

# DATA SHEET

## 25 FRAME PLUNGER PUMPS



**Brass**

**2530HS, 2530EHS**

**Stainless Steel**

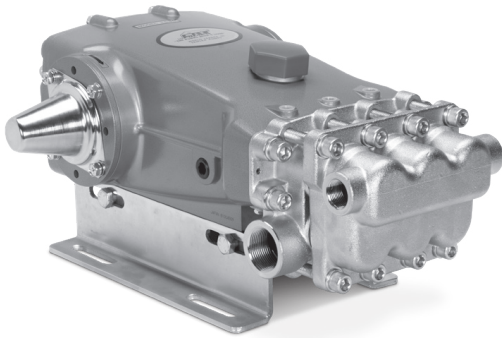
**2531HS**

**Flushed Stainless Steel**

**2531CHS**

**Nickel Aluminum Bronze**

**2537HS**



Model 2530HS 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.
- Model 2531C offers an external flush for high-temperature or lowlubricity liquids.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

### SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow	25 gpm	95 lpm
Pressure Range	100 to 1200 psi	6.9 to 83 bar
Pump RPM*	1025 rpm	1025 rpm
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.9 bar
Max. Liquid Temp.	160° F	71° C
<b>Alternative seals available for high temp up to 93,3°C (200° F)</b>		
Bore	1.260"	32 mm
Stroke	1.516"	38.5 mm
Crankcase Capacity	84 oz.	2.5 l
Inlet Ports (2)	1 1/4" NPT (F)	1 1/4" NPT (F)
Flush 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

\*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)
IPFE	.0770	200°F	(93°C)
HT	.3000	180°F	(82°C)
STHT	.3400	200°F	(93°C)

$$\text{DETERMINING THE PUMP R.P.M.} = \frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$$

$$\text{DETERMINING THE REQUIRED H.P.} = \frac{\text{Hp (Electric Brake)}}{\text{gpm x psi}} = \frac{\text{gpm x psi}}{1460}$$

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

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>2530HS</b>		<b>2531HS</b>		<b>2537HS</b>			
	<b>2530EHS</b>		<b>2531CHS</b>					
5	<b>126544</b>	STCP R	<b>125753</b>	S	<b>125753</b>	S	Screw, HHC, Sems (M8x25) (See Tech Bulletin 074)	8
	<b>125753</b>	S	—	—	—	—	Screw, HHC, Sems (M8x25) (Model 2530E)	8
8	134966	ALE	134966	ALE	134966	ALE	Cover, Bearing (See Tech Bulletin 118, 135)	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	2
15	26512	STL	26512	STL	26512	STL	Bearing, Ball	2
20	126809	BZ R	126809	BZ R	126809	BZ R	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
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
36	129343	RBR	129343	RBR	129343	RBR	Gasket, Flat	1
37	92241	PC	92241	PC	92241	PC	Gasket, Oil, Bubble w/ Gasket - 80D	1
38	44428	NBR	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge - 80D	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) (See Tech Bulletin 074)	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	133582	ALE	133582	ALE	133582	ALE	Cover, Rear (See Tech Bulletin 118, 126)	1
51	27767	NBR	27767	NBR	27767	NBR	O-Ring, Rear Cover - 70D	1
53	133609	ALE	133609	ALE	133609	ALE	Crankcase w/Guide Pins (See Tech Bulletin 118, 135)	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	134716	SSHB	134716	SSHB	134716	SSHB	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
98	44069	SS	44069	SS	44069	SS	Gasket, Plunger Retainer	3
99	44068	SS	44068	SS	44068	SS	Retainer, Plunger (M7) [7/02] (See Tech Bulletin 074)	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
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) (See Tech Bulletin 074)	4
	<b>88398</b>	S	—	—	—	—	Screw, HSH (M12x40) (Model 2530E) (See Tech Bulletin 074)	4
125	† 45832	SNG	45832	SNG	45832	SNG	Seal, HPS w/SS	3
143	14203	NBR	14203	NBR	14203	NBR	O-Ring, Adapter, LPS, Rear-70D	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
155	14520	NBR	14520	NBR	14520	NBR	O-Ring, Adapter, Valve -70D	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
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) (See Tech Bulletin 074)	8
	<b>89628</b>	S	—	—	—	—	Screw, HSH (M12x65) (Model 2530E) (See Tech Bulletin 074)	8

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

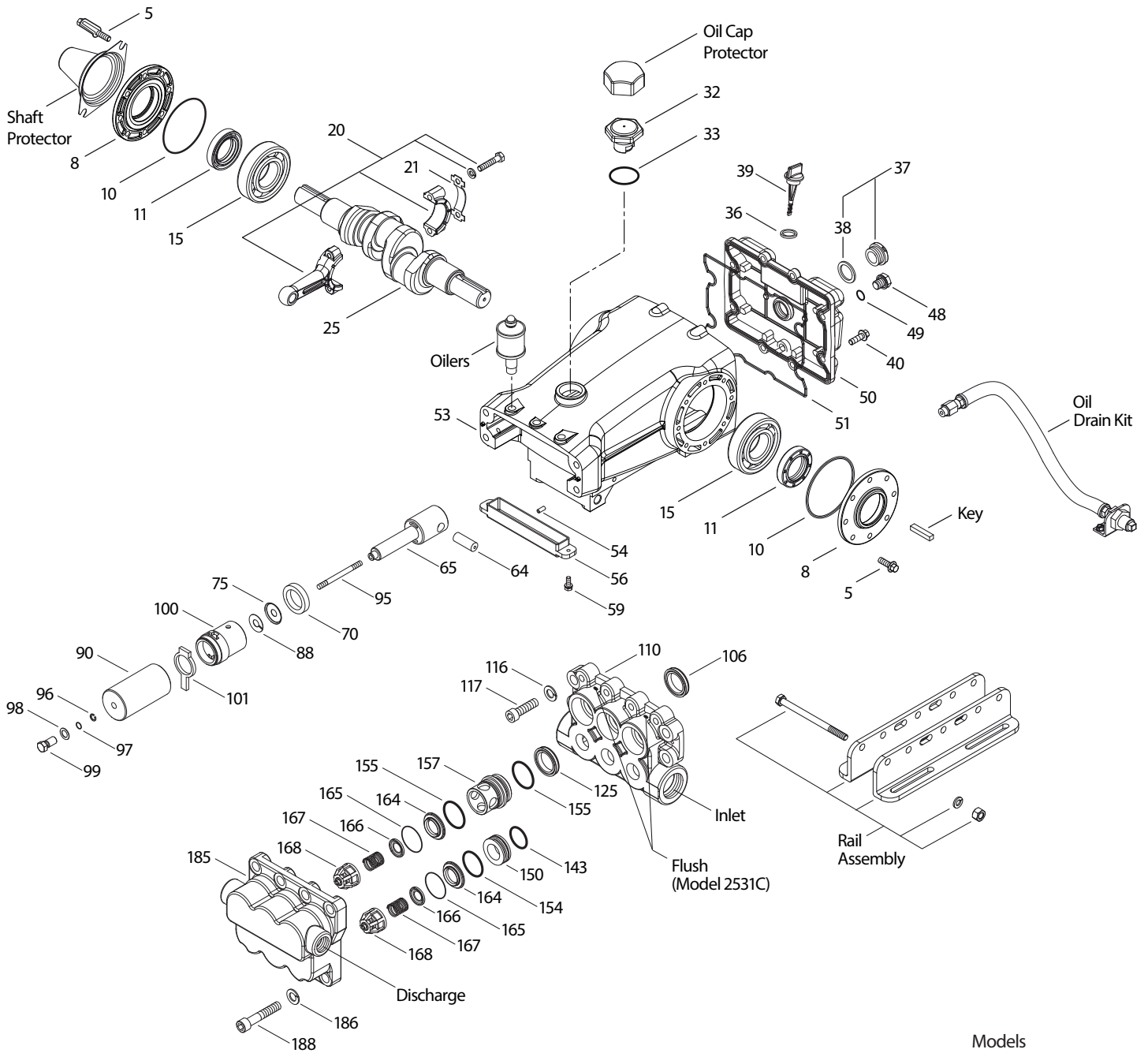
[ ] Date of latest production change. † Production parts are different than repair parts. R Components comply with RoHS Directive.

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):

ABS=ABS Plastic AL=Aluminum ALE=Aluminum Epoxy BB=Brass BZ=Bronze 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 PC=Poly Carbonate PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene  
 PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SNG=Special Blend (Buna) ST2=Special PTFE2 STL=Steel SSHB=316SS W/High Strength Brass  
 SSHS=316SS/High Strength STCP=Steel/Chrome Plated STHT=Special PTFE High Temp STZP=Steel/Zinc Plated

**Optional Parts and Accessories and Service parts listed on Page 3. Standard and optional Seal Kits and Valve Kits listed on page 4.**

# EXPLODED VIEW



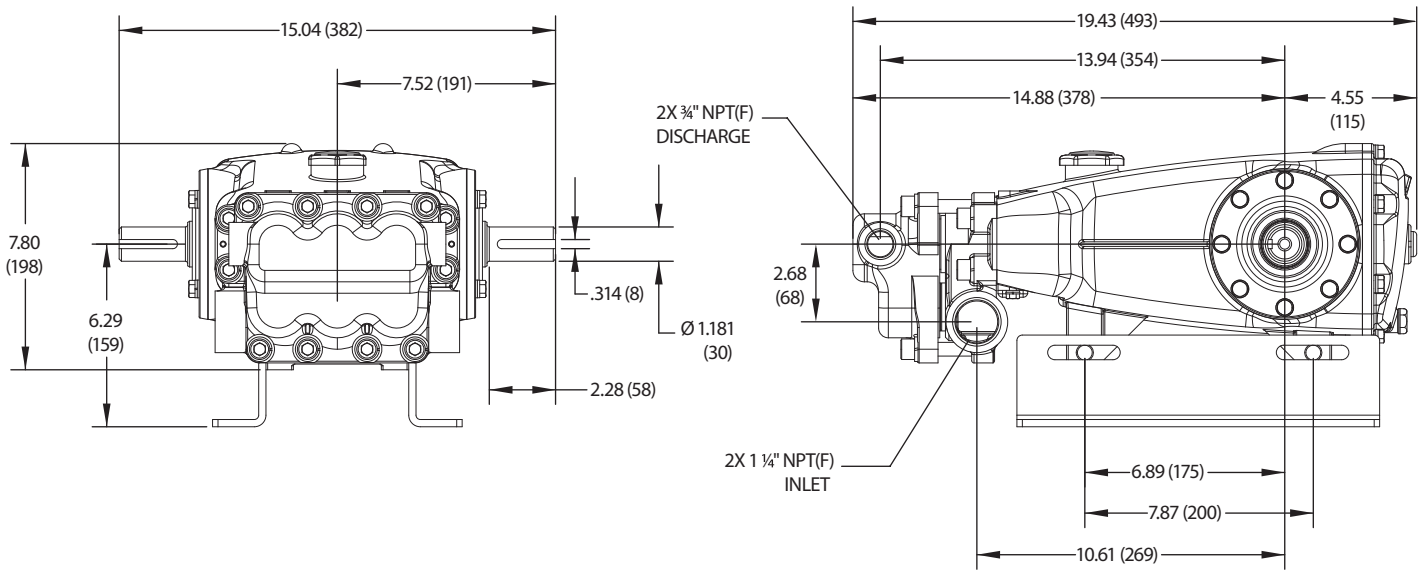
Models  
 Brass - 2530HS, 2530EHS  
 Stainless Steel - 2531HS, 2531CHS  
 Nickel Aluminum Bronze - 2537HS  
 January 2022

## OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30716	Key, M8 x 7 x 43	1
126608	Mount, Rail Assembly	1
26516	Protector, Shaft	1
828710	Protector, Oil Cap with Gasket	1
30278	Oiler (1 oz)	3
34334	Kit, Oil Drain (3/8" x 24")	1
30696	Plier, Reverse	1

## SERVICE PARTS

PART	DESCRIPTION	QTY
30952	Seal Kit - Standard NBR	1
33952	Valve Kit- Standard NBR	2
6107	Oil, Bottle (21 oz. bottle)	4
6119	Lubricant, Anti-Seize (2 oz) (2531, 2531C)	1
6124	Gasket, Liquid (3 oz)	1
701931	Sealant, Silicone (3 oz) (2530E)	1
814838	Head, Complete - 2530 w/NBR Seals and O-Rings	1
816735	Head, Complete - 2531 w/NBR Seals and O-Rings	1
816538	Head, Complete - 2537 w/NBR Seals and O-Rings	1



Models 2530HS, 2530EHS, 2531HS, 2537HS

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

PUMP MODELS	NBR (STD)	FPM (0.0110)	EPDM (0.0220)◆	STHT (0.3400)	IPFE (0.0770)
2530HS, 2530EHS, 2531HS, 2531CHS, 2537HS	30952	33607	33608	76292	31257*

ITEM (Included in Seal Kits)						DESCRIPTION	QTY
97	14190	14161	48239	14190	703586	O-Ring, Plunger Retainer	3
106	44098	44827	48244	76298	76298	Seal, LPS w/SS-Spg	3
125	45832	48220	48220	48220	48220	Seal, HPS w/SS	3
143	14203	11731	48241	14203	701851	O-Ring, Adapter, LPS Rear	3
154	18690	11744	48242	18690	703588	O-Ring, Adapter, LPS Front	3
155	14520	11745	48240	14520	702962	O-Ring, Adapter, Valve	6

◆ Silicone oil/grease required \*Review material codes for individual items (STG generally by be used as alternative).

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

PUMP MODELS	NBR (STD)	FPM (0.0110)	EPDM (0.0220)◆	STHT (0.3400)	IPFE (0.0770)
2530HS, 2530EHS, 2531HS, 2531CHS, 2537HS	33952	31267	31268	33952	76267*

ITEM (Included in Valve Kits)						DESCRIPTION	QTY
143	14203	11731	48241	14203	701851	O-Ring, Adapter, LPS Rear	3
154	18690	11744	48242	18690	703588	O-Ring, Adapter, LPS Front	3
155	14520	11745	48240	14520	702962	O-Ring, Adapter, Valve	6
164	46857	46857	46857	46857	46857	Seat	3
165	14014	48238	48243	14014	703587	O-Ring, Seat	3
166	45839	45839	45839	45839	45839	Valve	3
167	45840	45840	45840	45840	45840	Spring	3
168	110682	110682	110682	110682	110682	Retainer, Spring	3

◆ Silicone oil/grease required

### 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.de](http://www.catpumps.de) or can be requested directly from CAT PUMPS.