

APPLICATIONS:

Liquid level controller for oil and gas separators, water knock-outs, 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 motor valve requiring not more than 30 psig diaphragm pressure. See sections E1, E2, E3, and E4 for diaphragm operated motor valves.

FEATURES:

- Compact design
- Snap or throttle control in one pilot
- Intermittent vent pilot (Preferred EPA Natural Gas Star BMP)
- Vent Rate (@ 30 psi - 0.4 scfd snap; 0.6 scfd throttle)
- NACE MR0175 compliant Wetted Parts
- Certification documents Available upon request, specify when ordering
- Low Temp Process Seal (Std.) (-50°F to 300°F)
- Powder coated enclosure
- Vibration tough
- No vent gas in Enclosure
- PVC Displacer (Std.) (4000 psi, 175°F);
- 316 SS Displacer (1500 psi, 350°F)
- 40 micron supply gas filter
- 1/4" NPT vented pilot
- Adjustment knob snap range (Patent Pending)
- Simple pilot removal

OPERATION:

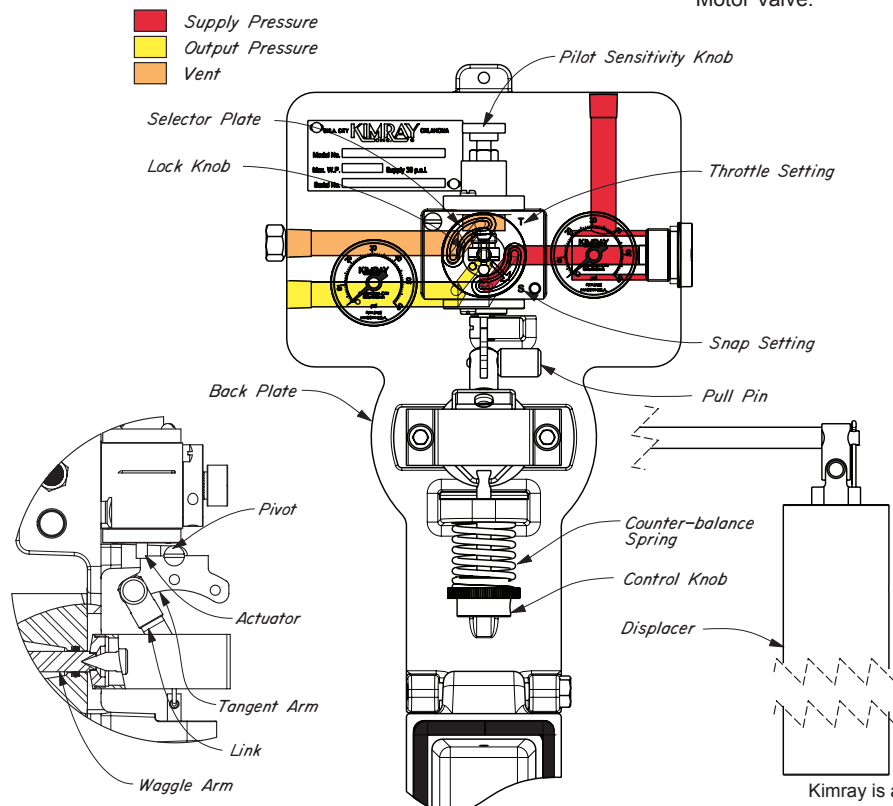
The GEN II Back Mount Liquid Level Controller consists of a DISPLACER for monitoring the changing liquid level, a SPRING for counterbalancing the weight of the DISPLACER, a WAGGLE ARM to transmit DISPLACER movement, a BACK PLATE upon which the controller mechanism is mounted, a 30 psig PILOT, a LINK and TANGENT ARM for setting the pilot sensitivity and direct/indirect action of the controller.

The color cross section of the pilot is shown identifying the supply, output and vent connections. In SNAP SERVICE the SELECTOR PLATE is position to the "S". To operate a Pressure Opening Motor Valve, the PULL PIN is place in the outer most hole of the TANGENT ARM left of the PIVOT. As the vessel liquid rises to partially submerge the DISPLACER. The displaced volume of liquid causes the counterbalance spring to exert a downward force at the end of the WAGGLE ARM HOUSING. The resulting downward movement of the LINK moves the TANGENT ARM downward from the ACTUATOR of the PILOT. The generated force of the DISPLACER continues until it activates and SNAPS the PILOT on. YELLOW OUTPUT pressure opens the Pressure Opening Motor Valve allowing the vessel liquid to drain.

As the vessel liquid lowers, the DISPLACER compresses the COUNTERBALANCE SPRING. The WAGGLE ARM transmits the action through the linkage to the ACTUATOR on the PILOT. The force on the ACTUATOR of the PILOT continues to increase until the PILOT SNAPS off. The YELLOW OUTPUT pressure is vented through the PILOT allowing the Motor Valve to close.

The PILOT SENSITIVITY KNOB can be turned to increase or decrease the SNAP RANGE from 4" to 9" in water. Turning the PILOT SENSITIVITY KNOB clockwise will increase the SNAP RANGE. The PILOT SENSITIVITY KNOB is not functional in the THROTTLE mode.

For THROTTLE mode the LOCK KNOB is loosened and the SELECTOR PLATE is moved from the "S" position to the "T" position. The PULL PIN is placed right of the PIVOT for a Pressure Open Motor Valve and left of the PIVOT for a Pressure Close Motor Valve.

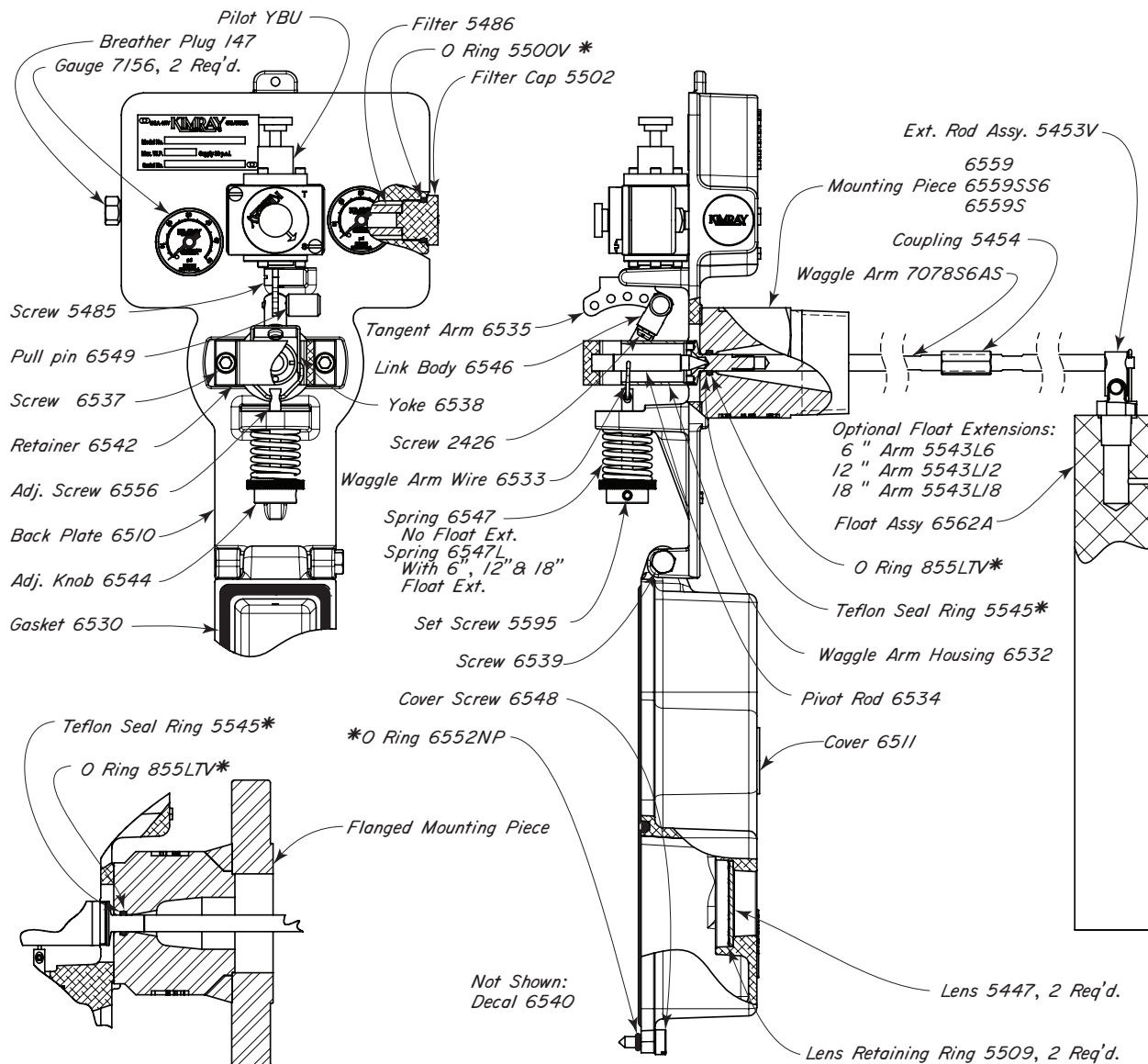


Kimray is an ISO 9001- certified manufacturer.

FLOAT OPERATED LEVEL CONTROLLER

GEN II BACK MOUNT
LCC, SS6 STEEL BODY

KIMRAY INC.®



CONTROLLERS AVAILABLE:

PART NO.	BODY CONNECTION	MODEL NO.	SUPPLY PRES.	MAX ^{††} W.P.	REP. KIT
CMM	2" NPT	GEN II LLC	0-30	4000	RMG
CMY	2" NPT S6	GEN II LLC	0-30	4000	RMG
CQO	2" NPT	GEN II LLC HANG	0-30	4000	RMG
CMX	2" NPT STL	GEN II LLC	0-30	4000	RMG

NOTES:

*These parts are recommended spare parts and are stocked as repair kits.

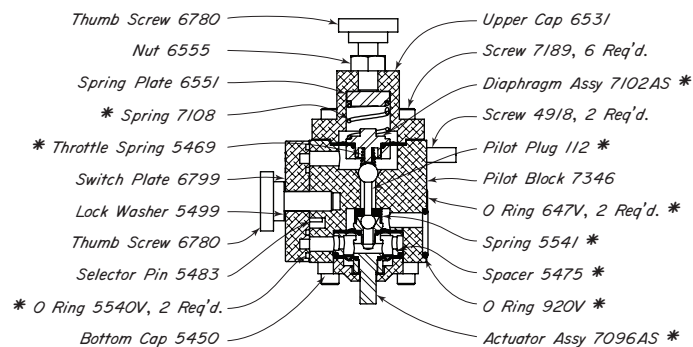
For optional Bodies, Float Assemblies & Float cages see Accessories on pages C1:40.1 - C1:40.6

For standard & optional Seals, Metals, Material specifications & Dimensions see Technical Data on pages C1:I - C1:V

^{††} Working Pressure based on -20°F to 100°F operating temperature. See page C1:VI for temps above 100°F

C1:20.2
Issued 10/19

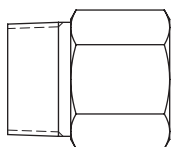
YBU PILOTS 30 psig MAX W.P.



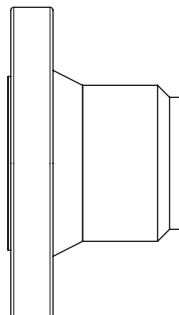
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Current Revision:
Add Optional Float Extensions & Springs

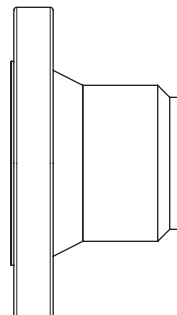
2" NPT (STD)



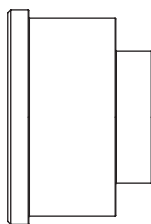
RF FLANGED



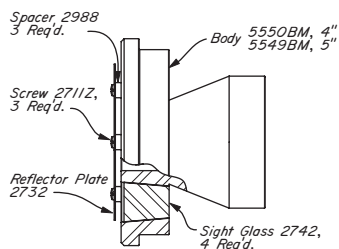
RTJ FLANGED



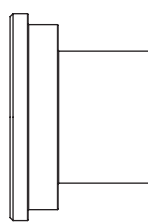
HAMMER UNION



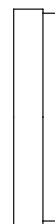
HAMMER UNION
(w/Sight Glass)



HAMMER UNION
(w/o Sight Glass)



ADAPTER



PART NO.	BODY			MAX. W.P. @ 100° F
6559	2"	NPT	GEN II	4000
6559SS6	2"	NPT	GEN II SS6	4000
5562BM	2"	150 RF	GEN II	285
5563BM	2"	300 RF	GEN II	740
5564BM	2"	600 RF	GEN II	1480
5565BM	2"	900/1500 RF	GEN II	2220
5568BM	2"	600 RTJ	GEN II	1480
5569BM	2"	1500 RTJ	GEN II	3705
5570BM	3"	150 RF	GEN II	285
5555BM	3"	300 RF	GEN II	740
5571BM	3"	600 RF	GEN II	1480
5572BM	3"	900 RF	GEN II	2220
6414BM	3"	1500 RF	GEN II	3705

PART NO.	BODY			MAX. W.P. @ 100° F
5573BM	3"	600 RTJ	GEN II	1480
5574BM	3"	900 RTJ	GEN II	2220
5558BM	3"	H.U. w/o SG	GEN II UN	3000
5575BM	4"	150 RF	GEN II	285
5576BM	4"	300 RF	GEN II	740
5577BM	4"	600 RF	GEN II	1480
5578BM	4"	600 RTJ	GEN II	1480
5579BM	4"	1500 RF	GEN II	3705
5551BM	4"	H.U. w/o SG		1500
2174	4"	GRV. X 2" NPT	ADAPTER	2000
5552BM	5"	H.U. w/o SG	GEN II UN	1500
5580BM	6"	1500 RF	GEN II	3705

FLOAT OPERATED LEVEL CONTROLLER

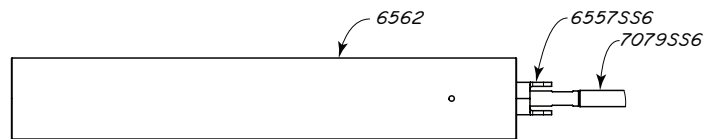


GEN II

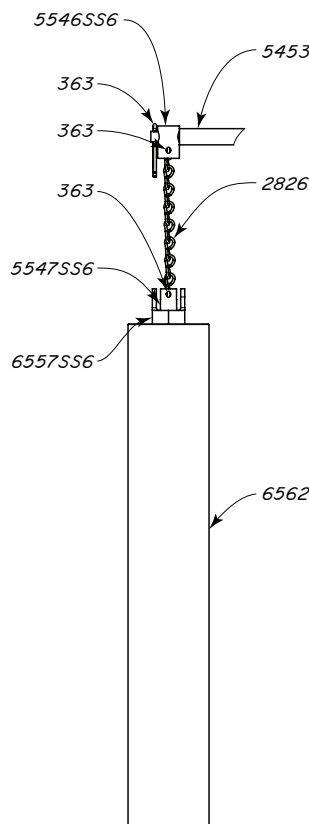
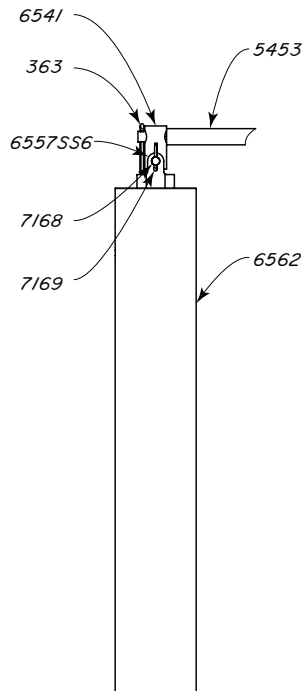
FLANGED BODY OPTIONS.

PART NO.	BODY CONNECTION	MODEL NO	SUPPLY PRES.	MAX W.P. @ 100°F	REP. KIT	MOUNTING PIECE
PNEUMATIC - BACK MOUNT						
COT	2" 150RF	GEN II BM LLC	0-30	285	RMG	5562BM
COV	2" 300RF	GEN II BM LLC	0-30	740	RMG	5563BM
COX	2" 600RF	GEN II BM LLC	0-30	1480	RMG	5564BM
CSY	2" 600RTJ	GEN II BM LLC	0-30	1480	RMG	5568BM
COZ	2" 900/1500RF	GEN II BM LLC	0-30	2220	RMG	5565BM
CTA	2" 1500RTJ	GEN II BM LLC	0-30	3705	RMG	5569BM
CPB	3" 150RF	GEN II BM LLC	0-30	285	RMG	5570BM
CPD	3" 300RF	GEN II BM LLC	0-30	740	RMG	5555BM
CPF	3" 600RF	GEN II BM LLC	0-30	1480	RMG	5571BM
CTC	3" 600RTJ	GEN II BM LLC	0-30	1480	RMG	5573BM
CPH	3" 900RF	GEN II BM LLC	0-30	2220	RMG	5572BM
CTE	3" 900RTJ	GEN II BM LLC	0-30	2220	RMG	5574BM
CRC	3" 1500RF	GEN II BM LLC	0-30	3705	RMG	6414BM
CST	4" Hammer Union	GEN II BM LLC W/O SIGHT GLASS W/ Thread 4 1/2" - 4 ACME	0-30	3000	RMG	5558BM
CPJ	4" 150RF	GEN II BM LLC	0-30	285	RMG	5575BM
CPL	4" 300RF	GEN II BM LLC	0-30	740	RMG	5576BM
CPN	4" 600RF	GEN II BM LLC	0-30	1480	RMG	5577BM
CTG	4" 600RTJ	GEN II BM LLC	0-30	1480	RMG	5578BM
CTI	4" 900RTJ	GEN II BM LLC	0-30	2220	RMG	5600BM
CRE	4" 1500RF	GEN II BM LLC	0-30	3705	RMG	5579BM
CTK	4" 1500RTJ	GEN II BM LLC	0-30	3705	RMG	5600BM
CSN	4" Hammer Union	GEN II BM LLC W/ SIGHT GLASS W/ Thread 4 1/2" - 6 ACME -2G	0-30	1000	RMG	5550BM
CSR	4" Hammer Union	GEN II BM LLC W/ SIGHT GLASS W/ 4 1/2" - 8 UN-2B THREAD	0-30	1000	RMG	5550BM
CPP	4" Hammer Union	GEN II BM LLC W/O SIGHT GLASS W/ Thread 4 1/2" - 6 ACME -2G	0-30	1500	RMG	5551BM
CSP	4" Hammer Union	GEN II BM LLC W/O SIGHT GLASS W/ 4 1/2" - 8 UN-2B THREAD	0-30	1500	RMG	5551BM
CTO	5" Hammer Union	GEN II BM LLC W/O SIGHT GLASS W/ 5 1/2" - 6 STD. ACME THD. 2G	0-30	1500	RMG	5552BM
CTU	5" Hammer Union	GEN II BM LLC W/O SIGHT GLASS W/ 5 5/8" - 4-ACME-2G	0-30	1500	RMG	5552BM
CRG	6" 600RF	GEN II BM LLC	0-30	1480	RMG	6605BM
CRI	6" 1500RF	GEN II BM LLC	0-30	3705	RMG	5580BM
ELECTRIC - BACK MOUNT						
COTE	2" 150RF	GEN II EBM LLC	0-30	285	RMG	5562BM
CPBE	3" 150RF	GEN II EBM LLC	0-30	285	RMG	5570BM
CPJE	4" 150RF	GEN II EBM LLC	0-30	285	RMG	5575BM
CTQE	5" Hammer Union	GEN II EBM LLC W/ SIGHT GLASS W/ 5 1/2" - 6 STD. ACME THD. 2G	0-30	1000	RMG	5549BM
CTOE	5" Hammer Union	GEN II EBM LLC W/O SIGHT GLASS W/ 5 1/2" - 6 STD. ACME THD. 2G	0-30	1500	RMG	5552BM
CTUE	5" Hammer Union	GEN II EBM LLC W/O SIGHT GLASS W/ 5 5/8" - 4-ACME-2G	0-30	1500	RMG	5552BM

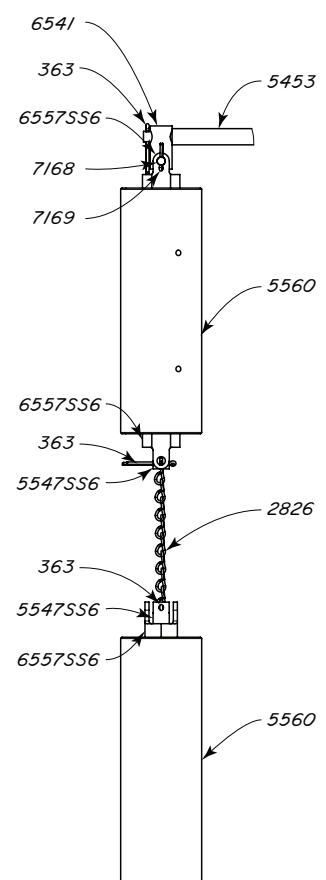
HORIZONTAL (STD.)



VERTICAL



SPLIT FLOAT



* Part 2826 chain comes in 8 foot length

DISPLACERS						
DISPLACER NO.	ACTUAL SIZE	FLOAT WEIGHT	MAX TEMP	MAX PSI	Minimum Differential SP.GR.	MATERIAL
6562	1 7/8" x 12" LG	1lb 15oz	180°F	4000	>0.20	PVC
6611	1 7/8" x 20" LG	3lb 5oz	180°F	4000	>0.15	PVC
6606	3" x 12" LG	4lb 5oz	180°F	4000	>0.1	PVC
6971	2 1/2" x 12" LG	3lb 0.5oz	180°F	4000	>0.15	PVC
5560	1 7/8" x 5 11/16" LG	12oz	180°F	4000	>0.40	PVC
5461SS6	1 3/4" x 12" LG	1lb 15oz	500°F	2000	>0.20	316SS
5461SS6L20	1 3/4" x 20" LG	3lb 0oz	500°F	2000	>0.17	316SS

FLOAT OPERATED LEVEL CONTROLLER



GEN II FLOAT ASSEMBLIES AVAILABLE

Config. & Material	Displacer			Arm P/N	Arm Extension		Spring		"Cotter Pin P/N"	"Hanger Block P/N"
	P/N	Nominal Diameter	Length		Length	P/N	Back Mount	Side Mount		
Vertical PVC Displacer	6562A	2"	12"	5453	None		6547	5467A	363	6541
	6562A	2"	12"	5453	6"	5543L6	6547L	5557A	363	6541
	6562A	2"	12"	5453	12"	5543L12	6547L	5557A	363	6541
	6562A	2"	12"	5453	18"	5543L18	6547L	5557A	363	6541
	6611A	2"	20"	5453	None		6547L	5467A	363	6541
	6611A	2"	20"	5453	6"	5543L6	6547L	5557A	363	6541
	6611A	2"	20"	5453	12"	5543L12	6547L	5557A	363	6541
	6611A	2"	20"	5453	18"	5543L18	6547L	5557A	363	6541
	6606A	3"	12"	5453	None		6547L	5467A	363	6541
	6606A	3"	12"	5453	6"	5543L6	6547L	5557A	363	6541
	6606A	3"	12"	5453	12"	5543L12	6547L	5557A	363	6541
	6606A	3"	12"	5453	18"	5543L18	6547L	5557A	363	6541
Vertical Stainless Steel Displacer	5461SS6	2"	12"	5453	None		6547	5467A	363	6541
	5461SS6	2"	12"	5453	6"	5543L6	6547	5557A	363	6541
	5461SS6	2"	12"	5453	12"	5543L12	6547L	5557A	363	6541
	5461SS6	2"	12"	5453	18"	5543L18	6547L	5557A	363	6541
	5461SS6L20	2"	20"	5453	None		6547L	5467A	363	6541
	5461SS6L20	2"	20"	5453	6"	5543L6	6547L	5557A	363	6541
	5461SS6L20	2"	20"	5453	12"	5543L12	6547L	5557A	363	6541
	5461SS6L20	2"	20"	5453	18"	5543L18	6547L	5557A	363	6541
Any vertical displacer can be configured into hanger by adding: (1) 2826 Chain, (1) 5546SS6 Hanger Block, (1) 5547SS6 Hanger Screw & (2) 363 Cotter Pins										
Horizontal PVC Displacer	6562A	2"	12"	N/A	None		6547	5467A	N/A	N/A
	6562A	2"	12"	N/A	6"	5543L6	6547L	5557A	N/A	N/A
	6562A	2"	12"	N/A	12"	5543L12	6547L	5557A	N/A	N/A
	6562A	2"	12"	N/A	18"	5543L18	6547L	5557A	N/A	N/A
	6611A	2"	20"	N/A	None		6547L	5467A	N/A	N/A
	6611A	2"	20"	N/A	6"	5543L6	6547L	5557A	N/A	N/A
	6611A	2"	20"	N/A	12"	5543L12	6547L	5557A	N/A	N/A
	6611A	2"	20"	N/A	18"	5543L18	6547L	5557A	N/A	N/A
	6606A	3"	12"	N/A	None		6547L	5467A	N/A	N/A
	6606A	3"	12"	N/A	6"	5543L6	6547L	5557A	N/A	N/A
	6606A	3"	12"	N/A	12"	5543L12	6547L	5557A	N/A	N/A
	6606A	3"	12"	N/A	18"	5543L18	6547L	5557A	N/A	N/A
Horizontal Stainless Steel Displacer	5461S6	2"	12"	N/A	None		6547	5467A	N/A	N/A
	5461S6	2"	12"	N/A	6"	5543L6	6547	5557A	N/A	N/A
	5461S6	2"	12"	N/A	12"	5543L12	6547L	5557A	N/A	N/A
	5461S6	2"	12"	N/A	18"	5543L18	6547L	5557A	N/A	N/A
	5461SS6L20	2"	20"	N/A	None		6547L	5467A	N/A	N/A
	5461SS6L20	2"	20"	N/A	6"	5543L6	6547L	5557A	N/A	N/A
	5461SS6L20	2"	20"	N/A	12"	5543L12	6547L	5557A	N/A	N/A
	5461SS6L20	2"	20"	N/A	18"	5543L18	6547L	5557A	N/A	N/A
Split Displacer Kit (2"x 6" PVC Displacers linked with Chain.) - P/N: CMP Kit comes with everything needed to convert a vertical displacer to a split displacer: (Not available in stainless steel displacers) (1) 2826 Chain, (2) 363 Cotter Pins, (2) 5547SS6 Hanger Screws, (2) 5560 PVC Displacers (2" Dia x 6" each) & (3) 6557SS6 Bushings										

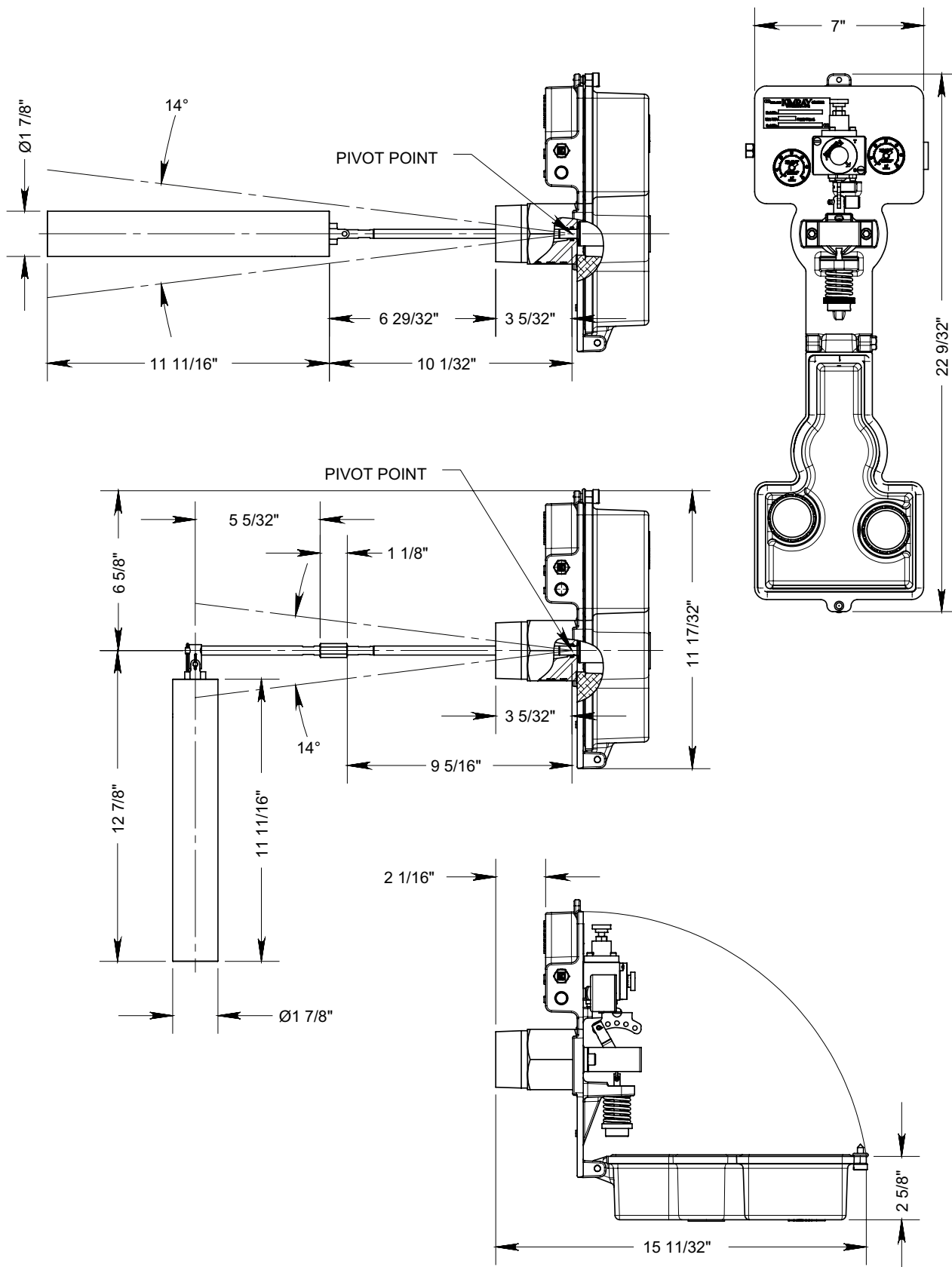
EXTENSION RODS KITS			SPRING ASSEMBLIES
EXTENSION NO.		LENGTH	
BACK MOUNT	CMUL6	6"	6547L
	CMUL12	12"	6547L
	CMUL18	18"	6547L
SIDE MOUNT	CMOL6	6"	5557
	CMOL12	12"	5557
	CMOL18	18"	5557

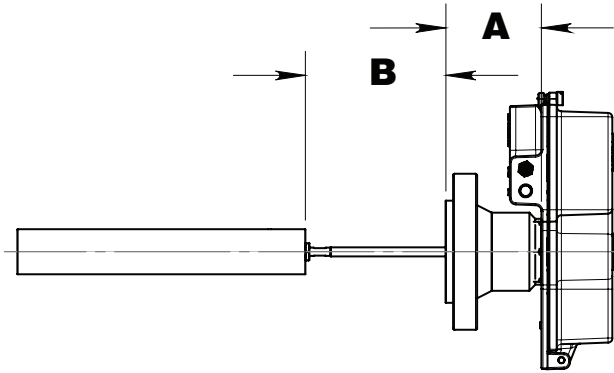
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FLOAT OPERATED LEVEL CONTROLLER

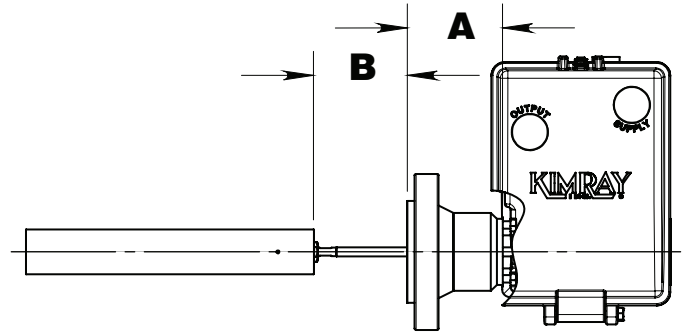
GEN II BACK MOUNT DIMENSIONS

KIMRAY
INC.®

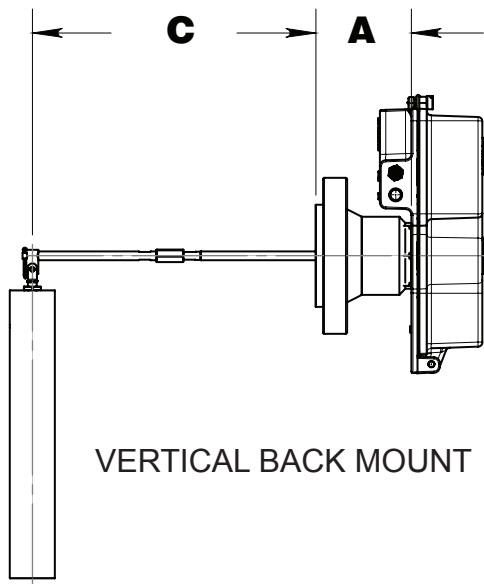




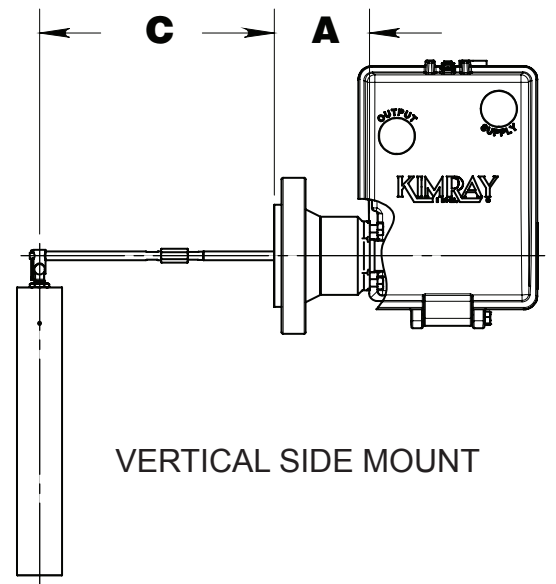
HORIZONTAL BACK MOUNT



HORIZONTAL SIDE MOUNT



VERTICAL BACK MOUNT



VERTICAL SIDE MOUNT

FLANGES		150#			300#			600#			900#			1500#		
TYPE	SIZE	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
SIDE MOUNT	Raised Face	2"	3 27/64	4 15/32	10 11/32	3 5/8	4 17/64	10 9/64	3 59/64	3 31/32	9 27/32	4 27/64	3 15/32	9 11/32		
		3"	3 27/64	4 15/32	10 11/32	3 51/64	4 3/32	9 31/32	4 11/64	3 23/32	9 19/32	4 13/16	3 5/64	8 61/64	6 19/64	1 19/32
		4"	3 39/64	4 9/32	10 5/32	3 59/64	3 31/32	9 27/32	4 27/64	3 15/32	9 11/32				5 3/4	2 9/64
		6"													6 1/8	1 49/64
	Ring Joint	2"	3 43/64	4 7/32	10 3/32	3 9/16	4 21/64	10 13/64	3 63/64	3 57/64	9 49/64				4 11/64	3 23/32
		3"							3 59/64	3 31/32	9 27/32	4 31/64	3 13/32	9 9/32		
		4"							4 31/64	3 13/32	9 9/32					
BACK MOUNT	Raised Face	2"	3 27/64	4 15/32	10 11/32	3 5/8	4 17/64	10 9/64	3 59/64	3 31/32	9 27/32	4 27/64	3 15/32	9 11/32		
		3"	3 27/64	4 15/32	10 11/32	3 51/64	4 3/32	9 31/32	4 11/64	3 23/32	9 19/32	4 13/16	3 5/64	8 61/64	6 19/64	1 19/32
		4"	3 39/64	4 9/32	10 5/32	3 59/64	3 31/32	9 27/32	4 27/64	3 15/32	9 11/32				5 3/4	2 9/64
		6"													6 1/8	1 49/64
	Ring Joint	2"	3 43/64	4 7/32	10 3/32	3 9/16	4 21/64	10 13/64	3 63/64	3 57/64	9 49/64				4 11/64	3 23/32
		3"							3 59/64	3 31/32	9 27/32	4 31/64	3 13/32	9 9/32		
		4"							4 31/64	3 13/32	9 9/32					

FLOAT OPERATED LEVEL CONTROLLER

SEALS



Table 1 - 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

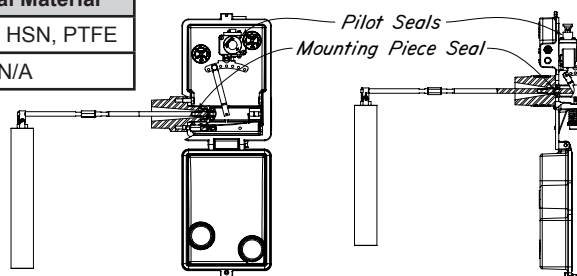


Table 2 - Level Switch Seal Options

Product Type	Part	Standard Material	Optional Material
Electric Switch	O-rings	FKM	AFLAS®, HSN, Nitrile
Pneumatic Switch	O-rings	FKM	AFLAS®, HSN, Nitrile
	Diaphragm	FKM	LTN

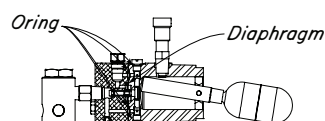


Table 3 - Seal Specifications

		NITRILE	HIGHLY SATURATED NITRILE	FKM	AFLAS®	
	Kimray Suffix	-	HSN	V	AF	LTN
Resistance	Abrasion	G	G	G	GE	G
	Acid	F	E	E	E	F
	Chemical	FG	FG	E	E	FG
	Cold	G	G	PF	P	E
	Flame	P	P	E	E	P
	Heat	G	E	E	E	G
	Oil	E	E	E	E	E
	Ozone	P	G	E	E	P
	Set	GE	GE	E	PF	GE
	Tear	FG	FG	F	PF	FG
	Water/Steam	FG	E	P	GE	FG
	Weather	F	G	E	E	F
	CO2	FG	GE	PG	GE	FG
	H2S	P	FG	P	E	P
Properties	Methanol	G	E	PF	PF	P
	Dynamic	GE	GE	GE	GE	GE
	Electrical	F	F	F	E	F
	Impermeability	G	G	G	G	G
	Tensile Strength	GE	E	GE	FG	GE
	Temp. Range (°F)	-40 to +220°F	-15° to +300°F	-10° to +350°F	+25° to +450°F	-85° to +120°F
	Temp. Range (°C)	-40 to +105°C	-26° to +149°C	-23° to +177°C	0° to +232°C	-65° to +49°C
	Form	O,S,D	O,S,D	O,S,D	O,S,D	O,D

RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT

Table 4 - Materials of Construction			
	Component	Standard Material	Optional Material
Pneumatic & Electric GEN II Level Controllers	Body	ASTM SA-352LCB	ASTM A-351CF8M
	Pilot	ASTM B-221 6061-T6	N/A
	Link	303SS ASTM A-582	N/A
	Tangent Arm	316 S.S. ASTM A-240	N/A
	Waggle Arm	316 S.S. ASTM A-479	N/A
	Displacer	PVC	316 S.S. ASTM A-240
	Spring	17-7 PH Condition C 302SS ASTM A-313	N/A
Pneumatic Level Switches	Body	Aluminum ASTM B-221 6061-T6	N/A
	Float	316 S.S. ASTM A-240	N/A
External Float Cages	Electronic & Pneumatic Level Switch Float Cage	ASTM A-352 LCB	ASTM A-351CF8M
	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

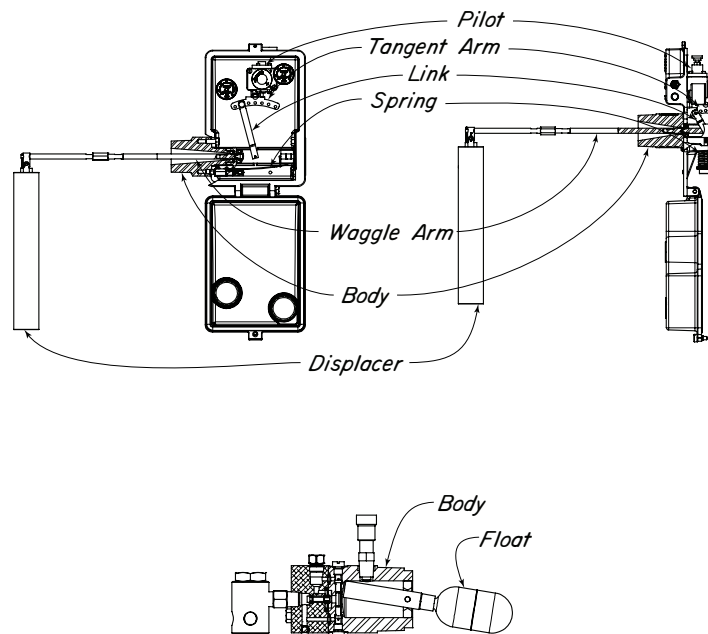


Table 5 - Material Specification					
	Body		Inner Parts		
	CAST STEEL	CAST DUCTILE	303 STAINLESS STEEL	316 STAINLESS STEEL	6061-T6 ALUMINUM
KIMRAY SUFFIX	LCB	C6	S3	S6	AL
ASTM GROUP	ASTM A-352	ASTM A-351	ASTM A-582	ASTM A-479	ASTM B-221
GRADE	LCB	CF8M	303	316	6061-T6
UNS	J02505	J92900	S30300	S31600	A96061
NACE Compliant	Yes	Yes	No	No	No