



68 Frame Block-Style Stainless Steel Plunger Pump

Standard Models 6841, 6861

Flushed Models 6841K, 6861K

FEATURES

Superior Design

- Triplex plunger design gives smoother fluid flow.
- Inlet and discharge valve assemblies interchangeable for easier maintenance.
- Oil bath crankcase assures optimum drive-end 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 pumped fluid.
- **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.
- Block-Style 316 Stainless Steel 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.

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

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.

SPECIFICATIONS

	U.S. Measure	Metric Measure
MODEL 6841, 6841K		
Max. Volume	48 GPM	(182 L/M)
Max. Discharge Pressure	100 to 2000 PSI	(7 to 140 BAR)
Max. RPM.....	615 RPM	(615 RPM)
Bore.....	1.772"	(45 mm)
Inlet Ports (2)	2-1/2" NPT	(2-1/2" NPT)
Discharge Ports (2).....	1-1/4" NPT	(1-1/4" NPT)

MODEL 6861, 6861K

Max. Volume	60 GPM	(230 L/M)
Max. Discharge Pressure	100 to 1200 PSI	(7 to 85 BAR)
Max. RPM.....	520 RPM	(520 RPM)
Bore.....	2.165"	(55 mm)
Inlet Ports (2) ★	2-1/2" NPT	(2-1/2" NPT)
Discharge Ports (2).....	1-1/4" NPT	(1-1/4" NPT)

Alternate Specifications

Max. Volume ★	70 GPM	(260 L/M)
Max. Discharge Pressure	100 to 1000 PSI	(7 to 70 BAR)
Max. RPM.....	600 RPM	(600 RPM)

★ When operating at the **Alternate Specifications** (600 RPM), a thin walled Stainless Steel fitting and a minimum 3" inlet line is required for optimum performance.

COMMON SPECIFICATIONS

Max. Inlet Pressure	Flooded to 50 PSI	(Flooded to 3.5 BAR)
Stroke.....	2.579"	(65.5 mm)
Crankcase Capacity.....	10 Qts.	(9.46 L)
Max. Fluid Temperature.....	120°F	(60°C)
Shaft Diameter	1.772"	(45 mm)
Weight.....	355 lbs.	(161 kg)
Dimensions	28.86" x 24.3" x 17.56"	(733 x 618 x 446 mm)

HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE					RPM
			PSI 900	PSI 1000	PSI 1200	PSI 1500	PSI 2000	
	U.S. GPM	L/M	BAR 60	BAR 70	BAR 85	BAR 105	BAR 140	
6841	48.0	182	N/A	N/A	39.6	48.9	65.1	615
6841K	40.0	152	N/A	N/A	32.9	41.3	54.9	518
6861	70	260	43.2	48.1	N/A	N/A	N/A	600
6861K	60	230	37.1	41.2	49.4	N/A	N/A	520
	50	189	30.9	34.3	41.2	N/A	N/A	433

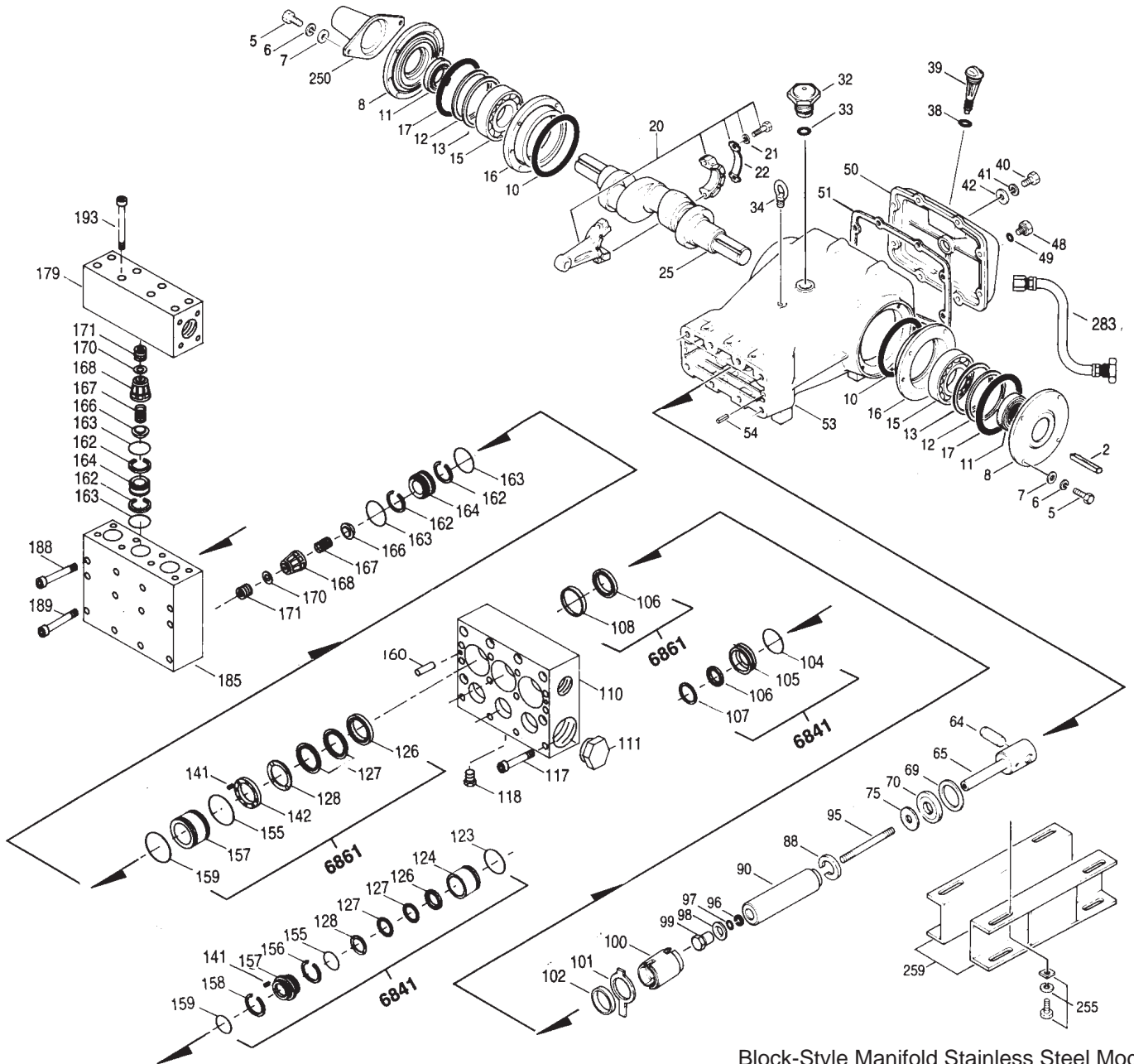
See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 03.

"Customer confidence is our greatest asset"

PARTS LIST

ITEM	PART NUMBER				DESCRIPTION	QTY				
	6841	MATL	6841K	MATL	6861	MATL	6861K	MATL		
● 2	43048	STL	43048	STL	43048	STL	43048	STL	Key (M14x9x90)	1 ●
5	89728	SS	89728	SS	89728	SS	89728	SS	Screw, HH (M10x40)	8
6	15847	S	15847	S	15847	S	15847	S	Lockwasher, Split (M10)	8
7	19934	SS	19934	SS	19934	SS	19934	SS	Washer, Flat (M10)	8
8	29443	AL	29443	AL	29443	AL	29443	AL	Bearing Cover, Outer	2
10	29444	NBR	29444	NBR	29444	NBR	29444	NBR	O-Ring, Cover Bearing	2
11	11443	NBR	11443	NBR	11443	NBR	11443	NBR	Seal, Oil, Crankshaft	2
12	43642	S	43642	S	43642	S	43642	S	Washer, Shim, Bearing, Inner (M120x0.3)	0-2
13	43643	S	43643	S	43643	S	43643	S	Washer, Shim, Bearing, Inner (M120x0.5)	0-2
15	29441	STL	29441	STL	29441	STL	29441	STL	Bearing, Roller	2
16	29442	AL	29442	AL	29442	AL	29442	AL	Cover, Bearing, Inner	2
17	29444	NBR	29444	NBR	29444	NBR	29444	NBR	O-Ring, Bearing Cover	2
20	46681	HS	46681	HS	46681	HS	46681	HS	Rod, Connecting Assembly	3
21	44941	STZP	44941	STZP	44941	STZP	44941	STZP	Washer, Locking	3
22	43641	STL	43641	STL	43641	STL	43641	STL	Washer, Shim, Connecting Rod (M10.5x1.5)	6
25	29440	FCM	29440	FCM	29440	FCM	29440	FCM	Crankshaft, Dual Shaft	1
32	43211		43211		43211		43211		Cap, Oil Filler	1
33	14177	NBR	14177	NBR	14177	NBR	14177	NBR	O-Ring, Filler Cap	1
34	29726	STZP	29726	STZP	29726	STZP	29726	STZP	Bolt, Eye	1
38	11338	NBR	11338	NBR	11338	NBR	11338	NBR	O-Ring, Dip Stick	1
39	27769	BB	27769	BB	27769	BB	27769	BB	Stick, Dip	1
40	89627	SS	89627	SS	89627	SS	89627	SS	Screw, HH (M10x30)	8
41	15847	S	15847	S	15847	S	15847	S	Lockwasher, Split (M10)	8
42	19934	SS	19934	SS	19934	SS	19934	SS	Washer, Flat (M10)	8
48	25625	BBCP	25625	BBCP	25625	BBCP	25625	BBCP	Plug, Drain (1/4"x11)	1
49	23170	NBR	23170	NBR	23170	NBR	23170	NBR	O-Ring, Drain Plug	1
50	29438	AL	29438	AL	29438	AL	29438	AL	Cover, Crankcase	1
51	29439	NBR	29439	NBR	29439	NBR	29439	NBR	Gasket, Crankcase Cover	1
● 53	43284	AL	43284	AL	43284	AL	43284	AL	Crankcase w/Guide Pins	1 ●
54	43282	S	43282	S	43282	S	43282	S	Pin, Guide	2
64	29481	S	29481	S	29481	S	29481	S	Pin, Rist	3
65	45384	SSZZ	45384	SSZZ	45384	SSZZ	45384	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	3
75	44752	NBR	44752	NBR	44752	NBR	44752	NBR	Slinger, Barrier	3
88	45677	SS	45677	SS	45677	SS	45677	SS	Washer, Keyhole (M14)	3
90	45672	CC	45672	CC	44749	CC	44749	CC	Plunger	3
95	44748	SS	44748	SS	44748	SS	44748	SS	Stud, Plunger Retainer (M14x147)	3
96	20189	PTFE	20189	PTFE	20189	PTFE	20189	PTFE	Back-up-Ring, Plunger Retainer	3
97	17616	NBR	17616	NBR	17616	NBR	17616	NBR	O-Ring, Plunger Retainer	3
	11686	FPM	11686	FPM	11686	FPM	11686	FPM	O-Ring, Plunger Retainer	3
98	44751	SS	44751	SS	44751	SS	44751	SS	Gasket, Plunger Retainer	3
99	44750	SS	44750	SS	44750	SS	44750	SS	Retainer, Plunger (M10)	3
100	44760	PVDF	44760	PVDF	44760	PVDF	44760	PVDF	Retainer, Seal, Rear	3
101	—	—	—	—	44762	—	44762	—	Wick, Long Tab (M55x185)	3
102	44761	PVDF	44761	PVDF	44761	PVDF	44761	PVDF	Retainer Seal, Adapter, Front	3
104	18178	NBR	18178	NBR	—	—	—	—	O-Ring, Inlet, Adapter	3
	13338	FPM	13338	FPM	—	—	—	—	O-Ring, Inlet, Adapter	3
105	701355	SS	701355	SS	—	—	—	—	Adapter, Inlet, LPS	3
106	106147	NBR	106147	NBR	44757	NBR	44757	NBR	LPS, w/SS-Spg	3
	—	—	—	—	45882	FPM	45882	FPM	LPS, w/SS-Spg	3
107	—	—	—	—	46167	SS	46167	SS	Spacer, LPS	3
108	701356	SS	701356	SS	—	—	—	—	Washer, LPS	3
● 110	46166	SS	—	—	46166	SS	—	—	Manifold Inlet, Block-Style	1 ●
	—	—	701343	SSL	—	—	701343	SSL	Manifold Inlet, Block-Style, Flushed	1 ●
111	701353	SSL	701353	SSL	701353	SSL	701353	SSL	Plug, Inlet Manifold (2-1/2" NPT)	1
117	89694	SS	89694	SS	89694	SS	89694	SS	Screw, HSH (M16x110)	8
118	701077	SS	701077	SS	701077	SS	701077	SS	Plug (1/4" NPT)	3
123	18178	NBR	18178	NBR	—	—	—	—	O-Ring, V-Packing Cylinder	3
	13338	FPM	13338	FPM	—	—	—	—	O-Ring, V-Packing Cylinder	3
124	701357	SS	701357	SS	—	—	—	—	Cylinder, V-Packing	3
126	701358	SS	701358	SS	45771	SS	45771	SS	Adapter, Female	3
127	104450	PTFE	104450	PTFE	44764	PTFE	44764	PTFE	V-Packing	6
128	701359	SS	701359	SS	45772	SS	45772	SS	Adapter, Male	3
141	45113	SS	45113	SS	44943	SS	44943	SS	Spring, Coil, Spacer	18/24
142	—	—	—	—	45383	SS	45383	SS	Spacer w/Coil Springs	3
155	701360	NBR	701360	NBR	18178	NBR	18178	NBR	O-Ring, V-Packing Spacer, Inner	3
	—	—	—	—	13338	FPM	13338	FPM	O-Ring, V-Packing Spacer, Inner	3
156	701361	PTFE	701361	PTFE	—	—	—	—	Back-up-Ring, Spacer, Inner	3
157	701362	SS	701362	SS	—	—	—	—	Spacer, V-Packing w/Coil Springs	3
	—	—	—	—	45321	SS	45321	SS	Spacer, V-Packing	3
158	701363	PTFE	701363	PTFE	—	—	—	—	Back-up-Ring, Spacer, Outer	3
159	18178	NBR	18178	NBR	18178	NBR	18178	NBR	O-Ring, V-Packing Spacer, Outer	3
	13338	FPM	13338	FPM	13338	FPM	13338	FPM	O-Ring, Spacer, Outer	3
160	44756	SS	44756	SS	44756	SS	44756	SS	Pin, Guide	2
162	23116	PTFE	23116	PTFE	23116	PTFE	23116	PTFE	Back-up-Ring, Seat	12
163	12392	NBR	12392	NBR	12392	NBR	12392	NBR	O-Ring, Seat	12
	13279	FPM	13279	FPM	13279	FPM	13279	FPM	O-Ring, Seat	12
164	46173	SS	46173	SS	46173	SS	46173	SS	Seat	6
166	44774	SS	44774	SS	44774	SS	44774	SS	Valve	6
167	44773	SS	44773	SS	44773	SS	44773	SS	Spring	6
168	44775	PVDF	44775	PVDF	44775	PVDF	44775	PVDF	Retainer, Spring	6
170	44776	SS	44776	SS	44776	SS	44776	SS	Washer, Retainer	6
171	701354	SS	701354	SS	701354	SS	701354	SS	Spring, Coil, Retainer	6
● 179	46171	SS	46171	SS	46171	SS	46171	SS	Manifold, Discharge	1 ●
● 185	701320	SSL	701320	SSL	701320	SSL	701320	SSL	Manifold, Block-Style	1 ●
188	89694	SS	89694	SS	89694	SS	89694	SS	Screw, HSH (M16x100), Upper	8
189	701279	SS	701279	SS	701279	SS	701279	SS	Screw, HSH (M12x110), Lower	4
193	89694	SS	89694	SS	89694	SS	89694	SS	Screw, HSH (M16x110)	8

EXPLODED VIEW



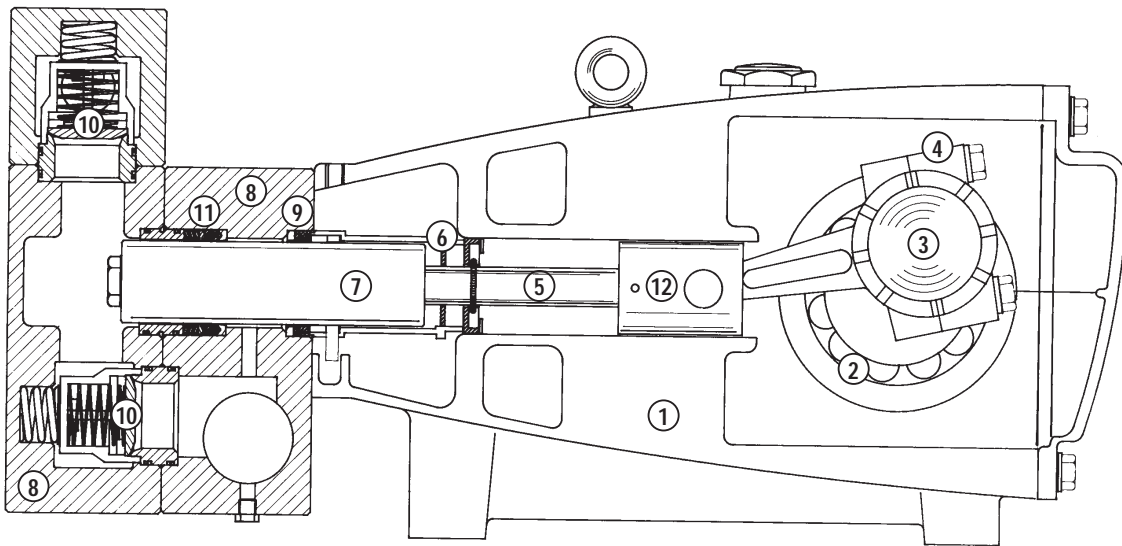
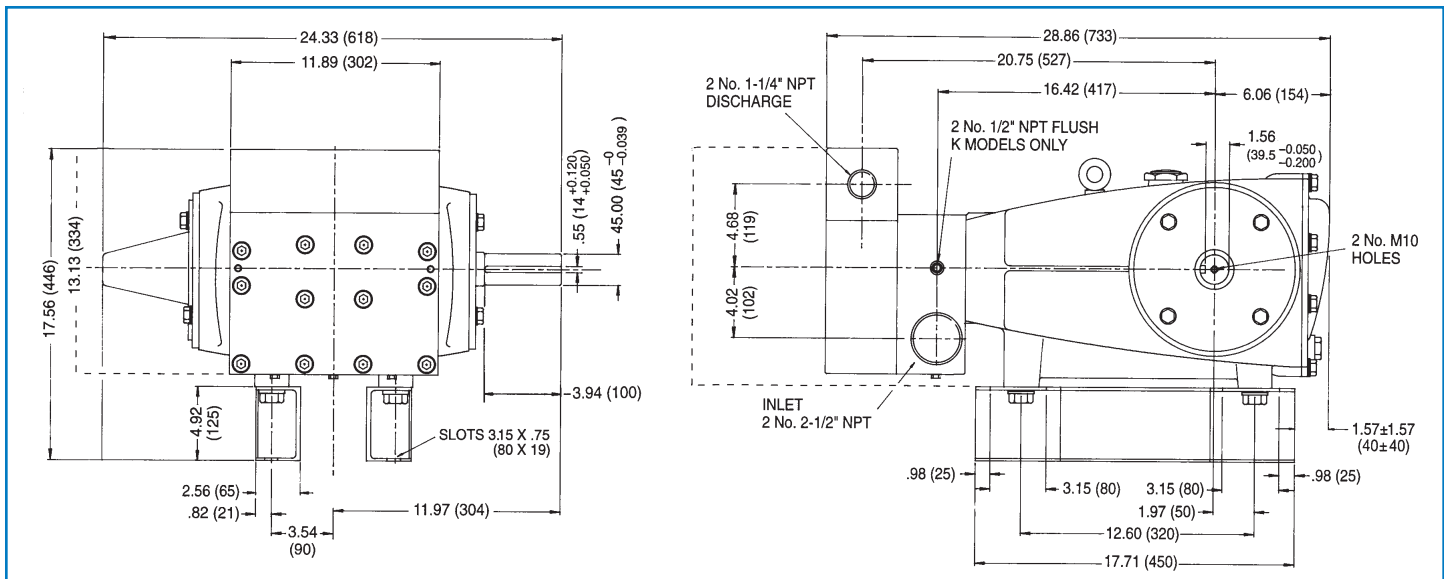
Block-Style Manifold Stainless Steel Models
6841, 6861, 6841K, 6861K
March 1998

● 250	29445	AL	29445	AL	29445	AL	29445	AL	Protector, Shaft	1	●
● 255	33243		33243		33243		33243		Kit, Mount (Included w/Pump)	2	●
● 259	29477	STZP	29477	STZP	29477	STZP	29477	STZP	Rail, Box (Included w/Pump)	2	●
● 275	990014		990014		990014		990014		Hub, "B", M45 (Keyway M14x9x90)	1	●
									[See complete Drive Packages, Tech Bulletin 03]		
● 279	30429				30429				Oiler (10 oz.)	3	●
● 281	30969				30969				Oiler, Glass (10 oz.)	3	●
● 282	10070	NBR			10070	NBR			Gasket, Oiler	3	●
● 283	34334		34334		34334		34334		Kit, Oil Drain	1	●
● 290	6108		6108		6108		6108		Liquid Gasket	1	●
● 299	910202	SSL			910203	SSL			Head Complete, Block-Style	1	●
●			910000	SSL			910001	SSL	Head Complete, Block-Style, Flushed	1	●
● 300	34098	NBR	34098	NBR					Kit, Seal (Incls: 97,106,127,155,159)	1	●
● 300					34106	NBR	34106	NBR	Kit, Seal (Incls:97,104,106,123,127,155,156,158,159)	1	●
					33406	FPM	33406	FPM	Kit, Seal (Incls: 97,106,127,155,159)	1	●
● 310	34105	NBR	34105	NBR	34105	NBR	34105	NBR	Kit, Valve (Incls: 159,162,163,164,166,167,168,170)	2	●
					701801	FPM	701801	FPM	Kit, Valve (Incls: 159,162,163,164,166,167,168,170)	2	●
● 370	990663		990663		990663		990663		Assembly, Flushing	1	●
● 390									C.A.T. (Captive Acceleration Tube)	1	●
● 391									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.*

Pressurized Inlet and C.A.T. highly recommended for Hi-Temp, R.O. and industrial applications. See Tech Bulletin 03, 24, 36, 74 and 77 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic FCM=Forged Chrome-moly
FPM=Fluorocarbon (Viton®) HS=High Strength NBR=Medium Nitrile (Buna-N) PTFE=Polytetrafluoroethylene (Teflon®) PVDF=Fluoroplastic (High Strength)
S=304SS SS=316SS SSL=316SS/Low Carbon SSZZ=316SS/Zamak STL=Steel STZP=Steel/Zinc Plated



- 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 Buna-N **barrier 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 stainless steel 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.
- 10 316 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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