

INSULATION KITS

APPROVED EGY-TEC. CO.



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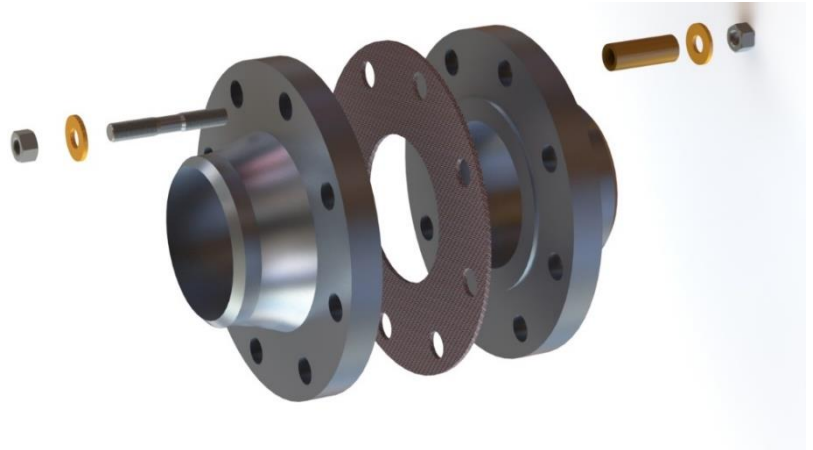
APPROVED EGY-TEC. CO.
Approved Egyptian Technology Company



APPROVED EGY-TEC INSULATION KITS

GENERAL INFORMATION

Gaskets are used to create a static compression seal between two stationary members of a mechanical assembly and to maintain that seal under operating conditions which may vary dependent upon changes in pressures and temperatures.



Flange Insulation Gaskets and Insulation Kits are used throughout the world and in numerous industry specific applications. Our Gaskets and Flange Insulation Kits have a proven track record of being one of the most effective and reliable products for controlling and maintaining the integrity of piping systems ever under the most demanding conditions.

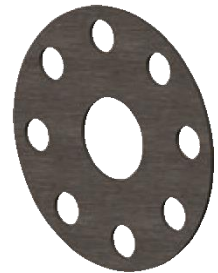
- Gaskets are available individually or in kits. Gasket material includes G3, G7, Nitrile-Face, Plain Phenolic, G10 and Durlon.
- Sleeve material includes Phenolic, Mylar, Polyethylene, Minlon, G10 or Nomex.
- Washer materials include Phenolic, Steel, G3, G7 or G10 available as a single washer and sleeve kit, a one-piece washer kit, a double washer kit or a one-piece double washer kit (Minlon).



Gasket Types

Type Full Face:

Full Face Gaskets completely cover the flange face from flange bed to outside diameter. Full face gaskets are used on flat faced flanges, however, can be used with a raised flat face flange to eliminate debris building up in raised area causing a short.



Type raised face:

This gasket will fit only the raised face surface of the flanges. The outside diameter of the gasket is slightly less than the inside diameter of the bolt circle.

This gasket can be used on both raised face and full-face flanges.



Insulating Washers

Standard insulating washers are manufactured from CE Phenolic. The maximum operating temperature is approximately 225°F with a compression strength of 36,400 PSI and a dielectric strength of 300 VPM. Our G3 and G7 high temperature insulating washers have a maximum operating temperature of 450°F.



Insulating Sleeves

APPROVED EGY-TEC offers insulating sleeves in a variety of materials. Our most standard include Mylar, High Density Polyethylene, and Nomex. They are designed to easily be inserted in the bolt hole, leaving ample room for the bolt, even when the bolt holes are misaligned. The wall thickness is 1/32" and can be provided for bolt sizes from 1/2" to 3 1/2".



Insulation Kits using for:

- Designed to minimize electro-chemical corrosion.
- Used to electrically isolate sections of pipeline
- Comprise of materials with high dielectric strength
- Easily identified with each kit labelled with flange size & rating
- Supplied as standard with gasket, steel washers and “Top Hats” or Mylar Sleeve for bolt isolation and ease of instalment.



TECHNICAL DATA

Materials

1. Gasket Materials

Properties	G10	G11
Water Absorption in Percent	0.10%	0.20%
Hardness Rockwell M	110	112
Tensile with Grain psi	38,000	37,000
Compression Flatwise psi	65,000	63,000
Flexural Flat W/Grain psi	65,000	70,000
Dielectric Strength VPM	400	500
Dielectric Constant	5.0	4.5
Max. Cont. Operating Temp	284°F/140°C	329°F/165°C

2. Sleeve Materials

Material	Dielectric Strength (volts/mil)	Water Absorption %	Max Continuous Operating Temp.
G10	800	0.10	284°F / 140°C
Mylar	4000	0.80	300°F / 149°C

3. Washer Materials

Material	Dielectric Strength volts/mil	Compressive Strength (Flatwise) psi	Flexural Strength (Flatwise with grain) psi	Max. Continuous Operating Temperature
G10	800	65,000	65,000	284°F / 140°C
G11	900	63,000	70,000	225°F / 107°C



Specifications for Flange Connection Insulation: ASME Standard Gaskets: B16.21

150 CLASS						300 CLASS					
Flange Size	(Number) & Size of Bolts	Ring Gasket I.D.	Ring Gasket O.D.	Full Face Gasket O.D.	RTJ	Flange Size	(Number) & Size of Bolts	Ring Gasket I.D.	Ring Gasket O.D.	Full Face Gasket O.D.	RTJ
1"	(4) ½"	1"	2 ½"	4 ¼"	R-15	1"	(4) 5/8"	1"	2 ¾"	4 7/8"	R-16
1 ¼"	(4) ½"	1 ¼"	2 7/8"	4 5/8"	R-17	1 ¼"	(4) 5/8"	1 ¼"	3 1/8"	5 ¼"	R-18
1 ½"	(4) ½"	1 ½"	3 ¼"	5"	R-19	1 ½"	(4) ¾"	1 ½"	3 5/8"	6 1/8"	R-20
2"	(4) 5/8"	2"	4"	6"	R-22	2"	(8) 5/8"	2"	4 ¼"	6 ½"	R-23
2 ½"	(4) 5/8"	2 ½"	4 ¾"	7"	R-25	2 ½"	(8) ¾"	2 ½"	5"	7 ½"	R-26
3"	(4) 5/8"	3"	5 ¼"	7 ½"	R-29	3"	(8) ¾"	3"	5 ¾"	8 ¼"	R-31
3 ½"	(8) 5/8"	3 ½"	6 ¼"	8 ½"	R-33	3 ½"	(8) ¾"	3 ½"	6 3/8"	9"	R-34
4"	(8) 5/8"	4"	6 ¾"	9"	R-36	4"	(8) ¾"	4"	7"	10"	R-37
5"	(8) ¾"	5"	7 5/8"	10"	R-40	5"	(8) ¾"	5"	8 3/8"	11"	R-41
6"	(8) ¾"	6"	8 5/8"	11"	R-43	6"	(12) ¾"	6"	9 ¾"	12 ½"	R-45
8"	(8) ¾"	8"	10 7/8"	13 ½"	R-48	8"	(12) 7/8"	8"	12"	15"	R-49
10"	(12) 7/8"	10"	13 ¼"	16"	R-52	10"	(16) 1"	10"	14 1/8"	17 ½"	R-53
12"	(12) 7/8"	12"	16"	19"	R-56	12"	(16) 1 1/8"	12"	16 ½"	20 ½"	R-57
14"	(12) 1"	14"	17 5/8"	21"	R-59	14"	(20) 1 1/8"	13 ¾"	19"	23"	R-61
16"	(16) 1"	16"	20 1/8"	23 ½"	R-64	16"	(20) 1 ¼"	15 ¼"	21 1/8"	25 ½"	R-65
18"	(16) 1 1/8"	18"	21 1/2"	25"	R-68	18"	(24) 1 ¼"	17"	23 3/8"	28"	R-69
20"	(20) 1 1/8"	20"	23 3/4"	27 ½"	R-72	20"	(24) 1 ¼"	19"	25 5/8"	30 ½"	R-73
24"	(20) 1 ¼"	24"	28 1/8"	32"	R-76	24"	(24) 1 ½"	23"	30 3/8"	36"	R-77
30"	(28) 1 ¼"	30"	34 5/8"	38 ¾"		36"	(32) 2"	35"	43 7/8"	50"	R-98
36"	(32) 1 ½"	36"	41 1/8"	46"		42"	(36) 2"	41"	50 3/8"	57"	
42"	(36) 1 ½"	42"	47 7/8"	53"		48"	(40) 2"	47"	52 3/4"	65"	
48"	(44) 1 ½"	48"	54 3/8"	59 ½"							

400 CLASS						600 CLASS					
Flange Size	(Number) & Size of Bolts	Ring Gasket I.D.	Ring Gasket O.D.	Full Face Gasket O.D.	RTJ	Flange Size	(Number) & Size of Bolts	Ring Gasket I.D.	Ring Gasket O.D.	Full Face Gasket O.D.	RTJ
1"	(4) 5/8"	1"	2 ¾"	4 7/8"	R-16	1"	(4) 5/8"	1"	2 ¾"	4 7/8"	R-16
1 ¼"	(4) 5/8"	1 ¼"	3 1/8"	5 ¼"	R-18	1 ¼"	(4) 5/8"	1 ¼"	3 1/8"	5 ¼"	R-18
1 ½"	(4) ¾"	1 ½"	3 5/8"	6 1/8"	R-20	1 ½"	(4) ¾"	1 ½"	3 5/8"	6 1/8"	R-20
2"	(8) 5/8"	2"	4 ¼"	6 ½"	R-23	2"	(8) 5/8"	2"	4 ¼"	6 ½"	R-23
2 ½"	(8) ¾"	2 ½"	5"	7 ½"	R-26	2 ½"	(8) ¾"	2 ½"	5"	7 ½"	R-26
3"	(8) ¾"	3"	5 ¾"	8 ¼"	R-31	3"	(8) ¾"	3"	5 ¾"	8 ¼"	R-31
3 ½"	(8) 7/8"	3 ½"	6 ¼"	9"	R-34	3 ½"	(8) 7/8"	3 ½"	6 ¼"	9"	R-34
4"	(8) 7/8"	4"	6 7/8"	10"	R-37	4"	(8) 7/8"	4"	7 ½"	10 ¾"	R-37
5"	(8) 7/8"	5"	8 ¼"	11"	R-41	5"	(8) 1"	5"	9 3/8"	13"	R-41
6"	(12) 7/8"	6"	9 5/8"	12 ½"	R-45	6"	(12) ¾"	6"	10 3/8"	14"	R-45
8"	(12) 1"	8"	11 7/8"	15"	R-49	8"	(12) 1 1/8"	7 7/8"	12 ½"	16 ½"	R-49
10"	(16) 1 1/8"	10"	14"	17 ½"	R-53	10"	(16) 1 ¼"	9 ¾"	15 5/8"	20"	R-53
12"	(16) 1 ¼"	12"	16 3/8"	20 ½"	R-57	12"	(20) 1 ¼"	11 ¾"	15 5/8"	22"	R-57
14"	(20) 1 ¼"	13 1/8"	18 7/8"	23"	R-61	14"	(20) 1 3/8"	12 7/8"	19 ¼"	23 ¾"	R-61
16"	(20) 1 3/8"	15"	21"	25 5/8"	R-65	16"	(20) 1 ½"	14 ¾"	22 1/8"	27"	R-65
18"	(24) 1 3/8"	17"	23 1/4"	28"	R-69	18"	(20) 1 5/8"	16 ½"	24"	29 ¼"	R-69
20"	(24) 1 ½"	18 7/8"	25 3/8"	30 ½"	R-73	20"	(24) 1 5/8"	18 ¾"	26 ¾"	32"	R-73
24"	(24) 1 ¾"	22 5/8"	30 5/8"	36"	R-77	24"	(24) 1 7/8"	22"	31"	37"	R-77



Specifications for Flange Connection Insulation: ASME Standard Gaskets: B16.21

900 CLASS					
Flange Size	(Number) & Size of Bolts	Ring Gasket		Full Face Gasket O.D.	RTJ
		I.D.	O.D.		
1"	(4) 7/8"	7/8"	3"	5 7/8"	R-16
1 1/4"	(4) 7/8"	1 1/8"	3 3/8"	6 1/4"	R-18
1 1/2"	(4) 1"	1 3/8"	3 3/4"	7"	R-20
2"	(8) 7/8"	1 7/8"	5 1/2"	8 1/2"	R-24
2 1/2"	(8) 1"	2 1/4"	6 3/8"	9 5/8"	R-27
3"	(8) 7/8"	2 7/8"	6 1/2"	9 1/2"	R-31
4"	(8) 1 1/8"	3 3/8"	8"	11 1/2"	R-37
5"	(8) 1 1/4"	4 3/4"	9 5/8"	13 3/4"	R-41
6"	(12) 1 1/8"	5 3/4"	11 1/4"	15"	R-45
8"	(12) 1 3/8"	7 1/2"	14"	18 1/2"	R-49
10"	(16) 1 3/8"	9 3/8"	17"	21 1/2"	R-53
12"	(20) 1 3/8"	11 1/8"	19 1/2"	24"	R-57
14"	(20) 1 1/2"	12 1/4"	20 3/8"	25 1/4"	R-62
16"	(20) 1 5/8"	14"	22 1/2"	27 3/4"	R-66
18"	(20) 1 7/8"	15 3/4"	25"	31"	R-70
20"	(20) 2"	17 1/2"	27 3/8"	33 3/4"	R-74

1500 CLASS					
Flange Size	(Number) & Size of Bolts	Ring Gasket		Full Face Gasket O.D.	RTJ
		I.D.	O.D.		
1"	(4) 7/8"	7/8"	3"	5 7/8"	R-16
1 1/4"	(4) 7/8"	1 1/8"	3 3/8"	6 1/4"	R-18
1 1/2"	(4) 1"	1 3/8"	3 3/4"	7"	R-20
2"	(8) 7/8"	1 7/8"	5 1/2"	8 1/2"	R-24
2 1/2"	(8) 1"	2 1/4"	6 3/8"	9 5/8"	R-27
3"	(8) 1 1/8"	2 3/4"	6 3/4"	10 1/2"	R-35
4"	(8) 1 1/4"	3 5/8"	8 1/8"	12 1/4"	R-39
5"	(8) 1 1/2"	4 3/8"	9 7/8"	14 3/4"	R-44
6"	(12) 1 3/8"	5 3/8"	11"	15 1/2"	R-46
8"	(12) 1 5/8"	7"	13 3/4"	19"	R-50
10"	(12) 7/8"	8 3/4"	17"	23"	R-54
12"	(16) 2"	10 3/8"	20 3/8"	26 1/2"	R-58

2500 CLASS					
Flange Size	(Number) & Size of Bolts	Ring Gasket		Full Face Gasket O.D.	RTJ
		I.D.	O.D.		
1"	(4) 7/8"	7/8"	3 1/4"	6 1/4"	R-18
1 1/4"	(4) 1"	1 1/8"	4"	7 1/4"	R-21
1 1/2"	(4) 1 1/8"	1 3/8"	4 1/2"	8"	R-23
2"	(8) 1"	1 7/8"	5 5/8"	9 1/4"	R-26
2 1/2"	(8) 1 1/8"	2 1/4"	6 1/2"	10 1/2"	R-28
3"	(8) 1 1/4"	2 3/4"	7 5/8"	12"	R-32
4"	(8) 1 1/2"	3 5/8"	9 1/8"	14"	R-38
5"	(8) 1 3/4"	4 3/8"	10 7/8"	16 1/2"	R-42
6"	(8) 2"	5 3/8"	12 3/8"	19"	R-47
8"	(12) 2"	7"	15 1/8"	21 3/4"	R-51



Flange Insulation: Sleeve Quantity and Length Cross Reference Single Washer Kits

SINGLE WASHER KITS (Qty) Diameter x Length						
Pipe Size	150 Class	300 Class	400 Class	600 Class	900 Class	1500 Class
1/2"	(4) 1/2" x 1 1/8"	(4) 1/2" x 1 3/8"	(4) 1/2" x 1 5/8"	(4) 1/2" x 1 7/8"	(4) 3/4" x 2 1/2"	(4) 3/4" x 2 1/2"
3/4"	(4) 1/2" x 1 1/4"	(4) 5/8" x 1 1/2"	(4) 5/8" x 2"	(4) 5/8" x 2"	(4) 3/4" x 2 3/4"	(4) 3/4" x 2 3/4"
1"	(4) 1/2" x 1 3/8"	(4) 5/8" x 1 5/8"	(4) 5/8" x 2 1/8"	(4) 5/8" x 2 1/8"	(4) 7/8" x 3"	(4) 7/8" x 3"
1 1/4"	(4) 1/2" x 1 1/2"	(4) 3/4" x 1 3/4"	(4) 5/8" x 2 3/8"	(4) 5/8" x 2 3/8"	(4) 7/8" x 3"	(4) 7/8" x 3"
1 1/2"	(4) 1/2" x 1 5/8"	(4) 3/4" x 1 7/8"	(4) 3/4" x 2 1/2"	(4) 3/4" x 2 1/2"	(4) 1" x 3 1/4"	(4) 1" x 3 1/4"
2"	(4) 5/8" x 1 3/4"	(8) 5/8" x 2"	(8) 5/8" x 2 3/4"	(8) 5/8" x 2 3/4"	(8) 7/8" x 3 3/4"	(8) 7/8" x 3 3/4"
2 1/2"	(4) 5/8" x 2"	(8) 3/4" x 2 1/4"	(8) 3/4" x 3"	(8) 3/4" x 3"	(8) 1" x 4"	(8) 1" x 4"
3"	(4) 7/8" x 2 1/8"	(8) 3/4" x 2 1/2"	(8) 3/4" x 3 1/4"	(8) 3/4" x 3 1/4"	(8) 7/8" x 3 3/4"	(8) 1 1/8" x 4 1/2"
3 1/2"	(8) 7/8" x 2 1/8"	(8) 3/4" x 2 5/8"	(8) 7/8" x 3 1/2"	(8) 7/8" x 3 1/2"		
4"	(8) 7/8" x 2 1/8"	(8) 3/4" x 2 3/4"	(8) 7/8" x 3 1/2"	(8) 7/8" x 3 3/4"	(8) 1 1/8" x 4 1/4"	(8) 1 1/4" x 5"
5"	(8) 3/4" x 2 1/8"	(8) 3/4" x 3 1/8"	(8) 7/8" x 3 3/4"	(8) 1" x 4 1/4"	(8) 1 1/4" x 4 3/4"	(8) 1 1/2" x 6 1/2"
6"	(8) 3/4" x 2 1/4"	(12) 3/4" x 3 1/4"	(12) 7/8" x 4"	(12) 1" x 4 1/2"	(12) 1 1/8" x 5 1/8"	(12) 1 3/8" x 7 1/4"
8"	(8) 3/4" x 2 1/2"	(12) 7/8" x 3 1/2"	(12) 1" x 4 1/2"	(12) 1 1/8" x 5 1/8"	(12) 1 3/8" x 5 3/4"	(12) 1 7/8" x 8"
10"	(12) 7/8" x 2 3/8"	(16) 1" x 4"	(16) 1 1/8" x 5"	(16) 1 1/4" x 5 3/4"	(16) 1 3/8" x 6 1/4"	(12) 1 7/8" x 9 1/4"
12"	(12) 7/8" x 2 3/4"	(16) 1 1/8" x 4 1/4"	(16) 1 1/4" x 5 1/4"	(20) 1 1/4" x 6"	(20) 1 3/8" x 7"	(16) 2" x 10 1/2"
14"	(12) 1" x 3"	(20) 1 1/8" x 4 1/2"	(20) 1 1/4" x 5 1/2"	(20) 1 3/8" x 6 1/4"	(20) 1 1/2" x 7 1/2"	
16"	(16) 1" x 3 1/8"	(20) 1 1/4" x 4 3/4"	(20) 1 3/8" x 5 3/4"	(20) 1 1/2" x 6 3/4"	(20) 1 5/8" x 7 3/4"	
18"	(16) 1 1/8" x 3 3/8"	(24) 1 1/4" x 5"	(24) 1 3/8" x 6"	(20) 1 5/8" x 7 1/4"	(20) 1 7/8" x 8 3/4"	
20"	(20) 1 1/8" x 3 3/8"	(24) 1 1/4" x 5 1/4"	(24) 1 1/2" x 6 1/4"	(24) 1 5/8" x 7 3/4"	(20) 2" x 9 1/4"	
22"	(20) 1 1/4" x 3 7/8"	(24) 1 1/2" x 5 1/2"	(24) 1 5/8" x 6 1/2"	(24) 1 3/4" x 8 1/4"		
24"	(20) 1 1/4" x 4"	(24) 1 1/2" x 5 3/4"	(24) 1 3/4" x 6 3/4"	(24) 1 7/8" x 8 3/4"		
26"	(20) 1 1/4" x 4 1/4"	(28) 1 5/8" x 6 1/2"	(28) 1 3/4" x 7 3/4"	(28) 1 7/8" x 9 1/4"		
28"	(28) 1 1/4" x 4 3/8"	(28) 1 5/8" x 7"	(28) 1 7/8" x 8 1/4"	(28) 2" x 9 1/2"		
30"	(28) 1 1/4" x 4 1/2"	(28) 1 3/4" x 7 1/2"	(28) 2" x 8 3/4"	(28) 2" x 9 3/4"		
32"	(28) 1 1/2" x 4 3/4"	(28) 1 7/8" x 8"	(28) 2" x 9 1/4"			
34"	(32) 1 1/2" x 4 3/4"	(28) 1 7/8" x 8 1/4"	(28) 2" x 9 1/2"			
36"	(32) 1 1/2" x 5"	(32) 2" x 8 1/2"	(32) 2" x 9 3/4"			
38"	(32) 1 1/2" x 7 1/8"	(32) 1 1/2" x 8 3/4"	(32) 1 3/4" x 10 1/2"	(28) 2 1/4" x 12 3/4"		
40"	(36) 1 1/2" x 7 3/8"	(32) 1 5/8" x 9 1/4"	(32) 1 7/8" x 11"	(32) 2 1/4" x 13 1/4"		
42"	(36) 1 1/2" x 7 7/8"	(32) 1 5/8" x 9 5/8"	(32) 1 7/8" x 11 1/4"	(28) 2 1/2" x 14"		
44"	(40) 1 1/2" x 8 1/4"	(32) 1 3/4" x 10"	(32) 2" x 11 3/4"	(32) 2 1/2" x 14 3/8"		
46"	(40) 1 1/2" x 8 3/8"	(28) 1 7/8" x 10 3/8"	(36) 2" x 12 1/4"	(32) 2 1/2" x 14 7/8"		
48"	(44) 1 1/2" x 8 3/4"	(32) 1 7/8" x 10 3/4"	(28) 2 1/4" x 12 3/4"	(32) 2 3/4" x 15 5/8"		
50"	(44) 1 3/4" x 9"	(32) 2" x 11 1/4"	(32) 2 1/4" x 13 1/8"	(28) 3" x 16 1/4"		
52"	(44) 1 3/4" x 9 3/8"	(32) 2" x 11 5/8"	(32) 2 1/4" x 13 1/2"	(32) 3" x 16 3/4"		
54"	(44) 1 3/4" x 9 3/4"	(28) 2 1/4" x 12 1/4"	(28) 2 1/2" x 14 1/8"	(32) 3" x 17 1/4"		
56"	(48) 1 3/4" x 10"	(28) 2 1/4" x 12 3/8"	(32) 2 1/2" x 14 1/2"	(32) 3 1/4" x 17 7/8"		
58"	(48) 1 3/4" x 10 3/8"	(32) 2 1/4" x 12 3/4"	(32) 2 1/2" x 14 3/4"	(32) 3 1/4" x 18 1/4"		
60"	(52) 1 3/4" x 10 3/8"	(32) 2 1/4" x 13 1/8"	(32) 2 3/4" x 15 5/8"	(28) 3 1/2" x 19 1/8"		



Flange Insulation:

Sleeve Quantity and Length Cross Reference

Double Washer Kits

DOUBLE WASHER KITS (Qty Sleeves)** Diameter x Length						
Pipe Size	150 Class	300 Class	400 Class	600 Class	900 Class	1500 Class
1/2"	(4) 1/2" x 1 1/4"	(4) 1/2" x 1 1/2"	(4) 1/2" x 2"	(4) 1/2" x 2"	(4) 3/4" x 2 5/8"	(4) 3/4" x 2 5/8"
3/4"	(4) 1/2" x 1 3/8"	(4) 5/8" x 1 5/8"	(4) 5/8" x 2 1/8"	(4) 5/8" x 2 1/8"	(4) 3/4" x 2 1/8"	(4) 3/4" x 2 1/8"
1"	(4) 1/2" x 1 1/2"	(4) 5/8" x 1 3/4"	(4) 5/8" x 2 1/4"	(4) 5/8" x 2 1/4"	(4) 7/8" x 3 1/8"	(4) 7/8" x 3 1/8"
1 1/4"	(4) 1/2" x 1 3/8"	(4) 5/8" x 1 7/8"	(4) 5/8" x 2 1/2"	(4) 5/8" x 2 1/2"	(4) 7/8" x 3 1/8"	(4) 7/8" x 3 1/8"
1 1/2"	(4) 1/2" x 1 3/4"	(4) 3/4" x 2"	(4) 3/4" x 2 5/8"	(4) 3/4" x 2 5/8"	(4) 1" x 3 3/8"	(4) 1" x 3 3/8"
2"	(4) 5/8" x 1 5/8"	(8) 5/8" x 2 1/8"	(8) 5/8" x 2 7/8"	(8) 5/8" x 2 7/8"	(8) 7/8" x 3 3/8"	(8) 7/8" x 3 3/8"
2 1/2"	(4) 5/8" x 2 1/8"	(8) 3/4" x 2 3/8"	(8) 3/4" x 3 1/8"	(8) 3/4" x 3 1/8"	(8) 1" x 4 1/8"	(8) 1" x 4 1/8"
3"	(4) 5/8" x 2 1/4"	(8) 3/4" x 2 5/8"	(8) 3/4" x 3 3/8"	(8) 3/4" x 3 3/8"	(8) 7/8" x 3 7/8"	(8) 1 1/8" x 4 5/8"
3 1/2"	(8) 5/8" x 2 1/4"	(8) 3/4" x 2 3/4"	(8) 7/8" x 3 3/8"	(8) 7/8" x 3 3/8"		
4"	(8) 5/8" x 2 1/4"	(8) 3/4" x 2 7/8"	(8) 7/8" x 3 3/8"	(8) 7/8" x 4 7/8"	(8) 1 1/8" x 4 3/8"	(8) 1 1/4" x 5 1/8"
5"	(8) 3/4" x 2 1/4"	(8) 3/4" x 2 1/4"	(8) 7/8" x 3 7/8"	(8) 1" x 4 3/8"	(8) 1 1/4" x 4 7/8"	(8) 1 1/2" x 7 5/8"
6"	(8) 3/4" x 2 3/8"	(12) 3/4" x 3 3/8"	(12) 7/8" x 4 1/8"	(12) 1" x 4 5/8"	(12) 1 1/8" x 5 1/4"	(12) 1 3/8" x 7 3/8"
8"	(8) 3/4" x 2 5/8"	(12) 7/8" x 3 3/8"	(12) 1" x 4 5/8"	(12) 1 1/8" x 5 1/4"	(12) 1 3/8" x 5 5/8"	(12) 1 5/8" x 8 1/8"
10"	(12) 7/8" x 2 3/4"	(16) 1" x 4 1/8"	(16) 1 1/8" x 5 1/8"	(16) 1 1/4" x 5 5/8"	(16) 1 3/8" x 6 3/8"	(12) 1 5/8" x 9 3/8"
12"	(12) 7/8" x 2 5/8"	(16) 1 1/8" x 4 3/8"	(16) 1 1/4" x 5 3/8"	(20) 1 1/4" x 6 1/8"	(20) 1 3/8" x 7 1/8"	(16) 2" x 10 5/8"
14"	(12) 1" x 3 1/8"	(20) 1 1/8" x 4 5/8"	(20) 1 1/4" x 5 5/8"	(20) 1 3/8" x 6 3/8"	(20) 1 1/2" x 7 5/8"	
16"	(16) 1" x 3 1/4"	(20) 1 1/4" x 4 7/8"	(20) 1 3/8" x 5 5/8"	(20) 1 1/2" x 6 7/8"	(20) 1 5/8" x 7 7/8"	
18"	(16) 1 1/8" x 3 1/2"	(24) 1 1/4" x 5 1/8"	(24) 1 3/8" x 6 1/8"	(20) 1 5/8" x 7 3/8"	(20) 1 5/8" x 8 3/8"	
20"	(20) 1 1/8" x 3 3/4"	(24) 1 1/4" x 5 3/8"	(24) 1 1/2" x 6 3/8"	(24) 1 5/8" x 7 7/8"	(20) 2" x 9 3/8"	
22"	(20) 1 1/4" x 4"	(24) 1 1/2" x 5 5/8"	(24) 1 5/8" x 6 5/8"	(24) 1 3/4" x 8 3/8"		
24"	(20) 1 1/4" x 4 1/8"	(24) 1 1/2" x 5 7/8"	(24) 1 3/4" x 6 7/8"	(24) 1 7/8" x 8 7/8"		
26"	(20) 1 1/4" x 4 3/8"	(28) 1 5/8" x 6 3/8"	(28) 1 3/4" x 7 3/8"	(28) 1 5/8" x 9 3/8"		
28"	(28) 1 1/4" x 4 1/2"	(28) 1 5/8" x 7 1/8"	(28) 1 7/8" x 8 3/8"	(28) 2" x 9 3/8"		
30"	(28) 1 1/4" x 4 5/8"	(28) 1 3/4" x 7 5/8"	(28) 2" x 8 7/8"	(28) 2" x 9 7/8"		
32"	(28) 1 1/2" x 4 7/8"	(28) 1 7/8" x 8 1/8"	(28) 2" x 9 3/8"			
34"	(32) 1 1/2" x 8"	(28) 1 5/8" x 8 3/8"	(28) 2" x 9 3/8"			
36"	(32) 1 1/2" x 5 1/8"	(32) 2" x 8 3/8"	(32) 2" x 9 3/8"			
38"	(32) 1 1/2" x 7 1/4"	(32) 1 1/2" x 8 7/8"	(32) 1 3/4" x 10 5/8"	(28) 2 1/4" x 12 7/8"		
40"	(36) 1 1/2" x 7 1/2"	(32) 1 5/8" x 9 3/8"	(32) 1 7/8" x 11 1/8"	(32) 2 1/4" x 13 3/8"		
42"	(36) 1 1/2" x 8"	(32) 1 5/8" x 9 3/4"	(32) 1 7/8" x 11 3/8"	(28) 2 1/2" x 14 1/8"		
44"	(40) 1 1/2" x 8 3/8"	(32) 1 3/4" x 10 1/8"	(32) 2" x 11 7/8"	(32) 2 1/2" x 14 1/2"		
46"	(40) 1 1/2" x 8 1/2"	(28) 1 7/8" x 10 1/2"	(36) 2" x 12 3/8"	(32) 2 1/2" x 15"		
48"	(44) 1 1/2" x 8 3/8"	(32) 1 7/8" x 10 7/8"	(28) 2 1/4" x 12 7/8"	(32) 2 3/4" x 15 3/4"		
50"	(44) 1 3/4" x 9 1/8"	(32) 2" x 11 3/8"	(32) 2 1/4" x 13 1/4"	(28) 3" x 16 3/8"		
52"	(44) 1 3/4" x 9 1/2"	(32) 2" x 11 3/4"	(32) 2 1/4" x 13 3/8"	(32) 3" x 16 7/8"		
54"	(44) 1 3/4" x 9 3/8"	(28) 2 1/4" x 12 3/8"	(28) 2 1/2" x 14 1/4"	(32) 3" x 17 3/8"		
56"	(48) 1 3/4" x 10 1/8"	(28) 2 1/4" x 12 1/2"	(32) 2 1/2" x 14 5/8"	(32) 3 1/4" x 18"		
58"	(48) 1 3/4" x 10 1/2"	(32) 2 1/4" x 12 7/8"	(32) 2 1/2" x 14 7/8"	(32) 3 1/4" x 18 3/8"		
60"	(52) 1 3/4" x 10 3/4"	(32) 2 1/4" x 13 1/4"	(32) 2 3/4" x 15 1/2"	(28) 3 1/2" x 19 1/4"		



Flange Insulation: Sleeve ID and OD Reference Sheet

SLEEVE			SLEEVE		
Bolt Size	ID	OD	Bolt Size	ID	OD
3/8"	0.394"	0.474"	M10	0.413"	0.453"
1/2"	0.519"	0.599"	M12	0.491"	0.532"
5/8"	0.644"	0.724"	M16	0.649"	0.690"
3/4"	0.767"	0.849"	M20	0.806"	0.847"
7/8"	0.894"	0.974"	M24	0.964"	1.005"
1"	1.019"	1.099"	M27	1.082"	1.162"
1 1/8"	1.144"	1.224"	M30	1.200"	1.280"
1 1/4"	1.269"	1.349"	M33	1.318"	1.398"
1 3/8"	1.394"	1.474"	M36	1.436"	1.516"
1 1/2"	1.519"	1.599"	M39	1.554"	1.634"
1 5/8"	1.644"	1.724"	M45	1.791"	1.871"
1 3/4"	1.769"	1.849"	M48	1.909"	1.989"
1 7/8"	1.894"	1.974"	M52	2.066"	2.146"
2"	2.019"	2.099"	M56	2.224"	2.422"
2 1/4"	2.269"	2.349"	M64	2.539"	2.658"
2 1/2"	2.519"	2.599"			
2 3/4"	2.781"	2.849"			
3"	3.019"	3.099"			
3 1/2"	3.531"	3.591"			



INDEX

INSULATION KITS GENERAL INFORMATION	2
Gasket Types	3
Insulating Washers	3
Insulating Sleeves	3
Using of Insulation Kits using	4
Materials	5
ASME Standard Gaskets	6
Sleeve Quantity and Length	8
Sleeve ID and OD	10