VR Series

VESSEL & REACTOR VALVES

RISING DISC

Strahman has a full line of sampling valves that produce live samples without exception. Our sampling valves unique design prevent failure caused by sediment or clogging.

Drain Valves

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

Wash Down Equipment

Strahman offers a full line of mixing units, hose stations, hoses, nozzles and wash down accessories. Our wash down line is designed for industrial use and is used in a wide variety of industries including food, beverage, pharmaceutical, chemical and other applications.

Line Blinds

Strahman 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.

Please contact your local Strahman representative for further details or visit our website: www.strahmanvalves.com

Strahman Valves, Inc.

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ISO 9001 CERTIFIED

Established 1921

Sold by: G&W Industrial Sales
304-422-4755
mail@gwindustrial.com
Rising Disc Valves

M Seal for high Pressure & Temperature. Dual Seal, Soft Seal, M Ring and M Control are available

Optional full jacketing

Purge connections can be added to flush the valve and clean downstream

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

Live loaded packing arrangement is standard

Extended body design provides a flush design and a dead space free connection to the vessel

Jacket Connections (oil or steam) customized to actual valve position

Standard branch angle: 45° & 60° 90°, and other specific angles available upon request

Mechanical position indicator

JACKET CONNECTIONS

Flanges ANSI,DIN,JIS

Butt Weld

Socket Weld

Threaded connections NPT & BSP

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Strahman Rising Disc design is a bottom outlet valve. When opening, the disc rises into the vessel or reactor to break through any crust or solidified material to facilitate draining.

Strahman valves are available in a choice of options including material of construction, sealing systems, actuators and customized or standard connections to piping. Other specific features are full jacketing, valve tangentially positioned to process pipe or additive injection.

Typical applications: Draining of low viscosity products.

BODY ARRANGEMENTS

Strahman has two Rising Disc styles available:

- Figure 040 for large valves and low pressure applications. Uses a fabricated pipe or cast body design
- Figure 042 for small valves and high pressure applications. Uses a bar stock body design
DUAL SEAL DISC & DISMOUNTABLE SEAT

As an option the body seat can be dismountable. This is an attractive option when the process is corrosive during the reaction. Parts directly in contact with the process (seat and trim) are made of sophisticated alloys while valve body and piping are fabricated from regular materials.

Primary seal metal to metal ring compresses the resilient secondary seal ring

Secondary seal ring made of resilient material – PTFE / PTFE glass lined

Locking nut secured by tack weld

LINE & BRANCH CONNECTIONS

- Flanges ANSI, DIN, JIS
- Heated Flanges
- Socket Weld
- Threaded connections NPT & BSP
- Studded Ends
- 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
VESSEL CONNECTIONS

To connect valves to existing vessels or reactors, there are two possibilities: a nozzle or a pad connection. In both cases, the customer must specify the following vessel connection details: « D » (inside diameter), « H » (height), DN (nominal size), PN (pressure rating) and connection standard (ISO, ANSI, DIN, etc.). To eliminate retention areas radius « R » can be specified for optional contouring. For new projects Strahman can supply valves with easy-to-fit standardized pads that are ready to be installed.

**RANGE DEFINITION**

<table>
<thead>
<tr>
<th>VR Manufacturing Range</th>
<th>PN 10</th>
<th>PN 16</th>
<th>PN 20–150 lbs.</th>
<th>PN 25</th>
<th>PN 40</th>
<th>PN 50 600 lbs.</th>
<th>PN 400 lbs.</th>
<th>PN 100 600 lbs.</th>
<th>PN 150–180 900 lbs.</th>
<th>PN 250–1500 lbs</th>
<th>PN 320</th>
<th>PN 420–2500 lbs</th>
<th>PN 630–4500 lbs</th>
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**Fig. 042**

**Fig. 040**

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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.

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.

STANDARD PAD GASKET RANGE

PTFE
Aramid / 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
Metallic O Ring Helicoflex Gasket Aluminium/316
Metallic O Ring Helicoflex Gasket Nickel/Nimonic 90 316L RTJ
Nitrile O Ring
EPDM O Ring
Silicone O Ring
Fluorocarbon (Viton) O Ring
Silicone FEP Jacketed O Ring
Perfluoroelastomer (Kalrez) O Ring

VACUUM HOOD

For valves on full vacuum service Strahman 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

Mechanical position indicator

Spring loaded secondary packing made of PTFE or Graphite

Vacuum hood gasket made of Aramide compound or Graphite

Live loaded packing arrangement is standard

Valve Coding System

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<tr>
<th>V</th>
<th>R</th>
<th>4</th>
<th>M</th>
<th>B</th>
<th>J</th>
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<td>D</td>
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<td>R</td>
<td>M Ring Seat</td>
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<td>Extended Body</td>
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SEALING SYSTEMS

**M Seal** - This sealing system 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 performance and is suitable for almost all process conditions.

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

**Dual Seal** - The 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.

**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, Strahman 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
- TUV / HPO / TA Luft
- Standard testing procedures

**JACKET CONNECTIONS**
- Flanges: ANSI, DIN, JIS
- Butt Weld
- Socket Weld

**SEALING SYSTEMS**

- **M Seal**
  - Temperature: Min: -200°C / -330°F Max: 815°C / 1500°F
  - Pressure: Max: 250 bar / 3550 psig & full vacuum

- **M Ring Seal**
  - Temperature: Min: -200°C / -330°F Max: 450°C / 840°F
  - Pressure: Max: 250 bar / 3550 psig & full vacuum

- **Dual Seal**
  - Temperature: Min: -50°C / -60°F Max: 200°C / 450°F
  - Pressure: Max: 250 bar / 3550 psig & full vacuum

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**304-422-4755**

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The Strahman family of products include:

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**Established 1921**

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**ISO 9001 Certified**