THE ORIGINATOR OF PISTON-TYPE SAMPLING VALVES

# RISING DISC VALVES

## VR SERIES

VaporTec®

*Especialistas en Vapor*

www.vaportec.us

Strahman® PROCESS VALVES

## RISING DISC VALVES

CODE: VR4M-VR6M

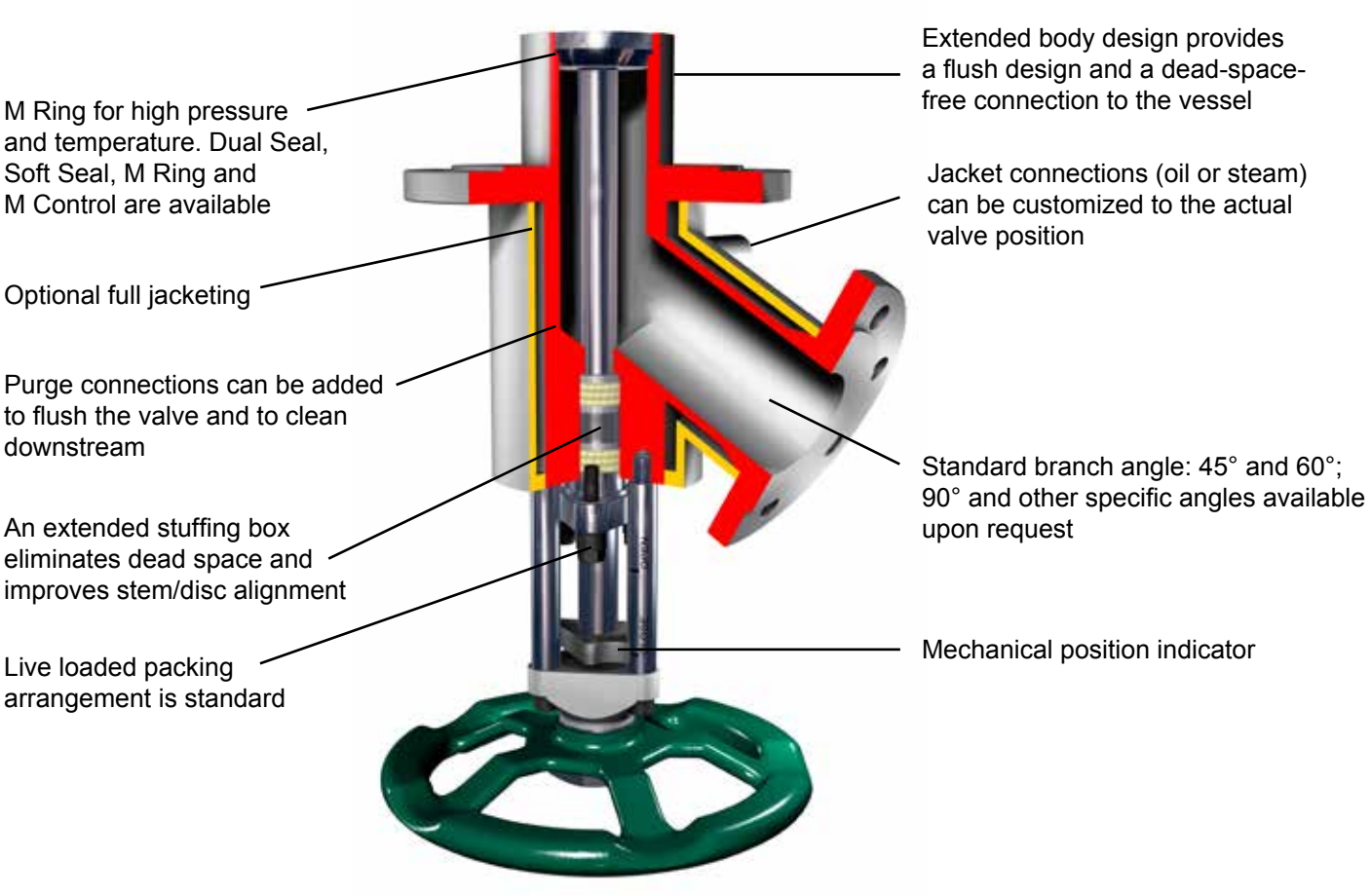
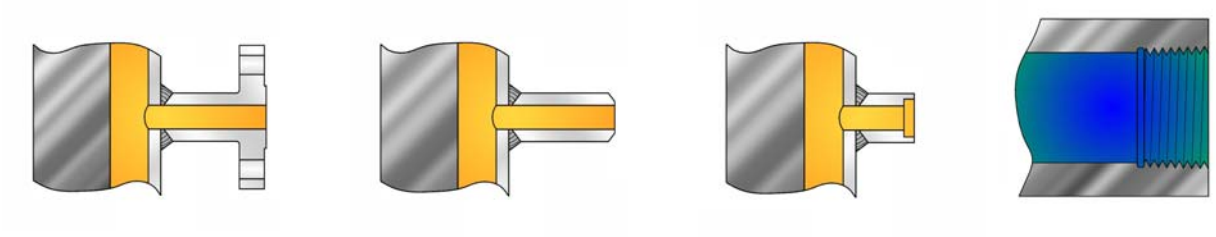



**Fig. 042D**

## JACKET CONNECTIONS



Flanges
ANSI,DIN,JIS

Butt Weld

Socket Weld

Threaded connections
NPT & BSP

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.

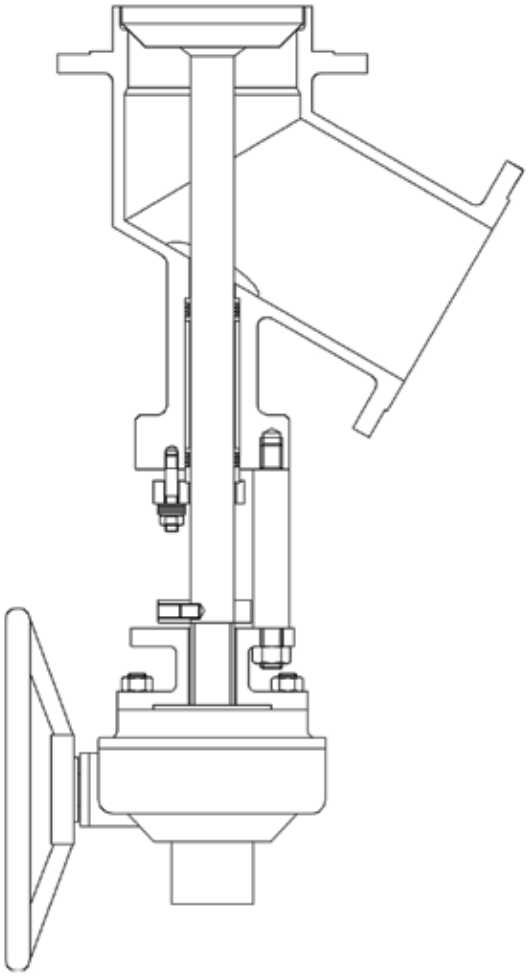


**Fig. 040**

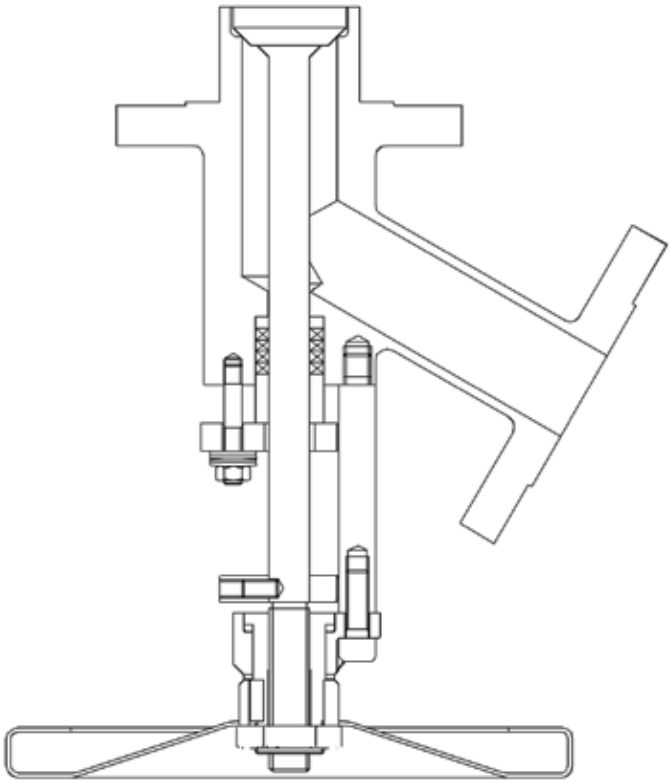
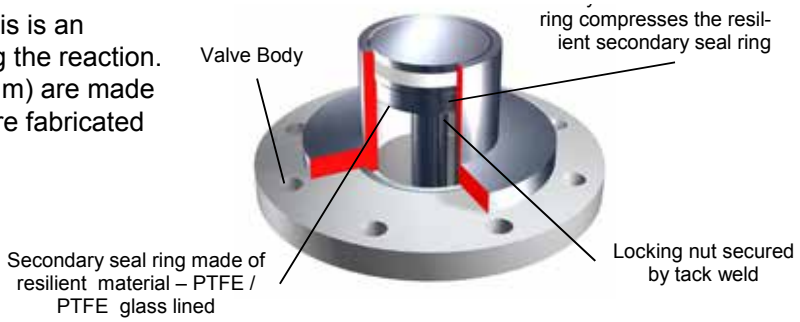
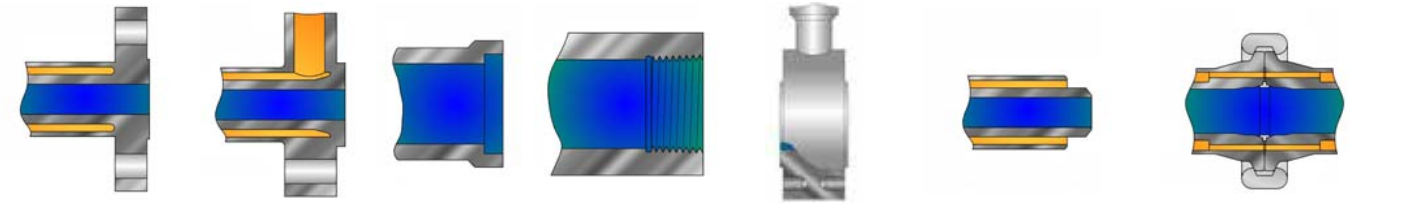


**Fig. 042**

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



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

## 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

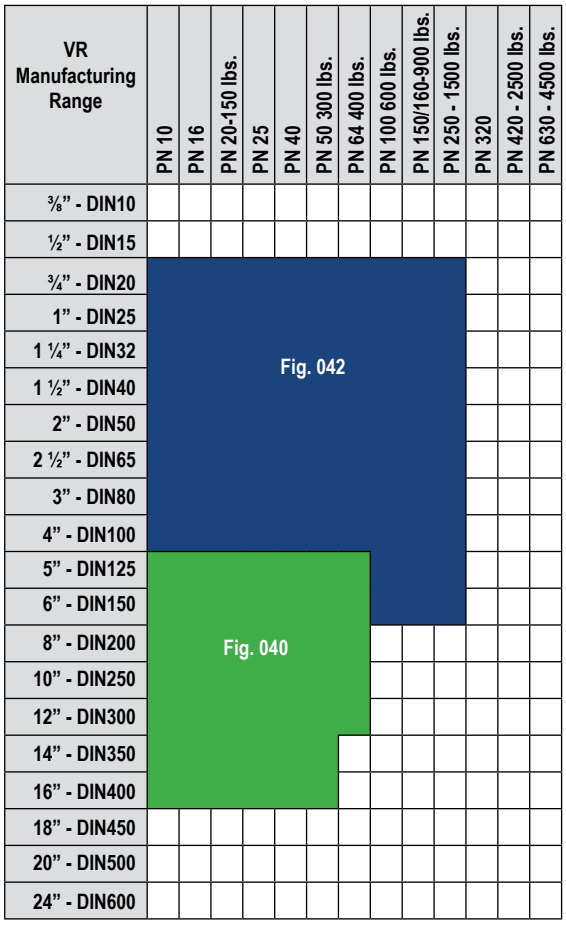
## SURFACE FINISH

- 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

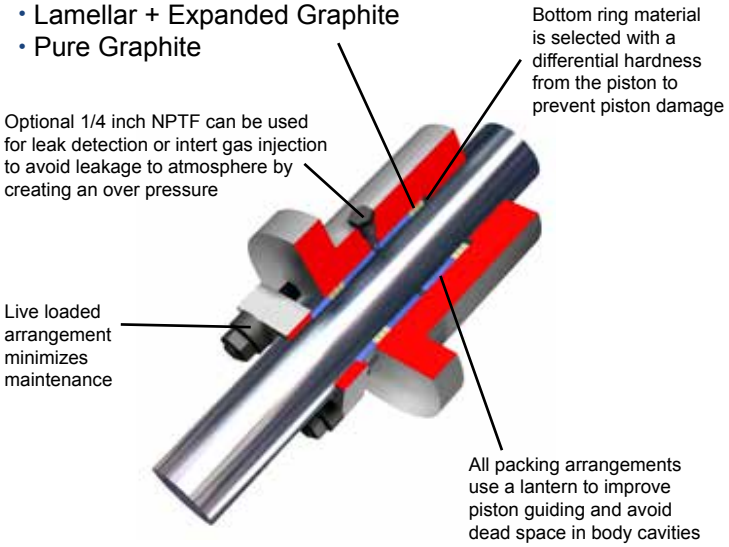
- ISO 9001 compliant
- PED / ATEX / CE marking
- TUV / HPO / TA Luft
- Standard testing procedures
- CU TR 010
- CU TR 032

## RANGE DEFINITION

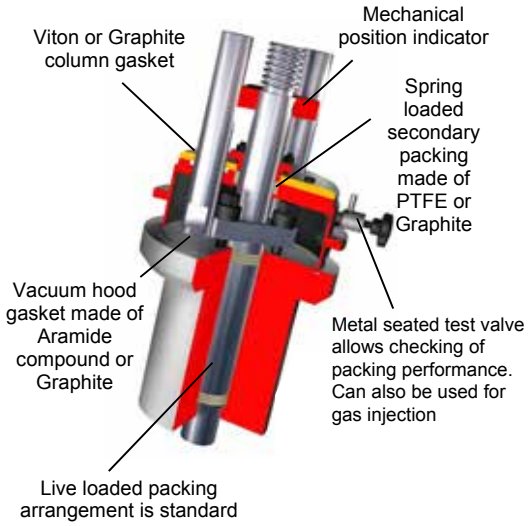


Typical Packing Materials:

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




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

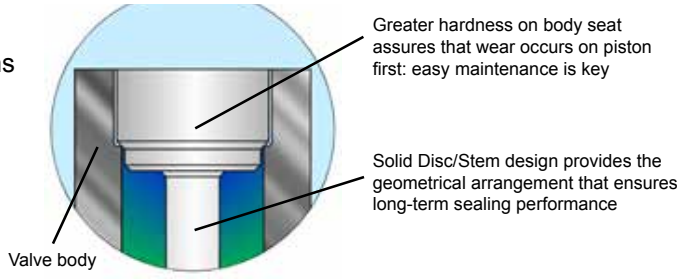
**V P 4JS B -**

| | |
|---|---|
| **V** | Vessel Reactor Valve |
| **P** | Piston |
| **D** | Disc |
| **R** | Rising Disc |
| **A** | Accessories |
| **4** | 45° Branch Angle |
| **6** | 60° Branch Angle |
| **9** | 90° Branch Angle |
| **S** | Straight |
| **$** | Special |
| **S** | Soft Sealed |
| **M** | M Seal |
| **C** | M Control |
| **D** | Dual Seal |
| **R** | M Ring Seal |
| **B** | Extended Body |
| **P** | Extended Plunger |
| **D** | Dismountable Seat |
| **$** | Special |
| **J** | Jacketed |

## 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.

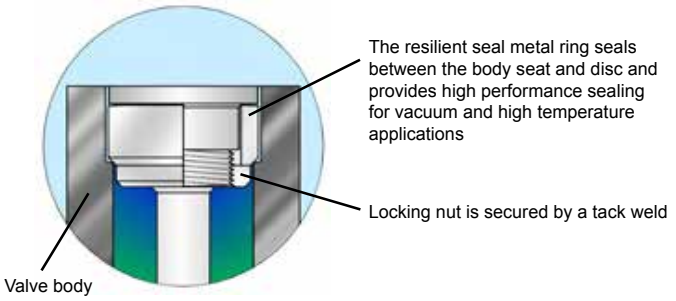
- **Temperature:** Min.: -200°C / -330°F
  Max.: 815°C / 1500°F
- **Pressure:** 630 bar / 9000 PSIG




## 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.

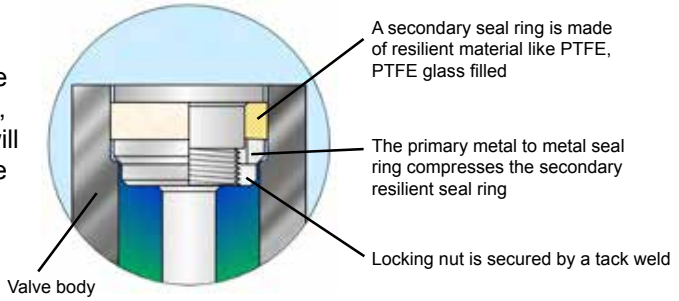
- **Temperature:** Min.: -200°C / -330°F
  Max.: 450°C / 840°F
- **Pressure:** 250 bar / 3550 PSIG and full vacuum




## 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.

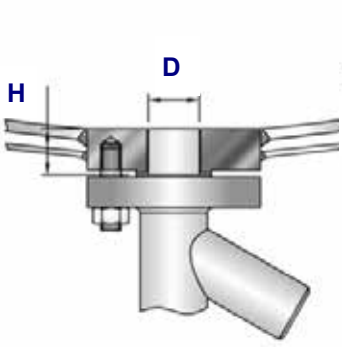
- **Temperature:** Min.: -50°C / -60°F
  Max.: 200°C / 450°F
- **Pressure:** 250 bar / 3550 PSIG and full vacuum



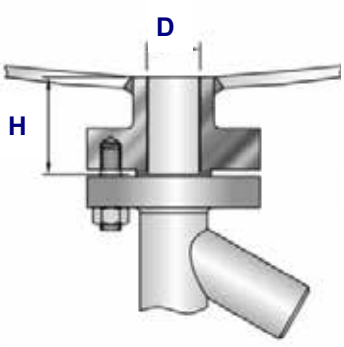

## VESSEL CONNECTIONS

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.

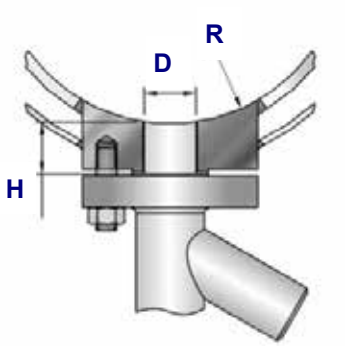
Vessel Pad




Vessel Nozzle




Pipe Assembly Pad




Custom Vessel Pad