



## YARWAY HANCOCK FORGED STEEL GLOBE STOP VALVES SERIES 5500

Direct contact, metal-to-metal seating, make the globe valve ideal for most shut-off applications.



### 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 5)
- A needle disc option is available.
- Code compliance with ASME B16.34 and the ASME boiler and pressure vessel code, section I.

### GENERAL APPLICATION

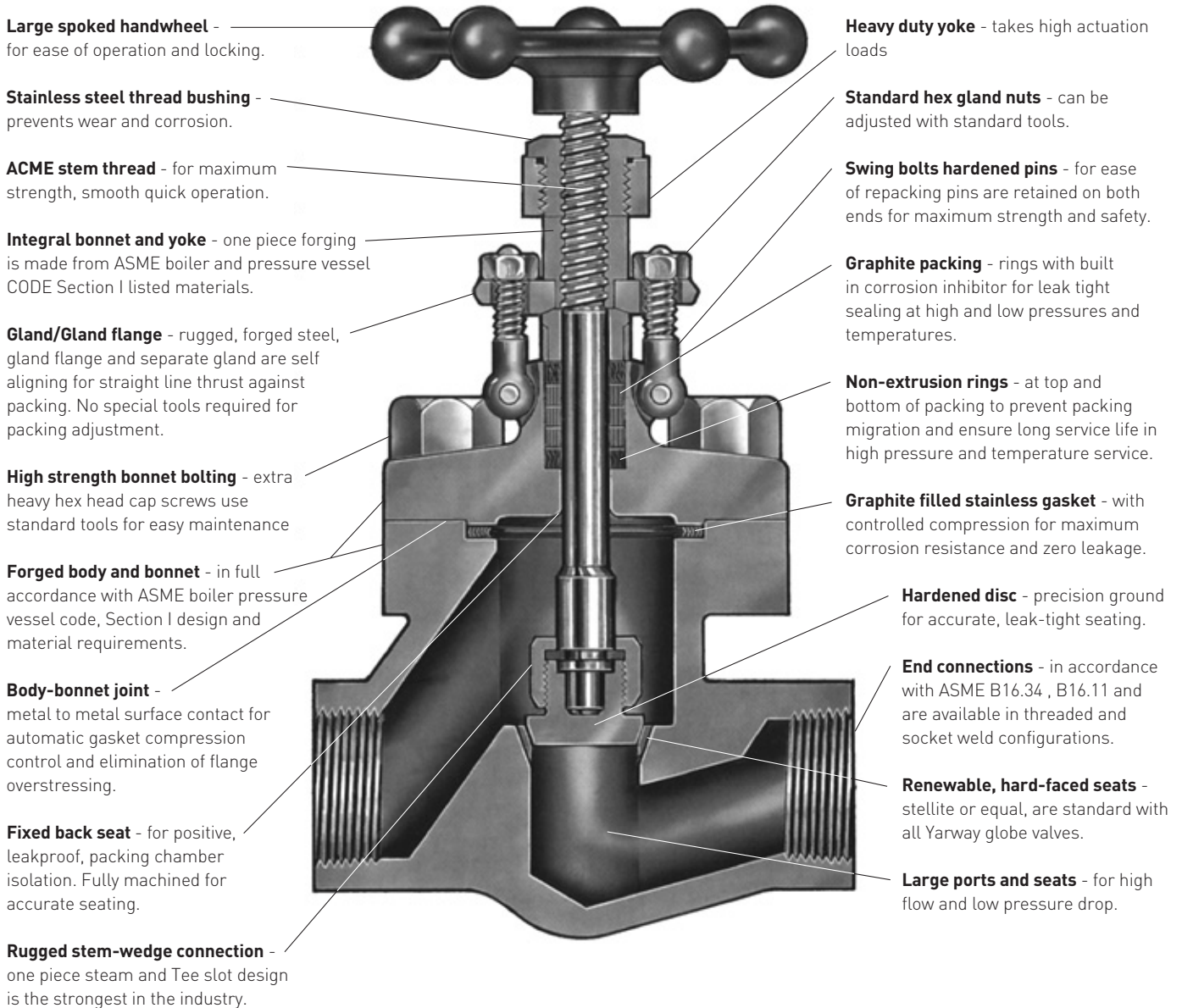
Designed for ASME boiler and pressure vessel code, section I applications including vents, drains, bypass systems, gauge shut-off, instrument isolation, chemical cleaning systems, control valve isolation, auxiliary steam lines, heat exchangers, or wherever reliable, leak-tight performance, under high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

### TECHNICAL DATA

Sizes : NPS ½ to 2  
ASME 800 LTD Class

# YARWAY HANCOCK FORGED STEEL GLOBE STOP VALVES

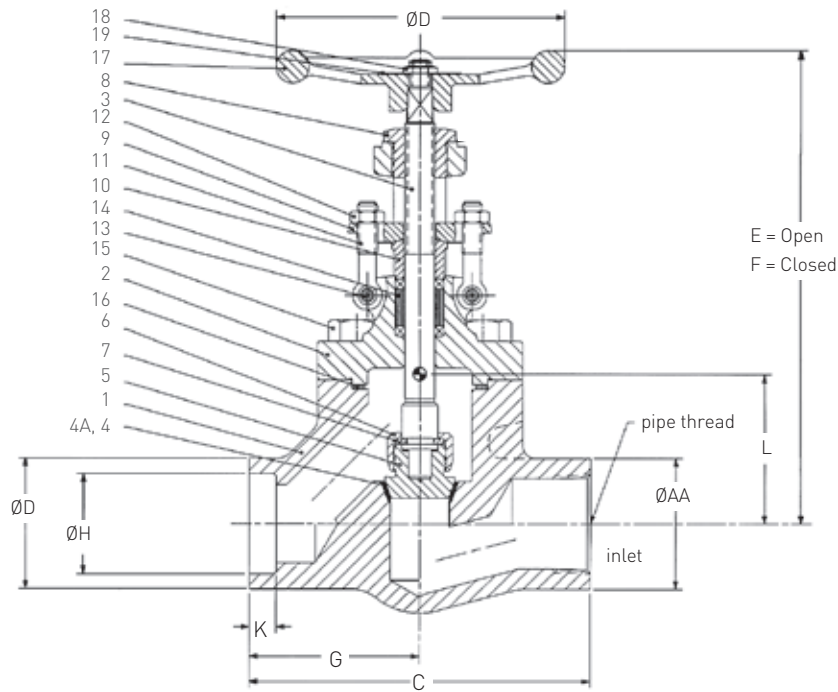
SERIES 5500



All Yarway 5500 series valves comply with ASME B16.34.

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SERIES 5500



## PARTS LIST

No.	Description	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

**NOTE:** See page 5 for alternate trim materials

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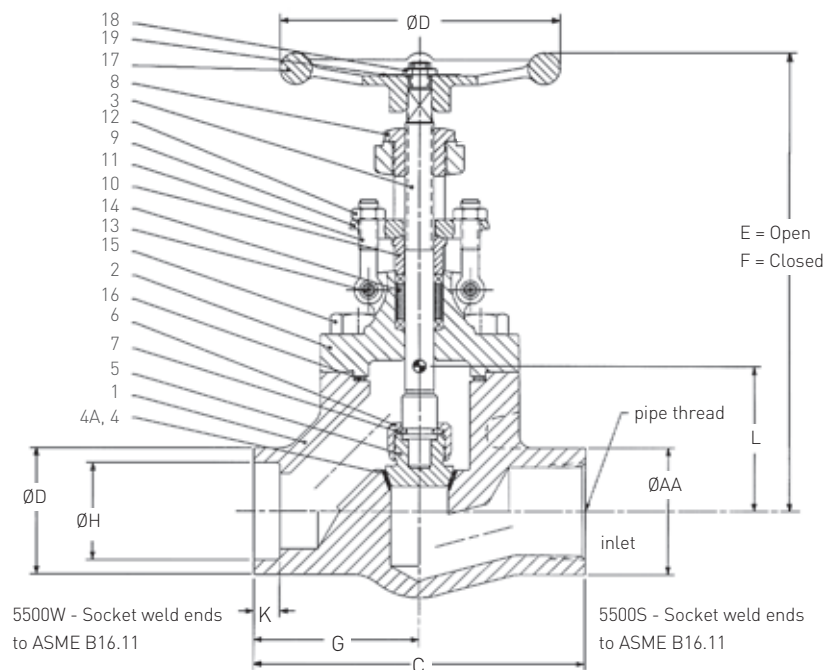
SERIES 5500

## DIMENSIONS (inches)

Size NPS	A	ØAA	C	ØD	E	F	G	ØH	K	Wt. (lbs)	C <sub>v</sub> values
1/2	1 5/16	1 5/16	3 9/16	3 1/2	5 15/16	5 11/16	1 21/32	0.855	3/8	5.00	1.00
3/4	1 1/2	1 1/2	3 7/16	3 1/2	6 3/8	6	1 29/32	1.065	1/2	5.25	2.00
1	1 7/8	1 7/8	4 3/8	4	7 3/4	7 1/4	2 9/16	1.330	1/2	8.50	4.00
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	17.50	10.40
2	3 3/8	3 3/8	7	6 1/2	11 1/4	10 3/16	3 1/2	2.406	3/8	27.00	14.00

## BODY, BONNET AND TRIM MATERIAL COMBINATIONS

Variation	Standard	1 1/4% Chrome alloy steel	Stainless steel	Stainless steel
	Int. seat	F11 (1 1/4% Cr., 1/2% Mo)	F316 with	F316 with H.F.
	13% Cr. trim	13% Cr. trim	316 Trim	Seat and disc
Suffix No.	None	-445	-535	-1449
<b>Valve Types</b>				
Available	5500S -W	5500S -W	5500S -W	5500S -W
Body	Carbon steel	SA182	SA182	SA182
	SA105	Gr. F11	Gr. F316	Gr. F316
Bonnet	Carbon steel	SA182	SA182	SA182
	SA105	Gr. F11	Gr. F316	Gr. F316
Seat	Hard faced with stellite or equal	Integral	316 S/S	Integral
		Hard faced with stellite or equal		Hard faced with stellite or equal
Disc	420 S/S	420 S/S	316 S/S	316 S/S H.F. with Stellite or equal
Stem	410 S/S	410 S/S	316 S/S	316 S/S
Packing gland	410 S/S	410 S/S	316 S/S	316 S/S
Disc nut	410 S/S	410 S/S	316 S/S	316 S/S
Lock ring	410 S/S	410 S/S	316 S/S	316 S/S
Gasket	304 S/S	304 S/S	316 S/S	316 S/S
	Spiral wound	Spiral wound	Spiral wound	Spiral wound
	Grafoil® filled	Grafoil® filled	Grafoil® filled	Grafoil® filled
Packing	Compressed graphite - lubricated - Corrosion inhibited			



# YARWAY HANCOCK FORGED STEEL GLOBE STOP VALVES

## SERIES 5500

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, downstream 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.

### TYPICAL SPECIFYING SEQUENCE

Example	NPS ½	5500	W	2	-445
<b>Nominal valve size NPS</b>					
½, ¾, 1, 1½, 2					
<b>Valve type number</b>					
5500 - Globe valve, T-Type integral seat					
<b>End connection</b>					
S - Threaded end					
W - Socket end					
<b>Design change number</b>					
2					
<b>Material combination suffix</b>					
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)					

