

APPLICATIONS:

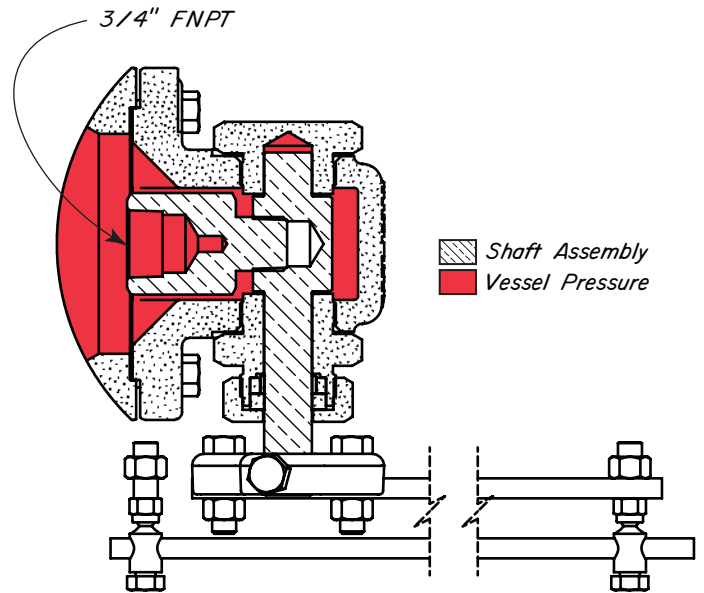
Used on oil and gas separators, freewater knockouts (FWKO), horizontal emulsion treaters and similar equipment where a float is desired to monitor fluid level.

FEATURES:

- Teflon packed rotary stuffing box
- Removable, bonnet type trunnion assembly
- 3/4" float arm hub
- ANSI 150 Flange
- 8" pipe x 5" long weldneck
- 8" ACME thread hammer union
- ASME code acceptable

CERTIFICATIONS:

Canadian Registration Number (CRN):
0H13107.2134567890NTY
Kimray is an ISO 9001- certified manufacturer.



Standard Order Code	Description	Line Size	Connection Type	Max. W.P. psig ^{††}
CCA	612 TO-D	6"	150 RF	250
CCB	812 TO-D	8"		
CCC	1012 TO-D	10"		
CCT	850 HUTA	8"	Weld-neck	500
CCF	25 TOB-D	---	Bolt on	
CCG	50 TOB-S	---	Weld-up	

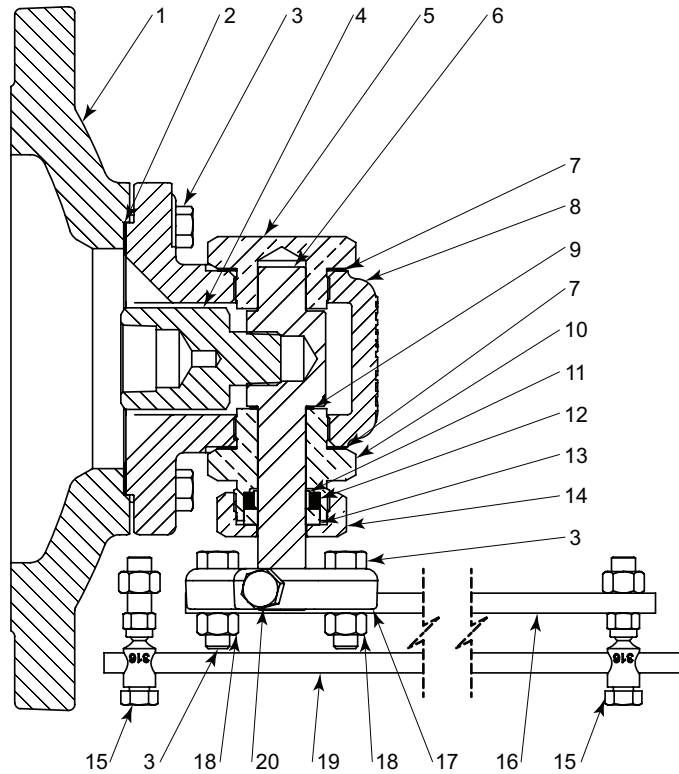
NOTES:

For standard & optional seals, metals, Cf Cv values, material specifications & dimensions see technical data on pages 03:1 - 03:VI
^{††} Max W.P. values based on -20°F to 100°F.

LIQUID DUMP VALVES LEVER OPERATED



TRUNNION ASSEMBLY
MODEL 612, 812, 1012 TO-D



ITEM	QTY.	DESCRIPTION	PART NO.		
			6 inch	8 inch	10 inch
1	1	Cover	432	433	434
2	1	Gasket	437		
3	8	Bolt	247		
4	1	Float Arm Hub	7599		
5	1	Trunnion Plug	369		
6	1	Shaft	7606		
7	2	Gasket *	366		
8	1	Bonnet	7014		
9	1	Thrust Washer *	362		
10	1	Stuffing Box	359		
11	1	Packing *	356		
12	1	Pacing Ring *	353		
13	1	Packing Follower *	350		
14	1	Stuffing Box Nut	347		
15	2	Ball Joint	753		
16	1	Lever	340		
17	1	Lever Hub	7602		
18	2	Nut	241		
19	1	Linkage Rod	754		
20	1	Set Screw	7608		
Repair Kits			REE		

* These parts are stocked as repair kits.

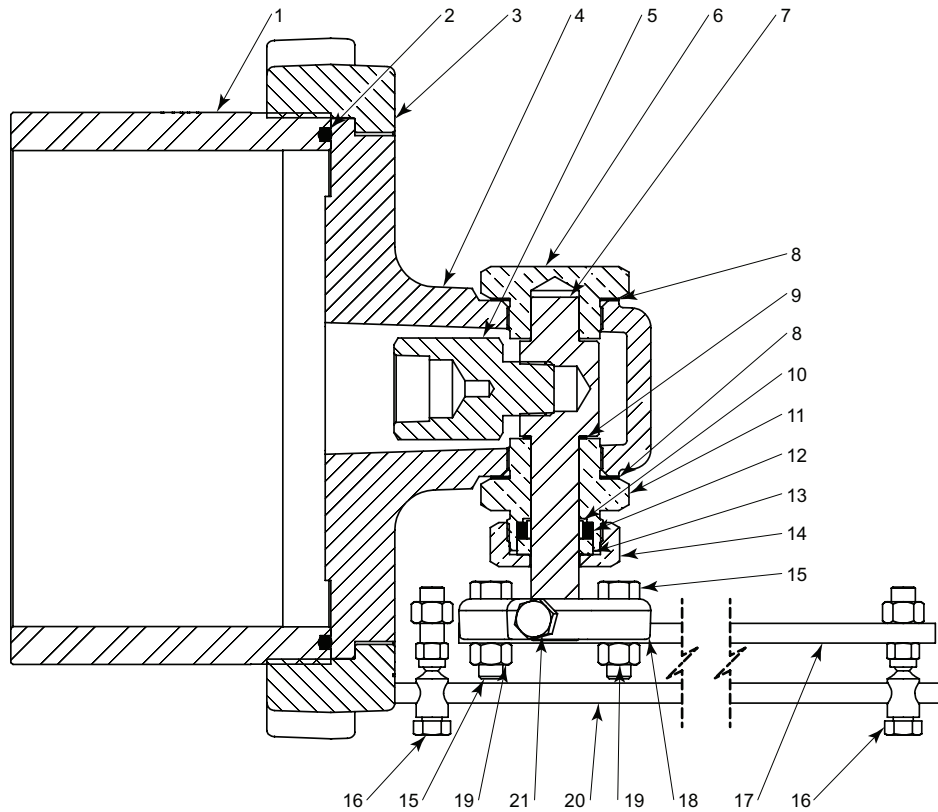
OPTIONAL WEIGHTED LEVER BARS & WEIGHTS			
ITEM	QTY.	DESCRIPTION	PART NO.
16	1	7 lb. Weight (not shown)	424
		9 lb. Weight (not shown)	425
		11 lb. Weight (not shown)	426
16	1	24" Long Lever Bar	7591L24
		36" Long Lever Bar	7591L36

Ordered separately from item code

OPTIONAL LONGER LEVER BARS			
ITEM	QTY.	DESCRIPTION	PART NO.
16	1	16" Long Lever Bar	340L16
		20" Long Lever Bar	340L20
		24" Long Lever Bar	340L24
		30" Long Lever Bar	340L30
16	1	36" Long Lever Bar	340L36

Ordered separately from item code

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



ITEM	QTY.	DESCRIPTION	PART NO.
1	1	5" Long Weld Neck	2757L5
		8" Long Weld Neck	2757L8
		15" Long Weld Neck	2757L15
2	1	O-Ring *	2758
3	1	Hammer Union Nut	2756
4	1	Bonnet	4085
5	1	Float Arm Hub	7599
6	1	Trunnion Plug	369
7	1	Shaft	7606
8	2	Gasket *	366
9	1	Thrust Washer *	362
10	1	Packing *	356
11	1	Stuffing Box	359
12	1	Packing Ring *	353
13	1	Packing Follower *	350
14	1	Stuffing Box Nut	347
15	2	Bolt	247
16	2	Ball Joint	753
17	1	Lever	340
18	1	Lever Hub	7602
19	2	Nut	241
20	1	Linkage Rod	754
21	1	Set Screw	7608
Repair Kits			REE

* These parts are stocked as repair kits.

OPTIONAL WEIGHTED LEVER BARS & WEIGHTS			
ITEM	QTY.	DESCRIPTION	PART NO.
17	1	7 lb. Weight (not shown)	424
		9 lb. Weight (not shown)	425
		11 lb. Weight (not shown)	426
17	1	24" Long Lever Bar	7591L24
		36" Long Lever Bar	7591L36
Ordered separately from item code			

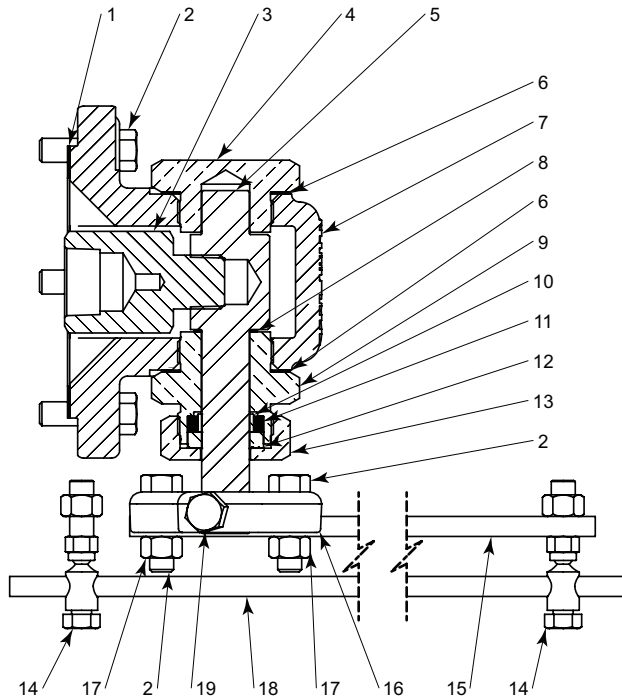
OPTIONAL LONGER LEVER BARS			
ITEM	QTY.	DESCRIPTION	PART NO.
17	1	16" Long Lever Bar	340L16
		20" Long Lever Bar	340L20
		24" Long Lever Bar	340L24
17	1	30" Long Lever Bar	340L30
		36" Long Lever Bar	340L36
Ordered separately from item code			

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LIQUID DUMP VALVES LEVER OPERATED



TRUNNION ASSEMBLY MODEL 25 TOB



ITEM	QTY.	DESCRIPTION	PART NO.	
			STANDARD	316 SS6
1	1	Gasket		437
2	8	Bolt		247
3	1	Float Arm Hub	7599	7599S6
4	1	Trunnion Plug	369	369S6
5	1	Shaft	7606	7606S6
6	2	Gasket *		366
7	1	Bonnet		436
8	1	Thrust Washer *		362
9	1	Stuffing Box	359	359SS6
10	1	Packing *		356
11	1	Packing Ring *		353
12	1	Packing Follower *	350	350SS6
13	1	Stuffing Box Nut	347	347SS6
14	2	Ball Joint		753
15	1	Lever		340
16	1	Lever Hub		7602
17	2	Nut		241
18	1	Linkage Rod		754
19	1	Set Screw		7608
Repair Kits			REE	

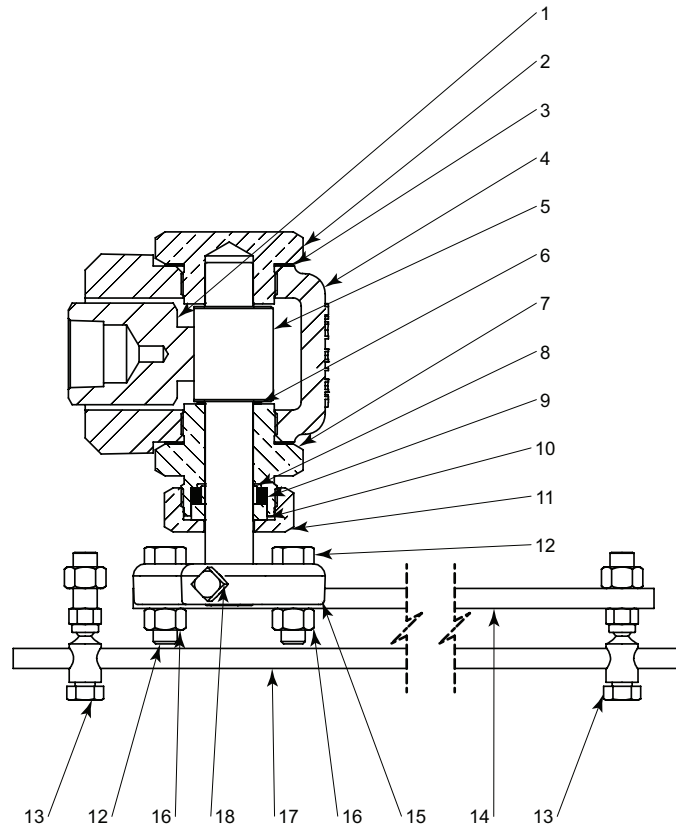
* These parts are stocked as repair kits.

OPTIONAL WEIGHTED LEVER BARS & WEIGHTS			
ITEM	QTY.	DESCRIPTION	PART NO.
15	1	7 lb. Weight (not shown)	424
		9 lb. Weight (not shown)	425
		11 lb. Weight (not shown)	426
15	1	24" Long Lever Bar	7591L24
		36" Long Lever Bar	7591L36
Ordered separately from item code			

OPTIONAL LONGER LEVER BARS			
ITEM	QTY.	DESCRIPTION	PART NO.
15	1	16" Long Lever Bar	340L16
		20" Long Lever Bar	340L20
		24" Long Lever Bar	340L24
15	1	30" Long Lever Bar	340L30
		36" Long Lever Bar	340L36
Ordered separately from item code			

OPTIONAL ADAPTER PLATE	
DESCRIPTION	PART NO.
6" O.D. x 1" Thick plate for welding applications	705
Ordered separately from item code	

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ITEM	QTY.	DESCRIPTION	PART NO.	
			STANDARD	316 SS6
1	1	Float Arm Hub	7599	7599SS6
2	1	Trunnion Plug	369	369SS6
3	2	Gasket *	366	
4	1	Bonnet	2010	2010SS6
5	1	Shaft	7606	7606SS6
6	1	Thrust Washer *	362	
7	2	Stuffing Box	347	347SS6
8	1	Packing *	356	
9	1	Packing Ring *	353	
10	1	Packing Follower *	350	350SS6
11	1	Stuffing Box Nut	359	359SS6
12	2	Bolt	247	
13	2	Ball Joint	753	
14	1	Lever	340	
15	1	Lever Hub	7602	
16	2	Nut	241	
17	1	Linkage Rod	754	
18	1	Set Screw	7608	
Repair Kits			REE	

* These parts are stocked as repair kits.

OPTIONAL WEIGHTED LEVER BARS & WEIGHTS			
ITEM	QTY.	DESCRIPTION	PART NO.
14	1	7 lb. Weight (not shown)	424
		9 lb. Weight (not shown)	425
		11 lb. Weight (not shown)	426
14	1	24" Long Lever Bar	7591L24
		36" Long Lever Bar	7591L36

Ordered separately from item code

OPTIONAL LONGER LEVER BARS			
ITEM	QTY.	DESCRIPTION	PART NO.
14	1	16" Long Lever Bar	340L16
		20" Long Lever Bar	340L20
		24" Long Lever Bar	340L24
14	1	30" Long Lever Bar	340L30
		36" Long Lever Bar	340L36

Ordered separately from item code

Table 1 - Flow Coefficient(Cv) for Lever Operated Dump Valves													
Line Size	Trim Size in. (mm)	Trim Type	Cf	Valve Opening Percentage									
				10	20	30	40	50	60	70	80	90	100
LD - Diaphragm Balanced													
2"	1 1/2 in (38mm)	Linear (Nominal)	0.79	5.0	8.5	11.7	14.6	17.0	19.0	20.5	21.6	22.6	23.3
3"	2 1/4 in (57 mm)		0.79	6.7	11.1	15.6	20.3	24.8	29.2	33.4	37.2	40.7	43.8
4"	3 in (76 mm)		0.79	12.0	18.9	25.8	32.8	39.9	46.9	53.7	60.0	65.7	70.1
6"	4.88 in (124 mm)		0.79	14.2	21.0	31.6	61.2	98.3	139.0	179.7	217.6	250.2	277.0
LP - Piston Balanced Throttling													
2"	1 1/2 in (38mm)	Linear (Nominal)	0.75	3.5	5.0	7.4	9.6	11.8	13.9	16.2	18.4	20.4	22.7
	2 in (51 mm)		0.75	6.6	12.3	18.4	24.2	29.5	34.1	38.0	41.2	44.0	47.0
3"	3 in (76 mm)		0.75	12.7	18.7	29.0	41.0	52.9	63.4	71.9	78.4	83.7	89.0
LB - Piston Balanced													
2"	2 in (51 mm)	Linear (Nominal)	0.79	5.0	8.5	11.7	14.6	17.0	19.0	20.5	21.6	22.6	23.3
3"	3 in (76 mm)		0.79	6.7	11.1	15.6	20.3	24.8	29.2	33.4	37.2	40.7	43.8
4"	4 in (76 mm)		0.79	12.0	18.9	25.8	32.8	39.9	46.9	53.7	60.0	65.7	70.1

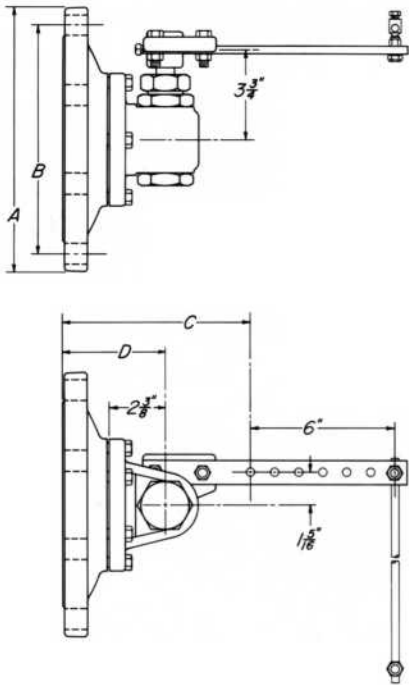
Kimray flow equations conform to ANSI/ISA - 75.01.01-2002
 Kimray inherent flow characteristics conform to ANSI/ISA 75.11.01 -1985

LIQUID DUMP VALVES LEVER OPERATED

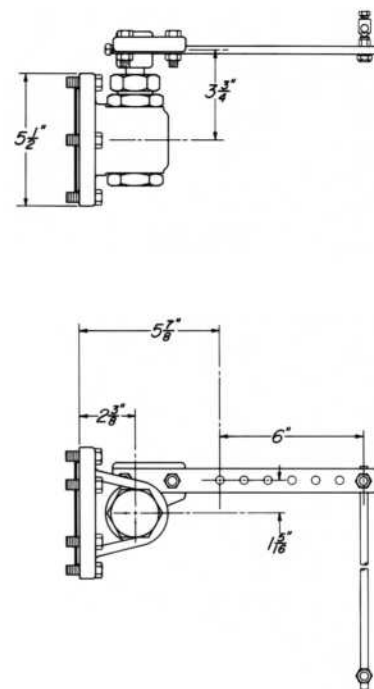


DIMENSIONS TRUNNION ASSEMBLY

612, 812 & 1012 TO-D



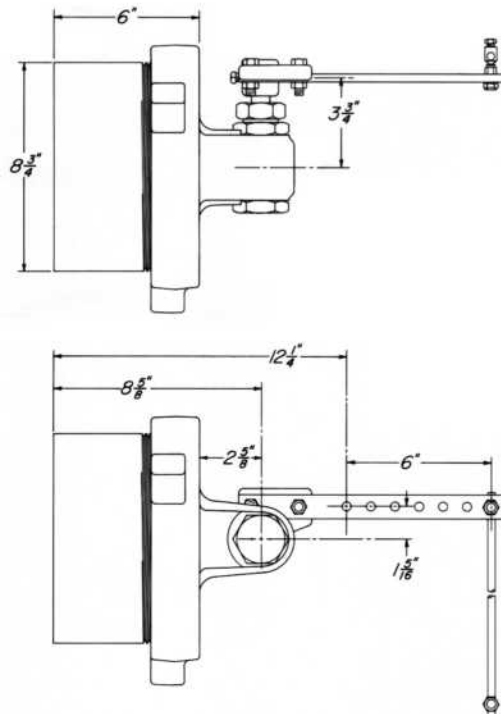
25 TOB



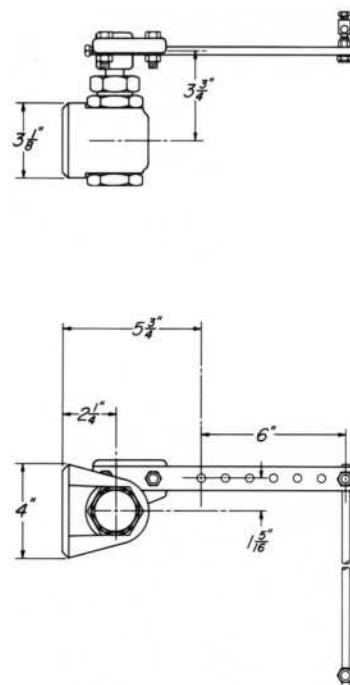
SIZE	NUMBER	A	B	C	D	No. SIZE OF BOLTS
6	612 TO	11 in	9 1/2 in	7 1/4 in	4 1/4 in	8 3/4 x 3 1/2
8	812 TO	13 1/2 in	11 3/4 in	7 1/4 in	4 1/4 in	8 3/4 x 3 1/2
10	6 1/8 in	16 in	14 1/4 in	7 1/2 in	4 1/2 in	12 7/8 x 3 1/2

All dimensions are in inches.

HUTA



50 TOB-S



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

Table 2 - Seal Options Dump Valves		
Part	Standard Material	Optional Material
O-rings	HSN	FKM
Diaphragm	HSN	FKM
Seat	HSN	FKM

Table 3 - Seal Options Trunnion Assemblies		
Part	Standard Material	Optional Material
O-rings	HSN	FKM

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

Table 5 - Material Options Diaphragm Balanced Dump Valves		
Part Description	Standard Material	Corrosive Material
Body	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Ratio Plug	2 & 3 inch Delrin (ASTM D4181), 4 & 6 inch Ductile (ASTM A395)	316SS (ASTM A351)
Cage	2 & 3 inch Delrin (ASTM D4181), 4 & 6 inch Ductile (ASTM A395)	316SS (ASTM A351)
Stuffing Box	2 & 3 inch 303SS (ASTM A582), 4 & 6 inch Brass (ASTM B-16)	316SS (ASTM A479)
Bonnet	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Seat Disc	4 & 6 inch Ductile (ASTM A395)	4 inch 316SS (ASTM A351)
Stem	2, 3 & 4 inch 303SS (ASTM A582), 6 inch 316SS (ASTM A213)	316SS (ASTM A351)

Table 6 - Material Options Piston Balanced Throttling Dump Valves		
Part Description	Standard Material	Corrosive Material
Body	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Ratio Plug Full Port	2 inch 316 Powder Metal (ASTM 316-N1-25), 3 inch Powder Metal (F-008)	316 Powder Metal (ASTM 316-N1-25)
Stuffing Box	303SS (ASTM A582)	316SS (ASTM A479)
Bonnet	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Stem	303SS (ASTM A582)	316SS (ASTM A484)
Piston	2 inch 316SS (ASTM A484) , 2 inch reduced & 3 inch 303SS (ASTM A582)	316SS (ASTM A484)
Cylinder	303SS (ASTM A582)	316SS (ASTM A484)

Table 7 - Material Options Piston Balanced Dump Valves		
Part Description	Standard Material	Corrosive Material
Body	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Ratio Plug	2 & 3 inch Delrin (ASTM D4181), 4 inch Ductile (ASTM A395)	316SS (ASTM A351)
Cage	Ductile (ASTM A395)	316SS (ASTM A351)
Stuffing Box	2 & 3 inch 303SS (ASTM A582), 4 inch Brass (ASTM B-16)	316SS (ASTM A479)
Bonnet	Ductile (ASTM A395)	Ductile (ASTM A395) + Kimcoat
Seat Disc	4 inch Ductile (ASTM A395)	4 inch 316SS (ASTM A351)
Stem	303SS (ASTM A582)	316SS (ASTM A479)
Piston	316SS (ASTM A351)	316SS (ASTM A351)
Cylinder	2 & 3 inch 303SS (ASTM A582), 4 inch 316SS (ASTM A351)	316SS (ASTM A249)

Table 8 - Material Options Trunnion Assemblies		
Part Description	Standard Material	Corrosive Material
Bonnet	Ductile (ASTM A395)	
Plate	Steel SA515 Grade 70 Plate	
Stuffing Box	Brass B-16 C-36000 HO2	316SS (ASTM A479)
Union Nut	Ductile (ASTM A395)	
Weld Neck	Schedule 100 Pipe ASTM A-106 grade C	

LIQUID DUMP VALVES LEVER OPERATED



CODE BUILDER D SERIES

Series:

D = Dump Valve

Model:

LD = Lever Operated Diaphragm Balanced
 LP = Lever Operated Piston Balanced Throttle (2 & 3 inch only)
 LB = Lever Operated Piston Balanced

Line Size:

2 = 2 NPS
 3 = 3 NPS
 4 = 4 NPS
 6 = 6 NPS

End Connection:

SA = FNPT (2 & 3 NPS only)
 AR = 150RF

Body Type:

A = Angle
 T = Thru

Shell Material:

D = Ductile Iron
E = Ductile Iron w/Coating

Inner Valve Size:

F = Full Port
 R = Reduced Port (LP only)

Actuator:

L = Lever Operated

Service Type:

S = Standard
 C = Corrosive

D LD 2 SA A D F L 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)
 H = HSN Elastomers
 V = FKM Elastomers
 X = Export (Hydrostatic test, MTR & 3.1)

Not all selections available on all products listed.
 See product pages 03:10.1 - 03:20.7 for available options