

HANCOCK

**Direct contact, metal-to-metal seating, make the globe valve ideal for most shut-off applications.
1/2" to 2" forged steel.**

Features

- The 5500 has a fixed, repairable seat overlaid with Stellite or equal hardfacing.
- Available with threaded or socket weld end connections as standard.
- Valves are made using one-piece, die forged bodies.
- All internal surfaces are accurately machined to provide maximum performance.
- The disc is hardened, ground, and lapped to ensure leak free sealing over the valve's full pressure/temperature range.
- A precision machined, integral backseat is standard.
- Both seats are designed for accurate, repeatable, seating alignment.
- Corrosion inhibited graphite packing and braided graphite filament anti-extrusion rings are 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 316 stainless steel valves have 316 trim.
- Also available in a variety of body and trim materials. (See page 6)
- A needle disc option is available.
- Code compliance with ASME/ANSI B16.34 and the ASME Boiler and Pressure Vessel Code, Section I.



Applications

Designed for ASME Boiler and Pressure Vessel Code, Section I applications including vents, drains, bypass systems, gauge shut-off, instrument isolation, chemical cleaning systems, control valve isolation, auxiliary steam lines, heat exchangers, or wherever reliable, leak-tight performance, under high temperature/pressure conditions, is required.

Sizes

1/2" to 2": Class 800 LTD Class

Hancock Type 5500

Globe Stop Valves

Features

Large Spoked Handwheel, for ease of operation and locking.

Stainless Steel Thread Bushing, prevents wear and corrosion.

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

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

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.

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

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

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

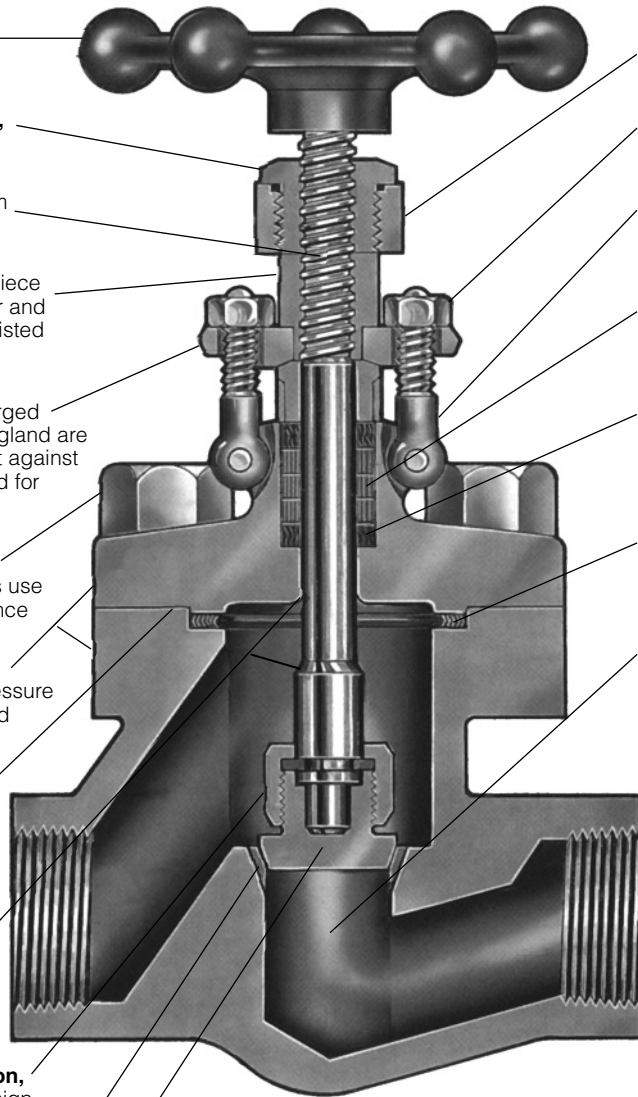
Fixed Back Seat, for positive, leakproof, packing chamber isolation. Fully machined for accurate seating.

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

Renewable, hard-faced seats, stellite or equal, are standard with all Hancock globe valves.

Hardened Disc, precision ground for accurate, leak-tight seating.

All Hancock 5500 series valves comply with ASME/ANSI B16.34.



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.

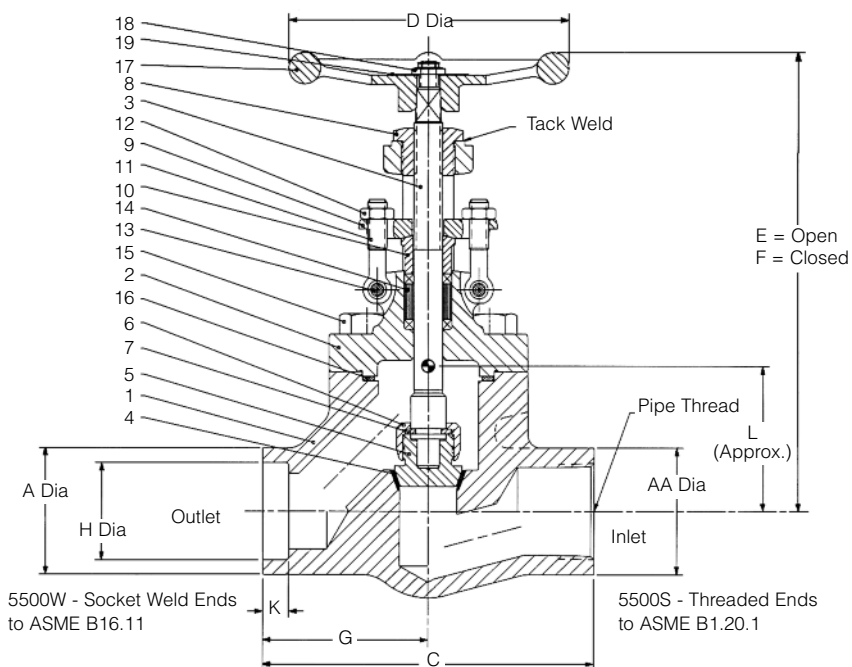
Graphite Filled Stainless Gasket, with controlled compression for maximum corrosion resistance and zero leakage.

Large Ports and Seats, for high flow and low pressure drop.

End Connections, in accordance with ASME/ANSI B16.34 , B16.11 and are available in threaded and socket weld configurations.

Hancock Type 5500

Globe Stop Valves



Materials of Construction

No.	Part	Material
1	Body	ASME SA105 Carbon Steel
2	Bonnet	ASME SA105 Carbon Steel
3	Stem	410 Stainless Steel
4	Seat Facing	Stellite or Equivalent
4A	Replaceable Seat (Type 5520)	410 Stainless Steel
5	Disc	420 Stainless Steel
6	Disc Nut	410 Stainless Steel
7	Lock Ring	410 Stainless Steel
8	Thread Bushing	410 Stainless Steel
9	Packing Gland Flange	Carbon Steel (Phosphated)
10	Packing Gland	410 Stainless Steel
11	Packing Gland Bolt	410 Stainless Steel
12	Packing Gland Nut	Carbon Steel - Cadmium Plated
13	Pin	410 Stainless Steel
14	Packing Set	Compressed Graphite
15	Bonnet Bolt	B7 Alloy Steel (Phosphated)
16	Bonnet Gasket	304 SS (Graphite) Filled
17	Handwheel	Ductile Iron (Phosphated)
16	Handwheel Nut	Carbon Steel (Phosphated)
19	Marker Plate	304 Stainless Steel

See page 5 for alternate trim materials

Hancock Type 5500

Globe Stop Valves

Standard Port

Size	A	AA	C	D	E	F	G	H	K	Wt.	C _v Values
1/2"	1 ⁵ / ₁₆	1 ⁵ / ₁₆	3 ⁵ / ₁₆	3 ¹ / ₂	5 ¹⁵ / ₁₆	5 ¹¹ / ₁₆	1 ²¹ / ₃₂	0.855	3/ ₈	5	1.4
3/4"	1 ¹ / ₂	1 ¹ / ₂	3 ⁹ / ₁₆	3 ¹ / ₂	6 ³ / ₈	6	1 ²⁵ / ₃₂	1.065	1/ ₂	5.25	3.0
1"	1 ⁷ / ₈	1 ⁷ / ₈	4 ³ / ₈	4	7 ³ / ₄	7 ¹ / ₄	2 ³ / ₁₆	1.330	1/ ₂	8.5	5.2
1 ¹ / ₂ "	2 ¹ / ₂	2 ¹ / ₂	6 ¹ / ₂	5 ¹ / ₂	9 ⁵ / ₈	8 ¹⁵ / ₁₆	3 ¹ / ₄	1.915	1/ ₂	17.5	15.0
2"	3 ¹ / ₈	3 ¹ / ₈	7	6 ¹ / ₂	11 ¹ / ₁₆	10 ³ / ₁₆	3 ¹ / ₂	2.406	5/ ₈	27	19.3

Body, Bonnet and Trim Material Combinations

Variation	Standard Int. Seat 13% Cr. Trim	1 ¹ / ₄ % Chrome Alloy Steel F11 (1 ¹ / ₄ % Cr., 1 ¹ / ₂ % Mo) 13% Cr. Trim	Stainless Steel F316 with 316 Trim	Stainless Steel F316 with H.F. Seat and Disc
Suffix No.	None	-445	-535	-1449
Valve Types Available	5500S -W	5500S -W	5500S -W	5500S-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	Hard Faced with Stellite ¹	Integral Hard Faced with Stellite ¹	316 SS	Integral Hard Faced with Stellite ¹
Disc	420 SS	420 SS	316 SS	316 SS H.F. with Stellite ¹
Stem	410 SS	410 SS	316 SS	316 SS
Packing Gland	410 SS	410 SS	316 SS	316 SS
Disc Nut	410 SS	410 SS	316 SS	316 SS
Lock Ring	410 SS	410 SS	316 SS	316 SS
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.

Positive contact, metal-to-metal seating, make the globe valve ideal for most shut-off applications. The basic design eliminates the inherent problem of "wedge sticking" common in wedge gate valves caused when high thermal transients or piping load stresses exert such force that the valve won't open. The contoured disc allows for accurate control over the initial portion of stem travel, permitting smooth, linear flow, thereby preventing mechanical and/or thermal shock to the valve, down stream piping or expensive machinery. An outstanding feature of a conventional globe valve, as opposed to a gate valve, is its ability to handle flow around the full seat diameter from the instant it starts to open. That is to say that the

high velocities, occurring during the initial opening of a conventional globe valve, are distributed evenly and simultaneously across the entire seating surface. It is this characteristic that helps protect the seating surfaces from erosion. This same characteristic is what helps to prevent cavitation and high velocity fluid from damaging the valve's downstream body walls or piping. The availability of metal-to-metal seating gives globe valves the ability to withstand high temperatures. Hardened or hard faced seats enhance the globe valve's ability to hold up in abrasive and high velocity environments. A wide variety of body and trim materials permits its use in severe and corrosive service applications.

Selection

Globe stop valves can be used in a wide variety of services and applications, however, they are especially well suited for applications requiring:

- Tight shut-off at high pressures and temperatures.
- Slow initial opening times.
- Throttling on initial start-up or shutdown.
- Rapid actuation or high speed remote operation.
- Valve operation during, or after, high thermal or piping stress transient conditions.

- Isolation, draining, venting or filling at high pressures and/or temperatures, while having to maintain tight shut-off at maximum operating conditions.
- Pressure or temperature equalizing of systems or large valves.

When selecting globe valves, utilization of a top entry design with a non-welded bonnet closure, will permit easy access to internal components for service and parts replacement, without having to remove the valve from the line. The ability to make quick repairs is especially important at start-up time, when valve damage from fabrication debris is most likely to cause expensive down time and project delays.

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" 5500 W — 2 -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

2

End Connection

- S – Threaded End
- W – Socket Weld End

Valve Type Number

5500 – Globe Valve, T-Type Integral Seat

Valve Size

- 1/2"
- 3/4"
- 1"
- 1 1/2"
- 2"