

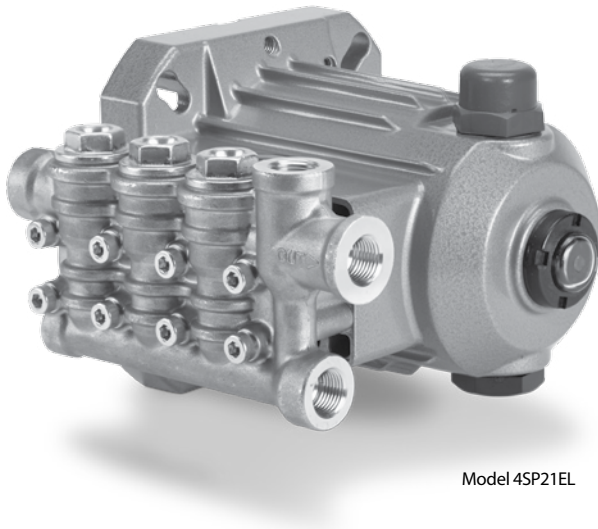
DATA SHEET

DIRECT DRIVE PLUNGER PUMPS



**Brass Electric
Model:**

4SP21EL



Model 4SP21EL

FEATURES

- Triplex plunger design provides a smooth liquid flow.
- Specially formulated high pressure seals and concentric, polished ceramic plungers assure maximum seal life.
- Compact, direct mounting to NEMA 56C motor with 5/8" shaft.
- Stacked valve design for ease in servicing.
- Crankcase can be vented (for misting or other applications) or completely sealed (for portable extractors).
- Includes crankcase oil.

SPECIFICATIONS	U.S. Measure	Metric Measure
Flow	2.1 gpm	7.9 lpm
Pressure Range	100 - 2000 psi	6.9 - 138 bar
Pump RPM	1750 rpm	1750 rpm
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Max. Liquid Temperature	140°F	60°C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Bore	0.630"	16 mm
Stroke	0.319"	8.1 mm
Crankcase Capacity	10.15 oz.	0.30 l
Inlet Port (1)	3/8" NPT(F)	3/8" NPT(F)
Accessory Inlet Port (1)	1/4" NPT(F)	1/4" NPT(F)
Discharge Port (3)	3/8" NPT(F)	3/8" NPT(F)
Shaft Diameter (Hollow - Electric)	5/8"	15.9 mm
Weight	10.6 lbs.	4.8 kg
Dimensions	7.80 x 6.70 x 5.28"	198 x 171 x 134 mm

ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE			RPM
			psi 1200	psi 1500	psi 2000	
	gpm	lpm	bar 83	bar 103	bar 138	
4SP21EL	2.1	7.9	1.4	2.2	2.9	1750

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.

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

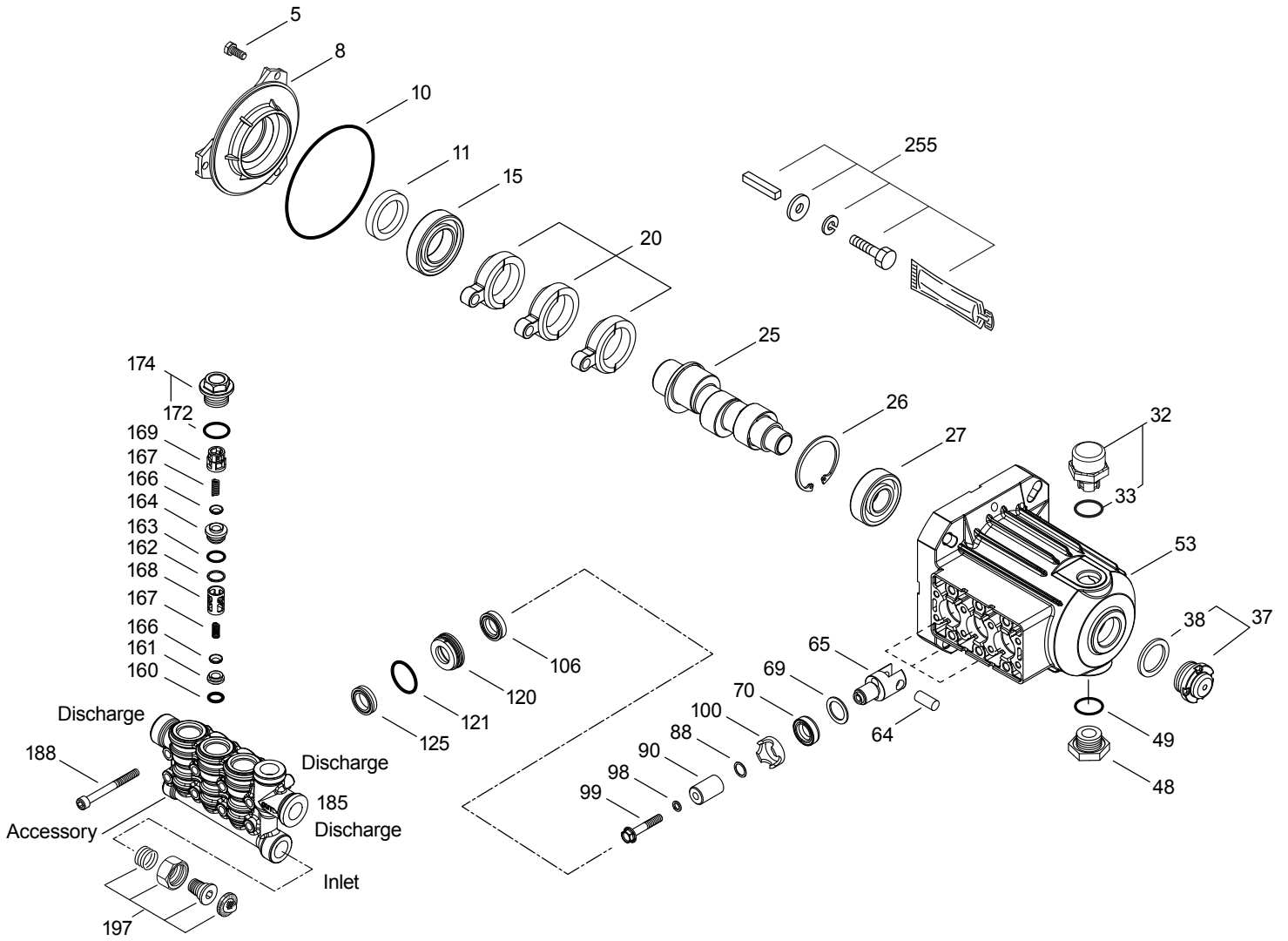
Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

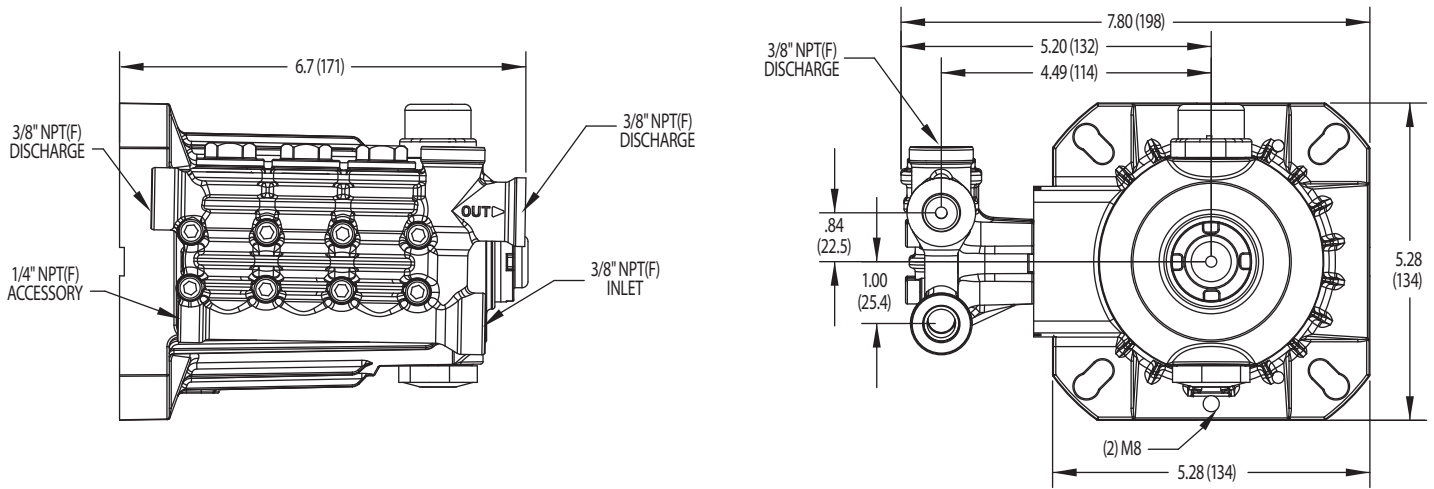
ITEM	PART NUMBER	MATL	DESCRIPTION	QTY
5	549360	STCP R	Screw, HHC Sems (M6x14)	3
8	547153	AL	Cover, Bearing	1
10	14041	NBR	O-Ring, Bearing Cover - 70D	1
11	55337	NBR	Seal, Oil	1
15	14488	STL	Bearing, Ball, Inner	1
20	547020	TNM	Rod, Connecting Assy	3
25	132605	CM	Crankshaft, 3450 RPM, 1", (8.1 mm)	1
26	12385	STL	Ring, Retaining	1
27	15710	STL	Bearing, Ball, Outer	1
32	549726	—	Cap, Vented w/O-Ring	1
33	14179	NBR	O-Ring, Oil Filler Cap - 70D	1
37	92241	—	Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
48	44842	NY	Plug, Drain	1
49	14179	NBR	O-Ring, Drain Plug - 70D	1
53	547099	AL	Crankcase	1
64	16948	CM	Pin, Crosshead	3
65	49982	BB	Rod, Plunger	3
69	126259	STCP R	Washer, Oil Seal	3
70	25301	NBR	Seal, Oil - 80D	3
88	132607	S	Washer	3
90	132606	CC	Plunger (M16x24.6)	3
98	46730	NBR	Washer, Seal - 90D	3
99	542405	S	Retainer, Plunger (M6x35)	3
100	44869	PVDF	Retainer, Seal	3
106	48222	NBR	Seal, LPS w/S-SPG	3
120	132608	BB	Case, Seal	3
121	13977	NBR	O-Ring, Seal Case - 70D	3
125	547157	SNG	Seal, HPS	3
160	17428	NBR	O-Ring, Inlet Seat - 80D	3
161	547077	S	Seat, Inlet	3
162	48361	D	Back-up-Ring, Discharge Seat	3
163	43358	NBR	O-Ring, Discharge Seat - 70D	3
164	547076	S	Seat, Discharge	3
166	547098	S	Valve	6
167	46865	S	Spring	6
168	543988	PVDF	Retainer, Spring, Inlet	3
169	49764	PVDF	Retainer, Spring, Discharge	3
172	142807	NBR	O-Ring, Valve Plug - 90D	3
174	547104	BB	Plug, Valve (M20)	3
185	132609	FBB	Head, Manifold	1
188	549357	STCP R	Screw, HSH (M6x60)	8
197	941516	BB	Assembly, GH 3/8"	1
255	30516	STZPR	Mount, Bolt Assy.	1
300	76968	NBR	Kit, Seal (Incls: 98,106,121,125)	1
310	76976	NBR	Kit, Valve (Incls: 160,161,162,163,164,166,167, 168,169,172)	1
—	6107	—	Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specific crankcase capacity prior to start up)	1

Note: Pump is shipped with two black caps w/o-rings for shipping purposes. Remove black cap w/o-ring on top of pump and replace with loose red cap w/o-ring as supplied in box.

EXPLODED VIEWS



Italics are optional items. [] Date of latest production change. R Components comply with RoHS Directive.
 See Tech Bulletins 002, 024, 036, 043, 055, 074 and 083 for additional information. MATERIAL CODES (Not Part of Part Number): AL=Aluminum, BB=Brass, CC=Ceramic, CM=Chrome-Moly, D=Acetal, FBB=Forged Brass, NBR=Medium Nitrile (Buna-N), NY=Nylon, PVDF=Polyvinylidene Fluoride, S=304SS, SNG=Special Blend (Buna), STCP=Steel/Chrome Plated, STL=Steel, STZP=Steel/Zinc Plated, TNM=Special High Strength.
NOTE: Discard Key which may come standard with most motors and engines and **use only the key included in this kit.**



Model 4SP21EL

⚠ 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.



CAT PUMPS

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