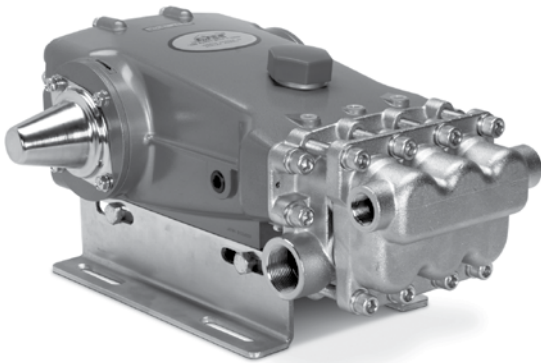


# DATA SHEET

## 25 FRAME PLUNGER PUMPS



Brass	Stainless Steel	Flushed Stainless Steel	Nickel Aluminum Bronze
<b>2530, 2530E</b>	<b>2531</b>	<b>2531C</b>	<b>2537</b>



Model 2530 Shown  
(Shaft protector and mounting rails sold separately)

### FEATURES

- Triplex design delivers 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 adjustments.
- Standard NBR seals with alternative options for temperature and chemical compatibility.
  - FPM – .0110
  - EPDM – .0220
  - High Temp, 200° F, (Intermittent Run Dry) – .3400
  - IPFE – .0770

### COMMON SPECIFICATIONS

	U.S.	Metric
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.9 bar
Bore	1.260"	32 mm
Stroke	1.516"	38.5 mm
Crankcase Capacity	84 oz.	2.5 l
Max. Liquid Temperature	160° F	71° C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Inlet Ports (2)	1 1/4" NPT(F)	1 1/4" NPT(F)
Flushing Ports (2)	1/4" NPT(F)	1/4" NPT(F)
Discharge Ports (2)	3/4" NPT(F)	3/4" NPT(F)
Pulley Mounting	Either Side	Either Side
Shaft Diameter	1.181"	30 mm
Weight	82 lbs.	37.1 kg
Dimensions	19.11 x 15.04 x 7.8"	485.44 x 382 x 198 mm

SPECIFICATIONS	U.S. Measure	Metric Measure
<b>2530, 2530E, 2531, 2531C</b>		
Flow	25 gpm	95 lpm
Pressure Range	100 to 1000 psi	6.9 to 69 bar
Pump RPM*	1025 rpm	1025 rpm
<b>2537</b>		
Flow	21 gpm	80 lpm
Pressure Range	100 to 1200psi	6.9 to 83 bar
Pump RPM*	860 rpm	860 rpm

### ALTERNATE SPECIFICATIONS

<b>2530, 2530E, 2531, 2531C</b>		
Flow	21 gpm	80 lpm
Pressure Range	100 to 1200psi	6.9 to 83 bar
Pump RPM*	860 rpm	860 rpm

\*Pump minimum is 100 RPM.

### ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE			RPM
			psi 800 bar 55	psi 1000 bar 69	psi 1200 bar 83	
<b>2530, 2530E, 2531, 2531C</b>	25	95	13.7	17.1	N/A	1025
	21	80	11.5	14.4	17.3	860
<b>2537</b>	21	80	11.5	14.4	17.3	860
	18	68	9.9	12.3	14.8	738
	15	57	8.2	10.3	12.4	615

**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.**  $\frac{\text{Hp (Electric Brake)}}{1460} = \frac{\text{gpm x psi}}{1460}$

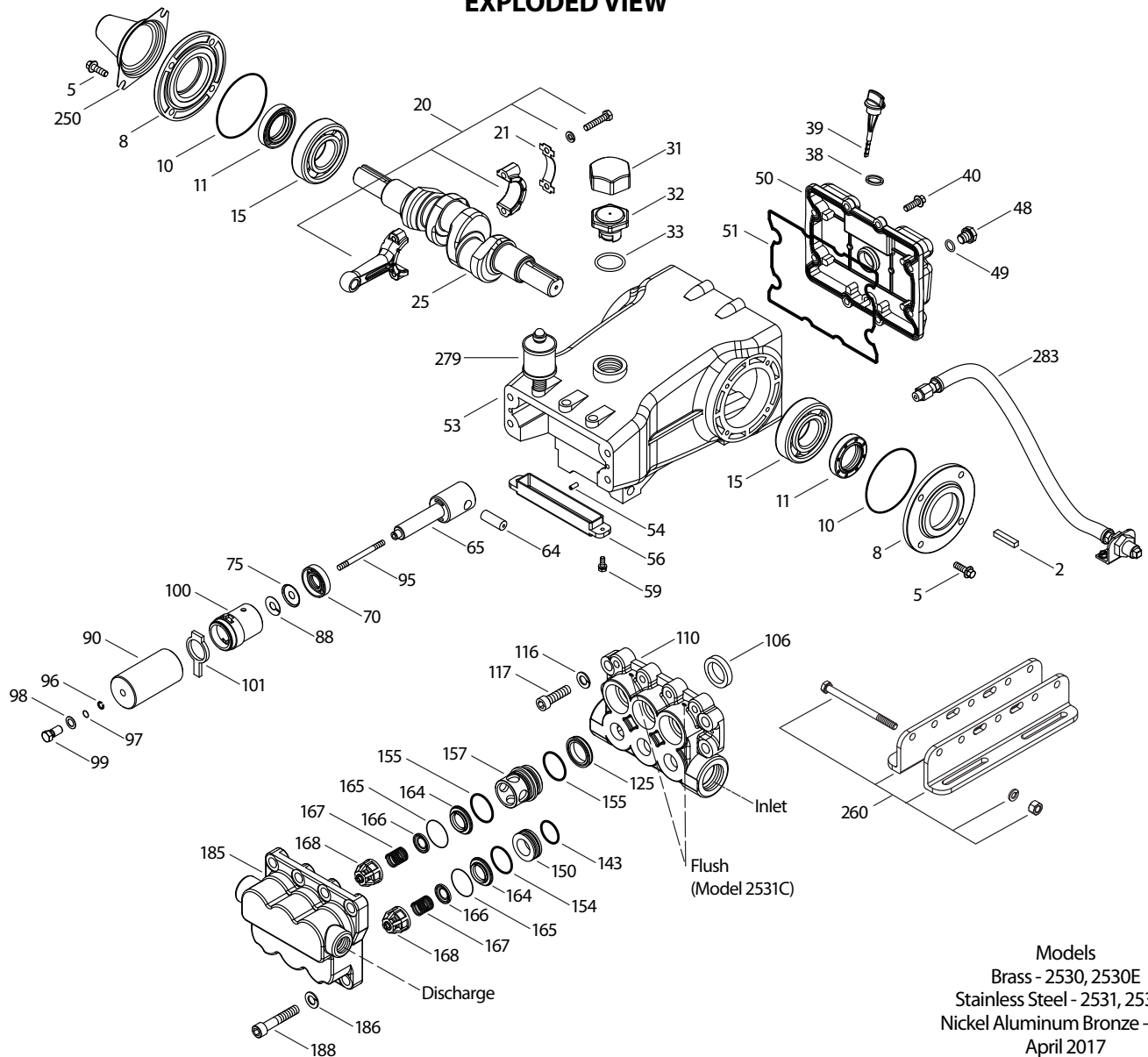
**DETERMINING MOTOR PULLEY SIZE**  $\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$

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	MATL	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	<b>2530, 2530E</b>		<b>2531, 2531C</b>		<b>2537</b>			
2	990036	STL	990036	STL	990036	STL	Key (M8x7x40) [2/00]	1
5	<b>126544</b>	STCP R	<b>125753</b>	S	<b>125753</b>	S	Screw, HHC, Sems (M8x25)	8
	<b>125753</b>	S	—	—	—	—	Screw, HHC, Sems (M8x25) (Model 2530E)	8
8	49533	ALE	49533	ALE	49533	ALE	Cover, Bearing (See Tech Bulletin 118)	2
10	27772	NBR	27772	NBR	27772	NBR	O-Ring, Oil Seal Case - 70D	2
11	27771	NBR	27771	NBR	27771	NBR	Seal, Oil, Crankshaft - 70D	2
15	26512	STL	26512	STL	26512	STL	Bearing, Ball	2
20	48613	TNM	48613	TNM	48613	TNM	Rod, Connecting	3
21	126562	STCP R	126562	STCP R	126562	STCP R	Washer, Locking	3
25	49795	FCM	49795	FCM	49795	FCM	Crankshaft - Dual End [3/11]	1
31	828710	PE	828710	PE	828710	PE	Protector, Oil Cap w/Gasket	1
32	43211	ABS	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap -70D	1
38	129343	RBR	129343	RBR	129343	RBR	Gasket, Flat	1
39	27769	ABS	27769	ABS	27769	ABS	Dipstick	1
40	<b>126544</b>	STCP R	<b>125753</b>	S	<b>125753</b>	S	Screw, HHC, Sems (M8x25)	8
	<b>125753</b>	S	—	—	—	—	Screw, HHC, Sems (M8x25) (Model 2530E)	8
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	49531	ALE	49531	ALE	49531	ALE	Cover, Rear (See Tech Bulletin 118)	1
51	27767	NBR	27767	NBR	27767	NBR	O-Ring, Rear Cover - 70D	1
53	49528	ALE	49528	ALE	49528	ALE	Crankcase w/Guide Pins (See Tech Bulletin 118)	1
54	27488	S	27488	S	27488	S	Pin, Guide	2
56	27790	POP	27790	POP	27790	POP	Pan, Oil	1
59	<b>125824</b>	STCP R	<b>92538</b>	S	<b>92538</b>	S	Screw, HHC, Sems (M6x16)	2
	<b>92538</b>	S	—	—	—	—	Screw, HHC, Sems (M6x16) (Model 2530E)	2
64	27784	CM	27784	CM	27784	CM	Pin, Crosshead	3
65	† 48719	SSHS	48719	SSHS	48719	SSHS	Rod, Plunger	3
70	27785	NBR	27785	NBR	27785	NBR	Seal, Crankcase Oil -70D	3
75	110669	S	110669	S	110669	S	Slinger, Barrier	3
88	110670	S	110670	S	110670	S	Washer, Keyhole	3
90	45749	CC	45749	CC	45749	CC	Plunger (M32x93)	3
95	† 89835	SS	89835	SS	89835	SS	Stud, Retainer (M7x87)	3
96	20184	PTFE	20184	PTFE	20184	PTFE	Back-up-Ring, Plunger Retainer	3
97	14190	NBR	14190	NBR	14190	NBR	O-Ring, Plunger Retainer - 70D	3
	14161	FPM	14161	FPM	14161	FPM	O-Ring, Plunger Retainer - 70D	3
	◆ 48239	EPDM	◆ 48239	EPDM	◆ 48239	EPDM	O-Ring, Plunger Retainer	3
	703586	IPFE	703586	IPFE	703586	IPFE	O-Ring, Plunger Retainer	3
98	44069	SS	44069	SS	44069	SS	Gasket, Plunger Retainer	3
99	44068	SS	44068	SS	44068	SS	Retainer, Plunger (M7) [7/02]	3
100	49788	NY	49788	NY	49788	NY	Retainer, LPS, Front	3
	49789	NY	49789	NY	49789	NY	Retainer, LPS, Rear	3
101	110796	—	110796	—	110796	—	Wick, Long Tab (M32)	3
106	† 44098	NBR	† 44098	NBR	† 44098	NBR	Seal, LPS w/SS-Spg	3
	44827	FPM	44827	FPM	44827	FPM	Seal, LPS w/SS-Spg	3
	◆ 48244	EPDM	◆ 48244	EPDM	◆ 48244	EPDM	Seal, LPS w/SS-Spg	3
	76298	ST2	76298	ST2	76298	ST2	Seal, LPS	3
110	<b>49265</b>	CFBB	<b>48583</b>	SS	<b>45830</b>	NAB	Manifold, Inlet	1
	—	—	<b>49545</b>	SS	—	—	Manifold, Inlet Flushed (1/4" Ports)	1
116	<b>126570</b>	STCP R	<b>19085</b>	S	<b>19085</b>	S	Lockwasher, Split	4
	<b>19085</b>	S	—	—	—	—	Lockwasher, Split (Model 2530E)	4
117	<b>126518</b>	STCP R	<b>88398</b>	S	<b>88398</b>	S	Screw, HSH (M12x40)	4
	<b>88398</b>	S	—	—	—	—	Screw, HSH (M12x40) (Model 2530E)	4
125	† 45832	SNG	45832	SNG	45832	SNG	Seal, HPS w/SS	3
	48220	HT	48220	HT	48220	HT	Seal, HPS w/SS, 2-PC w/S-Support	3
143	14203	NBR	14203	NBR	14203	NBR	O-Ring, Adapter, LPS, Rear-70D	3
	11731	FPM	11731	FPM	11731	FPM	O-Ring, Adapter, LPS, Rear	3
	◆ 48241	EPDM	◆ 48241	EPDM	◆ 48241	EPDM	O-Ring, Adapter, LPS, Rear	3
	701851	IPFE	701851	IPFE	701851	IPFE	O-Ring, Adapter, LPS, Rear	3
150	<b>45752</b>	BB	<b>45835</b>	SS	<b>45835</b>	SS	Adapter, LPS	3
154	18690	NBR	18690	NBR	18690	NBR	O-Ring, Adapter, LPS, Front -70D	3
	11744	FPM	11744	FPM	11744	FPM	O-Ring, Adapter, LPS, Front	3
	◆ 48242	EPDM	◆ 48242	EPDM	◆ 48242	EPDM	O-Ring, Adapter, LPS, Front	3
	703588	IPFE	703588	IPFE	703588	IPFE	O-Ring, Adapter, LPS, Front-75D	3
155	14520	NBR	14520	NBR	14520	NBR	O-Ring, Adapter, Valve -70D	6
	11745	FPM	11745	FPM	11745	FPM	O-Ring, Adapter, Valve -70D	6
	◆ 48240	EPDM	◆ 48240	EPDM	◆ 48240	EPDM	O-Ring, Adapter, Valve	6
	702962	IPFE	702962	IPFE	702962	IPFE	O-Ring, Adapter, Valve-75D	6
157	<b>45751</b>	BB	<b>45834</b>	SS	<b>45834</b>	SS	Adapter, Valve	3
164	† 46857	SS	46857	SS	46857	SS	Seat [11/95] (See Tech Bulletin 076)	6
165	14014	NBR	14014	NBR	14014	NBR	O-Ring, Seat	6
	48238	FPM	48238	FPM	48238	FPM	O-Ring, Seat	6
	◆ 48243	EPDM	◆ 48243	EPDM	◆ 48243	EPDM	O-Ring, Seat	6
166	† 45839	SS	45839	SS	45839	SS	Valve	6
167	† 45840	SS	45840	SS	45840	SS	Spring	6
168	110682	PVDF	110682	PVDF	110682	PVDF	Retainer, Spring	6
185	<b>49267</b>	CFBB	<b>48585</b>	SS	<b>45836</b>	NAB	Manifold, Discharge	1
186	<b>126570</b>	STCP R	<b>19085</b>	S	<b>19085</b>	S	Lockwasher, Split	8
	<b>19085</b>	S	—	—	—	—	Lockwasher, Split (Model 2530E)	8
188	<b>126517</b>	STCP R	<b>89628</b>	S	<b>89628</b>	S	Screw, HSH (M12x65)	8
	<b>89628</b>	S	—	—	—	—	Screw, HSH (M12x65) (Model 2530E)	8

# EXPLODED VIEW



Models  
 Brass - 2530, 2530E  
 Stainless Steel - 2531, 2531C  
 Nickel Aluminum Bronze - 2537  
 April 2017

ITEM	PART NUMBER	MATL	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	<b>2530, 2530E</b>		<b>2531, 2531C</b>		<b>2537</b>			
250	26516	STCP	26516	STCP	26516	STCP	Protector, Shaft	1
260	30614	STZPR	30614	STZPR	30614	STZPR	Mount, Rail, Assy.	1
279	30278	STZP	30278	STZP	30278	STZP	Oilers (1 oz.)	3
283	34334	—	34334	—	34334	—	Kit, Oil Drain (3/8"x24") (See Individual Data Sheet)	1
290	6124	—	6124	—	6124	—	Gasket, Liquid (3 oz.) (See Tech Bulletin 053)	1
299	<b>814838</b>	BB	<b>816735</b>	SS	<b>816538</b>	NAB	Head, Complete w/NBR Seals and O-Rings (Models 2530, 2531, 2537 only)	1
300	30952	NBR	30952	NBR	30952	NBR	Kit, Seal (Incls: 97,106,125,143,154,155) <b>Standard</b>	1
	33607	FPM	33607	FPM	33607	FPM	Kit, Seal (Incls: 97,106,125,143,154,155) <b>.0110</b>	1
	◆ 33608	EPDM	◆ 33608	EPDM	◆ 33608	EPDM	Kit, Seal (Incls: 97,106,125,143,154,155) <b>.0220</b>	1
	76292	STHT	76292	STHT	76292	STHT	Kit, Seal (Incls: 97,106,125,143,154,155) <b>.3400</b>	1
	31257	IPFE*	31257	IPFE*	31257	IPFE*	Kit, Seal (Incls: 97,106,125,143,154,155) <b>.0770</b>	1
310	33952	NBR	33952	NBR	33952	NBR	Kit, Valve (Incls: 143,154,155,164,165,166,167,168) <b>Standard, .3400</b>	2
	31267	FPM	31267	FPM	31267	FPM	Kit, Valve (Incls: 143,154,155,164,165,166,167,168) <b>.0110</b>	2
	◆ 31268	EPDM	◆ 31268	EPDM	◆ 31268	EPDM	Kit, Valve (Incls: 143,154,155,164,165,166,167,168) <b>.0220</b>	2
—	—	—	<b>6119</b>	—	—	—	Lubricant, Antiseize (2 oz.) (See Tech Bulletin 095)	1
—	<b>701931</b>	—	—	—	—	—	Sealant, Silicone (3 oz.) (2530E Only)	1
—	6100	—	6100	—	6100	—	Oil, Case (12 Bottles) ISO 68 Hydraulic	1

**Bold print part numbers are unique to a particular pump model. Italics are optional items. [ ]** Date of latest production change.

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

View Tech Bulletins 002, 003, 024, 036, 043, 053, 074, 076, 081, 083, 085, 095 and 118 for additional information. MATERIAL CODES (Not Part of Part Number):

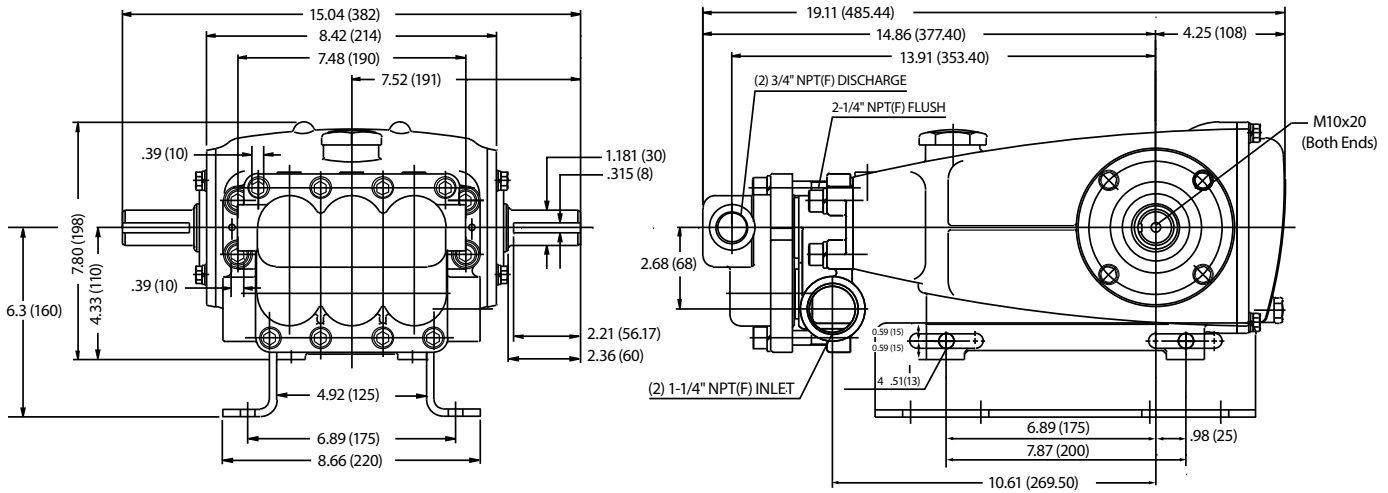
ABS=ABS Plastic AL=Aluminum ALE=Aluminum Epoxy BB=Brass CC=Ceramic CFBB=Chrome Forged Brass CM=Chrome-moly EPDM=Ethylene Propylene Diene Monomer

F=Cast Iron FCM=Forged Chrome-moly FPM=Fluorocarbon HT=High Temp (EPDM Alternative) IPFE=I-Perfluoroelastomer NAB=Nickel Aluminum Bronze

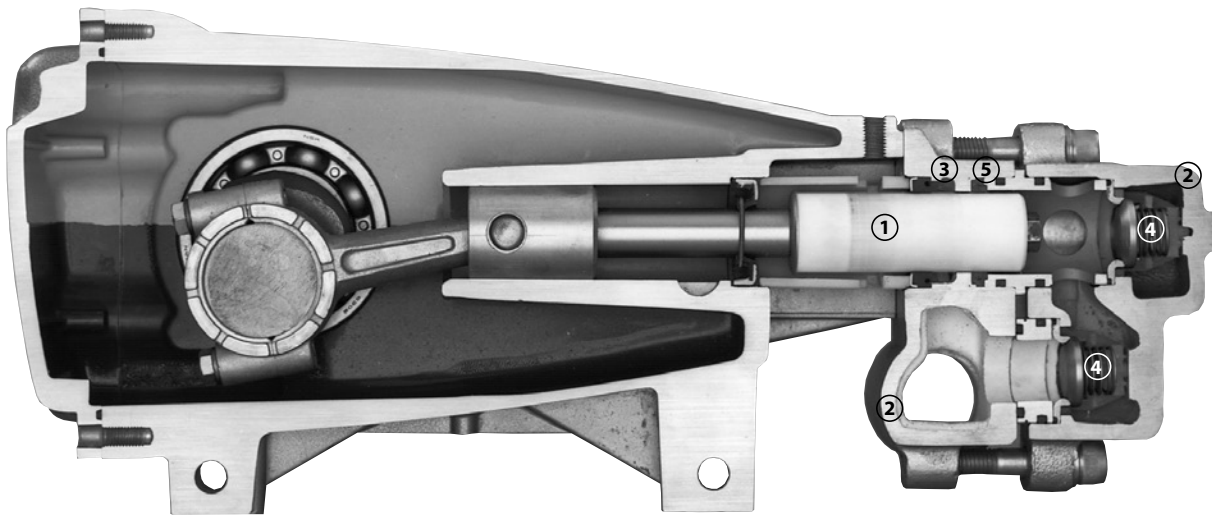
NBR=Medium Nitrile (Buna-N) NY=Nylon PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS

SNG=Special Blend (Buna) ST2=Special PTFE2 STL=Steel SSHS=316SS/High Strength STCP=Steel/Chrome Plated STHT=Special PTFE High Temp STZP=Steel/Zinc Plated

TNM=Special High Strength



Models 2530, 2530E, 2531, 2537



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 brass, 316 stainless steel or nickel aluminum bronze 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, Hi-Pressure Seals offer unmatched performance and seal life.
6. Special flushed inlet manifold (2531C only) permits external flush for added cooling with high temperature liquids and lubrication with lubricity liquids (not shown).

**⚠ 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).



**CAT PUMPS**

1681 - 94TH LANE N.E. MINNEAPOLIS, MN 55449-4324  
 PHONE (763) 780-5440 — FAX (763) 780-2958  
 e-mail: [techsupport@catpumps.com](mailto:techsupport@catpumps.com)  
[www.catpumps.com](http://www.catpumps.com)