

# DATA SHEET

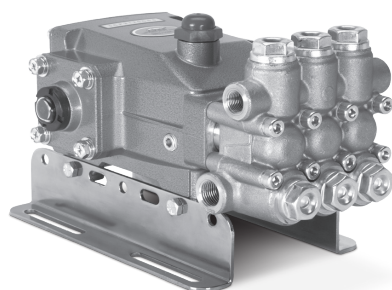
## 5CP PLUNGER PUMPS



The Pumps with Nine Lives

**Brass Models:**           **5CP5140, 5CP5140CSS**

**Brass Gearbox Models:**   **5CP5140CSSG1, 5CP5140CSSG118**



Model 5CP5140CSS Shown  
(Rails Sold Separately)

### FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Belt-driven option provides precise flow setting.
- Direct-drive option offers a compact foot print for electric motors with a NEMA or IEC frame, or SAE hydraulic motors with a bell housing/flexible coupler assembly.
- Gearbox model available with 1" or 1 1/8" hollow shaft to fit a wide variety of engines.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

COMMON SPECIFICATIONS	U.S.	Metric
Inlet Pressure Range up to 5.5 gpm	-2.5–60 psi	-0.2–4.1 bar
Inlet Pressure Range above 5.5 gpm	10–60 psi	0.7–4.1 bar
Maximum Liquid Temperature (NBR)	160° F	71° C
<b>Alternative seals available for higher temperature up to 190° F</b>		
Bore	0.709"	18 mm
Crankcase Capacity	17 oz	0.50 l
Inlet Ports (2)	1/2" NPT(F)	1/2" NPT (F)
Discharge Ports (2)	3/8" NPT (F)	3/8" NPT (F)
Shaft Diameter	0.787"	20 mm
Dimensions (5CP5140)	10.90 x 10.0 x 5.79"	277 x 254 x 147 mm
Dimensions (5CP5140CSS)	10.90 x 8.58 x 5.79"	277 x 218 x 147 mm
Dimensions (with Gearbox)	11.18 x 11.46 x 6.42"	284 x 291 x 163 mm

SPECIFICATIONS	U.S. Measure	Metric Measure
<b>5CP5140, 5CP5140CSS</b>		
Flow	5.5 gpm	21 lpm
Pressure Range	100–3500 psi	6.9–241 bar
Pump RPM*	1500 rpm	1500 rpm
Stroke	0.787"	20 mm
Weight	19.9 lbs	9 kg
<b>5CP5140, 5CP5140CSS Alternate Specifications</b>		
Flow	6.4 gpm	24.3 lpm
Pressure Range	100–3000 psi	6.9–207 bar
Pump RPM*	1750 rpm	1750 rpm
<b>5CP5140CSSG1, 5CP5140CSSG118</b>		
Flow	6.2 gpm	23.5 lpm
Pressure Range	100–3000 psi	6.9–207 bar
Engine RPM	3450 rpm	3450 rpm
Stroke	0.787"	20 mm
Weight	26.5 lbs	12 kg

\*Pump minimum is 100 RPM.

### 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)
HT	.3000	180° F	(82° C)
STHT	.3400	190° F	(88° C)

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

<b>DETERMINING THE PUMP RPM</b>	Rated gpm	=	Desired gpm
	Rated rpm	=	Desired rpm
<b>DETERMINING THE REQUIRED HP</b>	Hp	=	gpm x psi
	(Electric Brake)	=	1460
<b>DETERMINING MOTOR PULLEY SIZE</b>	Motor Pulley OD	=	Pump Pulley OD
	Pump rpm	=	Motor rpm

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

# PARTS LIST

ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	<b>5CP5140</b> <b>5CP5140CSS</b>		<b>5CP5140CSSG1</b> <b>5CP5140CSSG118</b>			
5	126542	STCP R	126542	STCP R	Screw, HHC, Sems (M8 x 16) (See Tech Bulletin 074)	8-4
8	46910	AL	46910	AL	Cover, Bearing	2-1-0
10	14028	NBR	14028	NBR	O-Ring, Bearing Cover-70D	2-1
11	43222	NBR	43222	NBR	Seal, Oil, Crankshaft	2-1-0
15	14480	STL	14480	STL	Bearing, Ball	2
20	48742	TNM	48742	TNM	Rod, Connecting Assembly (See Tech Bulletin 074)	3
25	<b>48646</b>	FCM	—	—	Crankshaft, Dual End End (M20) – 5CP5140	1
	<b>49773</b>	FCM	<b>49773</b>	FCM	Crankshaft, Single End (M20) – 5CP5140CSS, 5CP5140CSSG1, 5CP5140CSSG118	1
30	49776	AL	49776	AL	Cover, Bearing	0-1
32	46798	—	46798	—	Cap, Oil Filler, Domed	1
33	14179	NBR	14179	NBR	O-Ring, Oil Filler Cap-70D	1
37	92241	PC	92241	PC	Gauge, Oil, Bubble with Gasket-80D (See Tech Bulletin 074)	1-2
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge-80D	1-2
40	125824	STCP R	125824	STCP R	Screw, HHC, Sems (M6 x 16) (See Tech Bulletin 074)	4
48	25625	STCP	25625	STCP	Plug, Drain (1/4" x 19 BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug-70D	1
50	46940	AL	46940	AL	Cover, Rear	1
51	14044	NBR	14044	NBR	O-Ring, Rear Cover	1
53	48617	AL	48617	AL	Crankcase	1
64	46746	CM	46746	CM	Pin, Crosshead	3
65	48458	BBNP	48458	BBNP	Rod, Plunger	3
70	46838	NBR	46838	NBR	Seal, Oil, Crankcase	3
75	43328	S	43328	S	Slinger, Barrier	3
88	45697	S	45697	S	Washer, Keyhole (M18 x 10)	3
90	49655	CC	49655	CC	Plunger (M18 x 50)	3
98	46730	NBR	46730	NBR	Washer, Seal-90D	3
99	† 48201	SS	† 48201	SS	Retainer, Plunger with Stud (M6) (See Tech Bulletin 074)	3
100	46749	PVDF	46749	PVDF	Retainer, Seal	3
106	43243	NBR	43243	NBR	Seal, Low-Pressure with S-Spring	3
120	49657	BB	49657	BB	Case, Seal	3
121	13978	NBR	13978	NBR	O-Ring, Seal Case-70D	3
127	44549	SNG	44549	SNG	V-Packing	6
128	44548	NY	44548	NY	Adapter, Male	3
163	17547	NBR	17547	NBR	O-Ring, Seat-85D	6
164	45790	S	45790	S	Seat	6
166	46429	S	46429	S	Valve	6
167	43750	S	43750	S	Spring	6
168	† 44565	PVDF	† 44565	PVDF	Retainer, Spring	6
172	17549	NBR	17549	NBR	O-Ring, Valve Plug-70D	6
173	48365	D	48365	D	Backup Ring, Valve Plug	6
174	45900	BB	45900	BB	Plug, Valve (See Tech Bulletin 074)	6
185	46895	FBB	46895	FBB	Manifold, Head	1
188	126513	STCP R	126513	STCP R	Screw, HSH (M8 x 70) (See Tech Bulletin 074)	8
500	—	—	<b>8076</b>	—	Gearbox, 1" (See Individual Data Sheet)	1
	—	—	<b>8077</b>	—	Gearbox, 1 1/8" (See Individual Data Sheet)	1

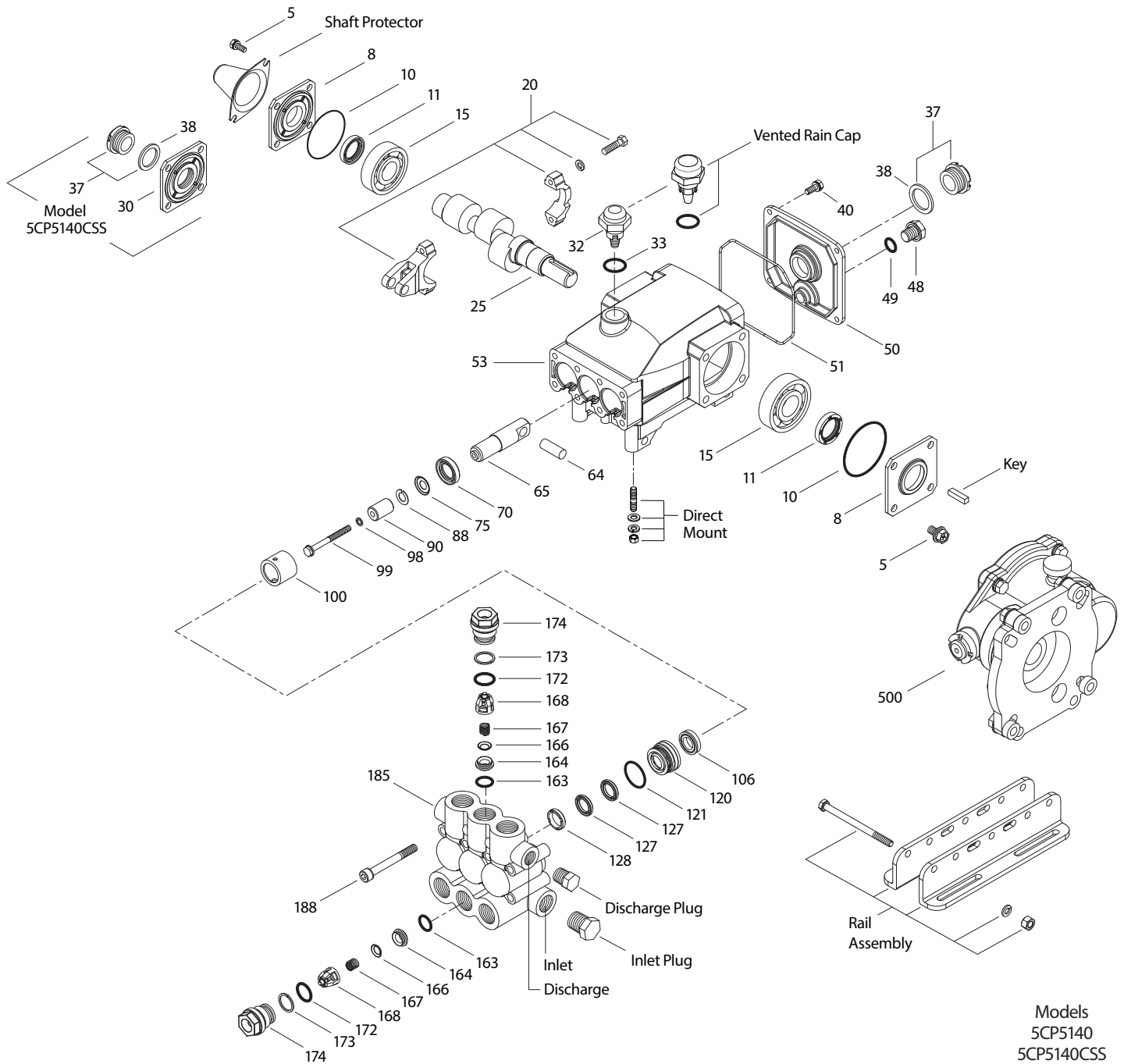
**Bold print part numbers are unique to a particular pump model. Italics are optional items.**

◆ Silicone oil/grease required. † Production parts are different than repair parts. R Components comply with RoHS Directive.

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): AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated BBNP=Brass/Nickel Plated CC=Ceramic  
 CM=Chrome-moly D=Acetal EPDM=Ethylene Propylene Diene Monomer FBB=Forged Brass FCM=Forged Chrome-moly FPM=Fluorocarbon  
 HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Polycarbonate PVDF=Polyvinylidene Fluoride S=304SS SS=316SS  
 SNG=Special Blend (Buna) SFG=Special Blend (FPM) STG=Special Blend PTFE White ST2=Special Blend PTFE Grey STL=Steel  
 STCP=Steel/Chrome Plated STHT=Special PTFE High Temp TNM=Special High Strength

# EXPLODED VIEW



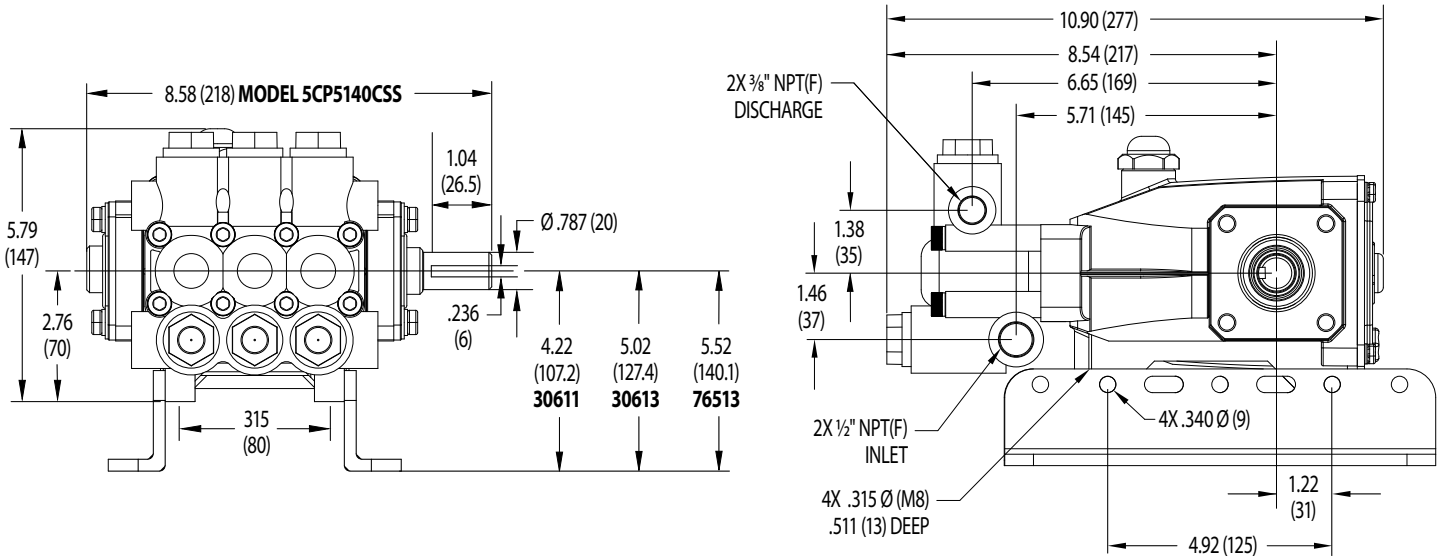
Models  
5CP5140  
5CP5140CSS  
5CP5140CSSG1  
5CP5140CSSG118  
July 2023

## OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30057	Key (M6 x 6 x 25)	1
30611	Assembly, Rail (4.22" - See Dimensional Drawing)	1
30613	Assembly, Rail (5.02" - See Dimensional Drawing)	1
76513	Assembly, Rail (5.52" - See Dimensional Drawing)	1
30637	Mount, Rail Assembly (Retro Fit - See Tech Bulletin 078)	1
30243	Mount, Direct	1
118672	Protector, Shaft (Model 5CP5140)	1
127409	Cap, Vented with O-Ring (Rain Cap)	1
22179	Plug, Inlet (1/2" NPT[M])	1
22187	Plug, Discharge (3/8" NPT[M])	1
34334	Kit, Oil Drain (3/8" x 24") (Not Shown)	1

## SERVICE PARTS

PART	DESCRIPTION	QTY
<b>33630</b>	Seal Kit - Standard NBR	1
<b>33060</b>	Valve Kit - Standard NBR	2
6107	Oil, Bottle (21 oz bottle) (Fill to Specified Crankcase Capacity Prior to Start-up)	1
6124	Gasket, Liquid (3 oz)	1
814844	Head, Complete - with NBR Seals and O-Rings	1



Model 5CP5140CSS

## SEAL KITS One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	HT (.3000)	STHT (.3400)	STHT (.3400)
5CP5140, 5CP5140CSS, 5CP5140CSSG1, 5CP5140CSSG118	<b>33630</b>	<b>31350</b>	<b>76630</b>	<b>76645</b>	<b>76960</b> After 2/09	<b>76546</b> Before 2/09

ITEM (Included in Seal Kits)							DESCRIPTION	QTY
98	46730	48394	48432	46730	46730	46730	O-Ring, Plunger Retainer	3
106	43243	—	—	43243	76243	76243	Seal, Low-Pressure with S-Spring	3
	—	44926	46651	—	—	—	Seal, Low-Pressure with SS-Spring	3
120	—	—	—	—	—	49657	Case, Seal	3
121	13978	14329	48904	13978	13978	13978	O-Ring, Seal Case	3
127	44549	45617	48300	48300	48300	48300	V-Packing	6

♦ Silicone Oil/Grease required

## VALVE KITS Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	HT (.3000)	STHT (.3400)
5CP5140, 5CP5140CSS, 5CP5140CSSG1, 5CP5140CSSG118	<b>33060</b>	<b>31345</b>	<b>31735</b>	<b>33060</b>	<b>33060</b>

ITEM (Included in Seal Kits)						DESCRIPTION	QTY
163	17547	11685	46648	17547	17547	O-Ring, Seat	3
164	45790	45790	45790	45790	45790	Seat	3
166	46429	46429	46429	46429	46429	Valve	3
167	43750	43750	43750	43750	43750	Spring	3
168	44565	44565	44565	44565	44565	Retainer, Spring	3
172	17549	26996	49133	17549	17549	O-Ring, Valve Plug	3
173	48365	48365	48365	48365	48365	Backup Ring, Valve Plug	3

♦ Silicone Oil/Grease required

### ⚠ 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](http://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](http://www.catpumps.com/literature/cat-pumps-limited-warranty)