



*Vogt Valves*

## ***Vogt Valves***

*The Connection Bulletin for  
Extended Body Forged Steel Valves  
Welded Bonnet, Bolted Bonnet, Class 800 & Class 1500*

*CB 22*

## Extended Body Forged Steel Valves



An extended body gate valve specifically designed for pressure measurement, venting, draining and sampling applications.

The extended end concept has an inherently greater length-strength ratio than the traditional "valve with nipple" welded assembly. It accommodates varying insulation thickness.

This is a ready to install outlet which provides reliable performance as well as significant savings in installation, inspection and maintenance time.

- Forged Steel Gate Valves Conform to API-602

***An Extended Body Globe Valve Also Available.***

# Forged Steel Seal Weld Bonnet Gate Valves for Extended Body Valve Applications

Vogt Valves

CONFORMS TO API-602

Dimensions are in inches.

Order by Size and Series Number

- Outside screw & yoke
- Bolted gland
- Seal weld bonnet
- Solid wedge
- HF seats

## Class 800 Conventional Port

100° F Ratings for Valves  
Carbon Steel 1975 psi  
Type 316 1920 psi

For other ratings see page 9

SERIES NUMBER	MATERIAL		TYPE ENDS	ILLUSTRATION (See page 3 for dimensions)
	Body/Bonnet	Trim		
<b>TT 2801</b> Δ	Carbon Steel A105	13% Cr. ★	Integral Male Threaded Female Threaded	
<b>TT 2831</b> Δ	316	316	Integral Male Threaded Female Threaded	
<b>TT 2811</b> ◆ Δ (Inside Screw Stem)	Carbon Steel A105	13% Cr. ★	Integral Male Threaded Female Threaded	
<b>ST 2801</b>	Carbon Steel A105	13% Cr. ★	Integral Male Socket Weld Female Threaded	
<b>SS 2801</b>	Carbon Steel A105	13% Cr. ★	Female Socket Weld (not illustrated)	
<b>ST 2831</b>	316	316 ★	Integral Male Socket Weld Female Threaded	
<b>CT 2801</b>	Carbon Steel A105	13% Cr. ★	Integral Male Couplet Female Threaded	
<b>CT 2831</b>	316	316	Integral Male Couplet Female Threaded	
<b>CT 2901</b>	Carbon Steel A105	13% Cr. ★	Integrally Reinforced Extended Length Male Couplet Female Threaded	
<b>CS 2901</b>	Carbon Steel A105	13% Cr. ★	Female Socket Weld (not illustrated)	
<b>CT 2911</b> ◆ (Inside Screw Stem)	Carbon Steel A105	13% Cr. ★	Integrally Reinforced Extended Length Male Couplet Female Socket Weld	
<b>BT 2901</b>	A105	13% Cr. ★	Integrally Reinforced Extended Length Butt Weld End Female Threaded	

Carbon Steel material conforms to ASTM A105. Stainless Steel material conforms to ASTM A182-F316.

◆ Inside Screw Stem valves are not illustrated; however, OS&Y dimensions shown are applicable, except for the open/closed dimensions.

† Normally furnished to these lengths. Other lengths can be fabricated - see page 9.

Δ 1/2" TT 2801, TT 2811 and TT 2831 valves are not covered under API-602 Rules.

★ Seats are hard faced.



# Forged Steel Seal Weld Bonnet Gate Valves for Extended Body Valve Applications

CONFORMS TO API-602

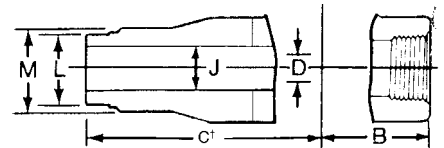
Dimensions are in inches.

Order by Size and Series Number

<b>Class 800</b> Conventional Port Seal Weld Bonnet		100° F Ratings for Valves														
		Carbon Steel	1975 psi	For other ratings see page 9												
Type 316	1920 psi															
Dimensions																
Valve Size	Weight in Pounds	A	B	C	D Max.	E	F Open	G Closed	H Handwheel Dia.	J	K	L	M	N	P	R
1/2	4.2	4.00	1.69	7.00	.47	.50	6.50	5.88	4.00	.64	.75	.84	1.25	.81	1.56	.97
3/4	4.2	4.00	1.69	7.00	.47	.50	6.50	5.88	4.00	.65	.75	1.05	1.25	.81	1.56	.97
1	7.4	4.38	2.00	7.50	.69	.75	8.31	7.38	4.75	.90	1.00	1.32	1.56	1.06	1.94	1.22
1 1/2	13.4	5.00	2.38	8.00	1.25	1.25	10.12	8.69	5.75	1.47	1.50	1.90	2.25	1.69	2.56	1.72

Order by Size and Series Number

Dimensions are in inches.

<b>Class 1500</b> Conventional Port Seal Weld Bonnet		100° F Ratings for Valves															
		Carbon Steel	3705 psi														
SERIES NUMBER	MATERIAL		TYPE ENDS	ILLUSTRATION													
	Body/Bonnet	Trim															
<b>ST 15801</b>	Carbon Steel A105	13% Cr. ★	Integral Male Socket Weld Female Threaded														
Dimensions																	
Valve	A	B	D	F Open	G Closed	H Handwheel Dia.	J	L	M								
1/2	4.69	2.00	.50	7.53	6.88	4.75	.69	.84	1.56								
3/4	4.69	2.00	.50	7.53	6.88	4.75	.75	1.05	1.56								
1	5.38	2.38	.75	9.69	8.78	7.00	1.12	1.32	2.25								

★ Seat is hard faced.

## Forged Steel Bolted Bonnet Gate Valves for Extended Body Valve Applications

**CONFORMS TO API-602**

Dimensions are in inches.

Order by Size and Series Number

- Outside screw & yoke
- Bolted gland
- Bolted bonnet
- Solid wedge
- HF seats

<b>Class 800 Conventional Port</b>		100° F Ratings for Valves Carbon Steel      1975 psi		For other ratings see page 9
<b>SERIES NUMBER</b>	<b>MATERIAL</b>		<b>TYPE ENDS</b>	<b>ILLUSTRATION</b> See page 6 for dimensions.
	Body/Bonnet	Trim		
<b>TT 12111</b>	Carbon Steel A105	13% Cr. ★	Male Threaded Female Threaded	
<b>ST 12111</b>	Carbon Steel A105	13% Cr. ★	Male Socket Weld Female Threaded	
<b>CT 12111</b>	Carbon Steel A105	13% Cr. ★	Integrally Reinforced Extended Length Male Couplet Female Threaded	
<b>CS 12111</b>	Carbon Steel A105	13% Cr. ★	Female Socket Weld (not illustrated)	
<b>BT 12111</b>	Carbon Steel A105	13% Cr. ★	Integrally Reinforced Extended Length Butt Weld End Female Threaded	
<b>BS 12111</b>	Carbon Steel A105	13% Cr. ★	Female Socket Weld (not illustrated)	

★ Seats are hard faced.

Can be disassembled for post weld heat treat procedure only if gate orientation is marked and maintained when reassembled. Note: Series CT12111 valves do not require an interfacing fitting. The valve can be welded directly to the pipe header or vessel as illustrated for CT2901, page 8.

† Normally furnished to these lengths. Other lengths can be fabricated - see page 9.

Δ 1/2" - TT 12111 valves are not covered by API-602 rules.



# Forged Steel Bolted Bonnet Gate Valves for Extended Body Valve Applications

*Vogt Valves*

Order by Size and Series Number

**CONFORMS TO API-602**

Dimensions are in inches.

<b>Class 800 Conventional Port</b>		100° F Ratings for Valves Carbon Steel      1975 psi		For other ratings see page 9											
<b>Dimensions</b>															
Valve Size	Weight in Pounds	A	B	C Max.	D Max.	E	F Open	G Closed	H Handwheel Dia.	J Max. Dia.	K	L	M	P	R
1/2	6.0	4.50	1.97	7.00	.47	.50	6.38	5.75	4.00	.64	.75	.84	1.56	1.56	.97
3/4	5.6	4.50	1.97	7.00	.50	.50	6.38	5.75	4.00	.75	.75	1.05	1.56	1.56	.97
1	9.4	5.25	2.09	7.50	.75	.75	8.31	7.38	4.75	1.00	1.00	1.32	1.94	1.94	1.22
1 1/2	13.4	6.00	2.72	8.00	1.25	1.25	10.12	8.69	5.75	1.50	1.50	1.90	2.56	2.56	1.72

★ Seats are hard faced.

Can be disassembled for post weld heat treat procedure if gate orientation is marked and maintained when reassembled. Note: Series CT12111 valves do not require an interfacing fitting. The valve can be welded directly to the pipe header or vessel as illustrated for CT2901, page 8.

† Normally furnished to these lengths. Other lengths can be fabricated - see page 9.

# Forged Steel Bolted Bonnet Globe Valves for Extended Body Valve Applications

## REPAIR IN-LINE

For in-line repair, this valve can be restored to first class service by lapping of the seat/disc, and can be disassembled before post weld heat treatment.

- Round bolted bonnet
- Spiral wound gasket
- Outside screw & yoke
- Bolted gland
- HF seat
- ASME B16.34

## THROTTLING

Lower Cv factors permit throttling. May be used for pressure snubbing applications (pressure gauges, etc.)

Order by Size and Series Number

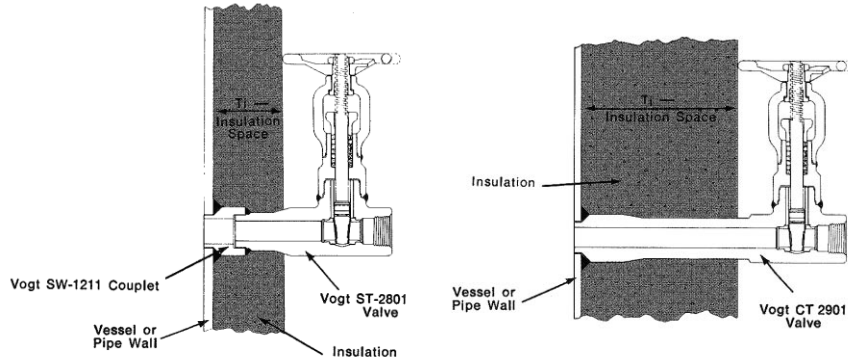
Dimensions are in inches.

SERIES NUMBER		MATERIAL		TYPE ENDS	ILLUSTRATION									
		Body/Bonnet	Trim											
<b>CT 12141</b>		Carbon Steel A105	13% Cr. ★	Integrally Reinforced Extended Length Male Couplet Female Threaded										
<b>ST 12141</b>		Carbon Steel A105	13% Cr. ★	Extended End Male Socket Weld Female Threaded										
<b>TT 12141</b>		Carbon Steel A105	13% Cr. ★	Extended End Male Threaded Female Threaded										
Dimensions														
Valve	A	B	C	G	H Open	J Closed	K Handwheel Dia.	L	M	N	P	R	S	T
1/2	7.00	2.00	.75	.50	6.62	6.19	4.00	.97	1.56	.84	.52	.31	4.50	1.44
3/4	7.00	2.00	.75	.50	6.62	6.19	4.00	.97	1.56	1.05	.65	.44	4.50	1.44
1	5.75	2.31	1.00	.75	8.44	7.81	4.75	1.22	1.94	1.32	.81	.44	5.25	1.75
1 1/2	6.50	3.12	1.47	1.28	10.38	9.47	5.75	1.72	2.56	1.90	1.47	.44	6.00	2.38
2	6.50	3.88	2.00	1.53	11.06	10.0	8.00	2.22	3.12	2.38	1.81	.56	6.00	2.94

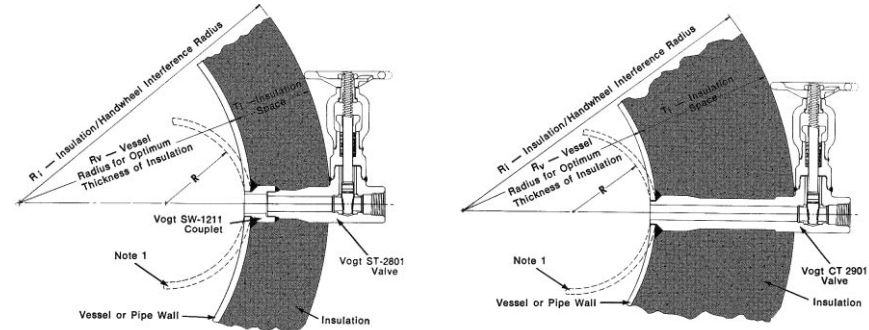
★ Body seat is hard faced.  
 Note: Series CT12141 valves do not require an interfacing fitting. The valve can be welded directly to the pipe header or vessel as illustrated for CT2901, page 8.  
 † Normally furnished to these lengths. Other lengths can be fabricated - see page 9.

# Insulation Capabilities

## FLAT SURFACES



## CURVED SURFACES



### OPTIMUM INSULATION THICKNESS

SERIES NUMBER	FLAT SURFACES		CURVED SURFACES			
	Valve Size	Ti Max Insulation Space	Valve Size	Ri Inches	Ti Max Insulation Space	Rv
<b>TT 2801</b> <b>TT 2811**</b> <b>TT 2831</b>	1/2	2.40	1/2	12.7	3.62	9.08
	3/4	2.45	3/4	12.7	3.66	9.04
	1	2.66	1	17.5	4.06	13.44
	1 1/2	3.06	1 1/2	21.9	4.65	17.25
<b>ST 2801</b> <b>ST 2831</b> <b>SS 2801</b>	1/2	2.63	1/2	12.7	3.84	8.86
	3/4	2.56	3/4	12.7	3.78	8.92
	1	2.87	1	17.5	4.28	13.22
	1 1/2	3.31	1 1/2	21.9	4.90	17.00
<b>CT 2801*</b> <b>CT 2831*</b>	1/2	2.00	1/2	12.7	3.22	9.48
	3/4	2.00	3/4	12.7	3.22	9.48
	1	2.00	1	17.5	3.41	14.09
	1 1/2	2.12	1 1/2	21.9	3.72	18.18
<b>CT 2901</b> <b>CT 2911</b>	1/2	4.87	1/2	12.7	6.10	6.60
	3/4	4.87	3/4	12.7	6.10	6.60
	1	5.00	1	17.5	6.41	11.09
	1 1/2	5.00	1 1/2	21.9	6.60	15.30

\* Series Numbers CT 2801 and CT 2831 valves do not require interfacing fitting. Valves can be welded directly to the vessel as illustrated for CT 2901.

\*\*The insulation space (Ti) for Series No. TT 2811 will exceed those shown in this table.

**Note 1:** For vessels with radius less than **Rv**, the insulation space (Ti) is increased. For vessels with radius greater than **Rv**, the insulation space (Ti) is decreased.



## Forged Steel Gate & Globe Valves for Extended Body Applications

**CT-2901, CT12111, CT12141,  
ST12141 & TT12141 Series...**  
can be modified for special applications



Vogt's unique method of construction of the Series CT-2901, CT12111 & CT12141, permits design flexibility and allows extended body valves to be modified with special extended male end dimension (either shorter or longer) while retaining the integral reinforcement feature. Users with special insulation thickness or space limitation requirements may find this feature desirable.

PRESSURE TEMPERATURE RATINGS			
Service Temperature (°F)	Class 800		Class 1500
	(1) (2) (4) Carbon Steel A105	(1) (3) A182- F316/316L	Carbon Steel A105
-20 to 100	1975	1920	3705
200	1800	1655	3375
300	1750	1495	3280
400	1690	1370	3170
500	1595	1275	2995
600	1460	1205	2735
650	1430	1185	2685
700	1420	1160	2665
750	1345	1140	2520
800	1100	1125	2060
850	715	1115	1340
900	460	1105	860
950	275	1030	515
1000	140	935	260
1050	—	—	—

- (1) Ratings are in accordance with procedures in ASME B16.34-96 Standard cClass.
- (2) Permissible but not recommended for prolonged use above 800°F.
- (3) F316 stainless steel containing max. carbon of .035. Do not use above 1000°F.
- (4) Only killed steel shall be used above 850°F.



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**FLOWSERVE CORPORATION**

**FLOW CONTROL DIVISION**

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