

68 Frame Block-Style Stainless Steel Plunger Pump

Standard Models 6811, 6821

Flushed Models 6811K, 6821K

FEATURES

Superior Design

- Triplex plunger design gives smoother liquid flow.
- Inlet and discharge valve assemblies interchange for easier maintenance.
- Oil bath crankcase assures optimum lubrication.
- Close tolerance concentricity of the ceramic plunger maximizes seal life.
- **Standard Models:** Lo-Pressure Seals and V-Packings are completely lubricated and cooled by the liquid being pumped.

Flushed Models: Special ported inlet manifold permits liquid to cool or flush between V-Packings and Lo-Pressure Seals providing protection against high temperatures or contaminating pumped fluids.

Quality Materials

- All 316 stainless steel valves are heat treated and seats are roller burnished for a positive seal and extended valve life.
- 316 SSL block-style manifolds for strength and corrosion resistance.
- Special concentric, high density, polished, graphite impregnated, solid ceramic plungers are abrasion resistant and result in extended seal life.
- Specially formulated, CAT PUMP exclusive, V-Packings offer unmatched performance and seal life.
- Die cast aluminum crankcase provides high strength, minimum weight and precision tolerance control.
- Optional Cast Iron crankcase for hazardous environments.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings mean longer bearing life.

Easy Maintenance

- Wet-end is easily serviced without entering crankcase, requiring less time and effort.
- Preset packings mean no packing gland adjustment is necessary, reducing maintenance costs.

⚠ WARNING

All systems require both a primary pressure regulating device (i.e., regulator, unloader) and a secondary pressure safety relief device (i.e., pop-off valve, safety valve). Failure to install such relief devices could result in personal injury or damage to the pump or to system components. CAT PUMPS does not assume any liability or responsibility for the operation of a customer's high pressure system.

SPECIFICATIONS

U.S. Measure

Metric Measure

MODELS 6811, 6811K

Flow 15.0 GPM (57 L/M)
 Pressure Range 100 to 5000 PSI (7 to 345 BAR)
 RPM 600 RPM (600 RPM)
 Bore 0.984" (25 mm)

Alternate Specifications

Flow 15.0 GPM (57 L/M)
 Pressure Range** 100 to 7000 PSI (7 to 485 BAR)

**Frequent cycle duty with dump gun only. Continuous duty with Safety Valve or Rupture Disk.

MODELS 6821, 6821K

Flow 25.0 GPM (95 L/M)
 Pressure Range 100 to 3000 PSI (7 to 210 BAR)
 RPM 615 RPM (615 RPM)
 Bore 1.260" (32 mm)

COMMON SPECIFICATIONS

Inlet Pressure Range* Flooded to 50 PSI (Flooded to 3.5 BAR)
 Stroke 2.579" (65.5 mm)
 Crankcase Capacity 10 Qts. (9.46 L)
 Max. Liquid Temperature 140°F (60°C)
 Inlet Ports (2) 1-1/2" NPTF (1-1/2" NPTF)
 Flushing Ports (2) 1/2" NPTF (1/2" NPTF)
 Discharge Ports (2) 1" NPTF (1" NPTF)
 Shaft Diameter 1.772" (45 mm)
 Weight 355 lbs. (161 kg)
 Dimensions 29.5 x 24.33 x 11.98" (750 x 618 x 305 mm)

*"K" Models have special inlet ports for cooling/flushing, containment of hazardous liquids and high inlet pressure. Contact CAT PUMPS for additional information.

HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE					RPM
			PSI 2000	PSI 2500	PSI 3000	PSI 4000	PSI 5000	
	U.S. GPM	L/M	BAR 140	BAR 175	BAR 210	BAR 275	BAR 345	
6811	15	57	N/A	N/A	30.9	41.1	51.5	600
6811K	12	45	N/A	N/A	24.7	32.9	41.1	496
	10	38	N/A	N/A	20.6	27.4	34.3	390
6821	25	95	34.3	42.8	51.4	N/A	N/A	615
6821K	20	76	27.4	34.3	41.1	N/A	N/A	492
	15	57	20.5	25.7	30.9	N/A	N/A	369

DETERMINING THE PUMP R.P.M.

Rated G.P.M. = "Desired" G.P.M.
Rated R.P.M. = "Desired" R.P.M.

DETERMINING THE REQUIRED H.P.

GPM x PSI = Electric Brake
 1460 = H. P. Required

DETERMINING MOTOR PULLEY SIZE

Motor Pulley O.D. = Pump Pulley O.D.
Pump R.P.M. = Motor R.P.M.

See complete Drive Packages [Inclds: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.

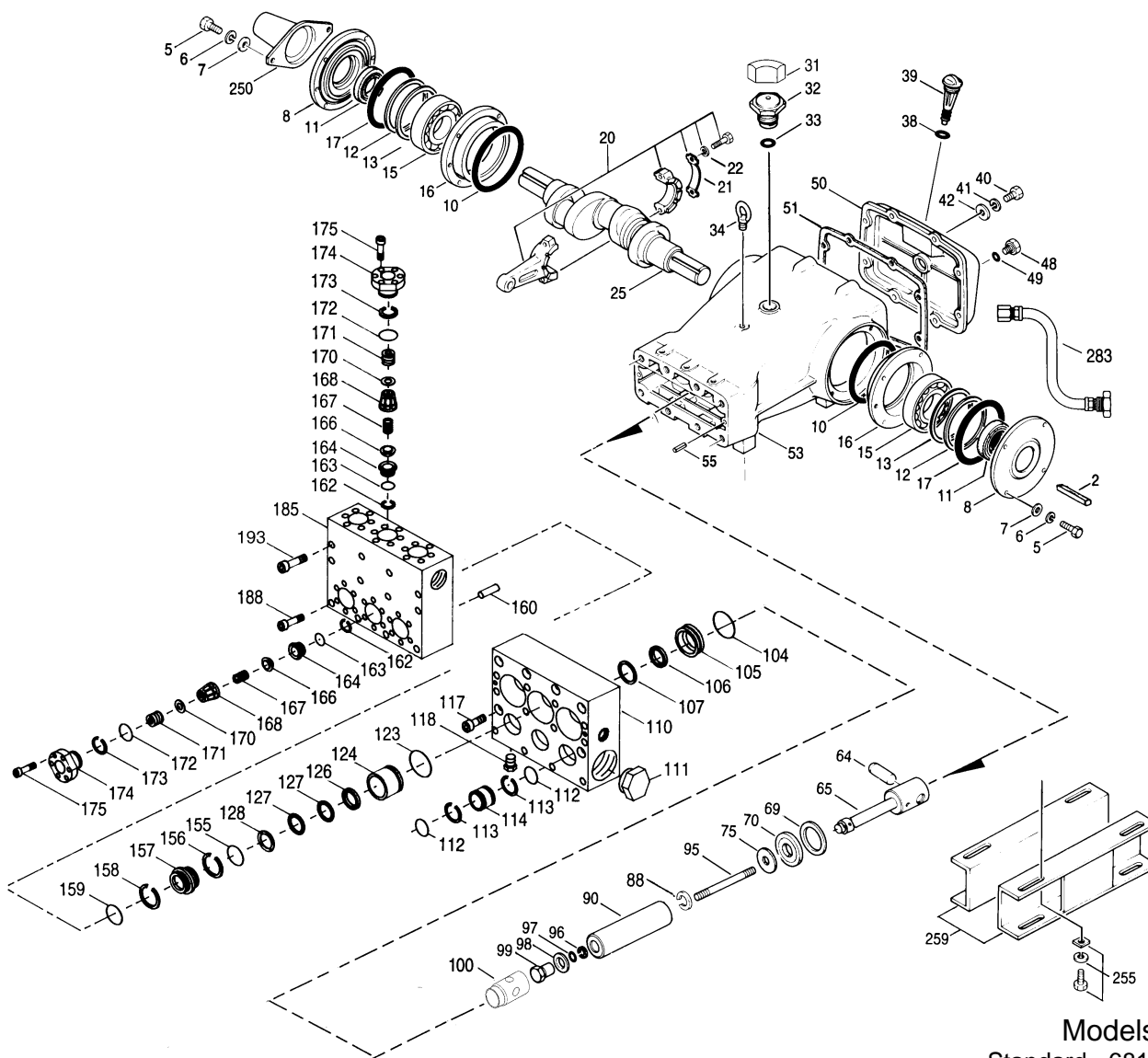
Refer to pump Service Manual for repair procedure and additional technical information.

"Customer confidence is our greatest asset"

PARTS LIST

ITEM	PART NUMBER				DESCRIPTION	QTY
	6811	6811K	6821	6821K		
	MATL	MATL	MATL	MATL		
2	43048 STL	43048 STL	43048 STL	43048 STL	Key (M14x9x90)	1
5	89728 S	89728 S	89728 S	89728 S	Screw, HH (M10x40)	8
6	15847 S	15847 S	15847 S	15847 S	Lockwasher (M10)	8
7	19934 SS	19934 SS	19934 SS	19934 SS	Washer, Flat (M10)	8
8	29443 AL	29443 AL	29443 AL	29443 AL	Cover, Bearing - Outer	2
10	29444 NBR	29444 NBR	29444 NBR	29444 NBR	O-Ring, Bearing Cover	2
11	11443 NBR	11443 NBR	11443 NBR	11443 NBR	Seal, Oil, Crankshaft - 70D	2
12	43642 S	43642 S	43642 S	43642 S	Washer, Shim (M120x0.3)	0-2
13	43643 S	43643 S	43643 S	43643 S	Washer, Shim (M120x0.5)	0-2
15	29441 STL	29441 STL	29441 STL	29441 STL	Bearing, Roller	2
16	29442 STL	29442 STL	29442 STL	29442 STL	Cover, Bearing - Inner	2
17	29444 NBR	29444 NBR	29444 NBR	29444 NBR	O-Ring, Bearing Cover	2
20	115983 BBHS	115983 BBHS	115983 BBHS	115983 BBHS	Rod, Connecting Assy	3
21	44941 STZP	44941 STZP	44941 STZP	44941 STZP	Washer, Locking	3
22	43641 STL	43641 STL	43641 STL	43641 STL	Washer, Shim (M10.5x1.5)	6
25	29440 FCM	29440 FCM	29440 FCM	29440 FCM	Crankshaft, Dual Shaft	1
31	828710	828710	828710	828710	Protector, Oil Cap	1
32	43211 ABS	43211 ABS	43211 ABS	43211 ABS	Cap, Oil Filler	1
33	14177 NBR	14177 NBR	14177 NBR	14177 NBR	O-Ring, Filler Cap - 70D	1
34	44319 STZP	44319 STZP	44319 STZP	44319 STZP	Bolt, Eye (M12)	1
38	11338 NBR	11338 NBR	11338 NBR	11338 NBR	O-Ring, Dip Stick	1
39	27769 ABS	27769 ABS	27769 ABS	27769 ABS	Stick, Dip	1
40	89627 S	89627 S	89627 S	89627 S	Screw, HH (M10x30)	8
41	15847 S	15847 S	15847 S	15847 S	Lockwasher (M10)	8
42	19934 SS	19934 SS	19934 SS	19934 SS	Washer, Flat (M10)	8
48	25625 STCP	25625 STCP	25625 STCP	25625 STCP	Plug, Drain (1/4"x19BSP)	1
49	23170 NBR	23170 NBR	23170 NBR	23170 NBR	O-Ring, Drain Plug - 70D	1
50	29438 AL	29438 AL	29438 AL	29438 AL	Cover, Rear	1
51	29439 NBR	29439 NBR	29439 NBR	29439 NBR	Gasket, Rear Cover	1
53	43284 AL	43284 AL	43284 AL	43284 AL	Crankcase w/Guide Pins	1
55	43282 S	43282 S	43282 S	43282 S	Pin, Guide	2
64	29481 CM	29481 CM	29481 CM	29481 CM	Pin, Crosshead	3
65	48735 SSZZ	48735 SSZZ	48735 SSZZ	48735 SSZZ	Rod, Plunger	3
69	29453 STZP	29453 STZP	29453 STZP	29453 STZP	Washer, Oil Seal	3
70	29454 NBR	29454 NBR	29454 NBR	29454 NBR	Seal, Oil Crankcase - 80D	3
75	43865 S	43865 S	43865 S	43865 S	Slinger Barrier	3
88	45676 SS	45676 SS	45676 SS	45676 SS	Washer, Keyhole (M16)	3
90	43866 CC	43866 CC	43957 CC	43957 CC	Plunger (M12x145) (M32x145)	3
95	89778 SS	89778 SS	89778 SS	89778 SS	Stud, Plunger Retainer (M10x135)	3
96	20189 PTFE	20189 PTFE	20189 PTFE	20189 PTFE	Back-up-Ring, Plunger Retainer	3
97	11345 NBR	11345 NBR	11345 NBR	11345 NBR	O-Ring, Plunger Retainer - 70D	3
	11375 FPM	11375 FPM	11375 FPM	11375 FPM	O-Ring, Plunger Retainer - 70D	3
	701490 EPDM	701490 EPDM	701490 EPDM	701490 EPDM	O-Ring, Plunger Retainer	3
98	44085 SS	44085 SS	44085 SS	44085 SS	Gasket, Plunger Retainer	3
99	44084 SS	44084 SS	44084 SS	44084 SS	Retainer, Plunger (M10)	3
100	701455 BB	701455 BB	701455 BB	701455 BB	Retainer, Seal	3
104	43875 NBR	43875 NBR	43875 NBR	43875 NBR	O-Ring, Adapter, Inlet - 70D	3
	44826 FPM	44826 FPM	44826 FPM	44826 FPM	O-Ring, Adapter, Inlet - 70D	3
	701656 EPDM	701656 EPDM	701656 EPDM	701656 EPDM	O-Ring, Adapter, Inlet	3
105	701323 SS	701323 SS	45562 SS	45562 SS	Adapter, Inlet, LPS	3
106	44086 NBR	44086 NBR	44098 NBR	44098 NBR	Seal, LPS, w/SS-Spg	3
	45846 FPM	45846 FPM	44827 FPM	44827 FPM	Seal, LPS, w/SS-Spg	3
	701944 SFTA*	701944 SFTA*	48244 EPDM	48244 EPDM	Seal, LPS, w/SS-Spg	3
	44089 SS	44089 SS	44101 SS	44101 SS	Washer, LPS	3
107	701321 SSL	701321 SSL	701321 SSL	701321 SSL	Manifold Inlet, Block-Style	1
110	—	701322 SSL	—	701322 SSL	Manifold Inlet, Block-Style, Flushed	1
111	701116 SS	701116 SS	701116 SS	701116 SS	Plug, Inlet Manifold (1-1/2" NPT)	1
112	701632 NBR	701632 NBR	701632 NBR	701632 NBR	O-Ring, Spacer	6
	701328 FPM	701328 FPM	701328 FPM	701328 FPM	O-Ring, Spacer	6
	701973 EPDM	701973 EPDM	701973 EPDM	701973 EPDM	O-Ring, Spacer	6
113	701329 PTFE	701329 PTFE	701329 PTFE	701329 PTFE	Back-up-Ring, Spacer	6
114	701327 SS	701327 SS	701327 SS	701327 SS	Spacer, Inlet	3
117	89694 S	89694 S	89694 S	89694 S	Screw, HSH (M16x110)	8
118	701077 SS	701077 SS	701077 SS	701077 SS	Plug (1/4" NPT)	3
123	12391 NBR	12391 NBR	12391 NBR	12391 NBR	O-Ring, V-Packing Cylinder - 70D	3
	13266 FPM	13266 FPM	13266 FPM	13266 FPM	O-Ring, V-Packing Cylinder - 70D	3
	701657 EPDM	701657 EPDM	701657 EPDM	701657 EPDM	O-Ring, V-Packing Cylinder	3
124	701324 SSL	701324 SSL	701330 SSL	701330 SSL	Cylinder, V-Packing	3
126	701325 SS	701325 SS	48390 D	48390 D	Adapter, Female	3
	—	—	45564 SS	45564 SS	Adapter, Female	3
127	44610 STG*	44610 STG*	44608 STG*	44608 STG*	V-Packing	6
128	701326 SS	701326 SS	45565 SS	45565 SS	Adapter, Male	3
155	11379 NBR	11379 NBR	25495 NBR	25495 NBR	O-Ring, Spacer, Inner - 70D	3
	14183 FPM	14183 FPM	11748 FPM	11748 FPM	O-Ring, Spacer, Inner - 70D	3
	701491 EPDM	701491 EPDM	701749 EPDM	701749 EPDM	O-Ring, Spacer, Inner	3
156	28243 PTFE	28243 PTFE	48371 D	48371 D	Back-up-Ring, Spacer, Inner	3
157	701294 SS	701294 SS	45674 SS	45674 SS	Spacer, V-Packing	3
158	28243 PTFE	28243 PTFE	48362 D	48362 D	Back-up-Ring, Spacer, Outer	3
159	11379 NBR	11379 NBR	18697 NBR	18697 NBR	O-Ring, Spacer, Outer - 70D	3
	14183 FPM	14183 FPM	20137 FPM	20137 FPM	O-Ring, Spacer, Outer - 70D	3
	701491 EPDM	701491 EPDM	701492 EPDM	701492 EPDM	O-Ring, Spacer, Outer	3
160	44756 SS	44756 SS	44756 SS	44756 SS	Pin, Guide	2
162	21985 PTFE	21985 PTFE	21985 PTFE	21985 PTFE	Back-up-Ring, Seat	12/6
163	26089 NBR	26089 NBR	26089 NBR	26089 NBR	O-Ring, Seat - 80D	12/6
	11377 FPM	11377 FPM	11377 FPM	11377 FPM	O-Ring, Seat - 80D	12/6
	46647 EPDM	46647 EPDM	46647 EPDM	46647 EPDM	O-Ring, Seat - 80D	12/6
164	44080 SS	44080 SS	44080 SS	44080 SS	Seat	6
166	44081 SS	44081 SS	44081 SS	44081 SS	Valve	6
167	44082 SS	44082 SS	44082 SS	44082 SS	Spring	6
168	44735 PVDF	44735 PVDF	44735 PVDF	44735 PVDF	Retainer, Spring	6
170	44794 SS	44794 SS	44794 SS	44794 SS	Washer, Retainer	6
171	44793 SS	44793 SS	44793 SS	44793 SS	Spring, Coil	6
172	15853 NBR	15853 NBR	15853 NBR	15853 NBR	O-Ring, Valve Plug - 70D	6
	11720 FPM	11720 FPM	11720 FPM	11720 FPM	O-Ring, Valve Plug - 70D	6
	701481 EPDM	701481 EPDM	701481 EPDM	701481 EPDM	O-Ring, Valve Plug - 70D	6

EXPLODED VIEW



Models
 Standard - 6811, 6821
 Flushed - 6811K, 6821K
 February 2002

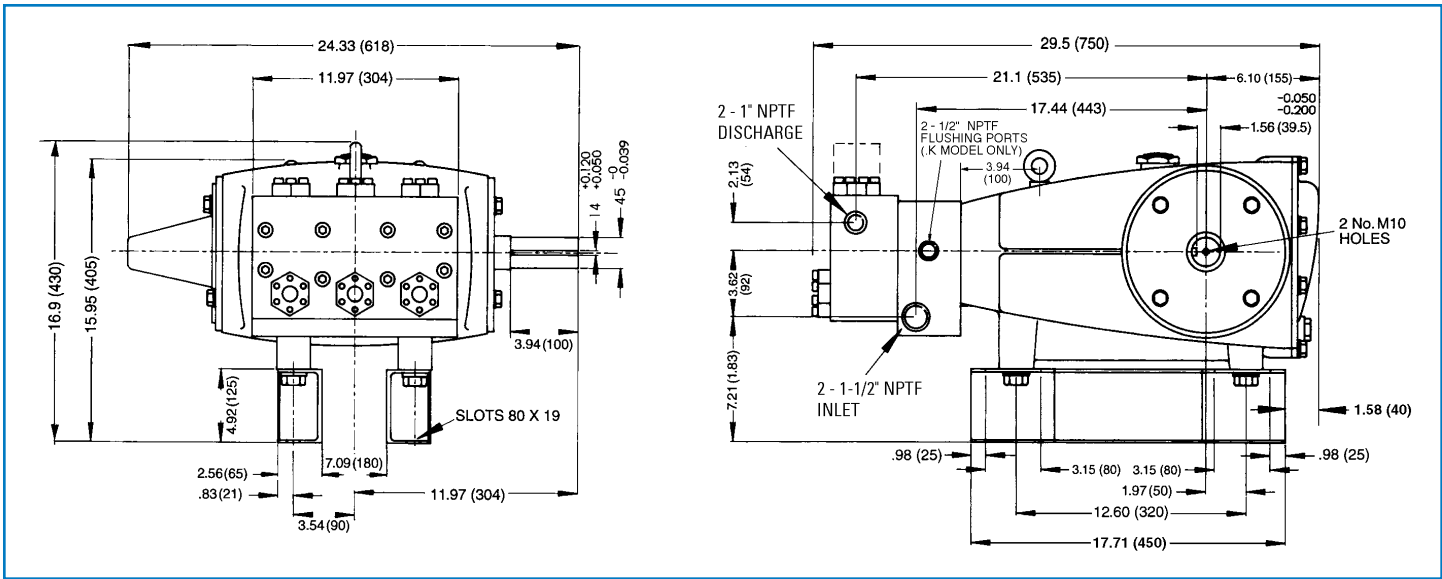
	6811	MATL	6811K	MATL	6821	MATL	6821K	MATL		
● 173	20224	PTFE	20224	PTFE	20224	PTFE	20224	PTFE	Back-up-Ring, Valve Plug	6
● 174	701260	SS	701260	SS	701260	SS	701260	SS	Plug, Valve	6
● 175	87951	SS	87951	SS	87951	SS	87951	SS	Screw, HSH (M10x30)	36
● 185	701320	SSL	701320	SSL	701320	SSL	701320	SSL	Manifold, Discharge, Block-Style	1 ●
● 188	701279	S	701279	S	701279	S	701279	S	Kit, Mount (Included w/Pump)	4
● 193	89694	S	89694	S	89694	S	89694	S	Screw, HSH (M12x100), Lower	1
● 250	29445	AL	29445	AL	29445	AL	29445	AL	Screw, HSH (M16x110), Upper	8
● 255	33243	STZP	33243	STZP	33243	STZP	33243	STZP	Protector, Shaft	1
● 259	29477	STZP	29477	STZP	29477	STZP	29477	STZP	Kit, Mount (Included w/Pump)	2 ●
● 275	990014	STL	990014	STL	990014	STL	990014	STL	Rail, Box (Included w/Pump)	2 ●
● 283	34334	34334	34334	34334	34334	34334	34334	34334	Hub, "B"; (M45) (Keyway M14x9x90) [See Drive Packages Tech Bulletin 003]	1 ●
● 290	6104	6104	6104	6104	6104	6104	6104	6104	Kit, Oil Drain	1 ●
● 299	910000	SSL	—	—	910001	SSL	—	—	Gasket, Liquid (1 oz.)	1 ●
●	—	—	910005	SSL	—	—	910002	SSL	Head, Complete, Block-Style	1 ●
●	—	—	—	—	—	—	—	—	Head, Complete, Block-Style, Flushed	1 ●
● 300	701648	NBR*	701648	NBR*	701649	NBR*	701649	NBR*	Kit, Seal (Incls: 97, 104, 106, 112, 113, 123, 127, 155, 156, 158, 159)	1
●	33710	FPM*	33710	FPM*	33720	FPM*	33720	FPM*	Kit, Seal (Incls: 97, 104, 106, 112, 113, 123, 127, 155, 156, 158, 159)	1
●	702353	EPDM	702353	EPDM	702352	EPDM	702352	EPDM	Kit, Seal (Incls: 97, 104, 106, 112, 113, 123, 127, 155, 156, 158, 159)	1
● 310	34151	NBR	34151	NBR	34151	NBR	34151	NBR	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 170, 172, 173)	2
●	701798	FPM	701798	FPM	701798	FPM	701798	FPM	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 170, 172, 173)	2
●	701799	EPDM	701799	EPDM	701799	EPDM	701799	EPDM	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 170, 172, 173)	2
● 370	—	—	990663	—	—	—	990663	—	Assembly, Flushing, 5 gal., 115V, 1.1 Amp, 1/2" NPT	1 ●
● —	711500	SS	711500	SS	714500	SS	714500	SS	C.A.T. (Captive Acceleration Tube)	1 ●
● —	711506	SS	711506	SS	714506	SS	714506	SS	Adapter (2 per C.A.T.) (See Data Sheet for complete selection)	2 ●
● —	6565.7	6565.7	6565.7	6565.7	6565.7	6565.7	6565.7	6565.7	Plunger Pump Service Video	1

● Industrial discount. **Bold print part numbers are unique to a particular pump model.** *Italics are optional items.* ◆ Silicone oil/grease required.

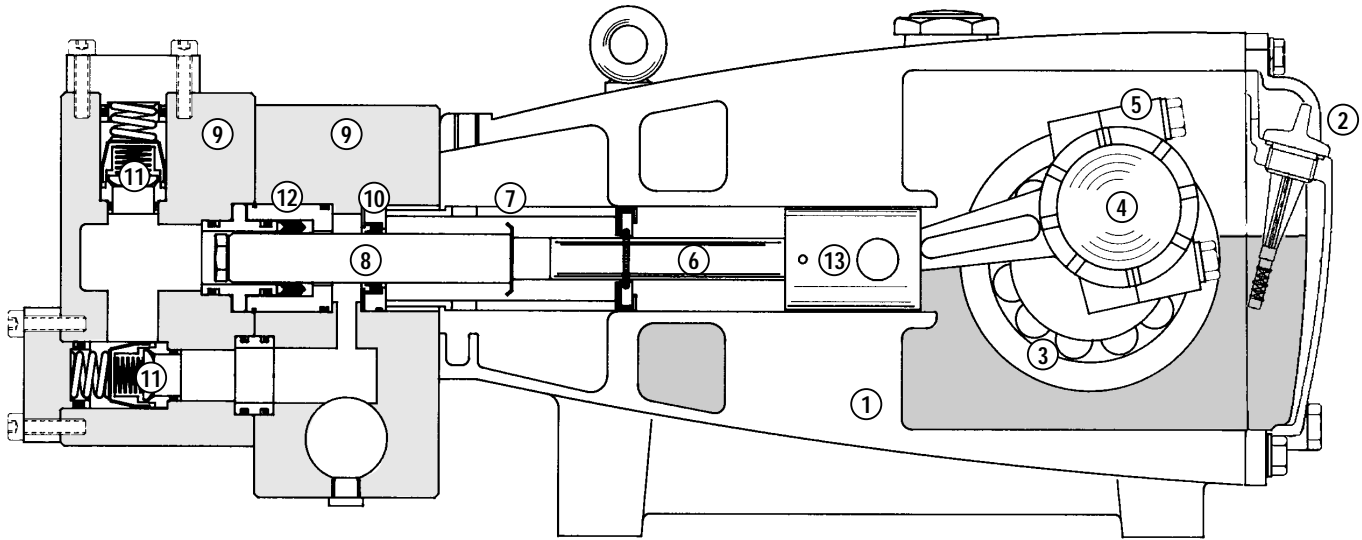
* Review material codes for individual items (STG generally may be used as alternate).

C.A.T. highly recommended for pressurized inlet, R.O. and Industrial applications. See Tech Bulletins 003, 024, 036, 074, 077, 083 and 084 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass BBHS=Brass/High Strength CC=Ceramic CM=Chrome-Moly D=Delrin® FCM=Forged Chrome-Moly FPM=Fluorocarbon (Viton®) NBR=Medium Nitrile (Buna-N) PTFE=Pure Teflon® PVDF=Fluoroplastic (High Strength) S=304SS SS=316SS SSL=316SS/Low Carbon SSZZ=316SS/Zamak STCP=Steel/Chrome Plated STG=Special Blend (Teflon®) White STL=Steel STZP=Steel/Zinc Plated



Models 6811, 6811K, 6821, 6821K



- 1 Die cast aluminum **crankcase** means high strength, lightweight, and excellent tolerance control.
- 2 **Dipstick** offers top access for easy oil level check.
- 3 Oversized crankshaft **bearings** provide extended bearing life and pump performance.
- 4 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.
- 5 Matched oversized high strength **connecting rods** are noted for superior strength and bearing quality.
- 6 Special stainless steel **plunger rods** with high strength crossheads for longevity and corrosion resistance.
- 7 The stainless steel **barrier slinger** provides back-up protection for the crankcase seal, keeping pumped liquids out of the crankcase.
- 8 Special concentric, high density, polished, graphite impregnated, solid ceramic **plungers** are abrasion resistant and result in extended seal life.
- 9 **Manifolds** are 316 SSL block-style for long-term, continuous-duty and corrosion resistance.
- 10 **Standard Models:** Lo-Pressure Seals and V-Packings are completely lubricated and cooled by the liquids being pumped.
- 11 316 stainless steel **valves, seats and springs** provide corrosion-resistance, positive seating and long life.
- 12 Specially formulated, CAT PUMP exclusive, **V-Packings** offer unmatched performance and seal life.
- 13 **Crossheads** are 360° supported for uncompromising alignment.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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