



CONSOLIDATED BILL OF MATERIALS (BOM) FOR STANDARD POLY-GUARD® SERIES GEAR PUMPS



**Models P1 thru P4
Mag-Drive, Close-Coupled**



**Models P5 thru P7
Mag-Drive, Close-Coupled**

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<p style="text-align: center;">Liquiflo Chemical Processing Pumps™</p>	<p>Poly-Guard® Series Gear Pumps BOM: MAG-DRIVE, CC Models P1 thru P4</p>
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Part Description	Drwg. Item #	303 Stainless Steel/PFA-Lined Construction					
		Code	Material	P1	P2	P3	P4
Position 2 – Basic Material & Port Type (Center Housing, Pins & Hardware)							
Center Housing, ANSI 150# RFF- 3/4"	12	L	303 SS/PFA		750002		
Center Housing, PN16 RFF- DN20	12	E	303 SS/PFA		750003		
Pin, Housing Alignment	11	L, E	17-4PHSS		780801 (4)		
Pin, Bearing Lock	7	L, E	Teflon		361801 (4)		
Bolt, Front Housing (3/8-16 x 1-1/2 SHCS)	26	L, E	18-8SS		781117 (4)		
Nut, Front Housing (3/8-16)	27	L, E	18-8SS		S1003 (4)		
Lockwasher, Front Housing (3/8)	28	L, E	18-8SS		S1004 (4)		
Screw, Cont. Can (5/16-24 x 5/8 SHCS)	21	L, E	18-8SS		785007 (6)		
Position 3 – Drive Gear (Gears & Keys)							
Drive Gear (Spur Type)	4	K	Kynar	750364	750368	750379	750358
Drive Gear (Spur Type)	4	P	PEEK	750365	750360	750322	750355
Key, Gears	13	K	Kynar			750454 (2)	
Key, Gears	13	P	PEEK			750452 (2)	
Key, Inner Magnet	14	K	Kynar			750454	
Key, Inner Magnet	14	P	PEEK			750452	
Position 4 – Idler Gear							
Idler Gear (Spur Type)	3	K	Kynar	750364	750368	750379	750358
Idler Gear (Spur Type)	3	P	PEEK	750365	750360	750322	750355
Position 5 – Wear Plates							
Wear Plate, Relieved	8	B	SiC	750371 (4)	750381 (4)	750391 (4)	340582 (4)
Wear Plate, Relieved	8	E	Carbon 60	750372 (4)	750382 (4)	750392 (4)	340523 (4)
Position 6 – Bearings							
Bearing	6	B	SiC			740413 (4)	
Bearing	6	E	Carbon 60			740401 (4)	
Position 7 – Motor Frame (Pedestal, Adapter & Motor Hardware)							
Pedestal - NEMA 56C	25	0	CI/Epoxy			SP000	
Bolt, Motor (3/8-16 x 1 SHCS)	29	0	18-8SS			781118 (4)	
Pedestal - NEMA 143/145TC	25	1	CI/Epoxy			SP000	
Bolt, Motor (3/8-16 x 1 SHCS)	29	1	18-8SS			781118 (4)	
Pedestal - IEC 71 (B5)	25	2	CI/Epoxy			SP001	
Bolt, Motor (3/8-16 x 1-1/2 SHCS)	29	2	18-8SS			781117 (4)	
Nut, Motor (3/8-16)	---	2	18-8SS			S1003 (4)	
Lockwasher, Motor (3/8)	---	2	18-8SS			S1004 (4)	
Pedestal - IEC 80 (B5)	25	3	CI/Epoxy			SP002	
Bolt, Motor (M10 x 40 SHCS)	29	3	18-8SS			S1011 (4)	
Lockwasher, Motor (M10)	---	3	18-8SS			S1012 (4)	
Nut, Motor (M10 Std Hex)	---	3	18-8SS			S1013 (4)	
Pedestal - IEC 90 (B5)	25	4	CI/Epoxy			SP002	
Bolt, Motor (M10 x 40 SHCS)	29	4	18-8SS			S1011 (4)	
Lockwasher, Motor (M10)	---	4	18-8SS			S1012 (4)	
Nut, Motor (M10 Std Hex)	---	4	18-8SS			S1013 (4)	
Position 8 – Containment Can							
Containment Can, Metal, Lined	20	0	Alloy-C/PFA			740914	
Containment Can, Nonmetal, Lined	20	P	PEEK/PFA			Consult Factory	
Position 9 – Bearing Flush (Front & Rear Housings)							
Front Housing, Standard	15	0	303SS/PFA			750101	
Rear Housing, Standard	9	0	303SS/PFA			750201	
Position 10 – Shafts							
Drive Shaft	2	B	SiC			750302	750300
Idler Shaft	1	B	SiC			750252	750250

Liquiflo Chemical Processing Pumps™	Poly-Guard® Series Gear Pumps BOM: MAG-DRIVE, CC Models P1 thru P4
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Part Description	Drwg. Item #	303 Stainless Steel/PFA-Lined Construction					
		Code	Material	P1	P2	P3	P4
Position 11 – O-Rings							
O-Ring, Housing (2-037)	10	E	EPDM		640609 (2)		
O-Ring, Housing (2-037)	10	V	Viton		640607 (2)		
O-Ring, Housing (2-037)	10	K	Kalrez		640612 (2)		
O-Ring, Containment Can (2-042)	22	E	EPDM		S4001		
O-Ring, Containment Can (2-042)	22	V	Viton		S4002		
O-Ring, Containment Can (2-042)	22	K	Kalrez		S4004		
O-Ring, Retaining, Gear (2-013)	5	E	EPDM		796705 (3)		
O-Ring, Retaining, Gear (2-013)	5	V	Viton		796706 (3)		
O-Ring, Retaining, Gear (2-013)	5	K	Kalrez		790693 (3)		
O-Ring, Retaining, Inner Magnet (2-012)	19	E	EPDM		796708		
O-Ring, Retaining, Inner Magnet (2-012)	19	V	Viton		796707		
O-Ring, Retaining, Inner Magnet (2-012)	19	K	Kalrez		620618		
Position 12 – Magnetic Coupling							
Inner Magnet, MCU - 1/2" Bore	18	U	CS/SmCo/PFA		750503		
Outer Magnet, MCU - 5/8" Bore	24	U (Pos. 7 = 0)	CS/SmCo		SOMCU-5		
Outer Magnet, MCU - 7/8" Bore	24	U (Pos. 7 = 1)	CS/SmCo		SOMCU-7		
Outer Magnet, MCU - 14 mm Bore	24	U (Pos. 7 = 2)	CS/SmCo		SOMCU-71		
Outer Magnet, MCU - 19 mm Bore	24	U (Pos. 7 = 3)	CS/SmCo		SOMCU-80		
Outer Magnet, MCU - 24 mm Bore	24	U (Pos. 7 = 4)	CS/SmCo		SOMCU-90		
Suffix – Trim Options							
Temperature Trim (Gears/Bearings)	–	-8(T) ¹	–				Consult Factory
Viscosity Trim (Gears)	–	-9D, -9T ²	–				

- 1 T = Application Temperature in °F (e.g., -8(140) = Temperature Trim at 140°F)
- 2 -9D = Double-clearance Viscosity Trim (for ≥ 150 cP and < 300 cP)
- 9T = Triple-clearance Viscosity Trim (for ≥ 300 cP)

See page 6 for Reference Drawing.

Liquiflo
Chemical Processing Pumps™

Poly-Guard® Series Gear Pumps
BOM: **MAG-DRIVE, CC Models P5 thru P7**

Part Description	Drwg. Item #	303 Stainless Steel/PFA-Lined Construction				
		Code	Material	P5	P6	P7
Position 2 – Basic Material & Port Type (Center Housing, Pins & Hardware)						
Center Housing, ANSI 150# RFF- 1-1/2"	12	L	303 SS/PFA		790001	
Center Housing, PN16 RFF- DN40	12	E	303 SS/PFA		790002	
Pin, Housing Alignment	11	L, E	17-4PHSS		780801 (4)	
Pin, Bearing Lock	7	L, E	Teflon		361801 (4)	
Bolt, Front Housing (3/8-16 x 1-5/8 SHCS)	26	L, E	18-8SS		781115 (4)	
Nut, Front Housing (3/8-16)	27	L, E	18-8SS		S1003 (4)	
Lockwasher, Front Housing (3/8)	28	L, E	18-8SS		S1004 (4)	
Screw, Cont. Can (5/16-24 x 5/8 SHCS)	21	L, E	18-8SS		785007 (6)	
Position 3 – Drive Gear (Gears & Keys)						
Drive Gear (Spur Type)	4	K	Kynar	790368	790363	790358
Drive Gear (Spur Type)	4	P	PEEK	790365	790360	790355
Key, Gears	13	K	Kynar	790454 (2)	790451 (2)	
Key, Gears	13	P	PEEK	790455 (2)	790452 (2)	
Key, Inner Magnet	14	K	Kynar		790451	
Key, Inner Magnet	14	P	PEEK		790452	
Position 4 – Idler Gear						
Idler Gear (Spur Type)	3	K	Kynar	790368	790363	790358
Idler Gear (Spur Type)	3	P	PEEK	790365	790360	790355
Position 5 – Wear Plates						
Wear Plate, Relieved	8	B	SiC	790514 (4)	790513 (4)	780513 (4)
Wear Plate, Relieved	8	E	Carbon 60	790522 (4)	790521 (4)	780502 (4)
Position 6 – Bearings						
Bearing	6	B	SiC		780413 (4)	
Bearing	6	E	Carbon 60		780401 (4)	
Position 7 – Motor Frame (Pedestal, Adapter & Motor Hardware)						
Pedestal - NEMA 56C	25	0	CI/Epoxy		SP000	
Bolt, Motor (3/8-16 x 1 SHCS)	29	0	18-8SS		781118 (4)	
Pedestal - NEMA 143/145TC	25	1	CI/Epoxy		SP000	
Bolt, Motor (3/8-16 x 1 SHCS)	29	1	18-8SS		781118 (4)	
Pedestal - IEC 71 (B5)	25	2	CI/Epoxy		SP001	
Bolt, Motor (3/8-16 x 1-5/8 SHCS)	29	2	18-8SS		781115 (4)	
Nut, Motor (3/8-16)	---	2	18-8SS		S1003 (4)	
Lockwasher, Motor (3/8)	---	2	18-8SS		S1004 (4)	
Pedestal - IEC 80 (B5)	25	3	CI/Epoxy		SP002	
Bolt, Motor (M10 x 40 SHCS)	29	3	18-8SS		S1011 (4)	
Lockwasher, Motor (M10)	---	3	18-8SS		S1012 (4)	
Nut, Motor (M10 Std Hex)	---	3	18-8SS		S1013 (4)	
Pedestal - IEC 90 (B5)	25	4	CI/Epoxy		SP002	
Bolt, Motor (M10 x 40 SHCS)	29	4	18-8SS		S1011 (4)	
Lockwasher, Motor (M10)	---	4	18-8SS		S1012 (4)	
Nut, Motor (M10 Std Hex)	---	4	18-8SS		S1013 (4)	
Pedestal - NEMA 182/184TC	25	5	CI/Epoxy		SP000	
Shim, Pedestal (0.50" Height)	---	5	303SS		SHIM-S105 (4)	
Adapter - NEMA 182/184TC	---	5	CS/Epoxy		SP0046	
Bolt, Adapter (1/2-13 X 1 SHCS)	---	5	18-8 SS		641105 (4)	
Bolt, Motor (3/8-16 x 1 SHCS)	29	5	18-8SS		781118 (4)	
Pedestal - IEC 100/112 (B5)	25	8	CI/CS/Epoxy		SP002-112	
Bolt, Motor (1/2-13 x 2 FH-SHCS)	29	8	18-8SS		S641111 (4)	
Lockwasher, Motor (1/2)	---	8	18-8SS		641107 (4)	
Nut, Motor (1/2-13)	---	8	18-8SS		641108 (4)	
Position 8 – Containment Can						
Containment Can, Metal, Lined	20	0	Alloy-C/PFA		740914	
Containment Can, Nonmetal, Lined	20	P	PEEK/PFA		Consult Factory	

Liquiflo Chemical Processing Pumps™	Poly-Guard® Series Gear Pumps BOM: MAG-DRIVE, CC Models P5 thru P7
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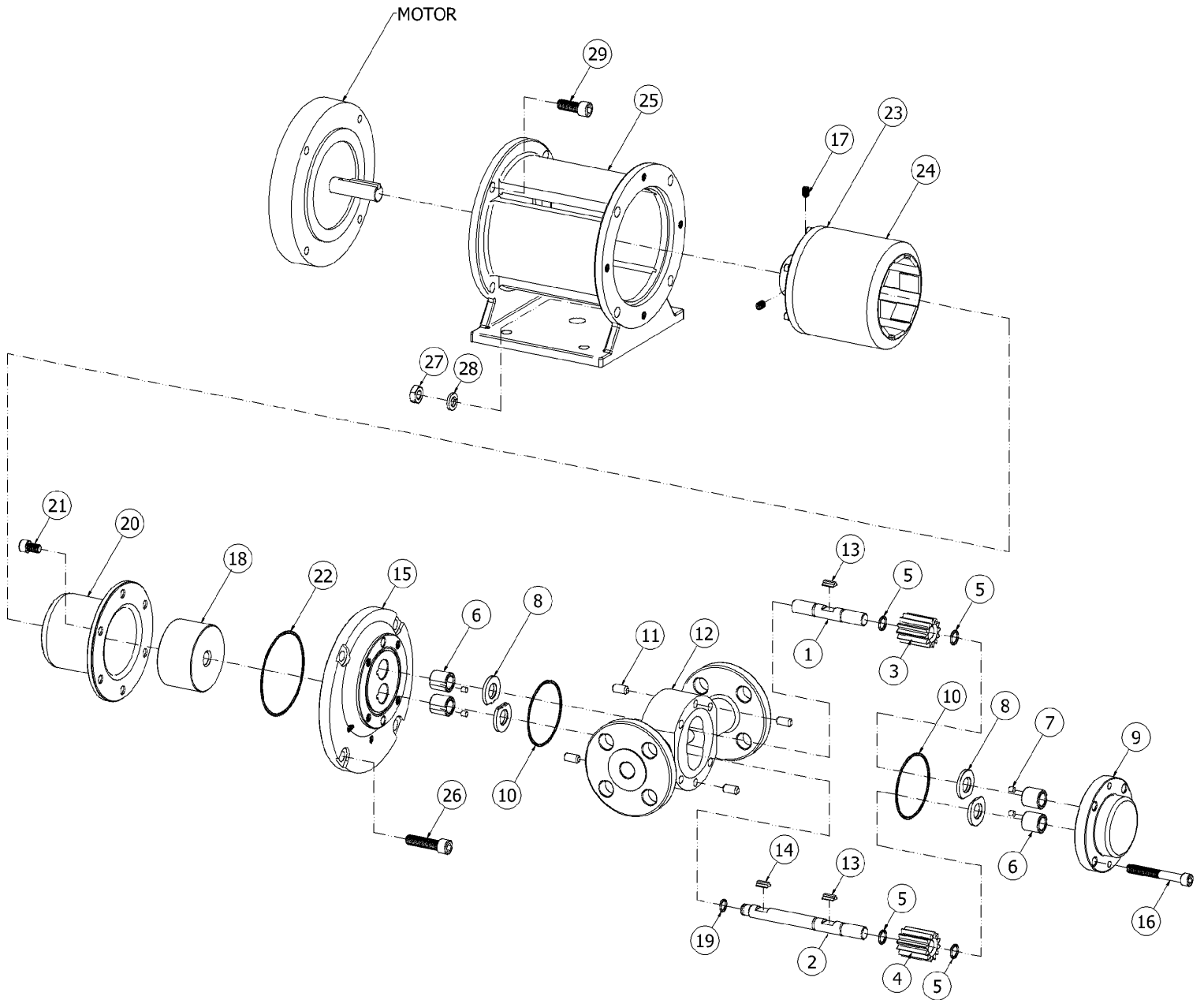
Part Description	Drwg. Item #	303 Stainless Steel/PFA-Lined Construction				
		Code	Material	P5	P6	P7
Position 9 – Bearing Flush (Front & Rear Housings)						
Front Housing, Standard	15	0	303SS/PFA		790101	
Rear Housing, Standard	9	0	303SS/PFA		790201	
Position 10 – Shafts						
Drive Shaft	2	B	SiC	790304	790302	790300
Idler Shaft	1	B	SiC	790254	790252	790250
Position 11 – O-Rings						
O-Ring, Housing (2-043)	10	E	EPDM		791103 (2)	
O-Ring, Housing (2-043)	10	V	Viton		791102 (2)	
O-Ring, Housing (2-043)	10	K	Kalrez		791104 (2)	
O-Ring, Containment Can (2-042)	22	E	EPDM		S4001	
O-Ring, Containment Can (2-042)	22	V	Viton		S4002	
O-Ring, Containment Can (2-042)	22	K	Kalrez		S4004	
O-Ring, Retaining, Gear (2-017)	5	E	EPDM		796704 (4)	
O-Ring, Retaining, Gear (2-017)	5	V	Viton		796702 (4)	
O-Ring, Retaining, Gear (2-017)	5	K	Kalrez		796703 (4)	
O-Ring, Retaining, Inner Magnet (2-013)	19	E	EPDM		796705	
O-Ring, Retaining, Inner Magnet (2-013)	19	V	Viton		796706	
O-Ring, Retaining, Inner Magnet (2-013)	19	K	Kalrez		790693	
Position 12 – Magnetic Coupling						
Inner Magnet, MCB - 3/4" Bore	18	B	CS/SmCo/PFA		750501	
Outer Magnet, MCB - 5/8" Bore	24	B (Pos. 7 = 0)	CS/SmCo		SOMCB-5	
Outer Magnet, MCB - 7/8" Bore	24	B (Pos. 7 = 1)	CS/SmCo		SOMCB-7	
Outer Magnet, MCB - 14 mm Bore	24	B (Pos. 7 = 2)	CS/SmCo		SOMCB-71	
Outer Magnet, MCB - 19 mm Bore	24	B (Pos. 7 = 3)	CS/SmCo		SOMCB-80	
Outer Magnet, MCB - 24 mm Bore	24	B (Pos. 7 = 4)	CS/SmCo		SOMCB-90	
Outer Magnet, MCB - 1-1/8" Bore	24	B (Pos. 7 = 5)	CS/SmCo		SOMCB-9	
Outer Magnet, MCB - 28 mm Bore	24	B (Pos. 7 = 8)	CS/SmCo		SOMCB-112	
Suffix – Trim Options						
Temperature Trim (Gears/Bearings)	-	-8(T) ¹	-	Consult Factory		
Viscosity Trim (Gears)	-	-9D, -9T ²	-			

- 1 T = Application Temperature in °F (e.g., -8(140) = Temperature Trim at 140°F)
- 2 -9D = Double-clearance Viscosity Trim (for ≥ 150 cP and < 300 cP)
- 9T = Triple-clearance Viscosity Trim (for ≥ 300 cP)

See page 6 for Reference Drawing.

Appendix 1: Exploded View Reference Drawing

Models P1 thru P7 – MAG-DRIVE, Close-Coupled



Appendix 2: Meaning of Abbreviated Terms

Term	Meaning	Notes
Alloy-C	Hastelloy-C	Nickel-based alloy; Grade C-276; containment can structural material
ANSI	American National Standards Institute	e.g., ANSI 150# flanges
CC	Close-Coupled	Method of pump-motor coupling
CI	Cast Iron	Pedestal structural material
Cont. Can	Containment Can	Component of Mag-drive pump
CS	Carbon Steel	Outer magnet and adapter structural material
DIN	Deutsches Institut für Normung (German Institute for Standardization)	e.g., DIN PN16 flanges
DN20	DIN 20 mm Port Size	20 mm pipe inner diameter
DN40	DIN 40 mm Port Size	40 mm pipe inner diameter
Drwg.	Drawing (Item #)	See exploded view reference drawing
EPDM	Ethylene-Propylene-Diene Monomer (rubber)	O-ring material; elastomer
FH-SHCS	Flat Head, Socket Head Cap Screw	Type of bolt
Kynar	Poly-vinylidene Fluoride (PVDF)	Virgin Kynar (plastic); FDA grade; material option for gears and keys
MC	Magnetically Coupled	Mag-drive pump
MCB	Magnetic Coupling "B"	120 in-lb torque rating @ 72°F
MCU	Magnetic Coupling "U"	75 in-lb torque rating @ 72°F
PEEK	Poly-Ether-Ether-Ketone (plastic)	Bearing Grade PEEK; material option for gears, keys, bearings & wear plates
PFA	Per-Fluoro-Alkoxy (plastic)	Fluoropolymer lining material
PHSS	Precipitate Hardened Stainless Steel	e.g., 17-4 PHSS
PN16	DIN Flange Pressure Class	16 bar (g) nominal rating @ room temperature *
Pos.	Position (#)	Position number of model code
RFF	Raised Face Flange	Type of flange
SHCS	Socket Head Cap Screw	Type of bolt
SiC	Silicon Carbide	Bearing, wear plate and shaft material
SmCo	Samarium Cobalt	Inner and outer magnet material
SS	Stainless Steel	e.g., 303 SS, 18-8 SS
#	Number or Pound	e.g., Position #, 150# flanges, etc.

* Actual Pressure Rating is function of Temperature and Flange Material.