

High

Pressure ( Reducing, Safety & Shutoff )

Valve



VALVE AUTOMATION  
ISO 9001 CO.



SERIES : C



"Cair" offers disc check valve (wafer type) especially for chemical, Food processing, Pharmaceuticals, Pulp and Paper, Textiles, Power generation, Refrigeration & Air Conditioning etc. The valves are used in Oil lines, Processing line, Hot and cold water systems, steam and condensates, Gas lines etc.



Wafer Type



( Size : 1/2" to 1" S/E )



Lug Type Design  
( Size : 1.1/4" to 2" )

**Technical Specifications :**

Pressure	Maximum Operating Pressure 20 Bar
Temperature	Maximum Operating Temperature 300 °C
Flange Standard	1. BS 10 Table D, E & H ( 65 NB & 80 NB will not be fitted between 'E' Flanges ) 2. DIN : PN 6, 10, 16, 25, 40 3. JIS 5, 10, 16, 20 ( 40 NB, 50 NB, 80 NB & 100 NB will not be fitted between JIS 5 Flanges )

**Size Range : 1/2" to 4" Screwed**

**Size Range : 1/2" to 12" Wafer Type**

**Operation**

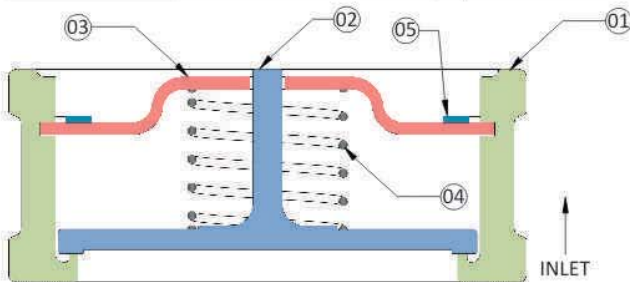
- Disc Check Valves are opened by the pressure of the fluid and closed through compression spring as soon as flow stops thus preventing reverse flow.

**Standard**

- Designed and Manufactured in accordance with BS 7438

**Silent Features :**

- Disc Check Valve is an advance design which gives full flow and occupy very less space than other type of Non Return Valve. This also available **IBR Certificate in Form III C.**
- DCVs are simple to fit between tow pipe flanges.
- Spring loaded disc to prevent reverse flow in pipe lines.
- Stronger, lighter and smaller than conventional swing check valves, hence less expensive to install and maintain.
- Compact Design of Valves flexibly accommodates various types of flange selection.
- The valves can be fitted in any plane / direction in pipe lines.
- Available in 15 mm to 300 mm sizes
- Extremely low operating pressure.
- Self centering type design.
- Zero leakage for soft seated valves
- Testing : As per API 598.

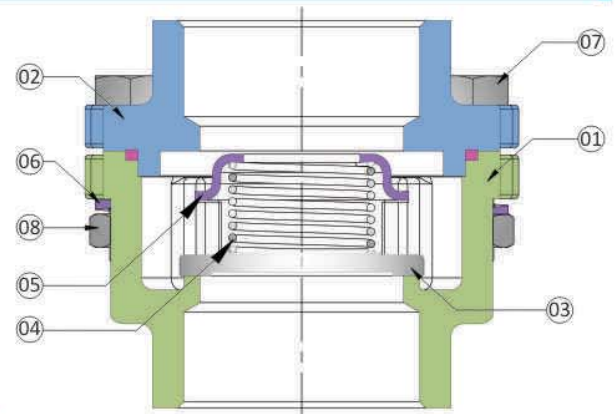
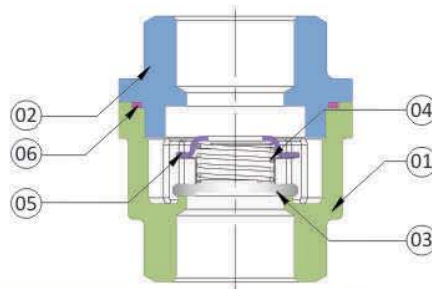


**This Specification Wafer Type DCV**

No.	Description	Material	Qty.
01	Body	WCB / CF8 / CF8M	01
02	Disc	CF8M	01
03	Retainer	CF8 / CF8M	01
04	Spring	S. S. 304 / 316	01
05	Stopper	CF8	01

**This Specification Size 1/2" to 1" S/E**

No.	Description	Material	Qty.
01	Body	CF8 / CF8M	01
02	Connector	CF8 / CF8M	01
03	Disc	S. S. 304 / 316	01
04	Spring	Spring Steel	01
05	Retainer	S. S. 304	01
06	Body Seal	PTFE	01



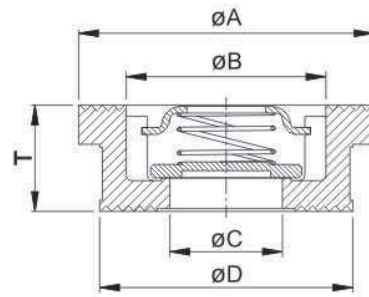
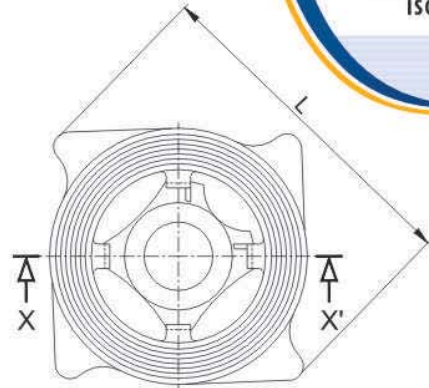
**This Specification Size 1.1/4" to 2" Lug Type Design**

No.	Description	Material	Qty.
01	Body	CF8 / CF8M	01
02	Connector	CF8 / CF8M	01
03	Disc	S. S. 304 / 316	01
04	Spring	Spring Steel	01
05	Retainer	S. S. 304	01
06	Body Seal	PTFE	01
07	Hex Bolt	S. S. 304	04
08	Hex Nut	S. S. 304	04

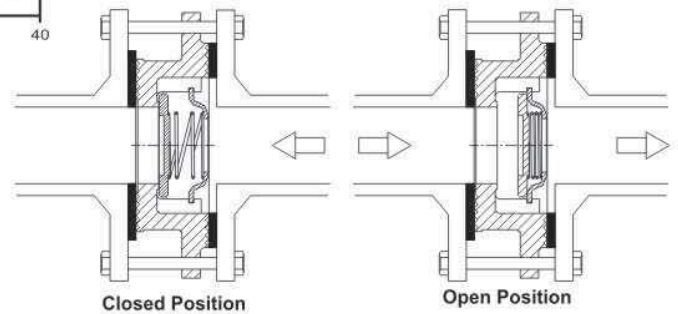


Dimensions : (All Dimensions are in mm)

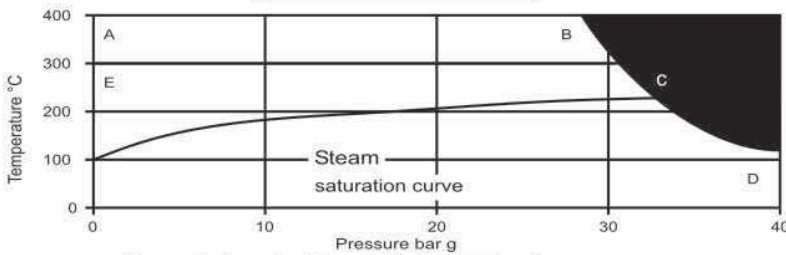
Valve Model	Valve Size		ØA	ØB	ØC	ØD	T	L	Weight Wafer Type
	MM	Inch							
DNRV - 15	15	1/2"	43	29	15	37	16	60	0.115
DNRV - 20	20	3/4"	53	35	20	44	19	70	0.183
DNRV - 25	25	1"	63	44	25	55	22	80	0.284
DNRV - 32	32	1.1/4"	74	53	32	67	28	90	0.489
DNRV - 40	40	1.1/2"	85	66	39	78	32	101	0.650
DNRV - 50	50	2"	95	77	49	92	40	115	1.088
DNRV - 65	65	2.1/2"	115	98	64	107	46	142	1.200
DNRV - 80	80	3"	133	110	79	127	50	153	1.700
DNRV - 100	100	4"	155	129	100	142	60	184	2.550
DNRV - 125	125	5"	192	161	125	184	90	245	7.600
DNRV - 150	150	6"	223	191	150	223	105	---	9.400
DNRV - 200	200	8"	279	249	198	279	143	---	15.900
DNRV - 250	250	10"	340	306	250	338	140	---	29.100
DNRV - 300	300	12"							ON REQUEST



Section X X'

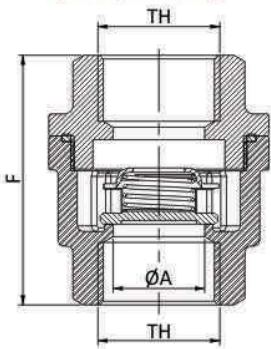


Operating Range

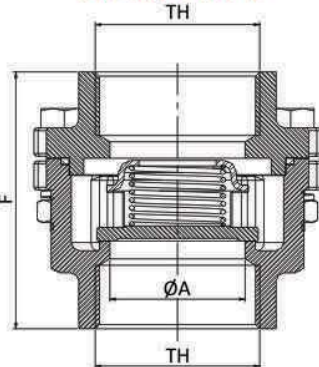


The product must not be used in the **C-D** region.  
A - B - C - D = DCV without spring or with high temperature spring.  
E - C - D = DCV with Standard Spring.

(Size 1/2" to 1")



(Size 1.1/4" to 2")



Operating Pressure : in m bar  
Differential Pressure With Zero Flow

	15 MM	20 MM	25 MM	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM
↑	25	25	25	28	29	30	31	33			ON REQUEST	
→	22.5	22.5	22.5	24.5	24.5	25	25.5	26.5			ON REQUEST	
↓	20	20	20	20	20	20	20	20			ON REQUEST	

→ Indicates Flow direction

The Valves can be installed, without spring in vertical pipe line with bottom to top flow, Where lowest opening pressures are required.

Without Spring

	15 MM	20 MM	25 MM	40 MM	50 MM	65 MM	80 MM	100 MM	125 MM	150 MM	200 MM	250 MM
↑	2.5	2.5	2.5	3.5	4	4.5	5.5	6.5			ON REQUEST	

→ Indicates Flow direction

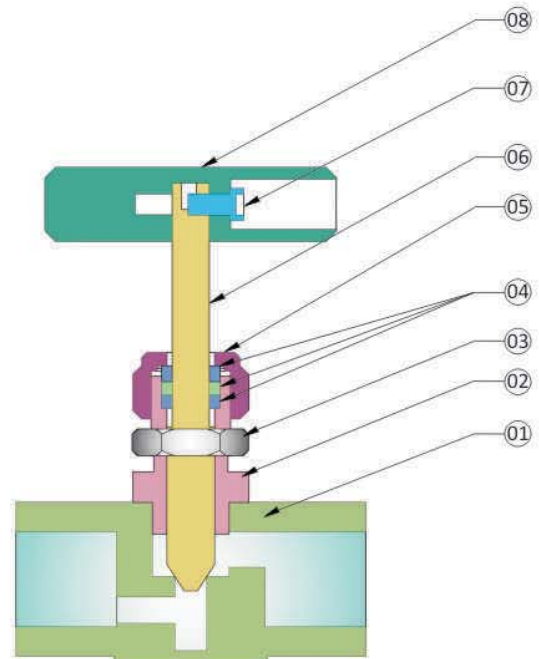
"Cair" Offers Medium Pressure Needle Valve Pressure Up to 350 Kg & Temperature 200 °C

Size Range : 1/4" to 2" Screwed

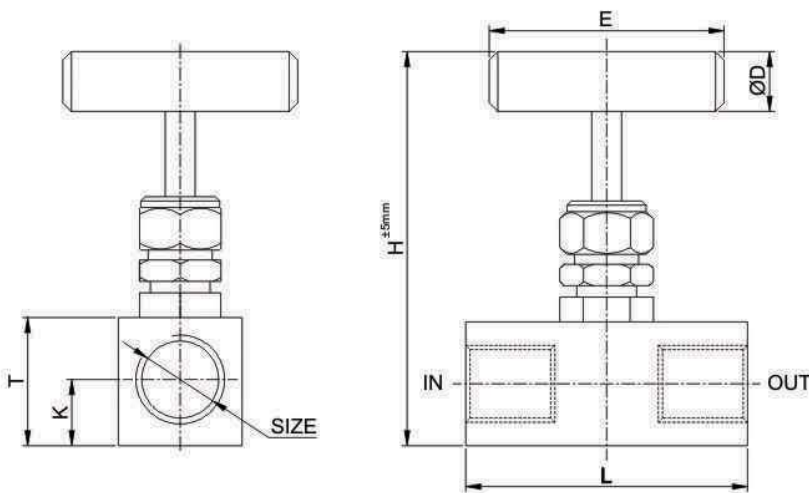


**Cair**<sup>®</sup>  
INDUSTRIAL VALVES

Needle Valve	Technical Specifications :
Pressure	350 Kg/cm <sup>2</sup> ( 5000 PSI )
Temperature	200 °C
Ends	Screwed (F) to BSP ( NPT On Request )
Media	Air, Water, Oil & Gas
Leakage	Bubble Tight



No.	Description	Material	Qty.
01	Body	IC CF8 / CF8M	01
02	Bonnet	S.S. 304 / S.S. 316	01
03	Check Nut	S.S. 304 / S.S. 316	01
04	Gland Packing	PTFE S.S. 304 / S.S. 316	02
05	Gland Nut	S.S. 304 / S.S. 316	01
06	Spindle	S.S. 304 / S.S. 316	01
07	Allenkey	Stainless Steel	01
08	'T' Type Key	S.S. 304 / S.S. 316	01



**Dimensions :** (All Dimensions are in mm)

Valve Model	Valve Size		H		T	L	K	ØD	E	Weight Approx.
	MM	Inch	Close	Open						
HNV-MP-6	6	1/4"	90	105	28	54	14	14	55	0.390
HNV-MP-10	10	3/8"	90	105	28	54	14	14	55	0.380
HNV-MP-15	15	1/2"	95	110	29	66	15	14	55	0.420
HNV-MP-20	20	3/4"	120	125	38	72	20	14	60	0.730
HNV-MP-25	25	1"	125	130	42	77	20	14	60	0.830
HNV-MP-32	32	1.1/4"	On Request							
HNV-MP-40	40	1.1/2"								
HNV-MP-50	50	2"								



Catalogue No.  
AEA / 1030

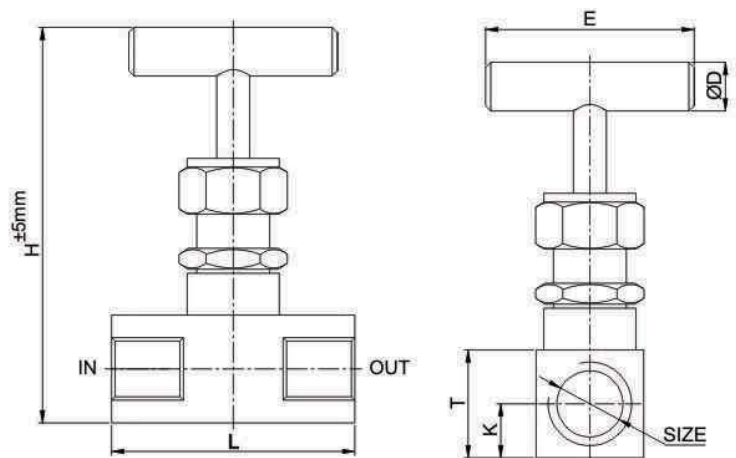
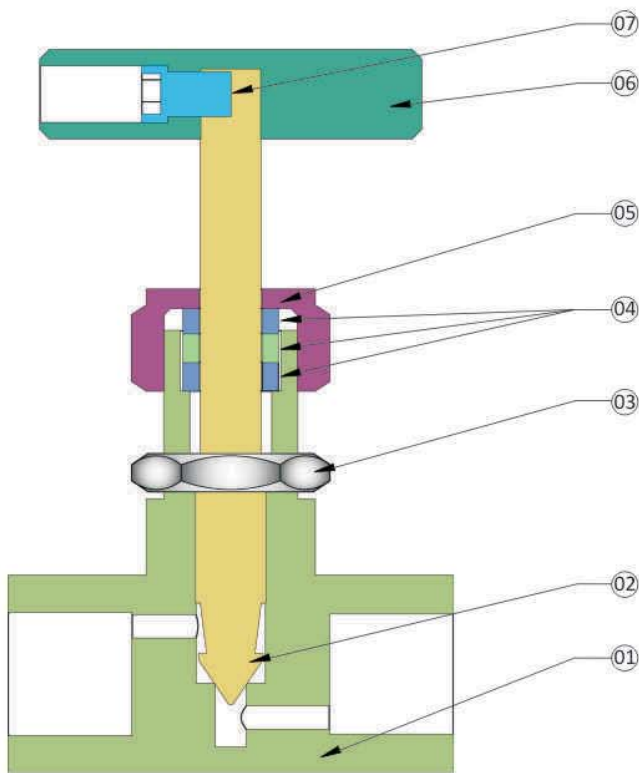
# High Pressure Needle Valve 700 Kg



"Cair" Offers High Pressure Needle Valve Pressure Upto 700 Kg & Temperature 350 °C

Size Range : 1/4" to 2" Screwed

Needle Valve	Technical Specifications :
Pressure	700 Kg/cm <sup>2</sup> ( 10000 PSI )
Temperature	360 °C
Ends	Screwed (F) to BSP ( NPT On Request )
Media	Air, Water, Oil & Gas
Leakage	Bubble Tight



No.	Description	Material	Qty.
01	Body	Forged S.S. 304 / 316	01
02	Spindle	S.S. 304 / S.S. 316	01
03	Check Nut	S.S. 304 / S.S. 316	01
04	Gland Packing	PTFE S.S. 304 / S.S. 316	01
05	Gland Nut	S.S. 304 / S.S. 316	01
06	'T' Type Key	S.S. 304 / S.S. 316	01
07	Allenkey	S.S. 304 / S.S. 316	01

**Dimensions :** (All Dimensions are in mm)

Valve Model	Valve Size		H		T	L	K	ØD	E	Weight Approx.	
	MM	Inch	Close	Open							
HNV-HP-6	6	1/4"	115	125	29	65	14.5	14	55	0.610	
HNV-HP-10	10	3/8"	118	125	30	65	15	14	60	0.590	
HNV-HP-15	15	1/2"	118	125	31.5	70	16.5	14	60	0.690	
HNV-HP-20	20	3/4"	128	142	38.5	75	20	14	60	0.970	
HNV-HP-25	25	1"	140	152	44	75	21.5	14	70	1.260	
HNV-HP-32	32	1.1/4"	152	165	53	91	26.5	14	70	1.980	
HNV-HP-40	40	1.1/2"	On Request								
HNV-HP-50	50	2"	On Request								

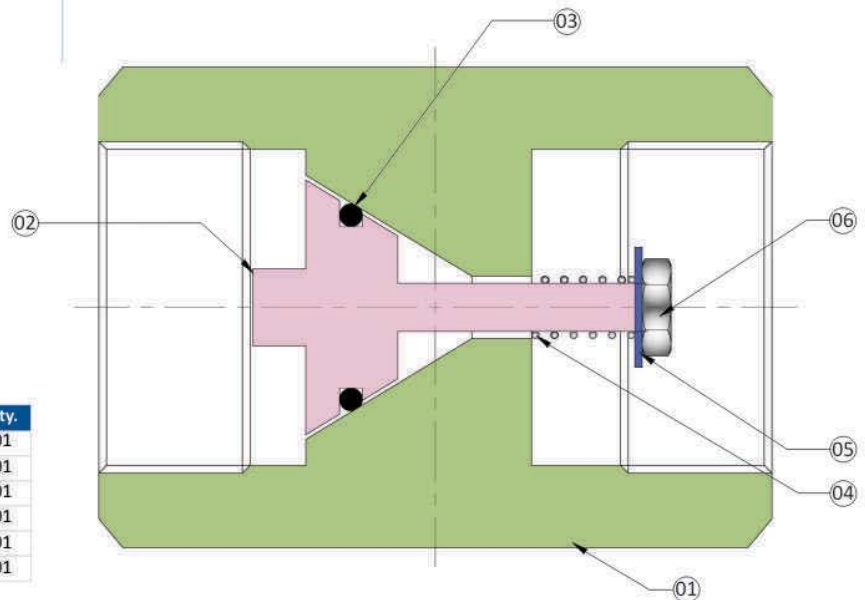


"aira" Offers High Pressure Universal Design Non-Return Valve. Superior design which can mount any position in pipe line maintenance free.

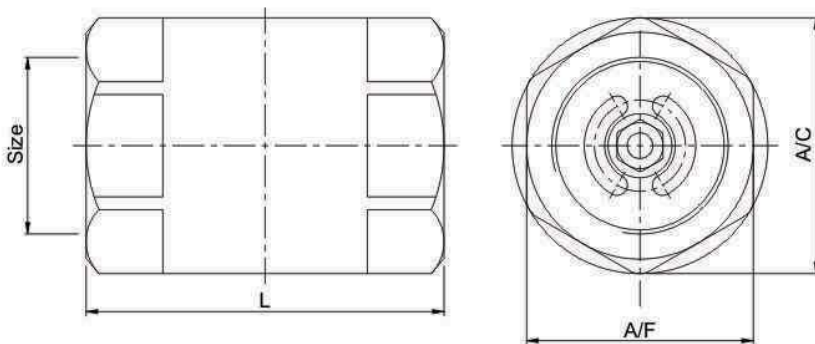


**Size Range : 1/2" to 2" Screwed (Female BSP / NPT)**

Non Return Valve	Technical Specifications :
Pressure	3000 PSI
Temperature	100 °C
Media	Air, Water, Oil & Gas
Ends	Screwed (F) to BSP ( NPT On Request )
Leakage	Bubble Tight



No.	Description	Material	Qty.
01	Body	IC CF8 / CF8M	01
02	Valve Pin	S.S. 304 / S.S. 316	01
03	'O' - Ring	Viton	01
04	Spring	S.S. 304 / S.S. 316	01
05	Washer	S.S. 304 / S.S. 316	01
06	Nut	S.S. 304 / S.S. 316	01



**Dimensions :** (All Dimensions are in mm)

Valve Model	Valve Size		L	A/F	A/C	Weight Approx.
	MM	Inch				
HNR - 15	15	1/2"	60	27	30	0.200
HNR - 20	20	3/4"	65	35	38	0.370
HNR - 25	25	1"	70	41	45	0.520
HNR - 32	32	1.1/4"	73	48	51	0.630
HNR - 40	40	1.1/2"	86	58.5	65	1.250
HNR - 50	50	2"	94	68	72	1.610



"Suzhik" Offer Pressure Reducing Valve Investment Cast Stainless Steel Material for Air, Water, Oil, Gas, Steam & Chemicals.

**Size Range : 1/2" to 4" Screwed / Flange End**

**Standard**

- 1/2" to 4" Meet requirements of
- ASSE Standard 1003. ( ANST 112.26 )
- CSA Standard B356
- ( ASSE - American Society of Sanitary Engineering )
- ( CSA - Canadian Standard Association )

**Pressure / Temperature**

- Temperature : 80 °C ( For Water )
- Temperature : 180 °C ( For Steam )
- Maximum Working Pressure : 21 Kg/cm<sup>2</sup>, Inlet
- Pressure Adjusting Range : 1 ~ 6 Kg/cm<sup>2</sup>, 4 ~ 10 Kg/cm<sup>2</sup>  
8 ~ 13 Kg/cm<sup>2</sup>, 12 ~ 20 Kg/cm<sup>2</sup> 20 ~ 35 Kg/cm<sup>2</sup>

**Pressure Setting And Flow Rate Of Direct - Activated Pressure Reducing Valve**

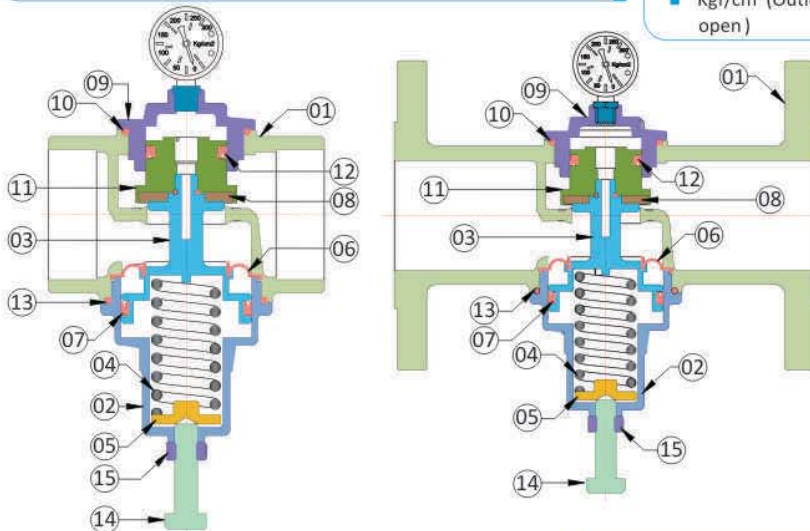
- Direct-activated pressure reducing valve directly opens and close valve gate by the outlet pressure
- When Outlet pressure is under setting pressure, valve gate automatically opens, To make valve gate fully open, adjustable pressure range and setting pressure are relative points.
- A : Pressure drop needed for fully-opened valve gate=B/4, B=Adjustable Pressure Range Maximum-Maximum
- B : Adjustable Pressure Range(=Maximum Maximum Adjustable Pressure Range)
- C : Setting Pressure of Outlet
- P : Pressure of fully-opened outlet valve gate, P=C-A
- Pressure drop needed for fully-opened valve gate for Adjusting Pressure range 3~9 kgf/cm<sup>2</sup> of direct activated pressure reducing valve.
- A=B/4=9 - 3 = 1.5 kgf/cm<sup>2</sup>.
- If the setting pressure of outlet 6 kgf/cm<sup>2</sup>, Pressure of fully opened valve gate will be P=6-1.5 = 4.5
- kgf/cm<sup>2</sup> (Outlet Pressure should go down under 4.5kgf/cm<sup>2</sup> to make valve gate fully open)

**Options**

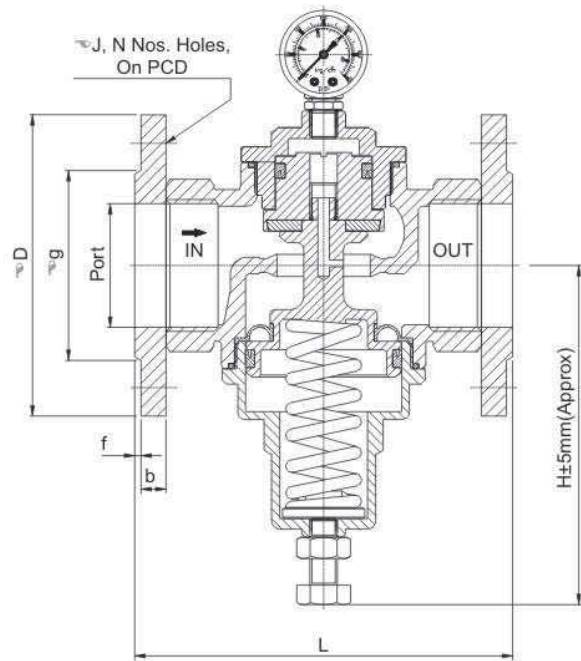
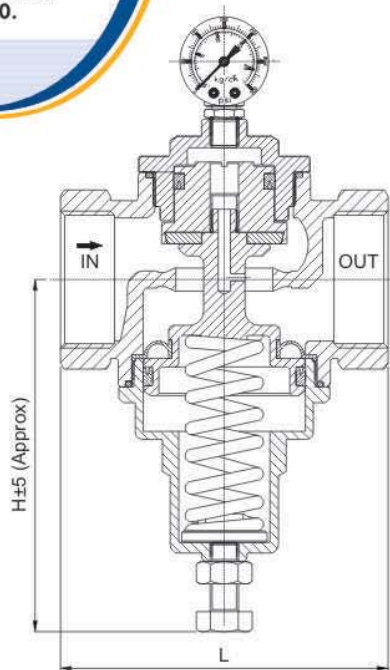
- Available different Models for Air, Water, Oil, Gas, Steam & Chemical
- LP - Low Pressure Range : 10 - 35 PSI
- HP - High Pressure Range : Max. Inlet 40 Kg/cm<sup>2</sup>  
Outlet 12 ~ 25 Kg/cm<sup>2</sup>  
20 ~ 35 Kg/cm<sup>2</sup>

**Example**

- Pressure drop needed for fully - opened valve . gate for adjustable Pressure range 3 ~ 9 Kg/cm<sup>2</sup> of direct activated pressure reducing valve
- A = B / 4 = 9 - 3 = 1.5 Kg/cm<sup>2</sup>
- If the setting pressure of outlet 6 Kg/cm<sup>2</sup>, Pressure of fully - opened valve gate will be P = 6 - 1.5 = 4.5
- Kgf/cm<sup>2</sup> (Outlet Pressure should go down under 4.5 Kg/cm<sup>2</sup> to make valve gate fully open)



No.	Description	Material	Qty.
01	Body	CF8 / CF8M	01
02	Bonnet	CF8 / CF8M	01
03	Piston	CF8 / CF8M	01
04	Spring	S. S. 302	01
05	Spring Guide	Brass / S. S. 410	01
06	Diaphragm	NBR / Viton	01
07	Piston V - Seal	NBR / Viton	01
08	Washer	NBR / Viton	01
09	End Cover	CF8 / CF8M	01
10	End Cover 'O' - Ring	NBR / Viton	01
11	Plug	CF8 / CF8M	01
12	Plug V - Seal	NBR / Viton	01
13	Bonnet 'O' - Ring	NBR / Viton	01
14	Adjusting Bolts	S. S. 304 / 316	01
15	Adjusting Nut	S. S. 304 / 316	01



Dimensions : (Screwed End) (All Dimensions are in mm)

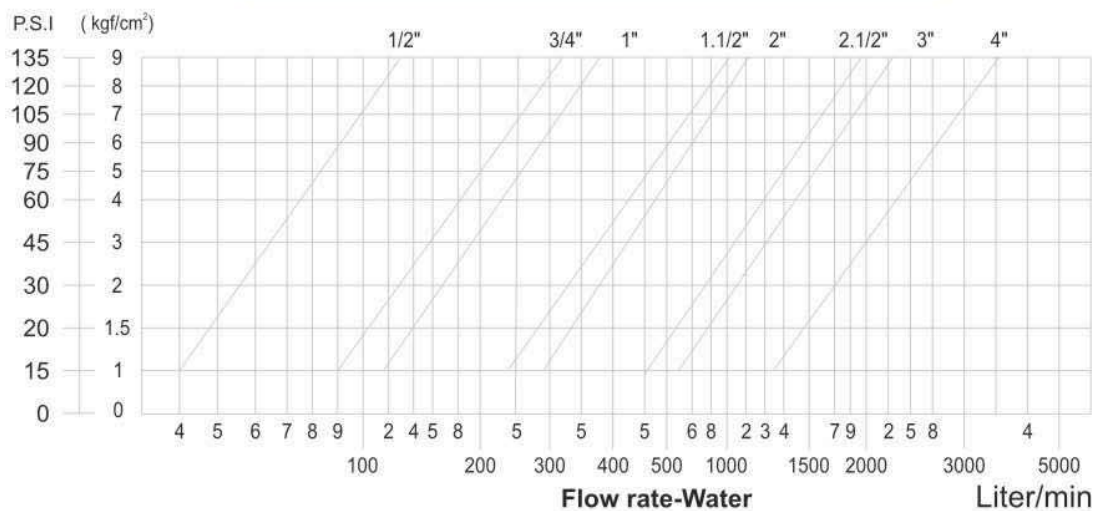
Valve Model	Valve Size		L	H	CV	Weight Approx.
	MM	Inch				
WGS-15-SD	15	1/2"	70.5	72	24	0.800
WGS-20-SD	20	3/4"	85.5	87	9	1.000
WGS-25-SD	25	1"	90.5	91	11	1.000
WGS-32-SD	32	1.1/4"	98.5	100	12.15	1.200
WGS-40-SD	40	1.1/2"	115	116	21	2.250
WGS-50-SD	50	2"	120	120	25	2.400
WGS-65-SD	65	2.1/2"	148	147	75	7.650
WGS-80-SD	80	3"	177	176	80	8.050
WGS-100-SD	100	4"	190	190	120	12.500

Dimensions : (Flange End)

(All Dimensions are in mm)

Valve Model	Valve Size		Port	ØD	b	Øg	f	ØJ	N	PCD	L	H	Weight Approx.
	MM	Inch											
WGF-15-FD	15	1/2"	12.5	88.9	8.9	35.05	2	15.75	4	60.45	138	100.8	1.500
WGF-20-FD	20	3/4"	17	98.55	8.9	42.9	2	15.75	4	69.85	147	111.1	2.000
WGF-25-FD	25	1"	24	107.9	9.6	50.8	2	15.75	4	79.25	127	87.7	2.250
WGF-32-FD	32	1.1/4"	30	117.34	11.1	63.5	2	15.75	4	88.9	170	108.8	3.100
WGF-40-FD	40	1.1/2"	37	127	12.6	73	2	15.75	4	98.55	195	137.5	4.700
WGF-50-FD	50	2"	49	152.4	14.15	91.95	2	19.05	4	120.65	208	138.5	6.300
WGF-65-FD	65	2.1/2"	64	177.8	15.4	104.65	2	19.05	4	139.7	210	----	13.500
WGF-80-FD	80	3"	80	192.5	17.9	129.16	2	19.05	4	152.4	225.5	----	14.500
WGF-100-FD	100	4"	100	230.6	22.4	158.57	2	19.05	8	190.5	251	----	24.600

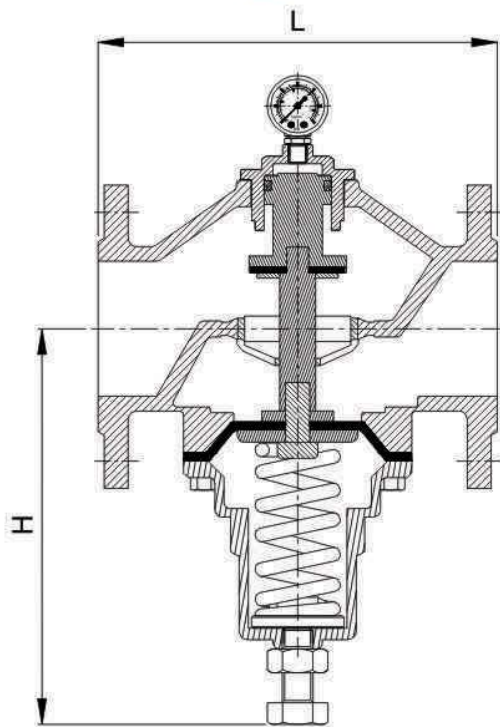
### Flow Chart of Inlet and Outlet Pressure Drop





FLOW CHART OF PRV FOR WATER AT 50 DEG C ( US GPM )

OUTLET	INLET	CV	SIZE	30 PSI	45 PSI	60 PSI	75 PSI	90 PSI	105 PSI	120 PSI	135 PSI	150 PSI	165 PSI	180 PSI
15	PSI	2.4	1/2"	9.29	10.73	16.08	18.58	20.78	22.75	25.39	26.28	27.86	29.38	30.82
		9	3/4"	34.83	40.23	60.30	69.66	77.94	85.32	95.22	98.55	104.49	110.16	115.56
		11	1"	42.57	49.17	73.70	85.14	95.26	104.28	116.38	120.45	127.71	134.64	141.24
		12.15	1.1/4"	47.02	54.31	81.41	94.04	105.22	115.18	128.55	133.04	141.06	148.72	156.01
		21	1 1/2"	81.27	93.87	140.70	162.54	181.86	199.08	222.18	229.95	243.81	257.04	269.64
		25	2"	96.75	111.75	167.50	193.50	216.50	237.00	264.50	273.75	290.25	306.00	321.00
		75	2 1/2"	290.25	335.25	502.50	580.50	649.50	711.00	793.50	821.25	876.00	918.00	963.00
		80	3"	309.60	357.60	536.00	619.20	692.80	758.40	846.40	876.00	928.80	979.20	1027.20
120	4"	464.40	536.40	804.00	928.80	1039.20	1137.60	1269.60	1314.00	1393.20	1468.80	1540.80		
30	PSI	2.4	1/2"	9.29	10.73	16.08	18.58	20.78	22.75	25.39	26.28	27.86	29.38	30.82
		9	3/4"	34.83	40.23	60.30	69.66	77.94	85.32	95.22	98.55	104.49	110.16	115.56
		11	1"	42.57	49.17	73.70	85.14	95.26	104.28	116.38	120.45	127.71	134.64	141.24
		12.15	1.1/4"	47.02	54.31	81.41	94.04	105.22	115.18	128.55	133.04	141.06	148.72	156.01
		21	1 1/2"	81.27	93.87	140.70	162.54	181.86	199.08	222.18	229.95	243.81	257.04	269.64
		25	2"	96.75	111.75	167.50	193.50	216.50	237.00	264.50	273.75	290.25	306.00	321.00
		75	2 1/2"	290.25	335.25	502.50	580.50	649.50	711.00	793.50	821.25	876.00	918.00	963.00
		80	3"	309.60	357.60	536.00	619.20	692.80	758.40	846.40	876.00	928.80	979.20	1027.20
120	4"	464.40	536.40	804.00	928.80	1039.20	1137.60	1269.60	1314.00	1393.20	1468.80	1540.80		
45	PSI	2.4	1/2"	9.29	10.73	16.08	18.58	20.78	22.75	25.39	26.28	27.86	29.38	30.82
		9	3/4"	34.83	40.23	60.30	69.66	77.94	85.32	95.22	98.55	104.49	110.16	115.56
		11	1"	42.57	49.17	73.70	85.14	95.26	104.28	116.38	120.45	127.71	134.64	141.24
		12.15	1.1/4"	47.02	54.31	81.41	94.04	105.22	115.18	128.55	133.04	141.06	148.72	156.01
		21	1 1/2"	81.27	93.87	140.70	162.54	181.86	199.08	222.18	229.95	243.81	257.04	269.64
		25	2"	96.75	111.75	167.50	193.50	216.50	237.00	264.50	273.75	290.25	306.00	321.00
		75	2 1/2"	290.25	335.25	502.50	580.50	649.50	711.00	793.50	821.25	876.00	918.00	963.00
		80	3"	309.60	357.60	536.00	619.20	692.80	758.40	846.40	876.00	928.80	979.20	1027.20
120	4"	464.40	536.40	804.00	928.80	1039.20	1137.60	1269.60	1314.00	1393.20	1468.80	1540.80		
60	PSI	2.4	1/2"	9.29	10.73	16.08	18.58	20.78	22.75	25.39	26.28	27.86	29.38	30.82
		9	3/4"	34.83	40.23	60.30	69.66	77.94	85.32	95.22	98.55	104.49	110.16	115.56
		11	1"	42.57	49.17	73.70	85.14	95.26	104.28	116.38	120.45	127.71	134.64	141.24
		12.15	1.1/4"	47.02	54.31	81.41	94.04	105.22	115.18	128.55	133.04	141.06	148.72	156.01
		21	1 1/2"	81.27	93.87	140.70	162.54	181.86	199.08	222.18	229.95	243.81	257.04	269.64
		25	2"	96.75	111.75	167.50	193.50	216.50	237.00	264.50	273.75	290.25	306.00	321.00
		75	2 1/2"	290.25	335.25	502.50	580.50	649.50	711.00	793.50	821.25	876.00	918.00	963.00
		80	3"	309.60	357.60	536.00	619.20	692.80	758.40	846.40	876.00	928.80	979.20	1027.20
120	4"	464.40	536.40	804.00	928.80	1039.20	1137.60	1269.60	1314.00	1393.20	1468.80	1540.80		
75	PSI	2.4	1/2"	9.29	10.73	16.08	18.58	20.78	22.75	25.39	26.28	27.86	29.38	30.82
		9	3/4"	34.83	40.23	60.30	69.66	77.94	85.32	95.22	98.55	104.49	110.16	115.56
		11	1"	42.57	49.17	73.70	85.14	95.26	104.28	116.38	120.45	127.71	134.64	141.24
		12.15	1.1/4"	47.02	54.31	81.41	94.04	105.22	115.18	128.55	133.04	141.06	148.72	156.01
		21	1 1/2"	81.27	93.87	140.70	162.54	181.86	199.08	222.18	229.95	243.81	257.04	269.64
		25	2"	96.75	111.75	167.50	193.50	216.50	237.00	264.50	273.75	290.25	306.00	321.00
		75	2 1/2"	290.25	335.25	502.50	580.50	649.50	711.00	793.50	821.25	876.00	918.00	963.00
		80	3"	309.60	357.60	536.00	619.20	692.80	758.40	846.40	876.00	928.80	979.20	1027.20
120	4"	464.40	536.40	804.00	928.80	1039.20	1137.60	1269.60	1314.00	1393.20	1468.80	1540.80		
90	PSI	2.4	1/2"	9.29	10.73	16.08	18.58	20.78	22.75	25.39	26.28	27.86	29.38	30.82
		9	3/4"	34.83	40.23	60.30	69.66	77.94	85.32	95.22	98.55	104.49	110.16	115.56
		11	1"	42.57	49.17	73.70	85.14	95.26	104.28	116.38	120.45	127.71	134.64	141.24
		12.15	1.1/4"	47.02	54.31	81.41	94.04	105.22	115.18	128.55	133.04	141.06	148.72	156.01
		21	1 1/2"	81.27	93.87	140.70	162.54	181.86	199.08	222.18	229.95	243.81	257.04	269.64
		25	2"	96.75	111.75	167.50	193.50	216.50	237.00	264.50	273.75	290.25	306.00	321.00
		75	2 1/2"	290.25	335.25	502.50	580.50	649.50	711.00	793.50	821.25	876.00	918.00	963.00
		80	3"	309.60	357.60	536.00	619.20	692.80	758.40	846.40	876.00	928.80	979.20	1027.20
120	4"	464.40	536.40	804.00	928.80	1039.20	1137.60	1269.60	1314.00	1393.20	1468.80	1540.80		



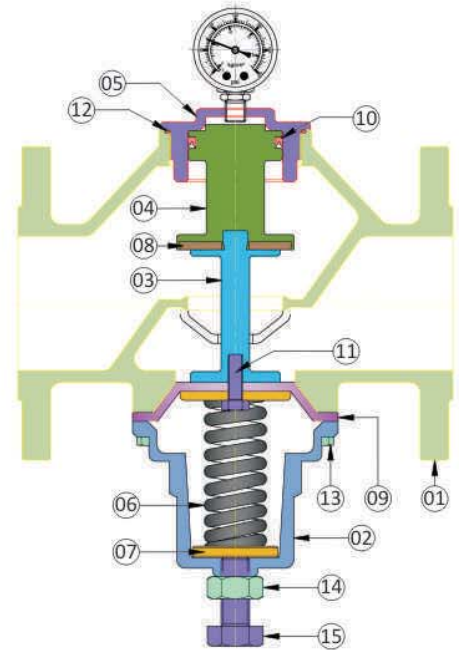
**Dimensions :** (All Dimensions are in mm)

Valve Model	Valve Size		L	H	CV	Weight Approx.
	MM	Inch				
DMF - 50	50	2"	190	150	21	12
DMF - 65	65	2.1/2"	210	165	38	17
DMF - 80	80	3"	225	200	55	19
DMF - 100	100	4"	250	220	95	24

**Size Range : 2" to 4" Flanged End**

**Silent Features :**

- The gate is designed for opening status, which will not influence the water supply function under unstable inlet pressure condition.
- When the outlet pressure responds directly to the pressure control chamber and adjusts the setting pressure, it responds quickly and adjusts the pressure accurately.
- Pressure Adjusting Range : 1 ~ 5 kgf/cm<sup>2</sup>, 3 ~ 8 kgf/cm<sup>2</sup>
- Valve Body Testing Pressure : 21 kgf/cm<sup>2</sup>
- Maximum Applied Pressure : 16 kgf/cm<sup>2</sup> (1 kgf/cm<sup>2</sup> = 14.2 psi)
- Applied Temperature : -15 ~ 80 °C accurately Design of piston and diaphragm improves the inability of sustaining pressure and leakage.
- Pressure Adjusting Range : 1 ~ 6 kgf/cm<sup>2</sup>, 4 ~ 10 kgf/cm<sup>2</sup>, 8 ~ 13 kgf/cm<sup>2</sup>
- Pressure needed from fully-closed gate to fully-opened gate : 1.5 kgf/cm<sup>2</sup> (1 kgf/cm<sup>2</sup> = 14.2 psi)
- Applied Temperature : -15 ~ 100 °C, 100 ~ 180 °C (For steam)
- Valve Body Testing Pressure : 35 kgf/cm<sup>2</sup>
- Maximum Applied Pressure : 25 kgf/cm<sup>2</sup>



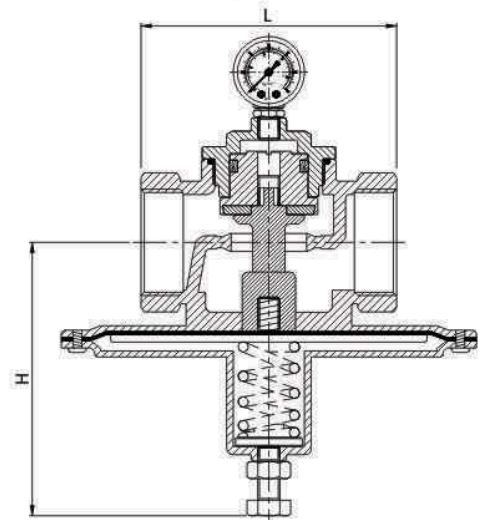
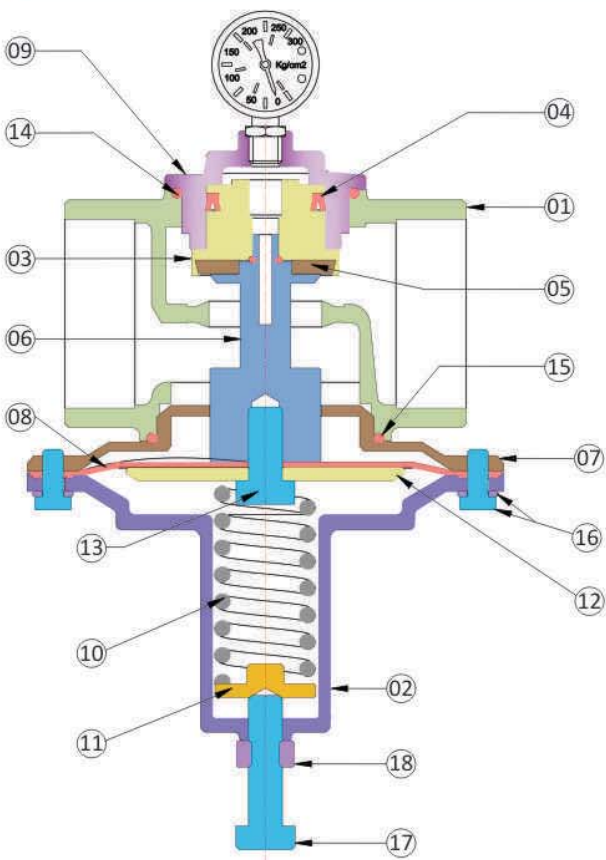
No.	Description	Material	Qty.
01	Body	Cast Iron	01
02	Bonnet	Cast Iron	01
03	Piston	CF8 / CF8M	01
04	Plug	CF8 / CF8M	01
05	End Cover	CF8 / CF8M	01
06	Spring	S. S. 202	01
07	Spring Guide	Brass / S. S. 410	02
08	Washer	NBR	01
09	Diaphragm	NBR / Viton	01
10	End Cover V - Seal	NBR / Viton	01
11	Piston For Bolt	M. S.	01
12	End Cover O - Ring	NBR	01
13	Bonnet Fitting Bolt	M. S.	02
14	Adjusting Nut	M. S.	01
15	Adjusting Bolt	M. S.	01



Size Range : 1/2" to 4" Screwed

● Silent Features :

- Valve Body is made by Stainless Steel #316, suitable for fluid, air and oil.
- Larger diaphragm is more sensitive to pressure.
- Pressure Adjusting Range : 0.2 ~ 1.5 Kg/cm<sup>2</sup>
- Applied Temperature : -15 ~ 80 °C
- Valve Body Testing Pressure : 16 Kg/cm<sup>2</sup>
- Maximum Applied Pressure : 10 Kg/cm<sup>2</sup>



No.	Description	Material	Qty.
01	Body	CF8 / CF8M	01
02	Bonnet	CF8 / CF8M	01
03	Plug	CF8 / CF8M	01
04	Plug V - Seal	NBR / Viton	01
05	Sealing Spacer Seat	NBR / Viton / PTFE	01
06	Piston	S. S. 304 / 316	01
07	Bonnet Cover	CF8 / CF8M	01
08	Diaphragm	NBR / Viton / PTFE	01
09	End Cover	CF8 / CF8M	01
10	Spring	Spring Steel	01
11	Spring Guide	Brass / S. S. 410	01
12	Diaphragm Washer	S. S. 304 / 316	01
13	Adjusting Piston Bolt	S. S. 304 / 316	01
14	End Cover O - Ring	NBR / Viton	01
15	Cover for O - Ring	NBR / Viton	01
16	Bonnet Fitting Bolt		
	Bonnet Fitting Washer	S. S. 304 / 316	06
17	Adjusting Bolt	S. S. 304 / 316	01
18	Adjusting Nut	S. S. 304 / 316	01

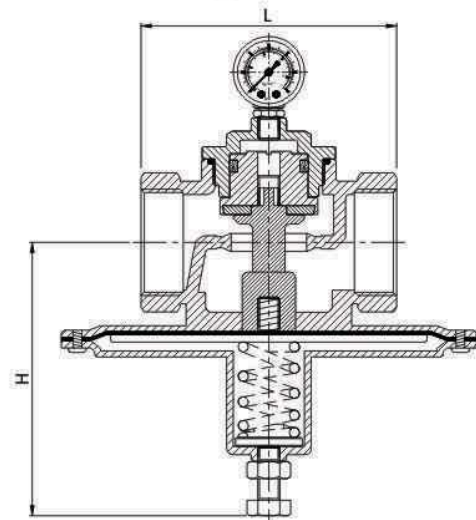
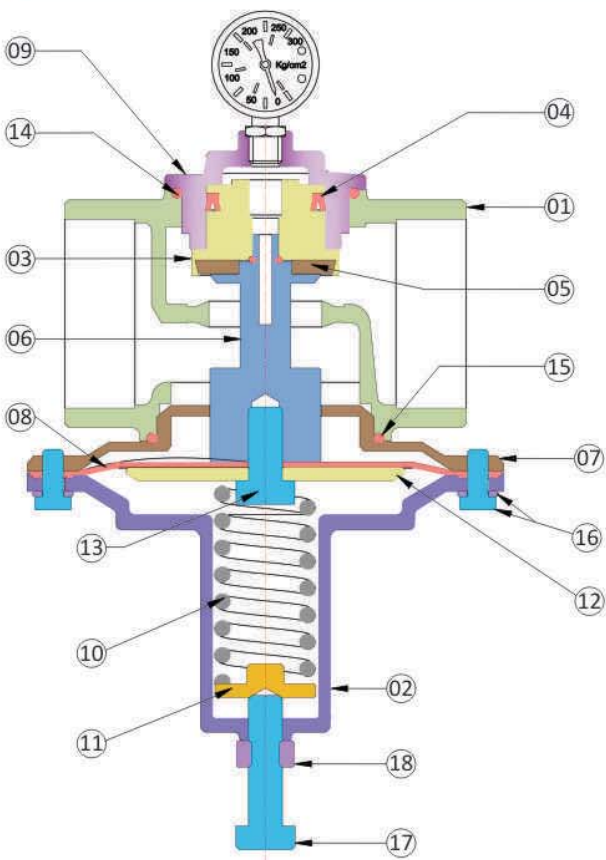
Dimensions : (All Dimensions are in mm)

Valve Model	Valve Size		L	H	CV	Weight Approx.
	MM	Inch				
LOS - 15	15	1/2"	70.5	128.5	2.5	1.400
LOS - 20	20	3/4"	85.5	137.45	9.0	1.600
LOS - 25	25	1"	90	135.4	11.0	1.650
LOS - 40	40	1.1/2"	115	134.5	21.0	3.550
LOS - 50	50	2"	120	165.9	25.0	3.800
LOS - 65	65	2.1/2"	148	170.2	75.0	3.928
LOS - 80	80	3"	177	----	80.0	----
LOS - 100	100	4"	190	----	120.0	----

Size Range : 1/2" to 4" Screwed

● Silent Features :

- Valve Body is made by Stainless Steel #316, suitable for fluid, air and oil.
- Larger diaphragm is more sensitive to pressure.
- Pressure Adjusting Range : 0.2 ~ 1.5 Kg/cm<sup>2</sup>
- Applied Temperature : -15 ~ 80 °C
- Valve Body Testing Pressure : 16 Kg/cm<sup>2</sup>
- Maximum Applied Pressure : 10 Kg/cm<sup>2</sup>



No.	Description	Material	Qty.
01	Body	CF8 / CF8M	01
02	Bonnet	CF8 / CF8M	01
03	Plug	CF8 / CF8M	01
04	Plug V - Seal	NBR / Viton	01
05	Sealing Spacer Seat	NBR / Viton / PTFE	01
06	Piston	S. S. 304 / 316	01
07	Bonnet Cover	CF8 / CF8M	01
08	Diaphragm	NBR / Viton / PTFE	01
09	End Cover	CF8 / CF8M	01
10	Spring	Spring Steel	01
11	Spring Guide	Brass / S. S. 410	01
12	Diaphragm Washer	S. S. 304 / 316	01
13	Adjusting Piston Bolt	S. S. 304 / 316	01
14	End Cover O - Ring	NBR / Viton	01
15	Cover for O - Ring	NBR / Viton	01
16	Bonnet Fitting Bolt		
	Bonnet Fitting Washer	S. S. 304 / 316	06
17	Adjusting Bolt	S. S. 304 / 316	01
18	Adjusting Nut	S. S. 304 / 316	01

Dimensions : (All Dimensions are in mm)

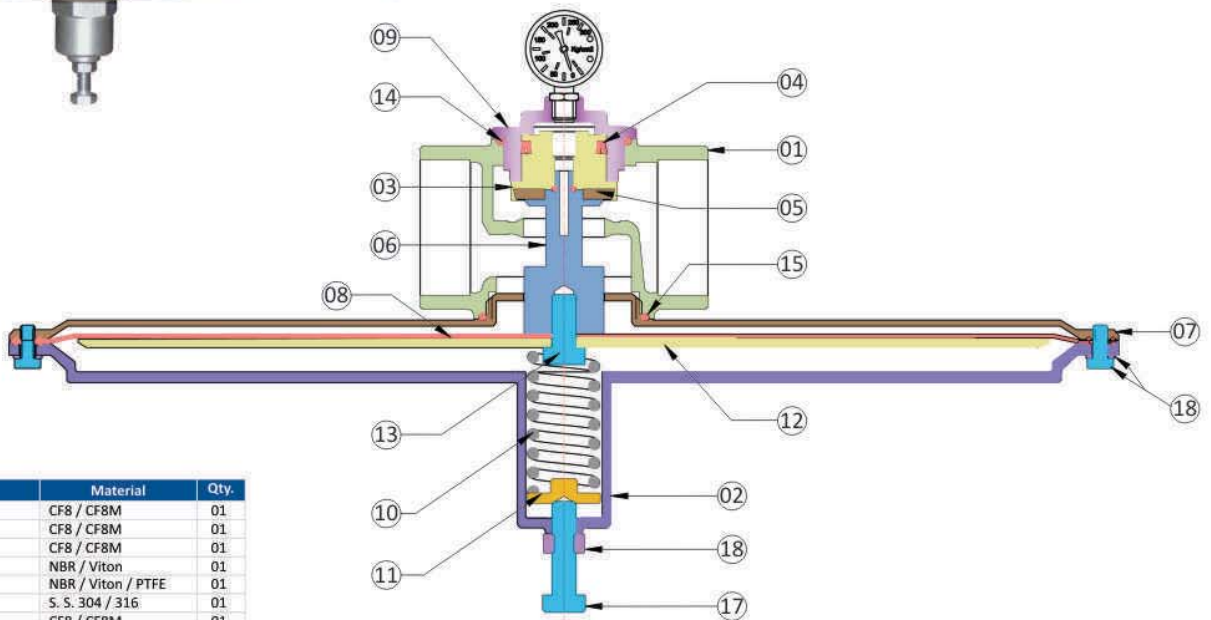
Valve Model	Valve Size		L	H	CV	Weight Approx.
	MM	Inch				
LOS - 15	15	1/2"	70.5	128.5	2.5	1.400
LOS - 20	20	3/4"	85.5	137.45	9.0	1.600
LOS - 25	25	1"	90	135.4	11.0	1.650
LOS - 40	40	1.1/2"	115	134.5	21.0	3.550
LOS - 50	50	2"	120	165.9	25.0	3.800
LOS - 65	65	2.1/2"	148	170.2	75.0	3.928
LOS - 80	80	3"	177	----	80.0	----
LOS - 100	100	4"	190	----	120.0	----



**Size Range : 1/2" to 2" Screwed End**

**Silent Features :**

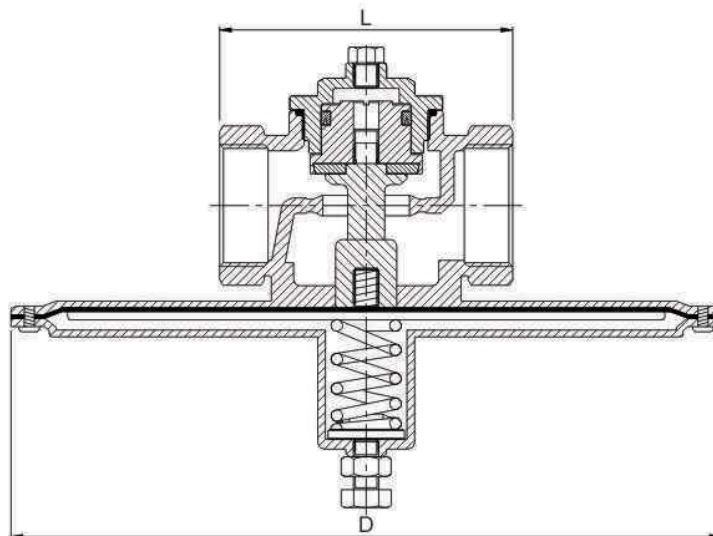
- Valve Body is made by Stainless Steel #316, suitable for fluid, air and oil.
- Larger diaphragm is more sensitive to pressure.
- Pressure Adjusting Range : 0.02 ~ 0.2 Kg/cm<sup>2</sup>
- Applied Temperature : -15 ~ 80 °C
- Valve Body Testing Pressure : 16 Kg/cm<sup>2</sup>
- Maximum Applied Pressure : 10 Kg/cm<sup>2</sup>



No.	Description	Material	Qty.
01	Body S/E	CF8 / CF8M	01
02	Bonnet	CF8 / CF8M	01
03	Plug	CF8 / CF8M	01
04	Plug V - Seal	NBR / Viton	01
05	Sealing Spacer Seat	NBR / Viton / PTFE	01
06	Piston	S. S. 304 / 316	01
07	Bonnet Cover	CF8 / CF8M	01
08	Diaphragm	NBR / Viton / PTFE	01
09	End Cover	CF8 / CF8M	01
10	Spring	Spring Steel	01
11	Spring Guide	Brass / S. S. 410	01
12	Diaphragm Washer	S. S. 304 / 316	01
13	Adjusting Piston Bolt	S. S. 304 / 316	01
14	End Cover O - Ring	NBR / Viton	01
15	Cover for O - Ring	NBR / Viton	01
16	Bonnet Fitting Bolt Bonnet Fitting Washer	S. S. 304 / 316	06
17	Adjusting Bolt	S. S. 304 / 316	01
18	Adjusting Nut	S. S. 304 / 316	01

**Dimensions : (All Dimensions are in mm)**

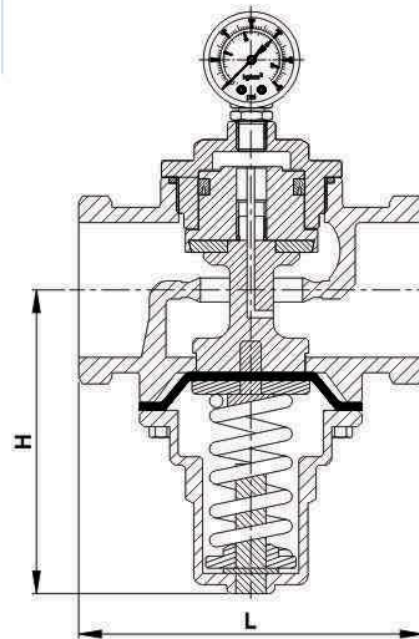
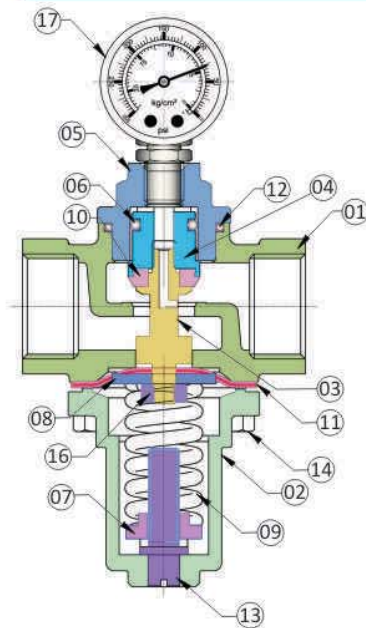
Valve Model	Valve Size		L	D
	MM	Inch		
MRS - 15	15	1/2"	70.5	310
MRS - 20	20	3/4"	85.5	310
MRS - 25	25	1"	90.5	310
MRS - 40	40	1.1/2"	115	310
MRS - 50	50	2"	170	310



Size Range : 1/2" to 3" Screwed / Flanged

**Silent Features :**

- The gate is designed for opening status, which will not flunce the water supply function under unstable inlet pressure condition. When the outlet pressure responds directly to the pressure control chamber and the setting pressure, it responds quickly and adjusts the pressure accurately.
- Pressure Adjusting Range : 1 ~ 5 kgf/cm<sup>2</sup>, 4 ~ 9 kgf/cm<sup>2</sup>, (special order is needed for other range)
- Valve Body Testing Pressure : 24 kgf/cm<sup>2</sup>
- Maximum Applied Pressure : 16 kgf/cm<sup>2</sup>
- Pressure needed form fully-closed gate to fully-opened gate 1 kgf/cm<sup>2</sup> (1 kgf/cm<sup>2</sup> = 14.2 psi)
- Applied Temperature : -15 ~ 80 °C
- Applied Condition : Fluid & Air



No.	Description	Material	Qty.
01	Body	CF8 / CF8M	01
02	Bonnet	CF8 / CF8M	01
03	Plug	CF8 / CF8M	01
04	Plug V - Seal	NBR / Viton	01
05	Sealing Spacer Seat	NBR / Viton / PTFE	01
06	Piston	S. S. 304 / 316	01
07	Bonnet Cover	CF8 / CF8M	01
08	Diaphragm	NBR / Viton / PTFE	01
09	End Cover	CF8 / CF8M	01
10	Spring	Spring Steel	01
11	Spring Guide	Brass / S. S. 410	01
12	Diaphragm Washer	S. S. 304 / 316	01
13	Adjusting Piston Bolt	S. S. 304 / 316	01
14	End Cover O - Ring	NBR / Viton	01
15	Cover for O - Ring	NBR / Viton	01
16	Bonnet Fitting Bolt		
	Bonnet Fitting Washer	S. S. 304 / 316	06
17	Adjusting Bolt	S. S. 304 / 316	01
18	Adjusting Nut	S. S. 304 / 316	01

**Dimensions :** (All Dimensions are in mm)

Valve Model	Valve Size		L	H	CV	Weight Approx.
	MM	Inch				
SDF - 15	15	1/2"	61	70.5	2	0.532
SDF - 20	20	3/4"	71	74	6	0.656
SDF - 25	25	1"	81	83	8	0.887
SDF - 32	32	1.1/4"	90.5	121	16	1.289
SDF - 40	40	1.1/2"	110.5	125.5	18	2.261
SDF - 50	50	2"	115	125.5	21	2.642
SDF - 65	65	2.1/2"	158	134	----	On Req.
SDF - 80	80	3"	180	141	----	On Req.



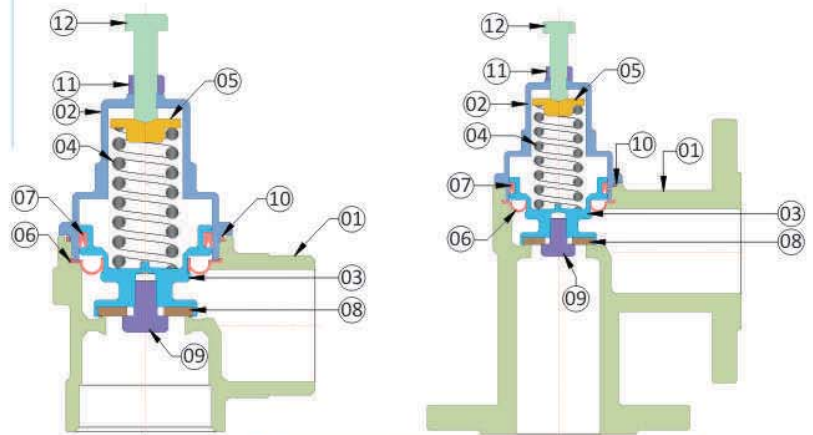
"Suzhik"  
Industries.

Offers Advance Combination Angle type Silent Safety Valve for Third Generation Process

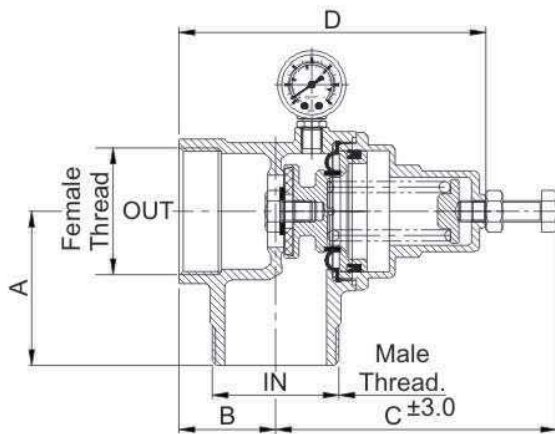
**Size Range : 1/2" to 4" Screwed / Flanged**

**Pressure / Temperature**

- Temperature Range : 80 °C ( For Water ) / 180 °C ( For Steam )
- Maximum Working Pressure : 21 Kg/cm<sup>2</sup> Inlet
- Pressure Adjusting Range : 0.5 ~ 10 Kg/cm<sup>2</sup> / 10 ~ 20 Kg/cm<sup>2</sup>  
20 ~ 30 Kg/cm<sup>2</sup> / 30 ~ 40 Kg/cm<sup>2</sup>  
40 ~ 50 Kg/cm<sup>2</sup>

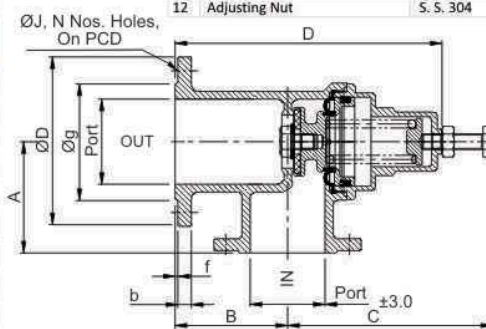


No.	Description	Material	Qty.
01	Body Screwed	CF8 / CF8M	01
02	Bonnet	CF8 / CF8M	01
03	Plug	CF8 / CF8M	01
04	Spring	S. S. 302	01
05	Spring Guide	Brass / S. S. 410	01
06	Diaphragm	NBR / Viton	01
07	V - Seal	NBR / Viton	01
08	Washer	NBR / Viton	01
09	Plug Bolt	CF8 / CF8M	01
10	O - Ring	NBR / Viton	01
11	Adjusting Bolt	S. S. 304	01
12	Adjusting Nut	S. S. 304	01



**Dimensions : (Screwed) (All Dimensions are in mm)**

Valve Model	Valve Size		A	B	C	D	Weight (Approx.)
	MM	Inch					
PLS - 15	15	1/2"	48.8	22.1	118	98.5	0.750
PLS - 20	20	3/4"	50	28	118	104.5	0.732
PLS - 25	25	1"	54.8	31	118	107.5	0.903
PLS - 32	32	1.1/4"	63.4	37	117	113	1.084
PLS - 40	40	1.1/2"	68	40.5	146	139.5	1.683
PLS - 50	50	2"	72.5	45.5	146	144.5	1.857
PLS - 65	65	2.1/2"	107.4	55	180	228.5	5.800
PLS - 80	80	3"	113	66.2	180	235.5	6.500
PLS - 100	100	4"	135	79	225.5	293.5	10.00



**Dimensions : ( Flange End ) (All Dimensions are in mm)**

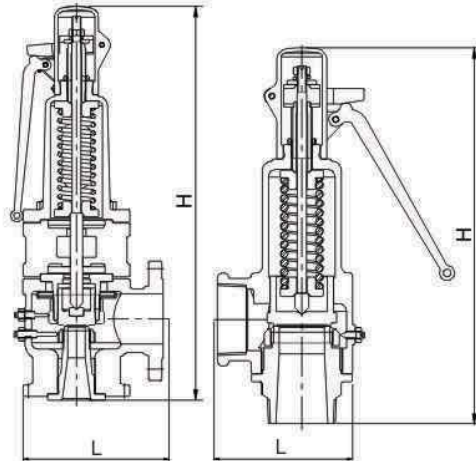
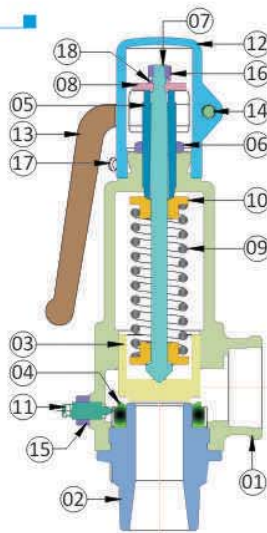
Valve Model	Valve Size		A	B	C	D	Port	ØD	b	Øg	f	ØJ	N	PCD	Weight (Approx.)
	MM	Inch													
PLF - 25	25	1"	72	70	116.6	147.3	24	107.9	9.6	50.8	2	15.9	4	79.4	2.000
PLF - 40	40	1.1/2"	90	92	146.6	189	37	127	12.7	73	2	15.9	4	98.4	4.100
PLF - 50	50	2"	104.5	104.5	147.4	204	49	157.4	14.3	92.1	2	19.05	4	120.7	5.900
PLF - 65	65	2.1/2"	115	115	180.7	283.5	64	177.8	15.9	104.8	2	19.05	4	139.7	11.400
PLF - 80	80	3"	125	125	181.7	293	75	190	17.5	127	2	19.05	4	152.4	13.150
PLF - 100	100	4"	145	145	224.2	356.5	98	228.6	22.3	157.2	2	19.05	8	190.5	21.500

**Size Range : 1/2" to 4" Screwed / Flanged**

**Function**

- Safety valves are used on Pressure equipments, Containers or Pipeline as over Pressure in the equipment increases and exceeds allowance, the valve can automatically open to discharge some mediums to prevent the pressure keeping raised. When the pressure decreases till to the stipulated value, the valve can close in time to avoid the pressure too much reduced, so that normal production will be carried out.

No.	Description	Material	Qty.
01	Body Screwed	WCB / CF8 / CF8M	01
02	Bonnet	WCB / CF8 / CF8M	01
03	Balanced Piston	CF8 / CF8M	01
04	Adjusting Ring	S. S. 304	01
05	Adjusting Bolt	S. S. 304	01
06	Adjusting Lock Nut	M. S.	01
07	Stem	S. S. 304	01
08	Flat Washer	M. S.	01
09	Spring	S. S. 302	01
10	Spring Guide	S. S. 304	02
11	Lock Screw	S. S. 304	01
12	Cap	CF8 / CF8M	01
13	Lifting Lever	CF8 / CF8M	01
14	Lever Pin	S. S. 304	01
15	Hex. Nut Lock Screw	ASTM 194	01
16	Hex. Nut For Steam	ASTM 194	01
17	Fitting Bolt For Cap	ASTM 194	02
18	Spring Washer	S. S. 304	01

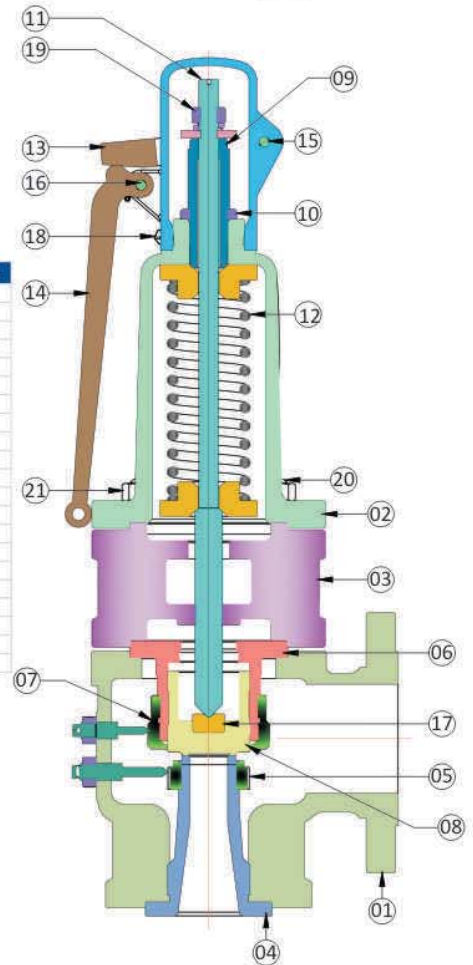


**Screwed End Dimension**

Dimensions : (All Dimensions are in mm)

Valve Model	Valve Size		L	H
	MM	Inch		
PTS - 15	15	1/2"	59.5	193.5
PTS - 20	20	3/4"	67	212.5
PTS - 25	25	1"	75	235.8
PTS - 32	32	1.1/4"	88.5	273.85
PTS - 40	40	1.1/2"	100	293.2
PTS - 50	50	2"	110	324.8
PTS - 65	65	2.1/2"	133	415.85
PTS - 80	80	3"	174.5	486

No.	Description	Material	Qty.
01	Body Flanged	WCB	01
02	Top Cover	WCB	01
03	Bracket	WCB	01
04	Bonnet	CF8 / CF8M	01
05	Bonnet Adjusting Ring	CF8 / CF8M	01
06	Piston Guide	CF8 / CF8M	01
07	Piston Guide Adjusting Ring	CF8 / CF8M	01
08	Piston	CF8 / CF8M	01
09	Adjusting Bolt	S. S. 304	01
10	Adjusting Lock Nut	M. S.	01
11	Stem	S. S. 304	01
12	Spring	S. S. 302	01
13	Lifting Lever	CF8 / CF8M	01
14	Lifting Handle	CF8 / CF8M	01
15	Lifting Lever Pin	M. S.	01
16	Lifting Handle Pin	M. S.	01
17	Piston Bush	M. S.	01
18	Cap Lock Nut	M. S.	02
19	Nut For Stem	M. S.	01
20	Fitting Stud	M. S.	08
21	Fitting Nut	M. S.	08



**Flange End Dimension**

Dimensions : (All Dimensions are in mm)

Valve Model	Valve Size		L	H
	MM	Inch		
PTF - 50	50	2"	213	627.3
PTF - 65	65	2.1/2"	235	652.4
PTF - 80	80	3"	248	809.5

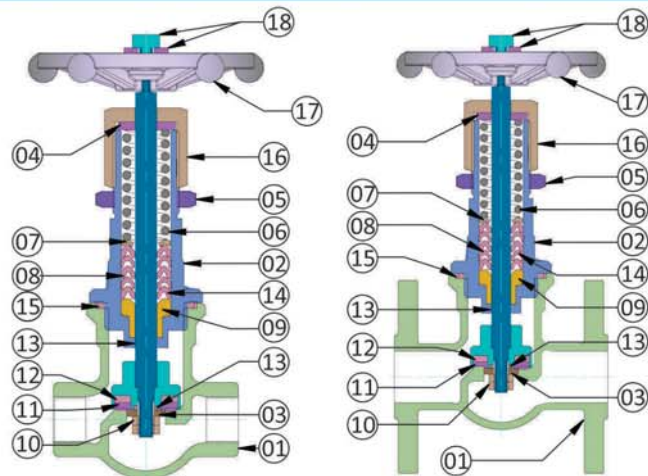
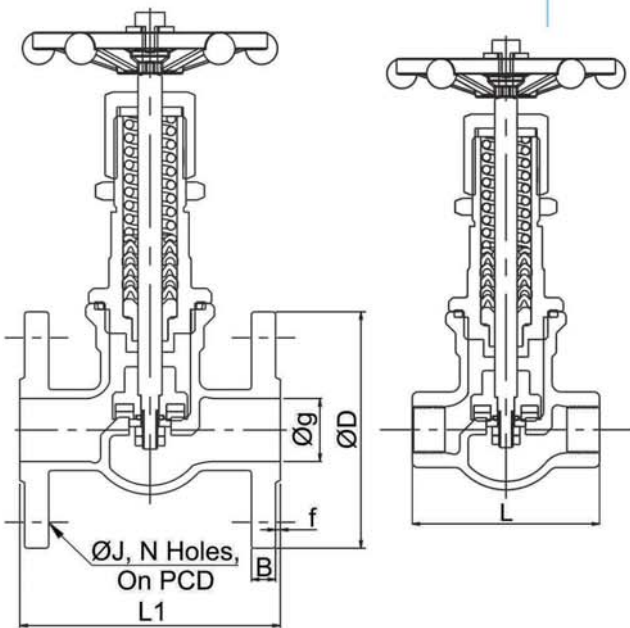


“aira” offers 2/2 Way Handle Wheel Operated Investment Casting Globe Type Control Valve

### Size Range : 1/2" to 4" Screwed / Flange End

#### Special Features :

- The gland is designed Special in this valve. Due to that media leakage chances would be nil.
- In gland spring is given. Which is controlling Automatically to seals with Pressure due to the gland leakage nil.
- In the seals is damage in future, you can replacement it easily this type of easy arrangement given.
- Because of Stainless Steel Body the life of valve increased automatically.



No.	Description	Material	Qty.
01	Body	CF8 / CF8M	01
02	Bonnet	CF8 / CF8M	01
03	Plug	S. S. 304	01
04	Star Washer	S. S. 304	01
05	Lock Nut For Flange	M. S.	01
06	Spring For Bonnet	S. S. 304	01
07	U - Washer	S. S. 304	03
08	Bonnet V - Seal	PTFE	01
09	"T" Bush (Guide Bush) Bonnet	PTFE + C	02
10	Lock Nut (Plug)	S. S. 304	01
11	Plug Washer	PTFE / GFT	01
12	Plug Washer	NBR	01
13	Plug + Shaft	S. S. 304	01
14	Bonnet ( U - Seal )	PTFE + C	02
15	Teflon For Body (Sealing Gasket)	PTFE	01
16	M / O Nut	S. S. 304	01
17	Handle	Alluminium	01
18	Handle Fitting Bolt & Plug Washer	S. S. 304	01

#### Dimensions :

(All Dimensions are in mm)

Valve Model	Valve Size		L S/E	L1 F/E	Port	ØD	b	Øg	f	ØJ	N	PCD	Weight Approx.	
	MM	Inch											S/E	F/E
GMS/GMF - 15	15	1/2"	65	107.9	15	90	8	37.9	2	15.9	4	60.3	1.00	1.82
GMS/GMF - 20	20	3/4"	75	117.3	20	100	8.9	42.9	2	15.9	4	69.9	1.40	2.06
GMS/GMF - 25	25	1"	85	127	24	110	9.6	50.8	2	15.9	4	79.4	1.74	3.00
GMS/GMF - 32	32	1.1/4"	110	139.7	30	115	11.2	63.5	2	15.9	4	88.9	2.12	3.80
GMS/GMF - 40	40	1.1/2"	114	165.1	37	125	12.7	73	2	15.9	4	98.4	2.36	4.78
GMS/GMF - 50	50	2"	125	177.8	49	150	14.3	92.1	2	19.05	4	120.7	3.00	6.64
GMS/GMF - 65	65	2.1/2"	--	190.5	64	180	15.9	104.8	2	19.05	4	139.7	-	-
GMS/GMF - 80	80	3"	--	203.2	75	190	19.05	127	2	19.05	4	152.4	-	-
GMS/GMF - 100	100	4"	--	228.6	98	230	22.3	157.2	2	19.05	8	190.5	-	-

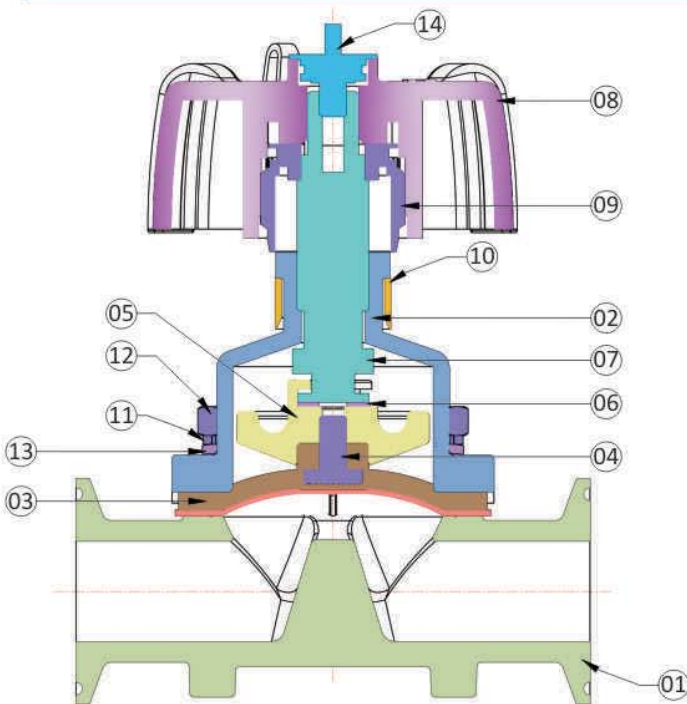
Size Range : 1/2" to 4" Triclover End

Operating Principles

- The Diaphragm provides the body seal as well as the seat seal. There are no paths the outside environment as such the valve is suitable for aseptic processes.
- As the valve is closed a pressure pad which supports the diaphragm moves towards the sealing face on the body. As the pressure plate moves the diaphragm flexes and is forced down onto the seal area in the center of the body thus closing off the flow path through the body.
- The inter - relationship of body to the pressure plate prevent over compression of the diaphragm.
- The valve can be actuated either manually or pneumatically and controlled by control tops and solenoid valves.

Applications

- Diaphragm valves, manually or pneumatically operated, and specially design for use on hygienic and aseptic process in the pharmaceutical industries.
- The valves is excellent for flow control as well as for Open / Close duties.



No.	Description	Material	Qty.
01	Body Triclover End	CF3M	01
02	Bonnet	CF3M	01
03	Diaphragm	PTFE / NBR / EPDM	01
04	Bolt For Diaphragm	S. S.	01
05	Compressor	CF8	01
06	Retainer	Nylon	01
07	Stem	S. S. 304	01
08	Handle Wheel	ABS	01
09	Handle Wheel Sleeve	ABS	01
10	Indicator	Nylon	01
11	Bonnet Fitting Bolt	S. S. 304	04
12	Nut For Fitting Bolt	S. S. 304	04
13	Spring Washer	S. S.04	04
14	Handle Wheel Lock Bolt	ABS + S. S.	01

Dimensions : (All Dimensions are in mm)

Valve Model	Valve Size		L	ØD	Weight Approx.
	MM	Inch			
PDV - T - 15	15	1/2"	108	34	0.418
PDV - T - 20	20	3/4"	117	34	1.158
PDV - T - 25	25	1"	127	50.5	1.675
PDV - T - 32	32	1.1/4"	146	50.5	----
PDV - T - 40	40	1.1/2"	159	50.5	3.171
PDV - T - 50	50	2"	190	64	4.382
PDV - T - 65	65	2.1/2"	216	91	----
PDV - T - 80	80	3"	254	106	----

