

DATA SHEET

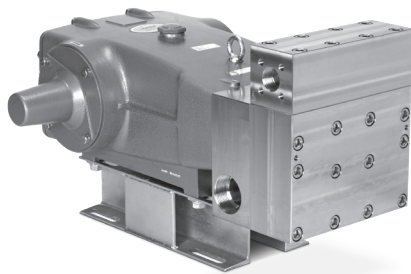
68 FRAME BLOCK-STYLE PLUNGER PUMPS



The Pumps with Nine Lives

Stainless Steel Models: **6841, 6861**

Flushed Models: **6841K, 6861K**



Model 6841 Shown
(Shaft protector and rails included)

FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- V-packings and low-pressure seals are completely lubricated and cooled by pumped liquid.
- Special high-density, polished, concentric ceramic plungers provide a true wear surface and extended seal life.
- Models 6841K and 6861K provide an external flush for higher temperature or low-lubricity liquids.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

COMMON

SPECIFICATIONS	U.S.	Metric
Inlet Pressure Range	Flooded to 50 psi	Flooded to 3.5 bar
Stroke	2.579"	65.5 mm
Crankcase Capacity	10 qts	9.46 l
Max. Liquid Temperature (NBR)	140° F	60° C

Alternate seals available for higher temperatures up to 180° F

Inlet Ports (2)	2½" NPT(F)	2½" NPT(F)
Flush Ports (2) ("K")	½" NPT(F)	½" NPT(F)
Discharge Ports (2)	1¼" NPT(F)	1¼" NPT(F)
Shaft Diameter	1.772"	45 mm
Weight	460 lbs	206 kg
Dimensions	28.86 x 24.33 x 12.64"	733 x 618 x 321 mm

SPECIFICATIONS

U.S. Measure

Metric Measure

Models 6841, 6841K

Flow	48 gpm	182 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Pump RPM*	615 rpm	615 rpm
Bore	1.772"	45 mm

Models 6861, 6861K

Flow	60 gpm	227 lpm
Pressure Range	100–1200 psi	6.9–83 bar
Pump RPM*	520 rpm	520 rpm
Bore	2.165"	55 mm

*Pump minimum is 100 RPM.

ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE	
NBR	—	140° F	(60° C)
FPM	.0110	180° F	(82° C)
EPDM	.0220	160° F	(71° 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

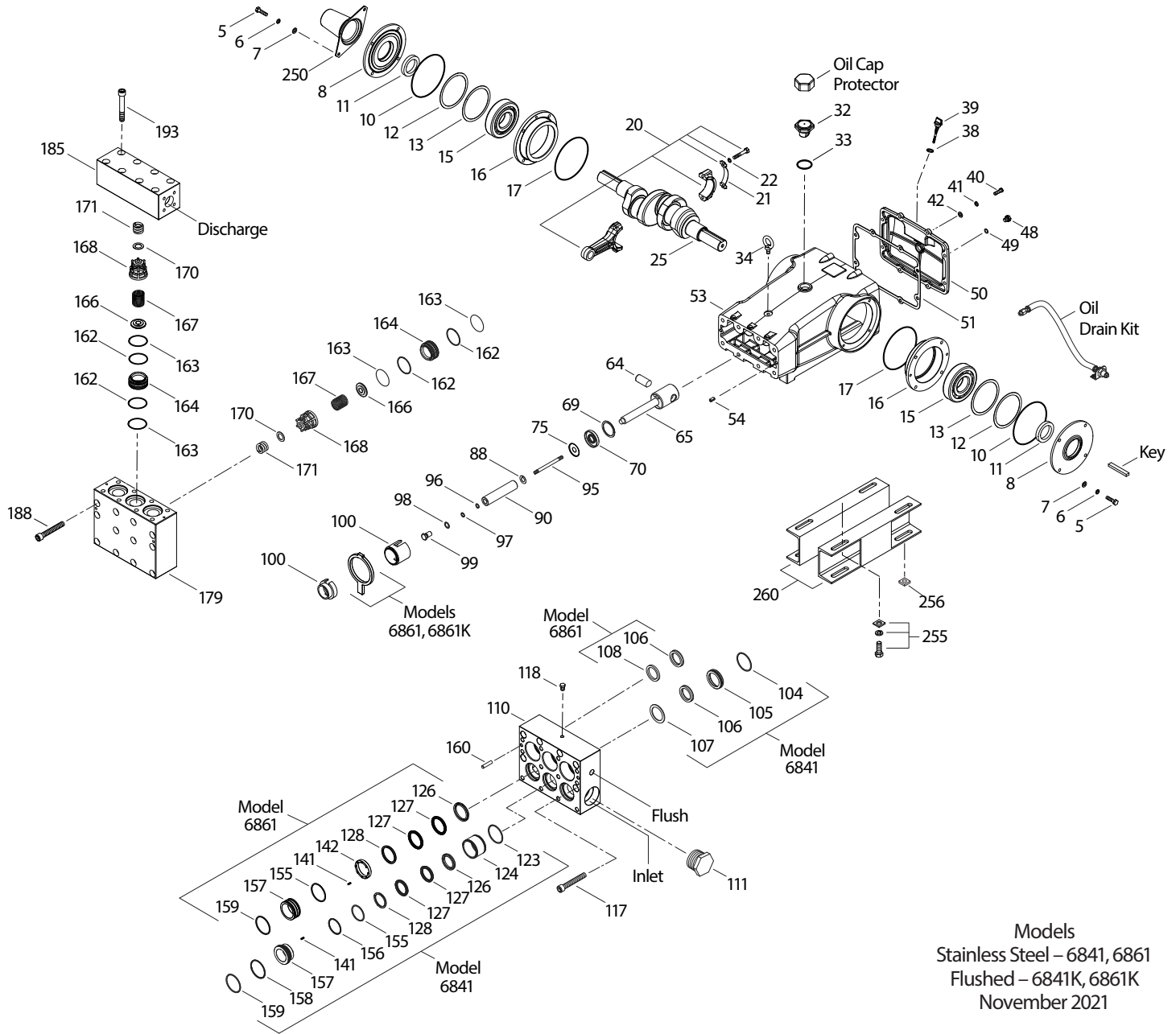
$$\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$$

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

PARTS LIST

ITEM	PART NUMBER								DESCRIPTION	QTY
	6841	MATL	6841K	MATL	6861	MATL	6861K	MATL		
5	89728	S	89728	S	89728	S	89728	S	Screw, HH (M10 x 40) (See Tech Bulletin 074)	8
6	15847	S	15847	S	15847	S	15847	S	Lockwasher (M10)	8
7	19934	S	19934	S	19934	S	19934	S	Washer, Flat (M10)	8
8	29443	ALE	29443	ALE	29443	ALE	29443	ALE	Cover, Bearing – Outer (See Tech Bulletin 118)	2
10	29444	NBR	29444	NBR	29444	NBR	29444	NBR	O-Ring, Bearing Cover–70D	2
11	11443	NBR	11443	NBR	11443	NBR	11443	NBR	Seal, Oil, Crankshaft	2
12	126594	STCP R	126594	STCP R	126594	STCP R	126594	STCP R	Washer, Shim (M120 x 0.3)	0–2
13	126595	STCP R	126595	STCP R	126595	STCP R	126595	STCP R	Washer, Shim (M120 x 0.5)	0–2
15	29441	STL	29441	STL	29441	STL	29441	STL	Bearing, Roller	2
16	29442	STL	29442	STL	29442	STL	29442	STL	Cover, Bearing – Inner	2
17	29444	NBR	29444	NBR	29444	NBR	29444	NBR	O-Ring, Bearing Cover–70D	2
20	126612	BBHS	126612	BBHS	126612	BBHS	126612	BBHS	Assembly, Connecting Rod (Includes Items: 21, 22) (See Tech Bulletin 074)	3
21	126560	STCP R	126560	STCP R	126560	STCP R	126560	STCP R	Washer, Locking	3
22	126593	STCP R	126593	STCP R	126593	STCP R	126593	STCP R	Washer, Shim (M10.5 x 1.5)	6
25	29440	FCM	29440	FCM	29440	FCM	29440	FCM	Crankshaft, Dual Shaft (M65.5)	1
32	43211	ABS	43211	ABS	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	14177	NBR	14177	NBR	O-Ring, Filler Cap–70D	1
34	126743	STCP R	126743	STCP R	126743	STCP R	126743	STCP R	Bolt, Eye (M12) (For Lifting Pump Only)	1
38	129343	RBR	129343	RBR	129343	RBR	129343	RBR	Gasket, Flat Flex	1
39	27769	ABS	27769	ABS	27769	ABS	27769	ABS	Stick, Dip	1
40	89627	S	89627	S	89627	S	89627	S	Screw, HH (M10 x 30) (See Tech Bulletin 074)	8
41	15847	S	15847	S	15847	S	15847	S	Lockwasher (M10)	8
42	19934	S	19934	S	19934	S	19934	S	Washer, Flat (M10)	8
48	25625	STCP	25625	STCP	25625	STCP	25625	STCP	Plug, Drain (1/4" x 19 BSP)	1
49	23170	NBR	23170	NBR	23170	NBR	23170	NBR	O-Ring, Drain Plug–70D	1
50	29438	ALE	29438	ALE	29438	ALE	29438	ALE	Cover, Rear (See Tech Bulletin 118)	1
51	129386	NBR	129386	NBR	129386	NBR	129386	NBR	Gasket, Rear Cover	1
53	45303	ALE	45303	ALE	45303	ALE	45303	ALE	Crankcase (Includes Items 34, 54) (See Tech Bulletin 118)	1
54	43282	S	43282	S	43282	S	43282	S	Pin, Guide	2
64	29481	CM	29481	CM	29481	CM	29481	CM	Pin, Crosshead	3
65	45384	SSZZ	45384	SSZZ	45384	SSZZ	45384	SSZZ	Rod, Plunger	3
69	126588	STCP R	126588	STCP R	126588	STCP R	126588	STCP R	Washer, Oil Seal	3
70	29454	NBR	29454	NBR	29454	NBR	29454	NBR	Seal, Oil Crankcase	3
75	44752	NBR	44752	NBR	44752	NBR	44752	NBR	Slinger, Barrier–85D	3
88	45677	SS	45677	SS	45677	SS	45677	SS	Washer, Keyhole (M14)	3
90	45672	CC	45672	CC	44749	CC	44749	CC	Plunger (M45 x 185) (M55 x 185)	3
95	44748	SS	44748	SS	44748	SS	44748	SS	Stud, Plunger Retainer (M14 x 147)	3
96	20214	PTFE	20214	PTFE	20214	PTFE	20214	PTFE	Backup Ring, Plunger Retainer	3
97	17616	NBR	17616	NBR	17616	NBR	17616	NBR	O-Ring, Plunger Retainer–80D	3
98	44751	SS	44751	SS	44751	SS	44751	SS	Gasket, Plunger Retainer	3
99	44750	SS	44750	SS	44750	SS	44750	SS	Retainer, Plunger (M14) (See Tech Bulletin 074)	3
100	855000	PVDF	855000	PVDF	855000	PVDF	855000	PVDF	Retainer, Seal 2-Piece (See Tech Bulletin 105)	3
101	—	—	—	—	44762	—	44762	—	Wick, Long Tab	3
104	18178	NBR	18178	NBR	—	—	—	—	O-Ring, Adapter, Inlet–80D	3
105	701355	SS	701355	SS	—	—	—	—	Adapter, LPS	3
106	106147	NBR	106147	NBR	44757	NBR	44757	NBR	Seal, LPS, with Stainless Steel Spring	3
107	701356	SS	701356	SS	—	—	—	—	Washer, LPS	3
108	—	—	—	—	46167	SS	46167	SS	Spacer, LPS	3
110	46166	SS	—	—	46166	SS	—	—	Manifold Inlet, Block-Style	1
—	—	—	701343	SS	—	—	701343	SS	Manifold Inlet, Block-Style, Flushed (Models 6841K, 6861K)	1
111	701353	SS	701353	SS	701353	SS	701353	SS	Plug, Inlet Manifold [2 1/2" NPT(M)]	1
117	89694	S	89694	S	89694	S	89694	S	Screw, HSH (M16 x 110) (See Tech Bulletin 074)	8
118	701077	SS	—	—	701077	SS	—	—	Plug [1/4" NPT(M)]	3
123	18178	NBR	18178	NBR	—	—	—	—	O-Ring, V-Packing Cylinder–80D	3
124	701357	SS	701357	SS	—	—	—	—	Cylinder, V-Packing	3
126	701358	SS	701358	SS	45771	SS	45771	SS	Adapter, Female	3
127	104450	STG	104450	STG	44764	STG	44764	STG	V-Packing	6
128	701359	SS	701359	SS	45772	SS	45772	SS	Adapter, Male	3
141	45113	SS	45113	SS	44943	SS	44943	SS	Spring, Coil	18/24
142	—	—	—	—	45383	SS	45383	SS	Spacer with Coil Springs	3
155	701978	NBR	701978	NBR	18178	NBR	18178	NBR	O-Ring, V-Packing Spacer, Inner	3
156	701361	PTFE	701361	PTFE	—	—	—	—	Backup Ring, Spacer, Inner	3
157	701362	SS	701362	SS	45321	SS	45321	SS	Spacer, V-Packing with Coil Springs (Models 6861, 6861K No Coil Springs)	3
158	701363	PTFE	701363	PTFE	—	—	—	—	Backup Ring, Spacer, Outer	3
159	18178	NBR	18178	NBR	18178	NBR	18178	NBR	O-Ring, V-Packing Spacer, Outer–80D	3
160	44756	S	44756	S	44756	S	44756	S	Pin, Guide	2
162	23116	PTFE	23116	PTFE	23116	PTFE	23116	PTFE	Backup Ring, Seat	12
163	12392	NBR	12392	NBR	12392	NBR	12392	NBR	O-Ring, Seat–70D	12
164	46173	SS	46173	SS	46173	SS	46173	SS	Seat	6
166	44774	SS	44774	SS	44774	SS	44774	SS	Valve	6
167	44773	SS	44773	SS	44773	SS	44773	SS	Spring	6
168	44775	PVDF	44775	PVDF	44775	PVDF	44775	PVDF	Retainer, Spring	6
170	44776	SS	44776	SS	44776	SS	44776	SS	Washer, Retainer	6
171	701354	SS	701354	SS	701354	SS	701354	SS	Spring, Coil, Retainer	6
179	46171	SS	46171	SS	46171	SS	46171	SS	Manifold, Valve, Block-Style	1
185	46176	SS	46176	SS	46176	SS	46176	SS	Manifold, Discharge, Block-Style	1
188	89694	S	89694	S	89694	S	89694	S	Screw, HSH (M16 x 110), Lower (See Tech Bulletin 074)	12
193	89694	S	89694	S	89694	S	89694	S	Screw, HSH (M16 x 110), Upper (See Tech Bulletin 074)	8
250	29445	ALE	29445	ALE	29445	ALE	29445	ALE	Protector, Shaft (See Tech Bulletin 118)	1
255	33243	STZP	33243	STZP	33243	STZP	33243	STZP	Kit, Mount	1
256	29649	STCP	29649	STCP	29649	STCP	29649	STCP	Washer, Slant (M16) Use for Adjustment Between Rail and Mounting Base	4
260	126604	STCP R	126604	STCP R	126604	STCP R	126604	STCP R	Rail, Box	2

EXPLODED VIEW



Models
Stainless Steel – 6841, 6861
Flushed – 6841K, 6861K
November 2021

OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
43048	Key (M14 x 9 x 90)	1
828710	Protector, Oil Cap with Foam Gasket	1
34314	Kit, Oil Drain	1
990014	Hub, "B", M45 with Keyway	1
819010	Assembly, Crankcase, Cast Iron Conversion	1
990663	Assembly, Flushing, 5 Gal, 115V, 1.1 Amp, 1/2" NPT (Models 6841K, 6861K)	1

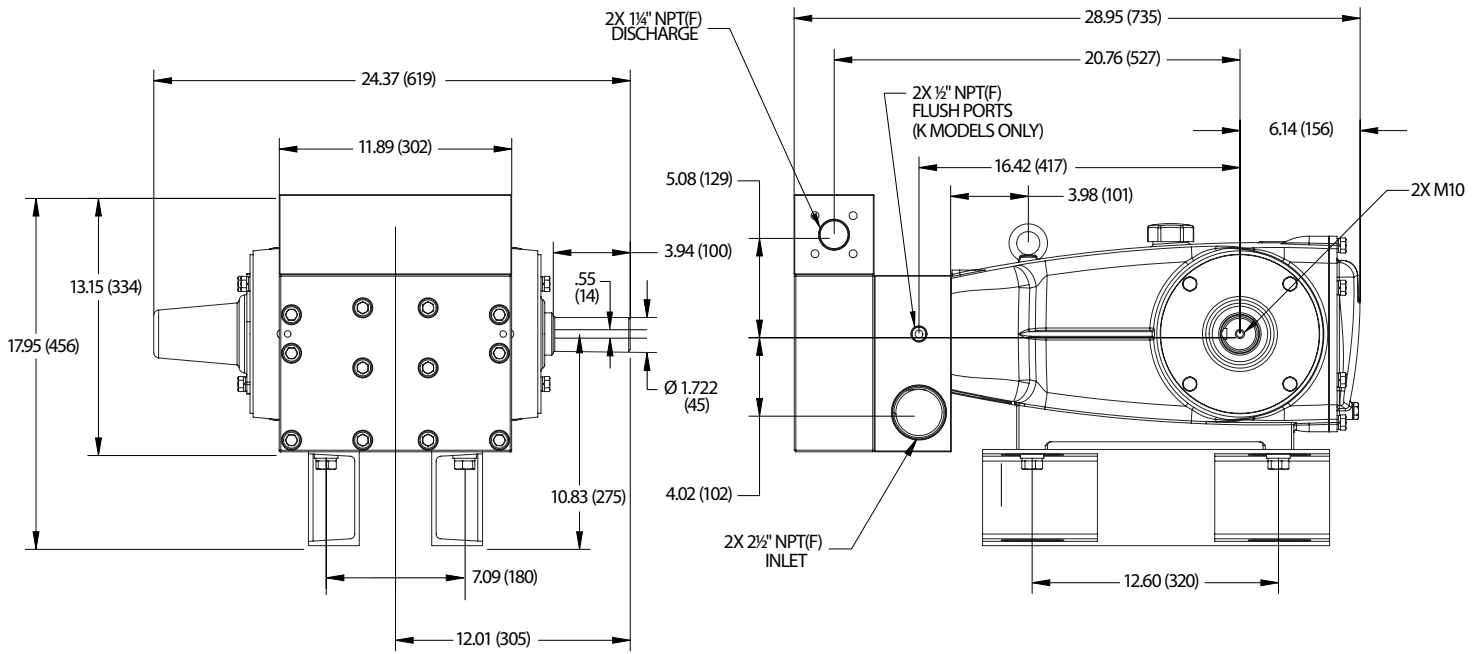
SERVICE PARTS

PART	DESCRIPTION	QTY
34098	Kit, Seal – Standard NBR (6841, 6841K)	1
34106	Kit, Seal – Standard NBR (6861, 6861K)	1
34105	Kit, Valve – Standard NBR (All Pumps)	2
6124	Gasket, Liquid (3 oz)	1
6139	Lubricant, Anti-seize (8 oz)	1
6105	Oil, Twin Pack (Two 2.5 Gal) ISO-68 Hydraulic	1
910201	Head, Complete, with NBR Seals and O-Rings (6841)	1
910203	Head, Complete, Flush, with NBR Seals and O-Rings (6841K)	1
910200	Head, Complete, with NBR Seals and O-Rings (6861)	1
910002	Head, Complete, Flush with NBR Seals and O-Rings (6861K)	1

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

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 AL=Aluminum ALE=Aluminum Epoxy BBHS=Brass/High Strength CC=Ceramic CM=Chrome-Moly D=Acetal EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FCM=Forged Chrome-Moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) PE=Polyethylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride RBR=Rubber S=304SS SS=316SS SSD=316SS/Duplex SSZZ=316SS/Zamak STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel STZP=Steel/Zinc Plated



SEAL KITS

One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	NBR (STD)	FPM (.0110)
6841, 6841K	34098*	701365*	76439*		
6861, 6861K				34106*	33406*

ITEM (Included in Seal Kits)	PART NUMBER					DESCRIPTION	QTY
97	17616	11686	46647	17616	11686	O-Ring, Plunger Retainer	3
104	18178	13338	702442			O-Ring, Inlet Adapter	3
106	106147	701752	701752	44757	45882	Seal, LPS, with SS-Spring	3
123	18178	13338	702442			O-Ring, V-Packing Cylinder	3
127	104450	104450	104450	44764	44764	V-Packing	6
155	701978	701360	702045	18178	13338	O-Ring, V-Packing Spacer, Inner	3
156	701361	701361	701361			Backup Ring, Spacer, Inner	3
158	701363	701363	701363			Backup Ring, Spacer, Outer	3
159	18178	13338	702442	18178	13338	O-Ring, V-Packing Spacer, Outer	3
163	12392	13279	701988	12392	13279	O-Ring, Seat	12

* Review material codes for individual items (STG generally may be used as alternate) ♦ Silicone oil/grease required

VALVE KITS

Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (0.0110)	EPDM (0.0220) ♦
6841, 6841K	34105	701801	76442
6861, 6861K			

ITEM (Included in Valve Kits)	PART NUMBER			DESCRIPTION	QTY
159	18178	13338	702442	O-Ring, V-Packing Spacer, Outer	6
162	23116	23116	23116	Backup Ring, Seat	6
163	12392	13279	701988	O-Ring, Seat	6
164	46173	46173	46173	Seat	3
166	44774	44774	44774	Valve	3
167	44773	44773	44773	Spring	3
168	44775	44775	44775	Retainer, Spring	3
170	44776	44776	44776	Washer, Retainer	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 or can be requested directly from Cat Pumps.

WARRANTY

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