

Parts list

APP Pumps

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1- 10.2



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Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

1. General

This parts list provides an overview of the content of the various service sets for the

- APP 0.6-1.0 Compact
- APP 0.6-1.0
- APM 0.8-2.9
- APP 1.5-2.5
- APP 3.0-3.5
- APP 5.1-10.2
- APP W 5.1-10.2
- APP 11-13
- APP 16-22
- APP 21-43

as well as exploded views of the pumps.

Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

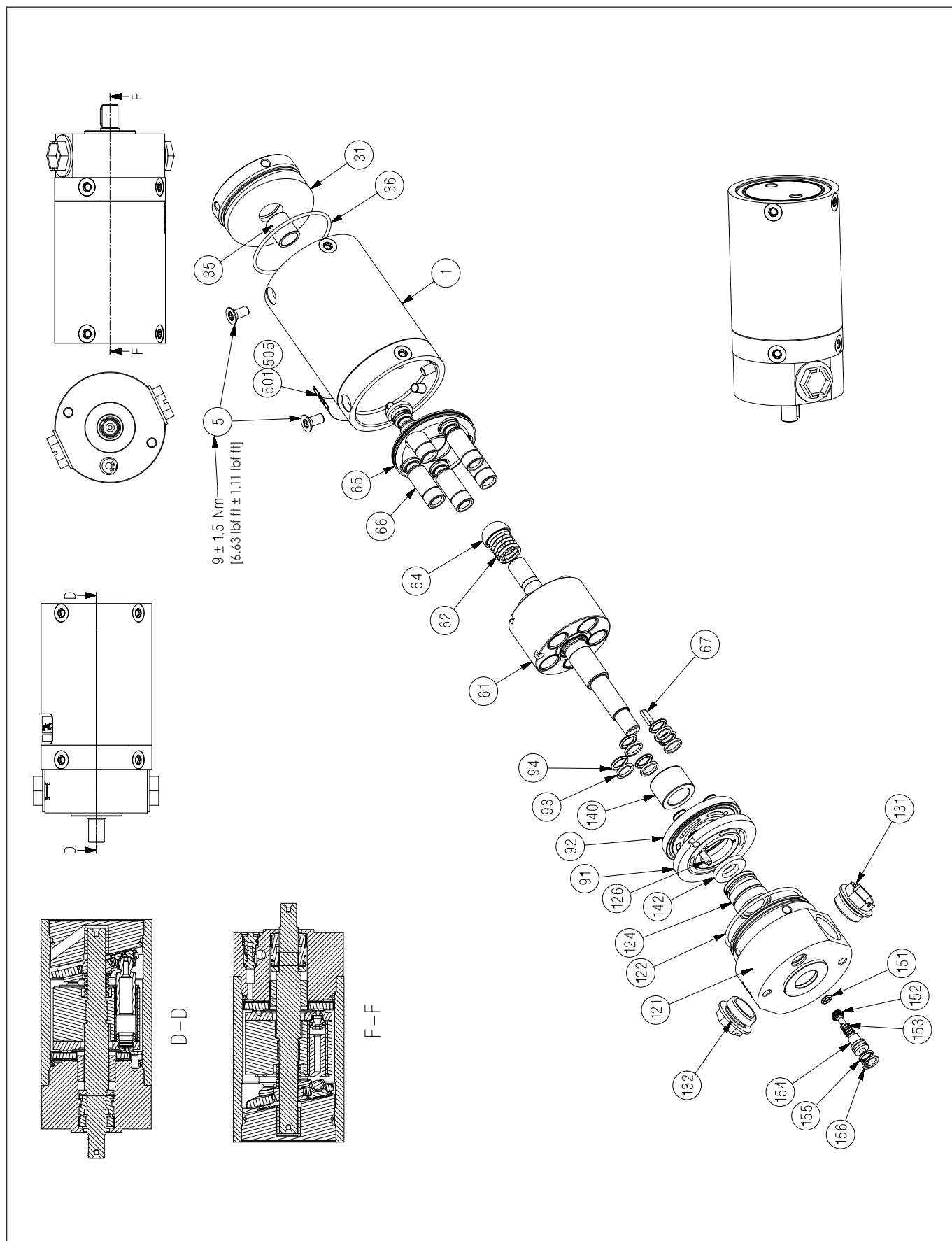
2. Parts list APP 0.6 - 1.0 Compact

Note:
The parts listed are not sold separately.

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4187 – Seal / Flushing valve set (APP 0.6-1.0 Compact)	180B4186 – Cylinder barrel set (APP 0.6-1.0 Compact)	180B4183 – Valve plate set (APP 0.6-1.0 Compact)	180B4182 – Retainer set (APP 0.6-1.0 Compact)	180B4181 – Piston set (APP 0.6-1.0 Compact)	180B4184 – Swash plate set (APP 0.6 Compact)	180B4189 – Swash plate set (APP 0.8 Compact)	180B4185 – Swash plate set (APP 1.0 Compact)
1	1	Housing	Duplex								
5	5-10	Screw (M6x12)	AISI 316	x				x			
31	1	Swash plate	Super Duplex						x	x	x
35	1	Bearing	PEEK						x	x	x
36	1	O-ring (Ø53x1.5)	NBR	x				x			
61	1	Cylinder barrel	Super Duplex / PEEK		x						
62	1	Spring	Duplex				x				
64	1	Retainer ball	Super Duplex				x				
65	1	Retainer plate	Super Duplex				x				
66	5	Piston	Super Duplex / PEEK					x			
67	1	Key (3x3x12)	AISI 316	x							
91	1	Port plate	Super Duplex / PEEK			x					
92	1	Valve plate	Super Duplex			x					
93	5	Back-up ring	PTFE	x		x					
94	5	O-ring (Ø8.73x1.78)	NBR	x		x					
121	1	Port flange	Duplex								
122	1	O-ring (Ø53x1.5)	NBR	x							
124	1	Shaft seal	AISI 316 / NBR	x							
126	1	Pin (Ø4x9)	PEEK	x							
140	1	Bearing	PEEK	x							
142	1	Washer for shaft seal	PP	x							
151	1	O-ring	NBR	x							
152	1	Valve cone	PP	x							
153	1	Spring	Duplex	x							
154	1	Plug/guide	Duplex	x							
155	1	O-ring	NBR	x							
156	1	Locking ring	AISI 316	x							
		Instruction		x	x	x	x	x	x	x	x

3. Exploded view
APP 0.6 - 1.0 Compact



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

4. Parts list APP 0.6 - 1.0 and APM 0.8 - 1.2

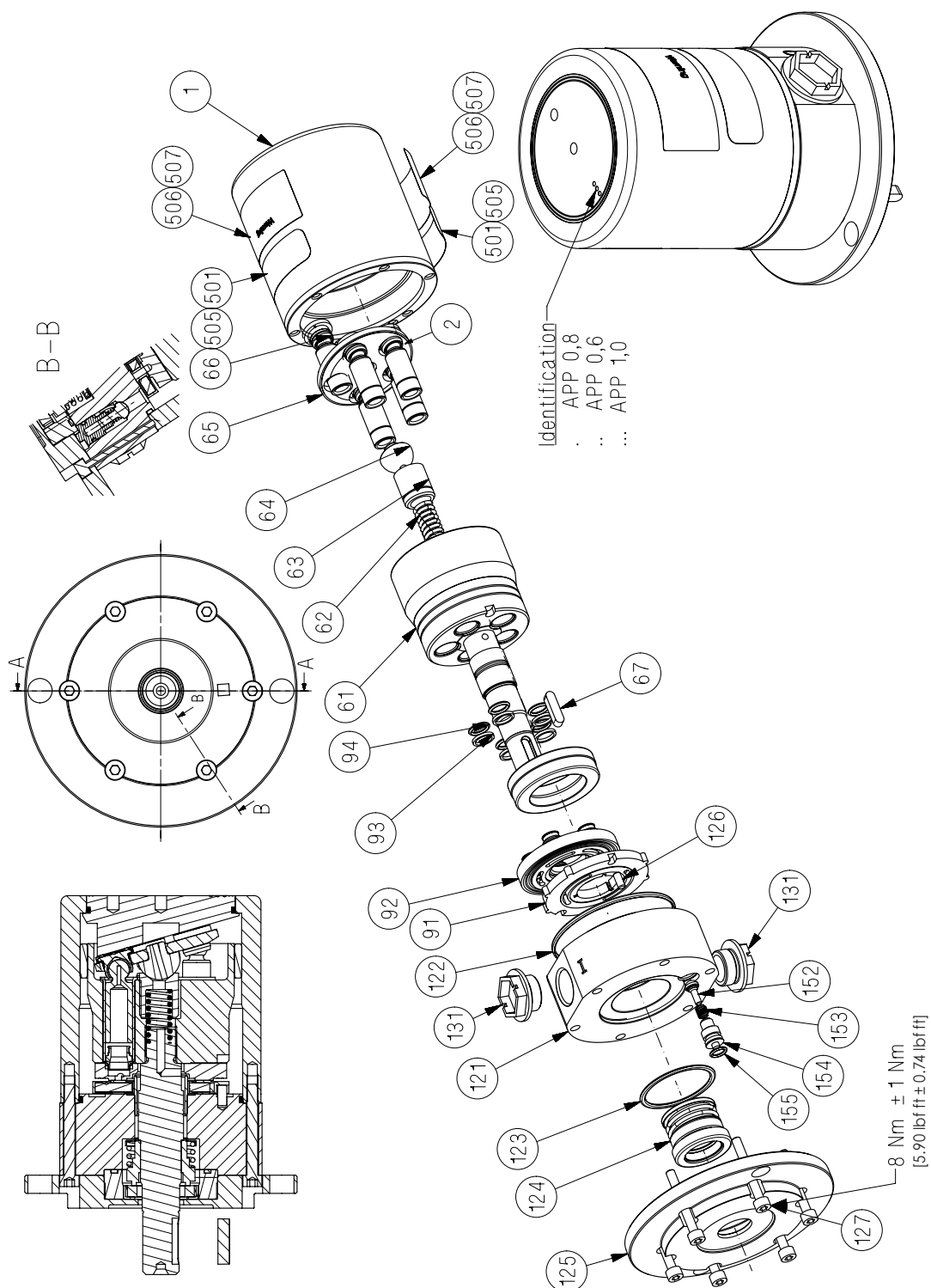
Note:
The parts listed are not sold separately, only in various kits.

Parts for APM 0.8-1.2 are equivalent to the parts for APP 0.6-1.0 except for the valve plate sets.

Exploded view, see next page.

Pos.	Qty.	Designation	Material	180B4141 – Seal / Flushing valve set (APP 0.6-1.0)	180B4140 – Cylinder barrel set (APP 0.6)	180B4139 – Valve plate set (APP 0.6-1.0)	180F4100 – Valve plate set (APM 0.8 - 1.2)	180B4138 – Retainer set (APP 0.6-1.0)	180B4137 – Piston set (APP 0.6-1.0)
1	1	Housing	Duplex / PEEK						
2	1	Pin (Ø4x14)	AISI 316	x					
61	1	Cylinder barrel	Super Duplex / PEEK		x				
62	1	Spring	Duplex					x	
63	1	Spring guide	PEEK					x	
64	1	Retainer ball	Super Duplex					x	
65	1	Retainer plate	Super Duplex					x	
66	5	Piston	Super Duplex / PEEK						x
67	1	Key (5x5x20)	AISI 316	x					
91	1	Port plate	Super Duplex / PEEK			x	x		
92	1	Valve plate	Super Duplex			x	x		
93	5	Back-up ring	PTFE	x		x	x		
94	5	O-ring (Ø8.73x1.78)	NBR	x		x	x		
121	1	Port flange	Duplex						
122	1	O-ring (Ø68x2)	NBR	x					
123	1	O-ring (Ø40x2)	NBR	x					
124	1	Shaft seal	AISI 316 / NBR	x					
125	1	Mounting flange	Wetted part: PP Dry parts: AISI 316						
126	1	Pin (Ø4x9)	PEEK	x					
127	6	Screw (M6x40)	AISI 316	x					
152	1	Valve cone	PEEK	x					
153	1	Spring	Duplex	x					
154	1	Plug/guide	Duplex	x					
155	1	O-ring (Ø7.0x1.5)	NBR	x					
	1	Instruction		x	x	x	x	x	x

5. Exploded view
APP 0.6 - 1.0 and APM 0.8 - 1.2



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

6. Parts list APP 1.5 - 2.5 and APM 1.8 - 2.9

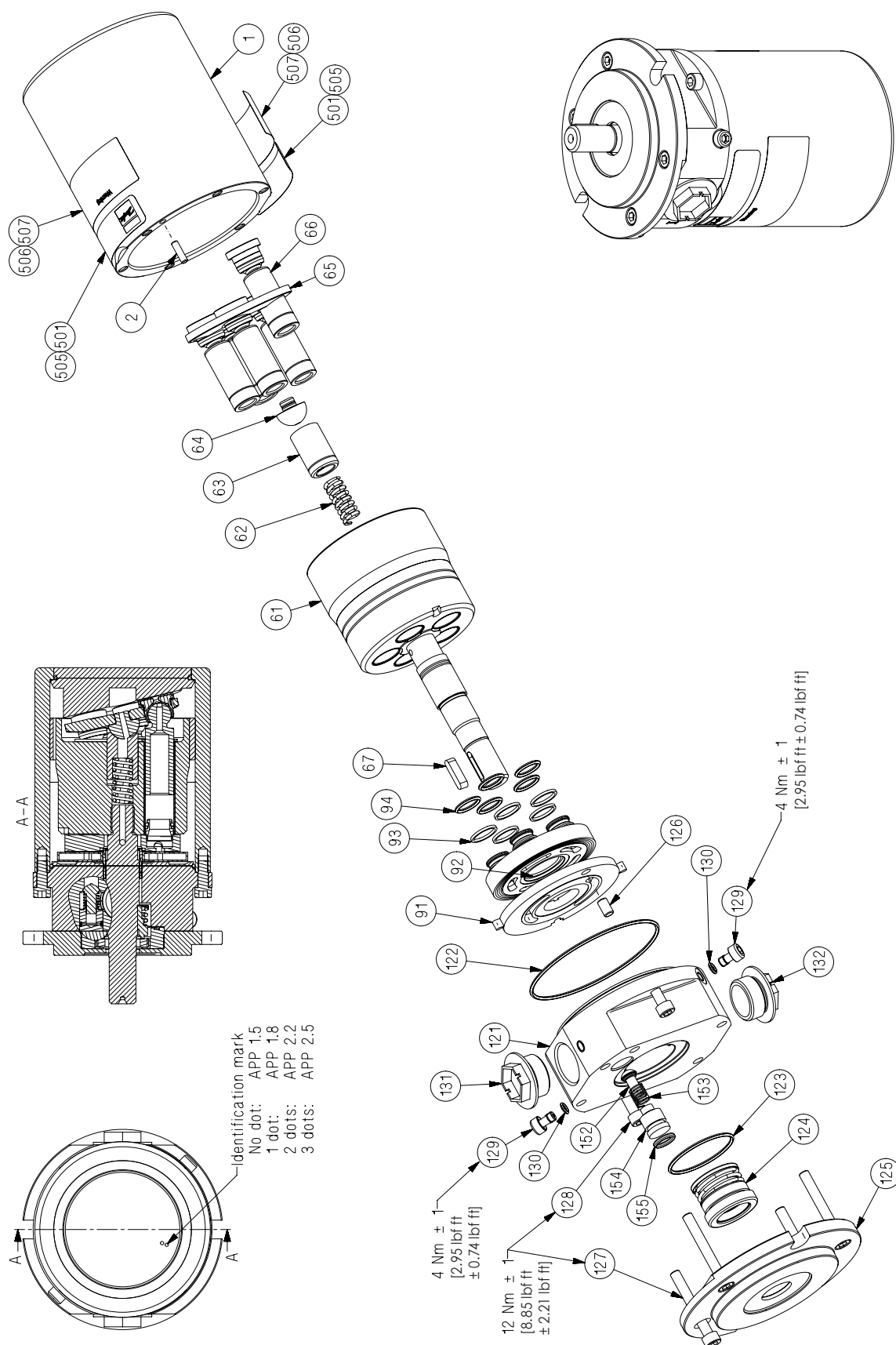
Note:
The parts listed are not sold separately, only in various kits

Parts for APM 1.8-2.9 are equivalent to the parts for APP 1.5-2.5 except for the valve plate sets.

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4147 – Seal set (APP 1.5-3.5)	180B4146 – Cylinder barrel set (APP 1.5-2.5)	180B4145 – Valve plate set (APP 1.5-2.5)	180F4007 – Valve plate set (APM 1.8 - 2.9)	180B4177 – Retainer set (APP 1.5-1.8 - APM 1.8-2.0)	180B4144 – Retainer set (APP 2.2-2.5 - APM 2.5-2.9)	180B4143 – Piston set (APP 1.5-2.5)	180B4136 – Flushing valve set (APP 1.5 - 3.5)
1	1	Housing	Duplex / PEEK								
2	1	Pin (Ø4x14)	AISI 316	x							
61	1	Cylinder barrel	Super Duplex / PEEK		x						
62	1	Spring	Duplex					x	x		
63	1	Spring guide	PEEK					x	x		
64	1	Retainer ball	Super Duplex					x	x		
65	1	Retainer plate	Super Duplex					x	x		
66	5	Piston	Super Duplex / PEEK							x	
67	1	Key (5x5x20)	AISI 316	x							
91	1	Port plate	Super Duplex / PEEK			x	x				
92	1	Valve plate	Super Duplex			x	x				
93	5	Back-up ring	PTFE	x		x	x				
94	5	O-ring (Ø13x2)	NBR	x		x	x				
121	1	Port flange	Duplex								
122	1	O-ring (Ø83x2)	NBR	x							
123	1	O-ring (Ø40x2)	NBR	x							
124	1	Shaft seal	AISI 316 / NBR	x							
125	1	Mounting flange	Wetted part: PP Dry part: AISI 316								
126	1	Pin (Ø6x10)	PEEK	x							
127	4	Screw (M6x45)	AISI 316	x							
128	2	Screw (M6x16)	AISI 316	x							
129	2	Bleeding plug	Duplex	x							
152	1	Valve cone	PEEK								x
153	1	Spring	Duplex								x
154	1	Plug/guide	Duplex								x
155	1	O-ring (Ø11.11x1.78)	NBR	x							x
	1	Instruction		x	x	x	x	x	x	x	x

7. Exploded view
APP 1.5 - 2.5 and APM 1.8 - 2.9



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

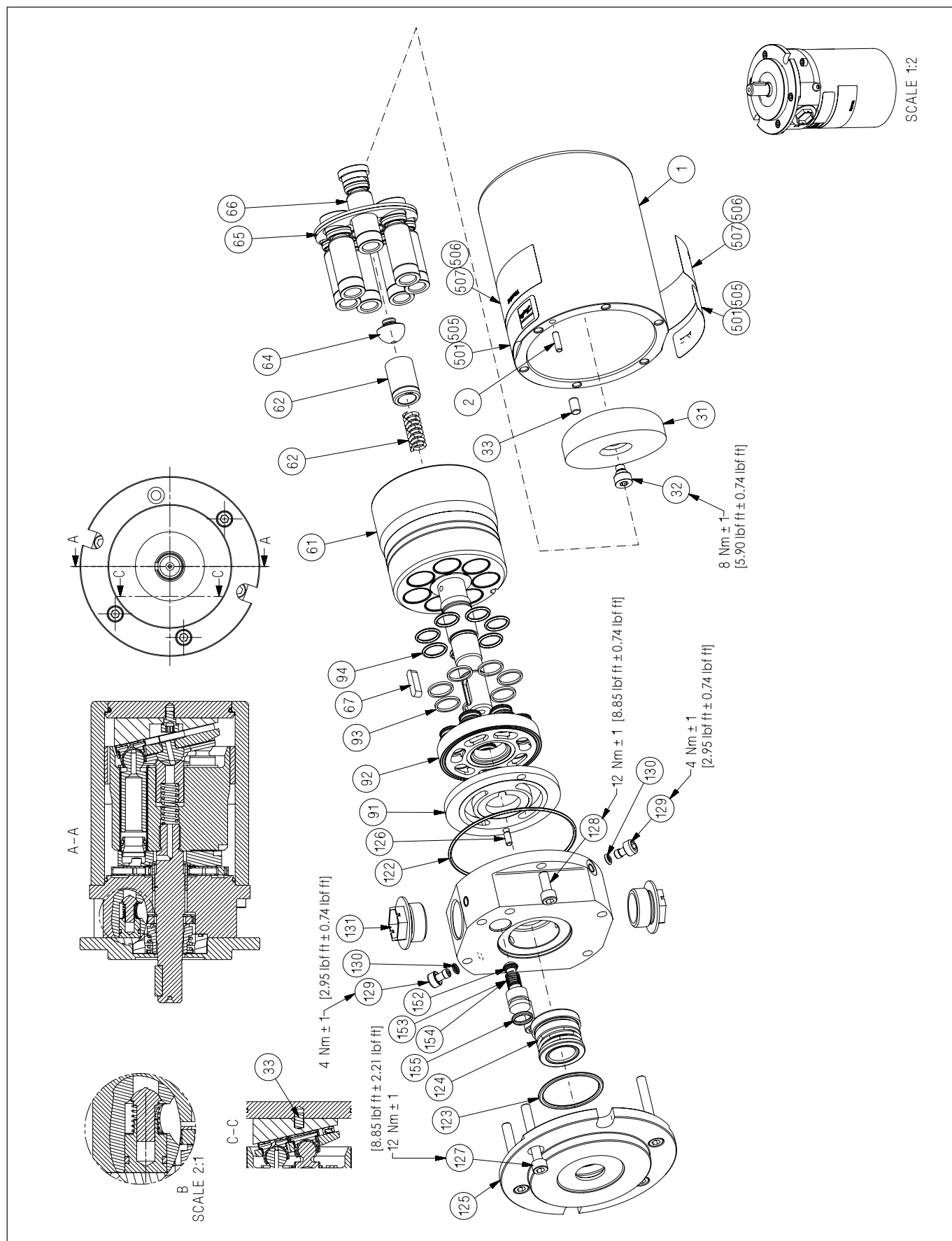
8. Parts list APP 3.0 - 3.5

Note:
The parts listed are not sold separately, only in various kits.

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4153 – Seal set (APP 3.0-3.5)	180B4152 – Cylinder barrel set (APP 3.0-3.5)	180B4151 – Valve plate set (APP 3.0-3.5)	180B4150 – Retainer set (APP 3.0-3.5)	180B4149 – Piston set (APP 3.0-3.5)	180B4134 – Swash plate set (APP 3.0)	180B4135 – Swash plate set (APP 3.5)	180B4136 – Flushing valve set (APP 3.5)
1	1	Housing	Duplex / PEEK								
2	1	Pin (Ø4x14)	AISI 316	x							
31	1	Swash plate	Super Duplex						x	x	
32	1	Centre bolt	Duplex						x	x	
33	1	Pin (Ø6x10)	PEEK	x					x	x	
61	1	Cylinder barrel	Super Duplex / PEEK		x						
62	1	Spring	Duplex				x				
63	1	Spring guide	PEEK				x				
64	1	Retainer ball	Super Duplex				x				
65	1	Retainer plate	Super Duplex				x				
66	7	Piston	Super Duplex / PEEK					x			
67	1	Key (5x5x20)	AISI 316	x							
91	1	Port plate	Super Duplex / PEEK			x					
92	1	Valve plate	Super Duplex			x					
93	7	Back-up ring	PTFE	x		x					
94	7	O-ring (Ø13x2.0)	NBR	x		x					
121	1	Port flange	Duplex								
122	1	O-ring (Ø83x2)	NBR	x							
123	1	O-ring (Ø40x2)	NBR	x							
124	1	Shaft seal	AISI 316 / NBR	x							
125	1	Mounting flange	Wetted parts: PP Dry parts: AISI 316L								
126	1	Pin (Ø4x9)	PEEK	x							
127	4	Screw (M6x45)	AISI 316	x							
128	2	Screw (M6x16)	AISI 316	x							
129	2	Bleeding plug	Duplex	x							
130	2	O-ring (Ø4.5x1.5)	NBR	x							
152	1	Valve cone	PEEK								x
153	1	Spring	Duplex								x
154	1	Plug/guide	Duplex								x
155	1	O-ring (Ø11.11x1.78)	NBR	x							x
		Instruction		x	x	x	x	x	x	x	x

9. Exploded view
APP 3.0 - 3.5



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

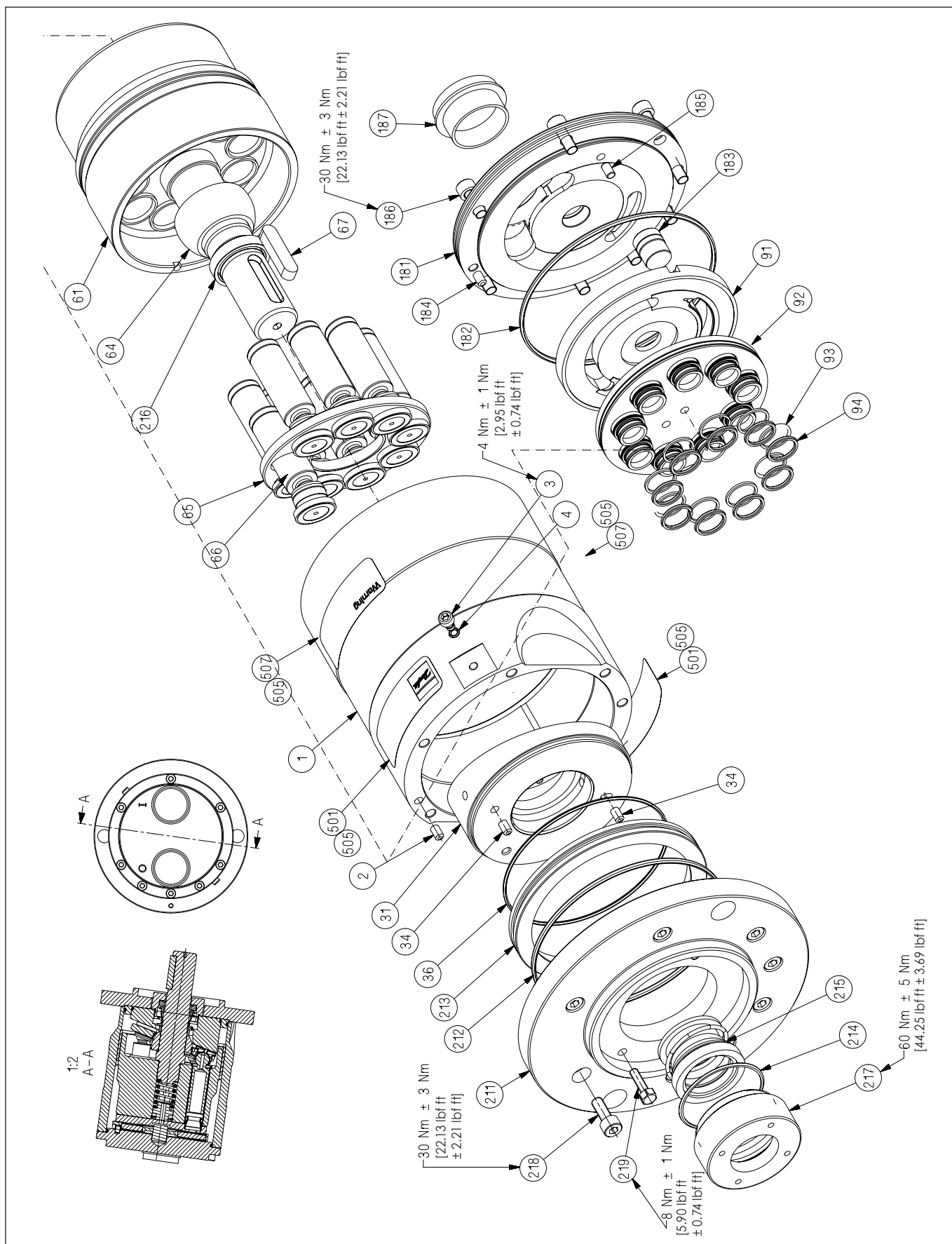
10. Parts list APP 5.1 - 10.2

Note:
The parts listed are not sold separately, only in various kits.

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4161 – Seal set (APP 5.1-10.2)	180B4160 – Cylinder barrel (APP 5.1-10.2)	180B4158 – Valve plate set (APP 5.1-8.2)	180B4159 – Valve plate set (APP 10.2)	180B4156 – Retainer set (APP 5.1-8.2)	180B4157 – Retainer set (APP 10.2)	180B4154 – Piston set (APP 5.1-8.2)	180B4155 – Piston set (APP 10.2)	180B4129 – Swash plate set (APP 5.1)	180B4130 – Swash plate set (APP 6.5)	180B4131 – Swash plate set (APP 7.2)	180B4132 – Swash plate set (APP 8.2)	180B4133 – Swash plate set (APP 10.2)
1	1	Housing	Duplex / PEEK													
2	1	Pin (Ø6x10)	AISI 316	x												
3	2	Bleeding plug	Duplex	x												
4	2	O-ring (Ø4.5x1.5)	NBR	x												
31	1	Swash plate	Super Duplex									x	x	x	x	x
34	2	Pin (Ø6x10)	AISI 316	x								x	x	x	x	x
36	1	O-ring (Ø117x2.5)	NBR	x						x	x					
61	1	Cylinder barrel	Super Duplex / PEEK		x											
64	1	Retainer ball	Super Duplex					x	x							
65	1	Retainer plate	Super Duplex					x	x							
66	9	Piston	Super Duplex / PEEK							x	x					
67	1	Key (10x8x45)	AISI 316	x												
91	1	Port plate	Super Duplex / PEEK			x	x									
92	1	Valve plate	Super Duplex			x	x									
93	9	Back-up ring	PTFE	x		x	x									
94	9	O-ring (Ø18.3x2.4)	NBR	x		x	x									
181	1	Port flange	Super Duplex													
182	1	O-ring (Ø135x3)	NBR	x												
183	1	Guide pin	Super Duplex													
184	1	Pin (Ø6x10)	AISI 316	x												
185	1	Pin (Ø6x10)	PEEK	x		x	x									
186	8	Screw (M8x20)	AISI 316	x												
211	1	Mounting flange	AISI 316													
212	1	O-ring (Ø135x3)	NBR	x						x	x					
213	1	Sealing ring	PEHD									x	x	x	x	x
214	1	O-ring (Ø58x2)	NBR	x												
215	1	Shaft seal	Hastelloy / NBR	x												
216	1	Stop bush	PEEK	x												
217	1	Bush	Super Duplex													
218	8	Screw (M8x20)	AISI 316	x						x	x					
219	1	Screw (M6x22)	AISI 316	x								x	x	x	x	x
		Instruction		x	x	x	x	x	x	x	x	x	x	x	x	x

11. Exploded view
APP 5.1 - 10.2



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

12. Parts list APP W 5.1 - 10.2

Note:
The parts listed are not sold
separately, only in various kits.

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4161 – Seal set (APP 5.1-10.2)	180B4160 – Cylinder barrel (APP 5.1-10.2)	180B4158 – Valve plate set (APP 5.1-8.2)	180B4159 – Valve plate set (APP 10.2)	180B4086 – Retainer set (APP W 5.1-8.2)	180B4087 – Retainer set (APP W 10.2)	180B4154 – Piston set (APP 5.1-8.2)	180B4155 – Piston set (APP 10.2)	180B4129 – Swash plate set (APP 5.1)	180B4130 – Swash plate set (APP 6.5)	180B4131 – Swash plate set (APP 7.2)	180B4132 – Swash plate set (APP 8.2)	180B4133 – Swash plate set (APP 10.2)
1	1	Housing	Duplex / PEEK													
2	1	Pin (Ø6x10)	AISI 316	x												
3	2	Bleeding plug	Duplex	x												
4	2	O-ring (Ø4.5x1.5)	NBR	x												
31	1	Swash plate	Super Duplex									x	x	x	x	x
34	2	Pin (Ø6x10)	AISI 316	x								x	x	x	x	x
36	1	O-ring (Ø117x2.5)	NBR	x						x	x					
61	1	Cylinder barrel	Super Duplex / PEEK		x											
64	1	Retainer ball	Super Duplex / DLC					x	x							
65	1	Retainer plate	Super Duplex / DLC					x	x							
66	9	Piston	Super Duplex / PEEK							x	x					
67	1	Key (10x8x45)	AISI 316	x												
91	1	Port plate	Super Duplex / PEEK			x	x									
92	1	Valve plate	Super Duplex			x	x									
93	9	Back-up ring	PTFE	x		x	x									
94	9	O-ring (Ø18.3x2.4)	NBR	x		x	x									
181	1	Port flange	Super Duplex													
182	1	O-ring (Ø135x3)	NBR	x												
183	1	Guide pin	Super Duplex													
184	1	Pin (Ø6x10)	AISI 316	x												
185	1	Pin (Ø6x10)	PEEK	x		x	x									
186	8	Screw (M8x20)	AISI 316	x												
211	1	Mounting flange	AISI 316													
212	1	O-ring (Ø135x3)	NBR	x						x	x					
213	1	Sealing ring	PEHD									x	x	x	x	x
214	1	O-ring (Ø58x2)	NBR	x												
215	1	Shaft seal	Hastelloy / NBR	x												
216	1	Stop bush	PEEK	x												
217	1	Bush	Super Duplex													
218	8	Screw (M8x20)	AISI 316	x						x	x					
219	1	Screw (M6x22)	AISI 316	x								x	x	x	x	x
		Instruction		x	x	x	x	x	x	x	x	x	x	x	x	x

This technical drawing is an exploded view of a mechanical assembly, likely a pump or motor component. It shows the following parts and specifications:

- Top Assembly:**
 - Part 61: Main housing/cap.
 - Part 64: Seal/O-ring.
 - Part 216: Shaft or pin.
 - Part 65: Nut/Bushing.
 - Part 66: Washer/Plate.
 - Part 67: Pin/Bushing.
 - Torque: $30 \text{ Nm} \pm 3 \text{ Nm}$ [$22.13 \text{ lbf ft} \pm 2.21 \text{ lbf ft}$]
- Central Assembly:**
 - Part 1: Main body/housing.
 - Part 2: Flange/Plate.
 - Part 3: Pin/Bushing.
 - Part 4: Pin/Bushing.
 - Part 501: Seal/O-ring.
 - Part 505: Seal/O-ring.
 - Part 507: Seal/O-ring.
 - Torque: $4 \text{ Nm} \pm 1 \text{ Nm}$ [$2.95 \text{ lbf ft} \pm 0.74 \text{ lbf ft}$]
- Bottom Assembly:**
 - Part 31: Pin/Bushing.
 - Part 34: Flange/Plate.
 - Part 36: Pin/Bushing.
 - Part 213: Pin/Bushing.
 - Part 212: Pin/Bushing.
 - Part 211: Pin/Bushing.
 - Part 218: Pin/Bushing.
 - Part 219: Pin/Bushing.
 - Part 215: Flange/Plate.
 - Part 214: Pin/Bushing.
 - Part 217: Pin/Bushing.
 - Torque: $30 \text{ Nm} \pm 3 \text{ Nm}$ [$22.13 \text{ lbf ft} \pm 2.21 \text{ lbf ft}$]
 - Torque: $60 \text{ Nm} \pm 5 \text{ Nm}$ [$44.25 \text{ lbf ft} \pm 3.69 \text{ lbf ft}$]
 - Torque: $\leq 8 \text{ Nm} \pm 1 \text{ Nm}$ [$5.90 \text{ lbf ft} \pm 0.74 \text{ lbf ft}$]
- Detail Views:**
 - View A-A: Cross-section of the top housing (part 61).
 - View 1: Cross-section of the central body (part 1).
 - View 2: Cross-section of the bottom flange (part 2).

Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

14. Parts list APP 11 - 13

Note:
The parts listed are not sold
separately, only in various kits.

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4229 – Seal set (APP 11-13)	180B4228 – Cylinder barrel set (APP 11-13)	180B4204 – Valve plate set (APP 11-13)	180B4201 – Retainer set (APP 11-13)	180B4221 – Piston set (APP 11-13)	180B4226 – Swash plate set (APP 11 / 1500 rpm)	180B4223 – Swash plate set (APP 11 / 1200 rpm, APP 13 / 1500 rpm)	180B4216 – Swash plate set (APP 13 / 1200 rpm)	180B4227 – Flushing valve set (APP 11-13)
1	1	Housing	Duplex / PEEK									
2	2	Pin (Ø6x10)	AISI 316	x								
3	2	Bleeding plug	Super Duplex	x								
4	2	O-ring (Ø11x2)	NBR	x								
5	12	Screw (M8x30)	AISI 316	x				x				
9	1	O-ring (Ø182x4)	NBR	x				x				
10	2	O-ring (Ø9.19x2.62)	NBR	x					x	x	x	
11	1	End flange	Duplex									
12	1	Lifting eye	AISI 316									
31	1	Swash plate	Super Duplex / PEEK						x	x	x	
34	2	Pin (Ø10.5x20)	Super Duplex	x					x	x	x	
61	1	Cylinder barrel	Super Duplex / Duplex / PEEK		x							
62	7	Spring	Duplex				x					
63	1	Spring guide	PP				x					
64	1	Retainer ball	Super Duplex / DLC				x					
65	1	Retainer plate	Super Duplex				x					
66	7	Piston	Super Duplex / PEEK					x				
67	1	Key (10x8x45)	AISI 316	x								
81	3	Pin (Ø6.4x40)	Duplex				x					
91	1	Port plate	Super Duplex / PEEK			x						
92	1	Valve plate	Super Duplex			x						
93	7	Back-up ring	PTFE	x		x						
94	7	O-ring (30.2x3.0)	NBR	x		x						
121	1	Port flange	Duplex / PEEK									
122	1	O-ring (Ø68x2)	NBR	x								
123	1	O-ring (Ø182x4)	NBR	x								
124	1	Shaft seal (Ø35)	Hastelloy / NBR	x								
125	1	Cover for shaft seal	Super Duplex									
126	2	Pin (Ø10.5x20)	Duplex	x		x						
127	4	Screws (M6x16)	AISI 316	x								
128	10	Screws (M8x65)	AISI 316	x								
129	1	Lifting eye	AISI 316									
142	1	Stop for shaft seal	PP	x								
144	4	Tailstock screw (M12x60)	AISI 316									
145	4	Check nut (M12)	AISI 316	x								
151	1	O-ring (Ø29x3)	FPM 75	x								x
152	1	Valve cone	Super Duplex									x
153	1	Spring (Ø1.9xØ25x33.7)	Duplex									x
154	1	Plug/guide	Super Duplex									x
155	1	O-ring (Ø38x3.7)	NBR	x								x
		Instruction		x	x	x	x	x	x	x	x	x

Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

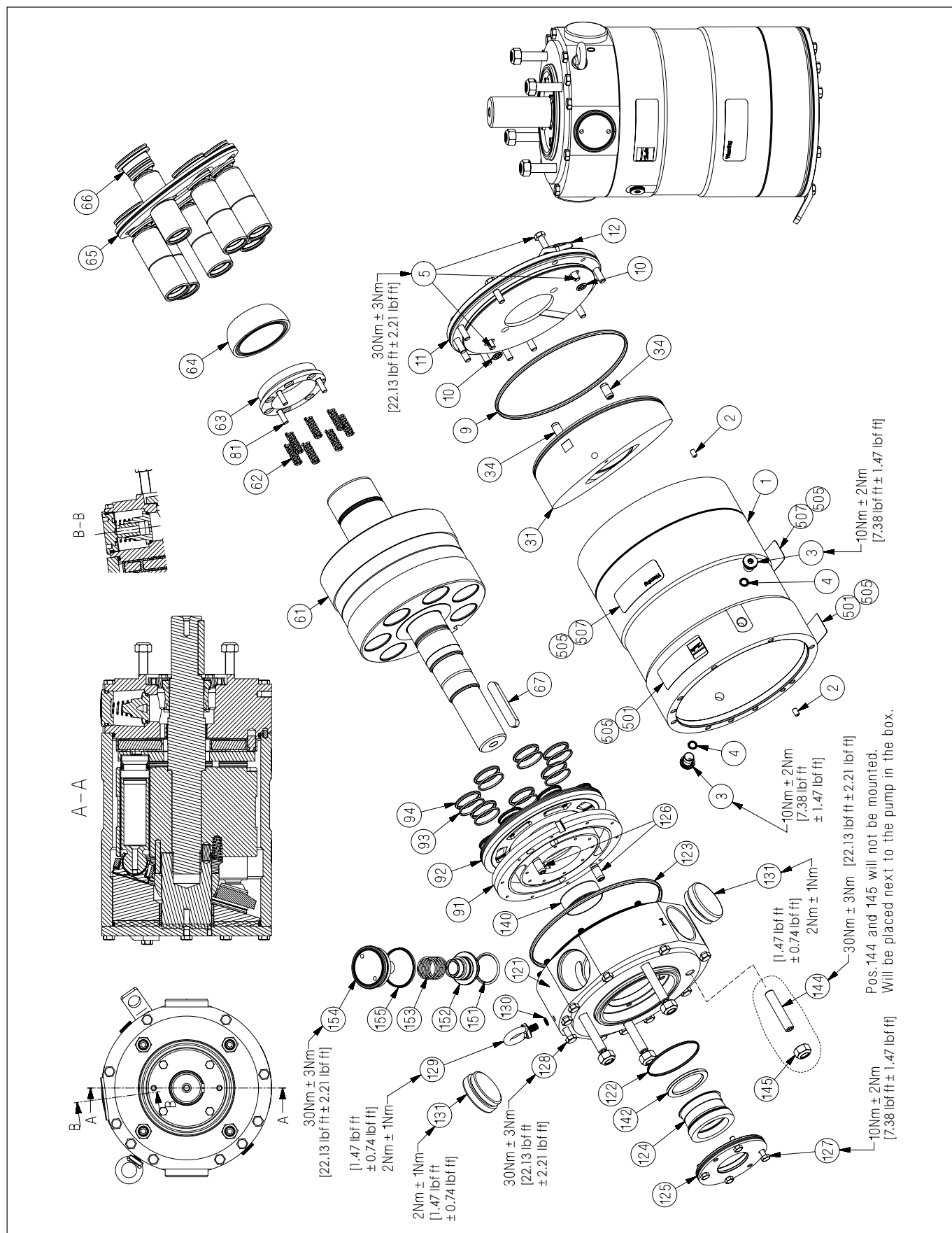
16. Parts list APP 16 - 19

Note:
The parts listed are not sold separately, only in various kits

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4206 – Seal set (APP 16-19)	180B4205 – Cylinder barrel set (APP 16-19)	180B4204 – Valve plate set (APP 16-19)	180B4201 – Retainer set (APP 16-19)	180B4221 – Piston set (APP 16-19)	180B4219 – Swash plate set (APP 16 / 1200 rpm)	180B4215 – Swash plate set (APP 16 / 1500 rpm)	180B4218 – Swash plate set (APP 17 / 1200 rpm)	180B4216 – Swash plate set (APP 17 / 1500 rpm)	180B4220 – Swash plate set (APP 19 / 1200 rpm)	180B4217 – Swash plate set (APP 19 / 1500 rpm)	180B4203 – Flushing valve set (APP 16-19)
1	1	Housing	Duplex / PEEK												
2	1	Pin (Ø6x10)	AISI 316	x											
3	2	Bleeding plug	Super Duplex	x											
4	2	O-ring (Ø11x2)	NBR	x											
5	12	Screw (M8x30)	AISI 316	x				x							
9	1	O-ring (Ø182x4)	NBR	x				x							
10	2	O-ring (Ø9.19x2.62)	NBR	x					x	x	x	x	x	x	
11	1	End flange	Duplex												
12	1	Lifting eye	AISI 316												
31	1	Swash plate	Super Duplex / PEEK						x	x	x	x	x	x	
34	2	Pin (Ø10.5x20)	Duplex	x					x	x	x	x	x	x	
61	1	Cylinder barrel	Super Duplex / Duplex / PEEK		x										
62	7	Spring	Duplex				x								
63	1	Spring guide	PP				x								
64	1	Retainer ball	Super Duplex / DLC				x								
65	1	Retainer plate	Super Duplex				x								
66	7	Piston	Super Duplex / PEEK					x							
67	1	Key (12x8x70)	AISI 316	x											
81	3	Pin (Ø6.4x40)	Duplex				x								
91	1	Port plate	Super Duplex / PEEK			x									
92	1	Valve plate	Super Duplex			x									
93	7	Back-up ring	PTFE	x		x									
94	7	O-ring (Ø30.2x3)	NBR	x		x									
121	1	Port flange	Duplex / PEEK												
122	1	O-ring (Ø68x2)	NBR	x											
123	1	O-ring (Ø182x4)	NBR	x											
124	1	Shaft seal (Ø45)	Hastelloy / NBR	x											
125	1	Cover for shaft seal	Super Duplex												
126	2	Pin (Ø10.5x20)	Duplex	x											
127	4	Screw (M6x16)	AISI 316	x											
128	10	Screw (M8x75)	AISI 316	x											
129	1	Lifting eye	AISI 316												
142	1	Stop for shaft seal	PP	x											
144	4	Tailstock screw (M12x60)	AISI 316												
145	4	Check nut (M12)	AISI 316	x											
151	1	O-ring (Ø35x3)	FPM 75	x											x
152	1	Valve cone	Super Duplex												x
153	1	Spring (Ø1.9xØ25x33.7)	Duplex												x
154	1	Plug/guide	Super Duplex												x
155	1	O-ring (Ø47.22x3.53)	NBR	x											x
		Instruction		x	x	x	x	x	x	x	x	x	x	x	x

17. Exploded view
APP 16 - 19



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

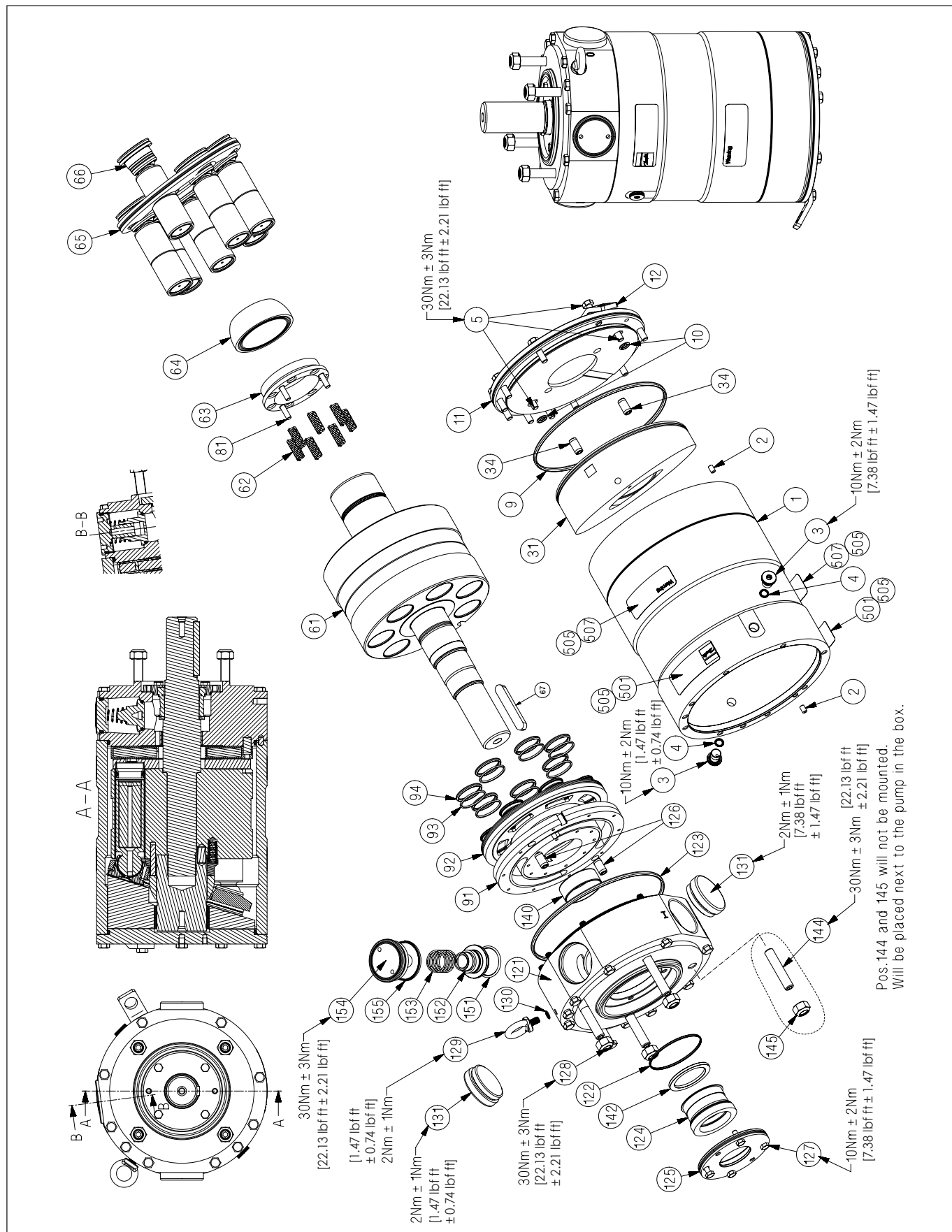
18. Parts list APP 22

Note:
The parts listed are not sold
separately, only in various kits

Exploded view, see next page.

Pos.	Qty.	Designation	Material	180B4206 – Seal set (APP 22)	180B4205 – Cylinder barrel set (APP 22)	180B4204 – Valve plate set (APP 22)	180B4201 – Retainer set (APP 22)	180B4200 – Piston set (APP 22)	180B4202 – Swash plate set (APP 22 / 1200 rpm)	180B4218 – Swash plate set (APP 22 / 1500 rpm)	180B4203 – Flushing valve set (APP 22)
1	1	Housing	Duplex / PEEK								
2	2	Pin (Ø6x10)	AISI 316	x							
3	2	Bleeding plug	Super Duplex	x							
4	2	O-ring (Ø11.0x2)	NBR	x							
5	12	Screw (M8x30)	AISI 316	x				x			
9	1	O-ring (Ø182x4)	NBR	x				x			
10	2	O-ring (Ø9.19x2.62)	NBR	x					x	x	
11	1	End flange	Duplex								
12	1	Lifting eye	AISI 316								
31	1	Swash plate	Super Duplex / PEEK						x	x	
34	2	Pin (Ø10.5x20)	Duplex	x					x	x	
61	1	Cylinder barrel	Super Duplex / Duplex / PEEK		x						
62	7	Spring	Duplex				x				
63	1	Spring guide	PP				x				
64	1	Retainer ball	Super Duplex / DLC				x				
65	1	Retainer plate	Super Duplex				x				
66	7	Piston	Super Duplex / PEEK					x			
67	1	Key (12x8x70)	AISI 316	x							
81	3	Pin (Ø6.4x40)	Duplex				x				
91	1	Port plate	Super Duplex / PEEK			x					
92	1	Valve plate	Super Duplex			x					
93	7	Back-up ring	PTFE	x		x					
94	7	O-ring (Ø30.2x3)	NBR	x		x					
121	1	Port flange	Duplex / PEEK								
122	1	O-ring (Ø68x2)	NBR	x							
123	1	O-ring (Ø182x4)	NBR	x							
124	1	Shaft seal	Hastelloy / NBR	x							
125	1	Cover for shaft seal	Super Duplex								
126	2	Pin (Ø10.5x20)	Duplex	x							
127	4	Screw (M6x16)	AISI 316	x							
128	10	Screw (M8x75)	AISI 316	x							
129	1	Lifting eye	AISI 316								
142	1	Stop for shaft seal	PP	x							
144	4	Tail stock screw (M12x60)	AISI 316								
145	4	Check nut (M12)	AISI 316	x							
151	1	O-ring (Ø35x3)	FPM 75	x							x
152	1	Valve cone	Super Duplex								x
153	1	Spring (Ø1.9xØ25x33.7)	Duplex								x
154	1	Plug/guide	Super Duplex								x
155	1	O-ring (Ø47.22x3.53)	NBR	x							x
		Instruction		x	x	x	x	x	x	x	x

19. Exploded view
APP 22



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

20. Parts list APP 21 - 26

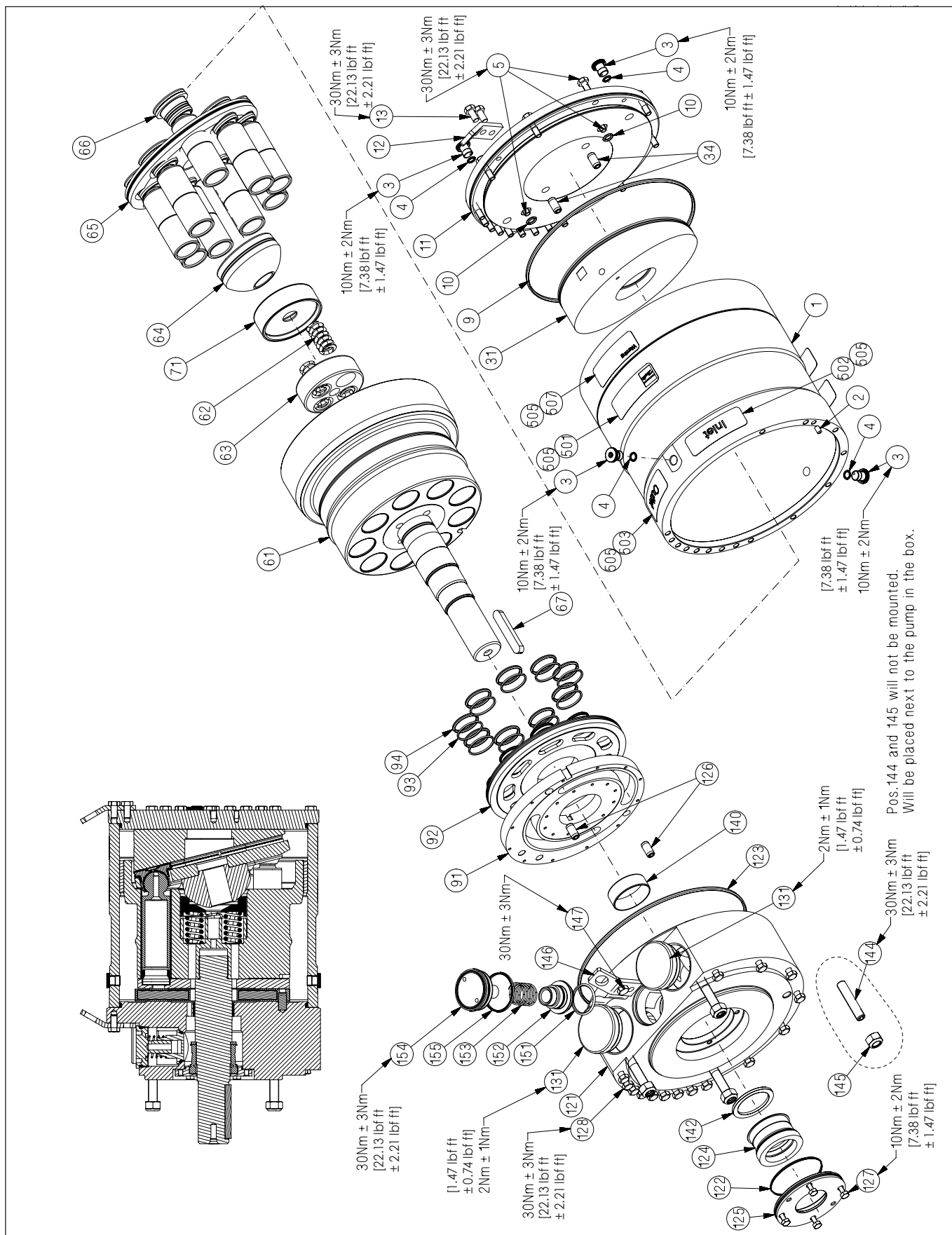
Note:

The parts listed are not sold separately,
only in various kits.

Exploded view, see next page.

Pos.	Qnt.	Designation	Material	180B4171 – Seal set (APP 21-26)	180B4166 – Cylinder barrel (APP 21-26)	180B4165 – Valve plate set (APP 21-26)	180B4164 – Retainer set (APP 21-26)	180B4163 – Piston set (APP 21-24 / 1500 rpm)	180B4163 – Piston set (APP 21-26 / 1200 rpm)	180B4199 – Piston set (APP 26 / 1500 rpm)	180B4167 – Swash plate set (APP 21 / 1200 rpm - APP 26 / 1500 rpm)	180B4077 – Swash plate set (APP 21 / 1500 rpm)	180B4168 – Swash plate set (APP 24 / 1200 rpm)	180B4224 – Swash plate set (APP 24 / 1500 rpm)	180B4169 – Swash plate set (APP 26 / 1200 rpm)	180B4170 – Flushing valve set (APP 21-26)
1	1	Housing	Duplex / PEEK													
2	2	Pin (Ø6x10)	AISI 316	x												
3	2	Bleeding plug	Super Duplex	x												
4	4	O-ring (Ø11x2)	NBR	x												
5	17	Screw (M8x30)	AISI 316	x				x	x	x						
9	1	O-ring (Ø228x4)	NBR	x				x	x	x						
10	2	O-ring (Ø9.19x2.62)	NBR	x							x	x	x	x	x	
11	1	End flange	Duplex													
12	1	Lifting eye	AISI 316													
13	2	Screw (M8x16)	AISI 316	x												
31	1	Swash plate	Super Duplex								x	x	x	x	x	
34	2	Pin (Ø10.5x20)	Duplex	x							x	x	x	x	x	
61	1	Cylinder barrel	Super Duplex / PEEK		x											
62	4	Spring	Duplex				x									
63	1	Spring guide	PP				x									
64	1	Retainer ball	Super Duplex / DLC				x									
65	1	Retainer plate	Super Duplex				x									
66	9	Piston	Super Duplex / PEEK					x	x	x						
67	1	Key (12x8x70)	AISI 316	x												
71	1	Retainer guide	Super Duplex / PEEK				x									
91	1	Port plate	Super Duplex / PEEK			x										
92	1	Valve plate	Super Duplex			x										
93	9	Back-up ring	PEEK	x		x										
94	9	O-ring (Ø30.2x3)	NBR	x		x										
121	1	Port flange	Duplex / PEEK													
122	1	O-ring (Ø68x2)	NBR	x												
123	1	O-ring (Ø228x4)	NBR	x												
124	1	Shaft seal	Hastelloy / NBR	x												
125	1	Cover for shaft seal	Super Duplex													
126	2	Pin (Ø10.5x20)	Duplex	x												
127	4	Screw (M6x16)	AISI 316	x												
128	15	Screw (M8x90)	AISI 316	x												
142	1	Stop for shaft seal	PP	x												
144	4	Tailstock screw (M12x60)	AISI 316													
145	4	Check nut (M12)	AISI 316	x												
146	1	Lifting eye	AISI 316													
147	1	Screw (M8x16)	AISI 316	x												
151	1	O-ring (Ø35x3)	FPM 75	x												x
152	1	Valve cone	Super Duplex													x
153	1	Spring (Ø1.9xØ25x33.7)	Duplex													x
154	1	Plug/guide	Super Duplex													x
155	1	O-ring (Ø47.22x3.53)	NBR	x												x
		Instruction		x	x	x	x	x	x	x	x	x	x	x	x	x

21. Exploded view
APP 21 - 26



Parts list

APP 0.6-43 / APM 0.8-2.9 / APP W 5.1-10.2

22. Parts list APP 30 - 43

Note:
The parts listed are not sold separately, only in various kits.

Exploded view, see next page.

Pos.	Qty.	Designation	Material	180B4171 – Seal set (APP 30-43)	180B4166 – Cylinder barrel (APP 30-43)	180B4180 – Valve plate set (APP 30-43)	180B4179 – Retainer set (APP 30 / 1200 rpm and APP 38 / 1500 rpm)	180B4164 – Retainer set (APP 30 / 1500 rpm)	180B4383 – Retainer set (APP 43 / 1700 rpm)	180B4199 – Piston set (APP 30-43)	180B4178 – Swash plate set (APP 30 / 1,200 rpm, APP 38 / 1500 rpm and APP 43 / 1700 rpm)	180B4168 – Swash plate set (APP 30 / 1500 rpm)	180B4170 – Flushing valve set (APP 30-43)
1	1	Housing	Duplex / PEEK										
2	2	Pin (Ø6x10)	AISI 316	x									
3	2	Bleeding plug	Super Duplex	x									
4	4	O-ring (Ø11x2)	NBR	x									
5	17	Screw (M8x30)	AISI 316	x						x			
9	1	O-ring (Ø228x4)	NBR	x						x			
10	2	O-ring (Ø9.19x2.62)	NBR	x							x	x	
11	1	End flange	Duplex										
12	1	Lifting eye	AISI 3169										
13	1	Screw (M8x16)	AISI 316	x									
31	1	Swash plate	Super Duplex								x	x	
34	2	Pin (Ø10.5x20)	Duplex	x							x	x	
61	1	Cylinder barrel	Super Duplex / PEEK		x								
62	4	Spring	Duplex				x	x	x				
63	1	Spring guide	PP				x	x	x				
64	1	Retainer ball	Super Duplex / DLC				x	x	x				
65	1	Retainer plate	Super Duplex				x	x	x				
66	9	Piston	Super Duplex / PEEK							x			
67	1	Key (12x8x70)	AISI 316	x									
71	1	Retainer guide	Super Duplex / PEEK				x	x	x				
80	4	Spacer	Super Duplex										
91	1	Port plate	Super Duplex / PEEK			x							
92	1	Valve plate	Super Duplex			x							
93	9	Back-up ring	PTFE	x		x							
94	9	O-ring (Ø30.2x3)	NBR	x		x							
121	1	Port flange	Duplex / PEEK										
122	1	O-ring (Ø68x2)	NBR	x									
123	1	O-ring (Ø228x4)	NBR	x									
124	1	Shaft seal	Hastelloy / NBR	x									
125	1	Cover for shaft seal	Super Duplex										
126	2	Pin (Ø10.5x20)	Duplex	x									
127	4	Screw (M6x16)	AISI 316	x									
128	15	Screw (M8x90)	AISI 316	x									
142	1	Stop for shaft seal	PP	x									
144	4	Tailstock screw (M12x60)	AISI 316										
145	4	Check nut (M12)	AISI 316	x									
146	1	Lifting eye	AISI 316										
147	1	Screw (M8x16)	AISI 316	x									
151	1	O-ring (Ø35x3)	FPM 75	x									x
152	1	Valve cone	Super Duplex										x
153	1	Spring (Ø1.9xØ25x33.7)	Duplex										x
154	1	Plug/guide	Super Duplex										x
155	1	O-ring (Ø47.22x3.53)	NBR	x									x
		Instruction		x	x	x	x	x	x	x	x	x	x

24. Tool sets

Note:
The parts listed are not sold separately, only in various kits.

Designation	180B4188 – Tool set (APP 0.6-1.0 Compact)	180B4142 – Tool set (APP 0.6-1.0)	180B4148 – Tool set (APP 1.5-3.5)	180B4162 – Tool set (APP 5.1-10.2)	180B4230 – Tool set (APP 11-13)	180B4222 – Tool set (APP 16-22)	180B4172 – Tool set (APP 21-43)
Shaft bush	x						
Press bush	x						
Drift	x						
Torx (T30)	x						
Shaft bush (Ø18)		x	x				
Press bush (Ø18)		x	x				
Allen key (4 mm)		x					
Allen key (5 mm)			x				
Allen key (6 mm)				x	x	x	x
Shaft bush (Ø35)				x			
Shaft seal extractor (Ø35)				x	x		
Press bush (Ø35)				x	x		
Adjustable pin wrench				x	x	x	x
Combination wrench (10 mm)				x	x	x	x
Combination wrench (13 mm)					x	x	x
Nut (M8x6.5x13)					x	x	x
Guide bolt (M8x140)					x		x
Shaft seal extractor (Ø45)						x	x
Press bush (Ø45)						x	x
Eye bolt (M8)					x	x	
Press bush for valve plate						x	x
Stop for retainer plate							x
Screw (M8x20)					x	x	x
Screw (M8x70)						x	x

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