

# DATA SHEET

## 15 FRAME PLUNGER PUMPS

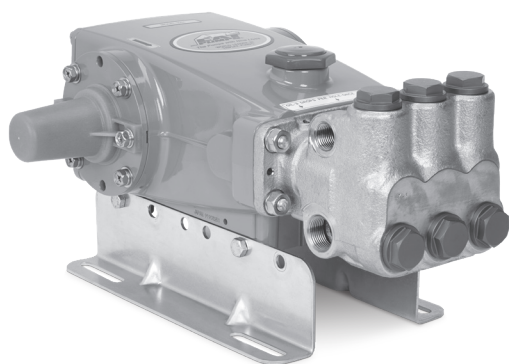


**Stainless Steel**  
**1051**

**SS Flushed**  
**1051C**

**Duplex SS**  
**1051D**

**Nickel Aluminum Bronze**  
**1057**



Model 1051 Shown  
(Shaft protector included rails sold separately)

### FEATURES

- Triplex design delivers high efficiency and low pulsation.
- Special flushed inlet manifold on model 1051C permits external flush for added cooling with high-temperature liquids and lubrication with low-lubricity liquids.
- Belt driven option provides precision flow settings.
- Compact direct-drive with bell housing and flexible coupler assembly. NEMA or IEC electric motor or hydraulic options available.
- Standard NBR seals with alternative options for temperature and chemical compatibility.

### COMMON SPECIFICATIONS

	U.S.	Metric
Bore	0.945"	24 mm
Stroke	1.181"	30 mm
Crankcase Capacity	42 oz.	1.26 l
Inlet Ports (2)	3/4" NPT(F)	3/4" NPT (F)
Flush Ports (2) (1051C)	1/8" NPT (F)	1/8" 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 (1051,1051C,1051D)	16.10 x 12.99 x 6.45"	409 x 330 x 164 mm
Dimensions (1057)	16.25 x 12.99 x 6.45"	413 x 330 x 164 mm

### SPECIFICATIONS

	U.S.	Metric
Flow	10 gpm	38 lpm
Pressure Range	100 – 2200 psi	6.9 – 152 bar
Pump RPM*	958 rpm	958 rpm
Inlet Pressure Range	-5 – 60 psi	-0.35 – 4.1 bar
Max. Liquid Temp. (NBR)	160°F	71°C

\*Pump minimum is 100 RPM.

Alternative seals available for higher temperatures up to 200° F

### ALTERNATE SPECIFICATIONS

	U.S.	Metric
Flow	12.3 gpm	46.6 lpm
Pressure Range	100 – 1800 psi	6.9 – 124 bar
Pump RPM*	1180 rpm	1180 rpm
Inlet Pressure Range	20 – 60 psi	1.4 – 4.1 bar
Max. Liquid Temp. (NBR)	100°F	38°C

\*Pump minimum is 100 RPM.



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### ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE
NBR	—	160° F (71° C)
FPM	.0110	180° F (82° C)
EPDM	.0220	160° F (71° C)
IPFE	.0770	200° F (93° C)
HT	.3000	180° F (82° C)
STHT	.3400	190° F (88° C)

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

**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.**

$$\frac{\text{HP (Electric Brake)}}{1460} = \frac{\text{gpm x psi}}{1460}$$

**DETERMINING MOTOR PULLEY SIZE**

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

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

# PARTS LIST

ITEM	DESCRIPTION				QTY	
	1051/C/D	MATL	1057	MATL		
5	49651	S	49651	S	Screw, HHC Sems (M8x20) (See Tech Bulletin 074, 128)	8
8	134805	ALE	134805	ALE	Cover, Bearing (See Tech Bulletin 118, 128)	2
9	855043	FBR	855043	FBR	Shim, Split, Bearing Cover 2-Piece (See Tech Bulletin 128)	2/4
10	11340	NBR	11340	NBR	O-Ring, Bearing Cover – 70D	2
11	43495	NBR	43495	NBR	Seal, Oil, Crankshaft	2
12	855044	S	855044	S	Shim, Split, Bearing Cover 2-Piece (See Tech Bulletin 128)	0/4
15	39060	STL	39060	STL	Bearing, Roller	2
20	48600	TNM	48600	TNM	Rod, Connecting Assembly [10/01] (See Tech Bulletin 074)	3
25	43494	FCM	43494	FCM	Crankshaft, Dual End (M30)	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Filler Cap – 70D	1
37	92241	PC	92241	PC	Gauge, Oil, Bubble with Gasket – 80D (See Tech Bulletin 074)	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge – 80D	1
40	92542	S	92542	S	Screw, HHC Sems (M6 x 20) (See Tech Bulletin 074)	4
48	25625	STCP	25625	STCP	Plug, Drain (1/4" x 19BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug – 70D	1
50	133576	ALE	133576	ALE	Cover, Rear (See Tech Bulletin 118)	1
51	44834	NBR	44834	NBR	O-Ring, Rear Cover – 70D	1
53	134848	ALE	134848	ALE	Crankcase (Includes: 54, 55) (See Tech Bulletin 118, 128)	1
54	27488	S	27488	S	Pin, Guide	2
55	44005	S	44005	S	Stud, Manifold (M10 x 45) (See Tech Bulletin 128)	4
56	44664	POP	44664	POP	Pan, Oil	1
64	43507	CM	43507	CM	Pin, Crosshead	3
65	<b>48892</b>	SSHB	<b>45258</b>	SSZZ	Rod, Plunger	3
69	126592	STCP R	126592	STCP R	Washer, Oil Seal	3
70	43500	NBR	43500	NBR	Seal, Oil, Crankcase – 80D	3
75	43506	S	43506	S	Slinger, Barrier	3
88	45675	S	45675	S	Washer, Keyhole	3
89	45879	SS	45879	SS	Collar, Spacer	3
90	43552	CC	43552	CC	Plunger (M24 x 77)	3
95	89651	SS	89651	SS	Stud, Plunger Retainer (M6 x 70)	3
96	43235	PTFE	43235	PTFE	Back-Up Ring, Plunger Retainer	3
97	17399	NBR	17399	NBR	O-Ring, Plunger Retainer – 80D	3
98	44041	SS	44041	SS	Gasket, Plunger Retainer	3
99	44031	SS	44031	SS	Retainer, Plunger (M6) (See Tech Bulletin 074)	3
100	855001	POP	855001	POP	Retainer, Seal 2-Piece [07/05] (See Tech Bulletin 098)	3
101	43554	—	43554	—	Wick, Long Tab	3
106	44035	NBR	44035	NBR	Seal, LPS with SS-Spring	3
120	49286	SSNP	49286	SSNP	Case, Seal [07/05]	3
121	14762	NBR	14762	NBR	O-Ring, Seal Case – 70D	3
126	48389	D	48389	D	Adapter, Female (See Tech Bulletin 087)	3
	45073	SS	45073	SS	Adapter, Female (See Tech Bulletin 087)	3
127	103692	STG	103692	STG	V-Packing	6
128	45074	SS	45074	SS	Adapter, Male	3
139	<b>44382</b>	SS	<b>44562</b>	NAB	Plug, Inlet [3/4" NPT(M)]	1
162	43248	PTFE	43248	PTFE	Back-Up Ring, Valve Seat	6
163	43249	NBR	43249	NBR	O-Ring, Seat – 80D	6
164	44037	SS	44037	SS	Seat	6
166	† 48793	SS	† 48793	SS	Valve	6
167	44039	SS	44039	SS	Spring, Valve	6
168	44564	PVDF	44564	PVDF	Retainer, Spring	6
171	—	—	<b>44832</b>	S	Coil Spring, Valve Plug (1057 Only)	6
172	17617	NBR	17617	NBR	O-Ring, Valve Plug	6
174	<b>49293</b>	SS	<b>44831</b>	NAB	Plug, Valve (See Tech Bulletin 074)	6
185	<b>134823</b>	SS	<b>46706</b>	NAB	Head, Manifold [8/18]	1
	<b>49188</b>	SS	—	—	Head, Manifold, Flushed (1/8" Flushed Port) (1051C Only)	1
	<b>134824</b>	SSD	—	—	Head, Manifold (1051D Only) [8/18]	1
192	15847	S	15847	S	Lockwasher (M10)	4
194	81258	S	81258	S	Nut, Hex (M10) (See Tech Bulletin 074)	4
250	855047	NY	855047	NY	Protector, Shaft with Two Screws (See Tech Bulletin 128)	1

*Italics are optional items. Bold print part numbers are unique to a particular pump model.*

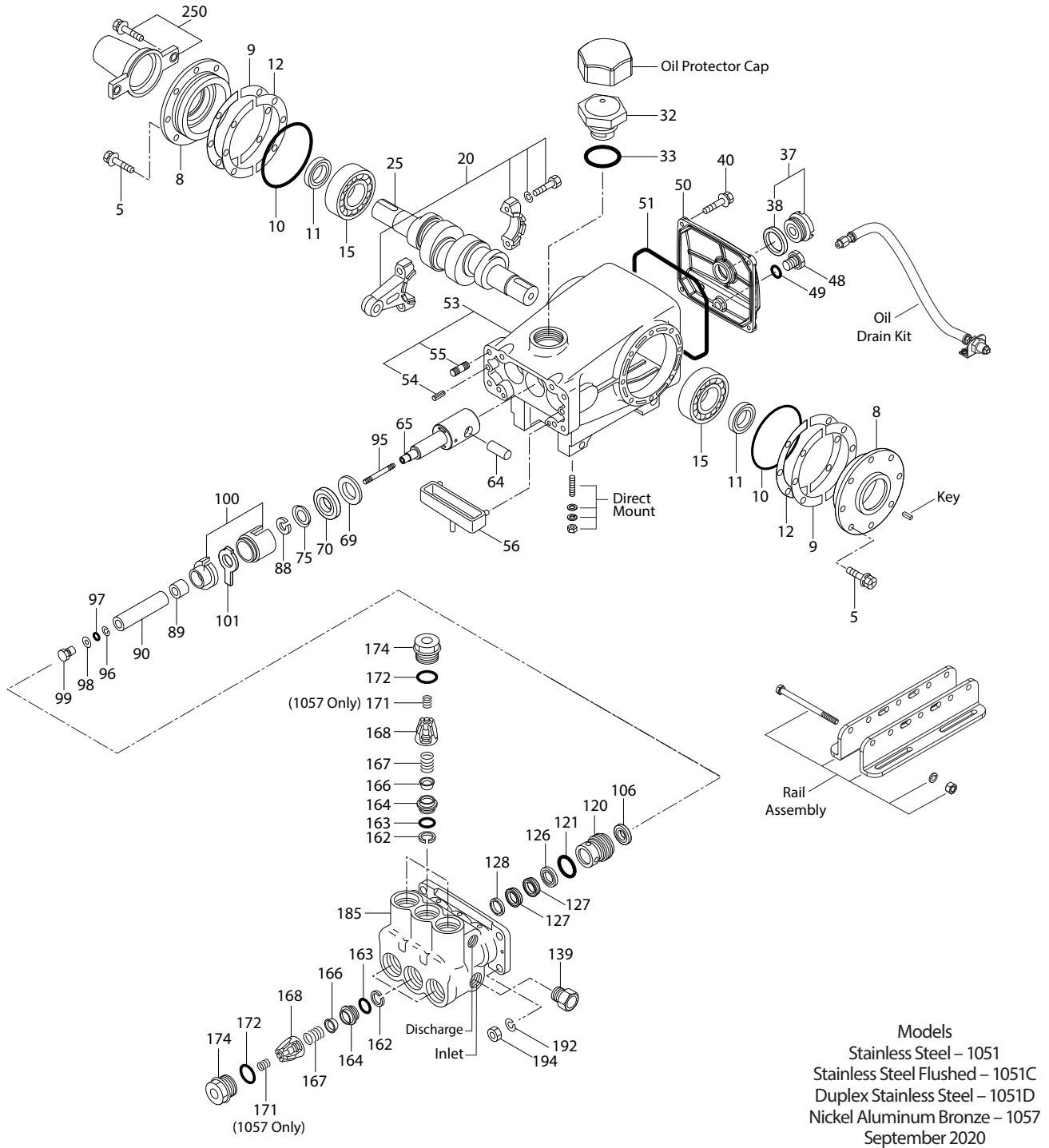
[ ] Date of latest production change. † Production parts different from service parts. R components comply with RoHS Directive.

\*Review individual parts in each kit for material code identification. For additional technical information see [www.catpumps.com/literature/tech-bulletins](http://www.catpumps.com/literature/tech-bulletins).

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic ALE=Aluminum Epoxy CC=Ceramic CM=Chrome-moly D=Acetal EPDM=Ethylene Propylene Diene Monomer FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon HT=High Temp. IPFE=Perfluoroelastomer NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Polycarbonate PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SSD= Duplex SS SSHB=316SS/High Strength Brass SSZZ=316SS/Zamak STCP=Steel/Chrome Plated STG=Special Blend PTFE White STHT=Special PTFE/High Temp SSNP=316SS/Nickel Plated STL=Steel TNM=Special High Strength

Standard and optional Seal Kits and Valve Kits listed on pages 3 and 4. Optional Parts and Accessories and Service parts listed on Page 3.

# EXPLODED VIEW



## OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30067	Key (M8 x 7.5 x 25)	1
30264	Mount, Direct	1
30613	Assembly, Rail (See Dimensional Drawing)	1
990550	Assembly, Rail for Diesel/Gas (See Dimensional Drawing)	1
76513	Assembly, Rail (See Dimensional Drawing)	1
828710	Protector, Oil Cap with Foam Gasket	1
30059	Hub, "H" 30mm (M8 Keyway)	1
34334	Kit, Oil Drain (3/8" x 24") (See Individual Data Sheet)	1
33006	Socket, Seal Case (1/2" drive)	1
30696	Pliers, Reverse	1

## SERVICE PARTS

PART	DESCRIPTION	QTY
33916	Seal Kit – Standard	1
34387	Valve Kit – Standard	2
6107	Oil, Bottle (21 oz.) ISO 68 Hydraulic	2
6119	Lubricate, Antiseize (2 oz.) (See Tech Bulletin 095) Models 1051, 1051C, 1051D	1
6124	Gasket, Liquid (3 oz.)	1
816771	Head, Complete with NBR seals and o-rings Model 1051	1
818333	Head, Complete with NBR seals and o-rings Model 1051C	1
818442	Head, Complete with NBR seals and o-rings Model 1051D	1
815261	Head, Complete with NBR seals and o-rings Model 1057	1

