

DATA SHEET

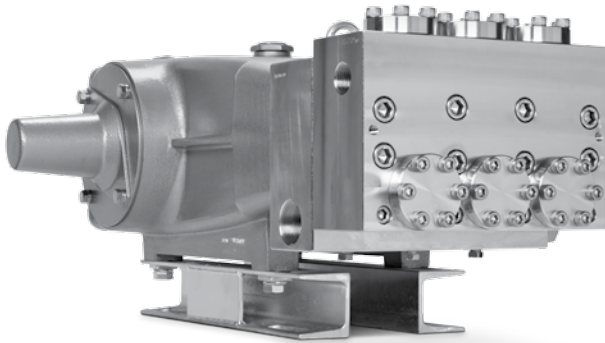
68 FRAME BLOCK-STYLE PLUNGER PUMP



The Pumps with Nine Lives

Stainless Steel Model: 6831

Stainless Steel Flushed Model: 6831K



Model 6831 Shown
(Shaft protector and mounting rails included)

SPECIFICATIONS	U.S. Measure	Metric Measure
Flow	40 gpm	151 lpm
Pressure Range	100 to 2300 psi	6.9 to 159 bar
Pump RPM*	625 rpm	625 rpm
Inlet Pressure Range	Flooded to 50 psi	Flooded to 3.5 bar
Max. Liquid Temperature	140° F	60° C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Bore	1.575"	40 mm
Stroke	2.579"	65.5 mm
Crankcase Capacity	10 Qts.	9.46 l
Inlet Ports (2)	1-1/2" NPT(F)	1-1/2" NPT(F)
Flushing Ports (2)**	1/2" NPT(F)	1/2" NPT(F)
Discharge Ports (2)	1" NPT(F)	1" NPT(F)
Shaft Diameter	1.772"	45 mm
Weight	355 lbs.	161 kg
Dimensions	29.72 x 24.02 x 12.00"	755 x 610 x 305 mm

*Pump minimum is 100 RPM.

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

FEATURES

- Triplex plunger design delivers high efficiency and low pulsation.
- Durable dual V-Packings are lubricated and cooled by pumped liquid.
- Pre-Set Lo-Pressure seals provide secondary protection against external leaks and require no packing adjustment.
- Special high-density, polished, concentric ceramic plungers provide a true wear surface and extended seal life.
- Standard NBR Seals with alternative options for temperatures and chemical compatibility.
 - FPM – .0110

ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE				RPM
		psi 1000	psi 1500	psi 2000	psi 2300	
gpm	lpm	bar 69	bar 103	bar 138	bar 159	
40	151	27.4	41.1	54.8	63.0	625
30	114	20.6	30.9	41.1	47.3	470
25	95	17.2	25.7	34.3	39.4	391
20	76	13.7	20.5	27.5	31.5	331

$$\frac{\text{DETERMINING THE PUMP R.P.M.}}{\text{Rated rpm}} = \frac{\text{Rated gpm}}{\text{"Desired" gpm}}$$

$$\frac{\text{DETERMINING THE REQUIRED H.P.}}{\text{Hp (Electric Brake)}} = \frac{\text{gpm x psi}}{1460}$$

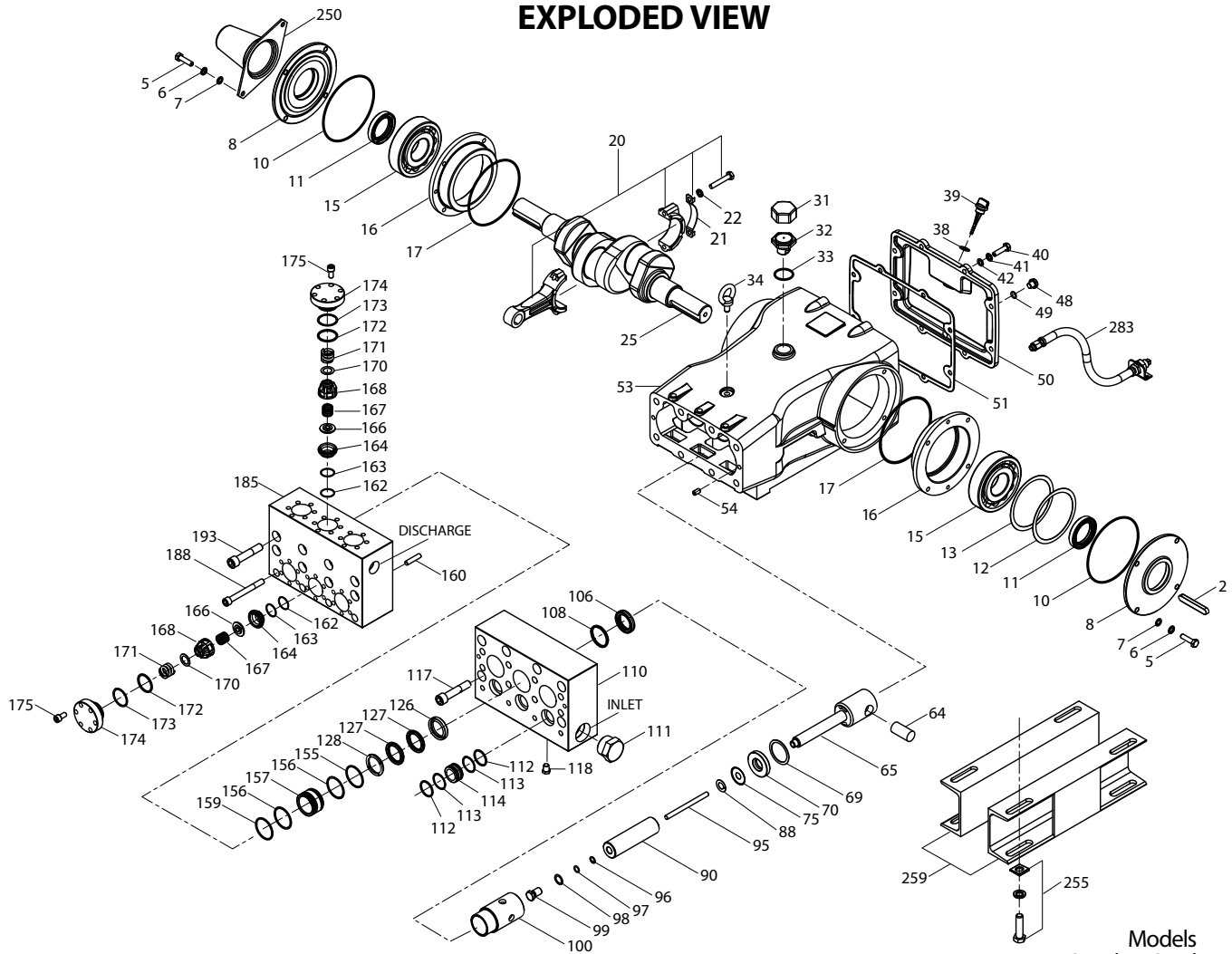
$$\frac{\text{DETERMINING MOTOR PULLEY SIZE}}{\text{Motor Pulley O.D.}} = \frac{\text{Pump Pulley O.D.}}{\text{Pump rpm}}$$

See complete Drive Packages [Includes: pulleys, belts, hubs, key] Tech Bulletin 003. Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	6831		6831K			
2	43048	STL	43048	STL	Key (M14x9x90)	1
5	89728	S	89728	S	Screw, HH (M10x40)	8
6	15847	S	15847	S	Lockwasher (M10)	8
7	19934	S	19934	S	Washer, Flat (M10)	8
8	29443	AL	29443	AL	Cover, Bearing, Outer (See Tech Bulletin 118)	2
10	29444	NBR	29444	NBR	O-Ring, Bearing Cover - 70D	2
11	11443	NBR	11443	NBR	Seal, Oil, Crankshaft - 70D	2
12	126594	STCP R	126594	STCP R	Washer, Shim (M120x0.3)	0-2
13	126595	STCP R	126595	STCP R	Washer, Shim (M120x0.5)	0-2
15	29441	STL	29441	STL	Bearing, Roller	2
16	29442	STL	29442	STL	Cover Bearing, Inner	2
17	29444	NBR	29444	NBR	O-Ring, Bearing Cover - 70D	2
20	126612	BBHS	126612	BBHS	Assembly, Connecting Rod (Incls: 21, 22)	3
21	126560	STCP R	126560	STCP R	Washer, Locking	3
22	126593	STCP R	126593	STCP R	Washer, Shim (M10.5x1.5)	6
25	29440	FCM	29440	FCM	Crankshaft, Dual Shaft	1
31	828710	PE	828710	PE	Protector, Oil Cap w/Foam Gasket	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Filler Cap - 70D	1
34	126743	STCP R	126743	STCP R	Bolt, Eye (M12) (For Lifting Pump Only)	1
38	129343	RBR	129343	RBR	Gasket, Flat Flex	1
39	27769	ABS	27769	ABS	Stick, Dip	1
40	89627	S	89627	S	Screw, HH (M10x30)	8
41	15847	S	15847	S	Lockwasher (M10)	8
42	19934	S	19934	S	Washer, Flat (M10)	8
48	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D	1
50	29438	AL	29438	AL	Cover, Rear (See Tech Bulletin 118)	1
51	129386	NBR	129386	NBR	Gasket, Rear Cover	1
53	45303	AL	45303	AL	Crankcase (Incls: 34, 54) (See Tech Bulletin 118)	1
54	43282	S	43282	S	Pin, Guide	2
64	29481	CM	29481	CM	Pin, Crosshead	3
65	48735	SSZZ	48735	SSZZ	Rod, Plunger	3
69	126588	STCP R	126588	STCP R	Washer, Oil Seal	3
70	29454	NBR	29454	NBR	Seal, Oil, Crankcase - 80D	3
75	43865	S	43865	S	Slinger, Barrier	3
88	45676	S	45676	S	Washer, Keyhole (M16)	3
90	43921	CC	43921	CC	Plunger (M40x145)	3
95	89778	SS	89778	SS	Stud, Plunger Retainer (M10x135)	3
96	20189	PTFE	20189	PTFE	Back-up-Ring, Plunger Retainer	3
97	11345	NBR	11345	NBR	O-Ring, Plunger Retainer - 70D	3
	11375	FPM	11375	FPM	O-Ring, Plunger Retainer - 70D	3
98	44085	SS	44085	SS	Gasket, Plunger Retainer	3
99	44084	SS	44084	SS	Retainer, Plunger (M10)	3
100	703084	D	703084	D	Retainer, Seal	3
106	44113	NBR	44113	NBR	Seal, LPS, w/SS-Spg	3
	44740	FPM	44740	FPM	Seal, LPS, w/SS-Spg	3
108	45381	SS	45381	SS	Spacer, LPS	3
110	701321	SS	—	—	Manifold Inlet, Block-Style	1
	—	—	701322	SS	Manifold Inlet, Block-Style, Flushed [1/2" NPT(F) Ports]	1
111	701116	SS	701116	SS	Plug, Inlet Manifold [1-1/2" NPT(M)]	1
112	701632	NBR	701632	NBR	O-Ring, Spacer	6
	701328	FPM	701328	FPM	O-Ring, Spacer	6
113	701329	PTFE	701329	PTFE	Back-up-Ring, Spacer	6
114	701327	SS	701327	SS	Spacer, Inlet	3
117	89694	S	89694	S	Screw, HSH (M16x110)	6
118	701077	SS	—	—	Plug [1/4" NPT(M)]	3
126	45367	SS	45367	SS	Adapter, Female	3
127	44609	STG	44609	STG	V-Packing	6
	44741	SFG	44741	SFG	V-Packing	6
128	704480	SS	704480	SS	Adapter, Male	3
155	48860	NBR	48860	NBR	O-Ring, V-Packing Spacer, Inner - 90D	3
	20137	FPM	20137	FPM	O-Ring, V-Packing Spacer, Inner - 70D	3
156	48362	D	48362	D	Back-up-Ring, V-Packing Spacer	6
157	45369	SS	45369	SS	Spacer, V-Packing	3
159	48860	NBR	48860	NBR	O-Ring, V-Packing Spacer, Outer - 90D	3
	20137	FPM	20137	FPM	O-Ring, V-Packing Spacer, Outer - 70D	3
160	44756	S	44756	S	Pin, Guide	2
162	48363	D	48363	D	Back-up-Ring, Seat	6
163	26142	NBR	26142	NBR	O-Ring, Seat - 80D	6
	14330	FPM	14330	FPM	O-Ring, Seat - 70D	6
164	44612	SS	44612	SS	Seat	6
166	44108	SS	44108	SS	Valve	6
167	44109	SS	44109	SS	Spring	6
168	44728	PVDF	44728	PVDF	Retainer, Spring	6
170	44729	SS	44729	SS	Washer, Retainer	6
171	44644	SS	44644	SS	Spring, Coil	6
172	89827	NBR	89827	NBR	O-Ring, Valve Plug - 90D	6

EXPLODED VIEW



Models
Stainless Steel - 6831
Flushed - 6831K
April 2017

ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	6831		6831K			
	11747	FPM	11747	FPM	O-Ring, Valve Plug - 90D	6
173	48364	D	48364	D	Back-up-Ring, Valve Plug	6
174	701432	SS	701432	SS	Plug, Valve	6
175	87951	S	87951	S	Screw, HSH (M10x30)	36
185	701431	SS	701431	SS	Manifold, Discharge, Block-Style	1
188	701279	S	701279	S	Screw, HSH (M12x100), Lower	4
193	89694	S	89694	S	Screw, HSH (M16x110), Upper	8
250	29445	AL	29445	AL	Protector, Shaft (See Tech Bulletin 118)	1
255	33243	STZP	33243	STZP	Kit, Mount (Included w/Pump)	2
259	126604	STCP R	126604	STCP R	Rail, Box (Included w/Pump)	2
275	990014	STL	990014	STL	Hub, "B", M45, Keyway [See Tech Bulletin 003]	1
283	34314	—	34314	—	Kit, Oil Drain (3/8" x 48") (See Tech Bulletin 118)	1
290	6124	—	6124	—	Gasket, Liquid (3 oz.)	1
299	910003	SS	—	—	Head, Complete, Block-Style w/NBR Seals & O-Rings	1
—	—	—	910004	SS	Head, Complete, Block-Style, Flushed w/NBR Seals & O-Rings	1
300	701647	NBR*	701647	NBR*	Kit, Seal (Incls: 97,106,112,113,127,155,156,159)	1
—	33708	FPM	33708	FPM	Kit, Seal (Incls: 97,106,112,113,127,155,156,159)	1
310	34017	NBR	34017	NBR	Kit, Valve (Incls: 162,163,164,166,167,168,170,172,173)	2
—	31955	FPM	31955	FPM	Kit, Valve (Incls: 162,163,164,166,167,168,170,172,173)	2
—	819010	F	819010	F	Assy, Crankcase, Cast Iron Conversion	1
370	—	—	990663	—	Assembly, Flushing, 5 gal., 115V, 1.1 Amp, 1/2" NPT	1
—	6105	—	6105	—	Oil, Twin Pack (Two 2.5 gal.) ISO-68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1
—	6119	—	6119	—	Lubricant, Antiseize (2 oz.) (See Tech Bulletin 095)	1

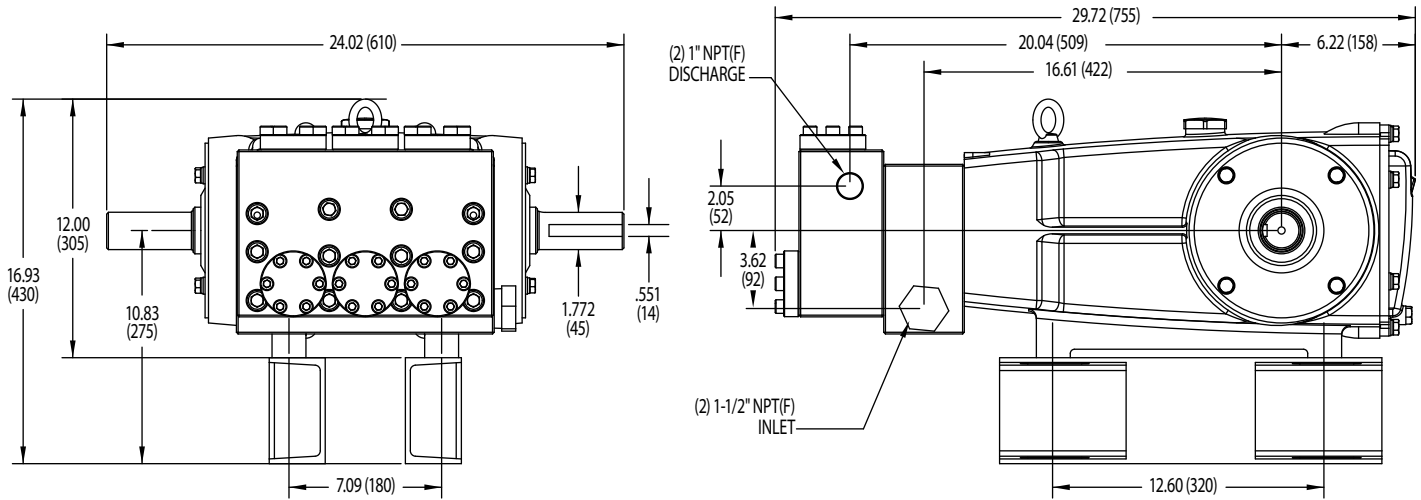
Bold print part numbers are unique to a particular pump model. Italics are optional items. R Components comply with RoHS Directive.

*Review individual parts in each kit for material code identification.

See Tech Bulletin 002, 003, 024, 036, 074, 083, 084, 095, 105, 118 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 F=Cast Iron FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) PE=Polyethylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride RBR=Rubber S=304SS SS=316SS SSZZ=316SS/Zamak SFG=Special Blend FPM STG=Special Blend PTFE White STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated



⚠ CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/cautions-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.



CAT PUMPS

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