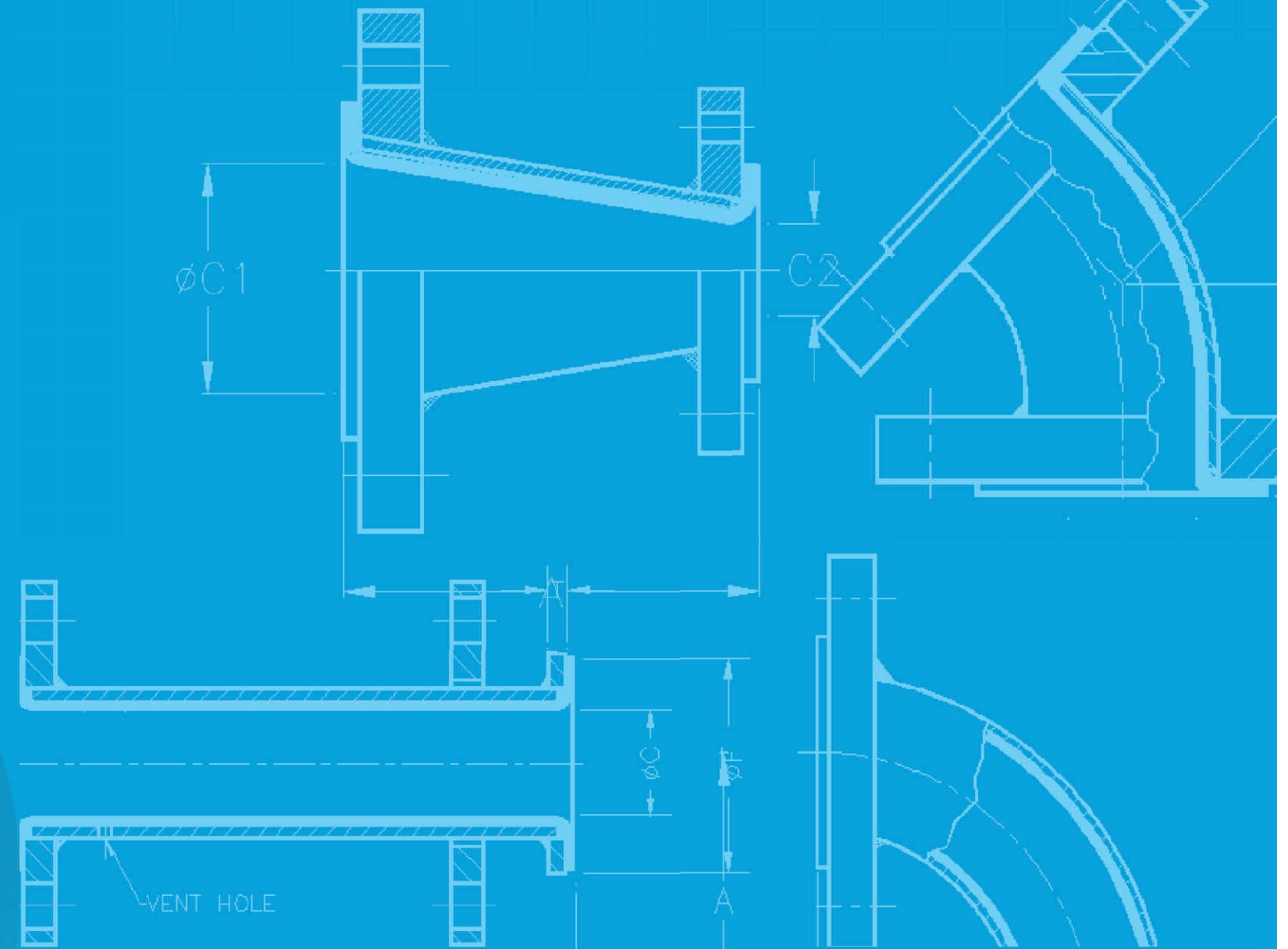


**Uni Polymers**  
Keeps corrosion at bay



**CORROSION RESISTANT  
PLASTIC LINED PIPES & SYSTEMS**



**Uni Polymers**  
Keeps corrosion at bay

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# ABOUT UNI POLYMERS

Uni Polymers designs and manufactures variety of high performance products including: Carbon Steel HDPE lined & Carbon Steel PP lined Pipes, fittings, Ball Valves, Diaphragm Valves, Nonreturn Valves and Sight flow Indicators. We keep all polymer lining processes completely in house and provide 100% traceability on every component manufactured. Our lined pipes and fittings are used in various industries like Agrochemicals, Petrochemicals, Pharmaceuticals, Effluent treatment and water treatment plants. Smooth conveyance and distribution of fluids is integral to all processes involved in these industries. Our Products are best suited for these industries as metal piping used by them often get corroded due to acidic fluids and in case of plastic piping used by them, those are unable to withstand mechanical stress and thermal shocks.

## User Industries

**Pharmaceutical :** Uni Polymers supply equipment to all the main Pharmaceutical companies in the India. Large scale project supply has seen the completion of several pharmaceutical manufacturing plants with all the lined piping and valves being supplied by Uni Polymers.

**Crop Science :** The production of biocides, fungicides, herbicides and insecticide involves the use of highly corrosive chemicals, Uni Polymers have supplied large amounts of HDPE /PP / PTFE lined piping and valves to these manufacturers.

**Water Treatment :** Chemicals such as Chlorine and Sodium hypochlorite are extensively used in water treatment plants. Whilst these are diluted significantly with the water, the pure chemical holding and injection / mixing lines are subject to corrosion. Our range of HDPE / PP and PTFE Lined Pipes have been supplied into these applications

**Chemical Manufacturing :** Many chemical manufacturers use Uni Polymers lined piping products in their facilities, feed stock chemicals such as, sulphuric acid, nitric acid etc are all corrosive and require the use of corrosion resistant piping HDPE / PP / PTFE lined piping is the ideal solution

**Cleaning and Detergent Products :** Chemicals used in cleaner and detergents can derive from very corrosive and toxic chemicals, our HDPE /PP / PTFE lined piping has replaced many bare polypropylene and other thermoplastic piping systems which have prematurely failed on these applications.

**Fine Chemical Manufacturers :** Manufacturing of chemical substances for use in manufacturing drugs, commonly called APIs (active pharmaceutical ingredients) often involves the use of highly corrosive substances. HDPE / PP / PTFE lined pipes are widely used to convey such substances, it is FDA approved and is easily cleanable.

**Process Plant Manufacturers :** Uni Polymers can help with the design and specification of components required in the manufacture of process skid units, process packages etc. utilizing HDPE, PP and PTFE lined products. Our piping products and valves are often used around specialist components such as filter assemblies, dryers, scrubbers etc.

**Power Stations :** Fossil fuelled power stations can suffer a variety of corrosion issues, the steam and cooling water requires treatments which can corrode steel piping and valves. By using HDPE / PP / PTFE lined pipe and valves on these applications prevents the corrosion of the equipment.

# THE UNIQUE PROCESS



**Pipes:** The lining process for Pipes positively locks the plastic liner in the metal pipe housing while effectively relieving stresses that could cause unwanted liner movement in service.

- The liner is processed under controlled conditions to a size somewhat larger than the I.D. of the steel housing into which it will be installed. It is then thoroughly inspected for conformance to specifications. Next, the liner is subjected to a battery of quality tests designed to ensure liner integrity.
- The liner is then drawn through a sizing die at carefully controlled draw rates which results in a calculated reduction in the outside diameter.
- A programmed heating cycle relaxes the liner inside the steel housing, resulting in a snug liner fit. Design allowances are incorporated in this procedure to eliminate undesirable stresses in the finished product.
- Both liner ends of the pipe spool are then hot flared. Temperature, time and pressure are carefully monitored.
- The finished pipe is then tested in accordance with ASTM F1545 standards.

This unique lining process provides lined pipe with dimensional stability under vacuum, pressure, and thermal cycling conditions, which prevents liner buckling and cracked flares within operational limits.

**Fittings:** All fittings are lined by automated Transfer/Injection moulding process. Our in house tooling facility insures uniform lined wall thickness.

## Lining Materials

Lining Material	Technical Name	Max. Working Temperature
PTFE	POLYTETRAFLUOROETHYLENE	250 Deg C
PFA	PERFLUOROALKOXY	250 Deg C
PVDF	POLYVINYLIDENEFLUORIDE	150 Deg C
PP	POLYPROPYLENE	100 Deg C
HDPE	HIGH DENSITY POLYETHYLENE	70 Deg C

Industry Standard Liner Coloration:

PTFE: White

PFA : Natural - off white

PVDF: Black

PP : Orange or Grey

HDPE: Black

Fabrication: Pipe and Fittings Tolerances:

### Dimension

Length and Centerline Dimensions

Fixed Flange Bolt Hole Alignment

Flange Perpendicularity

(with Pipe Center line)

### Tolerance, in.

$\pm 1/8"$

$\pm 1/16"$

$3/32$  in/ft. of nom. Pipe diameter



# Material Specification

Item	Material	Specifications	Remarks
Pipes	Carbon steel	ASTM A 106 Sh.40 or IS 1239 (Medium Duty)	Pipe will have one end lose and other end fix flange. Flange as per IS 2062 drilled to ANSI B16.5 Class 150
Reducer	Carbon steel	A 234 Gr. WPB Sh.40	Reducer will have both ends fixed flange Flange as per IS 2062 drilled to ANSI B16.5 Class 150
Tee	Carbon steel	ASTM A 106 Sh.40 ( Fabricated from Pipe)	Tee will have all ends fixed flange Flange as per IS 2062 drilled to ANSI B16.5 Class 150
Elbow	Carbon steel	A 234 Gr. WPB Sh.40	Elbow will have both ends fixed flange Flange as per IS 2062 drilled to ANSI B16.5 Class 150

## Inspection and Tests

**Hydrostatic Pressure Test:** All Piping products are tested for 150 % of maximum recommended working pressure. Test pressure reaches in 1 minute and maintained for 3 minutes.

**Electrostatic Test:** All Lined products are tested with non-destructive high voltage tester at an output voltage of 10 Kv. to detect lining integrity or pin holes.

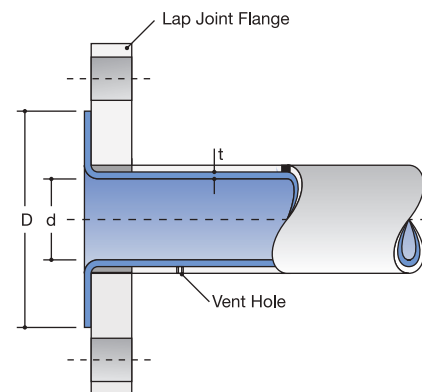
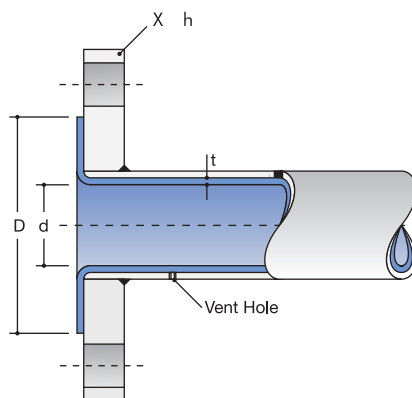
**Visual Inspection:** All finished products are visually inspected for any spots or cracks.

**External Finish:** All pipe and fittings are coated with Red Oxide OR as per customer specifications with an extra cost.

**Note:** Other customer-specified coatings are available. Upon review of the data sheets of the requested paints, however, Uni Polymers reserves the right to decline quoting customer-specified coatings based on MOC content, manufacturing incompatibility, or other factors.

**Note:** Normal shipping and handling can cause paint damage that requires touch-up at the job site. Costs associated with paint touch-up are for Buyer's account.

# PIPE



(Unit : mm)

Nominal Pipe size	d	D	f		L (Min)	L (Max.)
			Standard Liner Thk.	Heavy*		
1 (25)	21	51	3.0	4	100	6000
1 1/2 (40)	34	73	3.0	4	100	6000
2 (50)	46	92	3.0	4.5	150	6000
2 1/2 (65)	59	105	3.0	4.0	150	6000
3 (80)	74	127	3.0	5.0	150	6000
4 (100)	96	157	3.0	6.0	150	6000
6 (150)	144	212	5.0	7.0	150	6000
8 (200)	194	270	5.0	7.0	200	6000
10 (x250)	242	324	6.0	8.0	200	6000
12 (x300)	292	381	6.0	9.0	200	6000

"d" will vary accordingly

## Note:

Pipe : A-106 SH 40, in compliance with ANSI B36 10

Steel pipe according to SCH 40 from 1" to 6", according to SCH 20 from 8" to 10" according to SCH 10 over than 12"

Flange IS 2062 in compliance with ANSI B16.5 / class 150lbs JIS 10K or DIN is also available on request .

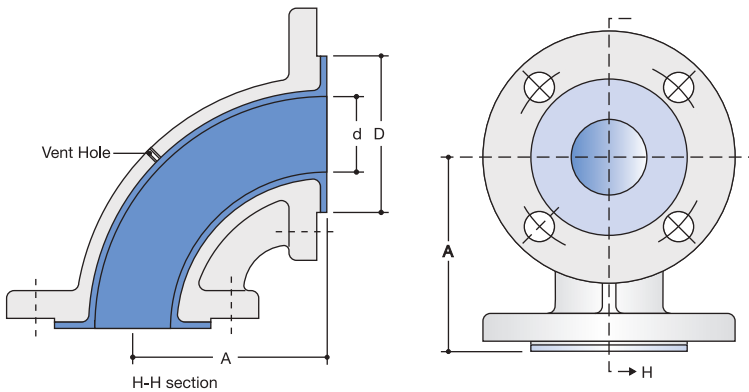
Standard : One loose flange ,one fixed flange; two fixed flanges or two loose flanges are on request .

Lining : PTFE/PP/HDPE/PVDF in compliance with ASTM F1545.

Other nominal sizes are available on request .



# STANDARD ELBOW 90°



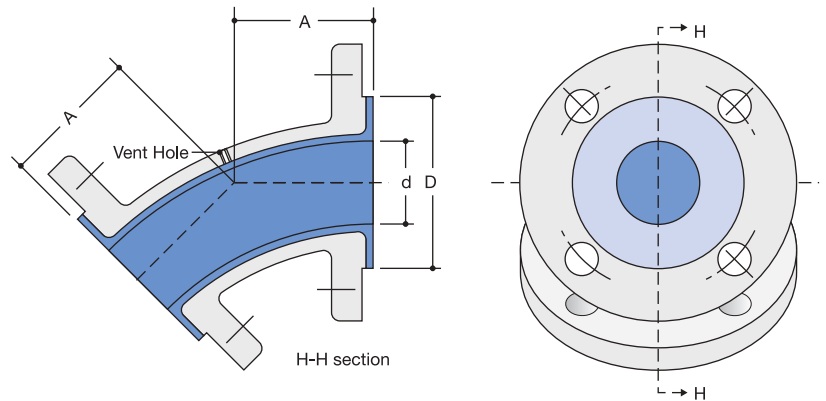
**Note:**

- Steel frame :ASTM A234 grade WPB in compliance with ANSI B16.28
- Steel bend : according to SCH 40.
- Flange IS 2062, in compliance with ANSI B16.5 / class 150lbs; JIS 10K or DIN is also available on request.
- Standard :Two fixed flanges two loose flanges or one loose and one fixed flange are on request.
- Ductile iron ASTM A395 and ASTM A234 Gr. WPB are both available .
- Lining PTFE/PP/HDPE/PVDF in compliance with F-1545.
- Other nominal sizes are available on request.

(Unit : mm)

Nominal Pipe size	A	d	l	D
				ANSI 150 LBS
1 (25)	89	19	3	51
1 1/2 (40)	102	34	3	73
2 (50)	114	46	3	92
2 1/2 (65)	130	59	3	105
3 (80)	140	74	3	127
4 (100)	165	94	3	155
6 (150)	203	140	5	212
8 (200)	228	190	5	270
10 (250)	280	238	6	323
12 (300)	305	288	6	381

# STANDARD ELBOW 45°



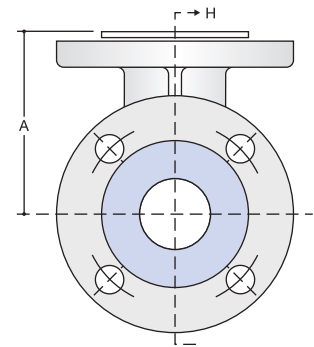
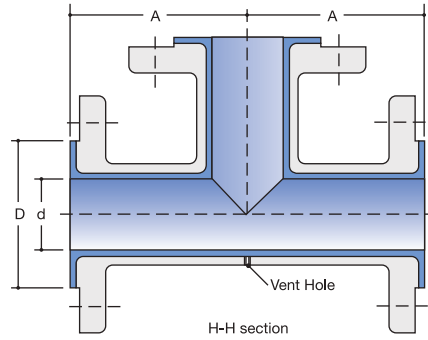
(Unit : mm)

**Note:**

- Steel frame :ASTM A234 grade WPB in compliance with ANSI B16 28
- Steelbend according to SCH 40 .
- Flange IS 2062 in compliance with ANSI B16.5 / class 150lbs JIS 10K or DIN is also available on request .
- Standard fixed flanges one loose flange and one fixed flange or two loose flanges is on request.
- Lining : PTFE/PP/HDPE/PVDF in compliance with F-1545.

Nominal Pipe size	A	d	l	D
				ANSI 150 LBS
1 (25)	45	19	3	51
1 1/2 (40)	58	34	3	73
2 (50)	64	46	3	92
2 1/2 (65)	76	59	3	105
3 (80)	76	74	3	127
4 (100)	102	94	3	157
6 (150)	127	140	5	212
8 (200)	140	190	5	270
10 (250)	165	238	6	323
12 (300)	191	288	6	381

# EQUAL TEE



(Unit : mm)

## Note:

Steel frame :ASTM A234 grade WPB in compliance with ANSI B16 28

Steel bend according to SCH 40 .

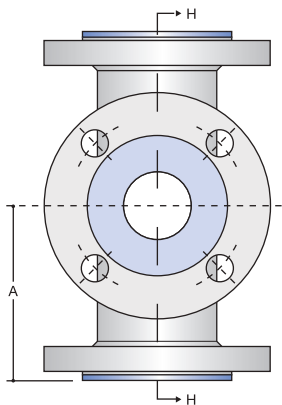
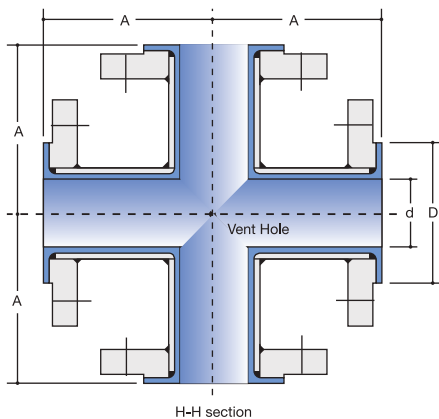
Flange IS 2062 in compliance with ANSI B16.5/ class 150lbs; JIS 10K or DIN is also available on request.

Standard : three fixed flanges three loose flange and one fixed flange or two loose flanges is on request.

Lining: PTFE/PP/HDPE/PVDF in compliance with F1545

Nominal Pipe size	A	d		D
		ANSI 150LBS	†	ANSI 150LBS
1 (25)	89	19	3	51
1 1/2 (40)	102	34	3	73
2 (50)	114	46	3	92
2 1/2 (65)	130	59	3	105
3 (80)	140	74	3	127
4 (100)	165	94	3	155
6 (150)	203	140	5	212
8 (200)	228	190	5	270
10 (x250)	280	238	6	323
12 (x300)	305	238	6	381

# EQUAL CROSS



(Unit : mm)

## Note:

Faceto face dimension are in accordance with ANSI B16.5 150 LBS series and JIS 10K.

Standard Flange Rating : Equal to ANSI B16.5, 150LBS and JIS 10K.

Fitting Material: Pipe - Schedule 40, ASTM A106

Flange- A105 / IS 2062

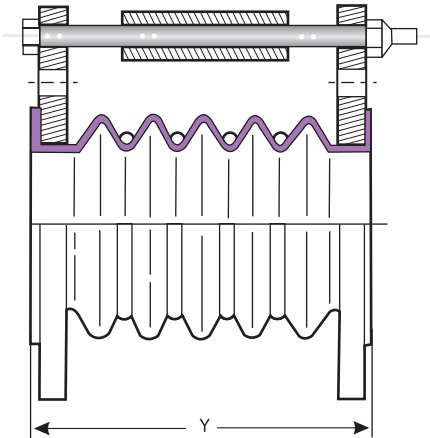
Lap joint flange is also available.

Lining: PTFE/PP/HDPE/PVDF in compliance with F1545

Nominal Pipe size		A	d	D
Inch	mm			
1	(25)	89	19	51
1 1/2	(40)	102	34	73
2	(50)	114	46	92
2 1/2	(65)	130	59	105
3	(80)	140	74	127
4	(100)	165	94	155
6	(150)	203	140	212
8	(200)	228	190	270
10	(250)	280	238	323



# PTFE BELLOWS



Nominal size		2 con.	3 con.	5 con.
Inch	mm			
1"	25	50	61	83
1-1/2"	40	61	76	105
2"	50	59	78	115
2-1/2"	65	69	86	120
3"	80	73	95	137
4"	100	74	96	138
6"	150	87	112	160
8"	200	97	123	175
10"	250	99	128	186
12"	300	102	133	194
14"	350	103	134	195

**Note:**

Flange : two pieces of carbon steel flanges with epoxy one coated; stainless steel is available on request. JIS 10k or DIN is available either.

Adjustment screw : three piece screws with zine plated.

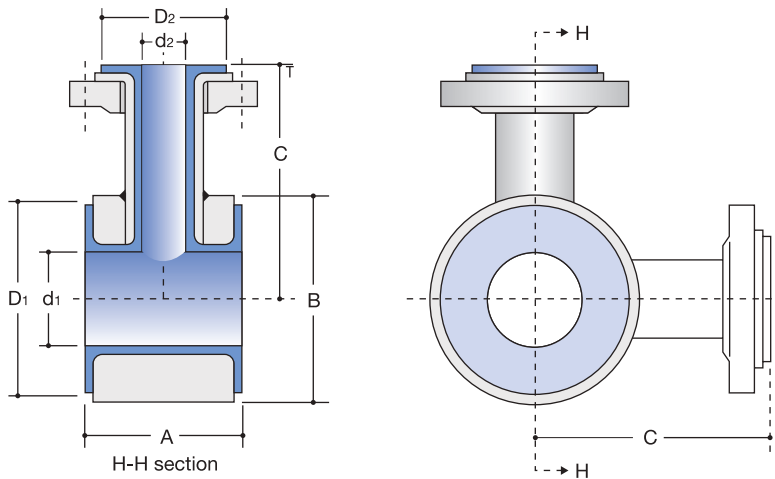
Support rings volume=con.-1, carbon steel with chrome plated.

Lining: PTFE/PP/HDPE/PVDF in compliance with F1 545.

Other nominal sizes are available on request.



# INSTRUMENT TEE



(Unit : mm)

Nominal Pipe size		D1	D2	A	C	†	†'
Inch	mm						
1"x1"	25x25	48	48	50	90	3	3
1-1/2"x1"	40x25	68	48	50	100	3	3
1-1/2"x1-1/2"	40x40	68	68	60	100	3	3
2"x1"	50x25	87	48	50	114	3	3
2"x1-1/2"	50x40	87	68	60	114	3	3
2"x2"	50x50	87	87	71	114	3	3
2-1/4"x1"	65x25	100	48	50	127	3	3
2-1/4"x1-1/2"	65x40	100	68	60	127	3	3
2-1/4"x2"	65x50	100	87	71	127	3	3
3"x1"	80x25	117	48	50	140	3	3
3"x1-1/2"	80x40	117	68	60	140	3	3
3"x2"	80x50	117	87	71	140	3	3
4"x1"	100x25	151	48	50	165	3	3
4"x1-1/2"	100x40	151	68	60	165	3	3
4"x2"	100x50	151	87	71	165	3	3
6"x1"	150x25	203	48	50	200	4	3
6"x1-1/2"	150x40	203	68	60	200	4	3
6"x2"	150x50	203	87	71	200	4	3
8"x1"	200x25	256	48	50	228	4	3
8"x1-1/2"	200x40	256	68	60	228	4	3
8"x2"	200x50	256	87	71	228	4	3
10"x1"	250x25	311	48	50	250	5	3
10"x1-1/2"	250x40	311	68	60	250	5	3
10"x2"	250x50	311	87	71	250	5	3
12"x1"	300x25	365	48	50	305	5	3
12"x1-1/2"	300x40	365	68	60	305	5	3
12"x2"	300x50	365	87	71	305	5	3
14"x1"	350x25	390	48	50	352	5	3
14"x1-1/2"	350x40	390	68	60	352	5	3
14"x2"	350x50	390	87	71	352	5	3

**Note :**

Steel frame: ASTM A234 grade WPB, in compliance with ANSI B16.28

Steel instrument tee pieces: according to SCH 40.

Flange: IS 2062, in compliance with ANSI B16.5/Class 150lbs; JIS 10k or DIN is also available on request.

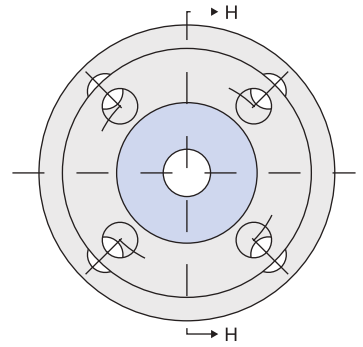
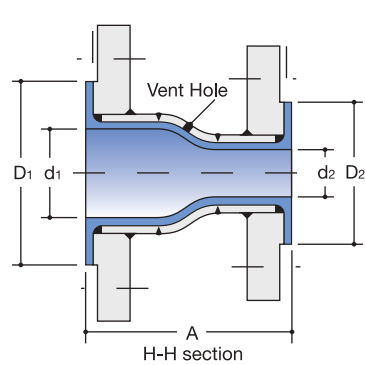
Standard: one fixed flange; loose flange is on request.

Lining: PTFE/PP/HDPE/PVDF in compliance with F1545.

Other nominal sizes are available on request.



# CONCENTRIC REDUCER



(Unit : mm)

Nominal Pipe size		D1	D2	A	†	†'
Inch	mm					
1-1/2"x1"	40x25	73	51	114	3	3
2"x1"	50x25	92	51	127	3	3
2"x1-1/2"	50x40	92	73	127	3	3
2-1/2"x1"	65x25	105	51	140	3	3
2-1/2"x1-1/2"	65x40	105	73	140	3	3
2-1/2"x2"	65x50	105	92	140	3	3
3"x1"	80x25	127	51	152	3	3
3"x1-1/2"	80x40	127	73	152	3	3
3"x2"	80x50	127	92	152	3	3
3"x2 1/2"	80x65	127	105	152	3	3
4"x1"	100x25	155	51	178	3	3
4"x1-1/2"	100x40	155	73	178	3	3
4"x2"	100x50	155	92	178	3	3
4"x3"	100x80	155	127	178	3	3
6"x2"	150x50	212	92	229	4	3
6"x3"	150x80	212	127	229	4	3
6"x4"	150x100	212	155	229	4	3
8"x3"	200x80	270	127	279	4	3
8"x4"	200x100	270	155	279	4	3
8"x6"	200x150	270	212	279	4	4
10"x4"	250x100	323	155	305	5	3
10"x6"	250x150	323	212	305	5	4
10"x8"	250x200	323	270	305	5	4
12"x6"	300x150	381	212	356	5	4
12"x8"	300x200	381	270	356	5	4
12"x10"	300x250	381	323	356	5	5

**Note :**

Steel frame : ASTM A234 grade WPB, in compliance with ANSI B16.28

Steel reducer: according to SCH 40.

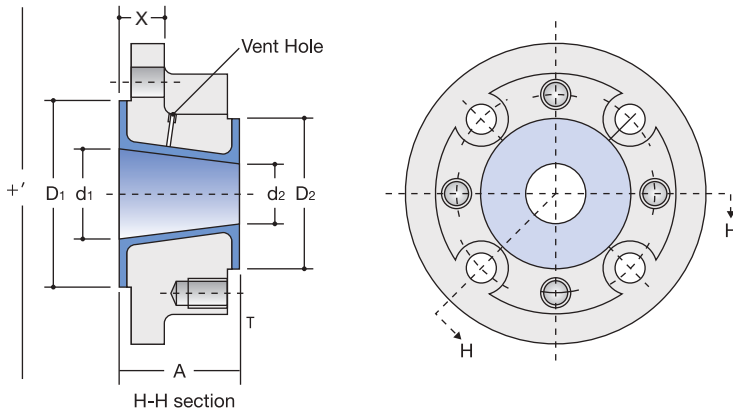
Flange: IS 2062, in compliance with ANSI B16.5/class 150lbs;  
JIS 10k or DIN is also available on request.

Standard: two fixed flanges; two loose flanges or one loose and one fixed flanges are on request.

Lining : PTFE/PP/HDPE/PVDF in compliance with ASTM F1545.

Other nominal sizes are available on request.

# REDUCING FLANGE



(Unit : mm)

Nominal Pipe size (mm)	Size (inch)	A	D1	D2	t	t'	H holes x Ø	P	P	Ø (OD)	E holes x Ø
40x25	1-1/2"x1"	44	68	48	3	3	4-TAPx1/2"	98.4	79.4	127	4-TAPx1/2"
50x25	2"x1"	44	87	48	3	3	4-TAPx5/8"	120.6	79.4	152	4-TAPx1/2"
50x40	2"x1-1/2"	44	87	68	3	3	4-TAPx5/8"	120.6	98.4	152	4-TAPx1/2"
65x25	2-1/2"x1"	44	100	48	3	3	4x19Ø	139.7	79.4	178	4-TAPx1/2"
65x40	2-1/2"x1-1/2"	44	100	68	3	3	4-TAPx5/8"	139.7	98.4	178	4-TAPx1/2"
65x50	2-1/2"x2"	44	100	87	3	3	4-TAPx5/8"	139.7	120.6	178	4-TAPx5/8"
75x25	3"x1"	44	117	48	3	3	4x19Ø	152.4	79.4	191	4-TAPx1/2"
75x40	3"x1-1/2"	44	117	68	3	3	4x19Ø	152.4	98.4	191	4-TAPx1/2"
75x50	3"x2"	44	117	87	3	3	4-TAPx5/8"	152.4	120.6	191	4-TAPx5/8"
75x65	3"x2-1/2"	44	117	100	3	3	4-TAPx5/8"	152.4	139.7	191	4-TAPx5/8"
100x25	4"x1"	51	117	48	3	3	8x19Ø	190.5	79.4	229	4-TAPx1/2"
100x40	4"x1-1/2"	51	151	68	3	3	8x19Ø	190.5	98.4	229	4-TAPx1/2"
100x50	4"x2"	51	151	87	3	3	8x19Ø	190.5	120.6	229	4-TAPx5/8"
100x65	4"x2-1/2"	51	151	100	3	3	8-TAPx5/8"	190.5	139.7	229	4-TAPx5/8"
100x75	4"x3"	51	151	117	3	3	8-TAPx5/8"	190.5	152.4	229	4-TAPx5/8"
150x25	6"x1"	51	151	48	4	3	8x23Ø	241.3	79.4	279	4-TAPx1/2"
150x40	6"x1-1/2"	51	203	68	4	3	8x23Ø	241.3	98.4	279	4-TAPx1/2"
150x50	6"x2"	51	203	87	4	3	8x23Ø	241.3	120.6	279	4-TAPx5/8"
150x75	6"x3"	51	203	117	4	3	8x23Ø	241.3	152.4	279	4-TAPx5/8"
150x100	6"x4"	51	203	151	4	3	8x23Ø	241.3	190.5	279	4-TAPx5/8"
200x25	8"x1"	51	256	48	4	3	8-TAPx3/4"	298.4	79.4	343	4-TAPx1/2"
200x40	8"x1-1/2"	51	256	68	4	3	8x23Ø	298.4	98.4	343	4-TAPx1/2"
200x50	8"x2"	51	256	87	4	3	8x23Ø	298.4	120.6	343	4-TAPx5/8"
200x75	8"x3"	51	256	117	4	3	8x23Ø	298.4	152.4	343	4-TAPx5/8"
200x100	8"x4"	51	256	151	4	3	8x23Ø	298.4	190.5	343	8-TAPx5/8"
200x150	8"x6"	51	256	203	4	4	8x23Ø	298.4	241.3	343	8-TAPx3/4"
250x25	10"x1"	51	311	48	5	3	8-TAPx3/4"	361.9	79.4	406	4-TAPx1/2"
250x40	10"x1-1/2"	51	311	68	5	3	12x25Ø	361.9	98.4	406	4-TAPx1/2"
250x50	10"x2"	51	311	87	5	3	12x25Ø	361.9	120.6	406	4-TAPx5/8"
250x75	10"x3"	51	311	117	5	3	12x25Ø	361.9	152.4	406	4-TAPx5/8"
250x100	10"x4"	51	311	151	5	4	12x25Ø	361.9	190.5	406	8-TAPx5/8"
250x150	10"x6"	51	311	203	5	4	12x25Ø	361.9	241.3	406	8-TAPx3/4"
250x200	10"x8"	51	311	256	5	4	12x25Ø	361.9	298.4	406	8-TAPx3/4"
300x50	12"x2"	51	365	87	5	3	12-TAPx7/8"	431.8	120.6	483	4-TAPx5/8"
300x100	12"x4"	51	365	151	5	3	12-TAPx7/8"	431.8	190.5	483	8-TAPx5/8"
300x150	12"x6"	51	365	203	5	4	12x25Ø	431.8	241.3	483	8-TAPx3/4"
300x200	12"x8"	51	365	256	5	4	12x25Ø	431.8	298.4	483	8-TAPx3/4"
300x250	12"x10"	51	365	311	5	5	12x25Ø	431.8	361.9	483	12-TAPx7/8"

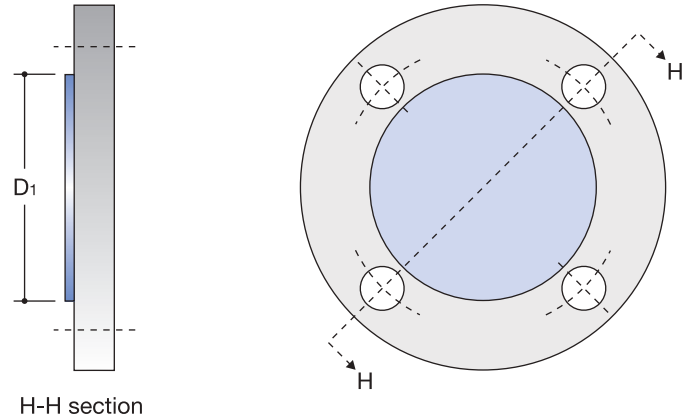
Lining : PTFE/PP/HDPE/PVDF in compliance with F1545.

Other Nominal sizes are available on request.

12x25Ø  
12TAPx7/8"



# BLIND FLANGE



H-H section

(Unit : mm)

Nominal size		T	G.W. (k.g)
Inch	mm		
1"	25	3.0	1.0
1-1/2"	40	3.0	1.9
2"	50	3.0	2.5
2-1/2"	65	3.0	3.4
3"	80	3.0	4.3
4"	100	3.0	8.0
6"	150	3.0	12.5
8"	200	3.0	21.5
10"	250	3.0	33.0
12"	300	3.0	52.0
14"	350	3.0	66.5
16"	400	3.0	85.0

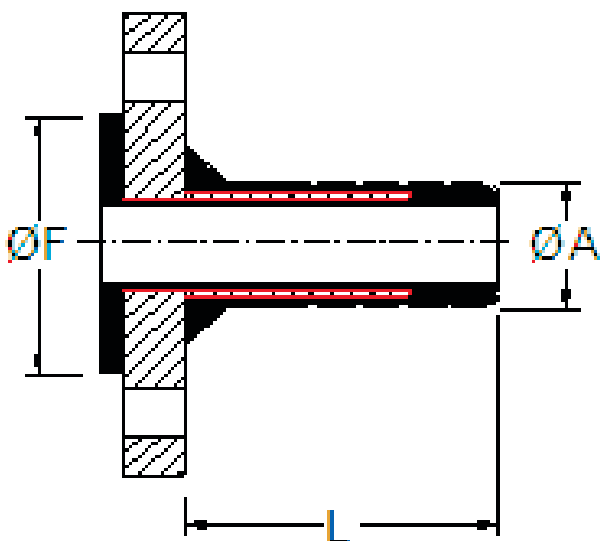
**Note:**

Flange : IS 2062, in compliance with ANSI B16.5/class 150lbs; JIS 10k or DIN is also available on request.

Lining : PTFE/PP/HDPE/PVDF in compliance with F1 545

Other nominal sizes are available on

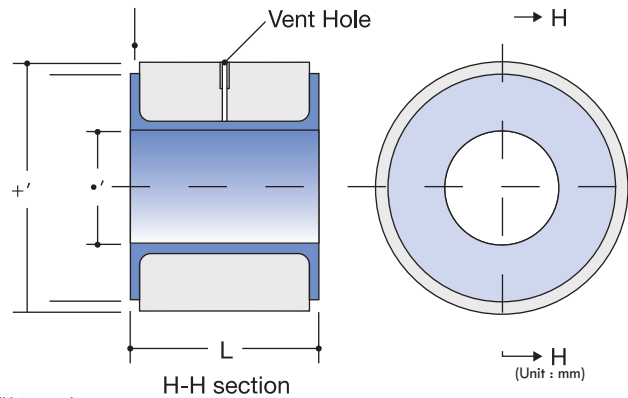
# HOSE NIPPLE



(Unit : mm)

mm	Hose Dim mm	Ø A mm	Ø F mm	L	G.W. (k.g)
25	25	26.5	26.5	70	1
40	25	26.5	26.5	70	1
40	40	42.5	42.5	70	1
50	25	26.5	26.5	70	1.5
50	40	42.5	42.5	70	1.5
50	50	52.5	52.5	70	1.5
80	25	26.5	26.5	70	4.5
80	40	42.5	42.5	70	4.5
80	50	52.5	52.5	70	4.5

# SPACER



(Unit : mm)

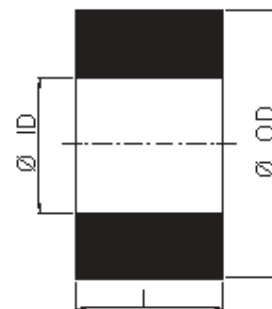
Nominal size		OD	ID	t'
Inch	mm			
1"	25	66.0	21.5	3~50
1-1/2"	40	85.0	35.5	3~50
2"	50	104.0	47.0	3~50
3"	80	136.0	72.5	3~50
4"	100	174.0	96.5	3~50
6"	150	221.5	145.0	3~50
8"	200	278.5	193.0	3~50
10"	250	330.0	250.0	3~50
12"	300	400.0	300.0	3~50
14"	350	410.0	350.0	3~50
16"	400	460.0	400.0	3~50
Tolerance		+0.-3	+0.-3	

Note:

Lining : PTFE/PP/HDPE/PVDF in compliance with F1545

Other nominal sizes are available on request

# SOLID SPACER

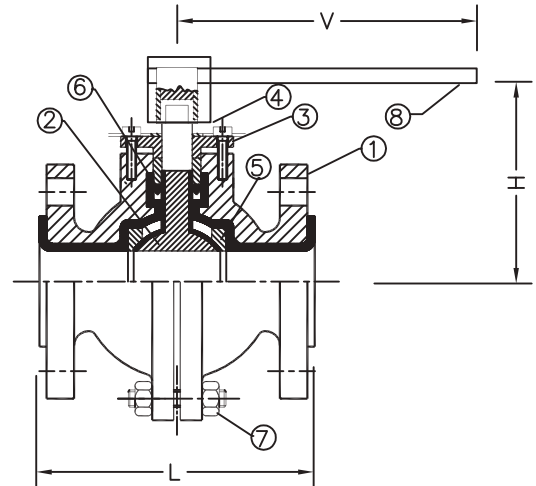


(Unit : mm)

Size mm	Ø OD	Ø ID	L min mm	L max mm
25	50	18	10	100
40	70	30	10	100
50	90	40	10	100
65	105	54	10	100
80	120	65	10	100
100	155	86	10	100
150	210	134	10	100
200	265	185	10	100



# INTEGRAL STEM BALL VALVE



(Unit : mm)

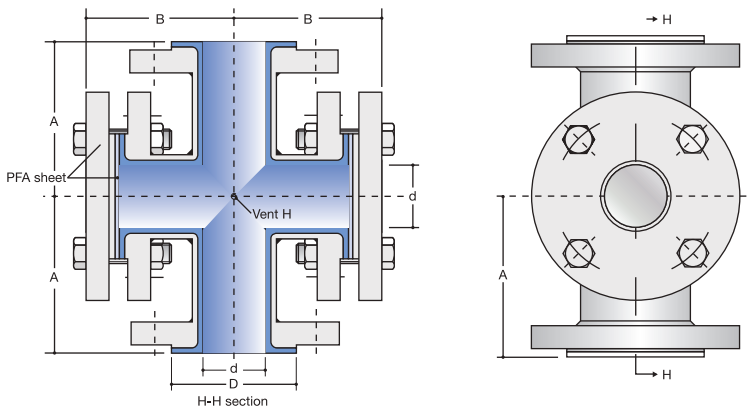
Size mm	ØF mim mm	C mm	H max mm	L mm	V mm	Torque kgf-m	Weight kg.
25	48	17	120	127	180	1	4.5
40	69	30	120	165	250	2	10
50	88	40	125	178	250	2.5	14
80	118	63	160	203	310	3	24
100	151	76	180	229	310	4	35

PART DESCRIPTION								
Sr. No	Part Name	BODY MATERIAL				LINING MATERIAL		
		Carboon Steel	Cast Iron	Cast Steel	PTFE	PTFE	PFA	PP / HDPE
1	Body		✓	✓		✓		✓
2	Stem Ball	✓					✓	✓
3	Gland Flange	✓						
4	Stopper Bolt	✓						
5	Seat ring				✓			
6	Stem Packing				✓			
7	Fasteners	✓						
8	Handle	✓						

## Features :

- One piece integral Ball Stem combination
- No backlash in stem and ball even after prolonged service
- Extraordinary strength due to metallic body and Ball core design
- Exceptionally low torque as compared to plug valve
- Self adjusting packing for maintenance free spindle sealing
- Bubble tight shut off same as standard ball valve

# SIGHT FLOW INDICATOR - DOUBLE WINDOW



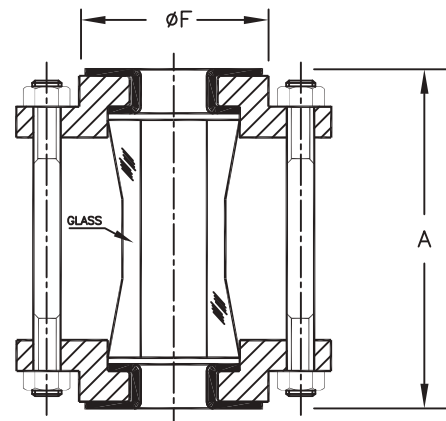
(Unit : mm)

Nominal size		D	A	t	G.W. (k.g.)
Inch	mm				
1"	25	48	178	3	7.0
1-1/2"	40	68	204	3	10.2
2"	50	87	228	3	12.9
3"	80	117	280	3	22.7
4"	100	151	330	3	25.6
6"	150	203	406	4	51.6
8"	200	256	456	4	64.5

**Note:**

Steel frame: ASTM A234 grade WPB, in compliance with ANSI B16.28 (Fabricated from pipes)  
 Flange: IS 2062, in compliance with ANSI B16.5/class 150lbs; JIS 10k or DIN is also available on request.  
 Lining: PTFE/PP/HDPE/PVDF in compliance with F1545

# SIGHT FLOW INDICATOR - FULL VIEW



(Unit : mm)

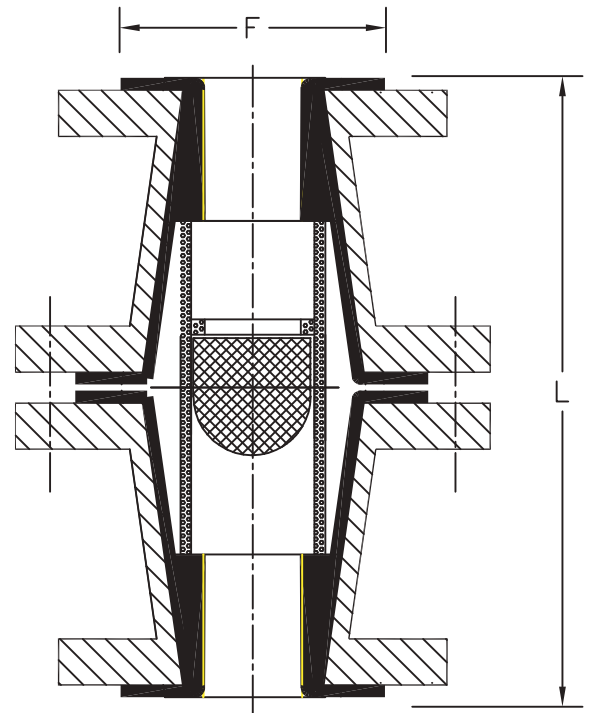
**Note:**

Flange: IS 2062, in compliance with ANSI B16.5/class 150lbs; JIS 10k or DIN is also available on request.  
 Lining: PTFE/PP/HDPE/PVDF in compliance with F1545

Size mm	A mm	ØF mm	Liner Thk min mm	Liner Thk max mm
25	150	48	3.5	1.5
40	150	69	4	2
50	150	88	4.2	2.5
80	150	118	4.5	3
100	150	151	4.5	3.5



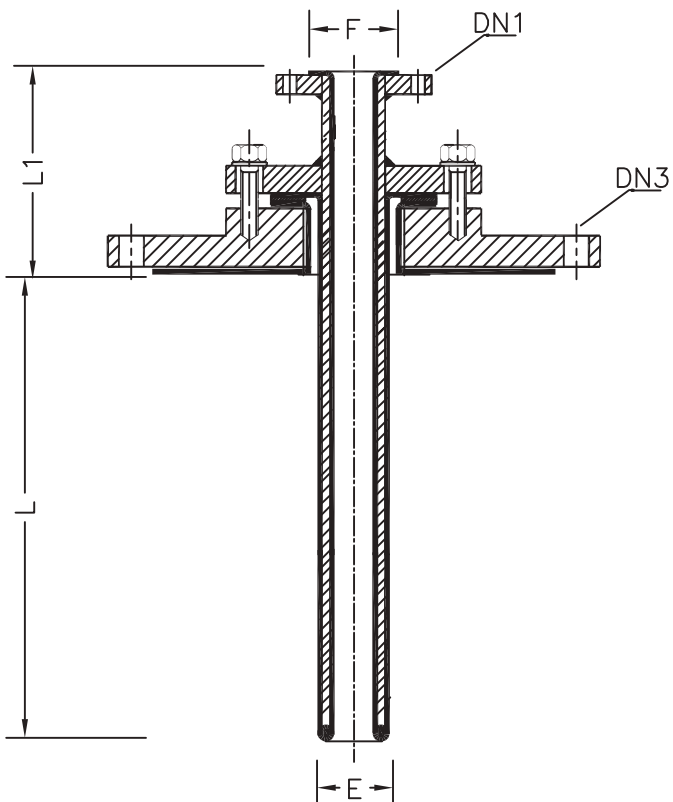
# Non Return Valve



(Unit : mm)

Inch	L mm	ØF min mm	G. W. (K.g.)	L Thickness mm
25	160	48	6	3.05
40	200	69	9	3.2
50	230	88	11	3.2
65	290	105	14	3.2
80	310	118	18	3.5
100	350	151	24	4.4

# DIP PIPE

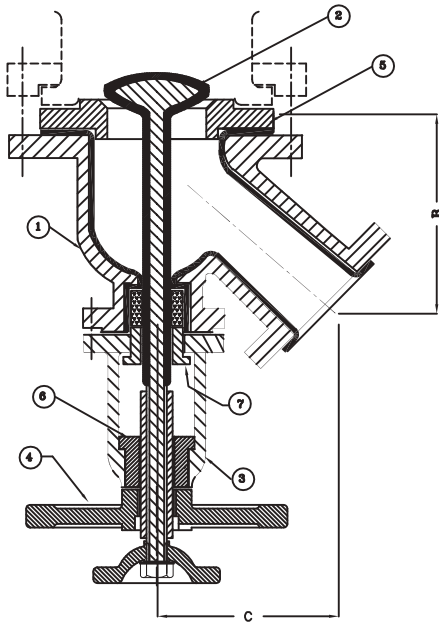


(Unit : mm)

DN1 mm	DN3 min mm	DN3 max mm	L max mm	ØE mm	L1 mm	L. Thick min mm
25	65	300	2700	45	150	3.05
40	80	300	2700	62	150	3.2
50	100	300	2800	78	150	3.5
80	150	300	2800	102	150	4
100	150	300	2800	133	150	4.5



# FLUSH BOTTOM VALVE



Size mm	L mm	ØE mm	B mm	C mm	X mm	Wt kg
50 X 40	375	50	160	125	30	12
80 X 50	420	75	183	135	30	18
100 X 80	440	98	208	155	38	26
150 X 100	545	150	259	196	45	38

PART DESCRIPTION									
Sr. No	Part Name	BODY MATERIAL				LINING MATERIAL			
		Carbon Steel	Cast Iron	Cast Steel	PTFE	GLASS FILLED PTFE	PTFE	PFA	PVDF
1	Body			✓			✓		
2	Spindle	✓						✓	✓
3	Bonnet	✓							
4	Handle		✓						
5	Seat					✓			
6	Seals				✓				
7	Gland	✓							