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Table 4 Dimensions of Facings (Other Than Ring Joints, All Pressure Rating Classes)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Nominal Pipe Size	Outside Diameter			Outside Diameter			Height			Depth of Groove or Female [Notes (2), (5)]	Minimum Outside Diameter of Raised Portion [Notes (6), (7)]			
	Raised Face Large Male and Large Tongue, <i>R</i>	Small Male, <i>S</i> [Note (1)]	Small Tongue, <i>T</i>	Inside Diameter of Large and Small Tongue, <i>U</i>	Inside Diameter of Small Tongue [Note (1)]	Large Female and Large Groove, <i>W</i>	Small Female, <i>X</i> [Note (1)]	Small Groove, <i>Y</i>	Inside Diameter of Large and Small Groove, <i>Z</i>		Raised Face [Notes (2), (3)]	Large and Small Male and Tongue [Notes (2), (4)]	Small Female and Groove, <i>K</i>	Large Female and Groove, <i>L</i>
1/2	34.9	18.3	35.1	25.4	...	36.5	19.9	36.5	23.8	...	...	...	44	46
3/4	42.9	23.8	42.9	33.3	...	44.4	25.4	44.4	31.8	...	...	...	52	54
1	50.8	30.2	47.8	38.1	...	52.4	31.8	49.2	36.5	...	...	...	57	62
1 1/4	63.5	38.1	57.2	47.6	...	65.1	39.7	58.7	46.0	...	...	...	67	75
1 1/2	73.0	44.4	63.5	54.0	...	74.6	46.0	65.1	52.4	...	...	...	73	84
2	92.1	57.2	82.6	73.0	...	93.7	58.8	84.1	71.4	...	...	...	92	103
2 1/2	104.8	68.3	95.2	85.7	...	106.4	69.8	96.8	84.1	...	...	...	105	116
3	127.0	84.1	117.5	108.0	...	128.6	85.7	119.1	106.4	...	...	...	127	138
3 1/2	139.7	96.8	130.2	120.6	...	141.3	98.4	131.8	119.1	...	...	...	140	151
4	157.2	109.5	144.5	131.8	...	158.8	111.1	146.0	130.2	...	...	...	157	168
5	185.7	136.5	173.0	160.3	...	187.3	138.1	174.6	158.8	...	...	...	186	197
6	215.9	161.9	203.2	190.5	...	217.5	163.5	204.8	188.9	...	...	...	216	227
8	269.9	212.7	254.0	238.1	...	271.5	214.3	255.6	236.5	...	...	...	270	281
10	323.8	266.7	304.8	285.8	...	325.4	268.3	306.4	284.2	...	...	...	324	335
12	381.0	317.5	362.0	342.9	...	382.6	319.1	363.5	341.3	...	...	...	381	392
14	412.8	349.2	393.7	374.6	...	414.3	350.8	395.3	373.1	...	...	...	413	424
16	469.9	400.0	447.5	425.4	...	471.5	401.6	449.3	423.9	...	...	...	470	481
18	533.4	450.8	511.2	489.0	...	535.0	452.4	512.8	487.4	...	...	...	533	544
20	584.2	501.6	558.8	533.4	...	585.8	503.2	560.4	531.8	...	...	...	584	595
22	641.4	...	...	...	...	...	...	...	...	...	...	...	...	...
24	692.2	603.2	666.8	641.4	...	693.7	604.8	668.3	639.8	...	...	...	692	703

GENERAL NOTES:

- (a) Dimensions are in millimeters. For dimensions in inch units, refer to Table II-4 of Mandatory Appendix II.
 (b) For facing requirements for flanges and flanged fittings, see paras. 6.3 and 6.4 and Figure 6.
 (c) For facing requirements for lapped joints, see para. 6.4.3 and Figure 6.
 (d) For facing tolerances, see para. 7.3.

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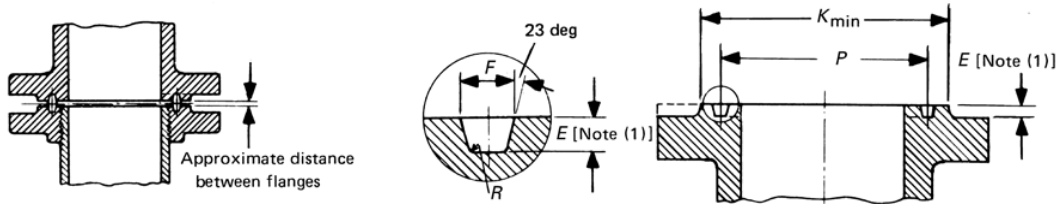
Table 4 Dimensions of Facings (Other Than Ring Joints, All Pressure Rating Classes) (Cont'd)

NOTES:

- (1) For small male and female joints, care should be taken in the use of these dimensions to ensure that the inside diameter of the fitting or pipe is small enough to permit sufficient bearing surface to prevent the crushing of the gasket. This applies particularly on lines where the joint is made on the end of the pipe. The inside diameter of the fitting should match the inside diameter of the pipe as specified by the purchaser. Threaded companion flanges for small male and female joints are furnished with plain face and are threaded with American National Standard Locknut Thread (NPSL).
- (2) See [para. 6.4.3](#) and [Figure 6](#) for thickness and outside diameters of laps.
- (3) The height of the raised face is either 2 mm or 7 mm (see [para. 6.4.1](#)).
- (4) The height of the large and small male and tongue is 7 mm.
- (5) The depth of the groove or female is 5 mm.
- (6) The raised portion of the full face may be furnished unless otherwise specified on order.
- (7) Large male and female faces and large tongue and groove are not applicable to Class 150 because of potential dimensional conflicts.

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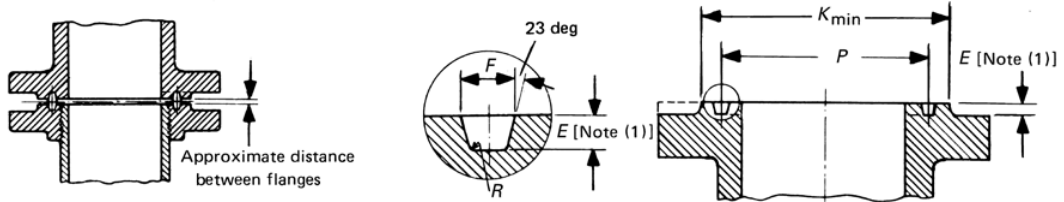
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes)



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

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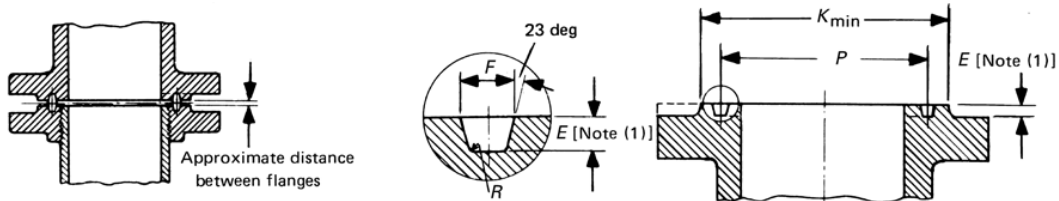
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



Diameter of Raised Portion, <i>K</i>					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

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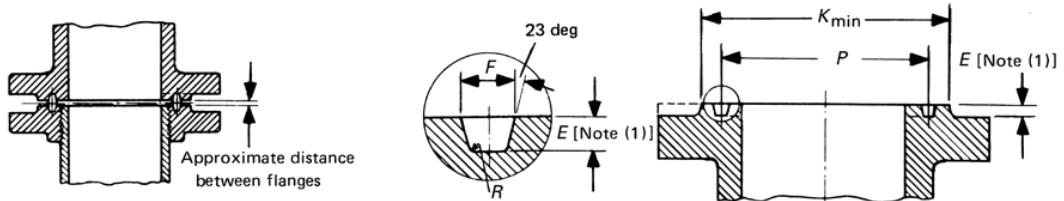
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



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>	
...	...	...	...	...	...	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

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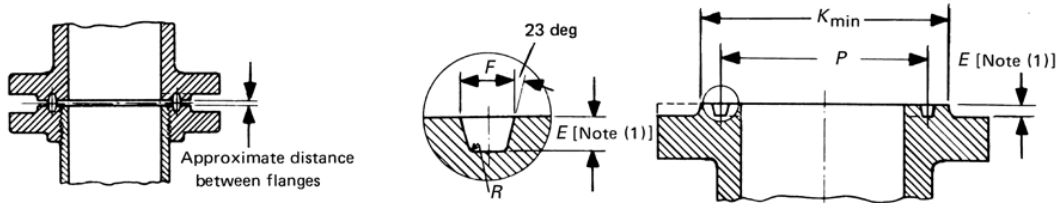
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



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	
...	...	...	...	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	

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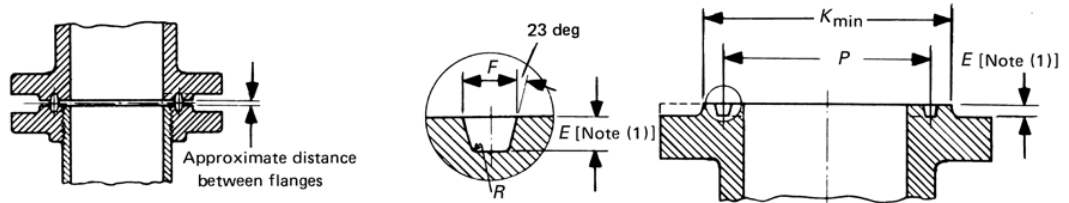
Table 5 Dimensions of Ring Joint Facings (All Pressure Rating Classes) (Cont'd)



1		2		3		4		5		6		7		8		9		10		11		12	
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		

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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	...

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(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