

## 38 Frame Block-Style Stainless Steel Plunger Pump

**Standard  
Model**

# 3841

**Flushed  
Model**

# 3841K

### 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 liquids.

#### 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.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity means 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
Flow .....	45 GPM	(170 L/M)
Pressure Range .....	100 to 1000 PSI	(7 to 70 BAR)
Inlet Pressure* .....	Flooded to 70 PSI	(Flooded to 4.9 BAR)
RPM .....	800 RPM	(800 RPM)
Bore .....	1.772"	(45 mm)
Stroke .....	1.890"	(48 mm)
Crankcase Capacity .....	4.2 Qts.	(4 L)
Maximum 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)
Pulley Mounting .....	Either Side	(Either Side)
Shaft Diameter .....	1.378"	(35 mm)
Weight .....	139 lbs.	(63 kg)
Dimensions .....	24.4 x 18.11 x 9.37"	(620 x 460 x 238 mm)

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

### HORSEPOWER REQUIREMENTS

FLOW		PRESSURE			RPM
		PSI 800	PSI 900	PSI 1000	
U.S. GPM	L/M	BAR 55	BAR 63	BAR 70	
45	170	24.7	27.8	30.9	800
40	151	22.0	24.7	27.4	712
35	133	19.2	21.6	24.0	622

<b>DETERMINING THE PUMP R.P.M.</b>	$\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}}$	=	$\frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$
<b>DETERMINING THE REQUIRED H.P.</b>	$\frac{\text{GPM x PSI}}{1460}$	=	Electric Brake H. P. Required
<b>DETERMINING MOTOR PULLEY SIZE</b>	$\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}}$	=	$\frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.  
Refer to pump Service Manual for repair procedure and additional technical information.

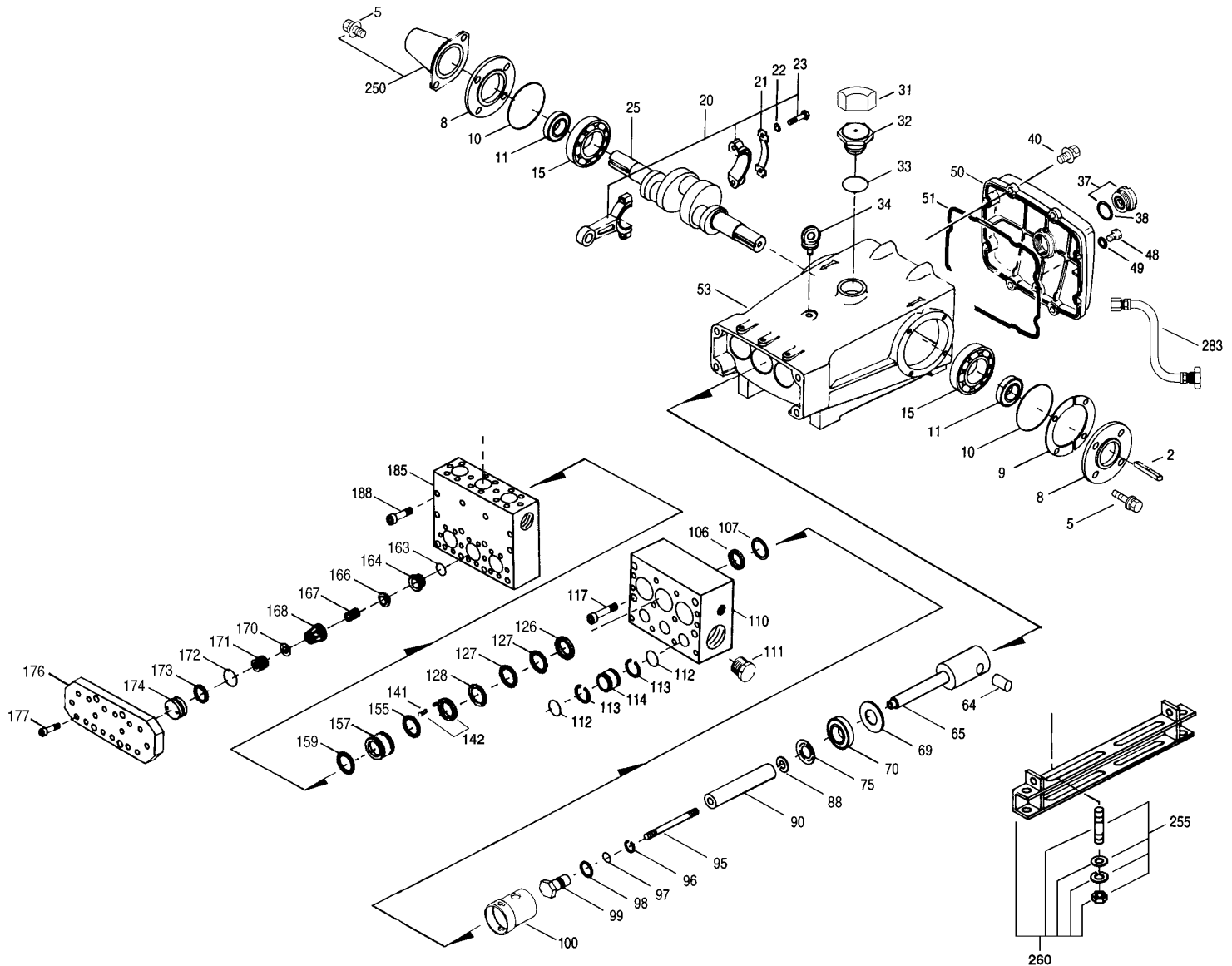
*"Customer confidence is our greatest asset"*

# PARTS LIST

ITEM	PART NUMBER		DESCRIPTION		QTY
	3841	MATL	3841K	MATL	
● 2	30055	STL	30055	STL	Key (M10x6x32) 1 ●
● 5	34021	STL	34021	STL	Key (M10x8x70) 1 ●
8	118824	S	118824	S	Screw, Sems HH (M8x25) 8
● 9	44542	AL	44542	AL	Cover, Bearing 2
10	701138	F	701138	F	Cover, Bearing (Use w/701139, 40, 45, 47, 428) 2 ●
11	44543	FBR	44543	FBR	Shim, Split 2-Pc 4
15	12398	NBR	12398	NBR	O-Ring, Bearing Cover - 70D 2
20	13296	NBR	13296	NBR	Seal, Oil, Crankshaft 2
21	29326	STL	29326	STL	Bearing, Roller 2
22	121467	TNM	121467	TNM	Rod, Connecting Assembly [10/00] 3
23	44940	STZP	44940	STZP	Washer, Locking (M10) 3
25	43641	STZP	43641	STZP	Washer (M10.5x1.5) 6
31	88155	STZP	88155	STZP	Screw, HH (M10x60F) 6
32	29325	FCM	29325	FCM	Crankshaft, Dual End 1
33	828710		828710		Protector, Cap 1
34	43211	ABS	43211	ABS	Cap, Oil Filler 1
35	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap - 70D 1
36	44319	STZP	44319	STZP	Bolt, Eye (M12) 1
37	701145	AL	701145	AL	Rivet, Serial Plate (Use w/701138, 39, 40, 47, 428) 1
38	701147	AL	701147	AL	Name Plate (Use w/701138, 39, 40, 45, 428) 1
40	92241		92241		Gauge, Oil, Bubble w/Gasket - 80D 1
48	44428	NBR	44428	NBR	Gasket, Flat - 80D 1
49	118824	S	118824	S	Screw, Sems HH (M8x25) 8
50	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP) 1
● 51	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D 1
● 53	45936	AL	45936	AL	Cover, Rear 1
64	701139	F	701139	F	Cover, Rear (Use w/701138, 40, 45, 47, 428) 1 ●
65	16612	NBR	16612	NBR	O-Ring, Rear Cover - 70D 1
69	44559	AL	44559	AL	Crankcase w/Guide Pins 1 ●
70	701428	F	701428	F	Crankcase w/Guide Pins (Use w/701138, 39, 40, 45, 47) 1 ●
75	43864	CM	43864	CM	Pin, Crosshead 3
88	45116	SSZZ	45116	SSZZ	Rod, Plunger 3
90	29338	S	29338	S	Washer, Oil Seal 3
95	100488	NBR	100488	NBR	Seal, Oil, Crankcase 3
96	44739	FPM	44739	FPM	Seal, Oil, Crankcase 3
97	43865	S	43865	S	Slinger, Barrier 3
98	45676	SS	45676	SS	Washer, Keyhole (M16) 3
99	46806	CC	46806	CC	Plunger (M45x145) 3
100	89778	SS	89778	SS	Stud, Plunger Retainer (M10x135) 3
106	20189	PTFE	20189	PTFE	Back-up-Ring, Plunger Retainer 3
107	11345	NBR	11345	NBR	O-Ring, Plunger Retainer - 70D 3
110	11375	FPM	11375	FPM	O-Ring, Plunger Retainer 3
111	◆ 701490	EPDM	◆ 701490	EPDM	O-Ring, Plunger Retainer 3
112	44085	SS	44085	SS	Gasket, Plunger Retainer 3
113	44084	SS	44084	SS	Retainer, Plunger (M10) 3
114	44119	PVDF	44119	PVDF	Retainer, Seal 3
117	48384	NBR	48384	NBR	Seal, LPS w/SS-Spg 3
126	702013	SFTB*	702013	SFTB*	Seal, LPS w/SS-Spg 3
127	◆ 46945	EPDM	◆ 46945	EPDM	Seal, LPS w/SS-Spg 3
128	48380	D	48380	D	Spacer, LPS 3
141	701865	SSL	701865	SSL	Manifold, Inlet, Block-Style 1 ●
142	—	—	701982	SSL	Manifold, Inlet, Block-Style, Flushed 1 ●
144	701116	SS	701116	SS	Plug, 1-1/2" 1
146	701632	NBR	701632	NBR	O-Ring, Inlet Spacer - 70D 6
147	701328	FPM	701328	FPM	O-Ring, Inlet Spacer 6
148	◆ 701659	EPDM	◆ 701659	EPDM	O-Ring, Inlet Spacer - 70D 6
150	701329	PTFE	701329	PTFE	Back-up-Ring, Inlet Spacer 6
151	701327	SS	701327	SS	Spacer, Inlet 3
152	44585	S	44585	S	Screw, HSH (M14x40) 4
153	48383	D	48383	D	Adapter, Female 3
154	46813	STG*	46813	STG*	V-Packing 6
155	48386	SS	48386	SS	Adapter, Male 3
156	45113	SS	45113	SS	Spring, Coil 6/18
157	48382	SS	48382	SS	Spacer w/Coil Springs 3
158	17784	NBR	17784	NBR	O-Ring, Spacer - 80D 3
159	20138	FPM	20138	FPM	O-Ring, Spacer - 80D 3
160	◆ 701658	EPDM	◆ 701658	EPDM	O-Ring, Spacer - 80D 3
161	48381	SS	48381	SS	Spacer, V-Packing 3
162	17784	NBR	17784	NBR	O-Ring, Spacer - 80D 3
163	20138	FPM	20138	FPM	O-Ring, Spacer - 80D 3
164	◆ 701658	EPDM	◆ 701658	EPDM	O-Ring, Spacer - 80D 3
165	26143	NBR	26143	NBR	O-Ring, Seat 6
166	14331	FPM	14331	FPM	O-Ring, Seat 6
167	◆ 701660	EPDM	◆ 701660	EPDM	O-Ring, Seat 6
168	48393	SS	48393	SS	Seat 6
169	44108	SS	44108	SS	Valve 6
170	44109	SS	44109	SS	Spring 6
171	44728	PVDF	44728	PVDF	Retainer, Spring 6
172	44729	SS	44729	SS	Washer, Spring Retainer 6
173	44644	SS	44644	SS	Spring, Coil (70kg), Valve Plug 6
174	89827	NBR	89827	NBR	O-Ring, Valve Plug - 90D 6
175	11747	FPM	11747	FPM	O-Ring, Valve Plug - 90D 6
176	◆ 701494	EPDM	◆ 701494	EPDM	O-Ring, Valve Plug - 70D 6
177	48364	D	48364	D	Back-up-Ring, Valve Plug 6
178	701278	SS	701278	SS	Plug, Valve 6
179	701316	SS	701316	SS	Cover, Valve 2 ●
180	87951	S	87951	S	Screw, HSH (M10x30) 32
181	701866	SSL	701866	SSL	Manifold, Discharge, Block-Style 1 ●
182	701279	S	701279	S	Screw, HSH (M12x100) 8

Replace as a set

# EXPLODED VIEW



**Models**  
 Standard - 3841  
 Flushed - 3841K  
 January 2002

	<b>3841</b>	<b>MATL</b>	<b>3841K</b>	<b>MATL</b>		
● 250	44516	NY	44516	NY	Protector, Shaft w/2 89283 Screws (Included with Pump)	1 ●
● 255	701140	F	701140	F	Protector, Shaft (Use w/701138, 39, 45, 47, 428)	1 ●
● 260	34039	SS	34039	SS	Kit, Stud Mount	1 ●
● 275	92674	STZP	92674	STZP	Assembly, Box Mounting	1 ●
● 283	990013	STL	990013	STL	Hub, "B", (M35), (Keyway M10x8x70) [See Drive Packages Tech Bulletin 003]	1 ●
● 290	34334		34334		Kit, Oil Drain	1 ●
● 299	6104		6104		Gasket, Liquid (1 oz.)	1 ●
●	<b>901410</b>	<b>SSL</b>	—	—	Head, Complete, Block-Style	1 ●
●	—	—	<b>901411</b>	<b>SSL</b>	Head, Complete, Block-Style, Flushed	1 ●
● 300	31934	NBR*	31934	NBR*	Kit, Seal (Incls: 97, 106, 112, 113, 127, 155, 159)	1 ●
●	31961	FPM*	31961	FPM*	Kit, Seal (Incls: 97, 106, 112, 113, 127, 155, 159)	1 ●
●	◆ 31923	EPDM*	◆ 31923	EPDM*	Kit, Seal (Incls: 97, 106, 112, 113, 127, 155, 159)	1 ●
● 310	33835	NBR	33835	NBR	Kit, Valve (Incls: 163, 164, 166, 167, 168, 170, 172, 173)	2 ●
●	31262	FPM	31262	FPM	Kit, Valve (Incls: 163, 164, 166, 167, 168, 170, 172, 173)	2 ●
●	◆ 31264	EPDM	◆ 31264	EPDM	Kit, Valve (Incls: 163, 164, 166, 167, 168, 170, 172, 173)	2 ●
● —	819000	F	819000	F	Crankcase Assembly, CAST IRON Conversion	1 ●
● 370	—	—	990663		Assembly, Flushing, 5 gal., 115V, 1.1 Amp, 1/2" NPT	1 ●
● —	714500	SS	714500	SS	C.A.T. (For R.O. or Industrial Applications)	1 ●
● —	714506	SS	714506	SS	Adapter (2 per C.A.T.) (See Data Sheet for complete selection)	2 ●

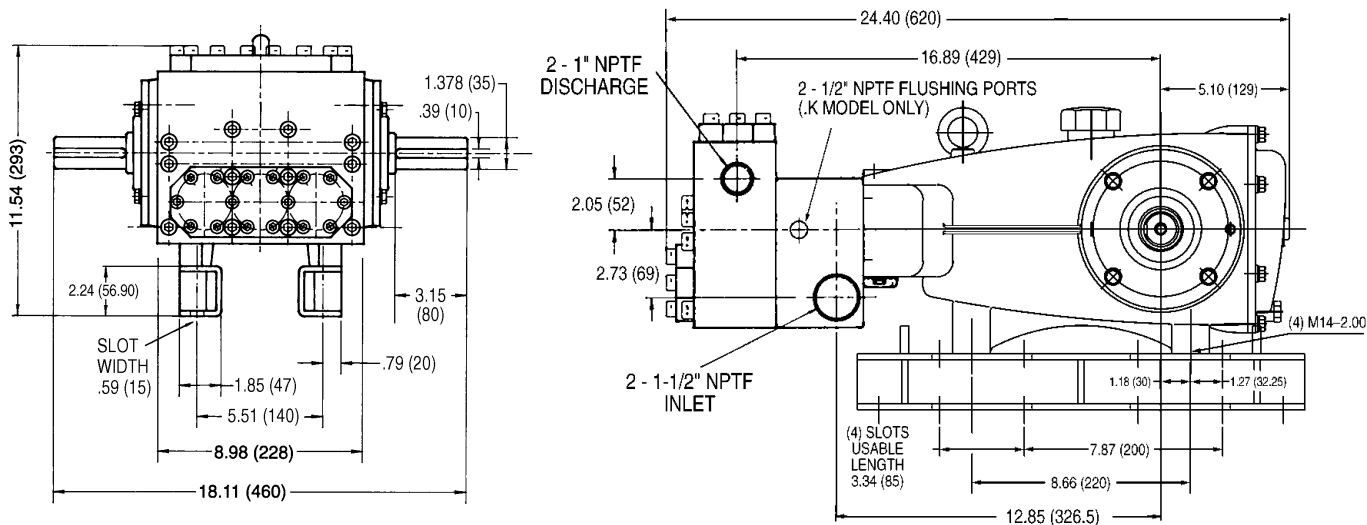
● Industrial discount. **Bold print part numbers are unique to a particular pump model.** *Italics are optional items.* ◆ Silicone oil/grease required.  
 [ ] Date of Latest production change. \*Review material codes for individual items (STG and SFTB generally may be used as alternates).

**Pressurized Inlet and C.A.T. highly recommended for Hi-Temp, R.O. and industrial applications.**

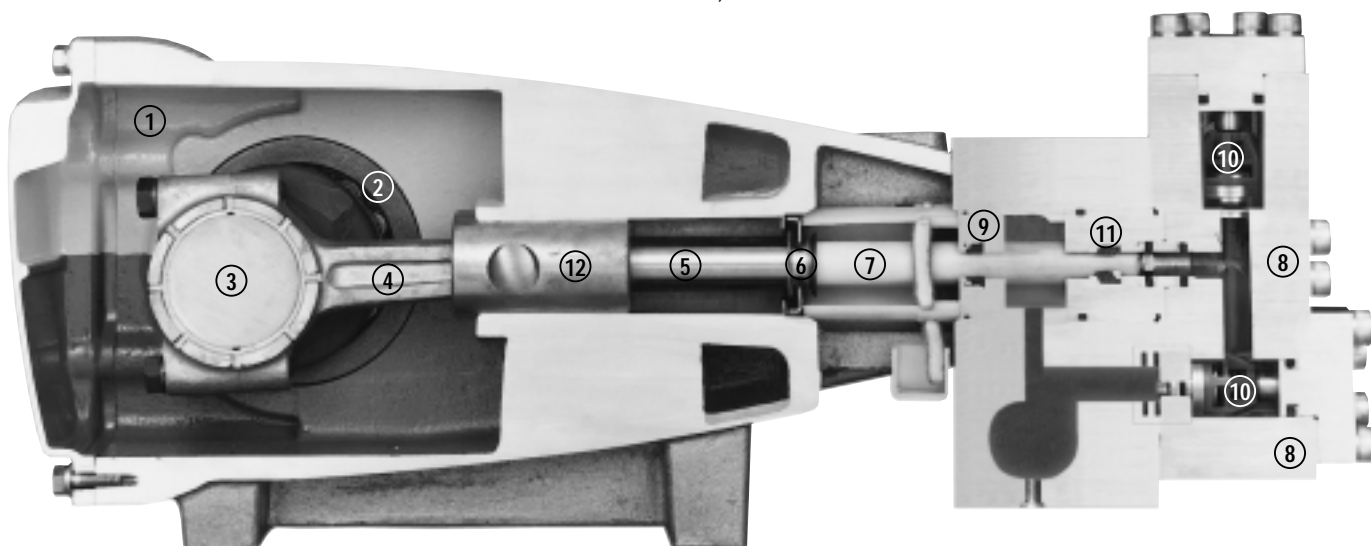
See Tech Bulletins 002, 003, 024, 036, 043, 053, 074, 077 and 083 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum CC=Ceramic CM=Chrome-moly

D=Delrin® EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon (Viton®) NBR=Medium Nitrile (Buna-N) NY=Nylon  
 PTFE=Pure Teflon® PVDF=Fluoroplastic (High Strength) S=304SS SS=316SS SSL=316SS/Low Carbon SFTB=Special Blend (Teflon®) Black SSZZ=316SS/Zamak  
 STG=Special Blend (Teflon®) White STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength



Models 3841, 3841K



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