HANCOCK

Direct contact, metal-to-metal seating, make the gate valve ideal for most shut-off applications. Class 800 ANSI.

Features

- Two inch and smaller valves are available with threaded or socket weld ends as standard.
- Made from one piece, die-forged bodies.
- All internal surfaces are accurately machined to provide maximum performance.
- Renewable seat rings are made from hardened stainless steel, faced with Stellite.
- The wedge is forged, hardened, ground, and lapped to ensure leak free sealing.
- Fully guided wedge, precision machined body channels, for accurate, repeatable seating alignment.
- Graphite packing, complete with braided graphite filament yarn anti-extrusion rings, is standard.
- Standard body and bonnet materials are carbon steel (ASME SA105), alloy steel (ASME SA182 Gr. F11) and stainless steel (ASME SA182 Gr. F316) Trim for steel valves is 13% chrome stainless steel. 316 stainless steel valves have 316 trim.
- Code compliance with ASME/ANSI B16.34 and the ASME Boiler and Pressure Vessel Code, Section I.

Applications

Designed for use in high temperature steam and water, this multipurpose gate valve can be used in a wide variety of general purpose applications including vents, drains and isolation of compressors, condensers, heaters, pumps, water lines, heat exchangers, bypass lines, flash tanks, control valves, etc.

Type

Type 950, Standard Port

Sizes

1/2" to 2": Class 800

tyco Flow Control

Features

Wear/Thrust Washers, reduce friction between moving parts.

Double Acme Stem Thread, for maximum strength, smooth, quick operation.

Gland/Gland Flange, rugged, forged steel, gland flange and separate gland are self aligning for straight line thrust against packing. No special tools required for packing adjustment.

Integral Bonnet and Yoke, one piece forging is made from ASME Boiler and Pressure Vessel CODE Section I listed materials.

High Strength Bonnet Bolting, extra heavy hex head cap screws use standard tools for easy maintenance.

Body-Bonnet Joint, metal-to-metal surface contact for automatic gasket compression control and elimination of flange overstressing.

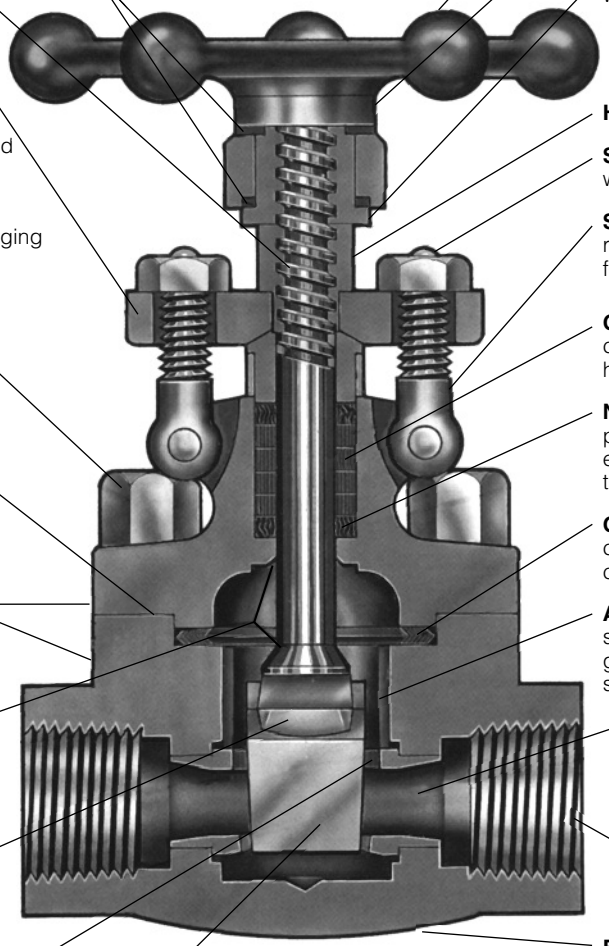
Forged Body and Bonnet, in full accordance with ASME Boiler Pressure Vessel Code, Section I design and material requirements.

Fixed Back Seat, for positive, leakproof, packing chamber isolation. Fully machined for accurate seating.

Rugged Stem-Wedge Connection, one piece steam and Tee slot design is the strongest in the industry.

Renewable Hard Faced Seats, Stellite or equal, are standard with all Hancock gate valves.

Husky, Hardened Wedge, precision guided in the body, eliminates seat surface contact until the fully closed position is reached, preventing early seat failure Wedge lifts completely clear of the flow passage for maximum flow. Stellite wedges available spaces.



Large Spoked Handwheel, for ease of operation and locking.

Built In Safety Against Overtorquing, key in handwheel shears before stem can break.

Stainless Steel Thread Bushing, prevents wear and corrosion.

Heavy Duty Yoke, takes high actuation loads.

Standard Hex Gland Nuts, can be adjusted with standard tools.

Swing Bolts Hardened Pins, for ease of repacking, pins are retained on both ends for maximum strength and safety.

Graphite Packing Rings, with built in corrosion inhibitor for leak tight sealing at high and low pressures and temperatures.

Non-extrusion Rings, at top and bottom of packing to prevent packing migration and ensure long service life in high pressure and temperature service.

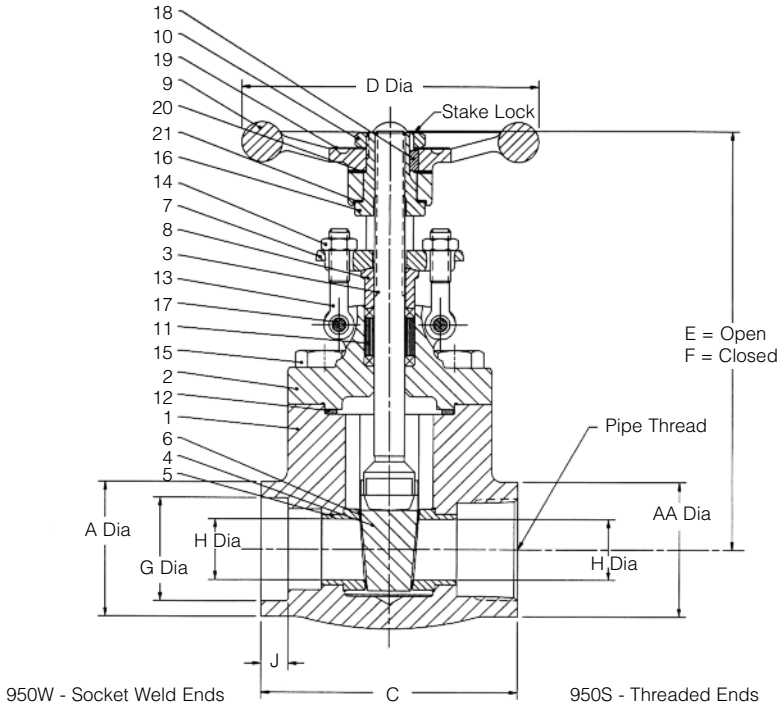
Graphite Filled Stainless Gasket, with controlled compression for maximum corrosion resistance and zero leakage.

Accurately Machined Guides, over the full stroke, keep wedge from twisting, binding or galling, prevents seat wear and prolongs service life.

Large Ports and Seats, for high flow and low pressure drop. Wedge lifts completely clear of the flow passage for maximum seat surface protection.

End Connections, in accordance with ASME/ANSI B16.34 and are available in threaded and socket weld configurations.

Full Code Compliance, all Hancock 950 series valves comply with ASME/ANSI B16.34.



Materials of Construction

No.	Part	Material
1	Body	ASME SA105 Carbon Steel
2	Bonnet	ASME SA105 Carbon Steel
3	Stem	410 Stainless Steel
4	Wedge	420 Stainless Steel
4A	Wedge Facing	Stellite or Equivalent (Optional)
5	Seat	410 Stainless Steel
6	Seat Facing	Stellite or Equivalent
7	Packing Gland Flange	Carbon Steel (Phosphate)
8	Packing Gland	410 Stainless Steel
9	Handwheel	Ductile Iron (Phosphate)
10	Thread Bushing Nut	Carbon Steel (Phosphate)
11	Packing Set	Compressed Graphite
12	Bonnet Gasket	304 SS (Graphite) Filled
13	Packing Gland Bolt	410 Stainless Steel
14	Packing Gland Nut	Carbon Steel - Cadmium Plated
15	Bonnet Bolt	B7 Alloy Steel (Phosphate)
16	Thread Bushing	410 Stainless Steel
17	Pin	410 Stainless Steel
18	Key	Carbon Steel (Phosphate)
19	Marker Plate	304 Stainless Steel
20	Handwheel Washer	430 Stainless Steel (Nitriding)
21	Thread Bushing Washer	430 Stainless Steel (Nitriding)

Standard Port

Size	A	AA	C	D	E	F	G	H	J	Wt.	C_V
1/2"	15/16	15/16	35/16	33/4	59/32	427/32	0.855	3/8	3/8	5	3.7
3/4"	11/2	11/2	39/16	33/4	55/8	51/32	1.065	1/2	1/2	5.25	9.2
1"	17/8	17/8	41/2	41/4	75/32	65/16	1.330	3/4	1/2	8.25	24.0
11/2"	21/2	21/2	43/4	51/2	9	725/32	1.915	11/8	1/2	15	74.0
2"	31/8	31/8	51/8	6	107/32	85/8	2.406	17/16	5/8	19	125.0

Body, Bonnet and Trim Material Combinations

Variation	Standard CS Body & Bonnet 13% Cr. Trim	11/4% Chrome Alloy Steel F11 (11/4% Cr., 1/2% Mo) 13% Cr. Trim	Stainless Steel F316 with F316 with H. F.	
Suffix No.	None	-445	316 Trim -535	Seats & Wedge -1449
Valve Types Available	950S-W	950S-W	950S-W	950S-W
Body	Carbon Steel SA105	SA182 Gr. F11	SA182 Gr. F316	SA182 Gr. F316
Bonnet	Carbon Steel SA105	SA182 Gr. F11	SA182 Gr. F316	SA182 Gr. F316
Seat	410 SS Hard Faced with Stellite[1]	410 SS Hard Faced with Stellite[1]	316 SS	316 SS Hard Faced with Stellite[1]
Wedge	420 SS	420 SS	316 SS	316 SS Hard Faced with Stellite[1]
Stem	410 SS	410 SS	316 SS	316 SS
Packing Gland	410 SS	410 SS	316 SS	316SS
Gasket	304 SS Spiral Wound GRAFOIL® Filled	304 SS Spiral Wound GRAFOIL® Filled	316 SS Spiral Wound GRAFOIL® Filled	316 SS Spiral Wound GRAFOIL® Filled
Packing	Compressed Graphite - Lubricated - Corrosion Inhibited			

Note

1. Or equal.

Gate Valves, Standard Port

A straight through, unobstructed flow passage, combined with metal-to-metal seating, makes the 950 gate valves the ideal choice for applications where high velocity or highly viscous fluids must be handled with minimum flow loss. Excess pressure drop, caused by abrupt changes in flow path direction, changes in cross section, friction or turbulence are virtually eliminated. Fluids containing entrained solids pass directly through the valve, in a straight line, at the lowest possible velocity, without impinging on the internal flow passages or seating surfaces. This prevents seat and/or body erosion damage. Cavitation damage, caused by high velocity liquid flow, is almost nonexistent in this valve type.

The wedge gate valve's top entry design permits easy access to internal components for service or parts replacement, without removing the valve from the line. Metal-to-metal seating gives this valve type the ability to withstand high temperatures. Hardened or hard faced seats make it possible for gate valves to hold up well in highly abrasive environments. A wide variety of body and trim materials permits its use in corrosive applications.

Selection

Gate valves can be used in a wide variety of services. However, they are especially well suited for applications requiring:

- High flow capacity at high pressure and temperature
- The handling of high velocity fluids having entrained particulate matter
- The handling of high pressure and/or temperature fluids having large entrained solids
- Rapid flow of viscous fluids
- Access to piping or vessels requiring "rodding," cleaning or insertion of equipment for inspection, etc.
- Rapid draining, venting or filling at low pressures, but having to maintain tight shut-off at high operating pressures and/or temperatures

When selecting gate valves, care must be taken not to use them in locations where a high concentration of solids might accumulate in the lower body cavity, such that the gate might be prevented from closing, or in throttling applications where high pressure drop or particulate matter will damage the valve.

Ordering Information

Figure Numbers

Hancock forged steel valves are available with a variety of standard and special materials, trims and operators. The diagram below is an explanation of Hancock figure numbers.

1/2" 950 W — 4 -445

Material Combination Suffix
None – A105 Body and Bonnet, 13 Cr. Trim
-445 – F11 Body and Bonnet, 13 Cr. Trim
-535 – 316 Body, Bonnet and Trim
-1449 – 316 Body, Bonnet and Trim (Trim is Hard-faced with Stellite)

Design Change Number
4

End Connection
S – Threaded End
W – Socket Weld End

Valve Type Number
950 – Gate Valve, Standard Port

Valve Size
Standard Port
1/2"
3/4"
1"
1 1/2"
2"