

25 Frame Piston Pump

Standard Models 1020, 2020
1520, 2520
Hi-Temp Model 2520C

FEATURES

Superior Design

- Triplex Uniflow design provides continuous forward fluid flow for smooth operation.
- Wetted cups and floating pistons are lubricated and cooled by pumped fluid for long cup life.
- Mechanically actuated inlet valves give strong lift and easy prime.
- 304 stainless steel flat valve design offers positive seating and greater suction capabilities.
- Oil bath crankcase assures optimum lubrication.

Quality Materials

- Cylinder and sleeve wear surfaces are hard chrome plated 304 stainless steel for maximum durability and abrasion resistance.
- Chrome plated, brass manifolds and optional stainless steel manifolds are strong and corrosion resistant.
- Heavy duty connecting rods are made of high quality Zamak offering superior bearing quality strength.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity mean longer bearing life.

Easy Maintenance

- Stepped stainless steel piston rod and with chrome-plated, stainless steel sleeve allows easy replacement from front of pump.
- All wet end wear parts are easily serviced without entering crankcase, requiring less time and effort.
- Wear parts are available in convenient kits.

DETERMINING THE PUMP R.P.M.	$\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}}$	=	$\frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$
DETERMINING THE REQUIRED H.P.	$\frac{\text{GPM} \times \text{PSI}}{1460}$	=	Electric Brake H. P. Required
DETERMINING MOTOR PULLEY SIZE	$\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}}$	=	$\frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

Note: Consult engine manufacturer when using gas or diesel engine. Refer to pump Service Manual for important Inlet Condition Check-List, Start-up Procedure, Tech Bulletins and Pump Maintenance information.

SPECIFICATIONS

	U.S. Measure	Metric Measure
MODEL 1020		
Flow	10 GPM	(38 L/M)
Pressure Range	100 to 1200 PSI	(7 to 85 BAR)
RPM	720 RPM	(720 RPM)
Bore984"	(25 mm)
MODEL 2020		
Flow	20 GPM	(76 L/M)
Pressure Range	100 to 800 PSI	(7 to 55 BAR)
RPM	870 RPM	(870 RPM)
Bore	1.260"	(32 mm)
MODEL 1520		
Flow	15 GPM	(57 L/M)
Pressure Range	100 to 1000 PSI	(7 to 70 BAR)
RPM	830 RPM	(830 RPM)
Bore	1.122"	(28.5 mm)
MODEL 2520 and 2520C Hi-Temp		
Flow	25 GPM	(95 L/M)
Pressure Range	100 to 800 PSI	(7 to 55 BAR)
RPM	772 RPM	(772 RPM)
Bore	1.490"	(38 mm)
COMMON SPECIFICATIONS		
Stroke	1.417"	(36 mm)
Inlet Pressure.....	-8.5 to +40 PSI	(-0.6 to +2.8 BAR)
2520C.....	Flooded to +40 PSI	(Flooded to +2.8 BAR)
Crankcase Capacity	84 oz.	(2.5 L)
Maximum Fluid Temperature	160°F	(71°C)
2520C.....	210°F	(98°C)
Inlet Ports (1).....	1-1/4" NPT	(1-1/4" NPT)
2520C - Cooling Ports (2).....	1/4" NPT	(1/4" NPT)
Discharge Ports (3).....	1" NPT	(1" NPT)
Pulley Mounting	Either side	(Either side)
Shaft Diameters	1.181"	(30 mm)
Weight	69.3 lbs.	(31.5 kg)
Dimensions.....	20.83 x 15.04 x 7.8"	(529 x 382 x 198 mm)
2520C.....	21.42 x 15.04 x 7.8"	(544 x 382 x 198 mm)

HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE			MOTOR PULLEY SIZE	
	U.S. GPM	L/M	PSI 800 BAR 55	PSI 1000 BAR 70	PSI 1200 BAR 85	Using 1725 RPM Motor & Std. 9.75" Pulley O.D. RPM	Pulley O.D.
1020	10	38	5.5	6.9	8.2	720	4.1
2020	20	76	11.0	13.7	N/A	870	4.9
1520	15	57	8.2	10.3	N/A	830	4.7
	12	45	6.6	8.2	N/A	660	3.8
	10	38	5.5	6.9	N/A	550	3.1
2520 and 2520C	25	95	13.7	N/A	N/A	772	4.4
	20	76	11.0	N/A	N/A	620	3.5
	15	57	8.2	N/A	N/A	465	2.7

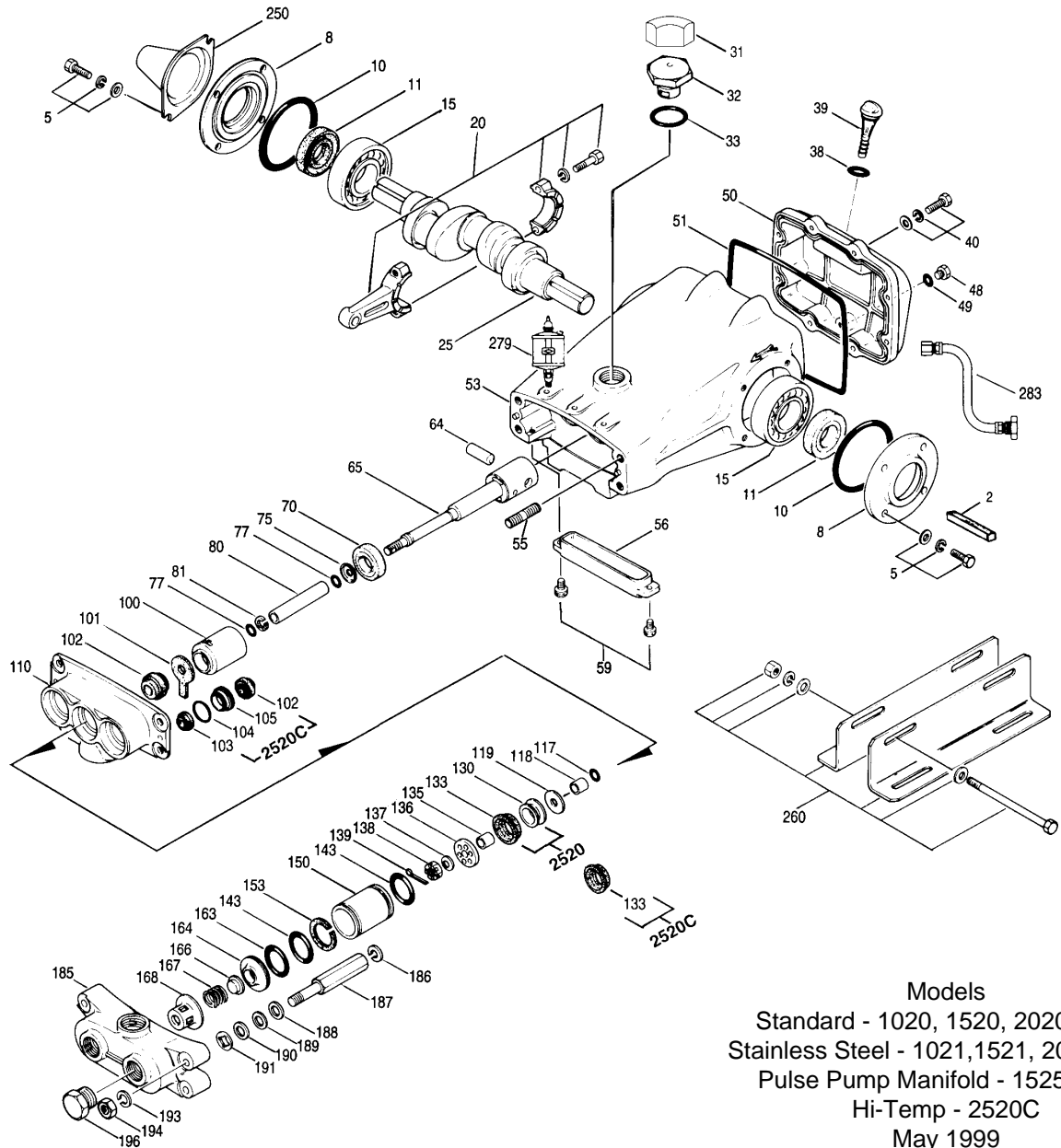
See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 03.

"Customer confidence is our greatest asset"

PARTS LIST

ITEM	PART NUMBER						DESCRIPTION	QTY
	1020 MATL	2020 MATL	1520 MATL	2520 MATL	2520C MATL			
● 2	50146 STL	51046 STL	50146 STL	50146 STL	50146 STL	50146 STL	Key (M7x7x40)	1 ●
5	92508 STZP	92508 STZP	92508 STZP	92508 STZP	92508 STZP	92508 STZP	Screw, Sems Hex Head (M8x25)	8
8	27773 AL	27773 AL	27773 AL	27773 AL	27773 AL	27773 AL	Cover, Bearing	2
10	27772 NBR	27772 NBR	27772 NBR	27772 NBR	27772 NBR	27772 NBR	O-Ring, Bearing Cover	2
11	27771 NBR	27771 NBR	27771 NBR	27771 NBR	27771 NBR	27771 NBR	Seal, Oil, Crankshaft	2
15	26512 STL	26512 STL	26512 STL	26512 STL	26512 STL	26512 STL	Bearing	2
20	27776 ZZ	27776 ZZ	27776 ZZ	27776 ZZ	27776 ZZ	27776 ZZ	Rod, Connecting, Assy	3
25	27770 FCM	27770 FCM	27770 FCM	27770 FCM	27770 FCM	27770 FCM	Crankshaft	1
31	828710	828710	828710	828710	828710	828710	Protector, Oil Cap	1
32	43211	43211	43211	43211	43211	43211	Cap, Oil Filler	1
33	14177 NBR	14177 NBR	14177 NBR	14177 NBR	14177 NBR	14177 NBR	O-Ring, Oil Filler Cap	1
38	11338 NBR	11338 NBR	11338 NBR	11338 NBR	11338 NBR	11338 NBR	O-Ring, Dipstick	1
39	27769 ABS	27769 ABS	27769 ABS	27769 ABS	27769 ABS	27769 ABS	Dipstick	1
40	92508 STZP	92508 STZP	92508 STZP	92508 STZP	92508 STZP	92508 STZP	Screw, Sems HHC (M8x25)	8
48	25625 STCP	25625 STCP	25625 STCP	25625 STCP	25625 STCP	25625 STCP	Plug, Drain (1/4")	1
49	23170 NBR	23170 NBR	23170 NBR	23170 NBR	23170 NBR	23170 NBR	O-Ring, Drain Plug	1
50	27768 AL	27768 AL	27768 AL	27768 AL	27768 AL	27768 AL	Cover, Rear	1
51	27767 NBR	27767 NBR	27767 NBR	27767 NBR	27767 NBR	27767 NBR	O-Ring, Rear Cover	1
● 53	27762 AL	27762 AL	27762 AL	27762 AL	27762 AL	27762 AL	Crankcase	1 ●
55	27764 ZP	27764 ZP	27764 ZP	27764 ZP	27764 ZP	27764 ZP	Stud (M12x53)	4
56	27790 POP	27790 POP	27790 POP	27790 POP	27790 POP	27790 POP	Pan, Oil	1
59	92519 STZP	92519 STZP	92519 STZP	92519 STZP	92519 STZP	92519 STZP	Screw, Sems HHC (M6x16)	2
64	27784 S	27784 S	27784 S	27784 S	27784 S	27784 S	Pin, Piston Rod	3
65	29229 SZZ	29229 SZZ	29229 SZZ	29229 SZZ	43266 SZZ	43266 SZZ	Rod, Piston (M8)	3
70	27785 NBR	27785 NBR	27785 NBR	27785 NBR	27785 NBR	27785 NBR	Seal, Oil, Crankcase	3
75	27786 S	27786 S	27786 S	27786 S	27786 S	27786 S	Slinger, Barrier	3
77	26531 NBR	26531 NBR	26531 NBR	26531 NBR	14198 FPM	14198 FPM	O-Ring, Sleeve	6
	14198 FPM	14198 FPM	14198 FPM	14198 FPM	—	—	O-Ring, Sleeve	6
80	43122 SCP	43122 SCP	43122 SCP	43122 SCP	43122 SCP	43122 SCP	Sleeve (M16)	3
	43123 S	43123 S	43123 S	43123 S	43123 S	43123 S	Sleeve (M16)	3
81	29246 PTFE	29246 PTFE	29246 PTFE	29246 PTFE	29246 PTFE	29246 PTFE	Back-up-Ring, Sleeve	3
100	27788 PVDF	27788 PVDF	27788 PVDF	27788 PVDF	27788 PVDF	27788 PVDF	Retainer, Seal	3
101	43126	43126	43126	43126	43126	43126	Wick, Long Tab (M16)	3
102	43124 NBR	43124 NBR	43124 NBR	43124 NBR	43272 FPM	43272 FPM	Seal (M16)/Seal w/Grease Pocket	3
	43125 FPM	43125 FPM	43125 FPM	43125 FPM	—	—	Seal (M16)	3
103	—	—	—	—	43269 FPM	43269 FPM	Seal w/Lip	3
104	—	—	—	—	14178 FPM	14178 FPM	O-Ring, Seal Adapter	3
105	—	—	—	—	43268 S	43268 S	Adapter, LPS	3
110	27791 BBCP	27791 BBCP	27791 BBCP	27791 BBCP	43270 BBCP	43270 BBCP	Manifold, Inlet	1
● 117	28595 SS	28595 SS	28595 SS	28595 SS	—	—	Manifold, Inlet	1 ●
118	—	—	—	—	14198 FPM	14198 FPM	O-Ring, Spacer	3
119	29242 S	29234 S	29232 S	29240 S	29240 S	29240 S	Spacer, Inlet Valve	3
130	27820 S	27945 S	27814 S	27840 S	—	—	Valve, Inlet (M8)	3
133	27821 FPM	27946 FPM	27815 FPM	28409 FPM	—	—	Piston	3
	—	—	30189 TG	30498 TR	30498 TR	30498 TR	Cup, Piston	3
	29091 NBR	29093 NBR	29092 NBR	29094 NBR	—	—	Cup, V-Hot	3
135	29231 S	29231 S	29231 S	29231 S	29231 S	29231 S	Spacer, Piston (M8)	3
136	29241 S	29235 S	29233 S	29239 S	29239 S	29239 S	Retainer, Piston (M8)	3
137	27871 S	27871 S	27871 S	27871 S	27871 S	27871 S	Washer, Conical (M8)	3
138	27510 S	27510 S	27510 S	27510 S	27510 S	27510 S	Nut, Slotted (M8)	3
139	29589 S	29589 S	29589 S	29589 S	29589 S	29589 S	Cotterpin (M8)	3
143	25495 NBR	25495 NBR	25495 NBR	25495 NBR	11748 FPM	11748 FPM	O-Ring, Cylinder	6
	11748 FPM	11748 FPM	11748 FPM	11748 FPM	—	—	O-Ring, Cylinder	6
150	27823 SCP	28533 SCP	27817 SCP	27844 SCP	27844 SCP	27844 SCP	Cylinder, (M65)	3
	29046 S	29048 S	29047 S	29049 S	29049 S	29049 S	Cylinder, (M65)	3
153	28242 PTFE	28242 PTFE	28242 PTFE	—	—	—	Back-up-Ring, Cylinder	3
163	28395 NBR	28395 NBR	28395 NBR	28395 NBR	28769 FPM	28769 FPM	O-Ring, Valve Seat	3
	28769 FPM	28769 FPM	28769 FPM	28769 FPM	—	—	O-Ring, Valve Seat	3
164	28396 S	28396 S	28396 S	28396 S	28396 S	28396 S	Seat	3
166	43133 S	43133 S	43133 S	43133 S	43133 S	43133 S	Valve	3
167	26548 S	26548 S	26548 S	26548 S	26548 S	26548 S	Spring	3
168	43134 S	43134 S	43134 S	43134 S	43134 S	43134 S	Retainer, Spring	3
185	27805 BBCP	27805 BBCP	27805 BBCP	27805 BBCP	27805 BBCP	27805 BBCP	Manifold, Discharge	1
● 28594 SS	28594 SS	28594 SS	28594 SS	28594 SS	—	—	Manifold, Discharge	1 ●
	—	—	6425 BB	6425 BB	—	—	Manifold, Pulse Pump, Ported	1
186	30908 STZP	30908 STZP	30908 STZP	30908 STZP	30908 STZP	30908 STZP	Lockwasher	4
187	27803 STCP	27803 STCP	27803 STCP	27803 STCP	43277 STCP	43277 STCP	Bolt, Cylinder	4
188	27804 STZP	27804 STZP	27804 STZP	27804 STZP	27804 STZP	27804 STZP	Washer (12x0.3)	4/8
189	26553 STZP	26553 STZP	26553 STZP	26553 STZP	26553 STZP	26553 STZP	Washer (12x0.5)	4/8
190	26554 STZP	26554 STZP	26554 STZP	26554 STZP	26554 STZP	26554 STZP	Washer (12x1.0)	4/8
191	27933 STZP	27933 STZP	27933 STZP	27933 STZP	27933 STZP	27933 STZP	Washer, Retaining (M12)	4
193	30908 STZP	30908 STZP	30908 STZP	30908 STZP	30908 STZP	30908 STZP	Lockwasher	4
194	81060 STZP	81060 STZP	81060 STZP	81060 STZP	81060 STZP	81060 STZP	Nut, Hex (M12)	4
196	27807 BBCP	27807 BBCP	27807 BBCP	27807 BBCP	27807 BBCP	27807 BBCP	Plug (1"NPT)	1

EXPLODED VIEW



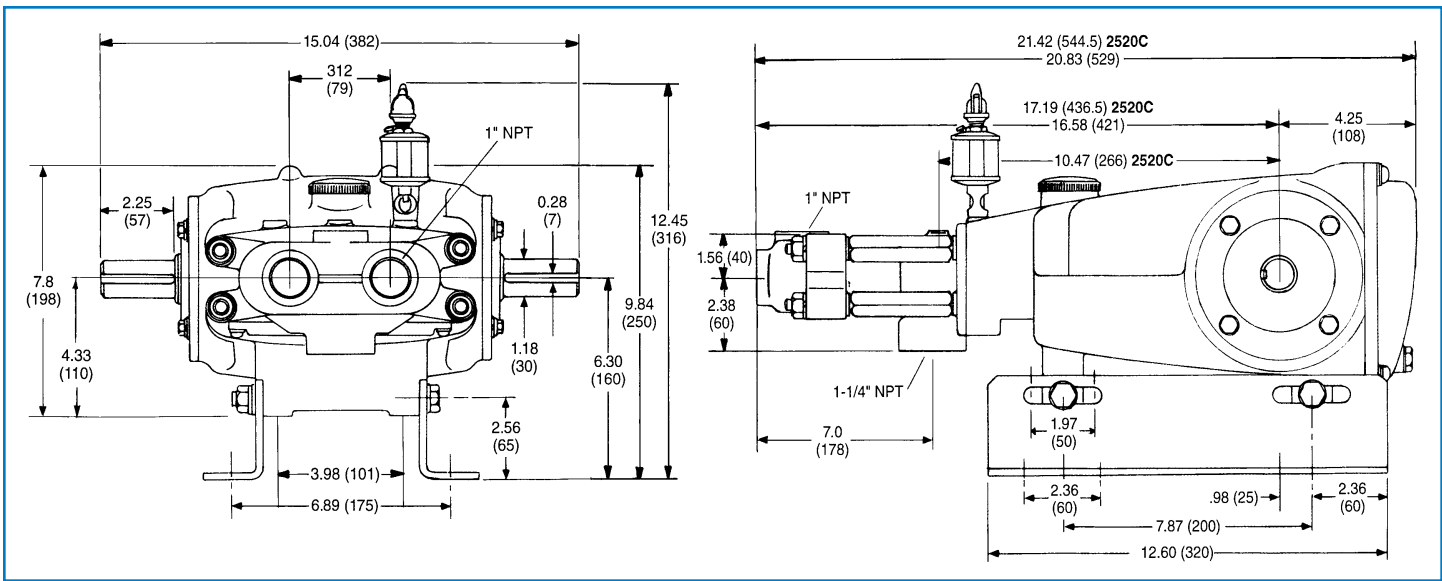
Models
 Standard - 1020, 1520, 2020, 2520
 Stainless Steel - 1021, 1521, 2021, 2521
 Pulse Pump Manifold - 1525, 2525
 Hi-Temp - 2520C
 May 1999

	1020 MATL	2020 MATL	1520 MATL	2520 MATL	2520C MATL		
250	26516 STCP	26516 STCP	26516 STCP	26516 STCP	26516 STCP	Protector, Shaft	1
260	30614	30614	30614	30614	30614	Assy, Angle Rail (Incls: 27808,30902,30930,30911,30908)	1
● 269	30206	30206	30206	30206	30206	Pulley (10" 2 Grv.)	1 ●
● 275	30207	30207	30207	30207	30207	Hub "H" (M7 Keyway)	1 ●
● 279	30278 STZP	30278 STZP	30278 STZP	30278 STZP	30278 STZP	(See complete Drive Packages, Tech Bulletin 03)	
281	30967	30967	30967	30967	30967	Oiler (1/4" NPT, 1 oz.)	3 ●
282	10069	10069	10069	10069	10069	Oiler, Glass Only	3
● 283	34334	34334	34334	34334	34334	Gasket, Oiler	1
295	—	—	6300 SS	6300 SS	—	Kit, Oil Drain	1 ●
295	—	—	6305 SS	6305 SS	—	Pump, Pulse (1 qt.) 1000 PSI	1
300	—	—	30254 FPM	30256 FPM	—	Pump, Pulse (1 gal.) 1000 PSI	1
302	—	—	30839 NBR	30252 NBR	—	Kit, Cup (Incls: 133,139,143,153)	1
305	30819 NBR	30819 NBR	30819 NBR	30819 NBR	—	Kit, Piston (Incls: 119-143)	1
306	—	30482 NBR	30482 NBR	30482 NBR	—	Kit, Sleeve & Seal (M8, M16)	
310	30767	30767	30767	30767	30767	(Incls: 75,77,80,85,102,139)	1
355	16981	27964	15770	27853	—	Kit, Seal (Incls: 101,102,139)	1
						Kit, Valve (Incls: 153,143,163,164,166,167,168)	1
						Cup Inserter	1

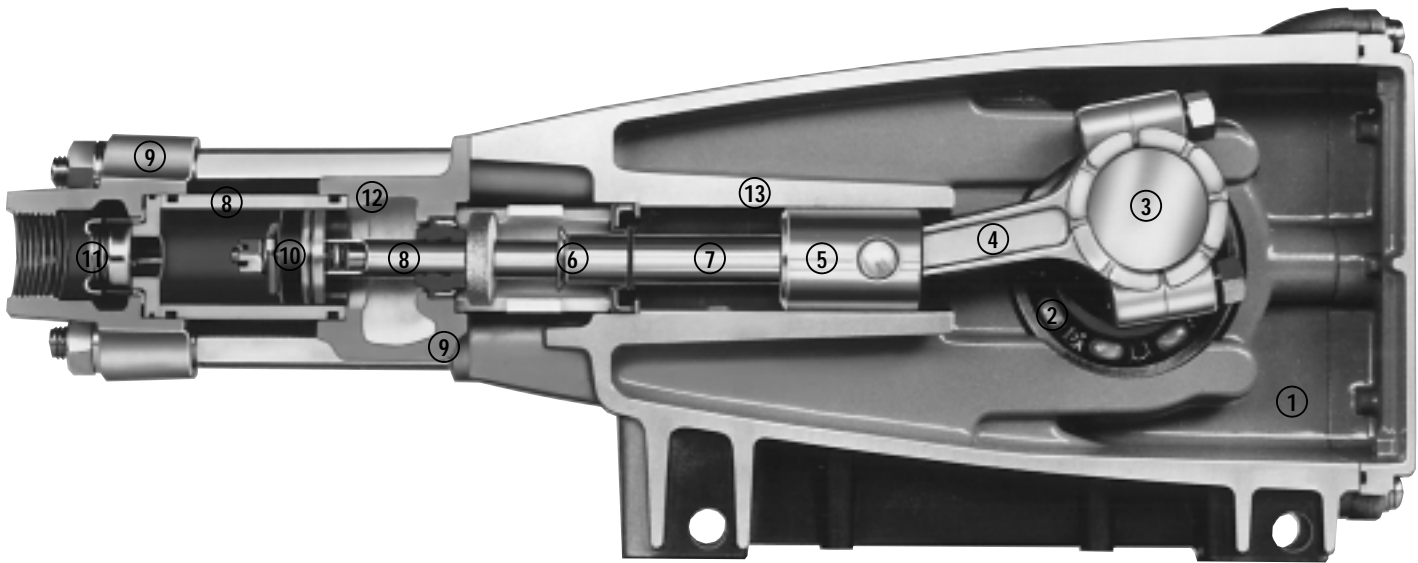
● Industrial discount. **Bold print part numbers are unique to a particular pump model.** *Italics are optional items.*

See Tech Bulletins 03, 08, 09, 17, 21, 24, 34, 36, 63, 64, and 74 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BBCP=Brass/Chrome Plated FCM=Forged Chrome-moly FPM=Fluorocarbon (Viton®) NBR=Medium Nitrile (Buna-N) POP=Polypropylene PTFE=Polytetrafluoroethylene (Teflon®) PVDF=Fluoroplastic (High Strength) S=304SS SCP=304SS/Chrome Plated SS=316SS STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated TG=PTFE Graphite Compound (GIT) TR=Roulon ZP=Zinc Plated ZZ=Zamak



Models 1020, 2020, 1520, 2520, 2520C



- | | | |
|--|---|--|
| <p>1 Die cast aluminum crankcase means high strength, lightweight, and excellent tolerance control.</p> <p>2 Oversized crankshaft bearings provide extended bearing life and pump performance.</p> <p>3 Chrome-moly crankshaft provides unmatched strength and surface hardness for long life.</p> <p>4 Matched oversized connecting rods are made of Zamak, a material noted for strength and superior bearing quality.</p> | <p>5 The piston rods are high tensile strength 316 stainless steel with Zamak crossheads.</p> <p>6 The stainless steel slinger provides back-up protection for the crankcase seal, keeping pumped fluids out of the crankcase.</p> <p>7 The patented stepped piston rod with hard chrome-plated stainless steel sleeve provides a durable wear surface and easy wet end servicing.</p> <p>8 The cylinder and sleeve wear surfaces are hard chrome-plated 304 stainless steel for longer service life.</p> | <p>9 Manifolds are of high tensile strength chrome-plated brass or 316 stainless steel for special corrosion resistance.</p> <p>10 100% wet cup/seal design adds to service life by allowing pumped fluids to cool and lubricate the elastomers on both sides.</p> <p>11 304 stainless steel valves, seats, and springs provide corrosion-resistance, positive seating and long life.</p> <p>12 Special dual inlet seals with cooling ports allow pumped fluids up to 210°F.</p> <p>13 Crossheads are 360° supported for uncompromising alignment.</p> |
|--|---|--|

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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