

# High Pressure High Temperature Service Valves



Forged Steel Valves

Special  
"Y" Pattern  
Valves



C-YV1



We introduce with this new catalog OMB's renewed offer of forged steel valves for the power industry. OMB manufacture a complete range of products designed for the most demanding applications of the High Temperature-High pressure services:

- Y pattern globe, bellows and check valves
- Straight Welded bonnet high pressure gate, globe, check and bellows seal valves
- Pressure Seal bonnet valve from the smallest size of 1"
- Special application products with custom design
- Actuated or manual operated options

We maintain an extensive inventory of valves and components to meet urgent delivery and special request and, in conjunction with OMB's extensive worldwide distribution network, we can offer immediate availability of our products virtually everywhere. OMB has tradition in keeping an wide range of different material grades in stock: today we can offer large

quantity of Carbon Steels such as A105, Alloys such as F11 and F22 and F91.

Custom specified material are available with short led time and at competitive price.

When you need forged steel valves, call us at OMB.

Type	Class Bore	Fig. N.	Page
Globe Y pattern	1700 Full	Y930	5
Piston Y pattern	1700 Full	Y940	5
Globe Y pattern	2700 Full	Y2530	7
Piston Y pattern	2700 Full	Y2540	7
Globe Y pattern	4500 Full	Y4530	9
Piston Y pattern	4500 Full	Y4540	9
Gate	1500 Reduced	LR910	10
Gate	1500 Full	L910	10
Gate	1500 Reduced	LR930	10
Gate	1500 Full	L930	10
Gate	1500 Reduced	LR940	10
Gate	1500 Full	L940	10
Gate	2500 Full	L2510	11
Globe	2500 Full	L2530	11
Piston	2500 Full	L2540	11
Globe	4500 Full	L4530	12
Piston	4500 Full	L4540	12



**HANDWHEEL**

The Handwheel is normally forged steel. This is designed to allow the operator to shut the valve easily and safely. The Handwheel is secured by a nut and washer. An impactor lever is used for the higher pressures and larger sizes.

**YOKE NUT**

The yoke nut is normally made from aluminium bronze. The low coefficient of friction of this material ensures low operating torques and minimal wear of the stem threads. The yoke nut is threaded in the bonnet and locked by two tack welds 180° apart.

**GLAND FLANGE**

The gland flange is always forged from the same material as the body and bonnet.

**GLAND**

The gland follower is made from material equal to the trim. It is designed to provide to correct compression of the gland packing and easy removal during maintenance. On request it is possible to have a one piece gland with integral flange.

**GLAND PACKING**

The gland packing system is designed to provide the optimum seal in high pressure steam. The packing rings are from graphite as standard with internal reinforcement necessary for high pressure and temperature service.

**BONNET**

The Bonnet is always forged in the same material as the body. The bonnet joint is threaded and seal welded. The seal weld is simple to remove for maintenance of the seat and disc faces.

**STEM**

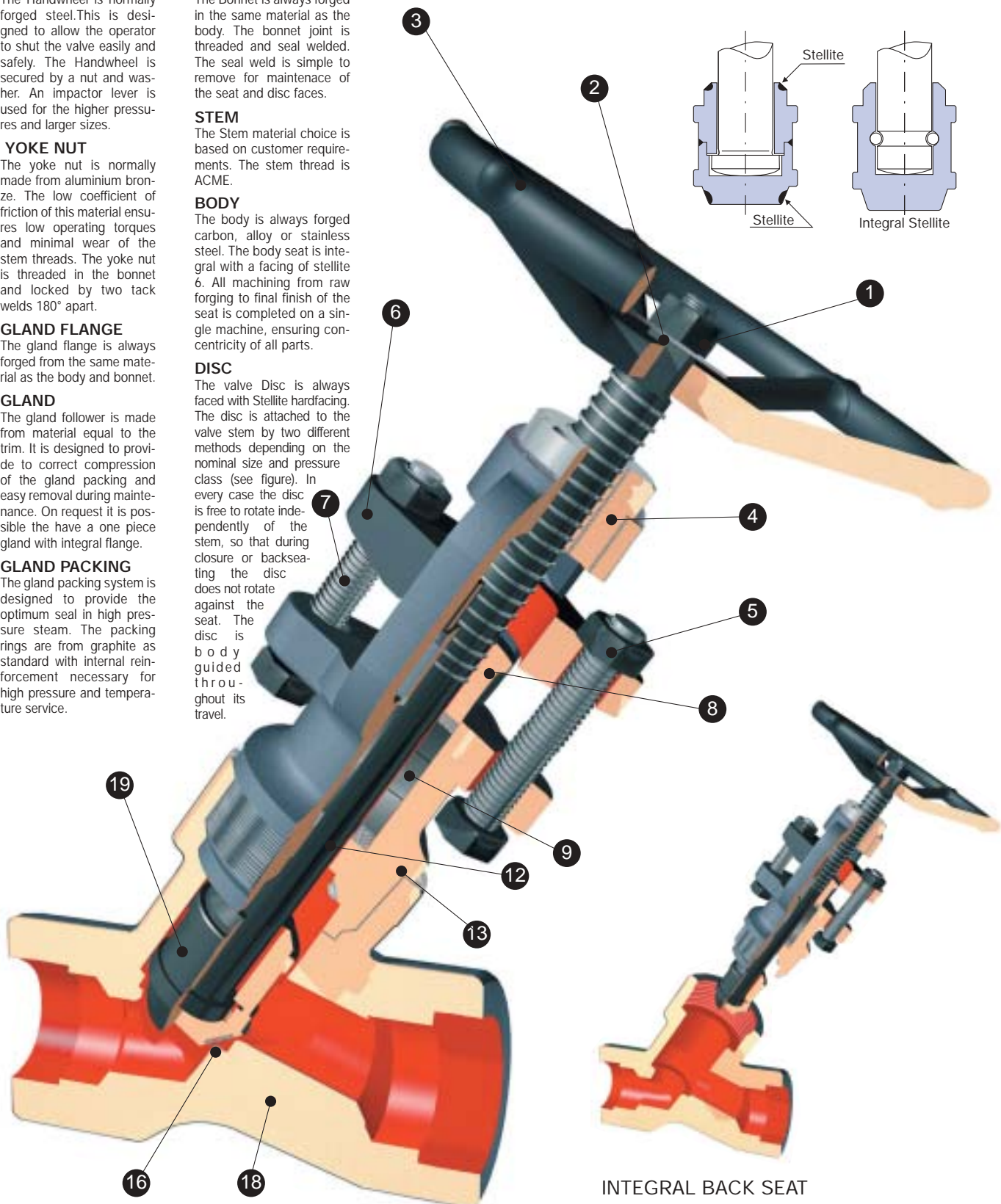
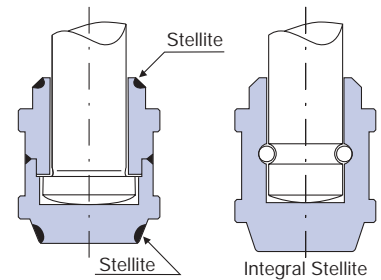
The Stem material choice is based on customer requirements. The stem thread is ACME.

**BODY**

The body is always forged carbon, alloy or stainless steel. The body seat is integral with a facing of stellite 6. All machining from raw forging to final finish of the seat is completed on a single machine, ensuring concentricity of all parts.

**DISC**

The valve Disc is always faced with Stellite hardfacing. The disc is attached to the valve stem by two different methods depending on the nominal size and pressure class (see figure). In every case the disc is free to rotate independently of the stem, so that during closure or backseating the disc does not rotate against the seat. The disc is body guided throughout its travel.



INTEGRAL BACK SEAT

# Class 1700 - Y Pattern

Fig. N. Y930

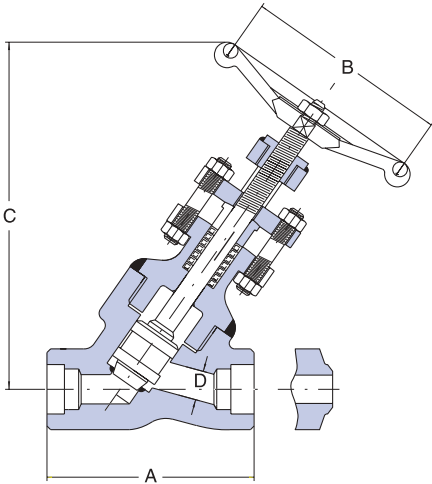
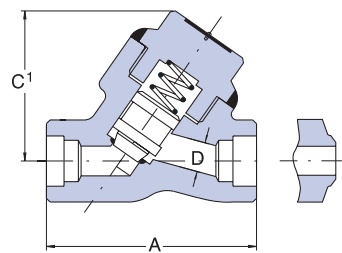


Fig. N. Y940



Part	Standard Materials		
	A105N	F22	F316
1 WHEELNUT	Carbon Steel	Carbon Steel	Carbon Steel
2 NAMEPLATE	Aluminum	Aluminum	Aluminum
3 HANDWHEEL	Carbon Steel	Carbon Steel	Carbon Steel
4 YOKE NUT	ASTM A582 TYPE 416	ASTM A582 TYPE 416	ASTM A582 TYPE 303
5 GLAND NUT	ASTM A194 2H	ASTM A194 gr.8	ASTM A194 gr.8
6 GLAND FLANGE	ASTM A105	ASTM A182 F6	ASTM A182 F304
7 GLAND STUD	AISI 410	ASTM A193 B8	ASTM A193 B8
8 GLAND	ASTM A276 TYPE 410	ASTM A276 TYPE 410	ASTM A479 TYPE 316
9 PACKING	Graphite	Graphite	Graphite
12 STEM	ASTM A276 TYPE 410	ASTM A276 TYPE 410	ASTM A479 TYPE 316
13 BONNET	ASTM A105N	ASTM A182 F22	ASTM A182 F316
16 INTEGRAL SEAT	Stellite gr. 6	Stellite gr. 6	Stellite gr. 6
18 BODY	ASTM A105N	ASTM A182 F22	ASTM A182 F316
19 DISC	ASTM A276 TYPE 410 + Stellite gr. 6	ASTM A276 TYPE 410 + Stellite gr. 6	ASTM A479 TYPE 316 + Stellite gr. 6

RATING: Carbon Steel

Classe 1500 = 3705 psi @ 100°F  
 Classe 1700 = 4198 psi @ 100°F

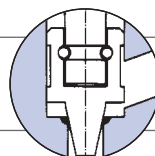
**ANSI classe 1700** DN 1/2" ÷ 4"  
 -BS 5352-

THREADED ENDS (NPT) ASME B1.20.1  
 SOCKET ENDS (SW) ASME B16.11  
 BUTTWELD ENDS (BW) ASME B16.25

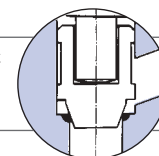
SIZE	1/2"		3/4"		1"		1.1/4"		1.1/2"		2"		2 1/2"		3"		4"	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	90 3.54	127 5.00	127 5.00	155 6.10	155 6.10	155 6.10	155 6.10	180 7.08	180 7.08	225 8.86	225 8.86	225 8.86	225 8.86	305 12.00	305 12.00	305 12.00	305 12.00
Handwheel	B	110 4.33	130 5.11	130 5.11	180 7.08	180 7.08	180 7.08	180 7.08	180 7.08	180 7.08	300 11.81	300 11.81	300 11.81	300 11.81	400 15.75	400 15.75	400 15.75	400 15.75
Center to Top Open	C	170 6.69	240 9.44	250 9.84	300 11.81	380 14.96	380 14.96	420 16.53	420 16.53	440 17.32	480 18.90	480 18.90	480 18.90	580 22.83	580 22.83	580 22.83	580 22.83	580 22.83
Center to Top Open	C1	70 2.75	100 3.93	100 3.93	120 4.72	120 4.72	120 4.72	120 4.72	140 5.51	180 7.08	180 7.08	180 7.08	180 7.08	230 9.05	230 9.05	230 9.05	230 9.05	230 9.05
Dia. of Port	D	11 0.43	15 0.59	19.5 0.76	27.5 1.08	31.5 1.24	31.5 1.24	39 1.53	39 1.53	52 2.04	60 2.36	60 2.36	60 2.36	60 2.36	60 2.36	60 2.36	60 2.36	60 2.36
Approx. Weight (Y930)	Kg/Lb	2 4.4	4.2 9.2	5.2 11.4	9.0 19.8	10.5 23.1	10.5 23.1	13.5 29.7	13.5 29.7	32 70.4	34 74.8	34 74.8	34 74.8	50 110.1	50 110.1	50 110.1	50 110.1	50 110.1
Approx. Weight (Y940)	Kg/Lb	1.5 3.3	3.2 7.0	3.2 7.0	6.0 13.2	6.2 13.6	6.2 13.6	9.5 20.9	9.5 20.9	16.5 36.3	16.5 36.3	16.5 36.3	16.5 36.3	35 77.1	35 77.1	35 77.1	35 77.1	35 77.1

2 1/2" - 3" - 4" BUTT WELD ENDS

## DISC OPTIONS



NEEDLE DISC



STOP CHECK DISC



Valve Specialists

# FORGED STEEL VALVES

## HANDWHEEL

The Handwheel is normally forged steel. This is designed to allow the operator to shut the valve easily and safely. The Handwheel is secured by a nut and washer. An impactor lever is used for the higher pressures and larger sizes.

## YOKE NUT

The yoke nut is normally made from aluminium bronze. The low coefficient of friction of this material ensures low operating torques and minimal wear of the stem threads. The yoke nut is threaded in the bonnet and locked by two tack welds 180° apart.

## GLAND FLANGE

The gland flange is always forged from the same material as the body and bonnet.

## GLAND.

The gland follower is made from the same material as the trim. A special split collar is located between the gland follower and gland flange. When the split collar is removed it is possible to withdraw the entire disc stem assembly (disc, stem, backseat bush, gland packing and gland follower) out through the gland flange and yoke bush housing. This disassembly allows rapid maintenance without the need to disturb the welded bonnet joint.

## GLAND PACKING

The gland packing system is designed to provide the optimum seal in high pressure steam. The packing rings are from graphite as standard with internal reinforcement necessary for high pressure and temperature service.

## BONNET.

The bonnet is always made from the same grade of forged steel as the body. The bonnet joint is screwed and seal welded. The bonnet is machined in a single operation ensuring the concentricity of bores and mating surfaces. An optional threaded stellited backseat is available on request.

## STEM

The Stem material choice is based on customer requirements. The stem thread is ACME.

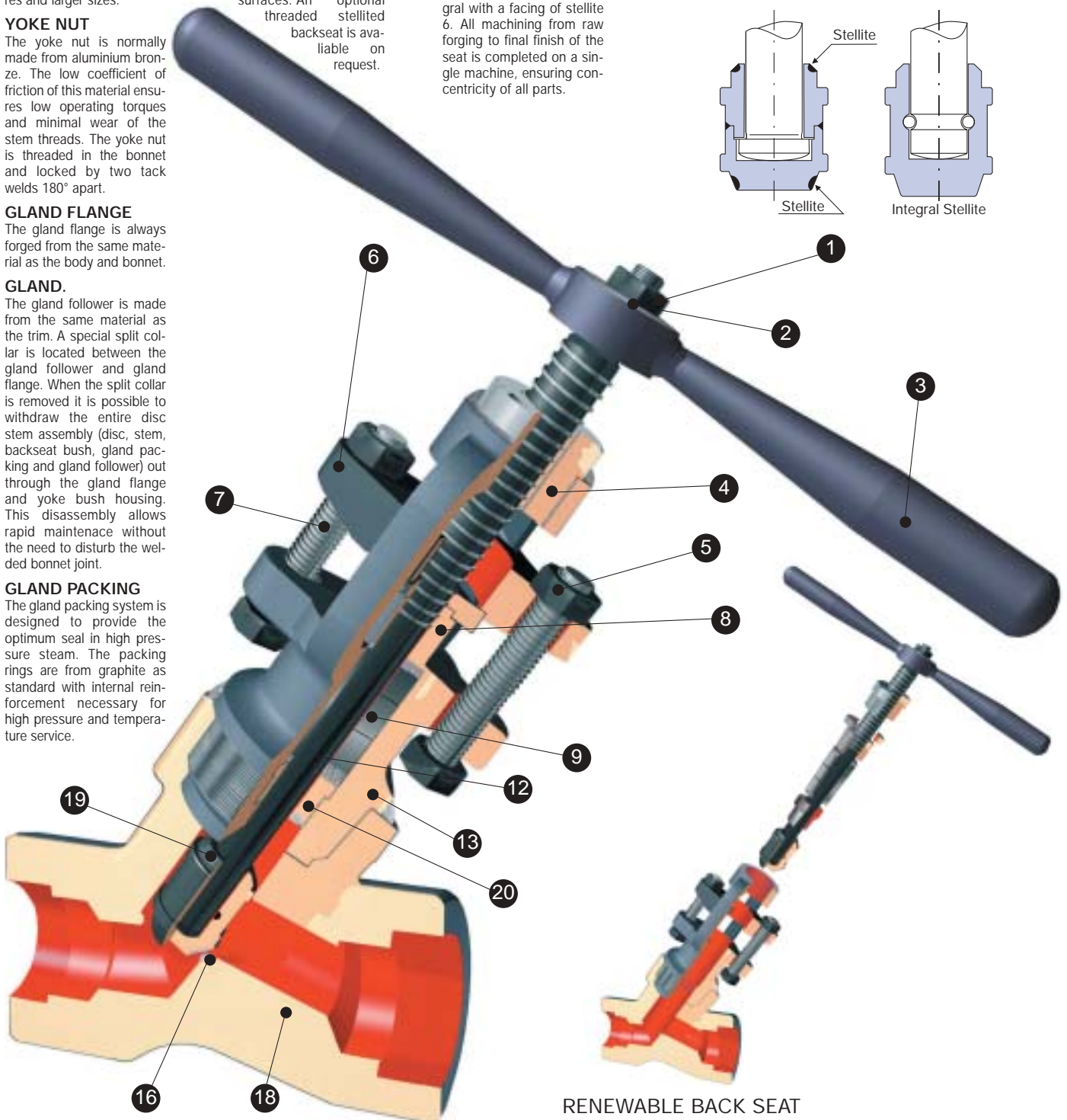
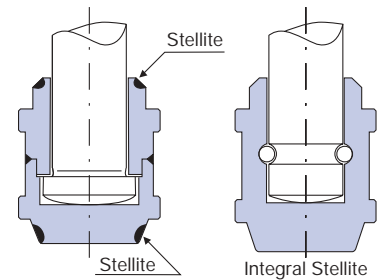
## BODY

The body is always forged carbon, alloy or stainless steel. The body seat is integral with a facing of stellite 6. All machining from raw forging to final finish of the seat is completed on a single machine, ensuring concentricity of all parts.

## DISC

The valve Disc is always faced with Stellite hardfacing. The disc is attached to the valve stem by two different methods depending on the nominal size and pressure class (see figure).

In every case the disc is free to rotate independently of the stem, so that during closure or backseating the disc does not rotate against the seat. The disc is body guided throughout its travel.



RENEWABLE BACK SEAT

# Class 2700 - Y Pattern

Fig. N. Y2530  
Fig. N. Y2530-SM

Integral back seat  
Renewable back seat (on request)

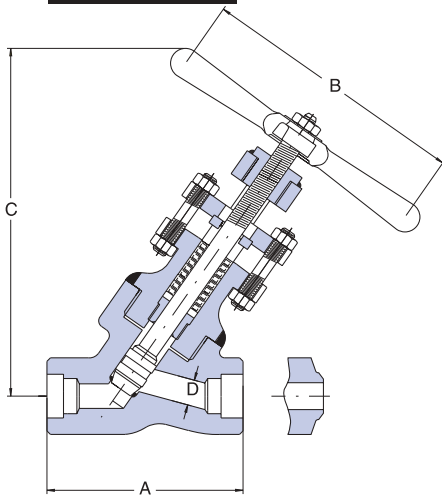
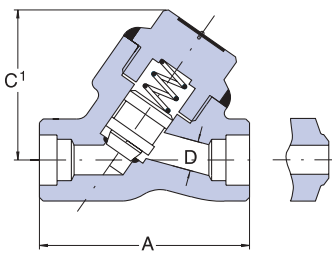


Fig. N. Y2540



Part	Standard Materials		
	A105N	F22	F91
1 WHEELNUT	Carbon Steel	Carbon Steel	Carbon Steel
2 NAMEPLATE	Aluminum	Aluminum	Aluminum
3 HANDWHEEL	Carbon Steel	Carbon Steel	Carbon Steel
4 YOKE NUT	ASTM A582 TYPE 416	ASTM A582 TYPE 416	ASTM A582 TYPE 416
5 GLAND NUT	ASTM A194 2H	ASTM A194 gr.8	ASTM A194 gr.8
6 GLAND FLANGE	ASTM A105	ASTM A182 F6	ASTM A182 F6
7 GLAND STUD	AISI 410	ASTM A193 B8	ASTM A193 B8
8 GLAND	ASTM A276 TYPE 410	ASTM A276 TYPE 410	ASTM A276 TYPE 410
9 PACKING	Graphite	Graphite	Graphite
12 STEM	ASTM A276 TYPE 410	ASTM A276 TYPE 410	ASTM A276 TYPE 410
13 BONNET	ASTM A105N	ASTM A182 F22	ASTM A182 F91
16 INTEGRAL SEAT	Stellite gr. 6	Stellite gr. 6	Stellite gr. 6
18 BODY	ASTM A105N	ASTM A182 F22	ASTM A182 F91
19 DISC	ASTM A276 TYPE 410 + Stellite gr. 6	ASTM A276 TYPE 410 + Stellite gr. 6	ASTM A276 TYPE 410 + Stellite gr. 6
20 BACKSEAT BUSH	ASTM A479 TYPE 316 (+ Stellite gr. 6 if requested)	ASTM A479 TYPE 316 (+ Stellite gr. 6 if requested)	ASTM A479 TYPE 316 (+ Stellite gr. 6 if requested)

RATING: Carbon Steel

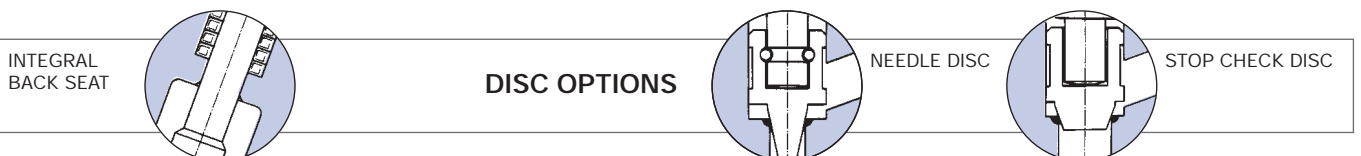
Classe 2500 = 6170 psi @ 100°F  
Classe 2700 = 6664 psi @ 100°F

**ANSI classe 2700** DN 1/2" ÷ 4"  
-ANSI B16.34-

THREADED ENDS (NPT) ASME B1.20.1  
SOCKET ENDS (SW) ASME B16.11  
BUTTWELDED ENDS (BW) ASME B16.25

SIZE	1/2"		3/4"		1"		1.1/4"		1.1/2"		2"		2 1/2"		3"		4"		
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
End to End	A	127 5.00	127 5.00	155 6.10	155 6.10	180 7.08	180 7.08	225 8.86	225 8.86	225 8.86	225 8.86	305 12.00							
Handwheel	B	130 5.11	130 5.11	180 7.08	180 7.08	180 7.08	180 7.08	400 15.75	400 15.75	400 15.75	400 15.75	400 15.75							
Center to Top Open	C	280 11.02	280 11.02	370 14.56	370 14.56	420 16.53	420 16.53	450 17.71	450 17.71	500 19.68	500 19.68	580 22.83							
Center to Top Open	C1	115 4.52	120 4.72	150 5.90	150 5.90	160 6.30	160 6.30	180 7.08	180 7.08	180 7.08	180 7.08	230 9.05							
Dia. of Port	D	11 0.43	15 0.59	19 0.76	27 1.08	31 1.24	31 1.24	39 1.53	50 1.96	50 1.96	60 2.36	60 2.36							
Approx. Weight (Y2530)	Kg/Lb	4.5 9.9	7.1 15.6	7.6 16.7	9.8 21.5	17.1 37.6	17.1 37.6	36 79.2	34 74.8	34 74.8	34 74.8	50 110.1							
Approx. Weight (Y2540)	Kg/Lb	3.5 7.7	3.5 7.7	6.2 13.6	5.6 12.3	10.4 22.9	10.4 22.9	14 30.8	16.5 36.3	16.5 36.3	16.5 36.3	35 77.1							

2 1/2" - 3" - 4" BUTT WELD ENDS





# Valve Specialists

# FORGED STEEL VALVES

### HANDWHEEL

The Handwheel is normally forged steel. This is designed to allow the operator to shut the valve easily and safely. The Handwheel is secured by a nut and washer. An impactor lever is used for the higher pressures and larger sizes.

### YOKE NUT

The yoke nut is normally made from aluminium bronze. The low coefficient of friction of this material ensures low operating torques and minimal wear of the stem threads. The yoke nut is threaded in the bonnet and locked by two tack welds 180° apart.

### GLAND FLANGE

The gland flange is always forged from the same material as the body and bonnet.

### GLAND.

The gland follower is made from the same material as the trim. A special split collar is located between the gland follower and gland flange. When the split collar is removed it is possible to withdraw the entire disc stem assembly (disc, stem, backseat bush, gland packing and gland follower) out through the gland flange and yoke bush housing. This disassembly allows rapid maintenance without the need to disturb the welded bonnet joint.

### GLAND PACKING

The gland packing system is designed to provide the optimum seal in high pressure steam. The packing rings are from graphite as standard with internal reinforcement necessary for high pressure and temperature service.

### BONNET.

The bonnet is always made from the same grade of forged steel as the body. The bonnet joint is screwed and seal welded. The bonnet is machined in a single operation ensuring the concentricity of bores and mating surfaces. An optional threaded stellited backseat is available on request.

### STEM

The Stem material choice is based on customer requirements. The stem thread is ACME.

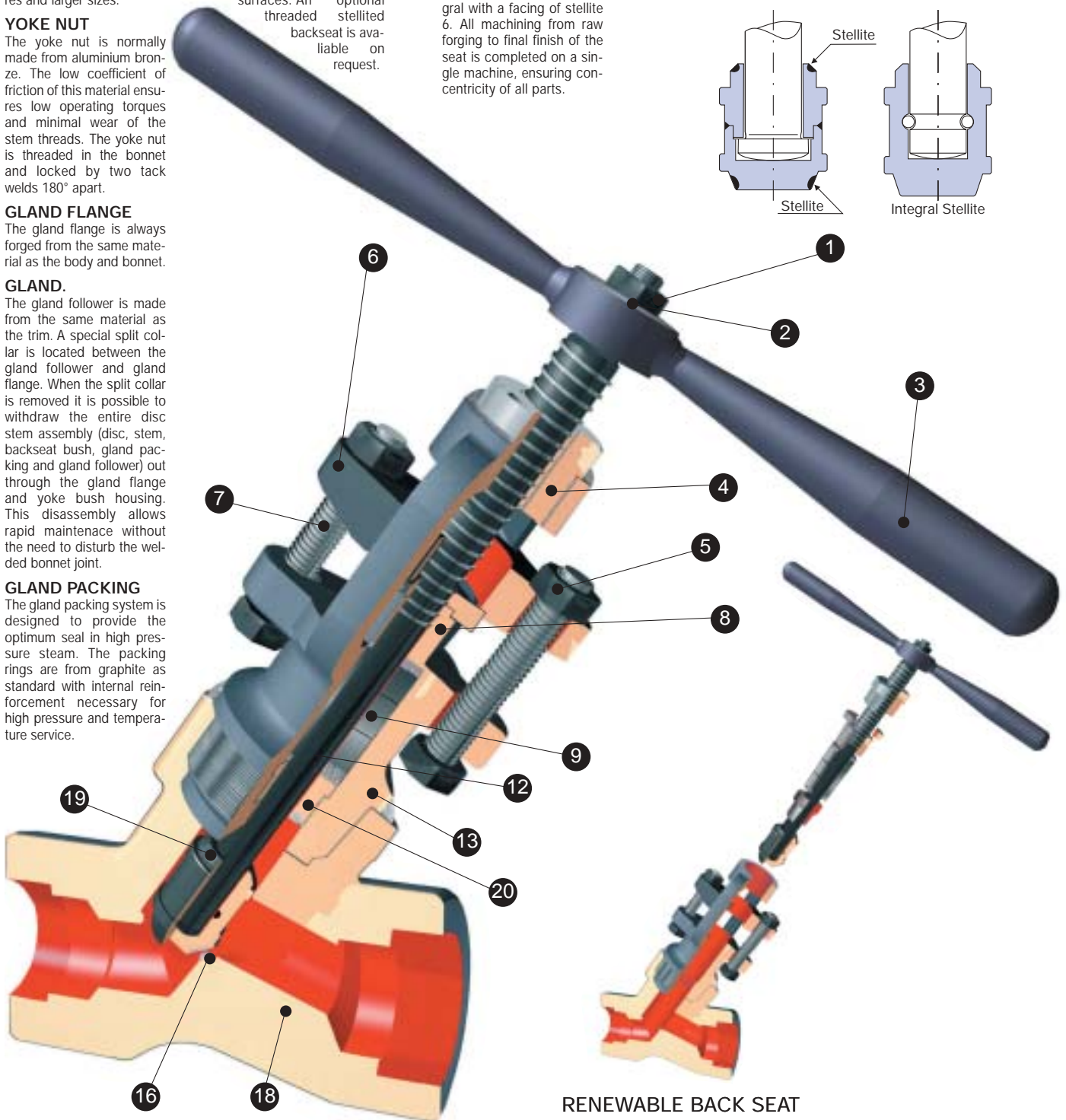
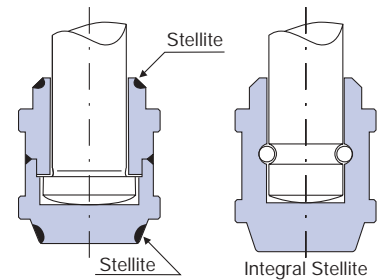
### BODY

The body is always forged carbon, alloy or stainless steel. The body seat is integral with a facing of stellite 6. All machining from raw forging to final finish of the seat is completed on a single machine, ensuring concentricity of all parts.

### DISC

The valve Disc is always faced with Stellite hardfacing. The disc is attached to the valve stem by two different methods depending on the nominal size and pressure class (see figure).

In every case the disc is free to rotate independently of the stem, so that during closure or backseating the disc does not rotate against the seat. The disc is body guided throughout its travel.



RENEWABLE BACK SEAT

# Class 4500 - Y Pattern

Fig. N. Y4530  
Fig. N. Y4540-SM

Integral back seat  
Renewable back seat (on request)

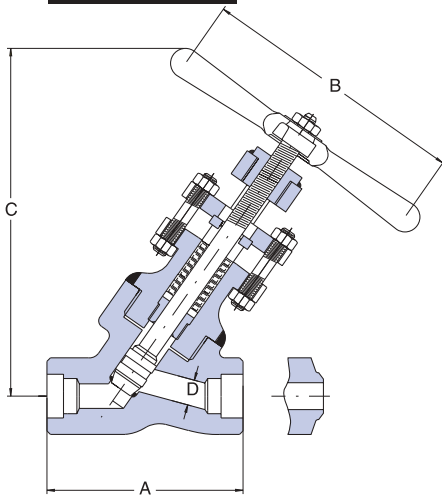
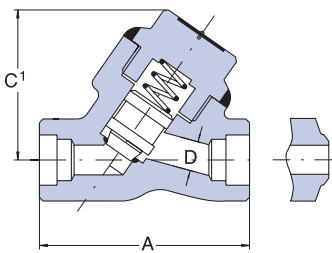


Fig. N. Y4540



Part	Standard Materials	
	A105N	F22
1 WHEELNUT	Carbon Steel	Carbon Steel
2 NAMEPLATE	Aluminum	Aluminum
3 HANDWHEEL	Carbon Steel	Carbon Steel
4 YOKENUT	ASTM A582 TYPE 416	ASTM A582 TYPE 416
5 GLAND NUT	ASTM A194 2H	ASTM A194 gr.8
6 GLAND FLANGE	ASTM A105	ASTM A182 F6
7 GLAND STUD	AISI 410	ASTM A193 B8
8 GLAND	ASTM A276 TYPE 410	ASTM A276 TYPE 410
9 PACKING	Graphite	Graphite
12 STEM	ASTM A276 TYPE 410	ASTM A276 TYPE 410
13 BONNET	ASTM A105N	ASTM A182 F22
16 INTEGRAL SEAT	Stellite gr. 6	Stellite gr. 6
18 BODY	ASTM A105N	ASTM A182 F22
19 DISC	ASTM A276 TYPE 410 + Stellite gr. 6	ASTM A276 TYPE 410 + Stellite gr. 6
20 BACKSEAT BUSH	ASTM A479 TYPE 316 (+ Stellite gr. 6 if requested)	ASTM A479 TYPE 316 (+ Stellite gr. 6 if requested)

RATING: Carbon Steel

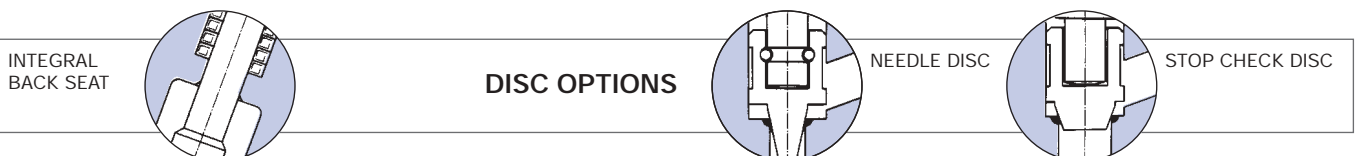
Classe 4500 = 11.110 psi @ 100°F

**ANSI classe 4500** DN 1/2" ÷ 2"  
-ANSI B16.34-

SOCKET ENDS (SW) ASME B16.11  
BUTT WELD ENDS (BW) ASME B16.25

SIZE		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	<b>A</b>	155	6.10	155	6.10	155	6.10	180	7.08	225	8.86	225	8.86
Handwheel	<b>B</b>	180	7.08	180	7.08	180	7.08	300	11.81	400	15.75	400	15.75
Center to Top Open	<b>C</b>	350	13.78	350	13.78	380	14.96	430	16.93	480	18.90	480	18.90
Center to Top Open	<b>C1</b>	120	4.72	120	4.72	150	5.90	150	6.30	180	7.08	180	7.08
Dia. of Port	<b>D</b>	11	0.43	11	0.43	15	0.59	19.5	0.76	26	1.02	28	1.10
Approx. Weight (Y4530)	<b>Kg/Lb</b>	9.36	12.1	9.4	20.7	10.5	23.1	15.5	34.1	38	83.7	38	83.7
Approx. Weight (Y4540)	<b>Kg/Lb</b>	8.5	18.7	8.5	18.7	8.5	18.7	10.5	23.1	16.5	36.3	16.5	36.3

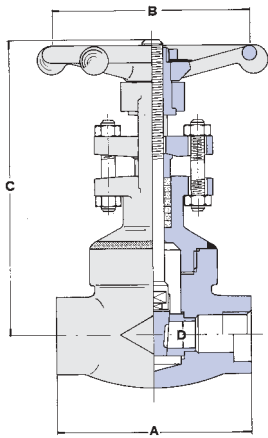
2 1/2" - 3" - 4" BUTT WELD ENDS





Valve Specialists

# FORGED STEEL VALVES

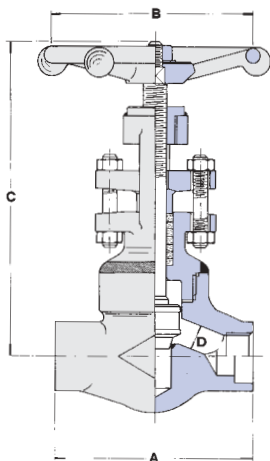


RATINGS: Carbon Steel- 3705 p.s.i. @ 100°F

## CLASS 1500

GATE VALVE - WELDED BONNET - REGULAR AND FULL PORT - API 602 - BS5352  
Outside Screw & Yoke - Threaded, Socket and Butt Weld Ends

	Fig. N.	-		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"		-	
REGULAR PORT	LR910																
FULL PORT	L910	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	90	3.54	90	3.54	110	4.33	127	5	127	5	127	5	210	8.26	210	8.26
Handwheel	B	90	3.54	90	3.54	110	4.33	110	4.33	130	5.11	130	5.11	180	7.08	180	7.08
Center to Top Open	C	145	5.7	160	6.29	175	6.89	210	8.26	240	9.45	260	10.2	355	13.9	360	14.1
Dia. of Port	D	8	0.31	10	0.39	14	0.55	19	0.75	24	0.94	30	1.18	37	1.45	40	1.57
Approx. Weight	Kg/Lb	2.2	4.8	2.2	4.8	3.8	8.3	5.5	12.1	6.8	15	9	19.8	18	39.6	17.5	38.5



RATINGS: Carbon Steel- 3705 p.s.i. @ 100°F

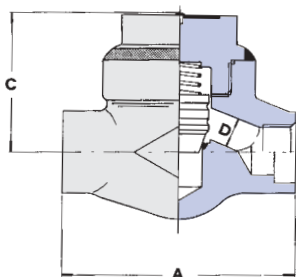
## CLASS 1500

GLOBE VALVE - WELDED BONNET - REGULAR AND FULL PORT - BS 5352  
Outside Screw & Yoke - Threaded, Socket and Butt Weld Ends

	Fig. N.	-		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"		-	
REGULAR PORT	LR930																
FULL PORT	L930	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	90	3.54	90	3.54	110	4.33	127	5.00	155	6.10	170	6.69	210	8.26	210	8.26
Handwheel	B	90	3.54	90	3.54	110	4.33	130	5.11	130	5.11	180	7.08	180	7.08	180	7.08
Center to Top Open	C	160	6.29	160	6.29	175	6.88	210	8.26	244	9.60	250	9.84	370	14.5	375	14.7
Dia. of Port	D	7	0.28	9	0.35	13	0.51	17	0.67	21	0.83	28	1.10	33	1.30	37.5	1.48
Approx. Weight	Kg/Lb	2.2	4.8	2.2	4.8	3.9	8.5	6	13.2	8	17.6	12	26.4	19	41.8	18.5	40.7

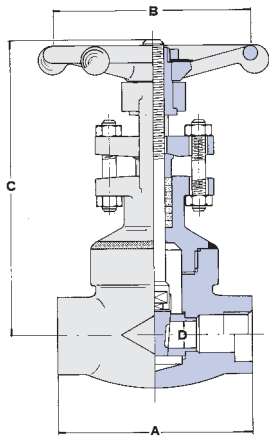
## CLASS 1500

CHECK VALVE - PISTON TYPE - REGULAR AND FULL PORT - BS 5352  
Welded Cover - Threaded, Socket and Butt Weld Ends



RATINGS: Carbon Steel- 3705 p.s.i. @ 100°F

	Fig. N.	-		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"		-	
REGULAR PORT	LR940																
FULL PORT	L940	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	90	3.54	90	3.54	110	4.33	127	5.00	155	6.10	170	6.69	210	8.26	210	8.26
Center to Top	C	60	2.36	60	2.36	73	2.87	80	3.14	98	3.85	110	4.33	150	5.90	150	5.90
Dia. of Port	D	7	0.28	9	0.35	13	0.51	17	0.67	21	0.83	28	1.10	33	1.30	37.5	1.47
Approx. Weight	Kg/Lb	1.5	3.3	1.5	3.3	2.8	6.1	4.6	10.1	7.4	16.3	9	19.8	15	33.0	14.5	31.9

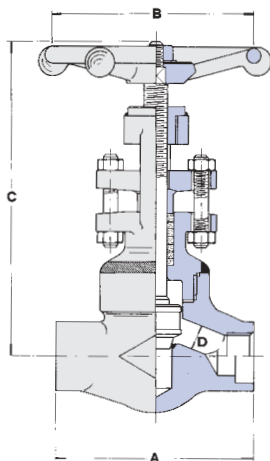


RATINGS: Carbon Steel- 6170 p.s.i. @ 100°F

## CLASS 2500

GATE VALVE - WELDED BONNET - FULL PORT - B16.34  
Outside Screw & Yoke - Threaded, Socket and Butt Weld Ends

FULL PORT	Fig. N.	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	127	5.00	127	5.00	127	5.00	-	-	235	9.25	235	9.25
Handwheel	B	-	-	-	-	130	5.11	130	5.11	130	5.11	-	-	300	11.8	300	11.8
Center to Top Open	C	-	-	-	-	214	8.42	239	7.40	253	9.96	-	-	425	16.7	430	16.9
Dia. of Port	D	-	-	-	-	14	0.55	19	0.75	24	0.94	-	-	37	1.45	37	1.45
Approx. Weight	Kg/Lb	-	-	-	-	58	12.7	7	15.4	10	22.0	-	-	26	57.3	25.5	56.2

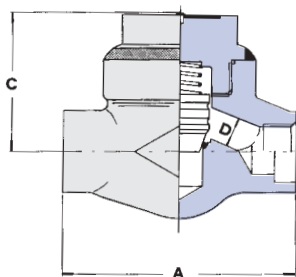


RATINGS: Carbon Steel- 6170 p.s.i. @ 100°F

## CLASS 2500

GLOBE VALVE - WELDED BONNET - FULL PORT - B16.34  
Outside Screw & Yoke - Threaded, Socket and Butt Weld Ends

FULL PORT	Fig. N.	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	127	5.00	155	6.10	170	6.69	-	-	235	9.25	235	9.25
Handwheel	B	-	-	-	-	130	5.11	130	5.11	130	5.11	-	-	300	11.8	300	11.8
Center to Top Open	C	-	-	-	-	237	9.33	242	9.52	256	10.1	-	-	430	16.9	435	17.1
Dia. of Port	D	-	-	-	-	13	0.51	17	0.67	21	0.83	-	-	33	1.30	35	1.37
Approx. Weight	Kg/Lb	-	-	-	-	6.5	14.3	8.5	18.7	12.5	27.5	-	-	26	57.2	25.5	56.1



RATINGS: Carbon Steel- 6170 p.s.i. @ 100°F

## CLASS 2500

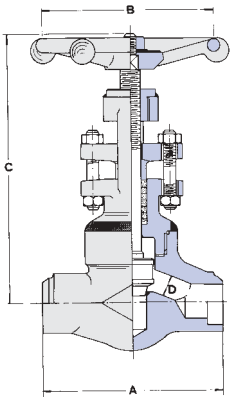
CHECK VALVE - PISTON TYPE - FULL PORT - B16.34  
Welded Cover - Threaded, Socket and Butt Weld Ends

FULL PORT	Fig. N.	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	127	5.00	155	6.10	170	6.69	-	-	235	9.25	235	9.25
Center to Top	C	-	-	-	-	80	3.14	98	3.85	110	4.33	-	-	170	6.69	170	6.69
Dia. of Port	D	-	-	-	-	13	0.51	17	0.67	21	0.83	-	-	33	1.30	35	1.37
Approx. Weight	Kg/Lb	-	-	-	-	5	11.0	8	17.6	10	22.0	-	-	21.5	47.3	21.3	46.9



Valve Specialists

# FORGED STEEL VALVES



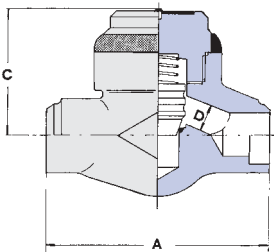
RATINGS: Carbon Steel- 11110 p.s.i. @ 100°F

## CLASS 4500

GLOBE VALVE - WELDED BONNET - FULL PORT - B16.34  
Outside Screw & Yoke - Socket and butt Weld Ends

FULL PORT	Fig. N. L4530	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	155	6.10	170	6.69	210	8.26	-	-	235	9.25	-	-
Handwheel	B	-	-	-	-	180	7.08	250	9.84	250	9.84	-	-	300	11.8	-	-
Center to Top Open	C	-	-	-	-	240	9.44	285	11.2	350	13.7	-	-	410	16.1	-	-
Dia. of Port	D	-	-	-	-	11	0.43	11	0.43	14	0.55	-	-	28	1.10	-	-
Approx. Weight	Kg/Lb	-	-	-	-	9	19.8	13	28.6	24.5	53.9	-	-	28	61.7	-	-

2" On Request



RATINGS: Carbon Steel- 11110 p.s.i. @ 100°F

## CLASS 4500

CHECK VALVE - PISTON TYPE - FULL PORT - B16.34  
Welded Cover - Socket and butt Weld Ends

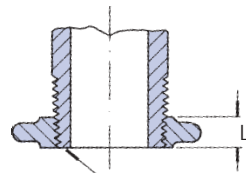
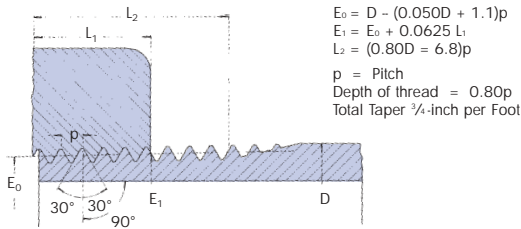
FULL PORT	Fig. N. L4540	1/4"		3/8"		1/2"		3/4"		1"		1.1/4"		1.1/2"		2"	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
End to End	A	-	-	-	-	155	6.10	170	6.69	210	8.26	-	-	235	9.25	-	-
Center to Top Open	C	-	-	-	-	98	3.85	110	4.33	150	5.90	-	-	170	6.69	-	-
Dia. of Port	D	-	-	-	-	11	0.43	11	0.43	14	0.55	-	-	28	1.10	-	-
Approx. Weight	Kg/Lb	-	-	-	-	8	17.6	10	22.0	17.5	38.5	-	-	23	50.6	-	-

2" On Request

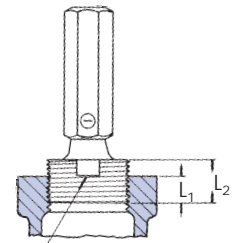
# THREADS - ASME B1.20.1

Nominal Pipe size	D Outside diameter of pipe	Number of threads per inch	P pitch of thread	E <sub>0</sub> Pitch diameter at end of external thread	E <sub>1</sub> ■ Pitch diameter at end of external	L <sub>1</sub> ● Normal engagement by and between external and internal threads	L <sub>2</sub> ◆ Length of effective external thread	Height of thread
1/16	0.3125	27	0.03704	0.27118	0.28118	0.160	0.2611	0.02963
1/8	0.405	27	0.03704	0.36351	0.37360	0.1615	0.2639	0.02963
1/4	0.540	18	0.05556	0.47739	0.49163	0.2278	0.4018	0.04444
3/8	0.675	18	0.05556	0.61201	0.62701	0.240	0.4078	0.04444
1/2	0.840	14	0.07143	0.75843	0.77843	0.320	0.5337	0.05714
3/4	1.050	14	0.07143	0.96768	0.98887	0.339	0.5457	0.05714
1	1.315	11.5	0.08696	1.23863	1.23863	0.400	0.6828	0.06957
1 1/4	1.660	11.5	0.08696	1.55713	1.58338	0.420	0.7068	0.06957
1 1/2	1.900	11.5	0.08696	1.79609	1.82234	0.420	0.7235	0.06957
2	2.375	11.5	0.08696	2.26902	2.29627	0.436	0.7565	0.06957

■ Also pitch diameter at gauging notch ◆ Also length of plug gauge. ● Also length of ring gauge, and length from gauging notch to small end of plug gauge  
 \* For the 1/8 - 27 and 1/4 - 18 sizes ... E<sub>1</sub> approx. D = - (0.05D + 0.827) p.



Flush by hand



### TOLERANCE ON PRODUCT

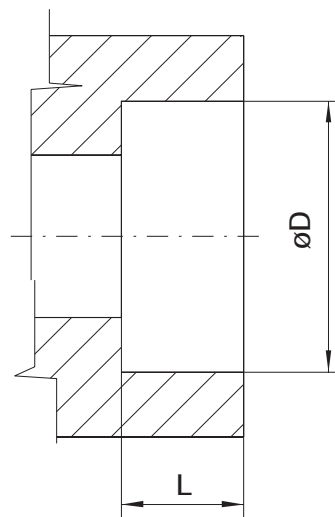
One turn large or small from notch on plug gauge or face of ring gauge.

Notch flush with face of fitting, if chamfered, notch flush with bottom of chamfer.

# SOCKET WELD ASME B16.11

Size	ØD		L (Min.)		L OMB	
	in	mm	in	mm	in	mm
1/4"	0.555	14.10	0.38	9.53	0.44	11.1
3/8"	0.690	17.53	0.38	9.53	0.44	11.1
1/2"	0.855	21.72	0.38	9.53	0.5	12.7
3/4"	1.065	27.05	0.5	12.70	0.57	14.5
1"	1.330	33.78	0.5	12.70	0.63	16.0
1 1/4"	1.675	42.54	0.5	12.70	0.69	17.5
1 1/2"	1.915	48.64	0.5	12.70	0.75	19.0
2"	2.406	61.11	0.62	15.88	0.86	22.0

Socket Wall Thickness conform to ASME B16.34





# FORGED STEEL VALVES

## Valve Specialists

### BUTT WELD - ASME B16.25

Size	SCHEDULE 40		SCHEDULE 80		SCHEDULE 160		SCHEDULE XXS	
	ØA	T	ØA	T	ØA	T	ØA	T
	In	In	In	In	In	In	In	In
1/2"	0.840	0.109	0.840	0.147	0.840	0.188	0.840	0.294
3/4"	1.050	0.113	1.050	0.154	1.050	0.219	1.050	0.308
1"	1.315	0.133	1.315	0.179	1.315	0.250	1.315	0.358
1 1/4"	1.660	0.140	1.660	0.191	1.660	0.250	1.660	0.382
1 1/2"	1.900	0.145	1.900	0.200	1.900	0.281	1.900	0.400
2"	2.375	0.154	2.375	0.218	2.375	0.344	2.350	0.436
2 1/2"	2.875	0.203	2.875	0.276	2.875	0.375	2.875	0.552
3"	3.500	0.216	3.500	0.300	3.500	0.438	3.500	0.600
4"	4.500	0.237	4.500	0.337	4.500	0.531	4.500	0.674

B = A - 2"

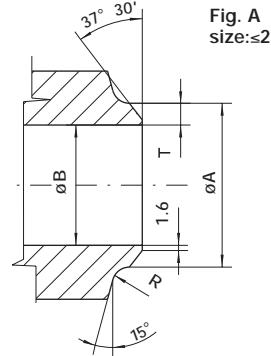


Fig. A  
size: ≤ 2

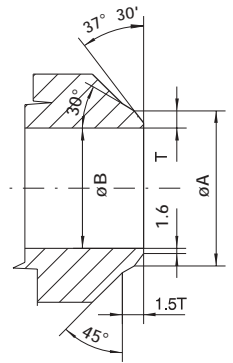


Fig. B  
size: > 2

Temperature °C	Pressure (Bar) Class 1700					Pressure (Bar) Class 2700					Pressure (Bar) Class 4500				
	Shell Material					Shell material					Shell Material				
	A105N	F11	F22	F91	F316	A105N	F11	F22	F91	F316	A105N	F11	F22	F91	F316
-29 +38	289.5	293.0	293.0	293.0	281.3	459.5	465.4	465.4	465.4	446.8	766.0	775.7	775.7	775.7	744.7
50	273.1	293.0	293.0	293.0	256.4	433.8	465.4	465.4	465.4	407.3	722.9	775.5	775.7	775.7	678.9
100	261.0	288.9	289.8	289.8	233.1	414.5	458.8	460.4	460.4	370.3	690.6	764.8	767.3	767.3	617.2
150	254.0	279.0	282.1	282.1	213.6	403.4	443.0	448.1	448.1	339.2	672.3	738.5	746.8	746.8	565.5
200	245.3	268.8	273.0	273.0	198.3	389.4	426.9	433.4	433.4	314.8	649.0	711.8	722.3	722.3	524.7
250	232.5	258.0	258.0	258.0	185.9	369.1	409.6	409.6	409.6	295.1	615.1	682.4	682.4	682.4	492.0
300	214.2	236.9	236.9	236.9	176.5	340.3	376.2	376.2	376.2	280.4	567.4	626.9	626.9	626.9	467.4
350	208.6	223.8	223.8	223.8	170.6	331.3	355.4	355.4	355.4	271.0	552.0	592.4	592.4	592.4	451.7
375	200.9	212.7	212.7	212.7	167.8	319.0	337.6	337.6	337.6	266.6	531.6	562.6	562.6	562.6	444.5
400	177.1	202.6	202.6	202.6	165.8	281.1	321.6	321.6	321.6	263.4	468.4	535.8	535.8	535.8	439.1
425	135.5	194.8	194.8	194.5	164.2	215.0	309.2	309.2	309.2	260.7	358.1	515.2	515.2	515.2	434.6
450	91.5	185.1	185.1	185.1	162.9	145.1	294.0	294.0	294.0	258.6	241.5	490.0	490.0	490.0	431.1
475	60.4	162.7	168.4	169.3	159.3	95.8	258.4	267.6	269.0	253.1	159.4	430.8	446.0	448.3	422.0
500	37.2	118.5	140.4	149.5	148.7	59.1	188.1	223.2	237.6	236.3	98.4	313.7	372.2	395.9	393.8
525		82.9	100.2	142.1	136.6		131.7	158.9	225.5	216.9		219.5	265.0	375.6	361.3
550		57.6	69.9	140.7	134.5		91.5	110.9	223.5	213.5		152.5	185.2	372.5	355.7
575		40.3	46.7	121.3	121.5		61.9	71.6	192.3	192.7		106.6	123.4	320.9	321.4
600		27.5	30.9	94.7	99.1		43.6	48.8	150.4	157.3		72.6	81.5	250.8	262.3
625		18.1	19.8	67.0	79.4		28.6	31.5	106.3	126.0		47.6	52.4	177.4	209.9
650					64.1					102.1					169.8
675					52.1					82.8					138.0
700					42.8					67.8					113.1
725					35.5					56.4					93.9
750					28.6					45.3					75.2
775					22.3					35.6					59.4
800					16.4					26.2					43.6

Temperature °F	Pressure (Psi) Class 1700					Pressure (Psi) Class 2700					Pressure (Psi) Class 4500				
	Shell Material					Shell material					Shell Material				
	A105N	F11	F22	F91	F316	A105N	F11	F22	F91	F316	A105N	F11	F22	F91	F316
-29 +100	4198	4250	4250	4250	4080	6664	6750	6750	6750	6480	11110	11250	11250	11250	10800
200	3825	4250	4250	4250	3508	6074	6750	6750	6750	5573	10120	11250	11250	11250	9290
300	3718	4091	4126	4126	3168	5907	6496	6555	6555	5033	9845	10830	10925	10925	8390
400	3592	3927	4000	4000	2912	5702	6237	6350	6350	4622	9505	10400	10585	10585	7705
500	3394	3768	3768	3768	2708	5389	5982	5982	5982	4298	8980	9965	9965	9965	7165
600	3100	3428	3428	3428	2556	4925	5443	5443	5443	4061	8210	9070	9070	9070	6770
700	3020	3218	3218	3218	2460	4795	5108	5108	5108	3909	7990	8515	8515	8515	6515
750	2856	3014	3014	3014	2420	4536	4784	4784	4784	3845	7560	7970	7970	7970	6410
800	2334	2878	2878	2878	2392	3704	4568	4568	4568	3801	6170	7610	7610	7610	6335
850	1518	2760	2760	2760	2368	2408	4384	4384	4384	3758	4010	7305	7305	7305	6265
900	974	2545	2545	2545	2352	1544	4044	4044	4044	3737	2570	6740	6740	6740	6230
950	584	1807	2137	2188	2188	928	2868	3397	3477	3477	1545	4785	5665	5795	5795
1000	294	1224	1478	2062	1983	464	1944	2344	3272	3148	770	3240	3910	5450	5245
1050		816	991	2040	1949		1296	1572	3240	3094		2160	2625	5400	5155
1100		544	623	1711	1729		864	988	2716	2748		1440	1645	4525	4575
1150		351	390	1263	1342		556	616	2004	2128		925	1030	3345	3550
1200		215	233	816	1049		340	372	1296	1668		565	615	2160	2775
1250					834					1328					2210
1300					662					1048					1750
1350					544					864					1440
1400					430					680					1130
1450					329					524					875
1500					233					372					620

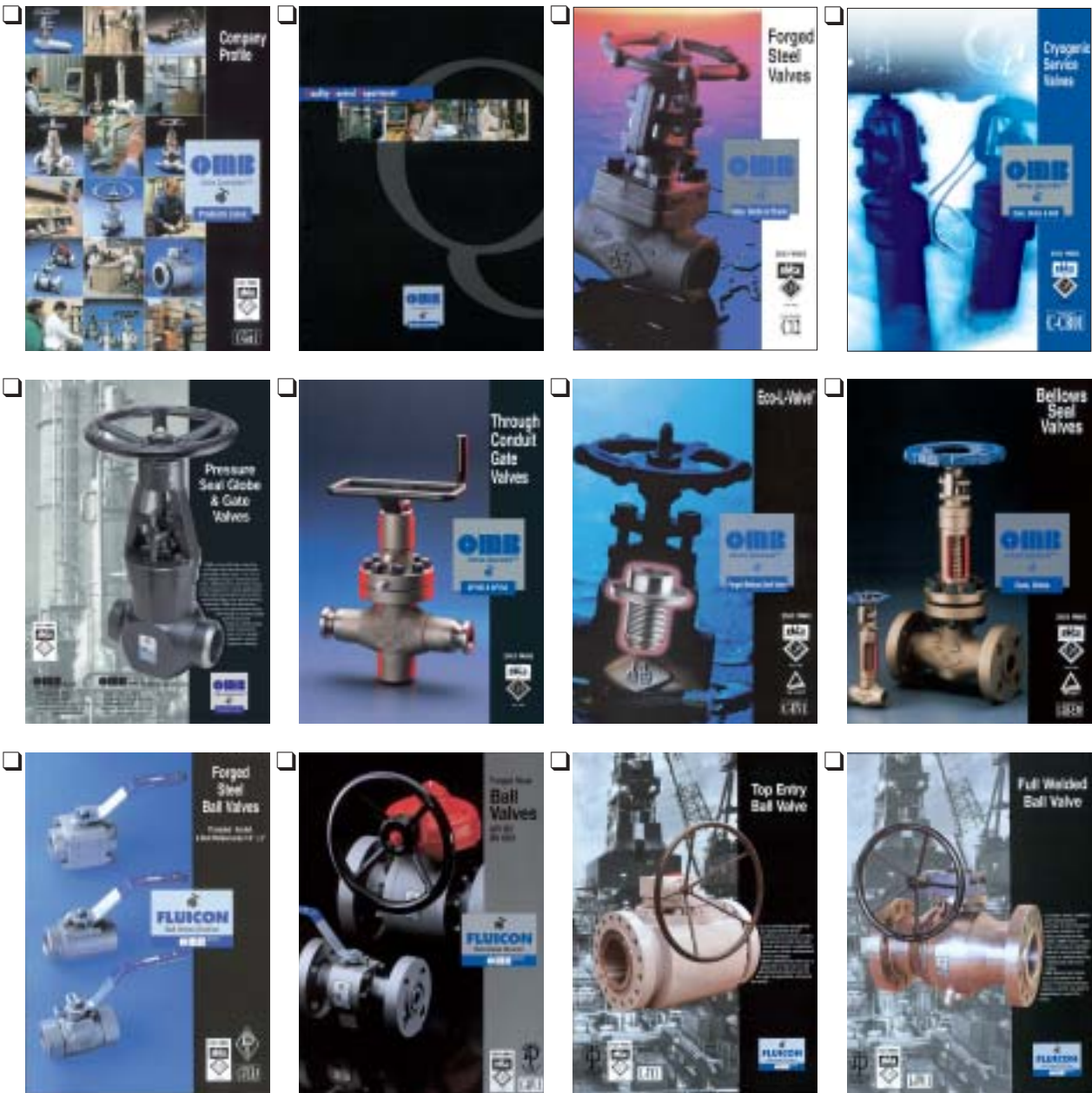
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