

DATA SHEET

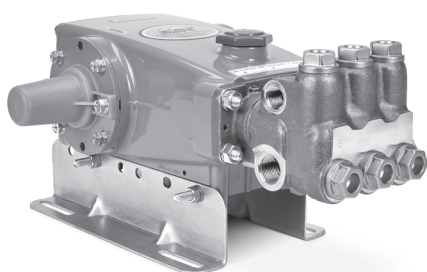
15 FRAME PLUNGER PUMPS



Brass Model 660

Stainless Steel Model 661D

Stainless Steel Flushed Model 661C



Model 660 Shown
(Shaft protector included mounting rails sold separately)

FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- V-packings and low-pressure seals are completely lubricated and cooled by pumped liquid, greatly increasing service life.
- Model 661C offers an external flush for high-temperature or low-lubricity fluids.
- Direct-drive option offers a compact foot print for electric motors with a NEMA or IEC frame, or SAE hydraulic motors with a bell housing/flexible coupler assembly.
- Belt-driven option provides precision flow setting.
- 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
Alternate seals available for higher temperatures up to 200° F		
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) (Model 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	42 lbs	19 kg
Dimensions	16.30 x 12.99 x 6.45"	414 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)
FFKM	.0770	200° F (93° C)
STHT	.3400	190° F (88° C)

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

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

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

PARTS LIST

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

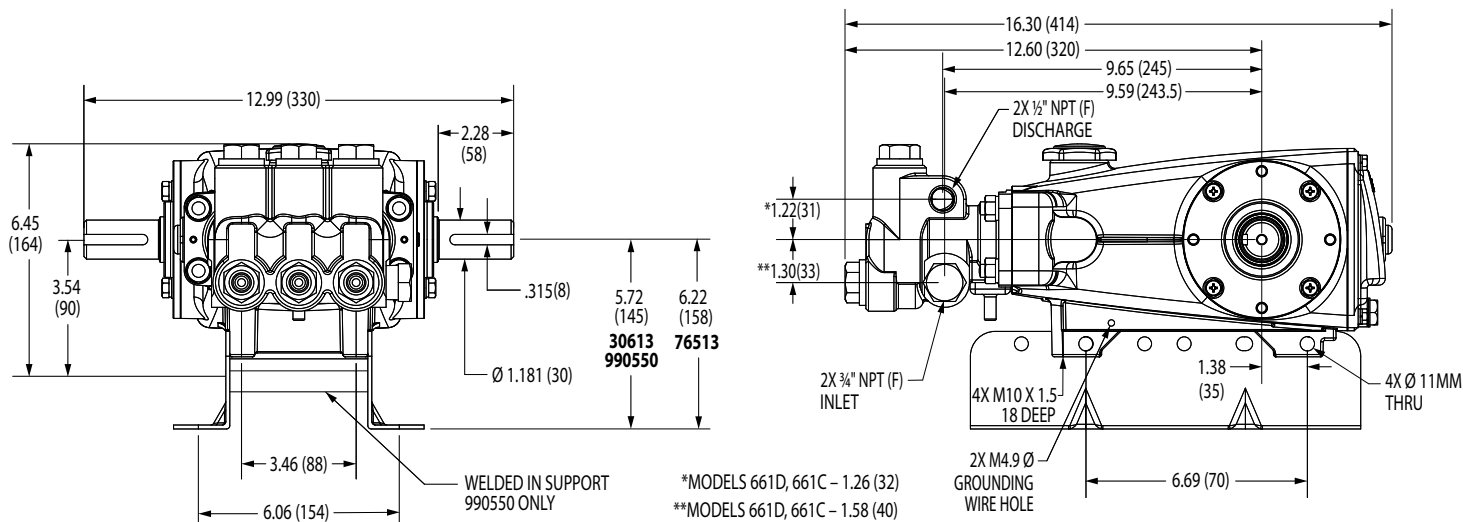
Bold print part numbers are unique to a particular pump model. † Production parts different from service parts.

R Components comply with RoHS Directive. For additional technical information see 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 FFKM=Perfluoroelastomer FPM=Fluorocarbon NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N) 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/Bronze 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

Optional Parts and Accessories and Service Parts listed on page 3. Standard and Optional Seal and Valve Kits listed on pages 3 and 4.

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) (Fill to Specified Crankcase Capacity Prior to Start-up)	2
6139	Lubricant, Anti-Seize (8 oz) (See Tech Bulletin 095)	1
30696	Pliers, Reverse (Not Shown)	1
33006	Socket, Seal Case (Not Shown)	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) ♦	FFKM (.0770)	STHT (.3400)
660, 661C, 661D	30798 *	31033	33919 *	76195 *	76056

ITEM (Included in Seal Kits)

ITEM	DESCRIPTION	QTY
97	O-Ring, Plunger Retainer	3
106	Seal, Low-Pressure (See Notes 1, 2, 3)	3
121	O-Ring, Seal Case	3
127	V-Packing	6

♦ Silicone Oil/Grease required

* Review material codes for individual items (STG may be used as an alternative)

¹ with SS-Spring, ² with S-Spring, ³ with NIH-Spring

VALVE KITS

Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	FFKM (.0770)	STHT (.3400)
660	30820	31263	31259	—	30820
661C, 661D	34387	30987	31258	76385	34387

ITEM (Included in Seal Kits)

ITEM	DESCRIPTION	QTY
162	Backup Ring, Valve Seat	3
163	O-Ring, Valve Seat	3
164	Seat (Model 660)	3
	Seat (Models 661C, 661D)	3
166	Valve (Model 660)	3
	Valve (Models 661C, 661D)	3
167	Spring (Model 660)	3
	Spring (Models 661C, 661D)	3
168	Retainer, Spring	3
172	O-Ring, Valve Plug	3

♦ Silicone Oil/Grease required

CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. 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 or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty online at www.catpumps.com/literature/cat-pumps-limited-warranty