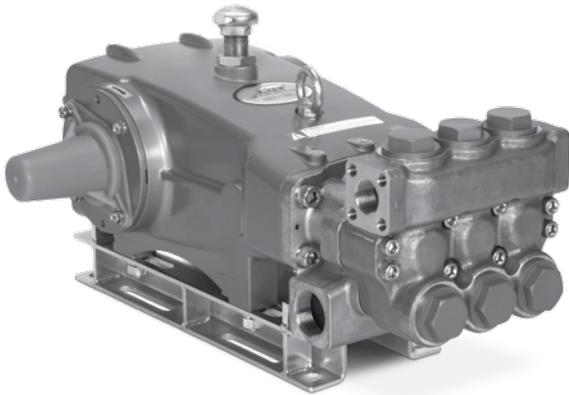


# DATA SHEET

## 35 FRAME PLUNGER PUMPS



**Stainless Steel Model:** **3521.44101**  
**Stainless Steel Flushed Model:** **3521C.44101**



Model 3521.44101 Shown  
 (Shaft protector included, mounting rails sold separately)

SPECIFICATIONS	U.S.	Metric
Flow	23 gpm	87 lpm
Pressure Range	100 - 2000 psi	6.9 - 138 bar
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.9 bar
Pump RPM*	800 rpm	800 rpm
Bore	1.260"	32 mm
Stroke	1.890"	48 mm
Crankcase Capacity	4.2 qts	4 l
Max. Liquid Temperature	240° F	115° C
Inlet Ports (2)	1-1/2" NPT(F)	1-1/2" NPT(F)
Discharge Ports (2)	1" NPT(F)	1" NPT(F)
Flushing Ports (2) (3521C.44101)	1/4" NPT(F)	1/4" NPT(F)
Pulley Mounting	Either Side	Either Side
Shaft Diameter	1.378"	35 mm
Weight	139 lbs.	63 kg
Dimensions	24.33 x 18.11 x 9.72"	618 x 460 x 247 mm

\*Pump minimum is 100 RPM.

### 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 fluids possessing adequate lubrication properties. Contact Cat Pumps for more information.
- Positive displacement technology for optimum energy efficiency.
- Re-configured pump .44101 option consists of following materials:
  - O-Ring material throughout the pump: Fluoropolymer elastomers.
  - Oil filler cap assembly: Brass adapters, chrome-plated steel vented cap.
  - Rear sight gauge assembly: Aluminum sight adapter and stainless steel sight gauge.
  - Seal retainers: Aluminum.
  - Low-pressure seals and V-Packings: Special PTFE blends.

### ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE				RPM
		psi 1200	psi 1500	psi 1800	psi 2000	
U.S. gpm	lpm	bar 83	bar 103	bar 124	bar 138	
23	87	18.9	23.6	28.4	31.6	800
20	76	16.5	20.6	24.7	27.4	696
18	68	14.8	18.5	22.2	24.7	626

<b>DETERMINING THE PUMP R.P.M.</b>	Rated gpm	=	"Desired" gpm
	Rated rpm	=	"Desired" rpm
<b>DETERMINING THE REQUIRED H.P.</b>	gpm x psi	=	Electric Brake
	1460	=	H. P. Required
<b>DETERMINING MOTOR PULLEY SIZE</b>	Motor Pulley O.D.	=	Pump Pulley O.D.
	Pump rpm	=	Motor rpm

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

## PARTS LIST

ITEM	PART NUMBER	MATL	DESCRIPTION	QTY
5	125753	S	Screw, HHC Sems (M8 x 25)	8
8	44542	AL	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
15	29326	STL	Bearing, Roller	2
20	121467	TNM	Rod, Connecting Assy (Incls: 21, 22, 23)	3
21	126749	STCP R	Washer, Locking	3
22	126593	STCP R	Shim, Washer (M10)	6
23	122045	STZP	Screw, HH (M10 x 55)	6
25	29325	FCM	Crankshaft, Dual End	1
31	76411	BB	Adapter, 3/4"NPT(F)	1
32	992623	BB	Nipple, Close 3/4"NPT(M)	1
33	76331	STCP	Cap, Vented	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 - 80D	1
40	125753	S	Screw, HHC Sems (M8 x 25)	8
48	25625	STCP	Plug, Drain (1/4" x 19BSP)	1
49	30322	FPM	O-Ring, Drain Plug	1
50	45936	AL	Cover, Rear	1
51	76174	FPM	O-Ring, Rear Cover - 75D	1
53	44487	AL	Crankcase Assy (Incls: 34,54)	1
54	27488	S	Pin, Guide	2
64	43864	CM	Pin, Crosshead	3
65	† 45116	SSZZ	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	43957	CC	Plunger (M32 x 145)	3
95	† 89778	SS	Stud, Plunger Retainer (M10 x 135)	3
96	20189	PTFE	Back-up-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, Inlet Adapter - 70D	3
105	45562	SS	Adapter, Inlet	3
106	76298	ST2	Seal, LPS w/S-Spg	3
107	44101	SS	Washer, LPS	3
110	<b>45365</b>	SS	Manifold, Inlet	1
	<b>125397</b>	SS	Manifold, Inlet, Flushed (1/4" Flush Ports)	1
112	14183	FPM	O-Ring, Inlet Manifold	3
117	44585	S	Screw, HSH (M14 x 40)	4
122	49782	SS	Spacer	3
123	13266	FPM	O-Ring, V-Packing Cylinder - 70D	3
124	49783	SS	Cylinder, V-Packing Cylinder	3
126	45564	SS	Adapter, Female	3
127	76608	ST4	V-Packing	6
128	45565	SS	Adapter, Male	3
141	49743	SS	Spring, Coil	3
158	20464	PTFE	Back-up-Ring, V-Packing Cylinder	3
159	20137	FPM	O-Ring, V-Packing Cylinder - 70D	3
162	44614	PTFE	Back-up-Ring, Valve Seat	6
163	14330	FPM	O-Ring, Valve Seat	6
164	44612	SS	Seat	6
166	44108	SS	Valve	6
167	44109	SS	Spring	6
168	44728	PVDF	Retainer, Spring	6
170	44729	SS	Washer, Spring Retainer	6
171	44644	SS	Spring, Coil	6
172	11747	FPM	O-Ring, Valve Plug - 90D	6
173	20388	PTFE	Back-up-Ring, Valve Plug	6
174	49300	SSD	Plug, Valve	6
185	49299	SSD	Manifold, Discharge	1
188	89981	S	Screw, HSH (M12 x 70)	8
250	44516	NY	Protector, Shaft	1

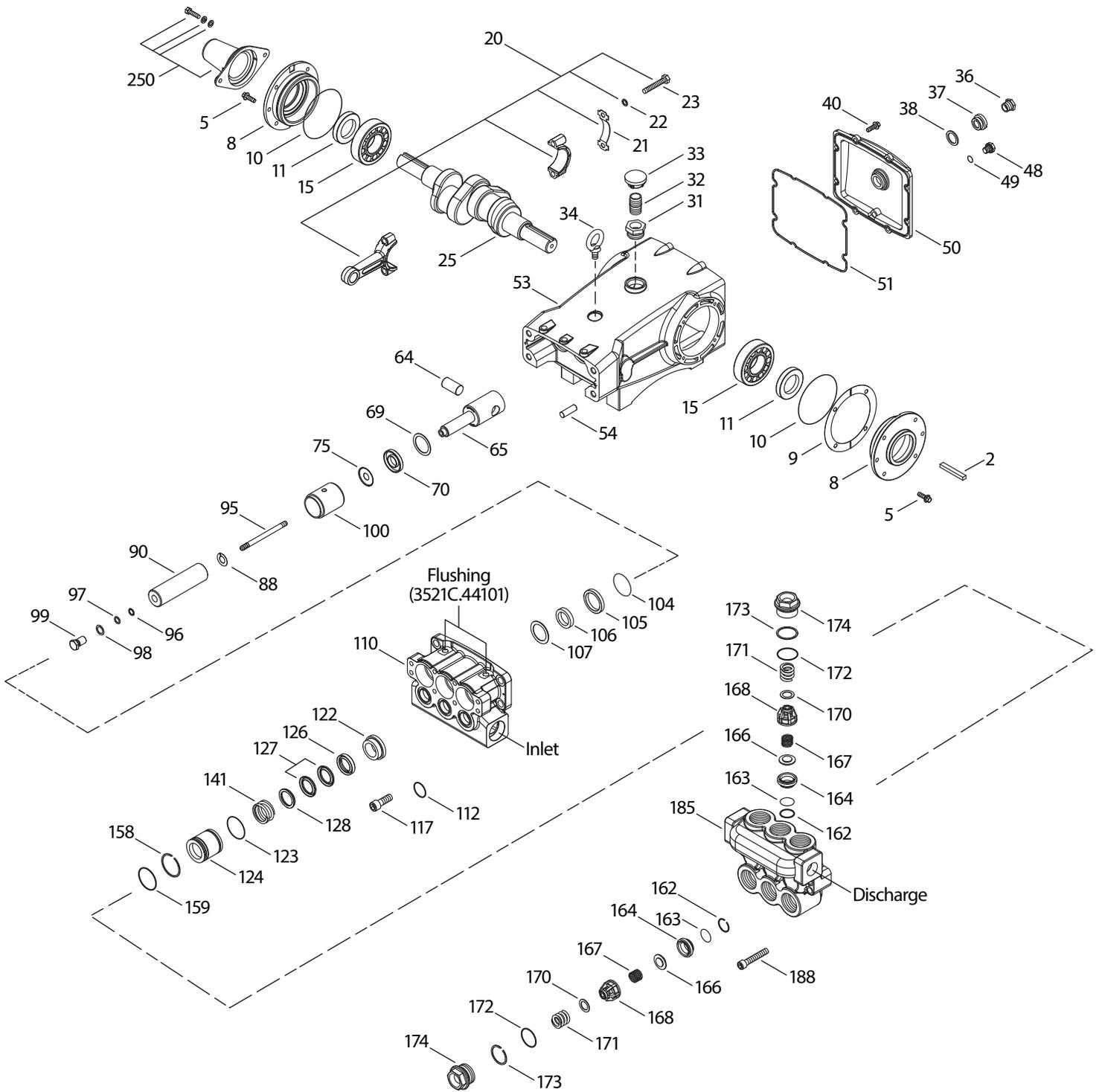
**Bold print part numbers are unique to a particular pump model** † Production Parts different from service parts. R Components † comply with RoHS Directive.

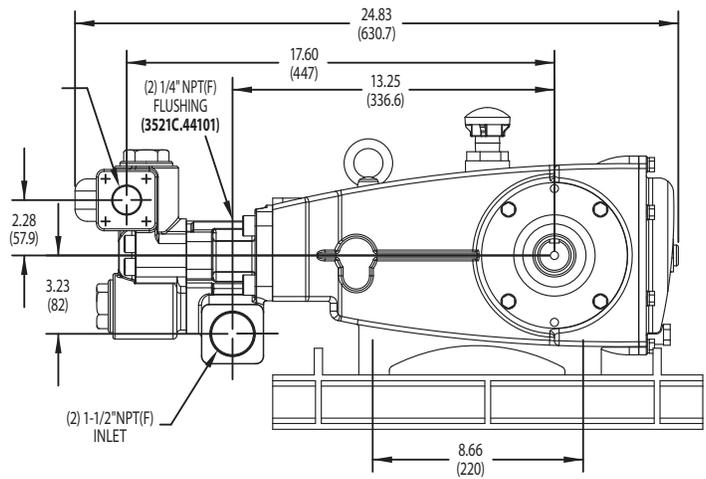
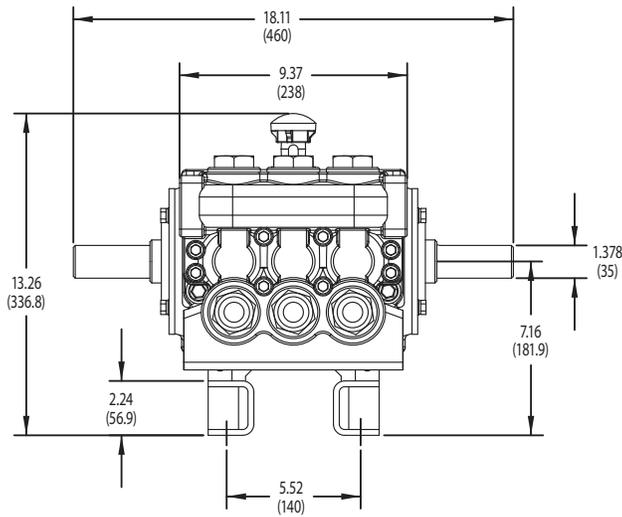
\*Review material codes for individual items (SFG generally may be used as alternate).

View Tech Bulletins 002, 003, 024, 053, 064, 069, 074, 083 and 114 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass CC=Ceramic CM=Chrome-Moly FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon  
 NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SSD=Duplex Stainless Steel FPM  
 STL=Steel ST2=Special PTFE2 ST4=SpecialPTFE4 STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated SSZZ=316SS/Zamak TNM=Special High Strength ZP=Zinc Plated

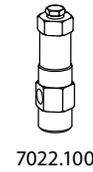
# EXPLODED VIEW





## REPAIR KITS AND PARTS

PART NUMBER	DESCRIPTION	QTY
77028	Kit, Seal (Includes Items 97, 104, 106, 112, 127, 158 and 159)	1
77029	Kit, Valve (Includes Items 162, 163, 164, 166,167, 168, 170, 172 and 173)	2
6107	Oil, Bottle (21 oz.) ISO 68 Hydraulic	4
34021	Key (M10x8x70)	1
6119	Lubricant, Anti seize (2 oz.)	1



7022.100



9941



890709



6073

## OPTIONAL PARTS AND ACCESSORIES

PART NUMBER	DESCRIPTION	QTY
7022.100	Regulator (Primary Pressure Control)	1
890709	Relief Valve (Secondary Pressure Control)	1
9941	Pop-Off Valve (Secondary Pressure Control)	1
6073	Pressure Gauge	1
6013	Accumulator	1
92674	Mounting Rail Assembly	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	Pliers (Reverse)	1
44050	Tool, Sight Gauge Removal	1



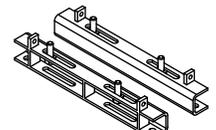
6013



34334



6107



92674

### ⚠ 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](http://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](http://www.catpumps.com/warranty).



### CAT PUMPS

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