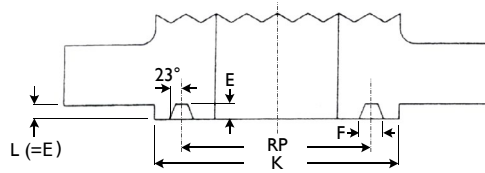


ANSI B16.5 RING JOINT FACE DIMENSIONS



Ring Joint

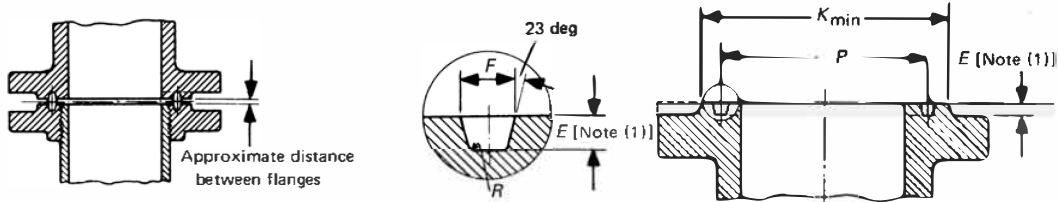
RING JOINT FACE DIMENSIONS (mm)

Size	ANSI 150					ANSI 300/600					ANSI 900				
	Ring No.	Pitch Diam.	Width Groove	Depth Groove	RF Diam.	Ring No.	Pitch Diam.	Width Groove	Depth Groove	RF Diam.	Ring No.	Pitch Diam.	Width Groove	Depth Groove	RF Diam.
mm	RN	RP	F	E	K	RN	RP	F	E	K	RN	RP	F	E	K
15						11	34.1	7.1	5.5	50.8	12	39.6	8.7	6.3	60.3
20						13	42.8	8.7	6.3	63.5	14	44.4	8.7	6.3	66.6
25	15	47.6	8.7	6.3	63.5	16	50.8	8.7	6.3	69.8	16	50.8	8.7	6.3	71.4
32	17	57.1	8.7	6.3	73.0	18	60.3	8.7	6.3	79.3	18	60.3	8.7	6.3	80.9
40	19	65.0	8.7	6.3	82.5	20	68.2	8.7	6.3	90.4	20	68.2	8.7	6.3	92.0
50	22	82.5	8.7	6.3	101.6	23	82.5	11.9	7.9	107.9	24	95.2	11.9	7.9	123.8
65	25	101.6	8.7	6.3	120.6	26	101.6	11.9	7.9	127.0	27	107.9	11.9	7.9	136.5
80	29	114.3	8.7	6.3	133.3	31	123.8	11.9	7.9	146.0	31	123.8	11.9	7.9	155.5
90	33	131.7	8.7	6.3	153.9	34	131.7	11.9	7.9	158.7					
100	36	149.2	8.7	6.3	171.4	37	149.2	11.9	7.9	174.6	37	149.2	11.9	7.9	180.9
125	40	171.4	8.7	6.3	193.6	41	180.9	11.9	7.9	209.5	41	180.9	11.9	7.9	215.9
150	43	193.6	8.7	6.3	219.0	45	211.1	11.9	7.9	241.3	45	211.1	11.9	7.9	241.3
200	48	247.6	8.7	6.3	273.0	49	269.8	11.9	7.9	301.6	49	269.8	11.9	7.9	307.9
250	52	304.8	8.7	6.3	330.2	53	323.8	11.9	7.9	355.6	53	323.8	11.9	7.9	361.9
300	56	381.0	8.7	6.3	406.4	57	381.0	11.9	7.9	412.7	57	381.0	11.9	7.9	419.1
350	59	396.8	8.7	6.3	425.4	61	419.1	11.9	7.9	457.2	62	419.1	16.6	11.1	466.7
400	64	454.0	8.7	6.3	482.6	65	469.9	11.9	7.9	508.0	66	469.9	16.6	11.1	523.8
450	68	517.5	8.7	6.3	546.1	69	533.4	11.9	7.9	574.6	70	533.4	19.8	12.7	593.7
500	72	558.8	8.7	6.3	596.9	73	584.2	13.4	9.5	635.0	74	584.2	19.8	12.7	647.7
600	76	673.1	8.7	6.3	711.2	77	692.1	16.6	11.1	749.3	78	692.1	26.9	15.8	771.5

Size	ANSI 1500					ANSI 2500				
	Ring No.	Pitch Diam.	Width Groove	Depth Groove	RF Diam.	Ring No.	Pitch Diam.	Width Groove	Depth Groove	RF Diam.
mm	RN	RP	F	E	K	RN	RP	F	E	K
15	25NB TO 65NB ARE IDENTICAL TO ANSI 900					13	42.8	8.7	6.3	65.0
20						16	50.8	8.7	6.3	73.0
25						18	60.3	8.7	6.3	82.5
32						21	72.2	11.9	7.9	101.6
40						23	82.5	11.9	7.9	114.3
50										26	101.6	11.9	7.9	133.3
65					28	111.1	13.4	9.5	149.2	
80	35	136.5	11.9	7.9	168.2	32	127.0	13.4	9.5	168.2
100	39	161.9	11.9	7.9	193.6	38	157.1	16.6	11.1	203.2
125	44	193.6	11.9	7.9	228.6	42	190.5	19.8	12.7	241.3
150	46	211.1	13.4	9.5	247.6	47	228.6	19.8	12.7	279.4
200	50	269.8	16.6	11.1	317.5	51	279.4	23.0	14.2	339.7
250	54	323.8	16.6	11.1	371.4	55	342.9	30.1	17.4	425.4
300	58	381.0	23.0	14.2	438.1	60	406.4	33.3	17.4	495.3
350	63	419.1	26.9	15.8	488.9					
400	67	469.9	30.1	17.4	546.1					
450	71	533.4	30.1	17.4	612.7					
500	75	584.2	33.3	17.4	673.1					
600	79	692.1	36.5	20.6	793.7					

(17)

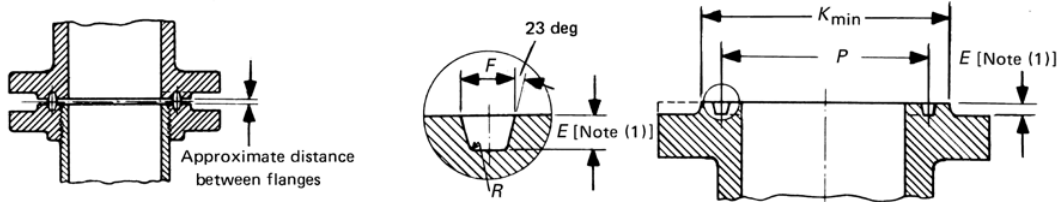
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes)



Nominal Size							Groove Dimensions				Radius at Bottom, R
Class 150 NPS	Class 300 NPS	Class 400 NPS [Note (2)]	Class 600 NPS	Class 900 NPS [Note (3)]	Class 1500 NPS	Class 2500 NPS	Groove Number	Pitch Diameter, P	Depth, E [Note (1)]	Width, F	
...	1/2	...	1/2	...	...	...	11	34.14	5.54	7.14	0.8
...	...	...	...	...	1/2	...	12	39.67	6.35	8.74	0.8
...	3/4	...	3/4	...	...	1/2	13	42.88	6.35	8.74	0.8
...	...	...	...	...	3/4	...	14	44.45	6.35	8.74	0.8
1	...	...	...	...	...	...	15	47.63	6.35	8.74	0.8
...	1	...	1	...	1	3/4	16	50.80	6.35	8.74	0.8
1 1/4	...	...	...	...	...	...	17	57.15	6.35	8.74	0.8
...	1 1/4	...	1 1/4	...	1 1/4	1	18	60.33	6.35	8.74	0.8
1 1/2	...	...	...	...	...	...	19	65.07	6.35	8.74	0.8
...	1 1/2	...	1 1/2	...	1 1/2	...	20	68.27	6.35	8.74	0.8
...	...	...	...	...	...	1 1/4	21	72.23	7.92	11.91	0.8
2	...	...	...	...	...	...	22	82.55	6.35	8.74	0.8
...	2	...	2	...	...	1 1/2	23	82.55	7.92	11.91	0.8
...	...	...	...	...	2	...	24	95.25	7.92	11.91	0.8
2 1/2	...	...	...	...	...	...	25	101.60	6.35	8.74	0.8
...	2 1/2	...	2 1/2	...	...	2	26	101.60	7.92	11.91	0.8
...	...	...	...	...	2 1/2	...	27	107.95	7.92	11.91	0.8
...	...	...	...	...	...	2 1/2	28	111.13	9.53	13.49	1.5
3	...	...	...	...	...	...	29	114.30	6.35	8.74	0.8
...	[Note (4)]	...	[Note (4)]	...	...	...	30	117.48	7.92	11.91	0.8
...	3 [Note (4)]	...	3 [Note (4)]	3	...	...	31	123.83	7.92	11.91	0.8
...	...	...	...	...	...	3	32	127.00	9.53	13.49	1.5
3 1/2	...	...	...	...	...	...	33	131.78	6.35	8.74	0.8
...	3 1/2	...	3 1/2	...	...	...	34	131.78	7.92	11.91	0.8
...	...	...	...	...	3	...	35	136.53	7.92	11.91	0.8
4	...	...	...	...	...	...	36	149.23	6.35	8.74	0.8
...	4	4	4	4	...	...	37	149.23	7.92	11.91	0.8
...	...	...	...	...	...	4	38	157.18	11.13	16.66	1.5
...	...	...	...	...	4	...	39	161.93	7.92	11.91	0.8
5	...	...	...	...	...	...	40	171.45	6.35	8.74	0.8
...	5	5	5	5	...	...	41	180.98	7.92	11.91	0.8

(17)

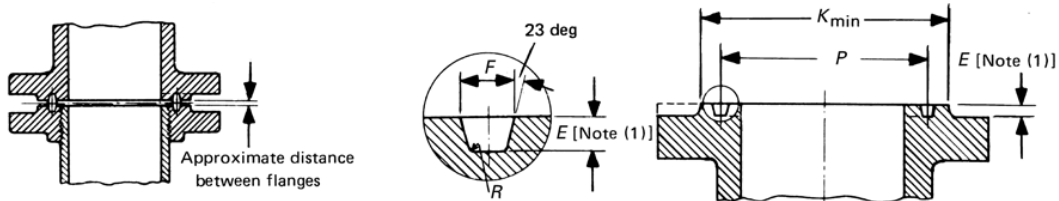
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



Diameter of Raised Portion, K					Approximate Distance Between Flanges							
Class	Class 300	Class 600	Class 900	Class 1500	Class 2500	Class 150	Class 300	Class 400	Class 600	Class 900	Class 1500	Class 2500
...	51.0	...	...	...	...	...	3	...	3	...	...	...
...	...	...	60.5	...	...	...	...	...	...	...	4	...
...	63.5	...	...	65.0	...	...	4	...	4	...	...	4
...	...	...	66.5	...	...	...	...	...	...	...	4	...
63.5	...	...	...	...	...	4	...	...	...	...	...	...
...	70.0	...	71.5	73.0	...	...	4	...	4	...	4	4
73.0	...	...	...	...	4	...	...	...	...	...	...	...
...	79.5	...	81.0	82.5	...	...	4	...	4	...	4	4
82.5	...	...	...	...	4	...	...	...	...	...	...	...
...	90.5	...	92.0	...	...	...	4	...	4	...	4	...
...	...	...	...	102	...	...	...	...	...	...	...	3
102	...	...	...	...	4	...	...	...	...	...	...	...
...	108	...	...	114	...	...	6	...	5	...	...	3
...	...	...	124	...	...	...	...	...	...	...	3	...
121	...	...	...	...	4	...	...	...	...	...	...	...
...	127	...	...	133	...	...	6	...	5	...	...	3
...	...	...	137	...	...	...	...	...	...	...	3	...
...	...	...	...	149	...	...	...	...	...	...	...	3
133	...	...	...	...	4	...	...	...	...	...	...	...
...
...	146	156	...	...	...	...	6	...	5	4	...	...
...	...	...	...	168	...	...	...	...	...	...	...	3
154	...	...	...	...	4	...	...	...	...	...	...	...
...	159	...	...	...	...	...	6	...	5	...	...	...
...	...	...	168	...	...	...	...	...	...	...	3	...
171	...	...	...	...	4	...	...	...	...	...	...	...
...	175	181	...	...	...	...	6	6	5	4	...	...
...	...	...	...	203	...	...	...	...	...	...	...	4
...	...	...	194	...	...	...	...	...	...	...	3	...
194	...	...	...	...	4	...	...	...	...	...	...	...
...	210	216	...	...	...	...	6	6	5	4	...	...

(17)

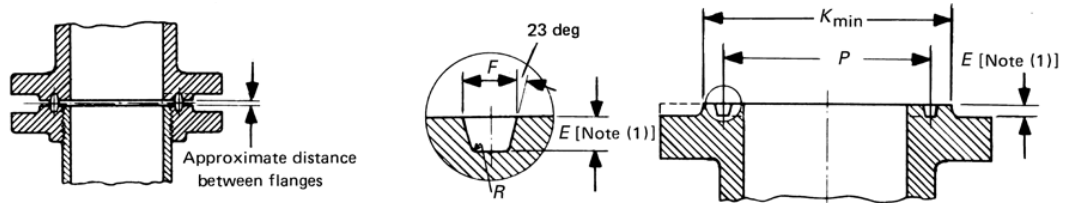
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



Nominal Size							Groove Dimensions				Radius at Bottom, R
Class 150 NPS	Class 300 NPS	Class 400 NPS [Note (2)]	Class 600 NPS	Class 900 NPS [Note (3)]	Class 1500 NPS	Class 2500 NPS	Groove Number	Pitch Diameter, P	Depth, E [Note (1)]	Width, F	
...	...	...	...	...	...	5	42	190.50	12.70	19.84	1.5
6	...	...	...	...	...	...	43	193.68	6.35	8.74	0.8
...	...	...	...	...	...	5	44	193.68	7.92	11.91	0.8
...	6	6	6	6	...	...	45	211.12	7.92	11.91	0.8
...	...	...	...	...	6	...	46	211.14	9.53	13.49	1.5
...	...	...	...	...	...	6	47	228.60	12.70	19.84	1.5
8	...	...	...	...	...	...	48	247.65	6.35	8.74	0.8
...	8	8	8	8	...	...	49	269.88	7.92	11.91	0.8
...	...	...	...	...	8	...	50	269.88	11.13	16.66	1.5
...	...	...	...	...	...	8	51	279.40	14.27	23.01	1.5
10	...	...	...	...	...	...	52	304.80	6.35	8.74	0.8
...	10	10	10	10	...	...	53	323.85	7.92	11.91	0.8
...	...	...	...	...	10	...	54	323.85	11.13	16.66	1.5
...	...	...	...	...	...	10	55	342.90	17.48	30.18	2.4
12	...	...	...	...	...	...	56	381.00	6.35	8.74	0.8
...	12	12	12	12	...	...	57	381.00	7.92	11.91	0.8
...	...	...	...	...	12	...	58	381.00	14.27	23.01	1.5
14	...	...	...	...	...	...	59	396.88	6.35	8.74	0.8
...	...	...	...	...	...	12	60	406.40	17.48	33.32	2.4
...	14	14	14	...	...	...	61	419.10	7.92	11.91	0.8
...	...	...	...	14	...	...	62	419.10	11.13	16.66	1.5
...	...	...	...	...	14	...	63	419.10	15.88	26.97	2.4
16	...	...	...	...	...	...	64	454.03	6.35	8.74	0.8
...	16	16	16	...	...	...	65	469.90	7.92	11.91	0.8
...	...	...	...	16	...	...	66	469.90	11.13	16.66	1.5
...	...	...	...	...	16	...	67	469.90	17.48	30.18	2.4
18	...	...	...	...	...	...	68	517.53	6.35	8.74	0.8
...	18	18	18	...	...	...	69	533.40	7.92	11.91	0.8
...	...	...	...	18	...	...	70	533.40	12.70	19.84	1.5
...	...	...	...	...	18	...	71	533.40	17.48	30.18	2.4
20	...	...	...	...	...	...	72	558.80	6.35	8.74	0.8
...	20	20	20	...	...	...	73	584.20	9.53	13.49	1.5

(17)

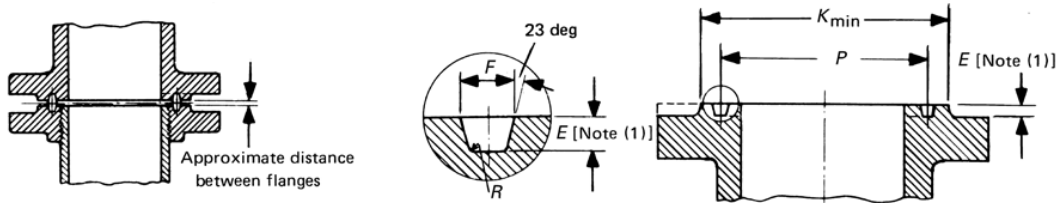
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



13	14	15	16	17	18	19	20	21	22	23	24
Diameter of Raised Portion, K					Approximate Distance Between Flanges						
Class	Class 300 400 600	Class 900	Class 1500	Class 2500	Class 150	Class 300	Class 400	Class 600	Class 900	Class 1500	Class 2500
...	...	...	...	241	...	...	...	...	...	...	4
219	...	...	...	...	4	...	...	...	...	...	...
...	...	...	229	...	...	...	...	...	...	3	...
...	241	241	...	...	...	6	6	5	4	...	...
...	...	...	248	...	...	...	...	...	...	3	...
...	...	...	...	279	...	...	...	...	...	...	4
273	...	...	...	...	4	...	...	...	...	...	...
...	302	308	...	...	...	6	6	5	4	...	...
...	...	...	318	...	...	...	...	...	...	4	...
...	...	...	...	340	...	...	...	...	...	...	5
330	...	...	...	...	4	...	...	...	...	...	...
...	356	362	...	...	...	6	6	5	4	...	...
...	...	...	371	...	...	...	...	...	...	4	...
...	...	...	...	425	...	...	...	...	...	...	6
406	...	...	...	...	4	...	...	...	...	...	...
...	413	419	...	...	...	6	6	5	4	...	...
...	...	...	438	...	...	...	...	...	...	5	...
425	...	...	...	...	3	...	...	...	...	...	...
...	...	...	...	495	...	...	...	...	...	...	8
...	457	...	...	...	...	6	6	5	...	...	...
...	...	467	...	...	...	...	...	...	4	...	...
...	...	...	489	...	...	...	...	...	...	6	...
483	...	...	...	...	3	...	...	...	...	...	...
...	508	...	...	...	...	6	6	5	...	...	...
...	...	524	...	...	...	...	...	...	4	...	...
...	...	...	546	...	...	...	...	...	...	8	...
546	...	...	...	...	3	...	...	...	...	...	...
...	575	...	...	...	...	6	6	5	...	...	...
...	...	594	...	...	...	...	...	...	5	...	...
...	...	...	613	...	...	...	...	...	...	8	...
597	...	...	...	...	3	...	...	...	...	...	...
...	635	...	...	...	...	6	6	5	...	...	...

(17)

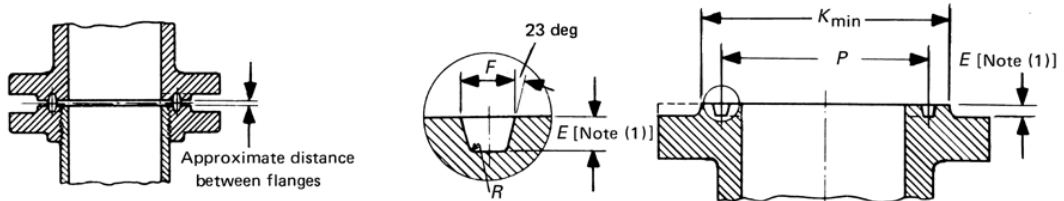
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



Nominal Size							Groove Dimensions				Radius at Bottom, <i>R</i>
Class 150 NPS	Class 300 NPS	Class 400 NPS [Note (2)]	Class 600 NPS	Class 900 NPS [Note (3)]	Class 1500 NPS	Class 2500 NPS	Groove Number	Pitch Diameter, <i>P</i>	Depth, <i>E</i> [Note (1)]	Width, <i>F</i>	
...	...	...	...	20	...	...	74	584.20	12.70	19.84	1.5
...	...	...	...	...	20	...	75	584.20	17.48	33.32	2.4
22	...	...	...	...	...	...	80	615.95	6.35	8.74	0.8
...	22	22	22	...	...	...	81	635.00	11.13	15.09	1.5
24	...	...	...	...	...	...	76	673.10	6.35	8.74	0.8
...	24	24	24	...	...	...	77	692.15	11.13	16.66	1.5
...	...	...	...	24	...	...	78	692.15	15.88	26.97	2.4
...	...	...	...	...	24	...	79	692.15	20.62	36.53	2.4

(17)

Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



13	14	15	16	17	18	19	20	21	22	23	24
Diameter of Raised Portion, <i>K</i>					Approximate Distance Between Flanges						
Class	Class 300 400 600	Class 900	Class 1500	Class 2500	Class 150	Class 300	Class 400	Class 600	Class 900	Class 1500	Class 2500
...	...	648	...	...	...	...	...	...	5	...	...
...	...	...	673	...	...	...	...	...	...	10	...
648	...	...	...	...	3	...	...	...	...	...	...
...	686	...	...	...	...	6	6	6	...	...	...
711	...	...	...	...	3	...	...	...	...	...	...
...	749	...	...	...	...	6	6	6	...	...	...
...	...	772	...	...	...	...	...	...	6	...	...
...	...	...	794	...	...	...	...	...	...	11	...

Get more FREE standards from Standard Sharing Group and our chats

(17) **Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)**

GENERAL NOTES:

- (a) Dimensions are in millimeters. For dimensions in inch units, refer to [Table II-5 of Mandatory Appendix II](#).
- (b) For facing requirements for flanges and flanged fitting, see [para. 6.4.1](#) and [Figure 6](#).
- (c) For facing requirements for lapped joints, see [para. 6.4.3](#) and [Figure 6](#).
- (d) See [para. 4.2.7](#) for marking requirements.

NOTES:

- (1) The height of the raised portion is equal to the depth of the groove dimension, E , but is not subjected to the tolerances for E . Former full-face contour may be used.
- (2) Use Class 600 in sizes NPS $\frac{1}{2}$ to NPS $3\frac{1}{2}$ for Class 400.
- (3) Use Class 1500 in sizes NPS $\frac{1}{2}$ to NPS $2\frac{1}{2}$ for Class 900.
- (4) For ring joints with lapped flanges in Classes 300 and 600, ring and groove number R30 is used instead of R31.

TOLERANCES:

- E (depth) +0.40, -0.00 mm
- F (width) ± 0.20 mm
- P (pitch diameter) ± 0.013 mm
- R (radius at bottom)
 - $R \leq 2 + 0.8, -0.00$ mm
 - $R > 2 \pm 0.8$ mm
- 23 deg (angle) $\pm \frac{1}{2}$ deg