



## Technical specifications and instructions



**35 Frame  
Plunger pump**

**Standard Brass**

**3535HS**

**Stainless steel**

**3531DHS**

**Stainless steel flushed**

**3531CHS**

**Nickel aluminum bronze**

**3537HS**

### Specifications (\*)

**Flow**

**Pressure range**

**RPM**

**Inlet pressure range**

**Stroke**

**Model 3535HS-3531DHS-3531CHS-3537HS**

150 L/min

7 to 140 bar

888 RPM

Flooded to 4,8 bar

48 mm

### Common specifications

**Bore**

**Crankcase capacity**

**Maximum liquid temperature**

**Inlet ports (2)**

**Discharge ports (2)**

**Shaft diameter**

**Weight**

**Dimensions**

40 mm

4 L

71° C

1-1/2" NPTF

1 NPTF

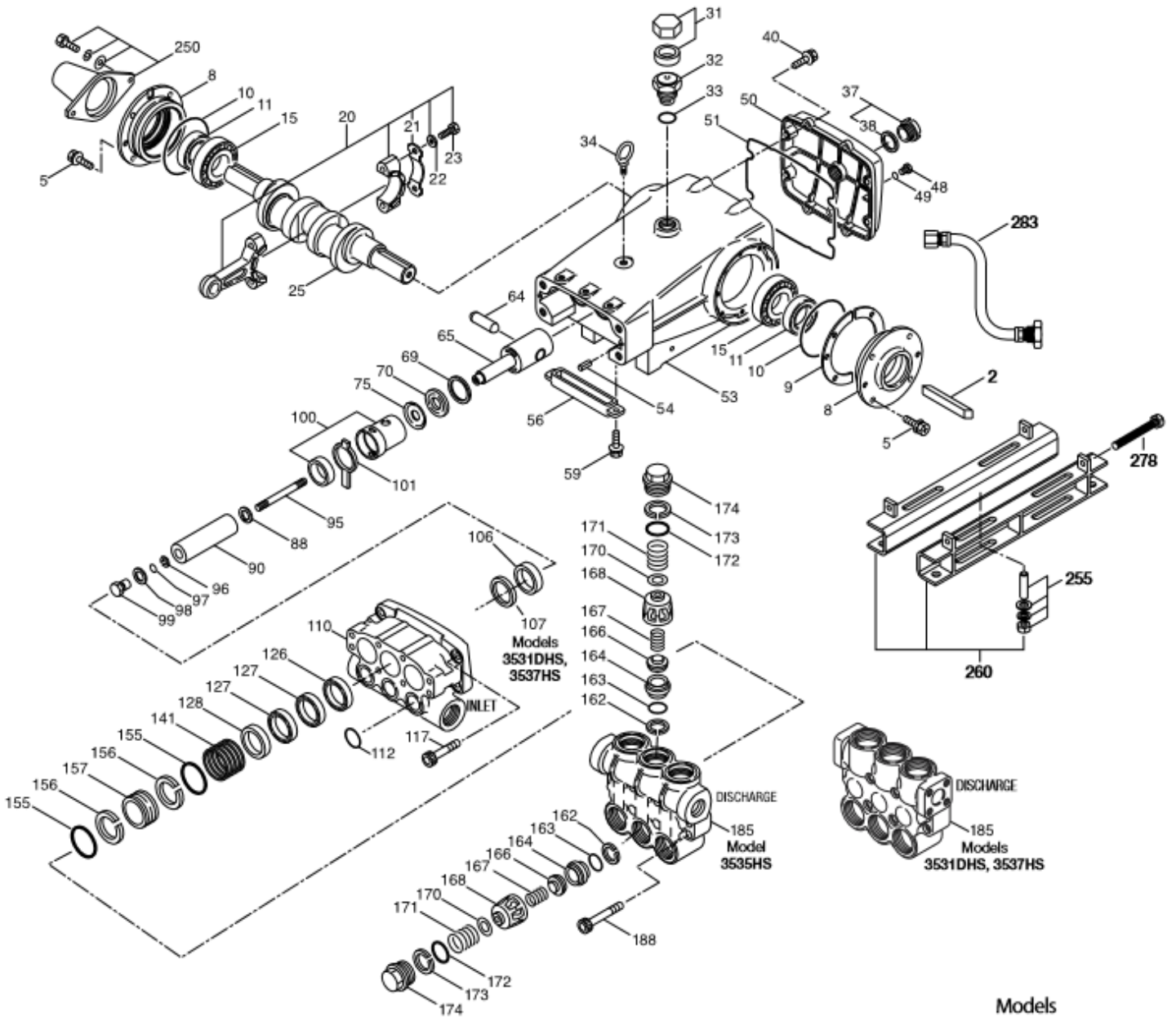
35mm

63 kg

618 x 460 x 247mm

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

# Exploded View



Models  
 Brass 3535HS  
 Stainless Steel 3531DHS, 3531CHS  
 Nickel Aluminum Bronze 3537HS  
 October 2018

# Parts list

lt.	Num. 3535HS	Mat.	Num. 3531DHS 3531CHS	Mat.	Num. 3537HS	Mat.	Description	Qty
2	34021	STL	34021	STL	34021	STL	Key (M10x8x70)	1
5	96049	S	96049	S	96049	S	Screw, HHC sems (M10x25) (see TB 125) {06/18}	8
8	134604	ALE	134604	ALE	134604	ALE	Cover, bearing (see TB 118,125) {06/18}	2
9	815279	FBR	815279	FBR	815279	FBR	Shim, split, 2-pc (see TB 125) {06/18}	2
10	12398	NBR	12398	NBR	12398	NBR	O-ring, bearing cover – 70D	2
11	13296	NBR	13296	NBR	13296	NBR	Seal, oil, crankshaft	2
15	29326	STL	29326	STL	29326	STL	Bearing, roller	2
20	126725	BZ R	126725	BZ R	126725	BZ R	Rod, connecting assy (incl. 21,22,23)	3
21	126749	STCP R	126749	STCP R	126749	STCP R	Locking washer (M10)	3
22	126593	STCP R	126593	STCP R	126593	STCP R	Washer, flat (M10.5)	6
23	122045	STZP	122045	STZP	122045	STZP	Screw, HH (M10x55)	6
25	29325	FCM	29325	FCM	29325	FCM	Crankshaft, dual end	1
31	828710	PE	828710	PE	828710	PE	Protector, oil cap w/ foam gasket	1
32	43211	ABS	43211	ABS	43211	ABS	Cap, oil filler	1
33	14177	NBR	14177	NBR	14177	NBR	O-ring, oil filler cap – 70D	1
34	126743	STCP R	126743	STCP R	126743	STCP R	Bolt, eye (M12x1,75) (for lifting pump only)	1
37	92241	-	92241	-	92241	-	Gauge, oil, bubble w/gasket	1
38	44428	NBR	44428	NBR	44428	NBR	Gasket, flat oil gauge – 80D	1
40	125753	S	125753	S	125753	S	Screw, HHC sems (M8x25)	8
48	25625	STCP	25625	STCP	25625	STCP	Plug, drain (1/4" x 19 BSP)	1
49	23170	NBR	23170	NBR	23170	NBR	O-ring, drain plug – 70D	1
50	45936	AL	45936	AL	45936	AL	Cover, rear (see TB 118)	1
51	16612	NBR	16612	NBR	16612	NBR	O-ring, crankcase cover – 70D	1
53	134784	AL	134784	AL	134784	AL	Crankcase assy (incl. 34,54) (see TB 118,125) {06/18}	1
54	27488	S	27488	S	27488	S	Pins, guide	2
56	27790	POP	27790	POP	27790	POP	Pan, oil	1
59	92538	S	92538	S	92538	S	Screw, HHC sems (M6x16)	2
64	43864	CM	43864	CM	43864	CM	Pin, crosshead	3
65	49166	SSHB	49166	SSHB	49166	SSHB	Rod, plunger	3
69	126587	STCP R	126587	STCP R	126587	STCP R	Washer, oil seal	3
70	100488	NBRS	100488	NBRS	100488	NBRS	Seal, oil, crankcase	3
	44739	FPM	44739	FPM	44739	FPM	Seal, oil, crankcase	3
75	43865	S	43865	S	43865	S	Slinger, barrier	3
88	45676	S	45676	S	45676	S	Washer, keyhole (M16)	3
90	43921	CC	43921	CC	43921	CC	Plunger (M40x145)	3
95	+ 89778	SS	89778	SS	89778	SS	Stud, plunger retainer (M10x135)	3
96	20189	PTFE	20189	PTFE	20189	PTFE	Back-up-ring, plunger retainer	3
97	11345	NBR	11345	NBR	11345	NBR	O-ring, plunger retainer – 70D	3
98	44085	SS	44085	SS	44085	SS	Gasket, retainer	3
99	+ 44084	SS	44084	SS	44084	SS	Retainer, plunger (M10)	3
100	814279	PVDF	814279	PVDF	814279	PVDF	Retainer, seal, 2-pc (see TB 105)	3
101	44112	-	44112	-	44112	-	Wick, long tab	3
106	+ 44113	NBR	44113	NBR	44113	NBR	Seal, LPS w/SS-spg	3
107	-	-	45381	SS	44115	NAB	Spacer, Lo-pressure seal	3
110	49464	BBCP R	45365	SS	45124	NAB	Manifold, inlet	1
	-	-	125397	SS	-	-	Manifold, inlet, flushed (1/4" flush)	1
112	11379	NBR	11379	NBR	11379	NBR	O-ring, inlet manifold – 70D	3
117	44585	S	44585	S	44585	S	Screw, HSH (M14x40)	4
126	46494	BB	48391	D	48391	D	Adapter, female (see TB 087)	3
	-	-	45367	SS	45367	SS	Adapter, female	3
127	44609	STG	44609	STG	44609	STG	V-packing	6
128	43928	BB	45368	SS	45368	SS	Adapter, male	3
141	49519	SS	49519	SS	49519	SS	Spring, large coil (see TB 108)	3
155	48860	NBR	48860	NBR	48860	NBR	O-ring, V-packing spacer – 90D	6
156	48362	D	48362	D	48362	D	Back-up ring, V-packing spacer	6
157	49478	BB	49520	SS	49521	NAB	Spacer, V-packing (see TB 108)	3
162	48363	D	48363	D	48363	D	Back-up-ring, valve seat	6
163	26142	NBR	26142	NBR	26142	NBR	O-ring, seat – 80D	6
164	44727	S	44612	SS	44612	SS	Seat, stepped	6
166	43932	S	44108	SS	44108	SS	Valve	6

167	44109	SS	44109	SS	44109	SS	Spring	6
168	44728	PVDF	44728	PVDF	44728	PVDF	Retainer, spring	6
170	44729	SS	44729	SS	44729	SS	Washer, spring retainer	6
171	44644	SS	44644	SS	44644	SS	Coil spring (70 kg), valve plug	6
172	89827	NBR	89827	NBR	89827	NBR	O-ring, valve plug – 90D	6
173	48364	D	48364	D	48364	D	Back-up-ring, valve plug	6
174	<b>46444</b>	<b>FBB</b>	<b>49300</b>	<b>SSD</b>	<b>44643</b>	<b>NAB</b>	Plug, valve	6
185	<b>49465</b>	<b>BBCP R</b>	<b>49299</b>	<b>SSD</b>	<b>76335</b>	<b>NAB</b>	Manifold, discharge (see TB 099 & 109)	1
188	89981	S	89981	S	89981	S	Screw, HSH (M12x70)	8
250	44516	NY	44516	NY	44516	NY	Protector, shaft w/2 screw, lockwashers, washer (included with pump) {06/18}	1

**Bold print part numbers are unique to a particular pump model. Italics are optional items. { }** Date of latest production change.

# silicone/grease required. R Components comply with RoHS directive. \* Review material codes for individual items. See 'Tech Bulletins' 024, 035, 036, 040, 041, 043, 050, 052, 053, 069, 074, 083, 095, 099, 105, 108, 109, 118, 125 and 127 for additional information. See 'Service Bulletin' 001.

**MATERIAL CODES (not part or part number)**

ABS	ABS plastic	FBR	Fiber	S	304 SS
AL	Aluminum	FCM	Forged chrome-moly	SFG	Special blend FPM
ALE	Aluminum epoxy	FPM	Fluorocarbon	SS	316 SS
BB	Brass	NAB	Nickel aluminum bronze	SSD	Duplex stainless steel
BBCP	Brass / chrome plated	NBR	Medium nitrile (Buna-N)	SSHB	316 SS w/ high strength brass
BZ	Bronze	NBRS	Buna, silicone free	STCP	Steel / chrome plated
CC	Ceramic	NY	Nylon	STG	Special blend PTFE white
CM	Chrome-moly	PE	Polyethylene	STL	Steel
D	Acetal	POP	Polypropylene	STZP	Steel / zinc plated
EPDM	Ethylene propylene diene mon.	PTFE	Pure polytetrafluoroethylene	ZP	Zinc plated
FBB	Forged Brass	PVDF	Polyvinylidene fluoride		

**OPTIONAL PARTS & ACCESSORIES**

PART	DESCRIPTION	QTY
31040	Seal kit – Standard NBR	1
<b>34235</b>	Valve kit (3535HS) – NBR	2
<b>34017</b>	Valve kit (3531DHS,3531CHS,3537HS) – NBR	2
92674	Mount, rail assembly (STZP R)	1
76514	Mount, rail assembly (S)	1
34018	Mount, direct (STZP R)	1
34039	Mount, direct (S)	1
990013	Hub, "B", 35 mm (STL) (not shown)	1
80540	Screwing, adjusting M12 x 100	1

30278	Oiler (1 oz) (not shown)	3
34314	Kit, oil drain	1
30696	Plier, reverse (not shown)	1

**SERVICE PARTS**

PART	DESCRIPTION	QTY
34021	Key, (M10 x 8 x 70)	1
<b>818427</b>	Head, complete w/NBR seals & O-rings – model 3535HS	1
<b>818372</b>	Head, complete w/NBR seals & O-rings – model 3531DHS	1
<b>814522</b>	Head, complete w/NBR seals & O-rings – model 3537HS	1
819000	Assy, crankcase, cast iron conversion	1

**SEAL KITS - 1 seal kit required per pump**

Pump model	NBR (standard)	FPM (0.0110)	EPDM (0.0220) #		
3535HS,3531DHS,3531CHS,3537HS	31040*	33055	33262*		
Items incl.				Description	Qty
97	11345	11375	701490	O-ring, plunger retainer	3
106	44113	44740	46955	Seal, LPS w/SS-spg	3
112	11379	14183	701491	O-ring, Inlet Manifold	3
127	44609	44741	44609	V-packing	6
155	48860	20137	701492	O-ring, V-packing spacer	6
156	48362	48362	48362	Back-up-ring, V-packing spacer	6

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

**VALVE KITS - : 2 valve kits required per pump**

Pump model	NBR (standard)	FPM (0.0110)	EPDM (0.0220) #		
3535HS	34235	31955	31952		
3531DHS,3531CHS,3537HS	34017	31955	31952		
Items incl.				Description	Qty
162	48363	48363	48363	Backup-ring, valve seat	3
163	26142	14330	701493	O-ring, valve seat	3
164	44727	-	-	Seat (3535HS)	3
	-	44612	44612	Seat (3531DHS,3531CHS,3537HS)	3
166	43932	-	-	Valve (3535HS)	3
	-	44108	44108	Valve (3531DHS,3531CHS,3537HS)	3
167	44109	44109	44109	Spring	3
168	44728	44728	44728	Retainer, spring	3
170	44729	44729	44729	Washer, spring retainer	3
172	89827	11747	701494	O-ring, Valve plug	3
173	48364	48364	48364	Back-up-ring, Valve plug	3

Silicone/oil/grease required