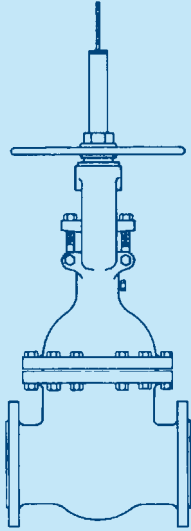




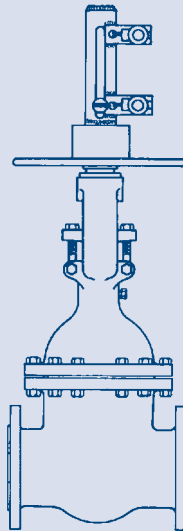
BONNEY FORGE

# ENGINEERING SPECIFICATIONS

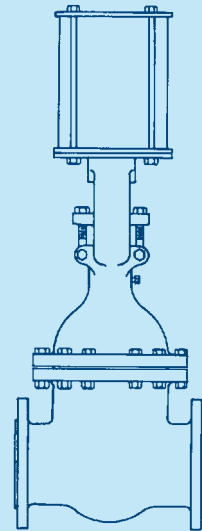
## SPECIAL FEATURES



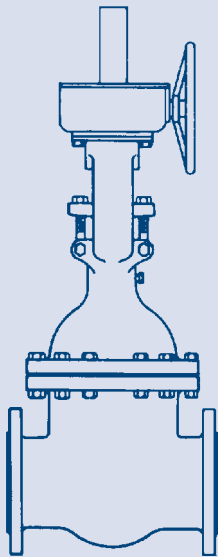
**LIFT  
INDICATOR**



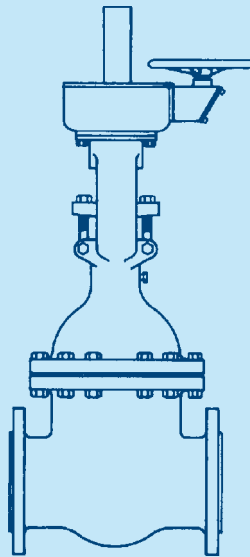
**LIMIT MICRO  
SWITCHES**



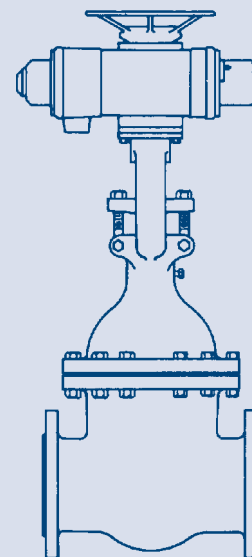
**PNEUMATIC  
OPERATOR**



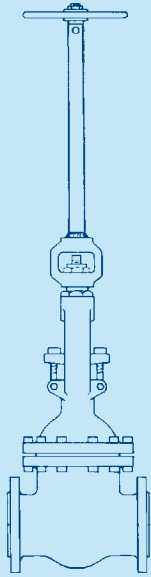
**BEVEL  
GEARING**



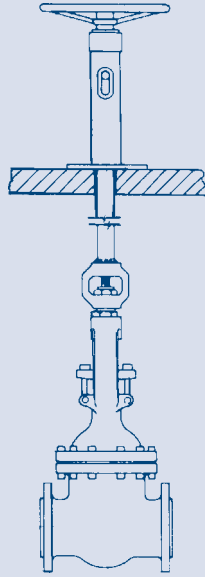
**BEVEL GEARING WITH  
HORIZONTAL HANDWHEEL**



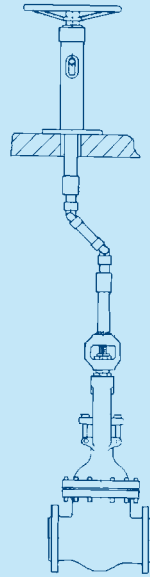
**ELECTRIC  
ACTUATOR**



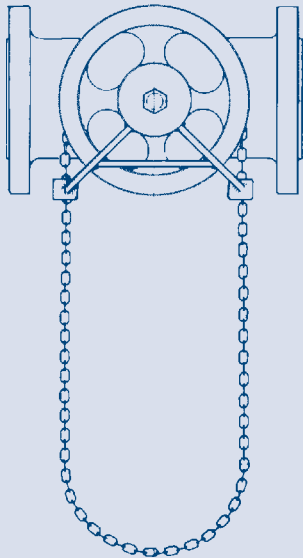
**EXTENSION  
STEM**



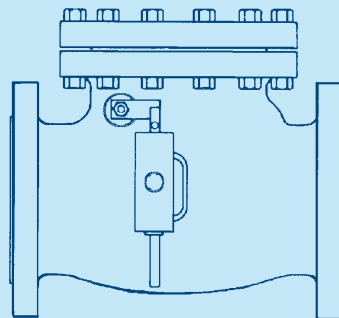
**FLOOR  
STAND**



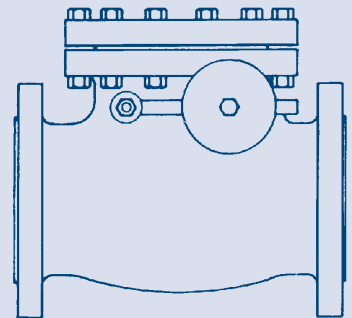
**FLOOR STAND WITH  
UNIVERSAL JOINT**



**CHAIN  
WHEEL**



**CHECK VALVE  
WITH DASH POT**



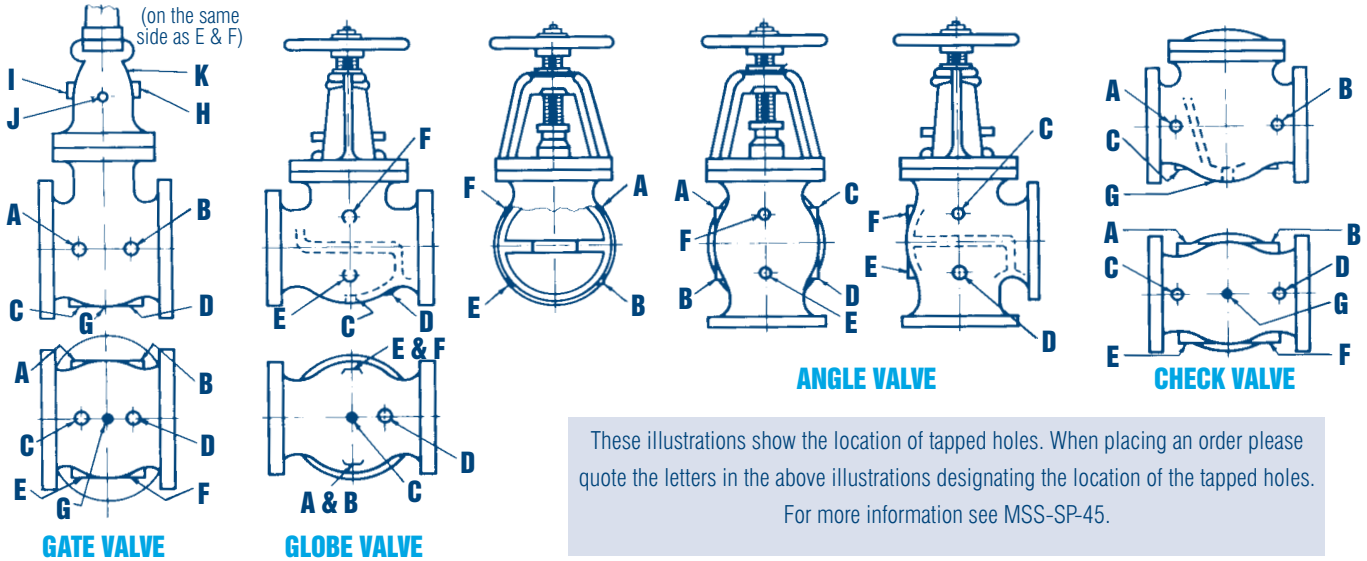
**CHECK VALVE WITH  
OUTSIDE LEVER & WEIGHT**



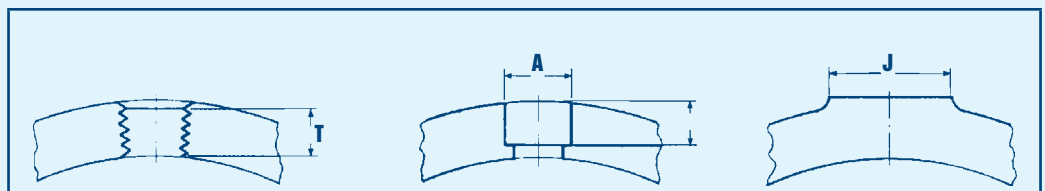
BONNEY FORGE

# ENGINEERING SPECIFICATIONS

## BYPASS & DRAIN CONNECTION



## DRAIN & BYPASS DIMENSIONS



	THREAD FOR CONNECTION TAPPING	SOCKET WELDING FOR CONNECTIONS	BOSSES FOR CONNECTIONS	
<b>Size of Valve</b>		2" to 4"	5" to 8"	10" to 24"
<b>Size of Tapping</b>		1/2	3/4	1
<b>Length of Thread</b>	T	9/16	9/16	11/16
<b>Minimum Diameter of Socket</b>	A	7/8	1 1/16	1 5/16
<b>Minimum Depth of Socket</b>	B	3/16	1/4	1/4
<b>Diameter of Boss</b>	J	1 1/2	1 3/4	2 1/8

All dimensions given in inches

Bonney Forge valves can be equipped with by-passes which permit equalization of pressure on both sides of the valve. Unless otherwise specified the by-pass arrangement will be furnished on the side of the main valve. By-passes of other types can be made to order. Inquiries should give complete description or drawings.

By-pass valves are "Bonney Forge" forged steel bolted-bonnet, outside screw and yoke, socket-weld end globe valves, and materials are suitable for the same service as the main valve.

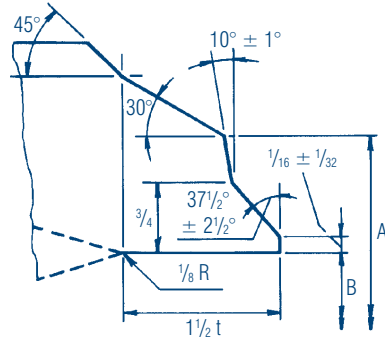
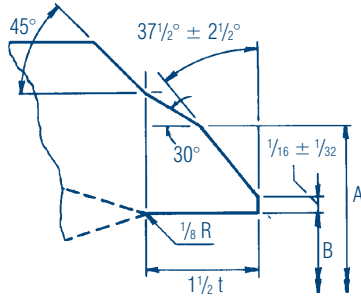


BONNEY FORGE

# ENGINEERING SPECIFICATIONS

## BUTT-WELDING ENDS

ASME B 16.25



Figures refer to  
**ASME B 16.25**

**IMPORTANT:** When ordering butt welding end valves please state the type of ends required and give the pipe dimensions or schedule number.

STD = Standard Wall Thickness  
XS = Extra Strong Wall Thickness  
XXS = Double Extra Strong Wall Thickness

All dimensions given in inches  
Designations per ASME B 16.25

Nominal Pipe Size	Nominal Pipe OD	Schedule Number	Valve OD A	Nominal ID B	Wall Thickness of Pipe T
2 1/2	2.875	40	2.875	0.203	2.469
		80		0.276	2.0323
		160		0.375	2.125
		XXS		0.552	1.771
3	3.500	40	3 19/32	0.216	3.068
		80		0.300	2.900
		160		0.438	2.624
		XXS		0.600	2.300
4	4.500	40	4 5/8	0.237	4.026
		80		0.337	3.826
		120		0.438	3.624
		160		0.531	3.438
5	5.563	40	5 11/16	0.258	5.047
		80		0.375	4.813
		120		0.500	4.563
		160		0.625	4.313
6	6.625	40	6 25/32	0.280	6.065
		80		0.432	5.761
		120		0.562	5.501
		160		0.719	5.187
8	8.625	40	8 25/32	0.322	7.981
		60		0.406	7.813
		80		0.500	7.625
		100		0.594	7.437
10	10.750	120	10 15/16	0.719	7.187
		140		0.812	7.001
		160		0.875	6.875
		XXS		0.906	6.813
12	12.750	40	12 31/32	0.365	10.020
		60		0.500	9.750
		80		0.594	9.562
		100		0.719	9.312
14	14.000	120	14 1/4	0.844	9.062
		140		1.000	8.750
		160		1.125	8.500
		XXS		1.312	8.126
16	16.000	40	16 1/4	0.375	12.000
		60		0.406	11.938
		80		0.500	11.750
		100		0.562	11.625
18	18.000	120	18 9/32	0.688	11.375
		140		1.000	10.750
		160		1.125	10.500
		XXS		1.312	10.126
20	20.000	40	20 5/16	0.375	13.250
		60		0.438	13.125
		80		0.500	13.000
		100		0.594	12.812
24	24.000	120	24 3/8	0.750	12.500
		140		0.938	12.124
		160		1.094	11.812
		XXS		1.250	11.500
24	24.000	30	24 3/8	0.375	15.250
		40		0.500	15.000
		60		0.656	14.688
		80		0.844	14.312
24	24.000	100	24 3/8	1.031	13.938
		120		1.219	13.562
		140		1.438	13.124
		160		1.594	12.812
24	24.000	40	24 3/8	0.562	16.876
		60		0.750	16.500
		80		0.938	16.124
		100		1.156	15.688
24	24.000	120	24 3/8	1.375	15.250
		140		1.562	14.876
		160		1.781	14.438
		XXS		1.969	14.062
24	24.000	30	24 3/8	0.562	18.812
		40		0.688	18.376
		60		0.969	17.938
		80		1.219	17.438
24	24.000	100	24 3/8	1.500	17.000
		120		1.750	16.500
		140		2.062	16.062
		160		2.344	15.624



BONNEY FORGE

# ENGINEERING SPECIFICATIONS

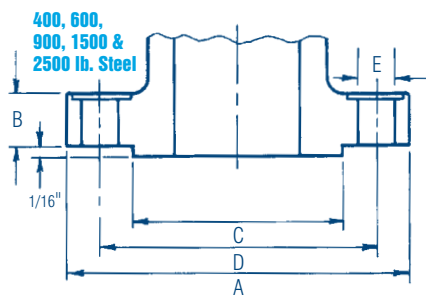
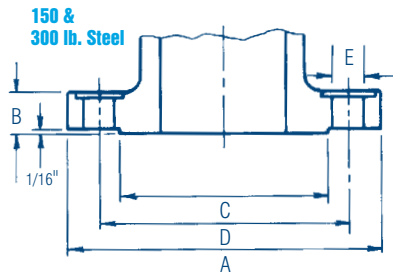
## FLANGE DIMENSIONS ASME B 16.5 and MSS-SP-44

	Nominal Pipe Size	Flange Diameter A	Flange Thickness		Diameter of Raised Face C	Diameter of Bolt Circle D	Diameter of Bolt Holes E	Number of Bolts	Diameter of Bolts
			Companion Flange B	Valve Flange B					
<b>ASME 150</b>	1/2	3 1/2	7/16	-	1 3/8	2 3/8	5/8	4	1/2
	3/4	3 1/2	1/2	-	1 11/16	2 3/4	5/8	4	1/2
	1	4 1/2	9/16	7/16	2	3 1/8	5/8	4	1/2
	1 1/4	4 1/2	5/8	1/2	2 1/2	3 1/2	5/8	4	1/2
	1 1/2	5	11/16	9/16	2 7/8	3 7/8	5/8	4	1/2
	2	6	3/4	5/8	3 5/8	4 3/4	3/4	4	5/8
	2 1/2	7	7/8	11/16	4 1/8	5 1/2	3/4	4	5/8
	3	7 1/2	15/16	3/4	5	6	3/4	4	5/8
	3 1/2	8 1/2	15/16	13/16	5 1/2	7	3/4	8	5/8
	4	9	15/16		6 3/16	7 1/2	3/4	8	5/8
	5	10	15/16		7 5/16	8 1/2	7/8	8	3/4
	6	11	1		8 1/2	9 1/2	7/8	8	3/4
	8	13 1/2	1 1/8		10 5/8	11 3/4	7/8	8	3/4
	10	16	1 3/16		12 3/4	14 1/4	1	12	7/8
	12	19	1 1/4		15	17	1	12	7/8
	14	21	1 3/8		16 1/4	18 3/4	1 1/8	12	1
	16	23 1/2	1 7/16		18 1/2	21 1/4	1 1/8	16	1
	16	25	1 9/16		21	22 3/4	1 1/4	16	1 1/8
	20	27 1/2	1 11/16		23	25	1 1/4	20	1 1/8
	24	32	1 7/8		27 1/4	29 1/2	1 3/8	20	1 1/8
	26	34 1/4	1 3/8		29 1/2	31 3/4	1 5/8	24	1 1/4
	28	36 1/2	1 7/16		31 1/2	34	1 5/8	28	1 1/4
	30	38 3/4	1 9/16		33 3/4	36	1 5/8	28	1 1/4
	32	41 3/4	1 11/16		36	38 1/2	1 5/8	28	1 1/2
34	43 3/4	1 7/8		38	40 1/2	1 5/8	32	1 1/2	
36	46	3 9/16		40 1/4	42 3/4	1 5/8	32	1 1/2	
38	48 3/4	3 7/16		42 1/4	45 1/4	1 5/8	32	1 1/2	
40	50 3/4	3 9/16		44 1/4	47 1/4	1 5/8	36	1 1/2	
42	53	3 13/16		47	49 1/2	1 5/8	36	1 1/2	
<b>ASME 300</b>	1/2	3 3/4	9/16		1 3/8	2 5/8	5/8	4	1/2
	3/4	4 5/8	5/8		1 11/16	3 1/4	3/4	4	5/8
	1	4 7/8	11/16		2	3 1/2	3/4	4	5/8
	1 1/4	5 1/4	3/4		2 1/2	3 7/8	3/4	4	5/8
	1 1/2	6 1/8	13/16		2 7/8	4 1/2	7/8	4	3/4
	2	6 1/2	7/8		3 5/8	5	3/4	8	5/8
	2 1/2	7 1/2	1		4 1/8	5 7/8	7/8	8	3/4
	3	8 1/4	1 1/8		5	6 5/8	7/8	8	3/4
	3 1/2	9	1 13/16		5 1/2	7 1/4	7/8	8	3/4
	4	10	1 1/4		6 3/16	7 7/8	7/8	8	3/4
	5	11	1 3/8		7 5/16	9 1/4	7/8	8	3/4
	6	12 1/2	1 7/16		8 1/2	10 5/8	7/8	12	3/4
	8	15	1 5/8		10 5/8	13	1	12	7/8
	10	17 1/2	1 7/8		12 3/4	15 1/4	1 1/8	16	1
	12	20 1/2	2		15	17 3/4	1 1/4	16	1 1/8
	14	23	2 1/8		16 1/4	20 1/4	1 1/4	20	1 1/8
	16	25 1/2	2 1/4		18 1/2	22 1/2	1 3/8	20	1 1/4
	16	28	2 3/8		21	24 3/4	1 3/8	24	1 1/4
	20	30 1/2	2 1/2		23	27	1 3/8	24	1 1/4
	24	36	2 3/4		27 1/4	32	1 5/8	24	1 1/2
	26	38 1/4	3 1/8		29 1/2	34 1/2	1 3/4	28	1 5/8
	28	40 3/4	3 3/8		31 1/2	37	1 3/4	28	1 5/8
	30	43	3 5/8		33 3/4	39 1/4	1 7/8	28	1 3/4
	32	45 1/4	3 7/8		36	41 1/2	2	28	1 7/8
34	47 1/2	4		38	43 1/2	2	28	1 7/8	
36	50	4 1/8		40 1/4	46	2 1/8	32	2	
38	46	4 1/4		40 1/2	43	1 5/8	32	1 1/2	
40	48 3/4	4 1/2		42 3/4	45 1/2	1 3/4	32	1 5/8	

The regular 1/16-inch raised face of 150 lb. flanges is included in the minimum flange thickness given, but other raised faces must be added thereto. The bolt holes, which are in multiples of four, are drilled to straddle the centerline unless otherwise ordered.

The regular 1/16-inch raised face of 300 lb. flanges is included in the minimum flange thickness given, but other raised faces must be added thereto. The bolt holes, which are in multiples of four, are drilled to straddle the centerline unless otherwise ordered.

End Flange dimensions comply with ASME B 16.5 and MSS-SP-44  
All dimensions are in inches



	Nominal Pipe Size	Flange Diameter A	Flange Thickness	Diameter of Raised Face C	Diameter of Bolt Circle D	Diameter of Bolt Holes E	Number of Bolts	Diameter of Bolts
<b>ASME 600</b>	1/2	3 3/4	9/16	1 3/8	2 5/8	5/8	4	1/2
	3/4	4 5/8	5/8	1 11/16	3 1/4	3/4	4	5/8
	1	4 7/8	11/16	2	3 1/2	3/4	4	5/8
	1 1/4	5 1/4	13/16	2 1/2	3 7/8	3/4	4	5/8
	1 1/2	6 1/8	7/8	2 7/8	4 1/2	7/8	4	5/8
	2	6 1/2	1	3 5/8	5	3/4	8	5/8
	2 1/2	7 1/2	1 1/8	4 1/8	5 7/8	7/8	8	3/4
	3	8 1/4	1 1/4	5	6 5/8	7/8	8	3/4
	3 1/2	9	1 3/8	5 1/2	7 1/4	1	8	7/8
	4	10 3/4	1 1/2	6 3/16	8 1/2	1	8	7/8
	5	13	1 3/4	7 5/16	10 1/2	1 1/8	8	1
	6	14	1 7/8	8 1/2	11 1/2	1 1/8	12	1
	8	16 1/2	2 3/16	10 5/8	13 3/4	1 1/4	12	1 1/8
	10	20	2 1/2	12 3/4	17	1 3/8	16	1 1/4
	12	22	2 5/8	15	19 1/4	1 3/8	20	1 1/4
	14	23 3/4	2 3/4	16 1/4	20 3/4	1 1/2	20	1 3/8
	16	27	3	18 1/2	23 3/4	1 5/8	20	1 1/2
	18	29 1/4	3 1/4	21	25 3/4	1 3/4	20	1 5/8
	20	32	3 1/2	23	28 1/2	1 3/4	24	1 5/8
	24	37	4	27 1/4	33	2	24	1 7/8
	26	40	4 1/4	29 1/2	36	2	28	1 7/8
	28	42 1/4	4 3/8	31 1/2	38	2 1/8	28	2
	30	44 1/2	4 1/2	33 3/4	40 1/2	2 1/8	28	2
	32	47	4 5/8	36	42 1/2	2 3/8	28	2 1/4
34	49	4 3/4	38	44 1/2	2 3/8	28	2 1/4	
36	51 3/4	4 7/8	40 1/4	47	2 5/8	28	2 1/2	
<b>ASME 900</b>	3	9 1/2	1 1/2	5	7 1/2	1	8	7/8
	4	11 1/2	1 3/4	6 3/16	9 1/4	1 1/4	8	1 1/8
	5	13 3/4	2	7 5/16	11	1 3/8	8	1 1/4
	6	15	2 3/16	8 1/2	12 1/2	1 1/4	12	1 1/8
	8	18 1/2	2 1/2	10 5/8	15 1/2	1 1/2	12	1 3/8
	10	21 1/2	2 3/4	12 3/4	18 1/2	1 1/2	16	1 3/8
	12	24	3 1/8	15	21	1 1/2	20	1 3/8
	14	25 1/4	3 3/8	16 1/4	22	1 5/8	20	1 1/2
	16	27 3/4	3 1/2	18 1/2	24 1/4	1 3/4	20	1 5/8
	18	31	4	21	27	2	20	1 7/8
	20	33 3/4	4 1/4	23	29 1/2	2 1/8	20	2
	24	41	5 1/2	27 1/4	35 1/2	2 5/8	20	2 1/2

The regular 1/4-inch raised face of 600 lb. flanges is not included in the minimum flange thickness given. The bolt holes, which are in multiples of four, are drilled to straddle the center-line unless otherwise ordered.

Use 1500 lb. dimensions in sizes smaller than 3-inch.

End Flange dimensions comply with ASME B 16.5 and MSS-SP-44  
All dimensions are in inches

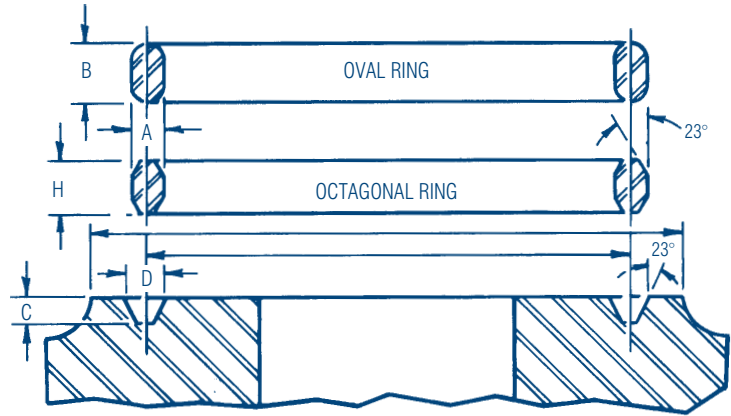


BONNEY FORGE

# ENGINEERING SPECIFICATIONS

## RING JOINT FACINGS

ASME B 16.5 and B 16.20



Groove suitable for either Oval or Octagonal ring

	Nominal Pipe Size	Ring Number	Ring Width A	Oval Ring Height B	Groove Width D	Octagonal Ring Height H	Ring Joint Raised Face Diameter K	Groove Depth L	Ring & Groove Pitch Diameter P
<b>150 LB.</b>	1	R15	5/16	9/16	11/32	1/2	2 1/2	1/4	1 7/8
	1 1/4	R17	5/16	9/16	11/32	1/2	2 7/8	1/4	2 1/4
	1 1/2	R19	5/16	9/16	11/32	1/2	3 1/4	1/4	2 9/16
	2	R22	5/16	9/16	11/32	1/2	4	1/4	3 1/4
	2 1/2	R25	5/16	9/16	11/32	1/2	4 3/4	1/4	4
	3	R29	5/16	9/16	11/32	1/2	5 1/4	1/4	4 1/2
	4	R36	5/16	9/16	11/32	1/2	6 3/4	1/4	5 7/8
	5	R40	5/16	9/16	11/32	1/2	7 5/8	1/4	6 3/4
	6	R43	5/16	9/16	11/32	1/2	8 5/8	1/4	7 5/8
	8	R48	5/16	9/16	11/32	1/2	10 3/4	1/4	9 3/4
	10	R52	5/16	9/16	11/32	1/2	13	1/4	12
	12	R56	5/16	9/16	11/32	1/2	16	1/4	15
	14	R59	5/16	9/16	11/32	1/2	16 3/4	1/4	15 5/8
	16	R64	5/16	9/16	11/32	1/2	19	1/4	17 7/8
	18	R68	5/16	9/16	11/32	1/2	21 1/2	1/4	20 3/8
	20	R72	5/16	9/16	11/32	1/2	23 1/2	1/4	22
24	R76	5/16	9/16	11/32	1/2	28	1/4	26 1/2	
<b>300, 600 LB.</b>	1/2	R11	1/4	7/16	9/32	3/8	2	7/32	1 11/32
	3/4	R13	5/16	9/16	11/32	1/2	2 1/2	1/4	1 11/16
	1	R16	5/16	9/16	11/32	1/2	2 3/4	1/4	2
	1 1/4	R18	5/16	9/16	11/32	1/2	3 1/8	1/4	2 3/8
	1 1/2	R20	5/16	9/16	11/32	1/2	3 9/16	1/4	2 11/16
	2	R23	7/16	11/16	15/32	5/8	4 1/4	5/16	3 1/4
	2 1/2	R26	7/16	11/16	15/32	5/8	5	5/16	4
	3	R31	7/16	11/16	15/32	5/8	5 3/4	5/16	4 7/8
	4	R37	7/16	11/16	15/32	5/8	6 7/8	5/16	5 7/8
	5	R41	7/16	11/16	15/32	5/8	8 1/4	5/16	7 1/8
	6	R45	7/16	11/16	15/32	5/8	9 1/2	5/16	8 5/16
	8	R49	7/16	11/16	15/32	5/8	11 7/8	5/16	10 5/8
	10	R53	7/16	11/16	15/32	5/8	14	5/16	12 3/4
	12	R57	7/16	11/16	15/32	5/8	16 1/4	5/16	15
	14	R61	7/16	11/16	15/32	5/8	18	5/16	16 1/2
	16	R65	7/16	11/16	15/32	5/8	20	5/16	18 1/2
	18	R69	7/16	11/16	15/32	5/8	22 5/8	5/16	21
	20	R73	1/2	3/4	17/32	11/16	25	3/8	23
24	R77	5/8	7/8	21/32	13/16	29 1/2	7/16	27 1/4	

All dimensions are in inches

	Nominal Pipe Size	Ring Number	Ring Width A	Oval Ring Height B	Groove Width D	Octagonal Ring Height H	Ring Joint Raised Face Diameter K	Groove Depth L	Ring & Groove Pitch Diameter P
<b>900 LB.</b>	3	R31	7/16	11/16	15/32	5/8	6 1/8	5/16	4 7/8
	4	R37	7/16	11/16	15/32	5/8	7 1/8	5/16	5 7/8
	5	R41	7/16	11/16	15/32	5/8	8 1/2	5/16	7 1/8
	6	R45	7/16	11/16	15/32	5/8	9 1/2	5/16	8 5/16
	8	R49	7/16	11/16	15/32	5/8	12 1/8	5/16	10 5/8
	10	R53	7/16	11/16	15/32	5/8	14 1/4	5/16	12 3/4
	12	R57	7/16	11/16	15/32	5/8	16 1/2	5/16	15
	14	R62	5/8	7/8	21/32	13/16	18 3/8	7/16	16 1/2
	16	R66	5/8	7/8	21/32	13/16	20 5/8	7/16	18 1/2
	18	R70	3/4	1	25/32	15/16	23 3/8	1/2	21
	20	R74	3/4	1	25/32	15/16	25 1/2	1/2	23
	24	R78	1	1 5/16	1 1/16	1 1/4	30 3/8	5/8	27 1/4
<b>1500 LB.</b>	1/2	R12	5/16	9/16	11/32	1/2	2 3/8	1/4	1 9/16
	1/4	R14	5/16	9/16	11/32	1/2	2 3/8	1/4	1 3/4
	1	R16	5/16	9/16	11/32	1/2	2 13/16	1/4	2
	1 1/4	R18	5/16	9/16	11/32	1/2	3 3/16	1/4	2 3/8
	1 1/2	R20	5/16	9/16	11/32	1/2	3 5/8	1/4	2 11/16
	2	R24	7/16	11/16	15/32	5/8	4 7/8	5/16	3 3/4
	2 1/2	R27	7/16	11/16	15/32	5/8	5 3/8	5/16	4 1/4
	3	R35	7/16	11/16	15/32	5/8	6 5/8	5/16	5 3/8
	4	R39	7/16	11/16	15/32	5/8	7 5/8	5/16	6 3/8
	5	R44	7/16	11/16	15/32	5/8	9	5/16	7 1/8
	6	R46	1/2	3/4	17/32	11/16	9 3/4	3/8	8 5/16
	8	R50	5/8	7/8	21/32	13/16	12 1/2	7/16	10 5/8
	10	R54	5/8	7/8	21/32	13/16	14 5/8	7/16	12 3/4
	12	R58	7/8	1 1/8	29/32	1 1/16	17 1/4	9/16	15
	14	R63	1	1 5/16	1 1/16	1 1/4	19 1/4	5/8	16 1/2
	16	R67	1 1/8	1 7/16	1 3/16	1 3/8	21 1/2	11/16	18 1/2
	18	R71	1 1/8	1 7/16	1 3/16	1 3/8	24 1/8	11/16	21
	20	R75	1 1/4	1 9/16	1 5/16	1 1/2	26 1/2	11/16	23
	24	R79	1 3/8	1 3/4	1 7/16	1 5/8	31 1/4	13/16	27 1/4

All dimensions are in inches





BONNEY FORGE

# ENGINEERING SPECIFICATIONS

## STANDARD CLASS PRESSURE TEMPERATURE RATINGS

ASME B 16.34

Working Class by Pressures	Temperature, °F	A 216 WCB(a)	A 352 LCB(d)	A 216 WCC(a) A 352 LC2(d) A 352 LC3(d) A 352 LCC(e)	A 217 WC1(b) A 352 LC1(d)	A 217 WC4(h) A 217 WC5(i)	A 217 WC6(j)	A 217 WC9(l)	A 217 C5	A 217 C12	A 351 CF3(f) A 351 CF8	A 351 CF3M(g) A 351 CF8M	A 351 CF8C	A 351 CN7M(l)
		Working Pressures in PSI												
150 LB.	-20 to 100	285	265	290	265	290	290	290	290	290	275	275	275	230
	200	260	255	260	255	260	260	260	260	260	230	235	255	200
	300	230	230	230	230	230	230	230	230	230	205	215	230	180
	400	200	200	200	200	200	200	200	200	200	190	195	200	160
	500	170	170	170	170	170	170	170	170	170	170	170	170	150
	600	140	140	140	140	140	140	140	140	140	140	140	140	140
	650	125	125	125	125	125	125	125	125	125	125	125	125	125
	700	110	110	110	110	110	110	110	110	110	110	110	110	110
	750	95	95	95	95	95	95	95	95	95	95	95	95	95
	800	80	80	80	80	80	80	80	80	80	80	80	80	80
	850	65	65	65	65	65	65	65	65	65	65	65	65	-
	900	50	50	50	50	50	50	50	50	50	50	50	50	-
	950	35	35	35	35	35	35	35	35	35	35	35	35	-
	1000	20	20	20	20	20	20	20	20	20	20	20	20	-
	1050	-	-	-	-	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)
	1100	-	-	-	-	-	-	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)
	1150	-	-	-	-	-	-	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)	20(1)
	1200	-	-	-	-	-	-	15(1)	15(1)	15(1)	20(1)	20(1)	20(1)	20(1)
	1250	-	-	-	-	-	-	-	-	-	20(1)	20(1)	20(1)	20(1)
	1300	-	-	-	-	-	-	-	-	-	20(1)	20(1)	20(1)	20(1)
1350	-	-	-	-	-	-	-	-	-	20(1)	20(1)	20(1)	-	
1400	-	-	-	-	-	-	-	-	-	20(1)	20(1)	15(1)	-	
1450	-	-	-	-	-	-	-	-	-	20(1)	20(1)	10(1)	-	
1500	-	-	-	-	-	-	-	-	-	15(1)	15(1)	10(1)	-	
300 LB.	-20 to 100	740	695	750	695	750	750	750	750	750	720	720	720	600
	200	680	660	750	660	750	750	750	750	750	600	620	660	520
	300	655	640	730	640	730	720	730	730	730	540	560	615	465
	400	635	615	705	615	705	695	705	705	705	495	515	575	420
	500	605	585	665	585	665	665	665	665	665	465	480	540	390
	600	570	550	605	550	605	605	605	605	605	440	450	515	360
	650	550	535	590	535	590	590	590	590	590	430	440	505	450
	700	530	510	555	510	570	570	570	570	570	420	435	495	445
	750	505	475	505	475	530	530	530	530	530	415	425	490	440
	800	410	390	410	390	510	510	510	510	510	405	420	485	430
	850	320	300	320	300	485	485	485	485	485	395	420	485	-
	900	230	200	225	200	450	450	450	450	375	390	415	450	-
	950	135	135	135	135	315	315	320	385	275	380	385	385	-
	1000	85	85	85	85	200	215	265	200	255	355	365	365	-
	1050	-	-	-	-	160	145	175	145	170	325	360	360	-
	1100	-	-	-	-	-	-	95	110	100	255	305	310	-
	1150	-	-	-	-	-	-	65	70	60	205	235	210	-
	1200	-	-	-	-	-	-	40	40	35	165	185	150	-
	1250	-	-	-	-	-	-	-	-	-	135	145	115	-
	1300	-	-	-	-	-	-	-	-	-	115	115	75	-
1350	-	-	-	-	-	-	-	-	-	95	95	50	-	
1400	-	-	-	-	-	-	-	-	-	75	75	40	-	
1450	-	-	-	-	-	-	-	-	-	60	60	30	-	
1500	-	-	-	-	-	-	-	-	-	40	40	25	-	

Working Class by Pressures	Temperature, °F	A 216 WCB(a)	A 352 LCB(d)	A 216 WCC(a) A 352 LC2(d) A 352 LC3(d) A 352 LCC(e)	A 217 WC1(b) A 352 LC1(d)	A 217 WC4(h) A 217 WC5(i)	A 217 WC6(j)	A 217 WC9(j)	A 217 C5	A 217 C12	A 351 CF3(f) A 351 CF8	A 351 CF3M(g) A 351 CF8M	A 351 CF8C	A 351 CN7M(l)	
		Working Pressures in PSI													
<b>600 LB.</b>	-20 to 100	1480	1395	1500	1395	1500	1500	1500	1500	1500	1440	1440	1440	1200	
	200	1360	1320	1500	1320	1500	1500	1500	1500	1500	1200	1240	1325	1035	
	300	1310	1275	1455	1275	1455	1445	1455	1455	1455	1075	1120	1235	930	
	400	1265	1230	1405	1230	1410	1385	1410	1410	1410	995	1025	1150	845	
	500	1205	1175	1330	1175	1330	1330	1330	1330	1330	930	955	1085	780	
	600	1135	1105	1210	1105	1210	1210	1210	1210	1210	885	900	1030	720	
	650	1100	1065	1175	1065	1175	1175	1175	1175	1175	865	885	1015	900	
	700	1060	1025	1110	1025	1135	1135	1135	1135	1135	845	870	995	890	
	750	1015	955	1015	955	1065	1065	1065	1065	1065	825	855	985	880	
	800	825	780	825	780	1015	1015	1015	1015	1015	810	845	975	865	
	850	640	595	640	595	975	975	975	975	975	790	835	970	-	
	900	460	405	445	405	900	900	900	745	900	780	830	900	-	
	950	275	275	275	275	630	640	755	550	755	765	775	775	-	
	1000	170	170	170	170	405	430	535	400	505	710	725	725	-	
	1050	-	-	-	-	315	290	350	290	345	650	720	720	-	
	1100	-	-	-	-	-	-	190	220	200	225	515	610	625	-
	1150	-	-	-	-	-	-	130	135	125	150	410	475	420	-
	1200	-	-	-	-	-	-	80	80	70	105	330	370	300	-
	1250	-	-	-	-	-	-	-	-	-	-	265	295	225	-
	1300	-	-	-	-	-	-	-	-	-	-	225	235	150	-
1350	-	-	-	-	-	-	-	-	-	-	185	190	105	-	
1400	-	-	-	-	-	-	-	-	-	-	150	150	80	-	
1450	-	-	-	-	-	-	-	-	-	-	115	115	60	-	
1500	-	-	-	-	-	-	-	-	-	-	85	85	55	-	
<b>900 LB.</b>	-20 to 100	2220	2090	2250	2090	2250	2250	2250	2250	2250	2160	2160	2160	1800	
	200	2035	1980	2250	1980	2250	2250	2250	2250	2250	1800	1860	1985	1555	
	300	1965	1915	2185	1915	2185	2165	2185	2185	2185	1615	1680	1850	1395	
	400	1900	1845	2110	1845	2115	2080	2115	2115	2115	1490	1540	1730	1265	
	500	1810	1760	1995	1760	1995	1995	1995	1995	1995	1395	1435	1625	1165	
	600	1705	1655	1815	1655	1815	1815	1815	1815	1815	1325	1355	1550	1080	
	650	1650	1600	1765	1600	1765	1765	1765	1765	1765	1295	1325	1520	1350	
	700	1590	1535	1665	1535	1705	1705	1705	1705	1705	1265	1305	1490	1335	
	750	1520	1430	1520	1430	1595	1595	1595	1595	1595	1240	1280	1475	1320	
	800	1235	1175	1235	1175	1525	1525	1525	1525	1525	1215	1265	1460	1295	
	850	955	895	955	895	1460	1460	1460	1460	1460	1190	1255	1455	-	
	900	690	605	670	605	1350	1350	1350	1120	1350	1165	1245	1350	-	
	950	410	410	410	410	945	995	1160	825	1130	1145	1160	1160	-	
	1000	255	255	255	255	605	650	800	595	760	1065	1090	1090	-	
	1050	-	-	-	-	475	430	525	430	515	975	1080	1080	-	
	1100	-	-	-	-	-	-	290	330	300	340	770	915	935	-
	1150	-	-	-	-	-	-	195	205	185	225	615	710	625	-
	1200	-	-	-	-	-	-	125	125	105	155	495	555	455	-
	1250	-	-	-	-	-	-	-	-	-	-	400	440	340	-
	1300	-	-	-	-	-	-	-	-	-	-	340	350	225	-
1350	-	-	-	-	-	-	-	-	-	-	280	290	155	-	
1400	-	-	-	-	-	-	-	-	-	-	225	225	125	-	
1450	-	-	-	-	-	-	-	-	-	-	175	175	95	-	
1500	-	-	-	-	-	-	-	-	-	-	125	125	80	-	



BONNEY FORGE

# ENGINEERING SPECIFICATIONS

## STANDARD CLASS PRESSURE TEMPERATURE RATINGS

ASME B 16.34

Working Class by Pressures	Temperature, °F	A 216 WCB(a)	A 352 LCB(d)	A 216 WCC(a) A 352 LC2(d) A 352 LC3(d) A 352 LCC(e)	A 217 WC1(b) A 352 LC1(d)	A 217 WC4(h) A 217 WC5(i)	A 217 WC6(j)	A 217 WC9(i)	A 217 C5	A 217 C12	A 351 CF3(f) A 351 CF8	A 351 CF3M(g) A 351 CF8M	A 351 CF8C	A 351 CN7M(l)
		Working Pressures in PSI												
<b>1500 LB.</b>	-20 to 100	3705	3480	3750	3480	3750	3750	3750	3750	3750	3600	3600	3600	3000
	200	3395	3300	3750	3300	3750	3750	3750	3750	3750	3000	3095	3310	2590
	300	3270	3190	3640	3190	3640	3610	3640	3640	3640	2690	2795	3085	2330
	400	3170	3075	3520	3075	3530	3465	3530	3530	3530	2485	2570	2880	2110
	500	3015	2930	3325	2930	3325	3325	3325	3325	3325	2330	2390	2710	1945
	600	2840	2755	3025	2755	3025	3025	3025	3025	3025	2210	2255	2580	1800
	650	2745	2665	2940	2665	2940	2940	2940	2940	2940	2160	2210	2530	2250
	700	2665	2560	2775	2560	2840	2840	2840	2840	2840	2110	2170	2485	2225
	750	2535	2385	2535	2385	2660	2660	2660	2660	2660	2065	2135	2460	2200
	800	2055	1955	2055	1955	2540	2540	2540	2540	2540	2030	2110	2435	2160
	850	1595	1490	1595	1490	2435	2435	2435	2435	2435	1980	2090	2425	-
	900	1150	1010	1115	1010	2245	2245	2245	1870	2245	1945	2075	2245	-
	950	685	685	685	685	1575	1595	1930	1370	1885	1910	1930	1930	-
	1000	430	430	430	430	1010	1080	1335	995	1270	1770	1820	1820	-
	1050	-	-	-	-	790	720	875	720	855	1630	1800	1800	-
	1100	-	-	-	-	-	-	480	550	495	565	1285	1525	1560
	1150	-	-	-	-	-	-	325	345	310	375	1030	1185	1045
	1200	-	-	-	-	-	-	205	205	170	255	825	925	755
	1250	-	-	-	-	-	-	-	-	-	-	670	735	565
	1300	-	-	-	-	-	-	-	-	-	-	565	585	375
1350	-	-	-	-	-	-	-	-	-	-	465	480	255	
1400	-	-	-	-	-	-	-	-	-	-	380	380	205	
1450	-	-	-	-	-	-	-	-	-	-	290	290	155	
1500	-	-	-	-	-	-	-	-	-	-	205	205	135	

NOTE:

(1) For welding end valves only. Flanged end ratings terminate at 1000°F.

NOTES:

- (a) Permissible, but not recommended for prolonged usage above about 800°F.
- (b) Permissible, but not recommended for prolonged usage above about 850°F.
- (d) Not to be used over 650°F.
- (e) Not to be used over 700°F.
- (f) Not to be used over 800°F.
- (g) Not to be used over 850°F.
- (h) Not to be used over 1000°F.
- (i) Not to be used over 1050°F.
- (j) Not to be used over 1100°F.
- (l) Ratings apply for 300°F and lower.