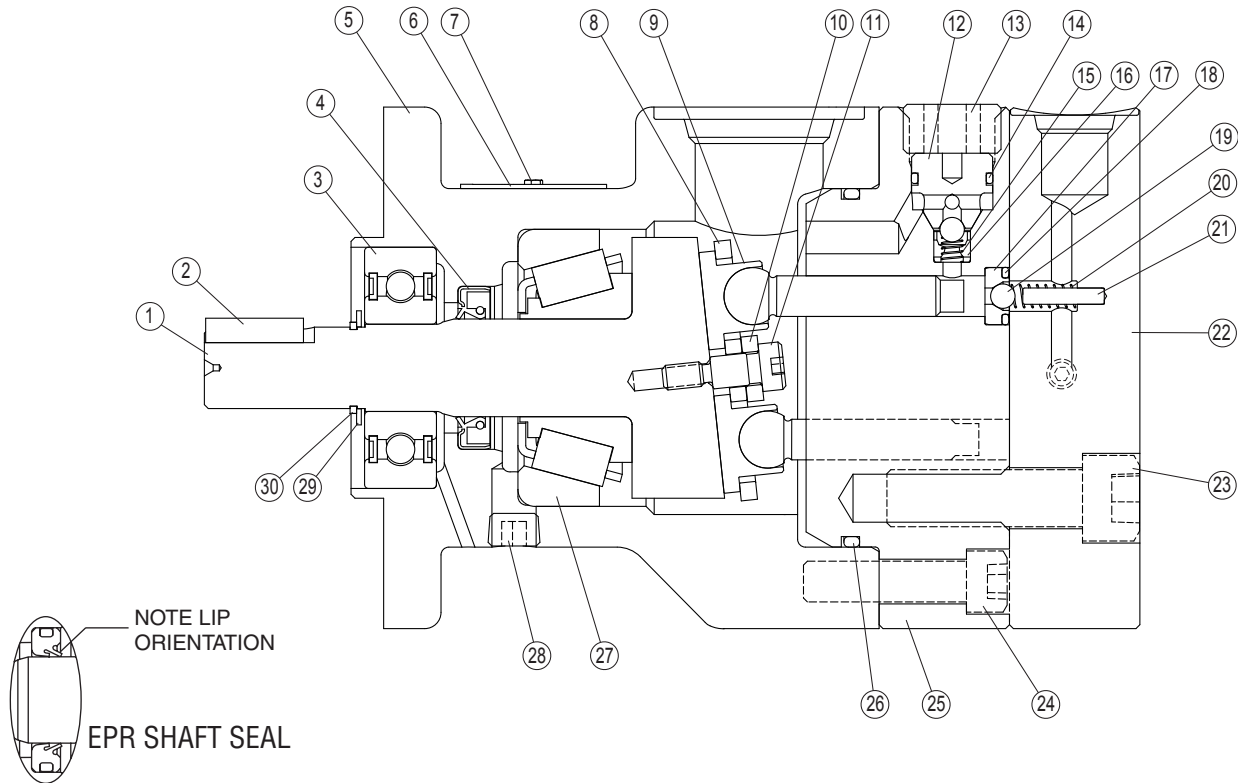




**CHECKBALL PISTON PUMPS  
PF500 SERIES, 20 DESIGN**

**PF5\*\*\*-\*\*\*-20**



**TABLE A – PARTS LIST**

ID Number	Part Number	Part Description	Quantity Required
1	See Table B	Camshaft	1
2	1018.325	Key	0or1
3	1103.155	Shaft Bearing (Front)	1
4	See Table C	Shaft Seal	1
5	1218.277	Housing	1
6	1137.026	Nameplate	1
7	1001.003	Screw (Nameplate)	2
8	1448.101	Holdown Plate	1
9	See Table E	Piston Subassembly	2, 3or4
10	1095.132	Spacer	1
11	1062.048	Shoulder Bolt <sup>①</sup>	1
12	1124.290	Inlet Check Seat	3or4
13	1577.006	Plug <sup>②</sup>	3or4
14	See Table C	O-ring (Inlet Check Seat)	3or4
15	See Table E	Spring (Inlet) <sup>③</sup>	2, 3or4
16	See Table E	Inlet Ball Stop <sup>③⑥</sup>	2, 3or4
17	1102.290	Outlet Check Seat	3or4
18	See Table C	O-ring (Outlet Check Seat)	3or4
19	1005.016	Checkball (Inlet/Outlet) <sup>⑧</sup>	6or8

ID Number	Part Number	Part Description	Quantity Required
20	1296.110	Spring (Outlet)	3or4
21	1123.061	Cover Pin <sup>⑦</sup>	3or4
22	See Table D	Cover	1
23	1383.028	Socket-head Capscrew <sup>④</sup>	3or4
24	1351.028	Socket-head Capscrew <sup>⑤</sup>	4or6
25	1239.050	Barrel	1
26	See Table C	O-ring	1
27	1102.155	Bearing	1
28	1007.245	Plug (Drain Port)	1
29	1156.108	Shim	1
30	1167.049	Retaining Ring	1

- ① Apply Loctite #271 or equivalent. Torque to 66 lb-in ( 7 N-m).
- ② Torque to 45 lb-ft (61 N-m).
- ③ Apply Loctite #680 or equivalent.
- ④ Torque to 70 lb-ft ( 95 N-m).
- ⑤ Torque to 25 lb-ft ( 34 N-m).
- ⑥ Quantity equals number of pistons. See Table E.
- ⑦ Pin included in Cover Assembly Kit. See Table D.
- ⑧ Quantity equals number of pistons +3 (3-bolt covers) or +4(4-bolt covers). See Table E.

**TABLE B – OUTPUT FLOW, CAMSHAFT**

Output Flow Code	Cam Shaft	
	Keyed	Spline
01	1149.288	1159.288
04	1152.288	1162.288
07	1155.288	1165.288
10	1158.288	1168.288
11	1149.288	1159.288
14	1152.288	1162.288
17	1155.288	1165.288
20	1158.288	1168.288

**TABLE C – SEAL KITS**

Seal Code	Description	Kit Number
No Code	All Fluorocarbon (Viton® or Fluorel®) with Buna-N (Nitrile) Shaft Seal	KP05009010
XV	All Fluorocarbon (Viton® or Fluorel®) with High Pressure Shaft Seal	KP05009011
XE	All EPR with High Pressure Shaft Seal <sup>①</sup>	KP05009012

<sup>①</sup> Contact the Dynex Sales department for recommended operating conditions with EPR seals.

**TABLE D – PORT, COVER KITS**

Port Code	Outlet Port Type	Cover Kit Number
PF5XX(X)-XXX-XX-20 (Models 501-510)		
No Code	Full Flow SAE	KP05209350
A	Full Flow Coned and Threaded	KP05209351
B	Full Flow BSPP	KP05209352
PF5XX(X)-XXX-3X-20 (Models 501-510)		
No Code	3X Split Flow SAE	KP052093X0
A	3X Split Flow Coned and Threaded	KP052093X1
B	3X Split Flow BSPP	KP052093X2
PF5XX(X)-XXX-2-20 (Models 511-520) <sup>①</sup>		
No Code	Full Flow SAE	KP05119050
A	Full Flow Coned and Threaded	KP05119051
B	Full Flow BSPP	KP05119052
PF5XX(X)-XXX-22-20 (Models 511-520)		
No Code	2+2 Split Flow SAE	KP05119220
A	2+2 Split Flow Coned and Threaded	KP05119221
B	2+2 Split Flow BSPP	KP05119222
PF5XX(X)-XXX-31-20 (Models 511-520)		
No Code	3+1 Split Flow SAE	KP05119310
A	3+1 Split Flow Coned and Threaded	KP05119311
B	3+1 Split Flow BSPP	KP05119312
PF5XX(X)-XXX-4X-20 (Models 511-520)		
No Code	4x Split Flow SAE	KP051194X0
A	4x Split Coned and Threaded	KP051194X1
B	4x Split Flow BSPP	KP051194X2

<sup>①</sup> This 2 piston pump is available in Full Flow version only.

**TABLE E – PISTON, SEAT AND CHECK ITEMS**

Item	Part Number	Description	Quantity
PF5XX(X)-XXX-XX-20 (Models 501-510)			
9	3007.900	Piston Subassembly	3
15	1295.110	Spring (Inlet)	3
16	1104.290	Inlet Ball Stop	3
19	1005.016	Checkball (Inlet/Outlet)	6
PF5XX(X)-XXX-XX-20 (Models 511-520)			
9	3007.900	Piston Subassembly	4
15	1295.110	Spring (Inlet)	4
16	1104.290	Inlet Ball Stop	4
19	1005.016	Checkball (Inlet/Outlet)	8
PF5XX(X)-XXX-2-20 (Models 511-520) <sup>①</sup>			
9	3007.900	Piston Subassembly	2
15	1295.110	Spring (Inlet)	2
16	1104.290	Inlet Ball Stop	2
19	1005.016	Checkball (Inlet/Outlet)	6

<sup>①</sup> This 2 piston pump is available in Full Flow version only.

# TYPICAL MODEL CODE

PF5

01

H – S XV

A

–

2 – 2

0

Pump Type	
PF5	Fixed Displacement Checkball Pump

Output Flow (At 1800 rpm, at Rated Pressure) <sup>①</sup>	
01	Standard: 0.16 gpm (0,59 L/min) "H" option: 0.15 gpm (0,55 L/min)
04	Standard: 0.25 gpm (0,95 L/min) "H" option: 0.24 gpm (0,90 L/min)
07	Standard: 0.35 gpm (1,31 L/min) "H" option: 0.34 gpm (1,26 L/min)
10	Standard: 0.51 gpm (1,93 L/min) "H" option: 0.50 gpm (1,88 L/min)
11	Standard: 0.21 gpm (0,78 L/min) "H" option: 0.19 gpm (0,73 L/min)
14	Standard: 0.33 gpm (1,26 L/min) "H" option: 0.32 gpm (1,21 L/min)
17	Standard: 0.46 gpm (1,75 L/min) "H" option: 0.45 gpm (1,68 L/min)
20	Standard: 0.68 gpm (2,58 L/min) "H" option: 0.66 gpm (2,51 L/min)

<sup>①</sup> Output flows based on typical performance at rated pressure. Refer to performance curves for flows at lower pressures.

Operating Pressure	
No Code	Standard Pressure
H	High Pressure <sup>①</sup>

<sup>①</sup> Requires "A" or "B" port option.

Drive Shaft	
No Code	Keyed, 0.625 inch (15,88 mm) diameter
S	SAE Spline, 0.625 inch (15,88 mm) <sup>①</sup>

<sup>①</sup> Contact the Dynex Sales department for availability.

Ports	
No Code	Inlet No. 12 SAE; Outlet No. 6 SAE <sup>①</sup>
A	Inlet No. 12 SAE; Outlet 3/8 Medium Pressure Coned and Threaded, 0.5625-18 UNF-2B Threaded <sup>②</sup>
B	Inlet No. 12 SAE; Outlet G 1/4 (BSPP) <sup>③</sup>

<sup>①</sup> Not recommended for operation above 8000 psi (560 bar). Contact the fitting manufacturer for the pressure rating of the fitting.  
<sup>②</sup> High pressure port uses Autoclave Medium Pressure, Butech M/P or equivalent fitting.  
<sup>③</sup> Outlet port uses British Standard Pipe Parallel fitting. Not recommended for operation above 10 000 psi (700 bar).

Cover Options (Split-Flow <sup>®</sup> )	
No Code	Full flow from single outlet
<i>Reduced Flow Models:</i>	
2	Two-piston output + two-inactive pistons <sup>①</sup>
<i>Split-Flow<sup>®</sup> Cover Models:</i>	
22	Two-piston output + two-piston output <sup>①</sup>
31	Three-piston output + one-piston output <sup>①②</sup>
4X	Four ports, each with one-piston output <sup>①</sup>
3X	Three ports, each with one-piston output <sup>③</sup>

<sup>①</sup> Available on models PF511, PF514, PF517, PF520 only.  
<sup>②</sup> Port for outlet flow designated by first digit is located at the 12 o'clock position (for code "31", three-piston output flow exits the 12 o'clock port).  
<sup>③</sup> Available on models PF501, PF504, PF507, PF510 only.

Seals	
No Code	Fluorocarbon (Viton <sup>®</sup> or Fluorel <sup>®</sup> ) Seals with Buna-N (Nitrile) Shaft Seal
XE	All EPR with High Pressure Shaft Seal <sup>①</sup>
XV	All Fluorocarbon (Viton <sup>®</sup> or Fluorel <sup>®</sup> ) with High Pressure Shaft Seal

<sup>①</sup> Not available with high pressure "H" option. Contact the Dynex Sales department for recommended operating conditions.

Design Number

Modification Number



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