



CONSOLIDATED BILL OF MATERIALS (BOM) FOR STANDARD 3-SERIES GEAR PUMPS



**Models 312R, 312F & 314F
Sealed, Long-Coupled**



**Models 312R, 312F & 314F
Mag-Drive, Long-Coupled**

Table of Contents

Models 312R, 312F & 314F:	SEALED-LC:	316 SS Construction2-3
		Alloy-C Construction4-5
	MAG-DRIVE-LC:	316 SS Construction6-7
		Alloy-C Construction8-9
Appendix 1:	Exploded View Reference Drawings	10-11
Appendix 2:	Meaning of Abbreviated Terms	12

Liquiflo Chemical Processing Pumps™	3-Series Gear Pumps BOM: SEALED, LC Models 312R, 312F & 314F
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Part Description	Drwg. Item #	316 Stainless Steel Construction				
		Code	Material	312R	312F	314F
Position 3 – Basic Material & Port Type (Center Housing, Alignment Pins, Coupling Key & Hardware)						
Center Housing, NPT	21	S	316 SS	3120004	3120004	X
Center Housing, Flanged ¹	21	L	316 SS	3120003	3120003	3140005
Center Housing, BSPT	21	X	316 SS	3120008	3120008	X
Pin, Housing Alignment	12	S, L, X	316 SS	3120801 (4)	3120801 (4)	3120801 (4)
Key, Mech. Coupling (Pump Shaft)	28	S, L, X	CS	3121900	3121900	3121900
Bolt, Housing (5/16-18 x 1 HHCS)	4	S, L, X	18-8 SS	3122004 (12)	3122004 (12)	3122004 (12)
Lockwasher, Housing (5/16)	15	S, L, X	18-8 SS	3126341 (12)	3126341 (12)	3126341 (12)
Position 4 – Drive Gear						
Gear	22	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	22	3	Teflon	3120667	3120664	3120664 (2)
Gear	22	6	316 SS	3120659	3120605	3120605 (2)
Gear	22	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	23	1, 6, P	316 SS	3121904	3121904	3140012
Key, Gear (LY)	23	3	316 SS	3121906	3121906	3140016
Position 5 – Idler Gear						
Gear	6	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	6	2	Carbon	X	X	X
Gear	6	3	Teflon	3120667	3120664	3120664 (2)
Gear	6	6	316 SS	3120659	3120605	3120605 (2)
Gear	6	8	Ryton	3120653	3120602	3120602 (2)
Gear	6	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	24	1, 6, 8, P	316 SS	3121904	3121904	3140012
Key, Gear (LY)	24	3	316 SS	3121906	3121906	3140016
Position 6 – Wear Plates						
Wear Plate, Relieved (obsolete)	7	2	Carbon	Use Code E	Use Code E	Use Code E
Wear Plate, Relieved	7	3	Teflon	3120522 (4)	3120505 (4)	3120505 (4)
Wear Plate, Relieved	7	4	SiC	3120513 (4)	3120507 (4)	3120507 (4)
Wear Plate, Relieved	7	E	Carbon 60	3120524 (4)	3120504 (4)	3120504 (4)
Wear Plate, Relieved	7	P	PEEK	3120502 (8)	3120502 (4)	3120502 (4)
Position 7 – Bearings						
Bearing (obsolete)	3	2	Carbon	Use Code E	Use Code E	Use Code E
Bearing	3	3	Teflon	3120416 (4)	3120416 (4)	3120416 (4)
Bearing	3	B	SiC	3120408 (4)	3120408 (4)	3120408 (4)
Bearing	3	E	Carbon 60	3120402 (4)	3120402 (4)	3120402 (4)
Bearing	3	P	PEEK	3120433 (4)	3120433 (4)	3120433 (4)
Position 8 – Seal Type						
Mechanical Seal, Single Internal	11	U	316 SS/Carbon	A-3127001	A-3127001	A-3127001
Mechanical Seal, Single Internal	11	S	316 SS/Teflon	A-3127002	A-3127002	A-3127002
Mechanical Seal, External	11	W	316 SS/Carbon	A-3127001	A-3127001	A-3127001
Mechanical Seal, External	11	X	316 SS/Teflon	A-3127002	A-3127002	A-3127002
Mechanical Seal, Double	11	F	316 SS/Carbon	A-3127011	A-3127011	A-3127011
Mechanical Seal, Double	11	H	316 SS/Teflon	A-3127012	A-3127012	A-3127012
Seal Seat, Outer	25	U, S, F, H	SiC	3121555	3121555	3121555
Seal Seat, Inner	26	W, X, F, H	SiC	3121033	3121033	3121033
Gland Plate, SMS & DMS	17	U, S, F, H	316 SS	3121510	3121510	3121510
Bolt, Gland (5/16-18 x 1 HHCS)	16	U, S, F, H	18-8 SS	3122004 (2)	3122004 (2)	3122004 (2)
Lockwasher, Gland (5/16)	19	U, S, F, H	18-8 SS	3126341 (2)	3126341 (2)	3126341 (2)
Plug, 1/8 NPT	9	U, S	316 SS	362304 (3)	362304 (3)	362304 (3)
Plug, 1/8 NPT	9	F, H	316 SS	362304 (1)	362304 (1)	362304 (1)
Packing Ring	18	L	Teflon	3126503 (5)	3126503 (5)	3126503 (5)
Packing Ring	18	R	Graphoil	3126506 (5)	3126506 (5)	3126506 (5)
Lantern Ring	11	L, R	316 SS	3127109	3127109	3127109
Gland Plate, Split, PS	17	L, R	316 SS	3121504 (2)	3121504 (2)	3121504 (2)
Bolt, Gland (5/16-18 x 1-1/4 HHCS)	16	L, R	18-8 SS	3122005 (2)	3122005 (2)	3122005 (2)
Grease Fitting, 1/8 NPT	25	L, R	303 SS	867201	867201	867201
Plug, 1/8 NPT	9	L, R	316 SS	362304 (2)	362304 (2)	362304 (2)

1 - Flanges are ANSI 150# RF.

See page 10 for Reference Drawing.

Liquiflo Chemical Processing Pumps™	3-Series Gear Pumps BOM: SEALED, LC Models 312R, 312F & 314F
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Part Description	Drwg. Item #	316 Stainless Steel Construction				
		Code	Material	312R	312F	314F
Position 9 – Bearing Flush Option (Front & Rear Housings)						
Front Housing, Std./EBF – SMS/DMS	8	0, 1	316 SS	3120117	3120117	3120117
Front Housing, Std./EBF – Packing	8	0, 1	316 SS	3120107	3120107	3120107
Front Housing, IBF – SMS/DMS	8	2	316 SS	3120119	3120119	3120119
Front Housing, IBF – Packing	8	2	316 SS	3120125	3120125	3120125
Rear Housing, Standard	2	0	316 SS	3120201	3120201	3120201
Rear Housing, EBF	2	1	316 SS	3120206	3120206	3120206
Rear Housing, IBF	2	2	316 SS	3120216	3120216	3120216
Plug, 1/8 NPT (Front Housing, Std./IBF)	9	0, 2	316 SS	362304 (1)	362304 (1)	362304 (1)
Plug, 1/8 NPT (Front/Rear Housings/EBF)	9	1	316 SS	362304 (3)	362304 (3)	362304 (3)
Position 10 – Shafts						
Drive Shaft, Uncoated	20	0	316 SS	3120338	3120338	3140348
Drive Shaft, CO-Coated	20	1	316 SS/CO	3120338-CO	3120338-CO	3140348-CO
Drive Shaft, TC-Coated	20	2	316 SS/TC	3120338-TC	3120338-TC	3140348-TC
Idler Shaft, Uncoated	1	0	316 SS	3120319	3120319	3140349
Idler Shaft, CO-Coated	1	1	316 SS/CO	3120319-CO	3120319-CO	3140349-CO
Idler Shaft, TC-Coated	1	2	316 SS/TC	3120319-TC	3120319-TC	3140349-TC
Position 11 – O-Rings						
O-ring, Housing (2-047)	5	0	Teflon	3121101 (2)	3121101 (2)	3121101 (2)
O-ring, Gland Plate ²	10	0	Teflon	869031	869031	869031
O-ring, Seal Seat, Outer ³	18	0	Viton	3121108	3121108	3121108
O-ring, Seal Seat, Inner ⁴	27	0	Viton	3121561	3121561	3121561
O-ring, Housing (2-047)	5	6	Silicone/FEP	3121123 (2)	3121123 (2)	3121123 (2)
O-ring, Gland Plate ²	10	6	Teflon	869031	869031	869031
O-ring, Seal Seat, Outer ³	18	6	Kalrez	3121118	3121118	3121118
O-ring, Seal Seat, Inner ⁴	27	6	Kalrez	3121564	3121564	3121564
O-ring, Housing (2-047)	5	B	Buna-N	3121105 (2)	3121105 (2)	3121105 (2)
O-ring, Gland Plate ²	10	B	Buna-N	869032	869032	869032
O-ring, Seal Seat, Outer ³	18	B	Buna-N	3121114	3121114	3121114
O-ring, Seal Seat, Inner ⁴	27	B	Buna-N	3121563	3121563	3121563
O-ring, Housing (2-047)	5	E	EPDM	3121110 (2)	3121110 (2)	3121110 (2)
O-ring, Gland Plate ²	10	E	EPDM	869033	869033	869033
O-ring, Seal Seat, Outer ³	18	E	EPDM	3121109	3121109	3121109
O-ring, Seal Seat, Inner ⁴	27	E	EPDM	3121562	3121562	3121562
O-ring, Housing (2-047)	5	V	Viton	3121112 (2)	3121112 (2)	3121112 (2)
O-ring, Gland Plate ²	10	V	Viton	869034	869034	869034
O-ring, Seal Seat, Outer ³	18	V	Viton	3121108	3121108	3121108
O-ring, Seal Seat, Inner ⁴	27	V	Viton	3121561	3121561	3121561
O-ring, Housing (2-047)	5	K	Kalrez	3121116 (2)	3121116 (2)	3121116 (2)
O-ring, Gland Plate ²	10	K	Kalrez	869035	869035	869035
O-ring, Seal Seat, Outer ³	18	K	Kalrez	3121118	3121118	3121118
O-ring, Seal Seat, Inner ⁴	27	K	Kalrez	3121564	3121564	3121564
Position 12 – Retaining Rings						
Retaining Ring, Gear	14	0	316 SS	3126702 (4)	3126702 (4)	3126702 (4)
Position 13 – Bearing Pins						
Pin, Bearing Lock	13	6	316 SS	3120801 (4)	3120801 (4)	3120801 (4)
Position 14 – Coupling Method						
Long-Coupled	-	1	-	X	X	X
Suffix – Trim Options						
Temperature Trim (Gears/Bearings)	-	-8(T) ⁵	-	Consult Factory		
Viscosity Trim (Gears)	-	-9D, -9T	-			

2 - Size: 2-031; SMS & DMS only.

3 - Size: 2-220; SMS & DMS only.

4 - Size: 2-030; EMS & DMS only.

5 - T = Application Temperature in °F (e.g., -8(300) = Temperature Trim at 300°F).

Liquiflo Chemical Processing Pumps™	3-Series Gear Pumps BOM: SEALED, LC Models 312R, 312F & 314F
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Part Description	Drwg. Item #	Alloy-C Construction				
		Code	Material	312R	312F	314F
Position 3 – Basic Material & Port Type (Center Housing, Alignment Pins, Coupling Key & Hardware)						
Center Housing, NPT	21	H	Alloy-C	3120005	3120005	X
Center Housing, Flanged ¹	21	C	Alloy-C	3120007	3120007	3140009
Center Housing, BSPT	21	Y	Alloy-C	3120009	3120009	X
Pin, Housing Alignment	12	H, C, Y	Alloy-C	3120803 (4)	3120803 (4)	3120803 (4)
Key, Mech. Coupling (Pump Shaft)	28	H, C, Y	CS	3121900	3121900	3121900
Bolt, Housing (5/16-18 x 1 HHCS)	4	H, C, Y	18-8 SS	3122004 (12)	3122004 (12)	3122004 (12)
Lockwasher, Housing (5/16)	15	H, C, Y	18-8 SS	3126341 (12)	3126341 (12)	3126341 (12)
Position 4 – Drive Gear						
Gear	22	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	22	3	Teflon	3120667	3120664	3120664 (2)
Gear	22	6	316 SS	X	X	X
Gear	22	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	23	1, P	Alloy-C	3121910	3121910	3140013
Key, Gear (LY)	23	3	Alloy-C	3121907	3121907	3140017
Position 5 – Idler Gear						
Gear	6	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	6	2	Carbon	X	X	X
Gear	6	3	Teflon	3120667	3120664	3120664 (2)
Gear	6	6	316 SS	X	X	X
Gear	6	8	Ryton	3120653	3120602	3120602 (2)
Gear	6	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	24	1, 8, P	Alloy-C	3121910	3121910	3140013
Key, Gear (LY)	24	3	Alloy-C	3121907	3121907	3140017
Position 6 – Wear Plates						
Wear Plate, Relieved (obsolete)	7	2	Carbon	Use Code E	Use Code E	Use Code E
Wear Plate, Relieved	7	3	Teflon	3120522 (4)	3120505 (4)	3120505 (4)
Wear Plate, Relieved	7	4	SiC	3120513 (4)	3120507 (4)	3120507 (4)
Wear Plate, Relieved	7	E	Carbon 60	3120524 (4)	3120504 (4)	3120504 (4)
Wear Plate, Relieved	7	P	PEEK	3120502 (8)	3120502 (4)	3120502 (4)
Position 7 – Bearings						
Bearing (obsolete)	3	2	Carbon	Use Code E	Use Code E	Use Code E
Bearing	3	3	Teflon	3120416 (4)	3120416 (4)	3120416 (4)
Bearing	3	B	SiC	3120408 (4)	3120408 (4)	3120408 (4)
Bearing	3	E	Carbon 60	3120402 (4)	3120402 (4)	3120402 (4)
Bearing	3	P	PEEK	3120433 (4)	3120433 (4)	3120433 (4)
Position 8 – Seal Type						
Mechanical Seal, Single Internal	11	U	Alloy-C/Carbon	A-3127023	A-3127023	A-3127023
Mechanical Seal, Single Internal	11	S	Alloy-C/Teflon	A-3127024	A-3127024	A-3127024
Mechanical Seal, External	11	W	316 SS/Carbon	A-3127001	A-3127001	A-3127001
Mechanical Seal, External	11	X	316 SS/Teflon	A-3127002	A-3127002	A-3127002
Mechanical Seal, Double	11	F	316 SS/Carbon	A-3127011	A-3127011	A-3127011
Mechanical Seal, Double	11	H	316 SS/Teflon	A-3127012	A-3127012	A-3127012
Seal Seat, Outer	25	U, S, F, H	SiC	3121555	3121555	3121555
Seal Seat, Inner	26	W, X, F, H	SiC	3121033	3121033	3121033
Gland Plate, SMS	17	U, S	Alloy-C	3121523	3121523	3121523
Gland Plate, DMS	17	F, H	316 SS	3121510	3121510	3121510
Bolt, Gland (5/16-18 x 1 HHCS)	16	U, S, F, H	18-8 SS	3122004 (2)	3122004 (2)	3122004 (2)
Lockwasher, Gland (5/16)	19	U, S, F, H	18-8 SS	3126341 (2)	3126341 (2)	3126341 (2)
Plug, 1/8 NPT	9	U, S	Alloy-C	362301 (3)	362301 (3)	362301 (3)
Plug, 1/8 NPT	9	F, H	Alloy-C	362301 (1)	362301 (1)	362301 (1)
Packing Ring	18	L	Teflon	3126503 (5)	3126503 (5)	3126503 (5)
Packing Ring	18	R	Graphoil	3126506 (5)	3126506 (5)	3126506 (5)
Lantern Ring	11	L, R	Alloy-C	3127110	3127110	3127110
Gland Plate, Split, PS	17	L, R	Alloy-C	3121516 (2)	3121516 (2)	3121516 (2)
Bolt, Gland (5/16-18 x 1-1/4 HHCS)	16	L, R	18-8 SS	3122005 (2)	3122005 (2)	3122005 (2)
Grease Fitting, 1/8 NPT	25	L, R	303 SS	867201	867201	867201
Plug, 1/8 NPT	9	L, R	Alloy-C	362301 (2)	362301 (2)	362301 (2)

1 - Flanges are ANSI 150# RF.

See page 10 for Reference Drawing.

<p style="text-align: center;">Liquiflo Chemical Processing Pumps™</p>	<p style="font-size: 1.2em; color: yellow;">3-Series Gear Pumps</p> <p style="color: yellow;">BOM: SEALED, LC Models 312R, 312F & 314F</p>
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Part Description	Drwg. Item #	Alloy-C Construction				
		Code	Material	312R	312F	314F
Position 9 – Bearing Flush Option (Front & Rear Housings)						
Front Housing, Std./EBF – SMS/DMS	8	0, 1	Alloy-C	3120116	3120116	3120116
Front Housing, Std./EBF – Packing	8	0, 1	Alloy-C	3120112	3120112	3120112
Front Housing, IBF – SMS/DMS	8	2	Alloy-C	3120120	3120120	3120120
Front Housing, IBF – Packing	8	2	Alloy-C	3120126	3120126	3120126
Rear Housing, Standard	2	0	Alloy-C	3120205	3120205	3120205
Rear Housing, EBF	2	1	Alloy-C	3120207	3120207	3120207
Rear Housing, IBF	2	2	Alloy-C	3120217	3120217	3120217
Plug, 1/8 NPT (Front Housing, Std./IBF)	9	0, 2	Alloy-C	362301 (1)	362301 (1)	362301 (1)
Plug, 1/8 NPT (Front/Rear Housings/EBF)	9	1	Alloy-C	362301 (3)	362301 (3)	362301 (3)
Position 10 – Shafts						
Drive Shaft, Uncoated	20	0	Alloy-C	3120340	3120340	3140350
Drive Shaft, CO-Coated	20	1	Alloy-C/CO	3120340-CO	3120340-CO	3140350-CO
Drive Shaft, TC-Coated	20	2	Alloy-C/TC	3120340-TC	3120340-TC	3140350-TC
Idler Shaft, Uncoated	1	0	Alloy-C	3120318	3120318	3140351
Idler Shaft, CO-Coated	1	1	Alloy-C/CO	3120318-CO	3120318-CO	3140351-CO
Idler Shaft, TC-Coated	1	2	Alloy-C/TC	3120318-TC	3120318-TC	3140351-TC
Position 11 – O-Rings						
O-ring, Housing (2-047)	5	0	Teflon	3121101 (2)	3121101 (2)	3121101 (2)
O-ring, Gland Plate ²	10	0	Teflon	869031	869031	869031
O-ring, Seal Seat, Outer ³	18	0	Viton	3121108	3121108	3121108
O-ring, Seal Seat, Inner ⁴	27	0	Viton	3121561	3121561	3121561
O-ring, Housing (2-047)	5	6	Silicone/FEP	3121123 (2)	3121123 (2)	3121123 (2)
O-ring, Gland Plate ²	10	6	Teflon	869031	869031	869031
O-ring, Seal Seat, Outer ³	18	6	Kalrez	3121118	3121118	3121118
O-ring, Seal Seat, Inner ⁴	27	6	Kalrez	3121564	3121564	3121564
O-ring, Housing (2-047)	5	B	Buna-N	3121105 (2)	3121105 (2)	3121105 (2)
O-ring, Gland Plate ²	10	B	Buna-N	869032	869032	869032
O-ring, Seal Seat, Outer ³	18	B	Buna-N	3121114	3121114	3121114
O-ring, Seal Seat, Inner ⁴	27	B	Buna-N	3121563	3121563	3121563
O-ring, Housing (2-047)	5	E	EPDM	3121110 (2)	3121110 (2)	3121110 (2)
O-ring, Gland Plate ²	10	E	EPDM	869033	869033	869033
O-ring, Seal Seat, Outer ³	18	E	EPDM	3121109	3121109	3121109
O-ring, Seal Seat, Inner ⁴	27	E	EPDM	3121562	3121562	3121562
O-ring, Housing (2-047)	5	V	Viton	3121112 (2)	3121112 (2)	3121112 (2)
O-ring, Gland Plate ²	10	V	Viton	869034	869034	869034
O-ring, Seal Seat, Outer ³	18	V	Viton	3121108	3121108	3121108
O-ring, Seal Seat, Inner ⁴	27	V	Viton	3121561	3121561	3121561
O-ring, Housing (2-047)	5	K	Kalrez	3121116 (2)	3121116 (2)	3121116 (2)
O-ring, Gland Plate ²	10	K	Kalrez	869035	869035	869035
O-ring, Seal Seat, Outer ³	18	K	Kalrez	3121118	3121118	3121118
O-ring, Seal Seat, Inner ⁴	27	K	Kalrez	3121564	3121564	3121564
Position 12 – Retaining Rings						
Retaining Ring, Gear	14	0	Alloy-C	3126709 (4)	3126709 (4)	3126709 (4)
Position 13 – Bearing Pins						
Pin, Bearing Lock	13	1	Alloy-C	3120803 (4)	3120803 (4)	3120803 (4)
Position 14 – Coupling Method						
Long-Coupled	-	1	-	X	X	X
Suffix – Trim Options						
Temperature Trim (Gears/Bearings)	-	-8(T) ⁵	-	Consult Factory		
Viscosity Trim (Gears)	-	-9D, -9T	-			

2 - Size: 2-031; SMS & DMS only.

3 - Size: 2-220; SMS & DMS only.

4 - Size: 2-030; EMS & DMS only.

5 - T = Application Temperature in °F (e.g., -8(300) = Temperature Trim at 300°F).

Liquiflo Chemical Processing Pumps™	3-Series Gear Pumps BOM: MAG-DRIVE, LC Models 312R, 312F & 314F
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Part Description	Drwg. Item #	316 Stainless Steel Construction				
		Code	Material	312R	312F	314F
Position 3 – Basic Material & Port Type (Center Housing, Alignment Pins, Coupling Key & Hardware)						
Center Housing, NPT	21	S	316 SS	3120004	3120004	X
Center Housing, Flanged ¹	21	L	316 SS	3120003	3120003	3140005
Center Housing, BSPT	21	X	316 SS	3120008	3120008	X
Pin, Housing Alignment	34	S, L, X	316 SS	3120801 (4)	3120801 (4)	3120801 (4)
Key, Mech. Coupling (Pump Shaft)	32	S, L, X	CS	S3140078	S3140078	S3140078
Bolt, Housing (5/16-18 x 1 HHCS)	4	S, L, X	18-8 SS	3122004 (12)	3122004 (12)	3122004 (12)
Lockwasher, Housing (5/16)	31	S, L, X	18-8 SS	3126341 (12)	3126341 (12)	3126341 (12)
Screw, C. Can (5/16-24 x 5/8) ²	18	S, L, X	18-8 SS	S641109 (8)	S641109 (8)	S641109 (8)
Position 4 – Drive Gear						
Gear	22	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	22	3	Teflon	3120667	3120664	3120664 (2)
Gear	22	6	316 SS	3120659	3120605	3120605 (2)
Gear	22	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	23	1, 6, P	316 SS	3121904	3121904	3140012
Key, Gear (LY)	23	3	316 SS	3121906	3121906	3140016
Position 5 – Idler Gear						
Gear	6	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	6	2	Carbon	X	X	X
Gear	6	3	Teflon	3120667	3120664	3120664 (2)
Gear	6	6	316 SS	3120659	3120605	3120605 (2)
Gear	6	8	Ryton	3120653	3120602	3120602 (2)
Gear	6	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	24	1, 6, 8, P	316 SS	3121904	3121904	3140012
Key, Gear (LY)	24	3	316 SS	3121906	3121906	3140016
Position 6 – Wear Plates						
Wear Plate, Relieved (obsolete)	7	2	Carbon	Use Code E	Use Code E	Use Code E
Wear Plate, Relieved	7	3	Teflon	3120522 (4)	3120505 (4)	3120505 (4)
Wear Plate, Relieved	7	4	SIC	3120513 (4)	3120507 (4)	3120507 (4)
Wear Plate, Relieved	7	E	Carbon 60	3120524 (4)	3120504 (4)	3120504 (4)
Wear Plate, Relieved	7	P	PEEK	3120502 (8)	3120502 (4)	3120502 (4)
Position 7 – Bearings						
Bearing (obsolete)	3	2	Carbon	Use Code E	Use Code E	Use Code E
Bearing	3	3	Teflon	3120416 (4)	3120416 (4)	3120416 (4)
Bearing	3	B	SIC	3120408 (4)	3120408 (4)	3120408 (4)
Bearing	3	E	Carbon 60	3120402 (4)	3120402 (4)	3120402 (4)
Bearing	3	P	PEEK	3120433 (4)	3120433 (4)	3120433 (4)
Position 8 – Outer Magnet Shaft						
7/8" Diameter Stub Shaft	16	1	See Outer Magnet, Position 14			
Position 9 – Bearing Flush Option (Front & Rear Housings)						
Front Housing, MC, Std./EBF	8	0, 1	316 SS	S3120130	S3120130	S3120130
Front Housing, MC, IBF	8	2	316 SS	S3120132	S3120132	S3120132
Rear Housing, Standard	2	0	316 SS	3120201	3120201	3120201
Rear Housing, EBF	2	1	316 SS	3120206	3120206	3120206
Rear Housing, IBF	2	2	316 SS	3120216	3120216	3120216
Plug, 1/8 NPT (Front Housing, Std./IBF)	9	0, 2	316 SS	362304 (1)	362304 (1)	362304 (1)
Plug, 1/8 NPT (Front/Rear Housings/EBF)	9	1	316 SS	362304 (3)	362304 (3)	362304 (3)
Position 10 – Shafts						
Drive Shaft, MC, Uncoated	20	0	316 SS	S3120348	S3120348	S3140348
Drive Shaft, MC, CO-Coated	20	1	316 SS/CO	S3120348-CO	S3120348-CO	S3140348-CO
Drive Shaft, MC, TC-Coated	20	2	316 SS/TC	S3120348-TC	S3120348-TC	S3140348-TC
Idler Shaft, Uncoated	1	0	316 SS	3120319	3120319	3140349
Idler Shaft, CO-Coated	1	1	316 SS/CO	3120319-CO	3120319-CO	3140349-CO
Idler Shaft, TC-Coated	1	2	316 SS/TC	3120319-TC	3120319-TC	3140349-TC

1 - Flanges are ANSI 150# RF.
 2 - FH-SHCS type.

See page 11 for Reference Drawing.

Liquiflo Chemical Processing Pumps™	3-Series Gear Pumps BOM: MAG-DRIVE, LC Models 312R, 312F & 314F
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Part Description	Drwg. Item #	316 Stainless Steel Construction				
		Code	Material	312R	312F	314F
Position 11 – O-Rings						
O-ring, Housing (2-047)	5	0	Teflon	3121101 (2)	3121101 (2)	3121101 (2)
O-ring, Containment Can (2-049)	19	0	Teflon	3121103	3121103	3121103
O-ring, Housing (2-047)	5	6	Silicone/FEP	3121123 (2)	3121123 (2)	3121123 (2)
O-ring, Containment Can (2-049)	19	6	Silicone/FEP	3121124	3121124	3121124
O-ring, Housing (2-047)	5	B	Buna-N	3121105 (2)	3121105 (2)	3121105 (2)
O-ring, Containment Can (2-049)	19	B	Buna-N	3121115	3121115	3121115
O-ring, Housing (2-047)	5	E	EPDM	3121110 (2)	3121110 (2)	3121110 (2)
O-ring, Containment Can (2-049)	19	E	EPDM	3121111	3121111	3121111
O-ring, Housing (2-047)	5	V	Viton	3121112 (2)	3121112 (2)	3121112 (2)
O-ring, Containment Can (2-049)	19	V	Viton	3121119	3121119	3121119
O-ring, Housing (2-047)	5	K	Kalrez	3121116 (2)	3121116 (2)	3121116 (2)
O-ring, Containment Can (2-049)	19	K	Kalrez	3121117	3121117	3121117
Position 12 – Retaining Rings						
Retaining Ring, Gear	29	0	316 SS	3126702 (4)	3126702 (4)	3126702 (4)
Retaining Ring, Inner Magnet	25	0	316 SS	S3146702	S3146702	S3146702
Position 13 – Bearing Pins						
Pin, Bearing Lock	26	6	316 SS	3120801 (4)	3120801 (4)	3120801 (4)
Position 14 – Magnetic Coupling						
Inner Magnet, MCK – 7/8" Bore	11	K	316 SS/SmCo	SIMCK-07	SIMCK-07	SIMCK-07
Outer Magnet, MCK – 7/8" Stub Shaft	10	K	CS/SmCo	SOMCK-7B	SOMCK-7B	SOMCK-7B
Inner Magnet, MCJ – 7/8" Bore	11	J	316 SS/SmCo	SIMCJ-07	SIMCJ-07	SIMCJ-07
Outer Magnet, MCJ – 7/8" Stub Shaft	10	J	CS/SmCo	SOMCJ-7B	SOMCJ-7B	SOMCJ-7B
Key, Inner Magnet	13	K, J	316 SS	S3140079	S3140079	S3140079
Position 15 – Containment Can						
Containment Can, Single Wall	12	S	316 SS	S3142004	S3142004	S3142004
Dual Kan Option (Modified Parts)	12	D	316 SS	Consult Factory		
Suffix – Trim Options						
Temperature Trim (Gears & Bearings)	-	-8(T) ³	-	Consult Factory		
Viscosity Trim (Gears)	-	-9D, -9T	-			

3 - T = Application Temperature in °F (e.g., -8(300) = Temperature Trim at 300°F).

<p style="text-align: center;">Liquiflo Chemical Processing Pumps™</p>	<p style="font-size: 1.2em; color: yellow;">3-Series Gear Pumps</p> <p style="color: yellow;">BOM: MAG-DRIVE, LC Models 312R, 312F & 314F</p>
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Part Description	Drwg. Item #	Alloy-C Construction				
		Code	Material	312R	312F	314F
Position 3 – Basic Material & Port Type (Center Housing, Alignment Pins, Coupling Key & Hardware)						
Center Housing, NPT	21	H	Alloy-C	3120005	3120005	X
Center Housing, Flanged ¹	21	C	Alloy-C	3120007	3120007	3140009
Center Housing, BSPT	21	Y	Alloy-C	3120009	3120009	X
Pin, Housing Alignment	34	H, C, Y	Alloy-C	3120803 (4)	3120803 (4)	3120803 (4)
Key, Mech. Coupling (Pump Shaft)	32	H, C, Y	CS	S3140078	S3140078	S3140078
Bolt, Housing (5/16-18 x 1 HHCS)	4	H, C, Y	18-8 SS	3122004 (12)	3122004 (12)	3122004 (12)
Lockwasher, Housing (5/16)	31	H, C, Y	18-8 SS	3126341 (12)	3126341 (12)	3126341 (12)
Screw, C. Can (5/16-24 x 5/8) ²	18	H, C, Y	18-8 SS	S641109 (8)	S641109 (8)	S641109 (8)
Position 4 – Drive Gear						
Gear	22	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	22	3	Teflon	3120667	3120664	3120664 (2)
Gear	22	6	316 SS	X	X	X
Gear	22	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	23	1, P	Alloy-C	3121910	3121910	3140013
Key, Gear (LY)	23	3	Alloy-C	3121907	3121907	3140017
Position 5 – Idler Gear						
Gear	6	1	Alloy-C	3120660	3120627	3120627 (2)
Gear	6	2	Carbon	X	X	X
Gear	6	3	Teflon	3120667	3120664	3120664 (2)
Gear	6	6	316 SS	X	X	X
Gear	6	8	Ryton	3120653	3120602	3120602 (2)
Gear	6	P	PEEK	3120656	3120671	3120671 (2)
Key, Gear (HY)	24	1, 8, P	Alloy-C	3121910	3121910	3140013
Key, Gear (LY)	24	3	Alloy-C	3121907	3121907	3140017
Position 6 – Wear Plates						
Wear Plate, Relieved (obsolete)	7	2	Carbon	Use Code E	Use Code E	Use Code E
Wear Plate, Relieved	7	3	Teflon	3120522 (4)	3120505 (4)	3120505 (4)
Wear Plate, Relieved	7	4	SiC	3120513 (4)	3120507 (4)	3120507 (4)
Wear Plate, Relieved	7	E	Carbon 60	3120524 (4)	3120504 (4)	3120504 (4)
Wear Plate, Relieved	7	P	PEEK	3120502 (8)	3120502 (4)	3120502 (4)
Position 7 – Bearings						
Bearing (obsolete)	3	2	Carbon	Use Code E	Use Code E	Use Code E
Bearing	3	3	Teflon	3120416 (4)	3120416 (4)	3120416 (4)
Bearing	3	B	SiC	3120408 (4)	3120408 (4)	3120408 (4)
Bearing	3	E	Carbon 60	3120402 (4)	3120402 (4)	3120402 (4)
Bearing	3	P	PEEK	3120433 (4)	3120433 (4)	3120433 (4)
Position 8 – Outer Magnet Shaft						
7/8" Diameter Stub Shaft	16	1	See Outer Magnet, Position 14			
Position 9 – Bearing Flush Option (Front & Rear Housings)						
Front Housing, MC, Std./EBF	8	0, 1	Alloy-C	S3120131	S3120131	S3120131
Front Housing, MC, IBF	8	2	Alloy-C	S3120133	S3120133	S3120133
Rear Housing, Standard	2	0	Alloy-C	3120205	3120205	3120205
Rear Housing, EBF	2	1	Alloy-C	3120207	3120207	3120207
Rear Housing, IBF	2	2	Alloy-C	3120217	3120217	3120217
Plug, 1/8 NPT (Front Housing, Std./IBF)	9	0, 2	Alloy-C	362301 (1)	362301 (1)	362301 (1)
Plug, 1/8 NPT (Front/Rear Housings/EBF)	9	1	Alloy-C	362301 (3)	362301 (3)	362301 (3)
Position 10 – Shafts						
Drive Shaft, MC, Uncoated	20	0	Alloy-C	S3120350	S3120350	S3140350
Drive Shaft, MC, CO-Coated	20	1	Alloy-C/CO	S3120350-CO	S3120350-CO	S3140350-CO
Drive Shaft, MC, TC-Coated	20	2	Alloy-C/TC	S3120350-TC	S3120350-TC	S3140350-TC
Idler Shaft, Uncoated	1	0	Alloy-C	3120318	3120318	3140351
Idler Shaft, CO-Coated	1	1	Alloy-C/CO	3120318-CO	3120318-CO	3140351-CO
Idler Shaft, TC-Coated	1	2	Alloy-C/TC	3120318-TC	3120318-TC	3140351-TC

1 - Flanges are ANSI 150# RF.
2 - FH-SHCS type.

See page 11 for Reference Drawing.

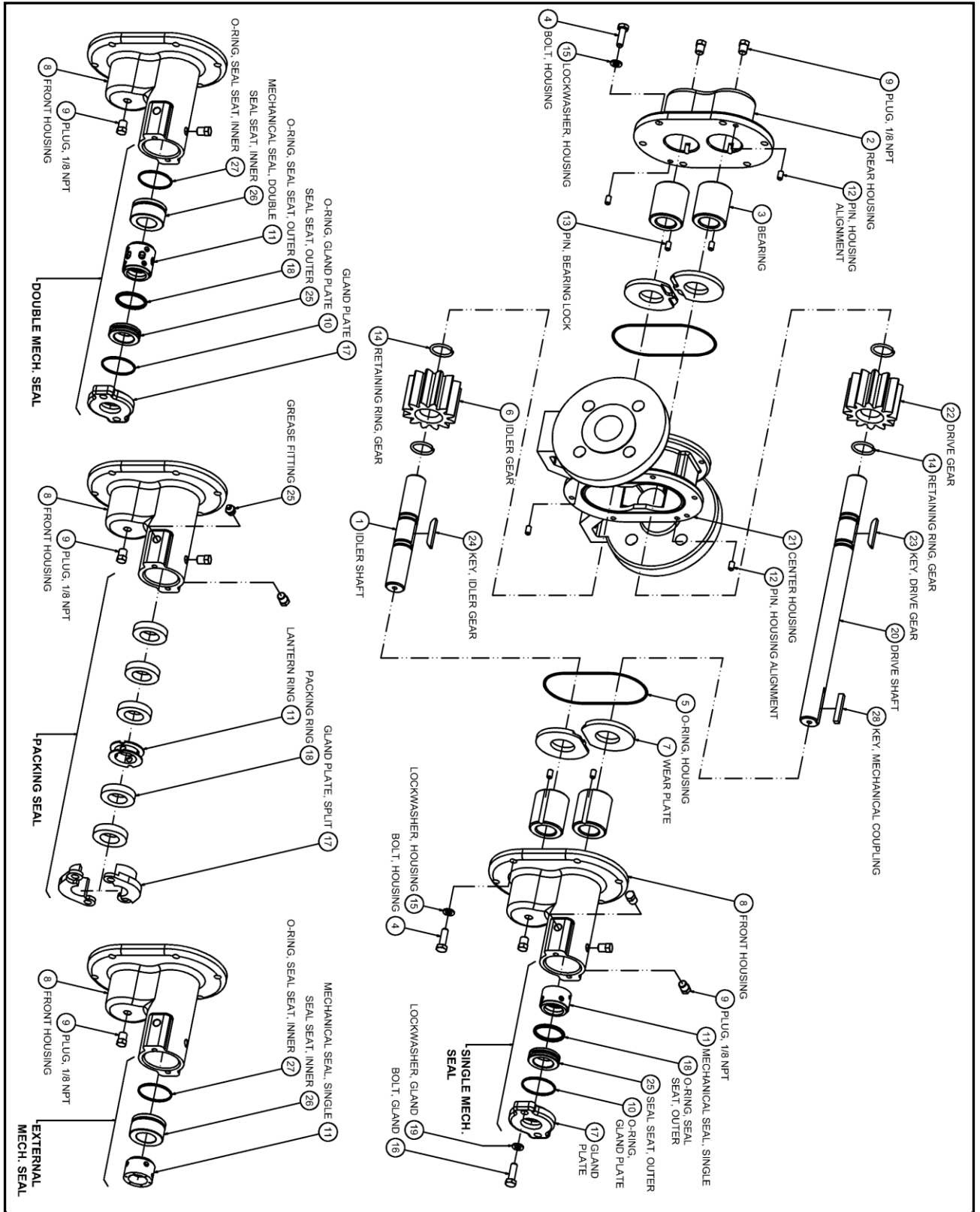
Liquiflo Chemical Processing Pumps™	3-Series Gear Pumps BOM: MAG-DRIVE, LC Models 312R, 312F & 314F
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Part Description	Drwg. Item #	Alloy-C Construction				
		Code	Material	312R	312F	314F
Position 11 – O-Rings						
O-ring, Housing (2-047)	5	0	Teflon	3121101 (2)	3121101 (2)	3121101 (2)
O-ring, Containment Can (2-049)	19	0	Teflon	3121103	3121103	3121103
O-ring, Housing (2-047)	5	6	Silicone/FEP	3121123 (2)	3121123 (2)	3121123 (2)
O-ring, Containment Can (2-049)	19	6	Silicone/FEP	3121124	3121124	3121124
O-ring, Housing (2-047)	5	B	Buna-N	3121105 (2)	3121105 (2)	3121105 (2)
O-ring, Containment Can (2-049)	19	B	Buna-N	3121115	3121115	3121115
O-ring, Housing (2-047)	5	E	EPDM	3121110 (2)	3121110 (2)	3121110 (2)
O-ring, Containment Can (2-049)	19	E	EPDM	3121111	3121111	3121111
O-ring, Housing (2-047)	5	V	Viton	3121112 (2)	3121112 (2)	3121112 (2)
O-ring, Containment Can (2-049)	19	V	Viton	3121119	3121119	3121119
O-ring, Housing (2-047)	5	K	Kalrez	3121116 (2)	3121116 (2)	3121116 (2)
O-ring, Containment Can (2-049)	19	K	Kalrez	3121117	3121117	3121117
Position 12 – Retaining Rings						
Retaining Ring, Gear	29	0	Alloy-C	3126709 (4)	3126709 (4)	3126709 (4)
Retaining Ring, Inner Magnet	25	0	Alloy-C	S3146709	S3146709	S3146709
Position 13 – Bearing Pins						
Pin, Bearing Lock	26	1	Alloy-C	3120803 (4)	3120803 (4)	3120803 (4)
Position 14 – Magnetic Coupling						
Inner Magnet, MCK – 7/8" Bore	11	K	Alloy-C/SmCo	SIMCK-17	SIMCK-17	SIMCK-17
Outer Magnet, MCK – 7/8" Stub Shaft	10	K	CS/SmCo	SOMCK-7B	SOMCK-7B	SOMCK-7B
Inner Magnet, MCJ – 7/8" Bore	11	J	Alloy-C/SmCo	SIMCJ-17	SIMCJ-17	SIMCJ-17
Outer Magnet, MCJ – 7/8" Stub Shaft	10	J	CS/SmCo	SOMCJ-7B	SOMCJ-7B	SOMCJ-7B
Key, Inner Magnet	13	K, J	Alloy-C	S3140080	S3140080	S3140080
Position 15 – Containment Can						
Containment Can, Single Wall	12	S	Alloy-C	S3142003	S3142003	S3142003
Dual Kan Option (Modified Parts)	12	D	Alloy-C	Consult Factory		
Suffix – Trim Options						
Temperature Trim (Gears & Bearings)	-	-8(T) ³	-	Consult Factory		
Viscosity Trim (Gears)	-	-9D, -9T	-			

3 - T = Application Temperature in °F (e.g., -8(300) = Temperature Trim at 300°F).

Appendix 1: Exploded View Reference Drawings

Models 312R, 312F & 314F – SEALED, Long-Coupled



Appendix 2: Meaning of Abbreviated Terms

Term	Meaning	Notes
ANSI	American National Standards Institute	e.g., ANSI 150# flanges
BSPT	British Standard Pipe Threads	Type of threaded port
Buna-N	Buna Nitrile (rubber)	O-ring material; NBR; elastomer
C. Can	Containment Can	Part of Mag-drive pump
CC	Close-Coupled	Method of pump-motor coupling
CO	Chrome Oxide	Shaft coating material
CS	Carbon Steel	Mechanical coupling key and outer magnet structural material
DMS	Double Mechanical Seal	Internally mounted double seal
Drwg.	Drawing (Item #)	See corresponding exploded view reference drawing
EBF	External Bearing Flush	Housing option for 3-Series pumps
EMS	External Mechanical Seal	Externally mounted single seal
EPDM	Ethylene-Propylene-Diene Monomer (rubber)	O-ring material; elastomer
FH-SHCS	Flat Head, Socket Head Cap Screw	Type of bolt
HHCS	Hex Head Cap Screw	Type of bolt
HY	High-Yield (key)	Type of gear key
IBF	Internal Bearing Flush	Housing option for 3-Series pumps
LC	Long-Coupled	Method of pump-motor coupling
LY	Low-Yield (key)	Type of gear key
MC	Magnetically Coupled	Mag-drive pump
MS	Mechanical Seal	Includes single, double & external seals
NPT	National Pipe Threads	Type of threaded port
PEEK	Poly-Ether-Ether-Ketone (plastic)	Bearing Grade PEEK; material option for gears, bearings & wear plates
Pos.	Position (#)	Position number of model code
PS	Packing Seal	Comprised of Teflon or Graphoil packing rings
RF	Raised Face	Type of flange
SHCS	Socket Head Cap Screw	Type of bolt
SiC	Silicon Carbide	Bearing, wear plate and seal seat material
Silicone/FEP	Silicone Rubber (encapsulated with) Fluoro-ethylene-propylene (plastic)	O-ring material; suggested for temperature cycling applications
SmCo	Samarium Cobalt	Inner and outer magnet material
SMS	Single Mechanical Seal	Internally mounted single seal
SS	Stainless Steel	e.g., 303 SS, 316 SS, 18-8 SS
Std.	Standard	Standard housing (without Flush)
TC	Tungsten Carbide	Shaft coating material
X	Not Available or Not Applicable	Used in lieu of Part Number
#	Number or Pound	e.g., Position #, Part #, 150# flanges, etc.