

## 38 Frame Block-Style Stainless Steel Plunger Pump

**Standard  
Model**

**3841**

**Flushed  
Model**

**3841K**

### FEATURES

#### Superior Design

- Triplex plunger design gives smoother fluid 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 fluid being pumped.

**Flushed Models:** Special ported inlet manifold permits fluid 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, soid 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.

### 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 Fluid Temperature .....	140°F	(60°C)
Inlet Ports (2) .....	1-1/2" NPT	(1-1/2" NPT)
Flushing Ports (2) .....	1/2" NPTF	(1/2" NPTF)
Discharge Ports (2) .....	1" NPT	(1" NPT)
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 flushing and cooling and are suitable for high inlet pressure fluids. Call for clarification.

### 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

See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 03.

<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>	$\frac{\text{GPM} \times \text{PSI}}{1460}$	=	Electric Brake H. P. Required
<b>DETERMINING MOTOR PULLEY SIZE</b>	$\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}}$	=	$\frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

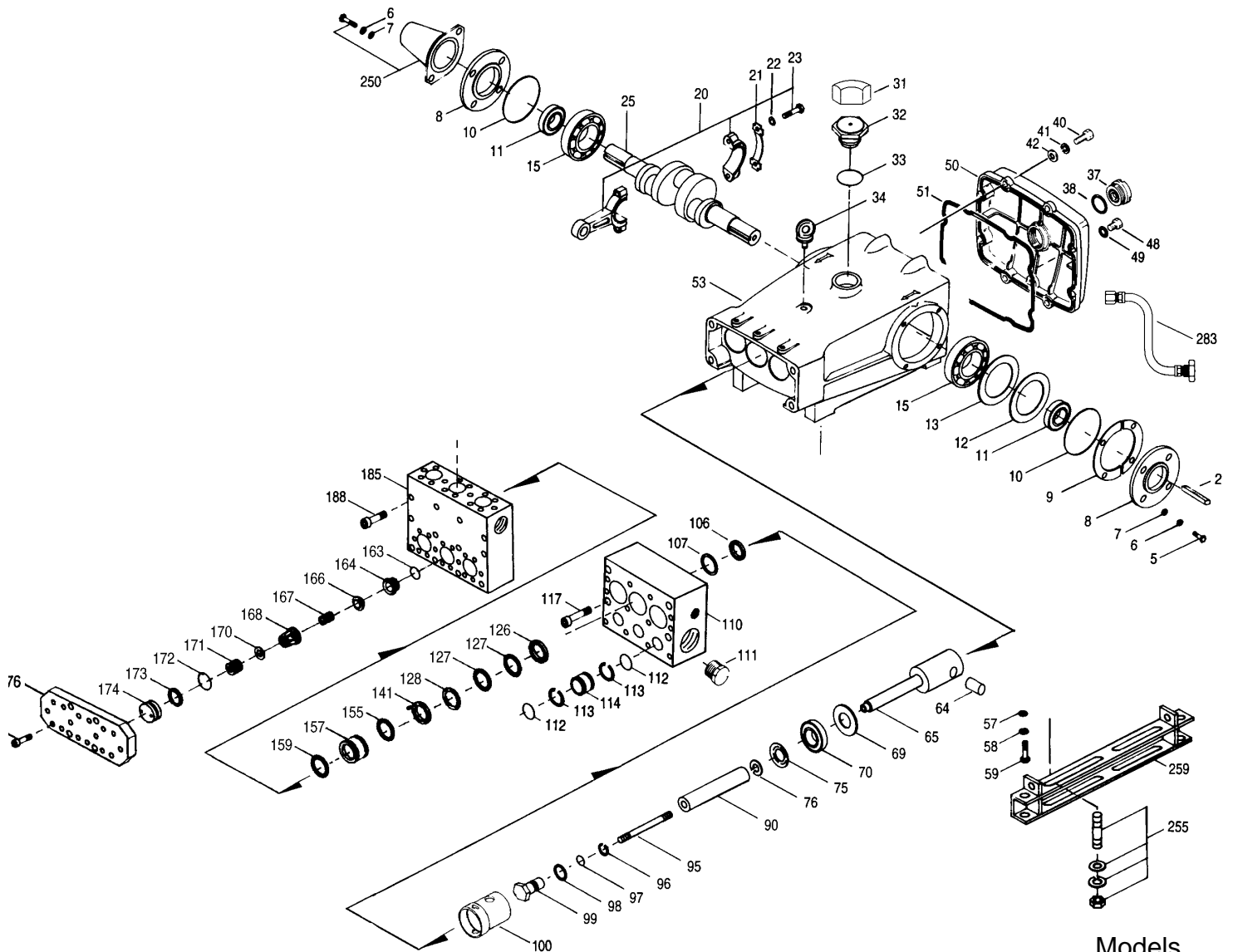
Note: Consult engine manufacturer when using gas or diesel engine.  
Refer to pump Service Manual for important Inlet Condition Check-List, Start-up Procedure, Tech Bulletins and Pump Maintenance information.

*"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 ●
6	89277	S	89277	S	Screw, Sems HHC (M8x25) 8
7	15846	S	15846	S	Lockwasher, Split (M8) 8
8	13534	SS	13534	SS	Washer (M8) 8
● 9	44542	AL	44542	AL	Cover, Bearing 2
10	701138	F	701138	F	Cover, Bearing (Use w/701137, 39, 40, 45, 47) 2 ●
11	44543		44543		Shim, Bearing Cover 4
15	12398	NBR	12398	NBR	O-Ring, Bearing Cover 2
20	13296	NBR	13296	NBR	Seal, Oil, Crankshaft 2
21	29326	STL	29326	STL	Bearing, Roller 2
22	46611	HS	46611	HS	Rod, Connecting Assembly 3
23	44940	STZP	44940	STZP	Washer, Locking (M10) 3
25	43641	STZP	43641	STZP	Washer (M10.5x1.5) <span style="border: 1px solid black; padding: 2px;"> </span> Replace as a set 6
31	88155	STL	88155	STL	Screw, HH (M10x60F) 3
32	29325	FCM	29325	FCM	Crankshaft, Dual End 1
33	828710		828710		Protector, Cap 1
34	43211		43211		Cap, Oil Filler 1
35	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap - 70 1
36	44319	STZP	44319	STZP	Bolt, Eye (M12) 1
37	701145	AL	701145	AL	Rivet, Serial Plate (Use w/701137, 38, 39, 40, 47) 1
38	701147	AL	701147	AL	Name Plate (Use w/701137, 38, 39, 40, 45) 1
40	43987		43987		Gauge, Oil, Bubble 1
41	44428	NBR	44428	NBR	Gasket, Flat 1
42	89277	S	89277	S	Screw, Sems HHC (M8x25) 8
43	15846	S	15846	S	Lockwasher, Split (M8) 8
44	13534	SS	13534	SS	Washer (M8) 8
45	25625	STCP	25625	STCP	Plug, Drain (1/4"x11) 1
46	23170	NBR	23170	NBR	O-Ring, Drain Plug 1
47	45936	AL	45936	AL	Cover, Rear 1
48	701139	F	701139	F	Cover, Rear (Use w/701137, 38, 40, 45, 47) 1 ●
49	16612	NBR	16612	NBR	O-Ring, Cover 1
50	44559	AL	44559	AL	Crankcase w/Guide Pins 1 ●
51	701137	F	701137	F	Crankcase w/Guide Pins (Use w/701138, 39, 40, 45, 47) 1 ●
52	43864	S	43864	S	Pin, Rist 3
53	45116	SSZZ	45116	SSZZ	Rod, Plunger 3
54	29338	S	29338	S	Washer, Oil Seal 3
55	100488	NBR	100488	NBR	Seal, Oil, Crankcase 3
56	44739	FPM	44739	FPM	Seal, Oil, Crankcase 3
57	43865	S	43865	S	Slinger, Barrier 3
58	45676	SS	45676	SS	Washer, Keyhole (M16) 3
59	46806	CC	46806	CC	Plunger 3
60	89778	SS	89778	SS	Stud, Plunger Retainer (M10x135) 3
61	20189	PTFE	20189	PTFE	Back-up-Ring, Plunger Retainer 3
62	11345	NBR	11345	NBR	O-Ring, Plunger Retainer 3
63	11375	FPM	11375	FPM	O-Ring, Plunger Retainer 3
64	701490	EPDM	701490	EPDM	O-Ring, Plunger Retainer 3
65	44085	SS	44085	SS	Gasket, Plunger Retainer 3
66	44084	SS	44084	SS	Retainer, Plunger (M10) 3
67	814279	PVDF	814279	PVDF	Retainer, Seal 3
68	48384	NBR	48384	NBR	Seal, LPS w/SS-Spg 3
69	701479	PTFE	701479	PTFE	Seal, LPS w/SS-Spg 3
70	46945	EPDM	46945	EPDM	Seal, LPS w/SS-Spg 3
71	48380	SS	48380	SS	Spacer, LPS 3
72	701865	SSL	701865	SSL	Manifold, Inlet, Block-Style 1 ●
73	—		701982	SSL	Manifold, Inlet, Block-Style, Flushed 1 ●
74	701632	NBR	701632	NBR	O-Ring, Inlet Spacer - 70 3
75	701328	FPM	701328	FPM	O-Ring, Inlet Spacer 3
76	701659	EPDM	701659	EPDM	O-Ring, Inlet Spacer 3
77	701329	PTFE	701329	PTFE	Back-up-Ring, Inlet Spacer 6
78	701327	SS	701327	SS	Spacer, Inlet 3
79	44585	SS	44585	SS	Screw, HSH (M14x40) 4
80	48383	D	48383	D	Adapter, Female 3
81	46813	STG	46813	STG	V-Packing 6
82	46813	FPM	46813	FPM	V-Packing, ALTERNATE, White 6
83	46813	EPDM	46813	EPDM	V-Packing, ALTERNATE, White 6
84	48386	SS	48386	SS	Adapter, Male 3
85	45113	SS	45113	SS	Spring, Coil 6/18
86	48382	SS	48382	SS	Spacer w/Coil Springs 3
87	17784	NBR	17784	NBR	O-Ring, Spacer - 80 3
88	20138	FPM	20138	FPM	O-Ring, Spacer 3
89	701658	EPDM	701658	EPDM	O-Ring, Spacer 3
90	48381	SS	48381	SS	Spacer, V-Packing 3
91	17784	NBR	17784	NBR	O-Ring, Spacer - 80 3
92	20138	FPM	20138	FPM	O-Ring, Spacer 3
93	701658	EPDM	701658	EPDM	O-Ring, Spacer 3
94	26143	NBR	26143	NBR	O-Ring, Seat - 80 6
95	14331	FPM	14331	FPM	O-Ring, Seat 6
96	701660	EPDM	701660	EPDM	O-Ring, Seat 6
97	48393	SS	48393	SS	Seat 6
98	44108	SS	44108	SS	Valve 6
99	44109	SS	44109	SS	Spring 6
100	44728	PVDF	44728	PVDF	Retainer, Spring 6
101	44729	SS	44729	SS	Washer, Spring Retainer 6
102	44644	SS	44644	SS	Spring, Coil (70kg), Valve Plug 6
103	89827	NBR	89827	NBR	O-Ring, Valve Plug - 90 6
104	11747	FPM	11747	FPM	O-Ring, Valve Plug 6
105	701494	EPDM	701494	EPDM	O-Ring, Valve Plug 6
106	48364	D	48364	D	Back-up-Ring, Valve Plug 6
107	701278	SS	701278	SS	Plug, Valve 6
108	701316	SS	701316	SS	Plate, Valve 2 ●

# EXPLODED VIEW



Models  
Standard - 3841  
Flushed - 3841K  
June 1999

	<b>3841</b>	<b>MATL</b>	<b>3841K</b>	<b>MATL</b>			
●	177	87951	HSH	87951	HSH	Screw, HSH (M10x30)	32
●	185	701866	SSL	701866	SSL	Manifold, Discharge, Block-Style	1 ●
●	188	701279	SS	701279	SS	Screw, HSH (M12x100)	8 ●
●	250	44516	NY	44516	NY	Protector, Shaft w/2 89283 Screws (Included with Pump)	1 ●
●	255	701140	F	701140	F	Protector, Shaft (Use w/701137, 38, 39, 45, 46)	1 ●
●	260	34039	SS	34039	SS	Kit, Stud Mount	1 ●
●	266	92674	STZP	92674	STZP	Assembly, Box Mounting	1 ●
●	275	990013	STL	990013	STL	Hub, "B", (M35), (Keyway M10x8x70) [See Drive Packages Tech Bulletin 03]	1 ●
●	283	34334		34334		Kit, Oil Drain	1 ●
●	290	6108		6108		Gasket, Liquid (1.5 oz.)	1 ●
●	299	<b>901410</b>	<b>BB</b>	—	—	Head, Complete, Block-Style	1 ●
●	300	—	—	<b>901411</b>	<b>SS</b>	Head, Complete, Block-Style, Flushed	1 ●
●	310	31934	NBR	31934	NBR	Kit, Seal (Incls: 97, 106, 112, 113, 127, 155, 159)	1 ●
●	310	31961	FPM	31961	FPM	Kit, Seal (Incls: 97, 106, 112, 113, 127, 155, 159)	1 ●
●	310	◆ 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 ●
●	310	31262	FPM	31262	FPM	Kit, Valve (Incls: 163, 164, 166, 167, 168, 170, 172, 173)	2 ●
●	310	◆ 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 ●
●	—	—	—	—	—	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.

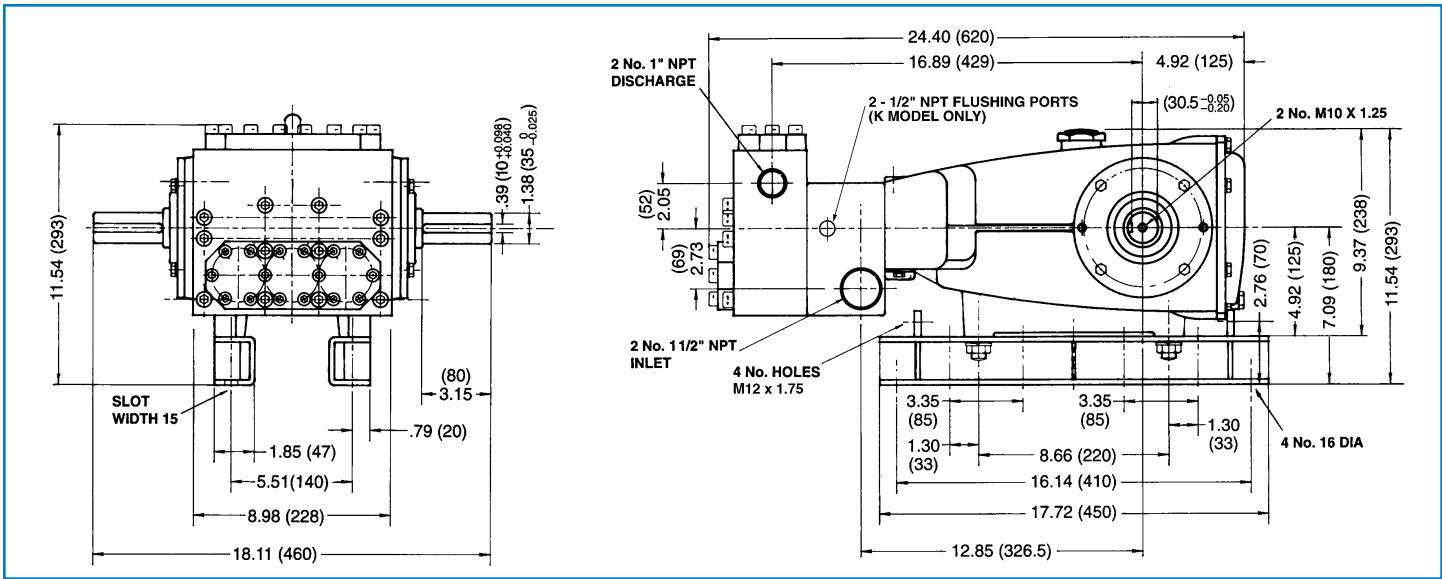
**Pressurized Inlet and C.A.T. highly recommended for Hi-Temp, R.O. and industrial applications.** See Tech Bulletins 03, 24, 40, 41, 53, 74 and 77 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BBCCP=Brass/Chrome Plated CC=Ceramic D=Delryn®

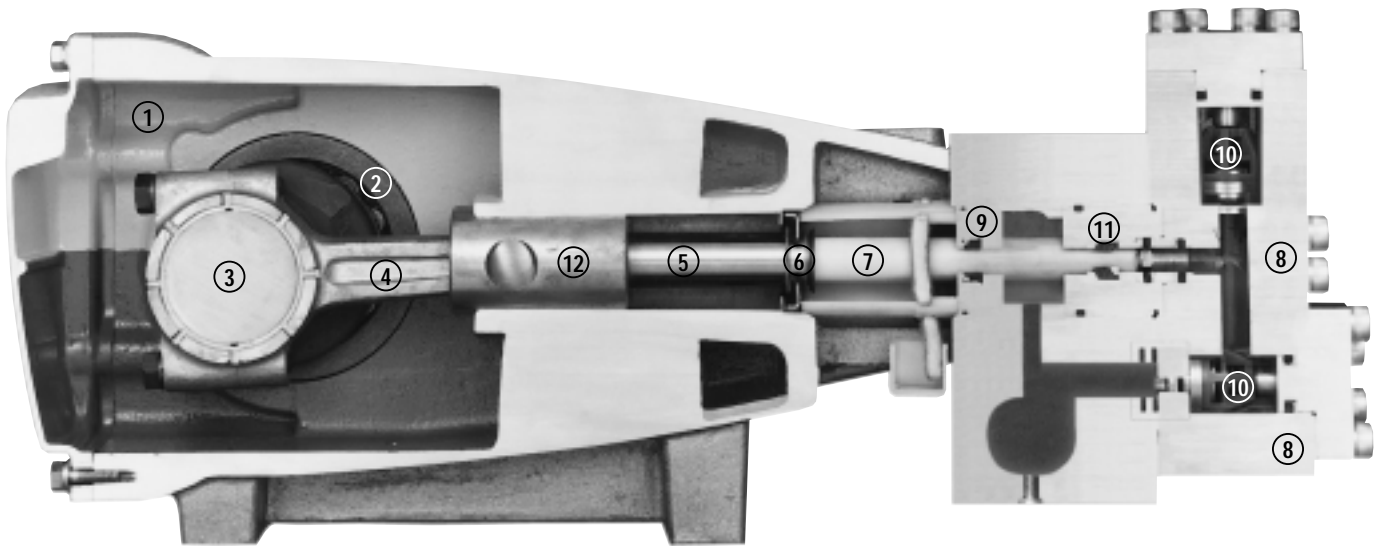
EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBB=Forged Brass FCM=Forged Chrome-moly FPM=Fluorocarbon (Viton®) HS=High Strength

NBR=Medium Nitrile (Buna-N) NY=Nylon POP=Polypropylene PTFE=Polytetrafluoroethylene (Teflon®) PVDF=Fluoroplastic (High Strength)

S=304SS SS=316SS SSL=316SS/Low Carbon SSZZ=316SS/Zamak STG=White Pure Teflon STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated



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

June 1999 2929

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