



Technical specifications and instructions



8 Frame Block-Style Stainless Steel Plunger pump

SS model 781-784-786

SS flushed model 781K

Gearbox model 781G1

Specifications (*)

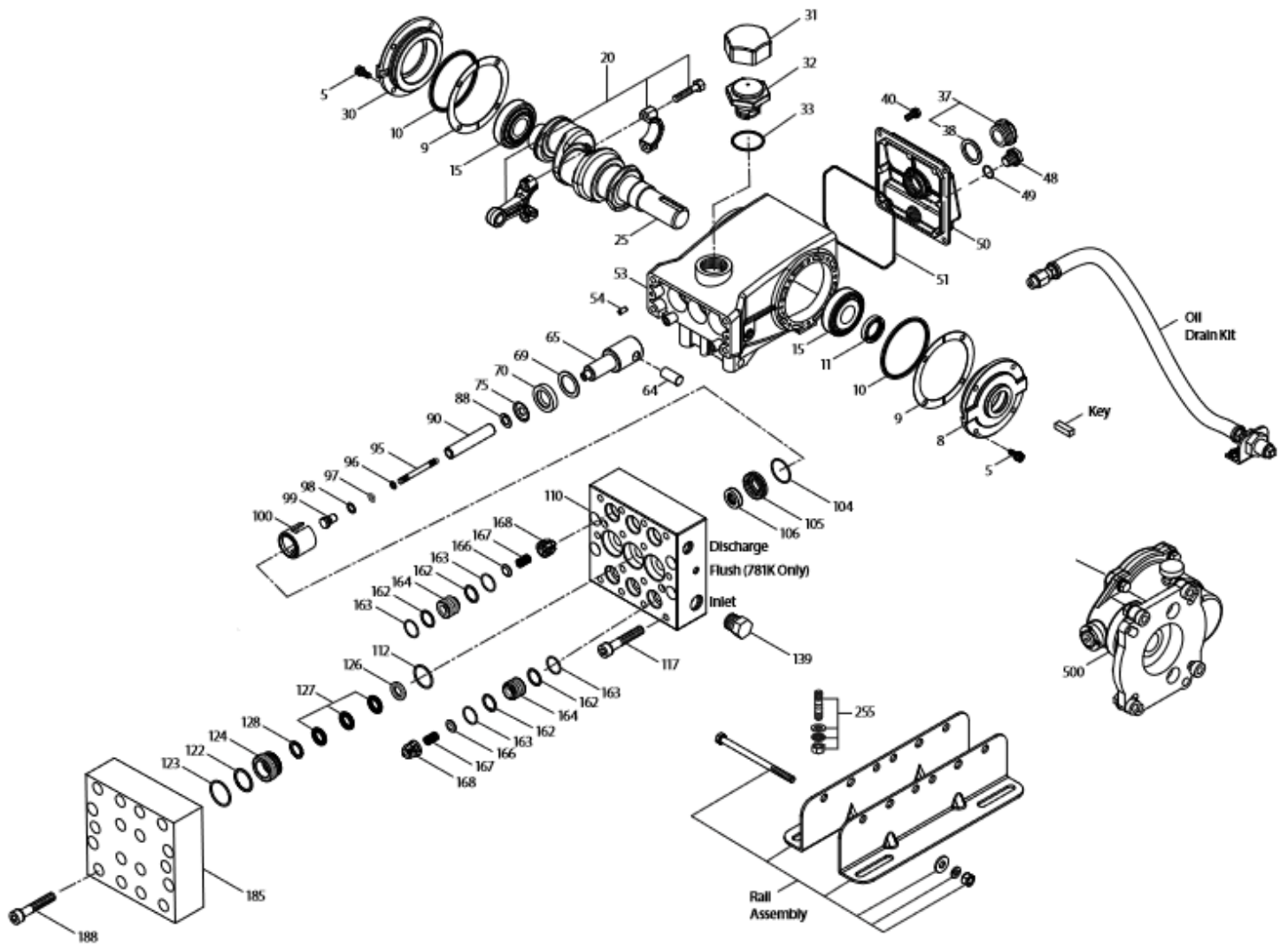
	Model 781/781K	Model 786	Model 784	Model 781G
Flow	15 L/min	11 L/min	9,1 l/min	17,0 l/min
Pressure range	7 to 350 bar	7 to 350 bar	7 to 350 bar	7 to 350 bar
RPM	1420 RPM	1420 RPM	1420 RPM	1700 RPM
Engine RPM				3465 RPM

Common specifications

Inlet pressure range	Flooded to 4,1 bar
Bore	14 mm
Stroke	24 mm – 15 mm (784) – 18,5 mm (786)
Crankcase capacity	0,75 L
Maximum liquid temperature	71° C
Inlet ports (2)	1/2" NPTF
Flushing ports (2)	1/8" NPTF
Discharge ports (2)	3/8" NPTF
Shaft diameter	24 mm
Weight	21,8 kg
Dimensions	334 x 235 x 154 mm

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

Exploded View



Models
781, 781K, 781G1,
784, 786
May 2019

Parts list

Item	Num. 781/781G1 784/786	Mat.	Num. 781K	Mat.	Description	Qty
5	92538	S	92538	S	Screw, HHC, sems (M6x16)	8
8	133571	ALE	133571	ALE	Cover, bearing (see TB 118,123)	1
9	815280	FBR	815280	FBR	Shim, split, 2 pc	1/2
10	12393	NBR	12393	NBR	O-ring, bearing cover	2
11	43222	NBR	43222	NBR	Seal, oil, crankshaft	1
15	43221	STL	43221	STL	Bearing, roller	2
20	48863	TNM	48863	TNM	Rod, connecting {6/02}	3
25	119234	FCM	119234	FCM	Crankshaft, single end (M24 w/60mm extension) (781,781K)	1
	46554	FCM	-	-	Crankshaft, single end (M24 w/34mm extension) (781G1)	1
	44591	FCM	-	-	Crankshaft, single end (M15 w/34mm extension) (784)	1
	44947	FCM	-	-	Crankshaft, single end (M18,5 w/34mm extension) (786)	1
30	133572	ALE	133572	ALE	Cover, blind bearing (see TB 118,123)	1
31	828710	PE	828710	PE	Protector, oil cap w/foam gasket	1
32	44666	RTP	44666	RTP	Cap, oil filler, domed	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 flex., oil gauge – 80D	1
40	92538	S	92538	S	Screw, HHC, sems (M6x16) (see TB 106)	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	133569	ALE	133569	ALE	Cover, rear {03/10} (see TB 118,123)	1
51	14047	NBR	14047	NBR	O-ring, rear cover – 70D (see TB 106)	1
53	133593	ALE	133593	ALE	Crankcase w/guidepins {03/10} (see TB 118)	1
54	27488	S	27488	S	Pin, guide	2
64	43237	CM	43237	CM	Pin, crosshead	3
65	48913	SHS	48913	SHS	Rod, plunger, short {05/02}	3
69	126589	STCP R	126589	STCP R	Washer, oil seal	3
70	43228	NBR	43228	NBR	Seal, oil, crankcase	3
75	43328	S	43328	S	Slinger, barrier	3
88	45697	S	45697	S	Washer, keyhole (M18)	3
90	45890	CC	45890	CC	Plunger (M14x72)	3
95	89653	SS	89653	SS	Stud, plunger retainer (M6x58)	3
96	43235	PTFE	43235	PTFE	Back-up-ring, plunger retainer	3
97	17399	NBR	17399	NBR	O-ring, plunger retainer – 80D	3
98	44041	SS	44041	SS	Gasket, plunger retainer	3
99	49665	SS	49665	SS	Retainer, plunger (M6)	3
100	995686	PVDF	995686	PVDF	Retainer, seal (see TB 105)	3
104	701734	NBR	701734	NBR	O-ring, inlet adapter – 70D	3
105	701587	SS	701587	SS	Adapter, inlet	3
106	48821	NBR	48821	NBR	Seal, LPS w/SS-Spg	3
110	49205	SS	-	-	Manifold, inlet/discharge, block-style	1
	-	-	49241	SS	Manifold, inlet/discharge, block-style, flushed (1/8" port)	1
112	701595	NBR	701595	NBR	O-ring, V.P. Spacer – 70D	3
117	87952	S	87952	S	Screw, HSH (M10x55)	4
122	701598	PTFE	701598	PTFE	Back-up-ring, V.P. Cylinder	3
123	701596	NBR	701596	NBR	O-ring, V.P. Cylinder – 70D	3
124	701589	SS	701589	SS	Cylinder, V.P.	3
126	701682	SS	701682	SS	Adapter, female	3
127	45895	SNG	45895	SNG	V-packing	9
128	701683	SS	701683	SS	Adapter, male	3
139	45156	SS	45156	SS	Plug, inlet/discharge manifold (1/2" NPTM)	1
162	701599	PTFE	701599	PTFE	Back-up-ring, valve seat	12

163	701597	NBR	701597	NBR	O-ring, seat – 70D	12
164	701591	SS	701591	SS	Seat	6
166	701751	SS	701751	SS	Valve	6
167	44056	SS	44056	SS	Spring	6
168	44565	PVDF	44565	PVDF	Retainer, spring	6
185	49214	SS	49214	SS	Manifold, valve, block-style	1
188	87952	S	87952	S	Screw, HSH (M10x55)	14
500	8071	-	-	-	Gearbox, 1" (see individual datasheet)	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. R components comply with RoHS directive.

See 'Tech Bulletins' 024, 035, 036, 043, 053, 054, 061, 064, 067, 074, 083, 095, 105, 106, 118 and 123 for additional information. See 8051-8078 gearbox data sheet for optional gearbox drive.

MATERIAL CODES: (not part or part number)

ALE	Aluminum Epoxy	NBR	Medium nitrile (Buna-N)	SS	316SS
CC	Ceramic	PE	Polyethylene	ST4	Special PTFE4
CM	Chrome-moly	PTFE	Pure polytetrafluorethylene	STCP	Steel / chrome plated
EPDM	Ethylene propylene diene mon.	PVDF	Polyvinylidene fluoride	STL	Steel
FBR	Fiber	RTP	Reinforced composite	STZP	Steel / zinc plated
FCM	Forged chrome-moly	S	304SS	TNM	Special high strength
FPM	Fluorocarbon	SHS	304 SS / high strength		
IPFE	I-Perfluorelastomer	SNG	Special blend (Buna)		

OPTIONAL PARTS & ACCESSORIES

Part	Description	Qty
701883	Seal kit – standard NBR	1
701884	Valve kit – standard NBR	2
30660	Kit, complete mounting	1
30645	Assy, standard rail	1
30243	Kit, direct mount	1
34334	Kit, oil drain (3/8" x 24")	1
30696	Plier, reverse	1

SERVICE PARTS

Part	Description	Qty
30067	Key (M8 x 7.5 x 25)	1
6119	Lubricant, anti-seize	1
811483	Head, complete w/NBR seals & O-rings	1
811485	Head, complete w/NBR seals & O-rings – mod 781K	1

SEAL KITS - 1 seal kit required per pump

Pump model	NBR (standard)	FPM (0.0110)	EPDM (0.0220) #	IPFE (0.0770)		
781,781K,781G,784,786	701883	701920*	76883*	702843		
Items incl.					Description	Qty
96	43235	43235	43235	43235	Back-up-ring, plunger retainer	3
97	17399	14160	46204	701715	O-ring, plunger retainer	3
104	701734	701912	703297	702774	O-ring, inlet adapter	3
106	48821	704649	49466	704649	Seal, LPS w/SS-spg	3
112	701595	701913	703298	702496	O-ring, VP spacer	3
122	701598	701598	701598	701598	Back-up ring, VP cylinder	3
123	701596	701914	703318	702769	O-ring, VP cylinder	3
127	45895	704666	704666	704666	V-packing	9

Silicone/oil/grease required

VALVE KITS - 2 valve kits required per pump

Pump model	NBR (standard)	FPM (0.0110)	EPDM (0.0220) #			
781,781K,781G,784,786	701884	701921	76884			
Items incl.				Description		Qty
162	701599	701599	701599	Backup-ring, valve seat		12
163	701597	701915	703180	O-ring, valve seat		12
164	701591	701591	701591	Seat		6
166	701751	701751	701751	Valve		6
167	44056	44056	44056	Spring		6
168	44565	44565	44565	Retainer, spring		6

Silicone/oil/grease required