

15 Frame Plunger Pump

**Standard Brass
Model**

1560

FEATURES

Superior Design

- Triplex plunger design provides smoother liquid flow.
- Lubricated Lo-Pressure Seals provide double protection against external leakage.
- Convenient pulsator assembly port to switch from high pressure to jetting.
- Oil bath crankcase assures optimum lubrication.
- Close tolerance concentricity of the ceramic plunger maximizes seal life.

Quality Materials

- Precision design 304 stainless steel valves and seats are hardened and polished for ultimate seating and extended valve life.
- Forged Brass manifolds are strong and corrosion resistant.
- Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and 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.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity means longer bearing life.

Easy Maintenance

- Wet-end is easily serviced without entering crankcase, requiring less time and effort.
- Stacked valve design for ease in servicing.
- Stacked valve assemblies are accessible without disturbing piping for quick service.
- Preset packings mean no packing gland adjustment is necessary, reducing maintenance costs.

⚠ WARNING

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

SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow	8.0 GPM	(30 L/M)
Pressure Range.....	100 to 4000 PSI	(7 to 275 BAR)
RPM	1140 RPM	(1140 RPM)
Inlet Pressure Range	Flooded to 70 PSI	(Flooded to 4.9 BAR)
Bore.....	0.787"	(20 mm)
Stroke.....	1.181"	(30 mm)
Crankcase Capacity	42 oz.	(1.26 L)
Maximum Liquid Temperature	140°F	(60°C)
Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.		
Inlet Ports (2)	3/4" NPTF	(3/4" NPTF)
Discharge Ports (2).....	1/2" NPTF	(1/2" NPTF)
Pulsator Port (1).....	1/8" NPTF	(1/8" NPTF)
Pulley Mounting	Either Side	(Either Side)
Shaft Diameter	1.181"	(30 mm)
Weight.....	59.9 lbs.	(27.2 kg)
Dimensions.....	16.93 x 12.99 x 7.24"	(430 x 330 x 184 mm)

ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE				RPM	DRIVE
U.S. GPM	L/M	PSI 2500	PSI 3000	PSI 3500	PSI 4000		
		BAR 175	BAR 210	BAR 245	BAR 275		Consult CAT PUMPS for Pump and Motor Pulley Sizes
8	30	13.7	16.4	19.2	21.9	1140	
7	27	12.0	14.4	16.8	19.2	998	
6	23	10.3	12.3	14.4	16.4	855	

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.	$\frac{\text{GPM x PSI}}{1460}$	=	Electric Brake H. P. Required
DETERMINING MOTOR PULLEY SIZE	$\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}}$	=	$\frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

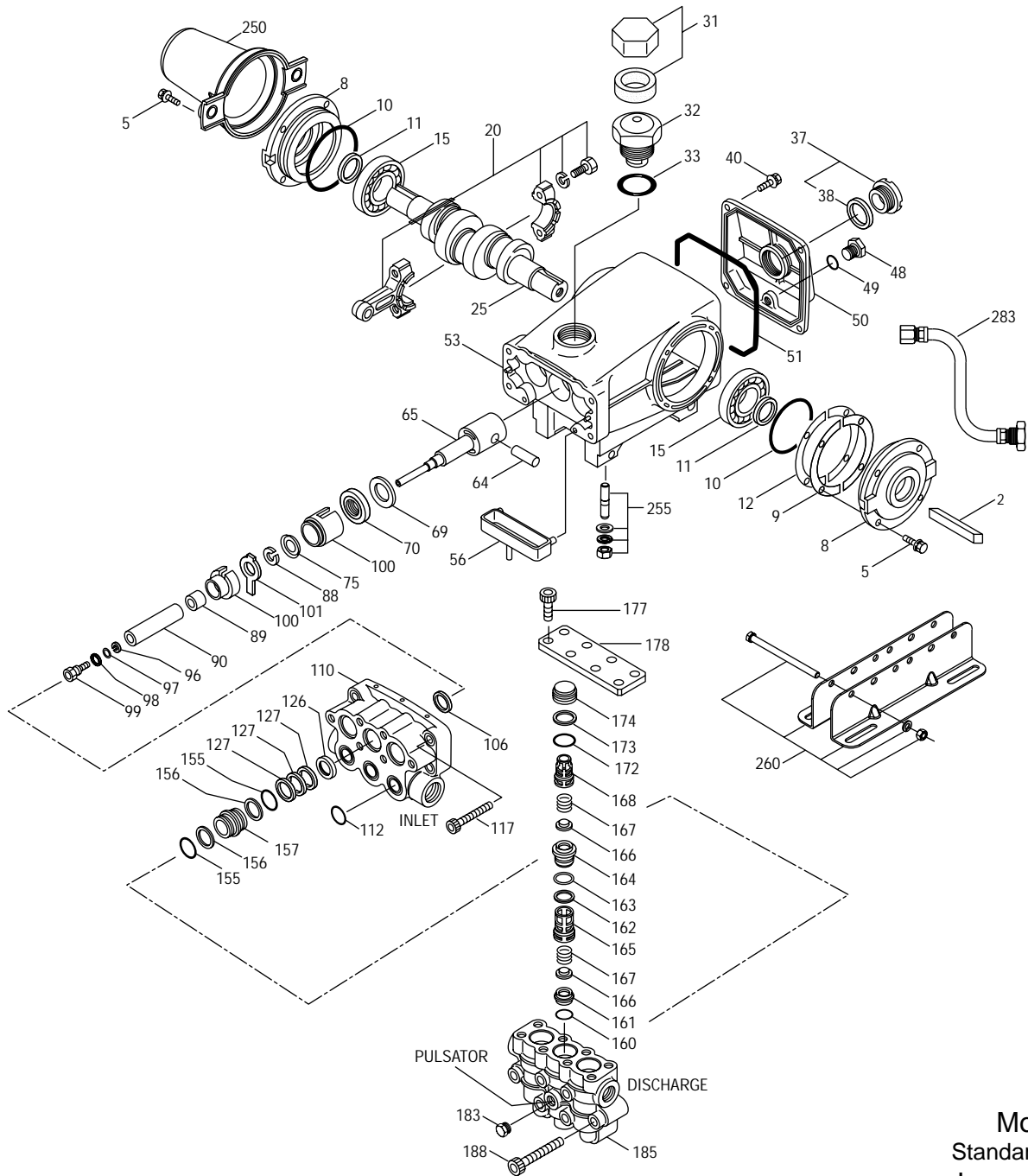
See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.
Refer to pump **Service Manual** for repair procedure, additional technical information and **pump warranty**.

"Customer confidence is our greatest asset"

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	43496	AL	Cover, Bearing	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	HS	Rod, Connecting Assembly	3
25	43494	FCM	Crankshaft, Dual-End (M30)	1
31	828710	—	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	43491	AL	Cover, Rear	1
51	44834	NBR	O-Ring, Rear Cover - 70D	1
53	115471	AL	Crankcase w/Guide Pins	1
56	44664	POP	Pan, Oil	1
64	43507	CM	Pin, Crosshead	3
65	49223	SHS	Rod, Plunger	3
69	126592	STCP R	Washer, Oil Seal	3
70	43500	NBR	Seal, Oil Crankcase - 80D	3
75	43506	S	Slinger, Barrier	3
88	45675	S	Washer, Keyhole	3
89	43505	BB	Spacer	3
90	43300	CC	Plunger, Ceramic (M20x77)	3
96	43235	PTFE	Back-up-Ring, Plunger Retainer	3
97	17399	NBR	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	43508	—	Wick	3
106	† 44071	NBR	Seal, LPS w/SS-Spg	3
110	49229	FBB	Manifold, Inlet	1
112	14179	NBR	O-Ring, Inlet Manifold - 70D	3
117	126515	STCP R	Screw, HSH (M10x55)	4
126	49231	BB	Adapter, Female	3
127	† 44607	STG	V-Packing	9
155	14176	NBR	O-Ring, Spacer, V/P - 70D	6
156	49232	PTFE	Back-up-Ring, Spacer, V/P	6
157	49230	BB	Spacer, V/P	3
160	49238	NBR	O-Ring, Seat, Inlet - 90D	3
161	49237	S	Seat, Inlet	3
162	49235	PTFE	Back-up-Ring, Seat	3
163	49236	NBR	O-Ring, Seat, Discharge - 70D	3
164	49234	S	Seat, Discharge	3
165	49198	PVDF	Retainer, Spring, Inlet	3
166	48793	SSL	Valve	6
167	43751	S	Spring	6
168	49199	PVDF	Retainer, Spring, Discharge	3
172	14176	NBR	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
178	49227	BB	Cover, Valve	1
183	49462	BB	Plug, Pulsator Port (1/8" NPTM)	1
185	49197	FBB	Manifold, Discharge	1
188	126519	STCP R	Screw, HSH (M12x70)	6
250	30764	NY	Protector, Shaft w/2 Screws	1
255	30264	STZP	Mount, Direct	1
260	30613	STZP	Mount Rail Assy	1

EXPLODED VIEW

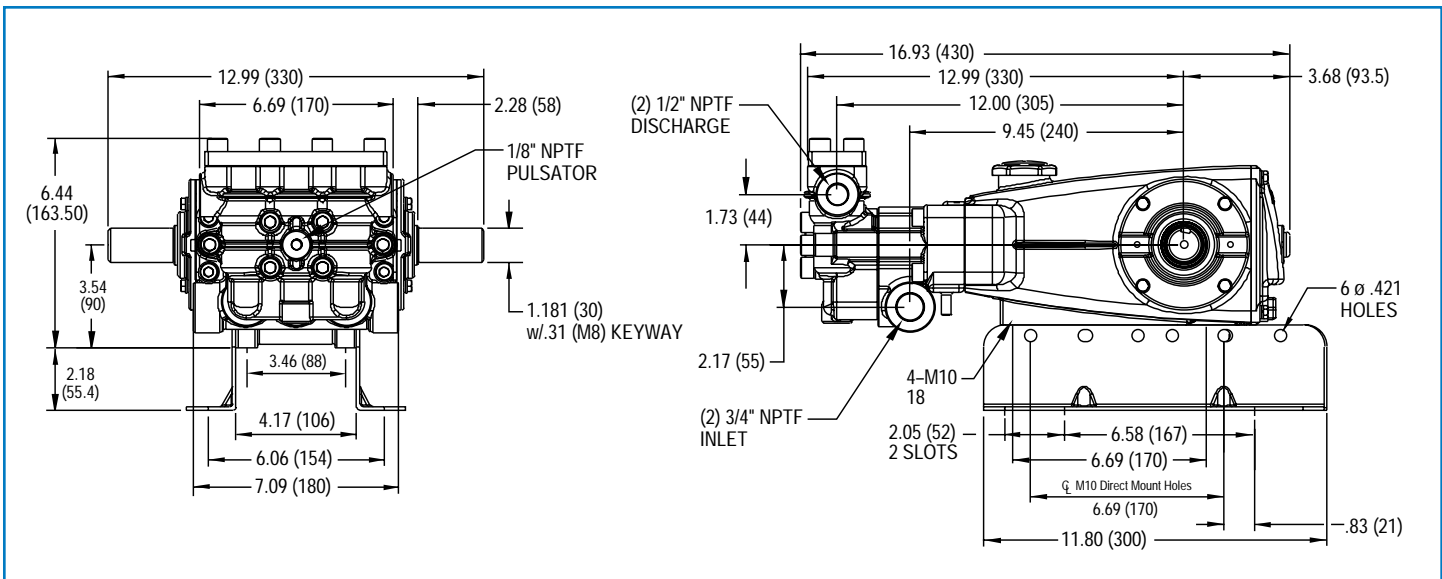


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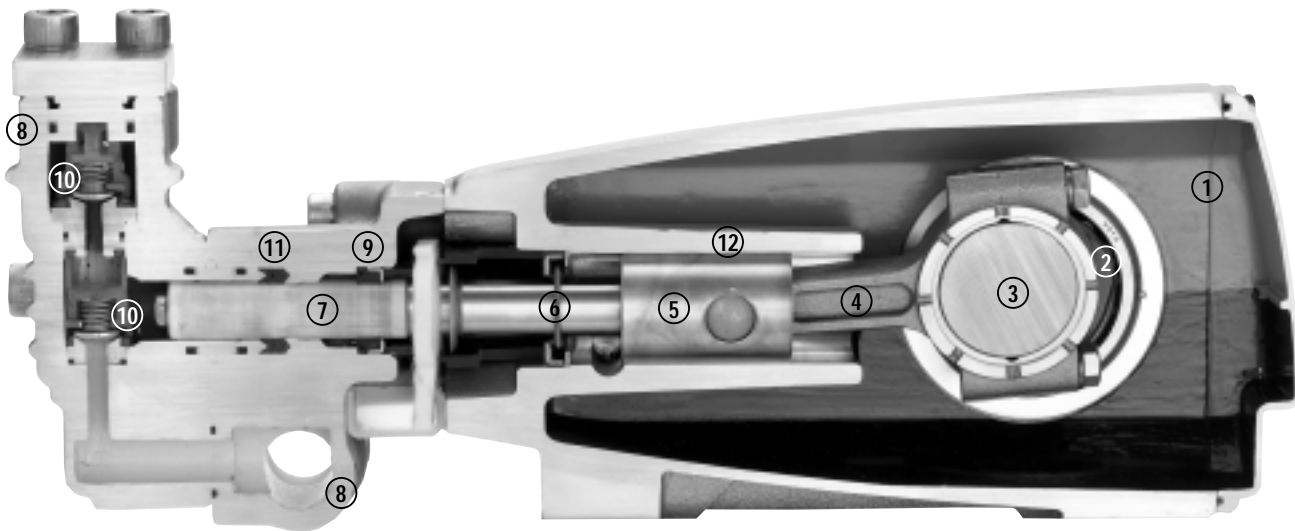
ITEM	P/N	MATL	DESCRIPTION	QTY
269	30206	F	Pulley (10") [See Drive Packages, Tech Bulletin 003]	1
270	30059	STL	Hub, "H", M30 (Keyway M8) [See Drive Packages, Tech Bulletin 003]	1
—	990012	STL	Hub, "B", M30 (Keyway M8) [See Drive Packages, Tech Bulletin 003]	1
283	34334	—	Kit, Oil Drain (3/8" x 24")	1
290	6124	—	Sealant, Hylomar (3 oz.)	1
299	818385	FBB	Head, Complete	1
300	31862	NBR	Kit, Seal (Incls: 97,106,112,127,155,156)	1
310	31872	NBR	Kit, Valve (Incls: 160,161,162,163,164,165,166,167,168,172,173)	1
—	76560	—	Pulsator Assy	1
—	6100	—	Oil, Case (12 Bottles) ISO-68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1

Italics are optional items. R Components comply with RoHS Directive. † Production parts are different than service parts.
See Tech Bulletins 002, 003, 024, 035, 036, 043, 053, 074, 077 and 083 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass CC=Ceramic CM=Chrome-moly
CU=Copper F=Cast Iron FBB=Forged Brass FBR=Fiber FCM=Forged Chrome-moly HS=High Strength NBR=Medium Nitrile (Buna-N) NY=Nylon
POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SHS=304SS/High Strength
SSL=316SS/Low Carbon STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel STZP=Steel/Zinc Plated



Model 1560



- 1 Die cast aluminum **crankcase** means high strength, light weight, and excellent tolerance control.
- 2 Oversized crankshaft **bearings** provide extended bearing life and pump performance.
- 3 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.
- 4 Matched oversized high strength **connecting rods** are noted for superior tensile strength and bearing quality.
- 5 Special **plunger rods** with high strength crossheads for high load bearing and longevity.
- 6 The stainless steel **slinger** provides back-up protection for the crankcase seal, keeping pumped liquids out of the crankcase.
- 7 Special concentric, high-density, polished, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 8 **Manifolds** are a high strength forged brass for long-term, continuous duty.
- 9 100% wet **seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides of seals.
- 10 Stacked stainless steel **valve assemblies** include valves, seats and springs to provide corrosion-resistance, ultimate seating and extended life.
- 11 Specially formulated, CAT PUMP exclusive, **V-Packings** offer unmatched performance and seal life.
- 12 **Crossheads** are 360° supported for uncompromising alignment.
- 13 Special **pulsator assembly port** to switch from high pressure to jetting (not shown).

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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