

DATA SHEET

35 FRAME PLUNGER PUMPS

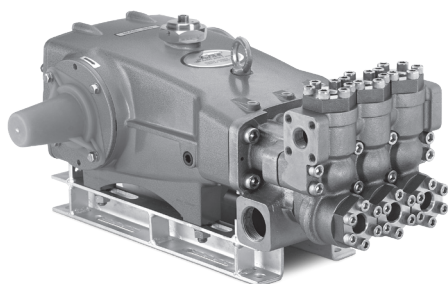


**Nickel Aluminum
Bronze Model:**

3517HS.44101

**Nickel Aluminum Bronze
Flushed Model:**

3517CHS.44101



Model 3517HS.44101 Shown
(Shaft protector included, mounting rails sold separately)

FEATURES

- Field tested, high-pressure triplex pump configured for high-temperature TEG (triethylene glycol) applications up to 240° F/115° C. May be used in other high-temperature applications with liquids possessing adequate lubrication properties. Contact Cat Pumps for more information.
- Positive displacement technology delivers optimum energy efficiency.
- TEG* pump configuration option is designed to withstand high temperatures and demanding continuous-duty environments:
 - Elastomers and O-ring materials made from heat-resistant FPM material.
 - Stainless steel vented oil filler cap assembly and aluminum seal retainers resist melting and misshaping.
 - Stainless steel oil sight gauge with aluminum adapter holds up against higher-temperature drive-end operation.
 - Special PTFE-blended V-packings and low-pressure seals increase durability and longevity with high-temperature fluids.

* TEG pump configuration is denoted by adding ".44101" to the end of the pump model.

SPECIFICATIONS

	U.S.	Metric
Flow	14 gpm	53 lpm
Pressure Range	100–3000 psi	6.9–207 bar
Pump RPM*	800 rpm	800 rpm
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.8 bar
Maximum Liquid Temperature	240° F	115° C
Bore	0.984"	25 mm
Stroke	1.890"	48 mm
Crankcase Capacity	4.2 qts	4 l
Inlet Ports (2)	1½" NPT(F)	1½" NPT(F)
Flush Ports (2)**	¼" NPT(F)	¼" NPT(F)
Discharge Ports (2)	1" NPT(F)	1" NPT(F)
Shaft Diameter	1.378"	35 mm
Pulley Mounting	Either Side	Either Side
Weight	152 lbs	69 kg
Dimensions	24.61 x 18.11 x 9.72"	675 x 460 x 247 mm

*Pump minimum is 100 RPM.

**The flushed inlet manifold requires an external flush, which aids in cooling the seals when pumping high-temperature liquids and lubricating them when pumping low-lubricity liquids.

ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE						PUMP RPM
GPM	LPM	PSI	BAR	PSI	BAR	PSI	BAR	
		2000	138	2500	172	3000	207	
		Horsepower						
14	53	19.2 hp		24.0 hp		28.8 hp		800
12	45	16.4 hp		20.5 hp		24.7 hp		685
10	38	13.7 hp		17.1 hp		20.5 hp		571

DETERMINING THE PUMP RPM

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

DETERMINING THE REQUIRED HP

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

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	96049	S	Screw, HHC Sems (M10 x 25) (See Tech Bulletin 074)	8
8	134604	ALE	Cover, Bearing	2
9	815279	FBR	Shim, Split 2-Piece	2
10	76173	FPM	O-Ring, Bearing Cover	2
11	76172	FPM	Seal, Oil, Crankshaft	2
12	855049	S	Shim, Split 2-Piece	0-2
15	29326	STL	Bearing, Roller	2
20	126725	BZ	Rod, Connecting Assembly (Includes: 21, 22, 23) (See Tech Bulletin 074)	3
21	126749	STCP R	Washer, Locking	3
22	126593	STCP R	Shim, Washer (M10.5)	6
23	122045	STZP	Screw, HH (M10 x 55)	6
25	29325	FCM	Crankshaft, Dual End (M48)	1
32	997574	SS	Cap, Filler with O-Ring	1
34	126743	STCP R	Bolt, Eye (M12 x 1.75) (For Lifting Pump Only)	1
36	76792	SS	Gauge, Sight	1
37	76791	AL	Adapter, Sight	1
38	44428	NBR	Gasket, Flat, Adapter	1
40	125753	S	Screw, HHC Sems (M8 x 25) (See Tech Bulletin 074)	8
48	25625	STCP	Plug, Drain (1/4" x 19 BSP)	1
49	30322	FPM	O-Ring, Drain Plug	1
50	45936	ALE	Cover, Rear	1
51	76174	FPM	O-Ring, Rear Cover	1
53	134784	ALE	Crankcase Assembly (Includes: 54)	1
54	27488	S	Pin, Guide	2
64	43864	CM	Pin, Crosshead	3
65	49166	SSHB	Rod, Plunger	3
69	126587	STCP R	Washer, Oil Seal	3
70	44739	FPM	Seal, Oil, Crankcase	3
75	43865	S	Slinger, Barrier	3
88	45676	S	Washer, Keyhole	3
90	43866	CC	Plunger (M25 x 145)	3
95	89778	SS	Stud, Plunger Retainer (M10 x 135)	3
96	20189	PTFE	Backup Ring, Plunger Retainer	3
97	11375	FPM	O-Ring, Plunger Retainer	3
98	44085	SS	Gasket, Plunger Retainer	3
99	44084	SS	Retainer, Plunger (M10)	3
100	999324	AL	Retainer, Seal	3
104	44826	FPM	O-Ring, Adapter	3
105	44088	NAB	Adapter, Low-Pressure Seal	3
106	76086	ST2	Seal, Low-Pressure with S-Spring	3
107	44089	SS	Washer, Low-Pressure Seal	3
110	44206	NAB	Manifold, Inlet	1
	125970	NAB	Manifold, Inlet, Flushed (Model 3517CHS.44101)	1
112	14183	FPM	O-Ring, Inlet Manifold	3
117	44585	S	Screw, HSH (M14 x 40) (See Tech Bulletin 074)	4
123	13266	FPM	O-Ring, Inlet Manifold	3
124	44090	NAB	Cylinder, V-Packing	3
126	44091	NAB	Adapter, Female	3
127	76611	ST4	V-Packing	6
128	44092	NAB	Adapter, Male	3
155	14183	FPM	O-Ring, V-Packing Spacer	6
156	28243	PTFE	Backup Ring, V-Packing Spacer	6
157	44093	NAB	Spacer, V-Packing	3
162	21985	PTFE	Backup Ring, Valve Seat	6
163	11377	FPM	O-Ring, Valve Seat	6
164	44080	SS	Seat	6
166	44081	SS	Valve	6
167	44082	SS	Spring	6
168	44735	PVDF	Retainer, Spring	6
170	44794	SS	Washer, Spring Retainer	6
171	44793	SS	Spring, Coil	6
172	11720	FPM	O-Ring, Valve Plug	6
173	20224	PTFE	Backup Ring, Valve Plug	6
174	44795	NAB	Plug, Valve	6
175	87951	S	Screw, HHC Sems (M10 x 30) (See Tech Bulletin 074)	36
185	46565	NAB	Manifold, Discharge	1
188	89981	S	Screw, HSH (M12 x 70) (See Tech Bulletin 074)	8
250	855042	NY	Protector, Shaft with Two (2) Screws, Lockwashers and washers	1

R Components comply with RoHS Directive.

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

MATERIAL CODES (Not Part of Part Number): AL=Aluminum ALE=Aluminum Epoxy BB=Brass BBCP=Brass/Chrome Plated BZ=Bronze CC=Ceramic CM=Chrome-Moly

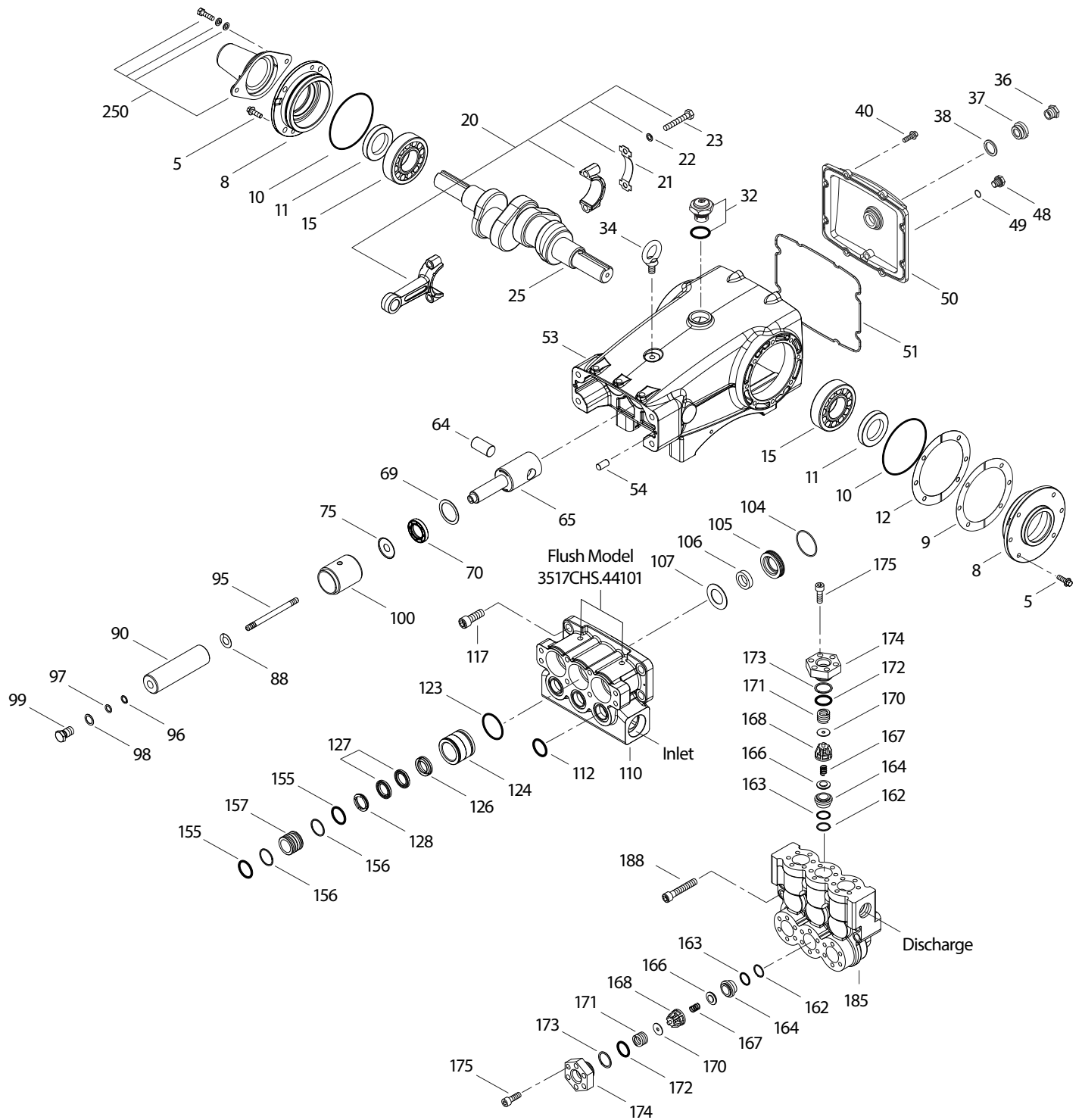
FBB=Forged/Brass FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N) NY=Nylon

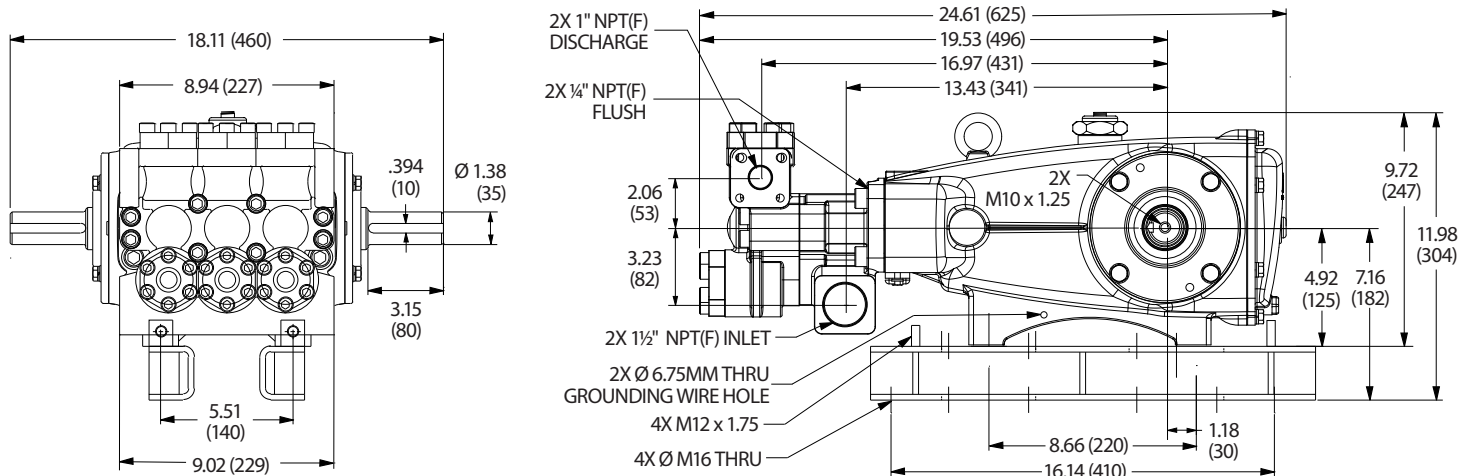
PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SSHB=316SS/High Strength Brass STL=Steel ST2=Special PTFE2

ST4=Special PTFE4 STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated

Repair kits and Parts, Optional Parts and Accessories listed on page 4.

EXPLODED VIEW



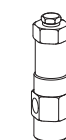


REPAIR KITS AND PARTS

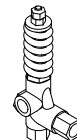
PART NUMBER	DESCRIPTION	QTY
76447	Kit, Seal (Includes Items: 97, 104, 106, 112, 123, 127, 155, 156)	1
701798	Kit, Valve (Includes Items: 162, 163, 164, 166, 167, 168, 170, 172, 173)	2
6107	Oil, Bottle (21 oz)	6-7
34021	Key (M10 x 8 x 70)	1

OPTIONAL PARTS AND ACCESSORIES

PART NUMBER	DESCRIPTION	QTY
7023.100	Regulator (Primary Pressure Control)	1
7533.1110	Valve, Relief (Secondary Pressure Control)	1
9941.0110	Valve, Pop-Off (Secondary Pressure Control)	1
6076	Gauge, Pressure	1
6030	Dampener, Pulsation	1
92674	Assembly, Rail	1
76334	Kit, Oil Indicator (3/8" x 24") See Individual Data Sheet	1
34334	Kit, Oil Drain (3/8" x 24") See Individual Data Sheet	1
30696	Reverse Pliers (Not Shown)	1
44050	Tool, Sight Gauge Removal (Not Shown)	1



7023.100



7533.1110



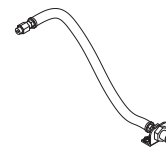
9941.0110



6076



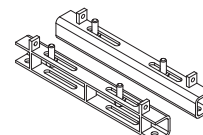
6030



34334



6107



92674

⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. 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/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty online at www.catpumps.com/literature/cat-pumps-limited-warranty