

# DATA SHEET

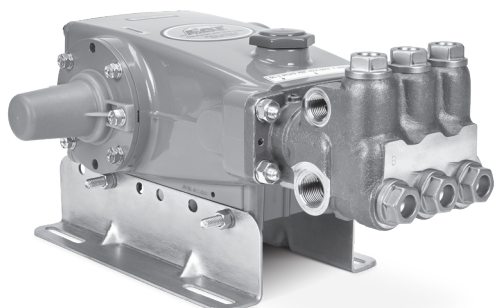
## 15 FRAME PLUNGER PUMPS



**Brass  
Model  
660**

**Stainless Steel  
Model  
661D**

**Stainless Steel  
Flushed Model  
661C**



Model 660 Shown  
(Mounting rails sold separately)

### FEATURES

- Triplex design offers high-efficiency and low-pulsation.
- Durable V-Packings are lubricated and cooled by the liquid being pumped.
- Pre-set low-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.
- Model 661C offers external flush for higher temperatures or low-lubricity 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	10 gpm	38 lpm
Pressure Range	100–3000 psi	6.9–207 bar
Pump RPM*	1429 rpm	1429 rpm
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Max. Liquid Temp. (NBR)	160° F	71° C
<b>Alternate seals available for higher temperatures up to 200° F</b>		
Bore	0.787"	20 mm
Stroke	1.181"	30 mm
Crankcase Capacity	42 oz	1.26 l
Inlet Ports (2)	¾" NPT(F)	¾" NPT(F)
Flush Ports (2) (661C)	⅛" NPT(F)	⅛" NPT(F)
Discharge Ports (2)	½" NPT(F)	½" NPT(F)
Pulley Mounting	Either Side	Either Side
Shaft Diameter	1.181"	30 mm
Weight	44 lbs	19.9 kg
Dimensions	16.28 x 12.99 x 6.44"	413.5 x 330 x 163.5 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	190° F	(88° C)

See **Tech Bulletin 002** for inlet conditions and RPM at high temperature.

<b>DETERMINING THE PUMP RPM</b>	Rated gpm	=	Desired gpm
	Rated rpm	=	Desired rpm
<b>DETERMINING THE REQUIRED HP</b>	Hp (Electric Brake)	=	$\frac{\text{gpm} \times \text{psi}}{1460}$
	Motor Pulley OD	=	$\frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$
<b>DETERMINING MOTOR PULLEY SIZE</b>	Pump rpm	=	Motor rpm

Refer to pump **Service Manual** for repair procedure and additional technical information.

# PARTS LIST

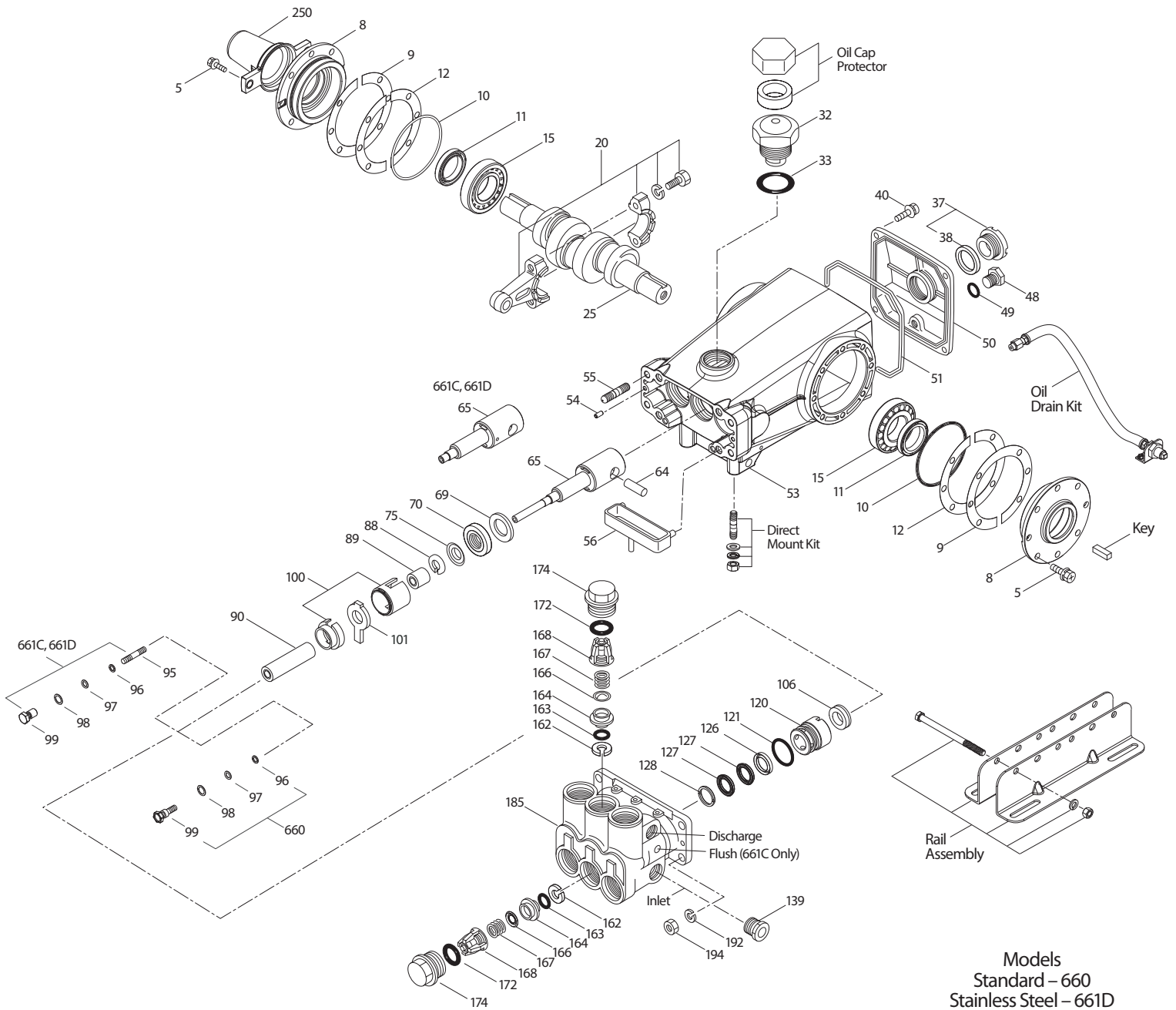
ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	<b>660</b>		<b>661C/661D</b>			
5	<b>126540</b>	STCP R	<b>49651</b>	S	Screw, HHC Sems (M8 x 20) (See Tech Bulletin 074, 128)	8
8	134805	ALE	134805	ALE	Cover, Bearing (See Tech Bulletin 118, 128)	2
9	855043	FBR	855043	FBR	Split Shim, Bearing Cover, 2-Piece (See Tech Bulletin 128)	0-2
10	11340	NBR	11340	NBR	O-Ring, Bearing Case-70D	2
11	43495	NBR	43495	NBR	Seal, Oil, Crankshaft-70D	2
12	855044	S	855044	S	Split Shim, Bearing Cover, 2-Piece (See Tech Bulletin 128)	0-2
15	39060	STL	39060	STL	Bearing, Roller	2
20	48600	TNM	48600	TNM	Rod Assembly, Connecting [11/00] (See Tech Bulletin 074)	3
25	43494	FCM	43494	FCM	Crankshaft - Dual End (M30)	1
31	828710	PE	828710	PE	Protector, Oil Cap with Foam Gasket	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Filler Cap-70D	1
37	92241	PC	92241	PC	Gauge, Oil, Bubble with Gasket-80D	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge-80D	1
40	<b>126541</b>	STCP R	<b>92542</b>	S	Screw, HHC Sems (M6 x 20) (See Tech Bulletin 074)	4
48	25625	STCP	25625	STCP	Plug, Drain (1/4" x 19 BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug-70D	1
50	133576	ALE	133576	ALE	Cover, Rear (See Tech Bulletin 118)	1
51	44834	NBR	44834	NBR	O-Ring, Rear Cover-70D	1
53	<b>134836</b>	ALE	<b>134848</b>	ALE	Crankcase (Includes: 54, 55) (See Tech Bulletin 118, 128)	1
54	27488	S	27488	S	Pin, Guide	2
55	<b>126545</b>	STCP R	<b>44005</b>	S	Stud (M10 x 45) (See Tech Bulletin 128)	4
56	44664	POP	44664	POP	Pan, Oil	1
64	43507	CM	43507	CM	Pin, Crosshead	3
65	<b>48228</b>	SHS	—	—	Rod, Plunger, Long	3
	—	—	<b>48892</b>	SSHB	Rod, Plunger, Short [3/02]	3
69	126592	STCP R	126592	STCP R	Washer, Seal	3
70	43500	NBR	43500	NBR	Seal, Oil, Crankcase-80D	3
75	43506	S	43506	S	Slinger, Barrier	3
88	45675	S	45675	S	Washer, Keyhole	3
89	<b>43505</b>	BB	<b>45880</b>	SS	Spacer, Plunger	3
90	43300	CC	43300	CC	Plunger (M20 x 77)	3
95	—	—	<b>89651</b>	SS	Stud, Plunger Retainer (M6 x 70)	3
96	43235	PTFE	43235	PTFE	Backup Ring, Plunger Retainer	3
97	17399	NBR	17399	NBR	O-Ring, Plunger Retainer-80D	3
98	<b>45891</b>	CU	<b>44041</b>	SS	Gasket, Plunger Retainer	3
99	—	—	<b>44031</b>	SS	Retainer, Plunger (M6) (See Tech Bulletin 074)	3
	<b>104360</b>	S	—	—	Retainer with Stud, Plunger (M5) (See Tech Bulletin 074)	3
100	855001	POP	855001	POP	Retainer, Seal, 2-Piece (See Tech Bulletin #098)	3
101	43508	—	43508	—	Wick, Long Tab	3
106	† 44071	NBR	† 44071	NBR	Seal, LPS with SS-Spring	3
120	<b>49291</b>	BB	<b>49284</b>	SSNP	Case, Seal [07/05]	3
121	14762	NBR	14762	NBR	O-Ring, Seal Case-70D	3
126	<b>43515</b>	BB	<b>49152</b>	PTFE	Adapter, Female [01/04]	3
127	† 44607	STG	† 44607	STG	V-Packing	6
128	<b>43517</b>	BB	<b>44165</b>	SS	Adapter, Male	3
139	<b>20326</b>	BBCP	<b>44382</b>	SS	Plug, Inlet [3/4" NPT(M)]	1
162	43248	PTFE	43248	PTFE	Backup Ring, Seat	6
163	43249	NBR	43249	NBR	O-Ring, Seat-80D	6
164	<b>43722</b>	S	<b>44037</b>	SS	Seat	6
166	<b>43721</b>	S	<b>48793</b>	SS	Valve	6
167	<b>43751</b>	S	<b>44039</b>	SS	Spring	6
168	44564	PVDF	44564	PVDF	Retainer, Spring	6
172	17617	NBR	17617	NBR	O-Ring, Valve Plug-90D	6
174	<b>43850</b>	BB	<b>49293</b>	SS	Plug, Valve (See Tech Bulletin 074)	6
185	<b>45975</b>	NAB	<b>48780</b>	SSD	Head, Manifold	1
	—	—	<b>49338</b>	SSD	Head, Manifold Flushed (1/8" Flushing Port) 661C Only	1
192	<b>126231</b>	STCP R	<b>15847</b>	S	Lockwasher (M10)	4
194	<b>126522</b>	STCP R	<b>81258</b>	S	Nut, Hex (M10) (See Tech Bulletin 074)	4
250	<b>855046</b>	NY	—	NY	Protector, Shaft with Two Screws (See Tech Bulletin 128)	1
	—	—	<b>855047</b>	NY	Protector, Shaft with Two SS Screws (See Tech Bulletin 128)	1

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

◆ Silicone oil/grease required. † Production parts different from service parts. [ ] Date of latest production change. R Components comply with RoHS Directive.

\*Review material codes for individual items (STG generally may be used as alternate). 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 ALE=Aluminum Epoxy BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-Moly CU=Copper  
EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBR=Fiber FCM=Forged Chrome-Moly FPM=Fluorocarbon IPFE=1-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 SFTA=Special Blend PTFE Tan SFTB=Special Blend PTFE Black SHS=304SS/High Strength SS=316SS SSD=Duplex Stainless SSHB=316SS/High Strength Brass  
SSNP=316SS/Nickel Plated STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel ST2=Special PTFE 2  
STZP=Steel/Zinc Plated TNM=Special High Strength

# EXPLODED VIEW



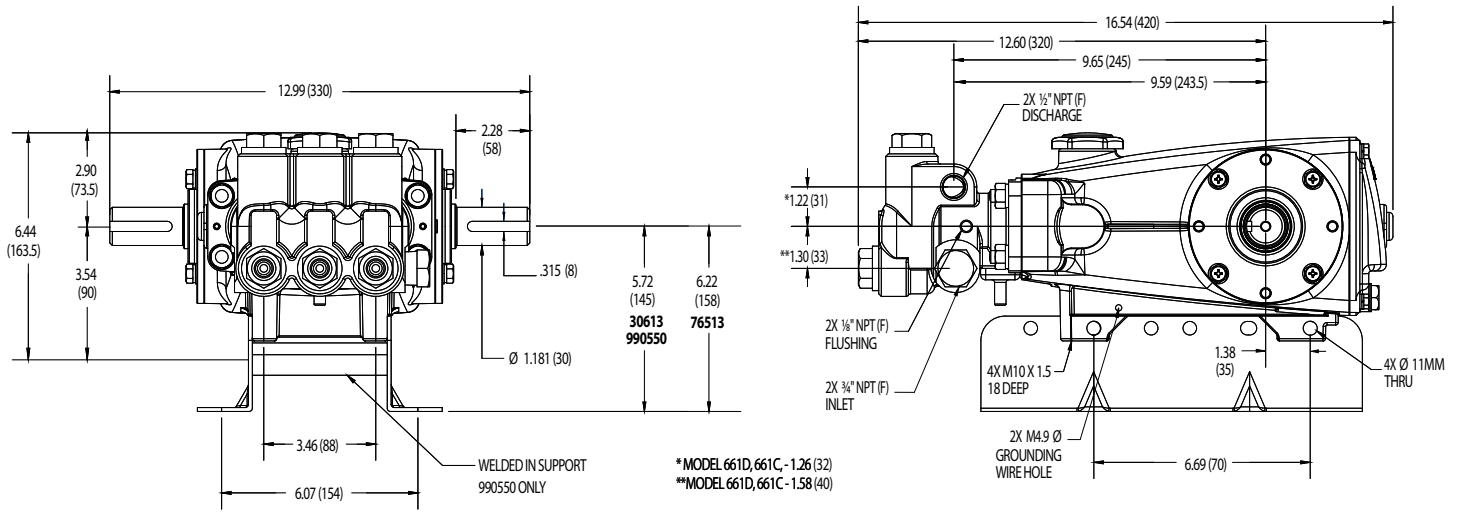
Models  
 Standard – 660  
 Stainless Steel – 661D  
 Stainless Steel Flushed – 661C  
 April 2021

## OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30067	Key, (M8 x 7.5 x 25)	1
30661	Kit, Complete Mounting	1
30613	Mount, Rail Assembly (5.72" See Dimensional Drawing)	1
990550	Mount, Rail Assembly for Diesel/Gas (5.72" See Dimensional Drawing)	1
76513	Mount, Rail Assembly (6.22" See Dimensional Drawing)	1
30264	Kit, Direct Mount	1
30206	Pulley, 10" (A/B)	1
30059	Hub, "H" (M30)	1
34334	Kit, Oil Drain (3/8" x 24")	1
30696	Pliers, Reverse	1
33006	Socket, Seal Case	1

## SERVICE PARTS

PART	DESCRIPTION	QTY
30798	Seal Kit – Standard NBR	1
30820	Valve Kit – Standard NBR (Model 660)	2
34387	Valve Kit – Standard NBR (Model 661C, 661D)	2
6107	Oil, Bottle (21 oz bottle)	2
6119	Lubricant, Anti-Seize (2 oz)	1
814561	Head, Complete – with NBR Seals and O-Rings (Model 660)	1
816780	Head, Complete – with NBR Seals and O-Rings (Model 661D)	1
818420	Head, Complete – with NBR Seals and O-Rings (Model 661C)	1



Models 660, 661C, 661D

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

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	IPFE (.0770)	STHT (.3400)
660,661C, 661D	<b>30798 *</b>	<b>31033</b>	<b>33919 *</b>	<b>76195 *</b>	<b>76056</b>

### ITEM (Included in Seal Kits)

ITEM	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	IPFE (.0770)	STHT (.3400)	DESCRIPTION	QTY
97	17399	14160	46204	701715	17399	O-Ring, Plunger Retainer	3
100	855001	855001	855001	855001	855001	Retainer, Seal	3
106	44071 <sup>1</sup>	44381 <sup>2</sup>	701974 <sup>3</sup>	703179 <sup>1</sup>	76071 <sup>1</sup>	Seal, LPS (See Notes 1, 2, 3)	3
121	14762	11737	46205	701851	14762	O-Ring, Seal Case	3
127	44607	44386	44607	44607	44607	V-Packing	6

◆ Silicone Oil/Grease required

\* Review material codes for individual items (STG generally by be used as alternative)

<sup>1</sup> W/SS-SPG, <sup>2</sup> W/S-SPG, <sup>3</sup> W/NIH-SPG

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

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ◆	IPFE (.0770)	STHT (.3400)
660	<b>30820</b>	<b>31263</b>	<b>31259</b>		<b>30820</b>
661C, 661D	<b>34387</b>	<b>30987</b>	<b>31258</b>	<b>76385</b>	<b>34387</b>

### ITEM (Included in Seal Kits)

ITEM	NBR (STD)	FPM (.0110)	EPDM (.0220) ◆	IPFE (.0770)	STHT (.3400)	DESCRIPTION	QTY
162	43248	43248	43248	43248	43248	Backup Ring, Valve Seat	3
163	43249	44383	46206	701852	43249	O-Ring, Valve Seat	3
164	43722	43722	43722		43722	Seat (Model 660)	3
	44037	44037	44037	44037	44037	Seat (Models 661C, 661D)	3
166	43721	43721	43721		43721	Valve (Model 660)	3
	48793	48793	48793	48793	48793	Valve (Models 661C, 661D)	3
167	43751	43751	43751		43751	Spring (Model 660)	3
	44039	44039	44039	44039	44039	Spring (Models 661C, 661D)	3
168	44564	44564	44564	44564	44564	Retainer, Spring	3
172	17617	11691	46207	701853	17617	O-Ring, Valve Plug	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.com/dynamic-literature/cautions-and-warnings](http://www.catpumps.com/dynamic-literature/cautions-and-warnings) or can be requested directly from Cat Pumps.

### WARRANTY

View the Limited Warranty on-line at [www.catpumps.com/literature/cat-pumps-limited-warranty](http://www.catpumps.com/literature/cat-pumps-limited-warranty)

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