

DATA SHEET

68 FRAME BLOCK-STYLE PLUNGER PUMP

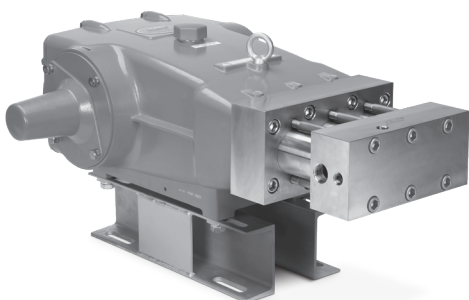


**Stainless Steel
with Bronze
Model:**

6810

Manifolds and cylinders are 17-4SS stainless steel. Valve assemblies are made with 304 and 455 stainless steel components. Internal packing assembly includes bronze cylinder supports and UHMW V-packings.

See Parts List to confirm material compatibility with the fluid pumped before use.



Shaft protector and mounting rails included

FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- V-packings and low-pressure seals are completely lubricated and cooled, greatly increasing service life.
- Special UHMW V-packings with bronze cylinder supports provide extra stability at high-pressure and extend seal life.
- Low upswept volume maximizes volumetric efficiency.
- Special high-density, polished, concentric ceramic plungers assemblies provide a true wear surface and extended seal life.
- Wet-end is easily serviced without entering crankcase.

SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow	10 gpm	38 lpm
Pressure Range	100–10,000 psi	6.9–689 bar
Pump RPM*	600 rpm	600 rpm
Inlet Pressure Range	Flooded to 50 psi	Flooded to 3.5 bar
Max. Liquid Temp. (NBR)	140° F	60° C
Above 130° F call Cat Pumps for inlet conditions and elastomer recommendations.		
Bore	0.827"	21 mm
Stroke	2.579"	65.5 mm
Crankcase Capacity	10 qts	9.46 l
Inlet Ports (2)	1" NPT(F)	1" NPT(F)
Discharge Ports (3)	½" NPT(F)	½" NPT(F)
Shaft Diameter	1.772"	45 mm
Pulley Mounting	Either Side	Either Side
Weight	376 lbs	170 kg
Dimensions	31.89 x 24.02 x 11.12"	810 x 610 x 282 mm

*Pump minimum is 100 RPM.

ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE
NBR	—	160° F (71° C)
ST	.4400	190° F (88° C)

See **Tech Bulletin 002** for inlet conditions and RPM at high temperature.

DETERMINING THE PUMP RPM

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

DETERMINING THE REQUIRED HP

$$\frac{\text{hp (Electric Brake)}}{1460} = \frac{\text{gpm} \times \text{psi}}{1460}$$

DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$$

Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

ITEM	PART NUMBER	MATL	DESCRIPTION	QTY
5	89728	S	Screw, HH (M10 x 40) (See Tech Bulletin 074)	8
6	15847	S	Lockwasher (M10)	8
7	19934	S	Washer, Flat (M10)	8
8	29443	ALE	Cover, Bearing, Outer	2
10	29444	NBR	O-Ring, Bearing Cover-70D	2
11	11443	NBR	Seal, Oil, Crankshaft	2
12	126594	STCP R	Washer, Shim (M120 x 0.3)	0-2
13	126595	STCP R	Washer, Shim (M120 x 0.5)	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 (Includes: 21, 22) (See Tech Bulletin 074)	3
21	126560	STCP R	Washer, Locking	3
22	126593	STCP R	Washer, Shim (M10.5 x 1.5)	6
25	29440	FCM	Crankshaft, Dual-End (M65.5)	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, Blue	1
40	89627	S	Screw, HH (M10 x 30) (See Tech Bulletin 074)	8
41	15847	S	Lockwasher (M10)	8
42	19934	S	Washer, Flat (M10)	8
48	25625	STCP	Plug, Drain (¼" x 19 BSP)	1
49	23170	NBR	O-Ring, Drain Plug-70D	1
50	29438	ALE	Cover, Rear	1
51	129386	NBR	Gasket, Rear Cover	1
53	133667	ALE	Crankcase, Assembly (Includes: 54)	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	3
75	43865	S	Slinger, Barrier	3
90	76347	CC	Assembly, Plunger (M21)	3
95	76344	S	Stud (M10 x 22)	3
100	76585	D	Retainer, Seal	3
106	76313	ST4	Seal, Low-Pressure with S-Spring	3
110	76348	S	Block, Housing	1
117	76358	S	Screw, HSH (M16 x 100) (See Tech Bulletin 074)	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	SFSS	Cylinder	3
127	76314	UHMW	Assembly, V-Packing with Bronze Cylinder Support	3
134	76359	SFSS	Valve, Inlet	3
135	76322	D	Retainer, Spring	3
136	76324	S	Spring	3
164	76916	SFSS	Seat, Ball Assembly with Ceramic Ball	3
185	76388	SFSS	Manifold, Inlet/Discharge	1
188	76377	S	Screw, HSH (M16 x 200) (See Tech Bulletin 074)	6
250	29445	ALE	Protector, Shaft	1
255	33243	STZP	Mount, Direct (See Tech Bulletin 074)	1
256	29649	STCP	Washer, Slant (M16) (To Shim and Align Mounting Bolts [Not Included] Through the Box Rail and Mounting Base)	4
259	126604	STCP R	Rail, Box	2

R Components comply with RoHS Directive.

For additional technical information see www.catpumps.com/literature/tech-bulletins.

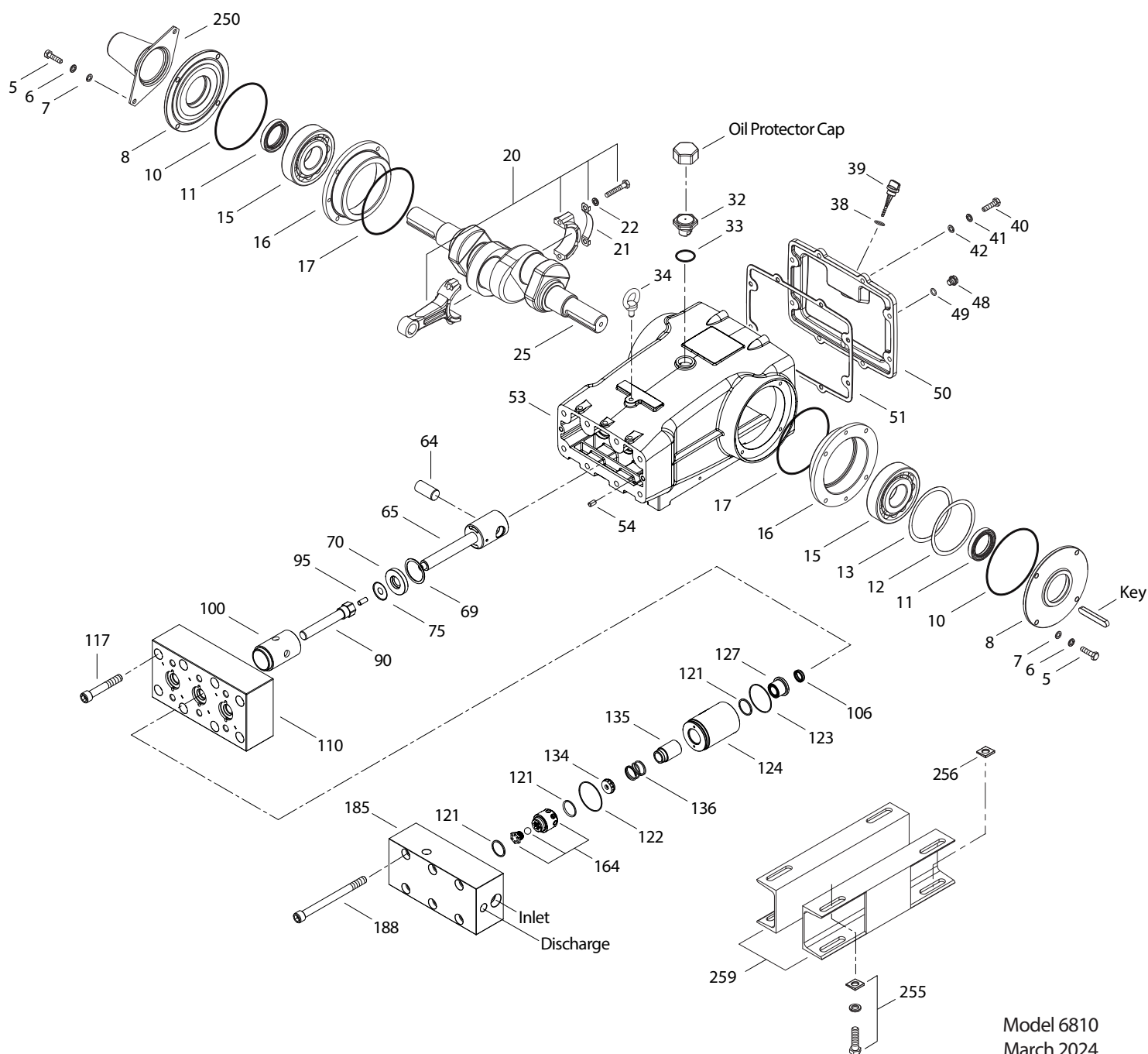
MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic ALE=Aluminum Epoxy BBHS=Brass/High Strength CC=Ceramic CM=Chrome-Moly D=Acetal

F=Cast Iron FCM=Forged Chrome-Moly NBR=Medium Nitrile (Buna-N) PTFE=Pure Polytetrafluoroethylene RBR=Rubber S=304SS SFSS=17-4SS

SSZZ=316SS/Zamak ST4=Special PTFE 4 STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated

UHMW=Ultra High Molecular Polyethylene

EXPLODED VIEW



OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
43048	Key (M14 x 9 x 90)	1
828710	Protector, Oil Cap	1
990014	Hub, "B", 45 mm (STL) (Not shown)	1
34314	Kit, Oil Drain (3/8" x 48") (Not shown)	1
88902	Stud (M16 x 277) (For Removal of DM & IM) (Not shown)	2
819010	Assembly, Crankcase, Cast Iron Conversion	1

SERVICE PARTS

PART	DESCRIPTION	QTY
76966	Kit, Seal – Standard NBR	1
76967	Kit, Valve – Standard NBR	1
6102	Oil, Jug (2.5 gal) ISO-68 Hydraulic (Fill to Specified Crankcase Capacity Prior to Start-up)	1
6124	Gasket, Liquid (3 oz)	1
6139	Lubricant, Anti-Seize (8 oz) (See Tech Bulletin 095)	1
31173	Crankcase Oil Seal Removal and Installation Kit (Not Shown) (Includes: Oil Seals, Guide Tool, Screws, Washer)	1
30696	Reverse Pliers (Not Shown)	1
996810	Head, Complete with NBR Seals and O-Rings	1

