

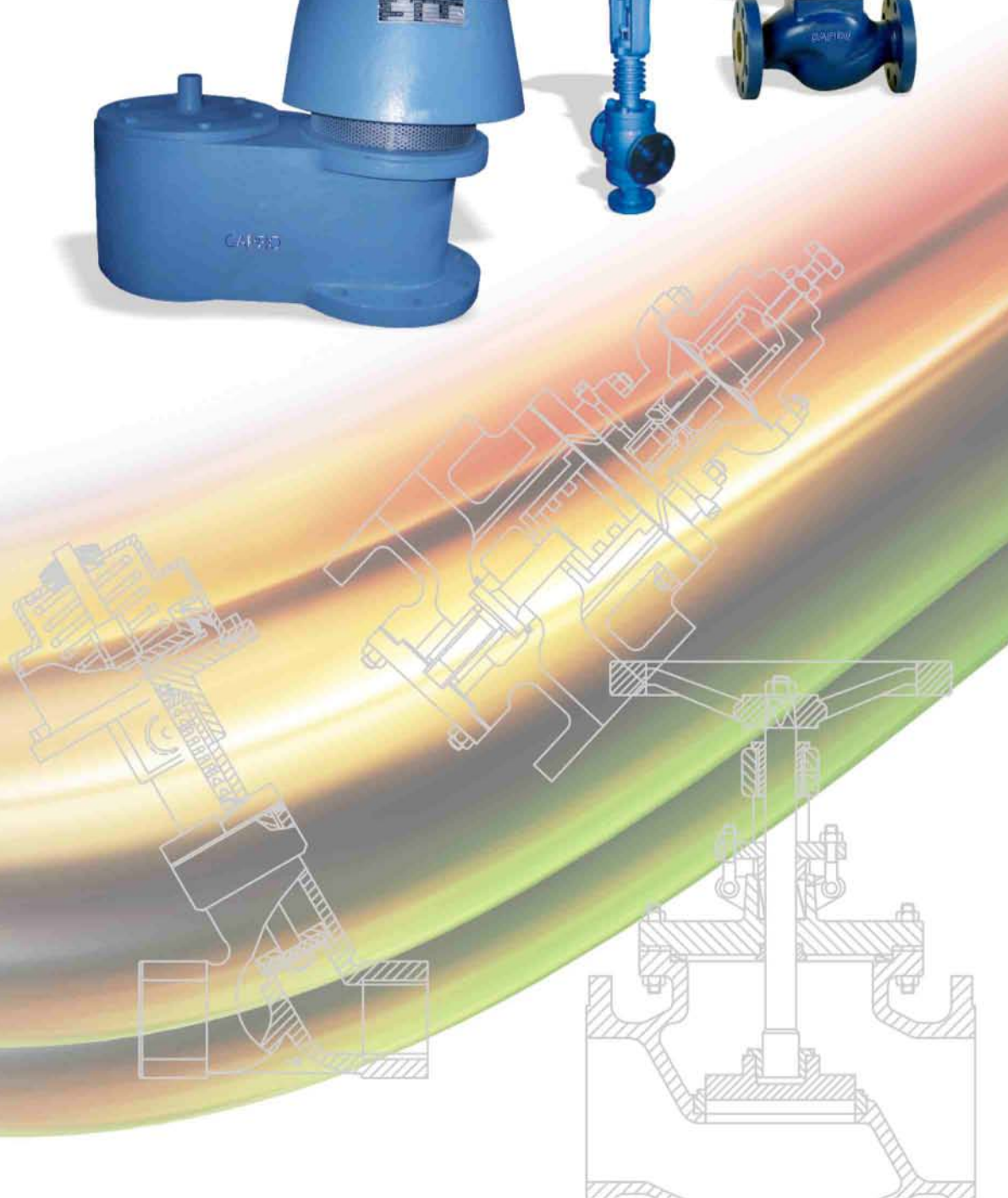
**UNIPHOS AGRO INDUSTRIES LIMITED**

**PRODUCT CATALOGS**



**MARKETED BY :  
UNIPHOS AGRO INDUSTRIES LIMITED**

# Our Other Quality Valves



# Introduction

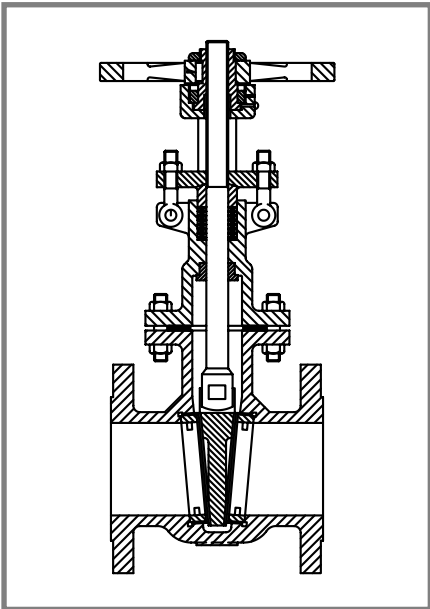
We take this opportunity to introduce ourselves as one of the leading exporters of manual as well as pneumatic & electric operated valves. We are one of the leading suppliers to several Private-Industries, and Govt. / Public Sector undertakings, engaged in wide range of industries like Refineries, Petro-Chemicals, Fertilizers, Steel Plants, Thermal and Atomic Power Centre, and Several Research Centers, BARC, NPCIL, IRE etc.

## **Our product range are :**

1. Pneumatic Diaphragm Operated Globe Type Control Valve in linear & Percentage Opening Versions.
2. Pneumatic Double Acting/Single Acting Cylinder Operated Control Valves.
3. Ball Valve, Butterfly Valve, Plug Valve with:- (a) Manual Operated (b) Pneumatic Diaphragm Actuator Operated, (c) Electrically Actuator Operated, (d) Pneumatic Cylinder Operated, (e) Rack & Pinion Rotary Actuator (f) Vane Type Rotary Actuator.
4. Gate Valve, Globe Valve & Check Valve (Swing/Lift type).
5. Knife Wedge Gate Valve with manual or Pneumatic Cylinder Actuator.
6. Bellow Sealed Valve.
7. Pressure Reducing Valve, Safety Relief Valve & Breather Valve.
8. Solenoid Valve, Manifold, Pneumatics Cylinder & Actuators.
9. Motorized Ball, Gate & Globe Valves.
10. Needle Valve, Strainers, Steam Trap.

The above valves are available in the body material of Cast-Iron, Cast-Steel, Forged Carbon-Steel SS304/316, Alloy Steel.

## Gate Valve



**Type :** Bolted Bonnet O. S. & Y Type Rising Stem.

**Size :** 50mm to 600 mm.

**Pressure Rating :**  
150 / 300 / 600 / 900.

**Design & Mfg. Standard :**  
API 600 / BS 1414.

**Inspection & Testing Standard :** API 598.

**Body Material :**  
Cast Iron, WCB, CF8, CF8M, Alloy Steel.

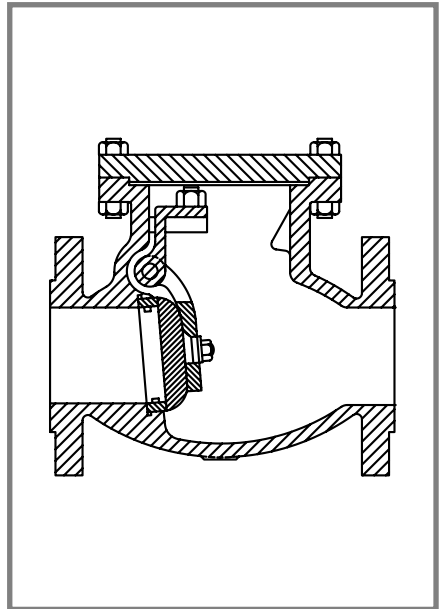
**Trim Materials :**  
13% Cr. Stellite, AISI 304 / 316.

**End Connection :**  
Flanged, Butt Welded as per ANSI B 16.5 / B 16.25.

**Face to Face Dimension :**  
ANSI B 16.10.

**Optional :**  
Manual gearbox or motorised Operation.

## Non Return Valve



**Type :** Swing Type, Lift Type.

**Size :** 50mm to 600 mm.

**Pressure Rating :**  
150 / 300 / 600 / 900.

**Design & Mfg. Standard :** BS-1868.

**Inspection & Testing Standard :**  
API 598 / BS 6755.

**Body Material :**  
Cast Iron, WCB, CF8, CF8M, Alloy Steel.

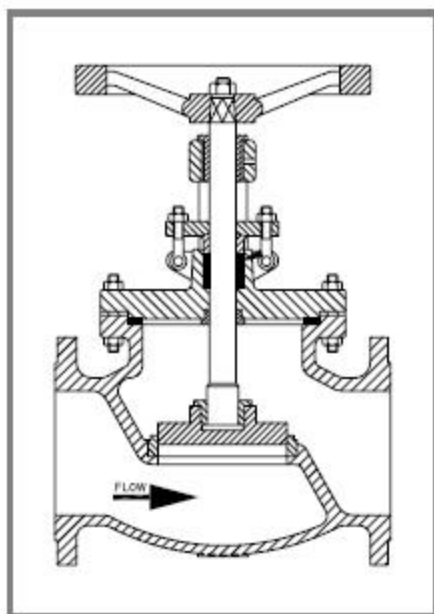
**Trim Materials :**  
13% Cr. Stellite, AISI 304 / 316 / Monel.

**End Connection :**  
Flanged, Butt Welded as per ANSI B 16.5 / B 16.25.

**Face to Face Dimension :**  
ANSI B 16.10.

**Optional :**  
Horizontal, Vertical.

## Globe Valve



**Type :**  
Bolted Bonnet O.S. & Y Type Rising Stem.

**Size :** 25mm to 600 mm.

**Body Material :**  
Cast Iron / WCB / CF8 / CF8M /  
Alloy Steel.

**Pressure Rating :**  
150 / 300 / 600 / 900.

**Design & Mfg. Standard :** BS 1873

**Inspection & Testing Standard :**  
API 598 / BS 6755 Part-1.

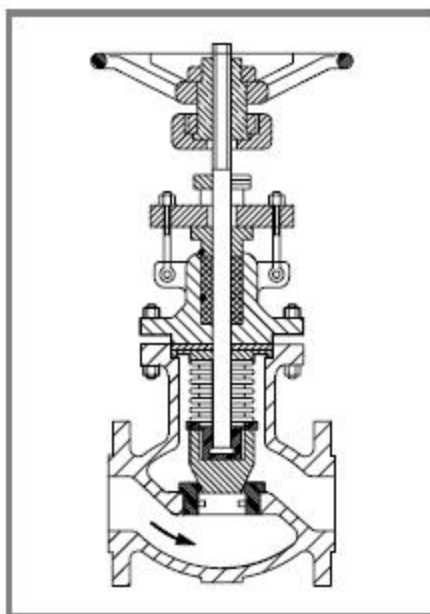
**Trim Materials :**  
13% Cr. Stellite, AISI 304/316.

**End Connection :**  
Flanged, Butt Welded as per ANSI B 16.5 /  
B 16.25.

**Face to Face Dimension :**  
ANSI B 16.10.

**Optional :**  
Manual gearbox or motorised operation.

## Bellow Sealed Valve



**Type :** Globe, Gate.

**Size :** 15mm to 500mm.

**Body Material :**  
C.S. / F.C.S. / SS 304 / SS316.

**Trim Material :**  
SS 304 / SS 316 / SS 321 / SS 410 /  
(13% Cr.) Hastalloy B & C / Monel.

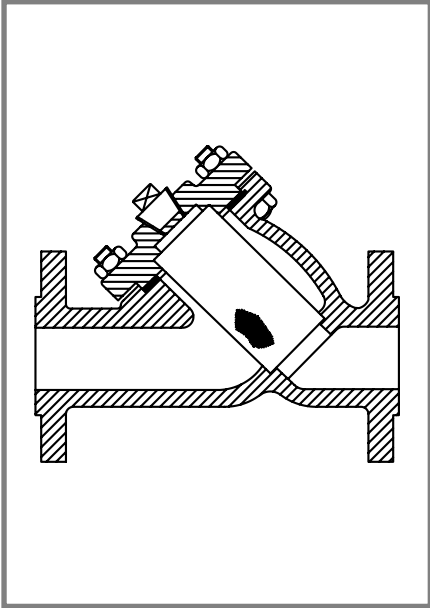
**End Connection :** Flanged End, Screwed  
End, Socket Weld End, Butt Weld End.

**Pressure Rating :**  
150 / 300 / 600 / 800 / 900 / 1500.

**Design & Mfg. Standard :** BS 1873.

**Inspection & Testing Standard :**  
API 598 / BS 6755 Part-1.

## Strainer



**Type :** Y Type, Basket Type.

**Size Range :** 25mm to 400mm.

**Pressure Rating :**  
Class 150 / 300 / 600.

**Design & Mfg. Standard :**  
BS 1873.

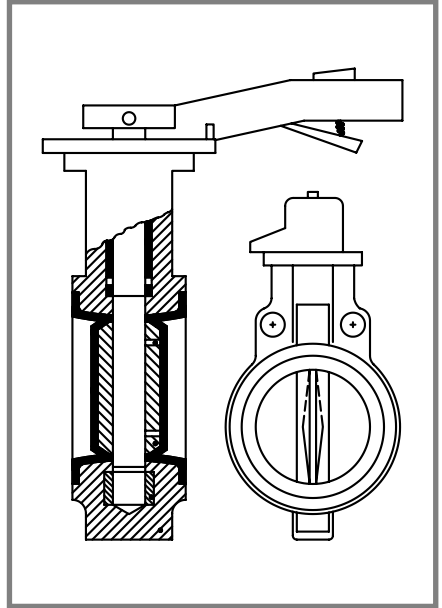
**Inspection & Testing Standard :**  
BS 6755 Part-I.

**Body Materials :**  
Cast Iron / WCB / CF 8 / CF8M.

**Trim Material :** SS 304 / 316, Brass.

**End Connection :**  
Flanged as per ANSI B 16.5 Butt Welded as per ANSI B 16.25.

## Butterfly Valve



**Type :** Wafer Type, Lug Type.

**Size :** 50mm to 1000mm.

**Pressure Ratings :** PN 10 / PN 16.

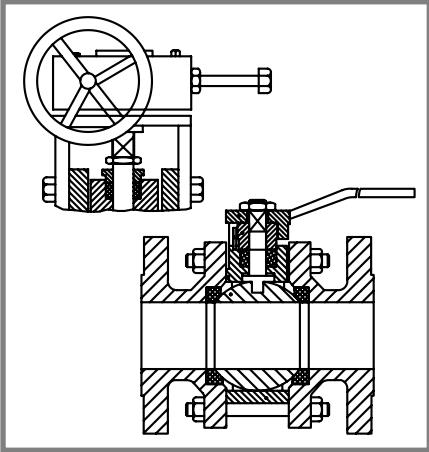
**Body Material :**  
C.I. / WCB / CF8 / CF8M.

**Disc Material :**  
C.I. / WCB / CF8 / CF8M.

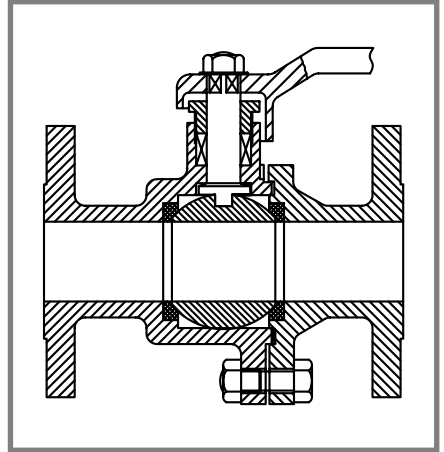
**Operation :**  
By Lever, Gear, Motor, Actuator.

**Seat Material :**  
Nitrile, EPDM, Viton, PTFE.

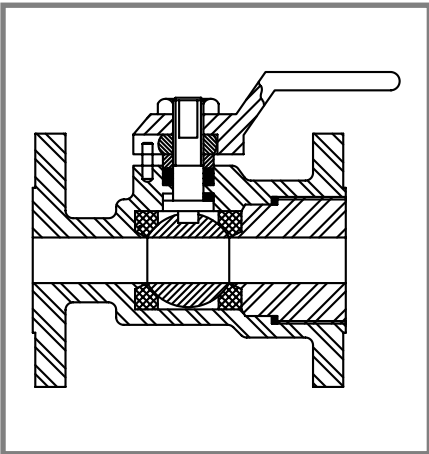
## Three Piece Ball Valve



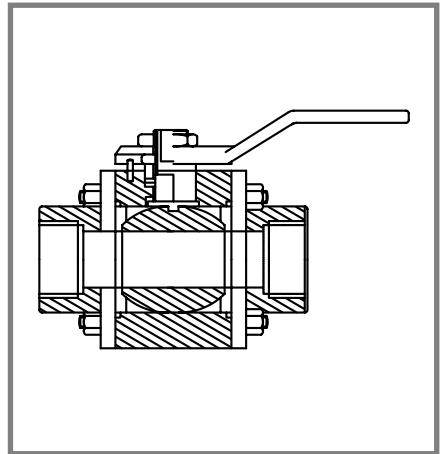
## Two Piece Ball Valve



## One Piece Ball Valve



## Screwed / Socket Weld Ball Valve



**Type** : Full or Reduced Bore.

**Size** : 15 mm to 500 mm.

**Construction** : Blow out proof stem, Floating Ball, Anti-Static device, Fire Safe design.

**Pressure Ratings** : Class 150 / 300 / 600 & 800.

**Design & Mfg. Standard** : BS 5351

**Testing & Inspection Standard** : BS 6755 Part 2.

**Body Materials** : Cast Iron, WCB, CF8, CF8M.

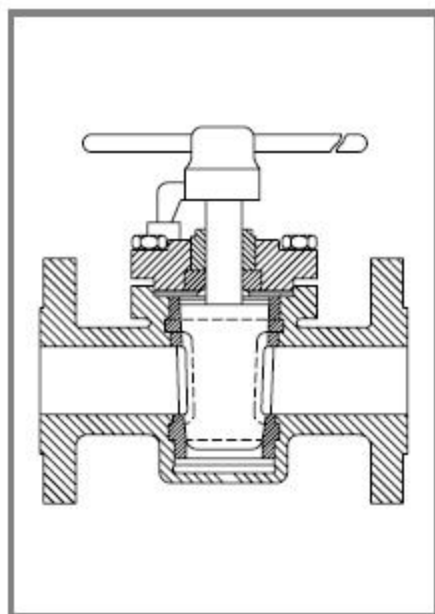
**End connections** : Flanged Ends ANSI B16.5 in Class 150, 300, 600, Socket Weld End ANSI B 16.11, Screwed End ANSI B 2.1, Butt Weld End ANSI B16.25.

**Face to Face Dimension** : ANSI B 16.10

**Fire Safe to** : API 607

**Optional** : Trunnion Mounted Ball, Manual Gear Box or motorised operation.

## Plug Valve



**Type :** Standard, Inverted Pressure balance Plug, Regular Pattern, Self Lubricated.

**Size :** 25 mm to 300 mm.

**Pressure Ratings :**  
ANSI Class 125 / 150 / 300 & 600 Lbs.

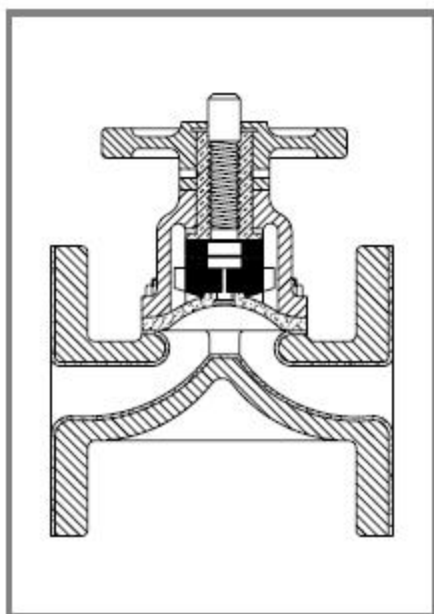
**Design & Mfg. Standard :**  
API 6D / BS 5353.

**Material of Construction :**  
CI / WCB / S.S. 304 / S.S. 316.

**Other feature :**  
PTFE Sleeve & PTFE Lined Plug Valves.

**End connections :** Flanged, Screwed.

## Diaphragm Valve



**Type :** Weir type Bolted Bonnet and Straight through bore.

**Size :** From 15 mm to 350 mm.

**Pressure Ratings :**  
ANSI Class 125, 150.

**Design & Mfg. Standard :** BS 5156.

**Material of Construction :**  
CI / WCB / CF8 / CF8M.

**Diaphragm :**  
Neoprene, EPDM, Natural.

**Lining :**  
Natural, Ebonite, Neoprene, Butyl & Glass.

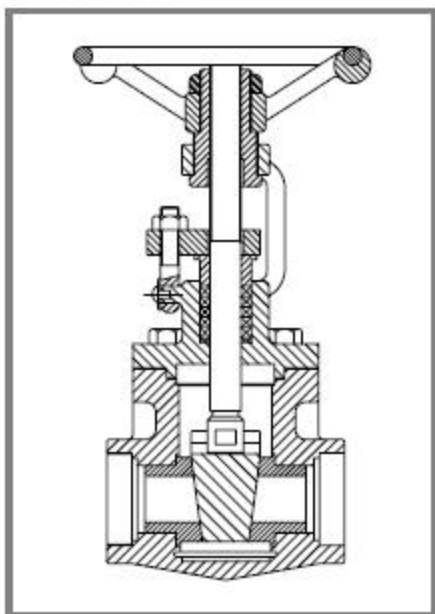
**Other Feature :** Pneumatic Operation.

**End connections :** Screwed to BSP / NPT,  
Flanged to BS, ANSI.

**Mfg. Code :** BS-5156.

## Forged Steel Valve

### Gate Valve



**Type :** Gate, Globe & Lift Check Valve.

**Size :** From 15 mm to 50 mm.

**Pressure Ratings :**  
Class 800 / 1500 / 2500.

**Design & Mfg. Standard :**  
API 602 (Gate) BS 5352 (Gate, Globe & Check).

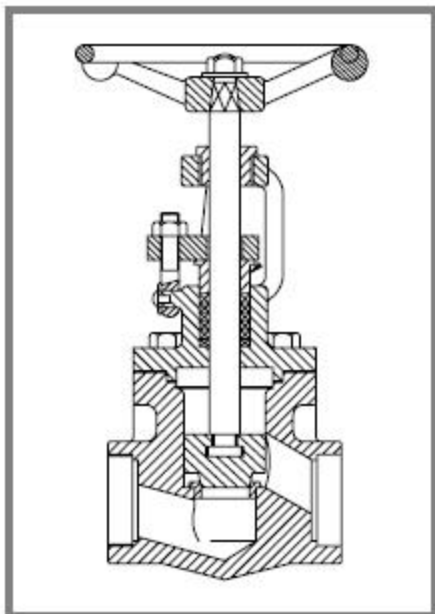
**Testing & Inspection Standard :**  
API 598, BS 5146.

**Body Materials :**  
ASTM A105 / A182 / F304 / F316.

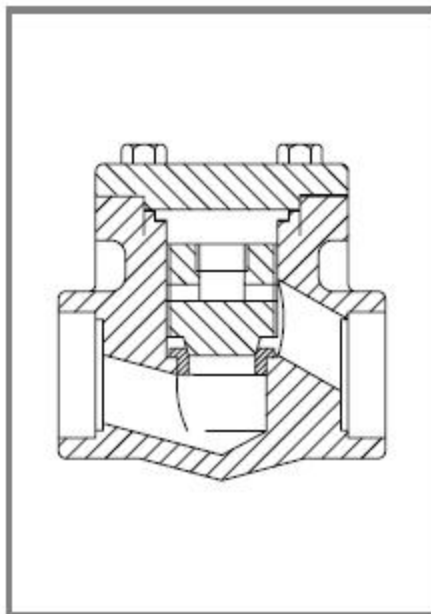
**Trim Materials :**  
AISI 410 / 304 / 316 / Stellite.

**End connections :**  
Screwed, Socket welded as per ANSI B 16.11 Or welded flanges as per ANSI B 16.5 in class 150, 300, 600.

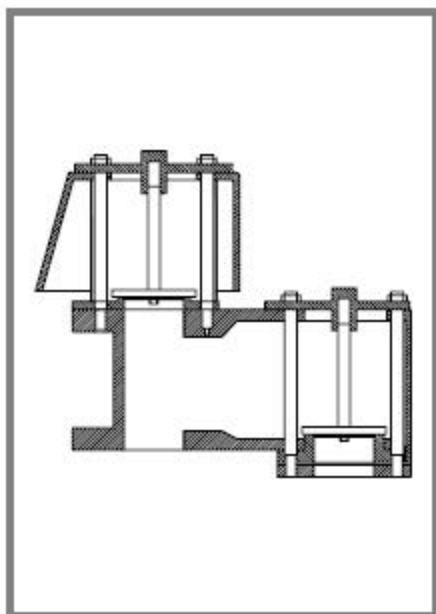
### Globe Valve



### Check Valve



## Breather Valve



**Size :** 50 mm to 500 mm.

**Body Material :** Cast Aluminium, WCB, CF8 (304) CF8M (316).

**Seats and pallets:** AISI 304, AISI 316.

**Bird screen and guides:** 18/8 Stainless Steel.

**Diaphragms:**

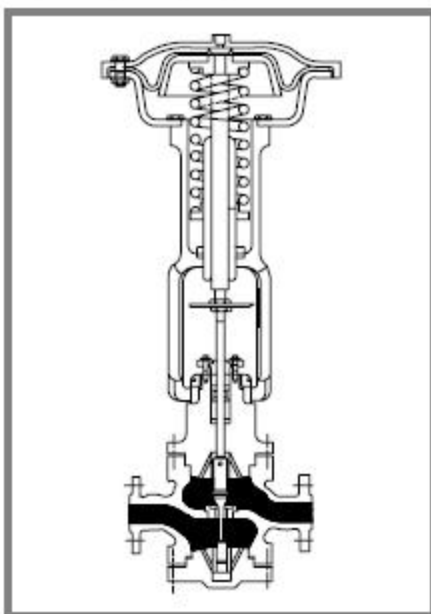
FEP, PTFE., BUNA-N, Viton etc.

**Flanges :**

ANSI 150, Drilled to UNI PN 10 on request.

**Main Features :** Replaceable seats, Antifreezing pallets the drip around the pallet avoids condensate collecting around the seat, Pallet guides located above the seat this arrangement assures a no-jamming guide of the pallet not affected by contaminant fluids as a close coupling between pallet and guides is not necessary, Bird screen avoids the entering of foreign elements, Setting any setting available, charging the pallet's dead weight load, between  $\pm 20$  mm H<sub>2</sub>O and  $\pm 400$  mmH<sub>2</sub>O. (On request higher sets)

## Diaphragm Operated Control Valve



**Type :** Globe Type 2 Way, 3 Way Single Seated, Double Seated.

**Size :** 1" to 12".

**Body Materials :** C.I. / C.S. / S.S.304 / S.S.316 / Alloy Steel.

**Design Pressure :** Upto 900 Psig.

**Design Temperature :** Upto-100° C + 850° C.

**End connections :** Screwed, Socket Weld up to 2" above 2" Flanged conforming to 150 / 300 / 600 #.

**Bonnet :** (Plain Boited)-0°C to + 200°C Radiation - 200°C to + 850°C Extenuation finned Column - low temperature up to - 1000 C.

**Bellows Seal :** Stainless Steel & PTFE.

**Packing :** Teflon, Teflon Asbestos, Graphite Asbestos.

**Trim Design :** Full Capacity. 40% restricted capacity.

**Characteristic :** Quick - Opening, Equal Percentage & Linear.

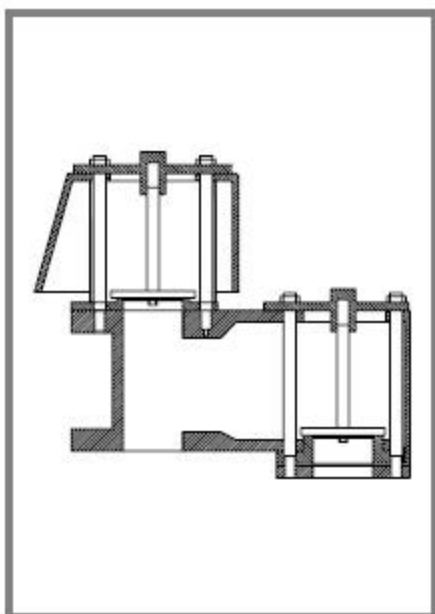
**Actuator Type :**

Spring diaphragm Cylinder / Electric.

**Leakage :** 0.05% of full capacity.

**Advantages :** Largest Various types of services Application, Noise & Cavitation Control Capability.

## Breather Valve



**Size :** 50 mm to 500 mm.

**Body Material :** Cast Aluminium, WCB, CF8 (304) CF8M (316).

**Seats and pallets:** AISI 304, AISI 316.

**Bird screen and guides:** 18/8 Stainless Steel.

**Diaphragms:**

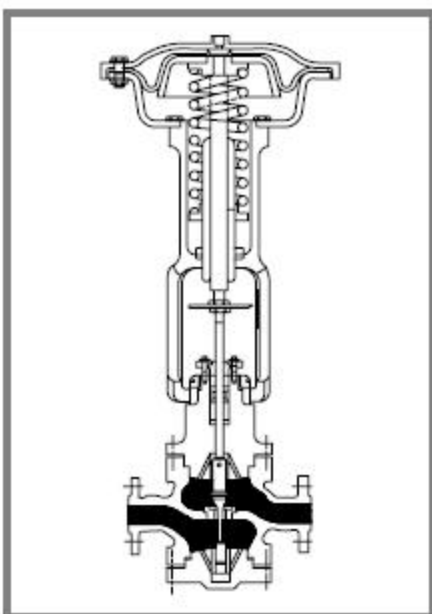
FEF, PT.FE., BUNA-N, Viton etc.

**Flanges :**

ANSI 150, Drilled to UNI PN 10 on request.

**Main Features :** Replaceable seats, Antifreezing pallets the drip around the pallet avoids condensate collecting around the seat, Pallet guides located above the seat this arrangement assures a no-jamming guide of the pallet not affected by contaminant fluids as a close coupling between pallet and guides is not necessary, Bird screen avoids the entering of foreign elements, Setting any setting available, charging the pallet's dead weight load, between  $\pm 20$  mm H<sub>2</sub>O and  $\pm 400$  mmH<sub>2</sub>O. (On request higher sets)

## Diaphragm Operated Control Valve



**Type :** Globe Type 2 Way, 3 Way Single Seated, Double Seated.

**Size :** 1" to 12".

**Body Materials :** C.I. / C.S. / S.S.304 / S.S.316 / Alloy Steel.

**Design Pressure :** Upto 900 Psig.

**Design Temperature :** Upto-100° C + 850° C.

**End connections :** Screwed, Socket Weld up to 2" above 2" Flanged conforming to 150 / 300 / 600 #.

**Bonnet :** (Plain Bolted)-0°C to + 200°C  
Radiation - 200°C to + 850°C  
Extenuation finned Column - low temperature up to - 1000 C.

**Bellows Seal :** Stainless Steel & PTFE.

**Packing :** Teflon, Teflon Asbestos, Graphite Asbestos.

**Trim Design :** Full Capacity. 40% restricted capacity.

**Characteristic :** Quick - Opening, Equal Percentage & Linear.

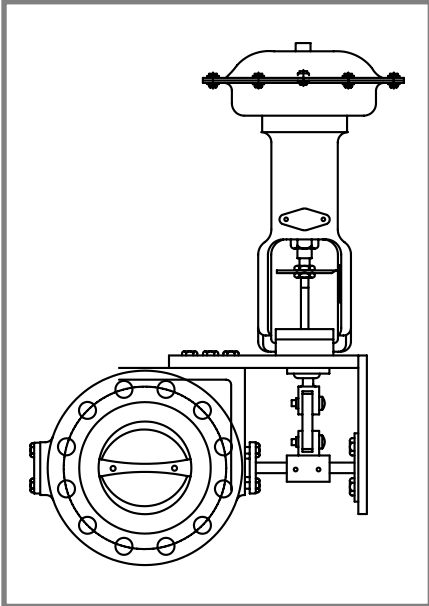
**Actuator Type :**

Spring diaphragm Cylinder / Electric.

**Leakage :** 0.05% of full capacity.

**Advantages :** Largest Various types of services Application, Noise & Cavitation Control Capability.

## Diaphragm Operated Butterfly Valve



**Type :** Pneumatic Operated, Electric Operated.

**Size :** From 2" to 36".

**Body Material :** C. I. / WCB / SS 304 / SS 316 / Alloy Steel.

**Design Pressure :** Up to 600 lbs.

**Design temperature :** Up to 650 Dig. C.

**Trim Materials :** C.S. / 304 / 316.

**End Connection :**

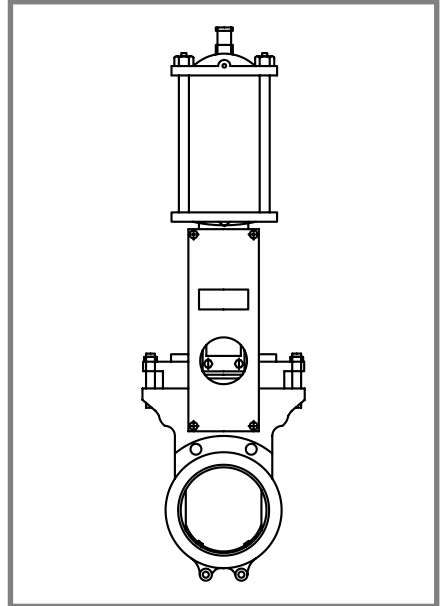
Wafer Type Design, Lug Type.

**Actuator Type :**

Spring Diaphragm, Cylinder.

**Action :** ON / OFF, Equal Percentage.

## Cylinder Operated Knife Gate Valve



**Type :** Double Acting Pneumatic Cylinder, Single Acting Pneumatic Cylinder, Electric Operated.

**Size :** 40mm to 300mm.

**Testing Standard :** API 598.

**Body Material :** Cast Iron / WCB / CF8 (304) / CF8M (316).

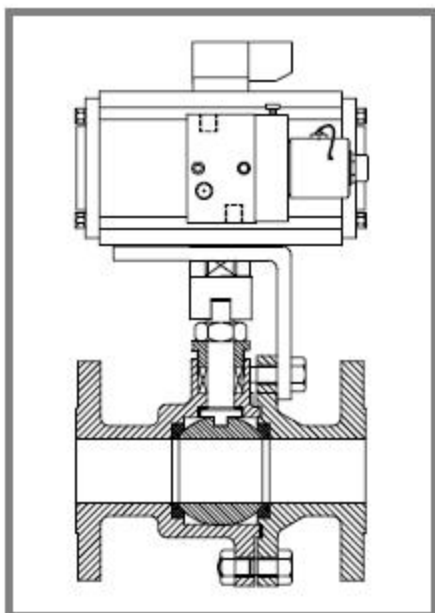
**Trim Materials:** Cast Iron / WCB / CF8 (304) / CF8M (316) / SS 410 / SS 202.

**End Connection:** Wafer Type, Lug Type.

**Action:** ON / OFF, Equal Percentage.

**Application :** Designed and Manufactured according to meet the worst working conditions in Pulp & Paper, Mining & Steel, Power & Chemical Industries to handle Semi-Solids, Dry-Ash, Chips, Fiber contents Pulps etc. The compact design of the Valves facilitate light weight, minimum space for installing, easy operation and maintenance.

## Automated Ball Valve



**Type :** Pneumatic, Electric Operated.

**Size :** 1" to 8".

**Body Materials :** C.I. / C.S. / S.S.304 / S.S.316.

**Design Pressure :** Upto 2000 PSIG.

**Design Temperature :** Upto 250° C.

**End connections :** Screwed, Socket Weld up to 2" above 2" Flanged conforming to 150 / 300 / 600 #.

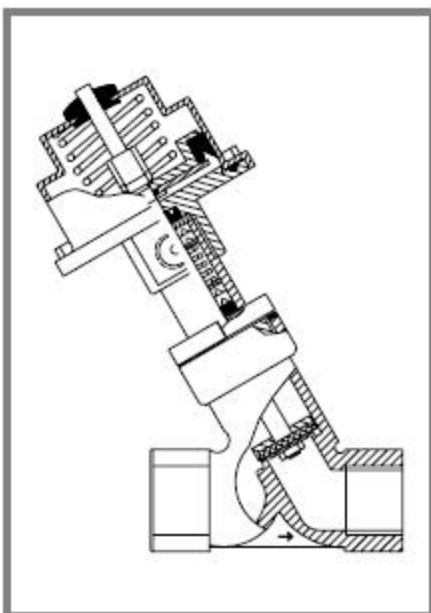
**Trim Materials :** S.S.304 / S.S.316.

**Characteristics :** On-Off / Equal Percentage.

**Advantages :** General service, Slurries, High capacity, High rangeability, Continuous purging of low activity, Zone prevents, Solids build-up or entrapment, Excellent control characteristics.

**Disadvantage :** Cavitation prone, high torque requirement, Seal wear.

## Y Type Pneumatic Valve



**Size :** 1/2" BSP to 2.1/2" BSP (F).

**Body Material :** SS 304 / SS 316 / CS.

**Trim Material :** SS 304 / SS 316.

**Seating :** Teflon, Viton, Buna-N.

**Packing :** Teflon VEE Seals.

**End connections :**  
Screwed End, Flanged End 150 #.

**Action :** Normally close, Normally open.

**Actuator :** Pneumatic cylinder piston operated (Spring Return Type) Air pressure for actuator to operate the valve 4-6 bar.

**Fluid Applied :**  
Water, Air, Gas, Oil, Steam etc.

### TEST SPECIFICATIONS

Test / Test pressure	#150		#300		#600		Testing medium
	kg/cm <sup>2</sup>	PSI	kg/cm <sup>2</sup>	PSI	kg/cm <sup>2</sup>	PSI	
Shell	32	455	80	1138	157	2233	Kerosene / Water
Back seat	23	327	58	825	115	1636	
Seat leak	6	85	6	85	6	85	Air

### PRESSURE TEMPERATURE

#### MATERIAL : A 216 WCB

Test pressure		#150		#300		#600	
°F	°C	PSI	Kg/CM <sup>2</sup>	PSI	Kg/CM <sup>2</sup>	PSI	Kg/CM <sup>2</sup>
-20 to 100	-17 to 38	285	20.0	740	52.0	1480	104.1
200	93.3	260	18.3	675	47.2	1350	94.9
300	148.9	230	16.2	655	46.1	1315	92.5
400	204.4	200	14.1	635	44.6	1270	89.3
500	260.0	170	12.0	600	42.2	1200	84.4
600	315.6	140	9.8	550	38.7	1095	77.0
650	343.3	125	8.8	535	37.6	1075	75.6
700	371.1	110	7.7	535	37.6	1065	74.9
750	398.9	95	6.7	505	35.5	1010	71.0
800	426.7	80	5.6	410	28.8	825	58.0
850	454.4	65	4.6	270	19.0	535	37.6
900	482.2	50	3.5	170	12.0	345	24.3
950	510.0	35	2.5	105	7.4	205	14.4
1000	537.8	20	1.4	50	3.5	105	7.4

#### MATERIAL : A 351 CF8 / CF8 M

Test pressure		#150		#300		#600	
°F	°C	PSI	Kg/CM <sup>2</sup>	PSI	Kg/CM <sup>2</sup>	PSI	Kg/CM <sup>2</sup>
-20 to 100	-17 to 38	275	19.3	720	50.6	1440	101.2
200	93.3	235	16.5	600	42.2	1200	84.4
300	148.9	205	14.4	540	38.0	1080	75.9
400	204.4	190	13.4	495	34.8	995	70.0
500	260.0	170	12.0	465	32.7	930	65.4
600	315.6	140	9.8	435	30.6	875	61.5
650	343.3	125	8.8	430	30.2	860	60.5
700	371.1	110	7.7	425	29.9	850	59.8
750	398.9	95	6.7	415	29.2	830	58.4
800	426.7	80	5.6	405	28.5	805	56.6
850	454.4	65	4.6	395	27.8	790	55.5
900	482.2	50	3.5	390	27.4	780	54.8
950	510.0	35	2.5	380	26.7	765	53.8
1000	537.8	20	1.4	320	22.5	640	45.0