

Model 56 Shown
(Rails Sold Separately)

FEATURES

- Triplex design delivers high efficiency and low pulsation.
- Durable dual V-Packings 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 HT, FPM elastomers for compatibility with many liquids and temperatures up to 200°F.

COMMON SPECIFICATIONS

Bore	0.708"	(18 mm)
Inlet Pressure Range	Flooded to 60 psi	(Flooded to 4 bar)
Crankcase Capacity	25 oz.	(0.75 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	0.945"	(24 mm)
Weight	29.25 lbs.	(13.3 kg)
Weight w/Gearbox	36.8 lbs.	(16.7 kg)
Dimensions	13.93 x 8.2 x 6.41"	(354 x 208 x 163 mm)

*See Gearbox Data Sheet 8051-8078 for maximum engine rpm.

⚠ 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.

7 Frame Plunger Pump

Standard Models 56, 57, 59, 60

**Gearbox Models 56G1, 59G1
60G1**

SPECIFICATIONS

MODELS	U.S. Measure		Metric Measure	
	U.S. Measure	Metric Measure	U.S. Measure	Metric Measure
	56		Alternate or 56G1*	
Flow	5.5 gpm	(21 l/m)	8 gpm	(30 l/m)
Pressure Range	100 to 3500 psi (7 to 245 bar)		100 to 1800 psi (7 to 125 bar)	
Pump RPM	1210 rpm	(1210 rpm)	1760 rpm	(1760 rpm)
Engine RPM	—	—	3600 rpm	(3600 rpm)
Stroke	0.945"	(24 mm)	0.945"	(24 mm)

MODEL

	57	
Flow	4.5 gpm	(17 l/m)
Pressure Range	100 to 4000 psi (7 to 275 bar)	
Pump RPM	1285 rpm	(1285 rpm)
Stroke	0.728"	(18.5 mm)

MODELS

	59, 59G1*		60, 60G1*	
Flow	5.5 gpm	(21 l/m)	4.5 gpm	(17 l/m)
Pressure Range	100 to 3500 psi (7 to 245 bar)		100 to 4000 psi (7 to 275 bar)	
Pump RPM	1570 rpm	(1570 rpm)	1570 rpm	(1570 rpm)
Engine RPM	3200 rpm	(3200 rpm)	3200 rpm	(3200 rpm)
Stroke	0.728"	(18.5 mm)	0.591"	(15 mm)

ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE					MOTOR PULLEY SIZE Using 1725 RPM Motor & Std. Pump Pulley	
			psi 1800	psi 2500	psi 3000	psi 3500	psi 4000		
			U.S. gpm	l/m	bar 125	bar 175	bar 210		
56	5.5	21	6.8	9.4	11.3	13.2	N/A	1210	6.9
56 ALT.	8.0	30	9.9	N/A	N/A	N/A	N/A	1760	Direct Drive
56G1	8.0	30	9.9	N/A	N/A	N/A	N/A	1760	Gearbox
57	4.5	17	5.6	7.7	9.3	10.8	12.3	1285	7.3
59, 59G1	5.5	21	6.8	9.4	11.3	13.2	N/A	1570	Gearbox
60, 60G1	4.5	17	5.6	7.7	9.3	10.8	12.3	1570	Gearbox

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.

$$\frac{\text{gpm} \times \text{psi}}{1460} = \text{Electric Brake H. P. Required}$$

DETERMINING MOTOR PULLEY SIZE

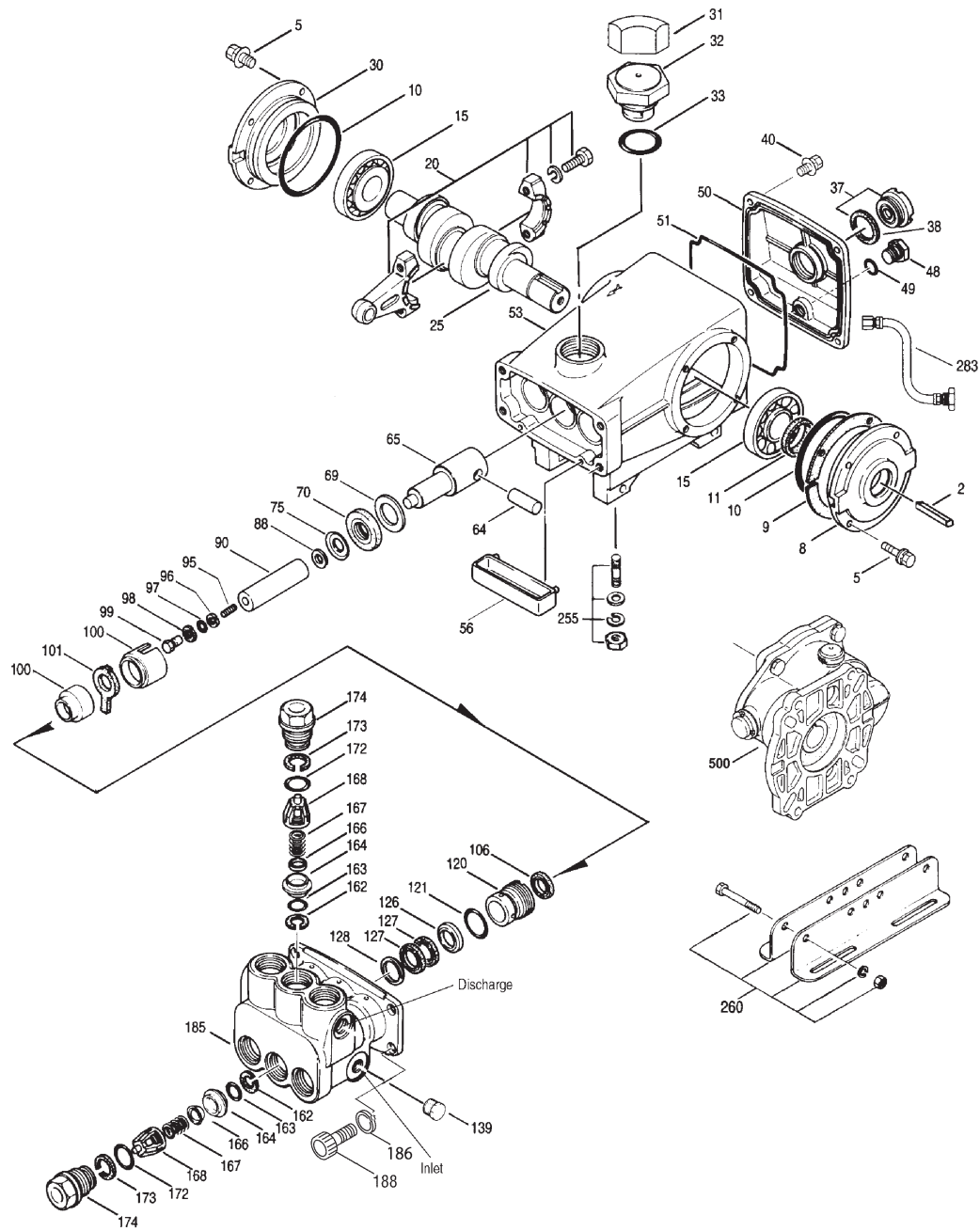
$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

See complete Drive Packages (Includes: 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
	56 MATL	57 MATL	59 MATL	60 MATL		
2	30067 STL	30067 STL	30067 STL	30067 STL	Key (M8x7.5x25)	1
5	92519 STZP	92519 STZP	92519 STZP	92519 STZP	Screw, HHC Sems (M6x16)	4/8
	125824 STCP R	125824 STCP R	125824 STCP R	125824 STCP R	Screw, HHC Sems (M6x16)	4/8
8	43223 AL	43223 AL	43223 AL	43223 AL	Cover, Bearing [03/10]	1
9	815280 FBR	815280 FBR	815280 FBR	815280 FBR	Shim, Split, 2-Pc	1
10	12393 NBR	12393 NBR	12393 NBR	12393 NBR	O-Ring, Bearing Cover	2
11	43222 NBR	43222 NBR	43222 NBR	43222 NBR	Seal, Oil Crankshaft - 70D	1
15	43221 STL	43221 STL	43221 STL	43221 STL	Bearing, Roller	2
20	48863 TNM	48863 TNM	48863 TNM	48863 TNM	Rod, Connecting [6/02]	3
25	43464 FCM	44947 FCM	46131 FCM	44591 FCM	Crankshaft, Single End	1
30	44948 AL	44948 AL	44948 AL	44948 AL	Cover, Bearing, Blind [03/10]	1
31	828710 —	828710 —	828710 —	828710 —	Protector, Oil Cap w/Foam Gasket	1
32	44666 RTP	44666 RTP	44666 RTP	44666 RTP	Cap, Oil Filler, Domed-Gearbox Models	1
33	14177 NBR	14177 NBR	14177 NBR	14177 NBR	O-Ring, Oil Filler Cap - 70D	1
37	92241 —	92241 —	92241 —	92241 —	Gauge, Oil Bubble w/Gasket - 80D	1
38	44428 NBR	44428 NBR	44428 NBR	44428 NBR	Gasket, Flat Flex, Oil Gauge - 80D	1
40	92520 STZP	92520 STZP	92520 STZP	92520 STZP	Screw, HHC Sems (M6x20)	4
	126541 STCP R	126541 STCP R	126541 STCP R	126541 STCP R	Screw, HHC Sems (M6x20) (See Tech Bulletin 106)	4
48	25625 STCP	25625 STCP	25625 STCP	25625 STCP	Plug, Drain (1/4"x19BSP)	1
49	23170 NBR	23170 NBR	23170 NBR	23170 NBR	O-Ring, Drain Plug - 70D	1
50	127701 AL	127701 AL	127701 AL	127701 AL	Cover, Rear [03/10]	1
51	14047 NBR	14047 NBR	14047 NBR	14047 NBR	O-Ring, Rear Cover (See Tech Bulletin 106)	1
53	127698 AL	127698 AL	129812 AL	129812 AL	Crankcase (M10) [03/10]	1
56	43240 POP	43240 POP	43240 POP	43240 POP	Pan, Oil	1
64	43237 CM	43237 CM	43237 CM	43237 CM	Pin, Crosshead	3
65	48913 SHS	48913 SHS	48913 SHS	48913 SHS	Rod, Plunger, Short [5/02]	3
69	43227 STZP	43227 STZP	43227 STZP	43227 STZP	Washer, Oil Seal	3
	126589 STCP R	126589 STCP R	126589 STCP R	126589 STCP R	Washer, Oil Seal	3
70	43228 NBR	43228 NBR	43228 NBR	43228 NBR	Seal, Oil, Crankcase	3
75	43328 S	43328 S	43328 S	43328 S	Slinger, Barrier	3
88	45697 S	45697 S	45697 S	45697 S	Washer, Keyhole (M18 x M10)	3
90	43232 CC	43232 CC	43232 CC	43232 CC	Plunger (M18x77)	3
95	89649 STZP	89649 STZP	89649 STZP	89649 STZP	Stud, Plunger Retainer (M6x70)	3
	126559 STCP R	126559 STCP R	126559 STCP R	126559 STCP R	Stud, Plunger Retainer (M6x70)	3
96	43235 PTFE	43235 PTFE	43235 PTFE	43235 PTFE	Back-up-Ring, Plunger Retainer	3
97	17399 NBR	17399 NBR	17399 NBR	17399 NBR	O-Ring, Plunger Retainer - 80D	3
	14160 FPM	14160 FPM	14160 FPM	14160 FPM	O-Ring, Plunger Retainer - 80D	3
98	45891 CU	45891 CU	45891 CU	45891 CU	Gasket, Plunger Retainer	3
99	46504 S	46504 S	46504 S	46504 S	Retainer, Plunger (M6)	3
100	45686 PVDF	45686 PVDF	45686 PVDF	45686 PVDF	Retainer, Seal, Rear	3
	45687 PVDF	45687 PVDF	45687 PVDF	45687 PVDF	Retainer, Seal Adapter, Front	3
101	43239 FBR	43239 FBR	43239 FBR	43239 FBR	Wick, Long Tab	3
106	43243 NBR	43243 NBR	43243 NBR	43243 NBR	Seal, LPS w/S-Spg	3
	44926 FPM	44926 FPM	44926 FPM	44926 FPM	Seal, LPS w/SS-Spg	3
120	45685 BB	45685 BB	45685 BB	45685 BB	Case, Seal	3
121	20285 NBR	20285 NBR	20285 NBR	20285 NBR	O-Ring, Seal Case - 70D	3
	11693 FPM	11693 FPM	11693 FPM	11693 FPM	O-Ring, Seal Case	3
126	44550 BB	44550 BB	44550 BB	44550 BB	Adapter, Female	3
127	44549 SNG	44549 SNG	44549 SNG	44549 SNG	V-Packing	6
	45617 SFG	45617 SFG	45617 SFG	45617 SFG	V-Packing	6
	48300 STG	48300 STG	48300 STG	48300 STG	V-Packing	6
128	45618 BB	45618 BB	45618 BB	45618 BB	Adapter, Male	3
139	43448 BB	43448 BB	43448 BB	43448 BB	Plug, Inlet, (1/2" NPT)	1
162	43248 PTFE	43248 PTFE	43248 PTFE	43248 PTFE	Back-up-Ring, Seat	6
163	43249 NBR	43249 NBR	43249 NBR	43249 NBR	O-Ring, Seat - 80D	6
	44383 FPM	44383 FPM	44383 FPM	44383 FPM	O-Ring, Seat - 70D	6
164	43722 S	43722 S	43722 S	43722 S	Seat	6
166	43721 S	43721 S	43721 S	43721 S	Valve	6
167	43751 S	43751 S	43751 S	43751 S	Spring	6
168	44564 PVDF	44564 PVDF	44564 PVDF	44564 PVDF	Retainer, Spring	6
172	14179 NBR	14179 NBR	14179 NBR	14179 NBR	O-Ring, Valve Plug - 70D	6
	15855 FPM	15855 FPM	15855 FPM	15855 FPM	O-Ring, Valve Plug - 70D	6
173	20213 PTFE	20213 PTFE	20213 PTFE	20213 PTFE	Back-up-Ring, Valve Plug	6
174	45939 BB	45939 BB	45939 BB	45939 BB	Plug, Valve, Extended	6
185	45937 FBB	45937 FBB	45937 FBB	45937 FBB	Head, Manifold, (M10)	1
186	49680 S	49680 S	49680 S	49680 S	Washer, Spring (M10)	4
188	49679 S	49679 S	49679 S	49679 S	Screw, HSH (M10x35)	4
255	30243 STZP	30243 STZP	30243 STZP	30243 STZP	Kit, Direct Mount	1
260	30611 STZP	30611 STZP	30611 STZP	30611 STZP	Assy, Angle Rail, B (2.09" x 9.45")	1
	30645 STZP	30645 STZP	30645 STZP	30645 STZP	Assy, Angle Rail, A (2.95" x 11.81")	1
269	30206 F	30206 F	30206 F	30206 F	Pulley, (10") AB (See Tech Bulletin 003)	1
274	33000 STL	33000 STL	33000 STL	33000 STL	Hub (M24), H Series (See Tech Bulletin 003)	1
283	34334 —	34334 —	34334 —	34334 —	Kit, Oil Drain (See Tech Bulletin 077)	1
298	34628 STZP	34628 STZP	34628 STZP	34628 STZP	Clutch Assy, Single Groove, 24mm, 12VDC	1
	34630 STZP	34630 STZP	34630 STZP	34630 STZP	Clutch Assy, Dual Groove, 24mm, 12VDC	1
	34959 STZP	34959 STZP	34959 STZP	34959 STZP	Clutch Assy, Eight Groove Poly L, 24mm, 12VDC	1
299	814618 FBB	814618 FBB	814618 FBB	814618 FBB	Head, Complete	1

EXPLODED VIEW



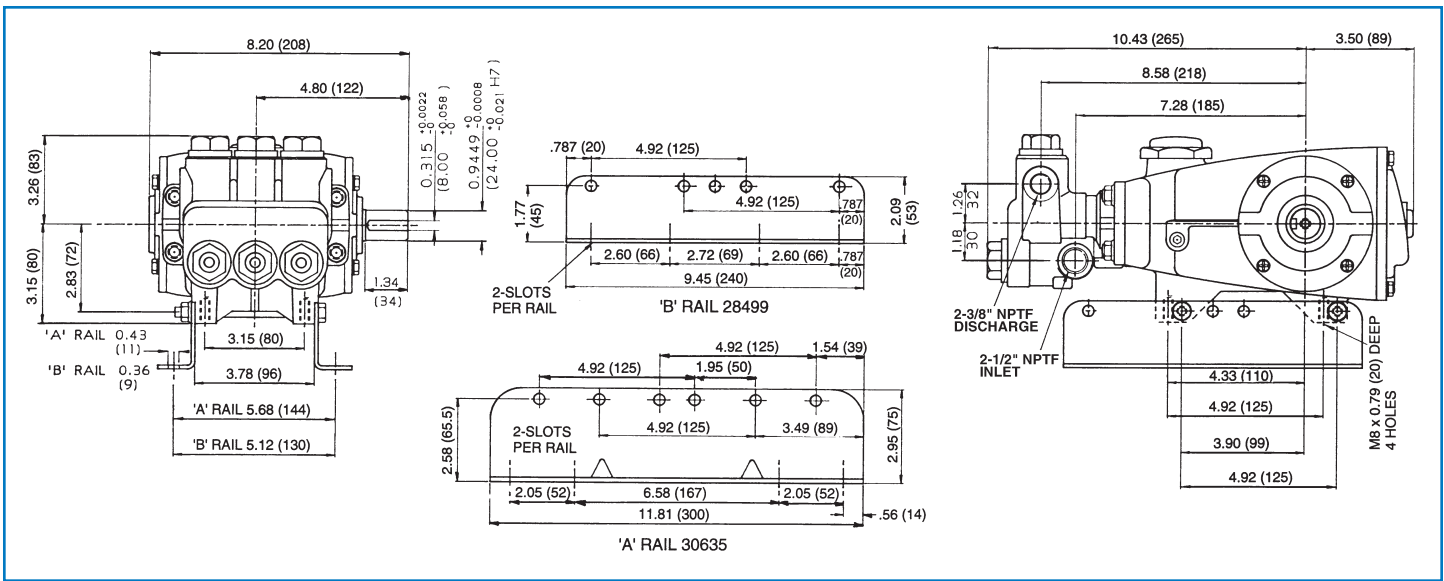
Models
56, 57, 59, 60
56G1, 59G1, 60G1
January 2011

	56	MATL	57	MATL	59	MATL	60	MATL		
300	30799	<i>NBR</i>	30799	<i>NBR</i>	30799	<i>NBR</i>	30799	<i>NBR</i>	Kit, Seal (Incls: 97,101,106,121,127)	1
	34237	<i>FPM</i>	34237	<i>FPM</i>	34237	<i>FPM</i>	34237	<i>FPM</i>	Kit, Seal (Incls: 97,101,106,121,127)	1
	76799	<i>HT</i>	76799	<i>HT</i>	76799	<i>HT</i>	76799	<i>HT</i>	Kit, Seal, "High Temp" (Incls: 97,101,106,121,127)	1
310	33820	<i>NBR</i>	33820	<i>NBR</i>	33820	<i>NBR</i>	33820	<i>NBR</i>	Kit, Valve (Incls: 162-168,172,173)	2
	34238	<i>FPM</i>	34238	<i>FPM</i>	34238	<i>FPM</i>	34238	<i>FPM</i>	Kit, Valve (Incls: 162-168,172,173)	2
350	30696	<i>STZP</i>	30696	<i>STZP</i>	30696	<i>STZP</i>	30696	<i>STZP</i>	Plier, Reverse	1
351	43257	<i>STZP</i>	43257	<i>STZP</i>	43257	<i>STZP</i>	43257	<i>STZP</i>	Tool, Seal Case Removal	1
	33005	<i>STZP</i>	33005	<i>STZP</i>	33005	<i>STZP</i>	33005	<i>STZP</i>	Socket, Seal Case, 1/2" Drive	1
352	44050	<i>STZP</i>	44050	<i>STZP</i>	44050	<i>STZP</i>	44050	<i>STZP</i>	Tool, Oil Gauge Removal	1
500	8071	—	—	—	8071	—	8071	—	Gearbox-1" (See individual Data Sheet)	1
—	6575	—	6575	—	6575	—	6575	—	Plunger Pump Service DVD	1
—	6107	—	6107	—	6107	—	6107	—	Oil, Bottle (21 oz.) ISO 68 Hydraulic	1-2

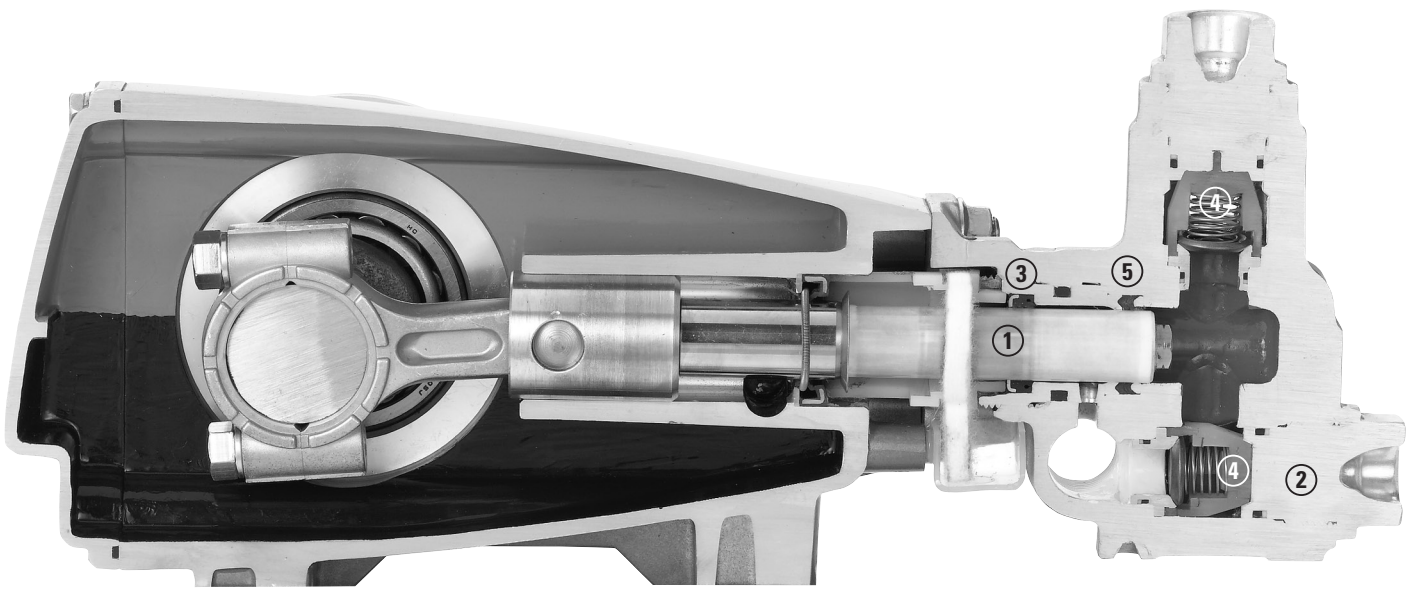
Bold print part numbers are unique to a particular pump model. *Italics are optional items.* [] Date of latest production change. R Components comply with RoHS Directive.

View Tech Bulletins 002, 003, 024, 027, 035, 036, 043, 051, 054, 058, 067, 074, 077, 083 and 106 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass CC=Ceramic CM=Chrome-Moly CU=Copper F=Cast Iron FBB=Forged Brass
FBR=Fiber FCM=Forged Chrome-Moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) POP=Polypropylene PTFE=Pure Polytetrafluoroethylene
PVDF=Polyvinylidene Fluoride RTP=Reinforced Composite S=304SS SFG=Special Blend FPM SHS=304SS/High Strength SNG=Special Blend (Buna)
STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel STZP=Steel/Zinc Plated TNM=Special High Strength



Models 56, 57, 59, 60, 56G1, 59G1, 60G1



- 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 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, **V-Packings** offer unmatched performance and seal life.



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