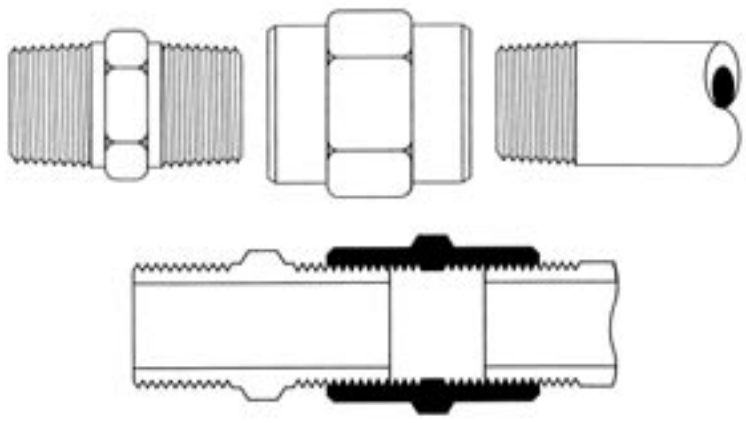


Brass Fittings

Pipe



Pipe Size	1/16	1/8	1/4	3/8	1/2	3/4	1
Thread Size	1/16-27	1/8-27	1/4-18	3/8-18	1/2-14	3/4-14	1-11^{1/2}
Working Pressure	1200	1200	1200	1200	1200	1000	1000

•Typical Application

Grease, fuels, LP and Natural gas (available on special order), refrigeration, instrumentation and hydraulic systems.

•Pressure

Operating pressure up to 1200 PSI.

•Vibration

Fair resistance.

•Temperature Range

-65°F to +250°F (-53°C to +121°C).

•Material

CA360 Brass for Barstock fittings
CA377 Brass for forged fittings

•Used With

Brass, bronze, copper, steel, aluminum and iron pipe

•Conformance

Meets specifications and standards of ASA, ASME and SAE.

•“L” at the end of a Part# means Light Pattern

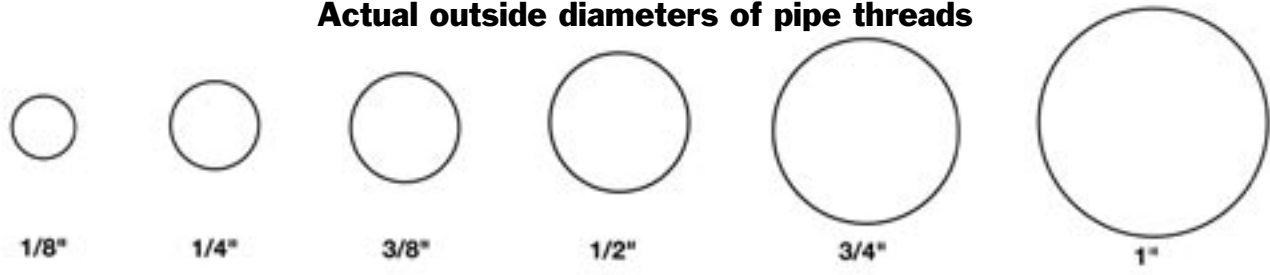
- these fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

•Assembly Instructions

- 1- Tighten approximately 2-1/2 turns past hand tight.
- 2- Fittings with Everseal tighten two turns past hand tight. Brittle materials require special cautions.

- for larger sizes see bronze fittings on page 114
- see page 152 for plastic pipe fittings.
- see page 212 for steel pipe fittings.

Actual outside diameters of pipe threads



Actual Male Thread Profiles



90° FEMALE ELBOW

**SAE#
130238**



2200P
3500
302
200

Part #	Size	List Price
28-001	1/8	1.41
28-002	1/4	1.90
28-003	3/8	2.59
28-004	1/2	5.08
28-005	3/4	12.69

90° FORGED FEMALE ELBOW



1200P
E7
100AF
100B

Part #	Size	List Price
28-009	1/8	1.45
28-010	1/4	1.95
28-011	3/8	2.98
28-012	1/2	5.06
28-013	3/4	10.94
28-014	1/4x1/8	3.32
28-015	3/8x1/4	3.76
28-016	1/2x3/8	7.14

45° FEMALE ELBOW



129
2201P
205
23355
45EZ
105
100-45A

Part #	Size	List Price
28-018	1/8	2.76
28-019	1/4	4.05

UNION TEE

**SAE#
130438**



322
2203P
3700
203
101A
311

Part #	Size	List Price
28-024	1/8	1.61
28-025	1/4	2.41
28-026	3/8	3.46
28-027	1/2	5.50
28-028	3/4	14.39

UNION FORGED TEE



1203P
LT7
101AF
101B

Part #	Size	List Price
28-032	1/8	1.85
28-033	1/4	2.41
28-034	3/8	3.10
28-035	1/2	6.32
28-036	3/4	10.35

REDUCING FORGED TEES

Part #	Size			List Price
	1	2	3	
28-029	1/8	1/8	1/4	3.85
28-030	1/4	1/4	1/8	3.97
28-031	1/4	1/4	3/8	6.66
28-037	3/8	3/8	1/8	6.61
28-038	3/8	1/4	3/8	6.33
28-039	3/8	3/8	1/4	6.33
28-046	1/2	1/2	3/8	8.30
28-047	3/4	1/2	3/4	15.53
28-048	3/4	3/4	1/2	15.53

CROSS



2205P
3950
228
102A
102BE

Part #	Size	List Price
28-041	1/8	3.43
28-042	1/4	4.15
28-043	3/8	5.56
28-044	1/2	14.15
28-045	3/4	32.93

FORGED CROSS



C7
105
102AF
102B

Part #	Size	List Price
28-049	1/8	3.08
28-050	1/4	4.77
28-051	3/8	6.57
28-052	1/2	9.63

COUPLING



SAE #	207P
130238	371
	3300
	103AH
	103B

Part #	Size	List Price
28-058L	1/8	0.50
28-058	1/8	1.06
28-059L	1/4	0.80
28-059	1/4	1.52
28-060L	3/8	1.26
28-060	3/8	1.98
28-061L	1/2	2.13
28-061	1/2	3.02
28-062L	3/4	4.06
28-062	3/4	6.77

REDUCING COUPLING



SAE #	377
130138	3300
	208P
	108
	119B
	119AH

Part #	Size	List Price
28-181L	1/4x1/8	0.88
28-181	1/4x1/8	1.52
28-182	3/8x1/8	1.92
28-183L	3/8x1/4	1.43
28-183	3/8x1/4	2.33
28-180	1/2x1/8	3.83
28-184L	1/2x1/4	2.66
28-184	1/2x1/4	3.26
28-185L	1/2x3/8	2.76
28-185	1/2x3/8	3.34
28-188	3/4x3/8	5.01
28-189	3/4x1/2	4.13

UNION



3250
212P
104A
104B

Part #	Size	List Price
28-067	1/8	6.48
28-068	1/4	8.50
28-069	3/8	15.22
28-070	1/2	14.98

CAP



3129
213P
23129
108A
108B

Part #	Size	List Price
28-075	1/8	0.55
28-076	1/4	0.79
28-077	3/8	1.48
28-078	1/2	2.07
28-079	3/4	3.28

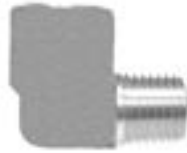
Brass

SAE# 90° STREET ELBOW

130239



Short Pattern



Regular Pattern

2202P
304
115
202
3400
116A

Part #	Size	List Price
28-156	1/8	0.92
28-156S	1/8short	0.65
28-157	1/4	1.57
28-157S	1/4short	1.22
28-158	3/8	2.29
28-159	1/2	4.28
28-160	3/4	7.14

See page 8 for Long Street Elbows.

FORGED 90° STREET ELBOW



5E8
1202P
116AF
116B

Part #	Size	List Price
28-165	1/8	2.04
28-166	1/4	1.86
28-167	3/8	3.04
28-168	1/2	4.15
28-169	3/4	6.95

FORGED REDUCING 90° STREET ELBOW

Female x Male

Part #	Size	List Price
28-260	1/8X1/4	2.88
28-261B	1/4FIPX1/8MIP (Barstock)	1.89
28-261	1/4X1/8	2.04
28-262	1/4X3/8	3.57
28-263	3/8X1/4	3.84
28-264	3/8X1/2	5.44
28-265	1/2X3/8	6.53

PIPE SWIVEL 90° STREET ELBOW



Part #	Size	List
28-430	1/4	17.10

HEX BUSHING

SAE # 130140



373
3220
209P
110A
110B

Male x Female

Part #	Size	List Price
28-102L	1/4x1/8	0.36
28-102	1/4x1/8	0.52
28-103	3/8x1/8	0.91
28-104L	3/8x1/4	0.57
28-104	3/8x1/4	0.77
28-105L	1/2x1/8	1.41
28-105	1/2x1/8	1.69
28-106L	1/2x1/4	0.91
28-106	1/2x1/4	1.28
28-107L	1/2x3/8	0.89
28-107	1/2x3/8	1.17
28-108	3/4x1/8	2.61
28-109L	3/4x1/4	2.24
28-110L	3/4x3/8	1.97
28-111L	3/4x1/2	1.29
28-111	3/4x1/2	2.12
28-112	1x1/4	4.54
28-113	1x3/8	5.44
28-114	1x1/2	3.56
28-115	1x3/4	3.75

FACE BUSHING



Male x Female

Part #	Size	List Price
28-121	1/4x1/8	0.64
28-122	3/8x1/8	1.04
28-116	3/8x1/4	0.94
28-090	1/2x1/8	1.81
28-128	1/2x1/4	1.45
28-117	1/2x3/8	0.80
28-129	3/4x1/4	2.76
28-130	3/4x3/8	2.59
28-118	3/4x1/2	1.11
28-120	1x3/4	4.60

⚙️ "L" means light pattern. See section header for description.

Brass Fittings

SQUARE HEAD PLUG



3151
211P
109A
109B

Part #	Size	List Price
28-084	1/8	0.32
28-085	1/4	0.45
28-086	3/8	0.70
28-087	1/2	1.17
28-088	3/4	2.73
28-089	1	5.42

COUNTERSUNK HEX HEAD PLUG



3155
219P
109CS
118

Part #	Size	List Price
28-092	1/16	0.55
28-093	1/8	0.45
28-094	1/4	0.52
28-095	3/8	0.58
28-096	1/2	0.98
28-097	3/4	2.50

SLOTTED-HEAD PLUG



220P
3150
117A
117B

Part #	Size	List Price
28-174	1/8	0.37
28-175	1/4	0.49
28-176	3/8	0.78

CORED HEX PLUGS



218P
3152
121A
103
121B
PPH
218P

Part #	Size	List Price
28-201	1/8	0.33
28-202	1/4	0.47
28-203	3/8	0.73
28-204	1/2	1.15
28-205	3/4	2.21
28-206	1	5.84

SOLID HEX HEAD PLUGS



121AS

Part #	Size	List Price
28-201S	1/8	0.67
28-202S	1/4	0.79
28-203S	3/8	1.15
28-204S	1/2	1.96
28-205S	3/4	3.21
28-206S	1	4.37

LOCKNUT

- Jam nuts
- Straight pipe thread



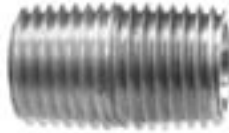
210P
21102
111A
111B

Part #	Size	List Price
28-123	1/8	0.53
28-124	1/4	0.77
28-125	3/8	0.87
28-126	1/2	1.09
28-127*	1/2	0.64

* Die Cast

Brass

CLOSE NIPPLE



165
215PN
3326
112A
112B

Part #	Diameter	Length	List Price
28-131	1/8	0.75	0.35
28-132	1/4	0.88	0.45
28-133	3/8	1.00	0.65
28-134	1/2	1.13	1.54
28-135	3/4	1.38	1.54

LONG NIPPLE



113B
113A
166
3327
3331
215PNL

Part #	Diameter X Length	List Price
28-140	1/8x1-1/2	0.67
28-141	1/8x2	0.99
28-142	1/8x2-1/2	1.38
28-143	1/8x3	1.56
28-144	1/4x1-1/2	0.83
28-145	1/4x2	1.05
28-146	1/4x2-1/2	1.64
28-147	1/4x3	2.37
28-148	3/8x1-1/2	1.17
28-149	3/8x2	1.79
28-150	3/8x2-1/2	2.32
28-151	3/8x3	3.08
28-152	1/2x1-1/2	1.90
28-153	1/2x2	2.50
28-154	1/2x2-1/2	3.01
28-155	1/2x3	3.63

🔑 See Red Brass Nipples for larger sizes!

"I can't do it" never accomplished anything. "I will try" has performed wonders.
-George P. Burnham

HEX NIPPLE



SAE#
130137

216P
3325
379
122AH
122B

Part #	Size	List Price
28-211L	1/8	0.43
28-211	1/8	0.60
28-212L	1/4	0.54
28-212	1/4	0.92
28-213L	3/8	1.03
28-213	3/8	1.44
28-214L	1/2	1.68
28-214	1/2	2.60
28-215	3/4	2.76
28-216	1	7.65

REDUCING HEX NIPPLE

SAE#
130137



216P
3325
379
122AH
122B

Part #	Size	List Price
28-220L	1/4x1/8	0.75
28-220	1/4x1/8	0.95
28-221L	3/8x1/8	1.50
28-221	3/8x1/8	2.13
28-222L	3/8x1/4	0.99
28-222	3/8x1/4	1.48
28-223L	1/2x1/4	1.88
28-223	1/2x1/4	2.47
28-224L	1/2x3/8	1.60
28-224	1/2x3/8	2.03
28-225	3/4x1/2	3.68

🔑 "L" means light pattern. See section header for description.

Enthusiasm is the greatest asset in the world. It beats money, power and influence.
-George P. Burnham

Brass Fittings

Pipe

Pipe

45° STREET ELBOW

**SAE#
130339**



306
3350
2214P
224

Part #	Size	List Price
28-230	1/8	1.53
28-231	1/4	1.92
28-232	3/8	2.68
28-233	1/2	4.60
28-234	3/4	12.47

45° FORGED STREET ELBOW



45E8
124B

Part #	Size	List Price
28-238	1/8	2.60
28-239	1/4	3.14
28-240	3/8	4.26

STREET TEE

**SAE#
130424**



225
2225P
3750
326
225
127A

Part #	Size	List Price
28-245	1/8	1.76
28-246	1/4	3.02
28-247	3/8	3.96
28-248	1/2	6.40
28-249	3/4	14.13

Male NPT x Female NPT 360° turning swivel fitting

360° Turning



NEW

Part #	Size	List Price
320-061	1/4	11.75

FORGED STREET TEE



107
T8
127B

Part #	Size	List Price
28-253	1/8	2.16
28-254	1/4	2.64
28-255	3/8	4.55
28-256	1/2	9.84
28-257	3/4	21.54

EXTENDER / ADAPTER

**SAE#
130139**



375
222P
3200
R1
120AH
120B

Female x Male

Part #	Size	List Price
28-190L	1/8x1/8	0.60
28-190	1/8x1/8	0.66
28-191L	1/4x1/8	0.69
28-191	1/4x1/8	1.48
28-192L	1/4x1/4	0.91
28-192	1/4x1/4	1.29
28-198	3/8x1/8	1.92
28-193L	3/8x1/4	1.09
28-193	3/8x1/4	1.99
28-194L	3/8x3/8	1.51
28-194	3/8x3/8	1.96
28-199	1/2x1/4	2.75
28-195L	1/2x3/8	2.56
28-195	1/2x3/8	3.46
28-196	1/2x1/2	2.49
28-207	3/4x3/8	10.65
28-208	3/4x1/2	4.37
28-209	3/4x3/4	6.53

PIPE SWIVEL ADAPTER



344R
3183

Female x Male

Part #	Size	List Price
28-425	1/4	7.65
28-426	3/8	17.10

See page 8 for long extender/ adapters

Brass

FORGED 90° MALE ELBOW



LE5
3455
116AMF

Part #	Size	List Price
28-266	1/8	1.53
28-267	1/4	1.86
28-268	3/8	3.71
28-269	1/2	4.97

90° MALE REDUCING ELBOW

Part #	Size	List Price
28-274	1/4X1/8	2.78
28-275	3/8X1/4	2.93
28-276	1/2X3/8	4.06

MALE BRANCH TEE

SAE#
130425



X106
23601
3600
2224P
226
329
128

Part #	Size	List Price
28-281	1/8	2.28
28-282	1/4	2.98
28-283	3/8	4.78
28-284	1/2	8.32
28-285	3/4	13.89

FORGED MALE BRANCH TEE



Part #	Size	List Price
28-281F	1/8	2.28
28-282F	1/4	3.43

FORGED ALL MALE TEE



T12
M101

Part #	Size	List Price
28-290	1/8	2.70
28-291	1/4	3.02
28-292	3/8	4.54
28-293	1/2	5.98
28-294	3/4	14.84

LONG STREET ELLS

D.O.T.
Approved



Part #	Size	Length	List Price
28-440	1/8	1-3/16"	4.55
28-441	1/8	1-7/16"	4.50
28-442	1/8	1-11/16"	4.70
28-443	1/8	1-7/8"	5.60
28-328	1/4	1-3/16"	8.00
28-329	1/4	1-7/16"	6.40
28-330	1/4	1-11/16"	6.40
28-331	1/4	1-7/8"	8.95
28-332	1/4	2-1/4"	8.85
28-333	3/8	1-3/4"	8.50

See page 4 for regular street elbows

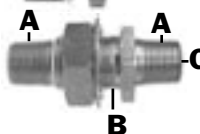
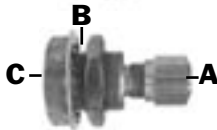
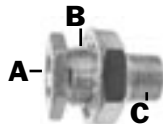
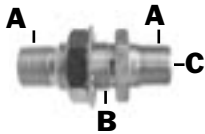
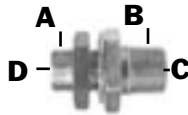
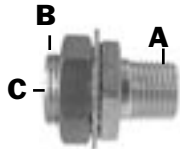
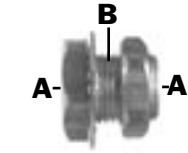
LONG EXTENSION ADAPTERS

D.O.T.
Approved



Part #	Size	Length	List Price
28-335	1/8	1-1/4"	3.97
28-336	1/8	1-3/4"	4.19
28-337	1/8	3"	4.95
28-338	1/4	1-9/16"	3.11
28-339	1/4	1-13/16"	3.24
28-340	1/4	2-1/16"	3.87

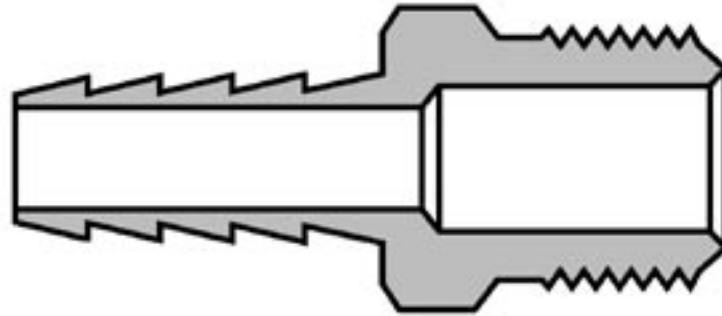
BULKHEAD / ANCHOR / FRAME COUPLINGS



Part#	Terminal Bolts / Frame Couplings				Length(in.)	List
	A	B	C	D		
28-300	1/8 - 27 NPTF	5/8 - 18 UNS	---	---	1-1/2	3.11
28-303	3/8 - 18 NPTF	1 - 14 UNS	---	---	15-16	4.03
28-301	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	15-16	4.43
28-302	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	1-1/2	5.02
28-315*	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	1-1/2	5.15
		*(same as 28-302 except with larger mounting nut)				
28-304	1/2 - 14 NPTF	1-1/8 - 14 UNS	---	---	1-1/2	6.77
28-317	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2-1/8	6.40
28-318	1/2 - 14 NPTF	1 - 14 UNS	3/8 - 18 NPTF	---	1-11/16	4.43
28-319	1/2 - 14 NPTF	1 - 14 UNS	3/8 - 18 NPTF	---	1-29/32	4.93
28-325	1/2 - 14 NPTF	3/4 - 16 UNS	1/4 - 18 NPTF	1/4 - 18 NPTF	1-11/16	5.20
28-345	1/2 - 14 NPTF	3/4 - 16 UNS	1/4 - 18 NPTF	---	2-5/32	4.77
28-313	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2-7/8	6.07
28-314*	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2-7/8	6.27
		*(same as 28-313 except with larger mounting nut)				
28-316	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	3-15/16	11.70
28-346	3/8 - 18 NPTF	1 - 14 UNS	1/2 - 14 NPTF	---	1-7/8	5.07
28-347	1/2 - 14 NPTF	1 - 14 UNS	1/2 - 14 NPTF	---	2-3/8	7.00
28-321	1/2 - O.D. Tube	7/8 - 20 UNCF	3/8 - 18 NPTF	---	1-5/16	7.43
28-322	3/8 - O.D. Tube	7/8 - 20 UNF	3/8 - 18 NPTF	---	1-3/8	7.65
28-348	3/8 - 18 NPTF	7/8 - 20 UNCF	3/8 - 18 NPTF	---	2-5/16	6.41
STEEL BULKHEAD FITTINGS						
28-306	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	.94	5.49
28-307	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	1.50	5.84
28-309	1/2 - 14 NPTF	3/4 - UNS	1/4 - 18 NPTF	1/4 - 18 NPTF	2.16	9.50
28-310	1/2 - 14 NPTF	3/4 - UNS	1/4 - 18 NPTF	---	2.53	16.42
28-312	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2.53	15.53

Brass

Hose Barb Fittings



See page 147 for plastic hose barb fittings

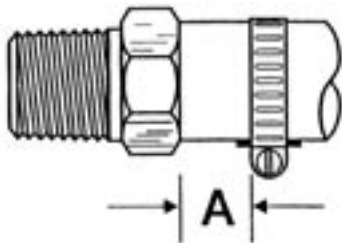
•Temperature and Working Pressure Ranges
From -40°F to + 160°F at 150 PSI maximum.

•Material
CA360 Brass for Barstock fittings.
CA377 Brass for Forged fittings.

Note: These fittings are intended for use with hose clamp, similar type clamp or a crimped ferrule.
See pages 160 for hose clamps

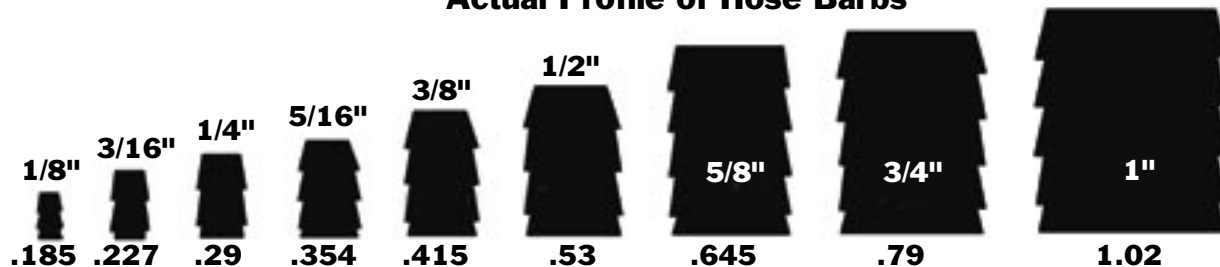
•Assembly Instructions

- 1- Cut hose cleanly and squarely to length.
- 2- Slide clamp on hose
- 3- Lubricate hose. Push hose on fitting until hose bottoms against stop ring or hex.
- 4- Position hose clamp as shown below and secure with a screwdriver or wrench. Maintain “A” dimension noted below for proper clamp positioning.



Hose Size	A
3/16"	1/4"
1/4"	1/4"
5/16"	1/4"
3/8"	1/8"
1/2"	1/8"
5/8"	1/8"
3/4"	1/8"

Actual Profile of Hose Barbs



RIGID MALE ADAPTER

PGH
101
102
201A



125HBL
105B-1
KF-PS
MPB

HOSE I.D. X MALE PIPE

Part #	Size	List Price
32-300	1/8x 1/16	6.80
32-001	1/8x1/8	0.64
32-027	1/8x1/4	0.76
32-002	3/16x1/8	0.54
32-003	3/16x1/4	0.89
32-301	1/4x1/16	2.22
32-004	1/4x1/8	0.54
32-005	1/4x1/4	0.54
32-006	1/4x3/8	0.89
32-007	1/4x1/2	1.79
32-008	5/16x1/8	0.57
32-009	5/16x1/4	0.64
32-010	5/16x3/8	1.08
32-390	5/16x1/2	2.06
32-011	3/8x1/8	0.61
32-012	3/8x1/4	0.54
32-013	3/8x3/8	0.71
32-014	3/8x1/2	1.50
32-026	3/8x3/4	2.97
32-333	7/16x1/4	2.50
32-302	1/2x1/8	0.94
32-015	1/2x1/4	0.79
32-016	1/2x3/8	0.93
32-017	1/2x1/2	1.18
32-018	1/2x3/4	2.20
32-303	1/2x1	6.21
32-304	5/8x1/4	2.47
32-019	5/8x3/8	1.17
32-020	5/8x1/2	1.43
32-021	5/8x3/4	2.38
32-305	5/8x1	5.20
32-306	3/4x3/8	3.16
32-022	3/4x1/2	1.79
32-023	3/4x3/4	2.21
32-316	3/4x1	6.90
32-299	1x3/8	6.80
32-307	1x1/2	4.08
32-024	1x3/4	3.13
32-025	1x1	4.70
32-028	1-1/4x1	5.50

See Bronze insert fittings on page 191 for larger sizes

SWIVEL MALE ADAPTER

Rotation 360°



SMS
103

HOSE I.D. X NPTF

Part #	Size	List Price
32-200	1/4x1/4	2.41
32-201	3/8x1/4	2.41
32-202	3/8x3/8	2.73
32-355	1/2x3/8	3.58
32-356	1/2x1/2	3.78
32-357	3/4x3/4	5.54

MENDER / SPLICER




MSB
122HBL
HM
129
178
73
108

HOSE I.D. X HOSE I.D

Part #	Size	List Price
32-091	1/8	0.93
32-092	3/16	0.79
32-093	1/4	0.71
32-094	5/16	0.79
32-095	3/8	0.71
32-096	1/2	1.00
32-097	5/8	1.13
32-098	3/4	1.88

See Bronze insert fittings on page 191 for longer sizes.

See Hose Clamps on page 160 

**Male NPT x Female NPT
360° turning swivel fitting**

360° Turning



NEW

Part #	Size	List Price
320-061	1/4	11.75

Brass

RIGID FEMALE ADAPTER

209A
128
29A
29F
126HB
126



FPB
105B-2
KF-RS
104

HOSE I.D. X FEMALE PIPE

Part #	Size	List Price
32-050	1/8x1/8	0.83
32-317	1/8x1/4	2.41
32-051	3/16x1/8	0.83
32-062	3/16x1/4	1.73
32-052	1/4x1/8	0.83
32-053	1/4x1/4	0.82
32-054	1/4x3/8	1.21
32-055	5/16x1/8	1.15
32-056	5/16x1/4	1.15
32-318	5/16x3/8	2.35
32-320	5/16x1/2	2.59
32-057	3/8x1/8	0.96
32-058	3/8x1/4	0.96
32-059	3/8x3/8	1.25
32-063	3/8x1/2	1.63
32-064	1/2x1/4	1.16
32-060	1/2x3/8	1.78
32-061	1/2x1/2	2.17
32-065	3/4x3/4	3.95
32-049	1x3/4	9.56

**SWIVEL FEMALE ADAPTER
With Gasket**

130
126
29FSG
KF-RN



5/Bag
NPF
NPSM-
GASKET SEAT

HOSE I.D. X NPSM

Part #	Size	List Price
32-120	1/4x1/8	3.50
32-121	1/4x1/4	1.35
32-129	1/4x3/8	3.26
32-130	5/16x1/4	3.75
32-122	3/8x1/4	2.66
32-123	3/8x3/8	2.95
32-354	3/8x1/2	4.38
32-124	1/2x3/8	3.43
32-125	1/2x1/2	4.05
32-117	1/2x3/4	5.19
32-118	5/8x3/4	5.91
32-119	3/4x3/4	3.42

See page 81 for Beaded Hose Barbs

**FORGED HOSE BARB
90° ELBOW**



129
HBE1
KF-PS90
HE-1
29E
139

HOSE I.D. X MALE PIPE

Part #	Size	List Price
32-308	3/16x1/8	1.46
32-391	3/16x1/4	1.91
32-038	1/4x1/8	1.63
32-039	1/4x1/4	1.88
32-309	1/4x3/8	2.50
32-036	5/16x1/8	1.71
32-040	5/16x1/4	1.75
32-310	5/16x3/8	3.65
32-046	3/8x1/8	1.67
32-041	3/8x1/4	1.88
32-042	3/8x3/8	2.14
32-047	3/8x1/2	1.88
32-048	1/2x1/4	2.79
32-043	1/2x3/8	3.29
32-311	1/2x1/2	3.75
32-044	5/8x3/8	3.13
32-045	5/8x1/2	3.25
32-312	5/8x3/4	5.42
32-313	3/4x1/2	4.79
32-314	3/4x3/4	6.67
32-330	3/4x1	7.95
32-315	1x3/4	7.50

See Bronze insert fittings on page 191 for larger sizes

**BARSTOCK HOSE BARB
90° ELBOW**



129HB

HOSE I.D. X MALE PIPE

Part #	Size	List
32-308B	3/16x1/8	2.44
32-038B	1/4x1/8	2.73
32-039B	1/4x1/4	2.94
32-041B	3/8x1/4	3.41
32-042B	3/8x3/8	7.96
32-043B	1/2x3/8	6.76

HOSE BARB TEES



32-128

Part #	Size	List Price
32-367	1/8	2.00
32-365	1/4	2.00
32-366	5/16	2.50
32-126	3/8	2.38
32-400	1/2	2.83
32-128	3/8X1/4 MIP Branch	5.71

See Bronze insert fittings on page 191 for larger sizes

90° HOSE BARB ELBOW



HOSE I.D. X HOSE I.D.

Part #	Size	List Price
32-412	1/4 x 1/8	1.61
32-413	1/4 x 1/4	1.61
32-414	3/8 x 1/8	2.32
32-415	3/8 x 1/4	2.32
32-416	3/8 x 3/8	1.96
32-417	3/8 x 1/2	2.71
32-418	1/2 x 1/4	2.71
32-419	1/2 x 3/8	2.71
32-420	1/2 x 1/2	2.71

90° FEMALE HOSE BARB ELBOW



HOSE I.D. X FEMALE PIPE

Part #	Size	List Price
32-401	1/4 x 1/8	2.50
32-402	1/4 x 1/4	2.50
32-403	3/8 x 1/8	2.50
32-404	3/8 x 1/4	3.14
32-405	3/8 x 3/8	3.93
32-406	3/8 x 1/2	5.75
32-407	1/2 x 1/4	3.68
32-410	1/2 x 3/8	4.57
32-411	1/2 x 1/2	5.79

See hose clamps on page 160

90° HOSE BARB X SWIVEL MALE PIPE



HOSE I.D. X MALE PIPE

Part #	Size	List Price
32-421	1/4 x 1/8	3.68
32-422	1/4 x 1/4	3.68
32-423	3/8 x 1/8	4.82
32-424	3/8 x 1/4	4.82
32-426	3/8 x 3/8	4.82
32-427	3/8 x 1/2	5.36
32-428	1/2 x 1/4	5.36
32-431	1/2 x 3/8	5.57
32-432	1/2 x 1/2	6.25

45° ELBOW



140
HE145
139HB
KF-PS45
139

HOSE I.D. X MALE PIPE

Part #	Size	List Price
32-110	1/4X1/8	3.41
32-109*	1/4X1/4	5.98
32-111	3/8X1/8	2.60
32-112	3/8X1/4	2.34
32-113	3/8X3/8	3.58
32-346	1/2X1/4	4.36
32-114	1/2X3/8	3.95
32-115	5/8X3/8	3.96

* Barstock

.....
 •When your confidence goes •
 • up, your competence goes •
 • up at the same time •

Brass

BALLSEAT FITTINGS

BALL END SWIVEL

NPSM-
BALL SEAT TYPE



128HBLSV
29FS
209AS
124
131

HOSE I.D. X NPSM

Part #	Size	List Price
32-066	1/8X1/8	1.57
32-067	3/16X1/8	1.39
32-068	3/16X1/4	1.76
32-069	1/4X1/8	1.62
32-070	1/4X1/4	1.08
32-078	1/4X3/8	2.15
32-071	5/16X1/4	1.30
32-072	3/8X1/4	1.17
32-073	3/8X3/8	1.47
32-074	3/8X1/2	3.14
32-075	1/2X3/8	1.73
32-076	1/2X1/2	2.19
32-077	3/4X3/4	3.52

BALLSEAT MALE ADAPTER

Beveled Seat



134
127HB
122AS
172

NPSM X MALE PIPE

Part #	Size	List Price
32-359	1/8X1/8	1.53
32-034	1/4X1/8	1.10
32-030	1/4X1/4	1.05
32-362	3/8X1/4	2.97
32-031	3/8X3/8	2.09
32-364	1/2X3/8	3.62
32-032	1/2X1/2	2.73
32-033	3/4X3/4	4.76

HOSE BARB X FLARE ADAPTER

45° FLARE ADAPTER



142
201BF
KF-MS

HOSE I.D. X 45° FLARE

Part #	Size	List Price
32-322	3/16X1/4	1.78
32-081	1/4X1/4	1.32
32-082	1/4X3/8	1.68
32-083	5/16X5/16	1.83
32-084	3/8X3/8	1.68

FEMALE 45° FLARE SWIVEL



29SAE
209ASF
146HBLFSV
KF-NS
128
FSS
146
144

HOSE I.D. X 45° FLARE

Part #	Size	List Price
32-326	3/16X3/16	2.13
32-107	3/16X1/4	1.73
32-101	1/4X1/4	1.18
32-102	1/4X5/16	1.45
32-103	1/4X3/8	1.31
32-104	5/16X5/16	1.50
32-327	5/16X3/8	1.83
32-105	3/8X3/8	1.40
32-106	3/8X1/2	3.33
32-100	1/2X1/2	1.94

FEMALE 37° J.I.C. FLARE SWIVEL

HOSE I.D. X 37° FLARE

Part#	Size	List
32-334	1/4x3/8	1.75
32-335	5/16 x 3/8	1.80
32-336	3/8 x 3/8	1.70

Accept that some days you're
the pigeon, and some days
you're the statue.

HOSE BARB X FLARE ADAPTER

DUAL 45°/37° FLARE SWIVEL



HOSE I.D. X DUAL SEAT

Part#	Size	List
32-337	1/4 X 1/4	1.60
32-339	5/16 X 5/16	1.66
32-340	3/8 X 1/2	2.45
32-341	1/2 X 1/2	2.48
32-342	1/2 X 5/8	3.28

INVERTED FLARE SWIVEL



HOSE I.D. X INVERTED FLARE

Part #	Size	List
32-369	1/4X1/4	5.02
32-370	5/16X5/16	4.57
32-371	3/8X3/8	4.21
32-372	1/2X1/2	5.44
32-373	5/8X5/8	6.31

See page 81 for Beaded Hose Barbs

"It's just too hot to wear clothes today," a husband remarked as he stepped out of the shower.

"Honey, what do you think the neighbors would think if I mowed the lawn like this?" He asked his wife.

"Probably that I married you for your money," she replied.

BRASS WELDING CONNECTORS

• Combine type of nut needed with proper stem size to get your required configuration

STEM ONLY



201RWA
WRS
WLS

Part #	Size	List
30-410	3/16	0.84
30-411	1/4	0.70
30-412	5/16	1.00
30-413	3/8	0.90

RIGHT HAND 9/16-18 FOR OXYGEN LINE



201RWA
WRS
KF-PE
152

Part #	Size	List
30-420	R.H. Nut Only	0.83

LEFT HAND 9/16-18 FOR ACETYLENE LINE



209LWA
WLS
154
KF-RE

Part #	Size	List
30-421	L.H. Nut Only	0.83

WELDING HOSE ADAPTERS

RIGHT HAND 9/16-18 #122RWA

122RWA
9/16 - 18



156

Part #	Size	List
30-401	1/4-18	1.94

LEFT HAND 9/16-18 #122LWA

122LWA
9/16 - 18



158

Part #	Size	List
30-406	1/4-18	1.94

STAINLESS STEEL HOSE BARBS

304 STAINLESS STEEL HOSE NIPPLES



Part #	Hose I.D. x Male Pipe	List Price
73-951	1/4"	4.24
73-952	3/8"	6.40
73-953	1/2"	6.41
73-954	3/4"	8.33
73-955	1"	10.29
73-956	1-1/4"	17.86
73-957	1-1/2"	18.63
73-958	2"	28.53
73-959	2-1/2"	47.55
73-960	3"	62.84
73-961	4"	150

304 STAINLESS STEEL REDUCING HOSE NIPPLES

Part #	Barb x Male Pipe	List Price
73-970	1/4 x 1/8	4.18
73-971	3/8 x 1/4	5.00
73-972	1/2 x 3/8	7.46
73-973	1/2 x 1/4	7.46
73-974	3/4 x 1/2	9.53
73-975	1 x 3/4	11.39
73-976	1 x 1/2	11.70
73-977	1-1/4 x 1	15.30
73-978	1-1/4 x 3/4	15.30
73-979	1-1/2 x 1-1/4	24.05
73-980	1-1/2 x 1	19.25
73-981	2 x 1-1/2	33.20
73-982	2 x 1-1/4	26.55

316 STAINLESS STEEL HOSE NIPPLES

Part #	Barb x Male	List Price
973-951	1/4"	4.60
973-952	3/8"	5.90
973-953	1/2"	9.90
973-954	3/4"	9.35
973-955	1"	12.47
973-956	1-1/4"	16.95
973-957	1-1/2"	29.46
973-958	2"	31.38
973-959	2-1/2"	87.50
973-990	3"	107.80
973-991	4"	246.75

BRASS MALE SWIVEL HOSE BARBS

MALE SWIVEL



4015
6065
8085

Hose I.D. X Male Pipe

Part #	Size	List Price
32-765	1/4x1/4	3.75
32-766	3/8x3/8	5.29
32-767	1/2x1/2	14.40

See page 11 for more Male Swivel fittings

HI VOLUME MALE SWIVEL

4065



Hose I.D. x Male Pipe

Part #	Size	List Price
32-781	3/8x1/4	9.32

300 PSI MAX.
WORKING PRESSURE



HOSE I.D. X MALE BALL SWIVEL

Part #	Size	List Price
28-415	1/4x1/4	17.50
28-417	3/8x1/4	15.81

REUSABLE HOSE COUPLINGS

183



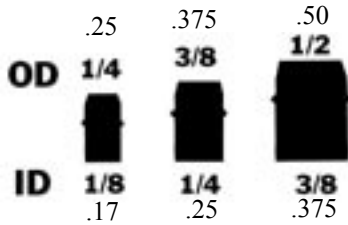
1/4" MALE THREAD ID X OD

Part #	Size	List Price
32-725	3/8x3/4(23/32)	4.10
32-726	1/4x5/8	3.51
32-727	1/4x1/2	3.25
32-728	1/4x19/32	3.45
32-741	5/16x5/8	3.87
32-742	3/8x5/8	6.70

More sizes and configurations available

BRASS BARBS FOR POLYETHYLENE TUBING

• Quick connecting fittings that do not require tube preparations for hand assembly. Inexpensive with excellent resistance to vibration.
 • All sizes are tube O.D. (I.D.)



UNION



1062
962

TUBE O.D. (TUBE I.D.) X TUBE O.D. (TUBE I.D.)

Part #	Size	List
21-003	1/4 (1/8) X 1/4 (1/8)	1.22
21-007	3/8 (1/4) X 1/4 (1/8)	2.17
21-009	3/8 (1/4) X 3/8 (1/4)	.99

MALE ADAPTER



1068
968
688

TUBE O.D. (TUBE I.D.) X MALE PIPE

Part #	Size	List
21-021	1/4 (1/8) X 1/16	1.40
21-025	1/4 (1/8) X 1/4	1.53
21-027	3/8 (1/4) X 1/8	1.58

FEMALE ADAPTER



1066
966
26
668

TUBE O.D. (TUBE I.D.) X FEMALE PIPE

Part #	Size	List
21-043	1/4 (1/8) X 1/8	2.22
21-047	3/8(1/4) X 1/4	3.92

BULKHEAD UNION



1074

TUBE O.D. (TUBE I.D.)

Part #	Size	List
21-083	3/8(1/4)	6.68

UNION ELBOW



1065
965

TUBE O.D. (I.D.)

Part #	Size	List
21-095	1/4 (1/8)	1.90
21-097	3/8 (1/4)	2.74
21-099	1/2 (3/8)	3.21

MALE 90° ELBOW



1069
969
229

TUBE O.D. (I.D.) X MALE PIPE

Part #	Size	List
21-111	1/4 (1/8) X 1/16	2.34
21-113	1/4 (1/8) X 1/8	2.03
21-115	1/4 (1/8) X 1/4	2.54
21-117	3/8 (1/4) X 1/8	2.75
21-119	3/8 (1/4) X 1/4	4.32
21-121	1/2 (3/8) X 3/8	6.59

FEMALE 90° ELBOW



1070
970
230

TUBE X FEMALE PIPE

Part #	Size	List
21-133	1/4 (1/8) X 1/8	2.48

UNION TEE

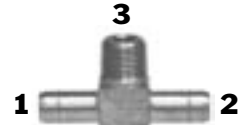


1064
964
224

O.D. (I.D.) X O.D. (I.D.) X O.D. (I.D.)

Part #	Size	List
21-151	1/4 (1/8)	2.39
21-153	3/8 (1/4) X 3/8 (1/4) X 1/4 (1/8)	2.61
21-155	3/8 (1/4)	2.80
21-159	1/2 (3/8) X 1/2 (3/8) X 3/8 (1/4)	3.45
21-161	1/2 (3/8)	3.91

MALE BRANCH TEE

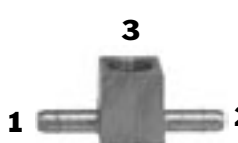


1072
972
232

O.D. (I.D.) X O.D. (I.D.) X MALE PIPE

Part #	Size	List
21-193	1/4 (1/8) X 1/4 (1/8) X 1/8	2.98
21-195	3/8 (1/4) X 3/8 (1/4) X 1/8	3.43
21-197	3/8 (1/4) X 3/8 (1/4) X 1/4	3.92

FEMALE BRANCH TEE

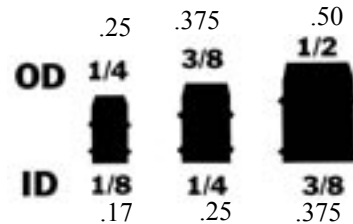


1077
978

O.D. (I.D.) X O.D. (I.D.) X FEMALE PIPE

Part #	Size 1x2x3	List
21-207	1/4 (1/8) X 1/4 (1/8) X 1/8	3.74

TWO BARB FITTINGS



MALE ADAPTER PIPE



Part #	Tube O.D. (I.D.) X Male Pipe	List
32-150	1/4 (1/8) X 1/8	2.21
32-151	1/4 (1/8) X 1/4	3.15
32-153	3/8 (1/4) X 1/4	2.79

UNION TEE



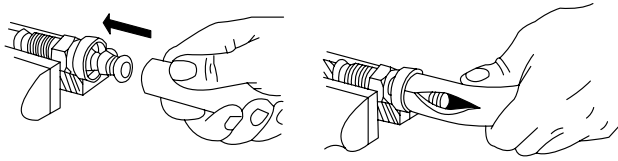
Part #	Tube O.D. (I.D.)	List
32-159	1/4 (1/8 ID)	3.92
32-160	3/8 (1/4 ID)	4.59

90° ELBOW



Part #	Tube O.D. (I.D.)	List
32-170	1/4 (1/8 ID)	2.93
32-171	3/8 (1/4 ID)	4.10

Push On Barb Fittings



Typical Application: Low Pressure Air, Fuel, Lube, and Oil Lines

Material: CA360 Brass

Advantages: Easy assembly. No clamps needed!!

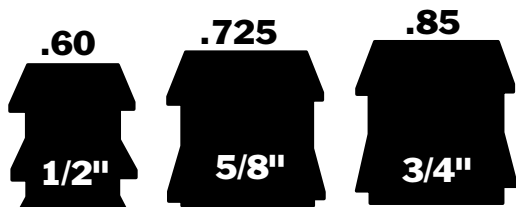
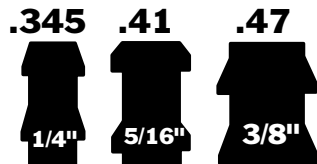
ASSEMBLY INSTRUCTIONS:

- 1- Lubricate insert.
- 2- Hold hose at angle as shown & push on and up over first barb.
- 3- Continue to push straight on until hose is seated under protective plastic cap. Keep hands back from hose end area so that hose can expand.

DISASSEMBLY INSTRUCTIONS:

- 1- Split hose as shown above. Do not cut completely through hose. Sealing edge of barb could be damaged.
- 2- Bend hose and remove with a quick pull

ACTUAL PUSH ON BARB PROFILES



MALE ADAPTER



301
P990A
HLM
100B-1
KA-MB
272
29PO
725
625

I.D. HOSE X MALE PIPE

Part #	Size	List Price
30-200	1/4x1/8	0.64
30-201	1/4x1/4	0.83
30-211	1/4x3/8	1.41
30-212	5/16x1/8	2.20
30-213	5/16x1/4	1.48
30-202	3/8x1/8	1.04
30-203	3/8x1/4	0.88
30-204	3/8x3/8	1.13
30-205	3/8x1/2	1.88
30-216	1/2x1/4	1.38
30-206	1/2x3/8	1.29
30-207	1/2x1/2	1.79
30-217	1/2x3/4	2.99
30-219	5/8x3/8	4.40
30-209	5/8x1/2	3.44
30-214	5/8x3/4	3.99
30-215	3/4x1/2	2.99
30-210	3/4x3/4	2.88

MALE SWIVEL



HMS
285

HOSE I.D. X MALE PIPE

Part #	Size	List Price
30-385	1/4x1/4	2.79
30-386	3/8x1/4	2.89
30-387	3/8x3/8	3.86
30-388	1/2x3/8	3.80
30-389	1/2x1/2	4.22
30-390	3/4x3/4	6.15

FEMALE SWIVEL



HOSE I.D. X GASKET SWIVEL

Part #	Size	List
30-358	1/4x1/4	3.24
30-360	3/8x1/4	3.77
30-361	3/8x3/8	4.98
30-365	5/8x3/4	10.53
30-366	3/4x3/4	11.15

696
29SPO
296
729

HOSE SPLICER

100B-Y
KA-RM
MHL
296



Part #	Size	List Price
30-300	1/4	0.93
30-305	5/16	1.23
30-301	3/8	1.11
30-302	1/2	1.67
30-303	5/8	3.42
30-304	3/4	3.70

RIGID FEMALE ADAPTER



29FPO
HLF
626
274
726

HOSE I.D. X FEMALE PIPE

Part #	Size	List Price
30-220	1/4x1/8	1.20
30-221	1/4x1/4	1.08
30-222	5/16x1/4	1.38
30-224	3/8x1/4	1.38
30-225	3/8x3/8	1.84
30-223	1/2x1/4	4.34
30-226	1/2x3/8	1.93
30-227	1/2x1/2	2.85

MALE ELBOW



100-C
29EPO

HOSE I.D. X MALE PIPE

Part #	Size	List Price
30-372	1/4x1/8	3.42
30-373	1/4x1/4	3.97
30-374	5/16x1/8	7.90
30-375	5/16x1/4	7.52
30-370	3/8x1/8	4.03
30-371	3/8x1/4	3.29
30-376	3/8x3/8	2.64
30-377	3/8x1/2	6.74
30-378	1/2x1/2	6.93
30-379	5/8x1/2	10.52
30-380	5/8x3/4	9.94
30-381	3/4x3/4	9.85

RIGID TUBE ADAPTER



294
100B-X
KA-RL
303
732
694

HOSE I.D. X O.D. TUBE

Part #	Size	List Price
30-290	1/4x3/16	2.32
30-291	1/4x1/4	1.04
30-292	1/4x5/16	2.20
30-293	5/16x5/16	5.23
30-294	3/8x3/8	1.96
30-297	1/2x1/2	3.13

MALE SAE FLARE ADAPTER



100B-3
KA-MS
727
682
302
282

HOSE I.D. X O.D. TUBE

Part #	Size	List Price
30-240	1/4x1/4	1.75
30-241	1/4x5/16	1.93
30-249	5/16x5/16	6.33
30-271	3/8x5/16	2.50
30-243	3/8x3/8	2.31
30-245	1/2x1/2	3.42

MALE JIC FLARE ADAPTER



HOSE I.D. X MALE JIC

Part #	Size	List Price
32-900	1/4X1/4	1.65
32-901	1/4x5/16	1.80
32-902	3/8x3/8	3.22
32-903	1/2x1/2	3.20
32-905	3/4x3/4	7.95

**SAE/JIC
DUAL 45°/37° FEMALE SWIVEL**

735
690
P990-K
305



29FDS
287
HDF
309

HOSE I.D. X O.D. TUBE

Part #	Size	List Price
30-230	1/4x1/4	1.21
30-231	1/4x5/16	1.74
30-232	5/16x5/16	1.79
30-233	3/8x1/2	2.70
30-234	1/2x1/2	2.22
30-235	1/2x5/8	3.69
30-236	5/8x1/2	3.62
30-237	5/8x5/8	3.86

45° SAE FLARE FEMALE SWIVEL

728
P990-H
29AEPO
307



284
100S-4
KA-MB
HSF
684

HOSE I.D. X O.D. TUBE

Part #	Size	List Price
30-250	1/4x1/4	1.21
30-251	1/4x5/16	1.91
30-253	1/4x3/8	2.46
30-254	5/16x5/16	3.91
30-260	5/16x3/8	2.51
30-252	3/8x3/8	1.76
30-257	3/8x1/2	3.96
30-261	1/2x3/8	4.23
30-255	1/2x1/2	2.79
30-262	1/2x5/8	6.38
30-258	5/8x5/8	5.07
30-259	3/4x3/4	5.86

FEMALE 37° JIC FLARE SWIVEL

29JICPO
HJF
688



738
288
100B-6
308
P990-F

HOSE I.D. X O.D. TUBE

Part #	Size	List Price
30-265	1/4x1/4	1.25
30-264	1/4x3/8	1.90
30-266	3/8x3/8	1.61
30-267	1/2x1/2	2.81
30-268	5/8x5/8	3.73
30-269	3/4x3/4	4.83

INVERTED FLARE MALE SWIVEL



290
100B-B
KA-MF
1MS

HOSE I.D. X O.D. TUBE THREAD

Part #	Size	List Price
30-275	1/4x3/16	2.36
30-276	1/4x1/4	2.05
30-277	1/4x5/16	2.21
30-278	5/16x1/4	3.02
30-280	5/16x5/16	2.81
30-283	5/16x3/8	4.59
30-284	3/8x5/16	2.68
30-279	3/8x3/8	2.51
30-285	3/8x1/2	6.26
30-281	1/2x3/8	6.62
30-282	1/2x1/2	4.38
30-286	5/8x5/8	7.18

**INVERTED FLARE FEMALE
ADAPTER**



306
100B-A
KA-NG
292
P990-J
736
692

HOSE I.D. X O.D. TUBE

Part #	Size	List Price
30-310	1/4x3/16	1.92
30-311	1/4x1/4	1.89
30-312	1/4x5/16	1.81
30-316	5/16x5/16	5.59
30-313	3/8x5/16	2.84
30-314	3/8x3/8	2.22
30-315	1/2x1/2	5.24

FEMALE BALLSEAT SWIVEL

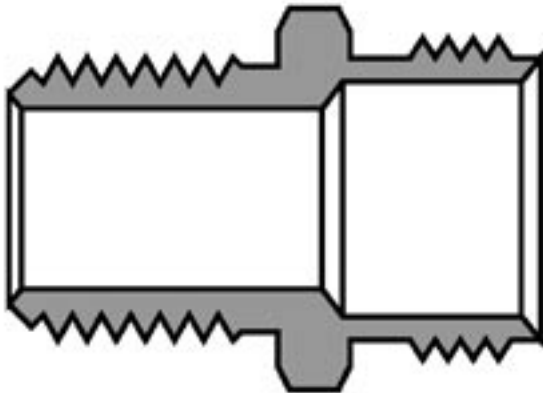


628
278
29SPO
731
NPSM

HOSE I.D. X BALLSEAT NPSM

Part #	Size	List Price
30-340	1/4x1/8	4.19
30-341	1/4x1/4	3.10
30-343	3/8x1/4	4.37
30-344	3/8x3/8	4.42
30-346	1/2x1/2	5.20
30-349	3/4x3/4	9.95

Garden Hose Fittings



See page 155 for Plastic garden hose fittings.

•Temperature and Working Pressure Ranges

From +35°F to +100°F at 75 PSI maximum or the recommended working pressure of the garden hose. (Not to exceed 150 PSI.)

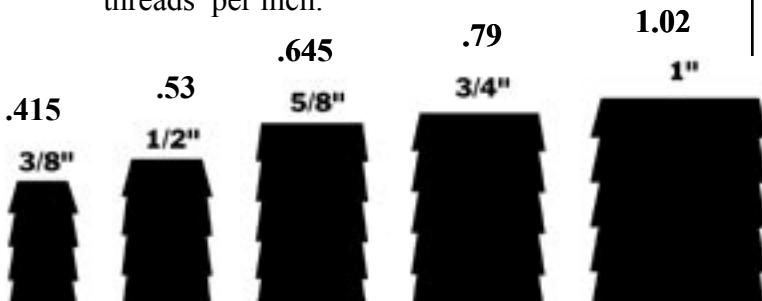
Note: All female connector ends should have a rubber washer inserted prior to usage.

FGH = Female Garden Hose threads
 MGH = Male Garden Hose threads



Male Garden Hose Profile

Male garden hose threads are all 3/4" with an outside diameter of 1.0625 and 11-1/2" threads per inch.



Actual size of Garden Hose Barbs

•WASHER INCLUDED



**SWIVEL
 MGH X FGH**

Part #	Size	List Price
30-000	3/4x3/4	2.53

•WASHER INCLUDED

HUS
 91
 203W



**SWIVEL
 FGH X FGH**

Part #	Size	List Price
30-011	3/4x3/4	2.59
30-012	no swivel	2.04

GSU
 101GHSV
 22AS
 506
 FS66

•WASHER INCLUDED

HSU11
 91Z
 197S



**SWIVEL
 FGH x FEMALE PIPE**

Part #	Size	List Price
30-001	3/4x1/2	2.10
30-006	3/4x3/4	2.39

98GHSV
 5AS
 21517
 502
 F565

•WASHER INCLUDED



**RIGID
 FGH x FEMALE PIPE**

Part #	Size	List Price
30-016	3/4x1/8	1.93
30-017	3/4x1/4	3.17
30-018	3/4x3/8	3.62

95GH
 501

Brass

FS67
198
HU11
21507



502
99GH
5A
H15PP

**RIGID
FGH X FEMALE PIPE**

Part #	Size	List Price
30-078	3/4x1/2	2.22
30-083	3/4x3/4	2.73

•WASHER INCLUDED



504
89GH
W1
62H4
88GH
W1

**SWIVEL
FGH x MALE PIPE**

Part #	Size	List
30-047	3/4x1/4	2.43
30-048	3/4x3/8	2.79
30-049	3/4x1/2	2.79

•WASHER INCLUDED

WITH FILTER



**SWIVEL
FGH X MALE PIPE**

Part #	Size	List Price
30-183	3/4x1/2	4.26



21505
503
83GH
20A
HU21
199
H7

**RIGID
FGH X MALE PIPE**

Part #	Size	List Price
30-088	3/4x1/2(1/2SWT)**	1.61
30-093	3/4x3/4	1.96
30-094	3/4x3/4(1/2TAP)	2.48
30-093L*	3/4x3/4	5.54

*long pattern

** 1/2 Swt = 5/8 O.D.

197
18R
HU12
H11PP



18A
507
18H
81GH
21503
MF67

**RIGID
MGH x FEMALE PIPE**

Part #	Size	List Price
30-066	3/4X1/4	2.58
30-067	3/4X3/8	2.58
30-068	3/4X1/2	2.10
30-073	3/4X3/4	2.38

19R
196
H530



21501
508
HU22
71GH
19A

**RIGID
MGH x MALE PIPE**

Part #	Size	List Price
30-053	3/4x3/8	2.30
30-058**	3/4x1/2	2.37
30-063*	3/4x3/4x1/2	1.84
30-063BE***	3/4x3/4	2.12
30-063L	long pattern1-1/2"	2.36
30-063S	3/4x3/4Short	2.02

No Tap

*(TAPPED 1/2 FEMALE)

** (1/2SWT=5/8 O.D.)

*** (TAPPED 1/2 FIP BOTH ENDS)



21500
509
75GH
23A
H8
19R

**RIGID
MGH x MGH**

Part #	Size	List Price
30-098	3/4	2.19
30-099	3/4X3/4 (1/2 TAP)	2.52

GARDEN HOSE NUT



30-021



30-022

94GH
GHN1
HNR
21514

Part #	Size	List Price
30-021	knurled	1.27
30-022	hexnut	1.98

GARDEN HOSE WASHERS



30-149



30-150

GHW
901GH

Part #	Size	List Price
30-150	black*	0.10
30-150R	red	0.10
30-149	recessed washer	0.20

*plasticized rubber

FILTER WASHER

•SCREEN: 30 MESH

LA662



Part #	Size	List Price
30-180	rough mesh	0.50
30-180F	fine mesh	0.50

HOSE CAP



513
96GH
GHN5
HC1
LA215
21518
200-W

Part #	Size	List Price
30-103	die cast (cut thread)	0.58

HOSE CAP WITH CHAIN



(FEMALE HOSE)

Part #	Size	List Price
30-142	3/4w/8" Chain	4.58

GARDEN HOSE PLUG



Part #	Size	List Price
30-026	3/4	4.33

**CAST BRASS HOSE
"Y" CONNECTOR**

•WASHER INCLUDED

21A



Part #	Size	List Price
30-140	3/4x3/4x3/4	3.55

QUICK DISCONNECT COUPLERS

•WASHER INCLUDED

LA73C



Part #	Size	List Price
30-450	complete	5.36
30-451	female end	3.60
30-452	male end	2.25

Brass



190
46WH
HFU21

MALE FLARE X FEMALE HOSE RIGID

Part #	Size	List Price
30-123	3/8x3/4	2.42
30-128	1/2x3/4	2.57
30-133	5/8x3/4	3.76

WASHER INCLUDED



50GHSV
51GHSV
W1
68H
191

SWIVEL

MALE FLARE X FEMALE HOSE

Part #	Size	List Price
30-052	1/4x3/4	2.01
30-138	3/8x3/4	3.97
30-139	1/2x3/4	3.02

WASHER INCLUDED



COMPRESSION X FGH

Part #	Size	List Price
30-050	1/4x3/4	3.20
30-051	3/8x3/4	3.75

Never trust a stock broker who is married to a travel agent.

BARSTOCK BRASS GARDEN HOSE COUPLINGS GARDEN HOSE COUPLING



GHS
92GH
936H
202GHS
22R
592

COMPLETE ROD BRASS - 1.19" SHANK

Part #	Size	List Price
30-025	3/8	3.71
30-027	1/2	3.54
30-028	5/8	3.54
30-029	3/4	3.54
30-030	1	11.64

FEMALE SWIVEL ONLY

WASHER INCLUDED



22RF
591
GHF
KF-RY
HU126
195

BARB X FGH

Part #	Size	List Price
30-031	3/8	1.95
30-032	1/2	1.89
30-033	5/8	1.89
30-034	3/4	1.89
30-035	1	5.08

MALE END ONLY



22RM
590
GHM
KF-PY
201GH
193
HU125

BARB X MGH

Part #	Size	List Price
30-039	3/8	1.95
30-040	1/2	1.89
30-041	5/8	1.89
30-042	3/4	1.89
30-043	1	6.40

**GARDEN HOSE COUPLING
SHORT SHANK (1"), ROUND NUT**



FEMALE SWIVEL ONLY

Part #	Size	List Price
30-466	1/2	1.76
30-467	5/8	1.76
30-468	3/4	1.76

**GARDEN HOSE COUPLING
SHORT SHANK (1"), ROUND NUT**



MALE END ONLY

Part #	Size	List Price
30-471	1/2	1.76
30-472	5/8	1.76
30-473	3/4	1.76

ROD BRASS - 2"SHANK

WASHER INCLUDED

GHFL
594



FEMALE END

Part #	Size	List Price
30-505	1/2	3.37
30-506	5/8	3.37
30-507	3/4	3.37

ROD BRASS - 2"SHANK

GHML
593



MALE END

Part #	Size	List Price
30-510	1/2	3.37
30-511	5/8	3.37
30-512	3/4	3.37

WROUGHT BRASS

WROUGHT BRASS COUPLINGS

•WASHER INCLUDED

85L



FEMALE END ONLY

Part #	Size	List Price
30-526	5/8	1.50
30-527	3/4	1.50

WROUGHT BRASS COUPLINGS

85M



MALE END ONLY

Part #	Size	List Price
30-530	1/2	1.50
30-531	5/8	1.50

GARDEN HOSE VALVES

ONE WAY BRASS BALL VALVE

Brass



MGH X FGH

30-161	3/4 X 3/4	20.56
--------	-----------	-------

Brass



MGH X 3/4 FEMALE PIPE

30-162	3/4 X 3/4	18.41
--------	-----------	-------

Brass

PLASTIC GARDEN HOSE VALVE

LA450C



**CYCOLAC BODY & BALL
MGH X FGH**

30-163 3/4 X 3/4 Yellow 2.25

**PLASTIC, NON-CORROSIVE, 2-WAY
HOSE SHUT-OFF "Y"**



30-160 3/4 1.95

Individually
Bagged



30-624 Y shape Zinc Alloy connector 1.60

Individually
Bagged



30-626 Y shape Zinc Alloy connector 4.00
with two levers



30-629 Zinc Alloy swivel hose connector 2.20



30-631 Zinc Alloy hose shut-off 1.80
with one lever



30-637 2.5" Striped pattern brass nozzle 3.00



30-640 3" Crossed pattern brass nozzle 3.50



30-638 4" Crossed pattern brass nozzle 5.15



Lead Free

30-600 .. 5-1/2" Zinc Alloy spray nozzle with 6.15
insulated handle soft grip and front thread protector.



Lead Free

30-609 ... Zinc Alloy spray nozzle with easy 8.00
adjustable brass head and plastic grip.



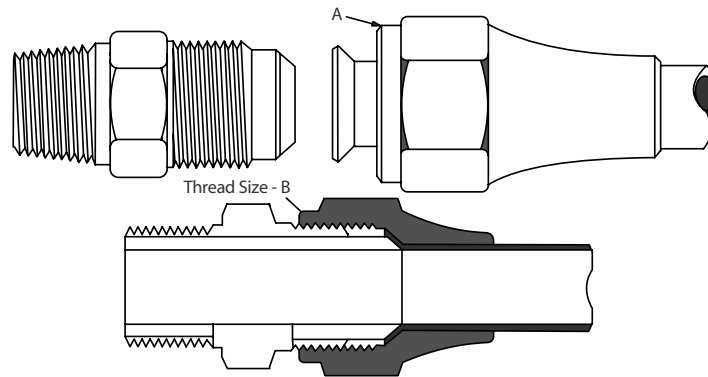
Lead Free

30-620 4-1/2" Zinc Alloy spray nozzle 3.00



30-630 4-1/2" Plastic spray nozzle 1.60

SAE 45° Flare



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4
Thread Size-B	5/16-24	3/8-24	7/16-20	1/2-20	5/8-18	11/16-16	3/4-16	7/8-14	1-1/16-14

•Typical Application

LP and natural gas, flammable liquids, instrumentation, refrigeration, power steering, hydraulic and pneumatic systems.

•Working Pressure Ranges

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection.

PSI	Tube O.D. (in.)	Tube Wall (in.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035
450	7/8	.035

Temperature 73°F with copper tubing:

•Vibration

Good resistance - use long nut when greater vibration resistance is required.

•Temperature Range

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures.

•Material

CA360 Brass for Barstock fittings.
CA377 Brass for forged fittings.

•Used With

Copper, brass, aluminum and steel hydraulic tubing that can be flared

•Conformance

Meets specifications and standards of ASA, ASME, SAE and MS (Military standards).

Assembly Instructions

- 1- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- 2- Slide nut on tube. Threaded and "A" of nut must face out.
- 3- Flare end of tube with a 45° flaring tool.
 - a- Measure flare diameter
 - b- Examine flare for excessive thin out.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

Note: Do not over-torque as it may damage the fitting or split the tubing at the flare.

Actual O.D. of Flare Fittings



SAE #
010110


SHORT ROD NUT



20910
41FS
1110
N1
41FX
441S
'L'

Part #	Size	List
10-013	1/8	0.50
10-014	3/16	0.37
10-015L	1/4	0.44
10-015	1/4	0.50
10-016	5/16	0.79
10-017L	3/8	0.62
10-017	3/8	1.03
10-018	7/16	2.92
10-019L	1/2	0.88
10-019	1/2	1.47
10-020L	5/8	1.29
10-020	5/8	2.32
10-021	3/4	3.39
10-022	7/8	7.17
10-026	1	9.96

REDUCING SHORT ROD NUT



Part #	Size	List
10-023	3/8x1/4	2.13
10-024	1/2x3/8	2.80
10-025	5/8x1/2	4.59

LONG ROD NUT

SAE #
010111



14FL
N2
241
441
41

Part #	Size	List
10-001	1/8	1.38
10-002	3/16	0.85
10-003	1/4	0.68
10-004	5/16	1.05
10-005	3/8	1.32
10-006	1/2	2.12
10-007	5/8	3.33
10-008	3/4	8.97

SAE #
010167

LONG FORGED NUT



N4
14FL
641
41FF
39

Part #	Size	List
10-028	1/4	1.74
10-030	3/8	2.54
10-031	1/2	2.73
10-032	5/8	4.67
10-033	3/4	5.63

SAE #
010166


SHORT FORGED NUT



14FS
41FFS
40
641-S
1116
NS4

Part #	Size	List
10-038	3/16	2.14
10-039	1/4	0.72
10-040	5/16	1.13
10-041	3/8	0.81
10-042	1/2	1.03
10-043	5/8	1.48
10-044	3/4	4.33
10-045	7/8	5.30

EXTRA HEAVY SHORT FORGED NUT



NSA

Part #	Size	List
10-046	1/4	1.30
10-047	3/8	1.49
10-048	1/2	1.88
10-049	5/8	2.49

• "L" at the end of a part# means Light Pattern
-These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

FORGED REDUCING NUT



NSR4
14FS
41FRS
40R
662-S

Part #	Size	List
10-051	5/16x1/4	4.77
10-052	3/8x1/4	1.80
10-053	3/8x5/16	1.91
10-054	1/2x3/8	1.97
10-055	5/8x3/8	5.39
10-056	5/8x1/2	2.87
10-058	3/4x5/8	7.07

FLARED PLUG



58
639F
PF
57
P2
2229
439

Part #	Size	List
10-063	3/16	2.31
10-064	1/4	0.52
10-065	5/16	1.80
10-066	3/8	0.79
10-067	1/2	1.22
10-068	5/8	1.72

FLARED CAP



640F
41FC
56
N5
2129
54
440

Part #	Size	List
10-074	3/16	1.49
10-075	1/4	0.32
10-076	5/16	1.49
10-077	3/8	0.53
10-078	1/2	0.82
10-079	5/8	1.24
10-080	3/4	6.75

GOLF

"The reason the pro tells you to keep your head down is so you can't see him laughing."

- Phyllis Diller

FINGER TIGHTENING CAP

NFT5



Part #	Size	List
10-081	1/4	0.81

COPPER GASKET

SAE #
010113



B2
2GF
6251
FG
157
59
463

Part #	Size	List
10-084	3/16	0.45
10-085	1/4	0.18
10-086	5/16	0.35
10-087	3/8	0.25
10-088	1/2	0.35
10-089	5/8	0.45
10-090	3/4	0.64

SAE #
010113

COPPER BONNET

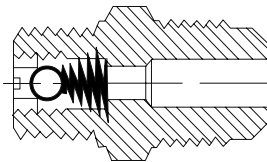


B1
3GF
64C
57
156
FB
695
464

Part #	Size	List
10-094	3/16	1.03
10-095	1/4	0.92
10-097	3/8	0.55
10-098	1/2	0.67
10-099	5/8	0.86
10-100	3/4	1.88

MALE BALL CHECK CONNECTOR

43A



Part #	Size	List
10-131	1/4x1/8	4.99
10-132	5/16x1/8	6.92
10-133	3/8x1/4	5.99

Note: Ball & Spring position may be reversed to change flow/check position. Max. pressure 3 PSI

SAE #
010101

UNION

42F
U2



Part #	Size	List
10-104	1/8	1.99
10-105	3/16	1.53
10-106L	1/4	0.56
10-106	1/4	0.73
10-107	5/16	1.28
10-108L	3/8	1.00
10-108	3/8	1.38
10-109L	1/2	1.52
10-109	1/2	2.13
10-110L	5/8	2.54
10-110	5/8	4.74
10-111	3/4	8.95
10-112	7/8	12.66

REDUCING UNION

656F
UR2
42-R



Flare x Flare

Part #	Size	List
10-117	5/16x1/4	1.31
10-118	3/8x1/4	1.25
10-119	3/8x5/16	3.33
10-120	1/2x1/4	2.68
10-121	1/2x3/8	1.83
10-122	5/8x3/8	2.88
10-123	5/8x1/2	2.85
10-125	3/4x5/8	4.48

• “L” at the end of a part# means **Light Pattern** - These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

SAE #
010401

UNION TEE

244F
T2
144F



FORGED TEE

BARSTOCK TEE

Part #	Size	List
10-157	1/8	3.50
10-158	3/16	3.44
10-159	1/4	2.21
10-159B <small>Barstock</small>	1/4	2.21
10-160	5/16	3.10
10-161	3/8	2.52
10-162	1/2	3.32
10-163	5/8	5.86
10-164	3/4	12.43
10-165	7/8	22.50

REDUCING TEE 1X2X3

144F
TR2
659F
684F
44R



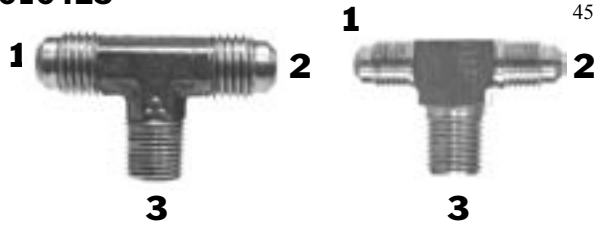
3

1 x 2 x 3

Part #	Size	List
10-170	1/4x1/4x3/8	3.21
10-171	5/16x5/16x1/4	4.80
10-172	3/8x1/4x1/4	3.83
10-173	3/8x1/4x3/8	3.60
10-174	3/8x3/8x1/4	3.67
10-175	3/8x3/8x1/2	4.25
10-176	3/8x3/8x5/8	9.26
10-178	1/2x3/8x3/8	4.16
10-179	1/2x3/8x1/2	4.44
10-180	1/2x1/2x1/4	5.43
10-181	1/2x1/2x3/8	4.51
10-182	1/2x1/2x5/8	5.45
10-187	5/8x1/2x5/8	8.62
10-188	5/8x5/8x3/8	7.89
10-189	5/8x5/8x1/2	7.06
10-197	3/4x3/4x5/8	16.74

It is easier to go down a hill then up, but the view is better from the top.

SAE # **MALE BRANCH TEE** T1
145F
45
010425



FORGED TEE

BARSTOCK TEE

FLARE X MALE PIPE

Part #	(1 & 2) x 3 Size	List
	Size	
10-203	3/16x1/8	2.47
10-204	1/4x1/8	2.47
10-204B	<small>Barstock</small> 1/4x1/8	2.81
10-205	1/4x1/4	2.59
10-205B	<small>Barstock</small> 1/4x1/4	4.81
10-206	1/4x3/8	4.08
10-207	5/16x1/8	2.82
10-208	5/16x1/4	3.41
10-209	3/8x1/8	3.04
10-210	3/8x1/4	3.33
10-211	3/8x3/8	4.02
10-212	3/8x1/2	5.86
10-213	1/2x1/4	5.86
10-214	1/2x3/8	5.86
10-215	1/2x1/2	5.99
10-216	1/2x3/4	10.19
10-217	5/8x3/8	7.44
10-218	5/8x1/2	7.37
10-219	5/8x3/4	10.41
10-220	3/4x1/2	14.85
10-221	3/4x3/4	13.98

A married couple was celebrating their 60th wedding anniversary. At the party everybody wanted to know how they managed to stay married so long in this day and age. The husband responded "When we were first married we came to an agreement. I would make all the major decisions and my wife would make all the minor decisions. And in 60 years of marriage we have never needed to make a major decision."

SAE # **FEMALE ADAPTER** 46
U3
010103



FLARE X FEMALE PIPE

Part #	Size	List
10-226	1/8x1/8	2.21
10-227	3/16x1/8	1.67
10-228L	1/4x1/8	0.71
10-228	1/4x1/8	0.92
10-229L	1/4x1/4	1.08
10-229	1/4x1/4	1.98
10-230	1/4x3/8	1.84
10-231	1/4x1/2	2.93
10-232	5/16x1/8	1.54
10-233	5/16x1/4	2.65
10-224	5/16x3/8	3.81
10-234	3/8x1/8	1.74
10-235L	3/8x1/4	0.95
10-235	3/8x1/4	1.87
10-236L	3/8x3/8	1.28
10-236	3/8x3/8	2.43
10-237L	3/8x1/2	1.54
10-237	3/8x1/2	4.50
10-238	3/8x3/4	3.07
10-239	1/2x1/4	1.69
10-240L	1/2x3/8	1.44
10-240	1/2x3/8	2.92
10-241L	1/2x1/2	1.84
10-241	1/2x1/2	3.40
10-242	1/2x3/4	2.47
10-243	5/8x3/8	3.27
10-244	5/8x1/2	2.15
10-245	5/8x3/4	2.89
10-246	3/4x1/2	9.77
10-247	3/4x3/4	8.20
10-248	7/8x3/4	9.51

• **“L” at the end of a part# means Light Pattern** - These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

Brass

SAE #
010102

MALE ADAPTER

U1
48



FLARE X MALE PIPE

Part #	Size	List
10-253	1/8x1/8	1.57
10-254	3/16x1/8	0.64
10-255L	1/4x1/8	0.41
10-255	1/4x1/8	0.60
10-256L	1/4x1/4	0.56
10-256	1/4X1/4	0.77
10-257	1/4X3/8	1.15
10-258	1/4X1/2	1.87
10-259L	5/16x1/8	0.82
10-259	5/16X1/8	0.89
10-260L	5/16x1/4	0.95
10-260	5/16X1/4	1.10
10-261	5/16X3/8	1.54
10-262	3/8X1/8	0.98
10-263L	3/8x1/4	0.86
10-263	3/8X1/4	1.20
10-264L	3/8x3/8	1.00
10-264	3/8x3/8	1.34
10-265L	3/8x1/2	1.32
10-265	3/8x1/2	2.90
10-266	3/8x3/4	2.59
10-267	1/2x1/4	1.95
10-268L	1/2x3/8	1.27
10-268	1/2x3/8	1.69
10-269L	1/2x1/2	1.45
10-269	1/2x1/2	2.38
10-270	1/2x3/4	2.50
10-271	5/8x1/4	4.77
10-272L	5/8x3/8	2.25
10-272	5/8x3/8	3.91
10-273L	5/8x1/2	1.84
10-273	5/8x1/2	4.53
10-274	5/8x3/4	2.54
10-275	3/4x1/2	4.81
10-276	3/4x3/4	3.47
10-277	7/8x1/2	14.03
10-278	7/8x3/4	10.64
10-279	1x3/4	12.63
10-280	1x1	15.66

SAE #
010202

90° MALE ELBOW

249F
49
E1
149F



FORGED ELBOW SQUARE BARSTOCK

Flare x Male Pipe

Part #	Size	List
10-283	1/8x1/8	2.92
10-283B	Barstock 1/8x1/8	3.00
10-284	3/16x1/8	3.63
10-284B	Barstock 3/16x1/8	1.37
10-285	3/16x1/4	2.78
10-286	1/4x1/8	1.46
10-286B	Barstock 1/4x1/8	1.13
10-287	1/4x1/4	1.72
10-287B	Barstock 1/4x1/4	1.67
10-288	1/4x3/8	2.84
10-289	1/4x1/2	3.23
10-290	5/16x1/8	2.49
10-290B	Barstock 5/16x1/8	1.74
10-291	5/16x1/4	2.54
10-291B	Barstock 5/16x1/4	2.20
10-292	5/16x3/8	2.81
10-293	3/8x1/8	2.87
10-293B	Barstock 3/8x1/8	4.40
10-294	3/8x1/4	1.84
10-294B	Barstock 3/8x1/4	2.20
10-295	3/8x3/8	1.86
10-295B	Barstock 3/8x3/8	2.53
10-296	3/8x1/2	2.52
10-297	3/8x3/4	6.32
10-282B	Barstock 7/16x1/4	5.63
10-298	1/2x1/4	3.02
10-298B	Barstock 1/2x1/4	3.31
10-299	1/2x3/8	2.52
10-299B	Barstock 1/2x3/8	3.16
10-300	1/2x1/2	2.72
10-300B	Barstock 1/2x1/2	4.15
10-301	1/2x3/4	5.30
10-311	5/8x1/4	5.17
10-302	5/8x3/8	4.81
10-302B	Barstock 5/8x3/8	5.04
10-303	5/8x1/2	3.39
10-303B	Barstock 5/8x1/2	4.91
10-304	5/8x3/4	5.51
10-305	3/4x1/2	7.96
10-306	3/4x3/4	6.82
10-306B	Barstock 3/4x3/4	11.83
10-307	7/8x3/4	14.33
10-308	1x3/4	20.15
10-309	1x1	20.38

The will to win is not nearly as important as the will to prepare to win.
-Bobby Knight

SAE # 90° FEMALE ELBOW E3
010203 50
 150F



FORGED ELBOW



SQUARE BARSTOCK

FLARE X FEMALE PIPE

Part #	Size	List
10-312	3/16X1/8	3.12
10-313	1/4X1/8	1.92
10-313B	Barstock 1/4X1/8	1.78
10-314	1/4X1/4	2.76
10-315	1/4X3/8	3.60
10-333	1/4X1/2	4.62
10-316	5/16X1/8	2.56
10-316B	Barstock 5/16X1/8	3.29
10-317	5/16X1/4	3.23
10-318	3/8X1/8	3.36
10-319	3/8X1/4	2.32
10-319B	Barstock 3/8X1/4	2.85
10-320	3/8X3/8	2.49
10-321	3/8X1/2	3.33
10-322	3/8X3/4	4.73
10-323	1/2X1/4	4.47
10-324	1/2X3/8	3.43
10-324B	Barstock 1/2X3/8	3.76
10-325	1/2X1/2	3.74
10-326	1/2X3/4	4.48
10-327	5/8X3/8	5.98
10-328	5/8X1/2	5.58
10-329	5/8X3/4	5.46
10-330	3/4X1/2	10.67
10-331	3/4X3/4	16.46

FORGED MALE RUN TEE T3
 151F
 51



FLARE X MALE PIPE
1 & 3 X 2

Part #	Size	List
10-343	3/16X1/8	3.19
10-344	1/4X1/8	2.79
10-345	1/4X1/4	3.36
10-347	5/16X1/8	2.87
10-348	5/16X1/4	4.15
10-350	3/8X1/4	4.56
10-351	3/8X3/8	5.95
10-340	3/8X1/2X3/8	5.52
10-352	3/8X1/2	7.17
10-353	1/2X3/8X1/2	5.76
10-354	1/2X3/8	7.05
10-355	1/2X1/2	7.57
10-357	5/8X1/2	8.38
10-359	3/4X1/2	16.57
10-360	3/4X3/4	14.55
10-361	3/16X1/8X5/16	2.27

More sizes available

The Future

The future is not a result of choices among alternative paths offered by the present, but a place that is created - created first in mind and will, created next in activity. The future is not some place we are going to, but one we are creating. The paths to it are not found but made, and the activity of making them changes both the maker and the destination.

- John Schaar

FORGED CROSS FLARE

SAE #
010501



455
C1
147F
52

Part #	Size	List
10-373	1/4	6.03
10-374	5/16	6.19
10-375	3/8	5.63
10-376	1/2	7.11

FORGED ADAPTER TEE

Service Tee



T17
53

MALE PIPE X FEMALE PIPE X FLARE

Part #	1 x 2 x 3 Size	List
10-382	1/8X1/8X1/4	3.33
10-383	1/4X1/4X1/4	4.06

FORGED 90° FLARE ELBOW



E2
155F

Part #	Size	List
10-404	1/8	4.50
10-405	3/16	4.70
10-406	1/4	1.72
10-407	5/16	2.77
10-408	3/8	2.53
10-409	1/2	3.58
10-410	5/8	5.01
10-411	3/4	10.92
10-412	7/8	20.06

FORGED REDUCING ELBOW

ER2
657F
55R



FLARE X FLARE

Part #	Size	List
10-416	3/8X1/4	2.87
10-417	3/8X5/16	3.62
10-419	1/2X3/8	3.41
10-421	5/8X1/2	5.83

FORGED FEMALE BRANCH TEE



TF1
136
T4
36
58FP

FLARE X FEMALE PIPE

Part #	1 & 2 x 3 Size	List
10-429	1/4X1/4	4.32
10-430	3/8X1/4	4.58
10-431	3/8X3/8	6.86
10-432	3/8X1/2	6.21
10-434	1/2X1/2	8.01
10-435	5/8X1/2	9.18

More sizes available

Anyone can become angry, that's easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way - this is not easy.

- Aristotle

- The Nicomachean Ethics

45° ELBOW

SAE #
010302



Forged



Barstock

E145
54
159F
654F
59FF
254
47
4945

FLARE X MALE PIPE

Part #	Size	List
10-448	1/4X1/8	1.67
10-448B	Barstock 1/4X1/8	2.59
10-449	1/4X1/4	2.75
10-450	5/16X1/8	3.02
10-451	5/16X1/4	3.17
10-452	3/8X1/4	2.69
10-452B	Barstock 3/8X1/4	3.50
10-453	3/8X3/8	2.92
10-454	3/8X1/2	4.19
10-455	1/2X3/8	3.21
10-455B	Barstock 1/2X3/8	5.50
10-456	1/2X1/2	4.68
10-460	5/8X3/8	6.53
10-457	5/8X1/2	4.81
10-458	3/4X1/2	8.39
10-459	3/4X3/4	8.33

BRASS GAS RANGE FITTINGS

BRASS MALE ADAPTERS



FLARE X MALE PIPE

Part #	Size	List
35-132	1/2X1/2 (3/8FIPTAP)	2.65
35-134	5/16x1/2	3.53

DRUM ADAPTERS

SAE #
010165



• straight thread

RD
IF
K1

FLARE X FIP

Part #	Size	List
50-011	1/4X1/2	8.25
50-001	1/4X3/4	6.51

FEMALE 45° FLARE FITTINGS

•Use with Copper Gasket

UNION

SAE #
010107



2310
U4
660HD
32

FEMALE FLARE X FEMALE FLARE

Part #	Size	List
10-135	1/4	3.89
10-136	3/8	4.43
10-137	1/2	6.77

FEMALE FLARE ADAPTER

SAE #
010106



U5
664FHD
33
48-FF

FEMALE FLARE X MALE PIPE

Part #	Size	List
10-440	1/4X1/8	2.95
10-441	1/4X1/4	3.42
10-442	3/8X1/4	4.21
10-443	1/2X3/8	5.77
10-444	1/2X1/2	5.34

FLARE REDUCER

SAE #
010105



UR3
661FHD
227
46-FF

MALE FLARE X FEMALE FLARE

Part #	Size	List
10-462	1/4X3/8	2.45
10-461	1/4X1/2	5.52
10-463	3/8X1/4	2.29
10-464	3/8X1/2	2.82
10-473	3/8X5/8	7.76
10-467	1/2X3/8	2.87
10-468	1/2X5/8	4.02
10-469	5/8X1/2	4.02
10-470	5/8X3/4	9.61
10-471	3/4X5/8	10.35

FEMALE 45° FLARE FITTINGS

Use with Copper Gasket

90° ELBOW

E4
669F



MALE FLARE X FEMALE FLARE

Part #	Size	List
10-500	1/4X1/4	3.62
10-495	1/2X1/2	6.76

BRASS FLARE SWIVEL FITTINGS

FORGED SWIVEL

SAE #
010108

1350
US4
14FSV
34



Part #	Size	List
10-481	1/4	2.23
10-482	5/16	3.22
10-483	3/8	2.71
10-484	1/2	3.03
10-485	5/8	4.19
10-486	3/4	12.61

REDUCING SWIVELS



Part #	Size	List
10-487	3/8X1/4	4.86
10-488	1/2X3/8	5.68
10-489	5/8X1/2	7.08

FORGED SWIVEL ELBOWS

ES4



MALE FLARE X FEMALE FLARE SWIVEL

Part #	Size	List
10-493	1/4	4.55
10-494	3/8	14.59
10-495*	1/2	6.76

*No swivel

BRASS SOLDER FITTINGS

SAE # FLARE TO SWT UNION

4085
US3
672FS
46FS
277



FLARE X SWT

Part #	Size	List
10-600	1/4X1/4	1.13
10-602	1/4X3/8	1.87
10-610	1/2X1/2	2.90
10-611	1/2X5/8	6.74
10-615	3/4X3/4	7.57

FORGED 90° SOLDER ELBOWS

ES2
SOLE1



FLARE X SOLDER

Part #	Size	List
10-620	1/4X1/4	2.25

Many, Many More Sizes availableJust Ask!

See 37° flare brass fittings on page 192

Christmas Present

"Hello, is this the FBI?"

"Yes, what do you want?"

"I'm calling to report my neighbor Billy Bob Smith! He is hiding drugs inside his firewood."

"Thank you very much for the call, sir."

The next day, the FBI agents descend on Billy Bob's house. They search the shed where the firewood is kept. Using axes, they bust open every piece of wood, but find no drugs. They swore at Billy Bob and left. The phone rings at Billy Bob's house.

"Hey, Billy Bob! Did the FBI come?"

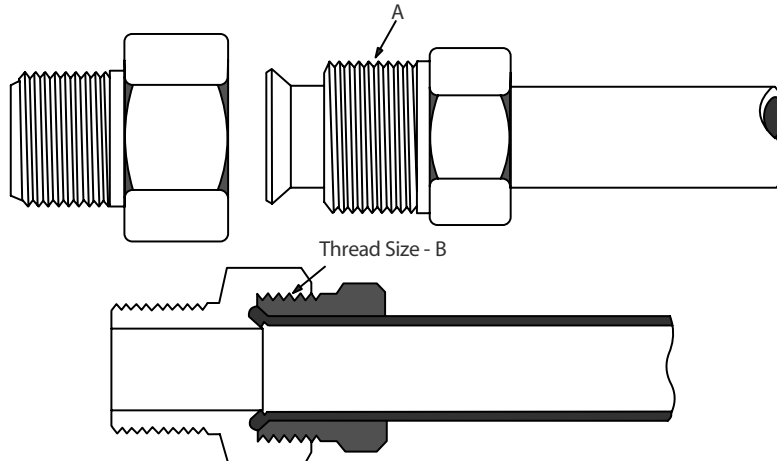
"Yeah!"

"Did they chop your firewood?"

"Yep."

"Merry Christmas Buddy"

Inverted Flare



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Thread Size-B	5/16-28	3/8-24	7/16-24	1/2-20	5/8-18	11/16-18	3/4-18	7/8-18	1-1/16-16	1-3/16-16	1-5/16-16

•Typical Application

Hydraulic brake, power steering, fuel lines and transmission cooler lines, LP and natural gas.

•Working Pressure Ranges

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

PSI	Tube O.D. (in.)	Tube Wall (in.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035

•Vibration

Excellent resistance.

•Temperature Range

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures.

•Material

CA360 Brass.

•Used With

Copper, brass, aluminum and steel hydraulic tubing that can be flared.

•Advantages

Very low cost and reusable. Seats and threads are internal and protected. Compact, excellent vibration life. Short nut affords very close tube bends. Steel or brass tube nut.

•Conformance

Meets specifications and standards of ASA, ASME, SAE and MS (Military Standards).

•Assembly Instructions

- 1- Cut tubing to desired length. Make sure all burrs are removed and the ends are cut square.
- 2- Slide nut on tube. Threaded end "A" of nut must face out.
- 3- Flare end of tube with a 45° flaring tool.
 - a- Measure flare diameter.
 - b- Examine flare for excessive thin out.
 - c- On thin wall, welded or brazed tubing, use double flare to prevent pinch-off and cracked flares.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

Note: Do not over-torque as it may damage the fitting or split the tubing at the flare.

Actual O.D. of male inverted flare threads

5/16"-28 2800 PSI	3/8"-24 1900 PSI	7/16"-24 1400 PSI	1/2"-20 1200 PSI	5/8"-18 1000 PSI	3/4"-18 750 PSI	7/8"-18 650 PSI	1-1/16"-16 550 PSI
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ZINC CHROMATE STEEL NUT


SAE #
040110



2105
41IFS
105
41W

Part #	Size	List
12-001	1/8	0.56
12-002	3/16	0.22
12-003	1/4	0.24
12-004	5/16	0.26
12-005	3/8	0.39
12-000	7/16	0.62
12-011	3/8(11/16-18)	2.84
12-006	1/2	0.63
12-007	5/8	1.75
12-008	3/4	2.59

LONG STEEL NUT



7896

Part #	Size	List
12-009	3/16	0.63
12-010	1/4	0.75

BRASS NUT

SAE #
040110



2100
41IF
100
41IB

Part #	Size	List
12-012	1/8	0.86
12-013	3/16	0.41
12-014	1/4	0.37
12-015	5/16	0.41
12-016	3/8	0.66
12-017	1/2	0.82

**"Character is what you do on the third and fourth tries."
- James A. Michener**

SPECIAL FORD NUT


43IF



Part #	Size	List
12-020	1/4	0.54

UNION INTERNAL

SAE #
040101



2300
42IFHD

INVERTED FLARE X INVERTED FLARE

Part #	Size	List
12-022	1/8	1.00
12-023	3/16	0.76
12-024	1/4	0.82
12-025	5/16	1.02
12-026	3/8	1.75
12-027	1/2	2.45
12-028	5/8	6.24

FEMALE ADAPTER

SAE #
040103



46IFHD
252
46W

INVERTED FLARE x FEMALE PIPE

Part #	Size	List
12-032	3/16X1/8	1.11
12-033	1/4X1/8	1.27
12-034	5/16X1/8	1.27
12-035	3/8X1/4	2.20
12-036	1/2X3/8	4.68
12-030	5/8X1/2	7.66
12-031	3/4X3/4	14.34

**"Maybe, just once, someone will call me 'sir' without adding, 'you're making a scene'.
- Homer Simpson**

SAE #
040102

MALE ADAPTER

2200
48IFHD
202
48W



INVERTED FLARE X NPTF

Part #	Size	List
12-041	1/8X1/8	0.54
12-042	3/16X1/8	0.65
12-043	1/4X1/8	0.67
12-044	1/4X1/4	0.80
12-045	5/16X1/8	0.75
12-046	5/16X1/4	0.95
12-047	3/8X1/8	1.40
12-048	3/8X1/4	1.00
12-049	3/8X3/8	1.46
12-038	1/2X1/4	2.95
12-050	1/2X3/8	1.52
12-051	1/2X1/2	2.39
12-052	5/8X1/2	3.12
12-039	3/4X1/2	5.98
12-040	3/4X3/4	5.89
12-053	1X1	16.14

SAE #
040202

ELBOW

400
2400
249IFHD
402
249IF
49W



INVERTED FLARE X NPTF

Part #	Size	List
12-057	1/8X1/8	1.32
12-058	3/16X1/8	0.81
12-059	1/4X1/8	0.88
12-054*	1/4X1/8	1.97
12-060	1/4X1/4	1.20
12-061	5/16X1/8	1.11
12-062	5/16X1/4	1.86
12-063	3/8X1/8	2.34
12-064	3/8X1/4	2.29
12-065	3/8X3/8	3.05
12-066	1/2X3/8	3.10
12-067	1/2X1/2	4.77
12-056	5/8X3/8	8.22
12-068	5/8X1/2	6.71
12-069	3/4X1/2	16.21
12-080	7/8X3/4	19.06
12-081	1X1	22.00

*Restricted pipe end

SAE #
040302

45° ELBOW

154
2352
259IFHD
352
94W



INVERTED FLARE X MALE PIPE

Part #	Size	List
12-071	1/8X1/8	1.49
12-072	3/16X1/8	1.49
12-073	1/4X1/8	1.53
12-074	5/16X1/8	3.26
12-075	5/16X1/4	4.19
12-078	3/8X1/8	4.34
12-076	3/8X1/4	2.94
12-077	1/2X3/8	3.72
12-079	5/8X1/2	9.44

SAE #
040401

UNION TEE

244IFHD
702
441



Part #	Size	List
12-085	1/8	2.78
12-086	3/16	2.31
12-087	1/4	2.65
12-088	5/16	2.95
12-089	3/8	4.34
12-090	1/2	7.02

SAE #
040109

STEEL PLUG

106
411P
131
2131

• Cored



Part #	Size	List
12-091	3/16	0.25
12-092	1/4	0.42
12-093	5/16	0.37
12-094	3/8	1.17

DID YOU KNOW... THERE ARE MORE CHICKENS IN THE WORLD THAN PEOPLE.

Brass

SAE # MALE BRANCH TEE 145
040427 245IFHD 602
 2600
 600



3
IN FL X IN FL X MALE PIPE
(1&2)x3

Part #	Size	List
12-100	3/16X1/8	2.45
12-101	1/4X1/8	2.20
12-102	5/16X1/8	3.20
12-103	3/8X1/4	5.30

FEMALE ELBOW 450



INVERTED FLARE X FEMALE PIPE

Part #	Size	List
12-109	3/16X1/8	2.85
12-110	1/4X1/8	2.67
12-111	5/16X1/8	3.01
12-112	3/8X1/4	3.92
12-113	1/2X3/8	11.16

MALE RUN TEE 251IFHD

SAE # 040424 752
 550
 151



3
IN FL X MIP X IN FL
(1&3)x2

Part #	Size	List
12-118	3/16X1/8	5.94
12-119	1/4X1/8	2.50
12-120	5/16X1/8	5.50
12-121	3/8X1/4	7.34
12-122	1/2X3/8	8.25

DID YOU KNOW...IT IS IMPOSSIBLE TO LICK YOUR OWN ELBOW.

SAE # FEMALE BRANCH TEE 252IFHD 652
040427 136



3
INVERTED FLARE X INVERTED FLARE X FEMALE PIPE
(1&2)x3

Part #	Size	List
12-127	3/16X1/8	7.60
12-128	1/4X1/8	3.10
12-129	5/16X1/8	5.75
12-130	3/8X1/4	5.99
12-131	1/2X3/8	7.80

90° UNION ELBOW 255IFHD

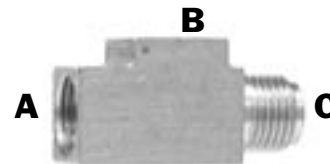
SAE # 040201 652
 136



INVERTED FLARE X INVERTED FLARE

Part #	Size	List
12-135	1/4	1.75
12-136	5/16	1.99
12-137	3/8	2.85

TOWED TRAILER BRAKE TEE



TUBE AND THREAD SIZE

Part #	A	B	C	List
12-144	3/16	3/16	3/16	7905 4.99
	(9/16-20)	(3/8-24)	(9/16-20)	
12-145	3/16	3/16	3/16	7906 4.99
	(1/2-20)	(3/8-24)	(1/2-20)	
12-146	3/16	3/16	1/4	7914 4.00
	(7/16-24)	(3/8-24)	(7/16-24)	
12-147	3/16	3/16	3/16	7900 3.95
12-148	3/16	1/4	3/16	7899 5.05
12-149	1/4	3/16	1/4	7904 5.05
	(9/16-18)	(3/8-24)	(9/16-18)	
12-150	1/4	3/16	1/4	7901 3.56
12-151	1/4	1/4	1/4	7898 5.35

.....DID YOU JUST TRY IT?.....

INVERTED FLARE AUTO FITTINGS

DUAL MASTER CYLINDER ADAPTER



MALE FLARE X FEMALE

(INVERTED FLARE THREADS)

Part #	Male	Female	List
12-200	3/16	3/16	1441 0.99
12-202	5/16	3/16	7897 2.30

DUAL MASTER CYLINDER ADAPTER



47W

MALE INVERTED FLARE X FEMALE INVERTED FLARE

(INVERTED FLARE THREADS)*

Part #	Male	Female	List
12-210	3/16	1/4	7828 1.58
12-212	1/4	3/16	7818 1.61
12-214*	7/16-20	1/4	7732 2.70
12-216	5/16	3/16	7909 1.60
12-218*	5/16	1/4	7727 1.67
12-220	5/16	1/4	7829 1.80
12-222*	5/16	5/16	1074 2.60
12-224	3/8 MPT	5/16	7771 4.00

**Seals on hex face*

CARBURETOR TO FUEL LINE ADAPTER - FORD 1513



Part #	Size	Size	List
12-230	1/4(1/2-20)	1/8MPT	4.75

RESTRICTION PIPE ADAPTER



1510

(.0625 ORIFICE)

Part #	Size	List
12-310	1/8	2.10

CARBURETOR TO FUEL LINE ADAPTER - PLYMOUTH 1514

Part #	Size	List
12-236	1/2-20 X 1/8MPT	1.60

SAE FLARE X INVERTED FLARE 4205



Part #	Size	Size	List
12-250	1/4	3/16	3.10
12-252	1/4	1/4	2.85
12-254	3/8	5/16	6.80
12-256	3/8	3/8	6.50
12-257	3/8	7/16	5.45

METRIC HYDRAULIC BRAKE FITTINGS

METRIC ADAPTER



Part #	Male	OD	List
12-335	M10X1.0	3/16"(3/8-24)	1.10
12-326	M11X1.5	3/16"(M10X1.0)	5.55
12-327	M12X1.0	3/16"(M10X1.0)	5.55
12-328	M13X1.5	3/16"(M10X1.0)	5.55

METRIC TOWED TRAILER BRAKE TEE B



Part #	A	B	C	List
12-330	3/16 (M10 x 1.0)	3/16 (3/8-24)	3/16 (M10 x 1.0)	11.20
12-331	3/16 (M10 X 1.0)ISO	3/16 (3/8-24)	3/16 (M10 X 1.0)ISO	10.80
12-332	3/16 (M11 X 1.5)	3/16 (3/8-24)	3/16 (M11 X 1.5)	10.75
12-333	3/16 (M12 X 1.0)	3/16 (3/8-24)	3/16 (M12 X 1.0)	11.80
12-334*	3/16 (M13 X 1.5)	1/4 (3/8-24)	3/16 (M13 X 1.5)	11.10

**Bubble flare type*

Brass

ADAPTER STANDARD TO METRIC BUBBLE



Part #	Size	Size	List
12-337	3/16 (3/8-24)	4.762 (3/16) (10 x 1.25)	7970.....4.50
12-338	3/16 (3/8-24)	1/4 (3/16 x 20)	7971.....6.92
12-339	3/16 (3/8-24)	13 x 1.5	7972.....5.70
12-340	3/16 (3/8-24)	11 x 1.5	7973.....7.35
12-341	3/16 (3/8-24)	12 x 1.0	7974.....5.60

METRIC UNION



Part #	Size	List
12-343	3/16.....10.0MM	7975.....5.45

ADAPTER STANDARD TO METRIC STANDARD



Part #	Size	List	
12-345	3/16..... (3/8-24)	4.762 (3/16) (10 X 1.25)	7996.....6.04

Job Interview 'Killer Question'

You are driving along in your car on a wild, stormy night. You pass by a bus stop, and you see three people waiting for the bus:

1. An old lady who looks as if she is about to die.
2. An old friend who once saved your life.
3. The perfect man (or) woman you have been dreaming about.

Which one would you choose to offer a ride to, knowing that there could only be one passenger in your car. Think before you continue reading. This is a moral/ethical dilemma that was once actually used as part of a job application. You could pick up the old lady, because she is going to die, and thus you should save her first; or you could take the old friend because he once saved your life, and this would be the perfect chance to pay him back. However, you may never be able to find your perfect dream lover again. The candidate who was hired (out of 200 applicants) had no trouble coming up with his answer.

WHAT DID HE SAY?

He simply answered: "I would give the car keys to my old friend, and let him take the lady to the hospital. I would stay behind and wait for the bus with the woman of my dreams."

"The concept is interesting and well-formed, but in order to earn better than a "C", the idea must be feasible."

-A Yale University management professor in response to student Fred Smith's paper proposing reliable overnight delivery service (Smith went on to found Fed Ex.)

**POL BRASS FITTINGS
(BOTTLE GAS)**

POL Thread 880 - 14LH
Note: All bottle fittings are UL listed.

TEE CHECK



POL-T1
2000
1000

Part #	Size	List
34-001	M2000	8.37

TAILPIECE WITH FLATS

1001AUL
21605



POL-LTPH
POL-LPT

Part #	Size	List
34-011	M.2001-A	3.80
34-012	HEX HEAD	2.25

STANDARD NUT



1001BUL
POL-N
21601

Part #	Size	List
34-016	M-2001-B	1.62

LARGE HEX NUT



1001ABUL
POL-LN

Part #	Size	List
34-021	M-2001-BL	2.44

TAILPIECE & NUT ASSEMBLY



2002AB

Part #	Size	List
34-022	1/4	3.61

POL CAP

POL-N5
2004
1004A



Part #	Size	List
34-031	M-2004	4.28

POL PLUG

1014A
POL-P2
2014



Part #	Size	List
34-036	M-2014	2.79

ADAPTERS

21607
POL-U2
1015



Part #	Size	List
34-041	3/8FLAREXPOL 2005	4.19
34-046	1/2FLAREXPOL 2006	4.37
34-051	5/8FLAREXPOL 2007	5.99

POL X 1/4 FIP

2008
POL-U3B



Part #	Size	List
34-056	POLX1/4FIP	7.38

TAILPIECE & NUT ASSEMBLY



Part #	Size	List
34-025	POLX1/4BARB	5.71

CAP ORIFICE

GF6
OH

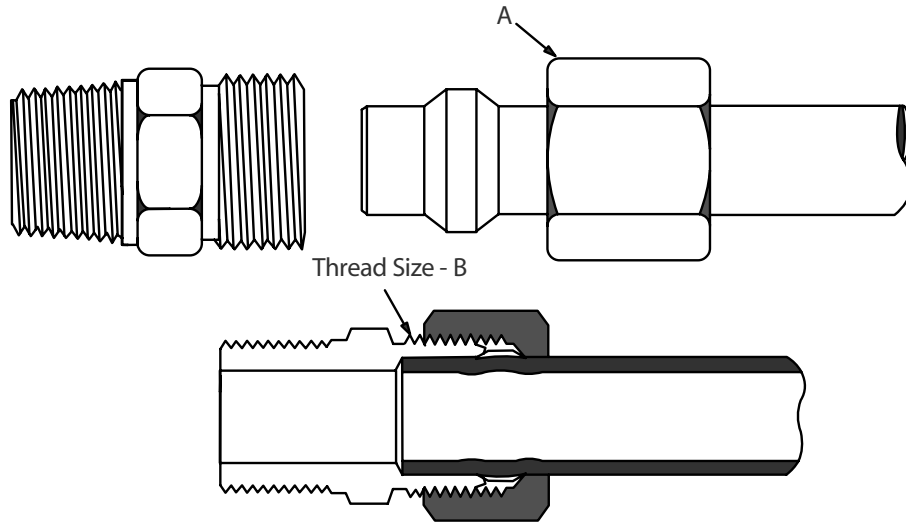


Part #	Size	List
34-032	.72	0.99
34-033	.80	1.71

Brass

Compression Fittings

Brass



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
Thread Size-B	5/16-24	3/8-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1-18	1-1/4-18

•Typical Application

Instrumentation, hydraulic and pneumatic systems.

•Pressure

Working pressure up to 2000 PSI with a 4:1 safety factor depending on tube size. When using plastic tubing, use the working pressure for type used.

•Vibration

Fair resistance - use long nut when greater vibration resistance is needed.

•Temperature Range

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures. (Refer to tubing temperature range.)

•Material

CA360 Brass for barstock fitting.
CA377 Brass for forged fittings.

•Used With

Aluminum, copper, brass and plastic tubing. Plastic tubing requires insert. Not recommended for steel tubing.

•Conformance

Meets specifications and standards of ASA, ASME and SAE.

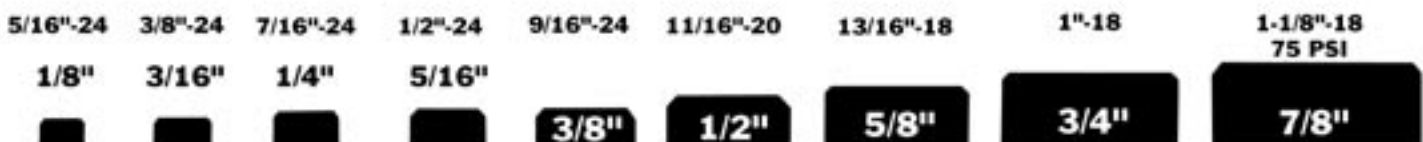
•Assembly Instructions

- 1- Cut tubing to desired length.
- 2- Slide nut and then sleeve on tube. Threaded end "A" of nut must face toward fitting.
- 3- Insert tubing into fitting body. Be sure tubing is bottomed on fitting shoulder.
- 4- Lubricate threads and assemble nut to fitting body.
- 5- Tighten nut hand tight. From that point, tighten with a wrench the number of turns indicated in the chart below.

Tube Size	Additional Turns From Hand Tight
1/8" thru 1/4"	1-1/4
5/16"	1-3/4
3/8" thru 1"	2-1/4

• "L" at the end of a Part# means **Light Pattern** - Means that these fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

Actual Profile of Compression Threads



BRASS SLEEVE

SAE#
060115



•Ferrules
60
260

Part #	Size	List Price
18-001	1/8	0.08
18-002	3/16	0.09
18-003	1/4	0.09
18-004	5/16	0.10
18-005	3/8	0.10
18-006	7/16	0.30
18-007	1/2	0.20
18-008	5/8	0.24
18-009	3/4	0.54
18-010	7/8	0.46

DERLIN SLEEVE

60-P



Part #	Size	List Price
18-015	1/4	0.08
18-016	5/16	0.34
18-017	3/8	0.13
18-018	1/2	0.18
18-019	5/8	0.20
18-020	3/4	1.24

SELF-ALIGN SLEEVE

Note: To buy comp. fittings with self-align sleeve, simply delete the 18- prefix on the same size compression fitting and substitute a 27- prefix. Pricing available upon request.



601

Part #	Size	List Price
27-001	1/8	0.17
27-002	3/16	0.36
27-003	1/4	0.20
27-005	3/8	0.25
27-006	1/2	0.48

BRASS INSERT

•Sleeve



63-BI
60AE
2030
63PT

Part #	Size			List
	Tube OD	Insert OD	Length	
22-008	1/8	.080	0.46	0.20
22-009	3/16	.135	0.45	0.21
22-009A	3/16	0.095	0.52	0.21
22-010	1/4	0.163	0.50	0.08
22-010A	1/4	0.125	0.59	0.30
22-010B	1/4	0.172	0.53	0.49
22-011A	5/16	0.232	0.50	0.46
22-011	5/16	0.187	0.53	0.22
22-012	3/8	0.250	0.56	0.15
22-013	1/2	0.372	0.72	0.23
22-014	5/8	0.483	0.72	0.69
22-015	3/4	0.563	1.03	1.37

BRASS NUT

SAE#
060110



61
261

Part #	Size	List Price
18-033	1/8	0.21
18-034	3/16	0.23
18-035L	1/4	0.20
18-035	1/4	0.27
18-036	5/16	0.34
18-037L	3/8	0.31
18-037	3/8	0.35
18-038	7/16	0.76
18-039L	1/2	0.56
18-039	1/2	0.83
18-040L	5/8	0.64
18-040	5/8	0.95
18-041	3/4	1.63
18-042	7/8	1.72

CHROME PLATED NUT



Part #	Size	List Price
18-054	1/4	0.28
18-055	3/8	0.35
18-056	1/2	0.72
18-057	5/8	0.93

LONG NUT COMPRESSION

Note: To buy comp. fittings with long nut, simply delete the 18- prefix on the same size compression fitting and substitute a 24-prefix. Pricing available upon request

LONG NUT

161



Part #	Size	List
24-003	1/4	0.54
24-004	5/16	0.73
24-005	3/8	0.76
24-006	1/2	1.40

CAPTIVE SLEEVE NUT

Note: To buy comp. fittings with captive sleeve, simply delete the 18- prefix on the same size compression fitting and substitute a 26- prefix. Pricing available upon request.



Part #	Size	List
26-001	1/8	0.98
26-002	3/16	1.08
26-003	1/4	0.68
26-004	5/16	0.96
26-005	3/8	0.89
26-007	1/2	1.14
26-008	5/8	3.78

CAP

61-CC
N5CT



Part #	Size	List Price
18-047	1/4	0.59
18-048	3/8	0.63
18-049	1/2	0.94
18-050	5/8	1.35

COMPRESSION PLUG



CSP

Part #	Size	List
18-029	3/8	0.55
18-030	1/2	1.08

UNION

SAE#
060101BA



M-62

Part #	Size	List Price
18-062	1/8	1.07
18-063	3/16	1.00
18-064L	1/4	0.99
18-064	1/4	1.35
18-065	5/16	1.34
18-066L	3/8	1.27
18-066	3/8	1.57
18-067	7/16	4.28
18-068L	1/2	2.13
18-068	1/2	3.15
18-069L	5/8	2.76
18-069	5/8	4.51
18-070	3/4	7.37
18-071L	7/8	5.35
18-071	7/8	6.89

REDUCING UNION

62-R

Part #	Size	List Price
18-076	1/4X1/8	1.72
18-077	1/4X3/16	1.72
18-078	5/16X1/4	1.72
18-079	3/8X1/4	1.25
18-080	3/8X5/16	1.60
18-081	1/2X3/8	1.90
18-082	5/8X3/8	2.80
18-083	5/8X1/2	2.94
18-084	7/8X5/8	15.95

DRILLED THRU COMP. UNION

Part #	Size	List Price
18-066D	3/8	2.60
18-069D	5/8	5.01
18-071D	7/8	6.34

• "L" at the end of a Part# means Light Pattern - See section header for description.

BULKHEAD UNIONS

SAE# 62BH
060101 75
 274



Part #	Size	List Price
18-088	1/4	2.92
18-090	3/8	8.91
18-091	1/2	13.74

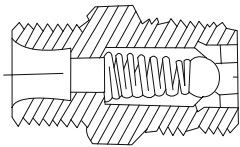
BULKHEAD NUTS



20102

Part #	Size	List Price
18-097	1/4	1.13
18-099	3/8	1.74
18-100	1/2	2.32

BALL CHECK VALVE



63
 263
 63A

TUBE O.D. X MALE PIPE

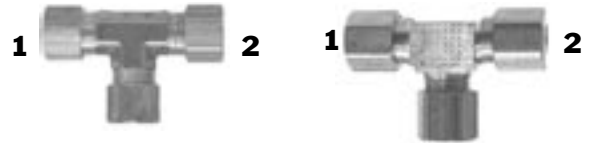
Part #	Size	List Price
18-092	1/8X1/8	5.92
18-094	1/4X1/8	4.94
18-095	5/16X1/8	6.73
18-096	3/8X1/4	5.78

"Laughter is to life what shock absorbers are to automobiles. It won't take the potholes out of the road, but it sure makes the ride smoother."

- Barbara Johnson

TEE

SAE# 64
060401 264C



3 FORGED

3 SQUARE BAR-

STOCK

Part #	Size	List Price
18-101	1/8	5.44
18-101B	Barstock 1/8	4.45
18-102	3/16	2.94
18-102B	Barstock 3/16	3.91
18-103	1/4	2.75
18-103B	Barstock 1/4	3.28
18-104	5/16	3.79
18-104B	Barstock 5/16	5.19
18-105	3/8	3.28
18-105B	Barstock 3/8	4.14
18-106	1/2	5.73
18-106B	Barstock 1/2	6.54
18-107	5/8	6.66
18-108	3/4	25.56
18-109	7/8	16.34

FORGED REDUCING TEE

64-R

Part #	Size	List
1 x 2 x 3		
18-114	1/4X1/4X1/8	3.56
18-110	1/4X1/4X3/8	4.50
18-111	3/8X1/4X1/4	4.60
18-115	3/8X3/8X1/4	3.53
18-116	1/2X1/2X1/4	6.82
18-117	1/2X1/2X3/8	7.22
18-118	5/8X5/8X3/8	8.75
18-119	5/8X5/8X1/2	9.20

A truly happy person is one who can enjoy the scenery on a detour.

UNION ELBOW

SAE#
060201

65
BSE2
165C
265C



FORGED

BARSTOCK

Part #	Size	List Price
18-122	1/8	2.53
18-122B	Barstock 1/8	2.53
18-123	3/16	2.31
18-123B	Barstock 3/16	2.64
18-124	1/4	2.32
18-124B	Barstock 1/4	2.22
18-125	5/16	3.71
18-125B	Barstock 5/16	3.02
18-126	3/8	2.45
18-127	1/2	4.35
18-127B	Barstock 1/2	4.94
18-128	5/8	4.63
18-129	3/4	12.11
18-130	7/8	12.33

65-R

REDUCING ELBOW

Part #	Size	List Price
18-135	3/8X1/4	4.65
18-136	1/2X3/8	5.27
18-137	5/8X3/8	3.55

Riddle

You and your neighbor, who aren't necessarily friends, are planning tag sales for the same day. You're both selling the exact same used TV. You feel the TV will sell for \$100. He insists on selling it at \$40. What do you do?

Answer: Buy his for \$40 and sell each for \$100.

FEMALE ADAPTER

SAE#
060103

66



COMP X FEMALE PIPE

Part #	Size	List Price
18-142	1/8X1/8	0.98
18-143	3/16X1/8	1.18
18-144	3/16X1/4	3.95
18-145L	1/4X1/8	0.94
18-145	1/4X1/8	1.02
18-146L	1/4X1/4	1.29
18-146	1/4X1/4	1.95
18-147	1/4X3/8	2.29
18-148	1/4X1/2	2.08
18-149	5/16X1/8	1.59
18-150	5/16X1/4	1.94
18-151	5/16X3/8	2.32
18-152	3/8X1/8	1.33
18-153L	3/8X1/4	1.49
18-153	3/8X1/4	2.00
18-154L	3/8X3/8	1.31
18-154	3/8X3/8	2.70
18-155	3/8X1/2	1.44
18-156	3/8X3/4	7.92
18-157	1/2X1/4	4.65
18-158L	1/2X3/8	1.80
18-158	1/2X3/8	3.36
18-159L	1/2X1/2	2.02
18-159	1/2X1/2	4.75
18-160	1/2X3/4	7.52
18-161	5/8X3/8	2.77
18-162L	5/8X1/2	2.58
18-162	5/8X1/2	4.79
18-163	5/8X3/4	3.96
18-164	3/4X1/2	7.83
18-165	3/4X3/4	10.43
18-167	7/8X1/2	8.95
18-166	7/8X3/4	4.48

• "L" at the end of a Part# means Light Pattern - See section header for description.

MALE ADAPTER

SAE#
060102



68

COMP X MALE PIPE

Part #	Size	List Price
18-175	1/8X1/16	3.16
18-176	1/8X1/8	0.88
18-177	3/16X1/8	0.81
18-178	3/16X1/4	1.10
18-179L	1/4X1/8	0.77
18-179	1/4X1/8	0.81
18-180L	1/4X1/4	0.82
18-180	1/4X1/4	1.08
18-181	1/4X3/8	1.35
18-182	1/4X1/2	2.15
18-183	5/16X1/8	1.18
18-184L	5/16X1/4	1.24
18-184	5/16X1/4	1.44
18-185	5/16X3/8	1.67
18-186	5/16X1/2	4.36
18-187L	3/8X1/8	1.13
18-187	3/8X1/8	1.46
18-188L	3/8X1/4	0.99
18-188	3/8X1/4	1.92
18-189L	3/8X3/8	1.27
18-189	3/8X3/8	2.07
18-190L	3/8X1/2	1.42
18-190	3/8X1/2	2.37
18-191	3/8X3/4	3.16
18-192	7/16X1/4	3.75
18-204	7/16X3/8	3.02
18-193L	1/2X1/4	1.94
18-193	1/2X1/4	2.81
18-194L	1/2X3/8	1.63
18-194	1/2X3/8	2.36
18-195L	1/2X1/2	1.75
18-195	1/2X1/2	2.95
18-196	1/2X3/4	3.66
18-197	5/8X3/8	2.21
18-198	5/8X1/2	2.07
18-199	5/8X3/4	3.47
18-200	3/4X1/2	4.89
18-201	3/4X3/4	4.61
18-202	7/8X1/2	8.85
18-203	7/8X3/4	3.41
18-205	7/8X1	11.22

**TANK ADAPTER
DRILLED THRU (NO STOP)**



68-T
682C
80F

COMP X MALE PIPE

Part #	Size	List Price
18-208	1/4X1/8	1.00
18-209	1/4X1/4	1.21
18-210	3/8X1/4	1.33
18-211	3/8X3/8	1.48
18-212	3/8X1/2	1.93
18-213	1/2X3/8	1.93
18-214	1/2X1/2	2.59
18-215	5/8X1/2	2.59

COMP X SWEAT ADAPTER



66-S

Part #	Size	List Price
18-171	3/8X1/2nom.swt	3.40

More sizes available

Values

Success does not necessarily mean that we must earn a great deal of money and live in the biggest house in town. It means only that we are daily engaged in striving toward a goal that we have independently chosen and feel is worthy of us as persons.

A goal, whatever it might be, is what gives us meaning to our existence. It is the carrot on the end of the stick that keeps us striving - that keeps us interested- that gives us a reason for getting out of bed in the morning.

-Earl Nightingale

Brass

MALE ELBOW

SAE#
060202



69
269C
BSE1
169C

**FORGED BARSTOCK
COMP X MALE PIPE**

Part #	Size	List Price
18-220	1/8X1/8	2.32
18-220B	Barstock 1/8X1/8	1.48
18-221	3/16X1/8	2.18
18-221B	Barstock 3/16X1/8	1.33
18-223	3/16X1/4	2.43
18-224	1/4X1/8	1.68
18-224B	Barstock 1/4X1/8	1.29
18-225	1/4X1/4	1.98
18-225B	Barstock 1/4X1/4	1.76
18-226	1/4X3/8	2.47
18-227	1/4X1/2	3.76
18-228	5/16X1/8	1.93
18-228B	Barstock 5/16X1/8	1.63
18-229	5/16X1/4	2.37
18-229B	Barstock 5/16X1/4	2.07
18-230	5/16X3/8	2.87
18-231	5/16X1/2	4.15
18-232	3/8X1/8	2.16
18-232B	Barstock 3/8X1/8	1.90
18-233	3/8X1/4	2.12
18-233B	Barstock 3/8X1/4	1.99
18-234	3/8X3/8	2.98
18-234B	Barstock 3/8X3/8	4.60
18-235	3/8X1/2	5.59
18-235B	Barstock 3/8X1/2	4.10
18-248	3/8X3/4	5.69
18-247	7/16X1/4	2.92
18-236	1/2X1/4	4.00
18-237	1/2X3/8	3.66
18-237B	Barstock 1/2X3/8	4.00
18-238	1/2X1/2	3.66
18-238B	Barstock 1/2X1/2	5.20
18-239	1/2X3/4	6.38
18-240	5/8X3/8	4.44
18-241	5/8X1/2	4.56
18-241B	Barstock 5/8X1/2	5.69
18-242	5/8X3/4	7.27
18-243	3/4X1/2	7.66
18-245	3/4X3/4	9.35
18-246	7/8X3/4	12.71

FEMALE ELBOW

SAE#
060203



70
270C
BSE3
170C

FORGED BARSTOCK

COMP X FEMALE PIPE

Part #	Size	List Price
18-251	1/8X1/8	3.20
18-252	3/16X1/8	2.14
18-253	1/4X1/8	2.47
18-253B	Barstock 1/4X1/8	2.00
18-254	1/4X1/4	2.72
18-254B	Barstock 1/4X1/4	3.31
18-267	1/4X3/8	3.51
18-268	1/4X1/2	4.65
18-255	5/16X1/8	2.90
18-256	5/16X1/4	3.37
18-257	3/8X1/8	2.67
18-258	3/8X1/4	2.77
18-259	3/8X3/8	3.22
18-260	3/8X1/2	3.86
18-250	3/8X3/4	5.89
18-261	1/2X1/4	5.39
18-262	1/2X3/8	4.45
18-263	1/2X1/2	4.70
18-270	1/2X3/4	6.77
18-269	5/8X3/8	6.88
18-264	5/8X1/2	5.19
18-265	5/8X3/4	6.92
18-266	3/4X1/2	11.72

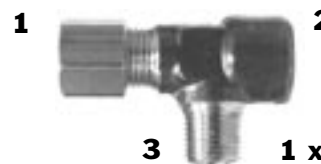
FORGED DROP-EAR ELBOW

BSE3-DE



Part #	Size	List
18-271	5/8X1/2	10.04

FORGED TEE



71
171C
BST3

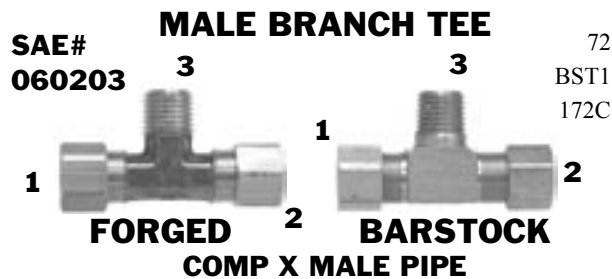
COMP X FEMALE PIPE X MALE PIPE

Part #	Size	List
18-307	1/4X1/8	3.72



FORGED TEE
COMP X MALE PIPE
(1 & 3) x 2

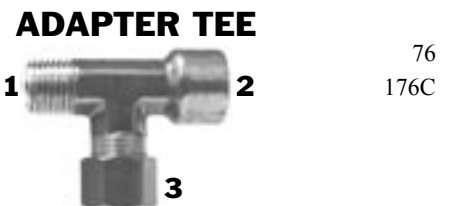
Part #	Size	List Price
18-272	1/8X1/8	2.77
18-273	3/16X1/8	3.12
18-274	1/4X1/8	2.67
18-275	1/4X1/4	3.27
18-276	5/16X1/8	4.15
18-277	5/16X1/4	3.86
18-278	3/8X1/8	4.20
18-279	3/8X1/4	3.71
18-280	3/8X3/8	4.54
18-281	1/2X3/8	6.04
18-282	1/2X1/2	7.96
18-283	5/8X1/2	8.03
18-284	3/4X1/2	18.89



SAE# 060203 **MALE BRANCH TEE** **72**
BST1
172C

FORGED **BARSTOCK**
COMP X MALE PIPE
(1 & 2) x 3

Part #	Size	List Price
18-289B	Barstock 1/8X1/8	3.18
18-290	3/16X1/8	4.06
18-290B	Barstock 3/16X1/8	3.65
18-291	1/4X1/8	2.99
18-291B	Barstock 1/4X1/8	3.05
18-292	1/4X1/4	3.46
18-293	5/16X1/8	3.46
18-294	5/16X1/4	3.87
18-295	3/8X1/8	4.31
18-296	3/8X1/4	3.56
18-296B	Barstock 3/8X1/4	4.32
18-297	3/8X3/8	5.37
18-298	3/8X1/2	7.79
18-304	1/2X1/4	6.19
18-299B	Barstock 1/2X3/8	9.90
18-299	1/2X3/8	6.32
18-300	1/2X1/2	8.19
18-301	5/8X1/2	9.11
18-302	3/4X1/2	19.52
18-303	3/4X3/4	20.83



ADAPTER TEE **76**
176C

BARSTOCK
MALE PIPE X FEMALE PIPE X COMP

Part #	Size 3X(1&2)	List Price
18-312	1/8X1/8	4.65
18-313	3/16X1/8	5.21
18-314	1/4X1/8	4.13
18-316	3/8X1/4	4.64



FORGED TEE **78**
BST4
77
177C
2908

COMP X FEMALE PIPE

Part #	Size (1&2)X3	List Price
18-321	1/4X1/8	3.46
18-328	1/4X1/4	5.40
18-325	3/8X1/8	4.25
18-322	3/8X1/4	5.27
18-323	3/8X3/8	7.62
18-326	1/2X1/8	7.14
18-324	1/2X3/8	11.00
18-327	5/8X1/8	9.05

45° ELBOW

SAE# 060302 **45° ELBOW** **6945**
45BSE1
74
179C
273
77



COMP X MALE PIPE

Part #	Size	List Price
18-329	3/16X1/8	2.76
18-330	1/4X1/8	2.54
18-336	1/4X1/4	3.62
18-331	5/16X1/8	3.94
18-332	5/16X1/4	4.16
18-333	3/8X1/4	3.33
18-338	3/8X3/8	6.86
18-334	1/2X3/8	4.00
18-339	1/2X1/2	7.57
18-335	5/8X1/2	8.25

Brass

GARDEN HOSE SWIVEL

- WASHER INCLUDED



COMPRESSION X FEMALE

Part #	Size	List Price
30-050	1/4x3/4	2.88
30-051	3/8x3/4	3.38

**DOUBLE COMPRESSION
THREADED SLEEVE FITTINGS**

- Use with aluminum and copper tubing or plastic tubing with internal tube support. Not recommended for steel tubing.
- Easy to assemble, no flaring, two piece construction.
- For use on oil, air, water and grease lubrication systems.
- When design makes a dimension critical, contact us for information

Tube OD	1/8	3/16	1/4	5/16	3/8
Thread	5/16-24	3/8-24	7/16-24	1/2-20	9/16-20
Working Pressure	500	500	500	250	250

NUT



Part #	Size	List
16-001	1/8	0.34
16-002	3/16	0.53
16-003	1/4	0.64
16-004	5/16	0.67
16-005	3/8	1.48

"If you think you're too small to make a difference, you haven't been in bed with a mosquito."
-Anita Roddick

BREAK-AWAY NUT



181-BA
21604
99LB
81LB

Part #	Size	List
16-010	1/4	0.58
16-090	3/16	2.63

THRD SLEEVE UNION



Part #	Size	List
16-013	1/4	2.64

MALE ADAPTER



188
6200
12

THRD SLEEVE X MALE PIPE

Part #	Size	List
16-117	1/8 x *	1.56
16-118	1/8 x 1/8	0.66
16-119	3/16 x 1/8	0.83
16-121	1/4 x 1/8	0.68
16-122	5/16 x 1/8	0.96
16-123	3/8 x 1/4	2.02

* 1/4-28 Male Thread Tapered

90° ELBOW



189
6400
15

FORGED

BARSTOCK

THRD SLEEVE X MALE PIPE

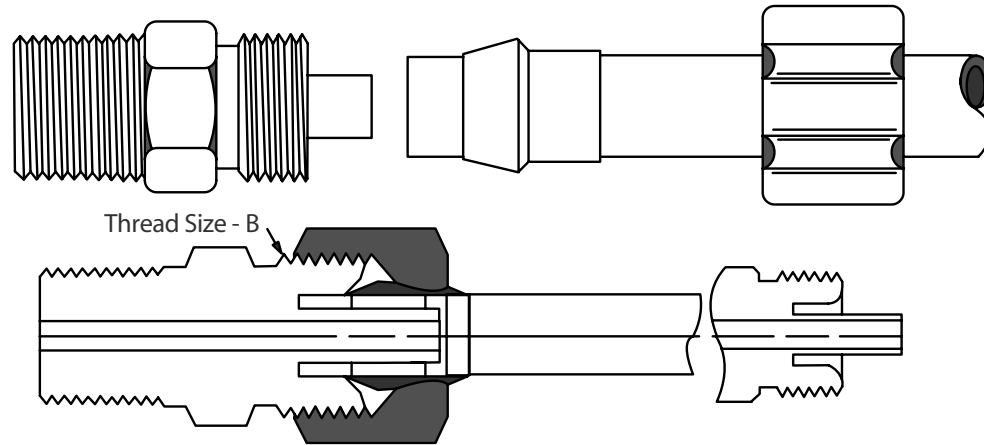
Part #	Size	List
16-127	1/8 x *	3.17
16-128	1/8 x 1/8	3.79
16-129	3/16 x 1/8	4.96
16-130	1/4 x 1/8	3.41
16-130B	1/4 x 1/8 Barstock	3.91
16-131	5/16 x 1/8	4.56
16-132	3/8 x 1/4	5.25

* 1/4-28 Male Thread Tapered

Did you know...it is physically impossible for pigs to look up into the sky.

Flareless

Flareless Brass Tube Fittings are Interchangeable with
Poly-Flo®, Poly-Tite® and Poly-Line®



Tube O.D.	1/8	3/16	1/4	1/4	5/16	3/8	1/2
Thread Size-B	5/16-24	3/8-24	3/8-24	3/8-24	7/16-24	1/2-24	11/16-20

•Typical Application

Pneumatic instrumentation circuits, lubricant and cooling lines.

•Working Pressure and Temperature Ranges

Up to 150 PSI from 0° to + 150°F with thermoplastic tubing. Up to 300 PSI from 0° to + 175°F with soft metal tubing

•Maximum allowable metal tube wall thickness for use with Poly-Tite fittings:

1/8", 3/16" O.D. --no limitation,
1/4" O.D.--.035 5/16", 3/8", 1/2" O.D.--.049

•Vibration

Excellent Resistance.

•Temperature Range

Depends on tubing used. -65°F to +250°F (-53°C to +121°C) with brass sleeve, -40°F to +150°F (-40°C to +66°C) with plastic sleeve. (Refer to tubing temperature range.)

•Material

CA360 Brass body, plastic sleeve.

•Used With

Aluminum, copper and hard plastic tubing requires brass sleeve. Not recommended for steel tubing.

•Advantages

No flaring of tubing required. Easy installation, captive sleeve, pre-assembled for installation and can be reassembled.

•Assembly Instructions

- 1- Cut tubing to desired length.
- 2- Slide nut/sleeve assembly on tube. Threaded end "A" of nut must face toward fitting.
- 3- Bottom tubing into fitting.
- 4- Plastic sleeve - Tighten nut hand tight.
Brass Sleeve - Tighten nut hand tight, then additional 3/4 turn.

PLASTIC CAP



59P
1229
59P
259P

Part #	Tube OD	List Price
20-201	1/4	0.99
20-203	3/8	0.82
20-204	1/2	1.17

PLASTIC SLEEVE



60P
260FF
1260
60P
260P

Part #	Tube OD	List Price
20-205	1/4	0.15
20-206	5/16	0.21
20-207	3/8	0.28
20-208	1/2	0.14

BRASS SLEEVE



260FB

Part #	Tube OD	List Price
20-380	1/8	0.72
20-381	3/16	0.38
20-382	1/4	0.50
20-383	5/16	0.58
20-384	3/8	0.52
20-385	1/2	0.68

NUT AND PLASTIC SLEEVE ASSEMBLY



261PF
1261
61PN
261U

Part #	Tube OD	List Price
20-211	1/4	0.72
20-212	5/16	0.77
20-213	3/8	0.85
20-214	1/2	1.56

NUT ONLY



61PN
1229
59P
259P
261FPN

Part #	Tube OD	Thread	List
20-218	1/8	5/16-24	0.61
20-219	3/16	3/8-24	0.61
20-220	1/4	3/8-24	0.61
20-221	5/16	7/16-24	0.61
20-222	3/8	1/2-24	0.71
20-223	1/2	11/16-20	1.07

UNIVERSAL NUT AND BRASS SLEEVE ASSEMBLY



261PFB
1261B
61PB
261UB

Part #	Tube OD	List
20-227	1/8	0.94
20-228	3/16	0.77
20-229	1/4	0.85
20-230	5/16	0.95
20-231	3/8	1.06
20-232	1/2	1.62

UNION TUBE #M62C



262S
62PCA
262PC

Part #	Tube OD	List
20-235	1/4	3.24
20-237	3/8	4.13

UNION



262PF
1262
62P
262P

Part #	Tube OD	List Price
20-240	1/8	3.50
20-241	3/16	3.91
20-242	1/4	3.70
20-243	5/16	4.27
20-244	3/8	4.43
20-200	3/8 X 1/4	4.64
20-245	1/2	5.55

UNION TEE



1264
164P
264P

Part #	Tube OD	List Price
20-248	1/8	5.81
20-249	3/16	6.20
20-250	1/4	5.16
20-251	5/16	6.17
20-252	3/8	6.11
20-330	3/8 X 1/4	10.99
20-253	1/2	14.82

FEMALE CONNECTOR



1266
66P
266P

Part #	Tube OD	Female Pipe		List
		Thread	Thread	
20-256	1/8	1/8	1/8	3.70
20-257	3/16	1/8	1/8	3.70
20-258	3/16	1/4	1/4	7.76
20-259	1/4	1/8	1/8	3.70
20-260	1/4	1/4	1/4	3.70
20-261	5/16	1/8	1/8	3.87
20-264	5/16	1/4	1/4	4.63
20-265	3/8	1/8	1/8	6.62
20-262	3/8	1/4	1/4	4.09
20-263	1/2	3/8	3/8	5.55

MALE CONNECTOR



1268
68P
268P

Part #	Tube OD	Male pipe		List
		Thread	Thread	
20-266	1/8	1/16	1/16	3.55
20-267	1/8	10-32*	10-32*	4.04
20-268	1/8	1/8	1/8	1.76
20-269	3/16	1/8	1/8	1.66
20-280	1/4	1/16	1/16	4.76
20-270	1/4	10-32*	10-32*	4.23
20-271	1/4	1/8	1/8	1.86
20-272	1/4	1/4	1/4	2.25
20-273	1/4	3/8	3/8	3.96
20-274	5/16	1/8	1/8	2.28
20-275	5/16	1/4	1/4	2.70
20-276	3/8	1/8	1/8	2.41
20-277	3/8	1/4	1/4	2.45
20-278	3/8	3/8	3/8	2.90
20-281	1/2	1/4	1/4	6.57
20-279	1/2	3/8	3/8	4.37
20-282	1/2	1/2	1/2	7.36
20-282A**	1/2	1/2	1/2	7.36

* Furnished with gaskets
** for .062 wall tubing

MALE ELBOW



1269
169P
269P

Part #	Tube OD	Male		List
		Pipe Thread	Thread	
20-284	1/8	1/16	1/16	5.65
20-287	1/8	1/8	1/8	2.32
20-288	3/16	1/8	1/8	2.46
20-285	1/4	1/16	1/16	5.00
20-289	1/4	1/8	1/8	2.25
20-290	1/4	1/4	1/4	2.53
20-291	1/4	3/8	3/8	6.02
20-292	5/16	1/8	1/8	2.99
20-293	3/8	1/8	1/8	3.10
20-294	3/8	1/4	1/4	2.88
20-295	3/8	3/8	3/8	3.89
20-296	1/2	3/8	3/8	4.64

Fitting Pictures are for reference only. Please contact us if specific style is needed.

Brass

UNION ELBOW



Part #	Tube OD	List
20-299	1/4 *	6.77

** For .062 wall tubing*

FEMALE ELBOW



Part #	Tube OD	Pipe Thread	List
20-300	1/8	1/8	12.40
20-301	3/16	1/8	4.64
20-302	1/4	1/8	2.92
20-303	1/4	1/4	4.85
20-304	3/8	1/4	4.09
20-305	1/2	3/8	5.81

MALE RUN TEE



Part #	Tube OD	Pipe Thread	List
20-308	1/8	1/8	15.28
20-309	3/16	1/8	5.81
20-310	1/4	1/8	4.86
20-311	1/4	1/4	5.94
20-312	5/16	1/8	5.81
20-313	3/8	1/4	6.59
20-314	1/2	3/8	8.93

A people that values its privileges above its principles soon loses both

MALE BRANCH TEE



Part #	Tube OD	Pipe Thread	List
20-317	1/8	1/8	8.15
20-318	3/16	1/8	5.42
20-319	1/4	1/8	4.47
20-319A	1/4*	1/8	6.63
20-320	1/4	1/4	6.38
20-321	5/16	1/8	5.81
20-322	3/8	1/8	8.51
20-323	3/8	1/4	5.81
20-324	1/2	3/8	9.70

** for .062 wall tubing*

FEMALE BRANCH TEE



Part #	Tube OD	Pipe Thread	List
20-327	1/4	1/8	7.37
20-328	1/4	1/4	9.30

BULKHEAD UNION



Part #	Tube OD	List Price
20-333	1/4	5.06
20-334	3/8	7.76

BULKHEAD NUT



Part #	Tube OD	List Price
20-370	1/8	41
20-371	1/4	1.26
20-372	5/16	1.46
20-373	3/8	1.48
20-374	1/2	1.60

Fitting Pictures are for reference only. Please contact us if specific style is needed.

BULKHEAD UNION

62PBH
329P
282P



Part #	Tube O.D.	List Price
20-337	1/4	5.90
20-338	5/16	7.17
20-339	3/8	8.15

QUICK DISCONNECT FITTING

292P



when tube is disconnected, flow shuts off automatically

Part #	Tube OD	Pipe Thread	List
20-344	1/4	1/8	13.53

QUICK DISCONNECT COUPLERS

**CHROME PLATED BRASS
SINGLE END SHUT-OFF TYPE**

TUBE X TUBE

349P



Part #	Tube O.D.	List Price
20-401	1/4	37.20
20-403	3/8	45.91

TUBE TO MALE THREAD

398P



Part #	Tube OD	Pipe Thread	List
20-409	1/4	1/8	28.31
20-411	1/4	1/4	33.66
20-413	3/8	1/4	38.17

INSERT ONLY

393P



Part #	Tube O.D.	List Price
20-417	1/4	12.96
20-419	3/8	15.30

DOUBLE END SHUT-OFF TYPE

TUBE TO TUBE

394P



Part #	Tube O.D.	List Price
20-425	1/4	46.25
20-427	3/8	55.98

TUBE X MALE PIPE

398PD



Part #	Tube OD	Pipe Thread	List
20-435	1/4	1/8	37.71
20-437	1/4	1/4	43.15
20-439	3/8	1/4	43.98

INSERT ONLY



Part #	Size	List Price
20-445	1/4	22.37

**CHROME PLATED NUT
AND PLASTIC SLEEVE**



Part #	Tube O.D.	List Price
20-451	1/4	1.00
20-453	3/8	1.22

TUBE CONNECTION

SINGLE END OR DOUBLE END
SHUT-OFF TYPE BODY ONLY

392P



PART #	Tube O.D.	List Price
20-455	1/4	23.85
20-457	3/8	30.33

MALE PIPE CONECTION

391P



PART#	Tube OD	Pipe Thread	List
20-461	1/4	1/8	15.30
20-463	1/4	1/4	20.22
20-465	3/8	1/4	22.86

Brass

Plain Brass

2 Types
Now Available!

Nickel Plated Brass GLOBAL THREAD

Works With Inch or Metric Threads

Brass

ENGINEERING AND DESIGN

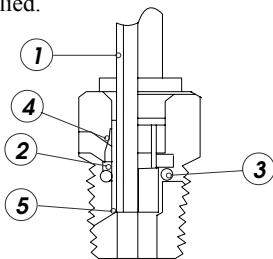
- **QUICK CONNECT**, simply push tubing in, no tools. Saves up to 75% of assembly time of standard compression fittings.
- **QUICK DISCONNECT**, hold two fingers on insert and pull tubing out, no tools required.
- **REUSEABLE**, connect and disconnect numerous times.
- **FULL FLOW DESIGN**, provides up to 60% more flow area than conventional fittings with internal tube supports.
- **POSITIVE SEAL**, no leaks. After tubing is inserted, seal is made.
- **VERSATILE**. BunaN "O" rings standard. Other materials of "O" rings available.
- **SECURE TUBE RETENTION**. Pulling on tubing only serves to tighten the connection.
- **SELF CONTAINED ASSEMBLY**, no loose parts, brass body and insert.
- **BRASS CONSTRUCTION**, Elbows and tees are forged brass.
- **CHOICE** of convenient swivel of economical stationary elbows and tees.
- **STRAIGHT CONNECTORS** have interior hex for Allen key tightening where space is limited...no need to use a wrench.
- **PRE-APPLIED TEFLON**® based pipe sealant on all male pipe threads, saving customer additional labor.
- **METRIC SIZES AVAILABLE**: Metric tube sizes from 2mm through 12mm in both standard NPT and metric pipe sizes are available on a special order basis.
- **WORKING PRESSURE**:

The fitting is suitable for use up to the maximum working pressure of the plastic tubing used. For soft copper tube, a maximum working pressure of 750 PSI is recommended. Also suitable for vacuum service.

• **WORKING TEMPERATURE:**

-10°F to 200°F (other ranges available on request).

- **PIPE THREAD**: NPTF with Teflon® based sealant pre-applied.

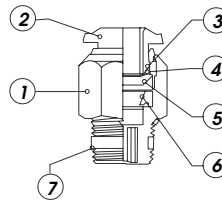


When tubing (1) is inserted into the fitting, it first passes through the gripping teeth (2). Just beyond the gripping teeth is the o-ring (3) which provides the leak proof seal against the OD of the tube. The gripping teeth grab the tube, which

expands the insert. Pulling back on the tube only tightens the grip as the insert moves onto the camming surface (4). Pressure through the tube also serves to tighten the grip. The tube bottoms against a positive tube stop (5) in a cavity providing tube support to prevent leakage.



Look for this
Logo



"Global Thread" fittings can be assembled with female threads produced to the following standards:

Tapered NPTF

Parallel (BSPP, BSP, ISO 7)

Tapered (BSPT, PT, ISO 7, ISO 228)

1.	BODY	BRASS - NICKEL PLATED
2.	THRUST RING	PLASTIC
3.	SLEEVE	BRASS - NICKEL PLATED
4.	GRIPPER COLLET	STAINLESS STEEL
5.	SAFETY RING	PAGE
6.	LIPSEAL (1/8 O-RING SEAL)	NBR 70
7.	THREAD SEAL	NBR 70

COMPONENT PARTS AND MATERIALS

PRESSURES RATING

0-250 PSI Vacuum Compatible

TUBING

Nylon, Polyethylene, Polyurethane 95 Durometer or higher.

TEMPERATURE RATING

0-160 F -18-70 C

MEDIA

Compressed air, water.

Global Thread Features:

- No Need To Stock both Inch and Metric fittings
Reduce Inventory by stocking Global Thread
- Stainless Steel gripper collet ensures superior gripping on all types of tubing
- Global Thread fitting can endure applications of high impact and vibration.
- Lip seal has exceptional sealing capability in both pressure and vacuum.
- All Global Thread fittings have reusable thread seal for ease of installation

**Reduce Inventory
Stock GLOBAL THREAD**

DOUBLE MALE UNION AQ34



PLAIN BRASS

Part#	Size	List
20-004	1/8	2.25
20-005	5/32	6.12
20-006	1/4	2.48
20-007	5/16	2.84
20-008	3/8	3.33
20-000	1/2	5.58

(For polyurethane or other soft plastic tubing)

PLASTIC PLUG 284PP



Part#	Size	List
20-009	5/32	0.77
20-010	1/4	0.99
20-014	5/16	2.25
20-011	3/8	1.76
20-013	1/2	2.36

UNION CONECTOR AQ62

12-020		6580
50-562		3106
262-OF		63PL
1162		KQH
262PP		



PLAIN BRASS **NICKEL PLATED**

Part #	List	Size	Part #	List
20-017	3.78	1/8	20-017N	3.56
20-018	3.87	5/32	20-018N	3.60
20-019	4.20	1/4	20-019N	3.78
20-022	4.91	3/8X1/4		
20-020	5.81	3/8	20-020N	5.31
20-021	8.01	1/2	20-021N	7.11

REDUCER 67PPL



NICKEL PLATED 286PP

Part #	Tube 1	Tube 2	List
20-510	1/4	1/8	4.59
20-511	1/4	5/32	4.95
20-512	3/8	1/4	6.26

KQT		264PP
12-060		AQ64
50-564		6540
264OF		3140
		164PL



PLAIN BRASS **NICKEL PLATED**

Part #	List	Tube O.D.	Part #	List
20-025	5.43	1/8	20-025N	5.22
20-026	5.27	5/32	20-026N	5.73
20-027	5.76	3/16		
20-028	5.85	1/4	20-028N	5.54
20-031	7.74	5/16	20-031N	7.65
20-029	8.10	3/8	20-029N	7.65
20-030	11.30	1/2	20-030N	10.58

FEMALE CONECTOR 266PP



PLAIN BRASS **NICKEL PLATED**

Part #	List	Tube O.D.	Pipe Thread	Part #	List
20-032	5.63	1/8	1/8	20-032N	5.49
20-038	8.15	1/8	1/4	20-038N	5.49
20-034	4.91	1/4	1/8	20-034N	4.68
20-035	6.49	1/4	1/4	20-035N	5.13
20-036	9.45	3/8	1/4	20-036N	8.33
20-037	11.34	3/8	3/8	20-037N	8.60

FIXED MALE ELBOW 12-445

269PP		1169
AQ69-P		
6500		
169PLNS		



PLAIN BRASS **NICKEL PLATED**

Part #	List	Tube O.D.	Pipe Thread	Part #	List
20-065	3.38	1/8	1/8		
20-066	3.42	5/32	1/8		
20-067	3.56	3/16	1/8		
20-068	3.15	1/4	1/8	20-068N	2.97
20-069	3.38	1/4	1/4	20-069N	3.24
20-070	6.08	1/4	3/8		
20-071	4.73	3/8	1/8		
20-072	4.59	3/8	1/4	20-072N	4.73
20-073	5.54	3/8	3/8	20-073N	5.54
20-074	6.80	1/2	1/4		
20-075	6.62	1/2	3/8		
20-064	7.70	1/2	1/2		

Brass

Brass

268PP
AQ68
6510
3115
68PL

MALE CONNECTOR



KQH
12-425
50-568
268-OF
1168

PLAIN BRASS

Part #	List	Tube O.D.	Pipe Thread	Part #	List
20-047	3.38	1/8	10-32*	20-047N	2.84
20-048	2.34	1/8	1/8	20-048N	2.48
20-023	2.93	1/8	1/4	20-023N	2.52
20-049	2.80	5/32	10-32*	20-049N	2.61
20-050	2.39	5/32	1/8	20-050N	2.16
20-046	3.60	5/32	1/4	20-046N	3.15
20-051	4.73	3/16	10-32*		
20-052	3.02	3/16	1/8		
20-053	4.37	1/4	10-32*	20-053N	3.11
20-054	2.66	1/4	1/8	20-054N	2.43
20-055	2.93	1/4	1/4	20-055N	2.70
20-056	3.94	1/4	3/8	20-056N	3.24
20-530	5.36	5/16	1/8	20-530N	3.51
20-531	5.58	5/16	1/4	20-531N	3.69
20-532	6.39	5/16	3/8	20-532N	4.50
20-057	4.01	3/8	1/8	20-057N	3.69
20-058	3.87	3/8	1/4	20-058N	3.65
20-059	4.20	3/8	3/8	20-059N	4.05
20-062	7.20	3/8	1/2	20-062N	6.53
20-060	5.22	1/2	1/4	20-060N	4.95
20-061	6.53	1/2	3/8	20-061N	6.12
20-063	8.01	1/2	1/2	20-063N	7.85

*Furnished with gaskets

AQ69-PS
56520
3109
169PL
KQL

SWIVEL MALE ELBOW



12-447
50-579
269-OFS
11695

PLAIN BRASS

Part #	List	Tube O.D.	Pipe Thread	Part #	List
20-079	4.06	1/8	1/8	20-079N	3.74
20-535	6.48	1/8	1/4	20-535N	4.73
20-080	4.32	5/32	1/8	20-080N	4.00
20-076	7.16	5/32	10-32	20-076N	4.32
20-077	6.21	5/32	1/4		
20-081	4.10	1/4	1/8	20-081N	4.01
20-078	5.99	1/4	10-32		
20-082	4.55	1/4	1/4	20-082N	4.36
20-086	8.91	1/4	3/8	20-086N	6.48
20-538	7.92	5/16	1/4	20-538N	5.31
20-539	10.58	5/16	3/8	20-539N	6.44
20-087	7.47	3/8	1/8	20-087N	6.30
20-083	6.03	3/8	1/4	20-083N	5.85
20-084	6.62	3/8	3/8	20-084N	6.62
20-088	10.44	3/8	1/2	20-088N	9.00
20-085	8.33	1/2	3/8	20-085N	8.37
20-092	9.99	1/2	1/2	20-092N	9.41

AQ65
6550
3102
165pl

UNION ELBOW



KQL
12-040
50-565
265-of

PLAIN BRASS

Part #	List	Tube O.D.	Part #	List
20-150	4.86	1/8	20-150N	4.82
20-151	5.31	5/32	20-151N	4.01
20-152	4.5	1/4	20-152N	4.14
20-155	7.83	5/16	20-155N	5.09
20-153	7.11	3/8	20-153N	6.17
20-154	10.04	1/2	20-154N	8.91

FEMALE ELBOW



AQ70-P
3009

PLAIN BRASS

Part #	Tube OD	Pipe Thread	List
20-094	5/32	1/8	4.73
20-089	1/4	1/8	5.49
20-090	1/4	1/4	6.62
20-091	3/8	1/4	8.33

UNION "Y"



PLAIN BRASS

Part #	List	Tube 1 O.D.	Tube 2 O.D.	Part #	List
20-552	12.60	1/4	1/8		
20-553	14.00	1/4	1/4	20-553N	11.75

MALE Y



12-445
50-569
1169

PLAIN BRASS

Part #	Tube OD	Pipe Thread	List
20-557	1/4	1/4	15.48

QUICK DISCONNECT

AQ92-P
6500
169PLNS



PLAIN BRASS

Part #	Tube O.D.	Pipe Thread	List
20-133	1/4	1/8	9.81
20-134	1/4	1/4	10.22

FIXED MALE RUN TEE AQ71-P



PLAIN BRASS			
Part #	Tube O.D.	Pipe Thread	List
20-095	1/8	1/8	4.82
20-097	3/16	1/8	5.90
20-098	1/4	1/8	5.63
20-093	1/4	1/4	6.08
20-099	3/8	1/8	7.61
20-100	3/8	1/4	8.42
20-101	3/8	3/8	9.00
20-102	1/2	3/8	10.17

AQ70-PS 12-468
 56440 50-571
 3103 271-OFS
 171PL 11715
 KQY

SWIVEL MALE RUN TEE



PLAIN BRASS			NICKEL PLATED		
Part #	List	Tube O.D.	Pipe Thread	Part #	List
20-162	6.81	1/4	1/8	20-162N	6.12
20-163	7.38	1/4	1/4	20-163N	6.12
20-165	11.84	3/8	3/8	20-165N	10.62
20-174	17.91	1/2	1/4	20-174N	12.60
20-166	13.59	1/2	3/8	20-166N	11.97

KQT AQ64
 12-060 6540
 50-564 3140
 264OF 64PL

SWIVEL MALE BRANCH TEE



PLAIN BRASS			NICKEL PLATED		
Part #	List	Tube O.D.	Pipe Thread	Part #	List
20-103	8.60	1/8	1/8	20-103N	5.58
20-104	8.42	5/32	10/32	20-104N	5.58
20-109	8.42	5/32	1/8	20-109N	5.49
20-105	7.02	1/4	1/8	20-105N	6.12
20-106	6.62	1/4	1/4	20-106N	6.12
20-107	8.60	3/8	1/4	20-107N	8.42
20-108	10.35	3/8	3/8	20-108N	9.54
20-110	12.60	1/2	3/8	20-110N	11.97
20-111	14.72	1/2	1/2	20-111N	13.41

FIXED MALE BRANCH TEE AQ72-P



PLAIN BRASS			
Part #	Tube O.D.	Pipe Thread	List
20-112	1/8	1/8	5.22
20-113	5/32	1/8	5.90
20-114	3/16	1/8	6.57
20-115	1/4	1/8	6.17
20-116	1/4	1/4	6.62
20-117	3/8	1/8	7.83
20-118	3/8	1/4	8.61
20-119	3/8	3/8	9.50
20-120	1/2	3/8	11.43

FEMALE BRANCH TEE AQ77-P
 3008
 177PL



PLAIN BRASS			
Part #	Tube O.D.	Pipe Thread	List Price
20-130	1/4	1/8	9.90
20-131	1/4	1/4	12.38
20-132	3/8	1/4	13.46

AQ82-P 12-029
 6590 50-582
 62PLBH 282-OF
 KQE 1174

BULKHEAD UNION



PLAIN BRASS			NICKEL PLATED		
Part #	List	Tube O.D.	Pipe Thread	Part #	List
20-126	8.06	3/16	1/2-20		
20-127	7.02	1/4	1/2-20	20-127N	6.35
20-123	8.10	5/16		20-123N	7.56
20-128	9.41	3/8	5/8-18	20-128N	9.09
20-129	13.01	1/2	3/4-16	20-129N	11.61

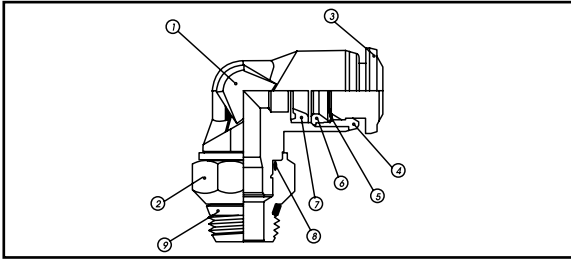
FEMALE BULKHEAD UNION AQ86-P



PLAIN BRASS			
Part #	Tube O.D.	Pipe Thread	List
20-170	1/4	1/8	8.19
20-171	1/4	1/4	9.45
20-172	3/8	1/4	9.90

Brass

Technical Characteristics



PART 1	BODY	COMPOSITE
PART 2	BODY	NICKEL PLATED BRASS
PART 3	TUBE RELEASE	ACETAL RESIN
PART 4	RETAINER	NICKEL PLATED BRASS
PART 5	GRIPPER RING	STAINLESS STEEL
PART 6	SPACER	COMPOSITE
PART 7	THREAD PACKING	NBR 70
PART 8	O-RING	NBR 70
PART 9	THREAD SEAL	NBR70

Operating Range

Pressure: 0 to 220 PSI (15 bar)

Vacuum: 0 to 29hg (-.99 bar)

Temperature

-5° F to + 175° F (-20° C to + 80° C)

Media

Compressed air.

Non-toxic fluids (water)

Global Threads (See Section Header for details)

Materials

The latest generation of composite material is used in the body construction in addition to nickel-plated brass on threaded components and stainless steel on the tube gripper.

Brass

MALE ADAPTER



Nickel Plated
O.D. mm

Part #	Tube	Global Thread	List
20-630	4	1/8	2.21
20-631	4	1/4	2.70
20-632	6	1/8	2.88
20-633	6	1/4	2.66
20-634	8	1/4	2.93
20-635	8	3/8	3.33
20-636	10	1/4	3.87
20-637	10	3/8	3.87
20-801	12	1/4	4.59
20-638	12	3/8	4.91

UNION



Part #	Tube O.D. mm	List
20-600	4	4.14
20-601	6	4.23
20-602	8	4.68
20-603	10	5.36
20-604	12	6.89

SWIVEL MALE 90° ELBOW



O.D. mm

Part #	Tube	Global Thread	List
20-642*	6	1/8	3.60
20-803	6	1/4	4.77
20-805	8	1/4	5.27
20-655	8	3/8	6.80
20-656	10	1/4	6.93
20-657	10	3/8	7.79
20-658	12	3/8	8.77
20-659	12	1/2	9.59

UNION 90° ELBOW



Part #	Tube O.D. mm	List
20-806	4	4.46
20-660	6	4.46
20-661	8	5.22
20-807	10	6.71
20-808	12	8.82

SWIVEL MALE BRANCH TEE



O.D. mm

Part #	Tube	Global Thread	List
20-680	4	1/8	5.94
20-682	6	1/8	5.94
20-683	6	1/4	6.48
20-809	8	1/8	7.25
20-684	8	1/4	7.47
20-685	8	3/8	8.06
20-686	10	1/4	10.17
20-687	10	3/8	10.80
20-810	10	1/2	11.16
20-688	12	3/8	11.57
20-689	12	1/2	12.60

UNION TEE



Part #	Tube O.D. mm	List
20-610	4	5.81
20-611	6	6.17
20-612	8	7.02
20-613	10	10.04
20-614	12	12.38

SWIVEL MALE RUN TEE



O.D. mm

Part #	Tube	Global Thread	List
20-670	4	1/8	5.94
20-672	6	1/8	5.94
20-673	6	1/4	6.48
20-811	8	1/8	7.25
20-674	8	1/4	7.47
20-675	8	3/8	8.06
20-676	10	1/4	10.17
20-677	10	3/8	11.16
20-678	12	3/8	11.57
20-679	12	1/2	12.60

UNION Y CONNECTOR



Part #	Tube O.D. mm	List
20-813	4	8.28
20-814	6	8.77
20-815	8	9.90

MALE Y CONNECTOR



O.D. mm

Part #	Tube	Global Thread	List
20-816	4	1/8	8.28
20-817	6	1/8	8.37
20-818	6	1/4	8.51
20-819	8	1/8	9.72
20-820	8	1/4	9.90

More sizes and shapes available

WATER HEATER CONNECTOR



Part #	Size	List
37-440	1/2" FIP Swivel x PEX Long Turn	4.90

**BRASS PEX INSERT ELBOW
PEX X PEX**



Part #	Size	List
37-460	1/2" X 1/2"	2.00
37-461	3/4" X 3/4"	3.00

PEX INSERT TEE



Part #	Size	List
37-451	1/2"	2.50
37-452	1/2" X 1/2" X 3/4"	3.75
37-453	3/4" X 1/2" X 1/2"	3.75
37-454	3/4" X 1/2" X 3/4"	3.75
37-455	3/4" X 3/4" X 1/2"	3.75
37-456	3/4"	4.50
37-457	1" X 1" X 1/2"	5.00
37-458	1"	5.00

**PEX INSERT COUPLING
PEX X PEX**



Part #	Size	List
37-462	1/2" X 1/2"	1.00
37-463	3/4" X 1/2"	1.75
37-464	3/4" X 3/4"	1.75
37-465	1" X 3/4"	2.25
37-468	1"	3.00

MALE INSERT COUPLING

Male Sweat X PEX



Part #	Size	List
37-472	1/2" X 1/2"	1.50
37-473	3/4" X 3/4"	2.25
37-477	1"	4.50

Female Sweat X PEX

37-474	1/2" X 1/2"	1.25
37-475	3/4" X 3/4"	2.25

ADAPTER POLY X PEX



Part #	Size	List
37-442	1/2"	1.50
37-443	3/4"	1.85

TEST PLUGS



Part #	Size	List
37-444	1/2"	0.75
37-445	3/4"	1.07

FEMALE ADAPTER



Part #	Size	List
37-466	1/2" Barb x 1/2" FPT	3.75
37-467	3/4" Barb x 3/4" FPT	3.75


INSERT MALE ADAPTER PEX X MPT



Part #	Size	List
37-470	1/2" X 1/2"	2.25
37-471	3/4" X 3/4"	3.75

Meets SAE #J-534C

Many other types available on special order


PIPE THREAD		#610
BALL CHECK		1610
5/8" Long		2800
Part #	Size	List
36-110	1/8-27 NPT	0.43
36-111	Thread Forming	0.60

PIPE THREAD		#607
BALL CHECK		1607
		2800
PART#	Size	List
36-112	1/8-27 NPT(1-1/4 Long)	1.15
36-113	1/8-27 NPT(1-3/4Long)	1.18


PIPE THREAD		#611
30° ANGLE BALL CHECK		1611
		2830
Part #	Size	List Price
36-114	1/8-27 NPT	0.73

PIPE THREAD		#688
45° ANGLE BALL CHECK		1688
		2845
Part #	Size	List Price
36-116	1/8-27 NPT	0.72

PIPE THREAD		#612
65° ANGLE BALL CHECK		1612
		2865
Part #	Size	List Price
36-118	1/8-27 NPT	0.66

PIPE THREAD		#613
90° ANGLE BALL CHECK		1613
		2890
Part #	Size	List Price
36-120	1/8-27 NPT	0.66
36-121	1-3/16 Long	2.26

PIPE THREAD		#627
BALL CHECK		1627
		2900K
Part #	Size	List Price
36-130	1/4-18 NPT	0.77

65° ANGLE BALL CHECK	PIPE THREAD	#629
		1629
		2965
Part #	Size	List Price
36-132	1/4-18 NPT	1.10

1/4-28 TAPER THREAD		#641
SHORT BALL CHECK		1641
		2400
Part #	List Price	
36-140		0.25
36-141	Thread Forming	0.28

1/4-28 TAPER THREAD		#652
LONG BALL CHECK		1652
		2400
Part #	List Price	
36-142		0.32

1/4-28 TAPER THREAD		#680
EXTRA LONG BALL CHECK		1680
		2400
Part #	List Price	
36-144		0.48

1/4-28 TAPER THREAD		#637
SHORT 45° BALL CHECK		1637
		2445
		1665
		2465
		3010
Part #	List Price	
36-146		0.59
36-147	65°	0.67

1/4-28 TAPER THREAD		#636
LONG 45° BALL CHECK		1630
		2445
Part #	List Price	
36-148		0.89

1/4-28 TAPER THREAD		#911
90° ANGLE BALL CHECK		1911
		2490
		3054
Part #	List Price	
36-150		0.52
36-152	90° THREAD FORMING	0.94

BALL CHECK DRIVE TYPE #608
1608



Part # List
36-160 5/16 0.36

BALL CHECK DRIVE TYPE #728
1728
2316



Part # List
36-164 3/16 0.32

BALL CHECK DRIVE TYPE #743
1743
214



Part # List
36-166 1/4 0.29

METRIC #711
6000
2106
2M6
Part # List
36-168 6MMx1 0.42



45° ANGLE METRIC #712
6045
2107



Part # List
36-170 6MMx1 0.62

90° ANGLE METRIC #713
6090
2108
ZM906
Part # List
36-172 6MMx1 0.62



METRIC #811
8000
2103
ZM58
Part # List
36-174 8MMx1 0.36



45° ANGLE METRIC #812
8045
2104
ZM458
Part # List
36-176 8MMx1 0.61



90° ANGLE METRIC #813
8090
2105
ZM908
Part # List
36-178 8MMx1 0.61



METRIC #911
9000
2109
ZM510
Part # List
36-180 10MMx1 0.49



METRIC #912
9045
2110
ZM4510
Part # List
36-182 10MMx1 0.76



90° ANGLE METRIC #913
9090
2111
ZM9010
Part # List
36-184 10MMx1 0.72



#711-B
1711
2500
Part # List
36-186 5/16-24 0.46



#710-B
1710
2600
Part # List
36-188 3/8-24 0.65



BUTTON HEAD
1184
1186
Part # List
36-200 1/8PTF 184 1.75
36-205 1/4NPTF 186 1.95



WHIP HOSE
Fits any hand gun 1/8 MIP End
10,000 LB Burst Pressure
Part # List
36-210 12"RUBBER 14.79
36-212 18"RUBBER 10.25
36-214 24"RUBBER 12.42
36-216 36"RUBBER 15.35

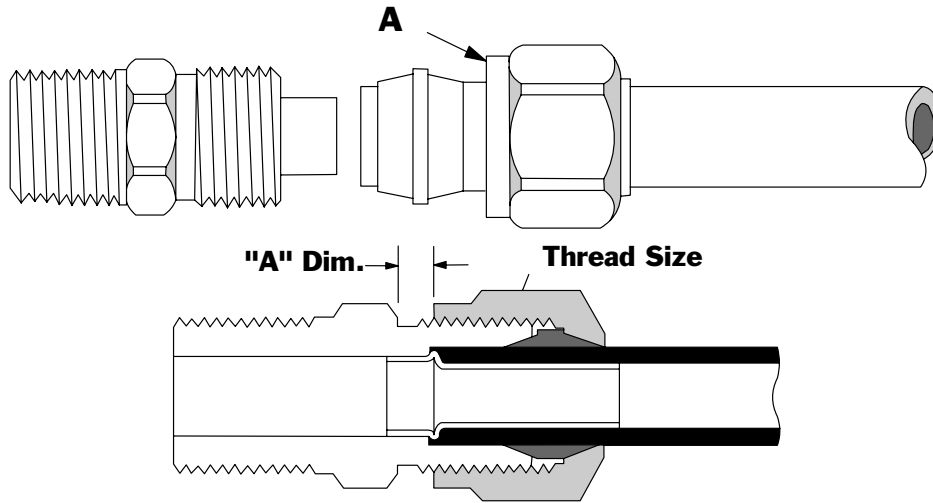


4 JAW GREASE GUN COUPLER

Part # List Price
36-220 4.34



D.O.T. Air Brake - Nylon Tubing



Brass

Tube O.D	1/4	3/8	1/2	5/8	3/4
Thread Size-B	7/16-24	17/32-24	11/16-20	13/16-18	1-18

•Typical Application

Air brake systems except where temperatures exceed +200°F or where battery acid can drip on tubing.

•Pressure

Maximum operating pressure of 150 PSI.

•Vibration

Fair resistance.

•Temperature Range

-40°F to +200°F (-40°C to +93°C).

•Material

CA360 Brass

•Used With

NT Nylon Tubing - SAE J844 Type A and B.

•Advantages

Easy to assemble (no tube preparation or flaring required.) Built in tube support. May be used with copper tubing by replacing nut, sleeve and insert with long nut and spherical sleeve. Insert should be removed for copper tubing use.

•Conformance

Meets specifications and standards of SAE and DOT FMVSS 571,106.

•Assembly Instructions

- 1- Cut tubing to desired length.
- 2-Slide nut and then sleeve on tubing. Threaded end of nut “A” must face toward fitting body.
- 3-Insert tubing into the preassembled fitting. Be sure tubing is bottomed in fitting.
- 4- Tighten nut to required torque as indicated on chart.

Tube Size	Additional Number of Turns from Hand-Tight
1/4	3
3/8, 1/2	4
5/8, 3/4	3-1/2

Disassembly: Remove nut and pull tubing out of fitting body. Insert will remain in tubing.

Reassembly: Push tubing and insert into fitting body until it bottoms. Thread nut onto fitting body and torque as in step 4.

SLEEVE

**SAE#
100115**



60NAB
60NTA
1460

Part #	Tube O.D.	List Price
38-001	1/4	0.18
38-002	3/8	0.21
38-003	1/2	0.27
38-004	5/8	0.66
38-005	3/4	1.17

NUT

**SAE#
100110**



61NAB
61NTA
1461

Part #	Tube O.D.	List Price
38-010	1/4	0.49
38-011	3/8	0.54
38-012	1/2	1.02
38-013	5/8	1.39
38-014	3/4	2.84

UNION

**SAE#
100101BA**



62NAB
62NTA
1462

Part #	Tube O.D.	List Price
38-019	1/4	2.25
38-020	3/8	3.78
38-021	1/2	5.13
38-022	5/8	8.92
38-023	3/4	15.93

BULKHEAD UNION



62NBH
1474
475

Part #	Tube O.D.	List Price
38-028	1/4	7.20
38-029	3/8	8.82
38-030	1/2	15.3

STAINLESS STEEL INSERT

• For SAE #
J844 Tubing

59A
63NTA



Part #	Tube O.D.	List Price
38-035	1/4	0.36
38-036	3/8	0.45
38-037	1/2	0.63
38-038	5/8	1.71
38-039	3/4	2.07

BRASS INSERT

1484
463



Part #	Tube O.D.	List Price
38-040	1/4	0.21
38-041	3/8	0.26
38-042	1/2	0.70
38-043	5/8	0.40
38-048	3/4	0.94

TEE

**SAE#
100401BA**

64NAB
264NTA
1464



Part #	Tube O.D.	List Price
38-044	1/4	6.25
38-045	3/8	6.45
38-046	1/2	10.60
38-047	5/8	26.82

REDUCING TEE

Part #	1	2	3	List Price
38-049	3/8	3/8	1/4	17.84
38-050	3/8	3/8	1/2	17.52
38-057	1/2	1/2	3/8	18.27

**SAE#
100201BA**

ELBOW



64NAB
265NTA
1465

Part #	Tube O.D.	List Price
38-052	1/4	4.36
38-053	3/8	4.55
38-054	1/2	8.25
38-055	5/8	15.89

BULKHEAD UNION



Part #	Tube O.D.	List Price
38-024	1/4	7.20
38-025	3/8	8.64

FEMALE ADAPTER

**SAE#
100103BA**



66NAB
66NTA
1466
66NBH

TUBE O.D. X FEMALE PIPE

Part #	Size	List Price
38-060	1/4X1/8	3.51
38-061	1/4X1/4	3.49
38-062	3/8X1/8	2.92
38-063	3/8X1/4	3.25
38-064	3/8X3/8	3.99
38-065	1/2X3/8	6.33
38-066	1/2X1/2	6.25
38-067	5/8X3/8	9.86
38-068	5/8X1/2	10.55

**SAE#
100102BA**

MALE ADAPTER



68NAB
68NTA
1468

TUBE O.D. X MALE PIPE

Part #	Size	List Price
38-072	1/4X1/16	3.93
38-073	1/4X1/8	1.94
38-074	1/4X1/4	1.96
38-075	1/4X3/8	3.51
38-076	3/8X1/8	2.19
38-077	3/8X1/4	1.85
38-078	3/8X3/8	2.66
38-079	3/8X1/2	3.48
38-080	1/2X1/4	3.46
38-081	1/2X3/8	3.42
38-082	1/2X1/2	4.39
38-087	1/2X3/4	8.75
38-083	5/8X3/8	7.83
38-084	5/8X1/2	5.38
38-088	5/8X3/4	10.46
38-085	3/4X1/2	9.63
38-086	3/4X3/4	11.07

MALE ELBOW

**SAE#
100202BA**



1469

TUBE O.D. X MALE PIPE

Part #	Size	List Price
38-091	1/4X1/8	2.22
38-092	1/4X1/4	2.47
38-093	1/4X3/8	4.26
38-094	3/8X1/8	2.87
38-095	3/8X1/4	3.24
38-090	3/8X1/4LONG	6.68
38-101	3/8X3/8	3.17
38-102	3/8X1/2	5.00
38-103	1/2X1/4	4.96
38-104	1/2X3/8	4.62
38-109	1/2X3/8LONG	9.00
38-105	1/2X1/2	5.67
38-106	5/8X3/8	9.76
38-107	5/8X1/2	7.47
38-110	5/8X3/4	21.63
38-111	3/4X3/8	15.46
38-108	3/4X1/2	15.84

FEMALE ELBOW

**SAE#
100203BA**



70NAB
1470
270NTA

TUBE O.D. X FEMALE PIPE

Part #	Size	List Price
38-113	1/4X1/8	3.65
38-114	1/4X1/4	9.58
38-115	3/8X1/8	6.45
38-116	3/8X1/4	4.12
38-117	3/8X3/8	4.61
38-118	1/2X3/8	6.52
38-119	1/2X1/2	7.93
38-120	5/8X1/2	15.57

**SAE#
100424BA**

MALE RUN TEE



71NAB
271NTA
1471

Part #	1	2	3	List Price
38-125	1/4	x 1/8	x 1/4	6.39
38-126	1/4	x 1/4	x 1/4	8.86
38-124	3/8	x 1/4	x 1/4	8.82
38-127	3/8	x 1/4	x 3/8	6.95
38-128	3/8	x 3/8	x 3/8	7.99
38-129	1/2	x 3/8	x 1/2	10.97

Aim High

It must be borne in mind that the tragedy of life

Doesn't lie in not reaching your goal.

The tragedy lies in having no goals to reach.

It isn't a calamity to die with dreams unfulfilled,

But it is a calamity not to dream.

It is not a disaster to be unable to capture your ideal,

But it is a disaster to have no ideal to capture.

It is not a disgrace not to reach the stars,

But it is a disgrace to have no stars to reach for.

Not failure, but low aim is sin.

-Dr. Benjamin Elijah Mays

MALE BRANCH TEE

**SAE#
100425BA**



72NAB
272NTA
1472

Part #	1	2	3	List Price
38-136	1/4X1/4	X1/8		6.75
38-137	1/4X1/4	X1/4		7.99
38-138	3/8X3/8	X1/8		6.54
38-132	3/8X1/4	X1/4		11.63
38-139	3/8X3/8	X1/4		5.81
38-133	1/2X1/2	X1/4		13.32
38-140	3/8X3/8	X3/8		6.09
38-134	1/2X3/8	X3/8		11.35
38-141	1/2X1/2	X3/8		8.02
38-142	1/2X1/2	X1/2		11.88
38-135	5/8X5/8	X1/4		15.27
38-143	5/8X5/8	X1/2		23.40

SPECIAL TEES

Part #	1	2	3	List Price
38-144	3/8X3/8	X1/4	FIP	11.68
38-145	1/2X1/2	X1/4	FIP	13.03
38-146	5/8X5/8	X1/4	FIP	18.12

45° ELBOW

**SAE#
100302BA**



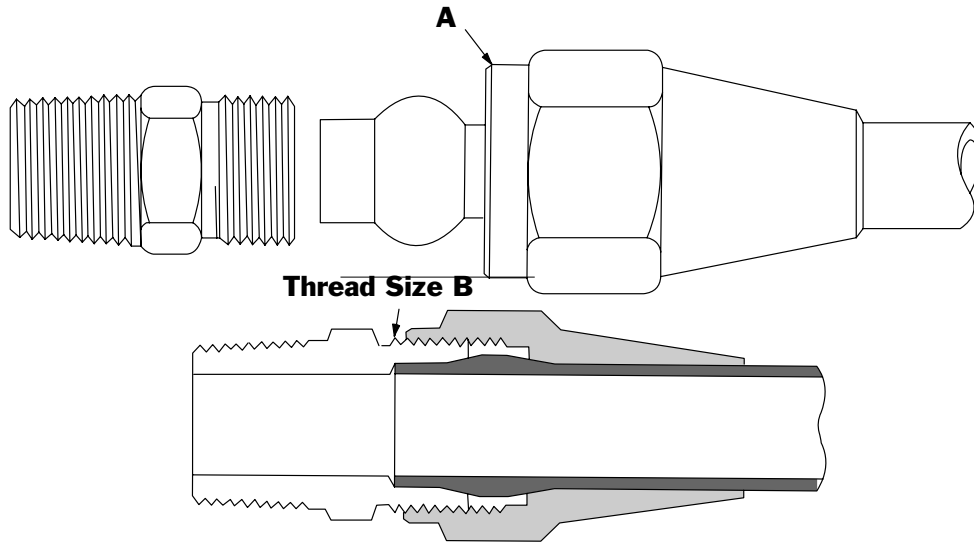
6945NAB
279NTA
1480

TUBE O.D. X MALE PIPE

Part #	Size	List Price
38-148	1/4X1/8	4.50
38-149	1/4X1/4	8.56
38-150	3/8X1/8	6.80
38-151	3/8X1/4	4.07
38-152	3/8X3/8	4.97
38-153	3/8X1/2	8.55
38-157	1/2X1/4	7.97
38-154	1/2X3/8	6.66
38-155	1/2X1/2	8.93
38-156	5/8X1/2	11.07
38-158	3/4X1/2	20.52

D.O.T. Air Brake - Copper Tubing

Brass



Tube O.D.	1/4	3/8	1/2	5/8	3/4
Thread Size-B	7/16-24	17/32-24	11/16-20	13/16-18	1-18

•Typical Application

Air brake systems.

•Pressure

Maximum operating pressure of 150 PSI.

•Vibration

Fair resistance.

•Temperature Range

-65°F to +250°F (-53°C to +121°C) with copper tubing.

•Material

CA360 Brass.

•Used With

Copper tubing in air brake systems.

•Advantages

Easy to assemble (no flaring). May be used with nylon tubing by replacing long nut and spherical sleeve with insert, rigid sleeve and nut.

•Conformance

Meets specifications and standards of SAE and DOT.

•Assembly Instructions

- 1- Cut tubing to desired length. Make sure all burrs are removed and the ends are cut square.
- 2- Slide nut and then sleeve on tubing. Threaded end "A" must face toward fitting body.
- 3- Insert tubing into fitting. Be sure tubing is bottomed on fitting shoulder.
- 4- Thread nut onto fitting body until it is hand tight.
- 5- From that point, tighten with a wrench the number of turns indicated in the chart below:

Tube Size	Additional Number of Turns from Hand Tight
1/4, 3/8	1-3/4
1/2, 5/8, 3/4	3-1/4

SLEEVE

**SAE #
120115BA**



60AB
1360

Part #	Tube OD	List Price
38-161	1/4	0.11
38-162	3/8	0.16
38-163	1/2	0.24
38-164	5/8	0.45
38-165	3/4	0.80

NUT

**SAE #
120111BA**



20961
61AB
1361

Part #	Tube OD	List Price
38-170	1/4	0.50
38-171	3/8	0.62
38-172	1/2	1.14
38-173	5/8	1.85
38-174	3/4	2.96

**SAE #
120101BA**

UNION



62AB
1362

Part #	Tube OD	List Price
38-179	1/4	1.89
38-180	3/8	3.10
38-181	1/2	5.02
38-182	5/8	9.50
38-183	3/4	15.3

TEE

**SAE #
120401BA**



264AB
1364

Part #	Tube OD	List Price
38-188	1/4	4.94
38-189	3/8	5.27
38-190	1/2	9.32
38-191	5/8	18.59

ELBOW

**SAE #
120201BA**



265AB
1365

Part #	Tube OD	List Price
38-196	1/4	3.65
38-197	3/8	4.21
38-198	1/2	6.99
38-199	5/8	11.01

FEMALE ADAPTER

**SAE #
120103BA**



66AB
1366

TUBE O.D. X FEMALE PIPE

Part #	Size	List Price
38-204	1/4X1/8	2.43
38-205	1/4X1/4	2.44
38-206	3/8X1/8	2.16
38-207	3/8X1/4	2.35
38-208	3/8X3/8	3.00
38-209	1/2X3/8	3.79
38-210	1/2X1/2	4.89
38-211	5/8X3/8	6.89
38-212	5/8X1/2	7.29

MALE ADAPTER

**SAE #
120102BA**



68AB
1368

TUBE O.D. X MALE PIPE

Part #	Size	List Price
38-217	1/4X1/8	1.89
38-218	1/4X1/4	1.81
38-219	1/4X3/8	3.20
38-220	3/8X1/8	1.87
38-221	3/8X1/4	1.87
38-222	3/8X3/8	2.06
38-223	3/8X1/2	2.88
38-224	1/2X1/4	3.02
38-225	1/2X3/8	2.85
38-226	1/2X1/2	3.81
38-227	5/8X3/8	6.12
38-228	5/8X1/2	5.18
38-229	3/4X1/2	9.23
38-230	3/4X3/4	10.44

90° MALE ELBOW

**SAE #
120202BA**



269AB
1369

TUBE O.D. X MALE PIPE

Part #	Size	List Price
38-235	1/4X1/8	2.11
38-236	1/4X1/4	2.33
38-237	1/4X3/8	5.05
38-238	3/8X1/8	2.35
38-239	3/8X1/4	2.36
38-240	3/8X3/8	2.86
38-241	3/8X1/2	4.34
38-242	1/2X1/4	3.40
38-243	1/2X3/8	3.45
38-244	1/2X1/2	4.10
38-245	5/8X3/8	8.69
38-246	5/8X1/2	7.10
38-247	3/4X1/2	13.86

LONG PATTERN ELBOW



TUBE O.D. X MALE PIPE

Part #	Size	List Price
38-249	3/8X1/4	5.33

90° FEMALE ELBOW

**SAE #
120203BA**



270AB
1370

TUBE O.D. X FEMALE PIPE

Part #	Size	List Price
38-252	1/4X1/8	4.23
38-253	1/4X1/4	5.58
38-255	3/8X1/4	3.53
38-256	3/8X3/8	3.95
38-257	1/2X3/8	5.02
38-258	1/2X1/2	6.30
38-259	5/8X1/2	9.50

**SAE #
120424BA**

RUN TEE



271AB
1371

**TUBE O.D. X MALE PIPE
(1&3)X2**

Part #	Size	List Price
38-264	1/4X1/8	6.17
38-265	1/4X1/4	5.60
38-266	3/8X1/4	5.40
38-267	3/8X3/8	6.25
38-269	1/2X1/2	8.60
38-270	5/8X1/2	15.30

**SAE #
120425BA**

BRANCH TEE



272AB
1372

**TUBE O.D. X MALE PIPE
(1&2) X 3**

Part #	Size	List Price
38-276	1/4X1/4	6.35
38-278	3/8X1/4	4.40
38-279	3/8X3/8	4.75
38-280	1/2X3/8	6.70
38-281	1/2X1/2	7.94
38-282	5/8X1/2	15.17

45° MALE ELBOW

**SAE #
120302BA**

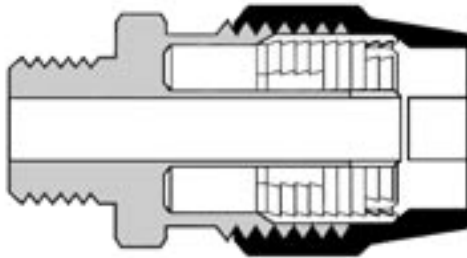


279AB
1380

TUBE O.D. X MALE PIPE

Part #	Size	List
38-287	1/4X1/8	3.42
38-288	1/4X1/4	3.56
38-290	3/8X1/4	4.16
38-291	3/8X3/8	5.81
38-292	3/8X1/2	5.81
38-293	1/2X3/8	4.76
38-294	1/2X1/2	7.92

**D.O.T.
Air Brake Hoses/Ends**



•Typical Application

Air Brake hose connections.

Meets SAE & DOT specifications (FMVCS 10 GAL)

•Pressure

Determined by maximum working pressure for hose size. Up to 125 psi

•Material

CA360 Brass.

Temperature: -40° to + 120° F

•Advantages

Can be used for nearly any brake line. Easy to assemble with a good selection of hose end configurations. Brass material offers excellent resistance against corrosion.

•Assembly Instructions

- 1- Slide nut and sleeve onto hose. Make sure bevel edge of sleeve faces out toward fitting.
- 2- Push hose into fitting until it bottoms.
- 3- Screw nut until contact is made with body hex.

NOTE: When reassembling fitting, body and nut should be inspected. Only reuse if in proper condition. Sleeves should never be reused.

SLEEVE



#60HC
3380-A
0903610
367

HOSE I.D.

Part #	SIZE	List Price
38-300	3/8	1.10
38-301	1/2	1.89

NUT



#61HC
369
3380-B
0903624

HOSE I.D.

Part #	Size	List Price
38-306	3/8	1.22
38-307	1/2	1.99

NUT



#61HCS
0903613
3380-D
31RBSG

HOSE I.D.

Part #	Size	Thread	List Price
38-312	3/8	31/31-20	1.27
38-313	1/2	1-3/32-20	2.19

NUT AND SPRING ASSEMBLY



379
67RBSG
0999999

Part #	Size	List Price
38-015	3/8 ID	2.69
38-016	1/2 ID	4.99

ADAPTER BODY



#68B
W1391Z

HOSE I.D. X MIP

Part #	Size	List Price
38-324	3/8X1/4	1.89
38-325	3/8X3/8	1.89
38-326	3/8X1/2	1.89
38-327	1/2X3/8	6.93
38-328	1/2X1/2	6.35

MALE ADAPTER



#68HC
368
3380B-Y2
68RB

HOSE I.D. X MIP

Part #	Size	List Price
38-333	3/8X1/4	4.71
38-334	3/8X3/8	4.76
38-335	3/8X1/2	5.18
38-336	1/2X3/8	7.15
38-337	1/2X1/2	7.58

MALE ADAPTER

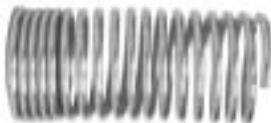


#68HCS
3380B-Y3
68RBGS
378

HOSE I.D. x MIP

Part #	Size	Thread	List Price
38-342	3/8X1/4	31/32	6.09
38-343	3/8X3/8	31/32	6.22
38-344	3/8X1/2	31/32	6.84
38-345	1/2X3/8	1-1/8-20	9.43
38-346	1/2X1/2	1-1/8-20	12.20

SPRING



#60SG
0901045
3380-C
377

HOSE I.D.

Part #	Size	List Price
38-351	3/8	0.71
38-352	1/2	1.46

UNION



#62HC
3380B-Y0
362

Part #	Size	Thread	List Price
38-318	3/8	31/32-30	13.84
38-319	1/2	1-1/8-20	25.18

FEMALE CONNECTOR HOSE



#66ABS
66RBSV
3380B-Y7
386

HOSE I.D. x FEMALE PIPE

Part #	Size	List Price
38-357	3/8 X 3/4-20	11.08
38-358	1/2 X 7/8-20	13.64

MALE CONNECTOR



#68ABS
09155
3380B-Y8
387

ABS x PIPE

Part #	Size	List Price
38-363	3/8X1/4	11.00
38-364	1/2X3/8	20.97

ADAPTER



#68ABS
1390
76RB
388

ABS x PIPE

Part #	Size	Thread	List Price
38-369	3/8X1/4	3/4-20	1.15
38-368	3/8X3/8	3/4-20	1.20
38-372	3/8X1/2	3/4-20	6.91
38-370	1/2X3/8	7/8-20	1.55
38-371	1/2X1/2	7/8-20	3.38

There are two types of people- those who come in the room and say, "Well, here I am," and those who come in and say "Ah, there you are."

-Frederick Collins

D.O.T. PUSH-IN TUBE FITTINGS

Meets D.O.T. FMVSS 571.106
SAE J1131 Air Brake System
Requirements

Benefits for Cost Savings & Engineering Project

- **Fast assembly:** No tools required. Simply push tubing in. Saves up to 75% of assembly time compared to standard air compression fittings. No loose parts to handle.
- **Fast disconnect:** Hold the collet collar with two fingers and pull out tube. No tools required.
- **Reusable:** Can be connected and disconnected several times.
- **Reliable sealing:** Using recommended tubing, full sealing is guaranteed.
- **Versatility:** Buna N O'ring standard. Viton and others available per request. Secure Tube Retention. Pulling on tubing only serves to tighten the connection.
- **Pre-Applied Teflon®** based pipe sealant on all male pipe threads, saving customer additional labor.
- **Full Flow Design,** provides more flow area than conventional fittings with internal tube supports even in the swivels.

DOT Fittings are constructed with an all brass captive eyelet which allows for maximum flow. The brass captive eyelet with extended length is floating and has a machined top end radius for easy installation of tubing. All male threads have a pre-applied Teflon* based pipe sealant to provide for easy assembly and leak proof seal.

- **Materials:**
CA360 Brass
"O" Ring: Buna - Nitrile (90 Durometer)
EP (Ethylene Propylene)
- **Working Pressures & Temperature Ranges**
Vacuum to 750 PSI
-40° to 200° Fahrenheit
- **Ordering Options**
The following options are **available only by customer request** and may be subject to minimum run quantities for ordering.
 - *Viton "O" Ring seals
 - Electroless Nickel Plating
 - Metric DQ Dot "One-Push" tube fittings with BSPT threads
 - Manifolds with DQ DOT One Push Cartridges.

MALE 45° ELBOW



AQ54DOT
279 PTMS
1880
DQ54DOT

Part #	Tube O.D.	Pipe Thread	List
540402	1/4	1/8	6.28
540404	1/4	1/4	7.11
540602	3/8	1/8	6.73
540604	3/8	1/4	7.95
540606	3/8	3/8	8.93
540608	3/8	1/2	7.43
540804	1/2	1/4	11.00
540806	1/2	3/8	9.88
540808	1/2	1/2	11.24
541008	5/8	1/2	14.15
541006	5/8	3/8	8.35
541208	3/4	1/2	19.08
541212	3/4	3/4	19.08

MALE 45° SWIVEL ELBOW



AQ54DOTS
279 PMT
1880
DQ54DOTS

Part #	Tube O.D.	Pipe Thread	List
540402S	1/4	1/8	9.43
540404S	1/4	1/4	9.59
540602S	3/8	1/8	8.82
540604S	3/8	1/4	8.86
540606S	3/8	3/8	9.31
540804S	1/2	1/4	11.00
540806S	1/2	3/8	7.69
540808S	1/2	1/2	11.24
541008S	5/8	1/2	17.32

PLUG



1829
DQ59DOT

Part #	A Tube	Net Price
595320	5/32	0.63
590400	1/4	0.26
590600	3/8	0.38
590800	1/2	0.54

Fitting Pictures are for reference only. Please contact us if specific style is needed.

Brass

Brass Fittings

D.O.T. Push-In

D.O.T. Push-In

UNION



AQ62DOT
162 PL
1862
DQ62DOT

Part #	Tube O.D.	List
620532	5/32	4.86
620400	1/4	3.83
620600	3/8	5.75
620800	1/2	5.63
621000	5/8	13.05
621200	3/4	21.62

UNION TEE



AQ64DOT
164 PL
1864
DQ64DOT

Part #	Tube O.D.	Net Price
645320	5/32	7.79
640400	1/4	8.29
640600	3/8	10.34
640800	1/2	13.29
641200	3/4	38.83

UNION ELBOW



AQ65DOT
165 PL
1865
DQ65DOT

Part #	Tube O.D.	Net Price
655320	5/32	8.82
650400	1/4	5.92
650600	3/8	7.24
650800	1/2	10.00

Spec sheets available upon request

FEMALE CONNECTOR



AQ66DOT
166 PL
1866
DQ66DOT

Part #	Tube O.D.	Pipe Thread	List
665322	5/32	1/8	4.69
660402	1/4	1/8	3.96
660404	1/4	1/4	5.38
660502	5/16	1/8	6.76
660602	3/8	1/8	15.24
660604	3/8	1/4	6.66
660606	3/8	3/8	7.79
660804	1/2	1/4	12.25
660806	1/2	3/8	14.73
660808	1/2	1/2	16.44

MALE CONNECTOR



AQ68DOT
168 PL
1868
DQ68DOT

Part #	Tube O.D.	Pipe Thread	List
685320	5/32	10/32	2.65
685321	5/32	1/16	3.17
685322	5/32	1/8	2.44
680302	3/16	1/8	5.40
680400	1/4	10/32	3.56
680402	1/4	1/8	2.57
680404	1/4	1/4	3.06
680406	1/4	3/8	4.58
680602	3/8	1/8	3.70
680604	3/8	1/4	3.66
680606	3/8	3/8	4.58
680608	3/8	1/2	6.59
680804	1/2	1/4	5.86
680806	1/2	3/8	5.60
680808	1/2	1/2	5.81
681006	5/8	3/8	9.15
681008	5/8	1/2	9.91
681208	3/4	1/2	9.02
681212	3/4	3/4	12.19

MALE ELBOW



AQ69DOT
169 PLNS
1869
DQ69DOT

Part #	Tube O.D.	Pipe Thread	List
695302	5/32	1/16	6.48
695322	5/32	1/8	4.00
690302	3/16	1/8	7.69
690402	1/4	1/8	4.16
690404	1/4	1/4	4.65
690406	1/4	3/8	6.16
690602	3/8	1/8	6.69
690604	3/8	1/4	5.59
690606	3/8	3/8	5.65
690608	3/8	1/2	11.26
690804	1/2	1/4	8.25
690806	1/2	3/8	7.85
690808	1/2	1/2	11.58
691006	5/8	3/8	12.69
691008	5/8	1/2	13.29
691208	3/4	1/2	16.79
691212	3/4	3/4	21.08

MALE SWIVEL ELBOW



AQ69DOTS
169 PL
1869
DQ69DOTS

Part #	Tube O.D.	Pipe Thread	List
695320S	5/32	10/32	6.51
690400S	1/4	10/32	6.51
690402S	1/4	1/8	5.00
690404S	1/4	1/4	5.60
690406S	1/4	3/8	7.74
690602S	3/8	1/8	6.69
690604S	3/8	1/4	8.13
690606S	3/8	3/8	6.86
690608S	3/8	1/2	11.65
690804S	1/2	1/4	20.49
690806S	1/2	3/8	10.26
690808S	1/2	1/2	12.81
691006S	5/8	3/8	13.41
691008S	5/8	1/2	15.38
691208S	3/4	1/2	26.22
691212S	3/4	3/4	27.59

FEMALE ELBOW



AQ70DOTS
1870
DQ70DOTS

Part #	Tube O.D.	Pipe Thread	List
705322	5/32	1/8	4.79
700402	1/4	1/8	4.57
700404	1/4	1/4	5.24
700406	1/4	3/8	8.41
700602	3/8	1/8	5.71
700604	3/8	1/4	6.08
700606	3/8	3/8	8.91
700804	1/2	1/4	7.14
700806	1/2	3/8	6.64
700808	1/2	1/2	10.00

FEMALE SWIVEL ELBOW



AQ70DOTS
DQ70DOTS

Part #	Tube O.D.	Pipe Thread	List
705322S	5/32	1/8	4.54
700402S	1/4	1/8	5.98
700404S	1/4	1/4	7.76
700604S	3/8	1/4	8.48
700606S	3/8	3/8	11.43

*Fitting Pictures are for reference only.
Please contact us if specific style is needed.*

Brass

MALE RUN TEE



AQ71DOTS
171 PL
1871
DQ71DOTS

Part #	Tube O.D.	Pipe Thread	List
715322	5/32	1/8	6.64
710402	1/4	1/8	6.43
710404	1/4	1/4	6.51
710602	3/8	1/8	8.59
710604	3/8	1/4	9.13
710606	3/8	3/8	8.80
710608	3/8	1/2	10.59
710806	1/2	3/8	11.92

MALE SWIVEL RUN TEE



AQ71DOTS
171PL
1871
DQ71DOTS

Part #	Tube O.D.	Pipe Thread	List
715322S	5/32	1/8	6.79
710402S	1/4	1/8	8.00
710404S	1/4	1/4	9.19
710604S	3/8	1/4	11.28
710606S	3/8	3/8	11.82
710804S	1/2	1/4	14.64
710806S	1/2	3/8	13.82
710808S	1/2	1/2	16.75

MALE BRANCH TEE



AQ72DOT
172 PL
1872
DQ72DOT

Part #	Tube O.D.	Pipe Thread	List
725322	5/32	1/8	6.64
720302	3/16	1/8	7.14
720402	1/4	1/8	6.73
720404	1/4	1/4	7.24
720406	1/4	3/8	8.89
720602	3/8	1/8	8.64
720604	3/8	1/4	9.12
720606	3/8	3/8	9.65
720804	1/2	1/4	9.85
720806	1/2	3/8	11.92
720808	1/2	1/2	12.00

MALE SWIVEL BRANCH TEE



AQ72DOTS
172 PL
1872
DQ72DOTS

Part #	Tube O.D.	Pipe Thread	List
725320S	5/32	10/32	7.93
725322S	5/32	1/8	8.79
720400S	1/4	10/32	10.57
720402S	1/4	1/8	8.11
720404S	1/4	1/4	8.98
720406S	1/4	3/8	7.33
720602S	3/8	1/8	9.63
720604S	3/8	1/4	10.88
720606S	3/8	3/8	11.85
720804S	1/2	1/4	13.68
720806S	1/2	3/8	13.71
720808S	1/2	1/2	16.28

BULKHEAD UNION



AQ82DOT
62PLBH
1874
DQ82DOT

Part #	Tube O.D.	List
820400	1/4	7.90
820600	3/8	12.01
820800	1/2	13.58
821000	5/8	18.22

FEMALE BULKHEAD UNION



AQ86DOT
1873
DQ86DOT

Part #	Tube O.D.	F-Pipe Thread	List
860402	1/4	1/8	5.92
860404	1/4	1/4	6.80
860604	3/8	1/4	6.54
860606	3/8	3/8	6.73
860808	1/2	1/2	12.00

Fitting Pictures are for reference only. Please contact us if specific style is needed.

How to call the Police

George Phillips of Meridian Mississippi was going to bed when his wife told him that he'd left the light on in the garden shed, which she could see from the bedroom window. George opened the back door to go turn off the light but saw that there were people in the shed stealing things. He phoned the police, who asked "Is someone in your house?" and he said no. Then they said that all patrols were busy, and that he should simply lock his door and an officer would be along when available. George said "Okay," hung up, counted to 30, and phoned the police again. "Hello, I just called you a few seconds ago because there were people in my shed. Well, you don't have to worry about them now cause I've just shot them all." Then he hung up. Within five minutes three police cars an Armed Response unit, and an ambulance showed up at the phillips residence. Of course, the police caught the burglars red-handed. One of the policemen said to George: "I thought you said that you'd shot them! George said, "I thought you said there was nobody available!"

(True Story)

**BRASS SPLIT SLEEVE DOT
FITTINGS (5/32 O.D.)**

COLLET



Part#	Tube O.D.	List Price
38-711	5/32	0.67

NUT



Part#	Tube O.D.	List Price
38-732	5/32	0.90

DOUBLE END UNION



Part#	Tube O.D.	List Price
38-761	5/32	7.63

CONNECTOR



Part#	Tube O.D.	Pipe Thread	List
38-769	5/32	1/16	4.70
38-770	5/32	1/8	4.73

ELBOW



Part#	Tube	Pipe Thread	List Price
38-718	5/32	1/8	3.56

AIR BRAKE TUBING



- SAE J844, Type 3 A & B & DOT FMVSS 106
- Nylon inner tube with open ply nylon fiber reinforcement and nylon cover.
- 40° F to +200° F temperature range.
- 150 P.S.I. max. working pressure

Part#	Type A	Color	Length	List
38-950	1/8	Black	100'	32.85
38-950-3	1/8	Black	1000'	211.50
38-952	1/4	Black	100'	66.60
38-952G	1/4	Green	100'	66.60
38-952R	1/4	Red	100'	66.60
38-952U	1/4	Blue	100'	66.60
38-952-2	1/4	Black	500'	308.25
38-952-3	1/4	Black	1000'	540.74

AIR BRAKE TUBING

Part#	Type B	Color	Length	List
38-960	3/8	Black	100'	182.70
38-960R	3/8	Red	100'	182.70
38-960U	3/8	Blue	100'	182.70
38-960Y	3/8	Yellow	100'	182.70
38-960B5	3/8	Black	500'	593.08
38-965	1/2	Black	100'	249.30
38-965R	1/2	Red	100'	249.30
38-965B5	1/2	Black	500'	778.15
38-970	5/8	Black	100'	286.30
38-975	3/4	Black	100'	373.50

NOTE: The Synflex, Parker and Eaton tubing must be torqued at 47 in. pounds.

Any other 5/32 DOT tubing used, tubing or fitting manufacturer should be contacted for proper torque requirements.

People may forget how fast you did a job, but they will remember how well you did it.



STEEL BRAKE LINES FOR DOMESTIC VEHICLES

Length	Catalog Number 3/16"		Catalog Number 1/4"		Catalog Number 5/16"		Catalog Number 3/8"	
	O.D.	List	O.D.	List	O.D.	List	O.D.	List
6"	38-930	2.61	—	—	—	—	—	—
8"	38-931	2.52	—	—	—	—	—	—
10"	38-932	2.90	—	—	—	—	—	—
12"	38-933	2.93	—	—	—	—	38-985	3.85
20"	38-934	3.38	—	—	—	—	38-986	4.59
30"	38-935	4.14	38-943	4.34	—	—	—	—
40"	38-936	4.70	38-944	5.02	—	—	38-988	6.80
51"	38-937	5.47	38-945	5.76	38-984	6.50	38-989	8.03
60"	38-938	7.00	38-946	6.48	—	—	38-990	8.53
72"	38-939	6.82	—	—	—	—	—	—

NOTE: 3/16" and 1/4" tube assemblies have one long and one short inverted nut.

**AIR BRAKE ACCESSORIES
GLADHAND COUPLINGS**

- Die Cast Aluminum Body
- Conforms to SAE J318
- Connects to 1/2" pipe



SERVICE (Signal) Blue
connects only to Service
Part# **List Price**
38-712 8.42

EMERGENCY (Supply Line) Red
connects only to emergency
38-714 8.42

UNIVERSAL - Gold
connects to all three styles
38-716 8.42

GLADHAND SEAL



Part# **List Price**
38-720 Full Face 0.92

HEX BALL FOOT CHUCK



Part # **List Price**
46-600 1/4fpt live air 2.11

**BALL FOOT CHUCK WITH
1/4 I.D. HOSE BARB**



Part # **List Price**
46-607 1/4 I.D. Live air 1.97

DUAL FOOT CHUCKS

6999 99941
693 50-065
108 6569
DFG-1



Standard straight-on chuck with 30° reverse angle chuck,
1/4" NPT female thread

Part # **List Price**
320-000 9.25

ANGLE CHUCK



For inner dual wheels with tilted valves.
Has 6" extension and 1/4" NPT female thread

Part # **List Price**
320-005 6.34

AIR BRAKE HOSES

AIR BRAKE HOSE



- Spiral synthetic cord reinforcement with neoprene cover.
- 40° F TO +200° F temperature range.
- Max operating pressure 255 psi
- Max burst pressure 900 psi

Part#	I.D.	O.D.	Length	Price
38-910	3/8	3/4	50'	70.70
38-915	1/2	7/8	50'	74.70

FUEL LINE AND VAPOR EMISSION



- SAE 30R7
- Nitrile tube w/ spiral synthetic cord, hypalon cover.
- 50 p.s.i. working pressure. 1/2 -35 PSI
- 40° F to + 257° F temperature range.
- Low pressure/ high temperature fuel for cars, light trucks, and small engines.

Part#	I.D.	O.D.	Length	Price
38-920	3/16	13/32	25'	68.09
38-926	5/16	9/16	25'	79.65
38-923	1/4	.50	25'	71.89
38-927	3/8	.63	50'	61.09

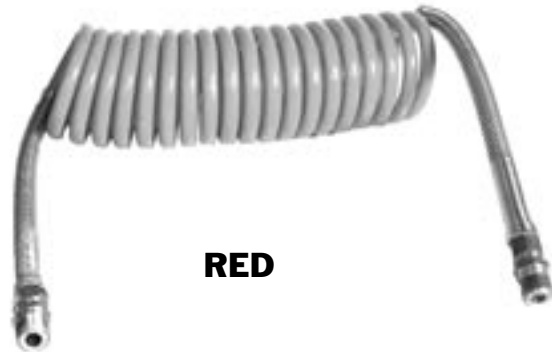
Procrastination

A painfully shy man fell in love with a young woman. He sensed she felt the same way, but he couldn't find the courage to ask her out.

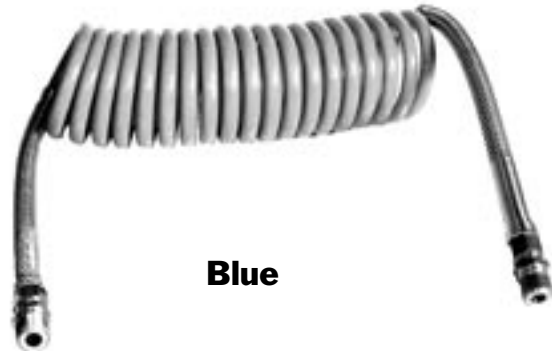
Finally he decided he would mail her a love letter every day for one year, and then ask her for a date.

Faithfully, he followed his plan, and at year's end he was courageous enough to call her - only to discover she'd married the letter carrier.

**COILED AIRBRAKE
TUBE ASSEMBLIES**



RED



Blue

- Conforms to SAE J844 Type B and SAE J1131.
- Conforms to DOT FMVSS 571. 106.
- Maximum Working Pressure 150 PSI,
- Minimum Burst 950 PSI.
- Temperature Range -40° F to 200° F.
- Brass end with spring guards and 1/2" male pipe connectons.
- Spring guards zinc plated for maximum corrosion resistance.
- Color coding, red for emergency and blue for service, provides you with error free installation.
- Preassembled for immediate installation.
- 1/2" O.D. with 1/2" fitting.

Each contains 1 red, 1 blue.

Part#	Working Length	Pigtail Length	List Price
38-700	12'	6"	77.16
38-705	12'	12"	115.26
38-710	15'	12"	84.60

If opportunity doesn't knock,
build a door.

BRASS FUEL HOSE FITTINGS

Typical Application: Low pressure air, fuel and oil applications. Generally used for automotive, light truck, and small engine fuel lines. Use with fuel hose SAE 30R7 & SAE 30R9.

Advantages: Easy to assembly, just push the fitting into the hose clamp. Good selection of configurations at reasonable cost.

MALE CONNECTOR



HOSE BARB X MALE PIPE

Part #	I.D.	Size	List Price
38-800	3/16	1/8	1541 .....1.00
38-802	1/4	1/8	1537 .....0.69
32-377	1/4	1/4	1581 .....0.89
38-806	5/16	1/8	1551 .....0.60
38-808	5/16	1/4	1555 .....1.16
38-810	3/8	1/8	1565 .....0.93
32-381	3/8	1/4	1564 .....1.16
32-382	3/8	3/8	1566 .....1.99
32-383	1/2	3/8	.....1.44
32-384	1/2	1/2	.....2.09
32-182	5/8	3/8	1411 .....3.09
32-385	5/8	1/2	1431 .....2.14
32-387	3/4	1/2	1430 .....2.22
32-388	3/4	3/4	.....3.04
32-185	1	3/4	.....6.71

**INVERTED FLARE
MALE CONNECTOR**



HOSE BARB X INVERTED FLARE

Part #	Hose ID	INV FLARE	List
38-828	5/16	1/4	1598 .....1.49
38-830	5/16	5/16	1560 .....0.98
38-832	5/16	3/8	1561 .....1.78
38-834	3/8	5/16	1568 .....1.80
38-836	3/8	3/8	1570 .....2.21

See Hose Clamps Starting on Page 160

90° MALE ELBOW



HOSE BARB X MALE PIPE

Part	ID	Size	List
38-860	1/4	1/8	1582 .....1.99
38-862	5/16	1/8	1556 .....1.80
38-864	5/16	1/4	1557 .....2.21
38-866	3/8	1/8	1572 .....2.03
38-868	3/8	1/4	1571 .....1.99
32-186	3/8	3/8	.....4.62
32-187	1/2	3/8	.....6.19
32-191	1/2	1/2	.....6.99
32-188	5/8	3/8	.....5.69
32-189	5/8	1/2	.....7.05
32-190	3/4	1/2	.....7.43

**INVERTED FLARE MALE SWIVEL
90° ELBOW**



HOSE BARB X TUBE O.D.

Part	ID	Tube	List
38-873	15/16	15/16	1405 .....6.65
38-874	3/8	3/8	1407 .....4.25

LONG STREET ELLS



Part #	Size	Length	List Price
28-440	1/8	1-3/16"	.....4.55
28-441	1/8	1-7/16"	.....4.50
28-442	1/8	1-11/16"	.....4.70
28-443	1/8	1-7/8"	.....5.60
28-328	1/4	1-3/16"	.....8.00
28-329	1/4	1-7/16"	.....6.40
28-330	1/4	1-11/16"	.....6.40
28-331	1/4	1-7/8"	.....8.95
28-332	1/4	2-1/4"	.....8.85

EXTENSION ADAPTERS D.O.T.



Part #	Size	Length	List Price
28-335	1/8	1-1/4"	.....3.97
28-336	1/8	1-3/4"	.....4.19
28-337	1/8	3"	.....4.95
28-338	1/4	1-9/16"	.....3.11
28-339	1/4	1-13/16"	.....3.24
28-340	1/4	2-1/16"	.....3.87

DRAIN COCKS

- For use with low pressure air, water and fluids.
- Designed for a working pressure of 150 PSI.
- Hand-tightening provides a metal-to-metal seal.
- Not intended for natural gas, LPG, nuclear or aircraft applications.

GASOLINE SHUT OFF 827
w/ SCREEN FILTER



Part #	Size	List Price
46-064	1/4X1/8	15.97

AIR TANK DRAIN VALVE



150 p.s.i.

Self-sealing w/ 5ft. remote cable

Part #	Size	List Price
46-065	1/4	19.23

DRAIN COCK 150 PSI

Trunk Air Tank DCR601-4



Part#	Size	List
46-066	1/4	13.97

TRUCK DRAIN



125 P.S.I.G.

Part #	Size	List Price
46-067	1/8	37D 8.27
46-068	W15310 1/4	38D 8.27

SHUT OFF

150 p.s.i. max.



MALE PIPE X FEMALE PIPE

Part #	Size	List Price
46-069	W20332 1/4	13.07

LEVER HANDLE



840
41D
DC601
• 30 p.s.i.g.

Part #	Size	List Price
46-070	#M-41-P 1/8	7.22
46-071	#M-42-P 1/4	6.91
46-072	#M-43-P 3/8	8.88
46-073	#M-44-P 1/2	12.87

INTERNAL SEAT



DC602
808
400A
1800A

Part #	Size	List Price
46-079	6783 1/8	4.61

INTERNAL SEAT





HB - 5/16
803
305A

Part#	Size	List
46-074	130 1/8	200PA 2.48
46-075	140 1/4	201PA 2.95
46-077	230 3/8	202PA 4.15

LONG INTERNAL SEAT

809


	
46-078	46-076
Part #	Size
46-078 185	..... 1/8
46-076 3/8 Hose I.D.	.....
	List Price
	46-078 7.29
	46-076 7.14

Internal Seat		DC603 802
---------------	---	--------------

TEE HANDLE

Part #	Size	List Price
	#M-200-P	
46-080 1/8	.....	6.81
	#M-201-P	
46-081 1/4	.....	5.70
	#M-202-P	
46-082 3/8	.....	5.65

EXTERNAL SEAT W/ SPOUT

	200A 239 DC606 807
Part#	List
46-084* 6788 1/4	..... 1.50
*Replaces GM #511771 & Chrysler #836015	

BIBB NEEDLE VALVE

.38 Hose ID		804 DC607 2019 201DH
Part #	Size	List Price
46-088 150 302P 1/8 MIP	.....	3.88

	
Part #	Size
46-089 120 ... 303P 1/4	..... MIP
	List Price
	46-089 4.83



Part #	Size	List
46-089A 6660 3/8HOSE X 1/4MIP 4.41

External Seat		320D 240 DC604 801
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RADIATOR TYPE

Part #	Size	List Price
	#M-320-P	
46-085 1/8 300A 1.29
	#M-321-P	
46-086 1/4 100A 1.26
	#M-322-P	
46-087 3/8	..... 2000A	..... 4.18
46-083 1/2	.....	..... 9.86
* 7/16" hex, for 9/16" hex order 46085A		
** 1-3/8" wide handle, 1" available 46086A		

REMOTE CONTROL DRAIN VALVES

REMOTE CONTROL DRAIN VALVES



- Brass Body and stainless steel spring
- Steel cable, nylon coated, certified to 200lbs pull test.
- Low profile to minimize accidental hits and damages.
- Pipe thread 1/4" NPTF.
- To order pre-coated pipe threads, add prefix "P" to the part number.

Part#	List
46-492 Standard 48"	..... 12.49
46-493 Standard 60"	..... 13.46

Brass

Brass Fittings

BRASS TRUCK VALVES



404V

HOSE TO MALE PIPE

Part #	Size	List
46-450	3/8X3/8	10.19
46-451	5/8X3/8	11.03



404V

HOSE TO MALE PIPE

Part #	Size	List Price
46-455	5/8X1/2	22.05
46-457	3/4X3/8	20.37
46-456	3/4X1/2	21.85



405V

FEMALE TO MALE PIPE

Part #	Size	List Price
46-465	3/8X3/8	12.78
46-466	3/8X1/2	18.32
46-467	1/2X1/2	17.06



409V

FLARE TO MALE PIPE

Part #	Size	List Price
46-475	1/2 x 1/2	21.96
46-476	5/8 x 1/2	17.41



412V

FLARE TO MALE PIPE

Part #	Size	List Price
46-485	5/8X1/2	18.93

Anniversaries

1. Clocks
2. China
3. Crystal
4. Electrical Appliances
5. Silverware
6. Wood
7. Desk Sets/Pens/Pencils
8. Linens and Laces
9. Leather
10. Diamond Jewelry
11. Fashion Jewelry
12. Pearls and/or Colored Gems
13. Textiles and Furs
14. Gold Jewelry
15. Watches
16. Holloware
17. Furniture
18. Porcelain
19. Bronze, Figurines
20. Platinum
25. Sterling Silver
30. Diamond
35. Jade
40. Ruby
45. Sapphire
50. Golden
55. Emerald
60. Diamond

SOLID BOTTOM FUEL VALVES

- Approved for use on Motorcraft fuel lines
- Pointer lever.
- 90° turn stop mechanism to assure positive location of the on and off positions.
- Corrosion proofed internal construction assures maximum salt atmosphere protection.
- Port hole is 1/4 (.250) diameter.
- UL listed for use in fuel oils no. 1 & no. 2, LP gas and utility gas.



8980

PIPE

FEMALE X MALE

Part #	Size	List
46-400M	1/8X1/8	24.31
46-401M	1/4X1/4	20.17
46-402M	3/8X3/8	25.02

SOLID BOTTOM VALVES

- Designed for instantaneous on-off operation.
- 360° rotation standard.
- 30 PSI
- Packed with grease.



1035D
M-70-SBV

O-RING SEALED

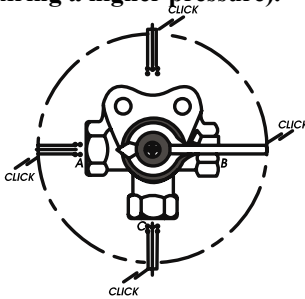
FIP X MIP

Part #	Size	List
46-400	1/8	15.75
46-401	1/4	14.99
46-402	3/8	17.55

**THREE AND FOUR-WAY
SELECTOR VALVES**

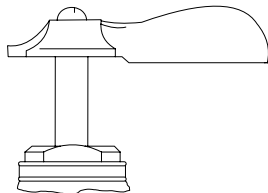
NON-LUBRICATED PLUG VALVES are designed to operate in systems where INSTANTANEOUS PORT SELECTION is desired. Since LUBRICANTS ARE NOT USED, relubrication is not required. There is no lubricant to freeze and lock the valve or to contaminate fine fluids. The O-RING SEALED CAP and STEM eliminate leakage to atmosphere. The mating BRASS BODY and CELCON PLUG produce a fine seal that WILL NOT SEIZE OR GALL.

Designed for PANEL or BRACKET MOUNTING. They are generally recommended for operation in GASOLINE, OIL, AIR, WATER and DETERGENT systems from minus 40° to 180°F, at a maximum operating pressure of 30 p.s.i.g. The fluid port size is 9/32 (.281) diameter for 1/8 and 1/4 sizes, 5/16 (.312) diameter for the 3/8 size. (Consult factory for applications requiring a higher pressure).



Type 1 (Standard)

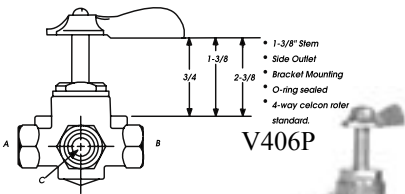
A pronounced "click" may be felt at each position. Handle travel is not restricted.



PANEL MOUNTING AVAILABLE

To change and change for the better are two separate things

**THREE-WAY VALVES
(Side Outlet)**



V406P

LESS CLICK

Part #	A-B-C Female Pipe Thread	Length of Stem	List
46-247	1/4	1-3/8"	21.60
46-248	3/8	1-3/8"	23.81

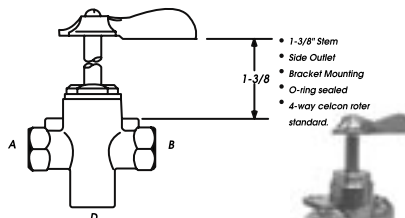
M-108-MID WITH CLICK 360°

Part #	A-B-C Female Pipe Thread	Length of Stem	List
46-250+	1/8	1-3/8"	22.00
46-251	1/4	1-3/8"	21.92
46-252	3/8	1-3/8"	25.38

Openings:

- Handle Pointer over A Valve Open A-C
- Handle Pointer over C Valve Open B-C
- Handle Pointer over B Valve "OFF"
- Handle Pointer over Bracket ... Valve "OFF"

**THREE-WAY VALVES
(Bottom Outlet)**



LESS CLICK

Part #	A-B-C Female Pipe Thread	Thread of Thread	List
46-241	1/4	1-3/8"	21.69

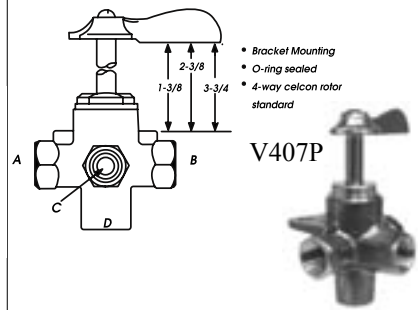
WITH CLICK 360°

Part #	A-B-C Female Pipe Thread	Length of Stem	List
46-243	1/8	1-3/8"	23.13
46-244	1/4	1-3/8"	23.13

Openings:

- Handle Pointer over A Valve Open A-C
- Handle Pointer over C Valve Open B-C
- Handle Pointer over B Valve "OFF"

FOUR-WAY VALVES



V407P

LESS CLICK

Part #	A-B-C-D Female Pipe Thread	Length of Stem	List
46-257	1/4	1-3/8"	20.88

**M-114-MID WITH CLICK
(360°)**

Part #	A-B-C Female Pipe Thread	Length of Stem	List
46-255	1/4	1-3/8"	23.40
46-256	3/8	1-3/8"	25.70

WITH 2-3/8" LONG STEM

M-115-MID

Part #	A-B-C Female Pipe Thread	Length of Stem	List
46-260	1/4	2-3/8"	22.91

Direction of Flow on four way valves pointer at:

- a) A, D open
- b) C, D open
- c) B, D open
- bracket open

Openings:

- Handle Pointer over A Valve Open A-D
- Handle Pointer over C Valve Open C-D
- Handle Pointer over B Valve Open B-D
- Handle Pointer over Bracket ... Valve "OFF"

No one ever says "It's only a game," when their team is winning.

SHUT-OFF COCKS

- Designed for automotive or industrial use. AGA approved shut-off cocks approved for LPG and natural gas applications. Lubricant may wash out at higher pressures or with some exotic fluids.
- Designed for working pressure of 15 PSI.
- Forged brass bodies and brass handles.
- Instantaneous off-on operation with 360° rotation.

FLARE X MALE PIPE



V402F
848

Part #		List Price
46-100	1/4X1/8 27SAE.....	8.20
46-101	1/4X1/4 227SAE.....	9.80
46-102	5/16X1/8 29SAE.....	8.20
46-103	5/16X1/4 229SAE.....	10.85
46-104	3/8X1/4 57SAE.....	9.47
46-106	3/8X1/2 577SAE.....	17.93
46-107	1/2X3/8 67SAE.....	12.80

FLARE X FLARE



842
V203F
136C
Please
request
AGA values

Part #		List Price
46-115	1/4 28SAE.....	8.03
46-116	5/16 30SAE.....	11.31
46-117	3/8 58SAE.....	9.26
46-118	1/2 68SAE.....	11.26
46-119	5/8 1010SAE.....	15.44

**DID YOU KNOW.....
A DUCK'S QUACK DOES NOT ECHO,
AND NO ONE KNOWS WHY.**

FLARE X FEMALE PIPE



138C
2046

Part #		List
46-127	3/8X3/8 163SAE.....	20.16
46-125	3/8X1/2 161SAE.....	16.95
46-126*	3/8X1/2 161SAE.....	17.55
46-128	1/2X1/2 164SAE.....	21.15
46-123	5/8X1/2 164SAE.....	22.08

**Heater valve*

COMP X MALE PIPE



868
V304C
2068
133C
VC206

See page 45 to order
NUT and SLEEVE
seperately.

Part #		List Price
46-130	1/4X1/8 27-C.....	7.79
46-131	1/4X1/4 227-C.....	9.05
46-132	5/16X1/8 29-C.....	8.95
46-134	3/8X1/4 57-C.....	8.98
46-135	3/8X3/8 557-C.....	15.50

COMP X COMP



V3030F
2062
134C

See page 45 to order
NUT and SLEEVE
seperately.

Part #		List Price
46-140	1/4 28-C.....	10.03
46-141	5/16 30-C.....	8.98
46-142	3/8 58-C.....	8.98
46-143	1/2 68-C.....	13.78

FEMALE X FEMALE PIPE



V403P
132C
875

Part#		List
46-151	1/8 7.55	
46-152	1/4 7.89	
46-152T*	1/4 10.88	
46-153	3/8 12.68	
46-154	1/2 17.10	

**125 PSI*

FEMALE X MALE PIPE

880
V402P
130C



Part #		List Price
46-160	..... 1/8	48-P 7.70
46-161	..... 1/4	49-P 7.89
46-161T*	..... 1/4 .....	..... 10.88
46-162	..... 3/8	50-P 12.68

* 125 PSI

MALE PIPE X MALE PIPE 1V401P
890



Part #		List Price
46-165	..... 1/8	76-P 8.13
46-166	..... 1/4	77-P 8.55
46-166T*	..... 1/4 .....	..... 11.16
46-167	..... 3/8	78-P 12.68

* 125 PSI

**COMPRESSION X MALE PIPE
LEFT TO RIGHT ANGLE**



Part#		List Price
46-168	..... LEFT 1/4X1/8	79C 28.94
46-169	..... RIGHT 1/4X1/8	89C 14.12

How long a minute is depends on what side of the bathroom door you're on.

Instructions for Life in the new millennium from the Dalai Lama:

1. Take into account that great love and great achievements involve great risk.
2. When you lose, don't lose the lesson.
3. Follow the three R's: Respect for self, respect for others, responsibility for all your actions.
4. Remember that not getting what you want is sometimes a wonderful stroke of luck.
5. Learn the rules so you know how to break them properly.
6. Don't let a little dispute injure a great friendship.
7. When you realize you've made a mistake, take immediate steps to correct it.
8. Spend some time alone everyday.
9. Open your arms to change, but don't let go of your values.
10. Remember that silence is sometimes the best answer.
11. Live a good, honorable life. Then, when you get older and think back, you'll be able to enjoy it a second time.
12. A loving atmosphere in your home is the foundation for your life.
13. In disagreements with loved ones, deal only with the current situation.
14. Don't bring up the past.
15. Share your knowledge. It's a way to achieve immortality.
16. Be gentle with earth.
17. Once a year, go someplace you've never been before.
18. Remember that the best relationship is one in which your love for each other exceeds your need for each other.
19. Judge your success by what you had to give up in order to get it.
20. Approach love and cooking with reckless abandon.

BRASS AIR COCKS

- For use on low pressure air systems.
- Designed for working pressure of 80 PSI at moderate temperatures.
- Spring-key type cocks of all brass construction with stainless steel springs.
- Machine finish is standard. Polished or plated finish available at extra cost.

MIP X BIBB • tee handle
• no hex



Part #		List Price
	#6	
46-300	1/8	8.31
	#7	
46-301	1/4	12.47

MIP X BIBB

- lever handle
- no hex



Part #		List Price
	#12	
46-305	1/8	8.55
	#13	
46-306	1/4	13.28

MIP X BIBB

- tee handle
- hex



Part #		List Price
	#63	
46-310	1/8	11.38
	#64	
46-311	1/4	9.03
	#8	
46-312	3/8	10.31

MIP X BIBB

- lever handle
- hex



Part #		List Price
	#65	
46-315	1/8	9.50
	#66	
46-316	1/4	13.84
	#14	
46-317	3/8	9.98
	#15	
46-318	1/2	14.28

MIP X MIP

- tee handle
- hex



Part #		List Price
	#18	
46-320	1/8	12.37
	#19	
46-321	1/4	16.65
	#20	
46-322	3/8	11.40
	#21	
46-323	1/2	13.60

MIP X MIP

- lever handle
- hex



Part #		List Price
	#22	
46-324	1/8	11.78
	#23	
46-325	1/4	12.26
	#24	
46-326	3/8	13.82
	#25	
46-327	1/2	15.87

MIP X BIBB NOSE

- tee handle
- hex



Part #		List Price
	#26	
46-330	1/8	15.00
	#27	
46-331	1/4	17.62
	#33	
46-333	1/2	16.15

MIP X BIBB NOSE

- lever handle
- hex



Part #		List Price
	#29	
46-335	1/8	13.06
	#30	
46-336	1/4	17.90
	#31	
46-337	3/8	16.01
	#32	
46-338	1/2	18.58

FIP X FIP



- tee handle
- no hex

Part #		List Price
	#37	
46-340	1/8	10.51
	#38	
46-341	1/4	10.04
	#39	
46-342	3/8	11.92

FIPXFIP



- lever handle
- no hex

Part #		List Price
	#43	
46-345	1/8	13.84
	#44	
46-346	1/4	13.28
	#45	
46-347	3/8	13.54

FIP X FIP



- tee handle
- hex

Part #		List Price
	#55	
46-350	1/8	13.14
	#56	
46-351	1/4	10.98
	#57	
46-352	3/8	13.16

FIP X FIP



- lever handle
- hex

Part #		List Price
	#58	
46-355	1/8	12.59
	#59	
46-356	1/4	14.85
	#60	
46-357	3/8	14.49
	#60A	
46-358	1/2	15.91



- tee handle
- no hex

MIP X FIP

Part #		List Price
	#40	
46-360	1/8	9.50
	#41	
46-361	1/4	13.86
	#42	
46-362	3/8	13.41

MIP X FIP



- lever handle
- no hex

Part #		List Price
	#46	
46-365	1/8	9.26
	#47	
46-366	1/4	11.25
	#48	
46-367	3/8	16.02
	#48A	
46-368	1/2	15.64

MIP X FIP



- tee handle
- hex

Part #		List Price
	#49	
46-370	1/8	9.27
	#50	
46-371	1/4	13.86
	#51	
46-372	3/8	16.88
	#51A	
46-373	1/2	16.96

FIP X MIP



- lever handle
- hex

Part #		List Price
	#52	
46-375	1/8	9.98
	#53	
46-376	1/4	9.98
	#54	
46-377	3/8	14.01
	#54A	
46-378	1/2	15.20

NEEDLE VALVES

Made with either pin handle or pressed on handle.
Please specify if you have a preference.

- Used on instrumentation, hydraulic, and pneumatic systems.
- Designed for a maximum working pressure of 150 PSI.
- Provided with steel handles and metal-to-metal seats with fine-thread screwdown.
- Not designed for natural gas, LPG, nuclear or aircraft applications.
- Always install with pressure against the seat.

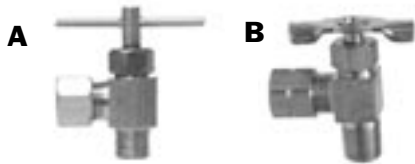
COMP X MALE PIPE



NV106C
2205
820
3068

Part #	Handle	List
	#M-133-C	
46-001	3/16X1/8	13.44
	#M-101-C	
46-002	1/4X1/8	3.00
46-002X	HEAVY PATTERN	7.30
	#M-101-C	
46-003	1/4X1/4	3.65
	#M-102-C	
46-004	5/16X1/8	5.75
	#M-143-C	
46-005	3/8X1/4	7.05

COMP X MALE PIPE-ANGLE

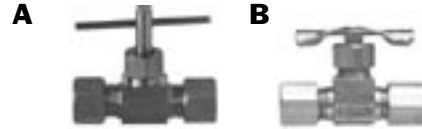


NV104C
2203
821
3069

Part #	Handle	List
	#M-33-C	
46-010	B 3/16X1/8	9.30
	#M-103-C	
46-011	A 1/4X1/8	2.90
46-011X	B HEAVY PATTERN	5.97
	#M-104-C	
46-012	B 1/4X1/4	8.25
46-013	B 5/16X1/8	9.50
46-014	B 5/16X1/4	16.30
	#M-303-C	
46-016	A 3/8X1/4	4.55

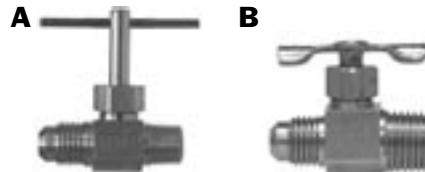
COMP X COMP

NV105C
3062
2201
822



Part #	Handle	List
	#M-105-C	
46-020	B 3/16	11.25
	#M-106-C	
46-021	A 1/4	3.00
	#M-107-C	
46-022	B 5/16	6.10
	#M-113-C	
46-023	A 3/8	4.40

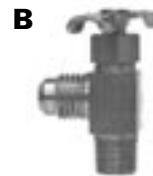
FLARE X MALE PIPE



NV103F
2405
823
3048

Part #	Handle	List
	#M-104-SAE	
46-028	A 1/4 X 1/8	6.95
	#M-1040-SAE	
46-029	B 1/4 X 1/4	6.15
	#M-108-SAE	
46-031	B 3/8 X 1/4	8.75

FLARE X MALE PIPE



NV101F
2403
824
3049

Part #	Handle	List
	#M-103-SAE	
46-036	B 1/4X1/8	5.24
	#M-203-SAE	
46-038	B 5/16X1/8	8.50
	#M-204-SAE	
46-039	B 5/16X1/4	6.80
	#M-303-SAE	
46-040	B 3/8X1/4	6.63

FLARE X FLARE

NV102F
3042
825
2401



Part #	Handle	List
#M-110-SAE		
46-045	1/4 M-11	2.97
#M-115-SAE		
46-046	3/8 M-11	6.93

MULTI-PURPOSE AIR VENT

705



Part #	Handle	List
46-048	1/8	1.81

MALE PIPE TO MALE PIPE

NV107P
2301
826
3122



Part #	Handle	List
#M-108-P		
46-050	A 1/8	4.77
46-050X	B 1/8	5.70
#M-110-P		
46-051	A 1/4	6.75

FEMALE TO FE PIPE

NV109P
2304
817
3103



Part #	Handle	List
#M-304-P		
46-055	1/8	4.00
#M-3044-P		
46-056	1/4	5.67
46-056P	1/4 HEAVY	7.70

MALE X FEMALE PIPE

NV108P
2305
818
3120



Part #	Handle	List
#M-305-P		
46-060	A 1/8	3.87
#M-3055-P		
46-061	A 1/4	5.66
46-061L	B 1/4 LIGHT PATTERN	5.97

FLOW CONTROL NEEDLE & CHECK VALVES

- Precision calibrated, dial to determine and allow a return to required flow settings
- Safe positive stop for needle travel
- positive no-leak stem seal
- 2PSI check cracking pressure
- 1000 PSI maximum operating pressure
- One piece forged housing
- Nickel Plated available
- Suitable for natural gas

CHECK VALVE



Part#	Thread	List
20-473	1/4	47.09

FLOW CONTROL



Part#	Thread	List
20-485	1/8	52.55
20-487	1/4	62.95
20-489	3/8	83.85

NEEDLE VALVE



Part#	Thread	List
20-501	1/8	44.81
20-503	1/4	56.59
20-505	3/8	77.53
20-507	1/2	107.72

Brass Fittings

SCREW STEM SHUT-OFF VALVES NEEDLE VALVES

NEEDLE VALVES are constructed to meter fluids and gases. They are **O-RING SEALED** to eliminate valve maintenance. The O-ring is positioned between the actuating threads and the seat, and seals the closely fitted cylinder to give the lowest possible internal volume and protect threads from contamination.

NEEDLE VALVES have a medium tipped stem (37°) to offer RAPID SHUT OFF, FULL FLOW and a SEMI-METERING FUNCTION.

The standard construction is a forged brass body, brass stem, thrust washer, cap and a BUNA "N" 'O' - RING seal. This valve is rated for 1,000 p.s.i.g. service from -40° to 250° F.

FACTORY MUST BE CONSULTED WHEN VALVES ARE TO BE USED WITH FLAMMABLE FLUIDS IN ORDER TO DETERMINE WORKING PRESSURE AND O-RING COMPATIBILITY.

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES
(Price on application)



MIP X FIP STRAIGHT

Part#	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List
46-768	1/8MaleX1/8Female	Regular	.141	24.93
46-769	1/8MaleX1/8Female	Panel Mntg.	.141	33.35
46-770	1/4MaleX1/4Female	Regular	.188	25.52
46-771	1/4MaleX1/4Female	Panel Mntg.	.188	34.02

MIP X MIP STRAIGHT

Part#	Thread	Straight Style	Maximum Orifice	List
46-774	1/8MaleX1/8Male	Regular	.141	24.93
46-775	1/8MaleX1/8Male	Panel	.141	33.35
47-776	1/4MaleX1/4Male	Regular	.188	25.52
46-777	1/4MaleX1/4Male	Panel	.188	34.02

FIP X FIP STRAIGHT

Part#	Thread	Straight Style	Maximum Orifice	List
46-780	1/8FemaleX1/8Female	Regular	.172	24.93
46-781	1/8FemaleX1/8Female	Panel	.172	33.35
46-782	1/4FemaleX1/4Female	Regular	.188	25.52
46-783	1/4FemaleX1/4Female	Panel	.188	34.02



MIP X FIP ANGLE

Part#	Thread Orifice	Style	Maximum	List
46-786	1/8MaleX1/8Female	Regular	0.188	24.08
46-787	1/8MaleX1/8Female	Panel Mntg.	0.188	32.40
46-788	1/4MaleX1/4Female	Regular	0.281	24.66
46-789	1/4MaleX1/4Female	Panel Mntg.	0.281	33.03

MIP X MIP ANGLE

Part#	Thread	Style	Maximum Orifice	List
46-792	1/8MaleX1/8Male	Regular	.188	24.08
46-793	1/8MaleX1/8Male	Panel	.188	32.40
46-794	1/4MaleX1/4Male	Regular	.281	24.66
46-795	1/4MaleX1/4Male	Panel	.281	33.03

FIP X FIP ANGLE

Part#	Thread	Style	Maximum Orifice	List
46-798	1/8FemaleX1/8Female	Regular	.188	24.08
46-799	1/8FemaleX1/8Female	Panel	.188	32.40
46-800	1/4FemaleX1/4Female	Regular	.281	24.66
46-801	1/4FemaleX1/4Female	Panel	.281	33.03

SPECIAL VERSIONS

Many special versions of these valves have been produced for other services. If your application is not described here or covered by our recommendations, please contact us. It is quite possible that one of these valve types can be economically adapted to your requirements.

*We could learn a lot from crayons:
some are sharp, some are pretty,
some are dull, some have weird
names, and all are different colors...
but they all exist very nicely in the
same box*

Brass Fittings

MICRO-METERING VALVES

VALVES offer PRECISE FLUID CONTROL through a full metering tip (5°) and lubricated micrometer threads. Our O-ring seal arrangement eliminates contamination of system media by the thread lubricant.

The standard construction is forged brass body, brass stem and cap, a CELCON* thrust bearing and a BUNA "N" 'O'-RING seal. It is rated for 3,500 p.s.i.g. service from -40° to 150° F.

Many variations and modifications have been made in these valves to accommodate customer applications. It is quite possible they can be economically adapted to your requirements.



MIP X FIP STRAIGHT

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-741	1/8Male	X1/8Female	Regular	.102	29.84
46-742	1/8Male	X1/8Female	Panel Mntg.	.102	37.98
46-743	1/4Male	X1/4Female	Regular	.172	33.03
46-744	1/4Male	X1/4Female	Panel Mntg.	.175	38.66

MIP X MIP STRAIGHT

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-745	1/8Male	X1/8Male	Regular	.102	29.83
46-746	1/8Male	X1/8Male	Panel Mntg.	.102	37.98
46-747	1/4Male	X1/4Male	Regular	.172	33.03
46-748	1/4Male	X1/4Male	Panel Mntg.	.172	38.66

FIP X FIP STRAIGHT

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-752	1/8Female	X1/8Female	Regular	.141	29.84
46-753	1/8Female	X1/8Female	Panel	.141	37.98
46-754	1/4Female	X1/4Female	Regular	.172	33.03
46-755	1/4Female	X1/4Female	Panel	.172	38.66

Don't tell me how hard you work. Tell me how much you get done.

-James Ling in Newsweek



MIP X FIP ANGLE

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-756	1/8Male	X1/8Female	Regular	.182	28.84
46-757	1/8Male	X1/8Female	Panel	.182	36.99
46-758	1/4Male	X1/4Female	Regular	.182	29.57
46-759	1/4Male	X1/4Female	Panel	.182	37.67

MIP X MIP ANGLE

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-760	1/8Male	X1/8Male	Regular	.182	28.94
46-761	1/8Male	X1/8Male	Panel	.182	36.99
46-762	1/4Male	X1/4Male	Regular	.182	29.57
46-763	1/4Male	X1/4Male	Panel	.182	37.67

FIP X FIP ANGLE

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-764	1/8Female	X1/8Female	Regular	.182	28.94
46-765	1/8Female	X1/8Female	Panel	.182	36.99
46-766	1/4Female	X1/4Female	Regular	.182	29.57
46-767	1/4Female	X1/4Female	Panel	.182	37.76

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

Some valves only available on made-to-order basis.

Creative Thinking

An elderly man, harassed by the taunts of the neighborhood children, devised a scheme. He offered to pay them a dollar each if they would return on Tuesday and yell their insults again.

The children did so eagerly and received the money. Then he told them he would pay only 25 cents on Wednesday. When they returned, insulted him again and collected their quarters, he informed them that Thursday's rate would be just a penny. "Forget it," they said- and never taunted him again

-Alfie Kohn in *The Boston Globe*

Brass Fittings

TOGGLE VALVES

TOGGLE SHUT OFF VALVES are constructed to INSTANTANEOUSLY OPEN and CLOSE the flow of fluids and gases. It is ideally suited for use in gas sampling and analysis systems as well as test equipment.

This valve is O-RING SEALED to eliminate leakage and maintenance. The O-ring is positioned between the operating mechanism and the seat, and seals the closely fitted cylinder to give the lowest possible internal volume and protect the mechanism from contamination.

The standard construction is forged brass body, brass cylinder, cap and lever, Viton seat, BUNA "N" 'O' RING seal, steel spring, and stainless steel lever pin.

This valve is rated for 200 p.s.i.g. service from -40° to 250° F and is available in the angle and straight pattern, both of which are available for panel or bracket mounting.



MIP X FIP STRAIGHT

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-804	1/8Male	X1/8Female	Regular	.102	24.93
46-805	1/8Male	X1/8Female	Panel Mntg.	.102	33.35
46-806	1/4Male	X1/4Female	Regular	.172	25.52
46-807	1/4Male	X1/4Female	Panel Mntg.	.175	34.02

MIP X MIP STRAIGHT

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-808	1/8Male	X1/8Male	Regular	.102	24.93
46-809	1/8Male	X1/8Male	Panel Mntg.	.102	33.35
46-810	1/4Male	X1/4Male	Regular	.172	25.52
46-811	1/4Male	X1/4Male	Panel Mntg.	.172	34.02

FIP X FIP STRAIGHT

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-812	1/8Female	X1/8Female	Regular	.141	24.93
46-813	1/8Female	X1/8Female	Panel	.141	33.75
46-814	1/4Female	X1/4Female	Regular	.172	25.52
46-815	1/4Female	X1/4Female	Panel	.172	34.02



MIP X FIP ANGLE

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-816	1/8Male	X1/8Female	Regular	.182	24.08
46-817	1/8Male	X1/8Female	Panel	.182	32.40
46-818	1/4Male	X1/4Female	Regular	.182	24.66
46-819	1/4Male	X1/4Female	Panel	.182	33.03

MIP X MIP ANGLE

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-820	1/8Male	X1/8Male	Regular	.182	24.08
46-821	1/8Male	X1/8Male	Panel	.182	32.40
46-822	1/4Male	X1/4Male	Regular	.182	24.66
46-823	1/4Male	X1/4Male	Panel	.182	33.03

FIP X FIP ANGLE

Part #	Pipe thread		Style	Maximum Orifice	List
	Inlet	Outlet			
46-824	1/8Female	X1/8Female	Regular	.182	24.08
46-825	1/8Female	X1/8Female	Panel	.182	32.40
46-826	1/4Female	X1/4Female	Regular	.182	24.66
46-827	1/4Female	X1/4Female	Panel	.182	33.03

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

Some valves only available on made-to-order basis

How to decide who to marry?

You got to find somebody who likes the same stuff. Like, if you like sports, she should like it that you like sports, and she should keep the chips and dip coming.

Alan, age 10

Brass Fittings

INDUSTRIAL INSTRUMENTATION BALL VALVES

- With Double O-RING STEM SEALS provide 20,000 leak-free performance cycles without leakage. Valves also have an exclusive stem seal design that never needs tightening and can be panel mounted for instrumentation applications. For systems with working pressures up to 1,500 p.s.i.g.
- TEFLON * Ball Seats
- Blow Out Proof Stem Seal
- Double O-Ring
- Up to 1,500 P.S.I.

FEMALE X FEMALE



Part #	Size	List
46-830	1/8 x 1/8	46.77
46-832	1/4 x 1/4	46.81
46-833	3/8 x 3/8	98.94
46-834	1/2 x 1/2	112.52

FEMALE X MALE

Part #	Size	List
46-835	1/8 x 1/8	49.12
46-838	1/4 x 1/4	49.21
46-839	3/8 x 3/8	98.94
46-840	1/2 x 1/2	112.52

MALE X MALE

Part #	Size	List
46-841	1/8 x 1/8	51.47
46-843	1/4 x 1/4	51.94
46-845	3/8 x 3/8	104.11
46-846	1/2 x 1/2	117.69

HOSE BARB X MALE PIPE THREAD

Part #	Size	List
46-849	1/4 x 1/4	60.77
46-850	3/8 x 1/4	61.01

INDUSTRIAL INSTRUMENTATION ANGLE BALL VALVES

FEMALE X FEMALE ANGLE



Part #	Size	List
46-875	1/8X1/8	46.01
46-876	1/8X1/4	46.20
46-877	1/4X1/8	46.30
46-878	1/4X1/4	46.30

FEMALE X MALE

Part #	Size	List
46-880	1/8X1/8	48.36
46-881	1/8X1/4	48.55
46-882	1/4X1/8	48.55
46-883	1/4X1/4	48.65
46-884	1/4X3/8	55.86
46-885	3/8X1/2	59.48

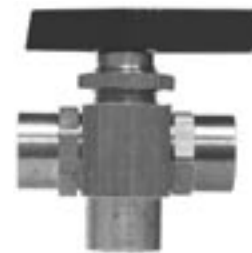
MALE X MALE MALE PIPE THREADS

Part #	Size	List
46-886	1/8X1/8	50.71
46-887	1/8X1/4	50.95
46-888	1/4X1/8	50.95
46-889	1/4X1/4	50.71
46-891	3/8X1/4	51.65

HOSE BIB X MALE PIPE THREAD

Part #	Size	List
46-893	1/4X1/8	55.41
46-894	1/4X1/4	55.65
46-895	3/8X1/8	55.98
46-896	3/8X1/4	55.17

INDUSTRIAL INSTRUMENTATION 3-WAY BALL VALVES



Part #	Port A	Port B	Port C	List
46-951	1/8 FPT	1/8 FPT	1/8 FPT	49.02
46-956	1/4 FPT	1/4 FPT	1/4 FPT	49.07
46-959	3/8 FPT	3/8 FPT	3/8 FPT	110.92
46-960	1/2 FPT	1/2 FPT	1/2 FPT	118.21

Any size and Any combination of male pipe, female pipe, hose barb, compression or flare connections are available...just ask!

Some valves only available on made-to-order basis

A new computer that was practically running the business in one office had suddenly stopped working. No one could locate the trouble, let alone correct it, so they were forced to call in a consultant. When he arrived, he opened his briefcase, took out a small hammer and tapped the side of the computer. It started working immediately. When he submitted his bill for \$500, the office manager was outraged. He said, "All you did was tap it with a hammer. I want an itemized bill."

The consultant took back the bill and wrote on the bottom: "Tapping computer-\$1. Knowing where to tap- \$499."

Brass Fittings

Brass Fittings

Brass Fittings

BRASS DOMESTIC MINIATURE BALL VALVES

- Working Pressure up to 1000 P.S.I.G.
 - ASTM B-16 Corrosion Resistant Brass Body.
 - Non-Adjusting Viton O-Ring Stem Seal Design Never Needs Tightening.
 - Highly Inert Teflon Seats.
 - Long Life Nickel Plated Brass Ball.
 - Blow-Out Proof Stem for Safety.
 - Temperature: -40°F to 300°F
 - 1/4 Turn Instantaneous On-Off Operation.
 - Quarter Turn Handle Design.
 - Water, Oil, and Air Pressure Systems.
 - Ideal for tight, confined areas, or when routing aesthetics are desired.
- Applications include instrumentation, gas sampling systems, high pressure gauges, test stands, hydraulic and pneumatic service lines on capital equipment.



MALE X FEMALE

Part #	Size	List
46-900	1/8 x 1/8	13.34
46-903	1/4 x 1/4	14.43



MALE X MALE

Part #	Size	List
46-910	1/8 x 1/8	13.35
46-912	1/4 x 1/4	14.34



HOSE BARB X MALE PIPE

Part #	Size	List
47-042	1/4 x 1/8	16.73
47-043	3/8 x 1/8	16.73
46-980	1/4 x 1/4	14.43
46-981	3/8 x 1/4	14.19

46-920
46-921
46-922



46-922A
46-923



46-924



46-925



FEMALE X FEMALE

Part #	Size	List
46-920	1/8 x 1/8	13.58
46-921	1/8 x 1/4	14.34
46-922	1/4 x 1/4	13.54
46-922A	1/4 x 1/4	8.42
46-923	3/8 x 3/8	11.48
46-924	1/2 x 1/2	18.32
46-925	3/4 x 3/4	20.48

U.L. TWO WAY VALVES

- Buna-N Seal, Teflon Seat
- Plated metal handle, plated brass ball.
- 250 PSI Working Pressure



U.L. TWO WAY VALVES FNPT X FNPT

Part #	Size	List
46-440	1/4 x 1/4	13.77



U.L. TWO WAY VALVES FNPT X MNPT

Part #	Size	List
46-443	1/4 x 1/4	13.77

BRASS CHECK VALVES

MAX. 2500 PSI

Cracking Pressure 1/3-3 PSI

- Bubble tight operation
- O-Ring poppet seal
- 180° max operating temp.



•SS ball and spring

MNPT X MNPT

Part#	Size	Opening Dia.	List
46-500	1/4 X 1/4	.0.187	12.47

MAX. 2500 PSI

- O-Ring poppet seal
- 180° max operating temp.



•SS ball and spring

MNPT X FNPT

Part #	Size	Opening Dia.	List
46-505	1/4 X 1/4	.0.187	12.47

MAX. 2500 PSI

- Bubble tight operation
- O-Ring poppet seal
- 180° max operating temp.



FNPT X FNPT

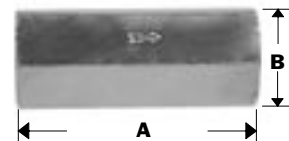
Part #	Size	Opening Dia.	List
46-510	1/4 X 1/4	.0.25	14.50
46-511	3/8 X 3/8	.0.375	17.00
46-512	1/2 X 1/2	.0.437	19.00

PNEUMATIC CHECK VALVES

- Max Operating Pressure: 220 psi
- Working Pressure: 14.5-145 psi
- Cracking Pressure: 2.8 psi
- Maximum Temperatures: 140° F

Materials

Body	Chrome plated Brass
Spring	Steel
O-Ring	NBR Rubber



Part#	Size	Dimensions (In.)		List
		A	B	
46-200	1/4	1.97	.67	5.31
46-201	3/8	1.97	.83	6.86
46-202	1/2	2.48	.98	8.51

FULL PORT 600WOG FORGED BRASS BALL VALVE

1/4" - 2" Gas Approved



5 PSIG
CSA AGA 3.88 5 PSIG

**ISO 9002 Manufacturer
FEATURES**

600 PSI non-shock cold water, gas, oil
- 150 PSI saturated steam

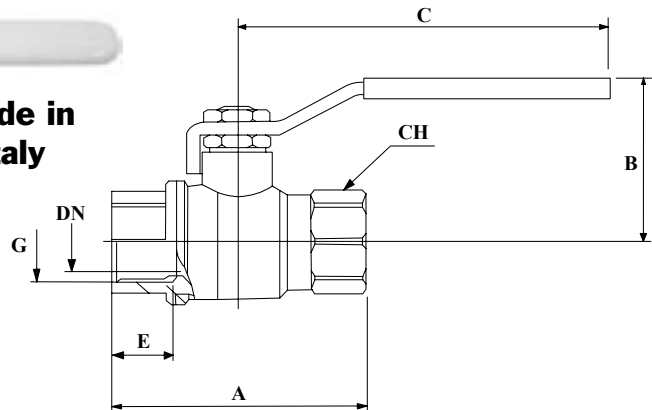
- Optional SS parts or Nickle Plated body
- Many options available
- Suitable for full range of liquids and gasses
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats
- Vinyl insulator on heavy duty plated carbon steel handles
- Fast 1/4 turn open or close operation

- Low operating torque
- Adjustable stem packing gland
- Maximum operating temperature: 248°F (120° C)
- Minimum operating temperature: -20°F (-40°C)
- KV: Pressure drop m³/h
- Each valve individually tested
- Forged Brass - for more strength
- Threaded ends to ANSI B1.20.1
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem
- Deeper threads - for better connections



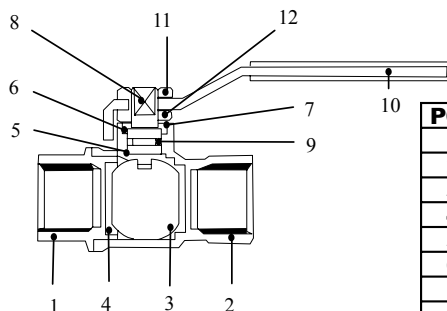
Female x Female

Made in Italy



Part#	Size	Dimension Inches							KV	Box	Case	List
	G	DN	A	B	C	E	CH					
943-200	1/4"	.31	1.96	1.57	3.43	.43	.74	.21	24	240	6.25	
943-201	3/8"	.39	1.96	1.57	3.43	.43	.86	.23	24	240	6.25	
943-202	1/2"	.59	2.28	1.49	3.27	.60	.94	.64	14	140	6.25	
943-203	3/4"	.78	2.44	1.57	3.27	.64	1.22	1.16	121	120	9.50	
943-204	1"	.98	2.95	1.93	3.74	.75	1.50	1.69	6	60	14.71	
943-205	1-1/4"	1.26	3.46	2.36	4.61	.84	1.89	3.50	4	40	23.04	
943-206	1-1/2"	1.57	3.94	3.00	4.61	.84	2.12	9.05	2	20	34.07	
943-207	2"	1.97	4.44	2.95	4.61	1.01	2.63	1.04	1	10	49.96	
943-208	2-1/2"	2.56	5.75	4.05	7.48	1.06	3.30	21.2	1	12	109.61	
943-209	3"	3.15	6.69	5.45	9.84	1.14	3.89	34.3	1	6	168.54	
943-210	4"	3.94	7.87	6.16	9.84	1.22	4.88	54.7	1	3	275.57	

See additional handle options on page 280



POS	Components	Materials	N
1	Body	Forged Brass	1
2	End Connection	Forged Brass	1
3	Ball	CP Brass	1
4	Ball Stems	P.T.F.E.	2
5	Stem Antif. Seat	P.T.F.E.	1
6	Stem Seat	P.T.F.E.	1
7	Brass Ring	Brass	1
8	Stem	Brass	1
9	O-Ring	NBR 80	1
10	Handle	Steel	1
11	Nut	Steel	1
12	Nut	Brass	1

Valves

FULL PORT 600WOG FORGED BRASS BALL VALUE

Gas Approved

ISO 9002 Manufacturer



Made in Italy

FEATURES

- Suitable for full range of liquids and gasses.
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation.

- Low operating torque.
- Adjustable stem packing gland.
- Maximum operating temperature: 248°F (120°C)
- Minimum operating temperature: -20°F (-40°C)
- KV: Pressure drop m³/h.
- Each valve individually tested.
- Forged Brass - for more strength.
- Threaded ends to ANSI B1.20.1
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem.
- Deeper threads - for better connections.

Valves



MIP X FIP

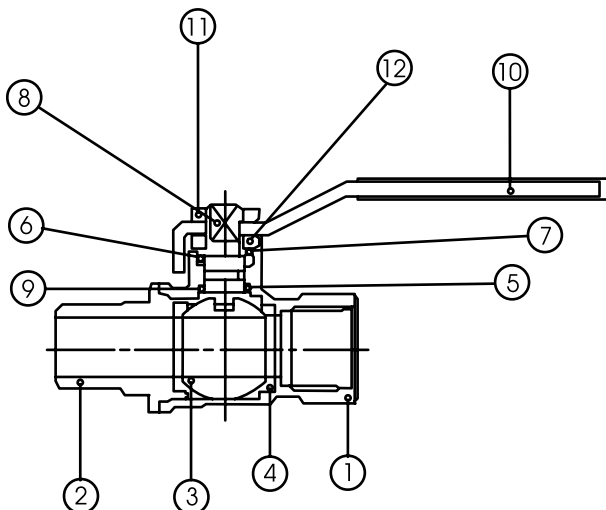


MIP X MIP

Part#	Size	Box	Case	List
948-101	1/4	10	180	6.80
948-102	3/8	10	180	6.80
948-103	1/2	10	120	7.50
948-104	3/4	10	90	10.25
948-105	1	6	60	15.50
948-106	1-1/4	4	36	22.95
948-107	1-1/2	4	24	31.85
948-108	2	2	16	48.90

Part #	Size	Box	Case	List
948-111	1/4	10	180	8.50
948-112	3/8	10	180	8.50
948-113	1/2	10	120	8.50
948-114	3/4	10	90	12.90
948-115	1	6	60	19.10
948-116	1 1/4	4	36	31.00
948-117	1 1/2	4	24	42.00
948-118	2	2	16	71.00

See additional handle options on Page 280



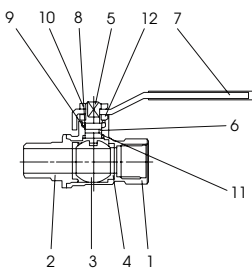
POS	Components	Materials	N
1	Body	CW617N Forged Brass	1
2	End Connection	CW617N Forged Brass	1
3	Ball	CW617N CP Brass	1
4	Ball Stems	P.T.F.E.	2
5	Stem Antif. Seat	P.T.F.E.	1
6	Stem Seat	P.T.F.E.	1
7	Brass Ring	CW617N Brass	1
8	Stem	CW617N Brass	1
9	O-Ring	NBR 80	1
10	Handle	UNI EN 10025 Steel	1
11	Nut	UN 5771 Steel	1
12	Nut	CW617N Brass	1

**FULL PORT 600WOG FORGED
BRASS BALL VALVE
ISO 9002 Manufacturer**

600 PSI non-shock cold water,
gas, oil - 150 PSI saturated steam

FEATURES

- Many options available.
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation
- Low operating torque
- Adjustable stem packing gland.
- Maximum operating temperature: 248°F (120° C)
- Minimum operating temperature: -20°F (-40°C)
- KV: Pressure drop m³.h.
- Each valve individually tested.
- Forged Brass - for more strength.
- Tube ends to ANSI B16.22.
- Hard chromium plated solid ball.
- Bottom entry, blow-out proof stem.



Part #	Size	Box	Case	List
940-212	1/2	14	140	8.50
940-213	3/4	12	120	10.95
940-214	1	6	60	15.75
940-215	1 1/4	4	40	20.95
940-216	1 1/2	2	20	31.10
940-217	2	1	10	48.80

More sizes available on request.

See handle options on page 280

POS	Components	Materials	N
1	Body	Forged Brass	1
2	End Connection	Forged Brass	1
3	Ball	CP Brass	1
4	Ball Seats	P.T.F.E.	2
5	Stem	Brass	1
6	O-Ring	NBR 80	1
7	Handle	Steel	1
8	Nut	UNI 5771 Steel	1
9	Stem Seat	P.T.F.E.	1
10	Brass Ring	Brass	1
11	Stem Seat	P.T.F.E.	1
12	Nut	Brass	1

**Forged Brass Ball Valve
Standard Port
ISO 9002 Manufacturer**

400 PSI Non-Shock Cold Water, Oil, Gas
125 PSI Saturated Steam

1/2" - 2" Gas Approved



- Threaded ends to ANSI B1.20.1
- Each Valve individually tested
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem
- Double stem packing, Teflon seats.

Mfg. in Italy,
Yellow Handle



**FORGED BRASS BALL VALVE IPS
SCREWED ENDS**

Part #	Size	Box	Case	List
940-241	1/2	16	192	7.12
940-242	3/4	10	120	9.95
940-243	1	8	96	14.75
940-244	1-1/4	6	48	22.95
940-245	1-1/2	4	32	31.10
940-246	2	2	16	48.66

See handle options on page 280

POS	Components	Materials	N
1	Body	Forged Brass	1
2	End Connection	Forged Brass	1
3	Ball	CP Brass	1
4	Ball Stems	P.T.F.E.	2
5	Stem Antif. Seat	P.T.F.E.	1
6	Stem Seat	P.T.F.E.	1
7	Brass Ring	Brass	1
8	Stem	Brass	1
9	O-Ring	NBR 80	1
10	Handle	Steel	1
11	Nut	Steel	1
12	Nut	Brass	1

**Gas Ball Valves
ISO 9002 Manufacturer**

Manual Valve
UL LISTED
Threaded NPT

 American Gas Association

 Canadian Gas Association

Made in Italy

- Bottom entry
- Blow out proof design.
- Double viton o-rings stem seals
- Teflon seats for durability.
- Forged construction for greater strength
- Larger ports for increased flow capacity.
- For use with natural, manufactured, mixed Liquefied. petroleum and LP gas-air mixtures.
- Deeper thread connections. Smooth quarter-turn.
- Manufactured to ANSI Z21.15, C.G.A. 9.1-M81, 9.2-M88, 1/2 psig. 372 also to A.G.A. 3-8, C.G.A. CR91-002, 2 psig.
- Reversible handle.
- May be used with water 400 WOG.



GAS BALL VALVES

Part #	Size	List
943-212	1/2	6.20
943-213	3/4	7.85



**APPLIANCE CONNECTOR VALVES
FIP x FLARE**

Part #	Size	List
935-122	3/8 x 1/2	8.00
935-123	1/2 x 1/2	7.40
935-124	5/8 x 3/4	9.65

MATERIALS	
Handle Nut	Steel
Handle	Epoxy Coated Aluminum
Stem	Brass ASTM B16
Stem Seals	Viton
Seats	Teflon PTFE
Ball	Chromium Plated Brass
Body	Forged Brass
Connector	Forged Brass



**FLARE x FLARE GAS BALL VALVES
AGA/UL GAS BALL VALVES**

Part #	Size	List
935-129	3/8 x 3/8	7.40
935-130	1/2 x 1/2	8.00

Valves

FULL PORT 600WOG FORGED BRASS BALL VALUE

Made in Italy

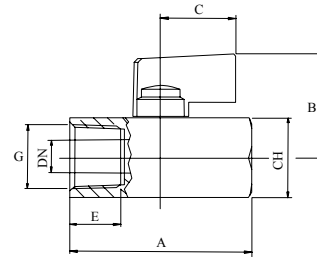
ISO 9002 Manufacturer

FEATURES

- longer body style for longer, deeper thread connections
- One piece drawn sand blasted body.
- Finest brass according to UNI 5705-65 spec.
- Each valve is seal tested for maximum safety.
- Double seal system allows valve to be operated in both directions making installation easier.
- Aluminum handles available upon request
- Chrome plated brass ball for longer life.
- No maintenance ever required.
- Blowout-proof brass stem.
- NPT taper ANSI B1.20.1 threads.
- -4°F to +200°F temperature.
- 1/4 Turn handle with mechanical stop.



Female x Female

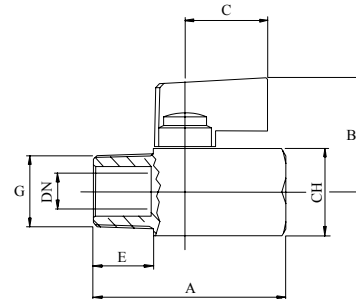


Part#	Size		Dimension Inches								
	G	DN	A	B	C	E	CH	KV	BOX	CASE	LIST
46-920 I	1/8"	0.24	1.51	1.2	0.9	0.31	0.83	0.9	50	500	5.00
46-922 I	1/4"	0.31	1.88	1.2	0.9	0.51	0.83	0.9	50	500	5.00
46-923 I	3/8"	0.31	1.88	1.2	0.9	0.51	0.83	0.9	50	400	5.00
46-924 I	1/2"	0.39	2.18	1.28	0.9	0.61	0.96	2.3	40	400	5.89

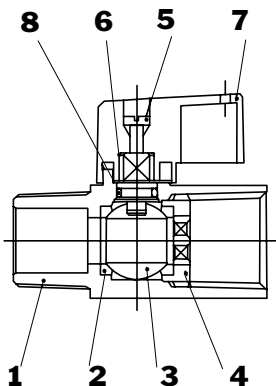


Made in Italy

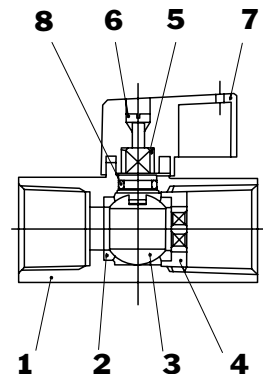
Male x Female



Part#	Size		Dimension Inches								
	G	DN	A	B	C	E	CH	KV	BOX	CASE	LIST
46-900 I	1/8"	0.24	1.5	1.2	0.9	0.34	0.83	0.9	50	500	5.00
46-902 I	1/4"	0.31	1.77	1.2	0.9	0.48	0.83	0.9	50	500	5.00
46-903 I	3/8"	0.31	1.81	1.2	0.9	0.49	0.83	0.9	50	500	5.00
46-904 I	1/2"	0.39	2.15	1.28	0.9	0.65	0.96	2.3	40	400	5.89



POS	Components	Materials	N
1	Body	CW517n Forged Brass	1
2	Ball Seats	P.T.F.E	2
3	Ball	CW517N CP Brass	1
4	Ring Unit	CW614N Brass	1
5	Stem	CW614N Brass	1
6	Screw	UNI 5771 Steel	1
7	Handle	Nylon	1
8	O-Ring	NBR 80	1



Forged brass Mini-Ball Valves

180° operational handle, blow out proof stem. Stem with double "O" Rings

- 200 WOG
- 125SWP

FEMALE X FEMALE



Part #	Size	List
944-114	1/8X1/8	3.63
944-115	1/8X1/4	3.63
944-116	1/4X1/4	3.63
944-117	3/8X3/8	5.20
944-118	1/4X1/2	5.20
944-140	1/2X1/2	6.75

MALE X FEMALE



Part #	Size	List
944-106	1/8X1/8	3.63
944-100	1/8X1/4	3.63
944-101	1/4X1/4	3.63
944-102	1/4X3/8	5.20
944-103	3/8X3/8	5.20
944-104	1/2X1/2	6.75

MALE X MALE



Part #	Size	List
944-108	1/8X1/4	3.63
944-109	1/4X1/4	3.63
944-110	3/8X3/8	5.20
944-111	1/4X1/2	5.20
944-112	1/2X1/2	6.75

Private label handle available on volume purchases

MALE X HOSE BARB



Part #	Size	List
944-137	1/8X1/8	4.15
944-126	1/8X3/8	4.15
944-138	1/4X1/4	4.15
944-128	1/4X3/8	4.15
944-132	1/2X3/8	6.15
944-139	1/2X1/2	7.15

HOSE BARB X HOSE BARB



Part #	Size	List
944-142	1/4X1/4	6.00
944-133	5/16X5/16	8.00
944-134	3/8X3/8	6.00

FEMALE X HOSE BARB

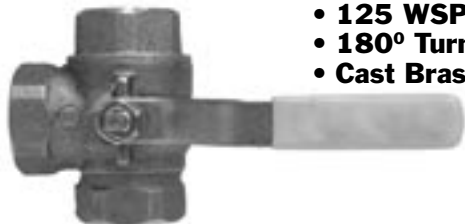


Part #	Size	List
944-135	1/8X1/8	5.50
944-120	1/8X3/8	5.50
944-136	1/4X1/4	5.50
944-122	1/4X3/8	5.50
944-123	3/8X3/8	5.50

NO	Part Name	Material	QTY
1	Nut	Steel	1
2	Handle	Steel	1
3	Cover	PVC	1
4	O-Ring	NBR	2
5	Stem	Brass	1
6	Body	Brass	1
7	Seat	Teflon	2
8	Ball Disc	Brass	1
9	End Plug	Brass	1

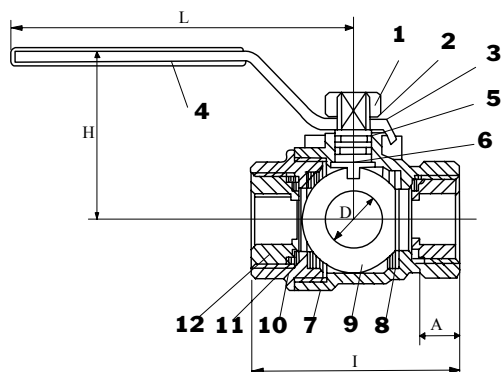
3 Way Ball Valve

- Side outlet
- 200 WOG
- 125 WSP
- 180° Turn handle
- Cast Brass



Part#	Size	I	H	D	L	A	Box	Case	List
940-464	1/4"	2.16	1.73	.51	3.35	.37	15	60	18.40
940-465	3/8"	2.16	1.73	.51	3.35	.37	15	60	18.40
940-461	1/2"	2.16	1.73	.51	3.35	.55	15	60	16.00
940-462	3/4"	2.44	2.01	.75	4.72	.55	10	40	23.90
940-463	1"	3.07	3.07	.94	4.72	.67	6	24	43.50

More sizes available on a special order basis.

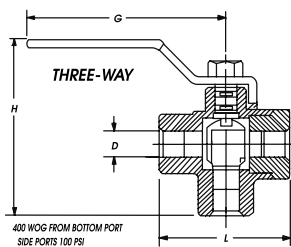


Nomenclature & Materials

NO	Part Name	Material	Qty
1	Nut	Steel	1
2	Spring Washer	Steel	1
3	Handle	Steel	1
4	COver	PVC	1
5	O-Ring	NBR	2
6	Stem	Brass	1
7	Body	Brass	1
8	Seat	Teflon	2
9	Ball Disc	Brass	1
10	End Plug	Brass	1
11	O-Ring	NBR	3
12	Socket	Brass	3

3 Way Ball Valve

- Bottom Outlet, Forged Brass
- 400 WOG From Bottom Port
- Side Ports 100 PSI



Part#	Size	D	G	H	L	Cv	List
940-121	1/4"	.44	1.50	2.78	1.68	5.2	31.00
940-122	3/8"	.50	1.50	2.78	1.68	5.2	31.00
940-123	1/2"	.50	1.50	2.78	1.68	5.2	34.92

Brass Gate Valves

- 200 WOG (Cold water, oil, gas)
- 125 WSP (Saturated Steam)

- Full port
- Brass pressure die cast body/bonnet- stronger than sand castings.
- Higher copper content alloy - 67% Cu
- Teflon packing with gland follower.
- Superior quality and finish.
- Each valve individually tested.
- Threaded ends to ANSI B1.20.1, Solder ends to ANSI B16.18
- Non rising stem.
- Cast iron handle.



BRASS GATE VALVES IPS

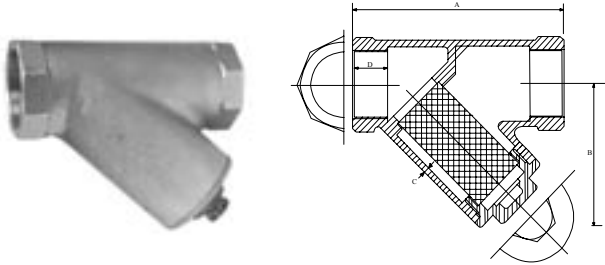
Part #	Size	Box	Case	List
940-130	1/4	10	120	5.50
940-131	3/8	10	120	5.50
940-132	1/2	10	120	5.50
940-133	3/4	10	120	7.00
940-134	1	5	60	8.50
940-135	1-1/4	4	40	14.00
940-136	1-1/2	2	30	18.00
940-137	2	1	20	26.00
940-138	2-1/2	1	8	45.00
940-139	3	1	8	74.25
940-140	4	1	4	126.50

MATERIALS

Nut	Brass
Name Plate	Aluminum
Hand	Cast Iron
Stem	Brass ASTM B16
Packing Nut	Brass ASTM B16
Packing Gland	Brass ASTM B16
Packing	Teflon Pipe
Locknut	Brass ASTM B16
Gasket	Teflon PTFE
Bonnet	Brass 67% CU
Wedge	Brass 67% CU
Body	Brass 67% CU

**CLASS 150 BRONZE
Y-PATTERN STRAINER**

- Protects regulators, pumps, meters and other controls from damage due to sediment scale, metal chips or other foreign materials
- Threaded ends
- 300 psi WOG non-shock
- 150 psi SATURATED STEAM
- Screwed cap is threaded & gasketed
- Tapped drain plug opening in cap
- 304 stainless steel screen #20 mesh
- Self cleaning
- Self cleaning can be accomplished by opening the valve or plug connected to the blow-off outlet
- Hydrostatic test pressures shell 450 P.S.I.



Part#	Size	A	B	C	D	Plug Size	Box	Case	List
940-521	1/4"	2.60	1.89	.09	.41	1/4"	10	80	13.29
940-522	3/8"	2.60	1.89	.09	.41	1/4"	10	80	13.29
940-523	1/2"	3.13	2.28	.10	.39	1/4"	10	80	14.53
940-524	3/4"	3.43	2.36	.11	.55	1/4"	8	64	19.62
940-525	1"	4.09	2.83	.12	.63	3/8"	8	48	37.02
940-526	1-1/4"	4.90	3.23	.14	.79	3/8"	1	24	48.28
940-527	1-1/2"	5.59	3.74	.15	.80	1/2"	1	16	66.00
940-528	2"	6.69	4.72	.2	1.10	1/2"	1	12	77.14
940-529	2-1/2"	8.39	5.83	.21	.93	3/4"	1	6	126.98
940-530	3"	9.06	6.69	.22	1.12	3/4"	1	4	199.69

MATERIALS	
Body	Bronze
Cap	Bronze
Screen	Type 304 S.S #20 Mesh
Gasket	Non-Asbestos
Plug	Brass

**REPLACEMENT SCREENS
304 S.S. #20 Mesh**

Part #	Size	List Price
940-523S	1/2	2.16
940-524S	3/4	2.25
940-525S	1	3.48
940-526S	1-1/4	4.20
940-527S	1-1/2	5.64
940-528S	2	7.95
940-529S	2-1/2	28.85
940-530S	3	36.80

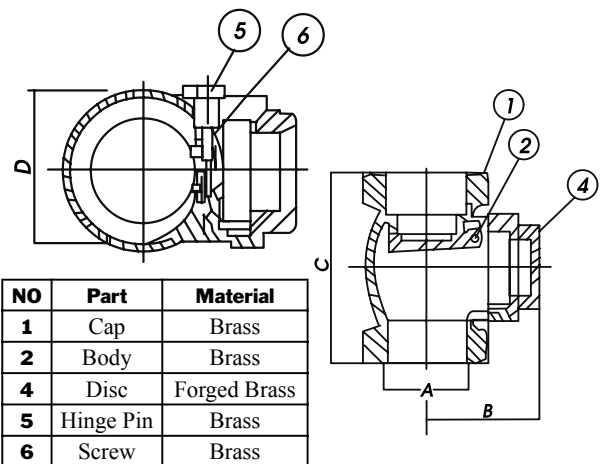
**Cast Brass Swing
Check Valves**

- Working pressure non-shock: 200 psi W.O.G. (cold water, oil, gas) 125 psi S.W.P. (saturated steam)
- Swing type disc.
- Screwed Cap.
- Hard Seat.
- 90° Straight Pattern.
- Used to prevent reverse flow in commercial and industrial applications.
- Threaded ends to ANSI B1.20.1
- Integral seat.



**CAST BRASS SWING CHECK VALVES
IPS SCREWED ENDS**

Part #	Size	Box	Case	List
940-352	1/2	10	30	8.00
940-353	3/4	10	120	9.75
940-354	1	10	100	13.50
940-355	1-1/4	5	50	17.50
940-356	1-1/2	5	30	27.30
940-357	2	5	25	42.00
940-358	2-1/2	2	12	84.05
940-359	3	1	8	125.00
940-360	4	1	6	187.50



NO	Part	Material
1	Cap	Brass
2	Body	Brass
4	Disc	Forged Brass
5	Hinge Pin	Brass
6	Screw	Brass

BRASS

S.S. SPRING LOADED BRONZE POPPET

For positive sealing & self-cleaning.

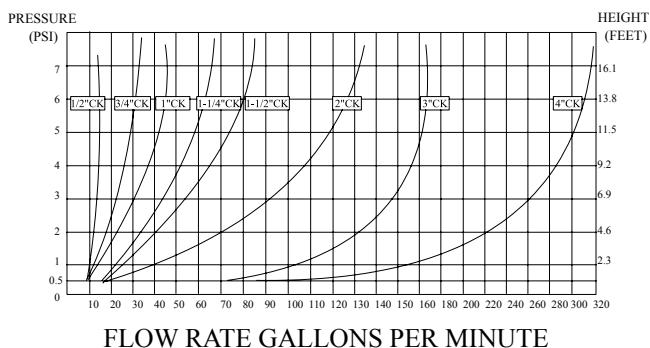
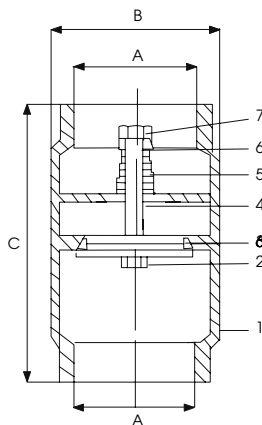
Insures against leakage.

- 200 WOG
- Corrosion resistant material
- Cast Red Brass body
- S.S. Spring
- Neoprene O-Ring Seal
- Can be used vertically or horizontally
- Individually boxed
- Hydraulic Burst test result: 232 Kg/cm²



Brass Check Valve (Inches)								
Part#	Size	Enters Pipe Side	A NPT	B	C	Box	Case	List
944-428	1/4"	-	1/4"	1.26	2.28	24	192	6.48
944-429	3/8"	-	3/8"	1.50	2.28	21	168	6.75
944-430	1/2"	1-1/4"	1/2"	1.77	2.43	10	100	8.35
944-431	3/4"	1-1/4"	3/4"	2.13	2.72	10	80	9.60
944-432	1"	2"	1"	2.36	3.23	10	60	16.59
944-433	1-1/4"	2-1/2"	1-1/4"	3.03	3.62	5	40	22.06
944-434	1-1/2"	3"	1-1/2"	4.21	4.04	5	30	26.46
944-435	2"	3-1/2"	2"	5.51	5.04	5	20	39.60

NO	Part	Material
1	Body	Brass
2	Stopper	Brass
3	O-Ring	NBR
4	Washer	PE
5	Spring	S.S.
6	Cap	S.S.
7	Nut	S.S.



BRASS CHECK VALVES

MAX. 2500 PSI

Cracking Pressure 1/3-3 PSI



- Bubble tight operation
- O-Ring poppet seal
- 180° max operating temp.
- SS ball and spring

MNPT X MNPT

Part#	Size	Opening Dia.	List
46-500	1/4 X 1/4	0.187	12.47

MAX. 2500 PSI



- O-Ring poppet seal
- 180° max operating temp.
- SS ball and spring

MNPT X FNPT

Part#	Size	Opening Dia.	List
46-505	1/4 X 1/4	0.187	12.47

MAX. 2500 PSI



- Bubble tight operation
- O-Ring poppet seal
- 180° max operating temp.

FNPT X FNPT

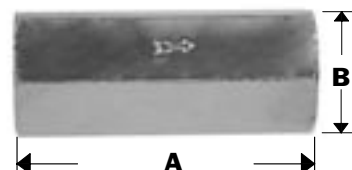
Part#	Size	Opening Dia.	List
46-510	1/4 X 1/4	0.25	14.50
46-511	3/8 X 3/8	0.375	17.00
46-512	1/2 X 1/2	0.437	19.00

PNEUMATIC CHECK VALVES

- Max Operating Pressure: 220 psi
- Working Pressure: 14.5-145 psi
- Cracking Pressure: 2.8 psi
- Maximum Temperatures: 140° F

Materials

Body	Chrome plated Brass
Spring	Steel
O-Ring	NBR Rubber



Part#	Size	Dimensions (In.)		List
		A	B	
46-200	1/4	1.97	.67	5.31
46-201	3/8	1.97	.83	6.86
46-202	1/2	2.48	.98	8.51

One Piece Standard Port Ball Valve 316 Stainless Steel 1000 PSI

•order with or without yellow locking handle.



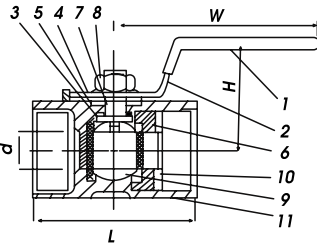
Without Locking Handle dimensions (inches)

Part#	Size	D	L	H	W	List
949-101	1/4"	.18	2.24	1.54	3.15	16.60
949-102	3/8"	.27	2.24	1.73	3.15	16.60
949-103	1/2"	.36	2.48	2.20	3.62	18.85
949-104	3/4"	.49	2.95	2.32	3.62	22.30
949-105	1"	.59	3.50	2.80	4.13	28.35
949-106	1-1/4"	.79	4.13	3.07	4.13	42.90
949-107	1-1/2"	.98	4.65	3.27	5.08	51.90
949-108	2"	1.26	5.35	3.94	5.08	67.80

Larger sizes available on special order basis

With Locking Handle

Part#	Size	List
949-101L	1/4"	18.90
949-102L	3/8"	19.15
949-103L	1/2"	20.90
949-104L	3/4"	25.05
949-105L	1"	31.85
949-106L	1-1/4"	46.50
949-107L	1-1/2"	55.95
949-108L	2"	71.85



Item	Parts	Material
1	Plastic Cover	Plastic
2	Handle	AISI 304 SS
3	Thrust Washer	PTFE
4	Packing Ring	AISI 304 SS
5	Stem Packing	PTFE
6	Seat	PTFE
7	Seat	AISI 316 SS
8	Stem Nut	AISI 304 SS
9	Ball	316SS ASTM-A351 CF8M
10	Cap	316SS ASTM-A351 CF8M
11	Body	316SS ASTM-A351 CF8M

SS = Stainless Steel

Two Piece Full Port Ball Valve 316 Stainless Steel 1000 PSI

•order with or without yellow locking handle.



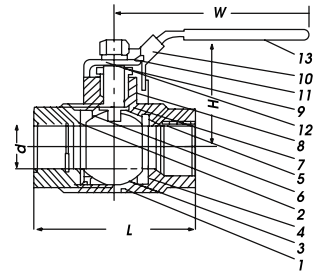
Without Locking Handle dimensions (inches)

Part#	Size	D	L	H	W	List
949-161	1/4"	.46	2.24	1.93	4.13	28.00
949-162	3/8"	.50	2.24	1.93	4.13	28.00
949-163	1/2"	.59	2.48	2.01	4.13	29.50
949-164	3/4"	.78	2.95	2.28	5.12	35.67
949-165	1"	.98	3.50	2.76	5.71	46.03
949-166	1-1/4"	1.26	4.13	2.87	5.71	66.67
949-167	1-1/2"	1.50	4.65	3.29	7.48	90.69
949-168	2"	2	5.35	3.62	7.48	131.35

Larger sizes available on special order basis

With Locking Handle

Part#	Size	List
949-161L	1/4"	31.55
949-162L	3/8"	31.55
949-163L	1/2"	33.05
949-164L	3/4"	39.52
949-165L	1"	50.88
949-166L	1-1/4"	72.52
949-167L	1-1/2"	98.54
949-168L	2"	139.30



Item	Parts	Material
1	Body	316SS ASTM-A351 CF8M
2	Body Cap	316SS ASTM-A351 CF8M
3	Ball	316SS ASTM-A351 CF8M
4	Seat	Reinforced PTFE
5	Stem	AISI 316 SS
6	Seal	Reinforced PTFE
7	Thrust Washer	Reinforced PTFE
8	Packing	Reinforced PTFE
9	Gland Nut	AISI 304SS
10/11	Nut & Washer	AISI 304SS
12	Handle	AISI 304SS
13	Plastic Cover	Plastic

SS = Stainless Steel

Private Label handles available.

See Page 280 for details

Carbon Barstock Steel Ball Valve

- For chemical and industrial applications.
- Blow-out proof stem design.
- 100% air tested under water, at 100 psi, open and closed positions.

SPECIFICATIONS

- Working Pressure: 1/4" ~ 1" 2000 psi WOG,
1-1/4" ~ 2" 1500 psi WOG,
- Temperature Range: -60° to 450°F
- End types: Threaded
- 1 piece ball valve reducing bore
- Reinforced PTFE seat



2000 PSI STANDARD PORT

Part #	Size	Box	Case	List
949-121	1/4	10	100	34.61
949-122	3/8	10	100	34.61
949-123	1/2	5	75	35.46
949-124	3/4	5	60	41.09
949-125	1	6	36	50.00
949-126	1-1/4	4	20	74.79
949-127	1-1/2	3	15	90.00
949-128	2	3	12	115.00

MATERIALS	
Body	Carbon Steel
Inscrewed Seat Retainer	Carbon Steel
Stem	S.S. 304
Ball	S.S. 304
Ball Seat	PTFE
Thrust Washer	PTFE
Cap Seat	PTFE
Packing	PTFE
Gland	Carbon Steel
Washer	Carbon Steel
Handle Nut	Carbon Steel
Handle	Carbon Steel
Handle Sleeve	Carbon Steel
Gland Nut	Carbon Steel

**STAINLESS STEEL
Check Valve**

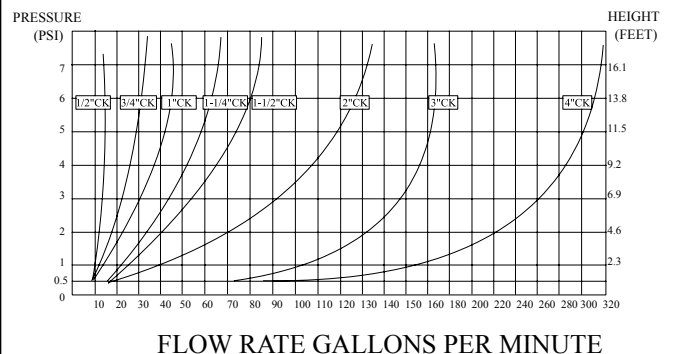
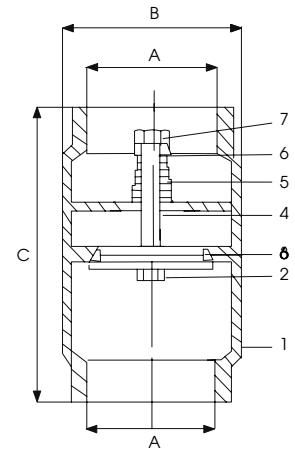
- No Lead
- Water wells need a check valve installed above the pumps between lengths of drop pipes



Brass Check Valve (Inches)							
Part#	Size	A NPT	B	C	Box	Case	List
949-430	1/2"	1/2"	1.26	2.43	10	100	19.82
949-431	3/4"	3/4"	1.50	2.72	10	80	22.58
949-432	1"	1"	1.77	3.23	10	60	29.58

More sizes available on a special order basis.

NO	Part	Material
1	Body	S.S 304
2	Stopper	S.S 304
3	O-Ring	Viton
4	Washer	PE
5	Spring	S.S 304
6	Cap	S.S 304
7	Nut	S.S 304



WHITE PVC BALL VALVES

- Quarter turn
- Solvent ends comply with ASTM D2466
- Designed for use in residential, commercial & industrial system as well as waste water, chemical, agricultural applications, marine, food processing, swimming pools
- Corrosion resistant
- EPDM seal
- EPDM O-ring
- Fits both Sch. 40 & 80 pipe
- NSF approved
- Rated for 150 PSI at 730
- Threaded ends comply with ANSI B1.20.1

**MOULDED IN PLACE
WHITE PIPE THREADS**



Part#	Size	Box	Case	List
940-284	1/2	10	100	2.60
940-285	3/4	5	60	3.45
940-286	1	5	40	4.90
940-287	1-1/4	5	30	7.50
940-288	1-1/2	4	24	10.10
940-289	2	4	16	13.50
940-290	2-1/2	3	12	48.00
940-291	3	3	12	63.00
940-292	4	2	8	98.25

**WHITE SOCKET
SLIP X SLIP**



Part #	Size	Box	Case	List
940-294	1/2	10	100	2.60
940-295	3/4	5	60	3.45
940-296	1	5	40	4.90
940-297	1 1/4	5	30	7.50
940-298	1 1/2	4	24	10.10
940-299	2	4	16	13.50

Grey also available in some sizes. Just change prefix to 941 instead of 940. Same Price.

Hose Bibbs

3/4" Hose Thread Outlet



Garden Hose Thread Male pipe thread

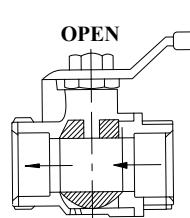
Hose Bibbs

Male Pipe

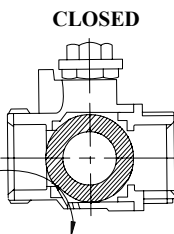
Part #	Size	Box	Case	List
942-170	1/2(1/2")	12	72	4.00
942-171	3/4	12	72	4.55

FULL PORT

AUTOMATIC DRAIN & LATCH LOCK HANDLE



Valve - open position.
Drain vent shut off.



Part#	Size	Box	Case	List
948-131	1/4"			18.28
948-132	3/8"			18.28
948-133	1/2"	10	120	18.28
948-134	3/4"	10	90	26.55
948-135	1"	6	60	37.60

Valve - closed and draining occurs. Upstream seat prevents air flow.
Downstream system is vented to atmosphere.

Do more than exist - live
 Do more than touch - feel.
 Do more than look - observe.
 Do more than read - absorb.
 Do more than hear - listen.
 Do more than listen - understand.

-John H. Rhoades

- Pipe threads to ANSI B1.20.1
- Hose threads to ANSI B 1.20.7

PLASTIC DRUM FAUCETS



The FLO-RITE faucet has been engineered to meet the demand for greater chemical resistance, using linear polyethylene for the stem.

SPECIFICATION DATA

- Body made of high-density polyethylene for greater strength and more positive thread engagement. Stem made of low density for more positive seal
- Not affected by most acids, caustics or oils. Will eliminate chemical reaction and contamination of products in drums.
- Lightweight yet strong and rugged two-piece construction. Eliminates mechanical difficulty.

“FLOW-RITE” DRUM FAUCET

Part#	Size	List
46-277	3/4	4.52



The FLO-KING faucet made of virgin polyethylene easily handles viscous materials. The faucet shoulder and gasket - made of EPDM material - provide a leakproof seal.

SPECIFICATION DATA

- Constructed of highest quality virgin polyethylene.
- Molded of attractive metallic gold plastic.
- Not affected by most acids, caustics or petroleum products.

“FLOW-KING” DRUM FAUCET

Part #	Size	List
46-278	2	37.06

CAUTION: Never use this product in temperatures exceeding 125° F or with a heated container. Failure to follow these instructions can lead to a hazardous condition

BRONZE DRUM & BARREL FAUCET VALVE

- Quarter turn operation
- 3/4” MIP inlet
- Lockable handle



MIP X FIP

Part#	Size	List
46-271	3/4 Hose Outlet	25.00

- Die cast body w/ nylon seat and steel spring
- For use with all petroleum products except trichlorethylene
- Lockable handle G261N



SELF-CLOSING STEEL DRUM & BARREL FAUCET

Part #	Size	List
46-270	3/4	7.00

BRONZE BARREL FAUCET

- Individually boxed
- Screen inlet
- Fine thread outlet
- Screen protected by plastic cap
- 3/4” MIP



SELF CLOSING BRONZE BARREL FAUCET

Part #	Size	List
46-275	3/4IPS INLET	30.92

Valves

Brass Nipples

We hereby certify that to the best of our knowledge and belief the CDA 230 alloy Red Brass Pipe from which our nipples are produced meet the requirements of ASTM Specifications B43-91 and is free of mercury contamination. The chemical analysis is 85% copper, 15% Zinc and conforms to federal Specifications WWN-35LA.

Our brass nipples meet ASTM B687-88 and MS51846 for standard brass and copper nipples, and MS51872 for extra heavy brass nipples and extra heavy copper nipples.

Threads: Nipples are threaded with American Standard taper pipe threads (NPT) in accordance with screw-thread standard for Federal Services Handbook H-28.

**RED BRASS 85%
Pipe With Threaded Ends Specifications:**

Pipe Size in Inches	Dimension in Inches		
	O.D.	I.D.	Wall Thickness
1/8"	.405	.281	.062
1/4"	.540	.376	.082
3/8"	.675	.495	.090
1/2"	.840	.626	.107
3/4"	1.050	.822	.114
1"	1.315	1.063	.126
1-1/4"	1.660	1.368	1.46
1-1/2"	1.900	1.600	.150
2"	2.375	2.063	.156
2-1/2"	2.875	2.501	.187
3"	3.500	3.062	.219
3-1/2"	4.000	3.500	.250
4"	4.500	4.000	.250
4-1/2"	5.000	4.500	.250
5"	5.563	5.063	.250
6"	6.625	6.125	.250

Standard Size (Inches)	Allowable Pressure POUNDS PER SQUARE INCH			
	@ 100° F	@ 200° F	@ 300° F	@ 400° F
1/8"	370	370	320	140
1/4"	870	870	760	330
3/8"	890	890	780	340
1/2"	900	900	790	340
3/4"	810	810	710	310
1"	630	630	560	240
1-1/4"	690	690	610	260
1-1/2"	630	630	560	240
2"	540	540	480	210
2-1/2"	450	450	390	170
3"	510	510	450	190
3-1/2"	570	570	500	220
4"	510	510	440	190
5"	410	410	360	160
6"	340	340	300	130

Nipples & Fittings

Nipple Weight Chart

Diameter	Length of Close	Close	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"
1/8"	3/4"	1.4	3.0	3.8	5.2	6.2	7.2	8.4	9.2	11.0	12.2	13.2
1/4"	7/8"	2.4	4.8	6.4	8.2	10.4	12.2	14.0	16.0	18.0	20.2	22.0
3/8"	1"	3.8	6.2	8.6	11.0	13.4	16.2	18.4	20.4	23.4	25.6	28.0
1/2"	1-1/8"	5.6	8.6	11.6	16.2	19.4	22.4	27.4	29.6	33.0	37.4	40.4
3/4"	1-3/8"	10.2	11.8	16.2	21.4	22.6	31.0	35.6	40.2	45.6	50.0	55.0
1"	1-1/2"	15.6		23.4	29.6	37.0	44.2	52.6	59.2	68.4	74.8	76.8
1-1/4"	1-5/8"	26.5		36.0	45.0	56.5	68.0	81.0	92.0	98.5	110.5	125.0
1-1/2"	1-3/4"	35.0		42.0	55.5	67.0	81.0	95.5	108.0	121.5	131.0	144.0
2"	2"	54.5			72.0	88.5	107.0	125.0	143.5	155.0	179.0	190.0
2-1/2"	2-1/2"	90.0				116.5	148.5	168.5	180.0	218.5	239.5	262.0
3"	2-5/8"	134.5				170.0	210.0	239.0	268.5	314.0	349.0	390.0
4"	2-7/8"	226.3				253.1	307.0	357.5	422.5	450.0	516.3	563.8

Approximate weight per 100 pieces. Standard Brass Nipples.

For Extra Heavy Brass multiply above weight by 1.37

Pipe Threads

1/8"-27

1/4"-18

3/8"-18

1/2"-14

3/4"-14

1"-11 1/2

1-1/4"-11 1/2

1 1/2"- 11 1/2

2"-11 1/2

2 1/2"-8

3"-8

4"-8

1/8" Diameter



Part #	Length	List
40-001	Close (3/4)	0.95
40-002	x 1-1/2"	1.07
40-003	x 2"	1.15
40-004	x 2-1/2"	1.31
40-005	x 3"	1.41
40-006	x 3-1/2"	1.52
40-007	x 4"	1.71
40-008	x 4-1/2"	1.93
40-009	x 5"	2.09
40-010	x 5-1/2"	2.26
40-011	x 6"	2.42
40-012	x 7"	2.88
40-013	x 8"	3.17
40-014	x 9"	3.63
40-015	x 10"	3.97
40-016	x 11"	4.31
40-017	x 12"	4.58
40-018	x 14"	7.00
40-019	x 16"	8.35
40-217	x 6ft.	36.03
40-218	x 12ft.	53.49

1/4" Diameter



Part #	Length	List
40-020	Close (7/8)	1.07
40-021	x 1-1/2"	1.24
40-022	x 2"	1.54
40-023	x 2-1/2"	1.51
40-024	x 3"	1.77
40-025	x 3-1/2"	2.01
40-026	x 4"	2.27
40-027	x 4-1/2"	2.57
40-028	x 5"	2.80
40-029	x 5-1/2"	3.04
40-030	x 6"	3.27
40-031	x 7"	3.89
40-032	x 8"	4.27
40-033	x 9"	4.73
40-034	x 10"	5.20
40-035	x 11"	5.68
40-036	x 12"	6.14
40-227	x 6ft.	45.84
40-228	x 12ft.	74.74

3/8" Diameter



Part #	Length	List
40-040	Close (1)	1.15
40-041	x 1-1/2"	1.29
40-042	x 2"	1.54
40-043	x 2-1/2"	1.79
40-044	x 3"	2.06
40-045	x 3-1/2"	2.66
40-046	x 4"	2.66
40-047	x 4-1/2"	3.00
40-048	x 5"	3.29
40-049	x 5-1/2"	3.50
40-050	x 6"	3.79
40-051	x 7"	4.60
40-052	x 8"	5.16
40-053	x 9"	5.79
40-054	x 10"	6.14
40-055	x 11"	6.71
40-056	x 12"	7.28
40-237	x 6ft.	61.06
40-238	x 12ft.	100.11

1/2" Diameter



Part #	Length	List
40-060	Close (1-1/8)	1.43
40-061	x 1-1/2"	1.65
40-062	x 2"	1.94
40-063	x 2-1/2"	2.30
40-064	x 3"	2.70
40-065	x 3-1/2"	3.15
40-066	x 4"	3.54
40-067	x 4-1/2"	3.91
40-068	x 5"	4.30
40-069	x 5-1/2"	4.73
40-070	x 6"	5.16
40-071	x 7"	6.07
40-072	x 8"	6.79
40-073	x 9"	7.55
40-074	x 10"	8.32
40-075	x 11"	9.11
40-076	x 12"	9.89
40-247	x 6ft.	83.21
40-248	x 12ft.	135.77

3/4" Diameter



Part #	Length	List
40-080	Close (1- 3/8)	2.05
40-081	x 1-1/2"	2.19
40-082	x 2"	2.61
40-083	x 2-1/2"	3.01
40-084	x 3"	3.47
40-085	x 3-1/2"	3.99
40-086	x 4"	4.52
40-087	x 4-1/2"	5.04
40-088	x 5"	5.55
40-089	x 5-1/2"	6.06
40-090	x 6"	6.60
40-091	x 7"	7.93
40-092	x 8"	8.91
40-093	x 9"	9.89
40-094	x 10"	10.86
40-095	x 11"	11.87
40-096	x12"	12.90
40-257	x 6ft.	113.74
40-258	x 12ft.	185.83

1" Diameter



Part #	Length	List
40-100	Close (1- 1/2)	3.03
40-101	x 2"	3.74
40-102	x 2-1/2"	4.37
40-103	x 3"	5.03
40-104	x 3-1/2"	5.82
40-105	x 4"	6.45
40-106	x 4-1/2"	7.30
40-107	x 5"	8.07
40-108	x 5-1/2"	8.84
40-109	x 6"	9.64
40-110	x 7"	11.26
40-111	x 8"	12.85
40-112	x 9"	14.94
40-113	x 10"	15.97
40-114	x 11"	17.16
40-115	x12"	18.97
40-267	x 6ft.	159.49
40-268	x 12ft.	274.00

1-1/4" Diameter



Part #	Length	List
40-120	Close (1-5/8)	4.61
40-121	x 2"	5.17
40-122	x 2-1/2"	6.08
40-123	x 3"	7.17
40-124	x 3-1/2"	8.40
40-125	x 4"	9.43
40-126	x 4-1/2"	10.47
40-127	x 5"	11.50
40-128	x 5-1/2"	12.62
40-129	x 6"	13.71
40-130	x 7"	16.25
40-131	x 8"	18.35
40-132	x 9"	21.30
40-133	x 10"	22.71
40-134	x 11"	25.42
40-135	x12"	27.07
40-277	x 6ft.	235.04
40-278	x 12ft.	364.8

1-1/2" Diameter



Part #	Length	List
40-140	Close(1-3/4)	5.95
40-141	x 2"	6.40
40-142	x 2-1/2"	7.67
40-143	x 3"	8.81
40-144	x 3-1/2"	10.12
40-145	x 4"	11.48
40-146	x 4-1/2"	12.90
40-147	x 5"	14.27
40-148	x 5-1/2"	15.62
40-149	x 6"	16.46
40-150	x 7"	19.83
40-151	x 8"	22.52
40-152	x 9"	25.21
40-153	x 10"	27.90
40-154	x 11"	30.60
40-155	x12"	33.28
40-287	x 6ft.	278.73
40-288	x 12ft.	456.00

2" Diameter



Part #	Length	List
40-160	Close (2)	9.06
40-161	x 2-1/2"	9.78
40-162	x 3"	11.29
40-163	x 3-1/2"	12.99
40-164	x 4"	14.77
40-165	x 4-1/2"	16.47
40-166	x 5"	18.26
40-167	x 5-1/2"	20.03
40-168	x 6"	21.81
40-169	x 7"	25.57
40-170	x 8"	29.09
40-171	x 9"	32.43
40-172	x 10"	36.03
40-173	x 11"	38.95
40-174	x 12"	42.91
40-175	x 18"	79.46
40-176	x 24"	105.95
40-177	x 30"	132.44
40-178	x 36"	158.93
40-279	x 6ft	307.15
40-298	x 12ft	600.00

2-1/2" Diameter



Part #	Length	List
40-180	x Close (2-1/2)	23.92
40-181	x 3"	25.00
40-182	x 3-1/2"	28.53
40-183	x 4"	31.49
40-184	x 4-1/2"	33.79
40-185	x 5"	37.17
40-186	x 5-1/2"	40.03
40-187	x 6"	43.83
40-188	x 7"	49.93
40-189	x 8"	57.34
40-190	x 9"	63.65
40-191	x 10"	70.33
40-192	x 11"	75.78
40-193	x 12"	83.14

3" Diameter



Part #	Length	List
40-200	Close (2-5/8)	32.52
40-201	x 3"	33.80
40-202	x 3-1/2"	38.23
40-203	x 4"	43.00
40-204	x 4-1/2"	47.34
40-205	x 5"	52.08
40-206	x 5-1/2"	56.59
40-207	x 6"	61.52
40-208	x 7"	71.78
40-209	x 8"	81.78
40-210	x 9"	89.55
40-211	x 10"	99.34
40-212	x 11"	108.03
40-213	x 12"	118.99

Extra Heavy Schedule 80 Red Brass Nipples and Chrome Plated Brass Available upon request

4" Diameter



Part #	Length	List
40-220	Close (2-7/8)	48.93
40-221	x 3"	49.70
40-222	x 3-1/2"	55.80
40-223	x 4"	63.64
40-224	x 4-1/2"	68.74
40-225	x 5"	75.92
40-226	x 5-1/2"	80.96
40-234	x 6"	89.40
40-229	x 8"	102.63
40-233	x 12"	169.87

Things come to those who wait, but only the things left by those who hustle.

-Abraham Lincoln

Class 125 (150) For steam, water, gas, oil and air service

Standard specifications

Materials - ASTM B62-82 (85,5,5,5)

Dimensions - ANSI B 16.15

Threads - ANSI B2.1 or BA 21 and Fed. WW-P-460

Bronze threaded fittings are manufactured from smooth-cored castings, designed to provide full flow with minimum restriction. All threads are accurately machined and gauged to ensure a perfect fit with the pipe. All fittings are individually tested under water to ensure quality.

Nipples & Fittings

90° ELBOWS



Part#	Size	List
44-100	1/8	1.33
44-101	1/4	1.33
44-102	3/8	1.33
44-103	1/2	2.00
44-104	3/4	2.72
44-105	1	4.17
44-106	1-1/4	6.65
44-107	1-1/2	8.32
44-108	2	13.51
44-109	2-1/2	25.76
44-110	3	43.43
44-112	4	100.55

90° REDUCING ELBOWS

Part#	Size	List
44-120	1/4 X 1/8	3.39
44-123	1/2 X 1/4	3.60
44-124	1/2 X 3/8	2.17
44-127	3/4 X 1/2	2.96
44-131	1 X 3/4	5.20
44-134	1-1/4 X 1	13.50
44-137	1-1/2 X 1	17.06
44-140	2 X 1	31.47

More sizes available

90° STREET ELLS



Part#	Size	List
44-160	1/8	2.00
44-161	1/4	2.00
44-162	3/8	2.00
44-163	1/2	2.51
44-164	3/4	3.54
44-165	1	5.83
44-166	1-1/4	8.95
44-167	1-1/2	11.64
44-168	2	19.74
44-169	2-1/2	29.09
44-170	3	43.63

45° ELBOWS



Part#	Size	List
44-180	1/8	1.46
44-181	1/4	1.46
44-182	3/8	1.46
44-183	1/2	1.84
44-184	3/4	2.72
44-185	1	4.59
44-186	1-1/4	7.32
44-187	1-1/2	9.16
44-188	2	14.88

More sizes available

45° STREET ELLS



Part#	Size	List
44-200	1/8	2.00
44-201	1/4	2.00
44-202	3/8	2.00
44-203	1/2	2.51
44-204	3/4	3.54
44-205	1	5.83
44-206	1-1/4	8.95
44-207	1-1/2	11.64
44-208	2	19.74

TEES



Part#	Size	List
44-250	1/8	1.84
44-251	1/4	1.84
44-252	3/8	1.84
44-253	1/2	2.33
44-254	3/4	3.33
44-255	1	5.94
44-256	1-1/4	8.33
44-257	1-1/2	11.43
44-258	2	18.71
44-259	2-1/2	35.32
44-260	3	66.35

REDUCING TEES (REDUCING ON THE BRANCH)



Part#	Size (1&2)x3	List
44-276	1/2 X 1/4	2.79
44-282	3/4 X 1/4	6.63
44-283	3/4 X 3/8	6.63
44-286	3/4 X 1/2	3.99
44-291	1 X 1/2	12.10
44-298	1 X 3/4	7.07
44-301	1-1/4 X 1/2	17.06
44-303	1-1/4 X 3/4	17.06
44-306	1-1/4 X 1	17.06

More sizes available

BULLHEAD TEES (LARGER BRANCH)



Part#	Size 1x2x3	List
44-280	1/2 X 1/2 X 3/4	4.56

REDUCING TEES (REDUCING ON THE RUN)



Part#	Size 1x2x3	List
44-287	3/4 X 1/2 X 1/2	7.28
44-296	1 X 3/4 X 3/4	12.10

CROSSES



Part#	Size	List
44-391	1/4	3.00
44-392	3/8	3.00
44-393	1/2	3.75
44-394	3/4	5.41
44-395	1	8.32
44-396	1-1/4	12.48
44-397	1-1/2	16.63
44-398	2	59.26

COUPLINGS



Part#	Size	List
44-410	1/8	1.33
44-411	1/4	1.33
44-412	3/8	1.33
44-413	1/2	1.67
44-414	3/4	2.21
44-415	1	3.33
44-416	1-1/4	5.20
44-417	1-1/2	7.07
44-418	2	11.69
44-420	3	44.42

Nipples & Fittings

REDUCING COUPLINGS



Part#	Size	List
44-430	1/4 X 1/8	1.42
44-431	3/8 X 1/8	1.42
44-432	3/8 X 1/4	1.42
44-433	1/2 X 1/8	2.00
44-434	1/2 X 1/4	1.79
44-435	1/2 X 3/8	1.79
44-436	3/4 X 1/4	3.03
44-437	3/4 X 3/8	2.80
44-438	3/4 X 1/2	2.80
44-440	1 X 3/8	4.78
44-441	1 X 1/2	4.38
44-442	1 X 3/4	4.38
44-444	1-1/4 X 1/2	7.83
44-445	1-1/4 X 3/4	7.07
44-446	1-1/4 X 1	7.07
44-447	1-1/2 X 1/2	16.71
44-448	1-1/2 X 3/4	9.77
44-449	1-1/2 X 1	8.95
44-450	1-1/2 X 1-1/4	8.95
44-458	2 X 1/2	14.55
44-451	2 X 3/4	14.55
44-452	2 X 1	14.55
44-453	2 X 1-1/4	13.30
44-454	2 X 1-1/2	13.30
44-461	2-1/2 X 1-1/2	39.09
44-462	2-1/2 X 2	22.86
44-456	3 X 2	51.80
44-463	3 X 2-1/2	51.80

More sizes available

CAPS



Part#	Size	List
44-470	1/8	1.00
44-471	1/4	1.00
44-472	3/8	1.00
44-473	1/2	1.32
44-474	3/4	1.75
44-475	1	2.75
44-476	1-1/4	4.17
44-477	1-1/2	5.62
44-478	2	9.56
44-480	3	30.20

UNIONS



Part#	Size	List
44-600	1/8	4.52
44-601	1/4	4.52
44-602	3/8	4.52
44-603	1/2	5.11
44-604	3/4	7.07
44-605	1	9.37
44-606	1-1/4	13.72
44-607	1-1/2	16.19
44-608	2	24.94
44-609	2-1/2	45.71
44-610	3	125.86

Domestic Bronze Fittings available on request.

Nipples & Fittings

The galleries are full of critics. They play no ball. They fight no fights. They make no mistakes because they attempt nothing. Down in the arena are the doers. They make many mistakes because they attempt many things.

Ford forgot to put a reverse gear on his first automobile and then went on to revolutionize the automobile industry with his Model T.

The man who makes no mistakes lacks boldness and the spirit of adventure. He never tries anything new. He is a brake on the wheels of progress.

-Grahm, Texas Rotary "Scandal Sheet"

HEX BUSHINGS



Part#	Size	List
44-500	1/4 X 1/8	0.84
44-501	3/8 X 1/8	0.84
44-502	3/8 X 1/4	0.84
44-503	1/2 X 1/8	1.26
44-504	1/2 X 1/4	1.05
44-505	1/2 X 3/8	1.05
44-506	3/4 X 1/8	1.26
44-507	3/4 X 1/4	1.26
44-508	3/4 X 3/8	1.46
44-509	3/4 X 1/2	1.46
44-510	1 X 1/4	2.66
44-511	1 X 3/8	2.66
44-512	1 X 1/2	2.21
44-513	1 X 3/4	2.21
44-514	1-1/4 X 1/4	4.50
44-515	1-1/4 X 3/8	4.50
44-516	1-1/4 X 1/2	4.50
44-517	1-1/4 X 3/4	3.75
44-518	1-1/4 X 1	3.75
44-519	1-1/2 X 1/4	5.83
44-520	1-1/2 X 3/8	9.70
44-521	1-1/2 X 1/2	5.83
44-522	1-1/2 X 3/4	5.83
44-523	1-1/2 X 1	4.78
44-524	1-1/2 X 1-1/4	4.78
44-525	2 X 1/4	8.53
44-527	2 X 1/2	8.53
44-528	2 X 3/4	8.53
44-529	2 X 1	8.53
44-530	2 X 1-1/4	7.07
44-531	2 X 1-1/2	7.07
44-532	2-1/2 X 1	29.15
44-534	2-1/2 X 1-1/2	14.14
44-535	2-1/2 X 2	14.14
44-537	3 X 1-1/2	24.94
44-538	3 X 2	20.78
44-539	3 X 2-1/2	20.78

More sizes available

BRONZE COUNTERSUNK PLUGS



Part#	Size	List
44-633	1/2	1.19
44-634	3/4	1.37
44-635	1	2.56
44-636	1-1/4	4.26
44-637	1-1/2	6.39
44-638	2	10.40
44-639	2-1/2	21.27
44-640	3	28.86

CORED SQUARE HEAD PLUGS



Part#	Size	List
44-650	1/8	0.88
44-651	1/4	1.01
44-652	3/8	1.12
44-653	1/2	1.39
44-654	3/4	1.60
44-655	1	2.09
44-656	1-1/4	3.12
44-657	1-1/2	3.96
44-658	2	6.25
44-659	2-1/2	17.79
44-660	3	28.43
44-662	4	55.53

SOLID SQUARE HEAD PLUGS



Part#	Size	List
44-670	1/8	0.94
44-671	1/4	1.01
44-672	3/8	1.11
44-673	1/2	1.67
44-674	3/4	2.17
44-675	1	3.70
44-676	1-1/4	6.67
44-677	1-1/2	8.65
44-678	2	13.72

HEX LOCKNUTS



Part#	Size	List
44-700	1/8	0.63
44-701	1/4	0.63
44-702	3/8	0.63
44-703	1/2	1.05
44-704	3/4	1.26
44-705	1	1.88
44-706	1-1/4	2.84
44-707	1-1/2	3.66
44-708	2	7.16

HEX NIPPLES



Part#	Size	List
44-720	1/8	2.40
44-721	1/4	2.20
44-723	1/2	3.65
44-724	3/4	4.20
44-725	1	5.45
44-726	1-1/4	8.20
44-727	1-1/2	10.40
44-728	2	16.40
44-729	2-1/2	26.15

BRONZE REDUCING NIPPLES



Part#	Size	List
44-740	1/4 X 1/8	2.40
44-741	3/8 X 1/4	2.40
44-742	1/2 X 3/8	3.65
44-743	3/4 X 1/2	4.60
44-744	1 X 1/2	5.45
44-745	1 X 3/4	6.55
44-748	1-1/4 X 1	9.02
44-750	1-1/2 X 1	11.46
44-753	1-1/2 X 1-1/4	11.46
44-760	2 X 1-1/2	17.95

More sizes available

Moral Of The Day

One day a farmer's donkey fell down into a well. The animal cried piteously for hours as the farmer tried to figure out what to do. Finally he decided the animal was old and the well needed to be covered up anyway, it just wasn't worth it to retrieve the donkey.

He invited all his neighbors to come over and help him. They all grabbed a shovel and began to shovel dirt into the well. At first, the donkey realized what was happening and cried horribly. Then, to everyone's amazement, he quieted down.

A few shovel loads later, the farmer finally looked down the well and was astonished at what he saw. With every shovel of dirt that hit his back, the donkey was doing something amazing. He would shake it off and take a step up.

As the farmer's neighbors continued to shovel dirt on top of the animal, he would shake it off and take a step up. Pretty soon, everyone was amazed as the donkey stepped up over the edge of the well and trotted off!

Life is going to shovel dirt on you, all kinds of dirt. The trick to getting out of the well is to shake it off and take a step up.

Each of our troubles is a stepping stone. We can get out of the deepest wells just by not stopping, never giving up! Shake it off and take a step up!

Remember the five simple rules to be happy:

1. Free your heart from hatred.
2. Free your mind from worries.
3. Live simply.
4. Give more.
5. Expect less.

P.S.: The donkey later came back and kicked THE CRAP out of the farmer that tried burying him.

Moral: When you try to cover your ass, it always comes back to get you.

Schedule 40 Welded
NPT threaded both ends

See Brass Nipple Section header
for detailed specifications
(They are the same)



1/8" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-001	1.08	x Close (3/4")	49-001	1.25
48-002	1.41	x 1-1/2"	49-002	1.75
48-003	1.68	x 2"	49-003	2.13
48-004	1.95	x 2-1/2"	49-004	2.50
48-005	2.22	x 3"	49-005	2.88
48-006	2.49	x 3-1/2"	49-006	3.27
48-007	2.76	x 4"	49-007	3.65
48-008	3.03	x 4-1/2"	49-008	4.03
48-009	3.30	x 5"	49-009	4.41
48-010	3.57	x 5-1/2"	49-010	4.80
48-011	3.85	x 6"	49-011	5.18
48-015	6.09	x 10"		



1/4" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-020	1.22	x Close (7/8")	49-020	1.40
48-021	1.51	x 1-1/2"	49-021	1.79
48-022	1.81	x 2"	49-022	2.19
48-023	2.14	x 2-1/2"	49-023	2.61
48-024	2.48	x 3"	49-024	3.03
48-025	2.81	x 3-1/2"	49-025	3.45
48-026	3.17	x 4"	49-026	3.91
48-027	3.51	x 4-1/2"	49-027	4.33
48-028	3.84	x 5"	49-028	4.75
48-029	4.17	x 5-1/2"	49-029	5.17
48-030	4.51	x 6"	49-030	5.59
48-032	5.93	x 8"		
48-034	7.27	x 10"		
48-036	8.60	x 12"		



3/8" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-040	1.46	x Close (1")	49-040	1.73
48-041	1.77	x 1-1/2"	49-041	2.16
48-042	2.15	x 2"	49-042	2.65
48-043	2.56	x 2-1/2"	49-043	3.18
48-044	2.96	x 3"	49-044	3.71
48-045	3.37	x 3-1/2"	49-045	4.24
48-046	3.78	x 4"	49-046	4.77
48-047	4.19	x 4-1/2"	49-047	5.30
48-048	4.60	x 5"	49-048	5.82
48-049	5.00	x 5-1/2"	49-049	6.35
48-050	5.41	x 6"	49-050	6.88
48-052	7.18	x 8"		
48-054	8.81	x 10"		



1/2" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-060	1.88	x Close (1-1/8")	49-060	2.30
48-061	2.27	x 1-1/2"	49-061	2.85
48-062	2.72	x 2"	49-062	3.47
48-063	3.26	x 2-1/2"	49-063	4.19
48-064	3.80	x 3"	49-064	4.91
48-065	4.34	x 3-1/2"	49-065	5.64
48-066	4.90	x 4"	49-066	6.38
48-067	5.44	x 4-1/2"	49-067	7.11
48-068	5.97	x 5"	49-068	7.75
48-069	6.51	x 5-1/2"	49-069	8.56
48-070	7.05	x 6"	49-070	9.28
48-071	8.22	x 7"		
48-072	9.30	x 8"		
48-073	10.38	x 9"		
48-074	11.46	x 10"		
48-075	12.53	x 11"		
48-076	13.61	x 12"		



3/4" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-080	2.54	x Close (1-3/8")	49-080	3.01
48-081	2.70	x 1-1/2"	49-081	3.21
48-082	3.24	x 2"	49-082	3.91
48-083	3.89	x 2-1/2"	49-083	4.74
48-084	4.54	x 3"	49-084	5.56
48-085	5.20	x 3-1/2"	49-085	6.38
48-086	5.85	x 4"	49-086	7.20
48-087	6.50	x 4-1/2"	49-087	8.02
48-088	7.15	x 5"	49-088	8.84
48-089	7.80	x 5-1/2"	49-089	9.66
48-090	8.46	x 6"	49-090	10.48
48-091	9.82	x 7"		
48-092	11.13	x 8"		
48-094	13.73	x 10"	49-094	17.11
48-096	16.34	x 12"		



1" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-100	3.34	x Close (1-1/2")	49-100	4.17
48-101	4.18	x 2"	49-101	5.28
48-102	4.96	x 2-1/2"	49-102	6.34
48-103	5.80	x 3"	49-103	7.46
48-104	6.64	x 3-1/2"	49-104	8.57
48-105	7.48	x 4"	49-105	9.69
48-106	8.32	x 4-1/2"	49-106	10.80
48-107	9.16	x 5"	49-107	11.92
48-108	10.00	x 5-1/2"	49-108	13.04
48-109	10.84	x 6"	49-109	14.15
48-110	12.70	x 7"		
48-111	14.38	x 8"		
48-113	17.73	x 10"		



1-1/4" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-120	4.49	x Close (1-5/8")	49-120	5.70
48-121	5.28	x 2"	49-121	6.78
48-122	6.26	x 2-1/2"	49-122	8.13
48-123	7.33	x 3"	49-123	9.57
48-124	8.39	x 3-1/2"	49-124	11.01
48-125	9.45	x 4"	49-125	12.45
48-126	10.52	x 4-1/2"	49-126	13.88
48-127	11.58	x 5"	49-127	15.32
48-128	12.64	x 5-1/2"	49-128	16.76
48-129	13.71	x 6"	49-129	18.20
48-131	17.99	x 8"		
48-135	26.54	x 12"		



1-1/2" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-140	5.49	x Close (2")	49-140	7.04
48-141	6.02	x 2"	49-141	7.79
48-142	7.28	x 2-1/2"	49-142	9.49
48-143	8.53	x 3"	49-143	11.19
48-144	9.79	x 3-1/2"	49-144	12.89
48-145	11.05	x 4"	49-145	14.59
48-146	12.3	x 4-1/2"	49-146	16.29
48-147	13.56	x 5"	49-147	17.98
48-148	14.82	x 5-1/2"	49-148	19.68
48-149	16.07	x 6"	49-149	21.38
48-151	21.24	x 8"		
48-152	23.75	x 9"		

Nipples & Fittings



2" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-160	8.53	x Close (2")	49-160	10.94
48-161	9.5	x 2-1/2"	49-161	12.51
48-162	11.21	x 3"	49-162	14.61
48-163	12.63	x 3-1/2"	49-163	16.85
48-164	14.27	x 4"	49-164	19.09
48-165	15.91	x 4-1/2"	49-165	21.33
48-166	17.54	x 5"	49-166	23.57
48-167	19.18	x 5-1/2"	49-167	25.81
48-168	20.82	x 6"	49-168	28.05
48-169	24.41	x 7"	49-169	32.84
48-170	27.68	x 8"		
48-171	30.96	x 9"		
48-172	34.23	x 10"		



2-1/2" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-180	17.29	x Close (2-1/2)		
48-193	66.38	x 12"		
		x 5-1/2"	49-186	40.09



3" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-200	24.32	x Close (2-5/8)		
48-201	26.86	x 3"		
48-203	33.63	x 4"	49-203	41.44
48-205	38.52	x 5"		
48-207	45.28	x 6"		
		x 7"	49-208	67.87
48-209	60.96	x 8"		
48-213	88.02	x 12"		



4" Diameter

304 STAINLESS			316 STAINLESS	
Part#	List	Length	Part#	List
48-220	31.09	x Close (2-7/8)		
		x 5"	49-225	64.45
48-227	58.11	x 6"		

More sizes available

Other Stainless Steel Nipples Available

- Schedule 80 welded
- Schedule 80 & 40 seamless

Nipples & Fittings

Count the "F's" in the following text:

FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS

How many? 3?

Wrong, there are 6 !!!

The brain cannot process "OF".

Anyone who counts all 6 "F's" on the first go is a genius. Three is normal, four is quite rare.

90° ELBOWS



304 STAINLESS			316 STAINLESS	
Part#	List	Size	Part#	List
62-100	2.61	1/8"	63-100	2.83
62-101	2.61	1/4"	63-101	2.83
62-102	2.88	3/8"	63-102	3.12
62-103	3.37	1/2"	63-103	3.76
62-104	4.81	3/4"	63-104	5.38
62-105	7.05	1"	63-105	7.89
62-106	10.07	1-1/4"	63-106	13.51
62-107	13.4	1-1/2"	63-107	15.00
62-108	21.48	2"	63-108	23.30
62-109	65.36	2-1/2"	63-109	45.12
62-110	58.16	3"	63-110	63.08
62-112	101.78	4"	63-112	110.39

90° STREET ELLS



304 STAINLESS			316 STAINLESS	
Part#	List	Size	Part#	List
62-160	3.56	1/8"	63-160	3.98
62-161	3.56	1/4"	63-161	3.98
62-162	4.01	3/8"	63-162	4.48
62-163	4.72	1/2"	63-163	5.27
62-164	6.83	3/4"	63-164	7.64
62-165	9.43	1"	63-165	10.54
62-166	13.15	1-1/4"	63-166	14.70
62-167	16.51	1-1/2"	63-167	18.46
62-168	25.93	2"	63-168	29.00

45° ELBOWS



304 STAINLESS			316 STAINLESS	
Part#	List	Size	Part#	List
62-180	3.27	1/8"	63-180	3.55
62-181	3.27	1/4"	63-181	3.55
62-182	3.7	3/8"	63-182	4.02
62-183	4.3	1/2"	63-183	4.73
62-184	6.31	3/4"	63-184	6.85
62-185	8.73	1"	63-185	9.47
62-186	12.7	1-1/4"	63-186	14.19
62-187	16.92	1-1/2"	63-187	18.93
62-188	26.17	2"	63-188	28.39

TEES



304 STAINLESS			316 STAINLESS	
Part#	List	Size	Part#	List
62-250	3.53	1/8"	63-250	3.95
62-251	3.53	1/4"	63-251	3.95
62-252	3.98	3/8"	63-252	4.45
62-253	4.68	1/2"	63-253	5.24
62-254	6.74	3/4"	63-254	7.53
62-255	9.46	1"	63-255	10.58
62-256	14.01	1-1/4"	63-256	15.66
62-257	17.63	1-1/2"	63-257	19.72
62-258	29.17	2"	63-258	32.62
62-260	78.86	3"		

CROSSES



304 STAINLESS			316 STAINLESS	
Part#	List	Size	Part#	List
		1/8"	63-390	6.49
62-391	5.81	1/4"	63-391	6.49
62-392	6.61	3/8"	63-392	8.86
62-393	7.76	1/2"	63-393	9.54
62-394	11.25	3/4"	63-394	13.84
62-395	14.46	1"	63-395	16.17
62-396	23.27	1-1/4"	63-396	26.02
62-397	27.15	1-1/2"	63-397	30.36
62-398	44.94	2"	63-398	50.25

**STAINLESS STEEL OD MACHINED
COUPLINGS**



304 STAINLESS			316 STAINLESS	
Part#	List	Size	Part#	List
62-410B	2.05	1/8"	63-410B	2.30
62-411B	2.05	1/4"	63-411B	2.30
62-412B	2.41	3/8"	63-412B	2.51
62-413B	2.92	1/2"	63-413B	3.53
62-414B	3.69	3/4"	63-414B	4.95
62-415B	7.69	1"	63-415B	8.05
62-416B	9.46	1-1/4"	63-416B	10.58
62-417B	12.62	1-1/2"	63-417B	14.11
62-418B	18.92	2"	63-418B	21.16

COUPLINGS



304 STAINLESS

Part#	List	Size
62-413	3.21	1/2"
62-414	4.49	3/4"
62-415	6.41	1"
62-416	10.45	1-1/4"
62-417	12.53	1-1/2"
62-418	20.29	2"
62-419	32.06	2-1/2"
62-420	44.88	3"
62-421	76.93	4"

316 STAINLESS

Part#	List
63-413	3.59
63-414	5.02
63-415	7.17
63-416	11.69
63-417	14.02
63-418	22.69
63-419	35.84
63-420	55.19
63-421	86.02

REDUCING COUPLINGS



304 STAINLESS

Part#	List	Size
62-430	2.66	1/4 x 1/8
62-431	3.02	3/8 x 1/8
62-432	3.02	3/8 x 1/4
62-433	3.02	1/2 x 1/8
62-434	3.53	1/2 x 1/4
62-435	3.53	1/2 x 3/8
62-455	4.94	3/4 x 1/8
62-436	4.94	3/4 x 1/4
62-437	4.94	3/4 x 3/8
62-438	4.94	3/4 x 1/2
62-440	7.98	1 x 3/8
62-441	7.98	1 x 1/2
62-442	7.98	1 x 3/4
62-445	12.54	1-1/4 x 3/4
62-446	12.54	1-1/4 x 1
		1-1/2 x 1/2
62-448	15.04	1-1/2 x 3/4
62-449	15.04	1-1/2 x 1
62-450	15.04	1-1/2 x 1-1/4
62-452	22.32	2 x 1
62-453	22.32	2 x 1-1/4
62-454	22.32	2 x 1-1/2

316 STAINLESS

Part#	List
63-430	2.98
63-432	3.37
63-434	3.95
63-435	3.95
63-436	5.52
63-437	5.52
63-438	5.52
63-441	8.60
63-442	8.60
63-445	14.02
63-446	14.02
63-447	16.82
63-448	16.82
63-449	16.82
63-450	16.82
63-452	24.95
63-453	24.95
63-454	24.95

**In the race for quality,
there is no finish line**

CAPS



304 STAINLESS

Part#	List	Size
62-470	1.99	1/8"
62-471	1.99	1/4"
62-472	2.21	3/8"
62-473	2.63	1/2"
62-474	3.69	3/4"
62-475	5	1"
62-476	9.2	1-1/4"
62-477	12	1-1/2"
62-478	17.35	2"
62-480	40.47	3"

316 STAINLESS

Part#	List
63-470	2.28
63-471	2.28
63-472	2.53
63-473	3.01
63-474	4.22
63-475	5.73
63-476	10.54
63-477	11.46
63-478	17.63

HEX BUSHINGS



304 STAINLESS

Part#	List	Size
62-500	1.80	1/4 x 1/8
		3/8 x 1/8
62-502	2.02	3/8 x 1/4
62-503	3.33	1/2 x 1/8
62-504	2.37	1/2 x 1/4
62-505	2.37	1/2 x 3/8
		3/4 x 1/4
62-508	3.30	3/4 x 3/8
62-509	3.30	3/4 x 1/2
62-512	4.62	1 x 1/2
62-513	4.62	1 x 3/4
		1-1/4 x 1/2
62-517	7.05	1-1/4 x 3/4
62-518	7.05	1-1/4 x 1
62-521	10.73	1-1/2 x 1/2
62-522	10.73	1-1/2 x 3/4
62-532	10.73	1-1/2 x 1
62-524	10.73	1-1/2 x 1-1/4
62-527	15.58	2 x 1/2
62-528	15.58	2 x 3/4
62-529	15.58	2 x 1
62-530	15.58	2 x 1-1/4
62-531	15.58	2 x 1-1/2
62-534	26.93	2-1/2 x 1-1/2
62-535	26.93	2-1/2 x 2
62-538	35.43	3 x 2
62-539	35.43	3 x 2-1/2
62-543	56.74	4 x 3

316 STAINLESS

Part#	List
63-500	2.01
63-501	2.26
63-502	2.26
63-504	2.65
63-505	2.65
63-507	3.69
63-508	3.69
63-509	3.69
63-512	5.17
63-513	5.17
63-516	9.47
63-517	9.47
63-518	9.47
63-521	12.00
63-522	12.00
63-523	12.00
63-524	12.00
63-528	17.42
63-529	17.42
63-530	17.42
63-531	17.42
63-534	27.60
63-535	27.60
63-538	39.61

**Nipples &
Fittings**

UNIONS



304 STAINLESS

Part#	List	Size
62-600	8.27	1/8"
62-601	8.27	1/4"
62-602	8.85	3/8"
62-603	10.73	1/2"
62-604	11.83	3/4"
62-605	17.63	1"
62-606	24.55	1-1/4"
62-607	31.45	1-1/2"
62-608	43.40	2"
62-610	124.62	3"

316 STAINLESS

Part#	List
63-600	9.25
63-601	9.25
63-602	9.89
63-603	10.00
63-604	13.23
63-605	19.71
63-606	27.45
63-607	38.36
63-608	48.53
63-610	139.32

HEX HEAD PLUGS



304 STAINLESS

Part#	List	Size
62-630	2.08	1/8"
62-631	2.08	1/4"
62-632	2.34	3/8"
62-633	2.76	1/2"
62-634	3.69	3/4"
62-635	5.96	1"
62-636	9.23	1-1/4"
62-637	11.62	1-1/2"
62-638	18.27	2"

316 STAINLESS

Part#	List
63-630	2.33
63-631	2.33
63-632	2.62
63-633	3.09
63-634	4.13
63-635	5.56
63-636	10.32
63-637	12.98
63-638	20.42

HEX NIPPLES



304 STAINLESS

Part#	List	Size
62-720	2.31	1/8"
62-721	2.31	1/4"
62-722	2.57	3/8"
62-723	3.05	1/2"
62-724	3.98	3/4"
62-725	5.48	1"
62-726	8.39	1-1/4"
62-727	10.61	1-1/2"
62-728	24.21	2"

316 STAINLESS

Part#	List
63-720	2.58
63-721	2.58
63-722	2.87
63-723	3.41
63-724	4.45
63-725	6.13
63-726	9.38
63-727	11.87
63-728	17.03

SQUARE HEAD PLUGS



304 STAINLESS

Part#	List	Size
62-670	1.64	1/8"
62-671	1.64	1/4"
62-672	1.86	3/8"
62-653	2.18	1/2"
62-654	2.73	3/4"
62-655	3.91	1"
62-656	6.73	1-1/4"
62-657	8.23	1-1/2"
62-658	14.12	2"
62-660	32.70	3"

316 STAINLESS

Part#	List
63-670	1.83
63-671	1.83
63-672	2.08
63-653	2.44
63-654	3.05
63-655	4.37
63-656	6.27
63-657	9.20
63-658	14.47

HEX LOCKNUTS



304 STAINLESS

Part#	List	Size
62-700	1.80	1/8"
62-701	1.80	1/4"
62-702	2.18	3/8"
62-703	2.41	1/2"
62-704	2.89	3/4"
62-705	3.43	1"
62-706	4.14	1-1/4"
62-707	4.90	1-1/2"
62-708	7.25	2"

316 STAINLESS

Part#	List
63-700	2.01
63-701	2.01
63-702	2.44
63-703	2.69
63-704	3.23
63-705	3.84
63-706	4.63
63-707	5.48
63-708	8.10

STAINLESS STEEL HALF COUPLINGS



304 STAINLESS

Part#	List	Size
62-771	1.86	1/4"
62-772	2.15	3/8"
62-773	2.66	1/2"
62-774	3.30	3/4"
62-775	4.62	1"
62-776	8.82	1-1/4"
62-777	10.00	1-1/2"
62-778	13.46	2"

316 STAINLESS

Part#	List
63-771	2.08
63-772	2.40
63-773	2.97
63-774	3.69
63-775	5.16
63-776	9.86
63-777	11.18
63-778	15.05

HOSE NIPPLES



Part #	Hose I.D. x Male Pipe	List Price
73-951	1/4"	4.24
73-952	3/8"	6.40
73-953	1/2"	6.41
73-954	3/4"	8.33
73-955	1"	10.29
73-956	1-1/4"	17.86
73-957	1-1/2"	18.63
73-958	2"	28.53
73-959	2-1/2"	47.55
73-960	3"	62.84
73-961	4"	150

REDUCING HOSE NIPPLES

304 STAINLESS

Part #	Hose ID x Male Pipe	List
73-970	1/4 x 1/8	4.18
73-971	3/8 x 1/4	5.00
73-972	1/2 x 3/8	7.46
73-973	1/2 x 1/4	7.46
73-974	3/4 x 1/2	9.53
73-975	1 X 3/4	10.76



**316 STAINLESS STEEL
HOSE NIPPLES**

Part #	Hose ID x Male Pipe	List
973-951	1/4"	4.60
973-952	3/8"	5.90
973-953	1/2"	9.90
973-954	3/4"	9.35
973-955	1"	12.47
973-956	1-1/4"	16.95
973-957	1-1/2"	29.46
973-958	2"	31.38
973-959	2-1/2"	87.50
973-990	3"	107.80
973-991	4"	246.75

More sizes available

ENLIGHTENED PERSPECTIVE

I've learned....

- That the best classroom in the world is at the feet of an elderly person.
- That when you're in love, it shows.
- That just one person saying to me, "You've made my day!" makes my day.
- That having a child fall asleep in your arms is one of the most peaceful feelings in the world.
- That being kind is more important than being right.
- That you should never say no to a gift from a child.
- That I can always pray for someone when I don't have the strength to help him in some other way.
- That no matter how serious your life requires you to be, everyone needs a friend to act goofy with.
- That sometimes all a person needs is a hand to hold and a heart to understand.
- That simple walks with my father around the block on summer nights when I was a child did wonders for me as an adult.
- That life is like a roll of toilet paper. The closer it gets to the end, the faster it goes.
- That we should be glad God doesn't give us everything we ask for.
- That money doesn't buy class.
- That it's those small daily happenings that make life so spectacular.
- That under everyone's hard shell is someone who wants to be appreciated and loved.
- That the Lord didn't do it all in one day. What makes me think I can?
- That to ignore the facts does not change the facts.
- That when you plan to get even with someone, you are only letting that person continue to hurt you.
- That love, not time, heals all wounds.
- That the easiest way for me to grow as a person is to surround myself with people smarter than I am.
- That everyone you meet deserves to be greeted with a smile.
- That there's nothing sweeter than sleeping with your babies and feeling their breath on your cheeks.
- That no one is perfect until you fall in love with them.
- That life is tough, but I'm tougher.
- That opportunities are never lost; someone will take the ones you miss.
- That when you harbor bitterness, happiness will dock elsewhere.
- That I wish I could have told my Dad that I love him one more time before he passed away.
- That one should keep his words both soft and tender, because tomorrow he may have to eat them.
- That a smile is an inexpensive way to improve your looks.
- That I can't choose how I feel, but I can choose what I do about it.
- That when your newly born grandchild holds your little finger in his little fist, that you're hooked for life.
- That everyone wants to live on top of the mountain, but all the happiness and growth occurs while you're climbing it.
- That it is best to give advice in only two circumstances; when it is requested and when it is a life threatening situation.
- That the less time I have to work with, the more things I get done.

- Andy Rooney

Nipples & Fittings

Black and Galvanized Steel Nipples

Product Specifications

Welded steel pipe nipples both galvanized and black in diameters ranging from 1/8” up to 4” in lengths from close to 12” and cut-pipe up to 120”.

Technical Specifications

Standards: Product complies with ASTM A-53, A-733 and ANSI B1.20.1 for threading, dimensions and pipe specifications.

Pipe: Complies with ASTM A-53 mill tested schedule 40 and 80. Meets ANSI B36.1. All pipe is hydrostatic tested.

Galvanized: Zinc coating applied by hot dipped. Galvanized complying with ASTM A-123.

Black: Protected against oxidation with varnish coating.

Cutting Procedure:

All pipe is roller cut. A visual inspection of seams, excessive galvanizing, mid-welds, poor galvanizing, bends, our of roundness, under and over weight of the pipe is made at the time it is cut. This is done for every length of pipe. Pipe lengths are cut to a tolerance of + or - 1/16” of the actual length.

Threading Procedure:

All pipe is chaser thread cut to American Standard Tapered Pipe Thread standards. This is 3/4” taper per foot. Pipe is visually inspected for roundness of threads and other visual faults as it is removed from the threading machine.

Steel and Wrought Iron Welded

Nominal Size	Outside Diameter	Schedule 40 Standard			Schedule 80 Extra Heavy		
		Wall Thickness	Inside Diameter	Weight per Foot P.E.	Wall Thickness	Inside Diameter	Weight per Foot P.E.
1/8"	.405	.068	.269	.24	.095	.215	.31
1/4"	.540	.088	.364	.42	.119	.302	.54
3/8"	.675	.091	.493	.57	.126	.423	.74
1/2"	.840	.109	.622	.85	.147	.546	1.09
3/4"	1.050	.113	.824	1.13	.154	.742	1.47
1"	1.315	.133	1.049	1.68	.179	.957	2.17
1-1/4"	1.660	.140	1.380	2.27	.191	1.278	3.00
1-1/2"	1.900	.145	1.610	2.72	.200	1.500	3.63
2"	2.375	.154	2.067	3.65	.218	1.939	5.02
2-1/2"	2.875	.203	2.469	5.79	.276	2.323	7.66
3"	3.500	.216	3.068	7.58	.300	2.900	10.25
3-1/2"	4.000	.226	3.548	9.11	.318	3.364	12.51
4"	4.500	.237	4.026	10.79	.337	3.826	14.98
5"	5.563	.258	5.047	14.62	.375	4.813	20.78
6"	6.625	.280	6.065	18.97	.432	5.761	28.57

Chemical Composition

Maximum%

C 0.25

Mn 0.95

Tensile Requirements

	Kg/ Mm2	PSI	MPA
Tensile Strength Min.	33.7	48000	331
Tensile Strength Min.	20.0	28500	196

Pounds per 100 pcs. approximate

Diam	Length close/RC	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"	7"	8"	9"	10"	11"	12"
1/8"	1.3	2.4	3.5	4.4	5.4	6.8	7.4	8.5	9.5	11.2	11.4	13.4	15.4	17.4	19.1	20.8	23.1
1/4"	2.4	4.3	6.1	8.3	9.0	11.8	13.5	16.1	16.8	19.1	19.9	24.7	28.7	32.0	35.1	38.1	41.4
3/8"	3.6	6.0	7.8	9.9	13.4	15.4	17.8	20.3	22.7	24.9	28.4	32.6	36.6	40.8	44.8	48.7	52.9
1/2"	6.1	8.7	12.7	15.9	19.3	24.2	26.0	31.6	34.5	39.2	43.1	50.0	58.0	66.1	74.5	82.3	89.0
3/4"	11.0	12.2	21.8	23.1	26.1	31.6	37.0	41.6	47.1	52.6	55.9	65.4	79.1	79.6	94.9	111.9	116.9
1"	15.3		22.0	28.4	37.0	44.2	52.1	59.4	66.6	76.5	79.7	94.8	111.6	124.5	136.3	153.6	175.0
1-1/4"	22.7		32.0	41.9	51.3	61.9	68.1	81.9	90.7	98.2	115.1	133.4	149.3	174.8	199.2	219.3	236.6
1-1/2"	29.9		37.9	46.8	80.6	72.6	85.8	99.1	112.7	120.3	134.5	162.1	184.9	208.5	219.4	247.5	277.8
2"	51.8			63.1	82.1	97.1	110.0	128.4	142.0	165.0	166.9	208.5	246.7	276.9	303.2	334.4	369.2
2-1/2"	82.6				109.0	133.5	156.2	172.9	209.9	232.8	253.4	318.9	337.3	408.1	457.6	514.2	554.4
3"	116.5				147.2	181.6	210.4	247.7	274.1	213.6	338.0	389.2	469.4	555.1	599.2	649.4	747.1
4"	172.7						265.3	326.2	344.4	405.7	451.7	547.3	632.2	721.8	832.7	927.1	1057.0
6"																	

Available Upon Request

Nipples & Fittings

1/8" DIAMETER



Galvanized List	Length	Black	List
56-001	.67 xClose(3/4)	57-001	0.45
56-002	.71 x 1-1/2"	57-002	0.51
56-003	.74 x 2"	57-003	0.57
56-004	.86 x 2-1/2"	57-004	0.61
56-005	.98 x 3"	57-005	0.68
56-006	1.05 x 3-1/2"	57-006	0.74
56-007	1.16 x 4"	57-007	0.87
56-008	1.49 x 4-1/2"	57-008	1.21
56-009	1.96 x 5"	57-009	1.40
56-010	2.11 x 5-1/2"	57-010	1.50
56-011	2.20 x 6"	57-011	1.54
56-012	2.75 x 7"	57-012	2.01
56-013	2.90 x 8"	57-013	2.12
56-014	3.05 x 9"	57-014	2.21
56-015	3.30 x 10"	57-015	2.34
56-016	3.50 x 11"	57-016	2.46
56-017	3.70 x 12"	57-017	2.48

1/4" Diameter



Galvanized List	Length	Black	List
56-020	.72 xClose(7/8)	57-020	0.54
56-021	.80 x 1-1/2"	57-021	0.58
56-022	.95 x 2"	57-022	0.67
56-023	1.02 x 2-1/2"	57-023	0.79
56-024	1.15 x 3"	57-024	0.87
56-025	1.25 x 3-1/2"	57-025	0.91
56-026	1.30 x 4"	57-026	1.15
56-027	1.50 x 4-1/2"	57-027	1.21
56-028	1.81 x 5"	57-028	1.39
56-029	2.15 x 5-1/2"	57-029	1.67
56-030	2.25 x 6"	57-030	1.74
56-031	2.54 x 7"	57-031	2.20
56-032	2.77 x 8"	57-032	2.24
56-033	2.90 x 9"	57-033	2.43
56-034	3.10 x 10"	57-034	2.64
56-035	3.30 x 11"	57-035	2.77
56-036	3.45 x 12"	57-036	2.90
56-038	9.00 x 18"		
56-037	10.00 x 24"		

More sizes available

3/8" DIAMETER



Galvanized List	Length	Black	List
56-040	.83 xClose(1)	57-040	0.61
56-041	.94 x 1-1/2"	57-041	0.64
56-042	.98 x 2"	57-042	0.73
56-043	1.10 x 2-1/2"	57-043	0.81
56-044	1.29 x 3"	57-044	0.92
56-045	1.38 x 3-1/2"	57-045	1.01
56-046	1.62 x 4"	57-046	1.08
56-047	1.71 x 4-1/2"	57-047	1.21
56-048	2.15 x 5"	57-048	1.64
56-049	2.41 x 5-1/2"	57-049	1.71
56-050	2.50 x 6"	57-050	1.83
56-051	2.68 x 7"	57-051	2.39
56-052	2.80 x 8"	57-052	2.54
56-053	3.10 x 9"	57-053	2.70
56-054	3.32 x 10"	57-054	2.86
56-055	3.55 x 11"	57-055	3.04
56-056	3.71 x 12"	57-056	3.12
	x 16"	57-059	4.57
56-430	5.52 X18"	57-430	4.60
56-431	6.74 x24"	57-431	5.50
56-432	7.97 x30"	57-432	6.42
56-433	9.18 x36"	57-433	7.33
56-234	20.52 x42"	57-234	14.12
56-235	12.08 x48"	57-235	9.60
56-236	14.51 x60"	57-236	11.42
56-237	16.95 x72"	57-237	19.01

Nipples & Fittings

Steel Nipples

1/2" DIAMETER



Galvanized List	Length	Black List
56-060	0.52 x Close(1-1/8)	57-060 0.46
56-061	0.57 x 1-1/2"	57-061 0.49
56-062	0.62 x 2"	57-062 0.50
56-063	0.67 x 2-1/2"	57-063 0.55
56-064	0.72 x 3"	57-064 0.60
56-065	0.80 x 3-1/2"	57-065 0.66
56-066	0.88 x 4"	57-066 0.72
56-067	0.98 x 4-1/2"	57-067 0.78
56-068	1.06 x 5"	57-068 0.91
56-069	1.13 x 5-1/2"	57-069 1.01
56-070	1.20 x 6"	57-070 1.15
56-071	1.97 x 7"	57-071 1.58
56-072	2.10 x 8"	57-072 1.67
56-073	2.30 x 9"	57-073 1.82
56-074	2.50 x 10"	57-074 2.01
56-075	2.70 x 11"	57-075 2.12
56-076	2.85 x 12"	57-076 2.34
56-240	4.59 x 18"	57-240 3.73
56-241	5.52 x 24"	57-241 4.57
56-242	6.80 x 30"	57-242 6.62
56-243	8.07 x 36"	57-243 6.74
56-244	19.20 x 42"	57-244 16.08
56-245	10.36 x 48"	57-245 8.53
56-246	12.76 x 60"	57-246 10.23
56-247	15.06 x 72"	57-247 12.58

3/4" DIAMETER



Galvanized List	Length	Black List
56-080	0.68 x Close(1-3/8)	57-080 0.58
56-081	0.70 x 1-1/2"	57-081 0.64
56-082	0.74 x 2"	57-082 0.67
56-083	0.83 x 2-1/2"	57-083 0.72
56-084	0.92 x 3"	57-084 0.81
56-085	1.01 x 3-1/2"	57-085 0.87
56-086	1.15 x 4"	57-086 0.94
56-087	1.21 x 4-1/2"	57-087 1.07
56-088	1.35 x 5"	57-088 1.21
56-089	1.47 x 5-1/2"	57-089 1.31
56-090	1.55 x 6"	57-090 1.39
56-091	2.40 x 7"	57-091 1.91
56-092	2.69 x 8"	57-092 2.31
56-093	2.80 x 9"	57-093 2.71
56-094	3.00 x 10"	57-094 2.84
56-095	3.27 x 11"	57-095 2.91
56-096	3.35 x 12"	57-096 3.01
56-250	5.47 x 18"	57-250 4.61
56-251	6.55 x 24"	57-251 5.52
56-252	8.39 x 30"	57-252 6.92
56-253	9.89 x 36"	57-253 8.18
56-254	23.82 x 42"	57-254 19.86
56-255	12.92 x 48"	57-255 10.89
56-256	15.83 x 60"	57-256 13.35
56-257	18.70 x 72'	57-257 15.34

Nipples & Fittings

1 - Most Important Lesson

During my second month of college our professor gave us a pop quiz. I was a conscientious student and had breezed through the questions, until I read the last one:

“What is the first name of the woman who cleans the school?”

Surely this was some kind of joke. I had seen the cleaning woman several times. She was tall, dark-haired and in her 50’s but how would I know her name? I handed in my paper, leaving the last question blank.

Just before class ended, one student asked if the last question would count toward our quiz grade.

“Absolutely,” said the professor. “In your careers, you will meet many people. All are significant. They deserve your attention and care even if all you do is smile and say ‘hello’.”

I’ve never forgotten that lesson. I also learned her name was Dorothy.

1" DIAMETER



Galvanized	List	Length	Black	List
56-100	1.01	x Close(1-1/2)	57-100	0.84
56-101	1.05	x 2"	57-101	0.91
56-102	1.14	x 2-1/2"	57-102	0.96
56-103	1.22	x 3"	57-103	1.06
56-104	1.42	x 3-1/2"	57-104	1.13
56-105	1.48	x 4"	57-105	1.29
56-106	1.73	x 4-1/2"	57-106	1.47
56-107	1.80	x 5"	57-107	1.58
56-108	1.99	x 5-1/2"	57-108	1.63
56-109	2.05	x 6"	57-109	1.71
56-110	3.10	x 7"	57-110	2.49
56-111	3.40	x 8"	57-111	2.74
56-112	3.70	x 9"	57-112	2.98
56-113	3.90	x 10"	57-113	3.21
56-114	4.25	x 11"	57-114	3.46
56-115	4.55	x 12"	57-115	3.68
56-260	7.21	x 18"	57-260	6.51
56-261	9.01	x 24"	57-261	7.26
56-262	11.91	x 30"	57-262	10.59
56-263	13.27	x 36"	57-263	10.80
56-264	30.36	x 42"	57-264	26.34
56-265	20.79	x 48"	57-265	14.11
56-266	20.85	x 60"	57-266	17.76
56-267	24.90	x 72"	57-267	26.71

1-1/4" DIAMETER



Galvanized	List	Length	Black	List
56-120	1.31	x Close(1-5/8)	57-120	1.10
56-121	1.40	x 2"	57-121	1.29
56-122	1.48	x 2-1/2"	57-122	1.37
56-123	1.67	x 3"	57-123	1.42
56-124	1.91	x 3-1/2"	57-124	1.63
56-125	2.01	x 4"	57-125	1.81
56-126	2.12	x 4-1/2"	57-126	1.94
56-127	2.34	x 5"	57-127	2.18
56-128	2.44	x 5-1/2"	57-128	2.21
56-129	2.58	x 6"	57-129	2.39
56-130	3.80	x 7"	57-130	3.14
56-131	4.20	x 8"	57-131	3.61
56-132	4.60	x 9"	57-132	3.89
56-133	5.00	x 10"	57-133	4.14
56-134	5.40	x 11"	57-134	4.48
56-135	5.80	x 12"	57-135	4.69
56-270	9.28	x 18"	57-270	7.56
56-271	11.91	x 24"	57-271	10.87
56-272	14.27	x 30"	57-272	14.67
56-273	17.68	x 36"	57-273	15.10
56-274	48.09	x 42"	57-274	22.74
56-275	23.91	x 48"	57-275	20.07
56-276	27.92	x 60"	57-276	25.61
56-277	49.61	x 72"	57-277	27.87

Nipples & Fittings

2 - Second Important Lesson

Always remember those who serve - In the days when an ice cream sundae cost much less, a 10 year old boy entered a hotel coffee shop and sat at a table.

A waitress put a glass of water in front of him.

"How much is an ice cream sundae?" he asked.

"Fifty cents," replied the waitress.

The little boy pulled his hand out of his pocket and studied the coins in it. "Well, how much is a plain dish of ice cream?" he inquired.

By now more people were waiting for a table and the waitress was growing impatient. "Thirty-five cents, she brusquely replied."

The little boy again counted his coins. "I'll have the plain ice cream," he said.

The waitress brought the ice cream, put the bill on the table and walked away. The boy finished the ice cream, paid the cashier and left.

When the waitress came back, she began to cry as she wiped down the table. There, placed neatly beside the empty dish, were two nickels and five pennies. You see, he couldn't have the sundae, because he had to have enough left to leave her a tip.

1-1/2" DIAMETER



Galvanized List	Length	Black List
56-140	1.69 xClose(1 3/4)	57-140 1.35
56-141	1.71 x 2"	57-141 1.47
56-142	1.80 x 2-1/2"	57-142 1.52
56-143	1.94 x 3"	57-143 1.71
56-144	2.18 x 3-1/2"	57-144 2.11
56-145	2.42 x 4"	57-145 2.18
56-146	2.55 x 4-1/2"	57-146 2.34
56-147	2.81 x 5"	57-147 2.51
56-148	2.95 x 5-1/2"	57-148 2.67
56-149	3.21 x 6"	57-149 2.79
56-150	4.30 x 7"	57-150 3.55
56-151	5.01 x 8"	57-151 3.96
56-152	5.57 x 9"	57-152 4.41
56-153	5.81 x 10"	57-153 4.91
56-154	6.31 x 11"	57-154 5.43
56-155	6.40 x 12"	57-155 5.61
56-280	11.81 x18"	57-280 10.97
56-281	13.51 x24"	57-281 12.10
56-282	16.52 x30"	57-282 16.57
56-283	20.95 x36"	57-283 22.17
56-284	48.36 x42"	57-284 33.06
56-285	27.45 x48"	57-285 27.18
56-286	38.10 x60"	57-286 36.41
56-287	41.95 x72"	57-287 43.72

2" DIAMETER



Galvanized List	Length	Black List
56-160	2.31 xClose(2)	57-160 1.77
56-161	2.49 x 2-1/2"	57-161 2.08
56-162	2.74 x 3"	57-162 2.42
56-163	2.89 x 3-1/2"	57-163 2.61
56-164	3.40 x 4"	57-164 2.78
56-165	3.51 x 4-1/2"	57-165 3.17
56-166	3.70 x 5"	57-166 3.33
56-167	4.08 x 5-1/2"	57-167 3.42
56-168	4.47 x 6"	57-168 3.71
56-169	6.40 x 7"	57-169 5.14
56-170	7.00 x 8"	57-170 5.79
56-171	7.60 x 9"	57-171 6.12
56-172	8.20 x 10"	57-172 6.60
56-173	8.80 x 11"	57-173 7.41
56-174	9.40 x 12"	57-174 7.82
56-290	14.71 x18"	57-290 14.17
56-291	17.77 x24"	57-291 19.08
56-292	25.10 x30"	57-292 22.18
56-293	25.73 x36"	57-293 24.71
56-294	52.35 x42"	57-294 43.87
56-295	37.01 x48"	57-295 41.19
56-296	49.15 x60"	57-296 50.45
56-297	59.93 x72"	57-297 62.25

Nipples & Fittings

3 - Third Important Lesson

The Obstacle in Our Path - In ancient times, a King had a boulder placed on a roadway. Then he hid himself and watched to see if anyone would remove the huge rock. Some of the King's wealthiest merchants and courtiers came by and simply walked around it. Many loudly blamed the King for not keeping the roads clear, but none did anything about getting the stone out of the way.

Then a peasant came along carrying a load of vegetables. Upon approaching the boulder, the peasant laid down his burden and tried to move the stone to the side of the road. After much pushing and straining, he finally succeeded. After the peasant picked up his load of vegetables, he noticed a purse lying in the road where the boulder had been.

The purse contained many gold coins and a note from the King indicating that the gold was for the person who removed the boulder from the roadway. The peasant learned what many of us never understand. Every obstacle presents an opportunity to improve our condition.

2-1/2" DIAMETER



Galvanized	List	Length	Black	List
56-180	6.71	xClose(2 1/2)	57-180	6.01
56-181	6.91	x 3"	57-181	6.24
56-182	7.20	x 3-1/2"	57-182	6.67
56-183	7.61	x 4"	57-183	6.52
56-184	8.04	x 4-1/2"	57-184	7.31
56-185	8.47	x 5"	57-185	7.54
56-186	8.88	x 5-1/2"	57-186	8.07
56-187	9.31	x 6"	57-187	8.31
56-188	11.07	x 7"	57-188	9.55
56-189	12.00	x 8"	57-189	9.84
56-190	12.74	x 9"	57-190	10.82
56-191	13.68	x 10"	57-191	11.67
56-192	14.45	x 11"	57-192	12.45
56-193	15.30	x 12"	57-193	13.11



4" DIAMETER

Galvanized	List	Length	Black	List
56-220	11.67	xClose(2-7/8)	57-220	10.21
56-223	12.01	x 4"	57-223	11.87
56-224	14.40	x 4-1/2"	57-224	12.60
56-225	15.20	x 5"	57-225	12.75
56-226	16.00	x 5-1/2"	57-226	13.90
56-227	16.80	x 6"	57-227	14.15
56-330	18.46	x 7"	57-330	15.65
56-229	20.06	x 8"	57-229	17.97
56-331	21.65	x 9"	57-331	18.14
56-332	23.24	x 10"	57-332	18.60
56-228	26.44	x 12"	57-233	24.11

4 - Fourth Important Lesson

Giving When It Counts - Many years ago, when I worked as a volunteer at a hospital, I got to know a little girl named Liz, who was suffering from a rare and serious disease. Her only chance of recovery appeared to be a blood transfusion from her 5-year old brother, who had miraculously survived the same disease and had developed the antibodies, needed to combat the illness.

3" DIAMETER



Galvanized	List	Length	Black	List
56-200	8.15	xClose(2-5/8)	57-200	7.81
56-201	8.25	x 3"	57-201	7.96
56-202	9.51	x 3-1/2"	57-202	8.02
56-203	9.71	x 4"	57-203	8.34
56-204	10.05	x 4-1/2"	57-204	10.12
56-205	11.00	x 5"	57-205	10.31
56-206	11.40	x 5-1/2"	57-206	10.62
56-207	11.64	x 6"	57-207	10.87
56-208	14.55	x 7"	57-208	12.59
56-209	15.67	x 8"	57-209	12.95
56-210	16.77	x 9"	57-210	15.76
56-211	17.87	x 10"	57-211	14.54
56-212	18.99	x 11"	57-212	17.05
56-213	20.10	x 12"	57-213	17.22
		x24"	57-311	49.05



6" DIAMETER

Galvanized	6" Dia.	List
56-300	49.90	Close.....57-300.....46.80

The doctor explained the situation to her little brother, and asked the little boy if he would be willing to give his blood to his sister. I saw him hesitate for only a moment before taking a deep breath and saying, "Yes, I'll do it, if it will save her." As the transfusion progressed, he lay in bed next to his sister and smiled, as we all did, seeing the color returning to her cheeks. Then his face grew pale and his smile faded. He looked up at the doctor and asked with a trembling voice, "Will I start to die right away?" Being young, the little boy had misunderstood the doctor; he thought he was going to have to give his sister all of his blood in order to save her. You see, after all, understanding and attitude, is everything.

Product Specifications

Welded steel couplings both galvanized and black in diameters from 1/8" up to 4"

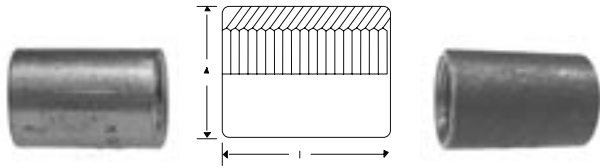
Technical Specifications

Standards: Product complies with ASTM A-53, A-733 and ANSI B1.20.1 for threading, dimensions and pipe specifications.

Pipe: Complies with ASTM A-53 milltested schedule 40 and 80. Meets ANSI B36.1. All pipe is hydrostatic tested.

Galvanized: Zinc coating applied by hot dipping. Galvanized complying with ASTM-A-123.

MERCHANT COUPLINGS



Galvanized	List	Size	Black	List
64-770	1.16	1/8	65-770	0.85
64-771	1.45	1/4	65-771	1.30
64-772	1.32	3/8	65-772	1.00
64-773	1.23	1/2	65-773	0.98
64-774	1.64	3/4	65-774	1.38
64-775	2.64	1	65-775	2.15
64-776	2.85	1-1/4	65-776	2.96
64-777	4.01	1-1/2	65-777	3.20
64-778	6.57	2	65-778	4.75
64-779	12.90	2-1/2	65-779	12.50
64-780	28.00	3	65-780	26.50
64-781	35.00	4	65-781	32.00

HALF MERCHANT COUPLINGS



Galvanized	List	Size	Black	List
		1/4	65-771H	1.30
		3/8	65-772H	1.50
64-773H	.98	1/2	65-773H	0.94
64-774H	1.25	3/4	65-774H	1.31
64-775H	2.70	1	65-775H	2.14
64-776H	2.25	1-1/4	65-776H	2.20
64-777H	3.20	1-1/2	65-777H	3.00
64-778H	4.00	2	65-778H	3.95
		2-1/2	65-779H	12.00
		3	65-780H	15.00
		4	65-781H	25.00

Nipples & Fittings

MERCHANT COUPLINGS SPECIFICATIONS

Size	Outside Diam.	Length	Weight 100 pcs approx.	Quantity per box	Threads per Inch	Threads
		Inches	Pounds			Type
1/2"	1.063"	1-9/16"	13.0	100	14	Straight
3/4"	1.313"	1-5/8"	28.3	50	14	Straight
1"	1.576"	2"	40.1	30	11-1/2	Straight
1-1/4"	1.900"	2-1/16"	49.5	25	11-1/2	Straight
1-1/2"	2.200"	2-1/16"	71.48	25	11-1/2	Straight
2"	2.750"	2-1/3"	112.0	20	11-1/2	Straight
2-1/2"	3.250"	3-1/8"	231.2	8	8	Taper Tapped
3"	4.000"	3-1/4"	353.8	5	8	Taper Tapped
4"	5.000"	3-1/2"	471.8	4	8	Taper Tapped

Standard Specifications

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153 Zinc Coating. ANSI B16.3 Malleable Iron Fittings

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

ISO 9002 Manufacturer

ELBOWS 90°



Galv.	List	Size	Box/Case	Black	List
64-100	1.18	1/8	5/160	65-100	0.87
64-101	1.12	1/4	5/140	65-101	0.83
64-102	1.12	3/8	5/135	65-102	0.83
64-103	.74	1/2	50/200	65-103	0.63
64-104	.85	3/4	35/105	65-104	0.71
64-105	1.67	1	20/60	65-105	1.32
64-106	2.57	1-1/4	20/40	65-106	2.14
64-107	3.39	1-1/2	10/30	65-107	2.82
64-108	5.64	2	8/16	65-108	4.85
64-109	14.08	2-1/2	6/18	65-109	10.53
64-110	23.65	3	1/14	65-110	15.70
64-112	40.94	4	1/6	65-112	33.38
64-114	140.00	6	1/2	65-114	98.00

REDUCING ELBOWS 90°

Galv.	List	Size	Box/Case	Black	List
64-121	2.38	3/8 x 1/8	5/180	65-121	1.89
64-122	1.68	3/8 x 1/4	5/180	65-122	1.20
64-123	1.38	1/2 x 1/4	40/240	65-123	1.16
64-124	1.30	1/2 x 3/8	50/200	65-124	1.13
64-126	1.99	3/4 x 3/8	25/150	65-126	1.56
64-127	1.50	3/4 x 1/2	30/120	65-127	1.18
64-130	2.04	1 x 1/2	30/90	65-130	1.60
64-131	1.92	1 x 3/4	25/75	65-131	1.51
64-133	3.87	1-1/4 x 3/4	15/60	65-133	2.79
64-134	3.22	1-1/4 x 1	10/40	65-134	2.45
64-136	4.96	1-1/2 x 3/4	15/45	65-136	4.03
64-137	4.96	1-1/2 x 1	10/40	65-137	3.52
64-138	4.96	1-1/2 x 1-1/4	15/30	65-138	3.53
64-139	7.03	2 x 3/4	10/30	65-139	5.92
64-140	6.89	2 x 1	14/28	65-140	5.81
64-141	6.89	2 x 1-1/4	10/20	65-141	5.81
64-142	6.02	2 x 1-1/2	10/20	65-142	5.10
64-145	22.04	2-1/2 x 1-1/2	8/24	65-145	14.28
64-146	19.62	2-1/2 x 2	8/24	65-146	14.01
64-148	30.99	3 x 1-1/2	6/18	65-148	22.64
		3 x 2-1/2	8/16	65-151	22.64
		4 x 2	1/12	65-152	58.79
		4 x 2-1/2	1/8	65-153	58.79
		4 x 3	1/9	65-154	58.79

More sizes available

90° STREET ELBOWS



Galv.	List	Size	Box/Case	Black	List
64-160	1.59	1/8	5/160	65-160	1.39
64-161	1.53	1/4	5/140	65-161	1.26
64-162	1.53	3/8	5/120	65-162	1.26
64-163	1.59	1/2	60/180	65-163	1.29
64-164	1.53	3/4	35/105	65-164	1.26
64-165	2.09	1	30/60	65-165	1.82
64-166	3.52	1-1/4	25/75	65-166	2.77
64-167	4.34	1-1/2	9/54	65-167	3.69
64-168	7.52	2	10/30	65-168	5.99
64-169	20.39	2-1/2	9/18	65-169	14.79
64-170	30.78	3	1/14	65-170	22.57
64-171	50.81	4	1/6	65-171	36.76

ELBOWS 45°



Galv.	List	Size	Box/Case	Black	List
64-180	1.69	1/8	5/160	65-180	1.26
64-181	1.50	1/4	5/140	65-181	1.29
64-182	1.50	3/8	5/150	65-182	1.17
64-183	1.15	1/2	50/200	65-183	1.01
64-184	1.61	3/4	40/120	65-184	1.24
64-185	1.85	1	20/60	65-185	1.58
64-186	3.37	1-1/4	20/140	65-186	2.77
64-187	4.02	1-1/2	10/30	65-187	3.42
64-188	6.00	2	12/36	65-188	5.15
64-189	20.32	2-1/2	6/18	65-189	14.53
64-190	29.54	3	10/20	65-190	18.86
64-191	49.52	4	1/6	65-191	36.64
64-192	175.00	6	1/2	65-192	125.00

Standard Specifications

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153 Zinc Coating. ANSI B16.3 Malleable Iron Fittings

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

ISO 9002 Manufacturer

45 ° STREET ELBOWS



Galv.	List	Size	Box/Case	Black	List
64-200	2.20	1/8	5/160	65-200	1.96
64-201	1.88	1/4	5/160	65-201	1.46
64-202	2.15	3/8	5/150	65-202	1.65
64-203	1.67	1/2	75/225	65-203	1.33
64-204	2.69	3/4	40/120	65-204	2.04
64-205	3.32	1	25/75	65-205	2.37
64-206	4.98	1-1/4	10/40	65-206	4.10
64-207	6.04	1-1/2	10/30	65-207	5.05
64-208	10.37	2	12/36	65-208	8.95
64-209	24.40	2-1/2	12/24	65-209	19.00
64-210	37.00	3	6/18	65-210	28.00
64-211	60.00	4	1/7	65-211	52.00

BULLHEAD TEES



Galv.	List	Size	Box/Case	Black	List
64-280	2.38	1/2 x 1/2 x 3/4	30/90	65-280	2.03
64-733	3.60	1/2 x 1/2 x 1	40/18	65-733	2.94
64-289	3.52	3/4 x 3/4 x 1	20/16	65-289	2.57
64-734	6.02	3/4 x 3/4 x 1-1/4	12/36	65-734	4.72
64-299	5.60	1 x 1 x 1-1/4	15/30	65-299	4.78
64-300	9.53	1 x 1 x 1-1/2	13/26	65-300	7.14
64-317	6.91	1-1/4 x 1-1/4 x 1-1/2	15/45	65-317	5.60
64-319	9.78	1-1/2 x 1-1/2 x 2	8/16	65-319	8.75

More sizes available....just Ask!

TEES



Galv.	List	Size	Box/Case	Black	List
64-250	1.68	1/8	5/200	65-250	1.33
64-251	1.46	1/4	5/150	65-251	1.25
64-252	1.46	3/8	5/90	65-252	1.25
64-253	.90	1/2	40/120	65-253	0.81
64-254	1.51	3/4	35/70	65-254	1.15
64-255	2.47	1	20/40	65-255	2.03
64-256	3.90	1-1/4	14/28	65-256	3.30
64-257	4.86	1-1/2	15/45	65-257	4.10
64-258	8.13	2	10/30	65-258	6.97
64-259	21.83	2-1/2	8/16	65-259	14.35
64-260	25.60	3	1/12	65-260	21.54
64-261	60.53	4	1/6	65-261	50.59
64-262	175.00	6	1/2	65-262	145.00

COUPLINGS



Galv.	List	Size	Box/Case	Black	List
64-410	1.40	1/8	5/200	65-410	1.22
64-411	1.30	1/4	5/160	65-411	1.22
64-412	1.30	3/8	5/150	65-412	1.22
64-413	1.04	1/2	40/240	65-413	1.22
64-414	1.20	3/4	50/150	65-414	0.99
64-415	1.98	1	25/75	65-415	1.51
64-416	2.73	1-1/4	16/64	65-416	1.93
64-417	3.12	1-1/2	18/36	65-417	2.58
64-418	4.54	2	12/24	65-418	3.76
64-419	13.89	2-1/2	8/32	65-419	10.24
64-420	18.56	3	6/18	65-420	13.84
64-421	39.43	4	6/12	65-421	27.61
64-422	103.00	6	1/2	65-422	74.09

**Nipples &
Fittings**

Standard Specifications

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153 Zinc Coating. ANSI B16.3 Malleable Iron Fittings

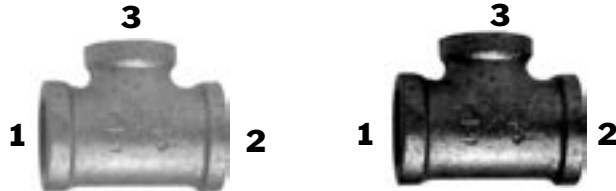
Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

ISO 9002 Manufacturer

REDUCING TEES

(Same size on run, reducing on branch)

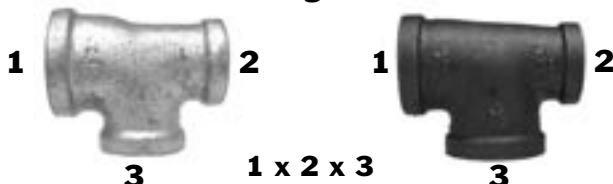


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Galv.	List	Size	Box/Case	Black	List
64-273	2.15	3/8 x 1/4	5/120	65-273	1.67
64-276	1.74	1/2 x 1/4	25/150	65-276	1.37
64-279	2.03	1/2 x 3/8	45/135	65-279	1.73
64-282	2.16	3/4 x 1/4	25/100	65-282	1.95
64-283	2.16	3/4 x 3/8	30/90	65-283	2.07
64-286	2.08	3/4 x 1/2	30/90	65-286	1.77
64-268	3.53	1 x 1/4	15/60	65-268	2.47
64-269	3.59	1 x 3/8	15/60	65-269	3.00
64-291	2.92	1 x 1/2	15/60	65-291	2.26
64-298	2.92	1 x 3/4	25/50	65-298	2.26
64-301	4.78	1-1/4 x 1/2	20/40	65-301	4.10
64-303	4.52	1-1/4 x 3/4	12/36	65-303	3.60
64-306	4.52	1-1/4 x 1	16/32	65-306	3.90
64-316	5.60	1-1/2 x 3/4	10/30	65-316	4.55
64-318	5.60	1-1/2 x 1	13/26	65-318	4.55
64-322	6.74	1-1/2 x 1-1/4	15/45	65-322	5.51
		2 x 1/2	10/20	65-327	7.12
64-328	8.16	2 x 3/4	10/20	65-328	7.12
64-330	8.16	2 x 1	12/3	65-330	7.12
64-334	9.61	2 x 1-1/4	8/16	65-334	7.53
64-336	9.61	2 x 1-1/2	8/16	65-336	7.53
64-343	26.06	2-1/2 x 1-1/2	8/16	65-343	18.66
64-351	35.36	3 x 2	6/12	65-351	24.93

REDUCING TEES

(Reducing on run)



Galv.	List	Size	Box/Case	Black	List
64-287	2.38	3/4 x 1/2 x 1/2	30/90	65-287	1.84
64-288	2.38	3/4 x 1/2 x 3/4	40/80	65-288	2.03
		1 x 3/4 x 3/4	25/50	65-296	2.38
		1-1/4 x 1 x 1	18/38	65-309	4.12

LOCKNUTS



Galv.	Box/Case	Size	List
64-703	100/600	1/2	0.89
64-704	60/360	3/4	1.01
64-705	40/240	1	1.91
64-706	30/180	1-1/4	1.75
64-707	30/180	1-1/2	2.27
64-708	25/75	2	4.03

Black available upon request.

MALLEABLE SERVICE TEE



(STREET TEE)

Galv.	List	Size	Box/Case	Black	List
64-363	2.86	1/2	40/240	65-363	2.08
64-364	3.14	3/4	25/150	65-364	2.77

SIDE OUTLET TEES



Galv.	List	Size	Box/Case	Black	List
64-383	4.47	1/2	5/90	65-383	3.59
64-384	5.65	3/4	20/80	65-384	4.58
64-385	8.00	1	15/60	65-385	6.41
64-386	14.27	1-1/4	12/36	65-386	11.51

More sizes available.....just Ask!

Standard Specifications

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153 Zinc Coating. ANSI B16.3 Malleable Iron Fittings

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

ISO 9002 Manufacturer

HEX BUSHING

REDUCING COUPLINGS



Galv.	List	Size	Box/Case	Black	List
64-430	1.22	1/4 x 1/8	5/200	65-430	1.01
64-431	1.22	3/8 x 1/8	5/200	65-431	1.01
64-432	1.22	3/8 x 1/4	5/120	65-432	1.01
64-433	1.37	1/2 x 1/8	50/300	65-433	1.00
64-434	1.11	1/2 x 1/4	50/300	65-434	0.92
64-435	1.04	1/2 x 3/8	40/240	65-435	0.87
64-439	1.41	3/4 x 1/8	30/180	65-439	1.17
64-436	1.38	3/4 x 1/4	30/180	65-436	1.14
64-437	1.38	3/4 x 3/8	30/180	65-437	1.14
64-438	1.22	3/4 x 1/2	60/180	65-438	0.99
64-459	2.45	1 x 1/4	45/135	65-459	1.77
64-440	2.50	1 x 3/8	30/120	65-440	1.80
64-441	2.03	1 x 1/2	30/120	65-441	1.54
64-442	1.88	1 x 3/4	25/100	65-442	1.54
64-460	3.20	1-1/4 x 3/8	25/75	65-460	2.22
64-444	3.20	1-1/4 x 1/2	25/75	65-444	2.22
64-445	2.58	1-1/4 x 3/4	25/75	65-445	1.93
64-446	2.58	1-1/4 x 1	15/60	65-446	1.93
64-443	4.54	1-1/2 X 3/8	15/60	65-443	2.83
64-447	3.77	1-1/2 x 1/2	20/60	65-447	2.83
64-448	3.33	1-1/2 x 3/4	15/60	65-448	3.19
64-449	3.33	1-1/2 x 1	25/50	65-449	2.83
64-450	3.15	1-1/2 x 1-1/4	12/36	65-450	2.44
64-458	5.44	2 x 1/2	14/42	65-458	4.61
64-451	5.44	2 x 3/4	14/42	65-451	4.06
64-452	4.54	2 x 1	14/42	65-452	3.83
64-453	4.80	2 x 1-1/4	12/36	65-453	4.06
64-454	4.54	2 x 1-1/2	10/30	65-454	3.54
64-461	14.33	2-1/2 x 1-1/2	15/30	65-461	10.55
64-462	14.06	2-1/2 x 2	15/30	65-462	9.05
64-486	18.69	3 x 1-1/2	16/32	65-486	14.11
64-456	18.16	3 x 2	16/32	65-456	11.70
64-463	18.69	3 x 2-1/2	12/24	65-463	14.11
64-464	40.44	4 x 2	6/18	65-464	28.29
		4 x 2-1/2	6/18	65-465	28.29
64-457	40.44	4 x 3	5/15	65-457	28.29
		6 x 4	1/8	65-491	71.00



Galvanized	List	Size	Black	List
		*1/4 x 1/8		
		*3/8 x 1/8		
		*3/8 x 1/4		
64-503	1.68	1/2 x 1/8	65-503	1.15
		*1/2 x 1/4		
64-505	1.68	1/2 x 3/8	65-505	1.15
64-506	1.78	3/4 x 1/8	65-506	1.13
64-507	1.73	3/4 x 1/4	65-507	1.11
64-508	1.93	3/4 x 3/8	65-508	1.13
64-509	1.56	3/4 x 1/2	65-509	1.05
64-510	1.87	1 x 1/4	65-510	1.33
64-511	2.93	1 x 3/8	65-511	1.36
64-512	1.69	1 x 1/2	65-512	1.02
64-513	1.60	1 x 3/4	65-513	1.02
64-514	2.70	1-1/4 x 1/4	65-514	1.71
64-515	2.70	1-1/4 x 3/8	65-515	1.53
64-516	2.37	1-1/4 x 1/2	65-516	1.46
64-517	2.16	1-1/4 x 3/4	65-517	1.31
64-518	2.16	1-1/4 x 1	65-518	1.31
64-519	3.43	1-1/2 x 1/4	65-519	2.02
64-520	3.43	1-1/2 x 3/8	65-520	2.02
64-521	3.14	1-1/2 x 1/2	65-521	1.66
64-522	3.14	1-1/2 x 3/4	65-522	1.66
64-523	2.83	1-1/2 x 1	65-523	1.46
64-524	2.61	1-1/2 x 1-1/4	65-524	1.67
64-525	3.91	2 x 3/8	65-525	2.52
64-527	3.91	2 x 1/2	65-527	2.52
64-528	3.64	2 x 3/4	65-528	2.01
64-529	3.45	2 x 1	65-529	1.89
64-530	3.45	2 x 1-1/4	65-530	1.89
64-531	3.03	2 x 1-1/2	65-531	2.10
64-546	5.67	2-1/2 x 1/2	65-546	3.43
64-547	5.67	2-1/2 x 3/4	65-547	3.43
64-532	5.67	2-1/2 x 1	65-532	3.43
64-533	5.67	2-1/2 x 1-1/4	65-533	3.43
64-534	5.56	2-1/2 x 1-1/2	65-534	3.19
64-535	4.94	2-1/2 x 2	65-535	3.17
64-550	7.48	3 x 1	65-550	4.74
64-549	7.34	3 x 1-1/4	65-549	4.74
64-537	6.66	3 x 1-1/2	65-537	4.65
64-538	7.04	3 x 2	65-538	3.62
64-539	13.41	3 x 2-1/2	65-539	4.44
64-551	15.70	4 x 3/4	65-551	9.63
64-553	15.70	4 x 1	65-553	9.63
64-552	15.70	4 x 1-1/4	65-552	9.63
64-540	15.70	4 x 1-1/2	65-540	9.63
64-541	13.85	4 x 2	65-541	8.39
64-542	15.70	4 x 2-1/2	65-542	9.46
64-543	14.66	4 x 3	65-543	8.39
64-545	30.15	6 x 4	65-545	24.42

**Use Steel fittings for smaller sizes
See page 138 for Galvanized and Black Steel Fittings.*

Standard Specifications

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153 Zinc Coating. ANSI B16.3 Malleable Iron Fittings

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

ISO 9002 Manufacturer

UNIONS



Galv.	List	Size	Box/Case	Black	List
64-600	5.21	1/8	5/150	65-600	4.50
64-601	5.03	1/4	5/120	65-601	4.29
64-602	3.35	3/8	5/60	65-602	3.35
64-603	3.20	1/2	50/100	65-603	2.76
64-604	3.68	3/4	35/70	65-604	3.17
64-605	4.81	1	20/40	65-605	4.14
64-606	6.79	1-1/4	15/30	65-606	5.49
64-607	8.38	1-1/2	10/20	65-607	6.71
64-608	10.87	2	6/12	65-608	9.38
64-609	32.84	2-1/2	1/8	65-609	25.00
64-610	45.96	3	1/7	65-610	30.78
64-611	99.55	4	1/7	65-611	76.12

SQUARE HEAD PLUGS



Galv.	List	Size	Box/Case	Black	List
		1/8*			
		1/4*			
		3/8*			
64-653	.75	1/2	50/300	65-653	0.51
64-654	1.17	3/4	30/180	65-654	0.57
64-655	1.08	1	20/120	65-655	0.76
64-656	1.79	1-1/4	40/120	65-656	0.96
64-657	2.42	1-1/2	30/90	65-657	1.34
64-658	3.00	2	20/60	65-658	1.91
64-659	5.92	2-1/2	1/16	65-659	4.06
64-660	8.14	3	1/8	65-660	6.32
64-661	10.50	4	1/4		

** Use Steel Fittings for smaller sizes
See page 138 For Galvanized & Black Steel Fitting*

CROSSES



Galv.	List	Size	Box/Case	Black	List
64-390	3.60	1/8	5/80	65-390	2.90
64-391	3.73	1/4	5/80	65-391	2.55
64-392	3.73	3/8	5/60	65-392	2.60
64-393	3.73	1/2	30/90	65-393	2.96
64-394	4.55	3/4	20/60	65-394	3.61
64-395	6.28	1	15/30	65-395	4.44
64-396	9.09	1-1/4	20/40	65-396	7.22
64-397	11.04	1-1/2	18/36	65-397	8.94
64-398	21.05	2	10/20	65-398	14.80
64-399	40.19	2-1/2	1/12	65-399	26.10
64-400	54.13	3	1/8	65-400	39.00
64-401	109.35	4	1/4	65-401	129.46

CAPS



Galv.	List	Size	Box/Case	Black	List
			1/8*		
			1/4*		
64-472	1.01	3/8	5/250	65-472	0.68
64-473	.77	1/2	75/450	65-473	0.63
64-474	1.11	3/4	40/240	65-474	0.84
64-475	1.22	1	35/140	65-475	1.02
64-476	1.78	1-1/4	25/100	65-476	1.33
64-477	2.27	1-1/2	25/75	65-477	1.81
64-478	2.87	2	18/54	65-478	2.37
64-479	9.14	2-1/2	1/28	65-479	5.89
64-480	11.07	3	1/21	65-480	8.75
64-481	21.99	4	1/7	65-481	13.66
64-482	80.05	6	1/11	65-482	55.00

** Use Steel Fittings for smaller sizes See page 138 For Galvanized & Black Steel Fitting*

FLOOR FLANGES



Galv.	List	Size	Box/Case	Black	List
64-692	4.71	1/2	25/100	65-692	2.26
64-693	5.26	3/4	20/80	65-693	2.44
64-694	5.79	1	20/60	65-694	3.16
64-695	6.59	1-1/4	15/45	65-695	3.17
64-696	8.23	1-1/2	12/36	65-696	3.50
64-697	10.84	2	8/24	65-697	4.56

Nipples & Fittings

HEX BUSHINGS



Galvanized	List	Size	Black	List
66-500	0.55	1/4 x 1/8	67-500	0.52
66-501	0.65	3/8 x 1/8	67-501	0.62
66-502	0.65	3/8 x 1/4	67-502	0.62
66-503	1.05	1/2 x 1/8	67-503	0.95
66-504	1.05	1/2 x 1/4	67-504	0.95
66-505	1.05	1/2 x 3/8	67-505	0.95
66-506	1.60	3/4 x 1/8	67-506	1.45
66-507	1.60	3/4 x 1/4	67-507	1.45
66-508	1.60	3/4 x 3/8	67-508	1.45
66-509	1.60	3/4 x 1/2	67-509	1.45
66-510	3.00	1 x 1/4	67-510	2.55
66-511	3.00	1 x 3/8	67-511	2.55
66-512	3.00	1 x 1/2	67-512	2.55
66-513	3.00	1 x 3/4	67-513	2.55

CAPS



Galvanized	List	Size	Black	List
66-470	0.50	1/8	67-470	0.45
66-471	0.62	1/4	67-471	0.58
66-472	0.90	3/8	67-472	0.85
66-473	1.50	1/2	67-473	1.30
66-474	2.15	3/4	67-474	1.90
66-475	3.10	1	67-475	2.64

SQUARE HEAD PLUGS



Galvanized	List	Size	Black	List
		1/16	67-669	0.20
66-670	0.23	1/8	67-670	0.20
66-671	0.25	1/4	67-671	0.21
66-672	0.39	3/8	67-672	0.34
66-653	0.51	1/2	67-653	0.60
66-654	0.63	3/4	67-654	0.85

HEX HEAD PLUG



Galvanized	List	Size	Black	List
66-770	0.20	1/8	67-770	0.16
66-771	0.33	1/4	67-771	0.30
66-772	0.60	3/8	67-772	0.54
66-773	1.00	1/2	67-773	0.90
66-774	1.65	3/4	67-774	1.45
66-775	3.30	1	67-775	2.55

COUNTERSUNK PLUG



Square Socket

Galvanized	List	Size	Black	List
66-630	0.16	1/8	67-630	0.15
66-631	0.22	1/4	67-631	0.20
66-632	0.30	3/8	67-632	0.26
66-633	0.46	1/2	67-633	0.40
66-634	0.70	3/4	67-634	0.65
66-635	1.80	1	67-635	1.60
		1-1/4	67-636	2.70

HEX SOCKET PLUG



Galvanized	List	Size	Black	List
66-760	0.22	1/16	67-760	0.20
66-761	0.16	1/8	67-761	0.20
66-762	0.22	1/4	67-762	0.20
66-763	0.30	3/8	67-763	0.26
66-764	0.46	1/2	67-764	0.40
66-765	0.70	3/4	67-765	0.64
66-766	1.80	1		

FACE BUSHING



Galvanized	List	Size	Black	List
66-700	0.51	1/4 x 1/8	67-700	0.50
66-701	0.63	3/8 x 1/8	67-701	0.60
66-702	0.95	3/8 x 1/4	67-702	0.60
		1/2 x 1/8	67-703	0.90
66-704	0.95	1/2 x 1/4	67-704	0.90
66-705	0.95	1/2 x 3/8	67-705	0.90
		3/4 x 1/4	67-707	1.19
66-708	1.37	3/4 x 3/8	67-708	1.19
66-709	1.37	3/4 x 1/2	67-709	1.23
		1 x 3/8	67-711	2.20
66-712	2.45	1 x 1/2	67-712	2.20
66-713	2.45	1 x 3/4	67-713	2.20

Nipples & Fittings

**EXTRA HEAVY WEIGHT NIPPLES
1/8" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-001	2.30	Close (3/4)	59-001	1.48
58-002	2.52	1-1/2"	59-002	1.60
58-003	2.80	2"	59-003	1.72
58-004	3.00	2-1/2"	59-004	1.88
58-005	3.28	3"	59-005	2.00
58-006	3.60	3-1/2"	59-006	2.30
58-007	4.00	4"	59-007	2.50
58-008	4.04	4-1/2"	59-008	2.70
58-009	7.40	5"	59-009	4.70
58-010	7.60	5-1/2"	59-010	4.96
58-011	8.00	6"	59-011	5.12
58-012	10.20	7"	59-012	6.40
58-013	10.70	8"	59-013	6.80
58-014	11.20	9"	59-014	7.20
58-015	11.90	10"	59-015	7.60
58-016	12.20	11"	59-016	8.00
58-017	12.50	12"	59-017	8.30

**EXTRA HEAVY WEIGHT NIPPLES
1/4" DIAMETER**



GALVANIZED			BLACK	
Part #	List	Length	Part #	List
58-020	2.48	Close (7/8)	59-020	1.60
58-021	2.60	1-1/2"	59-021	1.68
58-022	2.84	2"	59-022	1.86
58-023	3.40	2-1/2"	59-023	2.20
58-024	3.86	3"	59-024	2.42
58-025	4.20	3-1/2"	59-025	2.56
58-026	4.36	4"	59-026	2.64
58-027	4.92	4-1/2"	59-027	3.24
58-028	6.12	5"	59-028	4.18
58-029	6.78	5-1/2"	59-029	4.46
58-030	6.92	6"	59-030	4.74
58-031	10.96	7"	59-031	7.60
58-032	11.40	8"	59-032	8.00
58-033	12.32	9"	59-033	8.40
58-034	13.36	10"	59-034	8.50
58-035	14.00	11"	59-035	9.00
58-036	14.84	12"	59-036	9.40

**EXTRA HEAVY WEIGHT NIPPLES
3/8" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-040	2.66	Close (1)	59-040	1.64
58-041	2.96	1-1/2"	59-041	1.86
58-042	3.20	2"	59-042	2.08
58-043	3.68	2-1/2"	59-043	2.34
58-044	4.12	3"	59-044	2.48
58-045	4.56	3-1/2"	59-045	2.78
58-046	5.50	4"	59-046	2.92
58-047	5.28	4-1/2"	59-047	3.30
58-048	6.48	5"	59-048	4.18
58-049	6.96	5-1/2"	59-049	4.48
58-050	7.40	6"	59-050	4.76
58-051	12.28	7"	59-051	8.40
58-052	13.00	8"	59-052	8.90
58-053	14.00	9"	59-053	9.40
58-054	14.68	10"	59-054	9.70
58-055	15.58	11"	59-055	10.00
58-056	16.08	12"	59-056	10.24

**EXTRA HEAVY WEIGHT NIPPLES
1/2" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-060	2.52	Close (1-1/8)	59-060	1.50
58-061	2.64	1-1/2"	59-061	1.56
58-062	2.76	2"	59-062	1.64
58-063	3.04	2-1/2"	59-063	1.80
58-064	3.30	3"	59-064	1.96
58-065	3.52	3-1/2"	59-065	2.16
58-066	3.90	4"	59-066	2.36
58-067	4.20	4-1/2"	59-067	2.60
58-068	4.50	5"	59-068	2.70
58-069	4.80	5-1/2"	59-069	2.86
58-070	5.10	6"	59-070	3.04
58-071	8.24	7"	59-071	5.20
58-072	8.62	8"	59-072	5.60
58-073	9.36	9"	59-073	6.00
58-074	10.34	10"	59-074	6.40
58-075	11.00	11"	59-075	7.00
58-076	11.78	12"	59-076	7.34

**EXTRA HEAVY WEIGHT NIPPLES
3/4" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-080	2.80	Close (1-3/8)	59-080	1.76
58-081	2.92	1-1/2"	59-081	1.84
58-082	3.16	2"	59-082	1.92
58-083	3.44	2-1/2"	59-083	2.06
58-084	3.74	3"	59-084	2.26
58-085	4.12	3-1/2"	59-085	2.50
58-086	4.48	4"	59-086	2.70
58-087	5.22	4-1/2"	59-087	3.16
58-088	5.72	5"	59-088	3.32
58-089	5.96	5-1/2"	59-089	3.70
58-090	6.26	6"	59-090	3.96
58-091	9.96	7"	59-091	6.36
58-092	9.92	8"	59-092	6.84
58-093	11.48	9"	59-093	7.36
58-094	12.14	10"	59-094	7.68
58-095	12.96	11"	59-095	8.40
58-096	13.82	12"	59-096	8.72

**EXTRA HEAVY WEIGHT NIPPLES
1-1/4" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-120	5.24	Close (1-5/8)	59-120	3.20
58-121	5.46	2"	59-121	3.30
58-122	5.92	2-1/2"	59-122	3.76
58-123	6.34	3"	59-123	4.02
58-124	6.78	3-1/2"	59-124	4.64
58-125	7.52	4"	59-125	5.04
58-126	8.50	4-1/2"	59-126	5.84
58-127	9.44	5"	59-127	6.20
58-128	10.72	5-1/2"	59-128	6.60
58-129	11.60	6"	59-129	6.96
58-130	16.20	7"	59-130	10.30
58-131	18.08	8"	59-131	11.60
58-132	19.76	9"	59-132	12.60
58-133	11.24	10"	59-133	13.40
58-134	22.86	11"	59-134	14.20
58-135	23.96	12"	59-135	15.42

**EXTRA HEAVY WEIGHT NIPPLES
1" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-100	4.20	Close (1-1/2)	59-100	2.60
58-101	4.38	2"	59-101	2.72
58-102	4.62	2-1/2"	59-102	2.96
58-103	5.12	3"	59-103	3.20
58-104	5.70	3-1/2"	59-104	3.60
58-105	6.12	4"	59-105	3.88
58-106	6.96	4-1/2"	59-106	4.52
58-107	7.36	5"	59-107	4.62
58-108	8.18	5-1/2"	59-108	5.16
58-109	8.84	6"	59-109	5.44
58-110	13.20	7"	59-110	8.40
58-111	15.40	8"	59-111	9.20
58-112	15.52	9"	59-112	10.00
58-113	16.50	10"	59-113	10.60
58-114	17.76	11"	59-114	11.40
58-115	19.04	12"	59-115	12.00

**EXTRA HEAVY WEIGHT NIPPLES
1-1/2" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-140	6.40	Close (1-3/4)	59-140	4.00
58-141	6.66	2"	59-141	4.20
58-142	7.20	2-1/2"	59-142	4.60
58-143	7.64	3"	59-143	5.00
58-144	8.72	3-1/2"	59-144	5.60
58-145	9.12	4"	59-145	6.00
58-146	10.06	4-1/2"	59-146	6.60
58-147	10.84	5"	59-147	7.00
58-148	11.74	5-1/2"	59-148	7.60
58-149	12.64	6"	59-149	8.00
58-150	18.64	7"	59-150	12.00
58-151	20.92	8"	59-151	13.40
58-152	22.28	9"	59-152	14.00
58-153	24.48	10"	59-153	15.40
58-154	25.90	11"	59-154	17.20
58-155	27.70	12"	59-155	18.60

**Nipples &
Fittings**

**EXTRA HEAVY WEIGHT NIPPLES
2" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-160	8.90	Close (2")	59-160	5.50
58-161	9.40	2-1/2"	59-161	5.90
58-162	9.92	3"	59-162	6.60
58-163	11.06	3-1/2"	59-163	7.10
58-164	11.94	4"	59-164	7.60
58-165	13.52	4-1/2"	59-165	8.60
58-166	14.96	5"	59-166	9.40
58-167	16.24	5-1/2"	59-167	10.20
58-168	17.44	6"	59-168	10.80
58-169	26.82	7"	59-169	17.06
58-170	29.64	8"	59-170	18.60
58-171	32.08	9"	59-171	20.00
58-172	34.92	10"	59-172	21.70
58-173	37.22	11"	59-173	23.50
58-174	40.68	12"	59-174	25.00

**EXTRA HEAVY WEIGHT NIPPLES
2-1/2" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-180	26.20	Close (2-1/2)	59-180	16.80
58-181	30.84	3"	59-181	18.72
58-182	35.80	3-1/2"	59-182	21.40
58-183	36.60	4"	59-183	21.80
58-184	40.28	4-1/2"	59-184	23.90
58-185	41.20	5"	59-185	24.80
58-186	42.24	5-1/2"	59-186	26.22
58-187	43.20	6"	59-187	27.00
58-188	50.06	7"	59-188	31.60
58-189	51.64	8"	59-189	32.60
58-190	46.24	9"	59-190	36.00
58-191	57.52	10"	59-191	36.80
58-192	62.80	11"	59-192	39.60
58-193	64.28	12"	59-193	40.60

**EXTRA HEAVY WEIGHT NIPPLES
3" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-200	32.64	Close (2-5/8)	59-200	20.50
58-201	35.94	3"	59-201	22.80
58-202	40.36	3-1/2"	59-202	24.00
58-203	42.40	4"	59-203	26.60
58-204	44.80	4-1/2"	59-204	28.50
58-205	47.94	5"	59-205	29.20
58-206	49.98	5-1/2"	59-206	30.60
58-207	50.96	6"	59-207	31.90
58-208	64.80	7"	59-208	41.92
58-209	68.20	8"	59-209	43.60
58-210	74.02	9"	59-210	48.00
58-211	75.64	10"	59-211	48.60
58-212	79.76	11"	59-212	50.80
58-213	84.28	12"	59-213	52.60

**EXTRA HEAVY WEIGHT NIPPLES
4" DIAMETER**



GALVANIZED			BLACK	
Part#	List	Length	Part #	Price
58-220	48.30	Close (2-7/8)	59-220	30.90
58-221	60.88	4"	59-221	37.60
58-222	66.32	4-1/2"	59-222	40.20
58-223	67.00	5"	59-223	42.20
58-224	73.50	5-1/2"	59-224	44.60
58-225	74.42	6"	59-225	45.90
58-226	83.32	7"	59-226	52.80
58-227	86.24	8"	59-227	54.00
58-228	95.92	9"	59-228	60.40
58-229	100.00	10"	59-229	62.20
58-230	109.40	11"	59-230	67.80
58-231	110.38	12"	59-231	69.00

**Nipples &
Fittings**

300 LB Fittings ASTM: A197 ANSI: B16.3, B16.4

90° ELBOWS



BLACK

Part #	List	Length
68-101	7.47	1/4
68-102	6.64	3/8
68-103	9.12	1/2
68-104	9.93	3/4
68-105	12.70	1
68-106	18.13	1-1/4
68-107	21.37	1-1/2
68-108	31.42	2

GALVANIZED

Part #	List
69-101	12.65
69-102	12.90
69-103	15.36
69-104	17.25
69-105	22.11
69-106	34.74
69-107	37.65
69-108	63.27

45° ELBOWS



BLACK

Part #	List	Length
68-181	11.12	1/4
68-182	11.12	3/8
68-183	12.38	1/2
68-184	13.76	3/4
68-185	15.26	1
68-186	24.41	1-1/4
68-187	31.83	1-1/2
68-188	48.07	2

GALVANIZED

Part #	List
69-181	19.74
69-182	19.74
69-183	22.84
69-184	26.38
69-185	28.82
69-186	44.75
69-187	57.88
69-188	80.16

90° STREET ELBOWS



BLACK

Part #	List	Length
68-161	8.86	1/4
68-162	9.92	3/8
68-163	11.55	1/2
68-164	16.42	3/4
68-165	19.26	1
68-166	26.47	1-1/4
68-167	32.75	1-1/2
68-168	50.94	2

GALVANIZED

Part #	List
69-161	17.51
69-162	17.52
69-163	26.08
69-164	27.69
69-165	36.22
69-166	47.30
69-167	60.79
69-168	95.04

TEES



BLACK

Part #	List	Length
68-252	9.97	3/8
68-253	12.69	1/2
68-254	13.70	3/4
68-255	16.47	1
68-256	31.04	1-1/4
68-257	33.19	1-1/2
68-258	40.65	2

GALVANIZED

Part #	List
69-252	18.33
69-253	22.95
69-254	25.28
69-255	31.15
69-256	44.47
69-257	46.24
69-258	73.94

300 LB Fittings ASTM: A197 ANSI: B16.3, B16.4

COUPLINGS



BLACK

Part #	List	Length
68-411	6.74	1/4
68-412	6.74	3/8
68-413	7.53	1/2
68-414	8.65	3/4
68-415	9.89	1
68-416	11.76	1-1/4
68-417	17.62	1-1/2
68-418	25.37	2

GALVANIZED

Part #	List
69-411	10.92
69-412	11.94
69-413	12.26
69-414	13.84
69-415	18.29
69-416	23.85
69-417	33.66
69-418	40.77

REDUCING COUPLING



BLACK

Part #	List	Length
68-432	8.90	3/8 x 1/4
68-434	10.73	1/2 x 1/4
68-435	10.73	1/2 x 3/8
68-438	10.97	3/4 x 1/2
68-441	13.37	1 x 1/2
68-442	13.10	1 x 3/4

GALVANIZED

Part #	List
69-432	15.74
69-434	17.31
69-435	17.31
69-438	21.01
69-441	25.59
69-442	25.08

CAPS



BLACK

Part #	List	Length
68-471	6.90	1/4
68-472	6.90	3/8
68-473	6.88	1/2
68-474	8.65	3/4
68-475	11.35	1
68-476	12.57	1-1/4
68-477	18.38	1-1/2
68-478	25.52	2

GALVANIZED

Part #	List
69-471	11.15
69-472	11.15
69-473	12.42
69-474	14.84
69-475	20.36
69-476	24.09
69-477	33.79
69-478	46.75

UNIONS



BLACK

Part #	List	Length
68-600	20.00	1/8
68-601	20.00	1/4
68-602	20.00	3/8
68-603	20.00	1/2
68-604	20.00	3/4
68-605	20.00	1
68-606	33.61	1-1/4
68-607	38.71	1-1/2
68-608	40.00	2

GALVANIZED

Part #	List
69-600	30.00
69-601	30.00
69-602	30.00
69-603	30.00
69-604	36.00
69-605	36.75
69-606	37.51
69-607	45.00
69-608	55.00

More sizes and shapes available!

3000 LB FORGED STEEL THREADED FITTINGS

ASTM: A105 ANSI: B16.11

90° ELBOWS



Part #	Size	List
101-103	1/2"	7.28
101-104	3/4"	8.42
101-105	1"	12.65
101-106	1-1/4"	23.86
101-107	1-1/2"	31.77
101-108	2"	38.61

STREET ELBOWS



Part #	Size	List
101-163	1/2"	13.98
101-164	3/4"	18.03
101-165	1"	23.07
101-166	1-1/4"	36.81
101-167	1-1/2"	49.36
101-168	2"	72.67

45° ELBOWS



Part #	Size	List
101-183	1/2"	5.10
101-184	3/4"	7.25
101-185	1"	11.65
101-186	1-1/4"	17.50
101-187	1-1/2"	25.50
101-188	2"	35.50

TEES



Part #	Size	List
101-253	1/2"	9.69
101-254	3/4"	13.66
101-255	1"	17.37
101-256	1-1/4"	33.45
101-257	1-1/2"	39.59
101-258	2"	52.64

CROSS



Part #	Size	List
101-393	1/2"	26.55
101-394	3/4"	35.07
101-395	1"	51.60
101-396	1-1/4"	71.62
101-397	1-1/2"	96.34
101-398	2"	133.78

HALF COUPLINGS



Part #	Size	List
101-773	1/2"	1.94
101-774	3/4"	2.25
101-775	1"	3.18
101-776	1-1/4"	4.89
101-777	1-1/2"	6.63
101-778	2"	9.29

CAPS



Part #	Size	List
101-473	1/2"	3.58
101-474	3/4"	5.00
101-475	1"	7.67
101-476	1-1/4"	11.52
101-477	1-1/2"	13.28
101-478	2"	20.31

2000 and 6000 lb threaded and socketweld fittings available on special order basis.

Victory is won not in miles but in inches. Win a little now, hold your ground and win a little more later.

-Louis L'Amour

COUPLINGS



Part #	Size	List
101-413	1/2"	2.53
101-414	3/4"	3.46
101-415	1"	5.23
101-416	1-1/4"	9.73
101-417	1-1/2"	13.14
101-418	2"	16.58

REDUCING COUPLINGS

Part #	Size	List
101-435	1/2 x 3/8"	5.78
101-434	1/2 x 1/4"	5.78
101-438	3/4 x 1/2"	6.52
101-437	3/4 x 3/8"	6.52
101-442	1 x 3/4"	8.91
101-441	1 x 1/2"	8.91
101-440	1 x 3/8"	8.91
101-446	1-1/4 x 1"	14.05
101-445	1-1/4 x 3/4"	14.05
101-444	1-1/4 x 1/2"	14.05
101-443	1-1/4 x 3/8"	14.05
101-450	1-1/2 x 1-1/4"	16.06
101-449	1-1/2 x 1"	16.06
101-447	1-1/2 x 1/2"	16.06
101-454	2 x 1-1/2"	23.29
101-453	2 x 1-1/4"	23.29
101-452	2 x 1"	23.29
101-451	2 x 3/4"	23.29
101-458	2 x 1/2"	23.29

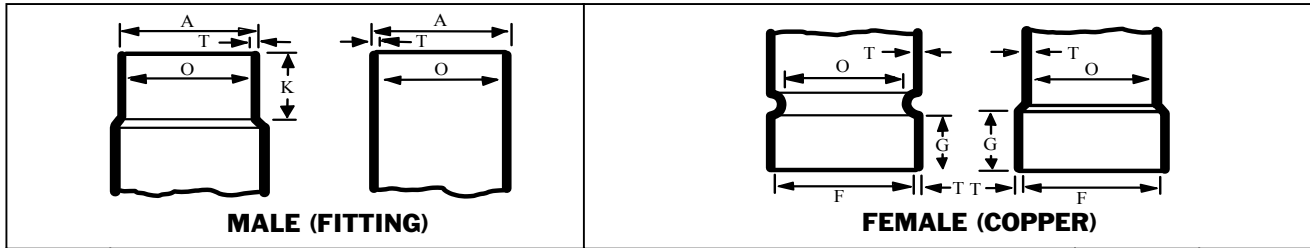
UNIONS



Part #	Size	List
101-603	1/2"	11.51
101-604	3/4"	13.85
101-605	1"	18.11
101-606	1-1/4"	30.53
101-607	1-1/2"	34.83
101-608	2"	45.25

*More Sizes Available. Please Call Order Desk for Details!

**Nipples &
Fittings**



Nominal Size	Joint Ends										Metal Thickness T (in)	Inside Diameter O (in)
	Male End					Female End						
	Outside Diameter (A) in	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) H (in)	Inside Diameter F (in)	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) G (in)		
1/8	2/8	0.03	2/8	2/8	3/8	2/8	0.03	2/8	2/8	3/8	0	2/8
1/4	3/8		3/8	3/8	3/8	3/8		3/8	3/8	3/8	0	2/8
3/8	4/8		4/8	4/8	3/8	4/8		4/8	4/8	3/8	0	3/8
1/2	5/8		5/8	5/8	4/8	5/8		5/8	5/8	3/8	0	4/8
5/8	6/8		6/8	6/8	5/8	6/8		6/8	6/8	5/8	0	4/8
3/4	7/8		7/8	7/8	6/8	7/8		7/8	7/8	5/8	0	5/8
1	1-1/8	0.04	1-1/8	1-1/8	7/8	1-1/8	0.04	1-1/8	1-1/8	7/8	0	7/8
1-1/4	1-3/8		1-3/8	1-3/8	1	1-3/8		1-3/8	1-3/8	1	0	1-1/8
1-1/2	1-5/8	0.05	1-5/8	1-5/8	1-1/8	1-5/8	0.05	1-5/8	1-5/8	1-1/8	0	1-3/8
2	2-1/8		2-1/8	2-1/8	1-3/8	2-1/8		2-1/8	2-1/8	1-2/8	0	1-6/8
2-1/2	2-5/8		2-5/8	2-5/8	1-4/8	2-5/8		2-5/8	2-5/8	1-4/8	1/8	2-1/8
3	3-1/8		3-1/8	2-1/8	1-6/8	3-1/8		3-1/8	3-1/8	1-5/8	1/8	2-5/8
4	4-1/8		4-1/8	4-1/8	2-1/8	4-1/8		4-1/8	4-1/8	2-1/8	1/8	3-4/8
5	5-1/8		5-1/8	5-1/8	2-6/8	5-1/8		5-1/8	5-1/8	2-5/8	1/8	4-5/8
6	6-1/8	0.08	6-1/8	6-1/8	3-2/8	6-1/8	0.08	6-1/8	6-1/8	3-1/8	1/8	5-6/8
8	8-1/8		8-1/8	8-1/8	4-1/8	8-1/8		8-1/8	8-1/8	3-7/8	1/8	7-4/8
10	10-1/8	0.35	10-1/8	10-1/8	4-4/8	10-2/8	0.35	10-1/8	10-2/8	4-3/8	2/8	9-2/8

Nipples & Fittings

Symbol of Joint Ends

- C** Solder joint fitting end made to receive copper tube diameter
- Ftg.** Solder joint fitting end made to copper tube diameter
- F** Internal ANSI Standard Taper Pipe Thread-Female
- M** External ANSI Standard Taper Pipe Thread-Male

The above conforms to ASTM B 88 & ASTM B 306

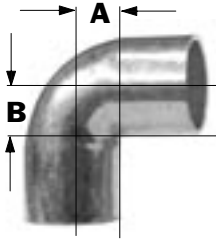
Warranty: Seller warrants that all fittings will be free from defects in materials and construction that will impair their usefulness, provided they are used as recommended. Any fitting that proves to be defective will be replaced or a credit issued but no incidental labor charges, expenses or damages will be allowed.

Dimensions: We have included roughing-in dimensions in this catalog. These dimensions are provided with the latest information available at the time of publication and are for estimating purposes only.

See copper fitting brushes on page 189

Copper Fittings

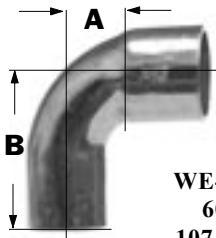
90° Ell C x C



WE-500-R
607-R
107-C

Part#	Nominal	Approx Net Wt.	A	B	List Price
77-100	1/8"	0.01	1/4	1/4	1.11
77-101	1/4"	0.01	1/4	1/4	1.11
77-102	3/8"	0.03	3/8	3/8	1.47
77-103	3/8" x 1/4"	0.03	5/8	1/2	1.90
77-104	1/2"	0.04	3/8	3/8	0.40
77-105	1/2"x3/8"	-	5/8	1/2	4.04
77-107	5/8"	0.07	3/8	3/8	3.00
77-108	3/4"	0.09	1/2	1/2	1.11
77-109	3/4" x 1/2"	0.12	3/4	3/4	2.68
77-110	1"	0.17	3/4	3/4	2.68
77-111	1"x3/4"	0.23	7/8	7/8	3.93
77-112	1"x1/2"	0.23	1-1/4	3/4	3.79
77-113	1-1/4"	0.27	7/8	7/8	4.08
77-114	1-1/2"	0.41	1-1/8	1-1/8	6.33
77-116	2"	0.73	1-1/4	1-1/4	11.54
77-117	2"x1 -1/2"	0.73	1-5/8	1-1/4	23.36
77-118	2-1/2"	1.16	1-5/8	1-5/8	21.97
77-119	3"	1.87	1-7/8	1-7/8	30.79
77-120	4"	3.79	2-3/4	2-3/4	78.83

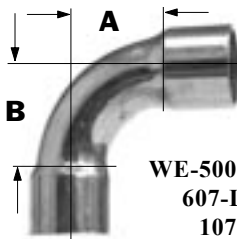
90° Street Ell Ftg. x C



WE-503
607-2
107-C-2

77-124	1/4"	0.01	3/8	3/4	2.68
77-125	3/8"	0.03	3/8	7/8	1.75
77-126	1/2"	0.05	1/2	1	0.72
77-127	5/8"	0.07	5/8	1-1/4	3.11
77-128	3/4"	0.12	3/4	1-1/2	1.61
77-129	1"	0.22	7/8	1-3/4	4.08
77-130	1-1/4"	0.33	1-1/8	2-1/8	6.18
77-131	1-1/2"	0.45	1-3/8	2-1/2	8.11
77-132	2"	0.87	1-3/4	3-1/8	17.61
77-134	3"	1.93	2-3/8	4	33.97

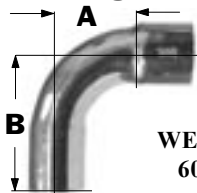
90° Long Turn Ell C x C



WE-500-L
607-LT
107-L

77-139	1/8"	0.01	1/4	1/4	2.86
77-140	1/4"	0.02	3/8	3/8	2.29
77-141	5/16" 00	0.03	5/8	5/8	1.93
77-142	3/8"	0.04	3/4	3/4	2.75
77-143	1/2"	0.06	7/8	7/8	2.47
77-144	5/8"	0.1	1	1	2.00
77-145	3/4"	0.15	1-1/4	1-1/4	3.36

90° Long Turn Street Ell Ftg. x C



WE-503-L
607-2LT

77-152	1/8"	0.01	1/2	1/2	3.08
77-153	1/4"	0.22	3/8	3/4	2.65
77-154	3/8"	0.04			5.04
77-155	1/2"	0.06	7/8	1-3/8	3.58
77-156	5/8"	0.11	1	1-3/4	4.22
77-157	3/4"	0.15	1-1/4	2	4.25

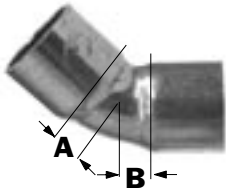
See copper fitting brushes on page 189

Nipples & Fittings

Copper Fittings

45° ELL C x C

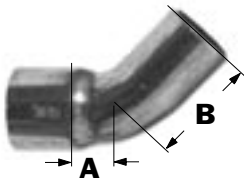
WE-504
606
106



Part#	Nominal	Approx Net Wt.	A	B	List Price
77-161	1/8"	0.01	1/4	1/4	3.65
77-162	1/4"	0.01	1/4	1/4	2.86
77-163	3/8"	0.02	1/4	1/4	2.33
77-164	1/2"	0.04	1/4	1/4	0.90
77-165	5/8"	0.06	3/8	3/8	4.47
77-166	3/4"	0.1	3/8	3/8	1.58
77-167	1"	0.19	1/2	1/2	3.93
77-168	1-1/4"	0.27	3/4	3/4	5.33
77-169	1-1/2"	0.39	3/4	3/4	6.40
77-170	2"	0.75	7/8	7/8	10.68
77-171	2-1/2"	1.23	1-1/8	1-1/8	22.79

Street 45° Ftg. x C

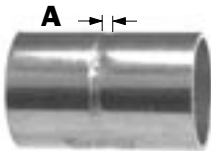
WE-505
606-2



77-177	1/4"	0.01	1/8	3/8	4.04
77-178	3/8"	0.02	1/8	1/2	2.75
77-179	1/2"	0.06	1/4	3/4	1.04
77-180	5/8"	0.06	1/4	3/4	6.75
77-181	3/4"	0.1	3/8	1-1/8	1.61
77-182	1"	0.18	1/2	1-1/2	5.22
77-183	1-1/4"	0.27	3/4	1-3/4	6.54
77-184	1-1/2"	0.38	3/4	1-3/4	8.00
77-185	2"	0.75	7/8	2-1/4	12.68

Coupling (Socket) w/Rolled Tube Stop C x C

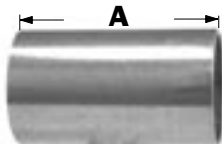
WC-400
100



77-201	1/8"	0	0		0.29
77-202	1/4"	0.01	0		0.36
77-203	3/8"	0.02	1/8		0.50
77-204	1/2"	0.03	1/8		0.36
77-205	5/8"	0.04	0		1.11
77-206	3/4"	0.06	1/8		0.72
77-207	1"	0.1	1/8		1.50
77-208	1-1/4"	0.15	1/8		2.65
77-209	1-1/2"	0.22	1/8		3.41
77-210	2"	0.39	1/8		4.29
77-211	2-1/2"	0.71	1/8		12.29
77-212	3"	0.98	1/8		14.61
77-214	4"	2.01	1/4		32.54

Coupling (Socket) Less Tube Stop C x C

WC-400NS
601

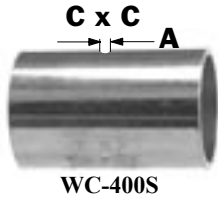


77-219	1/8"	0	5/8		0.25
77-220	1/4"	-	3/4		0.22
77-222	1/2"	0.03	1-1/8		0.47
77-223	3/4"	0.06	1-5/8		1.04
77-224	1"	0.1	2		2.15
77-225	1-1/4"	0.15	2		3.22
77-226	1-1/2"	0.22	2-3/8		4.36
77-227	2"	0.39	2-3/4		7.36

Nipples & Fittings

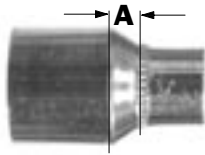
Copper Fittings

**Coupling (Socket)
w/Dimpled Tube Stop**



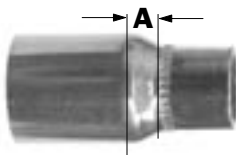
Part#	Nominal	Approx Net Wt.	A	List Price
77-238	1/2"	0.03	1/8	0.36
77-240	3/4"	0.06	1/8	0.72
77-241	1"	0.1	1/8	1.50
77-242	1-1/4"	0.15	1/8	2.00
77-244	2"	0.39	1/8	5.79
77-247	4"	2.01	1/4	28.00

**Reducer Coupling
w/ Stop
C x C**



77-252	1/4" x 1/8"	0.01	1/4	2.43
77-253	3/8" x 1/4"	0.02	1/8	0.61
77-255	1/2" x 3/8"	0.03	1/4	0.75
77-256	1/2" x 1/4"	0.03	1/4	0.85
77-258	5/8" x 1/2"	0.04	1/8	1.86
77-262	3/4" x 1/2"	0.06	1/4	1.33
77-263	3/4" x 3/8"	0.06	3/8	1.15
77-264	3/4" x 1/4"	0.06	3/8	1.18
77-265	1"x3/4"	0.12	3/8	2.43
77-267	1"x1/2"	0.1	1/2	2.75
77-268	1-1/4" x 1"	0.17	1/4	3.40
77-269	1 -1/4" x 3/4"	0.17	1/2	3.40
77-270	1 -1/4" x 1/2"	0.14	1/2	3.54
77-271	1-1/2" x 1-1/4"	0.24	1/4	5.65
77-272	1-1/2" x1"	0.24	1/2	5.65
77-273	1 -1/2" x 3/4"	0.25	5/8	4.29
77-274	1-1/2" x 1/2"	0.19	7/8	4.58
77-275	2" x 1-1/2"	0.42	5/8	6.65
77-276	2 x1 -1/4"	0.46	5/8	6.65
77-277	2" x 1"	0.48	5/8	8.75
77-280	2-1/2"x2"	0.79	3/4	14.65
77-284	3" x 2-1/2"	1.15	1/2	19.29

**Reducer Coupling
w/ Stop
C x C**

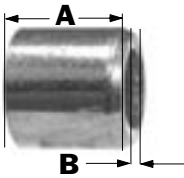


77-291	3/8" x 1/4"	0.02	1/8	0.83
77-292	3/8" x 1/8"	0.01	5/8	0.97
77-294	1/2" x 1/4"	0.03	3/4	0.90
77-295	5/8" X 1/2"	0.03	1/8	1.58
77-296	3/4" x 5/8"	0.08	1/8	1.00
77-297	3/4" x 1/2"	0.06	1/8	1.36
77-298	3/4" x 3/8"	0.05	1-1/8	1.18
77-299	3/4" X 1/4"	0.05	1-1/8	1.18
77-300	1"x3/4"	0.11	1/4	2.15
77-352	1" x 1/2"	0.1	1/4	2.72
77-354	1-1/4" x1"	0.17	1/4	3.40
77-355	1 -1/4" x 3/4"	0.15	1/4	3.40
77-356	1 -1/4" x 1/2"	0.14	1/2	3.54
77-357	1 -1/2" X 1-1/4"	0.21	1/4	5.65
77-358	1-1/2"x1"	0.22	1/4	5.65
77-359	1 -1/2" x 3/4"	0.21	1/2	5.65
77-360	1 -1/2" x 1/2"	0.21	5/8	3.72
77-361	2" x 1-1/2"	0.39	1/2	8.75
77-362	2" x 1 -1/4"	0.38	1/2	6.93
77-363	2" x 1"	0.4	5/8	6.93
77-364	2" x 3/4"	0.39	3/4	6.93
77-365	2" x 1/2"	0.44	7/8	7.40
77-370	3" x 2-1/2"	0.93	1/2	17.72

Nipples & Fittings

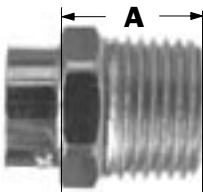
Copper Fittings

Flush Bushing
Ftg. x C
WC-106
618



Part#	Nominal	Approx Net Wt.	A	B	List Price
77-382	3/4" x 1/2"	0.08	7/8		1.43
77-383	3/4" x 5/8"	0.04	7/8		1.65
77-385	1" x 3/4"	0.13	1		2.90
77-387	1" x 1/2"	0.22	1		2.36
77-389	1-1/4" x 3/4"	0.3	1		3.93
77-391	1-1/2" x 1-1/4"	0.22	1-1/8		3.58
77-392	2" x 1-1/2"	0.68	1-3/8		13.50

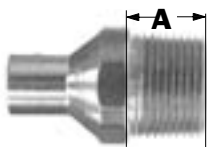
Male Adapter
C x M
WC-401
604



77-393	1/8"	0.02	3/8		5.08
77-394	1/4"	0.03	1/2		3.86
77-395	1/4" x 1/2"	0.09	1		2.04
77-396	1/4"x3/8"	0.06	5/8		4.54
77-397	1/4" x 1/8"	0.02	7/8		3.40
77-398	3/8"	0.06	7/8		1.93
77-401	1/2"	0.08	5/8		0.97
77-303	1/2"x3/4"	0.16	3/4		3.00
77-306	3/4"	0.14	7/8		1.72
77-307	3/4" x 1"	0.29	7/8		6.54
77-309	1"	0.24	7/8		4.43
77-312	1"x3/4"	0.18	1-7/8		6.54
77-314	1-1/4"	0.41	1-1/2		6.54
77-318	1-1/2"	0.5	1-5/8		7.50
77-320	1-1/2" x 1-1/4"	0.44	1-3/4		12.11
77-322	2"	0.87	7/8		12.68

Fitting Male Adapters
Ftg. x M

WC-404
604-2

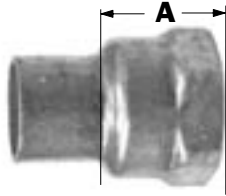


77-331	1/2"	0.09	1-1/2		4.50
77-332	1/2" x 3/4"	0.15	-		10.40
77-333	3/4"	0.15	1-7/8		4.40
77-335	1-1/4"	0.41	2-1/2		13.18
77-337	2"	0.86	2-7/8		35.15

A 95 -year old man is having his annual checkup. The doctor asks him how he is feeling. "I've got an eighteen-year old bride who's pregnant with my child. What do you think about that?" The Doctor considers this for a moment, and then says, "Well, let me tell you a story. I know of a guy who's an avid hunter. He never misses a season. But one day he's in a bit of a hurry and he accidentally grabs his umbrella instead of his gun. So he's walking in the woods near a creek and suddenly spots a beaver in some brush in front of him! He raises the umbrella, points it at the beaver and squeezed the handle; BAM!!!! The beaver drops dead in front of him. "That's impossible!", says the old man in disbelief, "Someone else must have shot that beaver." The Doctor says, "My point exactly."

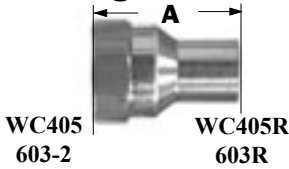
Copper Fittings

Female Adapters
C x F
 WC402
 603
 WC402R
 603R



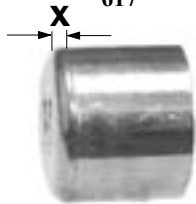
Part#	Nominal	Approx Net Wt.	A/X	List Price
77-338	1/8"	0.03	1/2	2.50
77-339	1/4"	0.04	1/2	2.40
77-340	3/8"	0.06	5/8	3.40
77-341	3/8" x 1/2"	0.1	7/8	3.33
77-343	1/2"	0.1	7/8	1.61
77-345	1/2" x 3/4"	0.15	7/8	3.54
77-346	1/2"x3/8"	,07	5/8	2.50
77-347	1/2" x 1/4"	0.05	5/8	1.93
77-349	3/4"	0.14	3/4	2.22
77-351	3/4" x 1/2"	,11	3/4	3.54
77-402	1"	0.24	1	5.15
77-404	1"x3/4"	0.22	5/8	7.50
77-405	1"x 1/2"	0.29	3/4	5.90
77-406	1-1/4"	0.43	1-1/8	7.50
77-407	1-1/4" x 1-1/2"	0.52	1-1/4	16.04
77-409	1 -1/4" x 3/4"	0.26	1/2	10.04
77-410	1-1/2"	0.58	1-1/8	11.75
77-413	2"	0.74	1-1/4	15.94
77-416	3"	1.83	1-1/2	52.65

Fitting Female Adapt.
Ftg. x F



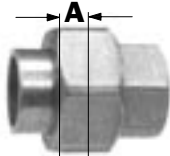
77-419	3/8"	0.05	1-1/8	3.40
77-420	1/2"	0.11	1-3/8	2.47
77-423	3/4"	0.19	1-3/4	3.18
77-424	1"	0.25	2	7.47
77-426	1-1/2"	0.55	2/1/02	11.93
77-427	2"	0.68	2-5/8	15.90

Cap
 WC-415
 617



77-428	1/8"	0.003	0	0.54
77-429	1/4"	0.01	0	0.36
77-430	3/8"	0.01	0	0.54
77-431	1/2"	0.02	0	0.33
77-432	5/8"	0.03	1/8	0.79
77-433	3/4"	0.04	1/8	0.61
77-434	1"	0.08	1/8	1.50
77-435	1-1/4"	0.11	1/8	2.11
77-436	1-1/2"	0.18	1/8	3.08
77-437	2"	0.3	0	5.65

Unions C x C
 WC-407



77-452	1/8	0.13	3/8	7.08
77-453	1/4	0.11	3/8	7.04
77-454	3/8	0.11	1/2	7.04
77-455	1/2	0.17	1/2	5.04
77-456	3/4	0.37	5/8	6.33
77-457	1	0.51	1/2	11.22

U-Type Strap
 WS-1100

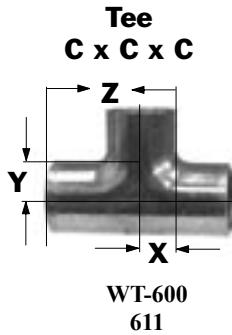


77-458	1/8	0.01		0.18
77-459	1/4	0.02		0.18
77-460	3/8	0.02		0.22
77-461	1/2	0.03		0.37
77-462	3/4	0.03		0.36
77-463	1	0.04		0.40
77-464	1-1/4	0.04		0.47
77-465	1-1/2	0.05		0.54
77-466	2	0.06		0.64

Nipples & Fittings

Copper Fittings

Nipples & Fittings



Part#	Nominal	Approx Net Wt.	A/X	B/Y	Z	List Price
77-467	1/8"	0.02	1/8	1/8		3.25
77-468	1/4"	0.03	1/4	1/4		2.47
77-470	3/8"	0.05	1/4	3/8		2.47
77-473	1/2"	0.08	3/8	3/8		0.83
77-474	1/2x1/2"x1"	-	1-1/4	5/8		3.86
77-481	5/8"	-	3/8	1/2		5.36
77-483	3/4"	0.18	1/2	1/2		2.00
77-485	3/4"x3/4"x1"	0.25	1	7/8		6.75
77-486	3/4" x 3/4" x 1/2"	0.15	3/8	1/2		1.97
77-488	3/4" x 1/2" x 3/4"	0.19	3/8	1/4		2.36
77-489	3/4"x1/2"x1/2"	0.15	3/8	1/2	1-3/8	8.72
77-490	1"	0.35	5/8	5/8		6.22
77-492	1"x1"x 1-1/4"	0.64	1-1/8	1		10.50
77-493	1"x1"x3/4"	0.29	1/2	5/8		6.22
77-496	1"x1"x1/2"	0.24	3/8	5/8		6.22
77-498	1"x3/4"x1"	0.38	3/4	5/8		7.40
77-499	1"x3/4"x3/4"	0.31	1/2	5/8	1-5/8	7.40
77-500	1"x3/4"x1/2"	0.27	1/2	3/4		7.40
77-501	1"x1/2"x1"	0.34	3/4	5/8		7.40
77-502	1"x1/2"x3/4"	0.34	3/8	3/4		7.40
77-504	1-1/4"	0.58	3/4	5/8		9.40
77-506	1 -1/4" x1 -1/4" x 1-1/2"	0.79	1-1/4	1		14.29
77-507	1-1/4"x1-1/4"x1"	0.47	5/8	3/4		9.15
77-508	1-1/4" x 1-1/4" x 3/4"	0.39	3/8	3/4		9.15
77-509	1-1/4"x1-1/4"x1/2"	0.33	3/8	3/4		9.15
77-510	1-1/4" x 1"x 1-1/4"	-	3/4	3/4		9.11
77-511	1-1/4" x 1"x1"	0.5	5/8	7/8		11.75
77-514	1 -1/4" x 3/4" x 1-1/4"	0.63	3/4	7/8		8.90
77-516	1-1/4"x3/4"x3/4"	-	1/2	7/8		11.75
77-518	1 -1/4"x 1/2" x 1-1/4"	-	3/4	7/8		12.00
77-519	1-1/2"	-	1	1		13.08
77-521	1-1/2"x1-1/2"x 1-1/4"	-	3/4	1		9.72
77-522	1-1/2" x 1-1/2" x1"	-				9.72
77-523	1 -1/2" x 1-1/2" x 3/4"	0.51	3/4	1		9.72
77-524	1 -1/2" x 1 -1/2" x 1/2"	0.46	3/8	1		9.72
77-543	2"	1.35	1-1/8	1-1/4		20.36
77-545	2" x 2" x 1-1/2"	1.17	7/8	1-1/4		11.36
77-546	2" x 2" x 1-1/4"	1.01	7/8	1-3/8		15.36
77-547	2"x2"x1"	0.99	7/8	1-1/4		15.36
77-548	2" x 2" x 3/4"	0.9	5/8	1-1/4		15.36
77-549	2"x2"x1/2"	0.77	5/8	1-1/4		15.36
77-554	2" x 1 -1/2" x 3/4"	1.4	5/8	1-1/4		20.04
77-556	2" x 1-1/4" x 1-1/4"	1.14	7/8	1-3/8		20.04
77-559	2"x1"x2"	1.34	1-1/8	1-1/4		20.04
77-560	2"x1"x1"	0.98	1/2	1-1/4		20.04
77-563	2-1/2"	2.21	1-1/2	1-5/8		41.08
77-585	3"x 3" x 2"	2.53	1-1/8	1-3/4		39.93
77-587	3" x 3" x 1-1/4"	2.18	3/4	1-7/8		39.93
77-588	3"x3"x1"	2.14	5/8	1-3/4		39.93

Machined Schedule 80 PVC nipples comply fully with ASTM D2464, threads conform to ASTM F1498, and the pipe is extruded from PVC 1120-1220 meeting ASTM D1784 and meets ASTM D1785, products standard 21-70



1/2" DIAMETER

Part #	Length	List Price
55-060	close(1-1/8)	0.35
55-061	1-1/2"	0.35
55-062	2"	0.39
55-063	2-1/2"	0.39
55-064	3"	0.42
55-065	3-1/2"	0.44
55-066	4"	0.47
55-067	4-1/2"	0.55
55-068	5"	0.59
55-069	5-1/2"	0.62
55-070	6"	0.64
55-072	8"	0.70
55-076	12"	0.97
55-241	24"	1.67
55-243	36"	2.90

3/4" DIAMETER

Part #	Length	List Price
55-080	close(1-3/8)	0.33
55-081	1-1/2"	0.41
55-082	2"	0.41
55-083	2-1/2"	0.41
55-084	3"	0.41
55-085	3-1/2"	0.49
55-086	4"	0.49
55-087	4-1/2"	0.65
55-088	5"	0.60
55-089	5-1/2"	0.66
55-090	6"	0.70
55-253	36"	3.67

1" DIAMETER

Part #	Length	List Price
55-100	close(1-1/2)	0.53
55-101	2"	0.55
55-102	2-1/2"	0.65
55-103	3"	0.65
55-104	3-1/2"	0.66
55-105	4"	0.73
55-106	4-1/2"	0.83
55-107	5"	0.83
55-108	5-1/2"	0.92
55-109	6"	1.00
55-111	8"	1.23
55-115	12"	1.67

1-1/4" DIAMETER

Part #	Length	List Price
55-120	close(1-5/8)	0.80
55-121	2"	0.84
55-122	2-1/2"	0.93
55-123	3"	1.04
55-124	3-1/2"	1.16
55-125	4"	1.20
55-126	4-1/2"	1.33
55-127	5"	1.43
55-128	5-1/2"	1.50
55-129	6"	1.60

1-1/2" DIAMETER

Part #	Length	List Price
55-140	close(1-3/4)	1.00
55-141	2"	1.04
55-142	2-1/2"	1.21
55-143	3"	1.27
55-144	3/1/102	1.40
55-145	4"	1.47
55-146	4-1/2"	1.56
55-147	5"	1.67
55-148	5-1/2"	1.77
55-149	6"	1.90

2" DIAMETER

Part #	Length	List Price
55-160	close (2)	1.33
55-161	2-1/2"	1.47
55-162	3"	1.56
55-163	3-1/2"	1.73
55-164	4"	1.83
55-165	4-1/2"	2.03
55-166	5"	2.17
55-167	5-1/2"	2.27
55-168	6"	2.40
55-174	12"	4.00

More sizes available...just ask!

Perseverance

Supposing you had tried and failed again and again. You may have a fresh start at any moment you choose, for this thing that we call "failure" is not the falling down, but the staying down.

-Mary Pickford

Nipples & Fittings

Plastic Fittings

Plastic Pipe

Plastic Pipe

AVAILABLE IN THREE TYPES OF PLASTIC

Add () letter for type of plastic required

(W) White Nylon- made from virgin grade formulated to resist physical stress and abrasion. This material meets F.D.A. requirements of Code of Federal Regulation part 177.1500 and is therefore suitable for food contact surfaces.

Temperature Range: -40°F to

200° F

Working Pressure: 125 PSI maximum.

(B) Black Polyethylene- made from a high molecular weight linear polyethylene formulated for chemical compatibility and high impact resistance at lower temperatures. Polyethylene is NSF approved for potable water.

Temperature Range: -65°F to

190°F

Working Pressure: 125 PSI maximum.

(P) Polypropylene- made from the finest polypropylene resins. Polypropylene is used for its resistance to a wide range of chemicals. Working pressures decrease as temperatures increase.

•NSF-approved materials

•FDA-approved materials

HEX HEAD PLUGS



Part #	Size	List Prices		
		B	P	W
28-601	1/8	0.33	0.41	0.41
28-602	1/4	0.33	0.42	0.41
28-603	3/8	0.35	0.50	0.41
28-604B	1/2	0.41		0.98
28-605B	3/4	0.77		0.56
28-606W	1			0.90
28-607W	1-1/4			1.28
28-608W	1-1/2			1.85
28-609W	2			2.75

PIPE CAP



Part #	Size	List Prices	
		B	W
28-640W	1/4		0.43
28-641W	3/8		0.52
28-642W	1/2		0.52
28-643W	3/4		0.55

"Go often to the house of thy friend, for weeds choke the unused path."
- Ralph Waldo Emerson

HEX NIPPLES



Part #	Size	List Prices		
		B	P	W
28-611	1/8	0.33		0.42
28-612	1/4	0.36	0.45	0.45
28-613	3/8	0.36	0.48	0.45
28-614	1/2	0.42	0.53	0.53
28-615	3/4		0.78	0.66
28-616W	1			1.05
28-617W	1 1/4			1.69
28-618W	1 1/2			2.76

REDUCER NIPPLES



Part #	Size	List Prices		
		B	P	W
28-620W	1/4 x 1/8			0.44
28-621W	3/8 x 1/8			0.47
28-622W	3/8 x 1/4			0.48
28-623	1/2 x 1/4	0.44		0.55
28-624	1/2 x 3/8	0.45		0.57
28-628	3/4 x 3/8	0.47		0.57
28-625	3/4 x 1/2	0.45		0.60
28-629P	1 x 3/4		3.21	
28-631P	1-1/4 x 3/4		3.69	
28-634P	2 x 1-1/4		4.48	
28-635P	3 x 2		16.11	

More shapes and sizes available

HEX BUSHINGS



Part #	Size	List Prices	
		P	W
28-659	1/4 x 1/8	0.58	0.89
28-660	3/8 x 1/8	1.22	0.92
28-661	3/8 x 1/4	1.13	0.89
28-663	1/2 x 1/4	1.26	0.95
28-664	1/2 x 3/8	0.85	0.96
28-665W	3/4 x 1/8		1.18
28-666	3/4 x 1/4	1.34	1.00
28-667W	3/4 x 3/8		1.33
28-668	3/4 x 1/2	1.01	1.08
28-671	1 x 1/2	1.39	1.46
28-672	1 x 3/4	1.59	1.19
28-674W	1-1/4 x 3/4		1.82
28-675W	1-1/4 x 1		1.88
28-678	1-1/2 x 3/4	2.51	2.48
28-679W	1-1/2 x 1		2.75
28-680	1-1/2 x 1-1/4	1.93	2.09
28-682W	2 x 3/4		6.72
28-683W	2 x 1		3.87
28-685W	2 x 1-1/2		2.70

ALL HOSE BARB "Y"



Part #	Size	List Prices	
		P	W
33-300P	1/4	3.00	
33-301	3/8	1.35	1.35
33-302P	1/2	3.15	

Plastic Fittings

Plastic Pipe

Plastic Hose

ELBOW



Part #	Size	List Prices	
		P	W
28-701W	1/4		2.62
28-702	3/8	4.88	
28-703W	1/2		3.20
28-704	3/4	3.38	3.23
28-705W	1		4.56
28-706W	1-1/4		6.87

STREET ELBOW



Part #	Size	List Prices	
		P	W
28-720W	1/4		2.76
28-721W	3/8		3.33
28-723	1/2	2.50	2.37
28-724W	3/4		3.33
28-725W	1		7.11
28-726W	1-1/4		8.75

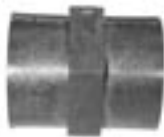
TEE



Part #	Size	List Prices	
		P	W
28-741	1/4	3.15	3.24
28-742P	3/8	5.60	
28-743	1/2	2.94	3.26
28-744	3/4	3.75	4.28
28-745W	1		8.43
28-746W	1-1/4		10.43
28-747W	1-1/2		11.87

More shapes and sizes available

COUPLING



Part #	Size	List Prices	
		P	W
28-760	1/8	2.63	2.63
28-761	1/4	2.63	2.63
28-762	3/8	2.63	2.63
28-763	1/2	2.63	2.63
28-764	3/4	2.70	2.70
28-765W	1		3.22
28-767W	1-1/2		4.73
28-768W	2		5.86

HOSE BARB ADAPTERS

FEMALE ADAPTERS



Hose ID x FIP

Part #	Size	List Prices		
		B	P	W
33-053	1/4 x 1/4	0.50		0.65
33-058	3/8 x 1/4	0.50		0.81
33-059W	3/8 x 3/8			2.17
33-060W	3/8 x 1/2			2.25
33-062P	1/2 x 3/8		2.15	
33-061W	1/2 x 1/2			0.96
33-063W	5/8 x 3/4			1.21
33-064W	3/4 x 1/2			2.15
33-065W	3/4 x 3/4			1.17

MALE ADAPTERS



Hose ID x MIP

Part #	Size	List Prices		
		B	P	W
33-002	3/16 x 1/8	0.32		0.42
33-003W	3/16 x 1/4			0.44
33-004	1/4 x 1/8	0.32		0.42
33-005	1/4 x 1/4	0.35		0.36
33-006	1/4 x 3/8	0.36		0.47
33-007	1/4 x 1/2	0.44		0.53
33-380W	1/4 x 3/4			0.61
33-008	5/16 x 1/8	0.32		0.42
33-009	5/16 x 1/4	0.35		0.44
33-010W	5/16 x 3/8			0.41
33-011W	3/8 X 1/8			0.42
33-012	3/8 x 1/4	0.36	0.44	0.44
33-013	3/8 x 3/8	0.38		0.47
33-014	3/8 x 1/2	0.44	0.54	0.56
33-026	3/8 x 3/4	0.50		0.64
33-015	1/2 x 1/4	0.36	0.45	0.45
33-016	1/2 x 3/8	0.38	0.50	0.48
33-017	1/2 x 1/2	0.45	0.50	0.55
33-018	1/2 x 3/4	0.53	0.64	0.65
33-019	5/8 x 3/8	0.38		0.48
33-020	5/8 x 1/2	0.45	0.53	0.56
33-021	5/8 x 3/4	0.50		0.66
33-022	3/4 x 1/2	0.45	0.59	0.72
33-023	3/4 x 3/4	0.51	0.65	0.67
33-000W	3/4 x 1			0.90
33-024	1 x 3/4	0.99	0.77	0.86
33-025	1 x 1	1.10	0.85	1.01
33-029W	1 x 1-1/4			1.76
33-028	1-1/4 x 1	1.38		1.38
33-030W	1-1/4 x 1-1/4			1.90
33-033	1-1/2 x 1-1/2	1.98		2.21
33-035W	2 x 2			3.00

Plastic Fittings

Plastic Hose

Plastic Hose

HOSE BARB ADAPTERS -CONTINUED-

ELBOWS



Hose ID x Male Pipe

Part #	Size	List Prices		
		B	P	W
33-308B	3/16 x 1/8	0.61		
33-381W	3/16 x 1/4			0.75
33-038	1/4 x 1/8	0.63		0.64
33-039	1/4 x 1/4	0.64		0.61
33-309W	1/4 x 3/8			0.74
33-040	5/16 x 1/4	0.64		0.85
33-310	5/16 x 3/8	0.66		0.86
33-046	3/8 x 1/8	0.64		0.82
33-041	3/8 x 1/4	0.66		0.70
33-042	3/8 x 3/8	0.67		0.78
33-047	3/8 x 1/2	0.89		0.82
33-384	3/8 x 3/4	1.10		0.95
33-048	1/2 x 1/4		0.83	0.79
33-043	1/2 x 3/8	0.67		0.78
33-311	1/2 x 1/2	0.64	0.87	0.93
33-385	1/2 x 3/4	1.14	1.08	0.99
33-044W	5/8 x 3/8			0.82
33-045	5/8 x 1/2	1.05		1.03
33-312	5/8 x 3/4	1.28		1.18
33-313	3/4 x 1/2	1.18	0.99	1.07
33-314	3/4 x 3/4	1.30	1.15	1.13
33-315W	3/4 x 1			1.25
33-386W	1x3/4			1.40
33-316	1 x 1	1.67	1.35	1.37
33-460W	1 x 1-1/4			2.29
33-461	1-1/4 x 1-1/4		2.32	2.43
33-463	1-1/2 x 1-1/2		3.16	2.72
33-464W	2 x 2			4.02

HOSE BARB X FEMALE ELBOW



Hose ID x Male Pipe

Part #	Size	List Prices	
		B	W
33-402	1/2 x 3/8	1.11	2.41
33-403W	1/2 x 3/4		1.60
33-471W	3/4 x 3/4		2.52

UNION ELBOWS



Part #	Size	List Prices		
		B	P	W
33-390	1/4	0.60		0.72
33-391	3/8	0.63		0.63
33-394	1/2	0.64		0.74
33-395	5/8	0.67	0.72	0.86
33-396	3/4	0.95	0.95	0.95
33-397W	1			1.65
33-398W	1-1/4			3.83
33-399W	1-1/2			6.26
33-389W	2			7.63

REDUCING UNION ELBOWS

Part #	Size	List
		W
33-392W	1/2 X 1/4	0.93

UNIONS/CONNECTORS/ SPLICERS



Part #	Size	List Prices		
		B	P	W
33-091	1/8	0.31		0.38
33-092	1/5	0.30		0.40
33-093	1/4	0.32		0.41
33-094W	5/16			0.45
33-095	3/8	0.33	0.45	0.42
33-096	1/2	0.33	0.48	0.45
33-097	5/8	0.29		0.48
33-098	3/4	0.84	0.68	0.77
33-099	1		0.90	0.98
33-480W	1-1/4			1.80
33-481W	1-1/2			1.94
33-482W	2			5.32

REDUCER CONNECTORS

Part #	Size	List Prices	
		B	W
33-406	3/8 x 1/4	0.32	0.42
33-407W	1/2 x 1/4		0.44
33-408	1/2 x 3/8	0.35	0.45
33-409W	5/8 x 3/8		0.47
33-410	5/8 x 1/2	0.36	0.48

TEES BARBED ON ALL SIDES



Part #	Size	List Prices		
		B	P	W
33-415	1/8	0.61		0.79
33-418*	3/16	0.60		1.45
33-420	3/16	0.62		0.80
33-422	1/4	0.63		0.80
33-426	1/3	1.04		0.85
33-429	3/8	0.68	0.99	0.85
33-433	1/2	0.70		0.93
33-436	5/8	0.79		0.96
33-437	3/4	0.84		1.08
33-438	1	0.99		1.30
33-439W	1-1/4			2.45
33-440	1-1/2		2.33	3.06
33-441W	2			8.86

* single barb

REDUCING TEES

Part #	Size 3 x 1 x 2	List	
		B	W
33-416	1/8 x 5/32 x 5/32		0.81
33-417	5/32 x 5/32 x 5/32		1.35
33-423B	1/4 x 3/8 x 3/8	0.63	
33-424	1/4 x 1/2 x 1/2	0.64	0.92
33-430	3/8 x 1/2 x 1/2	0.73	0.86
33-431W	3/8 x 5/8 x 5/8		0.92
33-432	1/2 x 3/8 x 3/8	0.73	0.93
33-435	1/2 x 3/4 x 3/4	0.95	1.06

TEES



1 & 2 x 3

Part #	Size	List Prices	
		B	W
33-448	1/4 x 1/4	0.66	0.83
33-450W	3/8 x 1/4		0.90
33-451W	3/8 x 3/8		0.92
33-453W	1/2 x 1/4		1.54
33-454W	1/2 x 3/8		0.93
33-456W	3/4 x 3/4		1.21

More sizes available

Nipples & Fittings

PLASTIC GARDEN HOSE FITTINGS
"FITTINGS WITH GARDEN HOSE THREAD"

GARDEN HOSE CAP



• White Nylon

Part #	Size	List
30-103P	3/4	0.64

GARDEN HOSE NUT



• White Nylon

Part #	Size	List
31-022	3/4	0.53

GARDEN HOSE ADAPTER INSERTS



• White Nylon

Part #	Size	List
31-034	3/4	0.39

GARDEN HOSE THREAD ADAPTERS



• White Nylon

Part #	Size	List
31-040	1/2	0.80
31-041	5/8	0.74

More sizes available

MALE GARDEN HOSE X FEMALE PIPE



• White Nylon

Part #	Size	List
31-068	MGH x 1/2 FIP	1.72

FEMALE GARDEN HOSE X MALE PIPE



• White Nylon

Part #	Size	List
31-093	FGH x 3/4 MPT	1.75

FEMALE GARDEN HOSE X FEMALE PIPE



• White Nylon

Part #	Size	List
31-096	FGH x 1/2 FIP	1.75

ADAPTERS GARDEN TO PIPE THREAD



• White Nylon

Part #	Size	List
31-058	GHT x 1/2	0.67
31-063	GHT x 3/4	0.72

PLASTIC COMPRESSION FITTINGS

• Standard nut and sleeve provided

Corrosion resistant thermoresins designed to resist vibration, provide good electrical insulation, low flow resistance, and resistance to scale buildup.

Add letter to the end of part no. to denote the type you prefer.

- N = Nylon
- P = Polypropylene
- C = Celcon

Standard nut and sleeves will be provided (sleeve is integral part of nut). Other sizes available upon request.

FERRULE NUTS



Part #	Size	List Prices	
		P	N
17-035	1/4	0.57	0.58
17-036N	5/16		0.78
17-037	3/8	0.86	0.86
17-039N	1/2		1.20
NUT WITH PLASTIC GRIPPER FERRULE			
17-013N	1/4		1.20
17-015	3/8	1.66	1.27
17-016N	1/2		1.40
NUT WITH STAINLESS STEEL GRIPPER FERRULE			
17-024	1/2	1.77	1.59

INSERTS



Part #	Size	List Prices	
		P	N
17-360	1/4	0.25	0.27
17-362	3/8	0.40	0.40
17-363	1/2	0.51	0.51

**PLASTIC COMPRESSION
-CONTINUED-**

**UNION & REDUCING UNION
CONNECTORS**



Part #	Size	List Prices	
		P	N
17-064	1/4	2.21	1.98
17-065N	5/16	2.21	2.32
17-078N	5/16 x 1/4		2.12
17-066	3/8	3.84	2.81
17-079	3/8 x 1/4	2.57	4.06
17-068	1/2	3.65	5.05
17-081	1/2 x 3/8	3.24	3.24

BULKHEAD UNIONS



Part #	Size	List
17-088N	1/4	3.24
17-090N	3/8	4.12
17-091N	1/2	5.04

UNION TEES



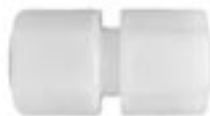
Part #	Size	List Prices	
		P	N
17-101N	1/8		3.02
17-103	1/4	5.14	3.43
17-105	3/8	6.55	5.25
17-106	1/2	6.33	5.72

UNION ELBOWS



Part #	Size	List Prices	
		P	N
17-124	1/4	2.75	2.75
17-126	3/8	3.74	3.74
17-127	1/2	4.92	4.62

FEMALE CONNECTORS



Part #	Tube x Pipe	List Prices	
		P	N
17-145	1/4 x 1/8	1.80	1.80
17-146N	1/4 x 1/4		2.07
17-153	3/8 x 1/4	2.27	2.25
17-154	3/8 x 3/8	2.35	2.43
17-155N	3/8 x 1/2		2.70
17-158	1/2 x 3/8	2.70	2.70
17-159P	1/2 x 1/2	2.89	

MALE CONNECTORS



Part #	C	Tube x Pipe	P	N
17-176N		1/8 x 1/8		1.17
17-179	1.11	1/4 x 1/8	1.47	1.47
17-180		1/4 x 1/4	1.62	1.62
17-181		1/4 x 3/8	1.68	1.68
17-183		5/16 x 1/8	1.58	1.58
17-184		5/16 x 1/4	2.11	1.58
17-187		3/8 x 1/8	1.73	1.73
17-188		3/8 x 1/4	1.95	1.95
17-189		3/8 x 3/8	1.98	1.98
17-190		3/8 x 1/2	2.67	2.67
17-193N		1/2 x 1/4		3.06
17-194		1/2 x 3/8	3.54	2.70
17-195		1/2 x 1/2	3.54	2.85

MALE ELBOWS



Part #	Tube x Pipe	List Prices	
		P	N
17-224	1/4 x 1/8	2.07	2.07
17-225	1/4 x 1/4	2.27	2.27
17-226N	1/4 x 3/8		2.56
17-229	5/16 x 1/4	2.39	2.39
17-233	3/8 x 1/4	2.93	3.42
17-234	3/8 x 3/8	3.06	5.04
17-237	1/2 x 3/8	3.54	3.21
17-238	1/2 x 1/2	3.57	3.21

FEMALE ELBOWS



Part #	Tube x Pipe	List Prices	
		P	N
17-254	1/4 x 1/4	3.24	3.24
17-258	3/8 x 1/4	3.33	3.63
17-259	3/8 x 3/8	3.78	3.78
17-262P	1/2 x 3/8	4.40	
17-263	1/2 x 1/2	5.13	5.13

MALE RUN TEES



Part #	Tube x Pipe	List
		P
17-279P	3/8 x 1/4	4.05
17-282P	1/2 x 1/2	5.40

MALE BRANCH TEES



Part #	Tube x Pipe	List Prices	
		P	N
17-291	1/4 x 1/8	2.79	2.79
17-292	1/4 x 1/4	3.42	3.42
17-296	3/8 x 1/4	4.05	4.05
17-297P	3/8 x 3/8	4.14	
17-299P	1/2 x 3/8	5.31	

Love begins with a smile,
grows with a kiss and
ends with a tear. The
brightest future will
always be based on a
forgotten past, you can't
go on well in life until
you let go of your past
failures and heartaches.

PLASTIC PUSH-IN TUBE FITTINGS

Fitting Working Specifications

Temperature

Air: -140F to + 167F (-25°C to 75°C)
 Water: 33°F to 140°F (1°C to 60°C)

Pressure

Air: 0 - 150 lbs. psi.
 Liquid: 0 - 150 lbs. psi.
 Suitable for Vacuum

Material Specifications

- Bodies:** Food Grade, Acetal Copolymer or Polypropylene
O'Rings: Food Grade Nitrile Rubber or EPDM
Collet: Food Grade Acetal Copolymer, stainless steel teeth



Fitting Tube Types

Plastic Tube:

Polyethylene, nylon, polyurethane (for soft tubing or thin wall tube, tube supports are recommended).

Braided Tube:

For Braided Tube, the use of Tube to Hose Stems and Elbows is required. To retain braided tube on barbs, the use of clamps is also recommended.

Metal Tube (soft):

Brass, Copper and Mild Steel; Ends must be de-burred, no sharp edges.

Metal Tube (hard):

Supersal fittings are recommended for stainless steel and other hard metal tubes; Ends must be deburred, no sharp edges.

Also available in metric sizes. Call order desk for details

MALE CONNECTOR



Part #	Tube OD	Thread NPTF	List
20-050P	5/32	1/8	1.85
20-046P	5/32	1/4	1.89
20-052P	3/16	1/8	1.99
20-054P	1/4	1/8	1.77
20-055P	1/4	1/4	2.17
20-531P	5/16	1/4	2.99
20-056P	1/4	3/8	2.96
20-532P	5/16	3/8	3.77
20-057P	3/8	1/8	4.50
20-058P	3/8	1/4	3.25
20-059P	3/8	3/8	3.60
20-062P	3/8	1/2	6.03
20-061P	1/2	3/8	5.04
20-063P	1/2	1/2	5.44

More sizes available upon request

UNION CONNECTOR



Part #	Tube OD2	List
20-018P	5/32	2.60
20-702P	3/16	2.52
20-019P	1/4	2.94
20-703P	5/16	2.99
20-020P	3/8	3.88
20-021P	1/2	4.62

CROSS



Part #	Tube OD	List
20-143P	3/8	10.79

REDUCING UNION



Part #	Tube OD	Tube OD	List
20-750P	1/4	3/16	5.10
20-751P	5/16	5/32	5.04
20-752P	5/16	3/16	5.11
20-753P	5/16	1/4	5.10
20-754P	3/8	3/16	6.25
20-755P	3/8	1/4	4.02
20-756P	3/8	5/16	6.42
20-757P	1/2	5/16	8.25
20-758P	1/2	3/8	5.75

UNION ELBOW



Part #	Tube OD	List Price
20-151P	5/32	2.61
20-704P	3/16	3.26
20-152P	1/4	3.10
20-155P	5/16	4.60
20-153P	3/8	4.66
20-154P	1/2	5.54

REDUCING ELBOW



Part #	Tube OD	Tube OD	List
20-730P	5/16	5/32	6.42
20-731P	5/16	3/16	19.04
20-732P	5/16	1/4	4.50
20-733P	3/8	3/16	8.53
20-734P	3/8	1/4	5.31
20-735P	3/8	5/16	5.31
20-736P	1/2	3/8	6.30

FIXED ELBOW



Part #	Tube OD	Thread NPTF	List
20-068P	1/4	1/8	2.70
20-069P	1/4	1/4	3.35
20-070P	1/4	3/8	3.70
20-072P	3/8	1/4	5.04
20-073P	3/8	3/8	5.27

PLUG-IN ELBOW

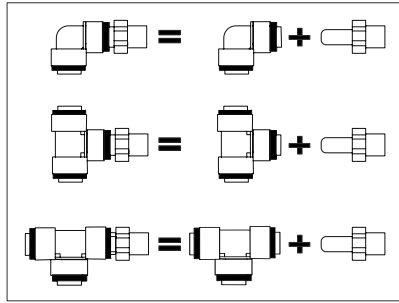


Part #	Stem OD	Tube OD	List
20-740P	5/32	5/32	3.20
20-741P	3/16	3/16	3.20
20-742P	1/4	1/4	3.99
20-743P	5/16	5/16	4.05
20-744P	3/8	3/16	4.30
20-745P	3/8	1/4	5.36
20-746P	3/8	5/16	4.30
20-747P	3/8	3/8	6.78
20-748P	1/2	1/2	5.85

More sizes available upon request

Adaptability

Products can be coupled together to form new, intergral fittings.



Use to get reducing swivel sizes you need!

STEM ADAPTER



Part #	Stem OD	Thread NPTF	List
20-522P	5/32	1/8	0.95
20-523P	5/32	1/4	0.95
20-700P	3/16	1/8	0.95
20-524P	1/4	1/8	1.22
20-526P	5/16	1/8	0.95
20-525P	1/4	1/4	1.22
20-527P	5/16	1/4	0.95
20-701P	5/16	3/8	1.00
20-528P	3/8	1/4	1.16
20-529P	3/8	3/8	1.48
20-530P	1/2	3/8	2.04
20-533P	1/2	1/2	3.25

REDUCER



Part #	Stem OD	Tube OD	List
20-759P	3/16	5/32	2.55
20-760P	5/16	3/16	2.78
20-761P	5/16	1/4	3.00
20-762P	3/8	3/16	3.45
20-512P	3/8	1/4	3.99
20-763P	3/8	5/16	3.55
20-764P	1/2	5/16	4.20
20-514P	1/2	3/8	7.74

UNION TEE



Part #	Tube OD	List Price
20-026P	5/32	4.50
20-027P	3/16	6.17
20-028P	1/4	4.29
20-031P	5/16	4.29
20-029P	3/8	5.28
20-030P	1/2	6.51

REDUCING BRANCH TEE



Part #	Tube OD Ends	Tube OD Branch	List
20-724P	1/2	3/8	7.11
20-725P	3/8	1/4	8.08

BULKHEAD UNION



Part #	Tube OD	List Price
20-125P	5/32	5.98
20-126P	3/16	6.47
20-127P	1/4	4.91
20-123P	5/16	8.58
20-128P	3/8	6.39
20-129P	1/2	8.05

FEMALE CONNECTOR



Part #	Tube OD	Thread NPTF	List
20-993P	1/4	1/8	5.09
20-035P	1/4	1/4	4.41
20-944P	3/8	1/8	6.02
20-036P	3/8	1/4	5.06

2-WAY DIVIDER



Part #	Tube OD	List Price
20-776P	5/16	6.91
20-777P	3/8	5.32

TUBE TO HOSE STEM



Part #	Stem	Hose	List
20-853P	1/4	3/16	1.90
20-854P	1/4	1/4	2.10
20-855P	5/16	5/16	2.25
20-856P	1/4	5/16	1.80
20-857P	5/16	3/16	2.00
20-858P	5/16	1/4	2.25
20-859P	5/16	3/8	2.85
20-860P	3/8	1/4	2.60
20-861P	3/8	5/16	2.85
20-862P	3/8	3/8	2.90
20-863P	3/8	1/2	3.42
20-864P	1/2	3/8	3.50
20-865P	1/2	1/2	4.33

PLUG



Part #	Stem OD	List Price
20-876P	5/32	0.70
20-877P	3/16	0.73
20-878P	1/4	0.94
20-879P	5/16	1.20
20-880P	3/8	1.50
20-881P	1/2	1.99

TUBE SUPPORT



Part #	Tube OD	Tube ID	List
20-836P	5/16	1/4	0.40
20-837P	3/8	5/16	0.40
20-838P	1/2	3/8	0.40

Polypropylene push-in shut off valves for portable water

Technical Specifications

- Working Pressure: 0 to 150 psi (0 to 10 bar)
- Working Temp. (water): 33° F to 150° F (+1°C to 65°C)

Materials

- Body
- Collet
- Food grade Polypropylene
- Food grade Polypropylene with stainless steel teeth
- O'Ring
- EPDM

Tube Tolerances

- Shut-off Valves are intended for use with potable water.
- The Valves are not for use with compressed air, explosive gases, petroleum spirits and other fuels or for heating systems.

PL X PL



Part #	Size	List
20-900P	1/4	8.00
20-901P	3/8	8.33

CHECK VALVE



Part #	Tube OD	List
20-779P	3/8	16.97

***** Geriatric Golfing *****

"How was your golf game, dear?" asked Jack's wife Tracy.

"Well, I was hitting pretty well, but my eyesight's gotten so bad, I couldn't see where the ball went."

"You're seventy-five years old, Jack!" Admonished his wife. "Why don't you take your brother Scott along?"

"But he's eighty-five and doesn't even play golf anymore," protested Jack.

"Yes but he's got perfect eyesight and can watch your ball for you," Tracy pointed out.

The next day Jack teed off with Scott looking on. Jack swung and the ball disappeared down the middle of the fairway. "Did you see where it went?" asked Jack.

"Yup," Scott answered.

"Well, where is it?" yelled Jack, peering off into the distance.

"I forgot"

Hose Clamps

1/2" BAND CLAMPS



Applications: A general purpose clamp for automobiles, plumbing, home and garden general clamping applications, with anti-corrosive properties varying with the number of components made from stainless steel.



- 600 Series**
- 5/16" Hex Slotted Carbon Steel Screw
 - 1/2" Wide 201 Stainless Steel Band
 - Carbon Steel Housing

- 611 Series**
- 5/16" Hex Slotted Carbon Steel Screw
 - 1/2" Wide 201 Stainless Steel Band
 - 301 Stainless Steel Housing

#	DIA. RANGE		PART NUMBER	LIST PRICE EACH	PART NUMBER	LIST PRICE EACH	MINIMUM BOX QUANTITY
	MIN.	MAX.					
6	3/8"	7/8"	600-006	.73	611-006	.77	100
8	7/16"	1"	600-008	.73	611-008	.77	100
10	9/16"	1-1/16"	600-010	.73	611-010	.77	100
12	9/16"	1-1/4"	600-012	.74	611-012	.78	100
16	11/16"	1-1/2"	600-016	.74	611-016	.78	100
20	3/4"	1-3/4"	600-020	.77	611-020	.79	100
24	1-1/16"	2"	600-024	.77	611-024	.79	100
28	1-5/16"	2-1/4"	600-028	.78	611-028	.81	100
32	1-9/16"	2-1/2"	600-032	.78	611-032	.81	100
36	1-13/16"	2-3/4"	600-036	.78	611-036	.82	100
40	2-1/16"	3"	600-040	.90	611-040	.93	100
44	2-5/16"	3-1/4"	600-044	.99	611-044	1.05	100
48	2-9/16"	3-1/2"	600-048	.99	611-048	1.05	100
52	2-13/16"	3-3/4"	600-052	1.08	611-052	1.16	100
56	3-1/16"	4"	600-056	1.08	611-056	1.16	100
60	3-5/16"	4-1/4"	600-060	1.11	611-060	1.20	100
64	2-1/2"	4-1/2"	600-064	1.11	611-064	1.20	100
72	3"	5"	600-072	1.19	611-072	1.27	100
80	3-1/2"	5-1/2"	600-080	1.23	611-080	1.55	100
88	4"	6"	600-088	1.35	611-088	1.55	100
96	4-1/2"	6-1/2"	600-096	1.47	611-096	1.56	100
104	5"	7"	600-104	1.47	611-104	1.57	100
116	5-3/4"	7-3/4"			611-116	1.61	100
128	6-1/2"	8-1/2"			611-128	1.75	100
152	2"	10"			611-152	2.00	100
164	1-3/4"	10-3/4"			611-164	2.00	100
176	9-1/4"	11-1/4"			611-176	2.10	100
188	2-1/16"	12-1/4"			611-188	2.10	100
200	11"	13"			611-200	2.10	100
212	11-3/4"	13-3/4"			611-212	2.30	100
224	12-1/2"	14-1/2"			611-224	2.36	100
248	1-3/4"	16"			611-248	2.45	100
270	15-3/8"	17-3/8"			611-270	2.52	100
312	18"	20"			611-312	2.57	100
332	19-1/8"	21-1/4"			611-332	2.72	100
390	22-7/8"	24-7/8"			611-390	2.83	100

Clamps

1/2" BAND CLAMPS

•Use for marine, underground and other high corrosive application

620 Series

- 5/16" Hex Slotted 305 Stainless Steel Screw
- 1/2" Wide 301 Stainless Steel Band
- 301 Stainless Steel Housing



#	DIA. RANGE		PART NUMBER	LIST PRICE EACH	MINIMUM BOX QUANTITY
	MIN.	MAX.			
6	3/8"	7/8"	620-006	.90	100
8	7/16"	1"	620-008	.90	100
10	9/16"	1-1/16"	620-010	.90	100
12	9/16"	1-1/4"	620-012	.91	100
16	11/16"	1-1/2"	620-016	.91	100
20	3/4"	1-3/4"	620-020	.92	100
24	1-1/16"	2"	620-024	.92	100
28	1-5/16"	2-1/4"	620-028	.93	100
32	1-9/16"	2-1/2"	620-032	.93	100
36	1-13/16"	2-3/4"	620-036	.96	100
40	2-1/16"	3"	620-040	1.09	100
44	2-5/16"	3-1/4"	620-044	1.23	100
48	2-9/16"	3-1/2"	620-048	1.23	100
52	2-13/16"	3-3/4"	620-052	1.34	100
56	3-1/16"	4"	620-056	1.34	100
60	3-5/16"	4-1/4"	620-060	1.41	100
64	2-1/2"	4-1/2"	620-064	1.41	100
72	3"	5"	620-072	1.49	100
80	3-1/2"	5-1/2"	620-080	1.56	100
88	4"	6"	620-088	1.69	100
96	4-1/2"	6-1/2"	620-096	1.82	100
104	5"	7"	620-104	1.84	100
116	5-3/4"	7-3/4"	620-116	1.89	100
128	6-1/2"	8-1/2"	620-128	2.04	100
152	2"	10"	620-152	2.24	100
164	1-3/4"	10-3/4"	620-164	2.33	100
176	9-1/4"	11-1/4"	620-176	2.33	100
188	2-1/16"	12-1/4"	620-188	2.46	100
200	11"	13"	620-200	2.56	100
212	11-3/4"	13-3/4"	620-212	2.66	100
224	12-1/2"	14-1/2"	620-224	2.76	100
248	1-3/4"	16"	620-248	2.87	100
270	15-3/8"	17-3/8"	620-270	2.88	100
312	18"	20"	620-312	2.90	100
332	19-1/8"	21-1/4"	620-332	3.18	100
390	22-7/8"	24-7/8"	620-390	3.32	100

Hose Clamps

MINIATURE CLAMPS - 5/16" BAND

Applications: For marine, agricultural, industrial and automotive uses. Corrosion resistance varies with stainless components.

Mechanically interlocked. 3 piece construction for service sealing pressure with out spot welding.

- 300 Series**

 - 1/4" Hex Slotted Carbon Steel Screw
 - 5/16" Wide 301 Stainless Steel Band
 - Carbon Steel Housing



DIA. RANGE		PART NUMBER	LIST PRICE EACH	MINIMUM BOX QUANTITY
MIN.	MAX.			
7/32"	5/8"	300-0004	.47	100
7/16"	11/16"	300-005	.47	100
5/16"	7/8"	300-0006	.47	100
7/16"	1"	300-0008	.50	100
1/2"	1-1/16"	300-010	.50	100
9/16"	1-1/4"	300-012	.52	100
11/16"	1-1/2"	300-016	.82	100
7/8"	1-3/4"	300-0020	.93	100

- 325 Series**

 - 1/4" Hex Slotted Carbon Steel Screw
 - 5/16" Wide 301 Stainless Steel Band
 - 301 Stainless Steel Housing



DIA. RANGE		PART NUMBER	LIST PRICE EACH	MINIMUM BOX QUANTITY
MIN.	MAX.			
7/32"	5/8"	325-004	.51	100
7/16"	11/16"	325-005	.51	100
5/16"	7/8"	325-006	.51	100
7/16"	1"	325-008	.51	100
1/2"	1-1/16"	325-010	.53	100
9/16"	1-1/4"	325-012	.55	100
11/16"	1-1/2"	325-016	.85	100
7/8"	1-3/4"	325-020	1.00	100

- 350 Series**

 - 1/4" Hex Slotted 410 Stainless Steel Screw
 - 5/16" Wide 301 Stainless Steel Band
 - 301 stainless Steel Housing



DIA. RANGE		PART NUMBER	LIST PRICE EACH	MINIMUM BOX QUANTITY
MIN.	MAX.			
7/32"	5/8"	350-004	.60	100
7/16"	11/16"	350-005	.60	100
5/16"	7/8"	350-006	.60	100
7/16"	1"	350-008	.60	100
1/2"	1-1/16"	350-010	.64	100
9/16"	1-1/4"	350-012	.67	100
11/16"	1-1/2"	350-016	1.01	100
7/8"	1-3/4"	350-020	1.05	100

Clamps

Hose Clamps

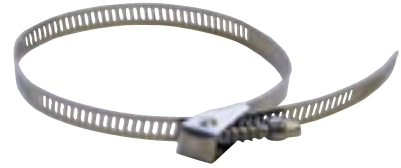
QUICK RELEASE 500/550 SERIES

These clamps feature a unique quick release design between the one piece housing and band allowing for quick and easy installation in restricted or difficult areas.

Applications: Quick release action permits easy installation in applications where clamp must be opened to be applied. Quick release clamps are used extensively in the telecommunications industry on cable enclosures where open air application demands durability.



Open/Close design allows easy installation.



- 500 Series**
- 5/16" Hex Slotted Carbon Steel Screw
 - 1/2" 301 Stainless Steel band
 - 301 Stainless Steel Housing
 - 410 Stainless Steel Bridge

- 550 Series**
- 5/16" Hex Slotted 410 Stainless Steel Screw
 - 1/2" 301 Stainless Steel band
 - 301 Stainless Steel Housing
 - 410 Stainless Steel Bridge

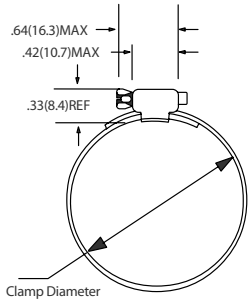
#	DIA. RANGE		PART NUMBER	LIST PRICE EACH	PART NUMBER	LIST PRICE EACH	MINIMUM BOX QUANTITY
	MIN.	MAX.					
12	1/2"	1-1/4"	500-012	.89	550-012	1.18	100
20	3/4"	1-3/4"	500-020	.90	550-020	1.25	100
28	1"	2-1/4"	500-028	.92	550-028	1.34	100
36	1"	2-3/4"	500-036	.93	550-036	1.38	100
48	1-1/2"	3-1/2"	500-048	1.18	550-048	1.64	100
56	1"	4"	500-056	1.34	550-056	1.79	100
72	2"	5"	500-072	1.44	550-072	2.06	100
88	2-1/16"	6"	500-088	1.68	550-088	2.26	100
104	1-3/4"	7"	500-104	1.77	550-104	2.51	100
128	1-3/4"	8-9/16"	500-128	1.99	550-128	2.80	100
152	2"	10"	500-152	2.11	550-152	3.04	100
188	2-1/16"	12-5/16"	500-188	2.28	550-188	3.35	100
216	10-3/16"	14"	500-216	2.53	550-216	3.50	100
248	1-3/4"	16"	500-248	2.66	550-248	3.92	100
280	14-1/4"	18"	500-280	3.16	550-280	4.13	100
312	14"	20"			550-312	4.92	100

Clamps

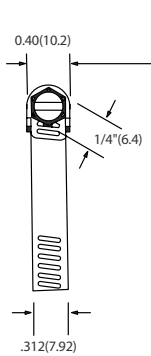
Some things you keep. Like good teeth. Warm coats. Bald husbands. They're good for you, reliable and practical and so sublime that to throw them away would make the garbage man a thief. So you hang on, because something old is sometimes better than something new, and what you know is often better than a stranger. These are my thoughts, they make me sound old, old and tame, and dull at a time when everybody else is risky and racy and flashing all that's new and improved in their lives. New careers, new thighs, new lips, new cars. The world is dizzy with trade-ins. I could keep track, but I don't think I want to. I grew up in the fifties with practical parents - a mother, God bless her, who washed aluminum foil after she cooked in it, then reused it- and still does. A father who is happier getting old shoes fixed than buying new ones. They weren't poor, my parents, they were just satisfied. Their marriage was good, their dreams focused. Their best friends lived barely a wave away. I can see them now, Dad in trousers and tee shirt and Mom in a house dress, lawn mower in one hand, dishtowel in the other. It was a time for fixing things - a curtain rod, the kitchen radio, screen door, the oven door, the hem in a dress. Things you keep. It was a way of life, and sometimes it made me crazy. All that re-fixing, reheating, renewing, I wanted just once to be wasteful. Waste meant affluence. Throwing things away meant there'd always be more. But then my father died, and on that clear autumn night, in the chill of the hospital room, I was struck with the pain of learning that sometimes there isn't any 'more.' Sometimes what you care about most gets all used up and goes away, never to return. So, while you have it, it's best to love it and care for it and fix it when it's broken and heal it when it's sick. That's true for marriage and old cars and children with bad report cards and dogs with bad hips and aging parents. You keep them because they're worth it, because you're worth it. Some things you keep. Like a best friend that moved away or a classmate you grew up with, there's just some things that make life important...people you know are special...and you KEEP them close!

- Author Unknown

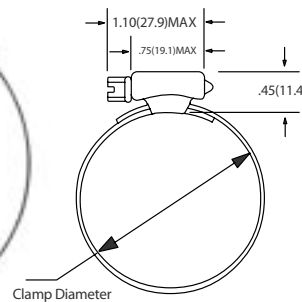
**WORM GEAR HOSE CLAMPS
830 Series**



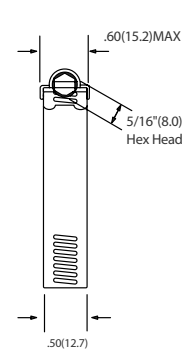
MINI CLAMP
Screw: 1/4" hex-head
Band: 5/16" wide



Interlock Construction
no welds, no bumps, which strengthens under tension to ensure maximum torque application



REGULAR CLAMP
Screw: 5/16" hex-head
Band: 1/2" wide



Clamps

No.	Diameter Range		Min. Pcs.	Use for General Industrial Application			
	Inch	MM		All Galvanized Steel		400 Series Stainless Steel Band, Housing and Screw	
	Min-Max	Min-Max		Part #	List	Part #	List
Mini Clamp with 8 mm wide Band (5/16")							
4	7/32"-5/8"	6-16	100	830-185	.20	830-185S	.43
6	7/16"-3/4"	11-20	100	830-184	.20	830-184S	.43
8	1/2"-7/8"	13-23	100	830-183	.20	830-183S	.45
Regular Clamp with 12.7 mm (1/2") wide Band							
10	9/16"-1 1/16"	14-27	100	830-188	.27	830-188S	.60
12	11/16"-1 1/4"	18-32	100	830-189	.30	830-189S	.60
16	13/16"-1 1/2"	21-38	100	830-190	.30	830-190S	.65
20	13/16"-1 3/4"	21-44	100	830-192	.31	830-192S	.67
24	1 1/16"-2"	27-51	100	830-193	.35	830-193S	.70
28	1 5/16"-2 1/4"	33-57	100	830-194	.35	830-194S	.70
32	1 9/16"-2 1/2"	40-63	100	830-132	.35	830-132S	.70
36	1 13/16"-2 3/4"	46-70	100	830-195	.35	830-195S	.75
40	2 1/16"-3"	52-76	100	830-182	.42	830-182S	.75
44	2 5/16"-3 1/4"	59-82	100	830-196	.42	830-196S	.80
48	2 9/16"-3 3/4"	65-89	100	830-197	.45	830-197S	.88
52	2 3/16"-3 3/4"	72-95	100	830-152	.45	830-152S	.88
56	3 1/16"-4"	78-101	100	830-198	.45	830-198S	.90
60	3 5/16"-4 1/4"	84-108	100	830-060	.50	830-060S	.90
64	3 9/16"-4 1/2"	91-114	100	830-064	.50	830-064S	.98
72	4 1/8"-5"	105-127	100	830-072	.56	830-072S	1.00
80	4 5/8"-5 1/2"	118-140	100	830-080	.60	830-080S	1.02
88	5 1/8"-6"	130-152	100	830-288	.70	830-288S	1.15
96	5 5/8"-6 1/2"	143-165	100	830-096	.70	830-096S	1.25
104	6 1/8"-7"	155-178	100	830-009	.80	830-009S	1.35

T-Bolt Clamps

- All designs meet SAE J1508 specifications.
- .025" Band Thickness
- 3/4" Wide Band
- Band Material: 300 Series Stainless Steel
- Bolt Material: 300 Series Stainless Steel
- Nut Material: 300 Series Stainless Steel
- Nuts are Self-locking
- Torque Rating 75 in/lb



Purpose: To provide a quick, yet effective means of clamping a variety of fittings to a wide range of hose. T-Bolts can be applied with a standard 7/16" socket wrench. They provide 360° sealing surface by using a shoe or formed bridge.

Services: The T-Bolt clamp is a high strength, reliable clamp with numerous applications in both the commercial and industrial markets including hose and ductwork connections for air, oil, water and other types of low pressure fluid lines.

Nominal Size	O.D. Range		Part#	List Price
	From:	To:		
1-1/4	1-5/32"	1-15/32"	840-131	2.66
1-1/2	1-3/8"	1-9/16"	840-150	2.72
1-3/4	1-5/8"	1-13/16"	840-175	2.75
1-7/8	1-3/4"	1-15/16"	840-188	2.80
2	1-7/8"	2-1/16"	840-200	2.87
2-1/4	2-1/8"	2-5/16"	840-225	2.91
2-3/8	2-1/4"	2-7/16"	840-238	2.93
2-1/2	2-3/8"	2-9/16"	840-250	2.96
2-9/16	2-11/32"	2-5/8"	840-256	3.98
2-5/8	2-13/32"	2-11/16"	840-263	3.01
2-3/4	2-17/32"	2-13/16"	840-275	3.03
2-7/8	2-21/32"	2-15/16"	840-288	3.05
3	2-25/32"	3-1/16"	840-300	3.11
3-1/8	2-29/32"	3-3/16"	840-312	3.14
3-1/4	3-1/32"	3-5/16"	840-325	3.20
3-1/2	3-9/32"	3-9/16"	840-350	3.26
3-3/4	3-17/32"	3-13/16"	840-375	3.30
3-53/64	3-19/32"	3-7/8"	840-382	3.35
4	3-25/32"	4-1/16"	840-400	3.41
4-1/4	4-1/32"	4-5/16"	840-425	3.45
4-1/2	4-9/32"	4-9/16"	840-450	3.55
4-3/4	4-17/32"	4-13/16"	840-475	3.61
5	4-25/32"	5-1/16"	840-500	3.69
5-1/4	5-1/32"	5-5/16"	840-525	3.74
5-1/2	5-9/32"	5-9/16"	840-550	3.81
5-3/4	5-17/32"	5-13/16"	840-575	3.87
6	5-25/32"	6-1/16"	840-600	3.94
6-1/4	6-1/32"	6-5/16"	840-625	3.99
6-1/2	6-9/32"	6-9/16"	840-650	4.08
6-3/4	6-17/32"	6-13/16"	840-675	4.13
7	6-25/32"	7-1/16"	840-700	4.26
7-1/2	7-9/32"	7-9/16"	840-750	4.38
8	7-25/32"	8-1/16"	840-800	4.59
8-1/4	8-9/32"	9-9/16"	840-850	4.70
8-7/8	8-21/32"	8-15/16"	840-888	4.73
10-7/8	10-21/32"	10-15/16"	840-1088	5.20
12-7/8	12-15/16"	12-15/16"	840-1288	5.69

Clamps

CARBON STEEL 1-EAR CLAMPS

1-Ear Clamps are intended for low pressures applications such as automotive (not fuel lines), appliances, industrial machinery, underground irrigation systems and beverage dispensing equipment. They are specifically designed for mass production applications where inexpensive clamps are needed.

PRESSURE:

As a guideline, 1-Ear Clamps have held 30 bar - 441 psi. This was done using a static water pressure test.

MATERIAL:

Hot dipped galvanized carbon steel band - G90



100 pc. minimum per clamp

Part#	Ref#	Nominal Size	Inches Close	Inches Open	List Price ea.
1050000	105	3/8"	0.350	0.414	0.27
1050001	113	7/16"	0.381	0.444	0.29
1050002	123	15/32"	0.394	0.486	0.29
1050003	133	1/2"	0.453	0.524	0.29
1050006	140	35/64"	0.472	0.551	0.29
1050007	145	9/16"	0.496	0.571	0.29
1050008	157	5/8"	0.543	0.618	0.29
1050009	170	11/16"	0.549	0.669	0.29
1050010	185	23/32"	0.618	0.728	0.29
1050011	198	3/4"	0.669	0.779	0.29
1050012	210	13/16"	0.716	0.827	0.30
1050013	226	7/8"	0.779	0.890	0.30
1050014	241	15/16"	0.839	0.949	0.32
1050015	256	1"	0.898	1.008	0.32
1050016	271	1 1/16"	0.945	1.067	0.33
1050017	286	1 1/8"	1.004	1.126	0.33
1050018	301	1 3/16"	1.063	1.185	0.35
1050020	331	1 5/16"	1.181	1.303	0.35
1050021	346	1 3/8"	1.240	1.362	0.37
1050023	376	1 15/32"	1.358	1.480	0.39
1050025	396	1 9/16"	1.437	1.559	0.40
1050026	410	1 5/8"	1.492	1.614	0.41
1050027	425	1 11/16"	1.551	1.673	0.42
1050028	440	1 23/32"	1.610	1.732	0.44
1050029	455	1 3/4"	1.669	1.791	0.44
1050030	470	1 16/16"	1.728	1.850	0.45
1050031	485	1 7/8"	1.787	1.909	0.47
1050032	500	1 15/16"	1.846	1.968	0.48
1050033	515	2"	1.905	1.028	0.50

100 pc. minimum per clamp

2-EAR CLAMPS

2-Ear Clamps are especially suited for industrial use and with heavily vibrating equipment.

This is a medium pressure clamp and is widely used for maintenance and OEM applications. Rubber hose, plastic tubing, coaxial and electrical cable, rope, etc. are all easily clamped. These clamps are installed on air, fluid, gas and steam lines. The one piece design offers a positive, tamper-proof seal without damaging the hose.

PRESSURE:

As a guideline, 2-Ear Clamps successfully seal at 54 bar - 800 psi with 35 pulsating strokes a minute.

MATERIAL:

Zinc plated carbon steel
SAE 1008/1010 or DIN 1.0338
Stainless steel tubing
UNS S30400 or DIN 1.4301



100 pc. minimum per clamp

Note: When ordering your 2-Ear Clamps select nominal clamp size nearest to, but always larger than, O.D. of material to be clamped after insert has been fitted.

ZINC PLATED CARBON STEEL

Part#	Nominal Size	Inches Close	Inches Open	List Price ea.
1010002	3/16"	0.134	0.197	0.55
1010004	1/4"	0.197	0.276	0.57
1010008	5/16"	0.276	0.354	0.57
1010011	3/8"	0.319	0.433	0.57
1010016	1/2"	0.425	0.512	0.59
1010019	9/16"	0.492	0.591	0.63
1010022	19/32"	0.551	0.669	0.63
1010024	5/8"	0.591	0.709	0.63
1010027	3/4"	0.638	0.787	0.70

STAINLESS STEEL

Part#	Nominal Size	Inches Close	Inches Open	List Price ea.
1510003	1/4"	0.197	0.276	0.74
1510004	5/16"	0.276	0.354	0.77
1510023	3/8"	0.319	0.433	0.77
1510006	1/2"	0.425	0.512	0.83
1510007	9/16"	0.492	0.591	0.88
1510008	19/32"	0.551	0.669	0.95
1510009	5/8"	0.591	0.709	1.01
1510010	3/4"	0.638	0.787	1.13
1510011	13/16"	0.709	0.866	1.15
1510012	7/8"	0.748	0.906	1.25
1510013	15/16"	0.827	0.984	1.30
1510014	1"	0.886	1.063	1.39
1510016	1 1/8"	1.035	1.221	1.57
1510019	1 9/16"	1.260	1.457	1.85
1510020	1 1/2"	1.378	1.575	1.95

100 pc. minimum per clamp

STEPLESS® EAR CLAMPS

Features:

- Assured clamping seal
- For low durometer and/ or thin-walled hose/ tubing
- Perfect for silicon, vinyl, polyurethane or other high tech materials used in all industries
- Once installed, smooth inner band circumference prevents damage to the hose while the unique tongue-in-groove design provides a 360° seal
- There are no steps or gaps inside clamp

Technical Information:

Ear Clamps hold against pressure and vibration or material shrinkage due to temperature changes or age. A built-in spring action permits the clamp to “breathe” without loosening. When installing, please note that each ear must be crimped closed to obtain proper seal.

MATERIAL:

Stainless steel tubing
UNS S30400 or DIN 1.4301

SPECIFICATIONS:

Nominal Sizes From - To	Band Width	Band Thickness
9/32” - 7/16”	5.0mm	0.5mm
1/2” - 13/16”	7.0mm	0.6mm



NOTE: 100 pc. minimum per clamp

When ordering Stepless Ear Clamps, select the nominal size nearest to, but always larger than the outside diameter of the material to be clamped. That outside diameter should be determined with connection fully assembled.

Part#	Nominal Size	Inches		List Price ea.
		Close	Open	
16700001	9/32”	0.228	0.275	0.66
16700004	3/8”	0.307	0.374	0.66
16700007	7/16”	0.378	0.445	0.66
16700010	15/32”	0.425	0.524	0.66
16700012	1/2”	0.453	0.551	0.66
16700013	35/64”	0.472	0.571	0.66
16700016	9/16”	0.520	0.618	0.68
16700017	5/8”	0.571	0.669	0.68
16700022	11/16”	0.654	0.780	0.78
16700024	3/4”	0.701	0.827	0.78

100 pc. minimum per clamp

KITS & PINCERS

Features:

- Emergency on-the-spot repairs
- A wide variety of uses and applications
- Various kit types available
- Ideal for in-plant and in-field maintenance



Oetiker 2 Ear Service Clamp Kit:

Well suited for industrial use or original equipment (OEM) applications. EPDM rubber hose, plastic tubing, electrical cable, stain relief, insert molding, welding and heavy vibrating equipment hoses are readily clamped.

Part# 18500064 (stainless) kit includes:

- 1 pair of standard jaw pincers
- 15 ea. of 5/16”, 3/8”, 1/2”, 9/16”, 5/8”, Clamps
- 12 ea. of 3/4”, 7/8”, 15/16”, 1” Clamps

List Price: 186.30

Oetiker Stepless Ear Service Clamp Kit:

Provide uniform compression and a 360° degree seal due to the unique tongue-in-groove design. The term “Stepless” relates to the absence of gaps or steps on the clamps inner circumference.

Part# 18500060 (stainless) kit includes:

- 1 pair of standard jaw pincers
- 10 ea. of 1/2”, 9/16”, 5/8”, 23/32”, 7/8”, 1”, 1-1/8”, 1-1/4” Clamps

List Price: 169.85

PINCERS

Model 1098 I Standard Jaw Pincers



Part # 1410118 **List Price** 60.95

SIDE JAW PINCERS

This dual purpose, side jaw design allows clamps to be applied or removed in confined areas with pincers held parallel to the hose. Also used like standard Pincers

Part # 1410083 **List Price** Model 1099 I 74.28

Clamps



Open End Clamps are of the same general construction as the preformed clamps with this exception, the double wrapping of the band around the hose or article is part of the application. The open end clamps are used when one end or both, of the article to be clamped is not free, or an obstruction prevents slipping a preformed clamp over the end.



Preformed Clamps are double wrapped and formed to a given diameter. Used primarily where one end of the hose or article is free to allow the clamps to be slid over the hose end before the fitting is inserted. All clamps may be pulled down to a smaller diameter but cannot be adjusted to a larger diameter.

OPEN END CLAMPS (3/8" AND 5/8" (NOMINAL) WIDTH)

Catalog Number	Band Width & Thickness	List Price	Clamp I.D. Inches	Clamps per Pkg.	Catalog Number	Band Width & Thickness	List Price
F0-3	3/8 x .022	1.93	13/16"	100	F0S-3	3/8 x .020	2.14
F0-311	3/8 x .022	2.01	1 3/8"	100	F0S-311	3/8 x .020	2.28
F0-316	3/8 x .022	2.06	2"	100	F0S-316	3/8 x .020	2.40
F0-325	3/8 x .022	2.17	3 1/8"	100	F0S-325	3/8 x .020	2.70
WITH STAINLESS STEEL LOK							
F0-8	5/8 x .025	1.67	2"	100	F0S-8	5/8 x .022	2.49
F0-10	5/8 x .025	1.76	2 1/2"	50	F0S-10	5/8 x .022	2.72
HEAVY DUTY BANDS							
F0-12	5/8 x .031	1.84	3"	50	F0S-12	5/8 x .022	2.94
F0-14	5/8 x .031	1.90	3 1/2"	50	F0S-14	5/8 x .022	3.19
F0-16	5/8 x .031	1.96	4"	50	F0S-16	5/8 x .022	3.39
F0-18	5/8 x .031	1.98	4 1/2"	50	F0S-18	5/8 x .022	3.59
F0-20	5/8 x .031	2.13	5"	25	F0S-20	5/8 x .022	3.86
F0-24	5/8 x .031	2.25	6"	25	F0S-24	5/8 x .022	4.30
F0-28	5/8 x .031	2.37	7"	25	F0S-28	5/8 x .022	5.04
F0-32	5/8 x .031	2.56	8"	25	F0S-32	5/8 x .022	5.63
F0-36	5/8 x .031	2.76	9"	25	F0S-36	5/8 x .022	6.05
F0-40	5/8 x .031	2.93	10"	25	F0S-40	5/8 x .022	6.48
F0-48	5/8 x .031	3.39	12"	25	F0S-48	5/8 x .022	7.48
F0-56	5/8 x .031	4.32	14"	10	F0S-56	5/8 x .022	8.76
F0-64	5/8 x .031	4.56	16"	10	F0S-64	5/8 x .022	9.64
F0-72	5/8 x .031	POR	18"	10	F0S-72	5/8 x .022	POR
F0-80	5/8 x .031	5.23	20"	10	F0S-80	5/8 x .022	POR
F0-96	5/8 x .031	5.83	24"	10	F0S-96	5/8 x .022	POR
F0-120	5/8 x .031	POR	30"	10	F0S-120	5/8 x .022	POR
F0-144	5/8 x .031	7.24	36"	10	F0S-144	5/8 x .022	POR
F0-168	5/8 x .031	9.35	42"	10	F0S-168	5/8 x .022	POR
F0-192	5/8 x .031	POR	48"	10	F0S-192	5/8 x .022	POR

APPLICATION TOOLS

For 3/8", 5/8"F-38, F-40, F-100

PREFORMED CLAMPS (3/8" AND 5/8" (NOMINAL) WIDTH)

Catalog Number	Band Width & Thickness	List Price	Clamp I.D. Inches	Clamps per Pkg.	Catalog Number	Band Width & Thickness	List Price
F-3	3/8 x .025	1.93	13/16"	100	FS-3	3/8 x .020	0.94
F-311	3/8 x .025	2.01	1 3/8"	100	FS-311	3/8 x .020	1.02
F-4	5/8 x .025	2.06	1"	100	FS-4	5/8 x .022	1.24
F-5	5/8 x .025	2.17	1 1/4"	100	FS-5	5/8 x .022	1.33
WITH STAINLESS STEEL LOK							
F-6	5/8 x .031	1.67	1 1/2"	100	FS-6	5/8 x .022	1.41
F-7	5/8 x .031	1.76	1 3/4"	100	FS-7	5/8 x .022	1.51
F-8	5/8 x .031	1.84	2"	100	FS-8	5/8 x .022	1.62
F-9	5/8 x .031	1.90	2 1/4"	100	FS-9	5/8 x .022	1.69
F-10	5/8 x .031	1.98	2 1/2"	50	FS-10	5/8 x .022	1.83
F-11	5/8 x .031	2.13	2 3/4"	50	FS-11	5/8 x .022	1.91
F-12	5/8 x .031	2.25	3"	50	FS-12	5/8 x .022	2.02
F-14	5/8 x .031	2.37	3 1/2"	50	FS-14	5/8 x .022	2.23
F-16	5/8 x .031	2.56	4"	25	FS-16	5/8 x .022	2.49
F-18	5/8 x .031	2.76	4 1/2"	25	FS-18	5/8 x .022	2.69
F-20	5/8 x .031	2.93	5"	25	FS-20	5/8 x .022	2.90
F-24	5/8 x .031	3.39	6"	25	FS-24	5/8 x .022	3.31
F-28	5/8 x .031	4.32	7"	25	FS-28	5/8 x .022	3.74
F-32	5/8 x .031	4.56	8"	25	FS-32	5/8 x .022	4.13

Double-wrapped, Triple Punched, Holds Permanently

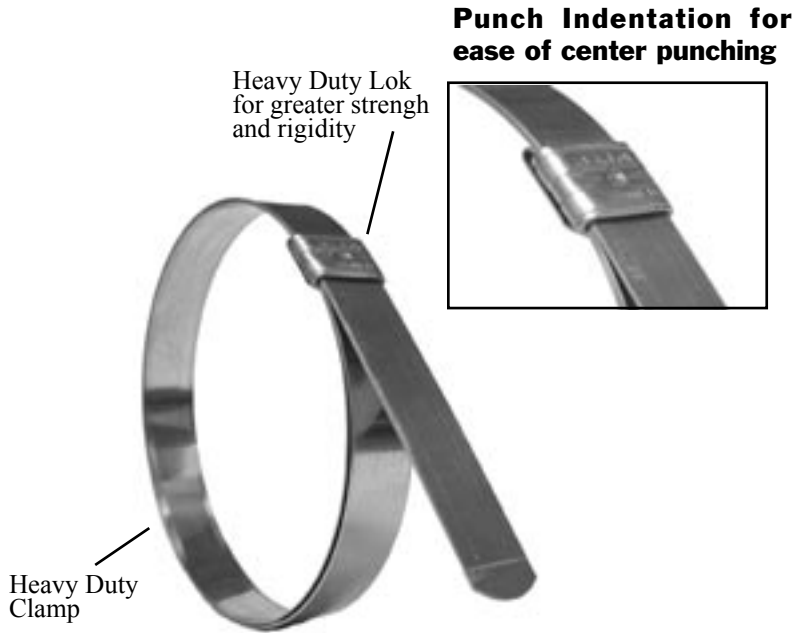


Galvanized Preformed Clamps 2 1/2 inch I.D. and above, and 5/8" wide open end clamps have a stainless steel lok for greater strength and rigidity.

Hose Clamps

K-CLAMP PREFORMED HOSE CLAMPS

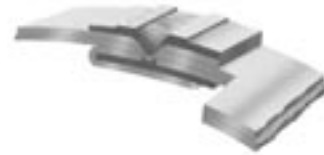
Each clamp is a double wrapped metal band formed to a given diameter. The clamp is designed to be slid over the hose end before the fitting is inserted. A punch-type or fold-up tool is then used to apply the clamp.



Punch Indentation for ease of center punching

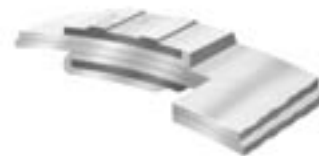


Center Punched



Less tension loss. Patented hole in inner band gives better internal mechanical locking after punching

Fold-up



K-Clamps may be secured by either a punch or fold-up method.
(See cross sectioned views)

PREFORMED CLAMPS (3/8" AND 5/8" (NOMINAL) WIDTH)

GALVANIZED STEEL

STAINLESS STEEL TYPE 301

Catalog Number	List Price	Clamp I.D. Inches	Band Width & Thickness	Clamps per Pkg.	Catalog Number	List Price
K-3	0.58	13/16"	3/8 x .025	100	KS-3	0.93
K-311	0.62	1 1/2"	3/8 x .025	100	KS-311	1.01
K-4	0.83	1"	5/8 x .030	100	KS-4	1.47
K-5	0.86	1 1/4"	5/8 x .030	100	KS-5	1.55
K-6	0.88	1 1/2"	5/8 x .030	100	KS-6	1.65
K-7	0.91	1 3/4"	5/8 x .030	100	KS-7	1.75
K-8	0.94	2"	5/8 x .030	100	KS-8	1.88
K-9	0.97	2 1/4"	5/8 x .030	100	KS-9	2.01
K-10	1.03	2 1/2"	5/8 x .030	50	KS-10	2.15
K-11	1.10	2 3/4"	5/8 x .030	50	KS-11	2.34
K-12	1.12	3"	5/8 x .030	50	KS-12	2.48
K-14	1.20	3 1/2"	5/8 x .030	50	KS-14	2.73
K-16	1.33	4"	5/8 x .030	25	KS-16	3.01
K-18	1.44	4 1/2"	5/8 x .030	25	KS-18	3.27
K-20	1.53	5"	5/8 x .030	25	KS-20	3.52
K-24	1.75	6"	5/8 x .030	25	KS-24	3.99
K-28	2.02	7"	5/8 x .030	25	KS-28	4.60
K-32	2.14	8"	5/8 x .030	25	KS-32	5.04

PREFORMED CLAMPS (3/4" (NOMINAL) WIDTH)

GALVANIZED STEEL

STAINLESS STEEL TYPE 301

Catalog Number	List Price	Clamp I.D. Inches	Band Width & Thickness	Clamps per Pkg.	Catalog Number	List Price
K-87500	1.43	2"	3/4" x .030	100	KS-87501	2.46
K-97500	1.46	2 1/4"	3/4" x .030	100	KS-97501	2.55
K-107500	1.52	2 1/2"	3/4" x .030	100	KS-107501	2.71
K-117500	1.55	2 3/4"	3/4" x .030	100	KS-117501	2.85
K-127500	1.59	3"	3/4" x .030	100	KS-127501	3.01
K-147500	1.66	3 1/2"	3/4" x .030	100	KS-147501	3.27
K-167500	1.84	4"	3/4" x .030	100	KS-167501	3.59
K-187500	1.99	4 1/2"	3/4" x .030	100	KS-187501	3.98
K-207500	2.14	5"	3/4" x .030	50	KS-207501	4.28
K-247500	2.44	6"	3/4" x .030	50	KS-247501	4.92
K-287500	2.81	7"	3/4" x .030	50	KS-287501	5.69
K-327500	2.99	8"	3/4" x .030	50	KS-327501	6.23

316 Stainless available upon request

For 3/8" and 5/8" widthsF-40, F-100

For 3/4" widthF-175

For all widthsK5001 (with KA001 aapter)

Clamps

**FLJ-Clamp
PREFORMED HOSE CLAMPS**

J-Clamps are available in 3/8", 5/8" and 3/4" widths, from 13/16" to 8" I.D. These non punch type clamps are to be secured by the foldup method, using the Wind-Up tool, our part no. KS001 and adapter KA001



KA001
FOLD-UP ADAPTER

KS001
WIND-UP TOOL

**GALVANIZED
STEEL**

**STAINLESS STEEL
TYPE 301**

Catalog Number	List Price	Clamp I.D. Inches	Band Width & Thickness	Clamps per Pkg.	Catalog Number	List Price
FLJ-301	0.66	1 3/16"	3/8 x .025	100	FLJ-201	0.86
FLJ-343	0.67	1"	3/8 x .025	100	FLJ-243	0.95
FLJ-302	0.69	1 3/8"	3/8 x .025	100	FLJ-202	0.97
FLJ-345	0.77	2"	3/8 x .025	100	FLJ-245	1.13
FLJ-346	0.96	3"	3/8 x .025	100	FLJ-246	1.50
N/A		3 1/4"	3/8 x .025	100	FLJ-255	1.75
FLJ-303	1.24	1"	5/8 x 0.30	100	FLJ-203	1.78
FLJ-304	1.27	1 1/4"	5/8 x 0.30	100	FLJ-204	1.86
FLJ-305	1.31	1 1/2"	5/8 x 0.30	100	FLJ-205	1.92
FLJ-306	1.35	1 3/4"	5/8 x 0.30	100	FLJ-206	2.00
FLJ-307	1.41	2"	5/8 x 0.30	100	FLJ-207	2.12
FLJ-308	1.37	2 1/4"	5/8 x 0.30	100	FLJ-208	2.16
FLJ-309	1.46	2 1/2"	5/8 x 0.30	100	FLJ-209	2.31
FLJ-327	1.75	2"	3/4 x 0.30	100	FLJ-227	2.93
FLJ-310	1.94	2 3/4"	3/4 x 0.30	100	FLJ-210	3.21
FLJ-311	1.96	3"	3/4 x 0.30	50	FLJ-211	3.42
FLJ-312	2.03	3 1/2"	3/4 x 0.30	50	FLJ-212	3.69
FLJ-313	2.32	4"	3/4 x 0.30	50	FLJ-213	1.06
FLJ-314	2.41	4 1/2"	3/4 x 0.30	50	FLJ-214	4.47
FLJ-315	2.62	5"	3/4 x 0.30	25	FLJ-215	4.78
FLJ-316	2.99	6"	3/4 x 0.30	25	FLJ-216	5.44
FLJ-318	3.35	7"	3/4 x 0.30	25	FLJ-218	6.35
FLJ-319	3.59	8"	3/4 x 0.30	25	FLJ-219	6.92

**FLJS-Clamp
SMOOTH I.D. CLAMPS**

FLJS - Clamps are double wrapped clamps with a more smooth inside diameter, intended for your thermo-plastic and other thinner wall hose clamping applications. The JS series clamps slide on the hose prior to inserting the fitting.

Preformed JS - Clamps are available in 5/8" and 3/4" widths, 1" I.D. to 8" I.D. in 1/4" increments.

The FLJS - clamp is intended to be applied with a KS001 tool or other comparable foldup locking tool.



**GALVANIZED
STEEL**

		5/8" (NOMINAL WIDTH)			
Catalog Number	Clamp I.D. Inches	Band Width & Thickness	Clamps per Pkg.	List Price	
FLJS-203	1"	5/8" x .030	100	1.60	
FLJS-204	1 1/4"	5/8" x .030	100	1.67	
FLJS-205	1 1/2"	5/8" x .030	100	1.76	
FLJS-206	1 3/4"	5/8" x .030	100	1.88	
FLJS-207	2"	5/8" x .030	100	2.03	
FLJS-208	2 1/4"	5/8" x .030	100	2.15	
FLJS-209	2 1/2"	5/8" x .030		2.31	
		3/4" (NOMINAL WIDTH)			
FLJS-227	2"	3/4" x .030	100	2.57	
FLJS-210	2 3/4"	3/4" x .030	100	2.96	
FLJS-211	3"	3/4" x .030	50	3.16	
FLJS-212	3 1/2"	3/4" x .030	50	3.42	
FLJS-213	4"	3/4" x .030	50	3.74	
FLJS-214	4 1/2"	3/4" x .030	50	4.14	
FLJS-215	5"	3/4" x .030	50	4.43	
FLJS-216	6"	3/4" x .030	50	5.07	
FLJS-218	7"	3/4" x .030	50	5.94	
FLJS-219	8"	3/4" x .030	50	6.49	

Clamps



CLAMP-IT

The multi-sized clamps all rolled up in one..for your unknown requirements for 1 inch to 30 feet, be they round or otherwise. Clamp-It products will fill your needs. This Strapping in widths of 3/8", 1/2", 5/8", and 3/4" stainless or galvanized steel, as are the clamps (buckles).

100' CLAMP-IT STRAPPING

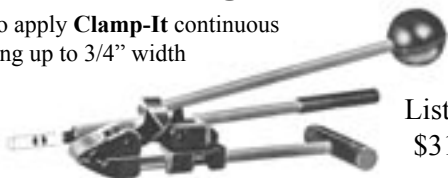
Catalog Number	Width	Thickness	Material 100'/CTN.	List Price/CNT
SS-3751	3/8"	.025	301 Stainless	1.60
SS-5001	1/2"	.030	301 Stainless	1.67
SS-6251	5/8"	.030	301 Stainless	1.76
SS-7501	3/4"	.030	301 Stainless	1.88
SG-3750	3/8"	.025	Galvanized	2.03
SG-5000	1/2"	.030	Galvanized	2.15
SG-6250	5/8"	.030	Galvanized	2.31
SG-7500	3/4"	.030	Galvanized	

CLAMPS (BUCKLES)

Catalog Number	Width	Material 100'/CTN.	QTY /Box	List Price Each pc.
CS-3751	3/8"	301 Stainless	100	0.42
CS-5001	1/2"	301 Stainless	100	0.54
CS-6251	5/8"	301 Stainless	100	0.66
CS-7501	3/4"	301 Stainless	50	0.99
CG-3750	3/8"	Galvanized	100	0.22
CG-3750	1/2"	Galvanized	100	0.31
CG-5000	5/8"	Galvanized	100	0.36
CG-6250	3/4"	Galvanized	50	0.50

C-2 Orbitor (Loking Tool)

Used to apply **Clamp-It** continuous strapping up to 3/4" width



List Price \$313.13

ORBITOR

A tool of endless travel... this lightweight, side entry, jack-type tool is the most rapid cinch-up application tool in its field. The **Orbitor** C-2 Loking Tool will handle **Clamp-It** strapping widths to 3/4" and always reached desired tension without fear of losing travel capacity of the tool. The **Clamp-It Strapping, Clamp-It Clamps**, and the unique **Clamp-It tool** add up to a superior system for you.

F-38⁴ Loking Tool



List Price: \$60.00

Portable hand tool used to apply punch Type 3/8 & 5/8 Clamps

F-40⁴ Loking Tool



List Price: \$97.58

Used to apply Punch Type 3/8 & 5/8 clamps. Order mallet separately

F-100⁴ Loking Tool



List Price: \$281.81

Used to apply Punch Type 3/8 & 5/8 clamps. Order mallet separately

F-225⁴ Mallet



List Price: \$55.34

Used for punching of all punch type clamps.

F-550⁴ Clamp Cutter



List Price: \$110.69

Used to remove clamps with minimum effort

KS001⁴ Wind-up Tool



List Price: \$161.51

Used to apply fold-up clamps and continuous strapping up to 3/4" width

Clamps

HOSE CLAMPS

- All designs exceed SAE J1508 specifications
- Smooth inside surface
- Even tightening torque for 3600 seal
- Rolled-up band edge
- * **Non-perforated band prevents hose damage ***

- Precision thread pitch for high vibration applications
- Design allows reuse
- Provides a strong seal
- Tolerates corrosive environments

ALUZINC MINI-F



Band and Housing • Aluzinc/ Painted
Band Width • (9mm) 3/8" wide band
Screw • Zinc Plated / Chromed
Corrosion Factor • 100

Sure seal of small thin-walled hoses.

Part#	Sizes	List
92-008	15/64-21/64"	0.59
92-009	9/32-3/8"	0.59
92-010	5/16-13/32"	0.59
92-011	23/64-29/64"	0.59
92-012	25/64-31/64"	0.59
92-013	7/16-17/32"	0.63
92-014	15/32-9/16"	0.63
92-015	33/64-29/64"	0.63
92-016	35/64-41/64"	0.63
92-017	19/32-11/16"	0.63

304 S.S. MINI-F



Band and Housing • SS2333/ AISI 304
Band Width • (9mm) 3/8" wide band
Screw • Zinc Plated / Chromed

Corrosion Factor • 1000 Industrial
Sure seal of small thin-walled hoses.

Part#	Sizes	List
93-008	15/64-21/64"	1.44
93-009	9/32-3/8"	1.44
93-010	5/16-13/32"	1.44
93-011	23/64-29/64"	1.53
93-012	25/64-31/64"	1.53
93-013	7/16-17/32"	1.53
93-014	15/32-9/16"	1.53
93-015	33/64-29/64"	1.53
93-016	35/64-41/64"	1.58
93-017	19/32-11/16"	1.58

Band and Housing • Aluzinc/ Painted
Band Width • (12.2mm) 3/8" wide band
Screw • Zinc Plated / Chromed
Corrosion Factor • 100



ALUZINC

Part #	SAE	Size	List
88-015	3	5/16-9/16"	0.95
88-017	4	7/16-11/16"	0.95
88-022	6	1/2-13/16"	0.97
88-024	8	5/8-15/16"	1.22
88-028	10	3/4-1-1/8"	1.26
88-032	12	7/8-1-1/4"	1.53
88-038	16	1-1/16-1-1/2"	1.58
88-044	20	1-1/4-1-3/4"	1.58
88-050	24	1-1/2-2"	1.62
88-056	28	1-3/4-2-1/4"	1.89
88-065	32	2-2-9/16"	2.03
88-075	40	2-5/16-3"	2.16
88-085	44	2-11/16-3-3/8"	2.21
88-095	52	3-3-3/4"	2.34
88-112	64	3-7/16-4-7/16"	2.70
88-138	80	4-1/8-5-7/16"	3.47
88-165	96	5-1/8-7-1/8"	3.74
88-180	104	5-7/8-7-1/8"	4.23
88-205	122	6-7/8-8-1/8"	5.00
88-231	138	7-7/8-9-1/8"	5.18
88-256	154	8-7/8-10-1/16"	5.81
88-282	170	9-7/8-11-1/8"	5.99
88-307	186	10-7/8-12-1/8"	6.08

You can't climb the ladder of success with your hands in your pockets.

Band and Housing • SS2333/ AISI 304
Band Width • (12.2mm) 1/2" wide band
Screw • SS2333/ AISI 304
Corrosion Factor • 1000 Industrial



All 304 S.S.

Part #	SAE	Size	List
89-014	3	5/16-9/16"	2.60
89-017	4	7/16-11/16"	2.66
89-020	6	1/2-13/16"	2.70
89-024	8	5/8-15/16"	2.57
89-028	10	3/4-1-1/8"	2.71
89-032	12	7/8-1-1/4"	2.88
89-038	16	1-1/16-1-1/2"	2.99
89-044	20	1-1/4-1-3/4"	3.11
89-050	24	1-1/2-2"	3.20
89-056	28	1-3/4-2-1/4"	3.38
89-065	32	2-2-9/16"	3.78
89-075	40	2-5/16-3"	3.98
89-085	44	2-11/16-3-3/8"	4.42
89-095	52	3-3-3/4"	4.68
89-112	64	3-7/16-4-7/16"	4.91
89-138	80	4-1/8-5-7/16"	6.02
89-165	96	5-1/8-7-1/8"	6.35
89-180	104	5-7/8-7-1/8"	6.91
89-205	122	6-7/8-8-1/8"	8.24
89-231	138	7-7/8-9-1/8"	8.51
89-256	154	8-7/8-10-1/16"	9.32
89-282	170	9-7/8-11-1/8"	9.63
89-307	186	10-7/8-12-1/8"	9.86

Band and Housing • Aluzinc/ Painted
Band Width • (9mm) 3/8" wide band
Screw • Zinc Plated / Chromed
Corrosion Factor • 100



ALUZINC NOVA

Part #	SAE	Size	List
91-015	3	5/16-9/16"	0.95
91-017	4	7/16-11/16"	0.95
91-022	6	1/2-13/16"	0.99
91-025	8	5/8-15/16"	1.26
91-028	10	3/4-1-1/8"	1.35
91-032	12	7/8-1-1/4"	1.35
91-040	16	1-1/16-1-1/2"	1.35
91-045	20	1-1/4-1-3/4"	1.44
91-051	24	1-1/2-2"	1.49
91-056	28	1-3/4-2-1/4"	1.53
91-065	32	2-2-9/16"	1.67
91-075	40	2-5/16-3"	1.85
91-085	44	2-11/16-3-3/8"	1.89

HOSE CLAMPS

Band and Housing • SS2333/ AISI 316
Band Width • (12.2mm) 1/2" wide band
Screw • SS2333/ AISI 304
Corrosion Factor • 1000 Industrial



ALL 316 ACID RESISTANT

Part #	SAE	Size	List
90-014	3	5/16-9/16"	2.61
90-017	4	7/16-11/16"	2.93
90-020	6	1/2-13/16"	2.97
90-024	8	5/8-15/16"	3.02
90-028	10	3/4-1/8"	3.04
90-032	12	7/8-1-1/4"	3.11
90-038	16	1-1/16-1-1/2"	3.17
90-044	20	1-1/4-1-3/4"	3.29
90-050	24	1-1/2-2"	3.42
90-056	28	1-3/4-2-1/4"	3.83
90-065	32	2-2-9/16"	3.96
90-075	40	2-5/16-3"	4.05
90-085	44	2-11/16-3-3/8"	4.05
90-095	52	3-3-3/4"	4.37
90-112	64	3-7/16-4-7/16"	4.55
90-138	80	4-1/8-5-7/16"	4.95
90-165	96	5-1/8-7-1/8"	5.32
90-180	104	5-7/8-7-1/8"	5.45
90-205	122	6-7/8-8-1/8"	5.87
90-231	138	7-7/8-9-1/8"	6.17
90-256	154	8-7/8-10-1/16"	6.66
90-282	170	9-7/8-11-1/8"	6.80
90-307	186	10-7/8-12-1/8"	7.16

ALUZINC EXHAUST CLAMP



Uniform tightening force around the exhaust tubes for a good sealing

Part #	Size	List
94-030	1.06-1.18	2.88
94-033	1.18-1.30	3.02
94-036	1.30-1.42	3.38
94-038	1.38-1.50	3.38
94-039	1.44-1.56	3.38
94-042	1.54-1.65	3.56
94-043	1.59-1.71	3.78
94-045	1.65-1.77	3.78
94-046	1.69-1.81	3.38
94-047	1.73-1.85	3.60
94-048	1.77-1.89	4.19
94-051	1.89-2.01	3.92
94-052	1.93-2.05	4.25
94-054	2.00-2.13	4.41
94-055	2.05-2.17	4.46
94-056	2.09-2.20	4.46
94-058	2.17-2.28	5.22
94-061	2.28-2.40	5.31
94-064	2.40-2.52	5.34
94-071	2.68-2.80	6.84
94-074	2.80-2.91	10.35

304 S.S. RUBBER CLIP



Eliminates hose and cable wear due to vibrations

Part #	Size	List
96-301	3/16"	0.98
96-302	1/4"	1.05
96-303	5/16"	1.04
96-304	3/8"	1.09
96-305	7/16"	1.13
96-306	1/2"	1.24
96-307	9/16"	1.31
96-308	5/8"	1.32
96-310	3/4"	1.38
96-312	7/8"	1.47
96-314	1"	1.59
96-316	1-1/8"	1.70
96-318	1-1/4"	1.85
96-320	1-3/8"	2.46
96-322	1-1/2"	2.52
96-323	1-3/4"	2.66



Eliminates hose and cable wear due to vibrations

ALUZINC RUBBER CLIP

Part #	Size	List
95-300	1/8"	0.45
95-301	3/16"	0.46
95-302	1/4"	0.50
95-303	5/16"	0.50
95-304	3/8"	0.52
95-305	7/16"	0.54
95-306	1/2"	0.62
95-307	9/16"	0.65
95-308	5/8"	0.66
95-309	11/16"	0.77
95-310	3/4"	0.76
95-311	13/16"	0.79
95-312	7/8"	0.82
95-313	15/16"	0.90
95-314	1"	0.93
95-315	1-1/6"	1.04
95-316	1-1/8"	1.05
95-317	1-3/16"	1.49
95-318	1-1/4"	1.53
95-319	1-5/16"	1.62
95-320	1-3/8"	1.67
95-321	1-7/16"	1.71
95-322	1-1/2"	1.80
95-326	1-5/8"	1.94
95-323	1-3/4"	1.94
95-328	1-7/8"	2.16
95-324	2"	2.30
95-325	2-1/8"	2.39
95-329	2-3/8"	2.57
95-327	2-1/2"	2.61
95-330	2-15/16"	3.29
95-331	3/5/16"	4.37

ALUZINC ROBUST



Band and Housing • Aluzinc/ Painted
Band Width • (9mm) 3/8" wide band
Screw • Zinc Plated/ Chromed
Corrosion Factor • 100

Part #	Size	List
97-031	(29-31mm)	3.20
97-035	(32-35mm)	3.24
97-039	(36-39mm)	3.38
97-043	(40-43mm)	3.51
97-047	(44-47mm)	4.86
97-051	(48-51mm)	4.90
97-055	(52-55mm)	4.95
97-059	(56-59mm)	5.04
97-063	(60-63mm)	5.09
97-067	(64-67mm)	5.13
97-073	(68-73mm)	5.18
97-079	(74-79mm)	5.31
97-085	(80-85mm)	5.36
97-091	(86-91mm)	5.45
97-097	(92-97mm)	5.58
97-103	(98-103mm)	5.58
97-112	(104-112mm)	5.81
97-121	(113-121mm)	5.99
97-130	(122-130mm)	6.35
97-139	(131-139mm)	6.48
97-148	(140-148mm)	6.53
97-161	(149-161mm)	6.62
97-174	(162-174mm)	6.71
97-187	(175-187mm)	10.58
97-200	(188-200mm)	10.85
97-213	(201-213mm)	10.89
97-226	(214-226mm)	11.07
97-239	(227-239mm)	11.25
97-252	(240-252mm)	11.48



In every episode of Seinfeld there is a Superman somewhere.

SMOOTH BRASS HOSE FERRULES



		List				
Part #	Ferrule #	I.D.	Length	Pierce	Gauge	Price
32-500	6231	0.330	0.484	0.250	0.016	0.12
32-501	833	0.358	0.500	0.270	0.016	0.16
32-502	622	0.380	0.500	0.270	0.016	0.13
32-550	619	0.400	0.469	0.265	0.016	0.17
32-504	620	0.410	0.500	0.270	0.016	0.17
32-551	769R	0.450	0.563	0.343	0.016	0.20
32-552	4750	0.475	0.687	0.328	0.20	0.20
32-553	624R	0.500	0.500	0.343	0.016	0.20
32-554	7322	0.500	1.000	0.344	0.025	0.20
32-555	625	0.525	0.469	0.359	0.016	0.20
32-517	625A	0.525	0.625	0.343	0.016	0.20
32-556	7323	0.525	1.000	0.375	0.025	0.33
32-521	9974	0.529	1.000	0.437	0.025	0.33
32-557	7324	0.531	1.000	0.437	0.025	0.33
32-558	626	0.550	0.469	0.375	0.016	0.25
32-559	7325	0.562	1.000	0.437	0.025	0.36
32-561	7326	0.593	1.000	0.437	0.025	0.34
32-562	JJ	0.600	0.484	0.437	0.016	0.22
32-563	JJ	0.600	0.499	0.500	0.019	0.22
32-526	II	0.625	0.484	0.437	0.016	0.21
32-564	7327	0.625	1.000	0.437	0.025	0.36
32-565	HH	0.650	0.484	0.437	0.016	0.22
32-566	7328	0.656	1.000	0.437	0.025	0.40
32-567	GG	0.675	0.500	0.437	0.016	0.33
32-568	7329	0.687	1.000	0.437	0.025	0.37
32-570	7330	0.718	1.000	0.500	0.025	0.38
32-571	EE	0.725	0.563	0.500	0.016	0.29
32-572	DD	0.750	0.563	0.500	0.016	0.27
32-573	7331	0.750	1.000	0.500	0.025	0.50
32-574	CC	0.775	0.563	0.500	0.016	0.31
32-533	7332	0.781	1.000	0.500	0.025	0.45
32-575	7332	0.781	1.000	0.625	0.025	0.40
32-576	BB	0.800	0.563	0.562	0.016	0.30
32-577	7333	0.812	1.000	0.625	0.025	0.50
32-578	AA	0.830	0.563	0.562	0.016	0.30
32-579	7244	0.875	0.875	0.625	0.025	0.50
32-580	7113	0.925	0.875	0.687	0.023	0.53
32-545	5235	1.000	0.875	0.687	0.025	0.51
32-549	7145A	1.050	0.850	0.693	0.025	0.60
32-584	5027	1.100	0.875	0.812	0.025	0.60
32-588	7088	1.175	0.875	0.875	0.025	0.65
32-589	7088A	1.175	0.840	0.875	0.025	0.68
32-590	875L	1.200	0.875	0.875	0.025	0.65
32-591	7291	1.218	1.000	0.875	0.025	0.67

More sizes available

HOSE CRIMPER

HOSE CRIMPERS

• Provides production capability and "big tool" crimping advantages at just a fraction of the cost of other tools offering comparable results.



HOSE CRIMPER COMES WITH 5 DIES

308-071 THRU # 308-075

Part #	List Price
308-070	Hose Crimper .....200.00

REPLACEMENT DIES

Part #	Size	List
308-071	5/8"	30.00
308-072	37/64"	30.00
308-073	17/32"	30.00
308-074	31/64"	30.00
308-075	11/16"	30.00
308-076	7/16"	30.00
308-077	3/4"	30.00
308-078	13/16"	30.00
308-079	3/8"	30.00

The word LEAD, at its root, means "go, travel, guide." Leadership has about it a kinesthetic feel, a sense of movement. Leaders "go first." They're pioneers. They begin the quest for a new order. They venture into unexplored territory and guide us to new and unfamiliar destinations."

"In contrast, the root origin of MANAGE is a word meaning "hand." At its core, managing is about "handling" things, about maintaining order, about organization and control. The critical difference between management and leadership is reflected in the root meanings of the two words - the difference between what it means to handle things and what it means to go places. The unique role of leaders is to take us to places we've never been before."

- THE LEADERSHIP CHALLENGE

Kouzes and Posner

Tubing

CORROSION RESISTANCE VALUES for Plastic Tubing

Ratings based on tests at 70°F and should not be exposed to higher temperature without testing

F-5000 Poly Vinyl Chloride

U-2000 Polyurethane

E-1000 Low Density Polyethylene

N-6000 Nylon

P-1100 Polypropylene

D-4000 EVA

T-7000 Teflon

U-8000 Special Plasticizers PVC

G-Good

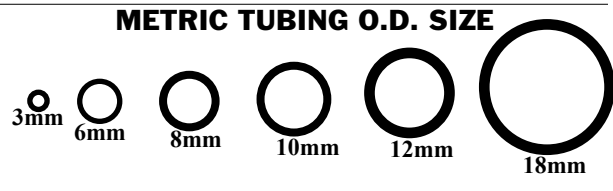
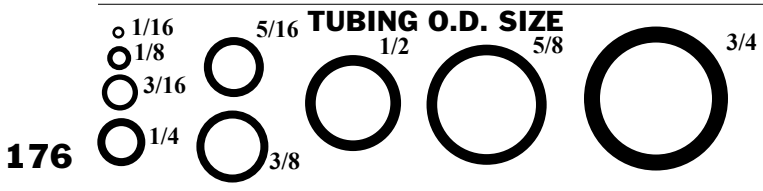
L-Limited

P-Poor

N-Not Tested

	F	U	E	N	P	D	T	U-8000	ACIDS & BASES	F	U	E	N	P	D	T
FUELS:									Acetic, 50%	G	P	P	L	G	P	G
Butane (1).....	G	G	L	G	L	G	G	N	Boric	G	G	G	G	G	G	G
Diesel Fuel.....	L	G	L	G	L	P	N	G	Carbolic (phenol)	P	P	G	P	G	P	N
Gasoline (regular).....	L	G	P	G	L	N	G	G	Fatty	G	G	P	G	G	N	G
Kerosene.....	L	G	P	G	G	P	G	G	Formic, 90%	G	P	G	P	G	G	G
Methane (nat. gas)(1).....	G	G	L	G	G	N	N	N	Hydrochloric, 10%	G	G	G	L	G	G	G
Propane (1).....	G	G	L	G	L	N	N	N	Hydrochloric, 25%	G	L	G	P	G	L	G
OTHERS:									Hydrochloric, 50%	G	L	G	P	G	L	G
Acetylene.....	N	G	G	G	G	N	N	N	Hydrocyanic, 50%	L	P	G	P	G	G	G
Ammonia gas.....	P	G	G	G	G	G	N	N	Maleic	G	P	G	G	G	N	N
Ammonium salts.....	G	G	G	G	G	G	N	N	Nitric, 10%	G	P	G	L	G	L	G
Amyl acetate.....	P	P	L	G	P	P	G	N	Nitric, 30%	G	P	G	P	L	L	G
Aniline.....	P	P	L	L	G	P	G	N	Oleic	L	G	L	G	G	P	N
Animal oils.....	G	G	P	G	G	N	G	G	Phosphoric, 25%	G	L	G	G	G	G	N
Bleach, 7%.....	G	P	G	L	L	N	N	G	Sulfuric, 30%	G	L	G	L	G	L	G
Bromine.....	L	G	P	P	P	P	G	N	Sulfuric, 70%	L	P	P	P	G	P	G
Butandiol.....	G	G	G	G	G	N	N	N	Sulfuric, 98%	P	P	P	P	G	P	G
Calcium salts incl. Chloride....	G	G	G	G	G	N	G	G	Sulfurous, 30%	G	P	G	L	G	N	G
Chlorine gas, dry.....	G	G	P	P	P	P	N	N	Tannic	G	P	G	G	G	N	G
Dibutyl phthalate.....	N	P	L	G	L	P	N	G	Ammonium hydroxide, 25%	P	G	L	G	G	G	N
Glucose.....	G	G	G	G	G	G	G	G	Potassium hydroxide, 25% ..	L	G	G	G	G	G	G
Glycerine.....	G	G	G	G	G	G	N	G	Sodium hydroxide, 50%	G	G	G	G	G	L	G
Hydrogen peroxide 10%....	G	G	G	G	G	G	G	G	SOLVENTS:							
Hydrogen peroxide 25%....	L	G	G	P	G	G	G	G	Acetone	P	P	G	G	L	P	G
Hydrogen sulfide.....	G	P	G	L	G	N	G	N	Benzene	P	L	P	G	P	P	G
Isocyanates.....	N	G	G	G	N	P	N	N	Carbon tetrachloride	P	L	L	L	P	P	G
Lead salts (3).....	G	G	G	G	G	N	N	N	Chloroform	P	P	P	L	P	P	G
Magnesium salts.....	G	G	G	G	G	N	G	N	Cyclohexanone	P	P	P	G	L	P	G
Mercury.....	G	G	G	G	G	G	N	N	Dimethylformamide	P	P	L	N	G	N	N
Milk.....	G	G	G	G	G	G	N	G	Dioxane	N	N	P	G	L	N	N
Mineral Oil.....	G	G	L	G	L	P	G	G	Ethyl acetate	P	L	G	G	L	P	G
Nitrous Oxide (1).....	G	G	L	G	G	N	N	N	Ethyl alcohol (1)	L	G	G	L	G	G	G
Oxygen (1).....	G	G	G	G	G	G	G	G	Ethyl ether	L	L	G	G	L	P	N
Ozone, ambient.....	G	G	L	G	L	N	N	G	Ethylene glycol	G	G	G	G	G	G	N
Paint, oil base.....	L	G	L	G	G	N	N	G	Formaldehyde	G	G	G	G	G	L	N
Polyglycols.....	G	G	G	G	G	N	N	N	Freon - 12'	L	L	G	G	L	N	G
Potassium salts.....	G	G	G	G	G	N	G	N	Methyl alcohol	L	G	G	L	G	N	N
Pydraul.....	P	P	P	G	N	N	N	N	Methylene chloride	P	P	L	G	L	P	N
Pyridine.....	P	L	G	L	G	N	G	N	Methyl ethyl ketone	P	P	G	G	L	P	N
Salt Water.....	G	G	G	G	G	G	G	G	Naphthas (2)	P	G	P	G	L	P	G
Silver Nitrate.....	G	G	G	G	G	G	N	N	Tolulene	P	G	P	G	L	P	N
Skydrol.....	P	P	P	G	N	N	N	N	Trichlorethylene	P	P	P	L	P	P	G
Soap solution (conc.).....	G	G	L	G	G	N	G	G	Turpentine	G	G	P	G	L	P	G
Sodium salts.....	G	G	G	G	G	N	G	G	Xylene	P	G	P	G	L	P	N
Sodium thiosulphate.....	G	G	G	G	G	N	G	G	HYDRAULIC FLUIDS:							
Styrene.....	P	G	P	G	N	N	N	G	Diester base grease	N	G	P	G	L	P	N
Trisodium phosphate.....	G	G	N	G	G	G	N	G	Petroleum base grease	G	G	L	G	L	P	N
Ucon oil.....	G	G	G	G	N	N	N	N	Phosphate ester	L	P	P	G	G	N	N
Urea.....	G	G	G	G	G	N	G	G	Polyol ester	P	N	P	G	G	N	N
Vegetable oils (1).....	G	G	G	G	G	P	N	G	Water-glycol	G	G	G	G	G	N	N
Water at 730F.....	G	G	G	G	G	G	G	G	SAE motor oils	G	G	G	G	G	N	N
Water at 1400F.....	L	G	G	G	G	G	G	G	Machine oil	G	G	L	G	L	N	N
Water at 1700F.....	P	L	N	L	G	P	N	G	MIL-L-7808 H	G	G	L	G	G	N	N
Whiskey, wine (1).....	N	G	G	G	G	G	N	G	Brake Fluid	N	N	N	N	N	N	N
Zinc Chloride.....	G	G	G	G	G	G	N	N								

Accessories



POLYETHYLENE TUBING

- Economical
- Flexible
- Low Pressure & Temperature



- Low density polyethylene tubing has a wide range of uses including water lines, beverage tubing, air lines, instrumentation, plus uses in industrial, agricultural, and chemical applications.
- Has good resistance to alkalis, dilute acid, ammonia gas, ammonium hydroxide, brine water, and most aqueous solutions of metallic salts.
- Food Grade
- temperature: -40F° to 135°F
- Natural - ASTM D-1248-8f - Type 1 - Class A - Category 4, Colors are class B.
- 100' coils in Boxes.

POLYETHYLENE TUBING

Part#	Tube O.D.	Tube Wall	Burst PSI	100' Box
973-200	1/8	0.020	400	6.42
973-201	5/32	0.025	400	12.99
973-202	3/16	0.030	400	13.01
973-203	1/4	0.040	400	8.21
973-204	1/4	0.062	800	10.87
973-205	5/16	0.062	600	14.45
973-206	3/8	0.062	400	18.05
973-207	1/2	0.062	300	25.03
973-208	5/8	0.062	250	35.48
973-211	3/4	0.062	150	41.12
973-209	3/4	0094	200	76.39
973-210	1	125	300	101.51

500' NATURAL POLYETHYLENE

Part#	O.D.	List
73-200N5	1/8	53.36
73-203N5	1/4	68.09
73-204N5	1/4	77.72
73-206N5	3/8	90.23
73-207N5	1/2	152.22

More colors and lengths available

1000' NATURAL POLYETHYLENE

Part#	O.D.	List
73-203N1	1/4	82.99
73-204N1	1/4	129.51
73-206N1	3/8	213.76
73-207N1	1/2	250.29

BLACK POLYETHYLENE TUBING

Part#	O.D.	100' List
73-200B	1/8	11.63
73-201B	5/32	12.35
73-202B	3/16	12.96
73-203B	1/4	13.57
73-204B	1/4	17.06
73-205B	5/16	21.33
73-206B	3/8	25.29
73-207B	1/2	33.66
73-208B	5/8	42.08

500' BLACK REEL

Part#	O.D.	List
73-203B5	1/4	63.72
73-205B5	5/16	100.36
73-206B5	3/8	119.87
73-207B5	1/2	152.22

1000' BLACK REEL

Part#	O.D.	List
73-206B1	3/8	213.76

BLUE

POLYETHYLENE TUBING

Part#	O.D.	100' List
73-200U	1/8	11.63
73-201U	5/32	12.35
73-202U	3/16	12.96
73-203U	1/4	13.57
73-204U	1/4	16.22
73-205U	5/16	21.33
73-206U	3/8	25.26
73-207U	1/2	37.68

500' BLUE REEL

Part#	O.D.	List
73-203U5	1/4	64.85
73-206U5	3/8	119.87

1000' BLUE REEL

Part#	O.D.	List
73-203U1	1/4	108.77

GREEN

POLYETHYLENE TUBING

Part#	O.D.	100' List
73-201G	5/32	12.35
73-203G	1/4	13.57
73-204G	1/4	16.22
73-205G	5/16	21.33
73-206G	3/8	25.26
73-207G	1/2	33.68

500' GREEN REEL

Part#	O.D.	List
73-203G5	1/4	59.54

1000' GREEN REEL

Part#	O.D.	List
73-203G1	1/4	103.59

RED

POLYETHYLENE TUBING

Part#	O.D.	100' List
73-203R	1/4	14.22
73-205R	5/16	21.33
73-206R	3/8	25.26

500' RED REEL

Part#	O.D.	List
73-203R5	1/4	64.83

1000' RED REEL

Part#	O.D.	List
73-203R1	1/4	103.59

WHITE

POLYETHYLENE TUBING

Part#	O.D.	List
73-203W	1/4	13.57
73-206W	3/8	25.26
73-207W	1/2	33.68

PLASTIC TUBE CUTTER

Range: 1/8" - 3/8" I.D. (3mm-10mm)



Part#	Description	List
91-707	Cutter w/ Blade	5.06
91-707B	Pack of 10 Blades	1.94

YELLOW

POLYETHYLENE TUBING

Part#	O.D.	100' List
73-203Y.....	1/4	13.57
73-205Y.....	5/16	21.33
73-206Y.....	3/8	25.26

ORANGE

POLYETHYLENE TUBING

Part#	O.D.	100' List
73-203O.....	1/4	13.57

GRAY

POLYETHYLENE TUBING

Part#	O.D.	100' List
73-206A.....	3/8	25.26

POLYETHYLENE METRIC TUBING



Part#	MM O.D.	MM Wall	Length	List
73-200M1...	4	2.5	150	60.50
73-201M2...	6	4	25	19.80
73-201M1...	6	4	150	94.28
73-202M2...	8	6	25	27.99
73-202M1...	8	6	150	162.92
73-203M2..	10	8	25	42.53
73-203M1..	10	8	150	235.35

More sizes, lengths
and colors available.
Just Ask!

"...as one goes through life one learns that if you don't paddle your own canoe, you don't move."

-Katharine Hepburn

FLEXIBLE NYLON 11 TUBING

- High Burst
- Resilient
- Corrosion Resistance



- Lubrication systems, instrumentation lines, fuel lines, refrigerant lines, Vacuum applications, food processing.
- Low moisture absorption, Good mechanical properties, and excellent electrical properties.
- Temperature range 400F to 225) F
- Has excellent resistance to a wide range of chemicals including oils, gasoline, hydraulic fluids, salt solutions, and bases.
- 1000lb min. burst P.S.I.
- For DOT tubing see air brake section

Part#	Tube O.D.	Tube Wall	100' Boxed
973-230.....	1/8	.017	18.19
973-231.....	5/32	.025	26.18
973-229.....	3/16	.024	29.24
973-232.....	1/4	.035	50.65
973-238.....	1/4	.040	60.60
973-239.....	1/4	.062	82.80
973-226.....	5/16	.040	73.38
973-233.....	3/8	.050	93.46
973-234.....	1/2	.062	180.54
973-235.....	5/8	.062	253.71

500' NYLON TUBING NATURAL

Part#	Tube O.D.	List
73-232N5.....	1/4	249.44

BLACK NYLON TUBING

Part#	Tube O.D.	100' List
73-230B.....	1/8	16.92
73-231B.....	5/32	24.95
73-232B.....	1/4	50.67
73-238B.....	1/4	63.43
73-233B.....	3/8	99.13
73-234B.....	1/2	180.54

1000' BLACK NYLON

Part#	Tube O.D.	List
73-230B1.....	1/8	146.25

NYLON 12 METRIC TUBING

- Same properties as nylon tubing



100' LENGTHS

Part#	MM O.D.	MM I.D.	MM Wall	Min PSI	List Coil
973-323....	4	2.3	0.85	1800	28.33
973-324....	5	3	1	1600	40.21
973-325....	6	4	1	1200	53.63
973-326....	6	3.5	1.25	1700	61.16
973-327....	8	6	1	800	73.38
973-328....	8	5.5	1.25	1100	85.22
973-329....	10	8	1	600	91.34
973-332....	12	10	1	480	98.28
973-333....	12	9	1.5	800	138.69
973-334....	14	12	1	950	238.77

PLASTIC TUBE CUTTER

Range: 1/8" - 3/8" I.D. (3mm-10mm)



Part#	Description	List
91-707.....	Cutter w/ Blade.....	5.06
91-707B.	Pack of 10 Blades.....	1.94

MINI-TUBING CUTTER

- Great for tight places



Part #	Size	List Price
990-571	3 mm-22mm (1/8"-7/8")	5.45

TUBING CUTTER



Part #	Size	List Price
990-570.....	1/8"-1-1/8"	8.01

POLYVINYL CHLORIDE (PVC) TUBING

FDA recipe
NSF approved
Grade A



- Clear, flexible PVC tubing is suitable for use in low pressure applications including drain lines, laboratory tubing, industrial, chemical, agricultural, and food and beverage applications.
- Has good chemical resistance to alkalies, ammonium compounds, brine, and some acids and alcohols.
- Sanctioned by the FDA for food packaging applications.
- Temperature Range: -5°F to 125°F
- 100 Foot coils in Boxes.

Part#	Tube I.D.	Tube O.D.	Tube Wall	Tube Burst	Tube Min Coils	100' List
973-222	1/8	3/16	1/32	200	13.37	
973-224	1/8	1/4	1/16	400	13.83	
973-223	3/16	5/16	1/16	250	17.72	
973-215	1/4	3/8	1/16	200	21.15	
973-252	5/16	7/16	1/16	150	24.99	
973-253	5/16	1/2	3/32	250	38.21	
973-216	3/8	1/2	1/16	125	27.47	
973-255	3/8	5/8	1/8	250	61.36	
973-262	3/8	9/16	3/32	200	60.16	
973-217	1/2	5/8	1/16	100	36.43	
973-219	3/4	1 0/1	1/8	120	103.49	
973-221	1	1-1/4	1/8	100	131.40	

POLYURETHANE TUBING 100' COILS



Part#	Tube O.D.	Tube I.D.	List
973-340	1/8	1/16	22.86
973-341	5/32	3/32	30.47
973-342	3/16	1/8	39.60
973-343	1/4	1/8	73.13
973-345	3/8	1/4	130.01
973-346	1/2	3/8	183.78

BLUE POLYURETHANE TUBING

Part#	O.D.	List
73-343U	1/4	81.25

BLACK POLYURETHANE TUBING

Part#	O.D.	List
73-343B	1/4	81.25

GREEN POLYURETHANE TUBING

Part#	O.D.	List
73-343G	1/4	81.25

YELLOW POLYURETHANE TUBING

Part#	O.D.	List
73-343Y	1/4	81.25

POLYURETHANE METRIC



Part#	Tube O.D.	Tube I.D.	100' Coils
973-350	4	2.5	28.19
973-352	6	4	56.08
973-353	8	6	77.40

More sizes and colors available

ALUMINUM TUBING

Alloy	Material to ASTM
3003-0	B-483
ASTM B-483	



ALUMINUM VERSATUBE 50' Coils

Part#	O.D.	Wall Thick.	List
972-190	1/8	.025	28.25
972-191	3/16	.028	34.00
972-192	1/4	.032	36.70
972-193	5/16	.035	47.05
972-194	3/8	.035	51.05
972-195	1/2	.035	76.20

COPPER TUBING

REFRIGERATION COPPER TUBE (50' Coils)



Part #	O.D. Nom.	Wt. 50'Coil	Wall Thick.	List Price
972-180	1/8	1.74	.030	30.15
972-181	3/16	2.88	.030	33.08
972-182	1/4	4.02	.030	40.68
972-183	5/16	5.45	.032	52.26
972-184	3/8	6.7	.032	61.07
972-185	1/2	9.1	.032	93.91
972-186	5/8	12.55	.035	158.08
972-187	3/4	15.25	.035	122.21

TYPE L SOFT COPPER TUBING (60' Coils)



For residential water lines

Part #	I.D. Nom.	Wt. Per Ft	Wall Thick.	List Price
972-171	1/4"	.126	.030	71.75
972-172	3/8"	.198	.035	132.00
972-173	1/2"	.285	.040	161.25

Accessories

UNIVERSAL SERIES QUICK DISCONNECT

For ARO, TRU-FLATE, INDUSTRIAL INTERCHANGE

Working range:
Maximum operating Pressure
To 150 psig
Temperature: -40⁰ to +225⁰F



1/4"
BASIC
SIZE



FEMALE THREAD


Part#	Size	List
28-560	1/4 NPS	6.46



MALE THREAD

Part#	Size	List
28-579	1/4 NPTF	6.46
28-589	3/8 NPTF	6.76

**Male NPT x Female NPT
360° turning swivel fitting**

360° Turning  **NEW**

Part #	Size	List Price
320-061	1/4	11.75



Industrial Parker ARO

INDUSTRIAL INTERCHANGE

Specifications

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-40° to +250°

- Sleeve type couplings are widely used to connect air and low pressure fluid lines.

Their compact and economical design uses a ball locking mechanism consisting of captive steel balls that engage the locking groove on the mating nipple. The sliding spring loaded sleeve on the coupler must be manually retracted in order to connect or disconnect the nipple. It is easy to do, but two hands are normally required.

Common applications include: compressed air, water, grease, paint, limited vacuum and limited gases.

- The standard is a brass coupler with a steel valve.
- Standard seals are Buna-N (Nitrile).

1/4"
Basic Body Size



MALE PIPE COUPLER



Part#	Size	List
28-551	1/8	6.29
28-552	1/4	5.85
28-553	3/8	6.66

FEMALE PIPE COUPLER



Part#	Size	List
28-539	1/8	6.29
28-540	1/4	5.41
28-541	3/8	6.48

HOSE ID COUPLER



Part#	Size	List
28-562	1/4	7.84
28-564	3/8	7.84
28-565	1/4(Push on)	7.84
28-566	3/8(Push on)	7.84

**MALE PLUG
STEEL**



Part#	Size	List
28-545	1/8	1.05
28-546	1/4	0.97
28-547	3/8	1.49

**FEMALE PLUG
STEEL**



Part#	Size	List
28-533	1/8	1.16
28-534 ⁵	1/4	1.00
28-535	3/8	1.73

**HOSE I.D. PLUG
STEEL**



Part#	Size	Type	List
28-557	1/4		1.16
28-559	3/8		1.00
28-558	1/4	(Push On)	2.26
28-561	3/8	(Push On)	1.73

Other sizes and materials available...just ask!

PARKER INTERCHANGE (TRU-FLATE)

Specifications

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-40° to +250°

- The standard features a brass coupler with a steel valve.
- Standard seals are Buna-N (Nitrile).
- Unique design has been field proven as a long lasting, high performance coupling especially when used with pneumatic tools.



MALE PIPE COUPLER

BRASS



Part#	Size	List
28-515	1/8	6.66
28-516	1/4	5.82
28-517	3/8	7.50

FEMALE PIPE COUPLER

BRASS



1/4"
Body Size

Part#	Size	List
28-506	1/8	6.66
28-507	1/4	5.82
28-508	3/8	7.50

HOSE ID COUPLER

BRASS



Part#	Size	List
28-528	1/4	7.46
28-530	3/8	8.66
28-531	1/4(Push on)	9.33
28-532	3/8 (Push on)	9.41

**MALE PLUG
STEEL**



Part#	Size	List
28-509	1/8	1.35
28-510	1/4	0.95
28-511	3/8	1.65

**FEMALE PLUG
STEEL**



Part#	Size	List
28-500	1/8	1.30
28-501	1/4	1.00
28-502	3/8	2.00

**HOSE ID PLUG
STEEL**



Part#	Size	List
28-518	1/4	2.42
28-520	3/8	2.67
28-521	1/4(Push on)	2.94
28-522	3/8(Push on)	3.04

ARO 210 INTERCHANGE

Specifications

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-40° to +250°

- Brass bodies and steel valves
- Standard seal material are Buna-N (Nitrile)
- Couplings have a full opening tubular valve for maximum flow and a built-in sleeve guard to minimize accidental disconnect.



MALE PIPE COUPLER

BRASS



Part#	Size	List
28-592	1/8	7.15
28-593	1/4	5.82
28-594	3/8	7.15

FEMALE PIPE COUPLER

BRASS



Part#	Size	List
28-583	1/8	6.40
28-584	1/4	5.82
28-585	3/8	7.07

HOSE ID COUPLER

BRASS



Part#	Size	List
28-601	1/4	7.36
28-603	3/8	7.55

**MALE PLUG
STEEL**



Part#	Size	List
28-586	1/8	1.65
28-587	1/4	1.03

**FEMALE PLUG
STEEL**



Part#	Size	List
28-577	1/8	1.82
28-578	1/4	1.05

**HOSE ID PLUG
STEEL**



Part#	Size	List
28-595	1/4	2.51
28-597	3/8	2.51

Other sizes available...just ask!

ST SERIES...HIGH FLOW

Specifications

Body Size (in.)	1/4	3/8
Rated Pressure (PSI)		
Brass Coupler & Steel Plug	5500	3500
Temperature Range	-40° to +250°	

- Non-valved couplings for applications where maximum flow is required. Ideal for applications such as high pressure water and steam washers, carpet cleaners and mold coolant lines. They are often used in food processing, on fluid and dye transfer lines.

- Standard seals are Buna-N (Nitrile)

- Couplers and plugs available in additional sizes and materials.

MALE PIPE COUPLER

BRASS



FEMALE PIPE COUPLER

BRASS



Part#	Size	List
28-667	1/8	6.15
28-665	1/4	7.26
28-666	3/8	8.26
28-668	1/2	12.38
28-669	3/4	20.12
28-670	1	34.83

Part#	Size	List
28-671	1/8	6.15
28-651	1/4	7.26
28-652	3/8	8.97
28-672	1/2	12.60
28-673	3/4	20.51
28-674	1	32.25

MALE PLUG

STEEL



Part#	Size	List
28-675	1/8	3.26
28-639	1/4	3.55
28-640	3/8	3.75
28-676	1/2	4.39
28-677	3/4	7.27
28-678	1	17.20

FEMALE PLUG

STEEL



Part#	Size	List
28-688	1/8	2.62
28-619	1/4	3.75
28-620	3/8	3.80
28-679	1/2	4.34
28-680	3/4	8.34
28-681	1	18.28

Other sizes and materials available...just ask!

LINCOLN INTERCHANGE

- 1/4" Basic Size

Specifications

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-40° to +250°

- Brass body with steel sleeve and backnut valve material is Acetal and seal is Nitrile



MALE PIPE COUPLER



FEMALE PIPE COUPLER



Part#	Size	List
28-682	1/8	13.03
28-683	1/4	13.03

Part#	Size	List
28-684	1/4	12.56

MALE PLUG

Steel



Part#	Size	List
28-685	1/8	3.48
28-686	1/4	2.71

FEMALE PLUG

Steel



Part#	Size	List
28-687	1/4	2.71

MINI TYPE QUICK DISCONNECTS

Working Range: 0-145 psi
Temperature Range: 32°
Material: Chrome Plated Brass



Male Coupler

Female Coupler

Male Plug

Female Plug



Part#	Size	List
28-605	1/8	16.80

Part#	Size	List
28-606	1/8	16.80

Part#	Size	List
28-607	1/8	5.04

Part#	Size	List
28-608	1/8	5.04

HYDRAULIC QUICK DISCONNECTS

ISO-A Interchange

See Page 249 for Specs



Flush Face

See Page 250 for Specs



Part#	Body Size	Male NPT	Working PSI	Price
ANV-14-F	1/4	1/4	5075	18.88
ANV-14-M	1/4	1/4	5075	8.17
ANV-38-F	3/8	3/8	4550	21.16
ANV-38-M	3/8	3/8	4550	10.54
ANV-12-F	1/2	1/2	4500	21.50
ANV-12-M	1/2	1/2	4500	8.60
ANV-34-F	3/4	3/4	3625	45.75
ANV-34-M	3/4	3/4	3625	20.73
ANV-1-F	1	1	3335	68.71
ANV-1-M	1	1	3335	28.38

Part#	Body Size	Male NPT	Working PSI	Price
FF-14-F	1/4	1/4	4400	55.30
FF-14-M	1/4	1/4	4400	27.69
FF-38-12-F	3/8	1/2	4350	70.31
FF-38-12-M	3/8	1/2	4350	33.63
FF-38-F	3/8	3/8	4350	66.48
FF-38-M	3/8	3/8	4350	23.31
FF-12-F	1/2	1/2	3650	70.13
FF-12-M	1/2	1/2	3650	58.57
FF-34-12-SAE-F	1/2	3/4	3675	86.82
FF-34-12-SAE-M	1/2	3/4	3675	54.87
FF-34-F	3/4	3/4	3650	111.07
FF-34-M	3/4	3/4	3650	70.31
FF-1-F	1	1	3675	182.71
FF-1-M	1	1	3675	103.07

ISO-B Interchange

See Page 249 for Specs



AG Interchange

See Page 250 for Specs



Part#	Body Size	Male NPT	Working PSI	Price
HNV-18-F	1/8	1/8	5800	27.91
HNV-18-M	1/8	1/8	5800	10.54
HNV-14-F	1/4	1/4	5075	16.99
HNV-14-M	1/4	1/4	5075	7.74
HNV-38-F	3/8	3/8	4350	25.41
HNV-38-M	3/8	3/8	4350	11.01
HNV-12-F	1/2	1/2	4060	31.65
HNV-12-M	1/2	1/2	4060	13.07
HNV-34-F	3/4	3/4	2610	48.72
HNV-34-M	3/4	3/4	2610	20.77
HNV-1-F	1	1	2175	66.69
HNV-1-M	1	1	2175	27.65

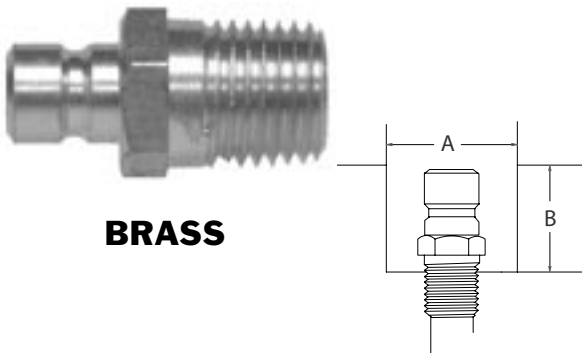
Part#	Body Size	Male NPT	Working PSI	Price
NV-14-F	1/4	1/4	5075	17.54
NV-14-M	1/4	1/4	5075	10.54
NV-38-F	3/8	3/8	4550	21.29
NV-38-M	3/8	3/8	4550	9.68
NV-12-F	1/2	1/2	3625	21.50
NV-12-M	1/2	1/2	3625	8.60
NV-34-F	3/4	3/4	3625	50.31
NV-34-M	3/4	3/4	3625	23.09
NV-1-F	1	1	3335	67.73
NV-1-M	1	1	3335	33.07

MOLD COOLANT-LINE QUICK COUPLERS

OPERATING PRESSURE:
200 PSIG (14.06 Kg/sq. cm)
WORK RANGE:
SILICONE: -90°F to 400°F (-68°C to + 205°C)
VITON: + 20°F to + 400°F (-7°C to + 205°C)



- Our coolant couplers are engineered for optimum speed and performance in connecting coolant lines to molds used for thermoplastic, thermosetting, blow molding, diecasting and on other types of tooling and equipment utilizing a constant fluid flow pumped through cooling channels.
- The quick connect feature of Our couplers greatly simplifies installation and removal of molds. It dramatically reduces machinery downtime.
- Couplers are precision machined from corrosion resistant brass and are available as straight-through or valved type. Valve prevents fluid loss through the coupler when it is disconnected.
- Standard seals are manufactured from a special silicone compound that is resistant to the destructive effects of water, glycol (anti-freeze) or air. Viton is available for use with oil or other coolants.
- Male plugs are designed to be threaded into mold coolant ports. Protective counterbored holes in the mold ports permit these plugs to be mounted below the surface greatly simplifying handling and storage of molds. Our male plugs are manufactured of corrosion resistant brass. Female plugs are intended for use on pipe nipples when the connection needs to be made outside the mold. They are machined from alloy steel.



BRASS



STEEL

MALE PLUG (BRASS)

1/4" BASIC SIZE

Part#	Size	A	B	List
29-900	1/8	0.69	0.69	1.13
29-901	1/4	0.84	0.94	1.31
29-902	3/8	1.00	0.97	1.65

3/8" BASIC SIZE

Part#	Size	A	B	List
29-906	1/4	1.00	0.94	1.52
29-907	3/8	1.00	1.13	1.65
29-908	1/2	1.81	1.25	2.83

1/2" BASIC SIZE

Part#	Size	A	B	List
29-911	1/2	1.25	1.50	4.35
29-912	3/4	1.50	1.56	6.53

FEMALE PLUG (STEEL)

1/4" BASIC SIZE

Part#	Size	List
29-903	1/8	1.48
29-904	1/4	1.57
29-905	3/8	2.18

3/8" BASIC SIZE

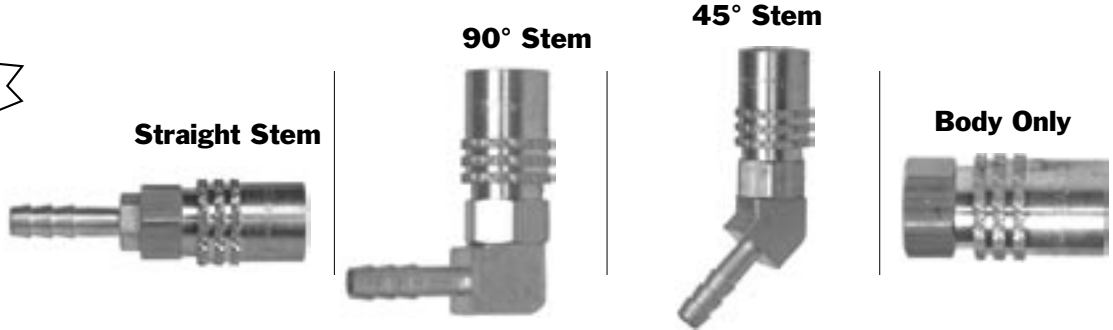
Part#	Size	List
29-909	1/4	1.96
29-910	3/8	2.65

1/2" BASIC SIZE

Part#	Size	List
29-913	1/2	6.26
29-914	3/4	10.79

Accessories

MOLD COOLANT-LINE QUICK COUPLERS
D-M-E, PARKER and FOSTER INTERCHANGE



1/4" BASIC SIZE, BRASS STRAIGHT THROUGH (Non-Valved)

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part#	List	Part#	List	Part#	List	Part#	List
1/4"	98-915	7.05	98-920	10.31	98-925	10.31	98-930	6.22
1/4" (Push On)	98-916	7.83	98-921	10.79	98-926	10.79	(1/8" Female Pipe)	
5/16"	98-917	7.05	98-922	10.31	98-927	10.31		
3/8"	98-918	7.05	98-923	8.82	98-928	10.31		
3/8" (Push On)	98-919	7.61	98-924	10.92	98-929	10.92		

1/4" BASIC SIZE, BRASS VALVED

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part#	List	Part#	List	Part#	List	Part#	List
1/4"	98-931	11.62	98-936	13.57	98-941	13.71	98-946	10.71
1/4" (Push On)	98-932	12.05	98-937	14.01	98-942	14.06	(1/8" Female Pipe)	
5/16"	98-933	11.62	98-938	13.57	98-943	13.71		
3/8"	98-934	11.62	98-939	13.57	98-944	13.71		
3/8" (Push On)	98-935	12.27	98-940	14.23	98-945	14.23		

3/8" BASIC SIZE, BRASS STRAIGHT THROUGH (Non-Valved)

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part#	List	Part#	List	Part#	List	Part#	List
3/8"	98-947	9.35	98-952	13.49	98-957	13.49	98-962	9.05
3/8" (Push On)	98-948	10.44	98-953	14.40	98-958	14.83	(1/4" Female Pipe)	
1/2"	98-949	9.79	98-954	12.09	98-959	13.49	98-986	9.61
1/2"	98-950	10.44	98-955	14.40	98-960	14.83	(3/8" Female Pipe)	
1/2" (Push On)	98-951	11.62	98-956	11.62	98-961			

3/8" BASIC SIZE, BRASS VALVED

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part#	List	Part#	List	Part#	List	Part#	List
3/8"	98-963	16.49	98-967	20.10	98-971	20.27	98-975	15.14
3/8" (Push On)	98-964	17.31	98-968	20.79	98-972	21.23	(1/4" Female Pipe)	
1/2"	98-965	14.14	98-969	20.10	98-973	20.27		
1/2"	98-966	17.40	98-970	21.01	98-974	21.10		

1/2" BASIC SIZE, BRASS STRAIGHT THROUGH (Non-Valved)

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part#	List	Part#	List	Part#	List	Part#	List
1/2"	98-976	24.71	98-979	31.48	98-982	35.84	98-985	22.23
1/2" (Push On)	98-977	25.71	98-980	32.36	98-983	36.80	(1/2" Female Pipe)	
3/4"	98-978	25.54	98-981	32.45	98-984	37.02		

Accessories

MUFFLERS

SINTERED BRONZE MUFFLER

40 Micron Sintered Bronze Element; 300 PSIG Max. Working Pressure; Temperature -65°F to 300°F



Part #	Size	Length	Hex	Price
300-020	10/32"	7/8"	13/32"	2.00
300-021	1/8"	5/16"	7/16"	1.33
300-022	1/4"	1-5/16"	9/16"	2.42
300-023	3/8"	1-19/32"	11/16"	3.13
300-024	1/2"	1-27/32"	7/8"	3.75
300-026	3/4"	1-3/16"	1-1/16"	8.76
300-028	1"	1-57/64"	1-3/8"	10.84

BREATHER VENT

BREATHER VENT

40 Micron Sintered Bronze Element; 150 PSIG Max. Working Pressure; Temperature -65°F to 300°F



Part #	Size	Length	Hex	Price
300-001	1/8"	1/2"	7/16"	1.04
300-002	1/4"	11/16"	9/16"	1.32
300-003	3/8"	53/64"	11/16"	1.82
300-004	1/2"	59/64"	7/8"	2.60
300-006	3/4"	1"	1-1/16"	8.00
300-008	1"	1-5/16"	1-5/16"	10.88

3 IN 1 ALUMINUM AIR MANIFOLD

No need to connect and disconnect every time you want to change tools. Supply 3 air tools from one outlet. These manifolds have one inlet with three outlets.

S685-4	D3408
S685-6	3104
S685-8	3106
D3404	
D3406	



Part#	Size	List
320-120	1/4" inlet three 1/4" outlets	4.32

SPEED CONTROL VALVE

Speed Control Valves provide an infinite variation of metering air flow of air valves and air cylinders. The SCV can be screwed into the exhaust port of any air valve. The speed control being effected by adjusting the rate of discharge of air from the cylinder. The speed of any operating cylinder or air tool may be increased or decreased with the adjusting screw.

After the speed control valves have been adjusted they can be locked at their settings with the lock nut.

300 PSIG Max. working pressure



Part #	Size	Length	Hex	Price
940-800	1/8"	1-3/32"	1/2"	5.40
940-801	1/4"	1-15/32"	9/16"	6.64
940-803	3/8"	1-15/32"	11/16"	8.55
940-804	1/2"	1-53/64"	7/8"	11.03
940-805	3/4"	2-3/8"	1-1/16"	24.32
940-806	1"	2-1/2"	1-5/16"	33.08

WATER NOZZLES

Lever controlled operating valve. Oil resistant, shockproof molded hard rubber nozzle. 1/4" female N.P.T.

RADIATOR WATER FAUCET



Part#	Size	List
209		
208		
8013		
8003		
320-100	1/4" FPT	20.00

MULTI-PURPOSE AIR VENT



Part #	Size	List Price
46-048	1/8"	1.81

SAFETY BLOW GUN

- N/P steel handle with plastic sleeve
- Brass Valve
- Zinc body
- Aluminum nozzle



5114		S148
51-124		D204-30
401		6475
20430AD		
Part#	Size	List
320-050	1/4" Inlet	5.27
	1/8" Outlet	

RUBBER TIPPED NOZZLE



51-521	
2058	
D201RT	
411R	
Makes positive seal between gun and fuel line or other openings. Use only on air line regulated to 30 PSI or less	
Part #	List Price
320-070	5.71

HIGH FLOW SAFETY NOZZLE



51-338	
SST10	
411BT	
2056	
Meets OSHA regulations of 30 PSI maximum outlet pressure when line pressure is 150 PSI or less. Has an air pressure bypass which prevent build up of tip pressure even if nozzle is blocked. Adapts to any blow gun with a 1/8" NPT nozzle port	
Part #	List Price
320-075	3.29

PNEUMATIC CHECK VALVES

- Max Operating Pressure: 220 psi
- Working Pressure: 14.5-145 psi
- Cracking Pressure: 2.8 psi
- Maximum Temperatures: 140° F

Materials

Body	Chrome plated Brass
Spring	Steel
O-Ring	NBR Rubber



Part#	Size	Dimensions (In.)	List
		A B	
46-200	1/4"	1.97 .67	5.31
46-201	3/8"	1.97 .83	6.86
46-202	1/2"	2.48 .98	8.51

AIR CHUCKS

HEX BALL FOOT CHUCK



Part # List Price
46-600 1/4fpt live air 2.11

**BALL FOOT CHUCK WITH
1/4 I.D. HOSE BARB**



Part # List Price
46-607 1/4 I.D. Live air 1.97

DUAL FOOT CHUCKS

6999	99941
693	50-065
108	6569
DFG-1	



Standard straight-on chuck with 30° reverse angle chuck, 1/4" NPT female thread
Part # List Price
320-000 9.25

ANGLE CHUCK 690
6172



For inner dual wheels with tilted valves. Has 6" extension and 1/4" NPT female thread
Part # List Price
320-005 6.34



Ball needle valve for air chucks or snap-on blow gun
Part# List
320-095 0.50

TANK & VENT VALVES

Three standard styles of valve bodies, complete with short core, for air lifts, water pumps, vacuum, pressurized containers, air jacks, and other pneumatic devices.
REGULAR: 300 PSI and cracking pressure 80 PSI

**1/8" NPT, .9" LONG
SPRING CORD**

Thread - .302 x 32



7/16" Hex

Part # List Price
46-620 REGULAR 2.67

**1/8NPT 1.207"LONG
SPRING CORD**

7/16" Hex



Part # List Price
46-621 REGULAR 2.95

**1/4 NPT 1"LONG
SPRING CORD**

9/16" Hex



Part # List Price
46-622 REGULAR 4.77
46-622L .. LIGHT SPRING 3.29

TANK VALVE ACCESSORIES

BLACK PLASTIC CAP

No Gasket



Part# List
46-630 0.10

SHORT NICKEL PLATED

DOME CAP

Dome skirted



type List
Part# List
46-631 0.40

**DUAL ANGLE-FOOT TRUCK
PENCIL GAUGE**



High pressure 20-120 PSI, in 2lb unit
Part# List
320-023 8.70

**DUAL STRAIGHT-FOOT
PENCIL GAUGE**



Identical to above except has straight chuck with 30° reverse angle chuck
Part# List
320-027 10.48

**Male NPT x Female NPT
360° turning swivel fitting**

360° Turning



Part # Size List Price
320-061 1/4 11.75

Social Security

A retired gentleman went to the Social Security office to apply for social security. After waiting in line a long time he got to the counter. The woman behind the counter asked him for his drivers license to verify his age. He looked in his pockets and realized he had left his wallet at home. He told the woman that he was very sorry but he seemed to have left his wallet at home. "I will have to go home and comeback later".

The woman says, "Unbotton your shirt." So he opens his shirt revealing lots of curly silver hair. She says, "That silver hair on your chest is proof enough for me." and she processed his social security application. When he gets home, the man excitedly tells his wife about his experience at the Social Security office. She said, "You should have dropped your pants, you might have gotten disability too."

Challenge

A ship, like a human being, moves best when it is slightly athwart the wind, when it has to keep it's sails tight and attend it's course.

Ships, like men, do poorly when the wind is directly behind, pushing them sloppily on their way so that no care is required in steering or in the management of sails; the wind seems favorable, for it blows in the direction one is heading, but actually is destructive because it induces a relaxation in tension and skill.

What is needed is a wind slightly opposed to the ship, for the tension can be maintained, and juices can flow and ideas can germinate; for ships, like men, respond to challenge.

-James A. Michener in Chesapeake

I tell you and you forget. I show you and you remember. I involve you and you understand.

-Eric Butterworth

STANDARD DRY GAUGES

STEEL CASE



All the gauges supplied by Midland Metal Mfg. are designed for long, reliable service under rugged conditions.

Typical applications include compressors, filter regulators, water pumps, beverage dispensing equipment, hydraulic and pneumatic systems, and other applications, where the media does not corrode brass

2" FACE 1/4" LOWER MOUNT

Part #	PSI	List Price
80-001	0-15	10.00
80-002	0-30	8.00
80-003	0-60	8.00
80-004	0-100	8.00
80-005	0-160	8.00
80-006	0-200	8.00
80-007	0-300	8.00
80-020	30-0 Vacuum	10.00



2-1/2" FACE 1/4" LOWER MOUNT

Part #	PSI	List Price
80-031	0-15	13.00
80-032	0-30	10.50
80-033	0-60	10.50
80-034	0-100	10.50
80-035	0-160	10.50
80-036	0-200	10.50

LIQUID FILLED GAUGES

STAINLESS CASE

Liquid filled gauges enhance the reliability and integrity of the measuring system for long periods. The glycerine filling helps dampen the effects of vibration and pulsation. It also lubricates the movement which extends the life of the gauge.



- Liquid Filled Gauges with a stainless case are used for protection in harsh environments.
- Stainless Steel Case
- Copper Alloy Wetted parts
- Polycarbonate window ± 1.5% of span accuracy

2-1/2" FACE 1/4" LOWER MOUNT

Part #	PSI	List Price
80-061	0-15	30.00
80-062	0-30	30.00
80-063	0-60	30.00
80-064	0-100	30.00
80-065	0-160	30.00
80-066	0-200	30.00
80-067	0-300	30.00
80-068	0-400	30.00
80-069	0-600	30.00
80-100	0-1000	30.00
80-101	0-1500	35.00
80-102	0-2000	35.00
80-103	0-3000	35.00
80-104	0-5000	40.00
80-080	Vacuum 30-0	35.00

2-1/2" FACE 1/4" CENTER BACK MOUNT

Part #	PSI	List Price
80-201	0-15	30.00
80-202	0-30	30.00

1-1/2" & 2" ABS also available

4" FACE 1/4" LOWER MOUNT

Part #	PSI	List Price
80-463	0-100	75.00

Other Gauges available upon request...Just Ask!

Accessories

TEFLON TAPE

Chemical Properties: Min. of 99% Poly-tetrafluoroethylene
Thickness: .0035", +0.001 or -0.0005"
Elongation: Min. of 50% (most of times it far exceeds)
Width: Nominal width +0.02, -0.02
Length: Nominal length + 20", -0"
Density: -0.35 to 0.40
Incompatibility: Avoid using on Moten Alkali, certain Halogen products & Flourine at high temperatures and pressures
Temperature: When heated to over 260 degrees Centigrade, it will thermally degrade and decompose and produce toxic fumes.
Government standard: Meets military specification T-27730a
Usage: To be used on all types of threaded fittings for passage of water; potable and non-potable, most chemicals, oxygen, gas, hydraulic and high pressure lines.

TEFLON TAPE



Thread Sealant

Part #	Size	List Price
982-107	1/2" x 260"	0.54
982-108	1/2" x 520"	0.65
982-109	3/4" x 260"	0.95
982-110	3/4" x 520"	1.20

POP OUT COVERED SPOOL

PREMIUM GRADE DUCT TAPE

100 MPH Tape

- Waterproof
- Polyethylene coated cloth backed tape
- Provides high tack and quick grab
- Meets U.L. No. 723 specifications
- Each roll individually shrink wrapped

PREMIUM GRADE DUCT TAPE



Part #	Size	List Price
990-128	Multi purpose 8 mil.	10.75

PRINTED CAUTION TAPE

PRINTED CAUTION TAPE



Part #	Size	List
990-143	3" x 300 ft long	12.50

ELECTRICAL TAPE

- 7 mil vinyl
- UL approved

ELECTRICAL TAPE



Part #	Size	List Price
990-157	3/4" x 60 ft long	1.85

SCRUBS IN A BUCKET



Truly portable Scrubs in a Bucket® provide, fast, easy and effective hand cleaning. Can be used anywhere, anyplace, anytime on the toughest soils, greases, tar, etc. Each dispensing canister contains 10-1/2" x 12-1/4" perforated absorbent cleaning towels. Containing a germ-fighting chemical known as Triclosan. No rinsing, no drying, no residue. Also can be used for cleaning tools and spills. On-the-spot hand cleaning when there is no sink around

Part#	Description	List
980-100	36 Scrubs™/container	18.20
980-101	72 Scrubs™/container	32.40

PIPE HANGERS AND CLAMPS

Many more sizes & styles available. Just Ask!

#350 MALLEABLE IRON BEAM CLAMP



Part#	Size	List
971-531	3/8" Short	0.97
971-532	3/8" Long	1.04
971-533	1/2"	1.47
971-534	5/8"	2.00
971-535	3/4"	2.43

BC-26 STEEL BEAM "C" CLAMP 330 LBS.



Part #	Size	List Price
971-539	3/8"	1.85

ZINC-PLATED HANGER



Part #	Size	List Price
971-494	1/2" IP, 3/4" CT	1.35
971-495	3/4" IP, 1" CT	1.35
971-496	1" IP, 1-1/4" CT	1.40

COPPER FITTING BRUSHES

- Extra thick mass of steel wire insures perfect cleaning job with minimum effort. Twisted wire handle - for copper fittings. Carbon steel brush
- Sold in boxes of 12 only



Part #	Size	List Price
990-540	3/8"	2.50
990-541	1/2"	2.50
990-542	3/4"	2.50
990-543	1"	2.80

Accessories

Cam and Groove



Aluminum

Type	A		B		C		D		E		F		DC		DP		Type
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Size
3/4"	61-911	4.35	61-921	12.41	61-931	10.11	61-941	10.81	61-951	4.70	61-961	5.30	61-971	9.30	61-981	4.32	3/4"
1"	61-912	4.62	61-922	12.89	61-932	10.73	61-942	13.24	61-952	5.05	61-962	5.92	61-972	10.41	61-982	4.95	1"
1-1/4"	61-913	5.57	61-923	13.62	61-933	11.03	61-943	12.69	61-953	6.59	61-963	7.59	61-973	11.43	61-983	5.57	1-1/4"
1-1/2"	61-914	6.14	61-924	13.92	61-934	11.81	61-944	13.46	61-954	5.84	61-964	6.86	61-974	11.14	61-984	5.14	1-1/2"
2"	61-915	5.54	61-925	19.03	61-935	14.46	61-945	15.30	61-955	8.35	61-965	7.70	61-975	13.49	61-985	6.19	2"
2-1/2"	61-916	9.95	61-926	23.27	61-936	19.27	61-946	20.51	61-956	14.14	61-966	15.32	61-976	15.58	61-986	10.57	2-1/2"
3"	61-917	12.97	61-927	35.03	61-937	23.62	61-947	23.43	61-957	15.81	61-967	18.81	61-977	19.73	61-987	11.14	3"
4"	61-918	19.62	61-928	80.32	61-938	31.86	61-948	33.95	61-958	30.16	61-968	23.57	61-978	25.49	61-988	16.00	4"

316 Stainless Steel

Type	A		B		C		D		E		F		DC		DP		Type
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Size
3/4"	63-911	14.40	63-921	20.70	63-931	20.27	63-941	24.68	63-951	12.65	63-961	16.51	63-971	17.00	63-981	9.92	3/4"
1"	63-912	17.59	63-922	29.68	63-932	26.73	63-942	32.51	63-952	18.00	63-962	21.62	63-972	24.03	63-982	11.46	1"
1-1/4"	63-913	23.43	63-923	40.32	63-933	35.49	63-943	40.16	63-953	26.78	63-963	35.70	63-973	32.35	63-983	19.92	1-1/4"
1-1/2"	63-914	26.95	63-924	43.45	63-934	46.32	63-944	44.38	63-954	32.16	63-964	44.38	63-974	35.78	63-984	21.27	1-1/2"
2"	63-915	32.16	63-925	49.35	63-935	57.43	63-945	54.24	63-955	41.89	63-965	66.86	63-975	44.49	63-985	27.11	2"
2-1/2"	63-916	55.11	63-926	75.57	63-936	80.59	63-946	80.59	63-956	57.57	63-966	88.68	63-976	60.68	63-986	40.27	2-1/2"
3"	63-917	60.78	63-927	86.43	63-937	98.59	63-947	98.57	63-957	79.00	63-967	88.68	63-977	74.00	63-987	43.89	3"
4"	63-918	93.78	63-928	123.30	63-938	129.73	63-948	133.35	63-958	121.97	63-968	138.08	63-978	98.68	63-988	64.59	4"

Brass

Type	A		B		C		D		E		F		DC		DP		Type
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Size
3/4"	44-911	7.30	44-921	14.51	44-931	14.76	44-941	15.78	44-951	8.27	44-961	8.27	44-971	13.27	44-981	7.78	3/4"
1"	44-912	8.62	44-922	17.65	44-932	17.49	44-942	17.78	44-952	9.76	44-962	10.76	44-972	15.76	44-982	8.84	1"
1-1/4"	44-913	10.54	44-923	19.95	44-933	19.51	44-943	19.95	44-953	12.49	44-963	15.27	44-973	18.51	44-983	10.27	1-1/4"
1-1/2"	44-914	12.38	44-924	21.78	44-934	21.62	44-944	21.46	44-954	14.27	44-964	14.27	44-974	19.46	44-984	9.51	1-1/2"
2"	44-915	14.84	44-925	25.81	44-935	27.49	44-945	26.97	44-955	20.22	44-965	20.32	44-975	22.00	44-985	14.03	2"
2-1/2"	44-916	22.65	44-926	36.03	44-936	35.68	44-946	38.54	44-956	25.51	44-966	25.51	44-976	27.00	44-986	17.24	2-1/2"
3"	44-917	27.97	44-927	45.78	44-937	45.32	44-947	46.54	44-957	37.38	44-967	38.76	44-977	36.95	44-987	20.32	3"
4"	44-918	49.43	44-928	62.30	44-938	69.68	44-948	71.54	44-958	59.89	44-968	62.14	44-978	54.14	44-988	32.03	4"

Accessories

Hose Accessories

Insert Fittings

Hose Fittings

BRONZE INSERT FITTINGS

150 PSI Genuine red brass
- for plastic pipe

HEX MALE ADAPTERS



Plastic x Male Pipe

Part #		List Price
973-927	1 x 1	7.46
973-930	1 x 1-1/4	8.88
973-928	1-1/4 x 1-1/4	10.03
973-929	1-1/4 x 1	8.03
973-948	1-1/2 x 1-1/2	14.59
973-949	2 x 2	18.56

BRONZE TEES ALL BARB



Part #	Size	List Price
973-965	3/4	9.60
973-966	1	10.25
973-967	1-1/4	22.48

ELBOWS



(BARB X MALE PIPE)

Part #	Size	List Price
973-980	3/4 x 3/4	6.91
973-981	1 x 3/4	8.72
973-982	1 x 1	12.31

STEEL INSERT FITTINGS FOR PLASTIC PIPE

MALE ADAPTER



BARB X MALE PIPE

Part #		List Price	
973-906	1/2	25/100	1.71
973-907	3/4	25/10	2.16
973-908	1	16/48	2.66
973-909	1-1/4	12/36	3.38
973-910	1-1/2	6/36	6.03
973-911	2	5/25	7.07
973-912	2-1/2	1/3	14.58
973-877	3	1/3	19.89
973-914	4	1/3	27.50

REDUCING ADAPTER



(INSERT X NPT)

Part #		List Price
974-264	3/4 x 1/2	6.80
974-265	1 x 3/4	6.80
974-266	1-1/4 x 1	9.00
974-267	1-1/2 x 1-1/4	11.93

COUPLINGS



BARB X BARB

Part #		List Price	
973-900	1/2	30/120	1.30
973-901	3/4	20/100	1.98
973-902	1	20/100	2.97
973-903	1-1/4	16/64	3.74
973-904	1-1/2	12/48	4.86
973-905	2	5/25	7.25

HOSE NIPPLES

STEEL HOSE NIPPLES



Part #	Hose Size	List Price
973-850	1/2"	3.34
973-851	3/4"	4.01
973-852	1"	4.01
973-853	1-1/4"	5.13
973-854	1-1/2"	5.79
973-855	2"	7.06
973-856	2-1/2"	15.22
973-857	3"	21.65
973-858	4"	32.00

STEEL HOSE NIPPLES

PLATED STEEL



Part #	Hose Size	List Price
973-870	1/2"	3.56
973-871	3/4"	3.71
973-872	1"	4.68
973-873	1-1/4"	5.57
973-874	1-1/2"	6.46
973-875	2"	7.80
973-876	2-1/2"	16.34
973-877	3"	19.90
973-878	4"	28.59

STEEL HOSE MENDER



Part #	Hose Size	List Price
973-890	1/2"	2.70
973-891	3/4"	3.34
973-892	1"	4.16
973-893	1-1/4"	6.55
973-894	1-1/2"	6.48
973-895	2"	8.01

More sizes available...just ask!

Success

"To laugh often and love much; to win the respect of intelligent persons and the affection of children; to earn the approbation of honest critics and endure betrayal of false friends; to appreciate beauty; to find the best in others; to give of one's self; to leave the world a little better, whether by a healthy child, a garden patch or a redeemed social condition; to have played and laughed with enthusiasm and sung with exultation; to know even one life has breathed easier because you have lived... this is to have succeeded!"

-Ralph Waldo Emerson

Thread Chart	
Size	JIC Thread
1/8	3/16-24
3/16	3/8-24
1/4	7/16-20
5/16	1/2-20
3/8	9/16-18
1/2	3/4-16
5/8	7/8-14
3/4	1 1/6-12
1	1 5/16-12

STRAIGHT



Part #	JIC Thread	Pipe Size	List
28-701	7/16-20	1/8	1.10
28-702	7/16-20	1/4	1.74
28-703	7/16-20	3/8	2.90
28-704	1/2-20	1/8	11.70
28-705	1/2-20	1/4	4.32
28-706	9/16-18	1/8	3.80
28-707	9/16-18	1/4	1.53
28-708	9/16-18	3/8	1.98
28-709	9/16-18	1/2	4.33
28-710	3/4-16	1/4	6.39
28-711	3/4-16	3/8	4.28
28-712	3/4-16	1/2	4.42
28-713	3/4-16	3/4	8.91
28-714	7/8-14	3/8	7.25
28-715	7/8-14	1/2	6.17
28-716	7/8-14	3/4	9.00
28-717	1-1/16-12	3/4	7.88
28-718	1-5/16-12	1	18.90

45° FORGED ELBOW



Part #	JIC Thread	Male Pipe	List
28-722F	7/16-20	1/8	4.12
28-724F	7/16-20	1/4	6.18
28-726F	1/2-20	1/8	POR
28-728F	1/2-20	1/4	3.94
28-729F	9/16-18	1/8	7.25
28-731F	9/16-18	1/4	4.28
28-733F	9/16-18	3/8	5.27
28-734F	9/16-18	1/2	8.34
28-736F	3/4-16	3/8	7.29
28-738F	3/4-16	1/2	19.77
28-740F	7/8-14	1/2	9.00
28-742F	1-1/16-12	3/4	41.31

90° ELBOW



Part #	JIC Thread	Pipe Size	List
28-746	9/16-18	1/4	6.31
28-747	9/16-18	3/8	8.18

BULKHEAD TUBE UNION



Part #	JIC Thread	Pipe Size	List
28-796	7/16-20	1/8	21.77
28-797	9/16-18	1/4	27.78
28-798	3/4-16	1/8	36.71
28-955	1-1/16-12	3/8	29.61

90° FORGED ELBOW



Part #	JIC Thread	Pipe Size	List
28-760F	7/16-20	1/8	4.01
28-762F	7/16-20	1/4	5.24
28-766F	1/2-20	1/4	6.11
28-768F	9/16-18	1/8	12.49
28-770F	9/16-18	1/4	8.89
28772F	9/16-18	3/8	8.09
28-773F	9/16-18	1/2	12.38
28-774F	3/4-16	3/8	7.87
28-777F	3/4-16	1/2	10.39
28-778F	3/4-16	3/4	11.46
28-780F	7/8-14	1/2	11.09
28-781F	1-1/16-12	1/2	25.05
28-783F	1-1/16-12	3/4	20.05
28-784F	1-5/16-12	3/4	28.66
28-786F	1-5/16-12	1	27.50

STRAIGHT



Part #	JIC Thread	Pipe Size	List
28-753	9/16-18	1/4	4.60
28-754	9/16-18	3/8	8.44
28-756	3/4-16	1/2	8.44

FEMALE STRAIGHT ADAPTER



Part #	JIC Thread	Pipe Size	List
28-957	7/16-20	1/8	4.29
28-958	7/16-20	1/4	3.18
28-959	9/16-18	1/4	3.96
28-960	9/16-18	3/8	7.61
28-961	3/4-16	3/8	4.78
28-962	3/4-16	1/2	6.04
28-963	7/8-14	1/2	7.84
28-964	1-1/16-12	3/4	13.74

STRAIGHT TUBE UNION



Part #	OD A Diam.	B Diam.	List	
28-966	1/4	7/16-20	7/16-20	3.61
28-969	3/8	9/16-18	9/16-18	3.74
28-970	1/2	3/4-16	3/4-16	4.20
28-971	3/4	1-1/16-12	1-1/16-12	15.28
28-972	1	1-5/16-12	1-5/16-12	22.77

TUBE TEE



Part #	JIC Thread	Pipe Size	List
28-981	7/16-20	1/4	16.07
28-982	9/16-18	3/8	15.97
28-983	3/4-16	1/2	18.74

FEMALE ELBOW (FORGED BODY)



Part #	JIC Thread	Pipe Size	List
28-973	7/16-20	1/8	4.16
28-974	7/16-20	1/4	6.53
28-975	9/16-18	1/4	6.49

Brass Adapters

MALE BSPP NIPPLE



Part#	Size	List
28-800	1/8 x 1/8	3.86
28-801	1/4 x 1/8	5.36
28-802	1/4 x 1/4	5.54
28-803	3/8 x 1/8	7.74
28-804	3/8 x 1/4	6.93
28-805	3/8 x 3/8	8.32
28-806	1/2 x 1/4	15.44
28-807	1/2 x 3/8	15.44
28-808	1/2 x 1/2	15.44
28-809	3/4 x 3/8	15.26
28-810	3/4 x 1/2	16.20
28-811	3/4 x 3/4	28.80

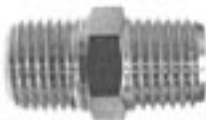
MALE



BSPT X MALE NPT NIPPLE

Part#	Size	List
28-815	1/8 x 1/8	9.95
28-816	1/4 x 1/4	11.03
28-817	3/8 x 3/8	13.54
28-818	1/2 x 1/2	21.06
28-819	3/4 x 3/4	43.49

BSPT NIPPLE



Part#	Size	List
28-820	1/8 x 1/8	3.38
28-821	1/4 x 1/8	4.97
28-822	1/4 x 1/4	5.04
28-823	3/8 x 1/8	6.95
28-824	3/8 x 1/4	6.55
28-825	3/8 x 3/8	6.55
28-826	1/2 x 1/8	18.43
28-827	1/2 x 1/4	11.48
28-828	1/2 x 3/8	11.48
28-829	1/2 x 1/2	10.91
28-830	3/4 x 1/4	33.88
28-831	3/4 x 3/8	31.68
28-832	3/4 x 1/2	15.84
28-833	3/4 x 3/4	17.64

BSPP COUNTERSUNK SEALED PLUG



Part#	Size	List
28-835	1/8	3.56
28-836	1/4	4.36
28-837	3/8	6.30
28-838	1/2	12.49

BSPT HEX COUNTERSUNK PLUG



Part#	Size	List
28-840	1/8	2.30
28-841	1/4	3.96
28-842	3/8	7.65
28-843	1/2	14.67
28-844	3/4	27.07
28-845	1	39.38

BSPT SQUARE HEAD PLUG



Part#	Size	List
28-848	1/8	28.80
28-849	1/4	32.26
28-850	3/8	30.24
28-851	1/2	25.06
28-852	3/4	40.90
28-853	1	23.15

FEMALE BSP CAP



Part#	Size	List
28-855	1/8	4.36
28-856	1/4	5.36
28-857	3/8	7.74
28-858	1/2	15.84

BSPT MALE x FEMALE NPT



Part#	Size	List
28-860	1/8 x 1/8	6.48
28-861	1/4 x 1/4	10.31
28-862	3/8 x 3/8	20.34
28-863	1/2 x 1/2	47.52
28-864	3/4 x 3/4	47.77

NPT MALE x FEMALE BSP



Part#	Size	List
28-867	1/8 x 1/8	7.97
28-868	1/4 x 1/4	10.89
28-869	3/8 x 3/8	25.07
28-870	1/2 x 1/2	40.03
28-871	3/4 x 3/4	48.10

BUSHING

BSPT MALE x BSP FEMALE



Part#	Size	List
28-873	1/4 x 1/8	3.96
28-874	3/8 x 1/8	5.13
28-875	3/8 x 1/4	5.13
28-876	1/2 x 1/4	9.09
28-877	1/2 x 3/8	9.09
28-878	3/4 x 1/2	12.89

All fittings are nickel plated.

Brass

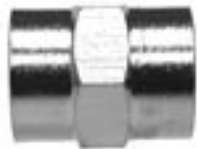
Brass Adapters

**MALE BSPP
x FEMALE BSPP BUSHING**



Part#	Size	List
28-880	1/8 x 1/8	4.57
28-881	1/8 x 1/4	5.94
28-882	1/4 x 1/8	4.75
28-883	1/4 x 1/4	5.76
28-884	1/4 X 3/8	9.32
28-885	3/8 x 1/8	6.55
28-886	3/8 x 1/4	5.54
28-887	3/8 x 3/8	15.26
28-888	3/8 x 1/2	16.24
28-889	1/2 x 1/4	12.49
28-890	1/2 x 3/8	11.48
28-891	1/2 x 1/2	22.79

**FEMALE
BSP COUPLING**



Part#	Size	List
28-894	1/8 x 1/8	3.78
28-895	1/4 x 1/8	10.30
28-896	1/4 x 1/4	6.16
28-897	3/8 x 1/8	14.47
28-898	3/8 x 1/4	12.67
28-899	3/8 x 3/8	11.09
28-900	1/2 x 1/4	16.24
28-901	1/2 x 3/8	16.45
28-902	1/2 x 1/2	22.65

All fittings are nickel plated.

90° BSPT MALE ELBOW



Part#	Size	List
28-905	1/8 x 1/8	3.92
28-906	1/4 x 1/4	12.83
28-907	3/8 x 3/8	12.93
28-908	1/2 x 1/2	28.76

90° BSPT x BSP FEMALE



Part#	Size	List
28-911	1/8 x 1/8	7.92
28-912	1/4 x 1/4	12.10
28-913	3/8 x 3/8	17.42
28-914	1/2 x 1/2	26.35

90° BSP FEMALE ELBOW



Part#	Size	List
28-917	1/8 x 1/8	8.93
28-918	1/4 x 1/4	15.26
28-919	3/8 x 3/8	19.80
28-920	1/2 x 1/2	31.86

MALE BSPT TEE



Part#	Size	List
28-924	1/8 x 1/8	11.07
28-925	1/4 x 1/4	18.04
28-926	3/8 x 3/8	22.00

BSP FEMALE TEE



Part#	Size	List
28-930	1/8 x 1/8	10.51
28-931	1/4 x 1/4	17.03
28-932	3/8 x 3/8	25.74
28-933	1/2 x 1/2	37.22

**BRANCH TEE BSPT
MALE x BSP FEMALE**



Part#	Size	List
28-940	1/8 x 1/8	11.30
28-941	1/4 x 1/4	17.03
28-942	3/8 x 3/8	25.74
28-943	1/2 x 1/2	37.22

**BRANCH MALE RUN
BSPP TEE**



Part#	Size	List
28-947	1/8 x 1/8	10.51
28-948	1/4 x 1/4	17.03
28-949	3/8 x 3/8	25.74
28-950	1/2 x 1/2	37.22

**FEMALE
BSP CROSS**



Part#	Size	List
28-952	1/8 x 1/8	20.20
28-953	1/4 x 1/4	28.91
28-954	3/8 x 3/8	39.02

Brass

CONFORMANCE

- SAE J514
- 30-Degree Chamfers - Most NPSM pipe swivel union fittings have 30-degree chamfers on NPTF male end of fittings. This chamfer is optional per SAE J514. If chamfer is mandatory, consult with our customer service department to verify chamfer exists on items you are requesting.
- Temperature Range: -65°F to +400°F

MATERIALS

- Steel - Carbon steel Zinc plated with yellow Dichromate per ASTM B633-98 (Type II SC-2).

Torque Values: The torque values provide benchmarks that we believe give optimum results for leak free connections. Actual torque values should be based on individual applications.

Caution: NPSM pipe swivel unions are not designed to provide structural support for other components

WORKING PRESSURES

The following table lists the recommended working pressures for steel NPSM pipe swivel union hydraulic fittings made in accordance with SAE standard J514. Many factors such as pulsing, vibration, mechanical shock and overtightening may affect the integrity of the fitting and swivel union connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.

SAE J514 NPSM PRESSURE RATINGS

Dash Size	NPSM Thread Size	4 TO 1 Minimum Burst PSI
-2	1/8-27	5000
-4	1/4-18	5000
-6	3/8-18	4000
-8	1/2-14	3500
-12	3/4-14	2250
-16	1-11 1/2	2000
-20	1 1/4-11 1/2	1625
-24	1 1/2-11 1/2	1250
-32	2-11 1/2	1125

STEEL PIPE SWIVEL ASSEMBLY INSTRUCTIONS

RECOMMENDED

- Step 1.** Inspect male pipe fitting connecting to swivel and confirm that it has an internal 30-degree chamfer. Do not install into union if chamfer is missing.
- Step 2.** Lubricate the threads and the entire chamfered area of male fitting with hydraulic fluid or other light weight lubricant.
- Step 3.** Install lubricated pipe fitting into swivel nut and turn nut until finger tight.
- Step 4.** Place wrench on hex of male fitting to prevent male fitting from turning, and torque swivel nut to the values in the following table.

Caution: When torquing swivel nut on straight swivel union fittings, it may be necessary to also place a wrench on the fitting wrench pad to prevent the fitting from backing out of its port while torquing the swivel nut.

Dash Size	NPSM Thread Size	Torque Foot/LBS
-2	1/8-27	13
-4	1/4-18	20
-6	3/8-18	25
-8	1/2-14	47
-12	3/4-14	84
-16	1-11 1/2	129
-20	1 1/4-11 1/2	152
-24	1 1/2-11 1/2	152
-32	2-11 1/2	300

ALTERNATE ASSEMBLY METHOD

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Place wrench on hex of male pipe fitting and consider this wrench in the 12 o'clock position.
- Step 3.** Lightly wrench tighten the swivel union nut so that the wrench is as near the 3 o'clock position as possible.
- Step 5.** Rotate wrench in 3 o'clock position counterclockwise to no less than the 1 o'clock position, but no more than the 12 o'clock position.

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

STEEL PIPE SWIVEL ADAPTERS

MALE PIPE SWIVEL ADAPTER

SAE 140130



Part #	Male Pipe 1	Female NPSM 2	Price
1404-2-2	1/8	1/8	1.76
1404-2-4	1/8	1/4	2.49
1404-4-2	1/4	1/8	2.15
1404-4-4	1/4	1/4	2.06
1404-4-6	1/4	3/8	2.75
1404-4-8	1/4	1/2	16.86
1404-6-4	3/8	1/4	3.27
1404-6-6	3/8	3/8	2.88
1404-6-8	3/8	1/2	3.91
1404-6-12	3/8	3/4	POR
1404-8-4	1/2	1/4	5.07
1404-8-6	1/2	3/8	4.04
1404-8-8	1/2	1/2	3.27
1404-8-12	1/2	3/4	7.65
1404-12-6	3/4	3/8	18.32
1404-12-8	3/4	1/2	6.62
1404-12-12	3/4	3/4	5.33
1404-12-16	3/4	1	10.79
1404-16-8	1	1/2	40.46
1404-16-12	1	3/4	9.07
1404-16-16	1	1	7.61
1404-16-20	1	1-1/4	19.74
1404-20-16	1-1/4	1	33.84
1404-20-20	1-1/4	1-1/4	14.66
1404-20-24	1-1/4	1-1/2	36.81
1404-24-20	1-1/2	1-1/4	37.41
1404-24-24	1-1/2	1-1/2	19.87
1404-32-32	2	2	44.85

Also available in Stainless Steel

More sizes available

-Available in a Restrictor-

"If something comes to live in others because of you, then you have made an approach to immortality."

-Norman Cousins

FEMALE PIPE SWIVEL ADAPTER

SAE 140131



Part #	Female Pipe 1	Female NPSM 2	Price
1405-2-2	1/8	1/8	1.59
1405-2-4	1/8	1/4	4.34
1405-4-2	1/4	1/8	27.22
1405-4-4	1/4	1/4	1.76
1405-4-6	1/4	3/8	4.04
1405-6-4	3/8	1/4	3.44
1405-6-6	3/8	3/8	2.84
1405-6-8	3/8	1/2	4.13
1405-8-4	1/2	1/4	29.84
1405-8-6	1/2	3/8	5.33
1405-8-8	1/2	1/2	3.61
1405-8-12	1/2	3/4	12.99
1405-12-8	3/4	1/2	12.69
1405-12-12	3/4	3/4	6.19
1405-12-16	3/4	1	25.76
1405-16-12	1	3/4	8.86
1405-16-16	1	1	9.46
1405-20-20	1-1/4	1-1/4	15.18
1405-24-24	1-1/2	1-1/2	31.61
1405-32-32	2	2	48.20

Also available in Stainless Steel

FEMALE SWIVEL UNION



Part #	Female NPSM 1	Female NPSM 2	Price
1406-4-4	1/4	1/4	19.87
1406-6-6	3/8	3/8	23.31
1406-8-8	1/2	1/2	26.57
1406-12-12	3/4	3/4	42.66
1406-16-16	1	1	77.79

Steel Pipe Swivels **Hydraulic Adapters** Steel Pipe Swivels

MALE PIPE ELBOW SWIVEL ADAPTER

SAE 140230



Part #	Male Pipe 1	Female NPSM 2	Price
1501-2-2	1/8	1/8	2.80
1501-2-4	1/8	1/4	3.66
1501-4-2	1/4	1/8	3.61
1501-4-4	1/4	1/4	3.23
1501-4-6	1/4	3/8	4.26
1501-4-8	1/4	1/2	12.69
1501-6-4	3/8	1/4	5.20
1501-6-6	3/8	3/8	4.90
1501-6-8	3/8	1/2	5.76
1501-6-12	3/8	3/4	45.80
1501-8-4	1/2	1/4	5.33
1501-8-6	1/2	3/8	5.38
1501-8-8	1/2	1/2	5.89
1501-8-12	1/2	3/4	8.94
1501-12-6	3/4	3/8	8.56
1501-12-8	3/4	1/2	9.20
1501-12-12	3/4	3/4	9.46
1501-12-16	3/4	1	20.30
1501-16-8	1	1/2	33.84
1501-16-12	1	3/4	16.00
1501-16-16	1	1	15.52
1501-16-20	1	1-1/4	52.46
1501-20-12	1-1/4	3/4	49.58
1501-20-16	1-1/4	1	36.21
1501-20-20	1-1/4	1-1/4	32.72
1501-20-24	1-1/4	1-1/2	128.05
1501-24-20	1-1/2	1-1/4	50.61
1501-24-24	1-1/2	1-1/2	43.99
1501-32-32	2	2	100.62

Also available in Stainless Steel

More sizes available

-Available in a Restrictor-

EXTRA LONG MALE PIPE ELBOW



Part #	Male Pipe 1	Female NPSM 2	Price
1501-LL-4-4	1/4	1/4	5.72
1501-LL-6-6	3/8	3/8	9.46
1501-LL-8-8	1/2	1/2	10.92
1501-LL-12-12	3/4	3/4	17.59
1501-LL-16-16	1	1	27.99

FEMALE UNION ELBOW SWIVEL ADAPTER



Part #	Female Pipe 1	Female NPSM 2	Price
1502-2-2	1/8	1/8	3.05
1502-2-4	1/8	1/4	14.62
1502-4-2	1/4	1/8	6.67
1502-4-4	1/4	1/4	3.64
1502-4-6	1/4	3/8	10.11
1502-6-4	3/8	1/4	5.85
1502-6-6	3/8	3/8	5.63
1502-6-8	3/8	1/2	7.10
1502-8-4	1/2	1/4	8.30
1502-8-6	1/2	3/8	7.01
1502-8-8	1/2	1/2	7.53
1502-8-12	1/2	3/4	14.62
1502-12-8	3/4	1/2	10.92
1502-12-12	3/4	3/4	11.48
1502-12-16	3/4	1	23.26
1502-16-12	1	3/4	15.74
1502-16-16	1	1	17.85
1502-20-20	1-1/4	1-1/4	31.13
1502-24-24	1-1/2	1-1/2	73.06
1502-32-32	2	2	146.20

Also available in Stainless Steel

More sizes available

My father used to play with my brother and me in the yard. Mother would come out and say, "You're tearing up the grass."

"We're not raising grass," Dad would reply. "We're raising boys."

-Harmon Killebrew

MALE 45° PIPE ELBOW SWIVEL ADAPTER



Part #	Male Pipe 1	Female NPSM 2	Price
1503-2-2	1/8	1/8	2.84
1503-2-4	1/8	1/4	9.50
1503-4-2	1/4	1/8	4.17
1503-4-4	1/4	1/4	3.40
1503-4-6	1/4	3/8	7.61
1503-6-4	3/8	1/4	4.26
1503-6-6	3/8	3/8	4.73
1503-6-8	3/8	1/2	7.40
1503-8-4	1/2	1/4	10.79
1503-8-6	1/2	3/8	5.93
1503-8-8	1/2	1/2	5.98
1503-8-12	1/2	3/4	14.36
1503-12-6	3/4	3/8	21.50
1503-12-8	3/4	1/2	10.54
1503-12-12	3/4	3/4	8.99
1503-12-16	3/4	1	25.37
1503-16-12	1	3/4	17.37
1503-16-16	1	1	16.64
1503-16-20	1	1-1/4	33.54
1503-20-16	1-1/4	1	26.10
1503-20-20	1-1/4	1-1/4	23.99
1503-24-24	1-1/2	1-1/2	47.09
1503-32-32	2	2	98.04

*Also available in Stainless Steel
More sizes available*

FEMALE 45° UNION ELBOW SWIVEL ADAPTER



Part #	Female Pipe 1	Female NPSM 2	Price
1504-2-2	1/8	1/8	5.85
1504-4-4	1/4	1/4	5.38
1504-6-4	3/8	1/4	8.51
1504-6-6	3/8	3/8	6.58
1504-8-6	1/2	3/8	5.89
1504-8-8	1/2	1/2	8.13
1504-12-12	3/4	3/4	12.26
1504-16-16	1	1	19.52
1504-20-20	1-1/4	1-1/4	37.84
1504-24-24	1-1/2	1-1/2	44.20

*Also available in Stainless Steel
More sizes available*

MALE SWIVEL BRANCH TEE



Part #	Male Pipe 1	Female NPSM 2 & 3	Price
1601-2-2	1/8	1/8	8.82
1601-4-4	1/4	1/4	6.58
1601-6-4	3/8	1/4	8.56
1601-6-6	3/8	3/8	8.51
1601-6-8	3/8	1/2	11.74
1601-8-4	1/2	1/4	11.31
1601-8-6	1/2	3/8	12.08
1601-8-8	1/2	1/2	11.48
1601-12-8	3/4	1/2	15.39
1601-12-12	3/4	3/4	18.23
1601-16-12	1	3/4	26.23
1601-16-16	1	1	32.12
1601-20-20	1-1/4	1-1/4	52.20
1601-24-24	1-1/2	1-1/2	81.57

FEMALE SWIVEL TEE



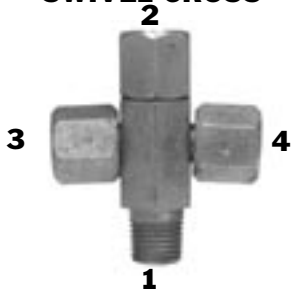
Part #	Female Pipe 1	Female NPSM 2 & 3	Price
1602-2-2	1/8	1/8	7.48
1602-4-4	1/4	1/4	8.34
1602-6-4	3/8	1/4	8.39
1602-6-6	3/8	3/8	8.60
1602-8-6	1/2	3/8	12.94
1602-8-8	1/2	1/2	11.65
1602-12-8	3/4	1/2	26.23
1602-12-12	3/4	3/4	21.46
1602-16-12	1	3/4	32.21
1602-16-16	1	1	41.54
1602-20-20	1-1/4	1-1/4	66.78
1602-24-24	1-1/2	1-1/2	125.69

FEMALE SWIVEL UNION TEE



Part #	Female		Price
	NPSM 1	NPSM 2 & 3	
1603-2-2.....	1/8.....	1/8.....	10.19
1603-4-4.....	1/4.....	1/4.....	7.14
1603-6-6.....	3/8.....	3/8.....	9.37
1603-8-8.....	1/2.....	1/2.....	11.18
1603-12-12.....	3/4.....	3/4.....	22.70
1603-16-16.....	1.....	1.....	48.03
1603-20-20.....	1-1/4.....	1-1/4.....	83.85

SWIVEL CROSS



Part #	Male	Female	Price
	Pipe 1	NPSM 2,3 & 4	
1604-4-4.....	1/4.....	1/4.....	18.15
1604-6-6.....	3/8.....	3/8.....	POR
1604-8-8.....	1/2.....	1/2.....	POR

Proud Father

A man has six children and is very proud of his achievement. He is so proud of himself that he starts calling his wife "Mother of Six" in spite of her objections. One night they go to a party. The man decides that it's time to go home, and wants to find out if his wife is ready to leave as well. He shouts at the top of his voice, "Shall we go home Mother of Six?" His wife, irritated by her husbands lack of discretion shouts back... "Anytime you're ready, Father of Four

"Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness, that most frighten us. We ask ourselves, who am I to be brilliant, gorgeous, talented, and fabulous? Actually who are you not to be? You are a child of God. Your playing small doesn't serve the world. There is nothing enlightened about shrinking so that other people won't feel insecure around you. We are born to make manifest the Glory of God that is within us. It's not just in some of us, it's in everyone, and as we let our own light shine, we consciously give other people permission to do the same. As we are liberated from our own fear, our presence automatically liberates others."

-Nelson Mandela
Inaugural Address

37° JIC ADAPTERS

Straights Pg. 200-205
 Shapes Pg. 206-210
 Bulkheads Pg. 210-211
 Female Swivels Pg. 224-227
 O-Ring Fittings Pg. 227-230

Caution: 37-Degree flared fittings are not designed to provide structural support for other components

CONFORMANCE

- SAE J514
- MS51500-MS51534
- Temperature Range: -65°F to +400°F

MATERIALS

- Steel-Carbon steel plated zinc with yellow dichromate per ASTM B633-98 (Type II SC-2)

WORKING PRESSURES

The following table lists the recommended working pressures for steel 37° flare hydraulic tube fittings manufactured in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock, and overtightening may affect the integrity of the fitting connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or type thread, use the lower pressure rating of the two threads.

SAE J514 37-DEGREE FLARED FITTINGS PRESSURE RATING

Dash Size	Flared Thread Size	4 TO 1 Minimum Burst PSI
-2	5/16-24	5000
-3	3/8-24	5000
-4	7/16-20	5000
-5	1/2-20	5000
-6	9/16-18	5000
-8	3/4-16	4500
-10	7/8-14	3500
-12	1 1/16-12	3500
-14	1 3/16-12	3000
-16	1 5/16-12	3000
-20	1 5/8-12	2500
-24	1 7/8-12	2000
-32	2 1/2-12	1500

37° FLARED FITTING ASSEMBLY INSTRUCTIONS

RECOMMENDED

- Step 1.** Inspect for possible contamination or damage from shipping or handling. Sealing surface should be smooth. Annular tool marks of (100uin) concentric with thread permissible.
- Step 2.** Lubricate the threads and the entire surface of the cone with hydraulic fluid or a light lubricant.
- Step 3.** Align mating components for hand connection and turn flare nut until sealing surfaces make full contact.
- Step 4.** Torque nut to the values shown on the following table. If a wrench pad is provided next to nut, place a second wrench on pad to prevent flare from rotating while being torqued.
- Step 5.** When torquing nut onto a straight flared fitting, it may be necessary to also place a wrench on the flared fitting wrench pad to prevent it from turning during assembly.

ALTERNATE ASSEMBLY METHOD

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Lightly wrench tighten the nut until there is firm resistance.
- Step 3.** Place a wrench on wrench pad next to nut as near the 6 o'clock as possible
- Step 4.** Place second wrench on nut as near the 3 o'clock position as possible.
- Step 5.** Turn nut clockwise to no less than the 4 o'clock position and no more than the 6 o'clock position. Required rotation generally decreases as size increases.

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

Dash Size	Flared Thread Size	Torque Foot/Lbs.
-2	5/16-24	6-7
-3	3/8-24	6-9
-4	7/16-20	9-12
-5	1/2-20	14-15
-6	9/16-18	18-20
-8	3/4-16	27-39
-10	7/8-1/4	36-63
-12	1 1/16-12	65-88
-14	1 3/16-12	75-103
-16	1 5/16-12	85-113
-20	1 5/8-12	115-133
-24	1 7/8-12	125-167
-32	2 1/2-12	190-258

STEEL 37° JIC FLARE TUBE FITTINGS

JIC SHORT TUBE NUT



Part #	Tube O.D	JIC Thread Size	Price
0302-4	1/4	7/16-20	0.99
0302-6	3/8	9/16-18	0.90
0302-8	1/2	3/4-16	1.42
0302-10	5/8	7/8-14	0.69
0302-12	3/4	1-1/16-12	4.17
0302-16	1	1-5/16-12	6.88

LONG JIC TUBE NUT

SAE 070111



Part #	Tube O.D	JIC Thread Size	Price
0304-4	1/4	7/16-20	0.90
0304-5	5/16	1/2-20	0.82
0304-6	3/8	9/16-18	0.82
0304-8	1/2	3/4-16	1.51
0304-10	5/8	7/8-14	1.98
0304-12	3/4	1-1/16-12	4.56
0304-14	7/8	1-3/16-12	5.12
0304-16	1	1-5/16-12	6.84
0304-20	1-1/4	1-5/8-12	14.19
0304-24	1-1/2	1-7/8-12	30.40
0304-32	2	2-1/2-12	137.60

Also available in Stainless Steel

JIC CAP

SAE 070112
MS 51532



Part #	Tube O.D	JIC Thread Size	Price
0304-C-2	1/8	5/16-24	3.57
0304-C-3	3/16	3/8-24	2.68
0304-C-4	1/4	7/16-20	0.56
0304-C-5	5/16	1/2-20	0.69
0304-C-6	3/8	9/16-18	0.77
0304-C-8	1/2	3/4-16	1.33
0304-C-10	5/8	7/8-14	2.24
0304-C-12	3/4	1-1/16-12	2.32
0304-C-14	7/8	1-3/16-12	6.24
0304-C-16	1	1-5/16-12	4.43
0304-C-20	1-1/4	1-5/8-12	7.83
0304-C-24	1-1/2	1-7/8-12	12.08
0304-C-32	2	2-1/2-12	39.90

Also available in Stainless Steel

"The future's always looked bleak till people with brains and faith and courage who dreamed and dared to take risks found a way to make it better. If we're free to dare- and we are- if we're free to give - and we are - then we're free to shape the future and have within our grasp all that we dream that future will be."

-President Ronald Reagan
1981

**JIC TUBE NUT
(SLEEVE REQUIRED)**

SAE 070110
MS 51531



Part #	Tube O.D	JIC Thread Size	Price
0318-2	1/8	5/16-24	0.65
0318-3	3/16	3/8-24	0.60
0318-4	1/4	7/16-20	0.39
0318-5	5/16	1/2-20	0.56
0318-6	3/8	9/16-18	0.65
0318-8	1/2	3/4-16	0.95
0318-10	5/8	7/8-14	1.42
0318-12	3/4	1-1/16-12	2.06
0318-14	7/8	1-3/16-12	2.84
0318-16	1	1-5/16-12	3.44
0318-20	1-1/4	1-5/8-12	6.32
0318-24	1-1/2	1-7/8-12	9.80
0318-32	2	2-1/2-12	27.91

Also available in Stainless Steel

JIC TUBE SLEEVE

SAE 070115
MS 51533



Part #	Tube O.D	Price
0319-2	1/8	0.52
0319-3	3/16	0.60
0319-4	1/4	0.30
0319-5	5/16	0.43
0319-6	3/8	0.34
0319-8	1/2	0.52
0319-10	5/8	0.69
0319-12	3/4	0.82
0319-14	7/8	1.55
0319-16	1	1.59
0319-20	1-1/4	3.78
0319-24	1-1/2	6.24
0319-32	2	17.72

Also available in Stainless Steel

JIC FLARELESS TUBE NUT



Part #	Tube O.D	Thread Size	Price
V0318-3	3/16	3/8-24	55.30
V0318-4	1/4	7/16-20	3.48
V0318-5	5/16	1/2-20	5.46
V0318-6	3/8	9/16-18	3.44
V0318-8	1/2	3/4-16	4.17
V0318-10	5/8	7/8-14	5.59
V0318-12	3/4	1-1/16-12	8.56
V0318-16	1	1-5/16-12	17.63
V0318-20	1-1/4	1-5/8-12	34.79
V0318-24	1-1/2	1-7/8-12	120.57
V0318-32	2	2-1/2-12	328.56

JIC FLARELESS TUBE-SLEEVE



Part #	Tube O.D	Price
V0319-3	3/16	18.62
V0319-4	1/4	2.92
V0319-5	5/16	5.20
V0319-6	3/8	3.18
V0319-8	1/2	4.26
V0319-10	5/8	4.64
V0319-12	3/4	5.46
V0319-16	1	15.65
V0319-20	1-1/4	23.18
V0319-24	1-1/2	101.09
V0319-32	2	119.50

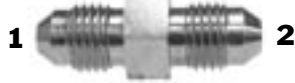
JIC BRAZE TUBE UNION



Part #	Braze Port 1	JIC Thread Size 2	Price
0403-4	1/4	7/16-20	0.90
0403-6	3/8	9/16-18	1.12
0403-8	1/2	3/4-16	1.59
0403-10	5/8	7/8-14	2.15
0403-12	3/4	1-1/16-12	3.14
0403-14	7/8	1-3/16-12	7.61
0403-16	1	1-5/16-12	4.69
0403-20	1-1/4	1-5/8-12	6.71
0403-24	1-1/2	1-7/8-12	16.21
0403-32	2	2-1/2-12	73.06

JIC TUBE UNION

SAE 070101
MS 51501



Part #	Thread Size 1	Thread Size 2	Price
2403-2	5/16-24	5/16-24	12.86
2403-3	3/8-24	3/8-24	3.35
2403-4	7/16-20	7/16-20	1.16
2403-5	1/2-20	1/2-20	1.85
2403-6	9/16-18	9/16-18	1.33
2403-6-4	9/16-18	7/16-20	2.32
2403-6-5	9/16-18	1/2-20	7.74
2403-8	3/4-16	3/4-16	2.06
2403-8-4	3/4-16	7/16-20	10.41
2403-8-6	3/4-16	9/16-18	2.97
2403-10	7/8-14	7/8-14	3.44
2403-10-4	7/8-14	7/16-20	15.82
2403-10-6	7/8-14	9/16-18	9.55
2403-10-8	7/8-14	3/4-16	4.04
2403-12	1-1/16-12	1-1/16-12	4.43
2403-12-6	1-1/16-12	9/16-18	26.70
2403-12-8	1-1/16-12	3/4-16	7.01
2403-12-10	1-1/16-12	7/8-14	6.15
2403-14	1-3/16-12	1-3/16-12	6.84
2403-16	1-5/16-12	1-5/16-12	6.41
2403-16-10	1-5/16-12	7/8-14	18.96
2403-16-12	1-5/16-12	1-1/16-12	10.45
2403-20	1-5/8-12	1-5/8-12	11.18
2403-20-12	1-5/8-12	1-1/16-12	39.43
2403-20-16	1-5/8-12	1-5/16-12	23.31
2403-24	1-7/8-12	1-7/8-12	23.22
2403-24-20	1-7/8-12	1-5/8-12	53.79
2403-32	2-1/2-12	2-1/2-12	57.02

Also available in Stainless Steel

JIC LARGE HEX TUBE UNION



Part #	JIC Thread Size 1	JIC Thread Size 2	Price
2403-LH-4	7/16-20	7/16-20	3.01
2403-LH-6	9/16-18	9/16-18	3.18
2403-LH-8	3/4-16	3/4-16	3.44
2403-LH-10	7/8-14	7/8-14	4.26
2403-LH-12	1-1/16-12	1-1/16-12	7.65
2403-LH-16	1-5/16-12	1-5/16-12	12.00
2403-LH-20	1-5/8-12	1-5/8-12	29.03

Also available in Stainless Steel

JIC MALE CONNECTOR

SAE 070102
MS 51500



Part #	JIC Thread Size	Male Pipe Thread	Price
2404-2-2	5/16-24	1/8	2.71
2404-2-4	5/16-24	1/4	17.63
2404-3-2	3/8-24	1/8	1.51
2404-3-4	3/8-24	1/4	14.28
2404-4-2	7/16-20	1/8	0.86
2404-4-4	7/16-20	1/4	1.03
2404-4-6	7/16-20	3/8	2.19
2404-4-8	7/16-20	1/2	4.56
2404-5-2	1/2-20	1/8	1.16
2404-5-4	1/2-20	1/4	1.38
2404-5-6	1/2-20	3/8	2.41
2404-6-2	9/16-18	1/8	1.33
2404-6-4	9/16-18	1/4	1.03
2404-6-6	9/16-18	3/8	1.59
2404-6-8	9/16-18	1/2	2.28
2404-6-12	9/16-18	3/4	5.16
2404-8-4	3/4-16	1/4	2.11
2404-8-6	3/4-16	3/8	1.81
2404-8-8	3/4-16	1/2	1.94
2404-8-12	3/4-16	3/4	3.87
2404-8-16	3/4-16	1	27.43
2404-10-4	7/8-14	1/4	14.32
2404-10-6	7/8-14	3/8	2.75
2404-10-8	7/8-14	1/2	2.75
2404-10-12	7/8-14	3/4	4.13
2404-10-16	7/8-14	1	28.72
2404-12-6	1-1/16-12	3/8	19.35
2404-12-8	1-1/16-12	1/2	3.87
2404-12-12	1-1/16-12	3/4	3.40
2404-12-16	1-1/16-12	1	6.06
2404-12-20	1-1/16-12	1-1/4	27.86
2404-14-12	1-3/16-12	3/4	6.97
2404-14-16	1-3/16-12	1	27.82
2404-16-12	1-5/16-12	3/4	6.02
2404-16-16	1-5/16-12	1	6.02
2404-16-20	1-5/16-12	1-1/4	12.60
2404-16-24	1-5/16-12	1-1/2	49.15
2404-20-12	1-5/8-12	3/4	32.81
2404-20-16	1-5/8-12	1	10.75
2404-20-20	1-5/8-12	1-1/4	8.73
2404-20-24	1-5/8-12	1-1/2	23.82
2404-24-16	1-7/8-12	1	43.43
2404-24-20	1-7/8-12	1-1/4	23.56
2404-24-24	1-7/8-12	1-1/2	12.77
2404-24-32	1-7/8-12	2	50.44
2404-32-16	2-1/2-12	1	100.15
2404-32-20	2-1/2-12	1-1/4	51.94
2404-32-24	2-1/2-12	1-1/2	57.53
2404-32-32	2-1/2-12	2	36.44
2404-40-40	3-12	2-1/2	142.89

Also available in Stainless Steel

-Available in a Restrictor-

JIC LONG MALE CONNECTOR

SAE 070102
MS 51500



Part #	JIC Thread		Male Pipe		Price
	Size 1	Size 2	Length		
2404-L-4-2	7/16-20	1/8	1.81		14.10
2404-L-4-4	7/16-20	1/4	2.35		20.64
2404-L-6-4	9/16-18	1/4	2.35		13.24
2404-L-6-6	9/16-18	3/8	2.50		15.61
2404-L-8-6	3/4-16	3/8	2.75		20.34
2404-L-8-8	3/4-16	1/2	3.13		23.26
2404-L-10-8	7/8-14	1/2	3.13		25.80
2404-L-12-12	1-1/16-12	3/4	3.50		25.76
2404-L-16-16	1-5/16-12	1	4		44.55

Also available in longer and extra long lengths

A new arrival in Hell was brought before the devil. The devil told his deamon to put the man to work on a rock pile with a 20-pound sledgehammer in 95-degree heat with 95% humidity. At the end of the day, the devil went to see how the man was doing, only to find him smiling and singing as he pounded rocks. The man explained that the heat and hard labor were very similar to those on his beloved farm back in Massachusetts.

The devil told his deamon to turn up the heat to 120 degrees, with 100% humidity. At the end of the next day, the devil again checked on the new man, and found him still happy to be sweating and straining. The man explained that it felt like the old days, when he had to clean out his silo in the middle of August on his beloved farm back in Massachusetts.

At that the devil told his deamon to lower the temperature for this man to -20 degrees with a 40 -mph wind. At the end of the next day the devil was confident that he would find the man miserable. But, the man was instead singing louder than ever, twirling the sledgehammer like a baton. When the devil asked him why he was so happy, the man answered, "Cold day in hell, the Patriots must have won the Super Bowl!"

JIC FEMALE CONNECTOR

SAE 070103
MS 51503



Part #	JIC Thread		Female Pipe		Price
	Size 1	Size 2	Size 1	Size 2	
2405-2-2	5/16-24	1/8			5.89
2405-3-2	3/8-24	1/8			9.03
2405-3-4	3/8-24	1/4			25.59
2405-4-2	7/16-20	1/8			1.33
2405-4-4	7/16-20	1/4			1.94
2405-4-6	7/16-20	3/8			10.11
2405-5-2	1/2-20	1/8			2.19
2405-5-4	1/2-20	1/4			2.54
2405-6-2	9/16-18	1/8			10.23
2405-6-4	9/16-18	1/4			1.68
2405-6-6	9/16-18	3/8			2.62
2405-6-8	9/16-18	1/2			8.21
2405-8-4	3/4-16	1/4			9.98
2405-8-6	3/4-16	3/8			2.49
2405-8-8	3/4-16	1/2			3.87
2405-8-12	3/4-16	3/4			18.28
2405-10-6	7/8-14	3/8			5.55
2405-10-8	7/8-14	1/2			3.78
2405-10-12	7/8-14	3/4			20.12
2405-12-8	1-1/16-12	1/2			8.99
2405-12-12	1-1/16-12	3/4			4.95
2405-12-16	1-1/16-12	1			26.32
2405-14-12	1-3/16-12	3/4			9.16
2405-16-12	1-5/16-12	3/4			16.25
2405-16-16	1-5/16-12	1			7.10
2405-16-20	1-5/16-12	1-1/4			27.05
2405-20-20	1-5/8-12	1-1/4			18.10
2405-24-24	1-7/8-12	1-1/2			35.56
2405-32-32	2-1/2-12	2			65.19

Also available in Stainless Steel

JIC TWO PIECE TUBE REDUCER



Part #	JIC Female	JIC Male	Price
	Tube O.D	Thread 2	
2407-6-4	3/8	7/16-20	4.17
2407-8-4	1/2	7/16-20	5.68
2407-8-6	1/2	9/16-18	4.69
2407-12-6	3/4	9/16-18	12.81
2407-12-8	3/4	3/4-16	6.45
2407-16-12	1	1-1/16-12	12.00
2407-20-16	1-1/4	1-5/16-12	7.00
2407-24-20	1-1/2	1-5/8-12	10.00

Also available in Stainless Steel

More sizes available

TUBE REDUCER/ EXPANDER



Part #	JIC Thread		Price
	Size 1	Size 2	
2406-6-4	9/16-18	7/16-20	2.15
2406-6-5	9/16-18	1/2-20	13.98
2406-8-4	3/4-16	7/16-20	5.12
2406-8-6	3/4-16	9/16-18	2.84
2406-8-12*	3/4-16	1-1/16-12	9.20
2406-10-4	7/8-14	7/16-20	6.28
2406-10-6	7/8-14	9/16-18	5.76
2406-10-8	7/8-14	3/4-16	3.48
2406-12-4	1-1/16-12	7/16-20	9.12
2406-12-6	1-1/16-12	9/16-18	9.07
2406-12-8	1-1/16-12	3/4-16	5.20
2406-12-10	1-1/16-12	7/8-14	6.24
2406-12-16*	1-1/16-12	1-5/16-12	14.28
2406-14-6	1-3/16-12	9/16-18	21.46
2406-14-8	1-3/16-12	3/4-16	17.54
2406-14-10	1-3/16-12	7/8-14	13.85
2406-14-12	1-3/16-12	1-1/16-12	14.53
2406-16-4	1-5/16-12	7/16-20	28.60
2406-16-6	1-5/16-12	9/16-18	34.40
2406-16-8	1-5/16-12	3/4-16	14.45
2406-16-10	1-5/16-12	7/8-14	14.23
2406-16-12	1-5/16-12	1-1/16-12	8.82
2406-16-14	1-5/16-12	1-3/16-12	18.23
2406-16-20*	1-5/16-12	1-5/8-12	30.70
2406-20-8	1-5/8-12	3/4-16	53.75
2406-20-12	1-5/8-12	1-1/16-12	21.50
2406-20-16	1-5/8-12	1-5/16-12	18.92
2406-24-16	1-7/8-12	1-5/16-12	33.58
2406-24-20	1-7/8-12	1-5/8-12	36.68
2406-32-24	2-1/2-12	1-7/8-12	73.10

*Tube Expander

**A DIME HAS 118 RIDGES
AROUND THE EDGE.**

PLUG

SAE 070109
MS 51518



Part #	Tube	JIC Thread	Price
	O.D.	Size	
2408-2	1/8	5/16-24	2.75
2408-3	3/16	3/8-24	2.75
2408-4	1/4	7/16-20	0.90
2408-5	5/16	1/2-20	1.29
2408-6	3/8	9/16-18	0.90
2408-8	1/2	3/4-16	1.46
2408-10	5/8	7/8-14	1.89
2408-12	3/4	1-1/16-12	3.05
2408-14	7/8	1-3/16-12	4.82
2408-16	1	1-5/16-12	4.60
2408-20	1-1/4	1-5/8-12	7.65
2408-24	1-1/2	1-7/8-12	20.34
2408-32	2	2-1/2-12	50.31

JIC UNION ELBOW



Part #	JIC Thread		Price
	Size 1	Size 2	
2500-2-2	5/16-24	5/16-24	27.95
2500-3-3	3/8-24	3/8-24	3.96
2500-4-4	7/16-20	7/16-20	2.32
2500-5-5	1/2-20	1/2-20	3.40
2500-6	9/16-18	9/16-18	3.14
2500-6-4	9/16-18	7/16-20	3.61
2500-8-8	3/4-16	3/4-16	4.56
2500-8-4	3/4-16	7/16-20	22.23
2500-8-6	3/4-16	9/16-18	4.73
2500-10	7/8-14	7/8-14	5.76
2500-10-8	7/8-14	3/4-16	5.85
2500-12	1-1/16-12	1-1/16-12	8.56
2500-12-8	1-1/16-12	3/4-16	7.87
2500-14	1-3/16-12	1-3/16-12	15.91
2500-16	1-5/16-12	1-5/16-12	14.88
2500-16-12	1-5/16-12	1-1/16-12	20.94
2500-20	1-5/8-12	1-5/8-12	25.89
2500-24	1-7/8-12	1-7/8-12	39.90
2500-32	2-1/2-12	2-1/2-12	80.41

Also available in Stainless Steel

More sizes available

SHAPES STEEL 37° JIC FLARE

JIC MALE ELBOW



Part #	JIC Thread Size 1	Male Pipe Size 2	Price
2501-2-2	5/16-24	1/8	4.26
2501-2-4	5/16-24	1/4	39.35
2501-3-2	3/8-24	1/8	3.70
2501-3-4	3/8-24	1/4	33.15
2501-4-2	7/16-20	1/8	2.41
2501-4-4	7/16-20	1/4	2.92
2501-4-6	7/16-20	3/8	4.30
2501-4-8	7/16-20	1/2	4.99
2501-5-2	1/2-20	1/8	2.97
2501-5-4	1/2-20	1/4	3.09
2501-5-6	1/2-20	3/8	5.16
2501-6-2	9/16-18	1/8	3.10
2501-6-4	9/16-18	1/4	2.75
2501-6-6	9/16-18	3/8	3.78
2501-6-8	9/16-18	1/2	4.82
2501-6-12	9/16-18	3/4	7.48
2501-8-4	3/4-16	1/4	4.09
2501-8-6	3/4-16	3/8	4.39
2501-8-8	3/4-16	1/2	5.33
2501-8-12	3/4-16	3/4	7.61
2501-8-16	3/4-16	1	10.71
2501-10-6	7/8-14	3/8	6.19
2501-10-8	7/8-14	1/2	5.25
2501-10-12	7/8-14	3/4	7.87
2501-10-16	7/8-14	1	13.16
2501-12-6	1-1/16-12	3/8	8.86
2501-12-8	1-1/16-12	1/2	8.21
2501-12-12	1-1/16-12	3/4	8.34
2501-12-16	1-1/16-12	1	12.86
2501-12-20	1-1/16-12	1-1/4	33.97
2501-14-12	1-3/16-12	3/4	12.99
2501-14-16	1-3/16-12	1	15.05
2501-16-12	1-5/16-12	3/4	12.64
2501-16-16	1-5/16-12	1	13.16
2501-16-20	1-5/16-12	1-1/4	22.32
2501-20-16	1-5/8-12	1	23.69
2501-20-20	1-5/8-12	1-1/4	26.57
2501-20-24	1-5/8-12	1-1/2	41.19
2501-24-20	1-7/8-12	1-1/4	39.13
2501-24-24	1-7/8-12	1-1/2	39.13
2501-24-32	1-7/8-12	2	144.48
2501-32-24	2-1/2-12	1-1/2	85.44
2501-32-32	2-1/2-12	2	76.45
2501-40-40	3-12	2-1/2	337.34

JIC ELBOW RESTRICTOR



Part #	JIC Thread Size 1	Male Pipe Size 2	Price
2501-RS-6-6	9/16-18	3/8	10.62
2501-RS-6-8	9/16-18	1/2	11.09

Please request Orifice Size

LONG MALE ELBOW

SAE 071502



Part #	Thread Size 1	Thread Size 2	Length	Price
2501-L-4-2	7/16-20	1/8	1.17"	3.93
2501-L-4-4	7/16-20	1/4	1.58"	4.47
2501-L-5-2	1/2-20	1/8	1.22"	5.72
2501-L-5-4	1/2-20	1/4	1.55"	5.59
2501-L-6-2	9/16-18	1/8	1.58"	18.83
2501-L-6-4	9/16-18	1/4	1.58"	5.03
2501-L-6-6	9/16-18	3/8	1.83"	7.01
2501-L-8-4	3/4-16	1/4	1.83"	13.11
2501-L-8-6	3/4-16	3/8	1.83"	6.58
2501-L-8-8	3/4-16	1/2	2.17"	6.58
2501-L-10-8	7/8-14	1/2	2.17"	10.11
2501-L-12-8	1-1/16-12	1/2	2.24"	21.41
2501-L-12-12	1-1/16-12	3/4	2.44"	12.69
2501-L-14-12	1-3/16-12	3/4	2.66"	19.57
2501-L-16-16	1-5/16-12	1	3.02"	19.52
2501-L-20-20	1-5/8-12	1-1/4	3.69"	45.41
2501-L-24-24	1-7/8-12	1-1/2	4.11"	93.22

Also available in Stainless Steel

Remember, half the people
you know are below average.

Also available in Stainless Steel

JIC EXTRA-LONG MALE ELBOW

SAE 140130



Part #	Thread		Length	Price
	Size 1	Size 2		
2501-LL-4-2	7/16-20	1/8	1.56"	5.12
2501-LL-4-4	7/16-20	1/4	2.11"	5.25
2501-LL-5-2	1/2-20	1/8	1.63"	5.59
2501-LL-5-4	1/2-20	1/4	2.04"	7.10
2501-LL-6-2	9/16-18	1/8	2.04"	53.79
2501-LL-6-4	9/16-18	1/4	2.08"	4.99
2501-LL-6-6	9/16-18	3/8	2.44"	7.65
2501-LL-8-4	3/4-16	1/4	2.42"	16.79
2501-LL-8-6	3/4-16	3/8	2.42"	7.18
2501-LL-8-8	3/4-16	1/2	2.88"	10.02
2501-LL-10-8	7/8-14	1/2	2.88"	10.02
2501-LL-12-8	1-1/16-12	1/2	3.25"	19.87
2501-LL-12-12	1-1/16-12	3/4	3.28"	15.52
2501-LL-14-12	1-3/16-12	3/4	3.63"	15.48
2501-LL-16-16	1-5/16-12	1	4.05"	24.64
2501-LL-20-20	1-5/8-12	1-1/4	5.00"	75.25
2501-LL-24-24	1-7/8-12	1-1/2	5.50"	POR

JIC EXTRA EXTRA LONG MALE ELBOW



Part #	Thread		Length	Price
	Size 1	Size 2		
2501-LLL-4-2	7/16-20	1/8	2.31"	28.94
2501-LLL-4-4	7/16-20	1/4	3.00"	25.80
2501-LLL-6-4	9/16-18	1/4	3.06"	20.21
2501-LLL-6-6	9/16-18	3/8	3.06"	27.99
2501-LLL-8-6	3/4-16	3/8	3.75"	14.62
2501-LLL-8-8	3/4-16	1/2	3.75"	20.43
2501-LLL-10-8	7/8-14	1/2	4.50"	23.65
2501-LLL-12-12	1-1/16-12	3/4	5.03"	20.68
2501-LLL-16-16	1-5/16-12	1	6.34"	51.34

Hard work pays off in the future. Laziness pays off now.

JIC MALE ELBOW SWIVEL



•swivel for installation only

Part #	JIC Thread		Male Pipe	Price
	Size 1	Size 2		
2501-S-4-4	7/16-20	1/4	POR	
2501-S-6-4	9/16-18	1/4	15.05	
2501-S-6-6	9/16-18	3/8	32.34	
2501-S-8-6	3/4-16	3/8	19.78	
2501-S-8-8	3/4-16	1/2	38.66	
2501-S-10-8	7/8-14	1/2	58.57	
2501-S-12-12	1-1/16-12	3/4	76.58	

JIC FEMALE ELBOW

SAE 070203
MS 51506



Part #	JIC Thread		Female Pipe	Price
	Size 1	Size 2		
2502-4-2	7/16-20	1/8	3.18	
2502-4-4	7/16-20	1/4	4.21	
2502-4-6	7/16-20	3/8	6.02	
2502-5-2	1/2-20	1/8	4.13	
2502-5-4	1/2-20	1/4	5.63	
2502-6-2	9/16-18	1/8	5.33	
2502-6-4	9/16-18	1/4	3.96	
2502-6-6	9/16-18	3/8	4.82	
2502-6-8	9/16-18	1/2	8.60	
2502-8-4	3/4-16	1/4	7.65	
2502-8-6	3/4-16	3/8	4.64	
2502-8-8	3/4-16	1/2	7.65	
2502-8-12	3/4-16	3/4	8.73	
2502-10-6	7/8-14	3/8	16.90	
2502-10-8	7/8-14	1/2	8.86	
2502-12-8	1-1/16-12	1/2	10.49	
2502-12-12	1-1/16-12	3/4	10.15	
2502-14-12	1-3/16-12	3/4	11.57	
2502-16-12	1-5/16-12	3/4	14.06	
2502-16-16	1-5/16-12	1	19.05	
2502-20-20	1-5/8-12	1-1/4	29.46	
2502-24-24	1-7/8-12	1-1/2	68.03	
2502-32-32	2-1/12	2	189.20	

Also available in Stainless Steel

JIC MALE 45° ELBOW



Part #	JIC Thread		Male Pipe	Price
	Size 1	Size 2		
2503-2-2	5/16-24	1/8	1/8	7.87
2503-3-2	3/8-24	1/8	1/8	3.01
2503-4-2	7/16-20	1/8	1/8	3.35
2503-4-4	7/16-20	1/4	1/4	3.83
2503-4-6	7/16-20	3/8	3/8	4.86
2503-5-2	1/2-20	1/8	1/8	5.72
2503-5-4	1/2-20	1/4	1/4	4.30
2503-6-2	9/16-18	1/8	1/8	5.25
2503-6-4	9/16-18	1/4	1/4	3.83
2503-6-6	9/16-18	3/8	3/8	4.56
2503-6-8	9/16-18	1/2	1/2	6.19
2503-6-12	9/16-18	3/4	3/4	7.40
2503-8-4	3/4-16	1/4	1/4	5.25
2503-8-6	3/4-16	3/8	3/8	4.99
2503-8-8	3/4-16	1/2	1/2	6.19
2503-8-12	3/4-16	3/4	3/4	9.46
2503-10-6	7/8-14	3/8	3/8	8.86
2503-10-8	7/8-14	1/2	1/2	6.15
2503-10-12	7/8-14	3/4	3/4	8.86
2503-12-6	1-1/16-12	3/8	3/8	64.50
2503-12-8	1-1/16-12	1/2	1/2	10.02
2503-12-12	1-1/16-12	3/4	3/4	9.33
2503-12-16	1-1/16-12	1	1	11.83
2503-14-12	1-3/16-12	3/4	3/4	15.52
2503-16-12	1-5/16-12	3/4	3/4	14.28
2503-16-16	1-5/16-12	1	1	13.16
2503-16-20	1-5/16-12	1-1/4	1-1/4	23.13
2503-20-16	1-5/8-12	1	1	21.29
2503-20-20	1-5/8-12	1-1/4	1-1/4	20.86
2503-24-24	1-7/8-12	1-1/2	1-1/2	33.41
2503-32-32	2-1/2-12	2	2	85.96
2503-40-40	3-12	2-1/2	2-1/2	318.72

JIC 45° UNION ELBOW



Part #	JIC Thread		Price
	Size 1	Size 2	
2504-6	9/16-18	9/16-18	9.33
2504-8	3/4-16	3/4-16	10.02
2504-10	7/8-14	7/8-14	11.22
2504-12	1-1/16-12	1-1/16-12	12.43
2504-16	1-5/16-12	1-5/16-12	13.16
2504-20	1-5/8-12	1-5/8-12	POR

JIC 45° FEMALE ELBOW



Part #	JIC Thread		Female Pipe	Price
	Size 1	Size 2		
2505-6-4	9/16-18	1/4	1/4	15.05
2505-8-6	3/4-16	3/8	3/8	14.79
2505-10-8	7/8-14	1/2	1/2	23.65
2505-12-12	1-1/16-12	3/4	3/4	39.17

More sizes available

JIC MALE BRANCH TEE



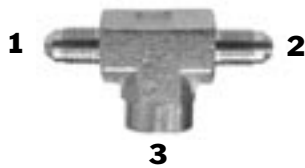
Part #	Thread		Pipe Thread	Price
	Size 1&2	Size 3		
2601-2-2	5/16-24	1/8	1/8	42.57
2601-3-2	3/8-24	1/8	1/8	4.56
2601-4-2	7/16-20	1/8	1/8	3.96
2601-4-4	7/16-20	1/4	1/4	5.25
2601-5-2	1/2-20	1/8	1/8	5.42
2601-5-4	1/2-20	1/4	1/4	6.19
2601-6-4	9/16-18	1/4	1/4	4.82
2601-6-6	9/16-18	3/8	3/8	6.15
2601-8-4	3/4-16	1/4	1/4	15.14
2601-8-6	3/4-16	3/8	3/8	6.41
2601-8-8	3/4-16	1/2	1/2	8.08
2601-10-6	7/8-14	3/8	3/8	15.22
2601-10-8	7/8-14	1/2	1/2	8.60
2601-12-8	1-1/16-12	1/2	1/2	13.98
2601-12-12	1-1/16-12	3/4	3/4	21.90
2601-14-12	1-3/16-12	3/4	3/4	23.18
2601-16-12	1-5/16-12	3/4	3/4	23.78
2601-16-16	1-5/16-12	1	1	20.73
2601-20-20	1-5/8-12	1-1/4	1-1/4	45.49
2601-24-24	1-7/8-12	1-1/2	1-1/2	70.99
2601-32-32	2-1/2-12	2	2	113.69

Also available in Stainless Steel

I couldn't repair your brakes,
so I made your horn louder

JIC FEMALE BRANCH TEE

SAE 070427
MS 51513

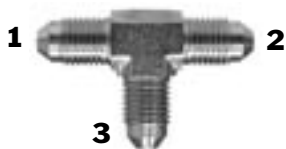


Part #	Thread	Pipe Thread	Price
	Size 1 & 2	Size 3	
2602-2-2	5/16-24	1/8	27.95
2602-3-2	3/8-24	1/8	36.85
2602-4-2	7/16-20	1/8	5.63
2602-4-4	7/16-20	1/4	7.27
2602-5-2	1/2-20	1/8	6.28
2602-6-4	9/16-18	1/4	5.55
2602-6-6	9/16-18	3/8	7.22
2602-8-6	3/4-16	3/8	7.44
2602-8-8	3/4-16	1/2	9.80
2602-10-8	7/8-14	1/2	11.83
2602-12-8	1-1/16-12	1/2	34.44
2602-12-12	1-1/16-12	3/4	15.91
2602-14-12	1-3/16-12	3/4	25.80
2602-16-16	1-5/16-12	1	25.71
2602-20-20	1-5/8-12	1-1/4	43.90
2602-24-24	1-7/8-12	1-1/2	77.62
2602-32-32	2-1/2-12	2	351.35

Also available in Stainless Steel

JIC UNION TEE

SAE 070401
MS 51510

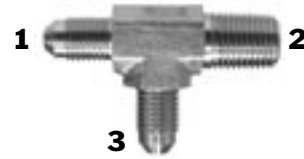


Part #	Thread	Thread	Price
	Size 1 & 2	Size 3	
2603-2-2	5/16-24	5/16-24	30.10
2603-3-3	3/8-24	3/8-24	10.02
2603-4-4	7/16-20	7/16-20	3.83
2603-5-5	1/2-20	1/2-20	5.98
2603-6	9/16-18	9/16-18	4.30
2603-8	3/4-16	3/4-16	6.45
2603-10	7/8-14	7/8-14	8.86
2603-12	1-1/16-12	1-1/16-12	12.60
2603-14	1-3/16-12	1-3/16-12	23.82
2603-16	1-5/16-12	1-5/16-12	19.05
2603-20	1-5/8-12	1-5/8-12	38.53
2603-24	1-7/8-12	1-7/8-12	51.56
2603-32	2-1/2-12	2-1/2-12	251.29

*More reducing sizes available
Also available in Stainless Steel*

JIC MALE RUN TEE

SAE 070424
MS 51511



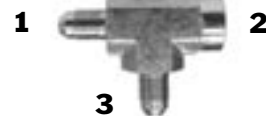
Part #	JIC Thread	Male Pipe	Price
	Size 1 & 3	Size 2	
2605-2-2	5/16-24	1/8	40.85
2605-3-2	3/8-24	1/8	8.60
2605-4-2	7/16-20	1/8	4.86
2605-4-4	7/16-20	1/4	5.25
2605-5-2	1/2-20	1/8	6.62
2605-5-4*	1/2-20	1/4	8.34
2605-6-4	9/16-18	1/4	4.77
2605-6-6	9/16-18	3/8	6.92
2605-8-4	3/4-16	1/4	17.29
2605-8-6	3/4-16	3/8	7.27
2605-8-8	3/4-16	1/2	7.82
2605-10-6*	7/8-14	3/8	POR
2605-10-8	7/8-14	1/2	9.76
2605-12-8	1-1/16-12	1/2	22.83
2605-12-12	1-1/16-12	3/4	12.86
2605-14-12	1-3/16-12	3/4	23.82
2605-16-12*	1-5/16-12	3/4	23.87
2605-16-16	1-5/16-12	1	23.18
2605-20-20	1-5/8-12	1-1/4	44.33
2605-24-24	1-7/8-12	1-1/2	53.79
2605-32-32	2-1/2-12	2	253.70

**Braze-on Style*

Also available in Stainless Steel

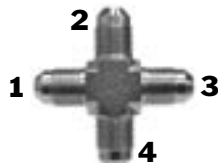
More sizes available

JIC FEMALE RUN TEE



Part #	Thread	Pipe Thread	Price
	Size 1 & 3	Size 2	
2606-3-2	3/8-24	1/8	50.74
2606-4-2	7/16-20	1/8	7.57
2606-4-4	7/16-20	1/4	5.42
2606-5-2	1/2-20	1/8	21.90
2606-5-4	1/2-20	1/4	36.29
2606-6-4	9/16-18	1/4	6.71
2606-6-6	9/16-18	3/8	8.86
2606-8-6	3/4-16	3/8	8.60
2606-8-8	3/4-16	1/2	10.54
2606-10-8	7/8-14	1/2	10.71
2606-12-8	1-1/16-12	1/2	91.68
2606-12-12	1-1/16-12	3/4	16.90
2606-14-12	1-3/16-12	3/4	41.80
2606-16-16	1-5/16-12	1	30.75
2606-20-20	1-5/8-12	1-1/4	66.52
2606-24-24	1-7/8-12	1-1/2	97.14
2606-32-32	2-1/2-12	2	363.90

JIC UNION CROSS

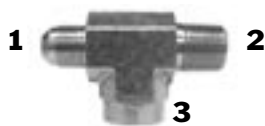


JIC Thread JIC Thread

Part #	Size 1&2	Size 3 & 4	Price
2650-4	7/16-20	7/16-20	8.13
2650-5	1/2-20	1/2-20	11.95
2650-6	9/16-18	9/16-18	9.89
2650-8	3/4-16	3/4-16	10.41
2650-10	7/8-14	7/8-14	21.33
2650-12	1-1/16-12	1-1/16-12	21.01
2650-14	1-3/16-12	1-3/16-12	30.10
2650-16	1-5/16-12	1-5/16-12	31.30
2650-20	1-5/8-12	1-5/8-12	66.65
2650-24	1-7/8-12	1-7/8-12	98.56

More sizes available

TEE



JIC Thread Thread

Part #	Size 1	Size 2 & 3	Price
2611-6-6-6	9/16-18	3/8-18	24.51
2611-8-6-6	3/4-16	3/8-18	19.01
2611-8-8-8	3/4-16	1/2-14	22.58
2611-12-12-12	1-1/16-12	3/4-14	50.53
2611-16-16-16	1-5/16-12	1-11-1/2	83.85
2611-20-20-20	1-5/8-12	1-1/4-11-1/2	96.88

More sizes available

BULKHEAD LOCK NUT

SAE 070118
MS 51860



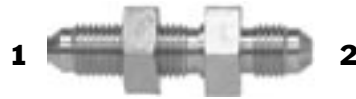
Tube Thread

Part #	O.D.	Size	Price
0306-4	1/4	7/16 - 20	0.39
0306-5	5/16	1/2-20	0.39
0306-6	3/8	9/16-18	0.43
0306-8	1/2	3/4-16	0.77
0306-10	5/8	7/8-14	1.12
0306-12	3/4	1-1/16-12	1.68
0306-14	7/8	1-3/16-12	2.58
0306-16	1	1-5/16-12	2.37
0306-20	1-1/4	1-5/8-12	2.88
0306-24	1-1/2	1-7/8-12	4.09
0306-32	2	2-1/2-12	16.99

STEEL BULKHEAD FITTINGS

JIC BULKHEAD UNION

SAE 070601
MS 51520



Thread Bulkhead

Part #	Size 1	Size 2	Price
2700-4-4	7/16-20	7/16-20	3.70
2700-5-5	1/2-20	1/2-20	4.43
2700-6-6	9/16-18	9/16-18	3.70
2700-8	3/4-16	3/4-16	5.03
2700-10	7/8-14	7/8-14	6.71
2700-12	1-1/16-12	1-1/16-12	10.06
2700-14	1-3/16-12	1-3/16-12	12.68
2700-16	1-5/16-12	1-5/16-12	15.91
2700-20	1-5/8-12	1-5/8-12	22.96
2700-24	1-7/8-12	1-7/8-12	37.07
2700-32	2-1/2-12	2-1/2-12	63.08

Also available in Stainless Steel

JIC BULKHEAD UNION ELBOW

SAE 070701
MS 51507



Thread Bulkhead

Part #	Size 1	Thread 2	Price
2701-4	7/16-20	7/16-20	4.26
2701-5	1/2-20	1/2-20	6.62
2701-6	9/16-18	9/16-18	4.52
2701-8	3/4-16	3/4-16	6.92
2701-10	7/8-14	7/8-14	9.50
2701-12	1-1/16-12	1-1/16-12	13.80
2701-14	1-3/16-12	1-3/16-12	92.24
2701-16	1-5/16-12	1-5/16-12	20.30
2701-20	1-5/8-12	1-5/8-12	41.02
2701-24	1-7/8-12	1-7/8-12	137.60

Also available in Stainless Steel

JIC BULKHEAD UNION 45° ELBOW

SAE 070801
MS 51509



Part #	Thread Size 1	Bulkhead Thread 2	Price
2702-4	7/16-20	7/16-20	4.73
2702-5	1/2-20	1/2-20	9.03
2702-6	9/16-18	9/16-18	6.88
2702-8	3/4-16	3/4-16	7.74
2702-10	7/8-14	7/8-14	10.02
2702-12	1-1/16-12	1-1/16-12	14.28
2702-14	1-3/16-12	1-3/16-12	POR
2702-16	1-5/16-12	1-5/16-12	21.89
2702-20	1-5/8-12	1-5/8-12	54.52
2702-24	1-7/8-12	1-7/8-12	171.10

Also available in Stainless Steel

JIC BULKHEAD BRANCH TEE

SAE 070959
MS 51515

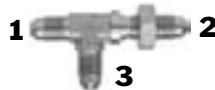


Part #	Thread Size 1&2	Bulkhead Thread 3	Price
2703-4	7/16-20	7/16-20	7.40
2703-5	1/2-20	1/2-20	29.80
2703-6	9/16-18	9/16-18	7.87
2703-8	3/4-16	3/4-16	11.44
2703-10	7/8-14	7/8-14	19.05
2703-12	1-1/16-12	1-1/16-12	23.18
2703-16	1-5/16-12	1-5/16-12	46.44
2703-20	1-5/8-12	1-5/8-12	69.06
2703-24	1-7/8-12	1-7/8-12	90.77
2703-32	2-1/2-12	2-1/2-12	POR

Also available in Stainless Steel

JIC BULKHEAD RUN TEE

SAE 070958
MS 51516



Part #	Thread Size 1&3	Bulkhead Thread 2	Price
2704-4	7/16-20	7/16-20	5.20
2704-6	9/16-18	9/16-18	8.69
2704-8	3/4-16	3/4-16	11.91
2704-10	7/8-14	7/8-14	12.77
2704-12	1-1/16-12	1-1/16-12	17.16
2704-16	1-5/16-12	1-5/16-12	25.53

*More sizes available
Also available in Stainless Steel*

JIC TO FEMALE PIPE BULKHEAD



Part #	Thread Size 1	Female Pipe Size 2	Price
2705-4-2	7/16-20	1/8	7.70
2705-4-4	7/16-20	1/4	7.78
2705-5-2	1/2-20	1/8	15.58
2705-6-4	9/16-18	1/4	9.85
2705-6-6	9/16-18	3/8	11.74
2705-8-6	3/4-16	3/8	13.12
2705-8-8	3/4-16	1/2	17.97
2705-10-8	7/8-14	1/2	15.31
2705-12-12	1-1/16-12	3/4	22.27
2705-14-12	1-3/16-12	3/4	32.25
2705-16-16	1-5/16-12	1	26.83
2705-20-20	1-5/8-12	1-1/4	93.05
2705-24-24	1-7/8-12	1-1/2	199.61
2705-32-32	2-1/2-12	2	320.57

Also available in Stainless Steel

JIC TO MALE PIPE BULKHEAD



Part #	Bulkhead Thread 1	Pipe Thread 2	Price
2706-4-2	7/16-20	1/8	16.13
2706-4-4	7/16-20	1/4	13.98
2706-6-4	9/16-18	1/4	12.04
2706-6-6	9/16-18	3/8	15.05
2706-8-6	3/4-16	3/8	10.88
2706-8-8	3/4-16	1/2	15.05
2706-10-8	7/8-14	1/2	12.90
2706-12-12	1-1/16-12	3/4	17.80
2706-16-16	1-5/16-12	1	24.21
2706-20-20	1-5/8-12	1-1/4	60.89
2706-24-24	1-7/8-12	1-1/2	126.64
2706-32-32	2-1/2-12	2	261.05

MALE PIPE BULKHEAD



Part #	Thread Size	Male Pipe Thread	Price
2708-4-4	9/16-18	1/4	59.08
2708-6-6	3/4-16	3/8	60.29
2708-8-8	7/8-14	1/2	66.18
2708-12-12	1-1/16-12	3/4	71.98

STEEL PIPE ADAPTERS

CONFORMANCE

- SAE J514 for hex nipples, expanders, elbows, tees and crosses
- SAE J514, J530 and J531 for bushing and plugs.
- Temperature Range: -65°F to +400°F

MATERIALS

- Steel- SAE 12L14 carbon steel plated zinc with yellow dichromate or bright iridite finish.

STYLES

- Barstock
- Forged
- Chamfered - male ends have an internal 30-degree chamfer to mate with NPSM female swivel union connections. Many pipe fittings do not have this chamfer, as it is not required per SAE J514 standard

Caution: Although most pipe fittings have sufficient structural integrity to support the weight of many components, consult our technical support department for guidance in selection of parts for this purpose

WORKING PRESSURES

The following table lists the recommended working pressures for steel NPTF hydraulic pipe fittings manufactured in accordance with SAE standard J514. Many factors such as number of threads engaged, impulsing, vibration, mechanical shock, removal and reassembly, thermal expansion and contraction may affect the integrity of the fitting or fitting connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions.

SAE J514 NPTF PIPE WORKING PRESSURES

Dash Size	NPTF Thread Size	4 TO 1 Minimum Burst PSI
-1	1/16-27	5000
-2	1/8-27	5000
-4	1/4-18	5000
-6	3/8-18	4000
-8	1/2-14	3000
-12	3/4-14	2500
-16	1-11 1/2	2000
-20	1 1/4-11 1/2	1150
-24	1 1/2-11 1/2	1000
-32	2-11 1/2	750

**NPTF DRY SEAL PIPE
ASSEMBLY INSTRUCTIONS**

- Step 1.** Inspect port and fitting to ensure that both are free of contaminants and excessive burrs and nicks.
- Step 2.** Apply a stripe of an anaerobic liquid pipe sealant around the male threads leaving the first two threads uncovered. If no liquid sealant is available, wrap Teflon tape 1 1/2 to 2 turns in a clockwise direction, viewed from the pipe end, leaving the first two threads uncovered. **Caution: Teflon tape and some pipe sealants are destructive to hydraulic components. Always use extreme caution and follow manufactures recommendations for proper application of any sealant in order to prevent contamination**
- Step 3.** Screw finger tight into the port.
- Step 4.** Wrench tighten the fitting to the correct Turns Past Finger Tight position. (See following table) When installing elbows or tees, consider final orientation position as to not exceed the recommended TPFT
- Caution: Never back off an installed pipe fitting to achieve proper alignment. Loosening installed pipe fittings will corrupt the seal and contribute to leakage and failure.**

Torque installation of pipe fittings is not a recommended practice. Thread taper and quality, different port and fitting materials, plating thickness and types, varying threads sealants, orientation, and other factors reduce the reliability of a torqued connection. If torque installation is required, refer to the following table for suggested torque values.

Dash Size	NPTF Thread Size	Turns Past Finger Tight
-1	1/16-27	2.0 - 3.0
-2	1/8-27	2.0 - 3.0
-4	1/4-18	2.0 - 3.0
-6	3/8-18	2.0 - 3.0
-8	1/2-14	2.0 - 3.0
-12	3/4-14	2.0 - 3.0
-16	1-11 1/2	1.5 - 2.5
-20	1 1/4-11 1/2	1.5 - 2.5
-24	1 1/2-11 1/2	1.5 - 2.5
-32	2-11 1/2	1.5 - 2.5

Dash Size	NPTF Thread Size	Torque Foot/LBS
-2	1/8-27	12
-4	1/4-18	25
-6	3/8-18	40
-8	1/2-14	54
-12	3/4-14	78
-16	1-11 1/2	112
-20	1 1/4-11 1/2	154
-24	1 1/2-11 1/2	211
-32	2-11 1/2	300

See STRAIGHT THREAD O-RING FITTING SECTION for assembly instructions and torque values for pipe fittings with o-ring straight threads.

PIPE COUPLING

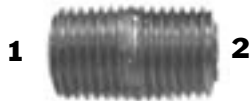
SAE 140138



Part #	Female Pipe 1	Female Pipe 2	Price
5000-2	1/8	1/8	1.81
5000-4-2	1/4	1/8	3.23
5000-4	1/4	1/4	2.11
5000-6-2	3/8	1/8	7.18
5000-6-4	3/8	1/4	3.57
5000-6-6	3/8	3/8	2.45
5000-8-4	1/2	1/4	5.55
5000-8-6	1/2	3/8	4.73
5000-8	1/2	1/2	4.04
5000-12-6	3/4	3/8	10.66
5000-12-8	3/4	1/2	7.96
5000-12-12	3/4	3/4	5.76
5000-16-8	1	1/2	6.41
5000-16-12	1	3/4	16.99
5000-16	1	1	8.51
5000-20-12	1-1/4	3/4	155.27
5000-20-16	1-1/4	1	59.17
5000-20-20	1-1/4	1-1/4	16.90
5000-24	1-1/2	1-1/2	34.36
5000-32	2	2	55.73

Also available in Stainless Steel

CLOSE NIPPLE



3,000 PSI

Part #	Male Pipe 1&2	Length (Inches)	Price
5400CL-2	1/8	3/4	5.93
5400CL-4	1/4	7/8	6.97
5400CL-6	3/8	1	3.27
5400CL-8	1/2	1-1/8	4.77
5400CL-12	3/4	1-3/8	5.76
5400CL-16	1	1-1/2	8.69
5400CL-20	1-1/4	1-5/8	14.53
5400CL-24	1-1/2	1-3/4	POR

Also available in Stainless Steel

LONG PIPE NIPPLE



3,000 PSI

Part #	Male Pipe 1 & 2	Length (Inches)	Price
5400-2-1.5	1/8	1-1/2	6.15
5400-2-2	1/8	2	7.01
5400-2-2.5	1/8	2-1/2	7.22
5400-2-3	1/8	3	7.96
5400-4-2	1/4	2	7.74
5400-4-2.5	1/4	2-1/2	8.34
5400-4-3	1/4	3	9.20
5400-4-4	1/4	4	11.09
5400-4-6	1/4	6	20.00
5400-6-2	3/8	2	8.26
5400-6-2.5	3/8	2-1/2	10.92
5400-6-3	3/8	3	10.71
5400-6-4	3/8	4	12.69
5400-4-6	3/8	6	20.00
5400-6-7	3/8	7	POR
5400-8-2.5	1/2	2-1/2	6.49
5400-8-3	1/2	3	7.27
5400-8-4	1/2	4	9.37
5400-8-6	1/2	6	13.67
5400-12-3	3/4	3	9.07
5400-12-4	3/4	4	11.05

Other lengths available

To me, boxing is like a ballet, except there's no music, no choreography, and the dancers hit each other.

STEEL PIPE FITTINGS

HEX PIPE NIPPLE

SAE 140137



Part #	Male Pipe 1	Male Pipe 2	Price
5404-2-1	1/8	1/16	55.73
5404-2	1/8	1/8	0.95
5404-2-4	1/8	1/4	20.94
5404-4-2	1/4	1/8	1.72
5404-4	1/4	1/4	1.20
5404-6-2	3/8	1/8	4.09
5404-6-4	3/8	1/4	2.06
5404-6	3/8	3/8	1.51
5404-8-4	1/2	1/4	2.67
5404-8-6	1/2	3/8	2.54
5404-8	1/2	1/2	2.19
5404-12-6	3/4	3/8	3.44
5404-12-8	3/4	1/2	4.34
5404-12	3/4	3/4	3.78
5404-16-6	1	3/8	36.85
5404-16-8	1	1/2	19.78
5404-16-12	1	3/4	6.75
5404-16	1	1	5.55
5404-20-8	1-1/4	1/2	45.71
5404-20-12	1-1/4	3/4	32.68
5404-20-16	1-1/4	1	17.72
5404-20	1-1/4	1-1/4	12.08
5404-24-12	1-1/2	3/4	47.30
5404-24-16	1-1/2	1	34.92
5404-24-20	1-1/2	1-1/4	29.93
5404-24	1-1/2	1-1/2	20.94
5404-32-20	2	1-1/4	116.10
5404-32-24	2	1-1/2	39.86
5404-32	2	2	49.62

Also available in Stainless Steel

More sizes & lengths available

*Cure for headaches:
Take a lime, cut it in half
and rub it on your fore-
head. The throbbing will
go away.*

EXPANDING PIPE ADAPTER

SAE 140139



Part #	Male Pipe 1	Female Pipe 2	Price
5405-1-2	1/16	1/8	54.40
5405-2-2	1/8	1/8	53.48
5405-2-4	1/8	1/4	2.41
5405-2-6	1/8	3/8	14.23
5405-2-8	1/8	1/2	10.97
5405-4-4	1/4	1/4	4.21
5405-4-6	1/4	3/8	2.75
5405-4-8	1/4	1/2	6.67
5405-4-12	1/4	3/4	19.22
5405-6-6	3/8	3/8	4.04
5405-6-8	3/8	1/2	4.09
5405-6-12	3/8	3/4	27.52
5405-8-8	1/2	1/2	4.26
5405-8-12	1/2	3/4	7.57
5405-8-16	1/2	1	16.25
5405-12-12	3/4	3/4	11.61
5405-12-16	3/4	1	13.29
5405-12-20	3/4	1-1/4	39.47
5405-16-16	1	1	24.04
5405-16-20	1	1-1/4	31.91
5405-16-24	1	1-1/2	99.24
5405-20-20	1-1/4	1-1/4	46.66
5405-20-24	1-1/4	1-1/2	38.14
5405-24-24	1-1/2	1-1/2	42.23
5405-24-32	1-1/2	2	93.57

Also available in Stainless Steel

More sizes available

The "sixth sick sheik's
sheep's sick" is said to be
the toughest tounge twister
in the English language

HEX REDUCER BUSHING



Part #	Male Pipe	Female Pipe	Price
5406-2-1	1/8	1/16	45.88
5406-4-2	1/4	1/8	0.69
5406-6-2	3/8	1/8	0.77
5406-6-4	3/8	1/4	0.82
5406-8-2	1/2	1/8	1.89
5406-8-4	1/2	1/4	1.25
5406-8-6	1/2	3/8	1.25
5406-12-2	3/4	1/8	6.06
5406-12-4	3/4	1/4	1.76
5406-12-6	3/4	3/8	2.02
5406-12-8	3/4	1/2	1.76
5406-16-4	1	1/4	6.71
5406-16-6	1	3/8	6.97
5406-16-8	1	1/2	3.27
5406-16-12	1	3/4	3.27
5406-20-4	1-1/4	1/4	12.26
5406-20-6	1-1/4	3/8	11.48
5406-20-8	1-1/4	1/2	8.99
5406-20-12	1-1/4	3/4	7.01
5406-20-16	1-1/4	1	7.05
5406-24-6	1-1/2	3/8	25.20
5406-24-8	1-1/2	1/2	22.32
5406-24-12	1-1/2	3/4	15.65
5406-24-16	1-1/2	1	14.15
5406-24-20	1-1/2	1-1/4	13.50
5406-32-8	2	1/2	42.18
5406-32-12	2	3/4	29.84
5406-32-16	2	1	27.09
5406-32-20	2	1-1/4	26.14
5406-32-24	2	1-1/2	28.17
5406-40-32	2-1/2	2	146.33

*Some sizes available in Stainless Steel
Also available in short pattern*

HEX HEAD PLUG



Part #	Male Pipe	Price
5406-P-1	1/16	0.56
5406-P-2	1/8	0.30
5406-P-4	1/4	0.34
5406-P-6	3/8	0.60
5406-P-8	1/2	1.08
5406-P-12	3/4	2.19
5406-P-16	1	3.70
5406-P-20	1-1/4	7.48
5406-P-24	1-1/2	10.36
5406-P-32	2	15.05

Also available in Stainless Steel

HOLLOW HEX PLUG

SAE 130109



Part #	Male Pipe	Price
5406-HHP-1	1/16	0.43
5406-HHP-2	1/8	0.30
5406-HHP-4	1/4	0.34
5406-HHP-6	3/8	0.34
5406-HHP-8	1/2	0.56
5406-HHP-12	3/4	0.77
5406-HHP-16	1	1.85
5406-HHP-20	1-1/4	4.69
5406-HHP-24	1-1/2	13.55
5406-HHP-32	2	19.48

Some sizes available in Stainless Steel

**FLUSH HOLLOW HEX PLUG
W/ 7/8 TAPER**



Part #	Male Pipe	Price
5406-FLP-1	1/16	0.46
5406-FLP-2	1/8	0.52
5406-FLP-4	1/4	0.69
5406-FLP-6	3/8	0.82
5406-FLP-8	1/2	1.59
5406-FLP-12	3/4	2.97

SQUARE HEAD PLUG

SAE 130109A



Part #	Male Pipe	Price
5406-SHP-2	1/8	0.30
5406-SHP-4	1/4	0.34
5406-SHP-6	3/8	0.52
5406-SHP-8	1/2	0.65
5406-SHP-12	3/4	1.38
5406-SHP-16	1	4.73
5406-SHP-20	1-1/4	10.28
5406-SHP-24	1-1/2	13.50
5406-SHP-32	2	30.14

PIPE CAP



Female

Part #	Pipe	Price
5406-C-2	1/8	0.82
5406-C-4	1/4	0.90
5406-C-6	3/8	1.46
5406-C-8	1/2	2.19
5406-C-12	3/4	3.57
5406-C-16	1	5.16

Also available in Stainless Steel

MALE ELBOW

SAE 140237



Male Male

Part #	Pipe 1	Pipe 2	Price
5500-2	1/8	1/8	3.01
5500-4-2	1/4	1/8	2.80
5500-4	1/4	1/4	3.40
5500-6-4	3/8	1/4	4.95
5500-6	3/8	3/8	4.43
5500-8-4	1/2	1/4	4.90
5500-8-6	1/2	3/8	5.93
5500-8	1/2	1/2	5.33
5500-12-6*	3/4	3/8	19.01
5500-12-8	3/4	1/2	8.08
5500-12-12	3/4	3/4	8.26
5500-16-12	1	3/4	13.63
5500-16	1	1	16.00
5500-20-16*	1-1/4	1	23.05
5500-20-20	1-1/4	1-1/4	28.34
5500-24	1-1/2	1-1/2	39.78
5500-32	2	2	273.09

**Braze-on Style*

Also available in Stainless Steel

More sizes available

MALE ELBOW SWIVEL



swivel for installation purpose only

Male Male

Part #	Pipe 1	Pipe 2	Price
5700-S-4-4	1/4	1/4	17.42
5700-S-6-6	3/8	3/8	16.77
5700-S-8-8	1/2	1/2	19.35
5700-S-12-12	3/4	3/4	147.30

45° MALE ELBOW



Male Male

Part #	Pipe 1	Pipe 2	Price
5501-2-2	1/8	1/8	5.38
5501-4-4	1/4	1/4	4.26
5501-6-6	3/8	3/8	8.30
5501-8	1/2	1/2	7.14
5501-12-12	3/4	3/4	12.64
5501-16-16	1	1	21.37
5501-20-20	1-1/4	1-1/4	68.11

90° STREET ELBOW

SAE 140239



Male Female

Part #	Pipe 1	Pipe 2	Price
5502-2	1/8	1/8	3.10
5502-2-4	1/8	1/4	4.26
5502-2-6*	1/8	3/8	4.04
5502-4-2	1/4	1/8	3.61
5502-4	1/4	1/4	4.69
5502-4-6	1/4	3/8	6.02
5502-4-8-8*	1/4	1/2	28.68
5502-6-2	3/8	1/8	28.29
5502-6-4	3/8	1/4	4.26
5502-6	3/8	3/8	4.26
5502-6-8	3/8	1/2	6.92
5502-8-4	1/2	1/4	4.90
5502-8-6	1/2	3/8	5.85
5502-8-8	1/2	1/2	7.61
5502-8-12	1/2	3/4	11.67
5502-12-8	3/4	1/2	11.09
5502-12	3/4	3/4	10.79
5502-12-16*	3/4	1	14.10
5502-16-12	1	3/4	12.69
5502-16-16	1	1	15.35
5502-16-20*	1	1-1/4	50.57
5502-20-16	1-1/4	1	51.86
5502-20	1-1/4	1-1/4	7.53
5502-24	1-1/2	1-1/2	64.03
5502-32	2	2	170.67

**Braze-on Style*

Also available in Stainless Steel

More sizes available

STREET ELBOW SWIVEL



Part #	Male	Female	Price
	Pipe 1	Pipe 2	
5702-4-4	1/4	1/4	17.16
5702-6-6	3/8	3/8	21.46
5702-8-8	1/2	1/2	27.09
5702-12-12	3/4	3/4	62.35

SHORT BODY STREET ELBOW



Part #	Male	Female	Price
	Pipe 1	Pipe 2	
5502-X-4	1/4	1/4	7.10
5502-X-6	3/8	3/8	8.64
5502-X-8	1/2	1/2	14.88

45° STREET ELBOW

SAE 140339



Part #	Male	Female	Price
	Pipe 1	Pipe 2	
5503-2	1/8	1/8	4.56
5503-4	1/4	1/4	4.64
5503-6	3/8	3/8	4.99
5503-8	1/2	1/2	7.61
5503-12-12	3/4	3/4	11.70
5503-16	1	1	20.30
5503-20	1-1/4	1-1/4	44.16
5503-24	1-1/2	1-1/2	100.66
5503-32	2	2	193.50

*More sizes available
Also available in Stainless Steel*

More than 50 % of the people
in the world have never made or
received a telephone call

FEMALE ELBOW

SAE 140238



Part #	Female	Female	Price
	Pipe 1	Pipe 2	
5504-2	1/8	1/8	3.10
5504-4-2	1/4	1/8	3.96
5504-4	1/4	1/4	3.78
5504-6-4	3/8	1/4	4.56
5504-6	3/8	3/8	4.99
5504-8-4	1/2	1/4	28.47
5504-8-6	1/2	3/8	7.74
5504-8	1/2	1/2	7.10
5504-12-6	3/4	3/8	36.38
5504-12-8	3/4	1/2	19.01
5504-12	3/4	3/4	12.64
5504-16-12	1	3/4	16.43
5504-16	1	1	16.60
5504-20-16	1-1/4	1	24.98
5504-20	1-1/4	1-1/4	30.53
5504-24	1-1/2	1-1/2	53.54
5504-32	2	2	208.12

Also available in Stainless Steel

More sizes available

45° FEMALE ELBOW

SAE 140338

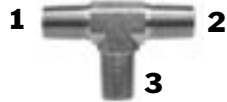


Part #	Female	Female	Price
	Pipe 1	Pipe 2	
5505-2	1/8	1/8	6.49
5505-4	1/4	1/4	7.14
5505-6	3/8	3/8	7.91
5505-8	1/2	1/2	16.04
5505-12	3/4	3/4	16.30
5505-16	1	1	20.55
5505-20	1-1/4	1-1/4	259.81

More sizes available

Hydraulic

MALE PIPE TEE



Part #	Male Pipe 1 & 2	Male Pipe 3	Price
5600-2-2	1/8	1/8	9.50
5600-4-4	1/4	1/4	8.34
5600-6-6	3/8	3/8	10.02
5600-8-8	1/2	1/2	11.95
5600-12	3/4	3/4	15.52
5600-16	1	1	34.44
5600-20	1-1/4	1-1/4	88.58

Also available in Stainless Steel

FEMALE RUN PIPE TEE

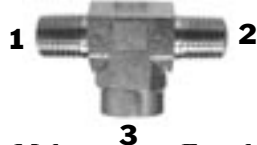


Part #	Male Pipe 1 & 3	Female Pipe 2	Price
5603-2-2	1/8	1/8	5.72
5603-4-4	1/4	1/4	6.54
5603-6-6	3/8	3/8	7.44
5603-8-8	1/2	1/2	12.64
5603-12	3/4	3/4	16.99
5603-16	1	1	36.55
5603-20	1-1/4	1-1/4	62.78
5603-24	1-1/2	1-1/2	120.36
5603-32	2	2	381.41

Some sizes available in Stainless Steel

FEMALE BRANCH PIPE TEE

SAE 140427



Part #	Male Pipe 1 & 2	Female Pipe 3	Price
5601-2-2	1/8	1/8	7.53
5601-4-4	1/4	1/4	8.13
5601-6-6	3/8	3/8	12.77
5601-8	1/2	1/2	20.68
5601-12	3/4	3/4	26.94
5601-16	1	1	39.95
5601-20	1-1/4	1-1/4	75.34
5601-24	1-1/2	1-1/2	115.63

Some sizes available in Stainless Steel

MALE BRANCH TEE



Part #	Male Pipe 1 & 3	Female Pipe 2	Price
5604-2-2	1/8	1/8	27.74
5604-4-4	1/4	1/4	31.26
5604-6-6	3/8	3/8	43.47
5604-8-8	1/2	1/2	11.61
5604-12	3/4	3/4	16.50
5604-16	1	1	28.21
5604-20	1-1/4	1-1/4	46.83
5604-24	1-1/2	1-1/2	96.97
5604-32	2	2	175.48

Some sizes available in Stainless Steel

STREET TEE

SAE 140424



Part #	Male Pipe 1	Female Pipe 2 & 3	Price
5602-2-2	1/8	1/8	3.91
5602-4-4	1/4	1/4	5.25
5602-6-6	3/8	3/8	6.19
5602-8-8	1/2	1/2	10.11
5602-12	3/4	3/4	17.03
5602-16	1	1	28.90
5602-20	1-1/4	1-1/4	53.79
5602-24	1-1/2	1-1/2	98.94
5602-32	2	2	270.90

Also available in Stainless Steel

FEMALE PIPE TEE

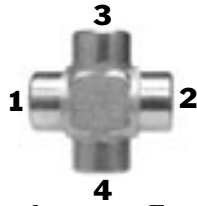
SAE 140438



Part #	Female Pipe	Price
5605-2-2	1/8	4.99
5605-4-4	1/4	4.95
5605-6-6	3/8	6.15
5605-8	1/2	11.22
5605-12	3/4	15.95
5605-16	1	21.59
5605-20	1-1/4	45.11
5605-24	1-1/2	81.87
5605-32	2	258.00

*More sizes available
All sizes available in Stainless Steel*

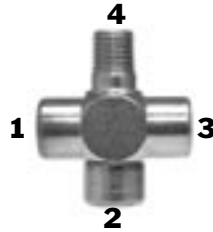
FEMALE CROSS



Part #	Female Pipe 1 & 3	Female Pipe 2	Price
5652-2	1/8	1/8	9.37
5652-4	1/4	1/4	8.30
5652-6	3/8	3/8	9.42
5652-8	1/2	1/2	14.75
5652-12	3/4	3/4	22.15
5652-16	1	1	40.42
5652-20	1-1/4	1-1/4	66.22
5652-24	1-1/2	1-1/2	135.88
5652-32	2	2	451.50

Also available in Stainless Steel

CROSS



Part #	Thread Size 1, 2, 3 & 4	Price
5655-4-4-4-4	1/4-18	20.30
5655-6-6-6-6	3/8-18	22.02
5655-8-8-8-8	1/2-14	27.69
5655-12-12-12-12	3/4-14	78.95

It takes a big man to cry, but
 it takes an even bigger man to
 laugh at that man
 - Jack Handy

These are from a book called *Disorder in the Court*, and are things people actually said in court, word for word, taken down and now published by court reporters - who had the torment of staying calm while these exchanges were actually taking place.

Q: Are you sexually active?

A: No, I just lie there.

Q: What was the first thing your husband said to you when he woke up that morning?

A: He said, "Where am I, Cathy?"

Q: And why did that upset you?

A: My name is Susan.

Q: So the date of conception (of the baby) was August 8th?

A: Yes.

Q: And what were you doing at that time?

Q: Is your appearance here this morning pursuant to a deposition notice which I sent to your attorney?

A: No, this is how I dress when I go to work.

Q: Doctor, before you performed the autopsy, did you check for a pulse?

A: No.

Q: Did you check for blood pressure?

A: No.

Q: Did you check for breathing?

A: No.

Q: So, is it possible that the patient was still alive when you began the autopsy?

A: No.

Q: How can you be so sure, Doctor?

A: Because his brain was sitting on my desk in a jar.

Q: But could the patient have been alive, nevertheless?

A: Yes, it is possible that he could have been alive and practicing law somewhere.

STEEL STRAIGHT THREAD O-RING ADAPTERS

Straights Pg. 200-205
 Shapes Pg.206-210
 Bulkheads Pg.210-211
 Female Swivels Pg.224-227
 O-Ring Fittings Pg.227-230

**SAE J514 O-RING STRAIGHT THREAD
FITTING PRESSURE RATINGS FOR STRAIGHT
AND ADJUSTABLE THREAD PORT STUDS**

CONFORMANCE

- SAE J514
- SAE J1926/1, SAE J1926/3
- ISO 11926-1, ISO 11926-3

MATERIALS

- Steel- SAE 12L14 Carbon steel plated zinc with yellow dichromate or bright iridite finish.

WORKING PRESSURES

The following table lists the recommended working pressures for steel O-ring Straight Thread Fittings made in accordance with SAE standard J514. Many factors such as surging, vibration, mechanical shock and over tightening may affect the integrity of the fitting connections. SAE recommends sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using the fittings with different size or thread type, use the lower pressure rating of the two threads.

Caution: Although most O-ring Straight Thread Fittings have sufficient structural integrity to support the weight of many components, consult with our technical support department for guidance in selection of parts for this purpose.

Dash Size	Straight Thread	4 to 1 Minimum Burst PSI Straight O-ring	4 to 1 Minimum Burst PSI Adjustable O-ring
-2	5/16-24	5000	5000
-3	3/8-24	5000	5000
-4	7/16-20	5000	4500
-5	1/2-20	5000	4000
-6	9/16-16	5000	4000
-8	3/4-16	4500	4000
-10	7/8-14	3500	3000
-12	1 1/16-12	3500	3000
-14	1 3/16-12	3000	2500
-16	1 5/16-12	3000	2500
-20	1 5/8-12	2500	2000
-24	1 7/8-12	2000	1500
-32	2 1/2-12	1500	1125

**STEEL STRAIGHT THREAD O-RING
RECOMMENDED ASSEMBLY INSTRUCTIONS**

NON-ADJUSTABLE STUD

- Step 1.** Inspect port area to be free of any contaminant.
- Step 2.** Lubricate o-ring and threads on fitting.
- Step 3.** Turn fitting into port finger tight, then torque to the value shown in the following tables.

ADJUSTABLE STUD

- Step 1.** Follow steps 1 and 2 from the foregoing instructions, then proceed to the following steps below.
- Step 2.** Looking at fitting from end with nut/washer/O-ring assembly, turn nut clockwise as far as possible.
- Step 3.** Using wrench pad, turn fitting into port until the washer touches the port spot face. Continue turning fitting until washer touches the thread nearest wrench pad.
- Step 4.** Back off fitting counterclockwise not exceeding one revolution until it is orientated in the correct position.
- Step 5.** Place wrench on the wrench pad of fitting to prevent fitting from turning, and torque nut to the value shown in the following table.

J514 & J1926/3 TORQUE VALUES

Dash Size	Straight Thread	Straight Stud Torque	Adjustable Stud Torque
-2	5/16-24	6	6
-3	3/8-24	6	6
-4	7/16-20	9	8
-5	1/2-20	14	9
-6	9/16-18	18	12
-8	3/4-16	27	20
-10	7/8-14	36	30
-12	1 1/16-12	65	44
-14	1 3/16-12	75	53
-16	1 5/16-12	85	59
-20	1 5/8-12	115	75
-24	1 7/8-12	125	105
-32	2 1/2-12	290	225

J514 & J1926/2 TORQUE VALUES

Dash Size	Straight Thread	Straight Stud Torque	Adjustable Stud Torque
-2	5/16-24	NA	NA
-3	3/8-24	NA	NA
-4	7/16-20	14	11
-5	1/2-20	18	14
-6	9/16-18	24	18
-8	3/4-16	40	28
-10	7/8-14	55	44
-12	1 1/16-12	95	65
-14	1 3/16-12	105	75
-16	1 5/16-12	120	85
-20	1 5/8-12	160	115
-24	1 7/8-12	175	125

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

JIC to O-RING CONNECTOR



Part #	Thread		O-Ring	Price
	Size 1	Thread 2	Thread 2	
6400-2	5/16-24	5/16-24		7.31
6400-3	3/8-24	3/8-24		5.68
6400-4	7/16-20	7/16-20		1.12
6400-4-3	7/16-20	3/8-24		5.59
6400-4-5	7/16-20	1/2-20		2.49
6400-4-6	7/16-20	9/16-18		1.89
6400-4-8	7/16-20	3/4-16		3.57
6400-4-10	7/16-20	7/8-14		6.71
6400-5	1/2-20	1/2-20		1.76
6400-5-4	1/2-20	7/16-20		1.38
6400-5-6	1/2-20	9/16-18		3.44
6400-6	9/16-18	9/16-18		1.38
6400-6-4	9/16-18	7/16-20		2.11
6400-6-5	9/16-18	1/2-20		1.81
6400-6-8	9/16-18	3/4-16		2.06
6400-6-10	9/16-18	7/8-14		2.75
6400-6-12	9/16-18	1-1/16-12		7.78
6400-6-16	9/16-18	1-5/16-12		30.92
6400-8	3/4-16	3/4-16		2.11
6400-8-4	3/4-16	7/16-20		7.18
6400-8-6	3/4-16	9/16-18		2.15
6400-8-10	3/4-16	7/8-14		3.01
6400-8-12	3/4-16	1-1/16-12		4.56
6400-8-16	3/4-16	1-5/16-12		15.05
6400-10	7/8-14	7/8-14		2.66
6400-10-6	7/8-14	9/16-18		2.71
6400-10-8	7/8-14	3/4-16		2.71
6400-10-12	7/8-14	1-1/16-12		4.26
6400-10-16	7/8-14	1-5/16-12		9.98
6400-10-20	7/8-14	1-5/8-12		29.50
6400-12	1-1/16-12	1-1/16-12		4.26
6400-12-8	1-1/16-12	3/4-16		4.04
6400-12-10	1-1/16-12	7/8-14		4.17
6400-12-14	1-1/16-12	1-3/16-12		8.56
6400-12-16	1-1/16-12	1-5/16-12		6.28
6400-12-20	1-1/16-12	1-5/8-12		17.59
6400-14	1-3/16-12	1-3/16-12		6.75
6400-14-12	1-3/16-12	1-1/16-12		8.77
6400-14-16	1-3/16-12	1-5/16-12		10.49
6400-16	1-5/16-12	1-5/16-12		5.89
6400-16-10	1-5/16-12	7/8-14		11.22
6400-16-12	1-5/16-12	1-1/16-12		6.45
6400-16-14	1-5/16-12	1-3/16-12		13.12
6400-16-20	1-5/16-12	1-5/8-12		16.47
6400-16-24	1-5/16-12	1-7/8-12		32.85
6400-20	1-5/8-12	1-5/8-12		16.13
6400-20-12	1-5/8-12	1-1/16-12		25.80
6400-20-16	1-5/8-12	1-5/16-12		12.64
6400-20-24	1-5/8-12	1-7/8-12		26.19
6400-24	1-7/8-12	1-7/8-12		18.83
6400-24-20	1-7/8-12	1-5/8-12		27.39
6400-24-32	1-7/8-12	2-1/2-12		88.71
6400-32	2-1/2-12	2-1/2-12		148.42
6400-32-24	2-1/2-12	1-7/8-12		81.96

Also available in Stainless Steel

Also Available in restrictor

LONG JIC TO O-RING CONNECTOR



Part #	Thread		O-Ring	Length	Price
	Size 1	Thread 2	Thread 2		
6400-L-4	7/16-20	7/16-20		2.12"	4.86
6400-L-6	9/16-18	9/16-18		2.31"	5.12
6400-L-8	3/4-16	3/4-16		2.68"	8.17
6400-L-10	7/8-14	7/8-14		3.00"	10.58
6400-L-12	1-1/16-12	1-1/16-12		3.56"	19.18
6400-L-16	1-5/16-12	1-5/16-12		4.00"	26.36
6400-L-20	1-5/8-12	1-5/8-12		4.62"	47.13

Also available in Stainless Steel

O-RING TO PIPE ADAPTER



Part #	O-Ring	Male Pipe	Price
	Thread 1	Thread 2	
6401-4-2	7/16-20	1/8	1.81
6401-4-4	7/16-20	1/4	1.89
6401-5-2	1/2-20	1/8	3.05
6401-6-4	9/16-18	1/4	2.02
6401-6-6	9/16-18	3/8	2.37
6401-6-8	9/16-18	1/2	19.39
6401-8-6	3/4-16	3/8	3.05
6401-8-8	3/4-16	1/2	3.57
6401-8-12	3/4-16	3/4	13.80
6401-10-8	7/8-14	1/2	3.96
6401-12-8	1-1/16-12	1/2	11.09
6401-12-12	1-1/16-12	3/4	5.07
6401-16-16	1-5/16-12	1	8.64
6401-20-20	1-5/8-12	1-1/4	15.27
6401-24-24	1-7/8-12	1-1/2	39.00
6401-32-32	2-1/2-12	2	60.67

More sizes available

Some sizes available in Stainless Steel

**No word in the English
language rhymes with month,
orange, silver, or purple.**

**O-RING TO 37° JIC
SWIVEL ADAPTER**



Part #	O-Ring Thread 1	Thread Size 2	Price
6402-O-4-4	7/16-20	7/16-20	6.41
6402-O-5-5	1/2-20	1/2-20	52.16
6402-O-6-6	9/16-18	9/16-18	4.26
6402-O-6-8	9/16-18	3/4-16	4.21
6402-O-8-8	3/4-16	3/4-16	4.17
6402-O-8-6	3/4-16	9/16-18	7.18
6402-O-10-10	7/8-14	7/8-14	10.02
6402-O-12-12	1-1/16-12	1-1/16-12	12.00
6402-O-14-14	1-3/16-12	1-3/16-12	97.40
6402-O-16-16	1-5/16-12	1-5/16-12	19.65
6402-O-16-12	1-5/16-12	1-1/16-12	14.15
6402-O-20-20	1-5/8-12	1-5/8-12	46.27
6402-O-24-24	1-7/8-12	1-7/8-12	52.72

*Some sizes available in Stainless Steel
More sizes available*

O-RING HEX NIPPLE UNION



Part #	O-Ring Thread 1	O-Ring Thread 2	Price
6403-O-4	7/16-20	7/16-20	5.20
6403-O-6	9/16-18	9/16-18	5.20
6403-O-6-4	9/16-18	7/16-20	8.90
6403-O-8	3/4-16	3/4-16	6.75
6403-O-10	7/8-14	7/8-14	6.75
6403-O-10-8	7/8-14	3/4-16	7.48
6403-O-12	1-1/16-12	1-1/16-12	10.88
6403-O-12-8	1-1/16-12	3/4-16	13.80
6403-O-12-10	1-1/16-12	7/8-14	13.80
6403-O-16	1-5/16-12	1-5/16-12	12.77

More sizes available

George Bush:
When you rearrange the letters:
He bugs Gore

ADJUSTABLE O-RING HEX NIPPLE

SAE 090109A



Part #	O-Ring Thread 1	O-Ring Thread 2	Price
6403-AO-4	7/16-20	7/16-20	8.47
6403-AO-6	9/16-18	9/16-18	8.30
6403-AO-8	3/4-16	3/4-16	7.22
6403-AO-8-6	3/4-16	9/16-18	54.83
6403-AO-10	7/8-14	7/8-14	14.45
6403-AO-10-8	7/8-14	3/4-16	29.67
6403-AO-12	1-1/16-12	1-1/16-12	19.48
6403-AO-12-8	1-1/16-12	3/4-16	58.70
6403-AO-12-10	1-1/16-12	7/8-14	49.15
6403-AO-16	1-5/16-12	1-5/16-12	19.35
6403-AO-16-12	1-5/16-12	1-1/16-12	83.81
6403-AO-20	1-5/8-12	1-5/8-12	36.55
6403-AO-24	1-7/8-12	1-7/8-12	27.09
6403-AO-32	2-1/2-12	2-1/2-12	206.74

Also available in Stainless Steel

FEMALE O-RING TO MALE PIPE ADAPTER



Part #	O-Ring Thread 1	Male Pipe Thread 2	Price
6404-4-2	7/16-20	1/8	7.64
6404-4-4	7/16-20	1/4	6.41
6404-6-4	9/16-18	1/4	8.51
6404-6-6	9/16-18	3/8	5.16
6404-6-8	9/16-18	1/2	10.11
6404-8-4	3/4-16	1/4	18.32
6404-8-6	3/4-16	3/8	3.44
6404-8-8	3/4-16	1/2	4.64
6404-10-8	7/8-14	1/2	5.38
6404-10-12	7/8-14	3/4	22.49
6404-10-16	7/8-14	1	54.52
6404-12-12	1-1/16-12	3/4	11.74
6404-16-16	1-5/16-12	1	21.80
6404-20-20	1-5/8-12	1-1/4	48.12

More sizes available

The Morse Code:
When you rearrange the letters:
Here come dots

Slot Machines:
When you rearrange the letters:
Cash lost in em

O-RING TO FEMALE PIPE ADAPTER



Part #	O-Ring		Price
	Thread 1	Female Pipe Thread 2	
6405-O-2-2	5/16-24	1/8	30.40
6405-O-2-4	5/16	1/4	3.44
6405-O-3-2	3/8-24	1/8	21.33
6405-O-3-4	3/8-24	1/4	46.27
6405-O-4-2	7/16-20	1/8	2.06
6405-O-4-4	7/16-20	1/4	3.10
6405-O-5-2	1/2-20	1/8	3.57
6405-O-5-4	1/2-20	1/4	8.90
6405-O-6-2	9/16-18	1/8	7.70
6405-O-6-4	9/16-18	1/4	2.41
6405-O-6-6	9/16-18	3/8	3.14
6405-O-6-8	9/16-18	1/2	12.94
6405-O-6-12	9/16-18	3/4	23.31
6405-O-8-4	3/4-16	1/4	3.23
6405-O-8-6	3/4-16	3/8	2.92
6405-O-8-8	3/4-16	1/2	3.61
6405-O-8-12	3/4-16	3/4	18.83
6405-O-10-4	7/8-14	1/4	4.04
6405-O-10-6	7/8-14	3/8	3.70
6405-O-10-8	7/8-14	1/2	3.66
6405-O-10-12	7/8-14	3/4	9.93
6405-O-12-6	1-1/16-12	3/8	10.11
6405-O-12-8	1-1/16-12	1/2	5.33
6405-O-12-12	1-1/16-12	3/4	5.38
6405-O-12-16	1-1/16-12	1	38.61
6405-O-14-8	1-3/16-12	1/2	18.53
6405-O-14-12	1-3/16-12	3/4	8.99
6405-O-14-16	1-3/16-12	1	42.23
6405-O-16-6	1-5/16-12	3/8	14.32
6405-O-16-8	1-5/16-12	1/2	9.72
6405-O-16-12	1-5/16-12	3/4	6.45
6405-O-16-16	1-5/16-12	1	8.86
6405-O-16-20	1-5/16-12	1-1/4	24.77
6405-O-20-12	1-5/8-12	3/4	17.59
6405-O-20-20	1-5/8-12	1-1/4	15.74
6405-O-20-24	1-5/8-12	1-1/2	59.13
6405-O-24-16	1-7/8-12	1	27.56
6405-O-24-20	1-7/8-12	1-1/4	30.23
6405-O-24-24	1-7/8-12	1-1/2	30.83
6405-O-32-20	2-1/2-12	1-1/4	181.25
6405-O-32-24	2-1/2-12	1-1/2	107.50
6405-O-32-32	2-1/2-12	2	67.12

*Some sizes available in Stainless Steel
More sizes available*

O-RING HEX HEAD PLUG

SAE 090109A



Part #	O-Ring		Price
	Thread	O-Ring	
6408-O-2	5/16-24		0.77
6408-O-3	3/8-24		0.90
6408-O-4	7/16-20		0.90
6408-O-5	1/2-20		1.03
6408-O-6	9/16-18		0.86
6408-O-8	3/4-16		1.59
6408-O-10	7/8-14		1.94
6408-O-12	1-1/16-12		2.75
6408-O-14	1-3/16-20		4.26
6408-O-16	1-5/16-12		4.17
6408-O-20	1-5/8-12		7.48
6408-O-24	1-7/8-12		12.56
6408-O-32	2-1/2-12		47.34

Also available in Stainless Steel

**O-RING HOLLOW
HEX HEAD PLUG**



Part #	O-Ring		Price
	Thread	O-Ring	
6408-H-O-2	5/16-24		0.90
6408-H-O-3	3/8-24		0.86
6408-H-O-4	7/16-20		0.99
6408-H-O-5	1/2-20		1.29
6408-H-O-6	9/16-18		0.95
6408-H-O-8	3/4-16		1.63
6408-H-O-10	7/8-14		2.15
6408-H-O-12	1-1/16-12		3.10
6408-H-O-14	1-3/16-20		4.73
6408-H-O-16	1-5/16-12		4.21
6408-H-O-20	1-5/8-12		8.56
6408-H-O-24	1-7/8-12		12.30
6408-H-O-32	2-1/2-12		33.24

Also available in Stainless Steel

God gave us two ears but only one mouth. Some people say it's because He wanted us to spend twice as much time listening as talking. Others claim it's because He knew that listening was twice as hard.

**O-RING PORT
REDUCER/EXPANDER**



Part #	O-Ring Thread 1	O-Ring Thread 2	Price
6410-O-2-4	5/16-24	7/16-20	37.75
6410-O-4-5	7/16-20	1/2-20	41.45
6410-O-4-6	7/16-20	9/16-18	3.48
6410-O-6-4	9/16-18	7/16-20	3.27
6410-O-6-8	9/16-18	3/4-16	6.75
6410-O-8-4	3/4-16	7/16-20	5.33
6410-O-8-6	3/4-16	9/16-18	2.58
6410-O-8-10	3/4-16	7/8-14	4.86
6410-O-8-12	3/4-16	1-1/16-12	18.02
6410-O-10-4	7/8-14	7/16-20	7.74
6410-O-10-6	7/8-14	9/16-18	5.63
6410-O-10-8	7/8-14	3/4-16	3.61
6410-O-10-12	7/8-14	1-1/16-12	9.25
6410-O-12-4	1-1/16-12	7/16-20	19.26
6410-O-12-6	1-1/16-12	9/16-18	13.50
6410-O-12-8	1-1/16-12	3/4-16	5.81
6410-O-12-10	1-1/16-12	7/8-14	6.92
6410-O-12-14	1-1/16-12	1-3/16-12	43.09
6410-O-12-16	1-1/16-12	1-5/16-12	22.02
6410-O-14-8	1-3/16-12	3/4-16	23.87
6410-O-14-10	1-3/16-12	7/8-14	15.70
6410-O-14-12	1-3/16-12	1-1/16-12	9.93
6410-O-16-6	1-5/16-12	9/16-18	17.20
6410-O-16-8	1-5/16-12	3/4-16	9.46
6410-O-16-10	1-5/16-12	7/8-14	12.26
6410-O-16-12	1-5/16-12	1-1/16-12	7.48
6410-O-16-14	1-5/16-12	1-3/16-12	35.09
6410-O-16-20	1-5/16-12	1-5/8-12	61.83
6410-O-20-10	1-5/8-12	7/8-14	33.63
6410-O-20-12	1-5/8-12	1-1/16-12	23.65
6410-O-20-16	1-5/8-12	1-5/16-12	17.97
6410-O-20-24	1-5/8-12	1-7/8-12	48.03
6410-O-24-12	1-7/8-12	1-1/16-12	23.52
6410-O-24-16	1-7/8-12	1-5/16-12	32.25
6410-O-24-20	1-7/8-12	1-5/8-12	28.85
6410-O-32-16	2-1/2-12	1-5/16-12	150.50
6410-O-32-20	2-1/2-12	1-5/8-12	94.17
6410-O-32-24	2-1/2-12	1-7/8-12	68.37

Some sizes available in Stainless Steel

More sizes available

Available in an extender

**A ship in a safe harbor is safe,
but that is not what a ship is
built for.**

-William Shedd

FEMALE SWIVELS STEEL FLARE

JIC SWIVEL NUT ELBOW

SAE 070221
MS 51521



Part #	JIC Thread Size 1	JIC Thread Size 2	Price
6500-4	7/16-20	7/16-20	3.35
6500-5	1/2-20	1/2-20	4.39
6500-6	9/16-18	9/16-18	4.04
6500-8	3/4-16	3/4-16	5.93
6500-8-6	3/4-16	9/16-18	6.79
6500-10	7/8-14	7/8-14	7.61
6500-10-8	7/8-14	3/4-16	7.83
6500-12	1-1/16-12	1-1/16-12	11.22
6500-12-10	1-1/16-12	7/8-14	22.06
6500-14	1-3/16-12	1-3/16-12	21.20
6500-16	1-5/16-12	1-5/16-12	18.40
6500-20	1-5/8-12	1-5/8-12	35.35
6500-24	1-7/8-12	1-7/8-12	50.83
6500-32	2-1/2-12	2-1/2-12	120.57

More sizes available

Some sizes available in Stainless Steel

JIC SWIVEL TO MALE PIPE ELBOW



Part #	JIC Thread Size 1	Male Pipe Thread 2	Price
6501-4-2	7/16-20	1/8	3.31
6501-4-4	7/16-20	1/4	3.96
6501-6-4	9/16-18	1/4	4.56
6501-6-6	9/16-18	3/8	6.15
6501-8-6	3/4-16	3/8	5.98
6501-8-8	3/4-16	1/2	6.71
6501-10-8	7/8-14	1/2	7.70
6501-12-12	1-1/16-12	3/4	10.75
6501-14-12	1-3/16-12	3/4	45.49
6501-16-16	1-5/16-12	1	19.65
6501-20-20	1-5/8-12	1-1/4	35.55
6501-24-24	1-7/8-12	1-1/2	48.93
6501-32-32	2-1/2-12	2	258.04

Also available in Stainless Steel

More sizes available

JIC SWIVEL 45° ELBOW



Part #	JIC Thread		Price
	Size 1	Size 2	
6502-4	7/16-20	7/16-20	4.82
6502-5	1/2-20	1/2-20	7.74
6502-6	9/16-18	9/16-18	4.73
6502-8	3/4-16	3/4-16	6.11
6502-10	7/8-14	7/8-14	9.16
6502-12	1-1/16-12	1-1/16-12	11.14
6502-14	1-3/16-12	1-3/16-12	20.38
6502-16	1-5/16-12	1-5/16-12	18.58
6502-20	1-5/8-12	1-5/8-12	34.14
6502-24	1-7/8-12	1-7/8-12	51.56
6502-32	2-1/2-12	2-1/2-12	126.51

Some sizes available in Stainless Steel

**JIC SWIVEL TO FEMALE
PIPE ELBOW**



Part #	JIC Thread		Female Pipe Thread 2	Price
	Size 1	Size 2		
6503-6-4	9/16-18	1/4	8.82	
6503-6-6	9/16-18	3/8	13.37	
6503-8-6	3/4-16	3/8	23.48	
6503-8-8	3/4-16	1/2	15.78	
6503-10-8	7/8-14	1/2	30.83	
6503-12-12	1-1/16-12	3/4	38.18	

*Also available in Stainless Steel
More sizes available*

JIC SWIVEL CONNECTOR



Part #	JIC Thread		Price
	Size 1	Size 2	
6504-4-4	7/16-20	7/16-20	6.62
6504-5-5	1/2-20	1/2-20	19.44
6504-6-6	9/16-18	9/16-18	5.59
6504-8-8	3/4-16	3/4-16	10.11
6504-8-10	3/4-16	7/8-14	19.52
6504-10-10	7/8-14	7/8-14	11.91
6504-12-12	1-1/16-12	1-1/16-12	15.22
6504-16-16	1-5/16-12	1-5/16-12	22.32
6504-20-20	1-5/8-12	1-5/8-12	46.10
6504-24-24	1-7/8-12	1-7/8-12	46.44
6504-32-32	2-1/2-12	2-1/2-12	165.46

**JIC SWIVEL TO MALE
PIPE ADAPTER**



Part #	JIC Thread		Male Pipe Thread 2	Price
	Size 1	Size 2		
6505-4-2	7/16-20	1/8	3.87	
6505-4-4	7/16-20	1/4	3.10	
6505-5-4	1/2-20	1/4	9.29	
6505-6-4	9/16-18	1/4	3.57	
6505-6-6	9/16-18	3/8	3.66	
6505-8-6	3/4-16	3/8	6.24	
6505-8-8	3/4-16	1/2	4.39	
6505-10-8	7/8-14	1/2	5.68	
6505-10-12	7/8-14	3/4	17.76	
6505-12-8	1-1/16-12	1/2	14.32	
6505-12-12	1-1/16-12	3/4	7.61	
6505-16-12	1-5/16-12	3/4	28.29	
6505-16-16	1-5/16-12	1	14.79	
6505-20-20	1-5/8-12	1-1/4	23.99	
6505-24-24	1-7/8-12	1-1/2	49.45	
6505-32-32	2-1/2-12	2	119.07	

Also available in Stainless Steel

**JIC SWIVEL TO FEMALE
PIPE ADAPTER**



Part #	JIC Thread		Female Pipe Thread 2	Price
	Size 1	Size 2		
6506-4-2	7/16-20	1/8	17.37	
6506-4-4	7/16-20	1/4	7.22	
6506-6-4	9/16-18	1/4	8.94	
6506-6-6	9/16-18	3/8	5.81	
6506-6-8	9/16-18	1/2	4.64	
6506-8-6	3/4-16	3/8	7.31	
6506-8-8	3/4-16	1/2	7.53	
6506-8-12	3/4-16	3/4	17.16	
6506-10-6	7/8-14	3/8	15.39	
6506-10-8	7/8-14	1/2	7.65	
6506-10-12	7/8-14	3/4	15.70	
6506-12-8	1-1/16-12	1/2	20.04	
6506-12-12	1-1/16-12	3/4	10.66	
6506-14-12	1-3/16-12	3/4	20.94	
6506-16-16	1-5/16-12	1	19.91	
6506-20-20	1-5/8-12	1-1/4	39.30	
6506-24-24	1-7/8-12	1-1/2	45.11	
6506-32-32	2-1/2-12	2	172.65	

*More sizes available
Also available in Stainless Steel*

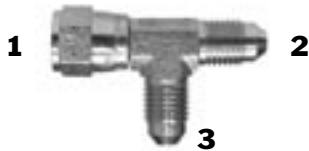
JIC SWIVEL BRANCH TEE



Part #	JIC Thread Size	JIC Female Thread	Price
6600-4-4	7/16-20	7/16-20	5.20
6600-5-5	1/2-20	1/2-20	7.22
6600-6-6	9/16-18	9/16-18	5.76
6600-8-8	3/4-16	3/4-16	7.78
6600-10	7/8-14	7/8-14	9.55
6600-12	1-1/16-12	1-1/16-12	14.58
6600-14	1-3/16-12	1-3/16-12	25.54
6600-16	1-5/16-12	1-5/16-12	20.38
6600-20	1-5/8-12	1-5/8-12	53.32
6600-24	1-7/8-12	1-7/8-12	80.50
6600-32	2-1/2-12	2-1/2-2	322.50

Also available in stainless steel

JIC SWIVEL RUN TEE



Part #	JIC Thread Size	JIC Female Thread	Price
6602-4	7/16-20	7/16 - 20	5.25
6602-5	1/2-20	1/2-20	7.40
6602-6	9/16-18	9/16-18	5.98
6602-8	3/4-16	3/4-16	8.00
6602-10	7/8-14	7/8-14	15.27
6602-12	1-1/16-12	1-1/16-12	15.05
6602-14	1-3/16-12	1-3/16-12	30.10
6602-16	1-5/16-12	1-5/16-12	25.07
6602-20	1-5/8-12	1-5/8-12	42.48
6602-24	1-7/8-12	1-7/8-12	59.64
6602-32	2-1/2-12	2-1/2-12	236.50

*More sizes available
Also available in Stainless Steel*

JIC BENT TUBE SWIVEL NUT ELBOW



Part #	JIC Thread Size 1	JIC Thread Size 2	Price
6701-4	7/16-20	7/16-20	19.74
6701-6	9/16-18	9/16-18	19.14
6701-8	3/4-16	3/4-16	20.73
6701-10	7/8-14	7/8-14	30.96
6701-12	1-1/16-12	1-1/16-12	33.20
6701-16	1-5/16-12	1-5/16-12	48.76
6701-20	1-5/8-12	1-5/8-12	62.74
6701-24	1-7/8-12	1-7/8-12	279.37

JIC LONG BENT TUBE SWIVEL NUT ELBOW



Part #	JIC Thread Size 1	JIC Thread 2	Price
6701-L-4	7/16-20	7/16-20	26.23
6701-L-6	9/16-18	9/16-18	20.60
6701-L-8	3/4-16	3/4-16	24.25
6701-L-10	7/8-14	7/8-14	26.40
6701-L-12	1-1/16-12	1-1/16-12	32.47
6701-L-16	1-5/16-12	1-5/16-12	41.97
6701-L-20	1-5/8-12	1-5/8-12	103.20

JIC EXTRA HEAVY BENT TUBE SWIVEL NUT ELBOW



Part #	JIC Thread Size 1	JIC Thread 2	Price
6701-XH-8	3/4-16	3/4-16	151.36
6701-XH-12	1-1/16-12	1-1/16-12	152.99
6701-XH-16	1-5/16-12	1-5/16-12	172.13
6701-XH-20	1-5/8-12	1-5/8-12	385.02
6701-XH-24	1-7/8-12	1-7/8-12	220.46

Meets SAE 100R10 pressures

"If I had to live my life again I'd make all the same mistakes - only sooner."

-Tallulah Bankhead

Maine is the only state (in USA) whose name is just one syllable

JIC EXTRA HEAVY LONG BENT TUBE SWIVEL NUT ELBOW



Meets SAE 100R10 pressures

Part #	Thread	Thread	Price
	Size 1	Size 2	
6701-LXH-8	3/4-16	3/4-16	205.54
6701-LXH-12	1-1/16-12	1-1/16-12	125.60
6701-LXH-16	1-5/16-12	1-5/16-12	197.24
6701-LXH-20	1-5/8-12	1-5/8-12	POR

JIC 45° BENT TUBE SWIVEL NUT ELBOW



Part #	Thread	Thread	Price
	Size 1	Size 2	
6702-6	9/16-18	9/16-18	25.50
6702-8	3/4-16	3/4-16	27.74
6702-10	7/8-14	7/8-14	27.86
6702-12	1-1/16-12	1-1/16-12	40.98
6702-16	1-5/16-12	1-5/16-12	48.85

Nothing in the world will take the place of persistence. Talent will not; nothing is more common than the unsuccessful person with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent. The slogan "press on" has solved and always will solve the problems of the human race.

-Calvin Coolidge

STEEL SAE O-RING FITTINGS

JIC TO O-RING ELBOW CONNECTOR

SAE 070220
MS 51527



Part #	Thread	O-Ring	Price
	Size 1	Thread 2	
6801-NWO-2	5/16-24	5/16-24	36.55
6801-NWO-3	3/8-24	3/8-24	7.05
6801-NWO-4	7/16-20	7/16-20	3.57
6801-NWO-4-3	7/16-20	3/8-24	108.10
6801-NWO-4-5	7/16-20	1/2-20	4.86
6801-NWO-4-6	7/16-20	9/16-18	4.39
6801-NWO-4-8	7/16-20	3/4-16	6.71
6801-NWO-5	1/2-20	1/2-20	4.86
6801-NWO-5-4	1/2-20	7/16-20	4.73
6801-NWO-5-6	1/2-20	8/16-18	5.98
6801-NWO-6	9/16-18	9/16-18	4.26
6801-NWO-6-4	9/16-18	7/16-20	4.34
6801-NWO-6-5	9/16-18	1/2-20	4.69
6801-NWO-6-8	9/16-18	3/4-16	6.45
6801-NWO-6-10	9/16-18	7/8-14	7.14
6801-NWO-6-12	9/16-18	1-1/16-12	10.75
6801-NWO-8	3/4-16	3/4-16	6.15
6801-NWO-8-6	3/4-16	9/16-18	5.98
6801-NWO-8-10	3/4-16	7/8-14	7.40
6801-NWO-8-12	3/4-16	1-1/16-12	8.99
6801-NWO-8-16	3/4-16	1-5/16-12	15.18
6801-NWO-10	7/8-14	7/8-14	8.60
6801-NWO-10-6	7/8-14	9/16-18	8.86
6801-NWO-10-8	7/8-14	3/4-16	7.61
6801-NWO-10-12	7/8-14	1-1/16-12	12.38
6801-NWO-10-16	7/8-14	1-5/16-12	15.78
6801-NWO-12	1-1/16-12	1-1/16-12	11.18
6801-NWO-12-8	1-1/16-12	3/4-16	10.49
6801-NWO-12-10	1-1/16-12	7/8-14	12.38
6801-NWO-12-14	1-1/16-12	1-3/16-12	20.43
6801-NWO-12-16	1-1/16-12	1-5/16-12	17.72
6801-NWO-12-20	1-1/16-12	1-5/8-12	22.02
6801-NWO-14	1-3/16-12	1-3/16-12	19.05
6801-NWO-14-12	1-3/16-12	1-1/16-12	21.59
6801-NWO-14-16	1-3/16-12	1-5/16-12	30.49
6801-NWO-16	1-5/16-12	1-5/16-12	19.05
6801-NWO-16-12	1-5/16-12	1-1/16-12	16.94
6801-NWO-16-14	1-5/16-12	1-3/16-12	28.29
6801-NWO-16-20	1-5/16-12	1-5/8-12	27.95
6801-NWO-20	1-5/8-12	1-5/8-12	29.46
6801-NWO-20-12	1-5/8-12	1-1/16-12	40.98
6801-NWO-20-16	1-5/8-12	1-5/16-12	28.98
6801-NWO-20-24	1-5/8-12	1-7/8-12	44.85
6801-NWO-24	1-7/8-12	1-7/8-12	45.45
6801-NWO-24-20	1-7/8-12	1-5/8-12	42.66
6801-NWO-32	2-1/2-12	2-1/2-12	107.67

*Some sizes available in Stainless Steel
More sizes available*

LONG JIC TO O-RING ELBOW



Part #	Thread	O-Ring	Price
	Size 1	Thread 2	
6801-L-NWO-4	7/16-20	7/16-20	7.70
6801-L-NWO-6	9/16-18	9/16-18	5.25
6801-L-NWO-6-8	9/16-18	3/4-16	6.75
6801-L-NWO-8	3/4-16	3/4-16	9.63
6801-L-NWO-8-10	3/4-16	7/8-14	11.48
6801-L-NWO-10	7/8-14	7/8-14	11.95
6801-LNWO-12	1-1/16-12	1-1/16-12	16.64
6801-LNWO-16	1-5/16-12	1-5/16-12	38.92

More sizes available

EXTRA LONG JIC TO O-RING ELBOW



Part #	Thread	O-Ring	Price
	Size 1	Thread 2	
6801-LL-NWO-4	7/16-20	7/16-20	9.50
6801-LL-NWO-6	9/16-18	9/16-18	5.72
6801-LL-NWO-6-8	9/16-18	3/4-16	9.16
6801-LL-NWO-8	3/4-16	3/4-16	8.69
6801-LL-NWO-8-10	3/4-16	7/8-14	10.97
6801-LL-NWO-10	7/8-14	7/8-14	12.47
6801-LL-NWO-12	1-1/16-12	1-1/16-12	16.00
6801-LL-NWO-16	1-5/16-12	1-5/16-12	25.54

More sizes available

EXTRA-EXTRA LONG STRAIGHT THREAD ELBOW



Part #	Thread	O-Ring	Price
	Size 1	Thread 2	
6801-LLL-NWO-6*	9/16-18	9/16-18	30.70
6801-LLL-NWO-8	3/4-16	3/4-16	16.47
6801-LLL-NWO-10*	7/8-14	7/8-14	79.64

**Braze-on Style*

JIC TO O-RING SWIVEL ELBOW



Swivel for installation only

Part #	Thread	O-Ring	Price
	Size 1	Thread 2	
6801-NWS-6-6	9/16-18	9/16-18	19.35
6801-NWS-8-8	3/4-16	3/4-16	25.37
6801-NWS-10-10	7/8-14	7/8-14	29.67

STRAIGHT THREAD 45° ELBOW

SAE 070320
MS 51528



Part #	Thread	O-Ring	Price
	Size 1	Thread 2	
6802-NWO-4	7/16-20	7/16-20	5.12
6802-NWO-4-6	7/16-20	9/16-18	5.98
6802-NWO-4-8	7/16-20	3/4-16	6.19
6802-NWO-5	1/2-20	1/2-20	6.92
6802-NWO-5-8	1/2-20	3/4-16	60.67
6802-NWO-6	9/16-18	9/16-18	5.50
6802-NWO-6-8	9/16-18	3/4-16	7.14
6802-NWO-6-10	9/16-18	7/8-14	7.74
6802-NWO-8	3/4-16	3/4-16	7.40
6802-NWO-8-6	3/4-16	9/16-18	7.61
6802-NWO-8-10	3/4-16	7/8-14	9.50
6802-NWO-8-12	3/4-16	1-1/16-12	10.19
6802-NWO-10	7/8-14	7/8-14	11.35
6802-NWO-10-8	7/8-14	3/4-16	9.80
6802-NWO-10-12	7/8-14	1-1/16-12	11.09
6802-NWO-12	1-1/16-12	1-1/16-12	12.38
6802-NWO-12-14	1-1/16-12	1-3/16-12	56.59
6802-NWO-12-16	1-1/16-12	1-5/16-12	20.08
6802-NWO-14	1-3/16-12	1-3/16-12	27.95
6802-NWO-16	1-5/16-12	1-5/16-12	19.05
6802-NWO-16-12	1-5/16-12	1-1/16-12	19.05
6802-NWO-16-20	1-5/16-12	1-5/8-12	73.06
6802-NWO-20	1-5/8-12	1-5/8-12	33.11
6802-NWO-20-16	1-5/8-12	1-5/16-12	39.43
6802-NWO-24	1-7/8-12	1-7/8-12	45.45
6802-NWO-32	2-1/2-12	2-1/2-12	244.20

*Some sizes available in Stainless Steel
more sizes available*

JIC TO O-RING BRANCH TEE

SAE 070429
MS 51529



Part #	Thread Size 1 & 2	O-Ring Thread 3	Price
6803-NWO-4	7/16-20	7/16-20	5.25
6803-NWO-5	1/2-20	1/2-20	7.87
6803-NWO-6	9/16-18	9/16-18	6.41
6803-NWO-6-8	9/16-18	3/4-16	16.00
6803-NWO-8	3/4-16	3/4-16	8.34
6803-NWO-8-10	3/4-16	7/8-14	23.56
6803-NWO-10	7/8-14	7/8-14	11.57
6803-NWO-12	1-1/16-12	1-1/16-12	16.30
6803-NWO-14	1-3/16-12	1-3/16-12	29.28
6803-NWO-16	1-5/16-12	1-5/16-12	26.23
6803-NWO-16-12	1-5/16-12	1-1/16-12	45.67
6803-NWO-20	1-5/8-12	1-5/8-12	48.33
6803-NWO-24	1-7/8-12	1-7/8-12	75.38
6803-NWO-32	2-1/2-12	2-1/2-12	529.24

*Some sizes available in Stainless Steel
More sizes available*

JIC TO O-RING RUN TEE

SAE 070428
MS 51530



Part #	Thread Size 1 & 3	O-Ring Thread 2	Price
6804-NWO-4	7/16-20	7/16-20	5.68
6804-NWO-5	1/2-20	1/2-20	6.62
6804-NWO-6	9/16-18	9/16-18	6.62
6804-NWO-6-8	9/16-18	3/4-16	26.27
6804-NWO-8	3/4-16	3/4-16	8.73
6804-NWO-8-10	3/4-16	7/8-14	31.18
6804-NWO-10	7/8-14	7/8-14	12.17
6804-NWO-12	1-1/16-12	1-1/16-12	16.73
6804-NWO-14	1-3/16-12	1-3/16-12	34.36
6804-NWO-16	1-5/16-12	1-5/16-12	27.82
6804-NWO-16-12	1-5/16-12	1-1/16-12	38.92
6804-NWO-20	1-5/8-12	1-5/8-12	44.03
6804-NWO-24	1-7/8-12	1-7/8-12	59.73
6804-NWO-32	2-1/2-12	2-1/2-12	169.51

*More sizes available
Also available in stainless steel*

O-RING TO FEMALE PIPE ELBOW



Part #	O-Ring Thread 1	Pipe Thread 2	Price
6805-NWO-4-2	7/16-20	1/8	5.25
6805-NWO-4-4	7/16-20	1/4	6.92
6805-NWO-5-2	1/2-20	1/8	7.96
6805-NWO-6-4	9/16-18	1/4	5.68
6805-NWO-6-6	9/16-18	3/8	8.56
6805-NWO-8-6	3/4-16	3/8	6.62
6805-NWO-8-8	3/4-16	1/2	11.22
6805-NWO-10-8	7/8-14	1/2	11.44
6805-NWO-12-12	1-1/16-12	3/4	15.52
6805-NWO-14-12	1-3/16-12	3/4	40.51
6805-NWO-16-16	1-5/16-12	1	23.82
6805-NWO-20-20	1-5/8-12	1-1/4	38.96
6805-NWO-24-24	1-7/8-12	1-1/2	62.35
6805-NWO-32-32	2-1/2-12	2	386.44

More sizes available

EXTRA LONG O-RING TO FEMALE PIPE ELBOW



Part #	O-Ring Thread 1	Pipe Thread 2	Price
6805-LL-8-6	3/4-16	3/8	48.55
6805-LL-10-8	7/8-14	1/2	48.42
6805-LL-12-12	1-1/16-12	3/4	72.33
6805-LL-16-16	1-5/16-12	1	121.95

One of the most lasting pleasures you can experience is the feeling that comes over you when you genuinely forgive an enemy - whether he knows about it or not.

-A. Battista

O-RING TO MALE PIPE ELBOW



Part #	O-Ring Thread 1	Pipe Thread 2	Price
6806-NWO-4-2	7/16-20	1/8	4.26
6806-NWO-4-4	7/16-20	1/4	5.72
6806-NWO-6-4	9/16-18	1/4	5.25
6806-NWO-6-6	9/16-18	3/8	9.33
6806-NWO-8-6	3/4-16	3/8	6.97
6806-NWO-8-8	3/4-16	1/2	7.44
6806-NWO-10-8	7/8-14	1/2	105.01
6806-NWO-12-12	1-1/16-12	3/4	13.29
6806-NWO-16-16	1-5/16-12	1	21.46
6806-NWO-20-20	1-5/8-12	1-1/4	105.15
6806-NWO-24-24	1-7/8-12	1-1/2	51.56
6806-NWO-32-32	2-1/2-12	2	240.07

More sizes available

STRAIGHT THREAD TO STRAIGHT THREAD



Part #	O-Ring Thread Size 1 & 2	Price
6807-NWO-4-4	7/16-20	7.40
6807-NWO-6-6	9/16-18	7.61
6807-NWO-8-8	3/4-16	9.80
6807-NWO-10-10	7/8-14	17.59
6807-NWO-12-12	1-1/16-12	15.74
6807-NWO-16-16	1-5/16-12	39.22
6807-NWO-20-20	1-5/8-12	57.28
6807-NWO-24-24	1-7/8-12	86.82

More sizes available

37° JIC SWIVEL NUT TO O-RING ELBOW



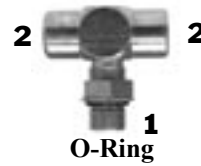
Part #	O-Ring Thread 1	JIC Thread 2	Price
6809-NWO-4-4	7/16-20	7/16-20	6.45
6809-NWO-6-6	9/16-18	9/16-18	7.40
6809-NWO-8-8	3/4-16	3/4-16	9.80
6809-NWO-8-10	3/4-16	7/8-16	32.16
6809-NWO-10-10	7/8-14	7/8-14	11.61
6809-NWO-12-12	1-1/16-12	1-1/16-12	17.07
6809-NWO-16-16	1-5/16-12	1-5/16-12	37.84
6809-NWO-20-20	1-5/8-12	1-5/8-12	71.64

FEMALE O-RING TO MALE O-RING ELBOW



Part #	O-Ring Thread 1	O-Ring Thread 2	Price
6815-NWO-6-6	9/16-18	9/16-18	23.65
6815-NWO-8-8	3/4-16	3/4-16	15.05
6815-NWO-10-10	7/8-14	7/8-14	45.02
6815-NWO-12-12	1-1/16-12	1-1/16-12	33.11

O-RING TO FEMALE PIPE BRANCH TEE



Part #	O-Ring Thread 1	Pipe Thread 2	Price
6855-NWO-6-4	9/16-18	1/4	19.31
6855-NWO-6-6	9/16-18	3/8	27.43

After a While

After a while you learn the subtle difference between holding a hand and chaining a soul,

And you learn that love dosen't mean leaning and company dosen't mean security, And you begin to learn that kisses aren't contracts and presents aren't promises, And you begin to accept your defeats with your head up and your eyes open, with the grace of an adult, not the grief of a child, And you learn to build all your roads on today, because tomorrow's ground is too uncertain for plans.

After a while you learn that even sunshine burns if you get too much.

So plant your own garden and decorate your own soul, instead of waiting for someone to bring you flowers.

-Author Unknown

O-RING SWIVEL ADAPTER

SAE 140157



Part #	O-Ring Thread 1	Female NPSM 2	Price
6900-O-4-2	7/16-20	1/8	1.89
6900-O-4-4	7/16-20	1/4	2.92
6900-O-4-6	7/16-20	3/8	13.89
6900-O-4-8	7/16-20	1/2	14.92
6900-O-5-4	1/2-20	1/4	6.02
6900-O-6-4	9/16-18	1/4	2.71
6900-O-6-6	9/16-18	3/8	2.92
6900-O-6-8	9/16-18	1/2	6.19
6900-O-8-4	3/4-16	1/4	4.17
6900-O-8-6	3/4-16	3/8	3.61
6900-O-8-8	3/4-16	1/2	3.48
6900-O-8-12	3/4-16	3/4	8.04
6900-O-10-4	7/8-14	1/4	37.15
6900-O-10-6	7/8-14	3/8	5.50
6900-O-10-8	7/8-14	1/2	4.21
6900-O-10-12	7/8-14	3/4	6.28
6900-O-10-16	7/8-14	1	POR
6900-O-12-6	1-1/16-12	3/8	20.12
6900-O-12-8	1-1/16-12	1/2	5.81
6900-O-12-12	1-1/16-12	3/4	6.71
6900-O-12-16	1-1/16-12	1	19.18
6900-O-14-8	1-3/16-12	1/2	69.88
6900-O-14-12	1-3/16-12	3/4	17.97
6900-O-16-8	1-5/16-12	1/2	40.25
6900-O-16-12	1-5/16-12	3/4	13.07
6900-O-16-16	1-5/16-12	1	9.68
6900-O-16-20	1-5/16-12	1-1/4	33.20
6900-O-20-12	1-5/8-12	3/4	45.15
6900-O-20-16	1-5/8-12	1	24.81
6900-O-20-20	1-5/8-12	1-1/4	26.53
6900-O-24-24	1-7/8-12	1-1/2	63.77
6900-O-32-32	2-1/2-12	2	142.24

More sizes available

The manner in which it is given is worth more than the gift.
-Pierre Corneille

90° O-RING SWIVEL ADAPTER



Part #	O-Ring Thread 1	Female Pipe NPSM 2	Price
6901-NWO-4-2*	7/16-20	1/8	11.48
6901-NWO-4-4	7/16-20	1/4	5.03
6901-NWO-4-6*	7/16-20	3/8	14.02
6901-NWO-6-4	9/16-18	1/4	4.69
6901-NWO-6-6	9/16-18	3/8	6.32
6901-NWO-6-8	9/16-18	1/2	11.31
6901-NWO-8-4*	3/4-16	1/4	6.79
6901-NWO-8-6	3/4-16	3/8	6.32
6901-NWO-8-8	3/4-16	1/2	6.97
6901-NWO-8-12	3/4-16	3/4	12.86
6901-NWO-10-4*	7/8-14	1/4	15.65
6901-NWO-10-6	7/8-14	3/8	9.55
6901-NWO-10-8	7/8-14	1/2	7.74
6901-NWO-10-12	7/8-14	3/4	13.72
6901-NWO-12-6*	1-1/16-12	3/8	10.66
6901-NWO-12-8	1-1/16-12	1/2	12.86
6901-NWO-12-12	1-1/16-12	3/4	13.12
6901-NWO-12-16*	1-1/16-12	1	15.70
6901-NWO-14-12*	1-3/16-12	3/4	33.58
6901-NWO-16-12*	1-5/16-12	3/4	19.82
6901-NWO-16-16	1-5/16-12	1	21.46
6901-NWO-16-20*	1-5/16-12	1-1/4	41.80
6901-NWO-20-12*	1-5/8-12	3/4	55.43
6901-NWO-20-16	1-5/8-12	1	25.46
6901-NWO-20-20	1-5/8-12	1-1/4	39.34
6901-NWO-24-24*	1-7/8-12	1-1/2	95.59
6901-NWO-32-32*	2-1/2-12	2	139.11

**Braze-on Style Available*

O-RING SWIVEL TEE



Part #	O-Ring Thread 1	Female NPSM 2 & 3	Price
6911-NWO-4-4	7/16-20	1/4	54.18
6911-NWO-6-6	9/16-18	3/8	57.79
6911-NWO-8-8	3/4-16	1/2	41.37
6911-NWO-10-8	7/8-14	1/2	POR
6911-NWO-12-12	1-1/16-12	3/4	81.96

More sizes available

45° O-RING SWIVEL ADAPTER



Part #	O-Ring Thread 1	Female NPSM 2	Price
6902-NWO-4-2	7/16-20	1/8	4.99
6902-NWO-4-4	7/16-20	1/4	7.61
6902-NWO-4-6	7/16-20	3/8	17.16
6902-NWO-6-4	9/16-18	1/4	7.18
6902-NWO-6-6	9/16-18	3/8	7.83
6902-NWO-6-8	9/16-18	1/2	8.17
6902-NWO-8-4	3/4-16	1/4	18.75
6902-NWO-8-6	3/4-16	3/8	8.64
6902-NWO-8-8	3/4-16	1/2	8.64
6902-NWO-8-12	3/4-16	3/4	25.33
6902-NWO-10-6	7/8-14	3/8	9.37
6902-NWO-10-8	7/8-14	1/2	9.89
6902-NWO-10-12	7/8-14	3/4	18.02
6902-NWO-12-8	1-1/16-12	1/2	11.27
6902-NWO-12-12	1-1/16-12	3/4	16.00
6902-NWO-12-16	1-1/16-12	1	74.52
6902-NWO-16-12	1-5/16-12	3/4	16.86
6902-NWO-16-16	1-5/16-12	1	20.77
6902-NWO-20-20	1-5/8-12	1-1/4	79.08
6902-NWO-24-24	1-7/8-12	1-1/2	126.85

More sizes available

A wife invited some people to dinner. At the table, she turned to their six-year-old daughter and said, "Would you like to say the blessing?" "I wouldn't know what to say," the girl replied. "Just say what you hear Mommy say," the wife answered. The daughter bowed her head and said, "Lord, why on earth did I invite all these people to dinner?"

O-RINGS

SAE BOSS VITON O-RING

Fluorocarbon



Part #	Boss Straight Thread	O-Ring I.D.	Price
4001-2-2	5/16-24	.239	0.54
4001-3-3	3/8-24	.301	0.58
4001-4-4	7/16-20	.351	0.69
4001-5-5	1/2-20	.414	1.08
4001-6-6	9/16-18	.468	0.77
4001-8-8	3/4-16	.644	1.12
4001-10	7/8-14	.755	1.55
4001-12	1-1/16-12	.924	1.72
4001-14	1-3/16-12	1.048	3.14
4001-16	1-5/16-12	1.171	2.49
4001-20	1-5/8-12	1.475	3.66
4001-24	1-7/8-12	1.720	9.37
4001-32	2-1/2-12	2.337	12.94

SAE BOSS BUNA O-RING



Part #	Boss Straight Thread	O-Ring I.D.	Price
4000-2-2	5/16-24	.239	0.77
4000-3-3	3/8-24	.301	0.77
4000-4-4	7/16-20	.351	0.30
4000-5-5	1/2-20	.414	0.30
4000-6-6	9/16-18	.468	0.30
4000-8-8	3/4-16	.644	0.34
4000-10	7/8-14	.755	0.34
4000-12	1-1/16-12	.924	0.39
4000-14	1-3/16-12	1.048	0.69
4000-16	1-5/16-12	1.171	0.60
4000-20	1-5/8-12	1.475	0.99
4000-24	1-7/8-12	1.720	1.20
4000-32	2-1/2-12	2.337	4.73

.....
 : A little boy was overheard praying: :
 : "Lord, if you can't make me a better :
 : boy, don't worry about it. I'm having :
 : a real good time like I am." :
 :
 :

STEEL FLANGE ADAPTERS

CONFORMANCE

- SAE J518

MATERIALS

- Steel per SAE J518 with either black phosphate finish or plated zinc with yellow dichromate or iridite dip. Stainless available upon request.

WORKING PRESSURES

The following table lists the recommended working pressures for steel Four-bolt Solid and Split Flange Fittings and Hose Ends manufactured in accordance with SAE standards J518 and J517. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using Flanged Fittings that have a threaded connection on one end, use the lower pressure rating of the two.

Caution: Although many Four-bolt Flanged Fittings have sufficient structural integrity to support the weight of many components, we recommend consulting with our technical support department for guidance in selection of parts for this purpose.

**SAE J518 FOUR-BOLT CODE 61
FLANGE PRESSURE RATINGS**

Dash Size	Flange Head OD Inches	4 TO 1 Minimum Burst PSI
-8	1 3/16 - 1.188	5000
-12	1 1/2 - 1.500	5000
-16	1 3/4 - 1.750	5000
-20	2 - 2.000	4000
-24	2 3/8 - 2.375	3000
-32	2 13/16 - 2.812	3000
-40	3 5/16 - 3.312	2500
-48	4 - 4.000	2000
-56	4 1/2 - 4.500	500
-64	5 - 5.000	500
-80	6 - 6.000	500

**SAE J518 FOUR-BOLT CODE 62
FLANGE PRESSURE RATINGS**

Dash Size	Flange Head OD Inches	4 TO 1 Minimum Burst PSI
-8	1 1/4 - 1.250	6000
-12	1 5/8 - 1.625	6000
-16	1 7/8 - 1.875	6000
-20	2 1/8 - 2.125	6000
-24	2 1/2 - 2.500	6000
-32	3 1/8 - 3.125	6000

**STEEL FLANGE ADAPTERS
ASSEMBLY INSTRUCTIONS**

RECOMMENDED SOLID FOUR-BOLT

- Step 1.** Inspect port area to be smooth and free of nicks, burrs, scratches, or contaminants.
- Step 2.** Lubricate the o-ring and place in flange head groove.
- Step 3.** Lubricate screw threads, slip lock washers onto screws, and insert screws into flange
- Step 4.** Position flange on port and finger tighten all screws.
- Step 5.** Torque the screws in a figure eight sequence, incrementally until the appropriate torque value in the following table is achieved.

**J518 CODE 61 AND CODE 62
FLANGE MINIMUM TORQUE VALUES**

Dash Size	Port Size	Code 61 Foot/Lbs.	Code 62 Foot/Lbs.
-8	1/2"	15-19	15-19
-12	3/4"	20-29	25-33
-16	1"	27-35	41-50
-20	1 1/4"	35-46	62-75
-24	1 1/2"	46-58	116-133
-32	2"	53-67	200-217
-40	2 1/2"	79	NA
-48	3"	137	NA
-56	3 1/2"	116	NA
-64	4"	116	NA
-80	5"	116	NA

RECOMMENDED SPLIT FOUR-BOLT

- Step 1.** Follow steps 1 through 3 above, then proceed to the following steps.
- Step 2.** Position both flanges on port and turn one screw in each flange about three turns.
- Step 3.** Rotate each flange away from the port for sufficient clearance to position hose or fitting flange head on port.
- Step 4.** Close each flange until it properly captures flange head. Insert remaining screws and finger tighten
- Step 5.** Torque the screws in a figure eight sequence incrementally until the appropriate torque value in the preceding table is achieved.

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

**JIC FLANGE ADAPTER
CODE 61**



3000 PSI

Part #	Thread Size		Flange Size	Price
	1	2		
1700-8-8	3/4-16	1/2	1/2	19.35
1700-8-12	3/4-16	3/4	3/4	21.33
1700-12-12	1-1/16-12	3/4	3/4	18.28
1700-12-16	1-1/16-12	1	1	22.79
1700-16-16	1-5/16-12	1	1	22.79
1700-16-20	1-5/16-12	1-1/4	1-1/4	27.43
1700-16-24	1-5/16-12	1-1/2	1-1/2	39.78
1700-20-16	1-5/8-12	1	1	28.77
1700-20-20	1-5/8-12	1-1/4	1-1/4	28.85
1700-20-32	1-5/8-12	2	2	93.70
1700-24-24	1-7/8-12	1-1/2	1-1/2	39.99
1700-32-32	2-1/2-12	2	2	133.00
1700-40-40	3-12	2-1/2	2-1/2	233.45

More sizes available

**JIC FLANGE 45° ADAPTER
CODE 61**



3000 PSI

Part #	Thread		Flange	Price
	Size 1	Size 2		
1703-8-8	3/4-16	1/2	1/2	24.25
1703-8-12	3/4-16	3/4	3/4	51.99
1703-12-12	1-1/16-12	3/4	3/4	28.55
1703-12-16	1-1/16-12	1	1	35.30
1703-16-16	1-5/16-12	1	1	34.49
1703-16-20	1-5/16-12	1-1/4	1-1/4	39.52
1703-16-24	1-5/16-12	1-1/2	1-1/2	69.23
1703-20-16	1-5/8-12	1	1	51.13
1703-20-20	1-5/8-12	1-1/4	1-1/4	48.25
1703-20-24	1-5/8-12	1-1/2	1-1/2	49.92
1703-24-40	1-7/8-12	2-1/2	2-1/2	207.73
1703-32-24	2-1/2-12	1-1/2	1-1/2	111.07
1703-32-32	2-1/2-12	2	2	136.05

More sizes available

**JIC FLANGE 90° ADAPTER
CODE 61**



3000 PSI

Part #	Thread		Flange	Price
	Size 1	Size 2		
1704-8-8	3/4-16	1/2	1/2	39.46
1704-8-12	3/4-16	3/4	3/4	39.52
1704-10-16	7/8-14	1	1	141.90
1704-12-12	1-1/16-12	3/4	3/4	28.60
1704-12-16	1-1/16-12	1	1	36.68
1704-12-20	1-1/16-12	1-1/4	1-1/4	48.81
1704-16-12	1-5/16-12	3/4	3/4	44.68
1704-16-16	1-5/16-12	1	1	37.80
1704-16-20	1-5/16-12	1-1/4	1-1/4	43.34
1704-16-24	1-5/16-12	1-1/2	1-1/2	49.49
1704-20-16	1-5/8-12	1	1	53.02
1704-20-20	1-5/8-12	1-1/4	1-1/4	52.80
1704-20-24	1-5/8-12	1-1/2	1-1/2	55.77
1704-24-16	1-7/8-12	1	1	69.70
1704-24-20	1-7/8-12	1-1/4	1-1/4	60.20
1704-24-32	1-7/8-12	2	2	112.19
1704-24-40	1-7/8-12	2-1/2	2-1/2	307.14
1704-32-24	2-1/2-12	1-1/2	1-1/2	POR
1704-32-32	2-1/2-12	2	2	120.23

More sizes available

**JIC FLANGE ADAPTER
CODE 62**



6000 PSI

Part #	Thread		Flange	Price
	Size 1	Size 2		
1800-8-8	3/4-16	1/2	1/2	38.44
1800-12-12	1-1/16-12	3/4	3/4	27.74
1800-12-16	1-1/16-12	1	1	39.26
1800-16-16	1-5/16-12	1	1	29.89
1800-16-20	1-5/16-12	1-1/4	1-1/4	42.91
1800-20-16	1-5/8-12	1	1	48.98
1800-20-20	1-5/8-12	1-1/4	1-1/4	46.23
1800-20-24	1-5/8-12	1-1/2	1-1/2	53.36
1800-24-24	1-7/8-12	1-1/2	1-1/2	59.77
1800-32-32	2-1/2-12	2	2	70.22

More sizes available

**JIC FLANGE 45° ADAPTER
CODE 62**

1



6000 PSI

Part #	Thread Size		Flange Size	Price
	1	2		
1803-8-8	3/4-16	1/2	1/2	47.00
1803-12-12	1-1/16-12	3/4	3/4	39.09
1803-12-16	1-1/16-12	1	1	69.75
1803-16-16	1-5/16-12	1	1	50.35
1803-16-20	1-5/16-12	1-1/4	1-1/4	55.94
1803-20-16	1-5/8-12	1	1	81.40
1803-20-20	1-5/8-12	1-1/4	1-1/4	95.03
1803-20-24	1-5/8-12	1-1/2	1-1/2	87.51
1803-24-24	1-7/8-12	1-1/2	1-1/2	95.68
1803-32-32	2-1/2-12	2	2	201.71

More sizes available

**JIC FLANGE 90° ADAPTER
CODE 62**

1



6000 PSI

Part #	Thread Size		Flange Size	Price
	1	2		
1804-8-8	3/4-16	1/2	1/2	41.11
1804-12-12	1-1/16-12	3/4	3/4	40.38
1804-12-16	1-1/16-12	1	1	43.73
1804-16-16	1-5/16-12	1	1	51.73
1804-16-20	1-5/16-12	1-1/4	1-1/4	78.48
1804-20-16	1-5/8-12	1	1	58.91
1804-20-20	1-5/8-12	1-1/4	1-1/4	69.45
1804-20-24	1-5/8-12	1-1/2	1-1/2	75.98
1804-24-24	1-7/8-12	1-1/2	1-1/2	77.83
1804-32-32	2-1/2-12	2	2	189.16

More sizes available

**BRAZE TO SPLIT FLANGE
CODE 61**



3000 PSI

Part #	Flange		Tube O.D.	Price
	Size	O.D.		
1861-8	1/2	1/2	1/2	7.31
1861-12	3/4	3/4	3/4	7.53
1861-16	1	1	1	8.94
1861-20	1-1/4	1-1/4	1-1/4	11.14
1861-24	1-1/2	1-1/2	1-1/2	13.63
1861-32	2	2	2	15.48
1861-40	2-1/2	2-1/2	2-1/2	36.55

**BRAZE TO SPLIT FLANGE
CODE 62**



3000 PSI

Part #	Flange		Tube O.D.	Price
	Size	O.D.		
1862-8	1/2	1/2	1/2	47.30
1862-12	3/4	3/4	3/4	22.36
1862-16	1	1	1	18.79
1862-20	1-1/4	1-1/4	1-1/4	23.26
1862-24	1-1/2	1-1/2	1-1/2	29.76
1862-32	2	2	2	49.88
1862-40	2-1/2	2-1/2	2-1/2	POR

**SPLIT FLANGE PLUG
CODE 61**



3000 PSI

Part #	Flange		Price
	Size	O.D.	
1961-8	1/2	1/2	11.65
1961-12	3/4	3/4	9.46
1961-16	1	1	9.63
1961-20	1-1/4	1-1/4	11.05
1961-24	1-1/2	1-1/2	14.02
1961-32	2	2	18.15

**SPLIT FLANGE PLUG
CODE 62**



6000 PSI

Part #	Flange		Price
	Size	O.D.	
1962-8	1/2	1/2	74.05
1962-12	3/4	3/4	26.45
1962-16	1	1	23.39
1962-20	1-1/4	1-1/4	32.81
1962-24	1-1/2	1-1/2	34.23
1962-32	2	2	75.08

FLANGE PAD O-RING



Viton Available upon request

Part #	Flange Size	O-Ring Number	Price
4004-8	1/2	210	0.56
4004-12	3/4	214	0.60
4004-16	1	219	0.73
4004-20	1-1/4	222	0.82
4004-24	1-1/2	225	0.99
4004-32	2	228	1.20
4004-40	2-1/2	232	1.72
4004-48	3	237	1.81

FLANGE CONNECTOR PLATES CODE 61



Part #	Flange Size	Price
1900-8	1/2	15.45
1900-12	3/4	13.50
1900-16	1	10.92
1900-20	1-1/4	12.60
1900-24	1-1/2	13.85
1900-32	2	13.93
1900-40	2-1/2	16.21

SPLIT FLANGE KIT CODE 61



3000 PSI

Part #	Flange Size	Flange Head Diameter	Price
1901-8	1/2	1.19	1.46
1901-12	3/4	1.50	1.72
1901-16	1	1.75	1.81
1901-20	1-1/4	2.00	3.35
1901-24	1-1/2	2.38	3.66
1901-32	2	2.81	3.70
1901-40	2-1/2	3.31	4.04
1901-48	3	4.00	6.62

SPLIT FLANGE KIT CODE 62



6000 PSI

Part #	Flange Size	Flange Head Diameter	Price
1902-12	3/4	1.63	2.06
1902-16	1	1.88	3.14
1902-20	1-1/4	2.12	3.83
1902-24	1-1/2	2.50	7.78
1902-32	2	3.12	13.76

FLANGE PAD KIT



Part #	Pipe Size	Pad Size	Price
1903-8-8	1/2	1/2	3.83
1903-12-12	3/4	3/4	4.34
1903-16-16	1	1	4.43
1903-20-20	1-1/4	1-1/4	5.68
1903-24-24	1-1/2	1-1/2	7.78
1903-32-32	2	2	8.34
1903-40-40	2-1/2	2-1/2	10.28
1903-48-48	3	3	13.50

SPLIT FLANGE HALF CODE 61



3000 PSI

Part #	Flange Size	Flange Head Dia.	Price
2061-8	1/2	1.19	4.30
2061-12	3/4	1.50	3.48
2061-16	1	1.75	3.70
2061-20	1-1/4	2.00	4.73
2061-24	1-1/2	2.38	6.32
2061-32	2	2.81	6.88
2061-40	2-1/2	3.31	13.16
2061-48	3	4	20.30

**SPLIT FLANGE HALF
CODE 62**



6000 PSI

Part #	Flange Size	Flange Head Dia.	Price
2062-12	3/4	1.63	7.44
2062-16	1	1.88	8.73
2062-20	1-1/4	2.12	13.16
2062-24	1-1/2	2.50	16.25
2062-32	2	3.12	33.76

**PIPE WELD FLANGE PAD
CODE 61**



3000 PSI

Part #	Pipe Size	Pad Size	Price
2161-8-8	1/2	1/2	32.04
2161-12-12	3/4	3/4	24.94
2161-16-16	1	1	27.82
2161-20-20	1-1/4	1-1/4	32.81
2161-24-24	1-1/2	1-1/2	43.69
2161-32-32	2	2	67.64

**PIPE WELD FLANGE PAD
CODE 62**



6000 PSI

Part #	Pipe Size	Pad Size	Price
2162-12-12	3/4	3/4	51.17
2162-16-16	1	1	87.25
2162-20-20	1-1/4	1-1/4	91.98
2162-24-24	1-1/2	1-1/2	109.56
2162-32-32	2	2	149.00

The microwave was invented after a researcher walked by a radar tube and a chocolate bar melted in his pocket

**PIPE FLANGE PAD
CODE 61**



3000 PSI

Part #	Pipe Size	Pad Size	Price
2261-8-8	1/2	1/2	31.43
2261-12-12	3/4	3/4	16.73
2261-16-16	1	1	24.47
2261-20-20	1-1/4	1-1/4	26.23
2261-24-24	1-1/2	1-1/2	29.20
2261-32-32	2	2	37.41
2261-40-40	2-1/2	2-1/2	66.01
2261-48-48	3	3	99.37

**PIPE FLANGE PAD
CODE 62**



6000 PSI

Part #	Pipe Size	Pad Size	Price
2262-12-12	3/4	3/4	61.79
2262-16-16	1	1	86.56
2262-20-20	1-1/4	1-1/4	97.52
2262-24-24	1-1/2	1-1/2	137.34
2262-32-32	2	2	194.83
2262-40-40	2-1/2	2-1/2	POR
2262-48-48	3	3	POR

**O-RING FLANGE PAD
CODE 61**



3000 PSI

Part #	Pipe Size	Pad Size	Price
2361-12-12	1-1/16-12	3/4	30.92
2361-16-16	1-5/16-12	1	31.99
2361-20-20	1-5/8-12	1-1/4	36.89
2361-24-24	1-7/8-12	1-1/2	49.02

Also Available in Code 62

"Stewardesses" is the longest word that is typed with only the left hand

O-RING FACE SEAL ADAPTER

CONFORMANCE

- SAE J1453

MATERIALS

- Steel- SAE 12L14 carbon steel plated zinc with yellow dichromate or clear iridite finish.

WORKING PRESSURES

The following table lists the recommended working pressures for steel O-ring Face Seal tube fittings made in accordance with SAE standard J1943. Many factors such as impulsing, vibration, mechanical shock and overtightening may affect the integrity of fitting connections. SAE recommends sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use lower pressure rating of the two threads.

Caution: O-ring Face Seal fittings are not designed to provide structural support for other components.

SAE J1453 O-RING FACE SEAL FITTINGS PRESSURE RATINGS

Dash Size	Flared Thread Size	4 TO 1 Minimum Burst PSI
-4	9/16-18	6000
-6	11/16-16	6000
-8	13/16-16	6000
-10	1-14	6000
-12	1 3/16-12	6000
-16	1 7/16-12	6000
-20	1 11/16-12	4000
-24	2-12	4000

SAE J1453 O-RING FACE SEAL PRESSURE RATINGS FOR STRAIGHT THREAD PORT

Dash Size	Flared Thread Size	4 TO 1 Straight	Minimum Adjustable Burst
-4	9/16-18	6000	6000
-6	11/16-16	6000	6000
-8	13/16-16	6000	6000
-10	1-14	6000	6000
-12	1 3/16-12	6000	6000
-16	1 7/16-12	6000	5000
-20	1 11/16-12	4000	4000
-24	2-12	4000	3000

O-RING FACE SEAL ASSEMBLY INSTRUCTIONS

RECOMMENDED

- Step 1.** Lubricate the threads and the entire surface of the face seal o-ring
- Step 2.** Install o-ring into face seal groove.
- Step 3.** Place matting face seal flange against o-ring and finger tighten face seal flange nut.
- Step 4.** Torque flange nut to the value in the following table.

Dash Size	Flared Thread Size	Torque Foot/Lbs.
-4	9/16-20	10
-6	11/16-16	20
-8	13/16-16	32
-10	1-14	46
-12	1 3/16-12	65
-16	1 7/16-12	92
-20	1 7/8-12	125
-24	2-12	150

ALTERNATE ASSEMBLY METHOD

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Lightly wrench tighten the nut until there is firm resistance.
- Step 3.** Place a wrench on wrench pad next to nut as near the 6 o'clock as possible
- Step 4.** Place second wrench on nut as near the 3 o'clock position as possible.
- Step 5.** Turn nut clockwise to no less than half way to the 4 o'clock position and no more than the 6 o'clock position.

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yeild, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

Torque Values: The torque values provided are to provide benchmarks that we believe give optimum results for leak free connections. Actual torque values should be based on individual applications

**BRAZE TUBE NUT
(SLEEVE REQUIRED)**



Part #	Tube O.D.	Braze Tube O.D.	Price
FSO318-4	1/4	.25	1.16
FSO318-6	3/8	.38	1.38
FSO318-8	1/2	.50	1.63
FSO318-10	5/8	.62	2.15
FSO318-12	3/4	.72	4.77
FSO318-16	1	1.00	6.97
FSO318-20	1 1/4	1.25	13.42
FSO318-24	1 1/2	1.50	21.20

BRAZE TUBE SLEEVE

SAE 070221



Part #	Tube O.D.	Price
FSO319-4	1/4	1.03
FSO319-6	3/8	0.82
FSO319-8	1/2	1.38
FSO319-10	5/8	1.20
FSO319-12	3/4	2.15
FSO319-16	1	2.67
FSO319-20	1-1/4	5.12
FSO319-24	1-1/2	23.44

Also available in Stainless Steel

See Page 202 for JIC Nut and Sleeve

In English pubs, ale is ordered by pints and quarts. So in old England, when customers got unruly, the bartender would yell at them mind their own pints and quarts and settle down. It's where we get the phrase "mind your P's and Q's"

BRAZE TUBE UNION



Part #	Braze Port	Flat Face Thread	Price
FSO403-4-4	1/4	9/16-18	3.05
FSO403-6-6	3/8	11/16-16	3.53
FSO403-8-8	1/2	13/16-16	3.87
FSO403-10-10	5/8	1-14	6.24
FSO403-12-12	3/4	1-3/8-12	7.53
FSO403-16-16	1	1-7/16-12	9.68
FSO403-20-20	1-1/4	1-11/16-12	32.04
FSO403-24-24	1-1/2	2-12	32.92

More sizes available

CAP



Part #	Tube O.D.	Flat Face Thread	Price
FSO304-C-4	1/4	9/16-18	2.58
FSO304-C-6	3/8	11/16-16	3.35
FSO304-C-8	1/2	13/16-16	4.00
FSO304-C-10	5/8	1-14	5.12
FSO304-C-12	3/4	1-3/8-12	8.73
FSO304-C-16	1	1-7/16-12	10.32
FSO304-C-20	1-1/4	1-11/16-12	15.01
FSO304-C-24	1-1/2	2-12	34.27

PLUG



Part #	Tube O.D.	Flat Face Thread	Price
FSO2408-4	1/4	9/16-18	2.15
FSO2408-6	3/8	11/16-16	2.92
FSO2408-8	1/2	13/16-16	4.17
FSO2408-10	5/8	1-14	5.12
FSO2408-12	3/4	1-3/8-12	5.76
FSO2408-16	1	1-7/16-12	10.02
FSO2408-20	1-1/4	1-11/16-12	22.88
FSO2408-24	1-1/2	2-12	26.19

O-RING FACE SEAL ADAPTERS

MALE CONNECTOR



Part #	FF Thread 1	Male Pipe Thread 2	Price
FSO2404-4-4	9/16-18	1/4	2.54
FSO2404-4-6	9/16-18	3/8	3.78
FSO2404-6-4	11/16-16	1/4	3.44
FSO2404-6-6	11/16-16	3/8	3.23
FSO2404-8-4	13/16-16	1/4	4.34
FSO2404-8-6	13/16-16	3/8	4.86
FSO2404-8-8	13/16-16	1/2	5.46
FSO2404-10-8	1-14	1/2	6.28
FSO2404-12-12	1-3/16-12	3/4	8.51
FSO2404-16-16	1-7/16-12	1	11.01
FSO2404-20-20	1-11/16-12	1-1/4	9.93
FSO2404-24-24	2-12	1-1/2	37.50

Also available in Stainless Steel

More sizes available

MALE ELBOW

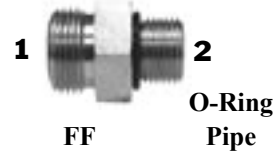


Part #	FF Thread 1	Male Pipe Thread 2	Price
FS2501-4-4	9/16-18	1/4	5.98
FS2501-6-4	11/16-16	1/4	5.85
FS2501-6-6	11/16-16	3/8	6.79
FS2501-8-6	13/16-16	3/8	7.40
FS2501-8-8	13/16-16	1/2	8.86
FS2501-8-12	13/16-16	3/4	11.48
FS2501-10-8	1-14	1/2	10.49
FS2501-10-12	1-14	3/4	13.16
FS2501-12-8	1-3/8-12	1/2	22.70
FS2501-12-12	1-3/8-12	3/4	14.58
FS2501-12-16	1-3/8-12	1	21.03
FS2501-16-12	1-7/16-12	3/4	25.07
FS2501-16-16	1-7/16-12	1	23.18
FS2501-20-20	1-11/16-12	1-1/4	74.52
FS2501-24-24	2-12	1-1/2	169.76

Also available in Stainless Steel

More sizes available

STRAIGHT THREAD CONNECTOR



Part #	FF Thread 1	O-Ring Pipe Thread 2	Price
FS6400-O-4-4	9/16-18	7/16-20	2.88
FS6400-O-4-6	9/16-18	9/16-18	2.75
FS6400-O-6-4	11/16-16	7/16-20	5.25
FS6400-O-6-6	11/16-16	9/16-18	3.66
FS6400-O-6-8	11/16-16	3/4-16	3.96
FS6400-O-8-6	13/16-16	9/16-18	5.16
FS6400-O-8-8	13/16-16	3/4-16	4.47
FS6400-O-8-10	13/16-16	7/8-14	5.25
FS6400-O-10-8	1-14	3/4-16	6.19
FS6400-O-10-10	1-14	7/8-14	7.01
FS6400-O-10-12	1-14	1-1/16-12	10.19
FS6400-O-12-8	1-3/16-12	3/4-16	10.54
FS6400-O-12-10	1-3/16-12	7/8-14	7.91
FS6400-O-12-12	1-3/16-12	1-1/16-12	8.17
FS6400-O-12-16	1-3/16-12	1-5/16-12	13.29
FS6400-O-16-12	1-7/16-12	1-1/16-12	14.32
FS6400-O-16-16	1-7/16-12	1-5/16-12	12.94
FS6400-O-16-20	1-7/16-12	1-5/8-12	26.10
FS6400-O-20-20	1-11/16-12	1-5/8-12	27.91
FS6400-O-20-24	1-11/16-12	1-7/8-12	78.35
FS6400-O-24-20	2-12	1-5/8-12	47.86
FS6400-O-24-24	2-12	1-7/8-12	55.26

Also available in Stainless Steel

**MALE FLAT FACE TO FEMALE
37 ° SWIVEL**



Part #	FF Thread 1	JIC O-Ring Thread 2	Price
FS6402-4-4	9/16-18	7/16-20	29.28
FS6402-6-6	11/16-16	9/16-18	26.66
FS6402-8-8	13/16-16	3/4-16	33.58
FS6402-10-10	1-14	7/8-14	48.68
FS6402-12-12	1-3/16-12	1-1/16-12	44.89
FS6402-16-16	1-7/16-12	1-5/16-12	58.27

More sizes available

The longest one-syllable word in the English language is "screached."

SWIVEL NUT ELBOW



Part #	FF		Price
	Thread 1	Thread 2	
FS6500-4-4	9/16-18	7/16-20	7.74
FS6500-6-6	11/16-16	9/16-18	8.08
FS6500-8-8	13/16-16	3/4-16	10.02
FS6500-10-10	1-14	7/8-14	14.28
FS6500-12-12	1-3/16-12	1-1/16-12	21.46
FS6500-16-16	1-7/16-12	1-5/16-12	32.94
FS6500-20-20	1-11/16-12	1-5/8-12	69.75
FS6500-24-24	2-12	1-7/8-12	58.35

More sizes available

Also available in Stainless Steel

MALE JIC 37° FLARE TO FEMALE FLAT FACE SWIVEL



Part #	JIC Thread		Price
	Size 1	Thread 2	
FS6504-4-4	7/16-20	9/16-18	20.81
FS6504-6-6	9/16-18	11/16-16	21.72
FS6504-8-8	3/4-16	13/16-16	25.28
FS6504-10-10	7/8-14	1-14	29.11
FS6504-12-12	1-1/16-12	1-3/16-12	45.41
FS6504-16-16	1-5/16-12	1-7/16-12	50.96

More sizes available

Many years ago in England, pub frequenters had a whistle baked into the rim or handle of their ceramic cups. When they needed a refill, they used the whistle to get some service. "Wet your whistle" is the phrase inspired by this practice

O-RING ELBOW CONNECTOR



Part #	FF		Price
	Thread 1	Thread 2	
FS6801-4-4	9/16-18	7/16-20	6.79
FS6801-4-6	9/16-18	9/16-18	7.40
FS6801-6-4	11/16-16	7/16-20	8.60
FS6801-6-6	11/16-16	9/16-18	7.61
FS6801-6-8	11/16-16	3/4-16	10.79
FS6801-8-6	13/16-16	9/16-18	10.58
FS6801-8-8	13/16-16	3/4-16	9.50
FS6801-8-10	13/16-16	7/8-14	13.63
FS6801-10-8	1-14	3/4-16	13.16
FS6801-10-10	1-14	7/8-14	11.57
FS6801-10-12	1-14	1-1/16-12	14.88
FS6801-12-10	1-3/16-12	7/8-14	19.05
FS6801-12-12	1-3/16-12	1-1/16-12	16.38
FS6801-12-16	1-3/16-12	1-5/16-12	27.95
FS6801-16-12	1-7/16-12	1-1/16-12	30.01
FS6801-16-16	1-7/16-12	1-5/16-12	28.64
FS6801-16-20	1-7/16-12	1-5/8-12	46.78
FS6801-20-16	1-11/16-12	1-5/16-12	49.75
FS6801-20-20	1-11/16-12	1-5/8-12	47.60
FS6801-24-24	2-12	1-7/8-12	59.34

More sizes available

Also available in Stainless Steel

STRAIGHT THREAD SWIVEL NUT ELBOW



Part #	FF		Price
	O-Ring Thread 1	Thread 2	
FS6809-4-4	7/16-20	9/16-18	12.00
FS6809-6-6	9/16-18	11/16-16	13.16
FS6809-8-8	3/4-16	13/16-16	14.88
FS6809-10-10	7/8-14	1-14	17.59
FS6809-12-12	1-1/16-12	1-3/16-12	23.13
FS6809-16-16	1-5/16-12	1-7/16-12	35.22

More sizes available

STEEL METRIC ADAPTERS

JIC MALE CONNECTOR BSPT



Part #	JIC		Price
	Thread Size 1	Male BSPT 2	
7000-4-2	7/16-20	1/8-28	4.26
7000-4-4	7/16-20	1/4-19	4.69
7000-6-4	9/16-18	1/4-19	5.38
7000-6-6	9/16-18	3/8-19	7.96
7000-6-8	9/16-18	1/2-14	16.43
7000-8-6	3/4-16	3/8-19	6.84
7000-8-8	3/4-16	1/2-14	6.45
7000-8-12	3/4-16	3/4-14	POR
7000-10-8	7/8-14	1/2-14	9.68
7000-10-12	7/8-14	3/4-14	20.64
7000-12-8	1-1/16-12	1/2-14	16.34
7000-12-12	1-1/16-12	3/4-14	12.86
7000-16-16	1-5/16-12	1-11	18.92
7000-20-20	1-5/8-12	1-1/4-11	42.91

More sizes available

JIC MALE ELBOW BSPT



Part #	JIC		Price
	Thread Size 1	Male BSPT 2	
7200-4-2	7/16-20	1/8-28	21.86
7200-4-4	7/16-20	1/4-19	14.58
7200-6-4	9/16-18	1/4-19	15.01
7200-6-6	9/16-18	3/8-19	15.91
7200-6-8	9/16-18	1/2-14	27.95
7200-8-6	3/4-16	3/8-19	17.20
7200-8-8	3/4-16	1/2-14	19.35
7200-10-8	7/8-14	1/2-14	25.80
7200-12-12	1-1/16-12	3/4-14	27.52
7200-16-16	1-5/16-12	1-11	44.08
7200-20-20	1-5/8-12	1-1/4-11	68.76

More sizes available

MALE CONNECTOR BSPP



Part #	JIC		Price
	Thread Size 1	Male BSPP 2	
7002-4-2	7/16-20	1/8	6.24
7002-4-4	7/16-20	1/4	6.71
7002-4-6	7/16-20	3/8	6.67
7002-4-8	7/16-20	1/2	19.09
7002-6-4	9/16-18	1/4	6.54
7002-6-6	9/16-18	3/8	7.74
7002-6-8	9/16-18	1/2	9.85
7002-8-6	3/4-16	3/8	9.46
7002-8-8	3/4-16	1/2	9.46
7002-8-12	3/4-16	3/4	16.13
7002-10-8	7/8-14	1/2	11.95
7002-12-12	1-1/16-12	3/4	15.05
7002-12-16	1-1/16-12	1	23.44
7002-16-16	1-5/16-12	1	21.93
7002-20-20	1-5/8-12	1-1/4	44.08
7002-24-24	1-7/8-12	1-1/2	78.05

More sizes available

MALE ELBOW BSPP



Part #	JIC		Price
	Thread Size 1	Male BSPP 2	
7202-NWO-4-2	7/16-20	1/8	23.65
7202-NWO-4-4	7/16-20	1/4	17.59
7202-NWO-6-4	9/16-18	1/4	19.57
7202-NWO-6-6	9/16-18	3/8	21.89
7202-NWO-6-8	9/16-18	1/2	29.11
7202-NWO-8-6	3/4-16	3/8	23.91
7202-NWO-8-8	3/4-16	1/2	26.14
7202-NWO-8-12	3/4-16	3/4	40.85
7202-NWO-10-8	7/8-14	1/2	26.23
7202-NWO-12-12	1-1/16-12	3/4	40.59
7202-NWO-12-16	1-1/16-12	1	61.49
7202-NWO-16-16	1-5/16-12	1	53.97
7202-NWO-20-20	1-5/8-12	1-1/4	103.72
7202-NWO-24-24	1-7/8-12	1-1/2	195.31

JIC STRAIGHT SWIVEL BSPP



Part #	JIC Thread Size 1	Male BSPP 2	Price
7022-4-2	7/16-20	1/8-28	15.05
7022-4-4	7/16-20	1/4-19	12.90
7022-6-4	9/16-18	1/4-19	14.62
7022-6-6	9/16-18	3/8-19	13.98
7022-8-6	3/4-16	3/8-19	16.56
7022-8-8	3/4-16	1/2-14	14.06
7022-10-8	7/8-14	1/2-14	19.14
7022-12-12	1-1/16-12	3/4-14	23.22
7022-16-16	1-5/16-12	1-11	28.85

More sizes available

HEX HEAD PLUG BSPP



Part #	Male BSPP	Price
9522-P-2	1/8-28	3.01
9522-P-4	1/4-19	3.01
9522-P-6	3/8-19	4.00
9522-P-8	1/2-14	5.38
9522-P-12	3/4-14	8.82
9522-P-16	1-11	12.47
9522-P-20	1-1/4-11	27.95

HOLLOW HEX PLUG BSPP



Part #	Male BSPP	Price
9522-H-2	1/8-28	9.68
9522-H-4	1/4-19	9.46
9522-H-6	3/8-1	11.61
9522-H-8	1/2-14	15.74
9522-H-12	3/4-14	19.09
9522-H-16	1-11	26.75
9522-H-20	1-1/4-11	53.97

FEMALE ADAPTER BSPP



Part #	Female Pipe 1	Male BSPP 2	Price
7042-2-2	1/8-27	1/8-28	11.83
7042-4-2	1/4-18	1/8-19	22.36
7042-4-4	1/4-18	1/4-19	11.95
7042-6-6	3/8-18	3/8-18	16.21
7042-8-8	1/2-14	1/2-14	19.57
7042-12-12	3/4-14	3/4-14	20.51
7042-16-16	1-11 1/2	1-11	31.52
7042-20-20	1-1/4-11 1/2	1-1/4-11	60.72
7042-24-24	1-1/2-11 1/2	1-1/2-11	91.16

More sizes available

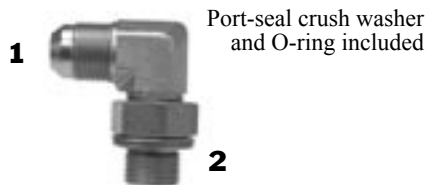
MALE CONNECTOR



Port-seal crush washer and O-ring included

Part #	Thread Size 1	Metric Thread 2	Price
7005-4-10	7/16-20	10x1.0	9.68
7005-4-12	7/16-20	12x1.5	10.97
7005-4-14	7/16-20	14x1.5	12.04
7005-4-18	7/16-20	18x1.5	19.09
7005-5-10	1/2-20	10x1.0	43.95
7005-5-12	1/2-20	12x1.5	11.44
7005-5-14	1/2-20	14x1.5	128.28
7005-6-14	9/16-18	14x1.5	10.32
7005-6-16	9/16-18	16x1.5	9.68
7005-6-18	9/16-18	18x1.5	10.92
7005-8-16	3/4-16	16x1.5	12.47
7005-8-18	3/4-16	18x1.5	14.84
7005-8-22	3/4-16	22x1.5	16.34
7005-10-18	7/8-14	18x1.5	12.04
7005-10-20	7/8-14	20x1.5	22.79
7005-10-22	7/8-14	22x1.5	23.22
7005-12-22	1-1/16-12	22x1.5	17.63
7005-12-27	1-1/16-12	27x2.0	43.34
7005-14-26	1-3/16-12	26x1.5	128.26
7005-16-27	1-5/16-12	27x2.0	54.14
7005-16-33	1-5/16-12	33x2.0	59.68
7005-20-42	1-5/8-12	42x2.0	75.47
7005-24-48	1-7/8-12	48x2.0	135.67

MALE ELBOW



Port-seal crush washer and O-ring included

Part #	JIC Thread		Metric Thread 2	Price
	Size 1	Size 2		
7205-NWO-4-10	7/16-20	10x1.0	10x1.0	20.98
7205-NWO-4-12	7/16-20	12x1.5	12x1.5	129.24
7205-NWO-4-14	7/16-20	14x1.5	14x1.5	21.03
7205-NWO-5-10	1/2-20	10x1.0	10x1.0	129.33
7205-NWO-5-12	1/2-20	12x1.5	12x1.5	22.92
7205-NWO-5-14	1/2-20	14x2.5	14x2.5	129.43
7205-NWO-6-14	9/16-18	14x1.5	14x1.5	21.93
7205-NWO-6-16	9/16-18	16x1.5	16x1.5	27.09
7205-NWO-8-16	3/4-16	16x1.5	16x1.5	27.52
7205-NWO-8-18	3/4-16	8x1.5	8x1.5	21.93
7205-NWO-8-22	3/4-16	22x1.5	22x1.5	31.78
7205-NWO-10-18	7/8-14	18x1.5	18x1.5	34.40
7205-NWO-10-20	7/8-14	20x1.5	20x1.5	39.13
7205-NWO-10-22	7/8-14	22x1.5	22x1.5	37.24
7205-NWO-12-22	1-1/16-12	22x1.5	22x1.5	41.93
7205-NWO-12-27	1-1/16-12	27x2.0	27x2.0	53.32
7205-NWO-14-26	1-3/16-12	26x1.5	26x1.5	79.55
7205-NWO-16-27	1-5/16-12	27x2.0	27x2.0	64.84
7205-NWO-16-33	1-5/16-12	33x2.0	33x2.0	61.15
7205-NWO-20-42	1-5/8-12	42x2.0	42x2.0	119.54

STRAIGHT SWIVEL



Part #	JIC Thread		Metric Thread 2	Price
	Size 1	Size 2		
7025-4-10	7/16-20	10x1.0	10x1.0	20.81
7025-4-12	7/16-20	12x1.5	12x1.5	35.35
7025-5-12	1/2-20	12x1.5	12x1.5	19.57
7025-6-14	9/16-18	14x1.5	14x1.5	21.93
7025-6-16	9/16-18	16x1.5	16x1.5	25.80
7025-8-16	3/4-16	16x1.5	16x1.5	25.89
7025-8-18	3/4-16	18x1.5	18x1.5	27.31
7025-10-22	7/8-14	22x1.5	22x1.5	28.81
7025-12-27	1-1/16-12	27x2.0	27x2.0	40.16
7025-16-33	1-5/16-12	33x2.0	33x2.0	49.54

**HEX HEAD PLUG METRIC
PARALLEL**



Part #	Metric Thread	Price
8555-P-10	10x1.0	3.87
8555-P-12	12x1.5	4.52
8555-P-14	14x1.5	5.16
8555-P-16	16x1.5	7.48
8555-P-18	18x1.5	6.45
8555-P-20	20x1.5	8.60
8555-P-22	22x1.5	10.75
8555-P-26	26x1.5	11.18
8555-P-30	30x1.5	15.05

**HOLLOW HEX HEAD PLUG
METRIC PARALLEL**



Part #	Metric Thread	Price
8555-H-10	10x1.0	5.85
8555-H-12	12x1.5	13.12
8555-H-14	14x1.5	8.77
8555-H-16	16x1.5	15.91
8555-H-18	18x1.5	18.15
8555-H-20	20x1.5	19.57
8555-H-22	22x1.5	24.30
8555-H-26	26x1.5	25.37
8555-H-30	30x1.5	27.52

More sizes available

FEMALE ADAPTER



Part #	Female Pipe 1	Metric Thread 2	Price
7045-2-10	1/8	10x1.0	10.66
7045-4-12	1/4	12x1.5	10.97
7045-4-14	1/4	14x1.5	11.83
7045-6-16	3/8	16x1.5	12.90
7045-6-18	3/8	18x1.5	15.48
7045-8-16	1/2	16x1.5	15.48
7045-8-18	1/2	18x1.5	15.48
7045-8-22	1/2	22x1.5	15.05
7045-12-27	3/4	27x2.0	21.54
7045-16-33	1	33x2.0	39.17
7045-20-42	1-1/4	42x2.0	137.21

More sizes available

HIGH PRESSURE SWIVELS

MALE CONNECTOR



Part #	JIC Thread Size 1	Male Pipe Thread 2	Price
HP2404-6-4	9/16-18	1/4	77.87
HP2404-8-6	3/4-16	3/8	82.00
HP2404-10-8	7/8-14	1/2	89.48
HP2404-12-12	1-1/16-12	3/4	95.63
HP2404-16-16	1-5/16-12	1	179.78
HP2404-20-20	1-5/8-12	1-1/4	343.83
HP2404-24-24	1-7/8-12	1-1/2	721.58
HP2404-32-32	2-1/2-12	2	POR

FEMALE CONNECTOR



Part #	JIC Thread Size 1	Female Pipe Thread 2	Price
HP2405-6-4	9/16-18	1/4	79.51
HP2405-8-6	3/4-16	3/8	87.66
HP2405-10-8	7/8-14	1/2	93.01
HP2405-12-12	1-1/16-12	3/4	95.42
HP2405-16-16	1-5/16-12	1	179.40
HP2405-20-20	1-5/8-12	1-1/4	343.83
HP2405-24-24	1-7/8-12	1-1/2	POR
HP2405-32-32	2-1/2-12	2	POR

TUBE ADAPTER



Part #	JIC Thread Size 1	JIC Thread Size 2	Price
HP2406-6-6	9/16-18	9/16-18	82.17
HP2406-8-8	3/4-16	3/4-16	84.84
HP2406-10-10	7/8-14	7/8-14	95.63
HP2406-12-12	1-1/16-12	1-1/16-12	95.63
HP2406-14-14	1-3/16-12	1-3/16-12	POR
HP2406-16-16	1-5/16-12	1-5/16-12	180.64
HP2406-20-20	1-5/8-12	1-5/8-12	343.83
HP2406-24-24	1-7/8-12	1-7/8-12	738.18
HP2406-32-32	2-1/2-12	2-1/2-2	1171.49

MALE ELBOW



Part #	JIC Thread Size 1	Male Pipe Thread 2	Price
HP2501-5-4	1/2-20	1/4	POR
HP2501-5-6	1/2-20	3/8	POR
HP2501-6-4	9/16-18	1/4	99.80
HP2501-6-6	9/16-18	3/8	99.89
HP2501-8-6	3/4-16	3/8	99.89
HP2501-10-8	7/8-14	1/2	106.90
HP2501-12-12	1-1/16-12	3/4	175.48
HP2501-16-16	1-5/16-12	1	223.94
HP2501-20-20	1-5/8-12	1-1/4	414.91
HP2501-24-24	1-7/8-12	1-1/2	782.90
HP2501-32-32	2-1/2-12	2	1109.79

FEMALE ELBOW



Part #	JIC Thread Size 1	Female Pipe Thread 2	Price
HP2502-5-4	1/2-20	1/4	POR
HP2502-5-6	1/2-20	3/8	POR
HP2502-6-4	9/16-18	1/4	99.50
HP2502-6-6	9/16-18	3/8	99.63
HP2502-8-6	3/4-16	3/8	99.89
HP2502-10-8	7/8-14	1/2	106.90
HP2502-12-12	1-1/16-12	3/4	174.28
HP2502-16-16	1-5/16-12	1	223.13
HP2502-20-20	1-5/8-12	1-1/4	414.91
HP2502-24-24	1-7/8-12	1-1/2	795.93
HP2502-32-32	2-1/2-12	2	POR

PIPE ADAPTER



Part #	Male Pipe 1	Female Pipe 2	Price
HP5405-4-4	1/4	1/4	82.17
HP5405-6-6	3/8	3/8	71.40
HP5405-8-8	1/2	1/2	95.63
HP5405-12-12	3/4	3/4	95.63
HP5405-16-16	1	1	180.26
HP5405-20-20	1-1/4	1-1/4	343.01
HP5405-24-24	1-1/2	1-1/2	762.99
HP5405-32-32	2	2	POR

Also available in Stainless Steel

PIPE COUPLING



Part #	Female Pipe 1	Female Pipe 2	Price
HP5000-4-4	1/4	1/4	81.87
HP5000-6-6	3/8	3/8	81.92
HP5000-8-8	1/2	1/2	95.63
HP5000-12-12	3/4	3/4	95.63
HP5000-16-16	1	1	149.67
HP5000-20-20	1-1/4	1-1/4	349.29
HP5000-24-24	1-1/2	1-1/2	759.29
HP5000-32-32	2	2	POR

Also available in Stainless Steel

MALE SWIVEL ELBOW



Part #	Male Pipe 1	Female NPSM 2	Price
HP1501-4-4	1/4	1/4	99.85
HP1501-4-6	1/4	3/8	97.74
HP1501-6-4	3/8	1/4	99.89
HP1501-6-6	3/8	3/8	99.89
HP1501-8-8	1/2	1/2	106.90
HP1501-12-12	3/4	3/4	175.48
HP1501-16-16	1	1	223.99
HP1501-20-20	1-1/4	1-1/4	414.19
HP1501-24-24	1-1/2	1-1/2	POR
HP1501-32-32	2	2	POR

Also available in Stainless Steel

FEMALE SWIVEL ELBOW



Part #	Female Pipe 1	Female NPSM 2	Price
HP1502-4-4	1/4	1/4	99.72
HP1502-4-6	1/4	3/8	102.73
HP1502-6-4	3/8	1/4	POR
HP1502-6-6	3/8	3/8	99.89
HP1502-8-8	1/2	1/2	106.90
HP1502-12-12	3/4	3/4	174.15
HP1502-16-16	1	1	219.17
HP1502-20-20	1-1/4	1-1/4	413.10
HP1502-24-24	1-1/2	1-1/2	795.93
HP1502-32-32	2	2	POR

Also available in Stainless Steel

STREET ELBOW



Part #	Male Pipe 1	Female Pipe 2	Price
HP5502-4-4	1/4	1/4	99.80
HP5502-4-6	1/4	3/8	88.41
HP5502-6-4	3/8	1/4	99.89
HP5502-6-6	3/8	3/8	99.89
HP5502-8-8	1/2	1/2	106.86
HP5502-12-12	3/4	3/4	174.54
HP5502-16-16	1	1	223.73
HP5502-20-20	1-1/4	1-1/4	434.82
HP5502-24-24	1-1/2	1-1/2	906.05
HP5502-32-32	2	2	1138.21

Also available in Stainless Steel

JIC TO O-RING ELBOW CONNECTOR



Part #	JIC Thread Size 1	O-Ring Thread 2	Price
HP6801-6-6	9/16-18	9/16-18	99.89
HP6801-6-8	9/16-18	3/4-16	99.89
HP6801-8-8	3/4-16	3/4-16	100.28
HP6801-10-10	7/8-14	7/8-14	POR
HP6801-12-12	1-1/16-12	1-1/16-12	175.48
HP6801-16-16	1-5/16-12	1-5/16-12	223.82
HP6801-20-20	1-5/8-12	1-5/8-12	414.82
HP6801-24-24	1-7/8-12	1-7/8-12	POR
HP6801-32-32	2-1/2-12	2-1/2-12	POR

After the church service, a little boy told the pastor, "When I grow up, I'm going to give you some money." "Well, thank you," the pastor replied, "but why?" "Because my daddy say's you're one of the poorest preachers we've ever had."

STEEL BEADED HOSE INSERTS

MALE PIPE HOSE INSERT

SAE 430160



Part #	Male		Price
	Hose I.D.	Pipe Thread	
4404-4-2	1/4	1/8	2.84
4404-4-4	1/4	1/8	1.76
4404-5-2	5/16	1/8	5.38
4404-6-4	3/8	1/4	3.14
4404-6-6	3/8	3/8	4.17
4404-8-6	1/2	3/8	4.00
4404-8-8	1/2	1/2	4.90
4404-10-8	5/8	1/2	7.47
4404-12-12	3/4	3/4	5.72
4404-16-12	1	3/4	11.44
4404-16-16	1	1	9.20
4404-20-20	1-1/4	1-1/4	19.74
4404-24-20	1-1/2	1-1/4	41.58
4404-24-24	1-1/2	1-1/2	32.47
4404-32-32	2	2	103.67

More sizes available

90° PIPE HOSE INSERT

SAE 430260



Part #	Hose I.D.		Price
	1	2	
4501-4-2	1/4	1/8	3.44
4501-4-4	1/4	1/4	3.78
4501-5-2	5/16	1/8	4.17
4501-6-2	3/8	1/4	14.75
4501-6-6	3/8	3/8	4.26
4501-8-6	1/2	3/8	4.69
4501-8-8	1/2	1/2	6.32
4501-10-8	5/8	1/2	5.33
4501-12-12	3/4	3/4	7.10
4501-16-12	1	3/4	11.78
4501-16-16	1	1	11.48
4501-20-16	1-1/4	1	13.72
4501-20-20	1-1/4	1-1/4	21.89
4501-24-24	1-1/2	1-1/2	39.52
4501-32-32	2	2	251.34

More sizes available

45° PIPE HOSE INSERT

SAE 430360



Part #	Hose I.D.		Price
	1	2	
4503-4-2	1/4	1/8	4.52
4503-6-4	3/8	1/4	4.56
4503-8-6	1/2	3/8	6.79
4503-10-8	5/8	1/2	5.68
4503-12-12	3/4	3/4	7.48
4503-16-16	1	1	13.67
4503-20-20	1-1/4	1-1/4	23.05

More sizes available

90° O-RING HOSE INSERT



Part #	Hose I.D.		Price
	1	O-Ring	
4601-NWO-4	1/4	7/16-20	6.36
4601-NWO-5	5/16	1/2-20	6.02
4601-NWO-6	3/8	9/16-18	6.88
4601-NWO-8	1/2	3/4-16	8.43
4601-NWO-10	5/8	7/8-14	10.66
4601-NWO-10-8	5/8	3/4-16	10.41
4601-NWO-12	3/4	1-1/16-12	9.72
4601-NWO-16	1	1-5/16-12	15.18
4601-NWO-16-12	1	1-1/16-12	15.22
4601-NWO-20	1-1/4	1-5/8-12	25.28
4601-NWO-24	1-1/2	1-7/8-12	43.90
4601-NWO-24-20	1-1/2	1-5/8-12	31.61
4601-NWO-32	2	2-1/2-12	137.21

More sizes available

Is it better to be single or married?

"It's better for girls to be single but not for boys. Boys need someone to clean up after them."

-Anita, age 9

45° O-RING HOSE INSERT



Part #	Hose I.D.		Price
	1	2	
4603-NWO-4	1/4	7/16-20	10.54
4603-NWO-6	3/8	9/16-18	6.32
4603-NWO-8	1/2	3/4-16	6.49
4603-NWO-10	5/8	7/8-14	8.34
4603-NWO-12	3/4	1-1/12-12	10.49
4603-NWO-16	1	1-5/16-12	15.57
4603-NWO-20	1-1/4	1-5/8-12	24.08
4603-NWO-20-16	1-1/4	1-5/16-12	28.29
4603-NWO-20-24	1-1/4	1-7/8-12	99.03
4603-NWO-24	1-1/2	1-7/8--12	37.41
4603-NWO-24-20	1-1/2	1-5/8-12	25.63
4603-NWO-32	2	2-1/2-12	293.69

More sizes available

O-RING HOSE INSERT



Part #	Hose I.D.		Price
	1	2	
4604-O-4	1/4	7/16-20	3.61
4604-O-5	5/16	1/2-20	4.09
4604-O-6	3/8	9/16-18	3.23
4604-O-8	1/2	3/4-16	3.74
4604-O-10	5/8	7/8-14	4.26
4604-O-10-8	5/8	3/4-16	5.16
4604-O-12	3/4	1-1/16-12	5.98
4604-O-16	1	1-5/16-12	8.99
4604-O-16-12	1	1-1/16-12	9.46
4604-O-20	1-1/4	1-5/8-12	18.06
4604-O-20-16	1-1/4	1-5/16-20	21.07
4604-O-24	1-1/2	1-7/8-12	29.28
4604-O-24-20	1-1/2	1-5/8-12	19.05

More sizes available

How would you make a marriage work?
"Tell your wife that she looks pretty
even if she looks like a truck."

Ricky, age 10

A man boarded an airplane and took his seat. As he settled in, he glanced up and saw a very beautiful woman boarding the plane. He soon realized she was headed straight toward his seat. Lo and behold, she took a seat right beside his. Eager to strike up a conversation, he blurted out, "Business trip or vacation?"

She turned and smiled and replied: "Business. I'm going to the Annual Nymphomaniac Convention in Chicago." He swallowed hard. Here was the most gorgeous woman he had ever seen sitting next to him and she was going to a meeting for nymphomaniacs!

Struggling to maintain his composure, he calmly asked, "What's your business role at this convention?"

"Lecturer," she responded. "I use my experience to debunk some of the popular myths about sexuality."

"Really," he said, "what myths are those?"

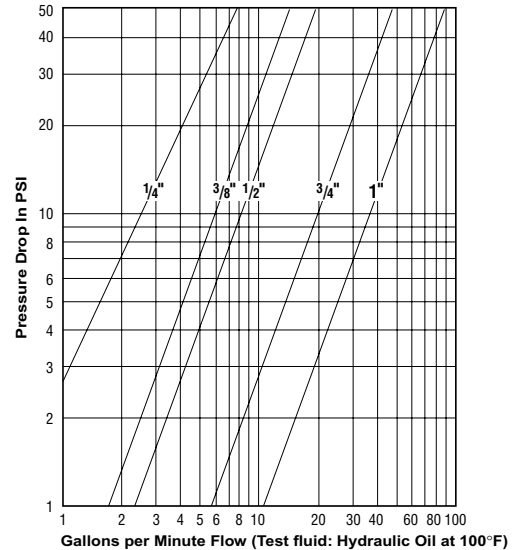
"Well," she explained, "one myth is that Italian men are the most well endowed when in fact it is the Native American Indian who is most likely to possess that trait. Another popular myth is that French men are the best lovers when research shows that actually men of Jewish descent are better. We have, however, found that potentially the best lover in all categories is the Southern Redneck."

Suddenly, the woman became a little uncomfortable and blushed. "I'm sorry," she said, "I shouldn't really be discussing this with you. Why I don't even know your name."

"Tonto," the man said, "Tonto Goldstein but my friends call me Bubba."

ISO-A Interchange

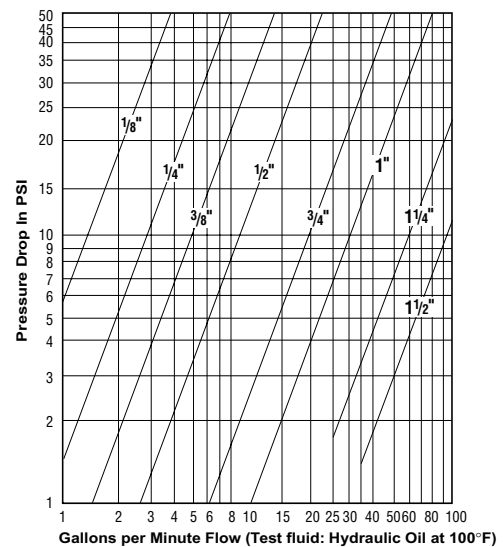
Nominal Size	Material	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected	Fluid Spillage
1/4"	Steel	2.5 GPM	27,260 PSI	20,155 PSI	18,850 PSI	0.5cc
3/8"	Steel	6.6 GPM	22,185 PSI	18,125 PSI	17,400	1.9cc
1/2"	Steel	11.3 GPM	18,850 PSI	15,370 PSI	16,820	2.7cc
3/4"	Steel	24.5 GPM	18,705 PSI	17,400 PSI	15,080	9.3cc
1"	Steel	29.7 GPM	16,820 PSI	14,500 PSI	14,500	16.0cc



Part#	Body Size	Male NPT	Working PSI	List Price
ANV-14-F	1/4"	1/4"	5075	18.88
ANV-14-M	1/4"	1/4"	5075	8.17
ANV-38-F	3/8"	3/8"	4550	21.16
ANV-38-M	3/8"	3/8"	4550	10.54
ANV-12-F	1/2"	1/2"	4500	21.50
ANV-12-M	1/2"	1/2"	4500	8.60
ANV-34-F	3/4"	3/4"	3625	45.75
ANV-34-M	3/4"	3/4"	3625	20.73
ANV-1-F	1"	1"	3335	68.71
ANV-1-M	1"	1"	3335	28.38

ISO-B Interchange

Nominal Size	Material	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected	Fluid Spillage
1/8"	Steel	2.0 GPM	25,300 PSI	23,200 PSI	23,200 PSI	0.5cc
1/4"	Steel	4.2 GPM	27,260 PSI	21,460 PSI	20,880 PSI	1.0cc
3/8"	Steel	8.0 GPM	27,550 PSI	18,850 PSI	19,430 PSI	2.4cc
1/2"	Steel	11.0 GPM	23,780	15,370 PSI	15,370 PSI	3.9cc
3/4"	Steel	24.0 GPM	19,720	15,950 PSI	15,660 PSI	11.0cc
1"	Steel	25.0 GPM	19,720	15,950 PSI	15,660 PSI	11.0cc



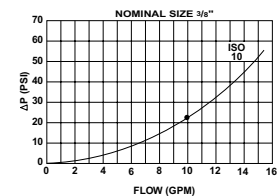
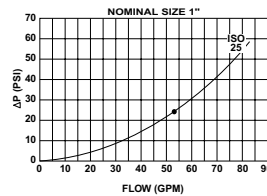
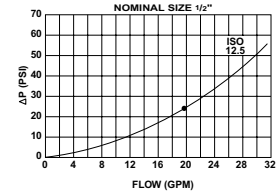
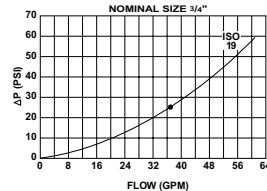
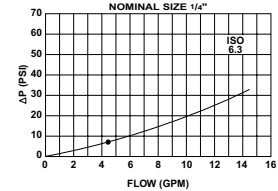
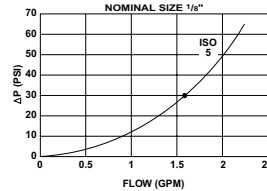
Part#	Body Size	Male NPT	Working PSI	List Price
HNV-18-F	1/8"	1/8"	5800	27.91
HNV-18-M	1/8"	1/8"	5800	10.54
HNV-14-F	1/4"	1/4"	5075	16.99
HNV-14-M	1/4"	1/4"	5075	7.74
HNV-38-F	3/8"	3/8"	4350	25.41
HNV-38-M	3/8"	3/8"	4350	11.01
HNV-12-F	1/2"	1/2"	4060	31.65
HNV-12-M	1/2"	1/2"	4060	13.07
HNV-34-F	3/4"	3/4"	2610	48.72
HNV-34-M	3/4"	3/4"	2610	20.77
HNV-1-F	1"	1"	2175	66.69
HNV-1-M	1"	1"	2175	27.65

Flush Face

Nominal Size	ISO Size	Maximum Working Pressure	Rated Flow	Minimum Burst-Plug	Minimum Burst-Coupler	Minimum Burst Connected	Fluid Spillage
1/8"	5	7250 PSI	1.6 GPM	43,500 PSI	29,000 PSI	43,500 PSI	0.006 cc
1/4"	6.3	5000 PSI	4.8 GPM	28,275 PSI	23,925 PSI	33,350 PSI	0.008 cc
3/8"	10	5000 PSI	10.0 GPM	29,200 PSI	21,025 PSI	20,590 PSI	0.010 cc
1/2"	12.5	5000 PSI	19.8 GPM	25,375 PSI	21,750 PSI	23,925 PSI	0.012 cc
5/8"	16	5000 PSI	26.4 GPM	24,255 PSI	21,750 PSI	23,200 PSI	0.015 cc
3/4"	19	5000 PSI	37.0 GPM	20,580 PSI	20,580 PSI	20,300 PSI	0.020 cc
1"	25	5000 PSI	52.8 GPM	20,580 PSI	20,580 PSI	21,750 PSI	0.030 cc
1 1/2"	40	3625 PSI	89.5 GPM	14,500 PSI	14,500 PSI	14,500 PSI	0.050 cc



Part# Size	Body NPT	Male PSI	Working	List Price
FF-14-F	1/4	1/4	4400	55.30
FF-14-M	1/4	1/4	4400	27.69
FF-38-12-F	3/8	1/2	4350	70.31
FF-38-12-M	3/8	1/2	4350	33.63
FF-38-F	3/8	3/8	4350	66.48
FF-38-M	3/8	3/8	4350	23.31
FF-12-F	1/2	1/2	3650	70.13
FF-12-M	1/2	1/2	3650	58.57
FF-34-12-SAE-F	1/2	3/4	3675	86.82
FF-34-12-SAE-M	1/2	3/4	3675	54.87
FF-34-F	3/4	3/4	3650	111.07
FF-34-M	3/4	3/4	3650	70.31
FF-1-F	1	1	3675	182.71
FF-1-M	1	1	3675	103.07

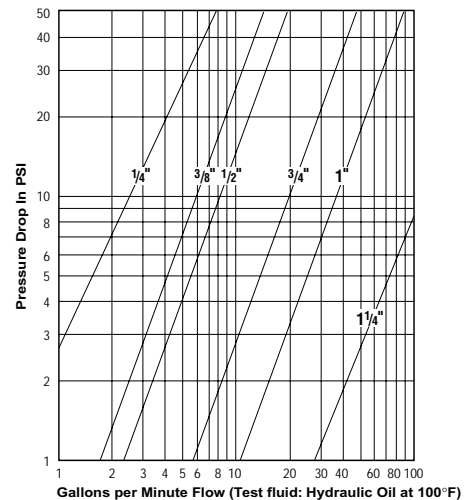


AG Interchange

Nominal Size	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected	Fluid Spillage
1/4"	6.08 GPM	27,550 PSI	21,170 PSI	22,040 PSI	1.0cc
3/8"	9.5 GPM	26,970 PSI	18,125 PSI	23,200 PSI	2.4cc
1/2"	11.3 GPM	18,850 PSI	15,370 PSI	16,820 PSI	2.7cc
3/4"	24.5 GPM	17,400 PSI	17,400 PSI	15,370 PSI	8.6cc
1"	27.5 GPM	16,820 PSI	14,500 PSI	14,790 PSI	13.0cc



Part# Size	Body NPT	Male PSI	Working	List Price
NV-14-F	1/4	1/4	5075	17.54
NV-14-M	1/4	1/4	5075	10.54
NV-38-F	3/8	3/8	4550	21.29
NV-38-M	3/8	3/8	4550	9.68
NV-12-F	1/2	1/2	3625	21.50
NV-12-M	1/2	1/2	3625	8.60
NV-34-F	3/4	3/4	3625	50.31
NV-34-M	3/4	3/4	3625	23.09
NV-1-F	1	1	3335	67.73
NV-1-M	1	1	3335	33.07





Two-Way

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE2-14-NPT	1/4"	1/4" NPT F	7250 PSI	34.92
GE2-38-NPT	3/8"	3/8" NPT F	7250 PSI	36.81
GE2-12-NPT	1/2"	1/2" NPT F	7250 PSI	39.90
GE2-34-NPT	3/4"	3/4" NPT F	5800 PSI	79.81
GE2-1-NPT	1"	1" NPT F	5075 PSI	89.78
*GE2-114T-NPT	1"	1 1/4" NPT F	5075 PSI	197.03
*GE2-112T-NPT	1"	1 1/2" NPT F	5075 PSI	236.93
*GE2-2T-NPT	2"	2"	5075 PSI	324.22

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE2-04-SAE	1/4"	7/16-20 UNF	7250 PSI	41.15
GE2-06-SAE	3/8"	9/16-18 UNF	7250 PSI	43.65
GE2-08-SAE	1/2"	3/4-16 UNF	7250 PSI	47.39
GE2-12-SAE	3/4"	1 1/16-12 UNF	5800 PSI	89.78
GE2-16-SAE	1"	1 5/16-12 UNF	5075 PSI	99.76
*GB2-20T-SAE	1"	1 5/8-12 UNF	5075 PSI	122.21
*GB2-24T-SAE	1"	1 7/8-12 UNF	5075 PSI	274.34
°GB2-32T-SAE	2"	2 1/2-12"	5075 PSI	342.93

Construction: Steel Body, Ball, Stem
 Zinc Chromate Plate
 Buna "O" Rings (Viton on request)
 Delrin Ball Seats

° = Reduced Port Only
 * = Available in Reduced Port



Three-Way

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE3L-14-NPT	1/4"	1/4" NPT F	5800 PSI	78.56
GE3L-38-NPT	3/8"	3/8" NPT F	5800 PSI	87.29
GE3L-12-NPT	1/2"	1/2" NPT F	5800 PSI	92.28
GE3L-34-NPT	3/4"	3/4" NPT F	5075 PSI	122.21
GE3L-1-NPT	1"	1" NPT F	5075 PSI	153.38
*GE3L-114T-NPT	1 1/4"	1 1/4" NPT F	5075 PSI	548.68
*GE3L-112T-NPT	1 1/2"	1 1/2" NPT F	5075 PSI	642.21
*GE3L-2T-NPT	2"	2" NPT F	5075 PSI	754.44

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE3L-04-SAE	1/4"	7/16-20 UNF	5800 PSI	84.80
GE3L-06-SAE	3/8"	9/16-18 UNF	5800 PSI	93.53
GE3L-08-SAE	1/2"	3/4-16 UNF	5800 PSI	99.76
GE3L-12-SAE	3/4"	1 1/16-12 UNF	5075 PSI	132.18
GE3L-16-SAE	1"	1 5/16-12 UNF	5075 PSI	162.11
*GB3L-20T-SAE	1 1/4"	1 5/8-12 UNF	5075 PSI	673.83
*GB3L-24T-SAE	1 1/2"	1 7/8-12 UNF	5075 PSI	785.61
°GB3L-32T-SAE	2"	2 1/2-12 UNF	5075 PSI	929.02

Construction: Steel Body, Ball, Stem
 Zinc Chromate Plate
 Buna "O" Rings (Viton on request)
 Delrin Ball Seats

° = Reduced Port Only
 * = Available in Reduced Port

Also Available in Stainless Steel

Hydraulic

Numerical Index

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10-003	28	10-084	29	101-254	143	10-164	30	10-237L	31	10-287B	32
10-004	28	10-085	29	101-255	143	10-165	30	10-238	31	10-288	32
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PRE-APPLIED THREAD SEALANTS!

Features and Benefits of Pre-Applied Thread Sealants

Improves Quality & Performance

- Reduces leaks and improves reliability.
- Inhibits thread corrosion both in storage and in use.
- Resists vibrational loosening.
- Prevents system contamination.

Reduces Costs

- Reduces rejection rate caused by leaks.
- Eliminates "touch-ups" and re-coating due to its tough, resilient coating properties.
- Eliminates the need to re-apply; can be re- inserted up to 8 times without re-coating.
- Reduces application costs when used in conjunction with the ECS II application machine.

Competitive Advantage

- Easily recognized color indicates the fitting is ready for leak-proof installation and service.
- Allows for control of the sealant application eliminating field installation problems.
- Adds value to fittings and increases product recognition.

Everseal™ 183

Approved in both US and Canada for methane, butane, propane, and natural gas applications



Part #	Size	Per End List Price
183	1/8"	15
184	1/4"	15
185	3/8"	18
186	1/2"	21
187	3/4"	24
188	1"	31
189	1-1/4"	40
190	1-1/2"	46
191	2"	57

Viscosity 27,000 cps
 Color Blue
 Specific Gravity 1.30 ± 0.05 at 77°F (25°C)
 Operating -65°F to +300°F
 Temperature Range -54°C to +149°C
 Dry Film Properties Tough Coating
 Shelf Life (uncured) 1 year
 (cured) Unlimited
 Clean up (uncured) Soap and water
 (cured) Methanol
 Resistance Pressure 1/2" NPT (13 mm) up to 10,000 psi (69,000 kpa)
 3" NPT (7.6 cm) up to 3,000 psi (20,700 kpa)
 No leakage for:
 Water at 200° F (93° C)
 Propane at 77° F (25° C)
 Butane at 77° F (25° C)

Everseal™ 283

Approved for use in devices handling gasoline and petroleum oils



Part #	Size	Per End List Price
283	1/8"	15
284	1/4"	15
285	3/8"	18
286	1/2"	21
287	3/4"	24
288	1"	31
289	1-1/4"	40
290	1-1/2"	46
291	2"	57

Viscosity 32,000 cps
 Color Green
 Specific Gravity 1.15 ± 0.07 at 77°F (25°C)
 Operating -65°F to +280°F
 Temperature Range -54°C to +138°C
 Dry Film Properties Tough Coating
 Shelf Life (uncured) 1 year
 (cured) Unlimited
 Clean up (uncured) Soap and water
 (cured) Methanol
 Resistance Pressure 1/2" NPT (13 mm) up to 10,000 psi (69,000 kpa)
 3" NPT (7.6 cm) up to 3,000 psi (20,700 kpa)
 No leakage for:
 Water at 200° F (93° C)
 Gasoline at 77° F (25° C)
 Oil at 300° F (149° C)

Everseal™ 483

Approved for sprinkler and water spray systems containing air, nitrogen, water or propylene glycol or glycerol antifreeze solutions



Part #	Size	Per End List Price
483	1/8"	15
484	1/4"	15
485	3/8"	18
486	1/2"	21
487	3/4"	24
488	1"	31
489	1-1/4"	40
490	1-1/2"	46
491	2"	57

Viscosity 32,000 cps
 Color White
 Specific Gravity 1.05 ± 1.40 at 77°F (25°C)
 Operating -65°F to +280°F
 Temperature Range -54°C to +138°C
 Dry Film Properties Tough Coating
 Shelf Life (uncured) 1 year
 (cured) Unlimited
 Clean up (uncured) Soap and water
 (cured) Methanol
 Resistance Pressure 1/2" NPT (13 mm) up to 10,000 psi (69,000 kpa)
 3" NPT (7.6 cm) up to 3,000 psi (20,700 kpa)
 No leakage for:
 Water at 200° F (93° C)
 Gasoline at 77° F (25° C)
 Oil at 300° F (149° C)

Also Available: Nickel Plating, Chrome plating and much more....Just Ask!

Thread Chart

DASH SIZE	2	3	4	5	6	7	8	10	12	14	16	20	24	32	40	48
O.D. TUBING SIZE	1/8	5/32	3/16	1/4	5/16	3/8	7/16	1/2	5/8	7/8	1	1-1/4	1-1/2	2	2-1/2	3
STANDARD PIPE SIZE N.P.T.F. (DRYSEAL)*	1/8-27		1/4-18		3/8-18		1/2-14		3/4-14		1-11 1/2	1 1/4-11 1/2	1 1/2-11 1/2	2-11 1/2	2 1/2 -8	3-8
S.A.E. 45° FLARE	5/16-24		7/16-20	1/2-20	5/8-18	11/16-16	3/4-16	7/8-14	1 1/16-14	1 1/4-12	1 3/8-12					
INVERTED FLARE	5/16-24		7/16-24	1/2-20	5/8-18	11/16-18	3/4-18	7/8-18	1 1/16-16							
J.I.C. 37° FLARE	5/16-24		7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12	3-12	3 1/2-12
COMPRESSION FLARELESS	5/16-24	5/16-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1 -18	1 1/8-18						
COMPRESSION (PLASTIC TUBE)	5/16-24		3/8-24	7/16-24	1/2-24		11/16-20									
AIR BRAKE - PLASTIC TUBE			7/16-24		17/32-24		11/16-20	13/16-18	1 -18							
AIR BRAKE - COPPER TUBE			7/16-24	1/2-24	17/32-24		11/16-20	13/16-18	1-18							
DOUBLE COMPRESSION STEEL	5/16-24		7/16-24	1/2-20	9/16-20		11/16-16									
COMPRESSION (HIGH PRESSURE)	5/16-24		7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12		
S.A.E. O-RING	5/16-24		7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12		
INTERNAL O-RING			1/2-20	9/16-18	5/8-18		7/8-14	1 -14	1 1/8-12	1 1/2-12	1 3/4-12	2 -12				
NPSM SWIVEL THREAD	1/8-27		1/4-18		3/8-18		1/2-14		3/4-14		1-11 1/2	1 1/4 -11 1/2	1 1/2 - 11 1/2	2-11 1/2		
FLAT FACE THREAD			9/16-18		11/16-16		13/16-16	1-14	1 3/16-12		1 7/16-12	1 11/16-12	2-12			
BRITISH THREAD BSPP/BSPT	1/8-28		1/4-19		3/8-19		1/2-14		3/4-14		1-11	1 1/4-11	1 1/2-11	2-11		
METRIC THREAD	10	12	14	16	18	20	22	24	26	27	30	33	36	42	48	
CODE 61 FLANGE HEAD O.D	M10X1.0	M12x1.5	M14x1.5	M16x1.5	M18x1.5	M20x1.5	M22x1.5	M24x1.5	M26x1.5	M27x2.0	M30x2.0	M33x2.0	M36x2.0	M42x2.0	M48x2.0	
CODE 62 FLANGE HEAD O.D							1.19	1.335	1.50		1.75	2.00	2.38	2.81	3.31	4.00
CODE 62 FLANGE HEAD O.D							1.25		1.62		1.88	2.12	2.50	3.12		

BALL VALVE PRIVATE LABEL PROGRAM



We will put your company name and logo on our ball valve handle for FREE. Simply place a minimum blanket order of 10 cases per size and we will stock them under a special part # for your access only. Please allow 90-120 days for delivery on the first shipment only. Then have them delivered as you need them!



TEE HANDLES



Part#	Valve Size	List Price
43-200T	1/4" - 3/4"	1.15
43-204T	1"	2.14

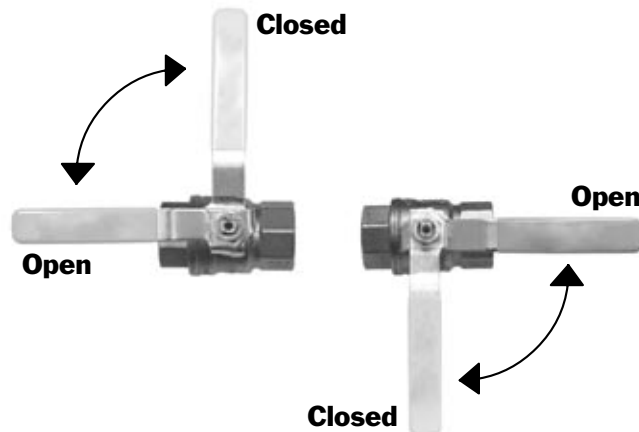
LOCKING HANDLES



Part#	Valve Size	List Price
43-200L	1/4" - 3/4"	4.29
43-204L	1" - 1 1/4"	6.43
43-206L	1 1/2" - 2"	10.00

Reversible Handles:

All regular ball valve handles are now reversible. You can take the handle off and "reverse" it, so it turns and opens over the opposite end of the valve in the opposite direction. Please let us know if this is a requirement when you order as some older stock may not have this feature.





QUICK DISCONNECTS: UNIVERSAL, INDUSTRIAL, PARKER, LINCOLN, MINI, HYDRAULIC, MOLD COOLANT-LINE QUICK DISCONNECTS AND PLUGS

page 180-185



PRIVATE LABEL, TEE, LOCKING & REVERSIBLE BALL VALVE HANDLES

page 96B



PEX BRASS FITTINGS

page 63



COPPER FITTINGS

page 144-150

360° Turning



360° TURNING SWIVEL

page 7



1 EAR, 2 EAR, STEPLESS HOSE CLAMPS & KITS

page 166-167



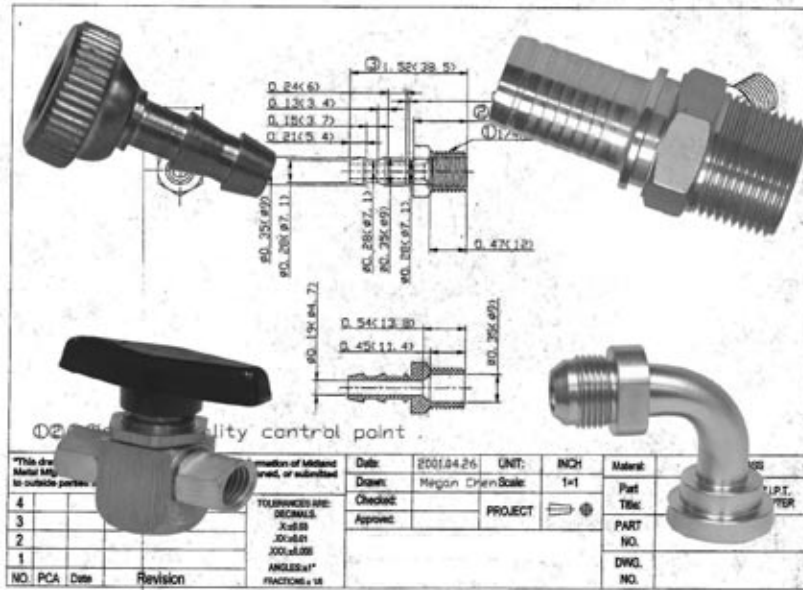
PNEUMATIC CHECK VALVES

page 96



HIGH PRESSURE 2 WAY AND 3 WAY BALL VALVES

page 251



OEM SPECIFIED FITTINGS & VALVES AT GENERIC PRICES

We can produce fittings & valves made to your specifications! Just send a print and/or sample with your delivery requirements, and we will quote a custom price from one of our domestic or overseas factories on your fitting(s) and/or valve(s).

























Any Material, Any Size, Any Shape, Any Volume... Just Ask!

Once you approve our price, we will then require a blanket purchase order based on sample approval. We will then stock these items under a separate part# for your access only. We guarantee delivery on time, everytime!

















Here's what you get:

- Consistent, top quality products!**
- Dedicated Inventory for your access only!**
- Guaranteed on-time delivery everytime!**
















Pipe

90° Elbow  pg.2	45° Elbow  pg.2	Union Tee  pg.2	Cross  pg.3
Coupling  pg.3	Union  pg.3	Cap  pg.3	St. Elbow  pg.4
Hex Bushing  pg.4	Square Plug  pg.5	Countersunk  pg.5	Slotted-head  pg.5
Hex Plug  pg.5	Locknut  pg.5	Close Nipple  pg.6	Long Nipple  pg.6
Hex Nipple  pg.6	45° Elbow  pg.7	Street Tee  pg.7	Extender  pg.7
Male Elbow  pg.8	Branch Tee  pg.8	Male Tee  pg.8	Bulkhead  pg.9

















Hose Barb

Male Adapter  pg.11	Swivel  pg.11	Mender  pg.11	Female Adapter  pg.12
Swivel  pg.12	90° Elbow  pg.12	Tees  pg.13	HB Elbow  pg.13
Female HB  pg.13	Swivel Male  pg.13	45° Elbow  pg.13	Ball End  pg.14
Ballseat Adapt.  pg.14	45° Flare  pg.14	Flare Swivel  pg.14	SS Nipple  pg.16

Push on Hose Barb

Male Adapter  pg.18	Male Swivel  pg.18	F Swivel  pg.18	Splicer  pg.18
Female Adapter  pg.19	Male Elbow  pg.19	Rigid Tube  pg.19	SAE Flare  pg.19
JIC Flare  pg.19	Duel Swivel  pg.20	45° SAE  pg.20	37° JIC  pg.20
Inverted Male  pg.20	Inverted F  pg.20	Ballseat  pg.20	

















Garden Hose

Swivel  pg.21	FGHxFemale  pg.21	Rigid  pg.22	Swivel  pg.22
FGH x Male  pg.22	Rigid FGHxM  pg.22	Rigid FGHxF  pg.22	MGHxM  pg.22
MGHxMGH  pg.22	"Y"  pg.23	Quick Dis.  pg.23	Coupling  pg.24
Ball Valve  pg.25	Shut-Off  pg.26	Nozzle  pg.26	Spray  pg.26

















SAE 45° Flare

Short Rod Nut  pg.28	Extra Heavy  pg.28	Flared Plug  pg.29	Flared Cap  pg.29
Copper Gasket  pg.29	Union  pg.30	Union Tee  pg.30	F Adapter  pg.31
M Adapter  pg.32	90° Elbow  pg.32	90° Elbow  pg.33	Forged Cross  pg.34
90° Flare  pg.34	Flare x M Pipe  pg.35	Swivel  pg.36	Union  pg.36







Inverted Flare

Steel Nut  pg.38	F Adapter  pg.38	M Adapter  pg.39	St. Elbow  pg.39
45° Elbow  pg.39	Union Tee  pg.39	Steel Plug  pg.39	Branch Tee  pg.40
F Elbow  pg.40	M Run Tee  pg.40	90° Elbow  pg.40	Brake Tee  pg.40
Dual Adapter  pg.41	SAE x Invert  pg.41	Metric Tee  pg.41	Stand/Metric  pg.42

















Compression Fittings

Brass Sleeve  pg.45	Brass Insert  pg.45	Brass Nut  pg.45	Long Nut  pg.46
Sleeve Nut  pg.46	Cap  pg.46	Union  pg.46	Tee  pg.47
Union Elbow  pg.48	F Adapter  pg.48	M Adapter  pg.49	M Elbow  pg.50
F Elbow  pg.50	M Branch Tee  pg.51	45° Elbow  pg.51	Break-Away  pg.52










Flareless

Plastic Sleeve  pg.54	Brass Sleeve  pg.54	Nut/Plastic  pg.54	Nut/Brass  pg.54
Union  pg.55	Union Tee  pg.55	F Connector  pg.55	M Connector  pg.55
Male Elbow  pg.55	Union Elbow  pg.56	M Run Tee  pg.56	M Branch Tee  pg.56
Bulkhead  pg.57	Insert Only  pg.57	Tube X M  pg.57	Insert Only  pg.57

















Push-In Fittings

Union Connect  pg.59	Reducer  pg.59	Union Tee  pg.59	F Connector  pg.59
M Elbow  pg.59	M Connector  pg.60	Swivel Elbow  pg.60	Union Elbow  pg.60
Union "Y"  pg.60	Swivel M Run  pg.61	Swivel M Br  pg.61	F Branch  pg.61
Bulkhead  pg.61	Metric  pg.62	M 90° Adapt  pg.62	Union Tee  pg.62

Pex Fittings

Water Heater  pg.63	Insert Coupling  pg.63	PEX Elbow  pg.63	Adapter  pg.63
Insert Tee  pg.63	Test Plugs  pg.63	Insert Coupling  pg.63	F. Adapter  pg.63
M. Adapter  pg.63			

Steel Grease Fittings

Pipe Thread  pg.64	Pipe Thread  pg.64	Pipe Thread  pg.64	Pipe Thread  pg.64
1/4-28 Taper  pg.64	1/4-28 Taper  pg.64	1/4-28 Taper  pg.64	Drive Type  pg.65
Metric  pg.65	Metric  pg.65	Metric  pg.65	Metric  pg.65
Metric  pg.65	Button Head  pg.65	Whip Hose  pg.65	Gun Coupler  pg.65

Air Brake-Nylon Tubing

Grid of Air Brake-Nylon Tubing fittings including Sleeve, Nut, Union, Bulkhead, Steel Insert, Brass Insert, Tee, Elbow, F Adapter, M Adapter, M Elbow, F Elbow, M Run Tee, M Branch, and 45° Elbow.

Air Brake - Accessories

Grid of Air Brake - Accessories including Collet, Tubing, No Hub, Seal, Hex Foot Chuck, 1/4 I.D. Barb, Dual Foot, Angle Chuck, Steel Brake, Hose, Fuel Line, Airbrake Tube, M Connector, 90° M Elbow, Long Ells, and Ext. Adapters.

Instrumentation Valves

Grid of Instrumentation Valves including Needle, Needle, Metering, Metering, Toggle, Toggle, F X F, F X F Angle, 3 Way Valves, M X F, Check, and Check.

Ball Valve Handles

Grid of Ball Valve Handles including Private Label, Tee, and Locking.

Air Brake - Copper

Grid of Air Brake - Copper fittings including Sleeve, Nut, Union, Tee, Elbow, F Adapter, M Adapter, 90° M Elbow, 90° F Elbow, Run Tee, Branch Tee, and 45° M Elbow.

Drain Cocks

Grid of Drain Cocks including Shut Off, Drain Valve, Drain Cock, Truck Drain, Shut Off, Lever Handle, Internal Seat, Internal Seat, Long Seat, Bibb Needle, Needle Valve, and Radiator Type.

Valves

Large grid of Valves including Full Port, MIP x FIP, MIP x MIP, SWT x SWT, Std Port, Gas Ball, Appliance, Flare x Flare, Mini FxF, Mini MxF, Mini FxH, Mini MxH, 3-Way, Gate, Y-Strainer, Check, In-Line Check, Carbon, SS In-Line, PVC Thread, PVC SLIP, Hose Bibb, Plastic, Drum, and Barrel.

Air Brake - Hoses/ends

Grid of Air Brake - Hoses/ends including Sleeve, Nut, Nut, Nut / Spring, Adapter Body, M Adapter, M Adapter, Spring, Union, F Connector, M Connector, and Adapter.

Shut-Off Cocks

Grid of Shut-Off Cocks including Flare X Male, Flare X Flare, Flare X F, Comp X M, Comp X Comp, F X F, M X F, and M X M.

D.O.T. Push-In

Grid of D.O.T. Push-In fittings including Male 45°, Male Swivel, Plug, Union, Union Tee, Union Elbow, F Connector, M Connector, Male Elbow, M Swivel, F Swivel, M Run Tee, M Swivel Run, Male Branch, Bulk/Union, and F Bulk/Union.

Brass Air Cocks

















Grid of Brass Air Cocks including MIP X BIBB, MIP X BIBB, MIP X MIP, MIP X MIP, MIP X BIBB, MIP X BIBB, FIP X FIP, and MIP X FIP.

































Needle Valves





















Grid of Needle Valves including Comp X Male, Comp X Male, Comp X Comp, Flare X M, Flare X Flare, Air Vent, M X M Pipe, F to FE PIPE, M X F Pipe, Check Valve, Flow Control, and Needle Valve.









Brass & Bronze









Grid of Brass & Bronze fittings including Nipple, 90° Elbow, 90° Street, 45° Elbow, 45° Street, Tee, Reducing, Cross, Coupling, Cap, Union, Hex Bushing, Countersunk, Square Head, Locknut, Hex Nipple, and Hex Nipple.









Stainless Steel			
Nipple  pg. 119	90° Elbow  pg. 122	90° Street  pg. 122	45° Elbow  pg. 122
Tee  pg. 122	Cross  pg. 122	Machined  pg. 122	Coupling  pg. 123
Cap  pg. 123	Hex Bushing  pg. 123	Union  pg. 124	Hex Head  pg. 124
Hex Nipple  pg. 124	Square Plug  pg. 124	1/2 Coupling  pg. 124	Hose Nipple  pg. 125









Black & Galvanized			
Nipples  pg. 127	Merchant  pg. 132	1/2 Merchant  pg. 132	90° Elbow  pg. 133
90° Street  pg. 133	45° Elbow  pg. 133	45° Street  pg. 134	Tee  pg. 134
Coupling  pg. 134	Reducing  pg. 135	Service  pg. 135	Side Outlet  pg. 135
Hex Bushing  pg. 136	Union  pg. 137	Cored Plug  pg. 137	Cross  pg. 137
Cap  pg. 137	Flange  pg. 137	Hex Bushing  pg. 138	Cap  pg. 138
Solid Plug  pg. 138	Hex Plug  pg. 138	Countersunk  pg. 138	Hex Socket  pg. 138
Extra Heavy  pg. 139	90° Elbow  pg. 142	45° Elbow  pg. 142	90° Street  pg. 142
Tee  pg. 142	Coupling  pg. 142	Cap  pg. 142	Union  pg. 142









Copper Fittings			
90° Ell  pg. 145	90° Street Ell  pg. 145	90° Long Turn  pg. 145	90° Long Turn  pg. 145
45° Ell  pg. 146	Street 45°  pg. 146	Coupling  pg. 146	Coupling  pg. 146
Coupling  pg. 147	Reducer  pg. 147	Reducer  pg. 147	Flush Bushing  pg. 148
Male Adapter  pg. 148	M. Fitting  pg. 148	F. Adapter  pg. 149	Fitting Adapter  pg. 149
Cap  pg. 149	Unions  pg. 149	U-Type Strap  pg. 149	Tee  pg. 150

















3000# Forged Steel			
90° Elbow  pg. 143	Cross  pg. 143	Coupling  pg. 143	45° Elbow  pg. 143
Street Elbows  pg. 143	Half Coupling  pg. 143	Tees  pg. 143	Union  pg. 143

Plastic Pipe			
PVC Nipple  pg. 151	Hex Plug  pg. 152	Pipe Cap  pg. 152	Hex Nipples  pg. 152
Hex Bushing  pg. 152	Elbow  pg. 153	Tee  pg. 153	Coupling  pg. 153













Plastic Hose			
Female  pg. 153	Male  pg. 153	Elbows  pg. 154	Hose x Fe  pg. 154
Union Elbow  pg. 154	Connector  pg. 154	Barbed Tee  pg. 154	Tees  pg. 154






















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










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





















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






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









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



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















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



































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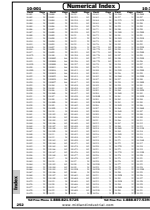
Quick Disconnect

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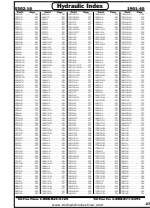
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Services

Material used for Brass Fittings

Straight bodies: Barstock CA 360 or CA 345
Shape bodies: Extruded barstock CA 360 or Forged CA 377
Nuts: Barstock CA 360 or Forged CA 377

MATERIAL COMPOSITION

CA360 Barstock Brass

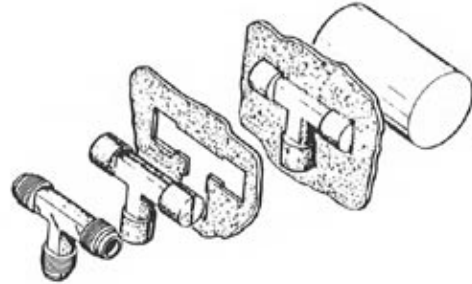
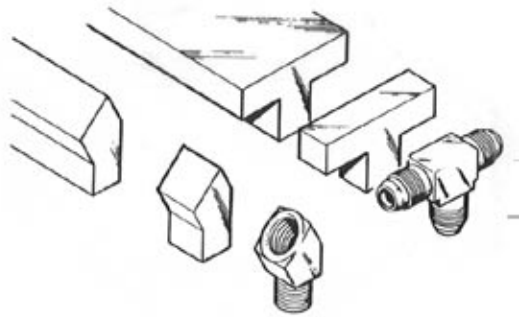
ASTM B16 - 92

Elements	Nominal	Min	Max
Copper	61.5	60	63
Lead	3.1	2.5	3.7
Iron			.35
Other			.50
Zinc	35.4	Balance	

CA377 Forged Brass

ASTM B 124,283

Elements	Nominal	Min	Max
Copper	59.5	58	61
Lead	2	1.5	2.5
Iron			.30
Zinc	38	Balance	



Extruded Barstock Fittings

Hexagon, round and shaped bars are extruded in the configuration required, drawn to size, cut to length and straightened. First a solid round billet (8 to 12 inches in diameter) is heated to the pliable state and forced by pressure of a approximately 80,000 pounds per square inch through a die. The resulting continuous length of bar is cooled and then drawn through dies to the desired external size. (The drawing process also controls the temper.) After straightening, the bar is ready for machining.

The process produces a dense, nonporous material somewhat stronger in the longitudinal direction due to an orientated flow of the grain.

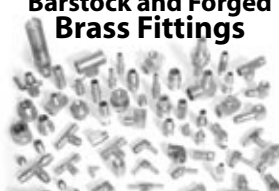





Forged Fittings

Material for forgings is extruded in round bars, cut to length and straightened. (At this point in the process, forging rod differs from round extruded machinable bars only in temper and chemical properties.) After straightening, the bars are cut again into slugs (short lengths), reheated to the pliable state and pressed under a pressure of approximately 25,000 pounds per square inch between upper and lower die cavities. After cooling the flash is trimmed away and the forging blank is ready for machining.

This process of forming under extreme pressure produces a uniformly dense material of exceptional strength. Because grain flow follows the contour, the fitting has high impact strength and is resistant to mechanical shock and vibration.

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 Nipples & Fittings
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 Brass
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Thread Profiles

Profiles

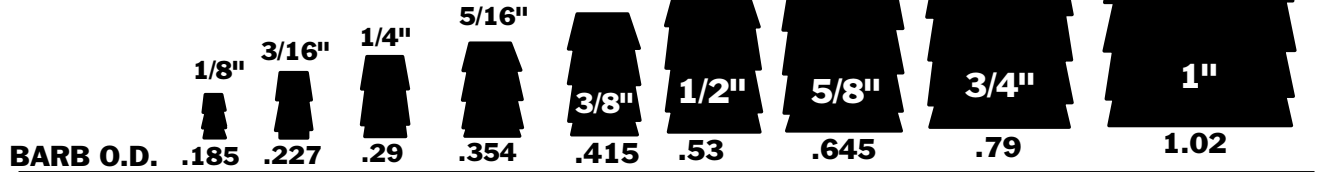
Thread Profiles

Pipe Threads

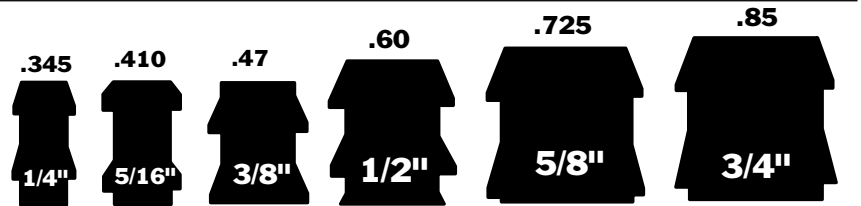
1/8"-27



Hose Barb Fittings

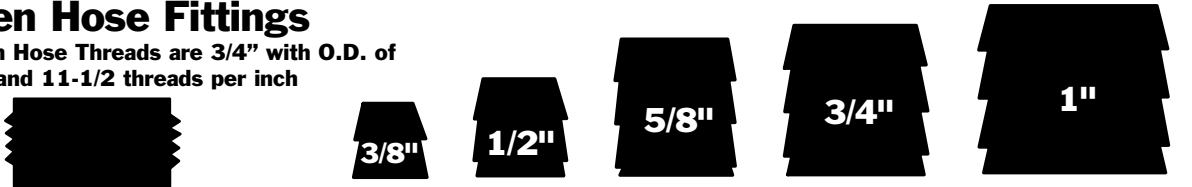


Push On Fittings

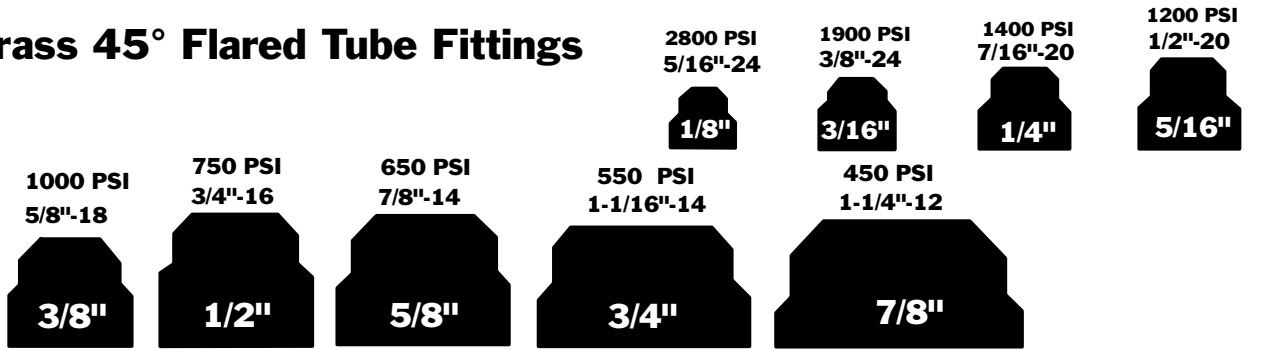


Garden Hose Fittings

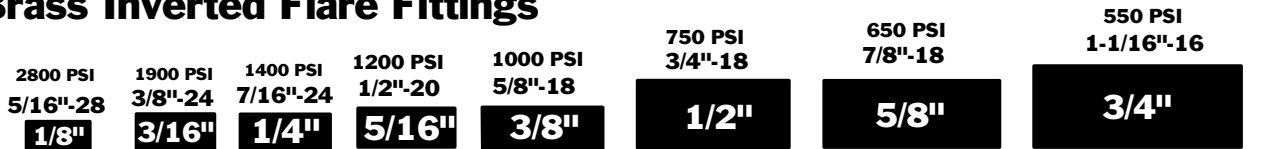
Male Garden Hose Threads are 3/4" with O.D. of 1.0625 and 11-1/2 threads per inch



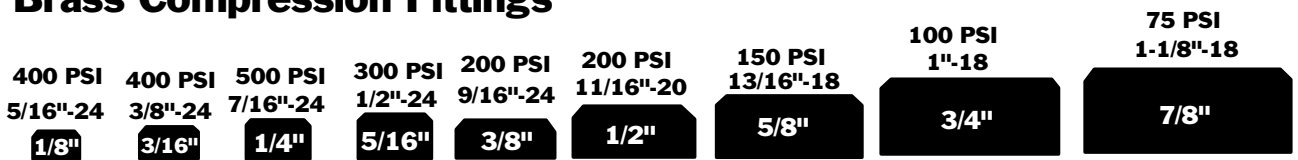
Brass 45° Flared Tube Fittings



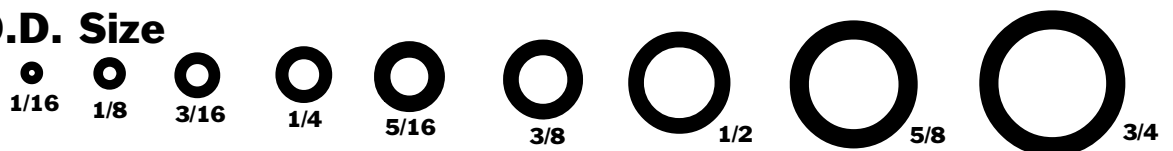
Brass Inverted Flare Fittings



Brass Compression Fittings



Tubing O.D. Size



2003

Brass Fittings

Valves



Nipples & Fittings



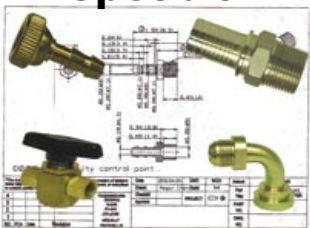
Hose Clamps



Accessories



"Specials"



Hydraulic Adapters



729 New Products

Fittings, Valves, Clamps & Accessories for Hose, Pipe, and Tube