

68 Frame Block-Style Stainless Steel Plunger Pump

Standard Models 6801, 6811

Flushed Models 6801K, 6811K

FEATURES

Superior Design

- Triplex plunger design provides smoother liquid flow.
- 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 K Models:** Special ported inlet manifold permits an external flush liquid providing cooling for hi-temp liquids and lubrication for low lubricity liquids.

Quality Materials

- Precision design 316 stainless steel valves and seats are hardened and polished for ultimate seating and extended valve life.
- 316 SSL block-style manifolds for strength and corrosion resistance.
- Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and 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.
- Inlet and discharge valve assemblies interchange for easier maintenance.
- 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 6801, 6801K

Flow 15.0 GPM (57 L/M)
 Pressure Range 100 to 7000 PSI (7 to 485 BAR)
 RPM 600 RPM (600 RPM)
 Bore 0.984" (25 mm)

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)

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)
 Maximum Liquid Temperature 140°F (60°C)
 Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.
 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)

* Flushed K Models: Special ported inlet manifold permits an external flush liquid providing cooling for hi-temp liquids and lubrication for low lubricity liquids.

ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE					RPM
			PSI 3000	PSI 4000	PSI 5000	PSI 6000	PSI 7000	
	U.S. GPM	L/M	BAR 210	BAR 275	BAR 345	BAR 415	BAR 485	
6801 6801K	15	57	30.8	41.1	51.4	61.6	71.9	600
	12	45	24.7	32.9	41.1	49.3	57.5	480
	10	38	20.5	27.4	34.2	41.1	47.9	400
6811 6811K	15	57	30.8	41.1	51.4	N/A	N/A	600
	12	45	24.7	32.9	41.4	N/A	N/A	480
	10	38	20.5	27.4	43.2	N/A	N/A	400

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. $\frac{\text{GPM x PSI}}{1460} = \text{Electric Brake H. P. Required}$

DETERMINING MOTOR PULLEY SIZE $\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

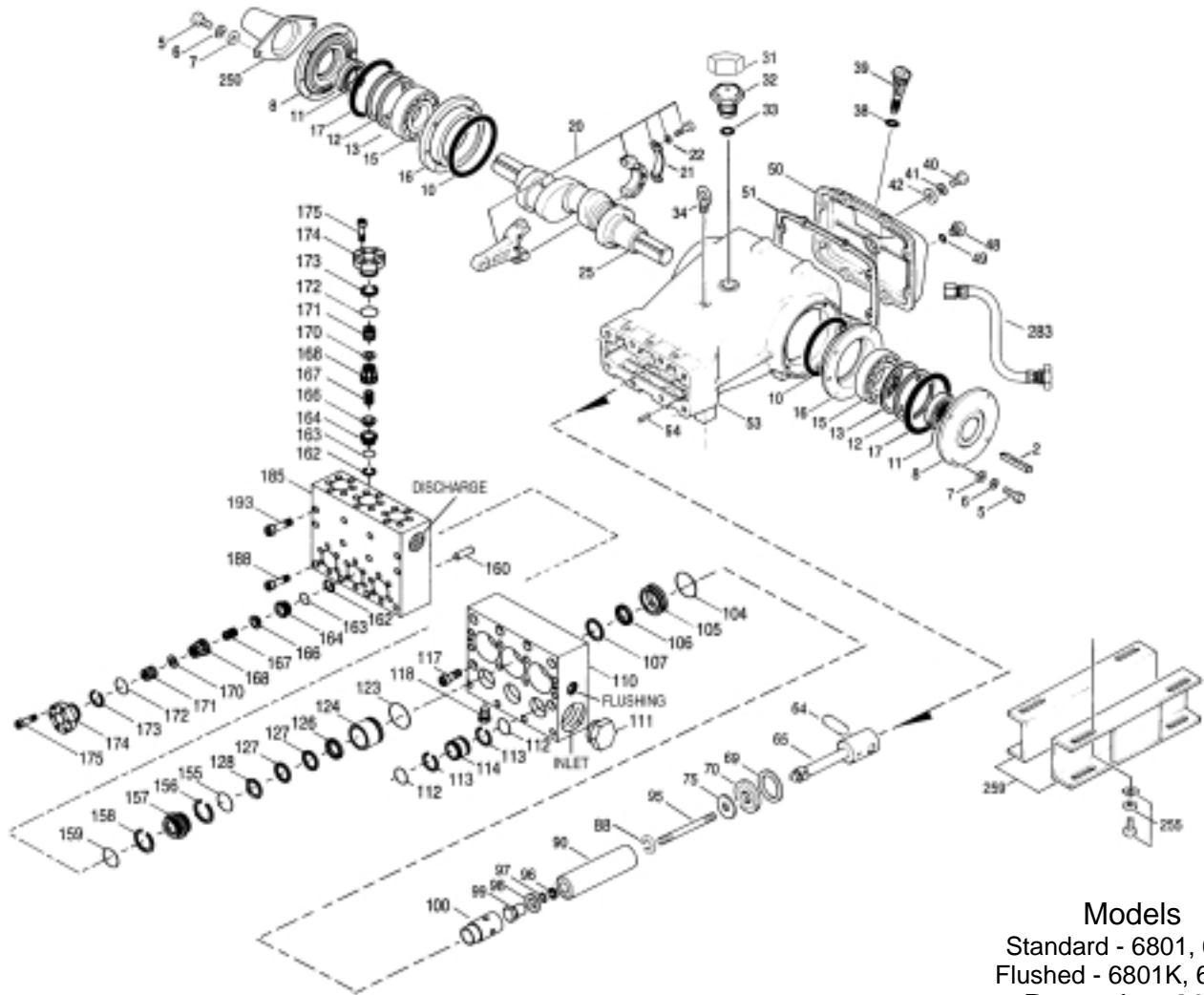
See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.
 Refer to pump **Service Manual** for repair procedure, additional technical information and **pump warranty**.

"Customer confidence is our greatest asset"

PARTS LIST

ITEM	PART NUMBER				DESCRIPTION	QTY
2	6801 MATL 43048 STL	6801K MATL 43048 STL	6811 MATL 43048 STL	6811K MATL 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 S	19934 S	19934 S	19934 S	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 -70D	2
11	11443 NBR	11443 NBR	11443 NBR	11443 NBR	Seal, Oil, Crankshaft - 70D	2
12	43642 STZP	43642 STZP	43642 STZP	43642 STZP	Washer, Shim (M120x0.3)	0-2
	126594 STCP R	126594 STCP R	126594 STCP R	126594 STCP R	Washer, Shim (M120x0.3)	0-2
13	126595 STCP R	126595 STCP R	126595 STCP R	126595 STCP R	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 - 70D	2
20	126612 BBHS	126612 BBHS	126612 BBHS	126612 BBHS	Assembly, Connecting Rod (Incls: 21, 22)	3
21	126560 STCP R	126560 STCP R	126560 STCP R	126560 STCP R	Washer, Locking	3
22	126593 STCP R	126593 STCP R	126593 STCP R	126593 STCP R	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 w/Foam Gasket	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	126743 STCP R	126743 STCP R	126743 STCP R	126743 STCP R	Bolt, Eye (M12) (For Lifting Pump Only)	1
38	11338 NBR	11338 NBR	11338 NBR	11338 NBR	O-Ring, Dip Stick - 70D	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 S	19934 S	19934 S	19934 S	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	45303 AL	45303 AL	45303 AL	45303 AL	Crankcase (Incls: 34, 54)	1
54	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	126588 STCP R	126588 STCP R	126588 STCP R	126588 STCP R	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 S	45676 S	45676 S	45676 S	Washer, Keyhole (M16)	3
90	43866 CC	43866 CC	43866 CC	43866 CC	Plunger (M12x145)	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	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	703084 D	703084 D	703084 D	703084 D	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 - 70D	3
105	701323 SS	701323 SS	701323 SS	701323 SS	Adapter, Inlet, LPS	3
106	44086 NBR	44086 NBR	44086 NBR	44086 NBR	Seal, LPS, w/SS-Spg	3
	45846 FPM	45846 FPM	45846 FPM	45846 FPM	Seal, LPS, w/SS-Spg	3
	701944 SFTA*	701944 SFTA*	701944 SFTA*	701944 SFTA*	Seal, LPS, w/SS-Spg	3
107	44089 SS	44089 SS	44089 SS	44089 SS	Washer, LPS	3
110	701321 SSL	701321 SSL	701321 SSL	701321 SSL	Manifold Inlet, Block-Style	1
	—	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" NPTM)	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	6
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" NPTM)	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 - 70D	3
124	701324 SSL	701324 SSL	701324 SSL	701324 SSL	Cylinder, V-Packing	3
126	701325 SS	701325 SS	701325 SS	701325 SS	Adapter, Female	3
127	44610 STG*	44610 STG*	44610 STG*	44610 STG*	V-Packing	6
128	701326 SS	701326 SS	701326 SS	701326 SS	Adapter, Male	3
155	11379 NBR	11379 NBR	11379 NBR	11379 NBR	O-Ring, V-Packing Spacer, Inner - 70D	3
	14183 FPM	14183 FPM	14183 FPM	14183 FPM	O-Ring, V-Packing Spacer, Inner	3
	◆ 701491 EPDM	◆ 701491 EPDM	◆ 701491 EPDM	◆ 701491 EPDM	O-Ring, V-Packing Spacer, Inner - 70D	3
156	28243 PTFE	28243 PTFE	28243 PTFE	28243 PTFE	Back-up-Ring, Spacer, Inner	3
157	701294 SS	701294 SS	701294 SS	701294 SS	Spacer, V-Packing	3
158	28243 PTFE	28243 PTFE	28243 PTFE	28243 PTFE	Back-up-Ring, Spacer, Outer	3
159	11379 NBR	11379 NBR	11379 NBR	11379 NBR	O-Ring, V-Packing Spacer, Outer - 70D	3
	14183 FPM	14183 FPM	14183 FPM	14183 FPM	O-Ring, V-Packing Spacer, Outer	3
	◆ 701491 EPDM	◆ 701491 EPDM	◆ 701491 EPDM	◆ 701491 EPDM	O-Ring, V-Packing Spacer, Outer - 70D	3
160	44756 S	44756 S	44756 S	44756 S	Pin, Guide IMDM	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

EXPLODED VIEW



Models
 Standard - 6801, 6811
 Flushed - 6801K, 6811K
 December 2008

	6801	MATL	6801K	MATL	6811	MATL	6811K	MATL		
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
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	S	87951	S	87951	S	87951	S	Screw, HSH (M10x30)	36
185	703206	SSD	703206	SSD	701320	SSL	701320	SSL	Manifold, Discharge, Block-Style	1
188	701279	S	701279	S	701279	S	701279	S	Screw, HSH (M12x100), Lower	4
193	89694	S	89694	S	89694	S	89694	S	Screw, HSH (M16x110), Upper	8
250	29445	AL	29445	AL	29445	AL	29445	AL	Protector, Shaft	1
255	33243	STZP	33243	STZP	33243	STZP	33243	STZP	Kit, Mount (Included w/Pump)	2
259	29477	STZP	29477	STZP	29477	STZP	29477	STZP	Rail, Box (Included w/Pump)	2
275	990014	STL	990014	STL	990014	STL	990014	STL	Hub, "B", M45 w/Keyway [See Drive Packages Tech Bulletin 003]	1
283	34314	—	34314	—	34314	—	34314	—	Kit, Oil Drain	1
290	6124	—	6124	—	6124	—	6124	—	Gasket, Liquid (3 oz.) (Seal-Valve Service)	1
299	910008	SSD	—	—	910000	SSL	—	—	Head, Complete, Block-Style	1
	—	—	910009	SSD	—	—	910005	SSL	Head, Complete, Block-Style, Flushed	1
300	701648	NBR*	701648	NBR*	701648	NBR*	701648	NBR*	Kit, Seal (Incls: 97,104,106,112,113,123,127,155,156,158,159)	1
	33710	FPM*	33710	FPM*	33710	FPM*	33710	FPM*	Kit, Seal (Incls: 97,104,106,112,113,123,127,155,156,158,159)	1
	♦ 702353	EPDM	♦ 702353	EPDM	♦ 702353	EPDM	♦ 702353	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
—	819010	F	819010	F	819010	F	819010	F	Assy, Crankcase, Cast Iron Conversion	1
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. (Inlet pressure stabilizer for RO and boosted applications)	1
—	711506	SS	711506	SS	714506	SS	714506	SS	Adapter (2 per C.A.T.) (See Data Sheet for complete selection)	2
—	6575	—	6575	—	6575	—	6575	—	Plunger Pump Service DVD	1
—	6105	—	6105	—	6105	—	6105	—	Oil, Twin Pack (Two-2.5 Gal) ISO-68 Hydraulic	1
—	—	—	—	—	—	—	—	—	(Fill to specified crankcase capacity prior to start-up)	
—	6119	—	6119	—	6119	—	6119	—	Lubricant, Antiseize (1 oz.)	1

Bold print part numbers are unique to a particular pump model. Italics are optional items. ♦Silicone oil/grease required. R Components comply with RoHS Directive.

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

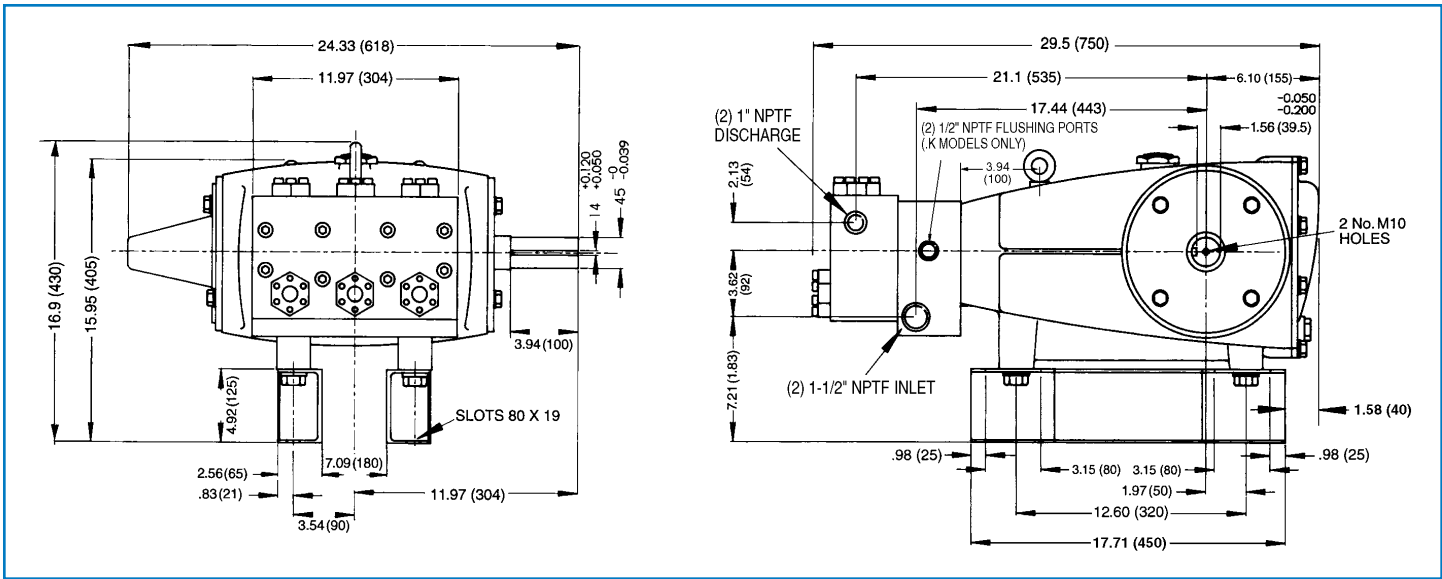
See Tech Bulletins 003, 024, 036, 074, 077, 083, 084, 087, 095 and 105 for additional information. **C.A.T. highly recommended for pressurized inlet, R.O. and Industrial applications.**

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BBHS=Brass/High Strength CC=Ceramic CM=Chrome-Moly

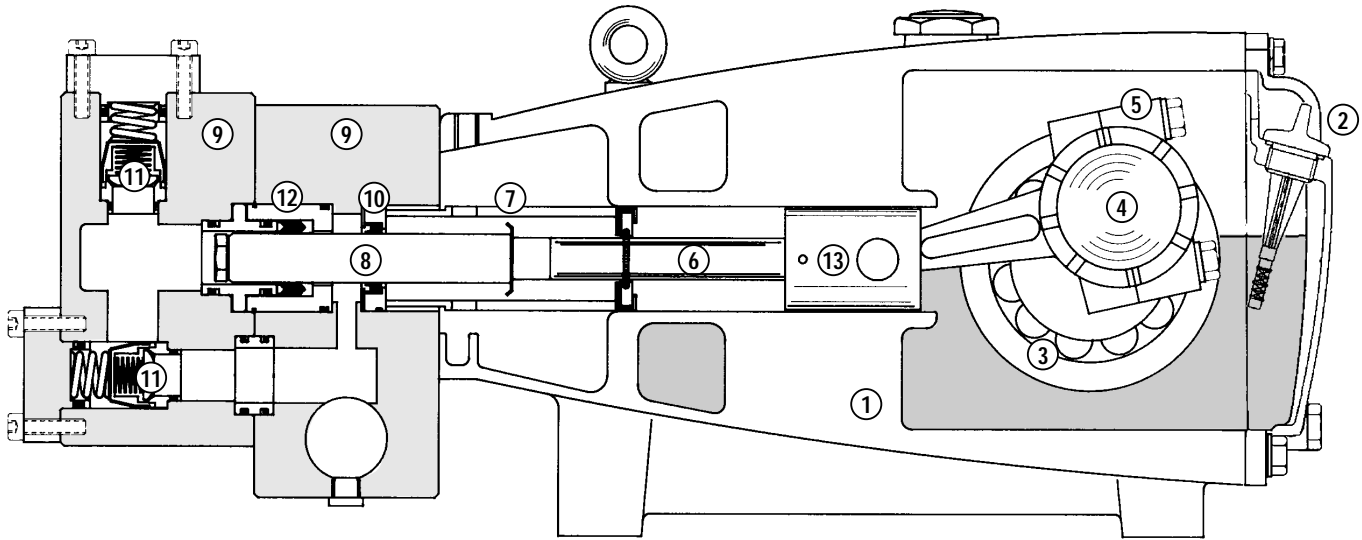
D=Acetal EPDM=Ethylene Propylene Diene Monomer FCM=Forged Chrome-Moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N)

PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SSL=316SS/Low Carbon SSZZ=316SS/Zamark

STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel STZP=Steel/Zinc Plated



Models 6801, 6801K, 6811, 6811K



- 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 tensile strength and bearing quality.
- 6 Special stainless steel high strength **plunger rods** for high load bearing and longevity.
- 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, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 9 **Manifolds** are 316 SSL or Duplex 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.
- 10 Optional special ported **Flushed Inlet Manifold** permits external flush for lubricating and cooling seals when pumping liquids such as DI water, Hi-Temp or low lubricity.
- 11 316 stainless steel **valves, seats and springs** provide corrosion-resistance, ultimate seating and extended 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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