



CRUST BREAKING BOTTOM OUTLET VALVES

RISING DISC VALVES

CODE: VR4M-VR6M

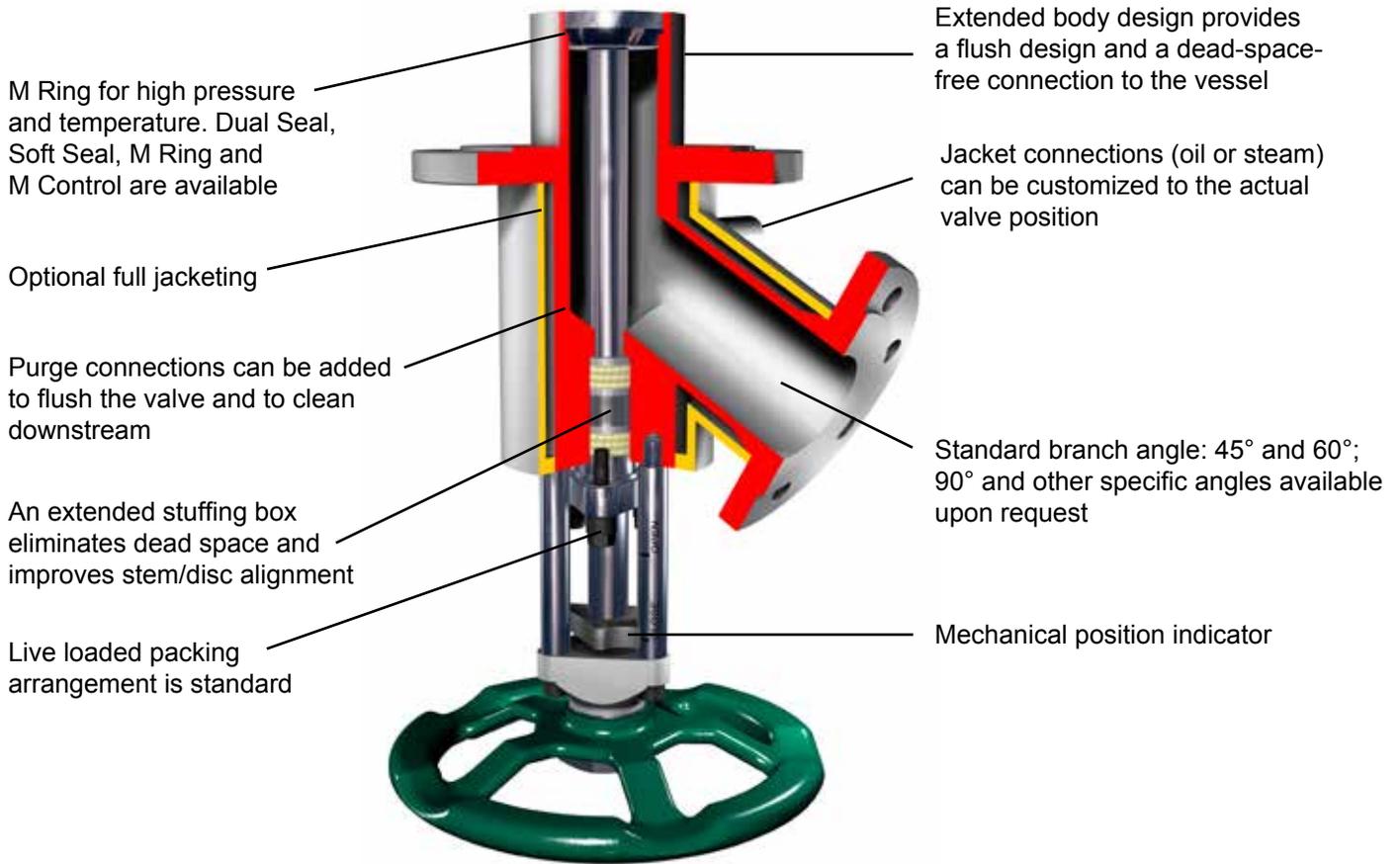
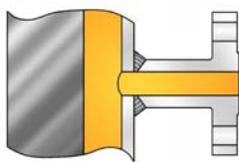
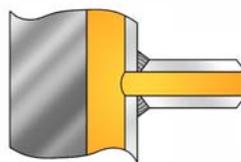


Fig. 042D

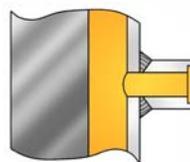
JACKET CONNECTIONS



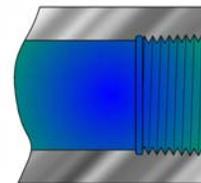
Flanges
ANSI, DIN, JIS



Butt Weld



Socket Weld



Threaded connections
NPT & BSP

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.

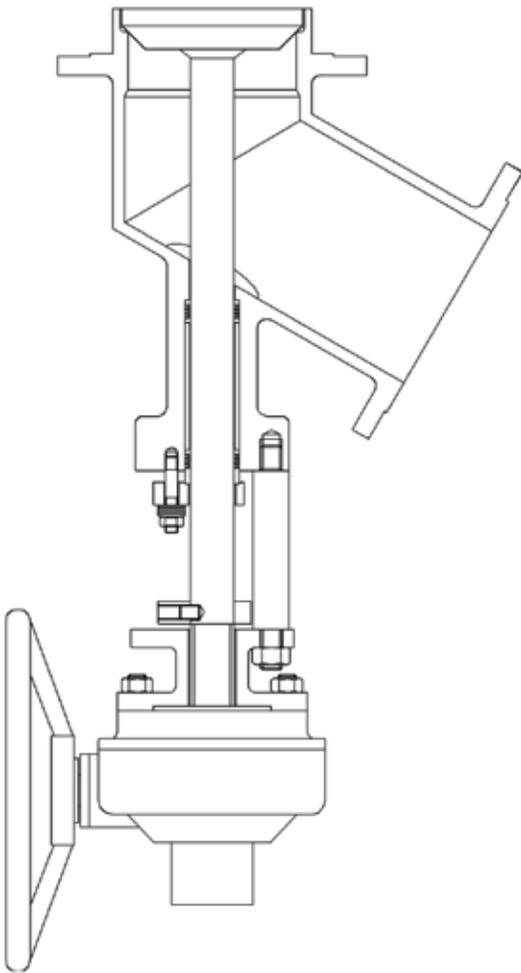


Fig. 040

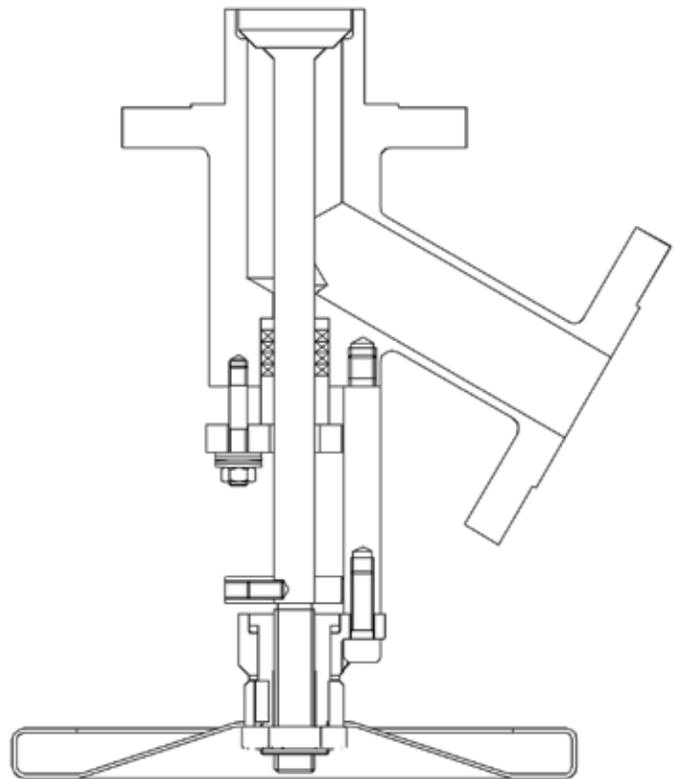
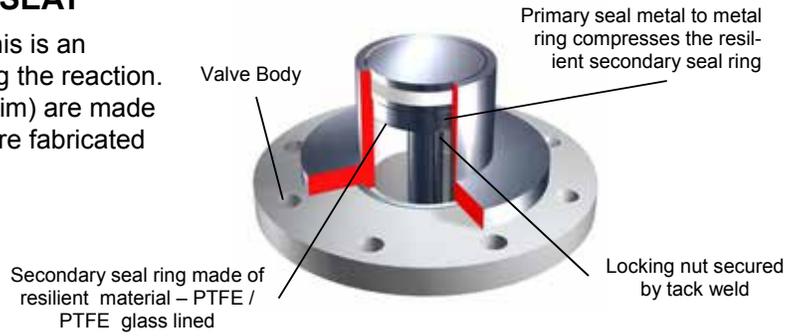


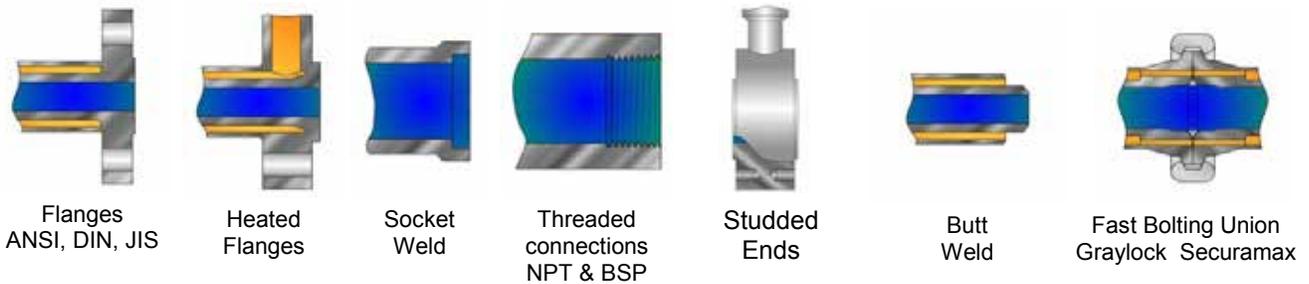
Fig. 042

DUAL SEAL DISC AND DISMOUNTABLE SEAT

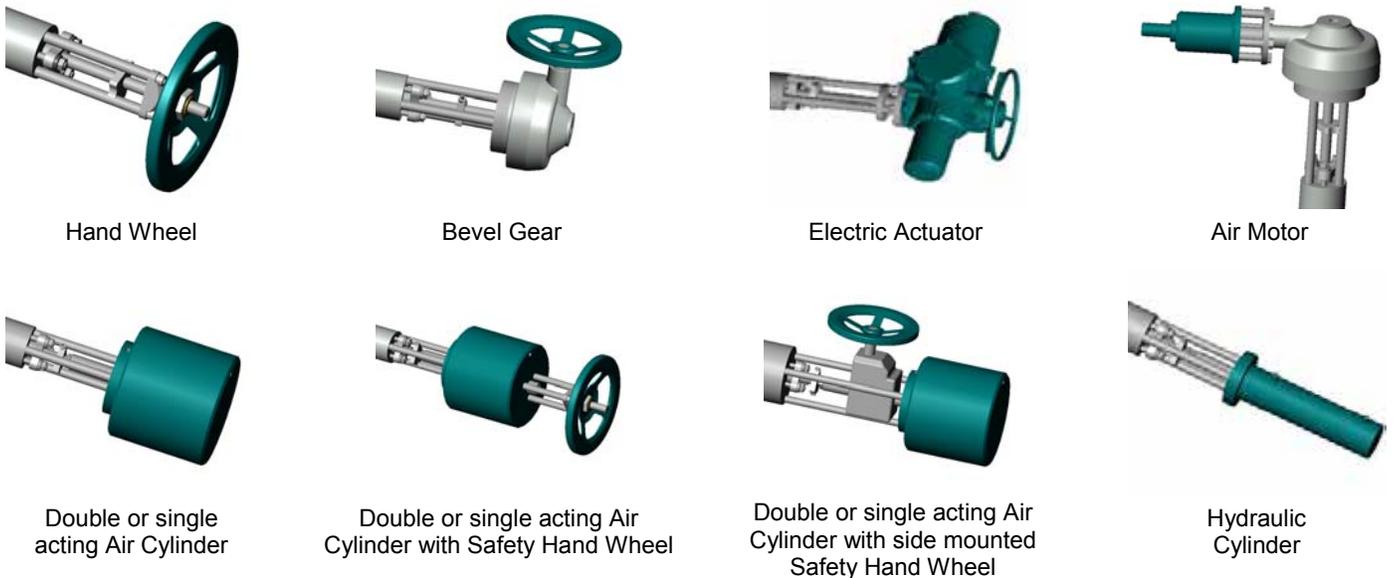
As an option, the body seat can be dismountable. This is an attractive option when the process is corrosive during the reaction. Parts directly in contact with the process (seat and trim) are made of sophisticated alloys while valve body and piping are fabricated from regular materials.



LINE AND BRANCH CONNECTIONS



ACTUATION OPTIONS



TECHNICAL AND GENERAL INFORMATION

DESIGN CODE AND 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 castings, and bar stock available

SURFACE FINISH

- For polymer applications, Strahman recommends a surface finish of 300 (Ra 0.4) for all parts are in contact with the medium

QUALITY ASSURANCE AND TESTING

- ISO 9001 compliant
- PED / ATEX / CE marking
- TUV / HPO / TA Luft
- Standard testing procedures
- CU TR 010
- CU TR 032

RANGE DEFINITION

VR Manufacturing Range	PN 10	PN 16	PN 20-150 lbs.	PN 25	PN 40	PN 50 300 lbs.	PN 64 400 lbs.	PN 100 600 lbs.	PN 150/160-900 lbs.	PN 250 - 1500 lbs.	PN 320	PN 420 - 2500 lbs.	PN 630 - 4500 lbs.
3/8" - DIN10													
1/2" - DIN15													
3/4" - DIN20	Fig. 042												
1" - DIN25													
1 1/4" - DIN32													
1 1/2" - DIN40													
2" - DIN50													
2 1/2" - DIN65													
3" - DIN80													
4" - DIN100	Fig. 040												
5" - DIN125													
6" - DIN150													
8" - DIN200													
10" - DIN250													
12" - DIN300													
14" - DIN350													
16" - DIN400													
18" - DIN450													
20" - DIN500													
24" - DIN600													

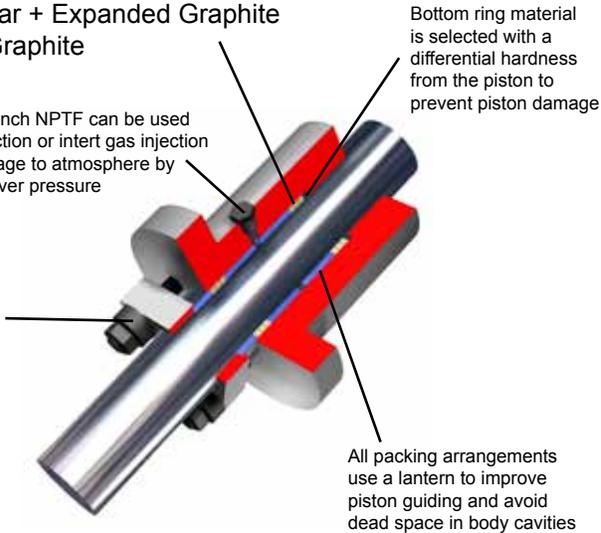
PACKING DEFINITION

Typical Packing Materials:

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

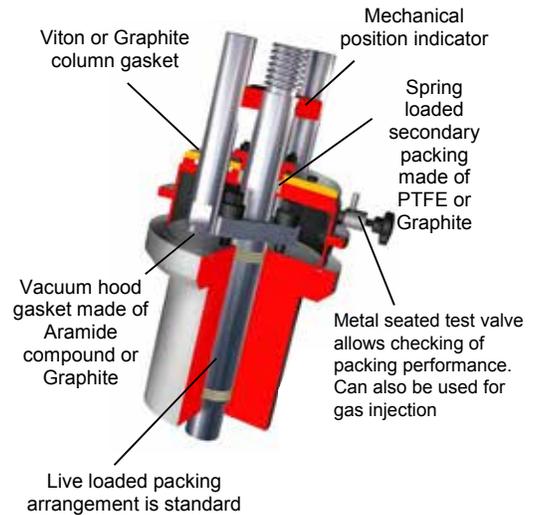
Optional 1/4 inch NPTF can be used for leak detection or inert gas injection to avoid leakage to atmosphere by creating an over pressure

Live loaded arrangement minimizes maintenance



VACUUM HOOD

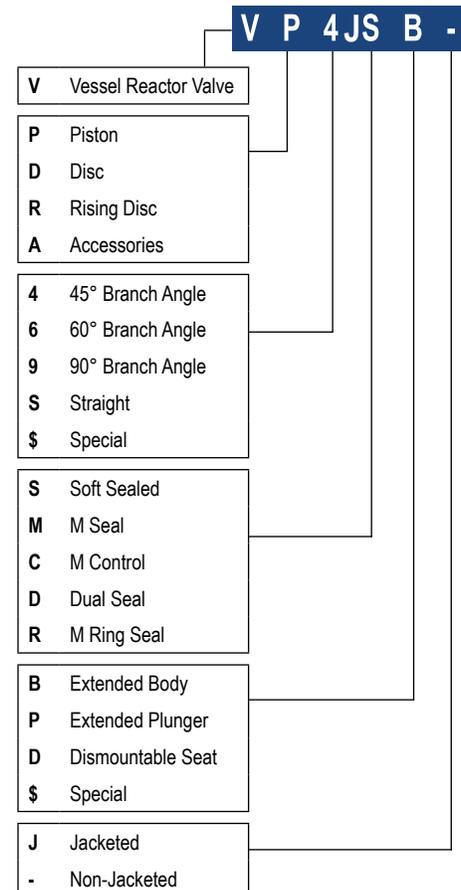
For valves on full vacuum service, Strahman offers a special **vacuum package** that maintains tightness to atmosphere. Valves with this package are usually equipped with an **M Ring Seal** design as process sealing. The system uses a replaceable aluminum or nickel seal ring and provides high vacuum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



STANDARD PAD GASKET RANGE

- PTFE
- Aramide / Nitrile
- Carbon / Nitrile
- 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 Lip Seals
- Metallic O-Ring Helicoflex Gasket Aluminum / 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

VALVE CODING SYSTEM

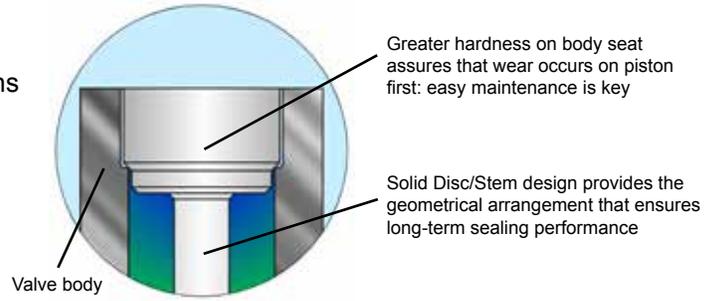


SEALING SYSTEMS

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 and reliable valve performance and is suitable for almost all process conditions.

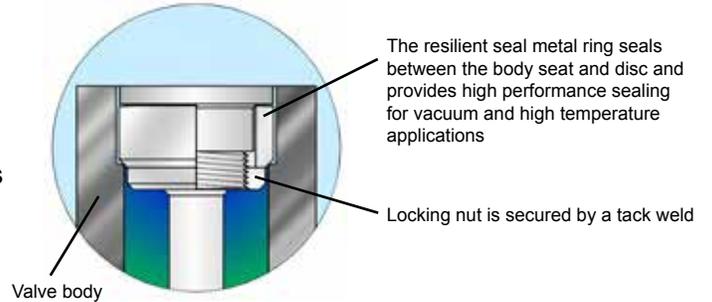
- **Temperature:** Min.: -200°C / -330°F
Max.: 815°C / 1500°F
- **Pressure:** 630 bar / 9000 PSIG



M RING SEAL

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 temperatures above 200°C.

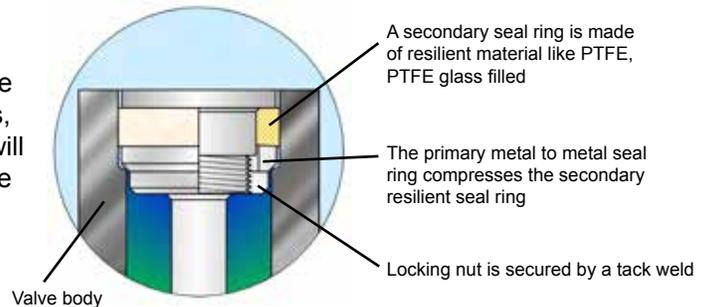
- **Temperature:** Min.: -200°C / -330°F
Max.: 450°C / 840°F
- **Pressure:** 250 bar / 3550 PSIG and full vacuum



DUAL SEAL

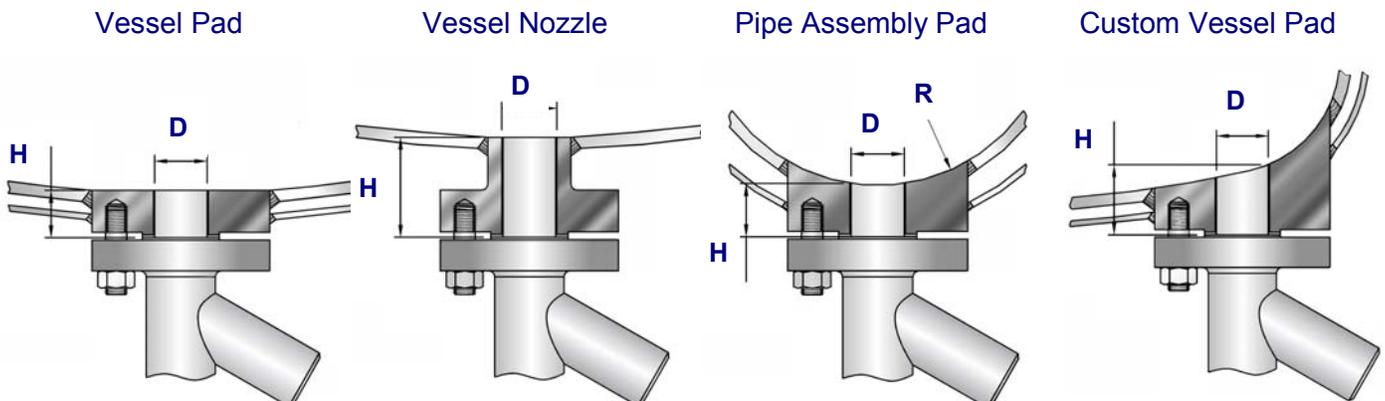
The **Dual Seal** is a unique double sealing system that works like a piston operating within a cylindrical seat. Unlike other designs, the secondary resilient seal ring is mounted on the piston and will expand after metal to metal contact of the primary seat ring. The design provides a true metal to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

- **Temperature:** Min.: -50°C / -60°F
Max.: 200°C / 450°F
- **Pressure:** 250 bar / 3550 PSIG and full vacuum



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.



The Strahman family of products include:

SAMPLING VALVES

Strahman has a full line of sampling valves that produce live samples without exception. Our sampling valves unique designs 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.

LINE BLINDS

Strahman Line Blinds provide zero leakage down stream and total isolation on process pipelines, vessels and maritime applications. No pipeline movement is required when blind position is changed.

AUTOMATED VALVES & FIRE SAFE PRODUCTS

Strahman automated valve packages with floating ball valves and resilient seated butterfly valves come complete with electric or pneumatic actuators for a wide array of industrial applications. Additionally, a full suite of API 607 fire safe valve products are offered as actuated units or to be used in conjunction with our FM approved thermal shut-off assemblies. Resettable Emergency Block Valves (R-EBV) are also available for the oil & gas and chemical industries.

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.

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



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