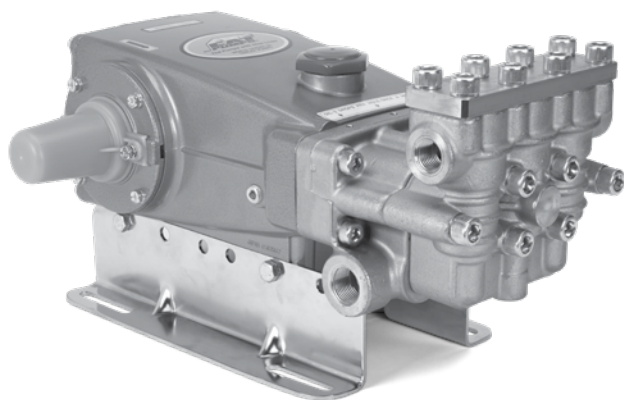


DATA SHEET

15 FRAME PLUNGER PUMPS



Brass Model: 1580



Model 1580 Shown
(Rails and shaft protector sold separately)

SPECIFICATIONS	U.S. Measure	Metric Measure
Flow	12.0 gpm	45.4 lpm
Pressure Range	100 - 3000 psi	6.9 - 207 bar
Pump RPM*	1180 rpm	1180 rpm
Inlet Pressure	Flooded to 70 psi	Flooded to 4.8 bar
Max. Liquid Temp. (NBR)	140° F	60° C

Alternative seals available for high temp up to 200° F

Bore	0.945"	24 mm
Stroke	1.181"	30 mm
Crankcase Capacity	42 oz.	1.26 L
Inlets Ports (2)	3/4" NPT(F)	3/4" NPT(F)
Discharge Ports (2)	1/2" NPT(F)	1/2" NPT(F)
Pulley Mounting	Either Side	Either Side
Shaft Diameter	1.181"	30 mm
Weight	59.5 lbs	27 kg
Dimensions	16.89 x 12.99 x 7.24"	429 x 330 x 184 mm

*Pump minimum is 100 RPM.

FEATURES

- Triplex design offers high efficiency and low pulsation.
- Durable V-Packings are lubricated and cooled by the liquid being pumped.
- Pre-set Lo-Pressure Seals provide secondary protection against external leaks and require no packing adjustment.
- Stacked valve design for ease in servicing.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Standard NBR Seals with alternative options for temperature and chemical compatibility.

ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE
NBR	—	140° F (60° C)
FPM	.0110	180° F (82° C)
STHT	.3400	200° F (93° C)

See Reference Document 99REF017 for inlet conditions and RPM at high temperature.

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

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

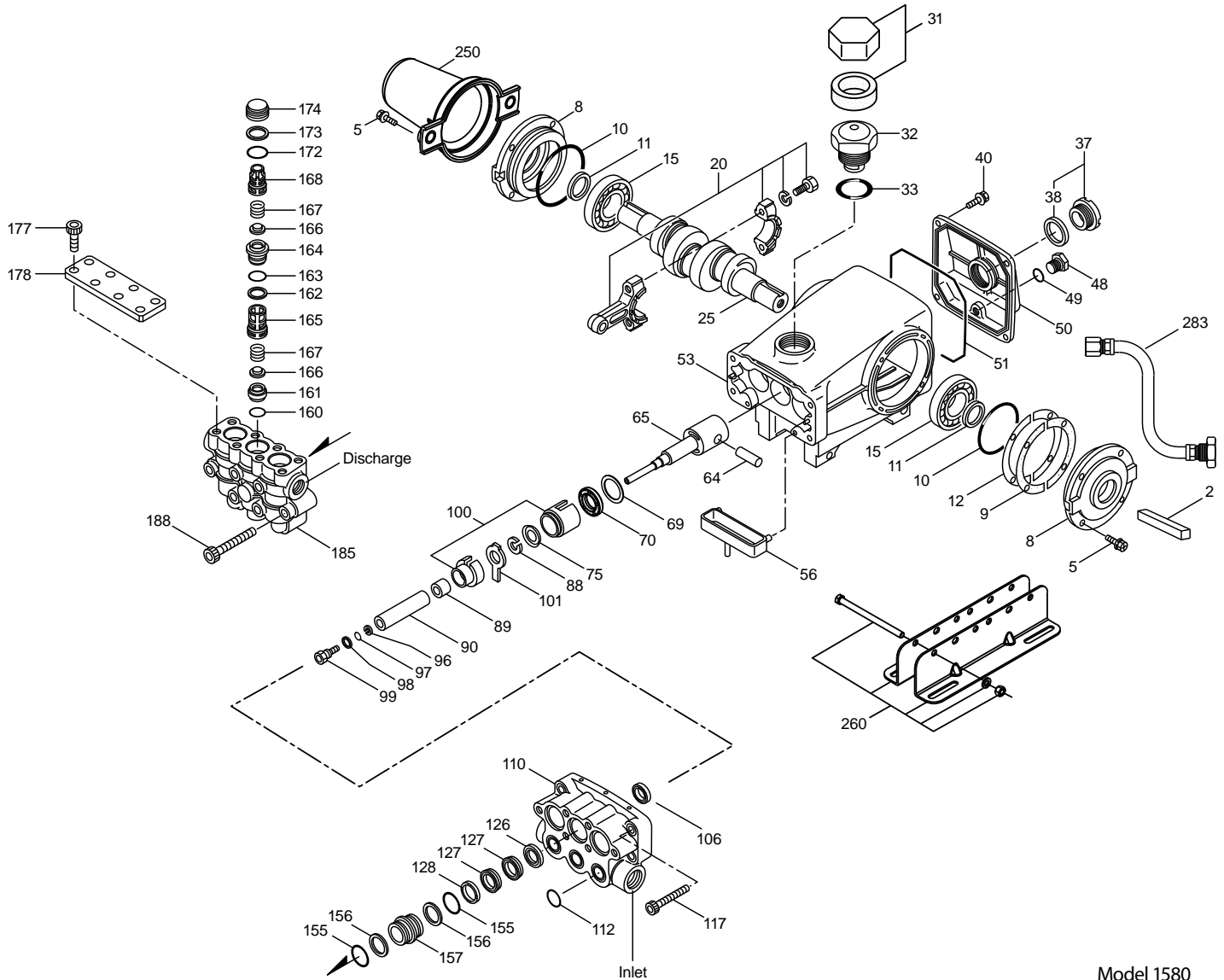
$$\text{DETERMINING MOTOR PULLEY SIZE} \quad \frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

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

PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
2	990036	STL	Key (M8x7x40) Use w/30059 and 990012	1
	30067	STL	Key (M8x7.5x25) Use w/30059 "H" Hub	1
5	125824	STCP R	Screw, HHC, Sems (M6x16)	8
8	49535	ALE	Cover, Bearing (See Tech Bulletin 118)	2
9	815281	FBR	Shim, Split, 2-Pc	6
10	11340	NBR	O-Ring, Bearing Cover - 70D	2
11	43495	NBR	Seal, Oil, Crankshaft - 70D	2
12	814800	S	Shim, Split, 2-Pc	2
15	39060	STL	Bearing, Roller	2
20	126805	BZ	Rod, Connecting Assembly	3
25	43494	FCM	Crankshaft, Dual-End (M30)	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
37	92241	—	Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
40	126541	STCP R	Screw, HHC, Sems (M6x20)	4
48	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	O-Ring, Drain Plug - 70D	1
50	49276	ALE	Cover, Rear (See Tech Bulletin 118)	1
51	44834	NBR	O-Ring, Rear Cover - 70D	1
53	115471	AL	Crankcase w/Guide Pins (See Tech Bulletin 118)	1
56	44664	POP	Pan, Oil	1
64	43507	CM	Pin, Crosshead	3
65	49223	SBZ	Rod, Plunger	3
69	126592	STCP R	Washer, Oil Seal	3
70	43500	NBR	Seal, Oil Crankcase	3
75	43506	S	Slinger, Barrier	3
88	45675	S	Washer, Keyhole	3
89	43553	BB	Spacer	3
90	43552	CC	Plunger, Ceramic (M24x77)	3
96	43235	PTFE	Back-up-Ring, Plunger Retainer	3
97	17399	NBR	O-Ring, Plunger Retainer - 80D	3
	14160	FPM	O-Ring, Plunger Retainer - 80D	3
98	45891	CU	Gasket, Plunger Retainer	3
99	104360	S	Retainer w/Stud, Plunger	3
100	855001	POP	Retainer, Seal, 2-Pc	3
101	43554	—	Wick	3
106	44035	NBR	Seal, LPS w/SS-Spg	3
	44388	FPM	Seal, LPS w/SS-Spg	3
	76035	ST	Seal, LPS w/S-Spg	3
110	133140	FBB	Manifold, Inlet	1
112	14179	NBR	O-Ring, Inlet Manifold - 70D	3
	15855	FPM	O-Ring, Inlet Manifold - 70D	3
117	126515	STCP R	Screw, HSH (M10x55)	4
126	43558	BB	Adapter, Female	3
127	43559	SNG	V-Packing	6
	103692	STG	V-Packing	6
128	43560	BB	Adapter, Male	3
155	11442	NBR	O-Ring, Adapter - 70D	6
	77318	FPM	O-Ring, Adapter	6
156	23086	PTFE	Backup-Ring, Adapter	6
157	133141	BB	Adapter	3
160	49238	NBR	O-Ring, Seat, Inlet - 90D	3
	129593	FPM	O-Ring, Seat, Inlet - 70D	3
161	133144	S	Seat, Inlet	3
162	49235	PTFE	Back-up-Ring, Seat	3
163	49236	NBR	O-Ring, Seat, Discharge - 70D	3
	129594	FPM	O-Ring, Seat, Discharge - 70D	3
164	49234	S	Seat, Discharge	3
165	49198	PVDF	Retainer, Spring, Inlet	3
166	48793	SS	Valve	6
167	43751	S	Spring	6
168	49199	PVDF	Retainer, Spring, Discharge	3
172	14176	NBR	O-Ring, Valve Plug - 70D	3
	77319	FPM	O-Ring, Valve Plug - 70D	3
173	49232	PTFE	Back-up-Ring, Valve Plug	3
174	49239	BB	Plug, Valve	3
177	126783	STCP R	Screw, HSH (M12x25)	8

EXPLODED VIEW



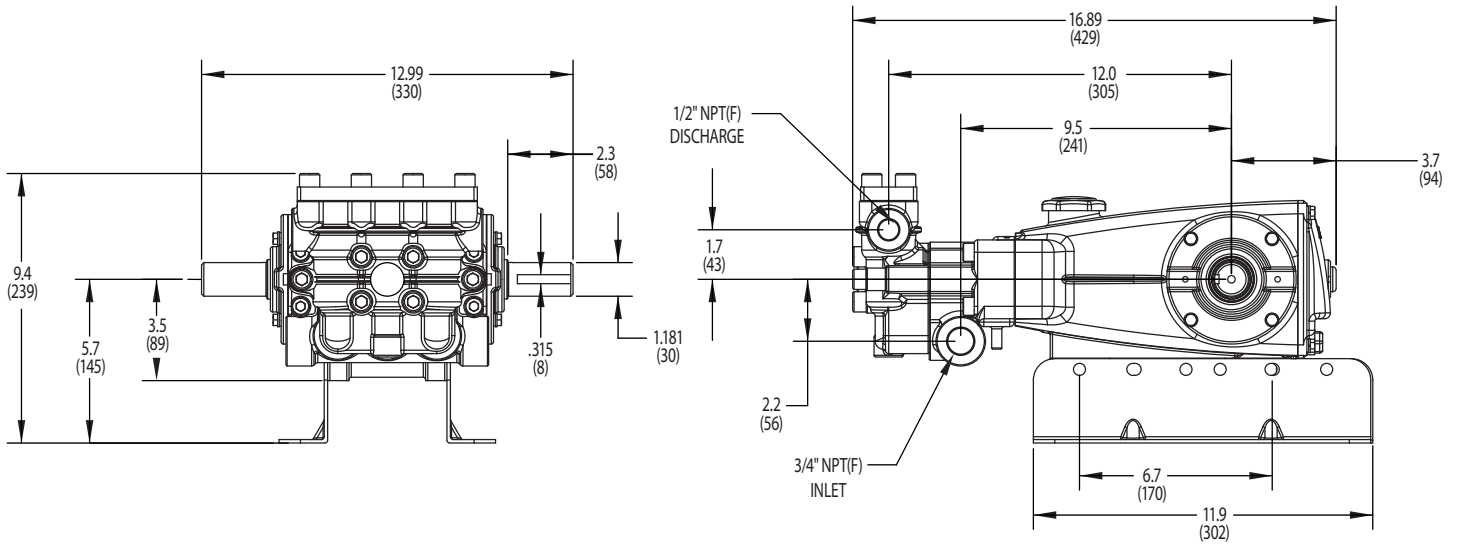
Model 1580
August 2018

ITEM	P/N	MATL	DESCRIPTION	QTY
178	49227	BB	Cover, Valve	1
185	133143	BB	Manifold, Discharge	1
188	126519	STCPR	Screw, HSH (M12x70)	6
250	30764	NY	Protector, Shaft w/2 Screws	1
255	30264	STZP	Mount, Direct	1
260	30613	STZPR	Mount, Rail Assy	1
	990550	STZPR	Mount, Rail Assy (Required on Diesel/Gas)	1
269	30206	F	Pulley (10") [See Tech Bulletin 003]	1
270	30059	STL	Hub, "H", M30 (Keyway M8) [See Tech Bulletin 003]	1
—	990012	STL	Hub, "B", M30 (Keyway M8) [See Tech Bulletin 003]	1
283	34334	—	Kit, Oil Drain (3/8" x 24")	1
290	6124	—	Sealant, Hylomar (3 oz.)	1
299	818606	BB	Head, Complete w/NBR Seals and O-Rings	1
300	76432	NBR	Kit, Seal (Incls: 97, 106, 112, 127, 155, 156) Standard	1
	76858	FPM	Kit, Seal (Incls: 97, 106, 112, 127, 155, 156) .0110	1
310	76428	NBR	Kit, Valve (Incls: 160-168, 172, 173) Standard	1
	76871	FPM	Kit, Valve (Incls: 160-168, 172, 173) .0110	1
—	6107	—	Oil, Bottle(21 oz.) ISO-68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	2

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

See Tech Bulletins 024, 035, 036, 043, 053, 074, 083 and 118 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum ALE=Aluminum Epoxy BB=Brass BZ=Bronze CC=Ceramic CM=Chrome-moly CU=Copper F=Cast Iron FBB=Forged Brass FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SBZ=304SS/Bronze STCP=Steel/Chrome Plated SNG=Special Blend (Buna) STG=Special Blend PTFE White STHT=Special PTFE High Temp STL=Steel 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.