

DATA SHEET

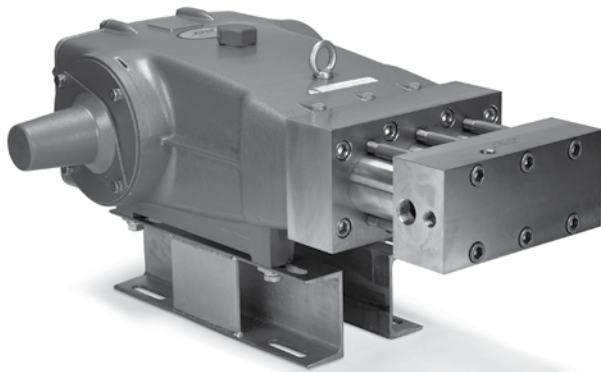
68 FRAME BLOCK-STYLE PLUNGER PUMP



The Pumps with Nine Lives

**Stainless Steel
Model:**

6810



SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow	10 gpm	38 lpm
Pressure Range	100 to 10,000 psi	6.9 to 689 bar
Inlet Pressure Range	Flooded to 50 psi	Flooded to 3.5 bar
Pump RPM*	600 rpm	600 rpm
Bore	0.827"	21 mm
Stroke	2.579"	65.5 mm
Max. Liquid Temperature	140° F	60° C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Crankcase Capacity	10 Qts.	9.46 l
Inlet Ports (2)	1" NPT(F)	1" NPT(F)
Discharge Ports (3)	1/2" NPT(F)	1/2" NPT(F)
Shaft Diameter	1.772"	45 mm
Weight	377.4 lbs.	171.5 kg
Dimensions	31.75 x 24.02 x 11.12"	806 x 610 x 282 mm

*Pump minimum is 100 RPM.

FEATURES

- Triplex plunger design delivers high efficiency and low pulsation.
- V-Packings and low pressure seals are completely lubricated and cooled by pumped liquid.
- Low upswept volume maximizes volumetric efficiency.
- Special high-density, polished, concentric ceramic plungers provide a true wear surface and extended seal life.
- Wet-end is easily serviced without entering crankcase.

ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE			PUMP RPM
		psi 5000	psi 7500	psi 10,000	
gpm	lpm	bar 345	bar 517	bar 689	
10	38	34.2	51.4	68.5	600
5	19	17.1	25.7	34.2	300

**DETERMINING
THE PUMP R.P.M.**

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$$

**DETERMINING
THE REQUIRED H.P.**

$$\frac{\text{gpm} \times \text{psi}}{1460} = \frac{\text{Electric Brake}}{\text{H. P. Required}}$$

**DETERMINING
MOTOR PULLEY SIZE**

$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

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

PARTS LIST

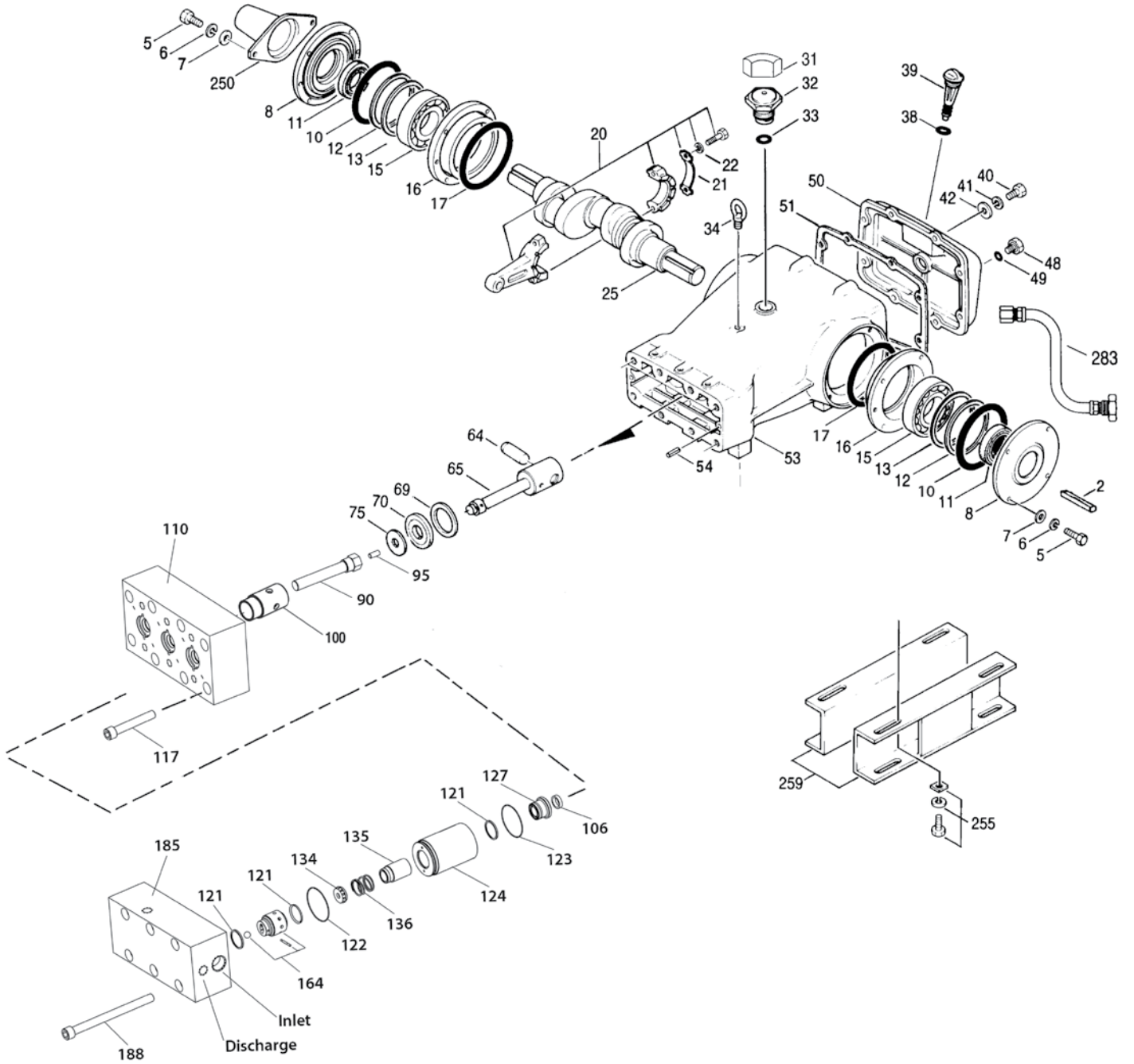
ITEM	PART NUMBER	MATL	DESCRIPTION	QTY
2	43048	STL	Key (M14x9x90)	1
5	89728	S	Screw, HH (M10x40)	8
6	15847	S	Lockwasher (M10)	8
7	19934	S	Washer, Flat (M10)	8
8	29443	AL	Cover, Bearing, Outer (See Tech Bulletin 118)	2
10	29444	NBR	O-Ring, Bearing Cover -70D	2
11	11443	NBR	Seal, Oil, Crankshaft - 70D	2
12	126594	STCP R	Washer, Shim (M120x0.3)	0-2
13	126595	STCP R	Washer, Shim (M120x0.5)	0-2
15	29441	STL	Bearing, Roller	2
16	29442	STL	Cover, Bearing, Inner	2
17	29444	NBR	O-Ring, Bearing Cover - 70D	2
20	126612	BBHS	Assembly, Connecting Rod (Incls: 21, 22)	3
21	126560	STCP R	Washer, Locking	3
22	126593	STCP R	Washer, Shim (M10.5x1.5)	6
25	29440	FCM	Crankshaft, Dual Shaft	1
31	828710	PE	Protector, Oil Cap w/Foam Gasket	1
32	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	O-Ring, Filler Cap - 70D	1
34	126743	STCP R	Bolt, Eye (M12) (For Lifting Pump Only)	1
38	129343	RBR	Gasket, Flat Flex	1
39	27769	ABS	Stick, Dip	1
40	89627	S	Screw, HH (M10x30)	8
41	15847	S	Lockwasher (M10)	8
42	19934	S	Washer, Flat (M10)	8
48	25625	STCP	Plug, Drain (1/4" x19BSP)	1
49	23170	NBR	O-Ring, Drain Plug - 70D	1
50	29438	AL	Cover, Rear (See Tech Bulletin 118)	1
51	129386	NBR	Gasket, Rear Cover	1
53	45303	AL	Crankcase (Incls: 34, 54) (See Tech Bulletin 118)	1
54	43282	S	Pin, Guide	2
64	29481	CM	Pin, Crosshead	3
65	48735	SSZZ	Rod, Plunger	3
69	126588	STCP R	Washer, Oil Seal	3
70	29454	NBR	Seal, Oil Crankcase - 80D	3
75	43865	S	Slinger, Barrier	3
90	76347	CC	Assembly, Plunger (M21)	3
95	76344	S	Stud (M10x22)	3
100	703084	D	Retainer, Seal	3
106	76313	ST4	Seal, LPS	3
110	76348	S	Block, Housing	1
117	76358	S	Screw, HSH (M16x100)	8
121	76318	PTFE	Ring, Cylinder Sealing	9
122	76327	NBR	O-Ring, Front Cylinder	3
123	76317	NBR	O-Ring, Rear Cylinder	3
124	76321	S	Cylinder	3
127	76314	UHMW	Assembly, V-Packing w/BZ Cylinder Support	3
134	76359	S	Valve, Inlet	3
135	76322	D	Retainer, Spring	3
136	76324	S	Spring	3
164	76337	S	Seat, Ball Assembly w/Ceramic Ball	3
185	76388	S	Manifold, Inlet/Discharge, Block Style	1
188	76377	S	Screw, HSH (M16x200)	6
250	29445	AL	Protector, Shaft (See Tech Bulletin 118)	1
255	33243	STZP	Kit, Mount (Included w/Pump)	2
259	126604	STCP R	Rail, Box (Included w/Pump)	2
275	990014	STL	Hub, "B", M45 w/Keyway [See Tech Bulletin 003]	1
283	34314	—	Kit, Oil Drain (3/8" x 48")	1
290	6124	—	Gasket, Liquid (3 oz.)	1
299	996810	S	Head, Complete, Block-Style w/NBR O-Rings	1
300	76966	NBR*	Kit, Seal (Incls: 106,121,122, 123,127)	1
310	76967	S	Kit, Valve (Incls: 121,122, 123,134, 136, 164)	1
—	819010	F	Assy, Crankcase, Cast Iron Conversion	1
—	6105	—	Oil, Twin Pack (Two-2.5 Gal) ISO-68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1
—	6119	—	Lubricant, Antiseize (2 oz.) (See Tech Bulletin 095)	1

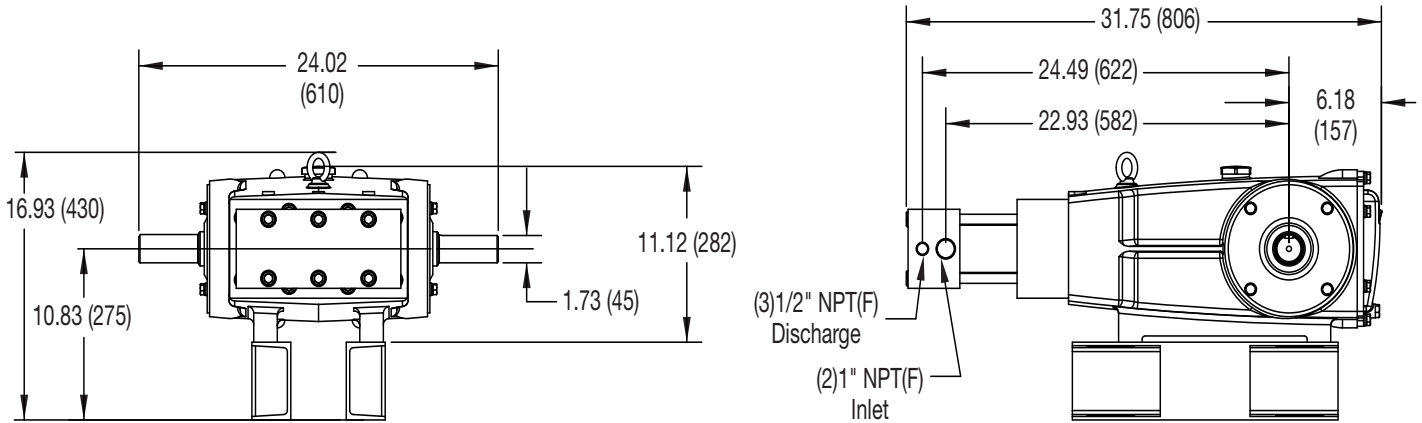
Italics are optional items. R Components comply with RoHS Directive. *Review individual parts in each kit for material code identification.

See Tech Bulletins 003, 024, 036, 074, 083, 084, 095, 105 and 118 for additional information.

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
 NBR=Medium Nitrile (Buna-N) PE=Polyethylene PTFE=Pure Polytetrafluoroethylene RBR=Rubber S=304SS SSZZ=316SS/Zamak ST4=Special PTFE 4 STCP=Steel/Chrome Plated
 STL=Steel STZP=Steel/Zinc Plated UHMW=Ultra High Molecular Polyethylene

EXPLODED VIEW





⚠ 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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