

DIVERTER VALVES

DD Series

DISC DIVERTER VALVES



 *Strahman*
PROCESS VALVES

STRAHMAN DISC TYPE DIVERTER VALVES

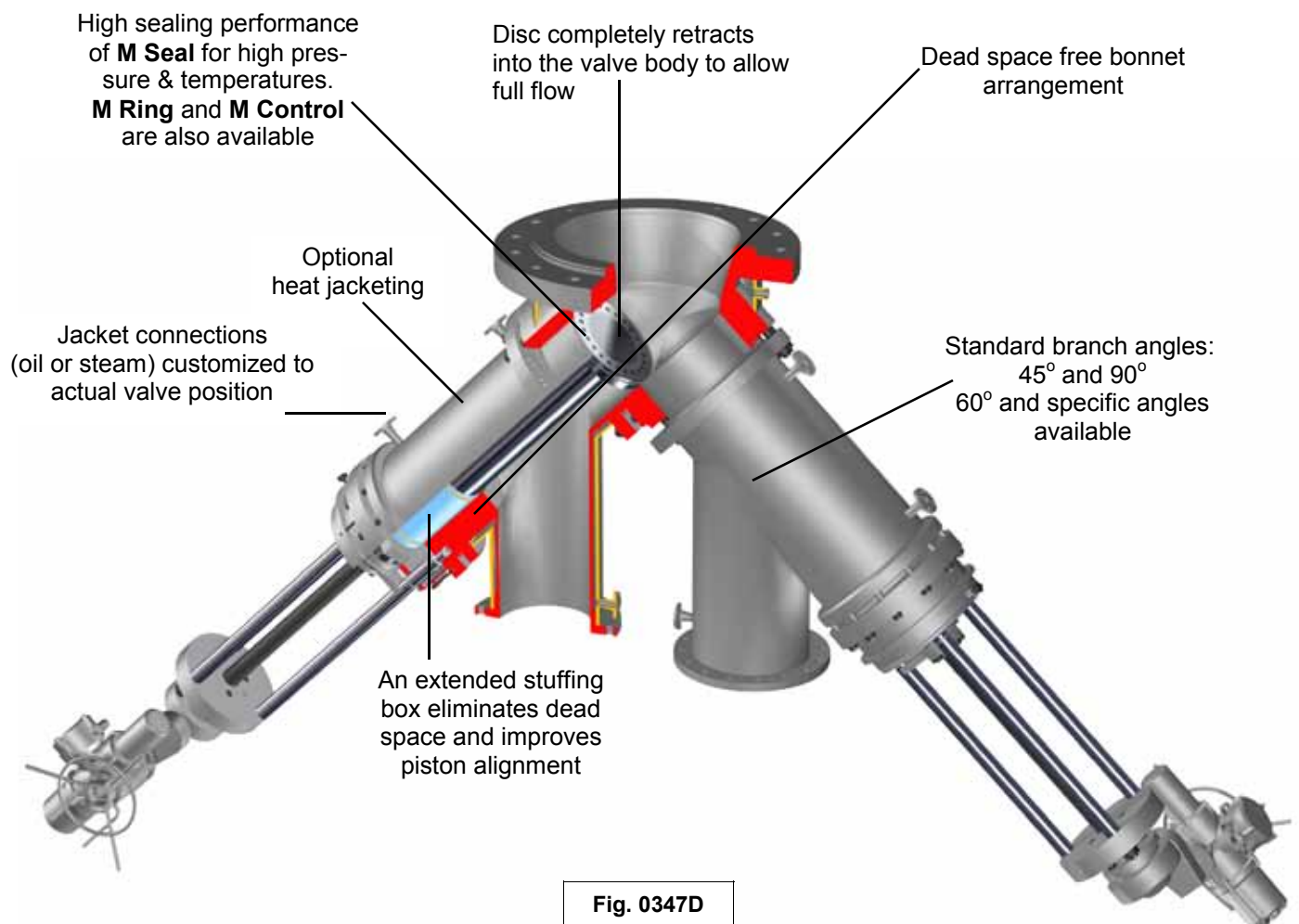
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Disc Diverter Valves

Strahman's disc type diverter valve is designed to divert one main flow into two separate flows. These valves are designed to minimize retention areas. They are often used as reactor isolation valves in polymer processes. Equipped with the vacuum package they are ideal for full vacuum applications in combination with high temperatures. The valves are bi-directional.

Upon opening, the discs retract completely into the valve body. This provides an unrestricted full flow. In combination with our maximized port sizes this design offers maximum flow capacity.

Strahman disc diverter valves are available in a choice of options including materials of construction, seat arrangements and actuators. Other features include full jacketing, vacuum package and a wide array of body arrangements.



BODY ARRANGEMENTS

Strahman **Disc Diverter Valves** use two basic designs:

- Figure **346** is used for small sizes or high pressure applications. Valves have a rising stem design.
- Figure **347** is used for large size valves or low pressure applications. These valves use a non-rising stem design.

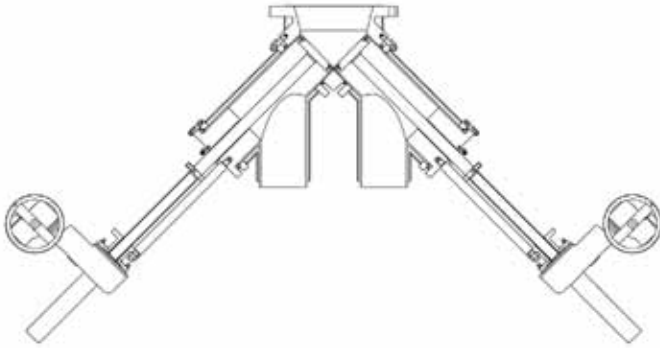


Fig. 346M

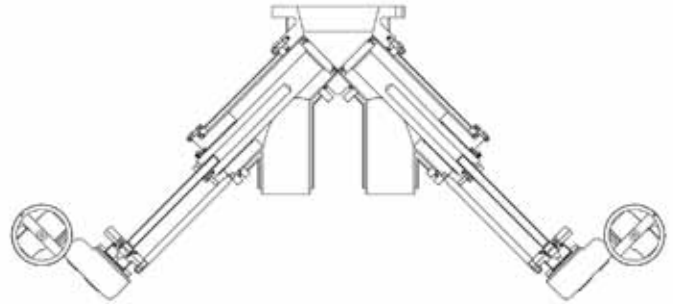


Fig. 347M

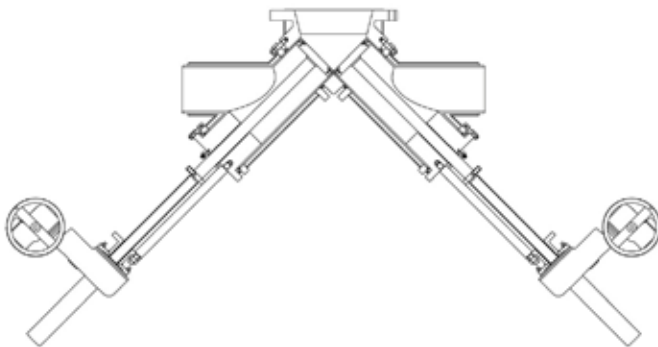


Fig. 346T

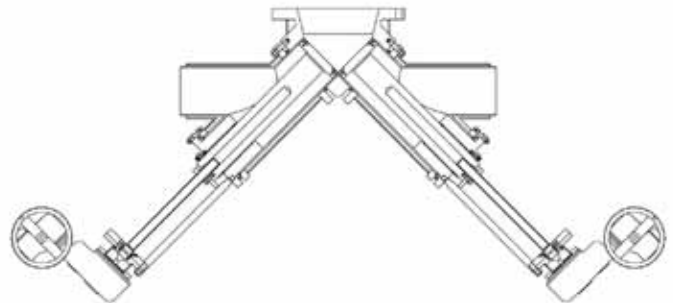


Fig. 347T

TEMPERATURE PROBE IN THE DISC

A bottom valve is located in the middle of your process. For this reason an optional temperature probe installed in the disc will provide you with temperature information without the need of extra nozzles or reactor modifications.

Valve / Disc Assembly



Single or double PT100
temperature probe.
Explosion-proof or standard.
Temperature range:
-50° C / 400° C
-60° F / 750° F

RANGE DEFINITION

| DD 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 | | | | | | | | | | | | | |

Fig. 346

Fig. 347

STEM LOCKING DEVICE

When safety regulations require an additional locking device to keep a valve closed, Strahman offers two different arrangements.

Arrangement A
A special half pipe blocks the stem within the top works and prevents valve from stroking



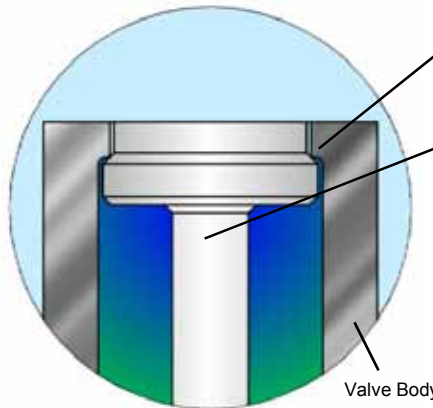
Arrangement B
Lockable handwheel



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.



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

One piece piston design minimizes dead areas

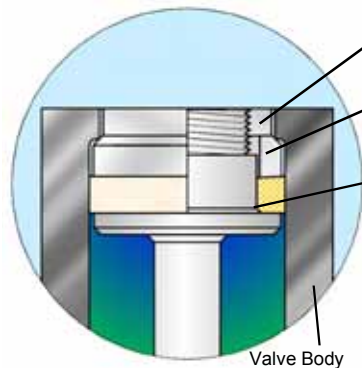
Temperature

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

Pressure

Max: 630 bar / 9000 psig

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.



Locking nut is secured by a tack

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

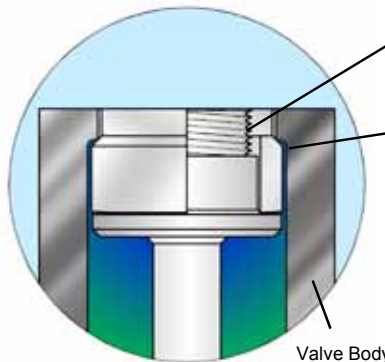
Temperature

Min: -50° C / -60° F
Max: 200° C / 450° F

Pressure

Max: 250 bar / 3550 psig
& full vacuum

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 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 / 840° F

Pressure

Max: 250 bar / 3550 psig
& full vacuum

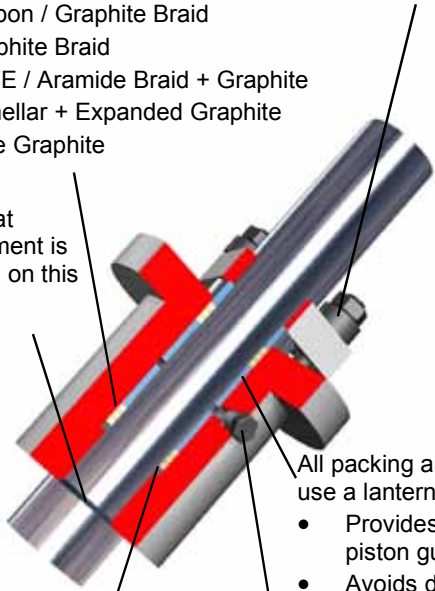
PACKING DEFINITION

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

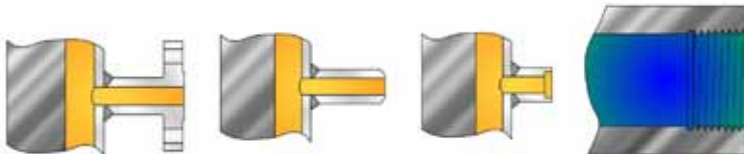
Bottom ring material is selected with a differential hardness from the piston to prevent piston damage

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

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

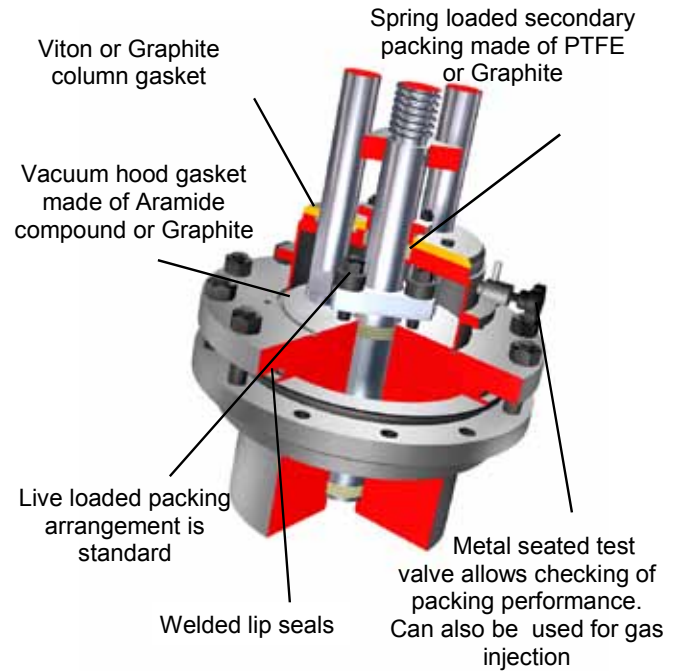
Butt Weld

Socket Weld,
NPI

Threaded
connections
NPT & BSP

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

Spring loaded secondary
packing made of PTFE
or Graphite

Vacuum hood gasket
made of Aramide
compound or Graphite

Live loaded packing
arrangement is
standard

Welded lip seals

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

Valve Coding System

| | D | P | S | 2 | R | J |
|--|---|---|---|---|---|---|
| D Diverter Valve | | | | | | |
| P Piston D Disc A Accessories | | | | | | |
| S Straight T T Design Y Y Design \$ Special | | | | | | |
| 2 2 Valves 3 3 Valves 4 4 Valves 6 6 Valves \$ Special | | | | | | |
| M M Seal C M Control D Dual Seal R M Ring Seal | | | | | | |
| J Jacketed - Non-Jacketed | | | | | | |

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
- TUV / HPO / TA Luft
- PED / ATEX / CE marking
- Standard testing procedures

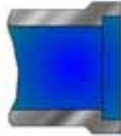
LINE & BRANCH CONNECTIONS



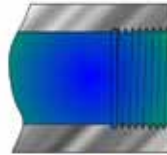
Flanges
ANSI, DIN, JIS



Heated
Flanges



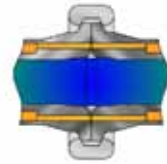
Socket
Weld



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

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 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 down stream 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



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