United Process Valves

Tradition Innovation Commitment

ID & IP Series

IN-LINE DISC & PISTON VALVES

United Process Valves
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HISTORY & MILESTONES

2023 — June 2023, the Strahman Valves France management team acquires Strahman Valves France and Strahman MGS. Name is changed to United Process Valves.

2019 — Feb 2019, Strahman Valves France acquires MGS in Vaux Sous Aubigny. Name of this add on company becomes Strahman MGS.

Strahman MGS

2004 — Strahman Valves Inc USA, founded in 1921 acquires MG Process Valves. Name is changed to Strahman Valves France.

Strahman VALVES France

2000 — Original French founders acquire the company from Fetterolf Corp. USA Name changed to MG Process Valves.

MG PROCESS VALVES
The answer !

1998 — MG-Fetterolf moves into a new constructed building in Mery, France.

1992 — Name change to MG-Fetterolf after acquisition by Fetterolf USA.

FETTEROLF

1986 — MG Industries is founded by two French partners.

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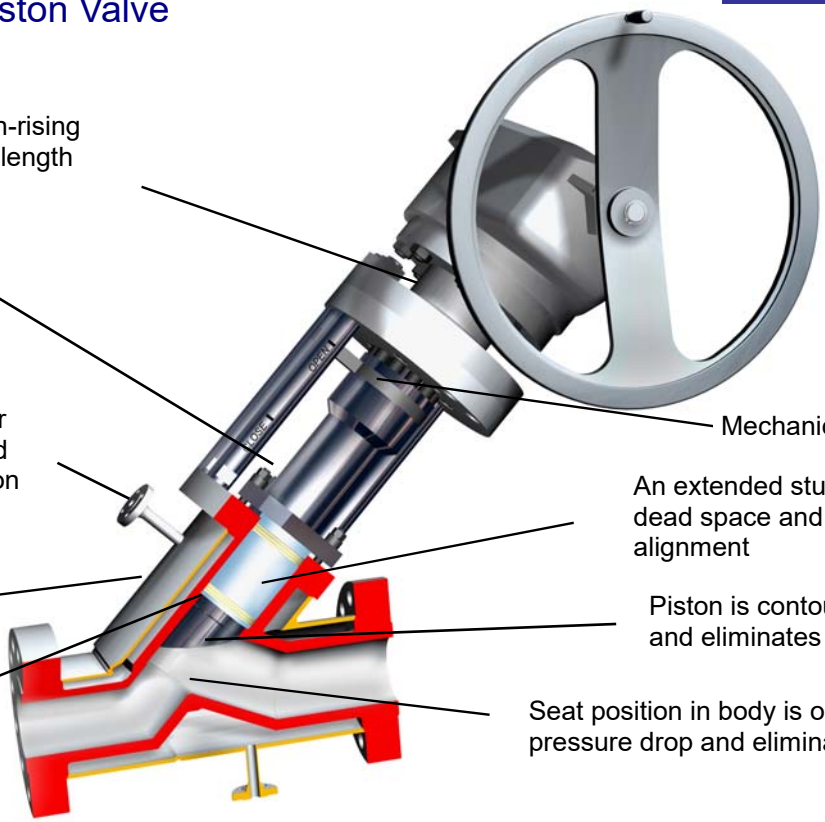
IN-LINE DISC & PISTON VALVES

Code: **IPYM**

M Seal In-Line Piston Valve



Large valves utilize a non-rising stem to minimize overall length

Live loaded packing arrangement is standard

Jacket connections (oil or steam can be customized to the actual valve position

Optional heat jacketing

M Seal provides high sealing performance for high temperature. Other sealing systems are available

Mechanical position indicator

An extended stuffing box eliminates dead space and improves stem/disc alignment

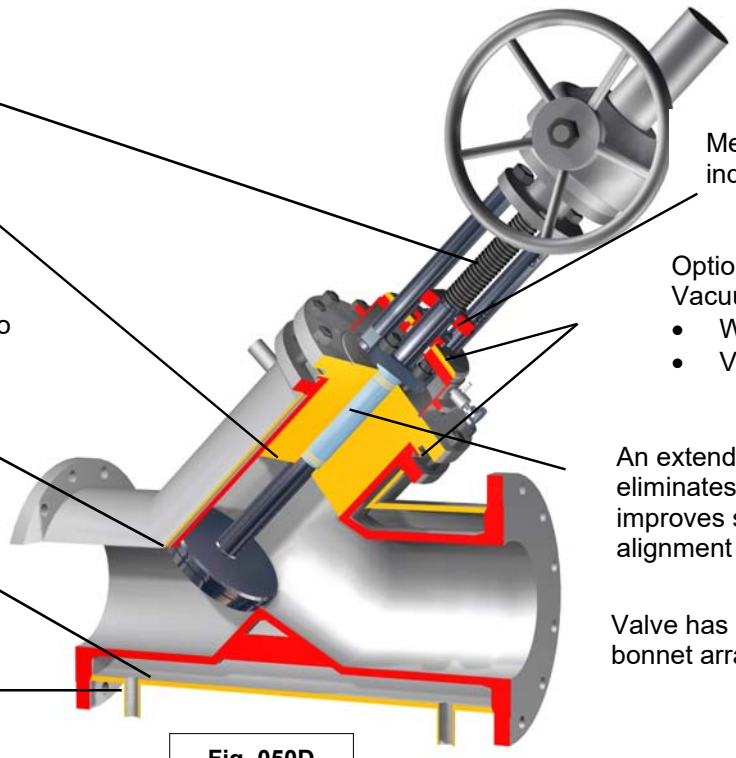
Piston is contoured for smooth flow and eliminates retention areas.

Seat position in body is optimized to minimize pressure drop and eliminate retention areas

Fig. 038D

Code: **IDYM**

In-Line Disc Valve



Large valves utilize a non-rising stem to minimize overall length

Disc completely retracts into valve body to provide full flow

Seat position in body is optimized to minimize pressure drop and elimi-nate retention areas

Optional heat jacketing

Jacket connections (oil or steam) can be customized to the actual valve position

Mechanical position indicator

Options include:
Vacuum Package with
- Welded Lip Seal
- Vacuum Hood

An extended stuffing box eliminates dead space and improves stem/disc alignment

Valve has dead space free bonnet arrangement

Fig. 050D

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As an alternative to a failing ball, plug or gate valve, United Process Valves offers in-line disc and piston valves. With a wide range of positive sealing systems like M Seal, M Ring Seal and M Control, these valves provide superior in-line tightness. When opening the piston or disc it retracts completely into the valve body providing an unrestricted full flow. In combination with our maximized port sizes, these designs offer maximum flow capacity. They are available in a wide choice of options including materials of construction, sealing systems to atmosphere, actuators, full jacketing and a vacuum package.
Typical applications for in-line piston valves is to provide a dead space free valve for high viscosity products or abrasive slurries, especially in combination with high pressures and high temperatures.

BODY ARRANGEMENTS

United Process Valves In-Line valves has several styles available:

- Figure **037** for small sizes Y pattern piston valves with a rising stem design
- Figure **038** for large sizes Y pattern piston valves with a non-rising stems
- Figure **050** for Y pattern disc valves with rising or non-rising stem
- Figure **055** for angle pattern disc valves with rising or non-rising stem

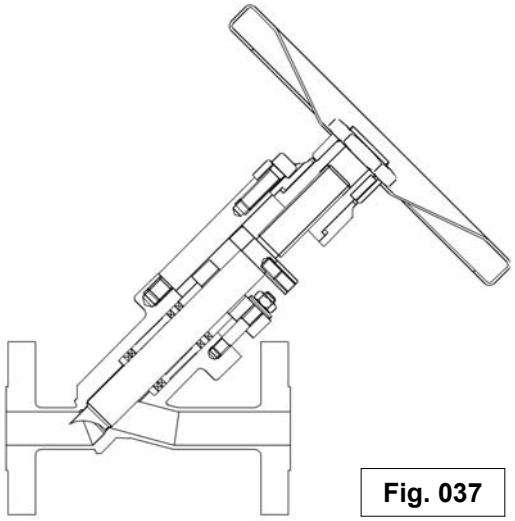

Fig. 037

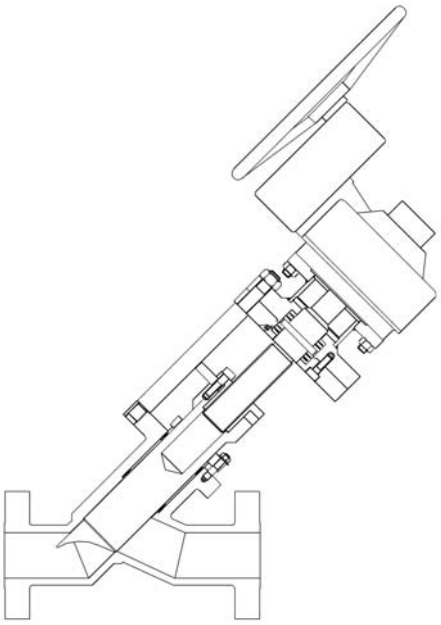

Fig. 038

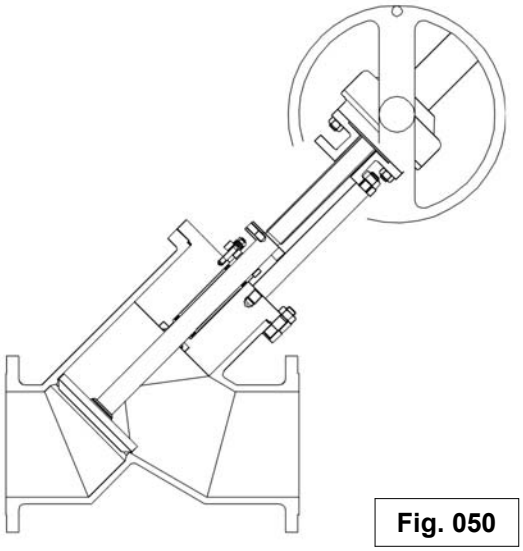

Fig. 050

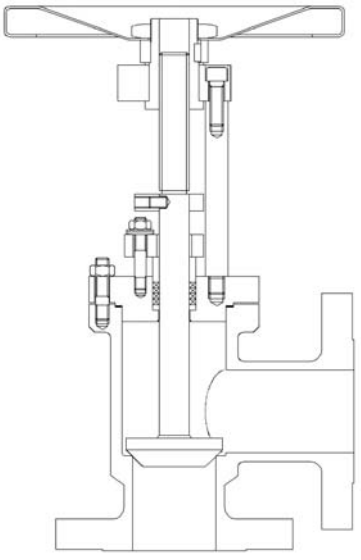

Fig. 055

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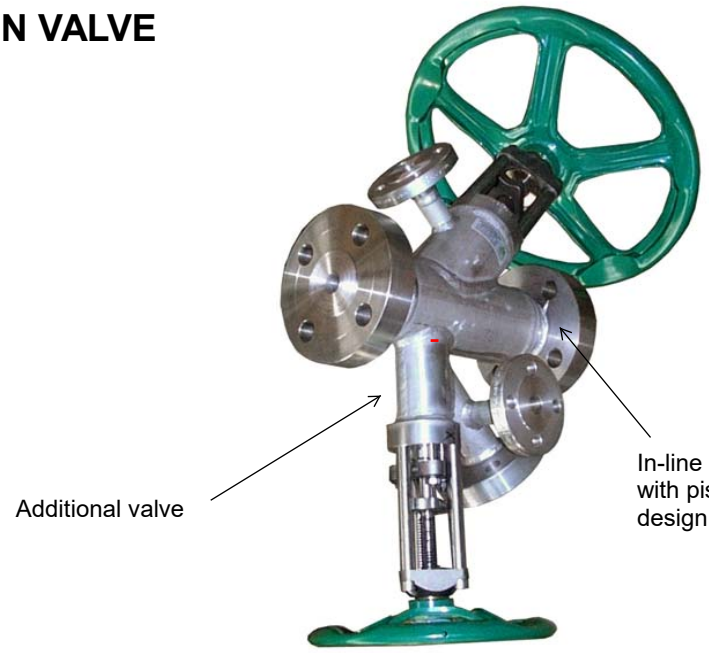
ADDITIONAL DRAIN OR INJECTION VALVE

In some processes, an additional valve can be required to serve as a drain valve for the product line (dump valve) or to inject additives. This additional valve can be welded to the body of the main valve as shown in this example.



RANGE DEFINITION

ID Manufacturing Range	PN 10	PN 16	PN 20– 150 lbs.	PN 25	PN 40	PN 50 300 lbs.	PN64 400 lbs.	PN 100 600 lbs.	PN 150/160-900 lb	PN 250 -1500 lb	PN 320	PN 420—2500 lb	PN 630 –4500 lb
3/8”- DIN10													
1/2”- DIN15													
3/4”- DIN20	■	■	■	■	■	■							
1”- DIN25	■	■	■	■	■	■							
1 1/4”- DIN32	■	■	■	■	■	■	■	■					
1 1/2”- DIN40	■	■	■	■	■	■	■	■	■	■			
2”- DIN50	■	■	■	■	■	■	■	■	■	■			
2 1/2”- DIN65	■	■	■	■	■	■	■	■	■	■			
3”- DIN80	■	■	■	■	■	■	■	■	■	■			
4”- DIN100	■	■	■	■	■	■	■	■	■	■			
5”- DIN125	■	■	■	■	■	■	■	■	■	■			
6”- DIN150	■	■	■	■	■	■	■	■	■	■			
8”- DIN200	■	■	■	■	■	■	■	■	■	■			
10”- DIN250	■	■	■	■	■	■	■	■	■				
12”- DIN300	■	■	■	■	■	■	■	■	■				
14”- DIN350	■	■	■	■	■	■	■	■	■				
16”- DIN400	■	■	■	■	■	■	■	■					
18”- DIN450	■	■	■	■	■	■	■	■					
20”- DIN500	■	■	■	■	■	■	■						
24”- DIN600	■	■	■	■	■	■	■						
28’ - DIN700	■	■	■	■	■	■							
32” - DN800	■	■	■	■	■								
36” - DN900	■	■	■	■									
40” - DN1000	■	■	■										
44” -DN1100	■	■											
48” - DN1200	■												

ID Manufacturing Range	PN 10	PN 16	PN 20– 150 lbs.	PN 25	PN 40	PN 50 300 lbs.	PN64 400 lbs.	PN 100	PN 150/ 160 -	PN 250 -1500 lb	PN 320	PN 420—2500 lb	PN 630 –4500 lb
3/8”- DIN10													
1/2”- DIN15													
3/4”- DIN20	■	■	■	■	■	■							
1”- DIN25	■	■	■	■	■	■							
1 1/4”- DIN32	■	■	■	■	■	■	■	■					
1 1/2”- DIN40	■	■	■	■	■	■	■	■	■	■			
2”- DIN50	■	■	■	■	■	■	■	■	■	■			
2 1/2”- DIN65	■	■	■	■	■	■	■	■	■	■			
3”- DIN80	■	■	■	■	■	■	■	■	■	■			
4”- DIN100	■	■	■	■	■	■	■	■	■	■			
5”- DIN125	■	■	■	■	■	■	■	■	■	■			
6”- DIN150	■	■	■	■	■	■	■	■	■	■			
8”- DIN200	■	■	■	■	■	■	■	■	■	■			
10”- DIN250	■	■	■	■	■	■	■	■	■				
12”- DIN300	■	■	■	■	■	■	■	■	■				
14”- DIN350	■	■	■	■	■	■	■	■	■				
16”- DIN400	■	■	■	■	■	■	■	■					
18”- DIN450	■	■	■	■	■	■	■	■					
20”- DIN500	■	■	■	■	■	■	■						
24”- DIN600	■	■	■	■	■	■	■						

United Process Valves

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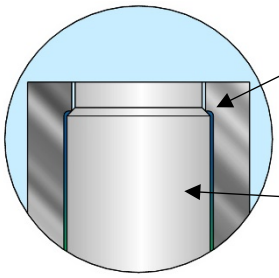
Available Sealing systems

M Seal offers a wide range of material combinations selected to create a differential hardness between body and plunger seat. The maintenance friendly design of the M Seal system provides long & reliable valve sealing performance and is suitable for almost all process conditions.



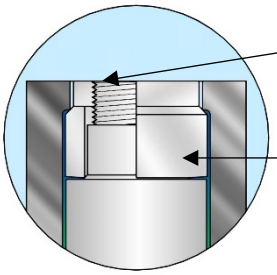
Greater hardness on body seat assures that wear occurs on piston first Easy maintenance is key.

One-piece piston design provides the geometrical arrangement to ensure long-term performance.

Temperature
Min: -200 C / -330°F
Max: 815°C / 1500°F

Pressure
Max: 630 bar / 9137 psi & full vacuum.

The M Ring Seal is also based on a differential hardness between the body and the piston surface. The replaceable metallic seal ring made of aluminum, nickel or titanium provides excellent sealing performance especially in applications that combine full vacuum and temperatures above 200° C.



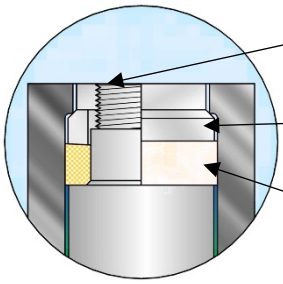
Locking nut is secured by a tack weld.

Resilient metal ring seals between the body seat and disc and provides high performance sealing for vacuum and high temperature applications.

Temperature
Min: -200 C / -330°F
Max: 450°C / 842°F

Pressure
Max: 250 bar / 3626 psi & full vacuum.

Dual Seal is a unique double sealing system that works like a piston operating within a cylindrical seat. Unlike other designs, the secondary resilient seal ring is mounted on the piston and will expand after metal to metal contact of the primary seat ring. The design provides a true metal to metal seal in case of resilient seat failure.



Locking nut is secured by a tack weld.

The primary metal to metal seal ring compresses the secondary resilient seal ring.

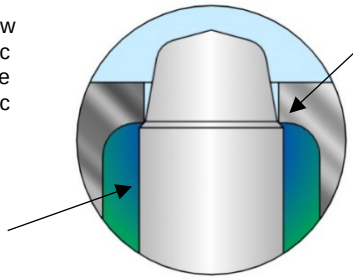
A secondary seal ring is made of resilient material like PTFE, PTFE glass filled.

Temperature
Min: -50 C / -60°F
Max: 225°C / 437°F

Pressure
Max: 250 bar / 3626 psi & full vacuum.

M-Control provides customized flow characteristics to regulate a specific laminar flow with high viscosity. The system uses a piston with a specific shape to control flow and/or pressure. M-Control uses the specific sealing features of the M seal system.

Body cavity is sized to keep full flow capacity through the valve



Greater hardness on body seat assures that wear occurs on piston first. Easy maintenance is key.

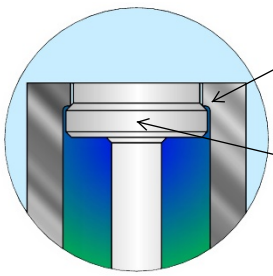
UPV's experience with high viscosity control valves combined with our calculation software provides a smooth and high performing control valve.

Temperature
Min: -200 C / -330°F
Max: 815°C / 1500°F

Pressure
Max: 630 bar / 9137 psi & full vacuum.

Sealing system In-Line Disc Valves

M Seal offers a wide range of material combinations selected to create a differential hardness between body and plunger seat. The maintenance friendly design of the M Seal system provides long & reliable valve sealing performance and is suitable for almost all process conditions.



Greater hardness on body seat assures that wear occurs on piston first Easy maintenance is key.

One-piece piston design provides the geometrical arrangement to ensure long-term performance.

Temperature
Min: -200 C / -330°F
Max: 815°C / 1500°F

Pressure
Max: 630 bar / 9137 psi & full vacuum.

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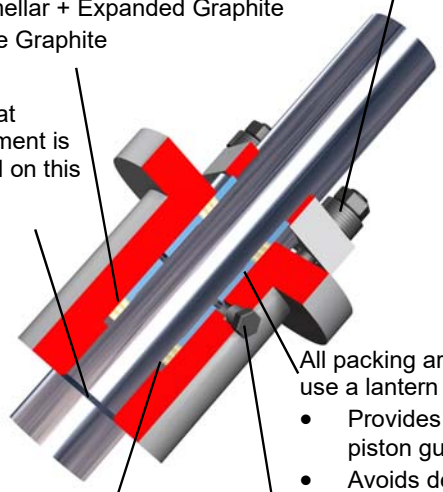
PACKING DEFINITION

Typical Packing Materials:

- PTFE
- PTFE / Aramide Braid
- Carbon / Graphite Braid
- Graphite Braid
- PTFE / Aramide Braid + Graphite
- Lamellar + Expanded Graphite
- Pure Graphite

Live loaded packing arrangement minimizes maintenance

Back seat arrangement is standard on this valve



All packing arrangements use a lantern ring that:

- Provides better stem piston guiding
- Avoids dead space in body cavities

Bottom ring material is selected with a differential hardness from the piston to prevent piston damage

Optional 1/4 inch NPTF can be used for leak detection or inert gas injection to avoid leakage to atmosphere by creating an over pressure

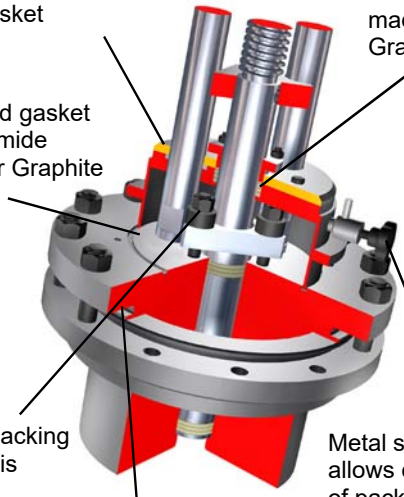
VACUUM HOOD

For valves on full vacuum service United Process Valves offers a special **vacuum package** that maintains tightness to atmosphere. Valves with this package are usually equipped with an **M Ring Seal** design as process sealing. The system uses a replaceable aluminium or nickel seal ring and provides high vacuum performance. This special **vacuum package** provides zero leakage between atmosphere and process.

Viton or Graphite column gasket

Spring loaded secondary packing made of PTFE or Graphite

Vacuum hood gasket made of Aramide compound or Graphite



Live loaded packing arrangement is standard

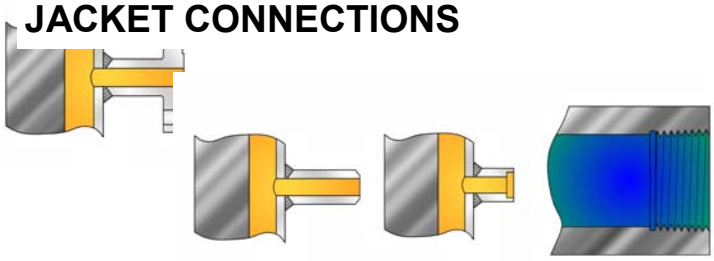
Metal seated test valve allows checking of packing performance. Can also be used for gas injection

Welded lip seals

STANDARD BODY GASKET RANGE

- PTFE
- Aramide / Nitrile
- Carbon / Aramide
- Laminated Graphite
- Laminated Graphite / 316
- Spiral Wound 316L / PTFE
- Spiral Wound 316L / Graphite
- Spiral Wound 321 / Graphite
- Spiral Wound Inconel / Graphite
- Spiral Wound Titanium / Graphite
- Welded Lips

JACKET CONNECTIONS



Flanges ANSI,DIN,JIS

Butt Weld

Socket Weld, NPT

Threaded connections NPT & BSP

Valve Coding System

I	P	Y	M	W	J

I In-Line Disc & Piston Valve

P Piston
D Disc
A Accessories

Y Y Pattern
A Angle
$ Special

M M Seal
C M Control
D Dual Seal
R M Ring Seal

F Flanged
W Butt Weld
O Over-sized Flange
G Graylock
$ Special

J Jacketed
- Non-Jacketed

United Process Valves

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TECHNICAL & GENERAL INFORMATION

Design Code & Construction

- Design standard compliant with ASME B16.34
- International standards include ANSI, DIN, JIS, API etc.
- Wide range of material selections including carbon steel / stainless steel / Titanium / Hastelloy / Duplex / Monel / Tantalum / Zirconium
- Fabricated, cast, forged and bar stock designs
- Combinations of fabricated, sand and investment casings, and bar stock available

Surface Finish

- For polymer applications, United Process Valves recommends a surface facing of 300 (Ra 0.4) for all parts are in contact with the medium

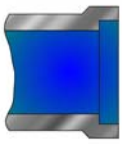
Quality assurance & testing

- ISO 9001 compliant
- PED / ATEX / CE marking
- ISO 15848 1 & 2, low emission testing and certification available
- Standard testing procedures

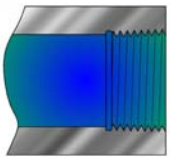
LINE & BRANCH CONNECTIONS

Flanges
ANSI, DIN, JIS

Heated
Flanges

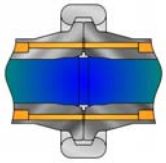


Socket
Weld



Threaded
connections
NPT & BSP

Butt
Weld



Fast Bolting Union
Graylock Securamax

ACTUATION OPTIONS

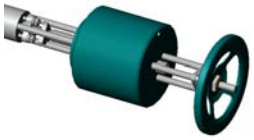
Hand Wheel

Bevel Gear

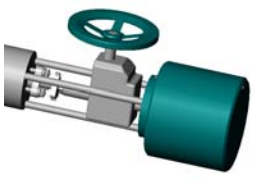
Electric Actuator

Air Motor

Double or single
acting Air Cylinder



Double or single acting Air
Cylinder with Safety Hand Wheel



Double or single acting Air
Cylinder with side mounted
Safety Hand Wheel

Hydraulic
Cylinder

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United Process Valves products include:

PISTON TYPE SAMPLING VALVES

United Process Valves has a full line of sampling valves that produce live samples without exception. Our sampling valves unique design prevents failure caused by sediment or clogging.

PISTON TYPE DRAIN VALVES

United Process Valves Drain Valves are designed to prevent clogging. They are ideal for use in liquid and gas services or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

PISTON & DISC TYPE IN-LINE VALVES

United Process Valves Piston and Disc Type In-Line Valves alternative to a failing ball, plug or gate valve. With a wide range of positive sealing systems like M Seal, M Ring Seal and M Control, these valves provide superior in-line tightness. When opening the piston or disc it retracts completely into the valve body providing an unrestricted full flow

PISTON & DISC TYPE DIVERTER VALVES

United Process Valves Diverter Valves are designed to divert process flows with high and low viscosity. They are dead space free to prevent clogging. They are ideal for use in liquid and gas services or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

SINGLE- & DOUBLE DISC SLAB GATE VALVES

United Process Valves Diverter Valves are designed to divert process flows with high and low viscosity. They are dead space free to prevent clogging. They are ideal for use in liquid and gas services or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

LINE BLINDS

United Process Valves Line Blinds provide zero leakage downstream and total isolation on process pipelines, vessels, and maritime applications. No pipeline movement is required when blind position is changed.

www.unitedprocessvalves.com

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ISO 9001:2015 BUREAU VERITAS Certification