

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 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.

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

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

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 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.

MODEL 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	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	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 flushing and cooling and are suitable for high inlet pressure liquids. Call for clarification.

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	41.2	51.5	600
6811K	12	45	N/A	N/A	24.7	32.9	41.2	496
	10	38	N/A	N/A	20.6	27.5	34.3	390
6821	25	95	34.3	42.9	55.1	N/A	N/A	615
6821K	20	76	27.7	34.3	41.2	N/A	N/A	492
	15	57	26.5	25.7	30.9	N/A	N/A	369

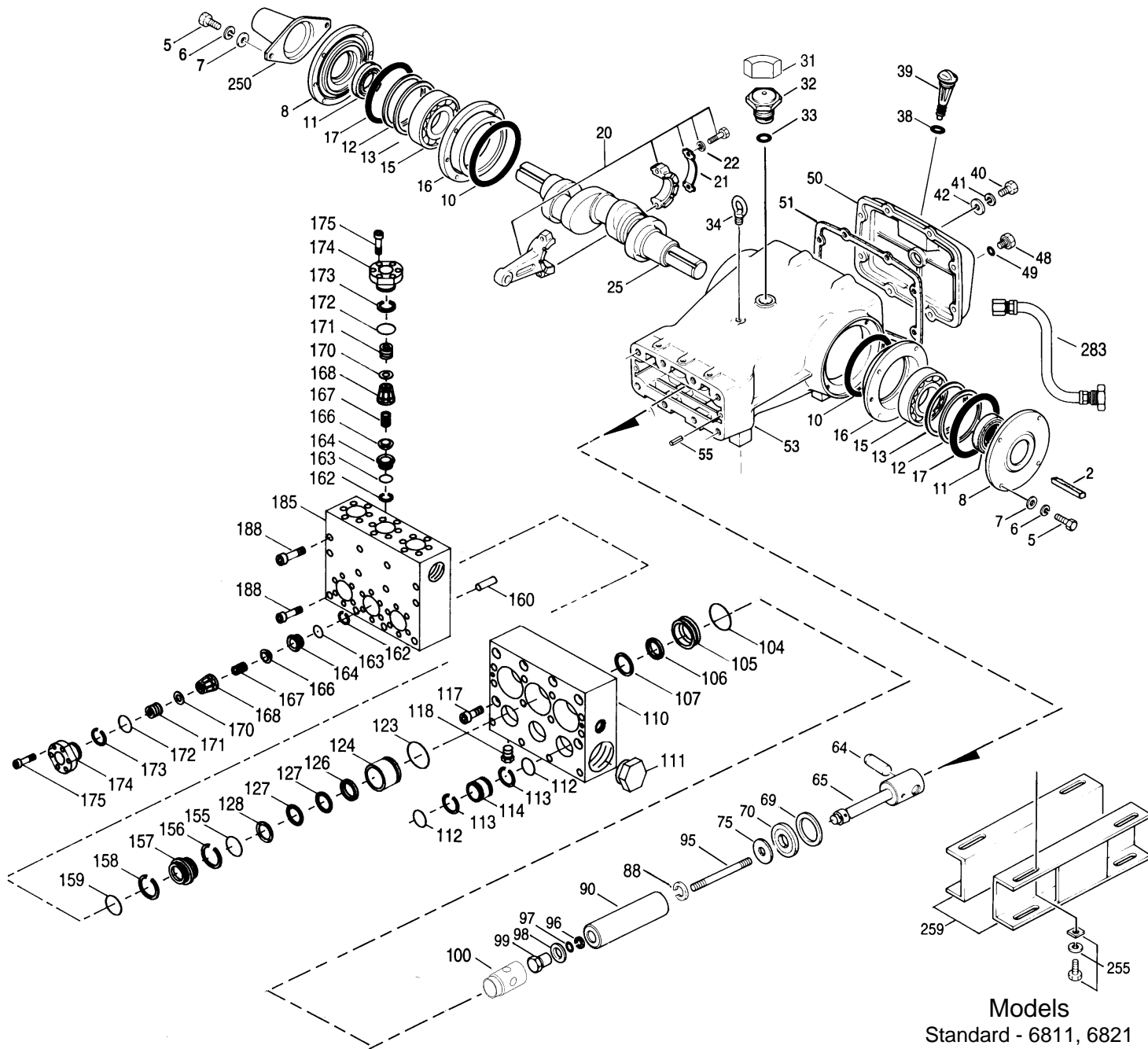
See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 03.

"Customer confidence is our greatest asset"

PARTS LIST

ITEM	PART NUMBER				DESCRIPTION	QTY				
	6811	MATL	6811K	MATL	6821	MATL	6821K	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, 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	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	HS	115983	HS	115983	HS	115983	HS	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, Connecting Rod (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		43211		43211		43211		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	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	STCP	25625	STCP	25625	STCP	25625	STCP	Plug, Drain (1/4"x11)	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	S	29481	S	29481	S	29481	S	Pin, Crosshead	3
65	701581	SSZZ	701581	SSZZ	701581	SSZZ	701581	SSZZ	Rod Plunger Assembly	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	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
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
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
107	44089	SS	44089	SS	44101	SS	44101	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" 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
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
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	V-Packing	3
127	44610	STG	44610	STG	44608	SNG	44608	SNG	V-Packing (Alternate)	6
	44610	FPM	44610	FPM	44608	FPM	44608	FPM	Adapter, Male	3
128	701326	SS	701326	SS	45565	SS	45565	SS	O-Ring, Spacer, Inner - 70D	3
155	11379	NBR	11379	NBR	25495	NBR	25495	NBR	O-Ring, Spacer, Inner - 70D	3
	14183	FPM	14183	FPM	11748	FPM	11748	FPM	Back-up-Ring, Spacer, Inner	3
156	28243	PTFE	28243	PTFE	48371	D	48371	D	Spacer, V-Packing	3
157	701294	SS	701294	SS	45674	SS	45674	SS	Back-up-Ring, Spacer, Outer	3
158	28243	PTFE	28243	PTFE	48362	D	48362	D	O-Ring, Spacer, Outer - 70D	3
159	11379	NBR	11379	NBR	18697	NBR	18697	NBR	O-Ring, Spacer, Outer - 70D	3
	14183	FPM	14183	FPM	20137	FPM	20137	FPM	Pin, Guide	2
160	44756	SS	44756	SS	44756	SS	44756	SS	Back-up-Ring, Seat	12/6
162	21985	PTFE	21985	PTFE	21985	PTFE	21985	PTFE	O-Ring, Seat - 80D	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	Seat	6
164	44080	SS	44080	SS	44080	SS	44080	SS	Valve	6
166	44081	SS	44081	SS	44081	SS	44081	SS	Spring	6
167	44082	SS	44082	SS	44082	SS	44082	SS	Retainer, Spring	6
168	44735	PVDF	44735	PVDF	44735	PVDF	44735	PVDF	Washer, Retainer	6
170	44794	SS	44794	SS	44794	SS	44794	SS	Spring, Coil	6
171	44793	SS	44793	SS	44793	SS	44793	SS	O-Ring, Valve Plug - 70D	6
172	15853	NBR	15853	NBR	15853	NBR	15853	NBR	O-Ring, Valve Plug - 70D	6
	11720	FPM	11720	FPM	11720	FPM	11720	FPM	Back-up-Ring, Valve Plug	6
173	20224	PTFE	20224	PTFE	20224	PTFE	20224	PTFE	Plug, Valve	6
174	701260	SS	701260	SS	701260	SS	701260	SS	Screw, HSH (M10x30)	36
175	87951	SS	87951	SS	87951	SS	87951	SS	Manifold, Discharge, Block-Style	1
185	701320	SSL	701320	SSL	701320	SSL	701320	SSL	Screw, HSH (M12x100), Lower	4
188	701279	SS	701279	SS	701279	SS	701279	SS	Screw, HSH (M16x110), Upper	8

EXPLODED VIEW



Models
 Standard - 6811, 6821
 Flushed - 6811K, 6821K
 October 1999

	6811 MATL	6811K MATL	6821 MATL	6821K MATL
● 250	29445 AL	29445 AL	29445 AL	29445 AL
● 255	33243	33243	33243	33243
● 259	29477 STZP	29477 STZP	29477 STZP	29477 STZP
● 275	990014 STL	990014 STL	990014 STL	990014 STL
● 283	34334	34334	34334	34334
● 290	6104	6104	6104	6104
● 299	910000 SSL	—	910001 SSL	—
● 300	—	910005 SSL	—	910002 SSL
	701648 NBR	701648 NBR	701649 NBR	701649 NBR
	33710 FPM	33710 FPM	33720 FPM	33720 FPM
310	34151 NBR	34151 NBR	34151 NBR	34151 NBR
	701798 FPM	701798 FPM	701798 FPM	701798 FPM
● 370	—	990663	—	990663
● —	711500 SS	711500 SS	714500 SS	714500 SS
● —	711506 SS	711506 SS	714506 SS	714506 SS
● —	6565.7	6565.7	6565.7	6565.7

- Protector, Shaft 1 ●
- Kit, Mount (Included w/Pump) 2 ●
- Rail, Box (Included w/Pump) 2 ●
- Hub, "B", (M45) (Keyway M14x9x90) [See Drive Packages Tech Bulletin 03] 1 ●
- Kit, Oil Drain 1 ●
- Gasket, Liquid (1 oz.) 1 ●
- Head, Complete, Block-Style 1 ●
- Head, Complete, Block-Style, Flushed 1 ●
- Kit, Seal (Incls: 97,104,106,112,113,123,127,155,156,158,159) 1 ●
- Kit, Seal (Incls: 97,104,106,112,113,123,127,155,156,158,159) 1 ●
- Kit, Valve (Incls: 162,163,164,166,167,168,170,172,173) 2 ●
- Kit, Valve (Incls: 162,163,164,166,167,168,170,172,173) 2 ●
- Assembly, Flushing, 5 gal., 115V, 1.1 Amp, 1/2" NPT 1 ●
- C.A.T. (Captive Acceleration Tube) 1 ●
- Adapter (2 per C.A.T.) (See Data Sheet for complete selection) 2 ●
- Plunger Pump Service Video 1 ●

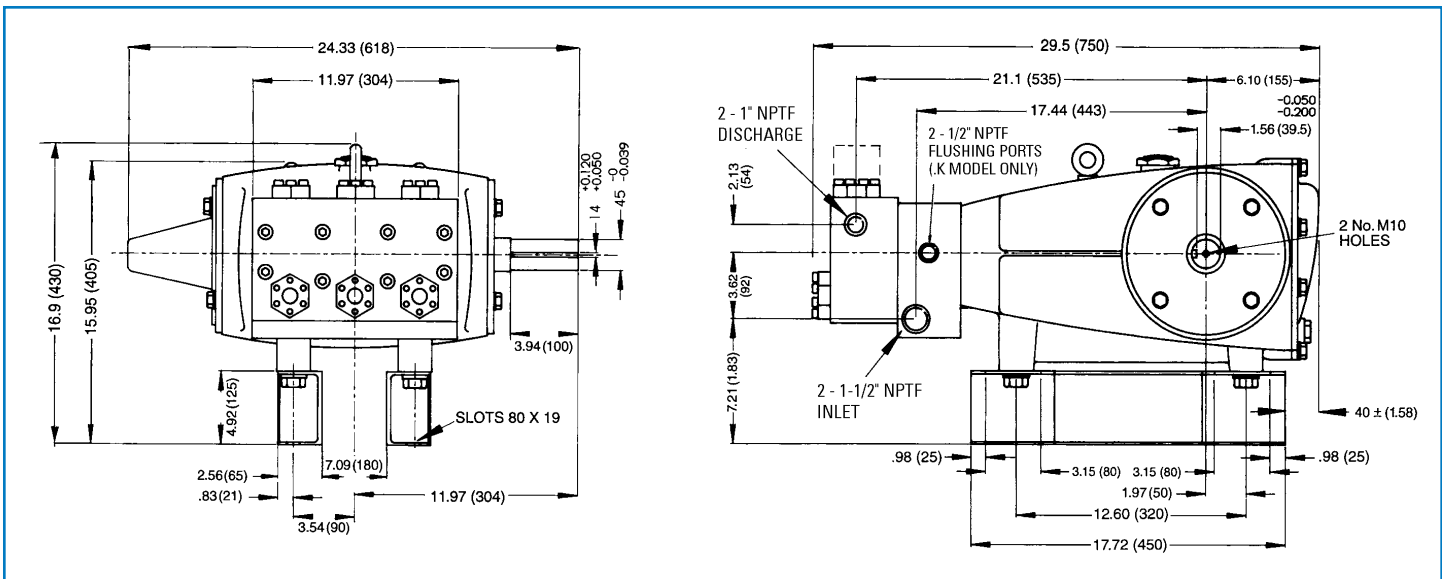
● Industrial discount. **Bold print part numbers are unique to a particular pump model.** *Italics are optional items.*

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.

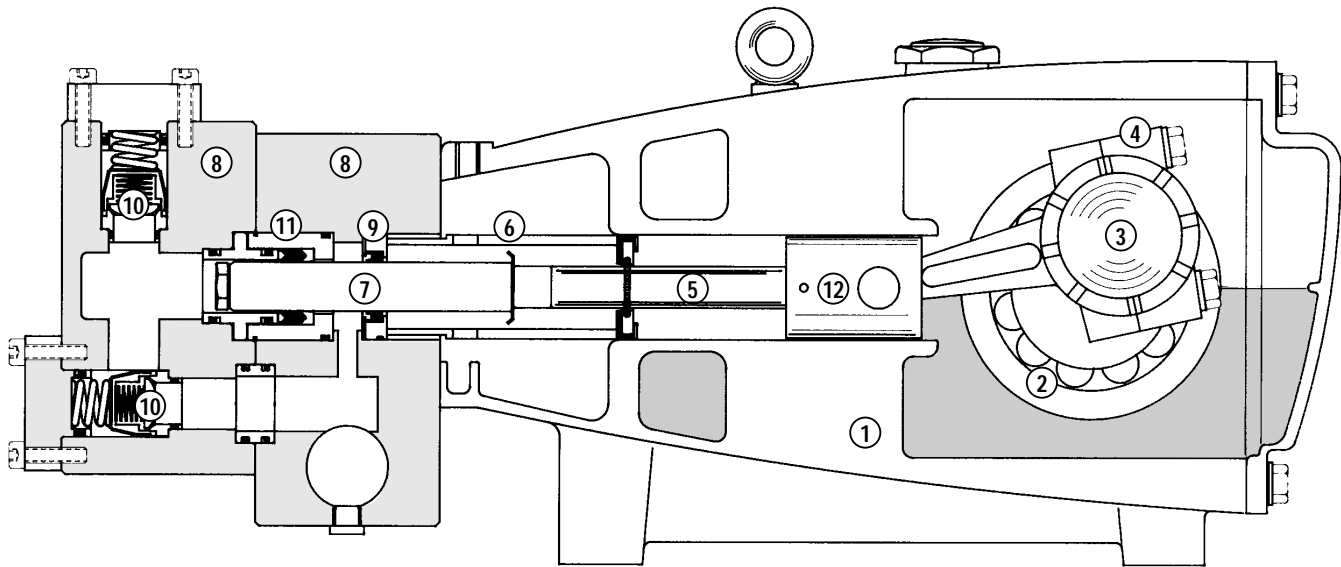
MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass CC=Ceramic D=Delryn FCM=Forged Chrome-moly

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 STCP=Steel/Chrome Plated SNG=Special Blend (Buna) STG=Special Blend (Teflon®) White
 STL=Steel STZP=Steel/Zinc Plated

ORDER CODES: Add to Model Number .0110 for FPM (Viton®). Consult factory for pricing.



Models 6811, 6811K, 6821, 6821K



- | | | |
|--|---|---|
| <p>1 Die cast aluminum crankcase means high strength, lightweight, and excellent tolerance control.</p> <p>2 Oversized crankshaft bearings provide extended bearing life and pump performance.</p> <p>3 Chrome-moly crankshaft provides unmatched strength and surface hardness for long life.</p> <p>4 Matched oversized high strength connecting rods are noted for superior strength and bearing quality.</p> <p>5 Special stainless steel plunger rods with high strength crossheads for longevity and corrosion resistance.</p> | <p>6 The stainless steel barrier slinger provides back-up protection for the crankcase seal, keeping pumped liquids out of the crankcase.</p> <p>7 Special concentric, high density, polished, graphite impregnated, solid ceramic plungers are abrasion resistant and result in extended seal life.</p> <p>8 Manifolds are 316 SSL block-style for long-term, continuous-duty and corrosion resistance.</p> <p>9 Standard Models: Lo-Pressure Seals and V-Packings are completely lubricated and cooled by the liquids being pumped.</p> | <p>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.</p> <p>10 Stainless steel valves, seats and springs provide corrosion-resistance, positive seating and long life.</p> <p>11 Specially formulated, CAT PUMP exclusive, V-Packings offer unmatched performance and seal life.</p> <p>12 Crossheads are 360° supported for uncompromising alignment.</p> |
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Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

Oct 1999 9946

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