

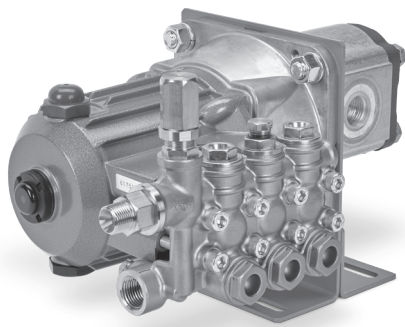
DATA SHEET

DIRECT DRIVE PLUNGER PUMPS



**Brass Model
Assemblies:**

**5SP30HUDHYD, 5SP30HUDHYD2,
5SP30HUDHYD3**



Model 5SP30HUDHYD Shown

FEATURES

- High-Pressure pump is driven by a standard SAE "A" 2 - bolt Hydraulic motor.
- Specially-formulated high-pressure seals and concentric solid ceramic plungers provide true wear surface and extended seal life.
- Multiple accessory ports allow for plumbing flexibility.
- Compact, direct mounting reduces space requirements.
- Integral pressure unloader with built-in bypass ensures system pressure control and pump protection.
- Includes crankcase oil.

SPECIFICATIONS	U.S. Measure	Metric Measure
Flow Range	2.0–4.0 gpm	7.6–15.1 lpm
Pressure Range	100–3000 psi	6.9–207 bar
Pump RPM	1300–2600 rpm	1300–2600 rpm
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Standard Liquid Temperature	140° F	60° C
Bore	0.630"	16 mm
Stroke	0.433"	11 mm
Crankcase Capacity	13.5 oz	0.4 l
Inlet Port	½" NPT(F)	½" NPT(F)
Accessory Ports (3)	¼" NPT(F)	¼" NPT(F)
Discharge Port	¾" NPT(M)	¾" NPT(M)
Shaft Diameter	⅝"	15.8 mm
Weight	13.2 lbs	6.0 kg
Dimensions	9.53 x 9.73 x 7.13"	242 x 234.5 x 181 mm

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

PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
5	127285	STCP R	Screw, HH Sems (M8 x 25) (See Tech Bulletin 074)	4
8	134123	AL	Cover, Bearing	1
10	14043	NBR	O-Ring, Bearing Cover	1
11	134797	NBR	Seal, Oil, Crankshaft	1
15	134331	STL	Bearing, Ball, Inner	1
20	49364	TNM	Rod, Connecting	3
24	549608	LDPE	Plug, Oil Cap	1
25	31210	CM	Crankshaft, 5/8", (11 mm)	1
27	49363	STL	Bearing, Ball, Outer	1
31	549726	—	<i>Cap, Vented with O-Ring (Rain Cap) (Not Shown)</i>	1
32	547961	RTP	Cap, Oil Filler with O-Ring	1
33	14179	NBR	O-Ring, Filler Cap-70D	1
37	92241	PC	Gauge, Oil Bubble with Gasket-80D (See Tech Bulletin 074)	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	49352	AL	Crankcase	1
64	49366	CM	Pin, Crosshead	3
65	49368	BB	Rod, Plunger	3
70	47215	NBR	Seal, Oil Crankcase	3
75	49370	S	Slinger, Barrier	3
90	134351	CC	Plunger (M16 x 30)	3
98	46730	NBR	Washer, Seal-90D	3
99	49369	S	Retainer, Plunger (See Tech Bulletin 074)	3
100	49371	NY	Retainer, Seal	3
106	48222	NBR	Seal, Low-Pressure with S-Spring	3
120	134352	BB	Case, Seal	3
121	13977	NBR	O-Ring, Seal Case-70D	3
125	547157	SNG	Seal, High-Pressure	3
160	14181	NBR	O-Ring, Valve Seat, Inlet-70D	3
161	45790	S	Seat, Inlet	3
163	17428	NBR	O-Ring, Seat, Discharge-80D	3
164	547077	S	Seat, Discharge	3
165	43723	S	Valve, Inlet	3
166	547098	S	Valve, Discharge	3
167	43750	S	Spring, Inlet	3
168	46583	NY	Retainer, Spring, Inlet	3
169	49764	PVDF	Retainer, Spring, Discharge	3
170	134579	S	Spring, Discharge	3
171	17615	NBR	O-Ring, Valve Plug, Inlet-80D	3
172	142807	NBR	O-Ring, Valve Plug, Discharge-90D	3
173	46756	BB	Plug, Valve, Inlet	3
174	547104	BB	Plug, Valve, Discharge, with O-Ring (See Tech Bulletin 074)	2
175	101556	BB	Plug (1/4" NPT[M])	2
180	134670	BB	Plug, Valve (1/4" NPT[F]) Threaded Port with O-Ring (See Tech Bulletin 074)	1
185	134128	BB	Head, Manifold with Integral Unloader	1
188	134340	STCP R	Screw, HSH (M6 x 55) (See Tech Bulletin 074)	8
255	<i>76SAEA2.5SP</i>	<i>STL</i>	<i>Mount, 5SP, SAE-A</i>	<i>1</i>
300	76968	NBR	<i>Kit, Seal (Includes: 98, 106, 121, 125)</i>	<i>1</i>
310	76302	NBR	<i>Kit, Valve, Inlet (Includes: 160, 161, 165, 167, 168, 171)</i>	<i>1</i>
	76303	NBR	<i>Kit, Valve, Discharge (Includes: 163, 164, 166, 169, 170, 172)</i>	<i>1</i>
400	NA	—	Integral Unloader (See Individual Parts List)	1

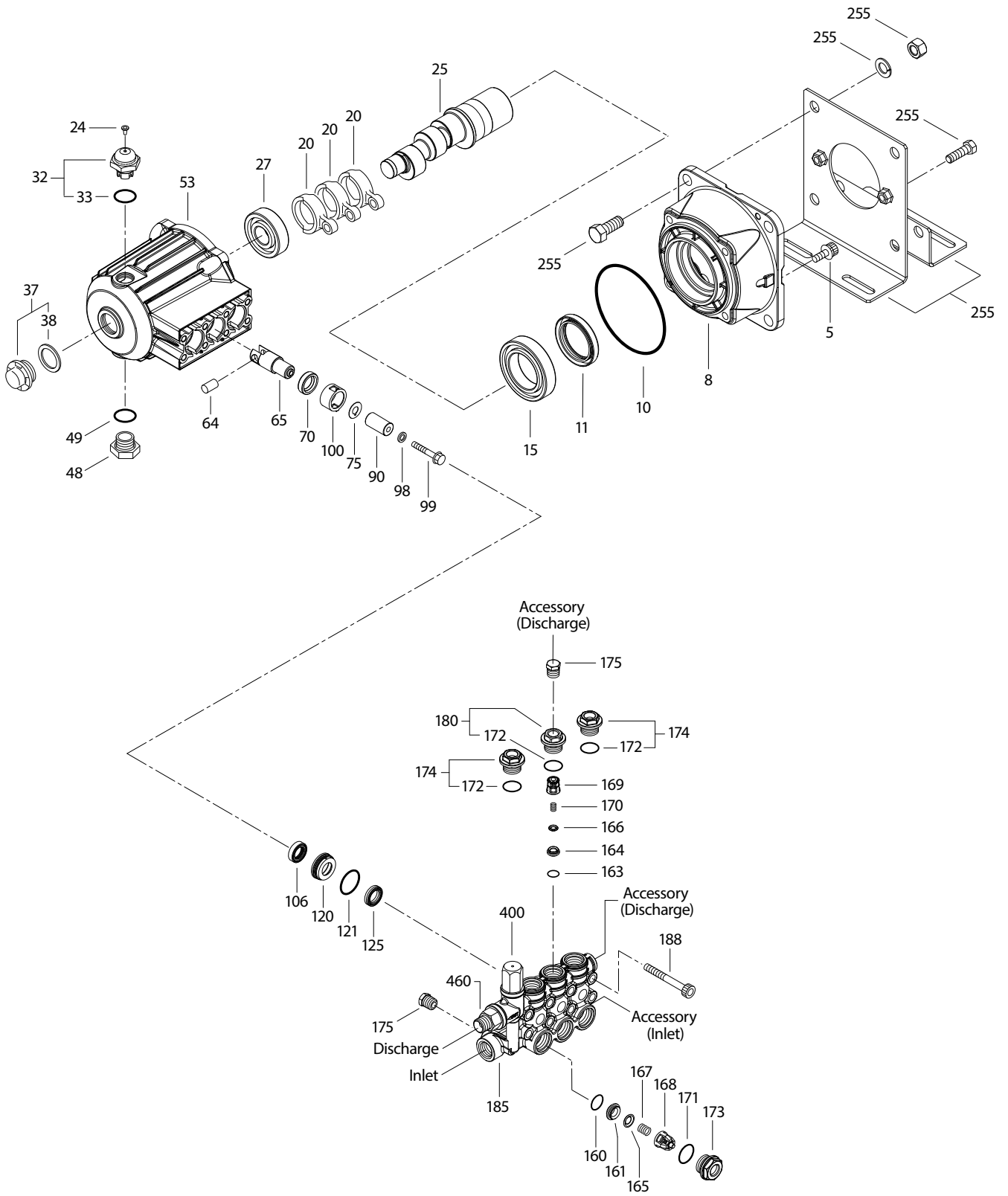
Italics are optional items.

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 BB=Brass CC=Ceramic CM=Chrome-moly D=Acetal LDPE=Low Density Polyethylene
 NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Poly Carbonate PVDF=Polyvinylidene Fluoride RTP=Reinforced Composite S=304SS SNG=Special Blend (Buna)
 STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength

NOTE: Use the Key that comes with this hydraulic motor.

EXPLODED VIEW



INTEGRAL UNLOADER

EXPLODED VIEW

SPECIFICATIONS

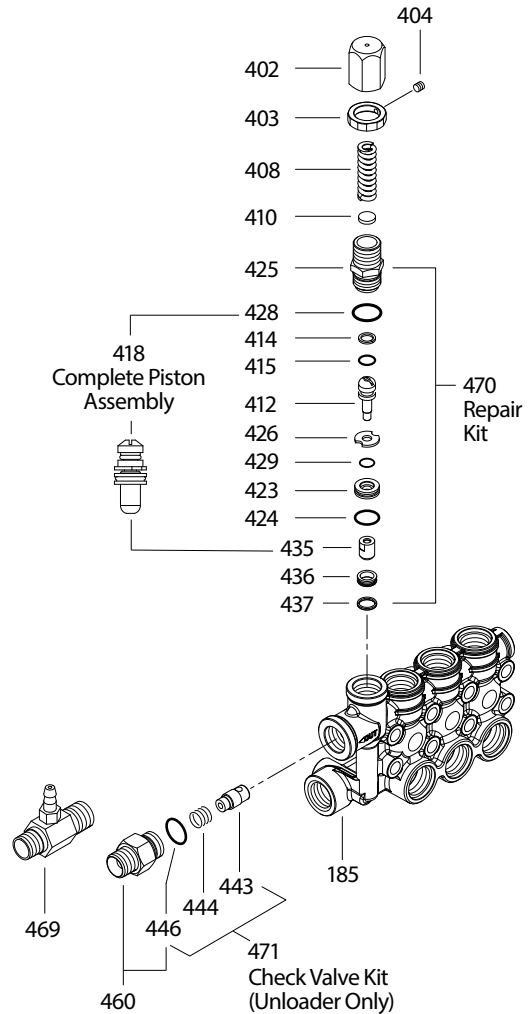
	U.S.	Metric
Flow	4.0 gpm	15.1 lpm
PSI Range	100–3000 psi	6.9–207 bar
Inlet Port	½" NPT(F)	½" NPT(F)
Discharge Port	¾" NPT(M)	¾" NPT(M)

PARTS LIST

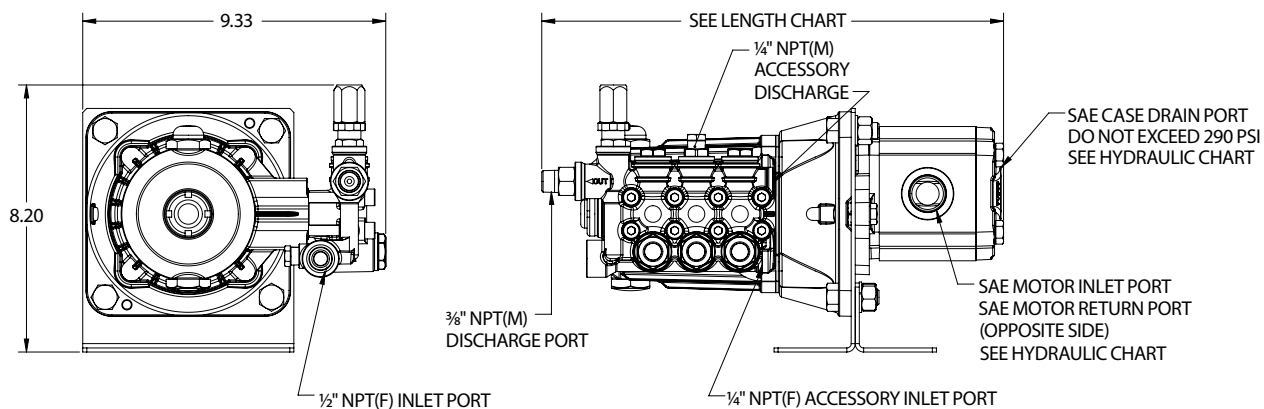
ITEM	PN	MATL	DESCRIPTION	QTY
402	547798	BB	Cap, Adjusting	1
403	548671	BB	Nut, Locking (M18 x 1)	1
404	548675	STL	Screw, Set (M4 x 4)	1
408	32094	STZP R	Spring, Pressure	1
410	549352	STCP R	Retainer, Spring	1
412	45694	S	Stem, Piston (M5)	1
414	20184	PTFE	Backup Ring, Piston Stem	1
415	14190	NBR	O-Ring, Piston Stem–70D	1
418	—	—	Assembly, Piston (Included In Repair Kit)	1
423	46249	BB	Retainer, Valve	1
424	13966	NBR	O-Ring, Valve Retainer (Outer)–70D	1
425	547799	BB	Retainer, Piston	1
426	46250	S	Washer	1
428	26133	NBR	O-Ring, Piston Retainer–80D	1
429	17399	NBR	O-Ring, Valve Retainer (Inner)–70D	1
435	547800	S	Valve	1
436	49664	S	Seat	1
437	13963	NBR	O-Ring, Seat–70D	1
443	134009	D	Valve, Check	1
444	117275	S	Spring	1
446	26133	NBR	O-Ring, Body–80D	1
460	134757	BB	Fitting, Discharge (¾" NPT[M]) with O-Ring	1
468	76499	NBR	Kit, O-Ring (Includes: 414, 415, 424, 428, 429, 437, 446)	1
470	76179	NBR	Kit, Repair (Includes: 418, 425, 428, 436, 437)	1
471	76506	NBR	*Kit, Check Valve (Includes: 443, 444, 446)	1

*76506 Kit Changes Regulator to Unloader

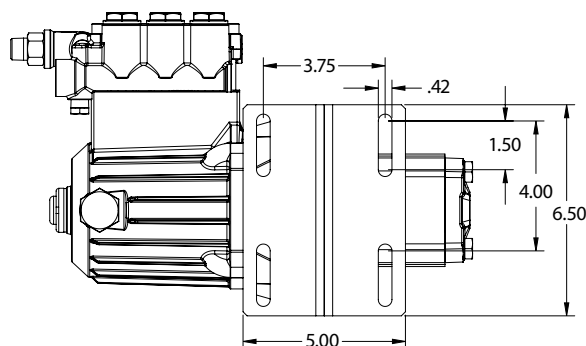
Italics are optional items. R Components comply with RoHS Directive.
 MATERIAL CODES (Not Part of Part Number): BB=Brass D=Acetal
 NBR=Medium Nitrile (Buna-N) PTFE=Pure Polytetrafluoroethylene
 S=304SS STCP=Steel/Chrome Plated STL=Steel
 STZP=Steel/Zinc Plated



DIMENSIONAL VIEW



MODEL	LENGTH
5SP30HUDHYD	14.2"
5SP30HUDHYD2	13.7"
5SP30HUDHYD3	13.5"



Hydraulic Models 5SP30HUDHYD, 5SP30HUDHYD2, 5SP30HUDHYD3

HYDRAULIC REQUIREMENTS

Pump Flow And Pressure	5SP30HUDHYD With 1.15 in ³ Hydraulic Motor		5SP30HUDHYD2 With 0.84 in ³ Hydraulic Motor		5SP30HUDHYD3 With 0.69 in ³ Hydraulic Motor	
	Flow	Pressure	Flow	Pressure	Flow	Pressure
4 gpm at 3000 psi	15.5 gpm	1200 psi	10.9 gpm	1800 psi	8 gpm	2150 psi
4 gpm at 2000 psi	15.5 gpm	850 psi	10.9 gpm	1200 psi	8 gpm	1450 psi
3 gpm at 3000 psi	11.6 gpm	1200 psi	8.2 gpm	1800 psi	6 gpm	2150 psi
3 gpm at 2000 psi	11.6 gpm	800 psi	8.2 gpm	1200 psi	6 gpm	1450 psi
Hydraulic Motor Inlet/Discharge Ports	SAE-12		SAE-10		SAE-12	
Hydraulic Motor Case Drain Port	SAE-4		SAE-4		SAE-6	
Maximum Case Drain Pressure	290 psi		290 psi		70 psi	

Alternative displacement motors are available upon request to meet existing hydraulic system capabilities.

⚠ 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