

Global Flow Systems of IDMC at your doorstep.



Skid for CIP system



Solutions Unlimited!

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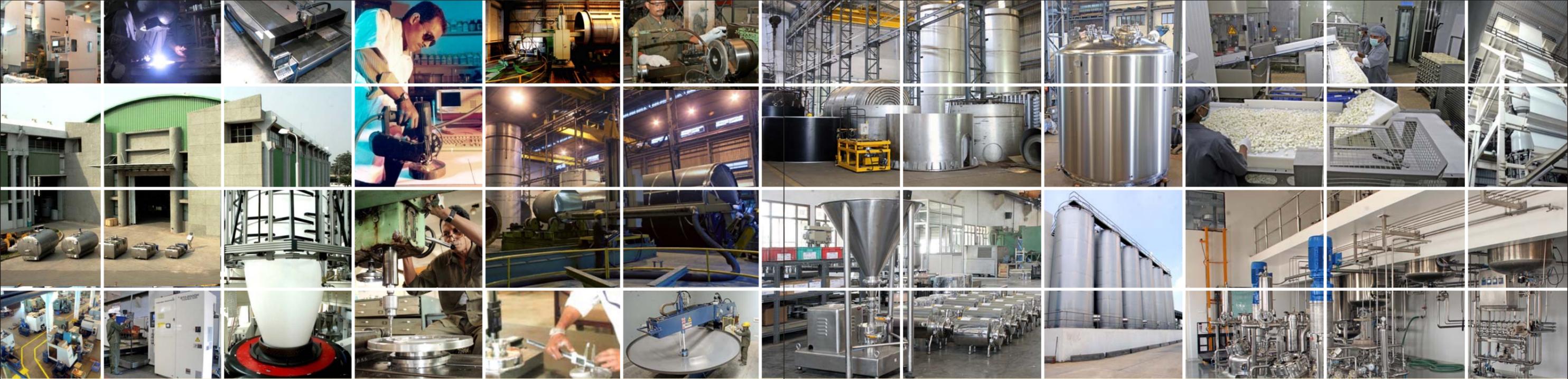


Providing customised solutions for

• DAIRY • PHARMA • BEVERAGES • BREWERY • THERMAL MANAGEMENT SYSTEM • PACKAGING



Solutions Unlimited!



IDMC: Serving the industry since 1979

Set up in the year 1979 and incorporated as a separate company in 1992, IDMC today is one of the largest project engineering and equipment manufacturing companies in the dairy, beverages, pharmaceutical, healthcare, brewery, food processing, confectionary and industrial refrigeration sectors. The company provides comprehensive process and project solutions under one roof with in-house equipment manufacturing and process automation facilities, which is best in class.

Fabrication shop

Excellent fabrication facility spread over clean and large space of over 96,000 sq. ft. and skilled manpower has made IDMC a leading manufacturer of tankages, process vessels, plate heat exchangers and specialized key process equipment for dairy, pharmaceutical, beverage, brewery and food sectors. Automatic polishing facility together with water jet cutting and disc spinning facility provides a cutting edge in job quality with uniform surface finish up to 400 grit on vessels up to 4.8 m diameter.

Machine shop

Equipped with several CNC machining centres, the machine shop caters to the machining requirement of other fabrication shops and manufactures a complete range of sanitary fittings, unions, tri-clover clamp, tees, butterfly, plug and pneumatic valves, turbo blenders, pumps, ice cream freezers, homogenizers and cup filling machines. A good proportion of the total production is exported to highly quality conscious customers in Europe.

Project engineering and execution

Skilled technicians are engaged under the supervision of highly experienced engineers for mechanical, electrical, process and piping installation including automation. Advanced tools such as orbital welding machines are employed to achieve

perfect welds conforming to the latest international standards. IDMC has to its credit several state-of-the-art very high capacity automated fully computer-controlled installations in India.

Process engineering and automation

IDMC provides complete customised software solutions with latest instrumentation and hardware. The SCADA systems adopted by IDMC allow real time MIS both for process and utilities, facilitating an effective monitoring of plant operations. A dedicated and highly skilled team of process and automation engineers provides support to the requirement of customers in the dairy and allied sectors.

Packaging film division

With recently added second module of state-of-the-art blown film plant and ten-colour CI Flexo-printing machine, IDMC has emerged as one of the largest players in this sector in India. The plant is capable of manufacturing three-layer blown film with minimum thickness tolerance for use in various industries such as dairy, food & beverages, bakery, confectionery, cosmetic, edible oils, cereals, personal care products and pharmaceuticals. The plant is equipped with the latest technology machines to produce a wide range of pouches (like side gussets, bottom gussets, wicket bags, stand-up, zipper, 4-panel synchronised pouches, etc.) with surface printed films and laminates.



Note: All specifications are subject to change without prior notice.

Plug Valves



Stainless Steel Plug Valves are used in the dairy, food and chemical industries and other installations where the application demands a sanitary grade compliant valve for on/off or flow divert operations while maintaining the pressure drop to a negligible level.

Design Characteristics

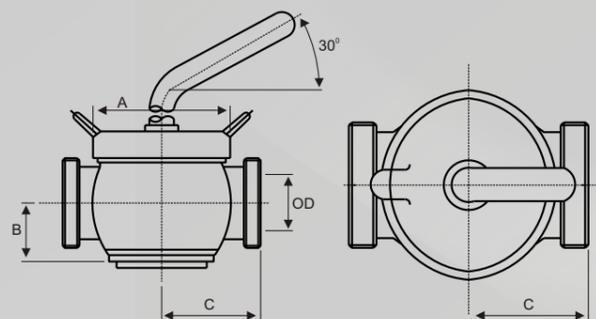
IDMC Plug Valves comprise a valve body, a plug, a cover (wing nut) and seals. These valves are available with union end connections to make replacement and maintenance easier.

Technical Data

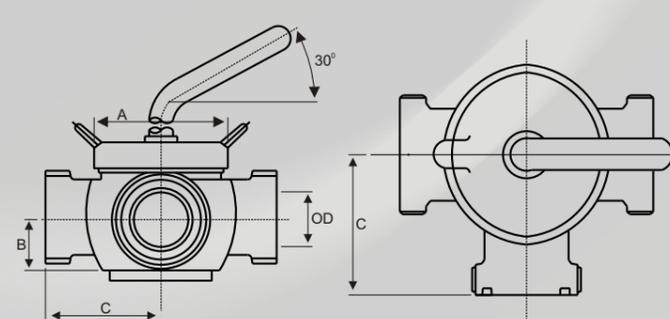
- Two-way on/off valve and three-way flow divert valve.
- Contact parts available in AISI 304 and AISI 316.
- Sizes available: 1" to 4"
- Valve sealing gaskets available in certified Food Grade NBR/EPDM. Chemical & temperature compatibility will depend on the choice of the seal material.
- Thrust washer : Teflon
- End connections : SMS standards with weldable/expandable unions or male threads. Flange end connections can be provided, if required.
- Working pressure range : 0- 5 bar
- Test pressure : 6 bar
- Surface finish : Up to 180 grit on all contact parts. Electro polishing available on request.

Sr. No.	OD mm	A mm	B mm	C mm
1	25.4	57	25.5	55
2	38.1	77	38.5	70
3	50.8	108	48.3	82
4	63.5	140	53.5	105
5	76.2	170	63	110

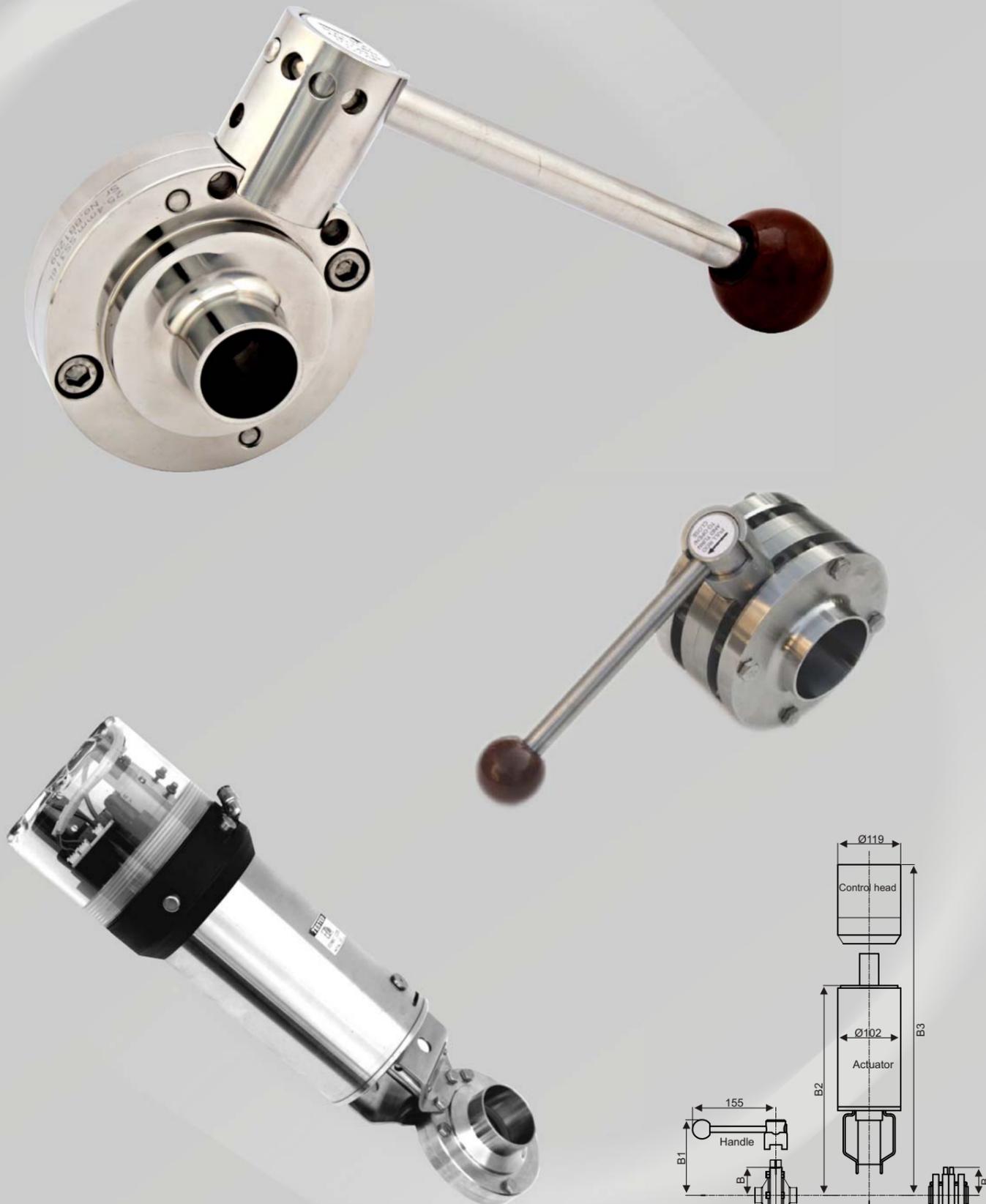
2 Way Plug Valves



3 Way Plug Valve



Butterfly Valves



IDMC Butterfly Valves are used for isolation and control in sanitary pipeline in dairy, food, beverage, brewery and pharmaceutical installations and can be operated manually or pneumatically.

Design Characteristics

Butterfly Valves are designed for smooth passage of the product with minimum pressure drop. The valve body and disc are made of stainless steel 316/316L forgings (1.4435) to ensure a non-porous valve body with low delta ferrite content. The valve has a special profiled gasket that is well housed in the body groove and conforms to FDA regulation 21CFR177.2600.

The Butterfly Valves are offered in a standard two-piece design and need little maintenance since the disc gasket is the only wear part in the valve. Optionally, Butterfly Valves can be supplied in a four piece "Sandwich" design meant for installation in fixed, hard-to-reach pipelines or other installations where the removal of the valves is not feasible. The sandwich valves can be easily removed from the pipeline for seal inspection and replacement by simply removing the flanges bolts.

Operation

Butterfly Valves can be supplied with a handle for manual operation or with a pneumatic actuator. The ergonomically designed valves handle mechanically locks in its open, close and two intermediate positions to regulate the flow.

The modular design of the valve enables fitting a common actuator on all sizes for operating the valve from a remote location by PLC or DCS stations. The actuator can be equipped with IDMC control heads for standard 24V DC operation or ASi field-bus actuation.

The valves are available in sizes from 1" to 4" diameter and are suitable for ASTM A270 OD or DIN 11851.

Salient Features

- Modular design
- Suitable for CIP cleaning
- Designed for direct welding to sanitary piping
- Minimum pressure drop across the valve
- Surface finish Ra<0.8µm. Electro polishing on request.

Technical Data

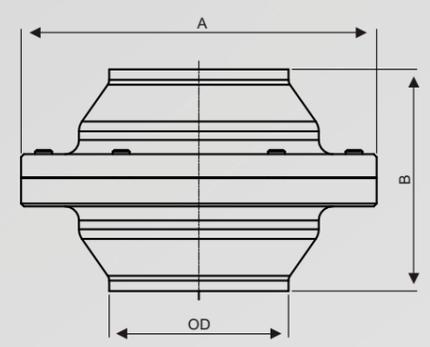
Size:	1" to 4" suitable for ASTM A270 OD or DN 25-100
Product wetted parts:	AISI 316/316L (1.4435)
Standard seal material:	EPDM (Option of NBR, Silicon or VITON)
Seal material conformance:	FDA 21CFR 177.2600
Maximum line pressure:	10 bar (1 MPa)
Minimum air pressure for actuator:	5 bar (0.5 Mpa)
Maximum air pressure for actuator:	10 bar (1 Mpa)

Sr. No.	OD mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B3 mm
1	25.4	70	82	52.5	77	256.5	398.5
2	38.1	70	82	55.5	80	259.5	401.5
3	50.8	70	82	66.5	91	270.5	412.5
4	63.5	80	92	70	94.5	273	415
5	76.2	80	96	76.5	101	280.5	422.5
6	101.6	90	104	92.5	117	296.5	438.5



Body grooved with profile gasket

Non-Return Valves



Non-Return Valves prevent back flow of the product in pressure piping systems and are used extensively in dairy, brewery, beverage, pharmaceutical, chemical, food and other similar sanitary applications.

Design Characteristics

IDMC Non-Return Valves are manufactured of stainless steel 316/316L forgings (1.4435) to ensure maximum strength and pressure withstanding ability making the valve suitable for use even in high-pressure sanitary applications. The valves have spring loaded seat with a large spherical body designed around the seat which minimizes the pressure drop across the valve.

The valves body comprises two rugged flanges having self aligning male and female bodies that prevent over-tightening of the body gasket. The body gasket and groove are of sanitary construction designed as per DIN 11864-2 to meet high hygienic requirement.

Operation

The valve opens as soon as differential pressure across the valve plug overcomes the spring force and pressure across the seat. The seats have dovetail grooves that are fitted with standard EPDM O-ring or profile gaskets and kept in position using a guide disc.

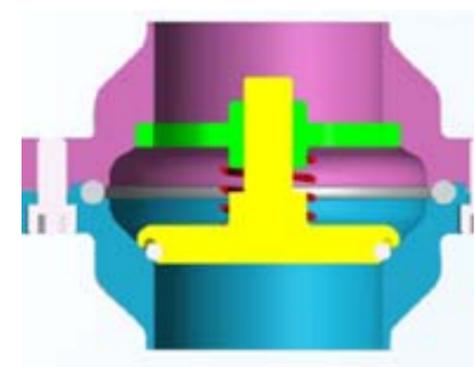
Salient Features

- Can be mounted in both horizontal and vertical positions.
- Suitable for CIP cleaning.
- Designed for direct welding to sanitary piping.
- Minimum pressure drop across the valve.
- Low pick up pressure of 0.03 bar.
- Full opening at 0.1 bar differential pressure.
- Surface finish Ra<0.8µm. Electro polishing on request.

Technical Data

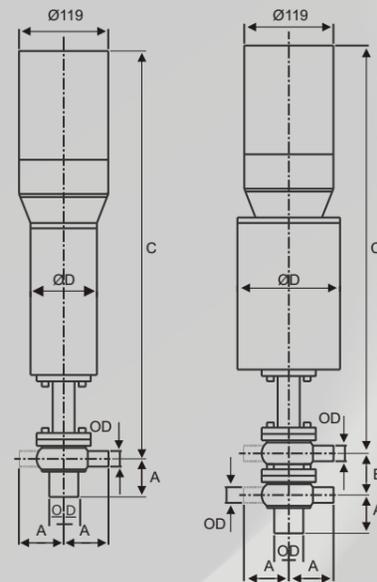
Size: 1" to 3" ASTM A270/ DN 25-80
 Valve body: AISI 316/316L (1.4435)
 Standard seal material: EPDM (Option of NBR, Silicon or VITON)
 Maximum line pressure: 10 bar

Sr. No.	OD mm	A mm	B mm
1	25.4	78	58.5
2	38.1	92	68.5
3	50.8	106	68.5
4	63.5	126	78.5
5	76.2	147	78.5



Spring loaded with seat arrangement

Pneumatic Seat Valves



IDMC manufactures Pneumatic Seat Valves for sanitary piping systems. The valves are controlled by PLC or by SCADA stations and are extensively used in dairy, brewery, beverages, pharmaceutical, cosmetic, food and mineral water applications.

Technology Features

- Spherical shape of body with smooth passage results into minimum pressure drop
- Fully drainable and no hold of liquid pool
- Machined from AISI 316/316L stainless steel round bar (1.4404)
- The flanged valve body have thick wall and is rugged in design to minimize stresses
- Manufactured in various configuration and combination to suit varied piping installation
- Special profile gasket housed in the body groove in line with recommendation of DIN 11864-2 for better hygienic design
- Seat gasket conforms to FDA regulation 21CFR177.2600
- Valve stem with FPM energized PTFE gasket ensures long seat life
- Application for On/Off and flow diversion
- Modular design
- Surface finish $ra < 0.8 \mu m$. Electro polishing on request
- Suitable for CIP cleaning

Maintenance Convenience

The valve is modular in design and can be fitted with interchangeable actuators for handling different product pressures, i.e. for higher product pressure application a larger actuator can be used rather than the standard one.

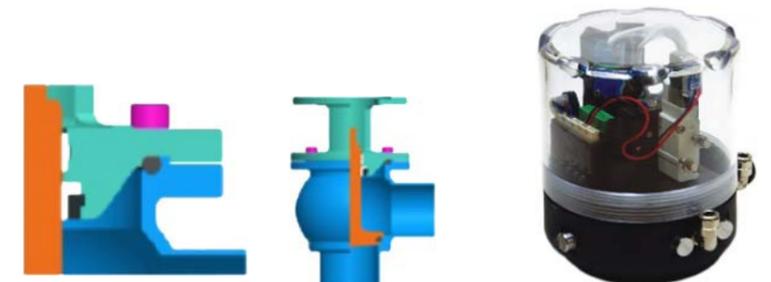
Advanced Controls

The actuator can be equipped with IDMC control head. The head is modular in design that can be accommodate either a standard 24 VDC control unit or ASI field bus control unit. The control head houses 5/2 solenoid valve with air flow regulators. The head is also equipped with two proximity sensors for positive feedback of valve opening and closing.

Technical Data

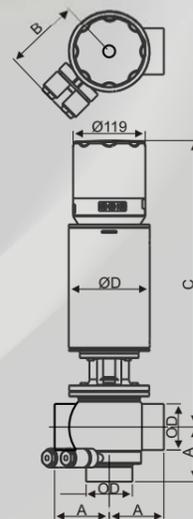
Size:	1" to 4" ASTM A270/DN 25-100
Product wetted parts:	AISI 316/316 L (1.4404)
Standard seat material:	VITON (Option of NBR, Silicon or EPDM)
Seat material conformance:	FDA 21CFR177.2600
Maximum line pressure:	10 bar (1 Mpa)
Minimum air pressure for actuator:	5 bar (0.5 Mpa)
Maximum air pressure for actuator:	10 bar (1 Mpa)

Sr. No.	OD mm	A mm	B mm	C mm	D mm
1	25.4	60	70	388	102
2	38.1	70	92	396	102
3	50.8	72	92	397	102
4	63.5	90	108	406	102
5	76.2	100	127	475	133
6	101.6	126	162	491	133



Spherical shaped, pocket and crevice free housing

Safe Flow Valves



IDMC manufactures Pneumatic Safe Flow Valves for sanitary piping systems. Safe Flow Valve is a combination of one single seat double seal valve and two CIP valves. Safe Flow Valves are controlled by PLC or by SCADA stations and are extensively used in dairy, brewery, beverages, pharmaceutical, cosmetic, food and mineral water applications.

Technology Features

- Spherical shape of body with smooth passage results into minimum pressure drop
- Fully drainable and no hold of liquid pool
- Machined from AISI 316/316L stainless steel round bar (1.4404)
- The flanged valve body have thick wall and is rugged in design to minimize stresses
- Manufactured in various configuration and combination to suit varied piping installation
- Special profile gasket housed in the body groove in line with recommendation of DIN 11864-2 for better hygienic design
- Seat gasket conforms to FDA regulation 21CFR177.2600, 3A and USP standards
- Valve stem with FPM energized PTFE gasket ensures long seat life
- CIP Valves are provided for inline CIP of seat gaskets and leakage detection
- Modular design
- Surface finish $ra < 0.8 \mu m$. Electro polishing on request
- Suitable for CIP cleaning

Maintenance Convenience

The valve is modular in design and can be fitted with interchangeable actuators for handling different product pressures, i.e. for higher product pressure application a larger actuator can be used rather than the standard one.

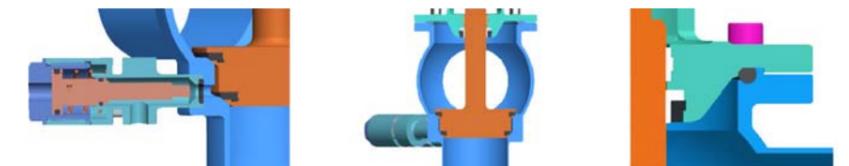
Advanced Controls

The actuator can be equipped with IDMC control head. The head is modular in design that can be accommodate either a standard 24 VDC control unit or ASI field bus control unit. The control head houses 5/2 solenoid valve with air flow regulators. The head is also equipped with two proximity sensors for positive feedback of valve opening and closing.

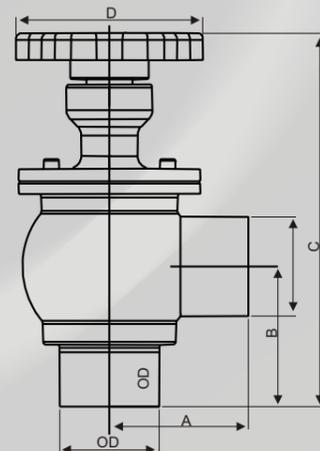
Technical Data

Size:	2" to 4" ASTM A270/DN 51-100
Product wetted parts:	AISI 316/316 L (1.4404)
Standard seat material:	VITON
Seat material conformance:	FDA 21CFR177.2600
Maximum line pressure:	10 bar (1 Mpa)
Minimum air pressure for actuator:	5 bar (0.5 Mpa)
Maximum air pressure for actuator:	10 bar (1 Mpa)

Sr. No.	OD mm	A mm	B mm	C mm	D mm
1	50.8	72	109	394	102
2	63.5	90	108	406	102
3	76.2	100	127	475	133
4	101.6	126	162	491	133



Flow Regulating Valves



IDMC manufactures Flow Regulating Valves for sanitary piping systems. The valves are manually operated and are extensively used in dairy, brewery, beverages, pharmaceutical, cosmetic, food and mineral water applications.

Technology Features

- Spherical shape of body with smooth passage results into minimum pressure drop
- Fully drainable and no hold of liquid pool
- Machined from AISI 316/316L stainless steel round bar (1.4404)
- The flanged valve body have thick wall and is rugged in design to minimize stresses
- Special profile gasket housed in the body groove in line with recommendation of DIN 11864-2 for better hygienic design
- Seat gasket conforms to FDA regulation 21CFR177.2600
- Valve stem with FPM energized PTFE gasket ensures long seat life
- Surface finish $ra < 0.8 \mu m$. Electro polishing on request
- Suitable for CIP cleaning

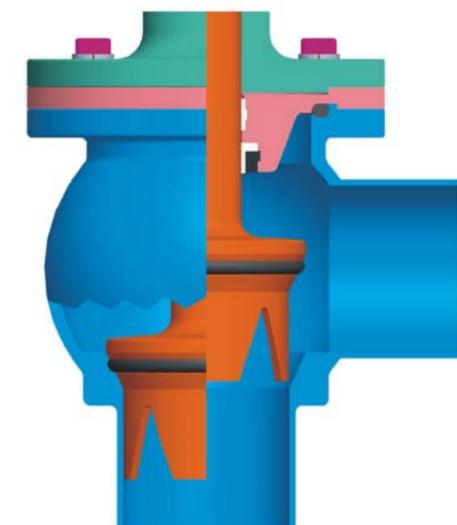
Working Principle

The valve is used to manually regulate the flow of fluid through pipe lines. Flow regulation is achieved by manually adjusting the flow area of valve port. The valve when fully closed completely shuts off the fluid flow. The valve opening is indicated by the axial displacement of the plug stem.

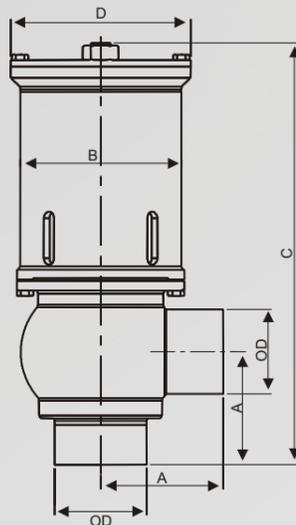
Technical Data

Size:	1.5" to 2.5" ASTMA270/DN 38-63
Product wetted parts:	AISI 316/316 L (1.4404)
Standard seat material:	VITON (Option of NBR, Silicon or EPDM)
Seat material conformance:	FDA 21CFR177.2600
Maximum line pressure:	10 bar (1 Mpa)

Sr. No.	OD mm	A mm	B mm	C mm	D mm
1	38.1	70	70	217	120
2	50.8	70	74	215	120
3	63.5	89	89	239	120



Modulating Valves



Modulating Valves are designed to use for automatic control of flow, pressure, process fluid temperature, and fluid level in balance tanks, etc. in sanitary applications.

Design Characteristics

- Machined from AISI 316/316L stainless steel round bar (1.4404).
- The flanged valve body has thick wall and is rugged in design to minimize stresses.
- Manufactured in angular configuration for bottom fluid inlet
- Precision molded profile gasket of valve plug ensures positive sealing & alignment under severe operating conditions.
- The valve has a sanitary & flexible design allowing it to be used in a wide range of process parameter control applications.
- It has few and simple moveable parts which results in a very reliable valve.
- Rugged and long-lasting plug stem bushings eliminate metal-to-metal contact.
- Rubber diaphragm used in pneumatic actuator having low friction characteristics results in a smooth modulating action.

Working Principle

The valve controls process parameters like flow, pressure, temperature and tank levels by changing the valve opening area. The process parameters are monitored with measuring instruments like flow meter, pressure transmitter, temperature transmitter, level transmitter, etc. The signals from measuring instruments are transmitted to a PID system that sends signal to i/p converter to control pneumatic pressure in the actuator. The valve is provided with pneumatic actuator having a rolling diaphragm. Valve opening is controlled by applying counter pneumatic pressure in the diaphragm against fluid pressure in the valve.

The valve is available in normally closed configuration. That needs a minimum of 0.5 bar pressure. The i/p converter can be configured for the fluid pressure at the inlet of the valve.

Salient Features

- Spherical shape of body with smooth passage for the fluid flow.
- Fully drainable design.
- Special profile gasket housed in the body groove in line with recommendation of DIN 11864-2 for better hygienic design.
- Seat gasket conforms to FDA regulation 21CFR 177.2600.
- Valve stem with FPM energized PTFE gasket ensures long seat life.
- Surface finish $ra < 0.8 \mu m$. Electro polishing on request.
- Sanitary design and suitable for CIP cleaning.

Technical Data

Product wetted parts:	AISI 316/316 L (1.4404)
Standard seat material:	VITON (Option of NBR, Silicon or EPDM)
Seat material conformance:	FDA 21CFR 177.2600
Minimum air pressure for actuator:	4 bar (0.4 Mpa)
Maximum product inlet pressure:	3 bar (higher pressure on request)

Sr.No.	OD mm	A mm	B mm	C mm	D mm
1	63.5	85	112	317	125

