

Model 5CP2120W Shown  
(Rails and shaft protector sold separately)

## FEATURES

- Triplex design offers high efficiency and low pulsation.
- Durable high pressure seals are lubricated and cooled by pumped liquid.
- Pre-set Lo-Pressure Seals provide secondary protection against external leaks and require no packing adjustment.
- Special high density, polished, concentric plungers provide a true wear surface and extended seal life.
- Optional STHT, FPM and EPDM elastomers for compatibility with many liquids and temperatures up to 200°F.
- Wet-end easily serviced without entering crankcase.

## COMMON SPECIFICATIONS

	U.S.	Metric
Inlet Pressure Range (950 rpm) ....	- 5 to 60 psi	(- 0.35 to 4 bar)
Inlet Pressure Range (1725 rpm)....	Flooded to 60 psi	(Flooded to 4 bar)
Crankcase Capacity.....	17 oz.	(0.51 l)
Standard Liquid Temperature .....	160°F	(71°C)
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Inlet Ports (2) .....	1/2" NPTF	(1/2" NPTF)
Discharge Ports (2) .....	3/8" NPTF	(3/8" NPTF)
Shaft Diameter .....	0.787"	(20 mm)
Dimensions.....	10.35 x 10.0 x 5.78"	(263 x 254 x 147)

### ⚠ 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).

## 5CP Plunger Pump

### Standard Models

**5CP2120W, 5CP2140WCS  
5CP2150W**

### Special Brass Models

**5CP2120B, 5CP2140B  
5CP2150B**

## SPECIFICATIONS

U.S. Measure    Metric Measure

### MODEL 5CP2120W and 5CP2120B Belt-Drive

Flow.....	4.0 gpm	(15 lpm)
Pressure Range.....	100-2500 psi	(7-175 bar)
RPM .....	950 rpm	(950 rpm)
Bore.....	0.787"	(20 mm)
Stroke.....	0.709"	(18 mm)
Weight.....	19.14 lbs.	(8.7 kg)

### MODEL 5CP2140WCS and 5CP2140B Direct-Drive

Flow.....	4.0 gpm	(15 lpm)
Pressure Range.....	100-2500 psi	(7-175 bar)
RPM .....	1725 rpm	(1725 rpm)
Bore.....	0.787"	(20 mm)
Stroke.....	0.394"	(10 mm)
Weight.....	19.14 lbs.	(8.7 kg)

### MODEL 5CP2150W and 5CP2150B Direct-Drive

Flow.....	5.0 gpm	(19 lpm)
Pressure Range.....	100-2000 psi	(7-140 bar)
RPM .....	1725 rpm	(1725 rpm)
Bore.....	0.787"	(20 mm)
Stroke.....	0.472"	(12 mm)
Weight.....	19.14 lbs.	(8.7 kg)

## ELECTRIC HORSEPOWER REQUIREMENTS

MODELS	FLOW		PRESSURE				MOTOR PULLEY SIZE Using 1725 rpm Motor & Std. 8" Pump Pulley	
			psi 1200	psi 1500	psi 2000	psi 2500		rpm
	U.S. gpm	lpm	bar 85	bar 105	bar 140	bar 175	Pulley O.D.	
5CP2120W	4.0	15	3.3	4.1	5.5	6.9	950	4.3
Alternate	5.0	19	4.1	5.1	6.9	N/A	1188	5.5
5CP2140WCS	4.0	15	3.3	4.1	5.5	6.9	1725	Direct Drive
5CP2150W	5.0	19	4.1	5.1	6.9	N/A	1725	Direct Drive

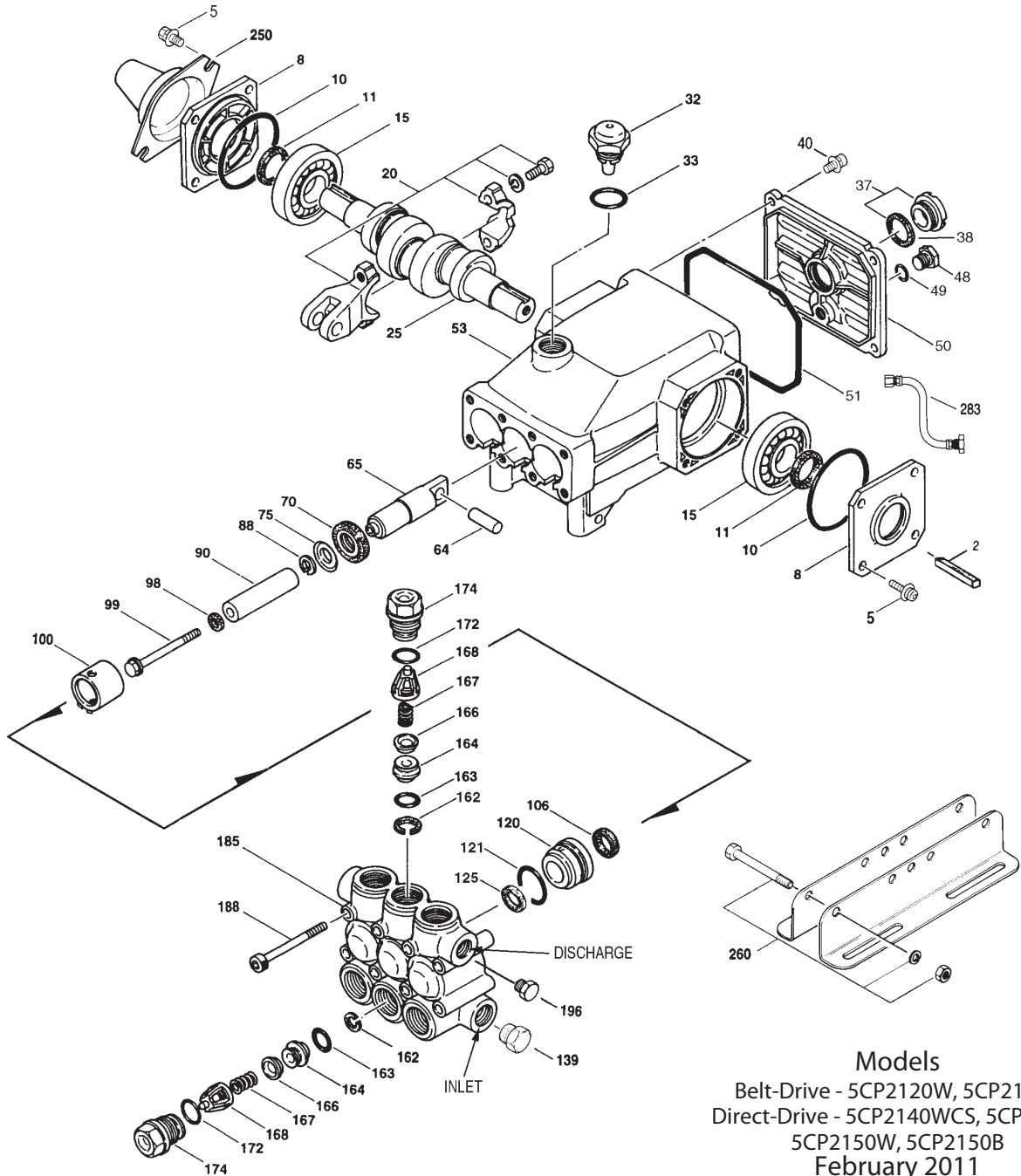
<b>DETERMINING THE PUMP R.P.M.</b>	$\frac{\text{Rated gpm}}{\text{Rated rpm}}$	=	$\frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$
<b>DETERMINING THE REQUIRED H.P.</b>	$\frac{\text{gpm} \times \text{psi}}{1460}$	=	Electric Brake H. P. Required
<b>DETERMINING MOTOR PULLEY SIZE</b>	$\frac{\text{Motor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

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				DESCRIPTION	QTY		
	5CP2120W		5CP2140WCS		5CP2150W			
	5CP2120B	MATL	5CP2140B	MATL	5CP2150B	MATL		
2	30057	STL	30057	STL	30057	STL	Key (M6x6x25)	1
5	96031	STZP	96031	STZP	96031	STZP	Screw, Sems HHC (M8x16)	8
	126542	STCP R	126542	STCP R	126542	STCP R	Screw, Sems HHC (M8x16)	8
8	46910	AL	46910	AL	46910	AL	Cover, Bearing	2/1
10	14028	NBR	14028	NBR	14028	NBR	O-Ring, Bearing Cover - 70D	2
11	43222	NBR	43222	NBR	43222	NBR	Seal, Oil, Crankshaft - 70D	2
15	14480	STL	14480	STL	14480	STL	Bearing, Ball	2
20	48742	TNM	48742	TNM	48742	TNM	Rod, Connecting Assy [10/01]	3
25	<b>46928</b>	<b>FCM</b>	—	—	<b>46982</b>	<b>FCM</b>	Crankshaft, Dual End	1
	—	—	<b>48203</b>	<b>FCM</b>	—	—	Crankshaft, Single End	1
30	—	—	<b>48224</b>	<b>AL</b>	—	—	Cover, Bearing Blind	1
32	46798	—	46798	—	46798	—	Cap, Oil Filler, Domed	1
33	14179	NBR	14179	NBR	14179	NBR	O-Ring, Oil Filler Cap - 70D	1
37	92241	—	92241	—	92241	—	Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
40	92519	STZP	92519	STZP	92519	STZP	Screw, Sems HHC (M6x16)	4
	125824	STCP R	125824	STCP R	125824	STCP R	Screw, Sems HHC (M6x16)	4
48	25625	STCP	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D	1
50	46940	AL	46940	AL	46940	AL	Cover, Rear	1
51	14044	NBR	14044	NBR	14044	NBR	O-Ring, Rear Cover	1
53	48617	AL	48617	AL	48617	AL	Crankcase	1
64	46746	CM	46746	CM	46746	CM	Pin, Crosshead	3
65	48458	BBNP	48458	BBNP	48458	BBNP	Rod, Plunger	3
70	46838	NBR	46838	NBR	46838	NBR	Seal, Oil, Crankcase - 70D	3
75	43328	S	43328	S	43328	S	Slinger, Barrier	3
88	45697	S	45697	S	45697	S	Washer, Keyhole (M18 x 10)	3
90	46841	CC	46841	CC	46841	CC	Plunger (M20x50)	3
98	46730	NBR	46730	NBR	46730	NBR	Washer, Seal - 90D	3
	48394	FPM	48394	FPM	48394	FPM	Washer, Seal - 90D	3
	◆ 48432	EPDM	◆ 48432	EPDM	◆ 48432	EPDM	Washer, Seal	3
99	† 48201	SS	† 48201	SS	† 48201	SS	Retainer, Plunger w/Stud (M6)	3
100	46749	PVDF	46749	PVDF	46749	PVDF	Retainer, Seal	3
106	43305	NBR	43305	NBR	43305	NBR	Seal, LPS w/S-Spg	3
	45153	FPM	45153	FPM	45153	FPM	Seal, LPS w/SS-Spg	3
	◆ 48429	EPDM	◆ 48429	EPDM	◆ 48429	EPDM	Seal, LPS w/SS-Spg	3
	76305	ST	76305	ST	76305	ST	Seal, LPS w/SS-Spg	3
120	46843	BB	46843	BB	46843	BB	Case, Seal (Press-in-style)	3
	49436	BB	49436	BB	49436	BB	Case, Seal (Use w/76305,13978)	3
121	13978	NBR	13978	NBR	13978	NBR	O-Ring, Seal Case - 70D	3
	14329	FPM	14329	FPM	14329	FPM	O-Ring, Seal Case	3
	◆ 48904	EPDM	◆ 48904	EPDM	◆ 48904	EPDM	O-Ring, Seal Case	3
125	43307	SNG	43307	SNG	43307	SNG	Seal, HPS w/S	3
	44936	FPM	44936	FPM	44936	FPM	Seal, HPS w/SS	3
	46667	HT	46667	HT	46667	HT	Seal, HPS 2-Pc w/S-Support	3
139	22179	BBCP	22179	BBCP	22179	BBCP	Plug, Inlet (1/2"NPT)	1
162	48361	D	48361	D	48361	D	Back-up-Ring, Seat	6
163	43358	NBR	43358	NBR	43358	NBR	O-Ring, Seat - 70D	6
	44938	FPM	44938	FPM	44938	FPM	O-Ring, Seat - 70D	6
	◆ 48908	EPDM	◆ 48908	EPDM	◆ 48908	EPDM	O-Ring, Seat	6
164	43725	S	43725	S	43725	S	Seat	6
166	43723	S	43723	S	43723	S	Valve	6
167	43750	S	43750	S	43750	S	Spring	6
168	44565	PVDF	44565	PVDF	44565	PVDF	Retainer, Spring	6
172	17615	NBR	17615	NBR	17615	NBR	O-Ring, Valve Plug - 75D	6
	15855	FPM	15855	FPM	15855	FPM	O-Ring, Valve Plug - 70D	6
	◆ 48431	EPDM	◆ 48431	EPDM	◆ 48431	EPDM	O-Ring, Valve Plug - 75D	6
174	43849	BBCP	43849	BBCP	43849	BBCP	Plug, Valve	6
185	48245	W770	48245	W770	48245	W770	Manifold, Head - W770	1
	49716	SBCP	49716	SBCP	49716	SBCP	Manifold, Head - Special Brass	1
188	126513	STCP R	126513	STCP R	126513	STCP R	Screw, HSH (M8x70)	8
196	22187	BBCP	22187	BBCP	22187	BBCP	Plug, Discharge (3/8"NPT)	1
250	118672	STCP	118672	STCP	118672	STCP	Protector, Shaft	1
255	30243	STZP	30243	STZP	30243	STZP	Mount, Direct (Not Shown)	1
260	30611	STZP R	30611	STZP R	30611	STZP R	Mounting, Angle Rail (Belt Drive Only)	1
	30637	STZP	30637	STZP	30637	STZP	Mount, Angle Assy-Retro Fit (See Tech Bulletin 078)	1
265	30659	—	30659	—	30659	—	Mount, Assy (Incls: 30611, 30633, 118672)	1
275	30944	STL	30944	STL	30944	STL	Assy Hub & Key (Incls: 30057, 30945)	1
283	34334	—	34334	—	34334	—	Kit, Oil Drain (3/8" x 24") (see Individual Data Sht)	1
	76334	—	76334	—	76334	—	Kit, Oil Level Indicator (3/8"x24") (see Individual Data Sht)	1
298	34970	STZP	34970	STZP	34970	STZP	Clutch, Assy, Single Groove, 20mm, 12VDC	1
	34980	STZP	34980	STZP	34980	STZP	Clutch, Assy, Dual Groove, 20mm, 12VDC	1
299	816650	W770	816650	W770	816650	W770	Head, Complete - W770	1
	818472	SBCP	818472	SBCP	818472	SBCP	Head, Complete - Special Brass	1

# EXPLODED VIEW



## Models

Belt-Drive - 5CP2120W, 5CP2120B  
 Direct-Drive - 5CP2140WCS, 5CP2140B  
 5CP2150W, 5CP2150B  
 February 2011

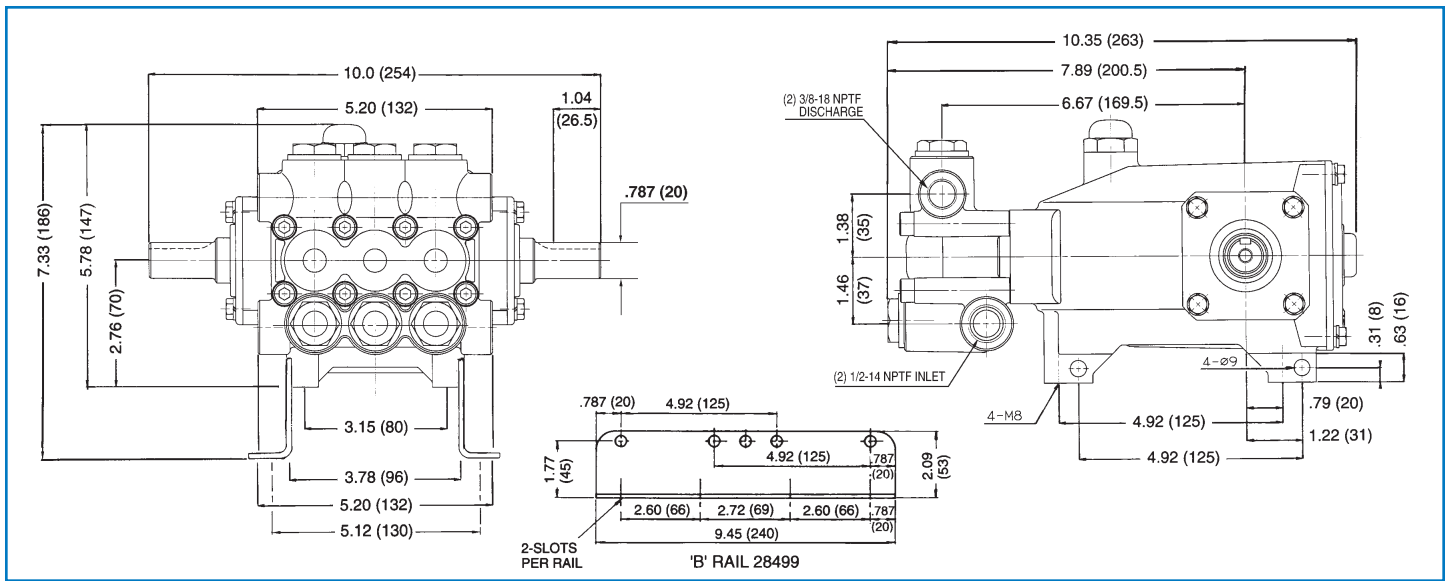
	5CP2120W	5CP2120B	MATL	5CP2140WCS	5CP2140B	MATL	5CP2150W	5CP2150B	MATL		
300	33628		NBR	33628		NBR	33628		NBR	Kit, Seal (Incls: 98, 106, 121, 125)	1
	31628		FPM	31628		FPM	31628		FPM	Kit, Seal (Incls: 98, 106, 121, 125)	1
	31648		EPDM*	31648		EPDM*	31648		EPDM*	Kit, Seal (Incls: 98, 106, 121, 125)	1
	31638		HT	31638		HT	31638		HT	Kit, Seal (Incls: 98, 106, 121, 125)	1
	76536		STHT	76536		STHT	76536		STHT	Kit, Seal (Incls: 98, 106, 120, 121, 125)	1
310	30821		NBR	30821		NBR	30821		NBR	Kit, Valve, Preassembled (Incls: 162 - 164, 166 - 168, 172)	2
	31821		FPM	31821		FPM	31821		FPM	Kit, Valve, Preassembled (Incls: 162 - 164, 166 - 168, 172)	2
	31162		EPDM	31162		EPDM	31162		EPDM	Kit, Valve, Preassembled (Incls: 162 - 164, 166 - 168, 172)	2
350	30696		STZP	30696		STZP	30696		STZP	Plier, Reverse	1
400	7850		BB	7850		BB	7850		BB	Modular Unloader (See Individual Data Sheet)	1
—	—		—	8026ES-8042ES		—	8026ES-8042ES		—	BD Motors (See Individual Data Sheet)	1
—	6107		—	6107		—	6107		—	Oil, Bottle (21 oz) ISO-68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	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. [ ] Date of latest production change. W770 effective with 97 production.

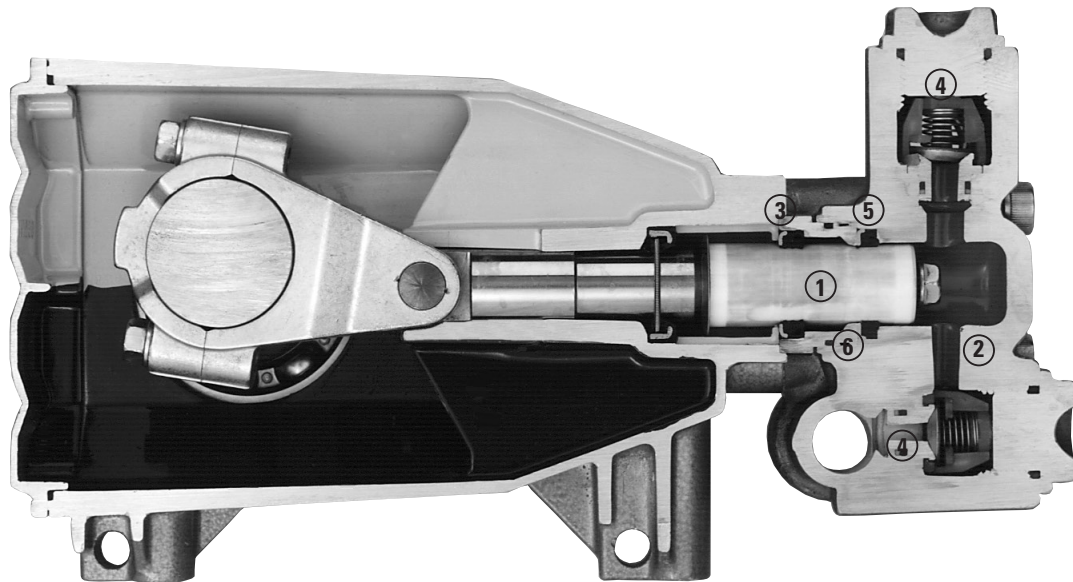
\*Review individual parts in each kit for material code identification.

Review Tech Bulletins 002, 003, 024, 036, 043, 053, 060, 061, 064, 073, 074, 077, 078, 083 and 103 for additional information.

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 HS=High Strength  
 HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N) PVDF=Polyvinylidene Fluoride S=304SS SBCP=Special Brass/Chrome Plated SS=316SS SNG=Special Blend  
 (Buna) STL=SteelW770=Special Alloy STHT=Special PTFE High Temp STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength



Models 5CP2120W, 5CP2120B, 5CP2140WCS, 5CP2140B, 5CP2150W, 5CP2150B



- 1 Special concentric, high-density, polished, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 2 **Manifolds** are a high tensile strength forged W770 alloy or special brass for long term, continuous duty.
- 3 100% wet **seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides.
- 4 Stainless steel **valves, seats and springs** provide corrosion-resistance, ultimate seating and extended life.
- 5 Specially formulated, Cat Pump exclusive, **Lo-Pressure and Hi-Pressure Seals** offer unmatched performance and seal life.
- 6 Press-in style seal case offers alignment and support for seals and “no tools” servicing.



**CAT PUMPS**

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