

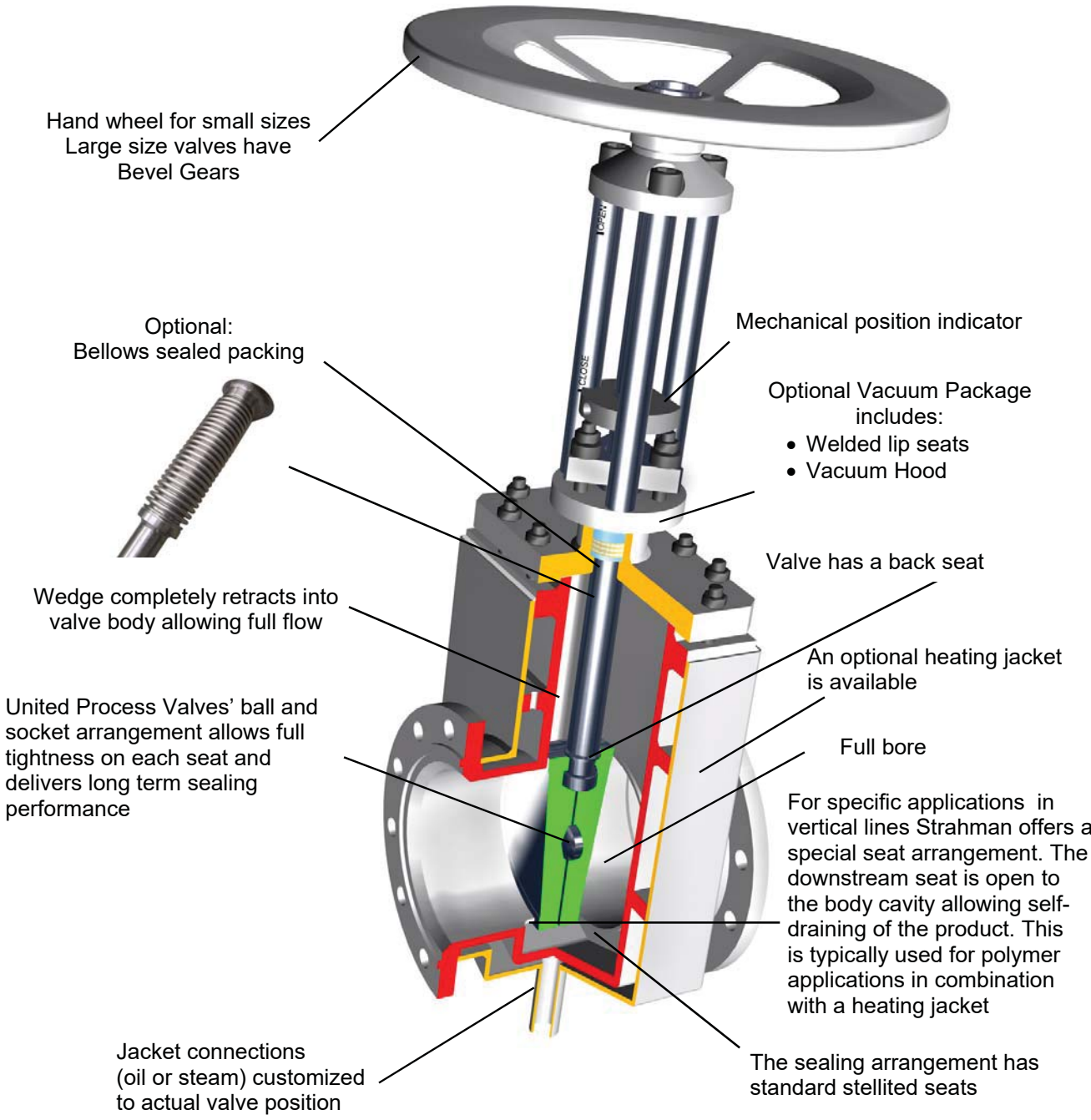
WEDGE & SLAB GATE VALVES



# WEDGE GATE AND SLAB GATE VALVES FOR SPECIAL APPLICATIONS

Code: **GW2M**

## Wedge Gate Valves



**Fig. 060 / 065D**

United Process Valves' designs and manufactures gate valves for special applications. They include specific applications where large diameters, jacketing or special materials are necessary. Most of United Process Valves' gate valves are customized to meet specific process requirements. They are well suited as isolation valves for process lines in chemical and petrochemical applications. The safety of process equipment often depends on the reliability of these "key equipment" valves. The main features include tight shut-off, full bore design, availability of metal or resilient sealing arrangements and the choice between wedge or parallel seated designs. Jacketed wedge gate valves are mainly used in the polymer industry. Bellow-sealed wedge gate valves with welded lip seals are suitable for toxic and lethal products. Slab gate valves are recommended for isolation of ethylene furnaces where heavy feedstocks are cracked.

## Wafer type Slab Gate Valve

Code: **GSD**

Slab Gate Valve with Dismountable Sleeve

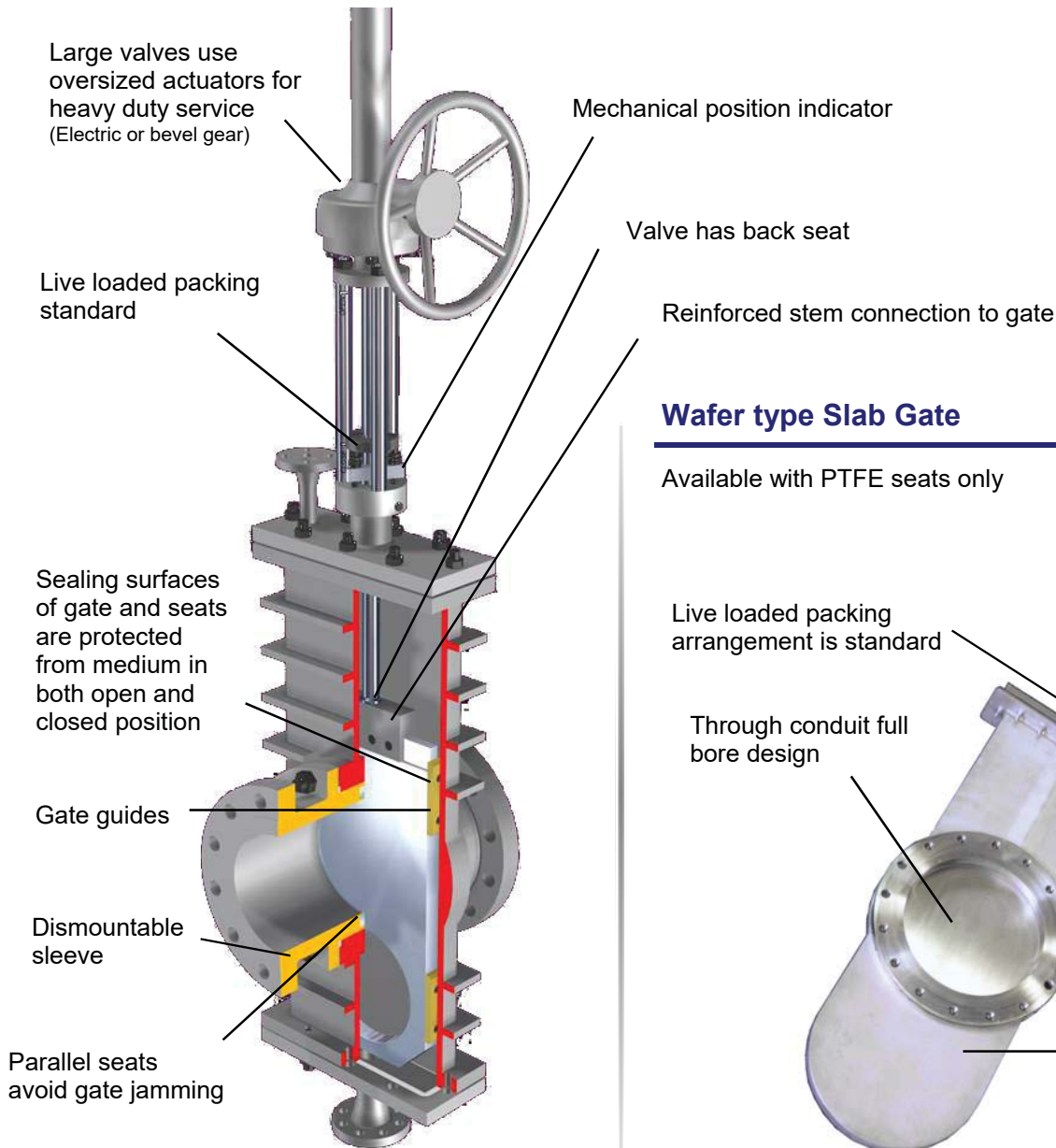


Fig. 074

## Wafer type Slab Gate

Code: **GSD**

Available with PTFE seats only

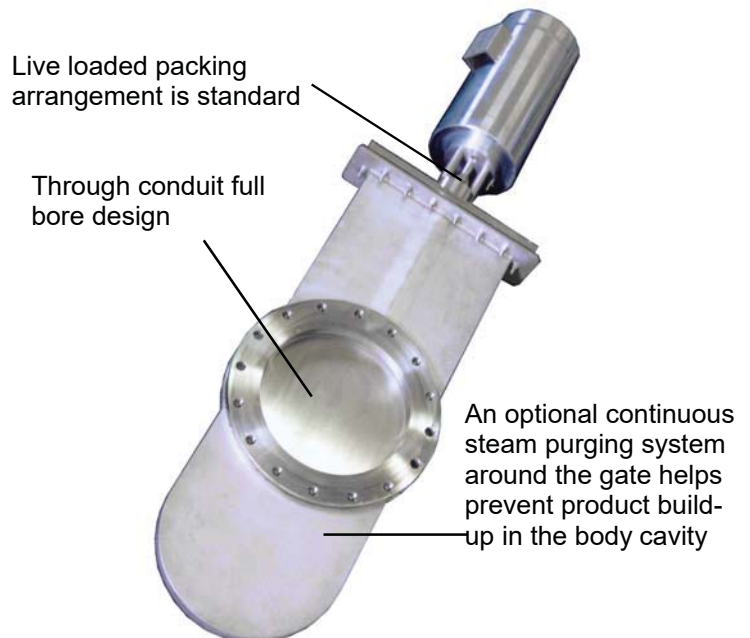
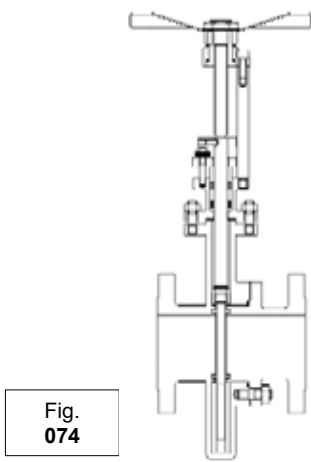
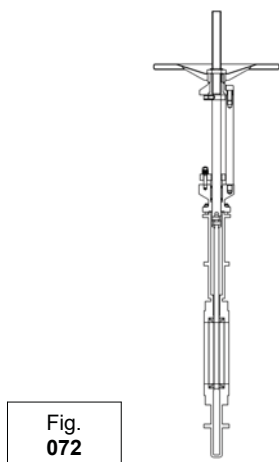
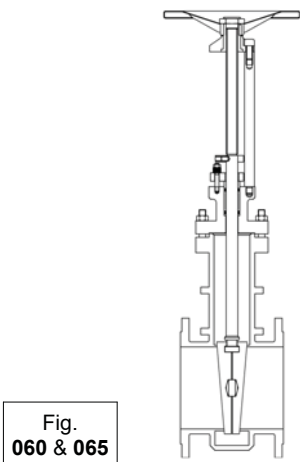


Fig. 072

# BODY ARRANGEMENTS

United Process Valves Gate valves have three different configurations:

- Fig. 060 or 065 is for Wedge gate valves
- Fig. 072 is for Wafer type slab gate valves
- Fig. 074 is for Slab gate valves with dismountable seats



## RANGE DEFINITION

GW Manufacturing Range	PN												
	10	16	20-150 lbs.	25	40	50 300 lbs.	64 400 lbs.	100 600 lbs.	150/160-900 lb	250 -1500 lb	320	420—2500 lb	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			Fig. 060 & 065										
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													

GS Manufacturing Range	PN												
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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. 060 & 065

Fig. 072 & 074

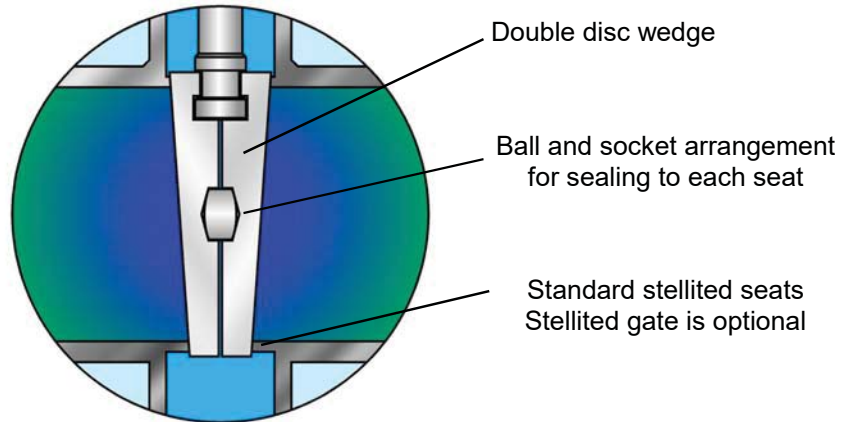
Fig. 074 Only

# SEALING SYSTEMS

United Process Valves Gate Valve sealing systems utilize different designs for wedge and slab valves. The following drawings illustrate the specific differences.

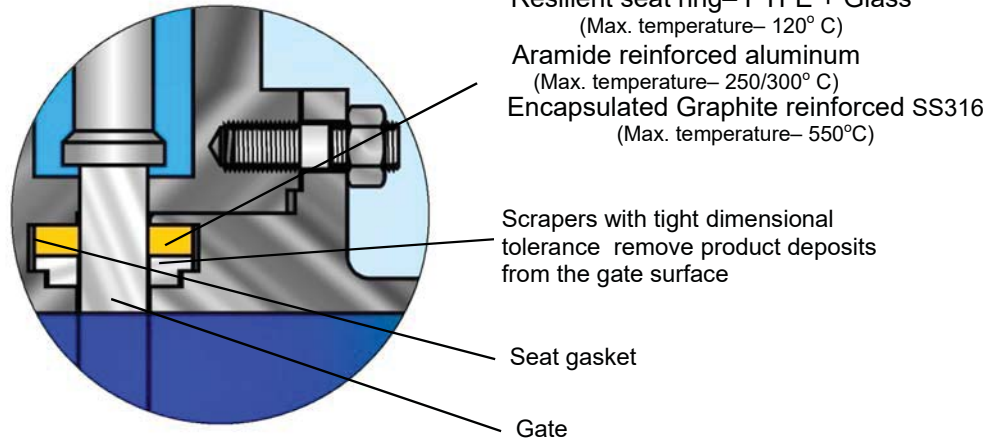
## Wedge

- Metal to Metal Gate to body seat sealing
- Stellite coating standard on body seat
- Bi-directional valve



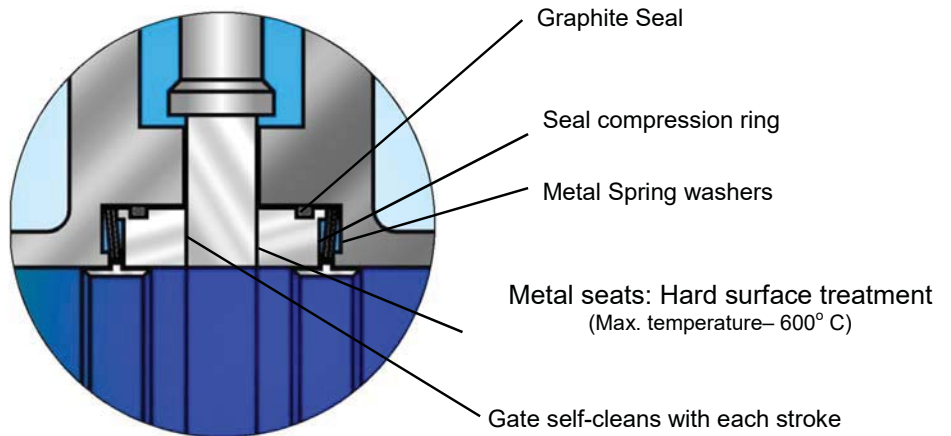
## Resilient Seats with Scraper Ring

- Metal to resilient material Gate to seat sealing
- Bi-directional valve
- Replaceable seats



## Resilient Seats with Scraper Ring

- Metal to resilient material Gate to seat sealing
- Bi-directional valve
- Replaceable seats



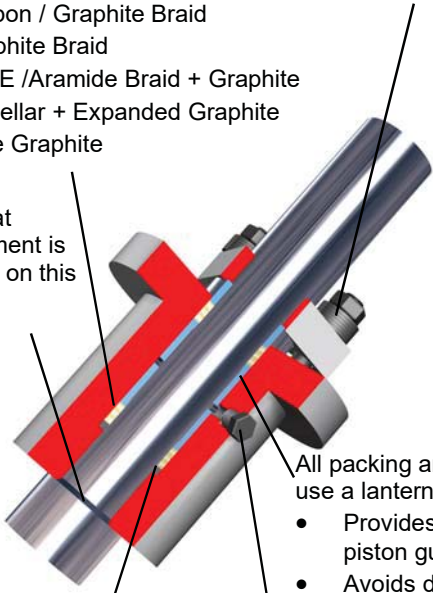
## PACKING DEFINITION

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

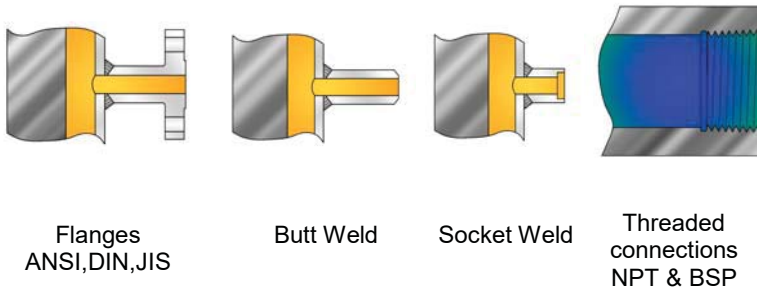
Bottom ring material is selected with a differential hardness from the piston to prevent piston damage

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

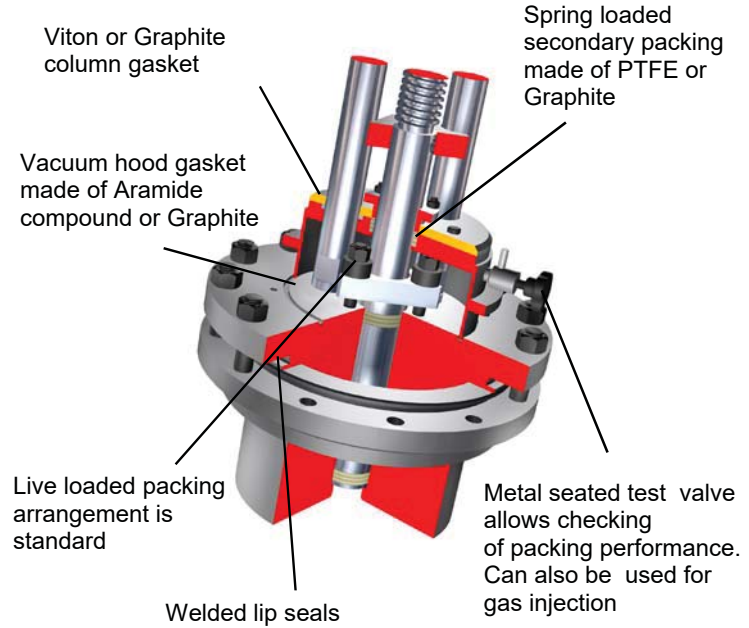
- PTFE
- Aramide / Nitrile
- Carbon / Aramide
- Laminated Graphite
- Laminated Graphite / 316
- Welded Lips

## JACKET CONNECTIONS



## 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.



Valve Coding System	G	W	2	\$	W	J
G Gate Valve						
W Wedge S Slab A Accessories						
2 Double Disc S Dismountable Sleeve D Dismountable Seat \$ Special						
S Soft Seated M Metal to Metal \$ Special						
F Flanged W Butt Weld A Wafer O Oversized Flange G Graylock \$ Special						
J Jacketed - Non-Jacketed						

NOTE: Some combinations may not be compatible

# 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 finish of 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

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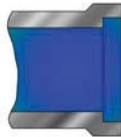
## LINE & BRANCH CONNECTIONS



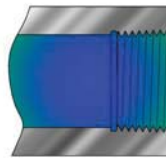
Flanges  
ANSI, DIN, JIS



Heated  
Flanges



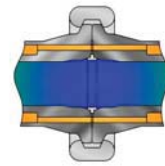
Socket  
Weld



Threaded  
connections  
NPT & BSP



Butt  
Weld



Fast Bolting Union  
Graylock Securamax

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## ACTUATION OPTIONS



Hand Wheel



Bevel Gear



Electric Actuator



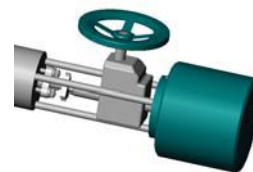
Air Motor



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 United Process Valves products include:

#### **PISTON TYPE SAMPLING VALVES**

Strahman United Process Valves 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.

#### **PISTON TYPE DRAIN VALVES**

Strahman United Process Valves 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.

#### **PISTON & DISC TYPE IN-LINE VALVES**

Strahman 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**

Strahman 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 service or with slurries, polymers, and high viscosity fluids that tend to solidify at room temperature.

#### **SINGLE & DOUBLE DISC SLAB GATE VALVES**

Strahman United Process Valves Single & Double Disc Slab Gate Valves are specifically designed for use in transfer line and decoking valves for ethylene cracking units and isolation applications in FCCU (fluid catalytic cracking unit) and DCU (delayed coker unit) plants. The safety and continuous production of process plants often depend on the reliability of these "key-equipment" valves.

#### **LINE BLINDS**

Strahman United Process Valves 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 United Process Valves representative  
for further details or

visit our website : [www.strahman-unityprocessvalves.com](http://www.strahman-unityprocessvalves.com)



Established 1986

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ISO 9001 Certified

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