



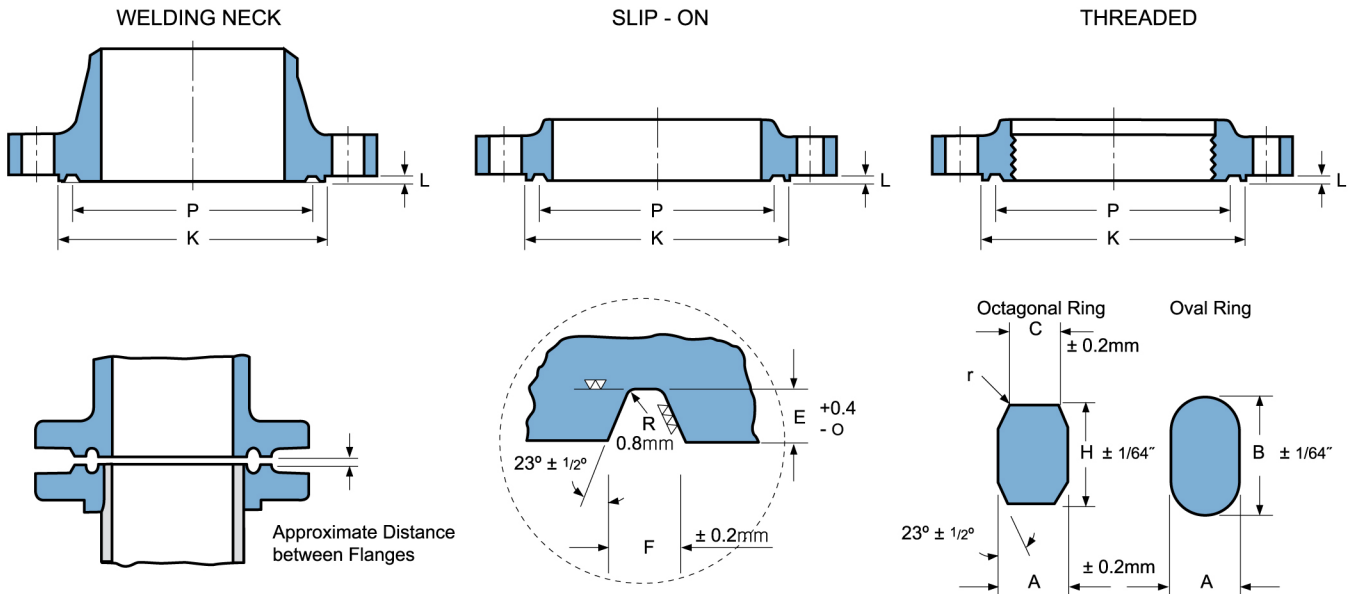
**PAP** PETRO ARTAN PART

# RING JOINT FLANGES

- Class 150 Flanges
- Class 300 / 400 / 600 Flanges
- Class 900 Flanges
- Class 1500 Flanges
- Class 2500 Flanges

# CLASS 150 FLANGES

## Ring Joint Flanges Facing Dimensions



## ANSI B 16.5 Forged Flanges

Unit : mm

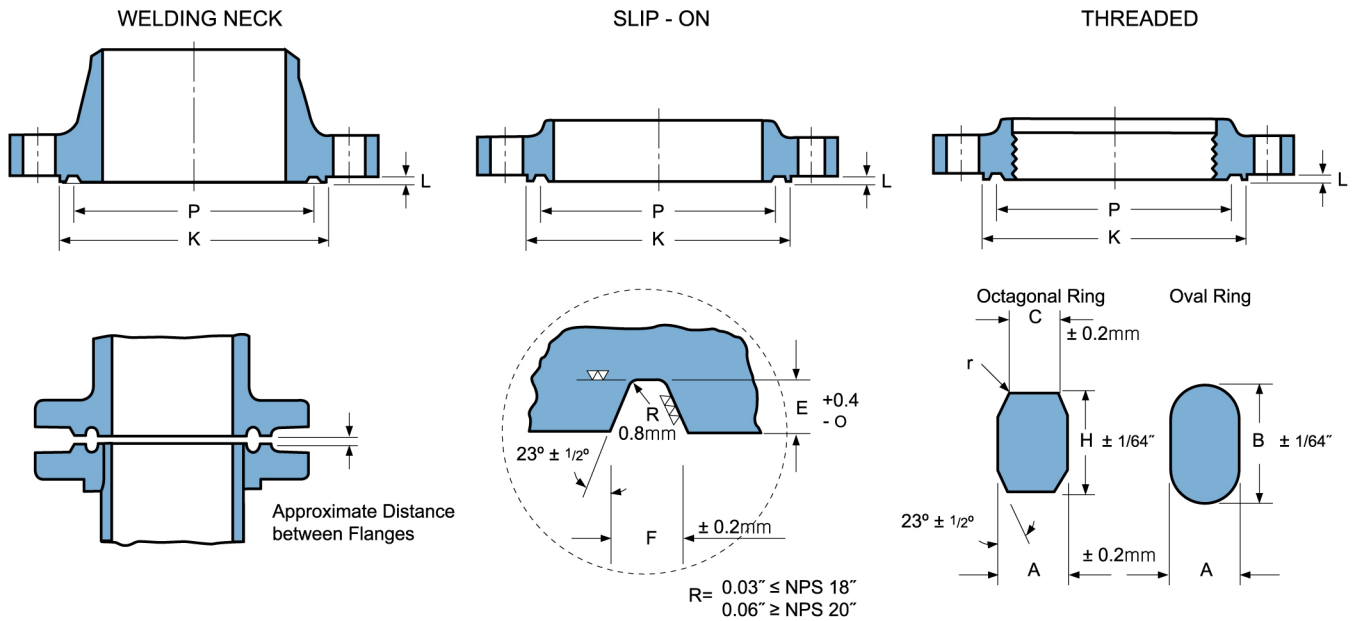
Nominal Pipe Size	Pitch Diam. of Ring and Groove	Width of Ring	HEIGHT OF RING		Width of Flat on Octagonal Rings	Width of Groove	Depth of Groove	Diameter of Raised Face for Ring Joint or Lapped	Ring Number	Approximate Distance Between Flange of Ring Joints When Ring is Compressed
			Oval	Octagonal						
	P	A	B	H	C	F	E(L*)	K(Min)		
1	47.6	8.0	14.3	12.7	5.2	8.7	6.4	63.5	R15	4.1
1 1/4	57.2	8.0	14.3	12.7	5.2	8.7	6.4	73.2	R17	4.1
1 1/2	65.1	8.0	14.3	12.7	5.2	8.7	6.4	82.6	R19	4.1
2	82.6	8.0	14.3	12.7	5.2	8.7	6.4	101.6	R22	4.1
2 1/2	101.6	8.0	14.3	12.7	5.2	8.7	6.4	120.7	R25	4.1
3	114.3	8.0	14.3	12.7	5.2	8.7	6.4	133.4	R29	4.1
3 1/2	131.8	8.0	14.3	12.7	5.2	8.7	6.4	153.9	R33	4.1
4	149.2	8.0	14.3	12.7	5.2	8.7	6.4	171.5	R36	4.1
5	171.5	8.0	14.3	12.7	5.2	8.7	6.4	193.5	R40	4.1
6	193.7	8.0	14.3	12.7	5.2	8.7	6.4	218.9	R43	4.1
8	247.7	8.0	14.3	12.7	5.2	8.7	6.4	273.1	R48	4.1
10	304.8	8.0	14.3	12.7	5.2	8.7	6.4	330.2	R52	4.1
12	381.0	8.0	14.3	12.7	5.2	8.7	6.4	406.4	R56	4.1
14	396.9	8.0	14.3	12.7	5.2	8.7	6.4	425.5	R59	3.0
16	454.0	8.0	14.3	12.7	5.2	8.7	6.4	482.6	R64	3.0
18	517.5	8.0	14.3	12.7	5.2	8.7	6.4	546.1	R68	3.0
20	558.8	8.0	14.3	12.7	5.2	8.7	6.4	596.9	R72	3.0
24	673.1	8.0	14.3	12.7	5.2	8.7	6.4	711.2	R76	3.0

**NOTE :**

- Unless other wise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
- The depth of groove is added to the minimum flange thickness.
  - \* Raised face " L " is equal to groove dimension " E " but is not subject to tolerances for " E "
  - \* A plus tolerance of 3/64 in, for heights B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in, throughout its entire circumference.
- Dimension " R " is max.
- Radius " r " is 1/16" for ring widths 7/8" and less and 3/32" for ring widths 1"(25.4mm) and over.

## CLASS 300 / 400 / 600 FLANGES

### Ring Joint Flanges Facing Dimensions



### ANSI B 16.5 Forged Flanges

Unit : mm

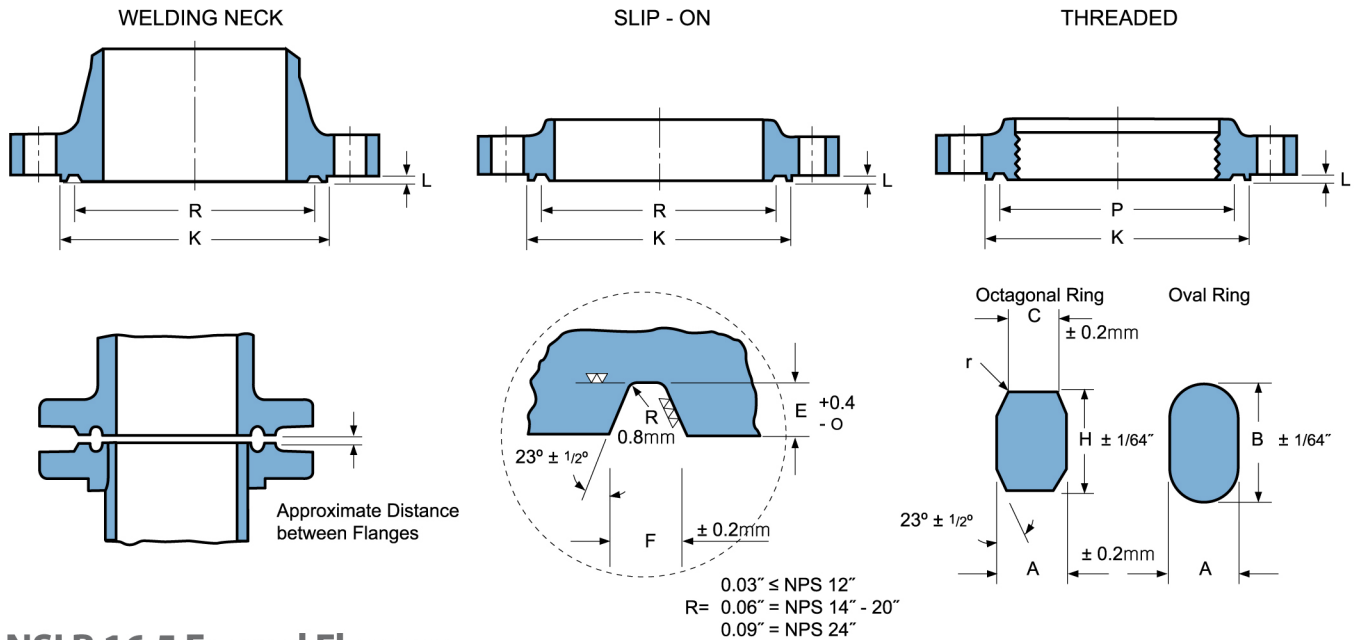
Nominal Pipe Size	Pitch Diam. of Ring and Groove	Width of Ring	HEIGHT OF RING		Width of Flat on Octagonal Rings	Width of Groove	Depth of Groove	Diameter of Raised Face for Ring Joint or Lapped	Ring Number	Approximate Distance Between Flange of Ring Joints When Ring is Compressed		
			Oval	Octagonal						Class 300	Class 400	Class 600
			B	H								
1/2	34.1	6.4	11.1	9.5	4.3	7.1	5.6	50.8	R11	3.0	-	3.0
3/4	42.9	8.0	14.3	12.7	5.2	8.7	6.4	63.5	R13	4.1	-	4.1
1	50.8	8.0	14.3	12.7	5.2	8.7	6.4	69.9	R16	4.1	-	4.1
1 1/4	60.3	8.0	14.3	12.7	5.2	8.7	6.4	79.5	R18	4.1	-	4.1
1 1/2	68.3	8.0	14.3	12.7	5.2	8.7	6.4	90.4	R20	4.1	-	4.1
2	82.6	11.1	17.5	15.9	7.7	11.9	7.9	108.0	R23	5.6	-	4.8
2 1/2	101.6	11.1	17.5	15.9	7.7	11.9	7.9	127.0	R26	5.6	-	4.8
3	123.8	11.1	17.5	15.9	7.7	11.9	7.9	146.1	R31	5.6	-	4.8
3 1/2	131.8	11.1	17.5	15.9	7.7	11.9	7.9	158.8	R34	5.6	-	4.8
4	149.2	11.1	17.5	15.9	7.7	11.9	7.9	174.8	R37	5.6	5.6	4.8
5	181.0	11.1	17.5	15.9	7.7	11.9	7.9	209.6	R41	5.6	5.6	4.8
6	211.2	11.1	17.5	15.9	7.7	11.9	7.9	241.3	R45	5.6	5.6	4.8
8	269.9	11.1	17.5	15.9	7.7	11.9	7.9	301.8	R49	5.6	5.6	4.8
10	323.9	11.1	17.5	15.9	7.7	11.9	7.9	355.6	R53	5.6	5.6	4.8
12	381.0	11.1	17.5	15.9	7.7	11.9	7.9	412.8	R57	5.6	5.6	4.8
14	419.1	11.1	17.5	15.9	7.7	11.9	7.9	457.2	R61	5.6	5.6	4.8
16	469.9	11.1	17.5	15.9	7.7	11.9	7.9	508.0	R65	5.6	5.6	4.8
18	533.4	11.1	17.5	15.9	7.7	11.9	7.9	574.8	R69	5.6	5.6	4.8
20	584.2	12.7	19.1	17.5	8.7	13.5	9.5	635.0	R73	5.6	5.6	4.8
24	692.2	15.9	22.2	20.7	10.5	16.7	11.1	749.3	R77	6.4	6.4	5.6

**NOTE :**

- Unless other wise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
- The depth of groove is added to the minimum flange thickness.
  - \* Raised face " L " is equal to groove dimension " E " but is not subject to tolerances for " E "
  - \* A plus tolerance of 3/64 in, for heights B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in, throughout its entire circumference.
- Dimension " R " is max.
- Radius " r " is 1/16" for ring widths 7/8" and less and 3/32" for ring widths 1"(25.4mm) and over.

# CLASS 900 FLANGES

## Ring Joint Flanges Facing Dimensions



## ANSI B 16.5 Forged Flanges

Unit : mm

Nominal Pipe Size	Pitch Diam. of Ring and Groove	Width of Ring	HEIGHT OF RING		Width of Flat on Octagonal Rings	Width of Groove	Depth of Groove	Diameter of Raised Face for Ring Joint or Lapped	Ring Number	Approximate Distance Between Flange of Ring Joints When Ring is Compressed
			Oval	Octagonal						
	P	A	B	H	C	F	E(L*)	K(Min)		

For size 2 1/2 and smaller, use Class 1500 Ring Joint Flanges

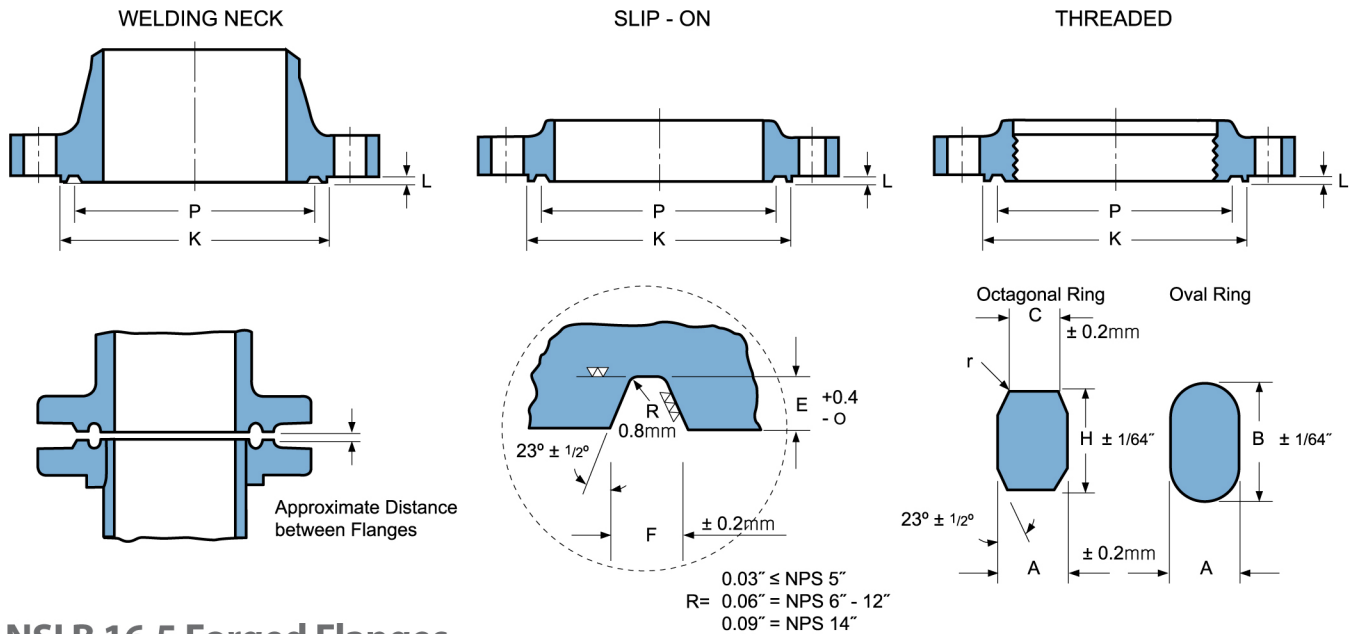
3	123.8	11.1	17.5	15.9	7.7	11.9	7.9	155.4	R31	4.1
4	149.2	11.1	17.5	15.9	7.7	11.9	7.9	180.8	R37	4.1
5	181.0	11.1	17.5	15.9	7.7	11.9	7.9	215.9	R41	4.1
6	211.2	11.1	17.5	15.9	7.7	11.9	7.9	241.3	R45	4.1
8	269.9	11.1	17.5	15.9	7.7	11.9	7.9	307.8	R49	4.1
10	323.9	11.1	17.5	15.9	7.7	11.9	7.9	362.0	R53	4.1
12	381.0	11.1	17.5	15.9	7.7	11.9	7.9	419.1	R57	4.1
14	419.1	15.9	22.2	20.7	10.5	16.7	11.1	466.9	R62	4.1
16	469.9	15.9	22.2	20.7	10.5	16.7	11.1	523.7	R66	4.1
18	533.4	19.1	25.4	23.8	11.1	19.8	12.7	593.9	R70	4.8
20	584.2	19.1	25.4	23.8	12.3	19.8	12.7	647.7	R74	4.8
24	692.2	25.4	33.4	31.8	17.3	27.0	15.9	771.7	R78	5.6

**NOTE :**

- Unless other wise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
- The depth of groove is added to the minimum flange thickness.
  - \* Raised face " L " is equal to groove dimension " E " but is not subject to tolerances for " E "
  - \* A plus tolerance of 3/64 in, for heights B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in, throughout its entire circumference.
- Dimension " R " is max.
- Radius " r " is 1/16" for ring widths 7/8" and less and 3/32" for ring widths 1"(25.4mm) and over.

# CLASS 1500 FLANGES

## Ring Joint Flanges Facing Dimensions



## ANSI B 16.5 Forged Flanges

Unit : mm

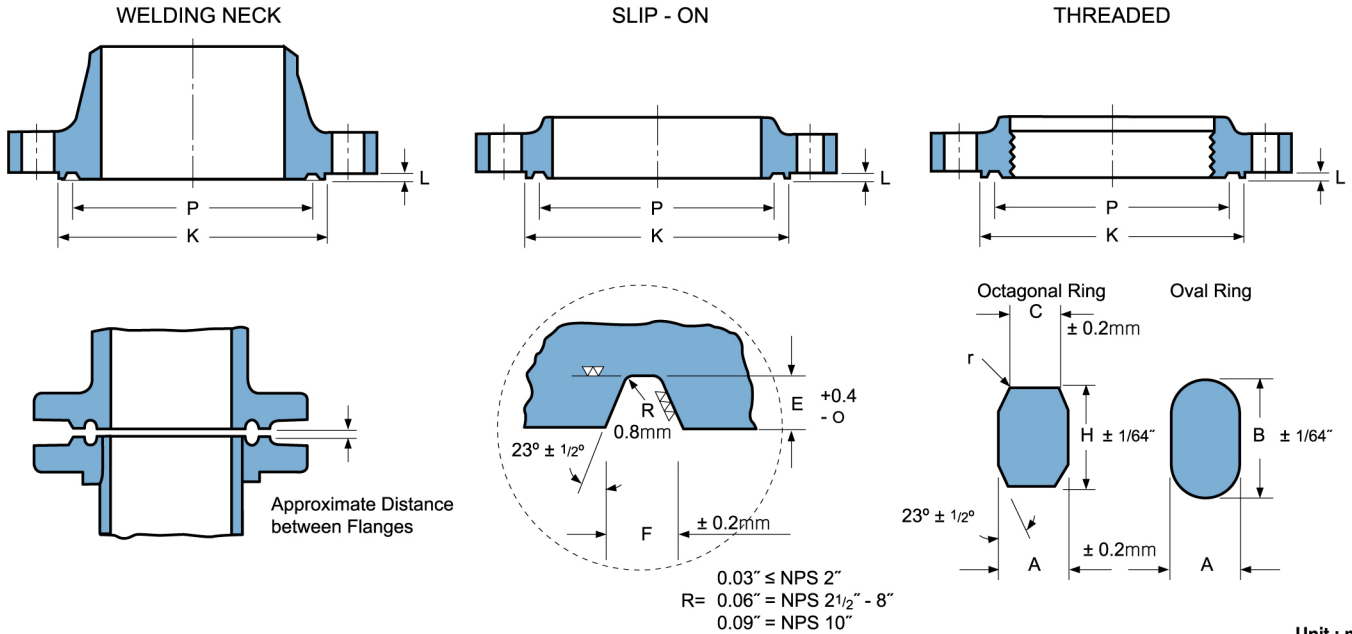
Nominal Pipe Size	Pitch Diam. of Ring and Groove	Width of Ring	HEIGHT OF RING		Width of Flat on Octagonal Rings	Width of Groove	Depth of Groove	Diameter of Raised Face for Ring Joint or Lapped	Ring Number	Approximate Distance Between Flange of Ring Joints When Ring is Compressed
			Oval	Octagonal						
	P	A	B	H	C	F	E(L*)	K(Min)		
1/2	39.7	8.0	14.3	12.7	5.2	8.7	6.4	60.5	R12	4.1
3/4	44.5	8.0	14.3	12.7	5.2	8.7	6.4	66.8	R14	4.1
1	50.8	8.0	14.3	12.7	5.2	8.7	6.4	71.4	R16	4.1
1 1/4	60.3	8.0	14.3	12.7	5.2	8.7	6.4	81.0	R18	4.1
1 1/2	68.3	8.0	14.3	12.7	5.2	8.7	6.4	92.2	R20	4.1
2	95.3	11.1	17.5	15.9	7.7	11.9	7.9	124.0	R24	3.0
2 1/2	108.0	11.1	17.5	15.9	7.7	11.9	7.9	136.7	R27	3.0
3	136.5	11.1	17.5	15.9	7.7	11.9	7.9	168.4	R35	3.0
4	161.9	11.1	17.5	15.9	7.7	11.9	7.9	193.8	R39	3.0
5	193.7	11.1	17.5	15.9	7.7	11.9	7.9	228.6	R44	3.0
6	211.2	12.7	19.1	17.5	8.7	13.5	9.5	247.7	R46	3.0
8	269.9	15.9	22.2	20.7	10.5	16.7	11.1	317.5	R50	4.1
10	323.9	15.9	22.2	20.7	10.5	16.7	11.1	371.6	R54	4.1
12	381.0	22.2	28.6	27.0	14.8	23.0	14.3	438.2	R58	4.8
14	419.1	25.4	33.4	31.8	17.3	27.0	15.9	489.0	R64	5.6
16	469.9	28.6	36.5	34.9	19.8	30.2	17.5	546.1	R67	7.9
18	533.4	28.6	36.5	34.9	19.8	30.2	17.5	612.9	R71	7.9
20	584.2	31.8	39.7	38.1	22.3	33.4	17.5	673.1	R75	9.7
24	692.2	34.9	44.5	41.3	24.8	36.5	20.6	793.8	R79	11.2

**NOTE :**

1. Unless other wise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
2. The depth of groove is added to the minimum flange thickness.  
 \* Raised face " L " is equal to groove dimension " E " but is not subject to tolerances for " E "  
 \* A plus tolerance of 3/64 in, for heights B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in, throughout its entire circumference.
3. Dimension " R " is max.
4. Radius " r " is 1/16" for ring widths 7/8" and less and 3/32" for ring widths 1"(25.4mm) and over.

# CLASS 2500 FLANGES

## Ring Joint Flanges Facing Dimensions



Unit : mm

Nominal Pipe Size	Pitch Diam. of Ring and Groove	Width of Ring	HEIGHT OF RING		Width of Flat on Octagonal Rings	Width of Groove	Depth of Groove	Diameter of Raised Face for Ring Joint or Lapped	Ring Number	Approximate Distance Between Flange of Ring Joints When Ring is Compressed
			Oval	Octagonal						
			B	H						
1/2	42.9	8.0	14.3	12.7	5.2	8.7	6.4	65.0	R13	4.1
3/4	50.8	8.0	14.3	12.7	5.2	8.7	6.4	73.2	R16	4.1
1	60.3	8.0	14.3	12.7	5.2	8.7	6.4	82.6	R18	4.1
1 1/4	72.2	11.1	17.5	15.9	7.7	11.9	7.9	101.6	R21	3.0
1 1/2	82.6	11.1	17.5	15.9	7.7	11.9	7.9	114.3	R23	3.0
2	101.6	11.1	17.5	15.9	7.7	11.9	7.9	133.4	R26	3.0
2 1/2	111.1	12.7	19.1	17.5	8.7	13.5	9.5	149.4	R28	3.0
3	127.0	12.7	19.1	17.5	8.7	13.5	9.5	168.4	R32	3.0
4	157.2	15.9	22.2	20.7	10.5	16.7	11.1	203.2	R38	4.1
5	190.5	19.1	25.4	23.8	12.3	19.8	12.7	241.3	R42	4.1
6	228.6	19.1	25.4	23.8	12.3	19.8	12.7	279.4	R47	4.1
8	279.4	22.2	28.6	27.0	14.8	23.0	14.3	339.9	R51	4.8
10	342.9	28.6	36.5	34.9	19.8	30.2	17.5	425.5	R55	6.4
12	406.4	31.8	39.7	38.1	22.3	33.4	17.5	495.3	R60	7.9

**NOTE :**

- Unless other wise specified by the customer, Ring Type Joint Flanges will be furnished in accordance with these details.
- The depth of groove is added to the minimum flange thickness.
  - \* Raised face " L " is equal to groove dimension " E " but is not subject to tolerances for " E "
  - \* A plus tolerance of 3/64 in, for heights B and H is permitted providing the variation in the height of any given ring does not exceed 1/64 in, throughout its entire circumference.
- Dimension " R " is max.
- Radius " r " is 1/16" for ring widths 7/8" and less and 3/32" for ring widths 1"(25.4mm) and over.