

#### APPLICATIONS:

Liquid level controller for oil and gas separators, water knockouts, gas scrubbers and accumulators.

Liquid interface control in fluids of 0.20 minimum differential specific gravities with the standard displacer. Other displacers are available to control liquid interface to 0.10 minimum specific gravities.

Operates any diaphragm control valve requiring not more than 45 psig diaphragm pressure.

#### FEATURES:

- Compact design fits in production units & other tight spaces.
- Snap or throttle control in one pilot
- Easily convert b/tw left/right mount & direct/indirect action
- Non-bleed pilot (Preferred EPA Natural Gas Star BMP)
- 1/4" NPT vent ports for optional emissions capture
- No vent gas in enclosure
- Simple pilot removal
- Powder coated enclosure
- Vibration resistant
- PVC Displacer (Std.) (4000 psi, 175°F);
- 316 SS Displacer (Optional) (1500 psi, 350°F)
- 40 micron supply gas filter
- Paraffin cleanout port

#### CERTIFICATIONS:

- NACE MR0175 compliant Wetted Parts option available
- Certification documents available upon request, specify when ordering

Kimray is an ISO 9001- certified manufacturer.

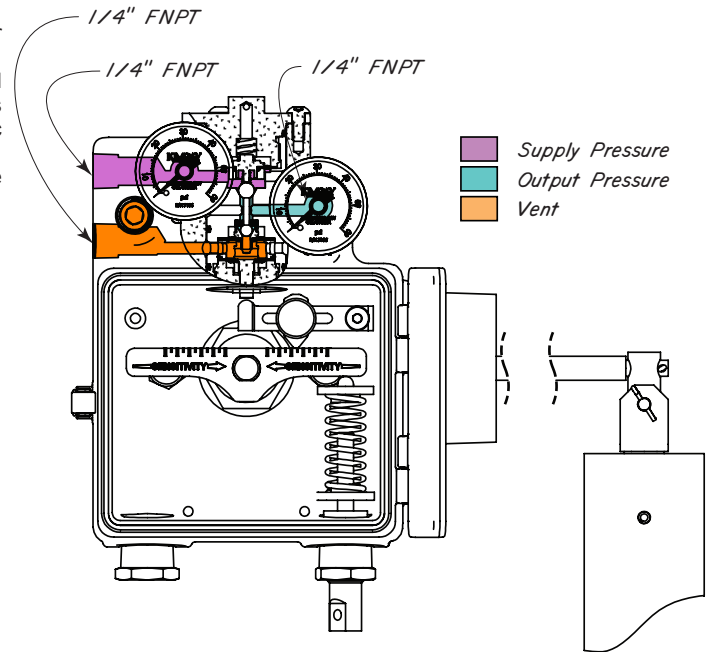


Image above shown in left mount

Standard Configuration Code †	Order Code	Line Size	Connection Type	Mounting Type	Supply Press. psig	Max. W.P. †† psig
FPL2S4L1AS	LCL	2"	NPT	Left Hand	5 - 45	4000
FPL2ARL1AS	LCA		150RF			285
FPL2BRL1AS			300RF			740
FPL2DRL1AS			600RF			1480
FPL2FRL1AS			1500RF			3705
FPL2DJL1AS			600RTJ			1480
FPL2FJL1AS			1500RTJ			3705
FPL3ARL1AS			3"			150RF
FPL3BRL1AS		300RF		740		
FPL3DRL1AS	LCW	600RF		1480		
FPL3ERL1AS		900RF		2220		
FPL3FRL1AS		1500RF		3705		
FPL3DJL1AS		600RTJ		1480		
FPL3EJL1AS		900RTJ		2220		
FPL3HUL1AS	LDC	H.U.		3000		
FPL4ARL1AS	LDM	4"	150RF	Right Hand	5 - 45	285
FPL4BRL1AS			300RF			740
FPL4DRL1AS			600RF			1480
FPL4ERL1AS			900RF			2220
FPL4FRL1AS			1500RF			3705
FPL4DJL1AS			600RTJ			1480
FPL4HUL1AS			H.U.			1500
FPL5HUL1AS	LEM		5"			H.U.
FPL6FRL1AS		6"	1500RF	3705		

Standard Configuration Code †	Order Code	Line Size	Connection Type	Mounting Type	Supply Press. psig	Max. W.P. †† psig
FPL2S4R1AS	LCR	2"	NPT	Right Hand	5 - 45	4000
FPL2ARR1AS	LCJ		150RF			285
FPL2BRR1AS			300RF			740
FPL2DRR1AS			600RF			1480
FPL2FRR1AS			1500RF			3705
FPL2DJR1AS			600RTJ			1480
FPL2FJR1AS			1500RTJ			3705
FPL3ARR1AS			3"			150RF
FPL3BRR1AS		300RF		740		
FPL3DRR1AS	LDF	600RF		1480		
FPL3ERR1AS		900RF		2220		
FPL3FRR1AS		1500RF		3705		
FPL3DJR1AS		600RTJ		1480		
FPL3EJR1AS		900RTJ		2220		
FPL3HUR1AS	LDL	H.U.		3000		
FPL4ARR1AS	LDV	4"	150RF	Right Hand	5 - 45	285
FPL4BRR1AS			300RF			740
FPL4DRR1AS			600RF			1480
FPL4ERR1AS			900RF			2220
FPL4FRR1AS			1500RF			3705
FPL4DJR1AS			600RTJ			1480
FPL4HUR1AS			H.U.			1500
FPL5HUR1AS	LEV		5"			H.U.
FPL6FRR1AS		6"	1500RF	3705		

#### NOTES:

For standard & optional seals, metals, Cf Cv values, material specifications & dimensions see technical data on pages 08:I - 08:VII

† For Corrosive service remove last "S" & replace with "C"

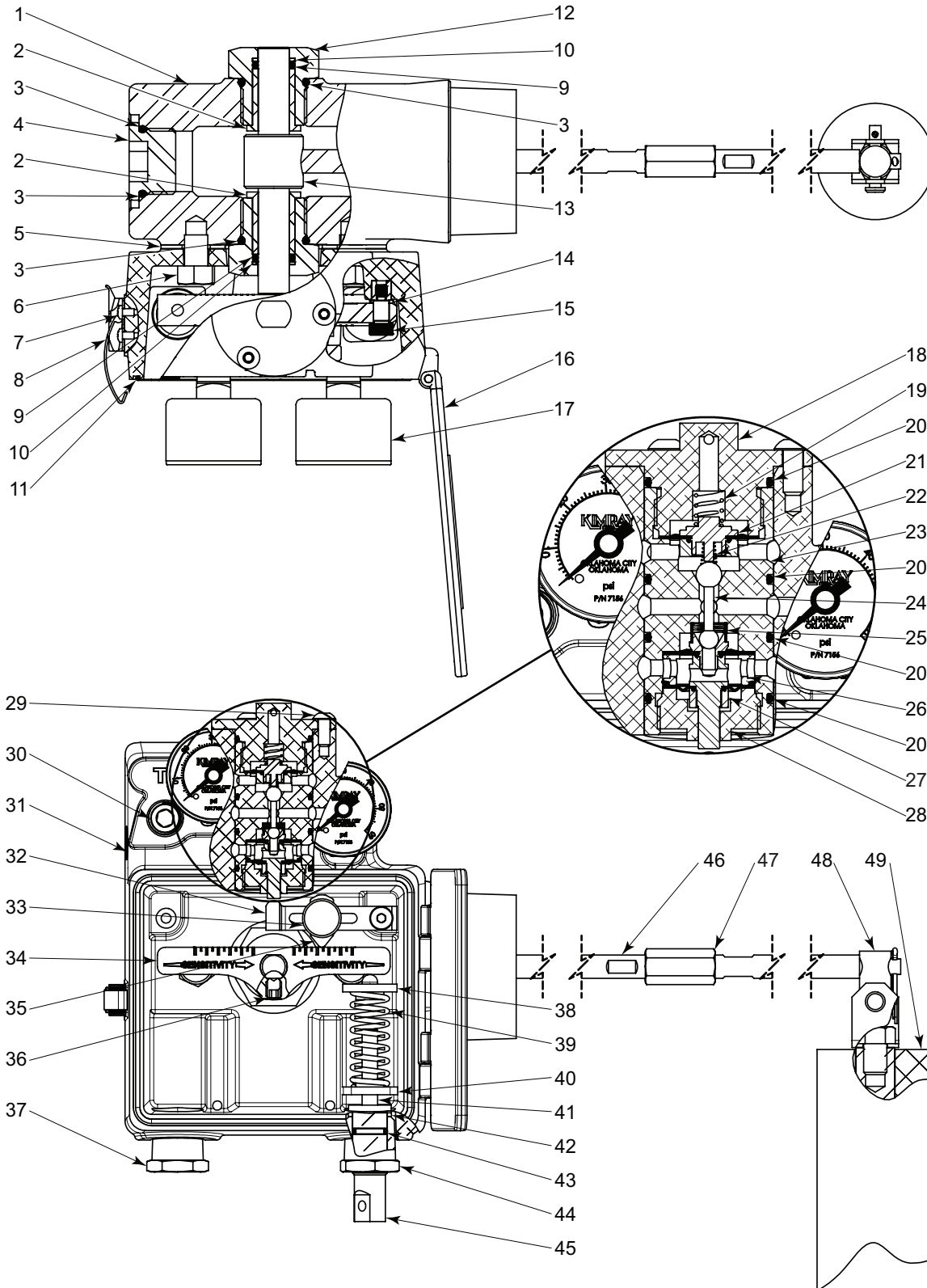
† For code builder see page 08:00.2

†† Max W.P. values based on -20°F to 100°F.

All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

# FLOAT OPERATED CONTROLLERS

## GEN 3 PNEUMATIC LEVEL CONTROLLER MODEL PL



All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

ITEM	QTY.	DESCRIPTION	PART NUMBER						CORROSIVE
			STANDARD						
			2 INCH	3 INCH	4 INCH	5 INCH	6 INCH	2 INCH	
1	1	Body						2 INCH	
		MNPT	7736	----	----	----	----	7736S6	
		150RF	7820	7826	7833	----	----	----	
		300RF	7821	7827	7834	----	----	----	
		600RF	7822	7828	7835	----	----	----	
		900RF	----	7829	7836	----	----	----	
		1500RF	7823	7830	7837	----	7839	----	
		600RTJ	7824	7831	7838	----	----	----	
		900RTJ	----	7832	----	----	----	----	
		1500RTJ	7825	----	----	----	----	----	
		Hammer Union	----	7759	7760	7761	----	----	

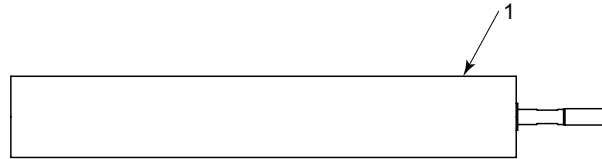
ITEM	QTY.	DESCRIPTION	PART NO		ITEM	QTY.	DESCRIPTION	PART NO	
			STANDARD	CORROSIVE				STANDARD	CORROSIVE
2	2	Flanged Bearing *	7678		27	1	Lower Diaphragm Assy. ◇ *	7096AS	
3	3	O-Ring, Fitting *	7679V		28	1	Bottom Cartridge Cap ◇	7743	
4	1	SAE Bearing	7667S6		29	3	Pilot Screw	7739	
5	1	Mount Gasket *	7754		30	3	NPT Socket Plug	7762	
6	2	Mount Screw	7908		31	1	Enclosure	7735AS	
7	2	Latch Screw	7752		32	1	Pilot Lever	7673	
8	1	Latch	5463		33	1	Sensitivity Knob	7742	
9	2	O-Ring, Shaft *	7758V		34	1	Torque Lever	7672	
10	2	Back-Up Standard *	7680V		35	1	Sensitivity Fulcrum	7674	
		Shaft PTFE (AFLAS kit only)	7819		36	1	Torque Level Set Screw	7749	
11	1	Cover Seal	7763		37	1	Hex NPT Plug	7756	
12	2	Bearing Hub	7666	7666S6	38	1	Upper Spring Plate	7675	
13	1	Torque Shaft	7668	7668S6	39	1	Spring Light	7725	
14	1	Pilot Washer *	7751				Spring Heavy	7726	
15	1	Pilot Lever Screw	7740		40	1	Lower Spring Plate	7676	
16	1	Enclosure Cover	7737		41	1	Spring Adjuster Set Screw	7750	
17	2	Gauge	7156		42	1	Spring Adjuster Washer *	7727	
18	1	Top Cartridge Cap ◇	7745		43	1	O-Ring, Spring Adjuster *	7748	
19	1	Booster Spring ◇ *	585L		44	1	Spring Adjuster Bushing	7757	
20	4	O-Ring, Pilot ◇ *	5226V		45	1	Spring Adjusting Knob	7677	
21	1	Upper Diaphragm Assy. ◇ *	7102AS		46	1	Displacer Arm	7681	
22	1	Conical Spring ◇ *	5469		47	1	Waggle Arm Coupling	5454	
23	1	Cartridge Body ◇	7744		48	1	Rod Assembly	7723A	
24	1	Pilot Plug ◇ *	112				Optional 6" Arm Extension	5543L6	
25	1	Spring ◇ *	5541				Optional 12" Arm Extension	5543L12	
26	1	Diaphragm Spacer ◇	5475				Optional 18" Arm Extension	5543L18	
Repair Kits			RYC		* These parts are recommended spare parts and stocked as repair kits.				
Pilot Assembly			YBZ		◇ These parts are stocked as Pilot Assembly				

ITEM	QTY.	DESCRIPTION	PART NO	WEIGHT	MAX TEMP	MAX PSI	MIN DIFF. SP.GR.	MATERIAL	SPRING P/N BASED ON EXTENSION LENGTH			
									NO Ext.	6" Ext.	12" Ext.	18" Ext.
49	1	Displacers							7725	7725	7725	7725
		1 7/8" x 12" Lg	7637A	1lb 15oz	180°F	4000	>0.20	PVC	7725	7725	7726	7726
		2 1/2" x 12" Lg	7639A	3lb 0.5oz	180°F	4000	>0.15	PVC	7725	7725	7726	7726
		1 7/8" x 20" Lg	7638A	3lb 5oz	180°F	4000	>0.15	PVC	7725	7725	7726	7726
		2 3/4" x 14 1/4" Lg	7640A	4lb 5oz	180°F	4000	>0.1	PVC	7725	7726	7726	7726
		1 3/4" x 12" Lg	5461SS6	1lb 15oz	500°F	2000	>0.20	316SS	7725	7725	7725	7725
		1 3/4" x 20" Lg	5461SS6L20	3lb 0oz	500°F	2000	>0.17	316SS	7725	7725	7726	7726

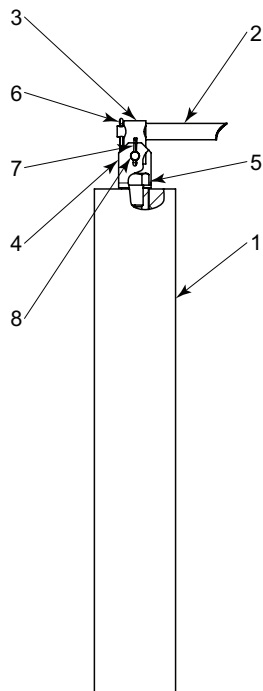
ACCESSORIES (not shown)	
ITEM	DESCRIPTION
Hex Key	7845
Filter	7847

EXTENSION RODS KITS			
Extension Kit	Length	Coupling	Arm Ext.
LPA	6"	5454	5543L6
LPB	12"	5454	5543L12
LPC	18"	5454	5543L18

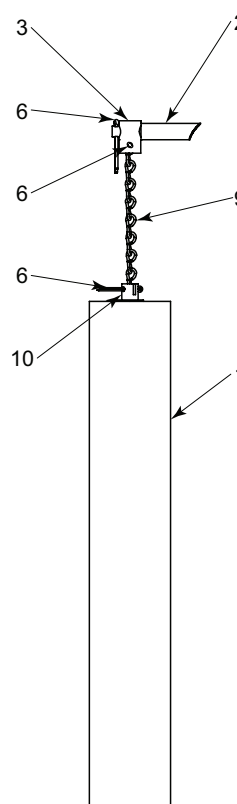
HORIZONTAL (STD.)



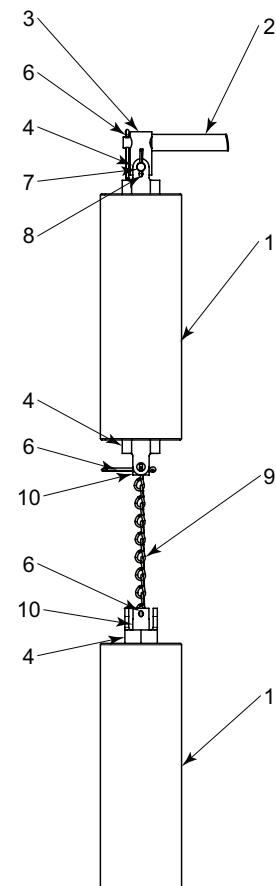
VERTICAL (STD.)



HANGING



SPLIT FLOAT



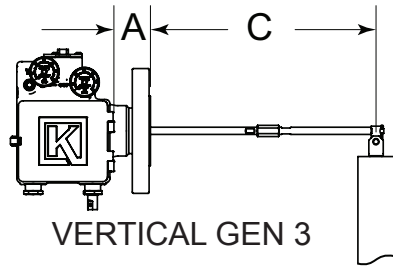
ITEM	DESCRIPTION	HORIZONTAL (STD.)		VERTICAL (STD.)		HANGING		SPLIT	
		PART NO	QTY.	PART NO	QTY.	PART NO	QTY.	PART NO	QTY.
1	Displacer	7637A	1	7637A	1	7637A	1	5560	2
2	Displacer ARM			5453	1	5453	1	5453	1
3	Hanger Block			6541	1	5546SS6	1	6541	1
4	U Bracket / Bushing			7577	1		1	6557SS6	3
5	Bolt			7696S6	1				
6	Cotter Pin			363	1	363	3	363	3
7	Clevis Pin			7168	1			7168	1
8	Cotter Pin			7169	1			7169	1
9	Chain					* 2826	1	* 2826	1
10	Screw					5547SS6	1	5547SS6	2
Kit Number						CMQ		CMP	

\* Part 2826 chain comes in 8 foot length

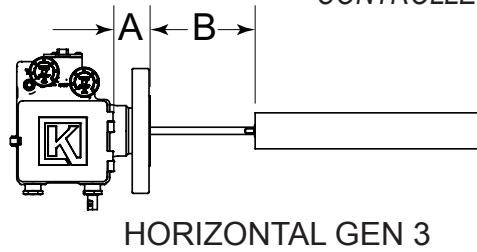
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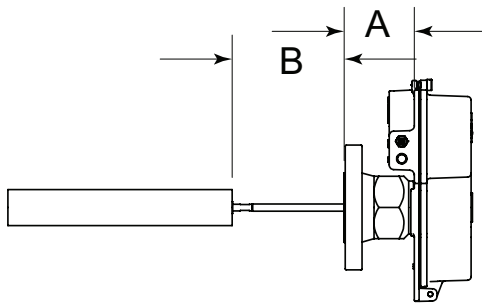
### DIMENSIONS CONTROLLER FLANGES



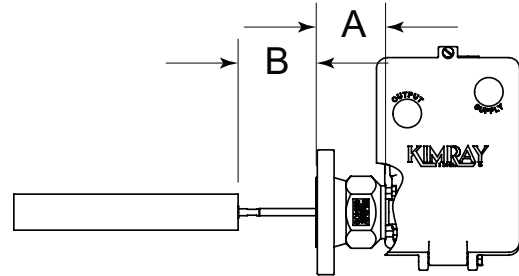
VERTICAL GEN 3



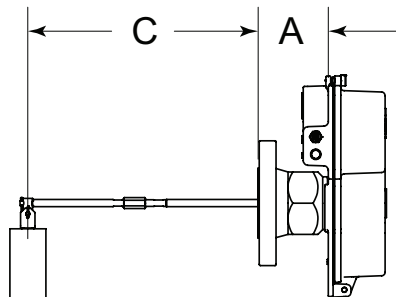
HORIZONTAL GEN 3



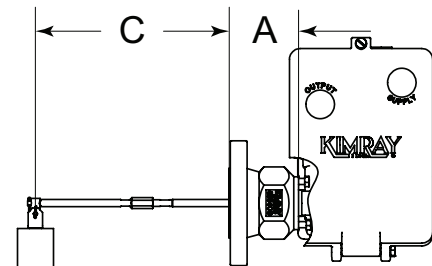
HORIZONTAL BACK MOUNT



HORIZONTAL SIDE MOUNT GEN II



VERTICAL BACK MOUNT



VERTICAL SIDE MOUNT GEN II

FLANGES		150#			300#			600#			900#			1500#			
TYPE	SIZE	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	
GEN 3	Raised Face	2"	1 11/16	5 3/4	11 15/16	1 29/32	5 15/32	11 3/4	2 3/16	5 1/4	11 7/16	---	---	---	2 41/16	4 3/4	10 15/16
		3"	1 11/16	5 3/4	11 15/16	2 1/16	5 21/16	11 9/16	2 7/16	5	11 3/16	3 3/32	4 3/8	10 9/16	3 13/16	3 4	9 13/16
		4"	1 7/8	5 9/16	11 3/4	2 3/16	5 9/16	11 7/16	2 41/16	4 3/4	10 15/16	2 21/32	4 13/16	11	3 9/32	4 3/16	10 3/8
		6"	---	---	---	---	---	---	---	---	---	---	---	---	4 5/32	3 5/16	9 1/2
	Ring Joint	2"	---	---	---	---	---	---	2 1/4	5 3/16	11 3/8	---	---	---	2 7/16	5	11 3/16
		3"	---	---	---	---	---	---	2 3/16	5 1/4	11 7/16	2 7/16	4 41/16	10 7/8	---	---	---
4"		---	---	---	---	---	---	2 7/16	4 41/16	10 7/8	---	---	---	---	---	---	
GEN II SIDE MOUNT	Raised Face	2"	3 7/16	4 5/8	10 3/4	3 5/8	4 1/16	10 9/16	3 15/16	3 5/8	10 1/4	---	---	---	4 7/16	3 3/16	9 3/4
		3"	3 7/16	4 1/4	10 3/4	3 15/16	3 3/4	10 1/4	4 3/16	3 3/16	10	4 13/16	3 1/16	9 3/8	6 5/16	1 3/8	7 7/8
		4"	3 11/16	3 15/16	10 1/2	3 15/16	3 3/4	10 1/4	4 7/16	3 1/4	9 3/4	5 1/8	2 9/16	9 1/16	5 3/4	1 15/16	8 7/16
		6"	---	---	---	---	---	---	---	---	---	---	---	---	5 7/8	1 13/16	8 5/16
	Ring Joint	2"	---	---	---	---	---	---	4	3 1/2	10 3/16	---	---	---	4 3/16	3 1/2	10
		3"	---	---	---	---	---	---	3 15/16	3 3/4	10 1/4	4 1/2	3 3/16	9 11/16	---	---	---
4"		---	---	---	---	---	---	4 1/2	3 3/16	9 11/16	---	---	---	---	---	---	
BACK MOUNT	Raised Face	2"	3 1/2	6 16/13	12 3/8	5 9/16	3 11/16	12	4	5 7/16	11 7/8	4 1/2	5 13/16	11 3/8	---	---	---
		3"	3 1/2	6 13/16	12 3/8	3 13/16	6 7/16	12	4 1/4	1/16	11 5/8	4 7/8	5 7/16	11	9 1/2	3 15/16	6 5/16
		4"	3 11/16	6 5/8	12 3/16	4	6 5/16	11 7/8	4 1/2	5 13/16	11 3/8	---	---	---	5 1/8	5 3/16	10 3/4
		6"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Ring Joint	2"	---	---	---	---	---	---	4 1/16	6 1/4	11 13/16	---	---	---	4 1/4	6 1/16	11 5/8
		3"	---	---	---	---	---	---	4	6 5/16	11 7/8	4 9/16	5 3/4	11 5/16	---	---	---
4"		---	---	---	---	---	---	4 9/16	5 3/4	11 5/16	---	---	---	---	---	---	

All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

Table 1 - GEN 3 Seal Options			
Product Type	Part	Standard Material	Optional Material
Pneumatic	Mounting Piece	FKM	AFLAS®, HSN,
	Pilot Seals	FKM	N/A

Table 2 - GEN II Seal Options			
Product Type	Part	Standard Material	Optional Material
Pneumatic & Electric	Mounting Piece	LTV	AFLAS®, HSN, PTFE
Pneumatic	Pilot Seals	FKM	N/A

Table 3 - Level Switch Seal Options			
Product Type	Part	Standard Material	Optional Material
Electric Switch	O-rings	FKM	AFLAS®, HSN, Nitrile
Pneumatic Switch	O-rings	FKM	N/A
	Diaphragm	FKM	LTN

Table 4 - Seal Specifications						
		NITRILE	LOW TEMP NITRILE	HIGHLY SATURATED NITRILE	FKM	AFLAS®
	Kimray Suffix	-	LTN	HSN	V	AF
Resistance	Abrasion	G	G	G-E	G	G
	Acid	F	F	G-E	G-E	E
	Chemical	F	F	F	E	E
	Cold	G	E	G	P	P
	Flame	P	P	P	E	E
	Heat	G	G	E	E	E
	Oil	G-E	G-E	E	E	E
	Ozone	P	P	G	G-E	E
	Set	G	G	G	G-E	P
	Tear	F	F	F	F	P
	Water/Steam	F	F	E	P	G
	Weather	F	F	G	E	E
	CO2	F-G	F-G	G	G	G
	H2S	P	P	F	P	E
	Methanol	F	P	E	P	P
Properties	Dynamic	G	G	G	G	G
	Electrical	F	F	F	F	G-E
	Impermeability	G	G	G	G	G
	Tensile Strength	G	G	G-E	G	F
Temp. Range		-20° to +250°F	-65° to +225°F	-20° to +300°F	-15° to +400°F	+15° to +450°F
		-29° to +121°C	-53° to +107°C	-29° to +149°C	-26° to +204°C	-9° to +232°C
RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT						

<b>Table 5 - Material Options</b>			
	<b>Component</b>	<b>Standard Material</b>	<b>Optional Material</b>
<b>Pneumatic GEN3 Level Controllers</b>	Body	Steel (ASTM SA352LCB)	316SS (ASTM A351 CF8M)
	Pilot	Aluminum (ASTM B221 6061-T6)	N/A
	Shaft & Bearing Hubs	Steel (ASTM)	316SS (ASTM A240)
	Bearings	Polyimide filled PTFE	N/A
	Levers	Steel (FLN2C-4005)	N/A
	Displacer	PVC	316SS (ASTM A 240)
	Spring	17-7SS (ASTM A313)	N/A
<b>Pneumatic &amp; Electric GEN II Level Controllers</b>	Body	Steel (ASTM SA352LCB)	316SS (ASTM A351 CF8M)
	Pilot	Aluminum (ASTM B221 6061-T6)	N/A
	Link	303SS (ASTM A582)	N/A
	Tangent Arm	316SS (ASTM A240)	N/A
	Waggle Arm	316SS (ASTM A479)	N/A
	Displacer	PVC	316SS (ASTM A 240)
	Spring	17-7PH Condition C 302SS (ASTM A313)	N/A
<b>Pneumatic Level Switches</b>	Body	Aluminum (ASTM B221 6061-T6)	N/A
	Float	316SS (ASTM A 240)	N/A
<b>External Float Cages</b>	Electronic & Pneumatic Level Switch Float Cage	Steel (ASTM SA352LCB)	316SS (ASTM A351 CF8M)
	Horizontal GEN II Float Cage	ASTM A-106 GR. B	N/A
	Vertical External GEN II Float Cage	SA-106B, SA-234 WPB, SA-516-70	N/A



# FLOAT OPERATED CONTROLLERS



## CODE BUILDER F SERIES (LEVEL CONTROLS)

Series:

F = Float Operated Controllers

Model:

PC = GEN II Pneumatic Level Controller  
 EC = Electric Level Controller (Back Mount only)  
 PL = GEN 3 Pneumatic Level Controller

Connection Size:

2 = 2 NPS  
 3 = 3 NPS  
 4 = 4 NPS  
 5 = 5 NPS (HU only)  
 6 = 6 NPS

End Connection:

**S4 = 4000 psi MNPT - 2 inch only**

AR = 150 RF  
 BR = 300 RF  
 DR = 600 RF  
 ER = 900 RF  
 FR = 1500 RF  
 DJ = 600 RTJ  
 EJ = 900 RTJ  
 FJ = 1500 RTJ  
 HU = Hammer Union - 3,4,5 inch only  
 GV = Grooved - 2 inch L & R only (PC & EC only)

Mounting Type:

L = Left Side Mount  
 R = Right Side Mount  
 B = Back Mount (PC & EC only)

Displacer Type:

Displacer Extensions:

A = None  
 B = 6 inch  
 C = 12 inch  
 D = 18 inch

**1 = 1 7/8 x 12**

2 = 1 7/8 x 20

3 = 2 3/4 x 14 1/4

4 = 2 1/2 x 12

5 = 1 7/8 x 5 11/16

6 = 1 3/4 x 12

7 = 1 3/4 x 20

Poly  
4000 psi

316SS  
2000 psi

Service Type:

S = Standard LCC body  
 C = Corrosive (S6 body)

F PC 2 S4 B 1 A S

Options: Additional cost and lead times will apply  
 If multiple options required input in sequential order  
 Leave blank if no options required

1 = NACE Certification (Corrosive Option Only)  
 2 = Hydrostatic Test Certification  
 3 = MTR (Shell Components)  
 A = AFLAS Elastomer  
 H = HSN Elastomer  
 X = Export (Hydrostatic test, MTR & 3.1)

Not all selections available on all products listed.  
 See product pages 08:10.1 - 08:30.3 for available options