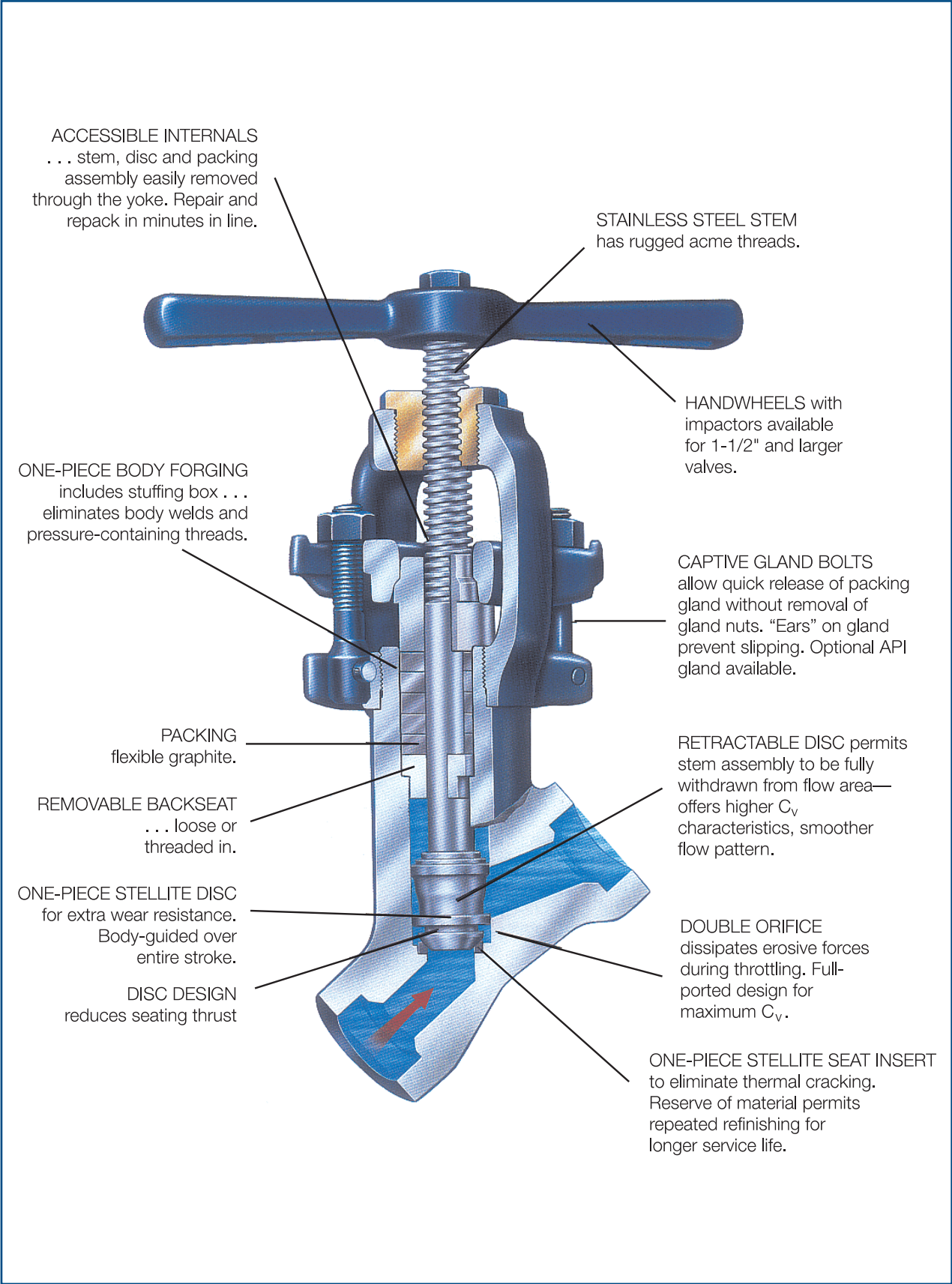


Welbond® High Pressure Globe Valve



YARWAY



Welbond® High Pressure Globe Valve

The Yarway Welbond® Valve has become an established stop valve for general line service in modern high pressure power plants.

The latest design of the valve combines the proven features of its predecessor with advantages made possible by advancements in metallurgy and fluid flow research. *No other valve on the market offers this outstanding combination of features.*

It offers industry a value-engineered product with minimum maintenance and maximum service life resulting from its unique in-line repairability feature. The one-piece body eliminates all pressure welds, threads, and their related problems.

The extra thickness of the Stellite seat ring eliminates seat cracking and provides for repeated renewal of the seating surface with Yarway's reseating tool.

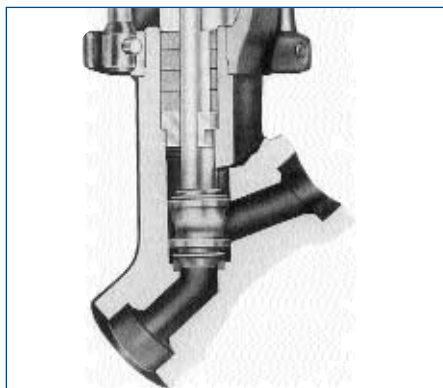
The disc is a Stellite investment casting. The design provides a secondary orifice during opening and closing so that erosive forces are dissipated through the disc-body orifice rather than the disc-seat orifice, which must be protected for drop-tight sealing. The body design allows the disc-stem assembly to retract completely into the body, thus assuring smooth flow and a high C_v characteristic. The design of the disc reduces sealing torque for easy operation both manually and with a powered actuator.

Removable Backseat

This design offers the greatest accessibility, thus is the easiest to maintain, especially when complete removal of the stem packing is desired.

Because the stuffing box bushing is not fastened to the body, the entire stem, disc, and packing assembly can be jacked out of the body by simply turning the handwheel counter-clockwise after releasing the gland. No special tools or picks are required to extract the packing.

In operation, full opening of the valve exerts an upward force on the stuffing box bushing, thus compress-



REMOVABLE BACKSEAT
Class 1700 103 bar—Fig. #5617
Class 2700 172 bar—Fig. #5627
Class 4500 310 bar—Fig. #5645

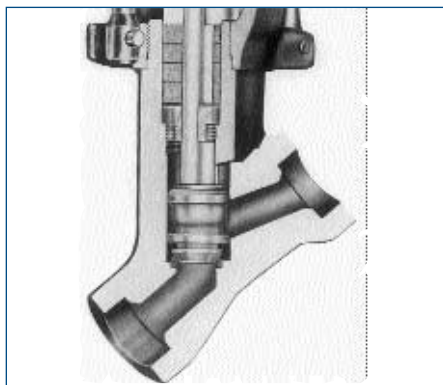
ing the stem packing from below—a maintenance feature frequently used to prevent stem leakage until shut-down can be scheduled.

Removable backseat models are available in sizes shown on page 4 for Classes 1700, 2700 and 4500. Corresponding figure numbers are indicated. The appropriate figures should be specified when ordering.

Threaded-In Backseat

This design offers accessibility after removal of the threaded stuffing box bushing by means of a special Backseat Removal Tool. It requires no seal weld removal for maintenance.

A special packing removal tool, available from Yarway, can be used to remove old packing, quickly, from fixed backseat valves.



THREADED-IN BACKSEAT
Class 1700 103 bar—Fig. #5617B
Class 2700 172 bar—Fig. #5627B
Class 4500 310 bar—Fig. #5645B

FEATURES AND BENEFITS

Fastest In-Line Repair

Repairable in-line more easily and at less cost than any other valve. Stem, disc, and packing can be quickly removed through the yoke, and the seat fully exposed for "like new" restoration.

High Dependability

One-piece forged body without pressure welds, seal welds, pressure-containing threads or gaskets, body/bonnet joints, or any of their related problems.

Greater Durability

Solid Stellite disc and seat ring all but eliminates cracking. Extra thickness of the seat ring also provides enough material to renew the seating surface over and over again.

High Flow Capacity

Generous port sizes and disc retraction well beyond that required for optimum flow. These features help to minimize flow velocities and, therefore, decrease the erosive forces which shorten the life of the seat and disc.

Available Off-The-Shelf

An in-depth stocking program makes Welbond valves available to you directly off-the-shelf (socketweld ends standard to 2-1/2"). You can be certain when you need a valve you'll have it.

Convertible Feature

The complete pre-machining of each Valve body means one of the backseat designs can be converted to the other, simply by reassembly with alternate backseat bushing.



Threaded-in backseat models are available in all sizes shown on pages 9 and 11 for Classes 1700, 2700 and 4500. Corresponding figure numbers are indicated. When ordering the threaded-in backseat design use suffix "B".

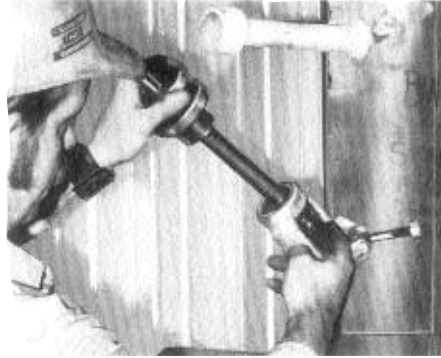
Quick Renewability In-Line

Without cutting the valve body out of the line, the stem/disc/packing assembly can be jacked out in minutes for inspection or replacement of the packing rings. With body still in place, the Yarway reseating tool can be mounted through the yoke, for the establishment of wholly new seating surfaces. Normally, the reconditioned and reassembled valve can be back in service in less than an hour without cleaning, welding, radiography, and other operations associated with the maintenance of conventional valves.

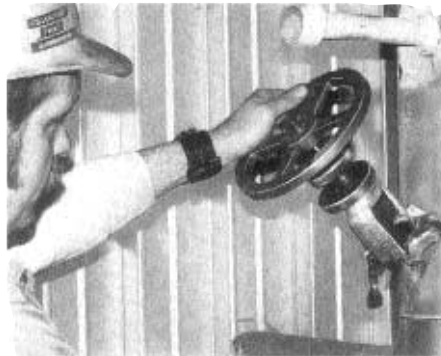
The reseating tool comprises a shaft with a removable tungsten carbide cutting head on one end and a hand-wheel on the other end. These components plus a key for removing the head are supplied as a kit by Yarway. Complete lists of tools for all valves can be found on these pages.

After removing the weld that secures the yoke bushing, the bushing is unscrewed and the stem is backed out. Then the tool is inserted into the valve body and slowly fed into contact with the seat by means of a threaded feed screw that engages the yoke threads.

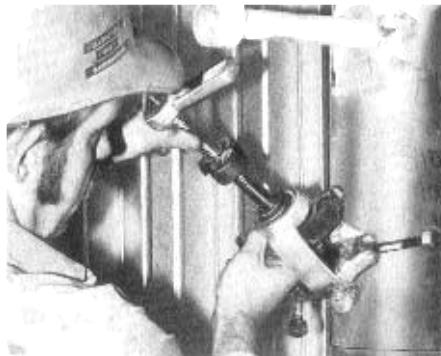
With the cutting head against the valve seat a locknut is tightened to prevent too deep a bite into the stellite seat material. When the wheel turns freely the locknut is readjusted to permit a new cut. After five or six turns an entirely new seat has been machined. The tool cuts both inclined portion and throat of seat to give a completely new line-contact seal.



Reseating tool is lowered into valve body after removal of yoke bushing and valve stem.



After tool locknut has been tightened against yoke face, to prevent too deep a bite into seat material, seat can be reconditioned by means of a series of five or six slow cuts.



New stem/disc assembly is lowered into valve body after completion of reseating cuts.

Packing and Backseat Removal Tool Selector

Valve Size	Valve Fig. No.	Pressure Class, ANSI	Indent. Tool No.
1/2"	5617B	1700	60
	5627B	2700	61
	5645B	4500	66
	5645BR	4500	68
	56145B	4500	46
	W5617B W5627B	1700 2700	66 66
3/4"	5617B	1700	60
	5627B	2700	61
	5645B	4500	66
	5645BR	4500	68
	56145B	4500	46
	W5617B W5627B	1700 2700	66 66
1"	5617B	1700	40
	5627B	2700	40
	5645B	4500	66
	5645BR	4500	68
	56145B	4500	46
	W5617B W5627B	1700 2700	66 66
1-1/2"	5617B	1700	62
	5627B	2700	63
	5645B	4500	67
	56145B	4500	47
	W5617B	1700	62
	W5627B	2700	63
2"	5617B	1700	42
	5627B	2700	64
	5645B	4500	67
	56145B	4500	47
	W5617B	1700	42
	W5627B	2700	64
2-1/2"	5617B	1700	65
	5627B	2700	65
	W5627B	2700	65
3"	W5617B	1700	65
	W5627B	2700	65

W = Buttweld ends

Welding of Welbond Valves

Since welding procedure is dependent upon various codes established by users, contractors and government rules, qualification to the specific code involved should be followed during valve installation.

The valve should be full closed during welding.

Reseating Tool Selector

Valve Fig. No.	Valve Size	Tool No.	Cutter No.
5617	1/2"	50	26
	3/4"	50	26
	1"	20	20
	1-1/2"	52	23
	2"	22	29
	2-1/2"	54	28
5627	3"	54	28
	1/2"	51	26
	3/4"	51	26
	1"	20	20
	1-1/2"	53	27
	2"	54	29
5645	2-1/2"	54	28
	3"	54	28
	1/2"	55	26
	3/4"	55	26
	1"	55	20
5645R	1-1/2"	56	21
	2"	56	21
	1/2"	55	20
56145	3/4"	55	20
	1"	55	20
	1-1/2"	25	20
	2"	23	23

Power Actuation

Welbond valves can be fitted with electric motor actuators for remote or local automatic push button control. With this addition, valves installed in elevated piping runs, or where an emergency will require rapid, positive, and remote operation, can be quickly controlled.

Motor actuated valves are available in the same sizes, materials and pressure classes as manually operated valves. They use standard repair parts which are interchangeable with manually operated valves of the same size and pressure class.

Motor actuators include position switches, torque switches, and auxiliary switches for audible or visual signals at the panel board. Dial indication of stem travel is also available.

Valve actuators are designed to provide constant seating thrust. This assures drop-tight closure and automatic compensation for valve wear. A handwheel is provided for emergency operation in the event of power failure.

Pneumatic actuators, in both fail-open and fail-closed models, are also available for remote operation of Welbond valves. Manual handwheels, limit switches, solenoid valves and air filter regulators can be provided.

ELECTRICALLY ACTUATED WELBOND VALVE



Throttling Services

Hy-Drop Throttling Valve controls the destructive forces inherent in high pressure drop service so that deterioration of parts is virtually eliminated. Rapid energy dissipation is essential to the throttling process, and the Hy-Drop Valve encourages this while containing the destructive capability.

Hy-Drop Throttling valve is designed for continuous blowdown, sampling, high pressure vents, boiler feed pump bypass relief, in fact any high pressure drop service.

HYDROP VALVE



Locking Devices

Welbond valves for shutoff service on water columns, gages, and remote level indicators are made in 1" and 1-1/2" sizes with a locking device.

Class 1700—specify Fig. 5617

Class 2700—specify Fig. 5627

Be sure to specify if lock-closed or lock-open attachment is required. Welbond valves for other services are available with lock-open or lock-closed attachment in all sizes shown on pages 9 and 11 for Classes 1700, 2700 and 4500. In ordering, specify which locking device is required.

Nuclear construction

Welbond valves of the threaded-in backseat design, through 2" size, meet all requirements for both "N" and "NPT" approvals for nuclear construction. Seismic analyses and seismic qualification test data are available through 2" sizes.

Chemical Processes

Carbon steel Welbond meets the standards of the Refining Department of the API for use in drilling, refining, chemical and petrochemical applications. The valves perform in H₂N₂ and liquid NH₃ services in various refineries.

**Pressure-Temperature Ratings
 Forged Steel and Stainless Steel Welbond® Valves
 Buttweld Ends (3" Size Only)**

Service Temp., F	Maximum Allowable Working Pressure, psig						
	Class 1700			Class 2700			Class 4500
	ASME 182 Grade F22	ASME 182 Grade 316	ASME SA105*	ASME 182 Grade F22	ASME 182 Grade 316	ASME SA105*	ASME SA182 Grade F22
100	4250	4080	4195	6750	6480	6660	11250
150	4250	3790	4010	6750	6025	6365	11250
200	4250	3505	3825	6750	5570	6075	11250
250	4185	3335	3770	6650	5300	5990	11085
300	4125	3165	3715	6555	5030	5905	10925
350	4060	3040	3655	6450	4825	5805	10755
400	4000	2910	3590	6350	4620	5700	10585
450	3880	2810	3490	6165	4460	5545	10275
500	3765	2705	3390	5980	4295	5385	9965
550	3595	2630	3245	5710	4180	5155	9515
600	3425	2555	3100	5440	4060	4925	9070
650	3330	2515	3040	5295	3995	4830	8825
700	3215	2460	3020	5105	3910	4795	8515
750	3010	2420	2855	4780	3845	4535	7970
800	2875	2390	2330	4565	3800	3700	7610
850	2760	2365	1515	4385	3755	2405	7305
900	2545	2350	970	4045	3735	1540	6740
950	2135	2185	580	3395	3475	925	5665
1000	1260	1980	290	2340	3145	460	3910
1050	990	1945	—	1570	3090	—	2625
1100	620	1725	—	980	2745	—	1645

Valves are rated in accordance with American National Standard ANSI B16.34 (1996)

* Not recommended for prolonged use above 800F.

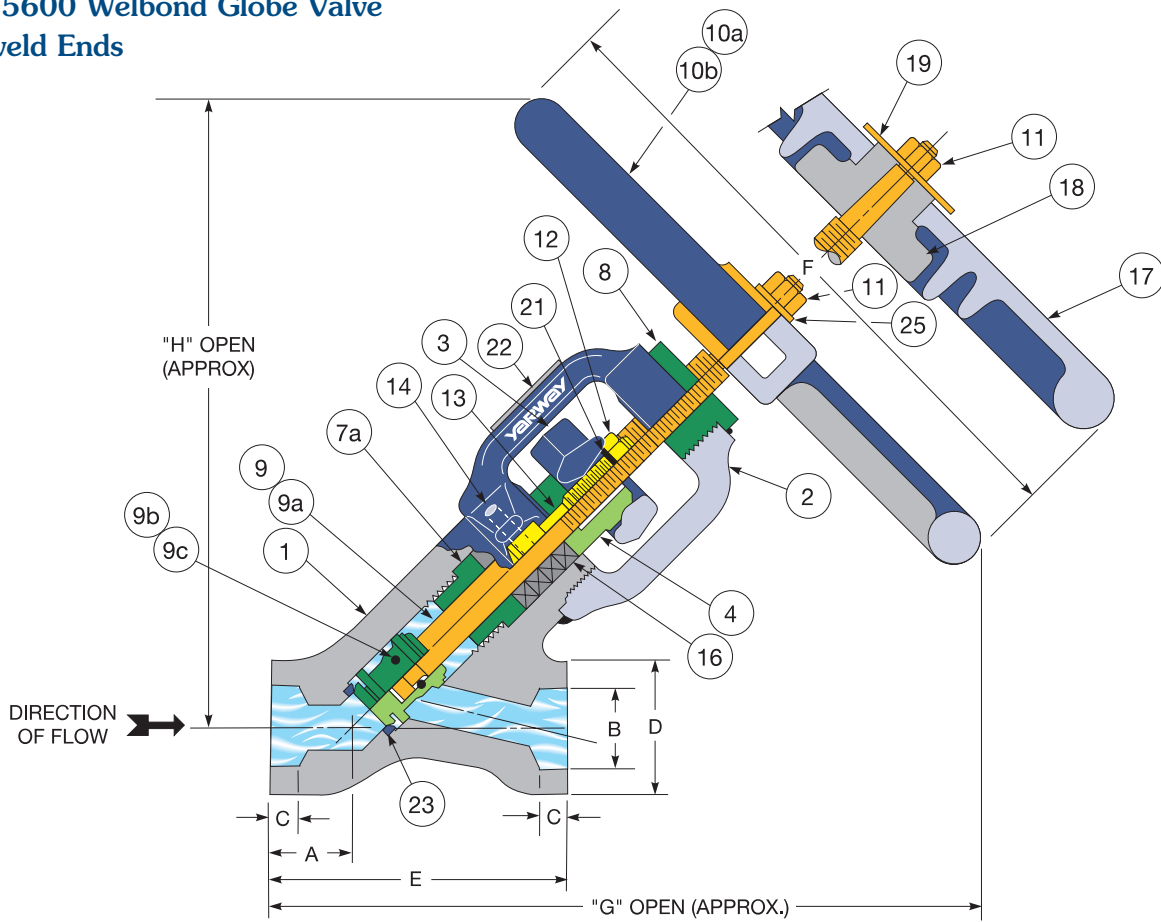
Pressure-Temperature Ratings
Forged Steel and Stainless Steel Welbond® Valves
Socketweld and Butt weld Ends (2-1/2" and Smaller))

Service Temp., F	Maximum Allowable Working Pressure, psig						
	Class 1700			Class 2700			Class 4500
	ASME 182 Grade F22	ASME 182 Grade 316	ASME SA105*	ASME 182 Grade F22	ASME 182 Grade 316	ASME SA105*	ASME SA182 Grade F22
100	4250	4250	4250	6750	6750	6750	11250
150	4250	4080	4250	6750	6480	6750	11250
200	4250	3910	4250	6750	6210	6750	11250
250	4225	3720	4250	6710	5910	6750	11185
300	4200	3535	4250	6670	5615	6750	11120
350	4150	3380	4250	6595	5370	6750	10990
400	4100	3230	4250	6515	5130	6750	10865
450	4090	3120	4250	6495	4955	6750	10830
500	4080	3010	4250	6480	4780	6750	10800
550	4080	2930	4145	6480	4655	6580	10800
600	4080	2855	4040	6480	4530	6415	10800
650	4055	2790	3960	6440	4430	6290	10735
700	4030	2740	3930	6400	4355	6240	10670
750	3910	2695	3570	6210	4280	5670	10350
800	3810	2670	2910	6050	4240	4625	10095
850	3640	2640	1890	5780	4195	3005	9645
900	3400	2620	1210	5400	4160	1925	9000
950	2735	2595	745	4410	4120	1200	7555
1000	1990	2385	390	3315	3785	650	6050
1050	1335	2385	—	2220	3785	—	4060
1100	835	2210	—	1395	3570	—	2545

Valves are rated in accordance with American National Standard ANSI B16.34 (1996) Limited Class.

* Not recommended for prolonged use above 800F.

Yarway 5600 Welbond Globe Valve Socketweld Ends



Item	Qty.	Part	Material
1	1	Body	ASME SA 182 Grade F22
2	1	Yoke	ASME SA 182 Grade F22
3	1	Gland	AISI 4140
4	1	Split Gland Bushing	AISI C-1215
7	1	Back Seat Bushing (Threaded-in Back Seat Design)	ASME SA 182 Grade F6A CL. 2
7a	1	Stuffing Box Bushing (Loose Back Seat Design)	AISI 410
8	1	Yoke Bushing	ASTM B371 Alloy No. 694
9	1	Stem-Disc Assembly Consisting of:	
	1	(9a) Stem	ASTM A582 Type 416
	1	(9b) Disc	AMS 5385 (Stellite 21)
	1	(9c) Disc Pin	AMS 5796 (Stellite 25)
10a	1	Handwheel (See Note 2)	ASTM A47 Grade 32510
10b	1	"T" Handle (See Note 1)	ASTM A47 Grade 32510
11	1	Locknut	Carbon Steel

Item	Qty.	Part	Material
12	2	Hex Nut	ASME SA 194 Grade 2H
13	2	Swing Bolt	ASME SA 193 Grade B7
14	2	Pin	AISI 6150 OR 8740
15	1	Gasket (Threaded-in Back Seat Design)	ASME SB 127
16	1 set	Packing (See Note 7)	Flexible Graphite
17	1	Impact Handwheel (See Note 3)	ASTM A47 Grade 32510
18	1	T-Bar (See Note 4)	4140 Annealed
19	1	Washer (See Note 4)	Carbon Steel
20	1	Packing Support Ring (Threaded-in Back Seat Design)	AISI 430
21	1	Washer	Carbon Steel
22	1	Nameplate	AISI 302
23	1	Seat (See Note 6)	AMS 5387 (Stellite 6)
25	1	Washer	Carbon Steel

5. Valves are suitable for acid washing.
 6. Seat is vacuum brazed to body—not replaceable.
 7. Recommended spare parts.

- Notes: 1. "T" Handle (Item 10B), furnished on 1/2", 3/4" and 1" sizes.
 2. Handwheel (Item 10A), furnished on 1-1/2" and 2".
 3. Impact Handwheel (Item 17), furnished on 2-1/2" size—optional on 1-1/2" and 2" sizes.
 4. For use with Item 17 only.

Dimensions, Weights and C_v Values

Class 1700–1700 psi at 1022F. Fig. No. 5617 and 5617B

Valve Size in. (DN)	Dimensions, in. (mm)								Max. Stem Rise, in. (mm)	C _v Value (K _v)	Approx. Weight lb (kg)
	A	B	C	D	E	F	G	H			
1/2 (15)	1-5/16 (33, 5)	.855 (21, 7)	3/8 (9, 5)	1-13/16 (46)	4-3/8 (111)	8 (203)	10-15/16 (278)	9-5/8 (244, 5)	5/8 (16)	6 (5)	10 (4, 5)
3/4 (20)	1-5/16 (33, 5)	1.065 (27)	1/2 (12, 5)	1-13/16 (46)	4-3/8 (111)	8 (203)	10-15/16 (278)	9-5/8 (244, 5)	5/8 (16)	6 (5)	10 (4, 5)
1 (25)	1-13/32 (35, 5)	1.330 (33, 8)	1/2 (12, 5)	2-3/8 (60, 3)	5 (127)	8 (203)	11-1/8 (282, 5)	10 (254)	3/4 (19)	10 (9)	15 (6, 8)
1-1/2 (40)	1-23/32 (43, 5)	1.915 (48, 6)	1/2 (12, 5)	3 (76, 2)	6-1/4 (158, 5)	12 (305)	17-3/16 (436, 5)	16-5/16 (414, 5)	1-3/8 (35)	38 (33)	36 (16, 3)
2 (50)	2 (51)	2.406 (61, 1)	5/8 (16)	3-5/8 (92, 1)	7-1/4 (184)	12 (305)	17-7/16 (443)	16-1/16 (408)	1-1/2 (38)	60 (52)	50 (22, 7)
2-1/2 (65)	2-3/8 (60, 5)	2.906 (73, 8)	5/8 (16)	4-13/16 (122, 2)	9-5/8 (244, 5)	14 (355, 5)	21-1/2 (546)	20-7/16 (519)	2 (51)	80 (69)	105 (47, 6)
3 (75)	2-3/8 (60, 5)	Buttweld End Only			9-5/8 (244, 5)	14 (355, 5)	21-1/2 (546)	20-7/16 (519)	2 (51)	70 (61)	105 (47, 6)

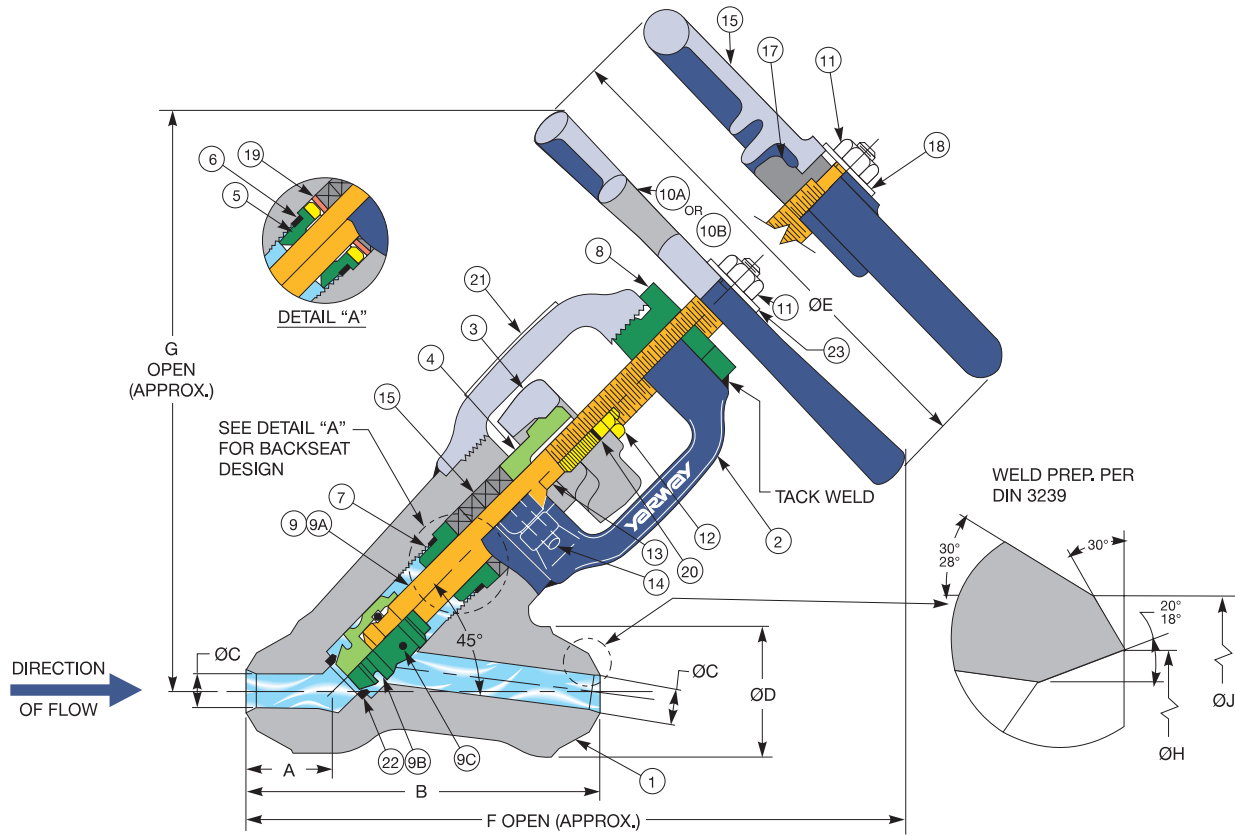
Class 2700–2700 psi at 1028F. Fig. No. 5627 and 5627B

Valve Size in. (DN)	Dimensions, in. (mm)								Max. Stem Rise, in. (mm)	C _v Value (K _v)	Approx. Weight lb (kg)
	A	B	C	D	E	F	G	H			
1/2 (15)	1-13/32 (33, 5)	.855 (21, 7)	3/8 (9, 5)	2-3/8 (60, 3)	5 (127)	8 (203)	10-15/16 (278)	9-9/16 (243)	5/8 (16)	6 (5)	15 (6, 8)
3/4 (20)	1-13/32 (33, 5)	1.065 (27)	1/2 (12, 5)	2-3/8 (60, 3)	5 (127)	8 (203)	10-15/16 (278)	9-9/16 (243)	5/8 (16)	6 (5)	15 (6, 8)
1 (25)	1-13/32 (35, 5)	1.330 (33, 8)	1/2 (12, 5)	2-3/8 (60, 3)	5 (127)	8 (203)	11-1/8 (282, 5)	9-13/16 (249)	3/4 (19)	12 (10)	15 (6, 8)
1-1/2 (40)	2 (51)	1.915 (48, 6)	1/2 (12, 5)	3-5/8 (92, 1)	7-1/4 (184)	12 (305)	17-1/8 (435)	15-1/4 (387, 5)	1-5/16 (33, 5)	34 (29)	52 (23, 6)
2 (50)	2-3/8 (60-5)	2.406 (61, 1)	5/8 (16)	4-13/16 (122, 2)	9-5/8 (244, 5)	14 (355, 5)	21-3/8 (543)	19-1/16 (484)	1-3/4 (44, 5)	65 (56)	98 (44, 4)
2-1/2 (65)	2-3/8 (60, 5)	2.906 (73, 8)	5/8 (16)	4-13/16 (122, 2)	9-5/8 (244, 5)	14 (355, 5)	21-1/2 (546)	19-1/8 (486)	2 (51)	90 (78)	105 (47, 6)
3 (75)	2-3/8 (60, 5)	Buttweld End Only			9-5/8 (244, 5)	14 (355, 5)	21-1/2 (546)	19-1/8 (486)	2 (51)	75 (65)	105 (47, 6)

Class 4500–4500 psi at 1039F. Fig. No. 5645 and 5645B

Valve Size in. (DN)	Dimensions, in. (mm)								Max. Stem Rise, in. (mm)	C _v Value (K _v)	Approx. Weight lb (kg)
	A	B	C	D	E	F	G	H			
1/2 (15)	2 (51)	.855 (21, 7)	3/8 (9, 5)	3-5/8 (92, 1)	7-1/4 (184)	8 (203)	14-5/8 (371, 5)	12-11/16 (322, 5)	15/16 (24)	2 (1, 7)	43 (19, 5)
3/4 (20)	2 (51)	1.065 (27)	1/2 (12, 5)	3-5/8 (92, 1)	7-1/4 (184)	8 (203)	14-5/8 (371, 5)	12-11/16 (322, 5)	15/16 (24)	5 (4)	43 (19, 5)
1 (25)	2 (51)	1.330 (33, 8)	1/2 (12, 5)	3-5/8 (92, 1)	7-1/4 (184)	8 (203)	14-5/8 (371, 5)	12-11/16 (322, 5)	15/16 (24)	6 (5)	43 (19, 5)
1-1/2 (40)	2-3/8 (60, 5)	1.915 (48, 6)	1/2 (12, 5)	4-13/16 (122, 2)	9-5/8 (244, 5)	12 (305)	19-3/4 (501, 5)	17-3/8 (441, 5)	1-1/4 (31, 5)	18 (16)	105 (47, 6)
2 (50)	2-3/8 (60-5)	Buttweld End Only			9-5/8 (244, 5)	12 (305)	19-3/4 (501, 5)	17-3/8 (441, 5)	1-1/4 (31, 5)	17 (15)	105 (47, 6)

Yarway 5600 Welbond Globe Valve Buttweld Ends



Parts/Materials

Item	Qty.	Part	Material	Item	Qty.	Part	Material
1	1	Body	DIN 17243 10 CrMo 9 10 /ASME SA 182 Gr. F22 or DIN 17243 C22.8	10B	1	"T" Handle (see note 1)	ASTM A47 Gr. 32510
2	1	Yoke	ASME SA 182 Gr. F22	11	1	Locknut	Carbon Steel
3	1	Gland	AISI 4140	12	2	Hex Nut	ASME SA 194 Gr. 2H
4	1	Split Gland Bushing	AISI C-1215	13	2	Swing Bolt	ASME SA 193 Gr. B7
*5	1	Back Seat Bushing	ASME SA 182 Gr. F6A CL.2	14	2	Pin	AISI 6150 OR 8740
*6	1	Gasket	ASME SB 127	*15	1 set	Packing	Flexible Graphite
7	1	Stuffing Box Bushing	AISI 410	16	1	Impact Handwheel (see note 3)	ASTM A47 Gr. 32510
8	1	Yoke Bushing	ASTM B371 Alloy No. 694	17	1	T-Bar (see note 4)	AISI 4140
*9	1	Stem Disc Ass'y Consisting of:		18	1	Washer (see note 4)	Carbon Steel
	1	(9a) Stem	ASTM A582 Type 416	19	1	Packing Support Ring	AISI 430
	1	(9b) Disc	AMS 5385 (Stellite 21)	20	2	Washer	Carbon Steel
	1	(9c) Disc Pin	AMS 5796/5759 (Stellite 25)	21	1	Nameplate	AISI 302
10A	1	Handwheel (see note 2)	ASTM A47 Gr. 32510	22	1	Seat (see note 6)	AMS 5387 (Stellite 6)
				23	1	Washer (see note 7)	Carbon Steel

NOTES:

- * - Recommended Spare Parts
- 1 - "T" Handle, (Item 10B), furnished on DN10, DN15, and DN25 sizes. Handwheel optional.
- 2 - Handwheel, (Item 10A), furnished on DN40 and DN50.
- 3 - Impact Handwheel, (Item 16), furnished on DN65 size - optional on DN40 and DN50 sizes.

- 4 - For use with Item 16 only.
- 5 - Valves are suitable for acid washing.
- 6 - Seat is vacuum brazed to body - not replaceable
- 7 - Used on valve sizes DN10 through DN50 only.

Dimensions—mm (in.), Weights—kg, K_v Values

Rating	Fig. No.	Valve Size	A	B	C Ø	D Ø	E Ø	F	G	H Ø	J Ø	Stem Rise		Kv Value	Approx. Weight
												Acc. Seat	Backseat		
117 bar @ 550°C	W5617 & W5617B	DN15 PN160	35.7 (1 ¹³ / ₃₂)	146 (5 ³ / ₄)	14.3 (⁹ / ₁₆)	50.8 (2)	203 (8)	282.5 (11 ¹ / ₈)	254 (10)	17 (⁴³ / ₆₄)	22 (⁷ / ₈)	15.9 (⁵ / ₈)	16.7 (²¹ / ₃₂)	8	6.8
		DN15 PN250								16 (⁵ / ₈)	22 (⁷ / ₈)				
		DN25 PN160								27 (1 ¹ / ₁₆)	34 (1 ¹¹ / ₃₂)				
		DN25 PN250								26.5 (1 ³ / ₆₄)	35 (1 ³ / ₈)				
		DN40 PN160	43.6 (1 ²³ / ₃₂)	158.8 (6 ¹ / ₄)	28.6 (1 ¹ / ₈)	63.5 (2 ¹ / ₂)	305 (12)	436.5 (17 ³ / ₁₆)	414 (16 ⁵ / ₁₆)	41 (1 ³⁹ / ₆₄)	54 (2 ¹ / ₈)	31.8 (1 ¹ / ₄)	34.1 (1 ¹¹ / ₃₂)	33	15.9
		DN40 PN250								38.5 (1 ³³ / ₆₄)	54 (2 ¹ / ₈)				
		DN50 PN160	50.8 (2)	203.2 (8)	31.8 (1 ¹ / ₄)	73 (2 ⁷ / ₈)	305 (12)	443 (17 ⁷ / ₁₆)	408 (16 ¹ / ₁₆)	52.5 (2 ¹ / ₁₆)	61 (2 ¹³ / ₃₂)	34.5 (1 ²³ / ₆₄)	35.3 (1 ²⁵ / ₆₄)	46	21.8
		DN50 PN250								45 (1 ²⁵ / ₃₂)	61 (2 ¹³ / ₃₂)				
		DN65 PN160	60.3 (2 ³ / ₈)	254 (10)	38.1 (1 ¹ / ₂)	101.6 (4)	356 (14)	546 (21 ¹ / ₂)	514 (20 ¹ / ₄)	65 (2 ⁹ / ₁₆)	77 (3 ¹ / ₃₂)	45.6 (1 ⁵¹ / ₆₄)	50.4 (1 ⁶³ / ₆₄)	57	46.4
		DN65 PN250								59.5 (2 ¹¹ / ₃₂)	77 (3 ¹ / ₃₂)				
186 bar @ 550°C	W5627 & W5627B	DN10 PN400	35.7 (1 ¹³ / ₃₂)	146 (5 ³ / ₄)	8.7 (¹¹ / ₃₂)	50.8 (2)	203 (8)	282.5 (11 ¹ / ₈)	254 (10)	10 (²⁵ / ₆₄)	18 (⁴⁵ / ₆₄)	15.9 (⁵ / ₈)	16.7 (²¹ / ₃₂)	4	6.8
		DN10 PN500			11.5 (²⁹ / ₆₄)					22 (⁷ / ₈)					
		DN15 PN400			14.3 (⁹ / ₁₆)					31 (⁴³ / ₆₄)					
		DN15 PN500			16.5 (²¹ / ₃₂)					32 (1 ¹⁷ / ₆₄)					
		DN25 PN400	50.8 (2)	203.2 (8)	25.4 (1)	73 (2 ⁷ / ₈)	305 (12)	435 (17 ¹ / ₈)	387 (15 ¹ / ₄)	29 (1 ⁹ / ₆₄)	44 (1 ⁴⁷ / ₆₄)	28.2 (1 ⁷ / ₆₄)	29 (1 ⁹ / ₆₄)	6	22.7
		DN25 PN500			22.2 (⁷ / ₈)					47 (1 ⁵⁵ / ₆₄)					
		DN40 PN400	60.3 (2 ³ / ₈)	254 (10)	25.4 (1)	101.6 (4)	356 (14)	543 (21 ³ / ₈)	484 (19 ¹ / ₁₆)	40 (1 ³⁷ / ₆₄)	61 (2 ¹³ / ₃₂)	40.9 (1 ³⁹ / ₆₄)	42.5 (1 ⁴³ / ₆₄)	53	42.3
		DN40 PN500			31.8 (1 ¹ / ₄)					66 (2 ¹⁹ / ₃₂)					
		DN50 PN400			38.1 (1 ¹ / ₂)	77 (3 ¹ / ₃₂)				49.5 (1 ⁶¹ / ₆₄)	86 (3 ²⁵ / ₆₄)				
		DN50 PN500			45 (1 ²⁵ / ₃₂)	86 (3 ²⁵ / ₆₄)									
310 bar @ 550°C	W5645 & W5645B	DN15 PN630	50.8 (2)	203.2 (8)	12.7 (¹ / ₂)	73 (2 ⁷ / ₈)	203 (8)	322 (12 ¹¹ / ₁₆)	373 (14 ¹¹ / ₁₆)	18.5 (⁴⁷ / ₆₄)	37 (1 ²⁹ / ₆₄)	20.6 (1 ³ / ₁₆)	22.2 (⁷ / ₈)	1.7	22.7
		DN25 PN630								25 (⁶³ / ₆₄)	54 (2 ¹ / ₈)			5	
		DN40 PN630	60.3 (2 ³ / ₈)	254 (10)	20.6 (¹³ / ₁₆)	101.6 (4)	305 (12)	441 (17 ³ / ₈)	502 (19 ³ / ₄)	43.5 (1 ²³ / ₃₂)	77 (3 ¹ / ₃₂)	31 (1 ⁷ / ₃₂)	32.5 (1 ⁹ / ₃₂)	10	45.5
		DN50 PN630								51.6 (2 ¹ / ₃₂)	90 (3 ³⁵ / ₆₄)			15	45

How To Select

As shown in temperature-pressure rating tables, pages 6 and 7, Yarway Welbond Valves cover a wide range of services including pressures up to 11,250 psi and temperatures as high as 1100 F. When maximum temperature requirements are known, the proper valve (Classes 1700, 2700, 4500) can be determined from the pressure rating tables on pages 6 and 7.

For example: Class 4500 forged chrome-moly F22 steel Welbond Valve, designed for temperatures to 1100 F in standard steam service, may be operated at pressures up to 10,160 if temperature does not exceed 850 F. In other services, maximum pressure may be as high as 11,250 at temperatures not exceeding 400 F. Check tables on pages 6 and 7 for other corresponding limits of Classes 1700, 2700 and 4500 forged Welbonds.

Applications

The Series 5600 Welbond has opened up a new dimension in stop valve maintenance and reliability in these typical applications: Waterwall Drains, Superheater Drains, Reheater Inlet Drains, Economiser Drains, Constant Head Chamber Shut-Off, Water Column and Gage Drains and Shut-Off, Drum Vents, Reheat Spray Isolation and Water and Steam Sampling.

Installation Requirements

Yarway Welbond Valves conform to all requirements of the ASME Boiler Code. Installation in any position gives proper drainage. The materials listed on pages 8 and 10 make these valves fully suitable for acid wash operations. Adjacent piping should be adequately supported in a manner to keep thrust and moment force at a minimum as covered by ANSI B31.1 Power Piping, Chapter II, Design.

How to Specify

Select figure number whenever possible. If not permitted to use name and figure no., describe as follows: valve shall be of seat and disc type straight-way pattern with forged (specify material grade) steel body having integral stellite #6 seat.

Body to be one-piece design with no pressure boundary welds or threads and to have socketweld or buttweld ends. Disc to be of self-aligning design. Working parts to be removable through top of yoke.

How To Order

May be ordered simply by giving your local Yarway representative the following details:

- Size
- Figure number and material (ASME SA182 F22 furnished unless otherwise specified)
- Basic Pressure Rating or Class
- Service (see list of applications)
- Maximum operating pressure and temperature

Yarway Corporation reserves the right to change the designs and materials of its products without notice.



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Inquiries from other than North American Locations should be addressed to the International Department, Blue Bell, PA