

DATA SHEET

15 FRAME PLUNGER PUMPS



Standard Brass: 1050



Model 1050 Shown
(Rails and shaft protector sold separately)

FEATURES

- Triplex 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 adjustments.
- Standard NBR seals with alternative options for temperature and chemical compatibility.
 - FPM – .0110
 - EPDM – .0220
 - IPFE – .0770
 - High Temp, 200°F, (Intermittent Run Dry) – .3400

COMMON SPECIFICATIONS

	U.S.	Metric
Bore	0.945"	24 mm
Stroke	1.18"	30 mm
Crankcase Capacity	42 oz.	1.26 l
Inlet 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	44 lbs.	20 kg
Dimensions (Pump Only)	16.28 x 12.99 x 6.44"	414 x 330 x 164 mm

STANDARD SPECIFICATIONS

	U.S.	Metric
Flow	10 gpm	38 lpm
Pressure Range	100 to 2200 psi	7 to 155 bar
RPM	958 rpm	958 rpm
Inlet Pressure Range	-5 to 60 psi	-0.35 to 4 bar
Max. Liquid Temperature	160°F	71°C

Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.

ALTERNATE SPECIFICATIONS

	U.S.	Metric
Flow	12 gpm	45 lpm
Pressure Range	100 to 1800 psi	7 to 125 bar
RPM	1150 rpm	1150 rpm
Inlet Pressure Range	20 to 60 psi	1.4 to 4 bar
Max. Liquid Temperature	100°F	38°C

ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE			RPM	MOTOR PULLEY SIZE
		psi 1800	psi 2000	psi 2200		Using 1725 rpm Motor & Std. 10" Pump Pulley
U.S. gpm	lpm	bar 125	bar 138	bar 155		PULLEY OUTER DIAMETER
12.0	45	14.8	N/A	N/A	1150	6.5
10.0	38	12.4	13.7	15.1	958	5.4
9.0	34	11.1	12.4	13.6	836	4.9

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.

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

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

PARTS LIST

ITEM	PN	MATL	DESCRIPTION	QTY
5	125824	STCP R	Screw, HHC Sems (M6x16)	8
8	43496	AL	Cover, Bearing	2
9	815281	FBR	Shim, Split, Bearing Cover 2-Pc	2/4
	814800	S	Shim, Split, Bearing Cover 2-Pc	0/4
10	11340	NBR	O-Ring, Bearing Cover - 70D	2
11	43495	NBR	Seal, Oil, Crankshaft - 70D	2
15	39060	STL	Bearing, Roller	2
20	48600	TNM	Rod, Connecting Assembly [10/01]	3
25	43494	FCM	Crankshaft, Dual End	1
31	828710	PE	<i>Protector, Oil Cap w/Foam Gasket</i>	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
54	27488	S	Pin, Guide	2
56	44664	POP	Pan, Oil	1
64	43507	CM	Pin, Crosshead	3
65	43501	SZZ	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	43553	BB	Collar, Spacer	3
90	43552	CC	Plunger (M24x77)	3
96	43235	PTFE	Back-up-Ring, Plunger Retainer	3
97	17399	NBR	O-Ring, Plunger Retainer - 80D	3
98	44041	SS	Gasket, Plunger Retainer	3
99	104360	S	Retainer, Plunger (M6)	3
100	855001	POP	Retainer, Seal 2-Pc [07/05] (See Tech Bulletin 098)	3
101	43554	—	Wick, Long Tab	3
106	44035	NBR	Seal, LPS w/SS-Spg	3
120	49290	BB	Case, Seal [07/05]	3
121	14762	NBR	O-Ring, Seal Case - 70D	3
126	43558	BB	Adapter, Female	3
127	43559	SNG	V-Packing	6
128	43560	BB	Adapter, Male	3
139	20326	BBCP	Plug, Inlet [3/4" NPT(F)]	1
162	43248	PTFE	Back-up-Ring, Valve Seat	6
163	43249	NBR	O-Ring, Seat - 80D	6
164	44718	S	Seat	6
166	43721	S	Valve	6
167	43751	S	Spring, Valve	6
168	44564	PVDF	Retainer, Spring	6
172	17617	NBR	O-Ring, Valve Plug - 90D	6
174	43851	BBCP	Plug, Valve	6
185	46704	BBCP	Head, Manifold [9/00]	1
187	126545	STCP R	Stud, Manifold (M10x45)	4
192	126231	STCP R	Lockwasher (M10)	4
194	126522	STCP R	Nut, Hex (M10)	4

Italics are optional items.

[] Date of latest production change.

R components comply with RoHS Directive.

View Tech Bulletins 002, 003, 024, 027, 035, 036, 043, 045, 046, 048, 049, 052, 053, 072, 074, 083, 087, 089 and 098 for additional information.

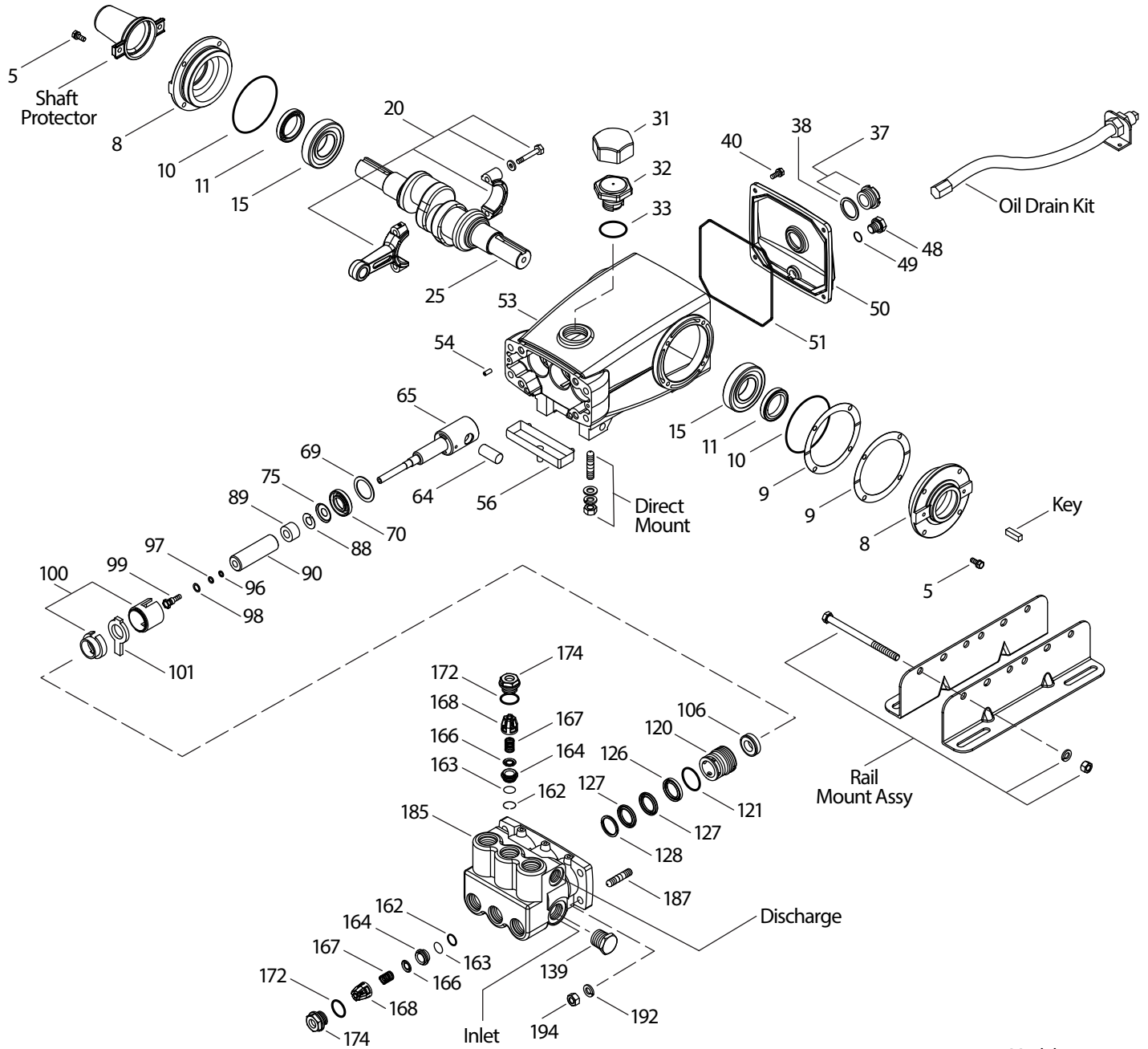
MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-moly

FBR=Fiber FCM=Forged Chrome-moly NBR=Medium Nitrile (Buna-N) PE=Ployethylene POP=Polypropylene

PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SNG=SpecialBlend (Buna) SS=316SS

STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated SZZ=304SS/Zamak TNM=Special High Strength

EXPLODED VIEW



Model
Standard - 1050
December 2015

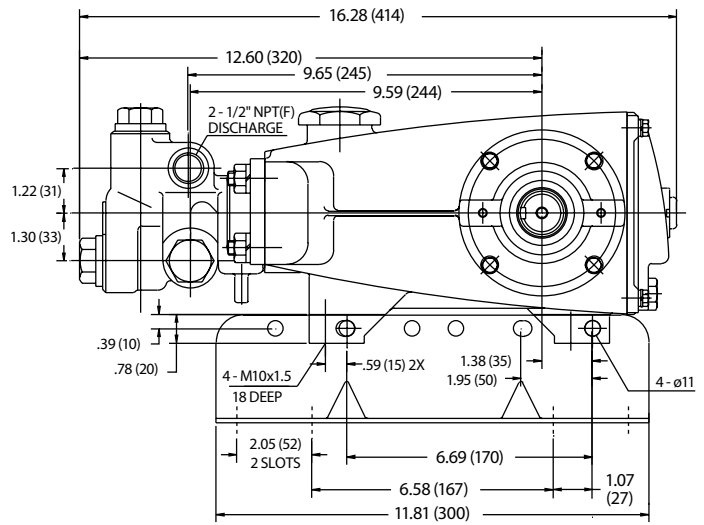
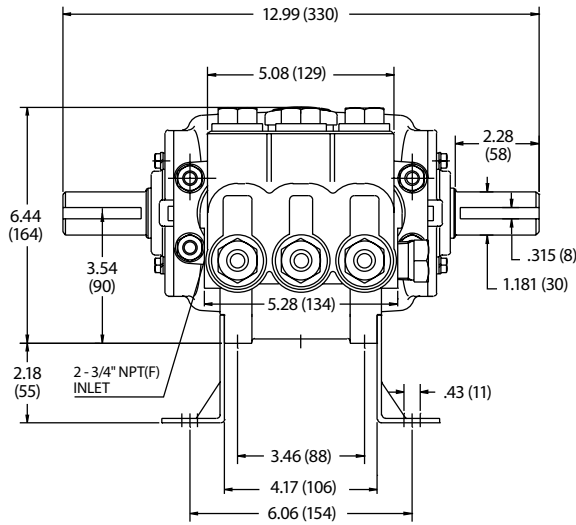
OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30764	Protector, Shaft w/two screws	1
30764S	Protector, Shaft w/two stainless steel screws	1
30264	Mount, Direct	1
30613	Mount, Rail, Assy (2.09 x 9.45)	1
30059	Hub, "H" 30mm (M8 Keyway)	1
30661	Mount, Assy (Incls: 30613, 30206, 30059, 30067, 30764)	1
34334	Kit, Oil Drain (3/8" x 24") (See Individual Data Sheet)	1

SERVICE PARTS

PART	DESCRIPTION	QTY
30696	Pliers, Reverse	1
33006	Socket, Seal Case (1/2" drive)	1
6107	Oil, Bottle (21 oz) ISO 68 Hydraulic	2
30067	Key (M8 x 7.5 x 25)	1
6124	Gasket, Liquid (3 oz.)	1
814560	Head, Complete w/NBR seals and o-rings Model 1050	1

Optional seal and valve kits listed on Page 4.



SEAL KITS

PUMP MODEL	NBR (STD)	FPM (0.0110)	EPDM (0.0220)	IPFE (0.0770)	HTST (0.3400)
1050	30913	30986	33913	76913	76062

ITEM (Included in Seal Kits)	PART NUMBER					DESCRIPTION	QTY
97	17399	14160	46204	701715	17399	O-Ring, Plunger Retainer	3
100	855001	855001	855001	855001	855001	Retainer, Seal 2 - Piece	3
106	44035	44388	46208	703243	76035	Seal, LPS w/SS-Spg	3
121	14762	11737	46205	701851	14762	O-Ring, Seal Case	3
127	43559	103692	103692	103692	103692	V-Packing	6

Note: One (1) seal kit required per pump

VALVE KITS

PUMP MODEL	NBR (STD)	FPM (0.0110)	EPDM (0.0220)	IPFE (0.0770)	NBR (STD)
1050	34920	31256	31253	NSU	34920

ITEM (Included in Valve Kits)	PART NUMBER					DESCRIPTION	QTY
162	43248	43248	43248	43248	43248	Backup-Ring, Seat	3
163	43249	44383	46206	701852	43249	O-Ring, Seat	3
164	44718	44718	44718	44718	44718	Seat (1050)	3
166	43721	43721	43721	43721	43721	Valve (1050)	3
167	43751	43751	43751	43751	43751	Spring (1050)	3
168	44564	44564	44564	44564	44564	Retainer, Spring	3
172	17617	11691	46207	701853	17617	O-Ring, Valve Plug	3

Note: Two (2) valve kits required per pump

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.



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