



Technical specifications and instructions



15 Frame Plunger pump

Standard brass model

650

Stainless steel model

651

Specifications (*)

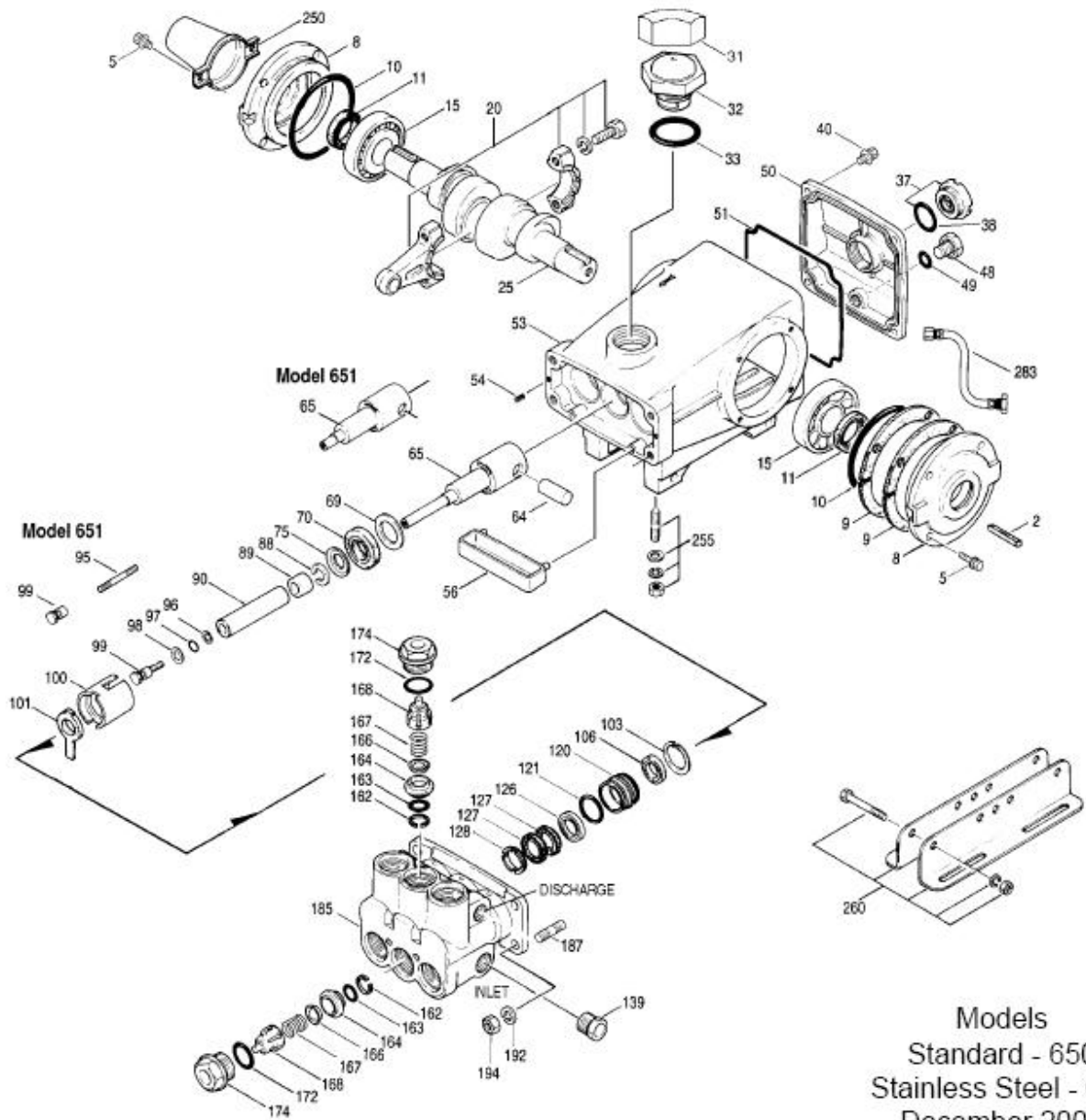
	Model 650	Model 651
Flow	27 l/min	27 l/min
Pressure range	7 to 210 bar	7 to 210 bar
RPM	1000 RPM	1000 RPM
Inlet pressure range	-0,35 to+ 4 bar	-0,35 to+ 4 bar
Stroke	30 mm	30 mm

Common specifications

Bore	20 mm
Crankcase capacity	1,26 L
Maximum liquid temperature	71° C
Inlet ports (2)	3/4" NPTF
Discharge ports (2)	1/2" NPTF
Shaft diameter	30 mm
Weight	19,9 kg
Dimensions	413,5 x 330 x 163,5 mm

(*) Abnormalities permitted only after consultation and written confirmation from Cat Pumps.

Exploded View



Parts list

Item	Num. 650	Mat.	Num. 651	Mat.	Description	Qty
2	30067	STL	30067	STL	Key (M8x7,5x25)	1
5	92519	STZP	92538	S	Screw, sems HHC (M6x16)	8
8	43496	AL	43496	AL	Cover, bearing	2
9	43520	FBR	43520	FBR	Split shim, bearing cover, 2 pc	2
	-	-	45387	S	Split shim, bearing cover, 2 pc	2
10	11340	NBR	11340	NBR	O-ring, bearing case – 70D	2
11	43495	NBR	43495	NBR	Seal, oil, crankshaft – 70D	2
15	39060	STL	39060	STL	Bearing, roller	2
20	48600	TNM	48600	TNM	Rod assy, connecting {11/00}	3
25	43494	FCM	43494	FCM	Crankshaft, dual end	1
31	828710	-	828710	-	Protector, oil cap w/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	-	92241	-	Gauge, oil, bubble w/gasket – 80D	1
38	44428	NBR	44428	NBR	Gasket, flat, oil gauge – 80D	1
40	92520	STZP	92542	S	Screw, sems HH (M6x20)	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	43491	AL	43491	AL	Cover, rear	1
51	44834	NBR	44834	NBR	O-ring, rear cover – 70D	1
53	43488	AL	43488	AL	Crankcase w/guide pins	1
54	27488	S	27488	S	Pin, guide	2
56	44664	POP	44664	POP	Pan, oil	1
64	43507	CM	43507	CM	Pin, crosshead	3
65	43501	SSZ	-	-	Rod, plunger, long	3
	-	-	48892	SSHS	Rod, plunger, short {03/02}	3
69	43504	STZP	43504	STZP	Washer, seal	3
70	43500	NBR	43500	NBR	Seal, oil, crankcase – 80D	3
75	43506	S	43506	S	Slinger, barrier	3
88	45675	SS	45675	SS	Washer, keyhole	3
89	43505	BB	45880	SS	Spacer, plunger	3
90	43300	CC	43300	CC	Plunger (M20x77)	3
95	-	-	89651	SS	Stud, plunger retainer (M6x70)	3
96	43235	PTFE	43235	PTFE	Back-up-ring, plunger retainer	3
97	17399	NBR	17399	NBR	O-ring, plunger retainer – 80D	3
	14160	FPM	14160	FPM	O-ring, plunger retainer – 80D	3
	# 46204	EPDM	# 46204	EPDM	O-ring, plunger retainer – 70D	3
98	45891	CU	44041	SS	Gasket, plunger retainer	3
99	-	-	44031	SS	Retainer, plunger (M6)	3
	104360	S	-	-	Retainer w/stud, plunger (M5)	3
100	43509	POP	43509	POP	Retainer, seal	3
101	43508	-	43508	-	Wick, long tab	3
103	44036	S	44036	S	Ring, retainer	3
106	44071	NBR	44071	NBR	Seal, LPS w/SS-Spg	3
	44381	FPM	44381	FPM	Seal, LPS w/SS-Spg	3
	701974	SFTB*	701974	SFTB*	Seal, LPS w/SS-Spg	3
120	46065	NAB	48465	SSNP	Case, seal	3
121	14762	NBR	14762	NBR	O-ring, seal case – 70D	3
	11737	FPM	11737	FPM	O-ring, seal case – 75D	3
	# 46205	EPDM	# 46205	EPDM	O-ring, seal case – 70D	3
126	43515	BB	48388	D	Adapter, female	1
127	44607	STG*	44607	STG*	V-packing	6
	44386	FPM	44386	FPM	V-packing	6
128	43517	BB	44165	SS	Adapter, male	3

139	20326	BBCP	44382	SS	Plug, inlet (3/4" NPT)	1
162	43248	PTFE	43248	PTFE	Back-up-ring, seat	6
163	43249	NBR	43249	NBR	O-ring, seat – 80D	6
	44383	<i>FPM</i>	44383	<i>FPM</i>	<i>O-ring, seat – 70D</i>	6
	# 46206	<i>EPDM</i>	# 46206	<i>EPDM</i>	<i>O-ring, seat – 70D</i>	6
164	43722	S	44037	SS	Seat	6
166	43721	S	48793	SSL	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 – 90D	6
	11691	<i>FPM</i>	11691	<i>FPM</i>	<i>O-ring, valve plug – 90D</i>	6
	# 46207	<i>EPDM</i>	# 46207	<i>EPDM</i>	<i>O-ring, valve plug – 70D</i>	6
174	43851	BBCP	48463	SSNP	Plug, valve	6
	43850	BB	-	-	<i>Plug, valve</i>	6
185	45975	NAB	48780	SSD	Head, manifold	1
187	14050	STZP	44005	S	Stud (M10x45)	4
192	12503	STZP	15847	S	Lockwasher (M10)	4
194	81048	STZP	81258	S	Nut, hex (M10)	4
250	30764	NY	30764	NY	<i>Protector, shaft w/2 screws</i>	1
255	30264	STZP	30264	STZP	<i>Kit, direct mount</i>	1
260	30613	STZP	30613	STZP	<i>Mount, rail assy – A (30635,30903,30921,30912)</i>	1
	990550	STZP	990550	STZP	<i>Mount, rail (required on diesel/gas)</i>	1
269	30206	F	30206	F	<i>Pulley (10") AB</i>	1
274	30059	STL	30059	STL	<i>Hub "H" (M30) (keyway M8)</i>	1
283	34334	-	34334	-	<i>Kit, oil drain</i>	1
299	814561	BB	816780	SS	<i>Head, complete</i>	1
300	30798	NBR*	30798	NBR*	<i>Kit, seal (incl. 97,103,106,121,127)</i>	1
	31033	<i>FPM</i>	31033	<i>FPM</i>	<i>Kit, seal (incl. 97,103,106,121,127)</i>	1
	# 33919	<i>EPDM*</i>	# 33919	<i>EPDM*</i>	<i>Kit, seal (incl. 97,103,106,121,127)</i>	1
310	30820	NBR	34387	NBR	<i>Kit, valve (incl. 162,163,164,166,167,168,172)</i>	2
	31256	FPM	30987	FPM	<i>Kit, valve (incl. 162,163,164,166,167,168,172)</i>	2
	# 31253	EPDM	# 31258	EPDM	<i>Kit, valve (incl. 162,163,164,166,167,168,172)</i>	2
350	30696	STZP	30696	STZP	<i>Plier, Reverse</i>	1
351	43523	STZP	43523	STZP	<i>Tool, seal case removal</i>	1
	33006	STZP	33006	STZP	<i>Socket, seal case 1/2" drive</i>	1
352	44050	STZP	44050	STZP	<i>Tool, oil gauge removal</i>	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.

* Review material codes for individual items. (HT generally may be used as alternate)

See 'Tech Bulletins' 002, 003, 024, 027, 035, 036, 043, 045, 048, 049, 052, 053, 062, 074, 077 and 083 for additional information.

C.A.T. highly recommended for pressurized inlet, RO and industrial applications.

Material codes: (not part or part number)

ABS	ABS plastic	FCM	Forged chrome-moly	SSD	Duplex stainless steel
AL	Aluminium	FPM	Fluorocarbon	SSHS	316SS / high strength
BB	Brass	NAB	Nickel aluminum bronze	SSL	316SS / low carbon
BBCP	Brass/chrome plated	NBR	Medium nitrile (Buna-N)	SSNP	316SS / nickel plated
CC	Ceramic	NY	Nylon	STCP	Steel / chrome plated
CM	Chrome-moly	POP	Polypropylene	STG	Special blend PTFE white
CU	Copper	PTFE	Pure polytetrafluorethylene	STL	Steel
D	Acetal	PVDF	Polyvinylidene fluoride	STZP	Steel / zinc plated
EPDM	Ethylene propylene diene mon.	S	304SS	SZZ	304SS / zamak
F	Cast iron	SFTB	Special blend PTFE black	TNM	Special high strength
FBR	Fiber	SS	316SS		