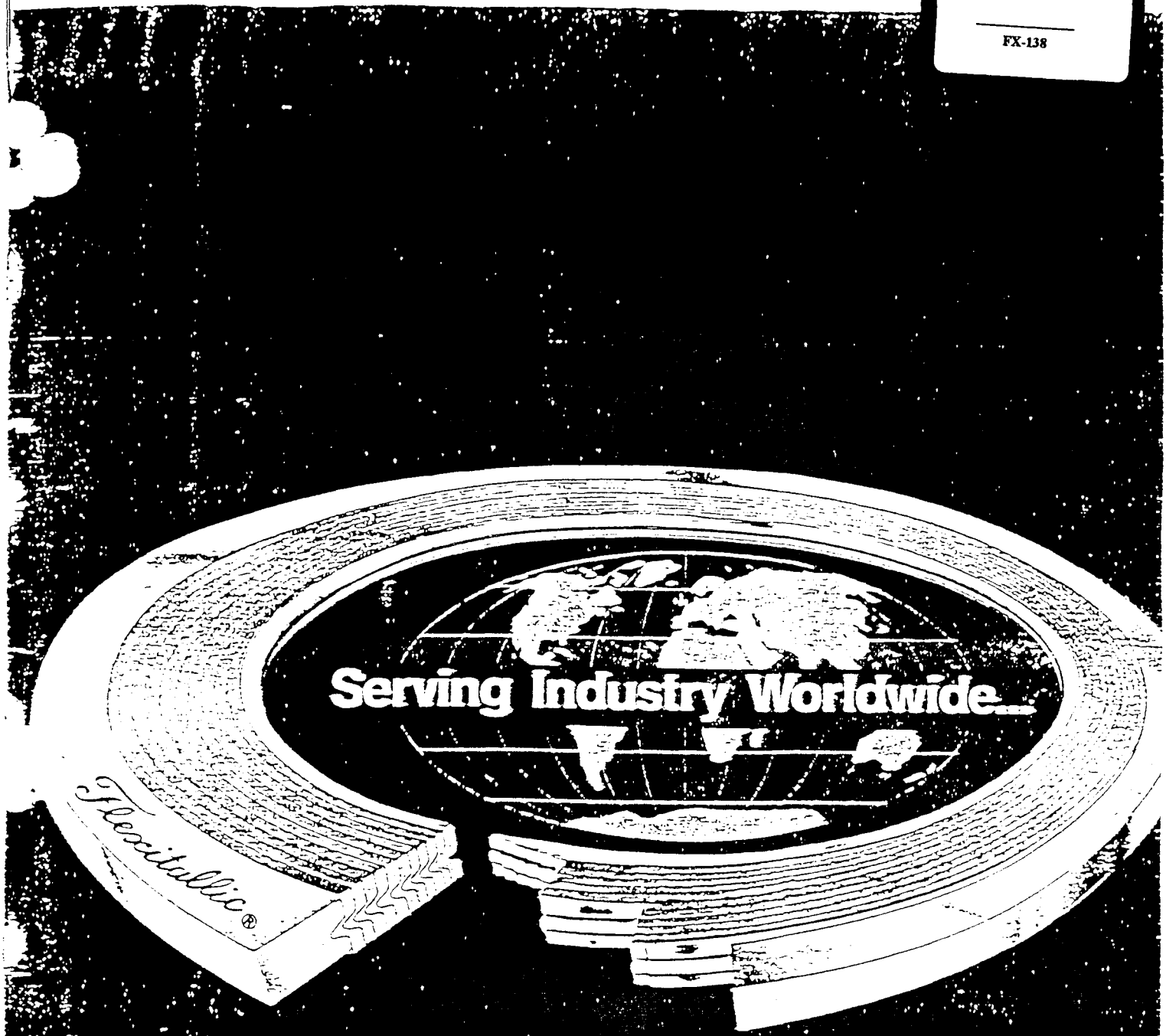
PLAINTIFF'S EXHIBIT

FX-138



Flexitallic®

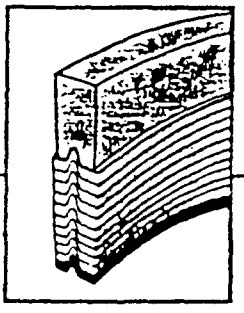
SPIRAL-WOUND GASKETS

General Catalog

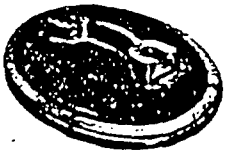
Flexitallic® SPIRAL-WOUND GASKETS

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FOREWORD

In 1912, Flexitallic pioneered and developed the Spiral-Wound Gasket—an engineered static seal with innate resilience that permits it to adjust automatically to changes in operating conditions, such as line pressure and thermal shocks, frequent or sudden vibration, and minor flange separation.

Today, Flexitallic is recognized as the world's leading producer of spiral-wound gaskets. The name Flexitallic has become the signature of a safe, dependable, reliable seal with superior sealing qualities. What has brought Flexitallic to this recognized position of leadership?

Engineered Performance...Flexitallic's engineers continually advance the "state-of-the-art" in gasket design where the density is critical to sealing performance. They have designed more spiral-wound gaskets than all other gasket producers combined.

Metals/Filler Inventory...An extensive inventory of various metals in strip and sheet form as well as a variety of filler materials is maintained at all plants.

Winding Mandrels...The most extensive inventory of winding mandrels in the world is maintained by Flexitallic. What would be a special order to other gasket producers is normally a conventional gasket to Flexitallic.

Production Capability...Flexitallic has developed their own unique winding system and equipment to ensure uniform construction and quality of each gasket. Lasers, punch presses and grooving equipment are used to produce centering guide rings that assure a proper gasket fit.

Quality Control

Because Flexitallic is aware of the cost of gasket failure, the most exacting quality control standards in the gasket industry have been established by the company. Flexitallic quality control procedures meet or exceed the latest government requirements under MIL-I-45208. Whether military specifications are involved or not, Flexitallic subjects its entire production to in-process inspection procedures, visual inspection and final compression testing on a statistical sampling basis.

Flexitallic has the most demanding quality assurance procedures in the industry in order to produce the right gasket for the right flange to make the right seal.

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FLEXITE™ SUPER*
NON-ASBESTOS FILLER MATERIAL

- ☐ *Does not give rise to respirable fibers*
- ☐ *Priced comparable to asbestos*
- ☐ *Carefully researched and developed to meet industry's demand for an alternative to asbestos-filled spiral-wound gaskets*
- ☐ *Performance superior to asbestos filler*
- ☐ *Contains no asbestos*
- ☐ *Low chloride content*

Flexite Super is a further development of Flexite, Flexitallic's chlorite mineral paper developed for the U.S. Navy. Its composition and method of manufacture is based on a complex chlorite mineral with graphite, and acrylic binder. The result is a material with temperature and chemical resistance equivalent to asbestos filler when used in spiral-wound gaskets.

*U.S. Patent Number 4,529,662

PROVEN BETTER SEALING PERFORMANCE THAN ASBESTOS FILLERS

When tested as a filler material in spiral-wound gaske Flexite Super gave better sealing performance than asbes

Performance figures were ascertained under conditic laid down in a thermal cycling test used in the refin industry.

Tests were carried out with 2" NPS Class 300 flanges, usi nitrogen gas over a period of 24 hours. Rig was pressurizec 750 psig and left for a minimum of 16 hours. Pressure w released and temperature increased to 860° F over a perioc 2 hours and the rig pressurized to 310 psig. Pressure a temperature were held for 1 hour. Rig was then allowec cool to ambient, and pressure and temperature recorc Temperature was again increased to 860° F and held fo hour. Pressure must return to 310 psig for the gas assembly to successfully meet conditions of the test.

INFORMATION FOR ORDERING FLEXITALLIC GASKETS

MATERIALS

Standard materials for Flexitallic Spiral-Wound Gaskets are 304 stainless steel with blue-dyed Canadian asbestos paper (Chrysotile) filler. The following materials are available on order:

Metals

Carpenter 20 Alloy	Stainless Steels:
Copper	AISI Types--
Hastelloy B and C	304, 304L,
Inconel 600, 625	309, 310,
Inconel X750	316L, 321,
Incoloy 800, 825	347
Low Carbon Steel, Zinc Plated	
Monel	
Nickel	
Phosphor Bronze	Other metals
Titanium	on request.

Fillers

- Flexite™ Super Non-Asbestos Chlorite/ Graphite Paper*
- Graphite (Flexicarb™)
- Blue-Dyed Canadian Asbestos Paper (Chrysotile)
- White Canadian Asbestos Paper (Chrysotile)
- Canadian Asbestos Sheet Packing with Neoprene, Buna S, and Buna N Binders
- Polytetrafluoroethylene (PTFE)
- Glass-Filled PTFE
- Ceramic

*U.S. Patent Number 4,529,662

SPECIFYING FLEXITALLIC GASKETS

Pipe Flange Applications

Flexitallic Spiral-Wound Pipe Flange Gaskets are manufactured in ten basic designs identified as Styles CG, CGI, CG-RJ, D, HE, HE-CG, 625, R-1, R-3, and R-4. Each Style is described in detail on subsequent pages. These gasket descriptions and previous experience will dictate the selection and ordering of the proper Flexitallic Gasket.

All Flexitallic Gasket Styles for standard flange fittings can be ordered from this catalog. Purchase orders or inquiries for standard flange gaskets should include the following for each item:

1. Nominal Pipe Size
2. Pressure Series of Flange
3. Flexitallic Gasket Identification Number
4. Materials of Construction
5. Inside Diameter and Material for Inner Ring if Style CGI Gaskets are ordered.

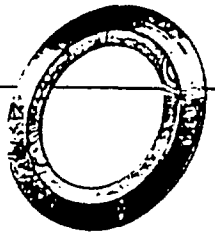
Special Gaskets

Gaskets of special design can be engineered and fabricated using the same basic fundamentals of Flexitallic Spiral-Wound Gasket design and construction to cover a wide range of applications in installations for which there are no industry-wide equipment standards. Special gaskets have been designed for valves, pumps, compressors, turbines, boilers, heat exchangers, etc. Consult with Flexitallic engineers as early in the design stage as possible.

Government Specifications

Flexitallic Spiral-Wound Gaskets are available in accordance with Military Specifications MIL-G-16265, MIL-G-21032 and MIL-G-15342, latest revisions. When making inquiry, please refer to the proper Government Specification number.

Flexitallic® STYLE CG "COMPRESSION-GAUGE" GASKETS



FOR ANSI B16.5 RAISED FACE AND PLAIN OR FLAT FACE FLANGES

Style CG Gaskets combine all the recognized advantages of spiral-wound construction with an integral metal gauge ring. The metal gauge ring serves the following purposes:

a) Facilitates accurate centering of the gasket in the flange assembly.
b) Provides additional radial strength and prevents possibility of gasket blow-out.
c) Serves as a compression stop and prevents possibility of spiral-wound component being crushed.

Standard CG Gaskets for ANSI and other standard flanges are manufactured to a nominal thickness of .175". Optimum compression is in the range of .125" to .135" (dependent on test pressures). Standard Style CG Gaskets are furnished with carbon steel gauge rings that are 1/8" thick.

Style CG Gaskets are available on special order in any combination of materials listed on page 3 and with "compression-gauge" centering rings in metals other than carbon steel. Style CG Gaskets can be supplied on special order with special I.D. dimensions if required. Inquiries are invited.

ANSI B16.5 FLANGES

Standard Style CG Gaskets are carried in stock for all sizes and pressures covered in ANSI B16.5. These standard gaskets conform to the requirements of API Standard 601, Latest Edition.

STYLE CG GASKETS FOR LARGE DIAMETER FLANGES

Large diameter Style CG Gaskets that are being used more frequently in recent years are also available. The large diameter gaskets are covered by API Standard 601- for API Standard 605 and M.S.S.-SP-44 flanges. To aid in selecting the proper gasket for these flanges, bolting details for each size and pressure series are indicated.

API 605 Flanges

These gaskets are covered by API Standard 601, Latest Edition, and cover flanges for Classes 75, 150, 300, 400, 600, and 900.

M.S.S.-SP-44 Flanges

This standard covers large diameter flanges for Classes 150, 300, 400, 600 and 900. Standard M.S.S. SP-44 does not include limiting dimensions for spiral-wound gaskets for use with these flanges. Dimensions listed are in accordance with API 601, Latest Edition.

Commercial Standard Large Diameter Flanges

The manufacturers of large diameter flanges have assigned different catalog numbers to the various classes of flanges. Reference to the number and size of bolts and bolt circle diameter will assure the selection of the proper gasket for each size and pressure series flange. Dimensions listed are commercial standards that have proven successful with these flanges.

API RING-JOINT FLANGES

Flexitallic has developed a series of special Style CG Gaskets designed to replace standard oval or octagonal API ring-joint gaskets. The designation for these gaskets is Style CG-RJ. Style CG-RJ Gaskets are intended for use as a replacement maintenance item. If spiral-wound gaskets are to be used in new applications, regular Style CG Gaskets and raised face flanges are recommended.

Converting from API ring-joint gaskets to Style CG-RJ Spiral-Wound Gaskets means greater economy through lower gasket costs, less downtime of equipment, and reduced labor costs for replacement. Only 1/16" breakaway is required as compared with 1/2" to 3/4" with conventional API ring-joint gaskets.

Style CG-RJ Gaskets are not available for all nominal pipe sizes. Available sizes are listed along with notes on applications.

Caution: Clearance dimensions between flange faces should be checked on close-coupled pipe prior to installation of Style CG-RJ Gaskets to insure optimum compression can be achieved without over-stressing bolts and flanges.

FLEXITALLIC STYLE CG GASKETS

FOR USE ON ANSI B16.5 RAISED AND FLAT FACE FLANGES (Dimensions based on API Standard 601, Latest Edition)

NOMINAL PIPE SIZE (Inches)	ALL SERIES GASKET O.D. (Inches)	CLASS 150 GASKET I.D. (Inches)	CLASS 150 RING O.D. (Inches)	CLASS 150 CATALOG NUMBER	CLASS 300 GASKET I.D. (Inches)	CLASS 300 RING O.D. (Inches)	CLASS 300 CATALOG NUMBER	CLASS 400 GASKET I.D. (Inches)	CLASS 400 RING O.D. (Inches)	CLASS 400 CATALOG NUMBER	CLASS 600 GASKET I.D. (Inches)	CLASS 600 RING O.D. (Inches)	CLASS 600 CATALOG NUMBER
1/4	7/8	1/2	1-3/4	CG-1A	1/2	1-3/4	CG-3A	1/2	1-3/4	CG-4A	1/2	1-3/4	CG-6A
1/2	1-1/4	3/4	1-7/8	CG-1B	3/4	2-1/8	CG-3B	3/4	2-1/8	CG-4B	3/4	2-1/8	CG-6B
3/4	1-9/16	1	2-1/4	CG-1C	1	2-5/8	CG-3C	1	2-5/8	CG-4C	1	2-5/8	CG-6C
1	1-7/8	1-1/4	2-5/8	CG-1D	1-1/4	2-7/8	CG-3D	1-1/4	2-7/8	CG-4D	1-1/4	2-7/8	CG-6D
1-1/4	2-3/8	1-7/8	3	CG-1E	1-7/8	3-1/4	CG-3E	1-7/8	3-1/4	CG-4E	1-7/8	3-1/4	CG-6E
1-1/2	2-3/4	2-1/8	3-3/8	CG-1F	2-1/8	3-3/4	CG-3F	2-1/8	3-3/4	CG-4F	2-1/8	3-3/4	CG-6F
2	3-3/8	2-3/4	4-1/8	CG-1G	2-3/4	4-3/8	CG-3G	2-3/4	4-3/8	CG-4G	2-3/4	4-3/8	CG-6G
2-1/2	3-7/8	3-1/4	4-7/8	CG-1H	3-1/4	5-1/8	CG-3H	3-1/4	5-1/8	CG-4H	3-1/4	5-1/8	CG-6H
3	4-3/4	4	5-3/8	CG-1J	4	5-7/8	CG-3J	4	5-7/8	CG-4J	4	5-7/8	CG-6J
3-1/2	5-1/4	4-1/2	6-3/8	CG-1K	4-1/2	6-1/2	CG-3K	4-1/8	6-3/8	CG-4K	4-1/8	6-3/8	CG-6K
4	5-7/8	5	6-7/8	CG-1L	5	7-1/8	CG-3L	4-3/4	7	CG-4L	4-3/4	7-5/8	CG-6L
4-1/2	6-1/2	5-1/2	7	CG-1M	5-1/2	7-3/4	CG-3M	5-5/16	7-5/8	CG-4M	5-5/16	8-1/4	CG-6M
5	7	6-1/8	7-3/4	CG-1N	6-1/8	8-1/2	CG-3N	5-13/16	8-3/8	CG-4N	5-13/16	9-1/2	CG-6N
6	8-1/4	7-3/16	8-3/4	CG-1P	7-3/16	9-7/8	CG-3P	6-7/8	9-3/4	CG-4P	6-7/8	10-1/2	CG-6P
8	10-3/8	9-3/16	11	CG-1Q	9-3/16	12-1/8	CG-3Q	8-7/8	12	CG-4Q	8-7/8	12-5/8	CG-6Q
10	12-1/2	11-5/16	13-3/8	CG-1R	11-5/16	14-1/4	CG-3R	10-13/16	14-1/8	CG-4R	10-13/16	15-3/4	CG-6R
12	14-3/4	13-3/8	16-1/8	CG-1S	13-3/8	16-5/8	CG-3S	12-7/8	16-1/2	CG-4S	12-7/8	18	CG-6S
14	16	14-5/8	17-3/4	CG-1T	14-5/8	19-1/8	CG-3T	14-1/4	19	CG-4T	14-1/4	19-3/8	CG-6T
16	18-1/4	16-5/8	20-1/4	CG-1U	16-5/8	21-1/4	CG-3U	16-1/4	21-1/8	CG-4U	16-1/4	22-1/4	CG-6U
18	20-3/4	18-11/16	21-5/8	CG-1V	18-11/16	23-1/2	CG-3V	18-1/2	23-3/8	CG-4V	18-1/2	24-1/8	CG-6V
20	22-3/4	20-11/16	23-7/8	CG-1W	20-11/16	25-3/4	CG-3W	20-1/2	25-1/2	CG-4W	20-1/2	26-7/8	CG-6W
24	27	24-3/4	28-1/4	CG-1X	24-3/4	30-1/2	CG-3X	24-3/4	30-1/4	CG-4X	24-3/4	31-1/8	CG-6X

N.B. – Per API Std 601, inner rings are mandatory on the following sizes: Class 900, NPS 24 to 48; Class 1500, NPS 12 to 24; Class 2500, NPS 4 to 12. Refer to page 8 for inner ring dimensions.

NOMINAL PIPE SIZE (Inches)	ALL SERIES GASKET O.D. (Inches)	CLASS 900 GASKET I.D. (Inches)	CLASS 900 RING O.D. (Inches)	CLASS 900 CATALOG NUMBER	CLASS 1500 GASKET I.D. (Inches)	CLASS 1500 RING O.D. (Inches)	CLASS 1500 CATALOG NUMBER	CLASS 2500 GASKET I.D. (Inches)	CLASS 2500 RING O.D. (Inches)	CLASS 2500 CATALOG NUMBER
1/2	1-1/4	3/4	2-1/2	CG-9B	3/4	2-1/2	CG-15B	3/4	2-3/4	CG-25B
3/4	1-9/16	1	2-3/4	CG-9C	1	2-3/4	CG-15C	1	3	CG-25C
1	1-7/8	1-1/4	3-1/8	CG-9D	1-1/4	3-1/8	CG-15D	1-1/4	3-3/8	CG-25D
1-1/4	2-3/8	1-9/16	3-1/2	CG-9E	1-9/16	3-1/2	CG-15E	1-9/16	4-1/8	CG-25E
1-1/2	2-3/4	1-7/8	3-7/8	CG-9F	1-7/8	3-7/8	CG-15F	1-7/8	4-5/8	CG-25F
2	3-3/8	2-5/16	5-5/8	CG-9G	2-5/16	5-5/8	CG-15G	2-5/16	5-3/4	CG-25G
2-1/2	3-7/8	2-3/4	6-1/2	CG-9H	2-3/4	6-1/2	CG-15H	2-3/4	6-5/8	CG-25H
3	4-3/4	3-3/4	6-5/8	CG-9J	3-5/8	6-7/8	CG-15J	3-5/8	7-3/4	CG-25J
3-1/2	5-1/4	4-1/8	7-1/2	CG-9K	4-1/8	7-3/8	CG-15K	—	—	—
4	5-7/8	4-3/4	8-1/8	CG-9L	4-5/8	8-1/4	CG-15L	4-5/8	9-1/4	CG-25L
4-1/2	6-1/2	5-5/16	9-3/8	CG-9M	5-5/16	9-1/8	CG-15M	—	—	—
5	7	5-13/16	9-3/4	CG-9N	5-5/8	10	CG-15N	5-5/8	11	CG-25N
6	8-1/4	6-7/8	11-3/8	CG-9P	6-3/4	11-1/8	CG-15P	6-3/4	12-1/2	CG-25P
8	10-1/8	8-3/4	14-1/8	CG-9Q	8-1/2	13-7/8	CG-15Q	8-1/2	15-1/4	CG-25Q
10	12-1/4	10-7/8	17-1/8	CG-9R	10-1/2	17-1/8	CG-15R	10-5/8	18-3/4	CG-25R
12	14-1/2	12-3/4	19-5/8	CG-9S	12-3/4	20-1/2	CG-15S	12-1/2	21-5/8	CG-25S
14	15-3/4	14	20-1/2	CG-9T	14-1/4	22-3/4	CG-15T	—	—	—
16	18	16-1/4	22-5/8	CG-9U	16	25-1/4	CG-15U	—	—	—
18	20-1/2	18-1/4	25-1/8	CG-9V	18-1/4	27-3/4	CG-15V	—	—	—
20	22-1/2	20-1/2	27-1/2	CG-9W	20-1/4	29-3/4	CG-15W	—	—	—
24	26-3/4	24-3/4	33	CG-9X	24-1/4	35-1/2	CG-15X	—	—	—

NOTES

1. A P I Standard 601 does not include dimensions for 1/4" 3-1/2" or 4-1/2" nominal pipe size.
2. Gasket O.D. dimensions shown are "overall".
3. 1/4" nominal pipe size in Class 150, 300, 400 and 600 are identical gaskets. Stocks of gaskets need not be duplicated.
4. There are no 400 psi flanges up to 3" nominal pipe size nor 900 psi up to 2-1/2" nominal pipe size. These items are listed for convenience.
5. Within screened area above are gaskets which are installed with identical bolting. Stocks of gaskets in each area need not be duplicated because the gaskets are identical.

   For limitations on recommended usage for particular flange type or bore, see the table below.
7. Flexitallic Style CG Gaskets are available with special I.D. dimensions on special order. Advise pipe size, pressure class and required I.D. dimension.

APPLICATION INFORMATION FOR STYLE CG GASKETS

FLANGE TYPE	150 PSI	300 PSI	400 PSI	600 PSI	900 PSI	1500 PSI	2500 PSI
WN-SW	All Sizes	All Sizes	All Sizes	All Sizes	All Sizes	All Sizes	All Sizes
Nozzles	All Sizes	All Sizes	1/2"—12"	1/2"—12"	1/2"—12"	1/2"—12"	1/2"—12"
WN-10-10S	1-1/4"—24"	1-1/4"—24"	1-1/4"—24"	1-1/4"—24"	1-1/4"—24"	None	None
Slip-on	1-1/4"—24"	1-1/4"—24"	1-1/4"—3"	1-1/4"—3"	None	None	None

WN-SW — Welding Neck Flange bored for standard weight or heavier pipe.
Nozzle — Bore equals nominal size.
WN-10-10S — Welding Neck Flange bored for schedule 10S pipe through 12" and bored for schedule 10 pipe over 12". Slip-on — Bore is essentially O.D. of pipe.

It is the users responsibility to determine whether a gasket is satisfactory for a flange of any larger bore

FLEXITALLIC STYLE CG GASKETS FOR LARGE DIAMETER FLANGES

API 605 FLANGES—CLASS 75

PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26	26-1/4	27	27-7/8	36	5/8	28-1/2
28	28-1/4	29-1/8	29-7/8	40	5/8	30-1/2
30	30-1/4	31-1/8	31-7/8	44	5/8	32-1/2
32	32-1/4	33-1/8	33-7/8	48	5/8	34-1/2
34	34-1/4	35-1/8	35-7/8	52	5/8	36-1/2
36	36-1/4	37-1/4	38-5/16	40	3/4	39-1/16
38	—	—	—	—	—	—
40	—	—	—	—	—	—
42	42-1/4	43-1/4	44-5/16	48	3/4	45-1/16
44	—	—	—	—	—	—
46	—	—	—	—	—	—
48	48-3/8	49-1/2	50-1/2	44	7/8	51-3/8
50	—	—	—	—	—	—
52	—	—	—	—	—	—
54	54-3/8	55-5/8	56-5/8	48	7/8	57-1/2
56	—	—	—	—	—	—
58	—	—	—	—	—	—
60	60-1/2	61-3/4	62-7/8	44	1	63-7/8

API 605 FLANGES—CLASS 150

GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26-1/2	27-1/2	28-9/16	36	3/4	29-5/16
28-1/2	29-1/2	30-9/16	40	3/4	31-5/16
30-1/2	31-1/2	32-9/16	44	3/4	33-5/16
32-1/2	33-1/2	34-11/16	48	3/4	35-7/16
34-1/2	35-3/4	36-13/16	40	7/8	37-11/16
36-1/2	37-3/4	38-7/8	44	7/8	39-3/4
38-3/8	39-3/4	41-1/8	40	1	42-1/8
40-1/4	41-7/8	43-1/8	44	1	44-1/8
42-1/2	43-7/8	45-1/8	48	1	46-1/8
44-1/4	45-7/8	47-1/8	52	1	48-1/8
46-1/2	48-3/16	49-7/16	40	1-1/8	50-9/16
48-1/2	50	51-7/16	44	1-1/8	52-9/16
50-1/2	52-3/16	53-7/16	48	1-1/8	54-9/16
52-1/2	54-3/16	55-7/16	52	1-1/8	56-9/16
54-1/2	56	57-5/8	56	1-1/8	58-3/4
56-1/2	57-7/8	59-5/8	60	1-1/8	60-3/4
58-1/2	59-15/16	62-3/16	48	1-1/4	63-7/16
60-1/2	61-15/16	64-3/16	52	1-1/4	65-7/16

API 605 FLANGES—CLASS 300

GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26-1/2	28	30-3/8	32	1-1/4	31-5/8
28-1/2	30	32-1/2	36	1-1/4	33-3/4
30-1/2	32	34-7/8	36	1-3/8	36-1/4
32-1/2	34	37	32	1-1/2	38-1/2
34-1/2	36	39-1/8	36	1-1/2	40-5/8
36-1/2	38	41-1/4	32	1-5/8	42-7/8
39-3/4	41-1/4	43-1/4	36	1-5/8	44-7/8
41-3/4	43-1/4	45-1/4	40	1-5/8	46-7/8
42-1/2	44	47-1/4	36	1-3/4	49
45-3/4	47-1/4	49-1/4	40	1-3/4	51
47-7/8	49-3/8	51-7/8	36	1-7/8	53-3/4
48-1/2	50	53-7/8	40	1-7/8	55-3/4
51-7/8	53-3/8	55-7/8	44	1-7/8	57-3/4
53-7/8	55-3/8	57-7/8	48	1-7/8	59-3/4
54-1/2	56	60-1/4	48	1-7/8	62-1/8
58-1/4	60	62-3/4	36	2-1/4	65
60-7/16	61-15/16	65-3/16	40	2-1/4	67-7/16
60-1/2	62	67-3/16	40	2-1/4	69-7/16

API 605 FLANGES—CLASS 400

PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26	26-1/4	27-1/2	29-3/8	28	1-3/8	30-3/4
28	28-1/8	29-1/2	31-1/2	24	1-1/2	33
30	30-1/8	31-3/4	33-3/4	28	1-1/2	35-1/4
32	32	33-7/8	35-7/8	28	1-5/8	37-1/2
34	34-1/8	35-7/8	37-7/8	32	1-5/8	39-1/2
36	36-1/8	38	40-1/4	28	1-3/4	42
38	38-1/4	40-1/4	42-1/4	32	1-3/4	44
40	40-3/8	42-3/8	44-3/8	32	1-7/8	46-1/4
42	42-3/8	44-3/8	46-3/8	32	1-7/8	48-1/4
44	44-1/2	46-1/2	48-1/2	32	2	50-1/2
46	47	49	50-3/4	36	2	52-3/4
48	49	51	53	28	2-1/4	55-1/4
50	51	53	55-1/4	32	2-1/4	57-1/2
52	53	55	57-1/4	32	2-1/4	59-1/2
54	55-1/4	57-1/4	59-3/4	28	2-1/2	62-1/4
56	57-1/4	59-1/4	61-3/4	32	2-1/2	64-1/4
58	59-1/4	61-1/4	63-3/4	32	2-1/2	66-1/4
60	61-3/4	63-3/4	66-1/4	32	2-3/4	69

API 605 FLANGES—CLASS 600

GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26-1/8	28-1/8	30-1/8	28	1-5/8	31-3/4
27-3/4	29-3/4	32-1/4	28	1-3/4	34
30-5/8	32-5/8	34-5/8	28	1-7/8	36-1/2
32-3/4	34-3/4	36-3/4	28	2	38-3/4
35	37	39-1/4	24	2-1/4	41-1/2
37	39	41-1/4	28	2-1/4	43-1/2
39	41	43-1/2	28	2-1/4	45-3/4
41-1/4	43-1/4	45-1/2	32	2-1/4	47-3/4
43-1/2	45-1/2	48	28	2-1/2	50-1/2
45-3/4	47-3/4	50	32	2-1/2	52-1/2
47-3/4	49-3/4	52-1/4	32	2-1/2	54-3/4
50	52	54-3/4	32	2-3/4	57-1/2
52	54	57	28	3	60
54	56	59	32	3	62
56-1/4	58-1/4	61-1/4	32	3	64-1/4
58-1/4	60-1/4	63-1/2	32	3-1/4	66-3/4
60-1/2	62-1/2	65-1/2	32	3-1/4	68-3/4
62-3/4	64-3/4	68-1/4	28	3-1/2	71-3/4

API 605 FLANGES—CLASS 900 (SEE NOTE 4)

GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
27-1/4	29-1/2	33	20	2-1/2	35-1/2
29-1/4	31-1/2	35-1/2	20	2-3/4	38-1/4
31-3/4	33-3/4	37-3/4	20	3	40-3/4
34	36	40	20	3	43
36-1/4	38-1/4	42-1/4	20	3-1/4	45-1/2
37-1/4	39-1/4	44-1/4	24	3	47-1/4
40-3/4	42-3/4	47-1/4	20	3-1/2	50-3/4
43-1/4	45-1/4	49-1/4	24	3-1/2	52-3/4
45-1/4	47-1/4	51-1/4	24	3-1/2	54-3/4
47-1/2	49-1/2	53-7/8	24	3-3/4	57-5/8
50	52	56-1/2	24	4	60-1/2
52	54	58-1/2	24	4	62-1/2
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1

M.S.S. SP-44 FLANGES—CLASS 150

PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
22	22-3/4	24	26	20	1-1/4	27-1/4
26	26-1/2	27-3/4	30-1/2	24	1-1/4	31-3/4
28	28-1/2	29-3/4	32-3/4	28	1-1/4	34
30	30-1/2	31-3/4	34-3/4	28	1-1/4	36
32	32-1/2	33-7/8	37	28	1-1/2	38-1/2
34	34-1/2	35-7/8	39	32	1-1/2	40-1/2
36	36-1/2	38-1/8	41-1/4	32	1-1/2	42-3/4
38	38-1/2	40-1/8	43-3/4	32	1-1/2	45-1/4
40	40-1/2	42-1/8	45-3/4	36	1-1/2	47-1/4
42	42-1/2	44-1/4	48	36	1-1/2	49-1/2
44	44-1/2	46-3/8	50-1/4	40	1-1/2	51-3/4
46	46-1/2	48-3/8	52-1/4	40	1-1/2	53-3/4
48	48-1/2	50-3/8	54-1/2	44	1-1/2	56
50	50-1/2	52-1/2	56-1/2	44	1-3/4	58-1/4
52	52-1/2	54-1/2	58-3/4	44	1-3/4	60-1/2
54	54-1/2	56-1/2	61	44	1-3/4	62-3/4
56	56-1/2	58-1/2	63-1/4	48	1-3/4	65
58	58-1/2	60-1/2	65-1/2	48	1-3/4	67-1/4
60	60-1/2	62-1/2	67-1/2	52	1-3/4	69-1/4

M.S.S. SP-44 FLANGES—CLASS 300

GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
22-3/4	24-3/4	27-3/4	24	1-1/2	29-1/4
27	29	32-7/8	28	1-5/8	34-1/2
29	31	35-3/8	28	1-5/8	37
31-1/4	33-1/4	37-1/2	28	1-3/4	39-1/4
33-1/2	35-1/2	39-5/8	28	1-7/8	41-1/2
35-1/2	37-1/2	41-5/8	28	1-7/8	43-1/2
37-5/8	39-5/8	44	32	2	46
38-1/2	40	41-1/2	32	1-1/2	43
40-1/4	42-1/8	43-7/8	32	1-5/8	45-1/2
42-1/4	44-1/8	45-7/8	32	1-5/8	47-1/2
44-1/2	46-1/2	48	32	1-3/4	49-3/4
46-3/8	48-3/8	50-1/8	28	1-7/8	52
48-5/8	50-5/8	52-1/8	32	1-7/8	54
51	53	54-1/4	32	2	56-1/4
53	55	56-1/4	32	2	58-1/4
55-1/4	57-1/4	58-3/4	28	2-1/4	61
57-1/4	59-1/4	60-3/4	28	2-1/4	63
59-1/2	61-1/2	62-3/4	32	2-1/4	65
61-1/2	63-1/2	64-3/4	32	2-1/4	67

M.S.S. SP-44 FLANGES—CLASS 400

GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
22-3/4	24-3/4	27-5/8	24	1-5/8	29-1/4
27	29	32-3/4	28	1-3/4	34-1/2
29	31	35-1/8	28	1-7/8	37
31-1/4	33-1/4	37-1/4	28	2	39-1/4
33-1/2	35-1/2	39-1/2	28	2	41-1/2
35-1/2	37-1/2	41-1/2	28	2	43-1/2
37-5/8	39-5/8	44	32	2	46
38-1/4	40-1/4	42-1/4	32	1-3/4	44
40-3/8	42-3/8	44-3/8	32	1-7/8	46-1/4
42-3/8	44-3/8	46-3/8	32	1-7/8	48-1/4
44-1/2	46-1/2	48-1/2	32	2	50-1/2
47	49	50-3/4	36	2	52-3/4
49	51	53	28	2-1/4	55-1/4
51	53	55-1/4	32	2-1/4	57-1/2
53	55	57-1/4	32	2-1/4	59-1/2
55-1/4	57-1/4	59-3/4	28	2-1/8	62-1/4
57-1/4	59-1/4	61-3/4	32	2-1/8	64-1/4
59-1/4	61-1/4	63-3/4	32	2-1/8	66-1/4
61-3/4	63-3/4	66-1/4	32	2-3/4	69

M.S.S. SP-44 FLANGES—CLASS 600

PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
22	22-3/4	24-3/4	28-7/8	24	1-3/4	30-5/8
26	27	29	34-1/8	28	1-7/8	36
28	29	31	36	28	2	38
30	31-1/4	33-1/4	38-1/4	28	2	40-1/4
32	33-1/2	35-1/2	40-1/4	28	2-1/4	42-1/2
34	35-1/2	37-1/2	42-1/4	28	2-1/4	44-1/2
36	37-5/8	39-5/8	44-1/2	28	2-1/2	47
38	39	41	43-1/2	28	2-1/4	45-3/4
40	41-1/4	43-1/4	45-1/2	32	2-1/4	47-3/4
42	43-1/2	45-1/2	48	28	2-1/2	50-1/2
44	45-3/4	47-3/4	50	32	2-1/2	52-1/2
46	47-3/4	49-3/4	52-1/4	32	2-1/2	54-3/4
48	50	52	54-3/4	32	2-3/4	57-1/2
50	52	54	57	28	3	60
52	54	56	59	32	3	62
54	56-1/4	58-1/4	61-1/4	32	3	64-1/4
56	58-1/4	60-1/4	63-1/2	32	3-1/4	66-3/4
58	60-1/2	62-1/2	65-1/2	32	3-1/4	68-3/4
60	62-3/4	64-3/4	68-1/4	28	3-1/2	71-3/4

M.S.S. SP-44 FLANGES—CLASS 900 (SEE NOTE 4)

GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
—	—	—	—	—	—
27	29	34-3/4	20	2-3/4	37-1/2
29	31	37-1/4	20	3	40-1/4
31-1/4	33-1/4	39-3/4	20	3	42-3/4
33-1/2	35-1/2	42-1/4	20	3-1/4	45-1/2
35-1/2	37-1/2	44-3/4	20	3-1/2	48-1/4
37-3/4	39-3/4	47-1/4	20	3-1/2	50-3/4
40-3/4	42-3/4	47-1/4	20	3-1/2	50-3/4
43-1/4	45-1/4	49-1/4	24	3-1/2	52-3/4
45-1/4	47-1/4	51-1/4	24	3-1/2	54-3/4
47-1/2	49-1/2	53-7/8	24	3-3/4	57-5/8
50	52	56-1/2	24	4	60-1/2
52	54	58-1/2	24	4	62-1/2
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1	Note 1	Note 1	Note 1	Note 1	Note 1

NOTES

1. There are no Class 900 flanges NPS 50 and larger.
2. Per latest Edition of API Std 601, inner rings are mandatory for certain sizes and pressure classes. See Page 8, note 4 for details.
3. For M.S.S. SP-44 flanges NPS 12 through 24, use gaskets listed on Page 5 for ANSI B16.5 Flanges.
4. **Per API Std 601, inner rings are mandatory on gaskets for API 605 and MSS SP-44 flanges in class 900, NPS 26 through NPS 48. Refer to Page 8 for inner ring dimensions.**

FLEXITALLIC STYLE CG GASKETS FOR LARGE DIAMETER FLANGES

CLASS 75 SLIP-ON AND BLIND FLANGES

PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26	27	28-1/4	30-1/8	32	7/8	31
28	29	30-1/4	32-1/8	36	7/8	33
30	31	32-1/4	34-1/8	36	7/8	35
32	33-1/8	34-3/8	36-3/8	40	1	37-3/8
34	35-1/8	36-1/2	38-3/8	40	1	39-3/8
36	37-1/8	38-1/2	40-3/8	44	1	41-3/8
42	43-1/4	44-3/4	46-5/8	48	1-1/8	47-3/4
48	49-1/4	50-7/8	52-5/8	56	1-1/8	53-3/4
54	55-3/8	57-3/4	59-1/8	68	1-1/8	60-1/4
60	61-3/8	63-3/8	65-1/8	72	1-1/8	66-1/4
66	67-1/2	69-1/2	71-3/4	72	1-1/4	73
72	73-1/2	75-1/2	77-3/4	80	1-1/4	79

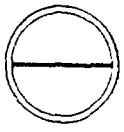
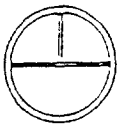
CLASS 75 (WELDING NECK)

PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26	26-1/2	27-3/4	28-3/4	32	7/8	29-5/8
28	28-1/2	29-3/4	30-3/4	36	7/8	31-5/8
30	30-1/2	31-3/4	32-3/4	36	7/8	33-5/8
32	32-1/2	33-3/4	35-1/8	36	1	36-1/8
34	34-1/2	35-7/8	37-1/8	40	1	38-1/8
36	36-1/2	37-7/8	39-1/8	40	1	40-1/8
42	42-1/2	44	45-5/8	48	1-1/8	46-3/4
48	48-1/2	50-1/8	51-5/8	52	1-1/8	52-3/4
54	54-1/2	56-3/8	57-7/8	64	1-1/8	59
60	60-1/2	62-1/2	63-7/8	72	1-1/8	65
66	66-1/2	68-1/2	70-1/4	72	1-1/4	71-1/2
72	72-1/2	74-1/2	76-1/4	80	1-1/4	77-1/2

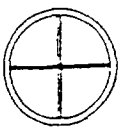
ALL CLASSES		CLASS 175					CLASS 250					CLASS 350				
PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)	GASKET O.D. (Inches)	RING O.D. (Inches)	NO. OF BOLTS	BOLT SIZE (Inches)	B.C. DIAMETER (Inches)
26	26-1/2	27-3/4	29-1/8	28	3/4	29-7/8	27-3/4	32-3/4	28	1-3/4	34-1/2	27-3/4	29-5/8	28	1	30-5/8
28	28-1/2	29-3/4	31-1/8	28	3/4	31-7/8	29-3/4	35-1/4	28	1-3/4	37	29-3/4	31-5/8	28	1	32-5/8
30	30-1/2	31-3/4	33-3/8	36	3/4	34-1/8	31-3/4	37-1/2	28	1-3/4	39-1/4	31-3/4	33-7/8	32	1	34-7/8
32	32-1/2	33-3/4	35-3/8	36	3/4	36-1/8	33-7/8	39-3/4	28	1-3/4	41-1/2	33-7/8	35-7/8	36	1	36-7/8
34	34-1/2	35-7/8	37-1/2	36	7/8	38-3/8	35-7/8	41-3/4	28	1-3/4	43-1/2	35-7/8	37-7/8	40	1	38-7/8
36	36-1/2	37-7/8	39-1/2	36	7/8	40-3/8	38-1/8	44	32	2	46	38-1/8	40-3/8	40	1-1/8	41-1/2
38	38-1/2	39-7/8	41-1/2	36	7/8	42-3/8	40-1/8	46	32	2	48	40-1/8	42-3/8	40	1-1/8	43-1/2
40	40-1/2	42	43-1/2	40	7/8	44-3/8	42-1/8	48-1/4	36	2	50-1/4	42-1/8	44-3/8	44	1-1/8	45-1/2
42	42-1/2	44	45-7/8	40	1	46-7/8	44-1/4	50-3/4	36	2	52-3/4	44-1/4	46-5/8	48	1-1/8	47-3/4
44	44-1/2	46	47-7/8	40	1	48-7/8	46-3/8	53	36	2	55	46-3/8	49	44	1-1/4	50-1/4
46	46-1/2	48	49-7/8	40	1	50-7/8	48-3/8	55-1/4	40	2	57-1/4	48-3/8	51	48	1-1/4	52-1/4
48	48-1/2	50-1/8	51-7/8	44	1	52-7/8	50-3/8	58-3/4	40	2	60-3/4	50-3/8	53	48	1-1/4	54-1/4
50	50-1/2	52-1/4	53-7/8	44	1-1/8	54-7/8	—	—	—	—	—	—	—	—	—	—
52	52-1/2	54-3/8	56-1/8	44	1-1/8	57-1/4	—	—	—	—	—	54-1/2	57-3/8	52	1-3/8	58-3/4
54	54-1/2	56-3/8	58-1/8	44	1-1/8	59-1/4	—	—	—	—	—	56-1/2	59-3/8	52	1-3/8	60-3/4
60	60-1/2	62-1/2	64-1/8	48	1-1/8	65-1/4	—	—	—	—	—	62-1/2	65-3/8	60	1-3/8	66-3/4
66	66-1/2	—	—	—	—	—	—	—	—	—	—	68-1/2	72-1/2	60	1-1/2	74

For **Class 125** refer to chart on Page 6 for M S S SP-44 for Class 150

Flexitallic STYLE HE AND STYLE HE-CG GASKETS

FOR MULTI-PASS HEAT EXCHANGERS

Styles HE and HE-CG (with compression-gauge centering ring) Gaskets are designed for the sealing of multi-pass heat exchangers. The peripheral seal uses the Flexitallic spiral-wound construction. The fixed insert, designed to tube sheet configurations, consists of a single or double jacketed metal rib, or ribs, filled with soft compressible Canadian asbestos, PTFE, or a variety of other materials. The gasket is designed so that the joining of the fixed insert of the peripheral seal will not interfere with normal compression of the gasket.

The peripheral seal embodies all of the exclusive features of Flexitallic design for keeping compression values in balance with bolting and providing resiliency to compensate for variable stresses encountered in service. It is manufactured to normal original thickness of .125" up to 40" I.D., .175" up to 75" I.D., and .250" or .285" for the largest heat exchangers now in use. These size limits can be exceeded in certain situations—consult Flexitallic on these applications.

Optimum compression is in the following range: .125" thick to .095" ± .005"; .175" thick to .130" ± .005"; .250" thick to .190" ± .010"; .285" to .210" ± .010".

The fixed insert with accurately positioned compressible ribs, restricts flow between heat exchanger passes. The configurations shown are some of the variations that can be made.

Flexitallic Gasket Engineering Data Form should accompany each request for quotation along with a sketch indicating exact location of required ribs.

FLEXITALLIC STYLE CGI GASKETS WITH INNER METAL RING

Flexitallic Style CGI Gaskets are the same as Style CG Gaskets with the addition of an inner metal ring. The use of the inner metal ring provides the following advantages in addition to the basic characteristics of the Style CG Gasket:

a) Minimizes build-up of process material between spiral-wound component and flange bore.
b) Reduces turbulence in process fluid flow.
c) Minimizes erosion and corrosion of flange faces.
d) Shields spiral-wound component from excessive heat.
e) Restricts lateral flow of spiral-wound component inward toward the flange bore.
f) Offers additional compression stop and essentially provides totally contained gasket without costly machining.

When Flexitallic Style CGI Gaskets are required, inner ring I.D. must be specified. Standard practice is to utilize inner rings with an I.D. that is 1/8" greater than the flange bore. The table below gives standard inside dimensions of inner rings for use in Style CGI Gaskets.

TABLE 1—STANDARD INSIDE DIMENSIONS OF INNER RINGS FOR STYLE CGI GASKETS

Flange Size (NPS)	Class						
	150	300	400	600	900*	1500*	2500*
1/2	.56	.56	Note 5	.56	Note 5	.56	.56
3/4	.81	.81	Note 5	.81	Note 5	.81	.81
1	1.06	1.06	Note 5	1.06	Note 5	1.06	1.06
1-1/4	1.50	1.50	Note 5	1.50	Note 5	1.31	1.31
1-1/2	1.75	1.75	Note 5	1.75	Note 5	1.63	1.63
2	2.19	2.19	Note 5	2.19	Note 5	2.06	2.06
2-1/2	2.63	2.63	Note 5	2.63	Note 5	2.50	2.50
3	3.19	3.19	Note 5	3.19	3.19	3.19	3.19
4	4.19	4.19	4.19	4.19	4.19	4.19	4.19
5	5.19	5.19	5.19	5.19	5.19	5.19	5.19
6	6.19	6.19	6.19	6.19	6.19	6.19	6.19
8	8.50	8.50	8.25	8.25	8.25	8.12	7.88
10	10.56	10.56	10.25	10.25	10.25	10.15	9.75
12	12.50	12.50	12.50	12.50	12.38	12.38	11.50
14	13.75	13.75	13.75	13.75	13.50	13.38	Note 5
16	15.75	15.75	15.75	15.75	15.50	15.25	Note 5
18	17.69	17.69	17.69	17.69	17.50	17.25	Note 5
20	19.69	19.69	19.69	19.69	19.50	19.25	Note 5
24	23.75	23.75	23.75	23.75	23.75	22.75	Note 5
26 and larger	—	—	—	—	see Table 2	—	—

NOTES

1. The inner ring thickness shall be 0.112 to .131 inch.
2. For sizes NPS 1/2 through 3, the inside diameter tolerance is ±0.03 inches; for sizes NPS 4 and larger, ±0.06 inches.
3. All sizes are suitable for flange bores equivalent to Schedule 40 pipe or smaller, except NPS 1-1/4, Class 1500 and 2500, and NPS 12, Class 2500, which require Schedule 80; and NPS 8 and 10 Class 2500, which require Schedule 60.
4. Per API STD 601, inner rings are required for Class 900 gaskets, NPS 24 and larger; Class 1500 gaskets, NPS 12 to NPS 24 inclusive; and Class 2500 gaskets, NPS 4 to NPS 12 inclusive. These inner rings may protrude into the pipe bore a maximum of 1/16 inch under the worst combination of maximum flange bore, eccentric installation, and additive tolerances.
5. There are no Class 400 flanges in NPS 1/2 through 3 (use Class 600); nor Class 900 flanges in NPS 1/2 through 2-1/2 (use Class 1500); nor Class 2500 flanges NPS 14 and larger.

Table 2—STANDARD INNER RING INSIDE DIAMETERS FOR SPIRAL-WOUND GASKETS IN CLASS 900 FOR MSS SP-44 OR API STANDARD 605 DESIGNATIONS

Flange Size (NPS)	MSS SP-44	API 605	Flange Size (NPS)	MSS SP-44	API 605
26	26.25	26.50	38	39.75	39.75
28	28.00	28.50	40	41.75	41.75
30	30.50	31.00	42	43.75	43.75
32	32.00	33.00	44	45.50	45.50
34	34.00	35.25	46	48.00	48.00
36	36.25	36.50	48	50.00	50.00

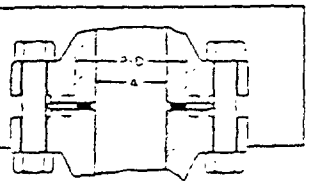
Flexitallic STYLE CG-RJ FOR RING-TYPE JOINTS (NON-STOCK ITEM)

Nom. Pipe Size	150 PSI			300 PSI			400 PSI			600 PSI			900 PSI			1500 PSI		
	Gasket		Ring	Gasket		Ring	Gasket		Ring	Gasket		Ring	Gasket		Ring	Gasket		Ring
	I.D.	O.D.	O.D.	I.D.	O.D.	O.D.	I.D.	O.D.	O.D.	I.D.	O.D.	O.D.	I.D.	O.D.	O.D.	I.D.	O.D.	O.D.
1/2	—	—	—	9/16	1-1/16	2-1/8	9/16	1-1/16	2-1/8	9/16	1-1/16	2-1/8	9/16	1-1/16	2-1/2	9/16	1-1/16	2-1/2
3/4	—	—	—	13/16	1-5/16	2-5/8	13/16	1-5/16	2-5/8	13/16	1-5/16	2-5/8	13/16	1-3/8	2-3/4	13/16	1-3/8	2-3/4
1	1-1/8	1-5/8	2-5/8	1-1/16	1-5/8	2-7/8	1-1/16	1-5/8	2-7/8	1-1/16	1-5/8	2-7/8	1-1/16	1-5/8	3-1/8	1-1/16	1-5/8	3-1/8
1-1/4	1-3/8	1-7/8	3	1-5/16	2	3-1/4	1-5/16	2	3-1/4	1-5/16	2	3-1/4	1-5/16	2	3-1/2	1-5/16	2	3-1/2
1-1/2	1-5/8	2-1/4	3-3/8	1-9/16	2-3/8	3-3/4	1-9/16	2-3/8	3-3/4	1-9/16	2-3/8	3-3/4	1-9/16	2-3/8	3-7/8	1-9/16	2-3/8	3-7/8
2	2-1/8	2-7/8	4-1/8	2-1/8	2-3/4	4-3/8	2-1/8	2-3/4	4-3/8	2-1/8	2-3/4	4-3/8	2-1/4	3-1/4	5-5/8	2-1/4	3-1/4	5-5/8
2-1/2	2-3/4	3-5/16	4-7/8	2-3/4	3-5/16	5-1/8	2-3/4	3-5/16	5-1/8	2-3/4	3-5/16	5-1/8	2-9/16	3-5/8	6-1/2	2-9/16	3-5/8	6-1/2
3	3-5/16	3-15/16	5-3/8	3-5/16	3-15/16	5-7/8	3-5/16	3-15/16	5-7/8	3-5/16	3-15/16	5-7/8	3-3/16	4-3/16	6-5/8	3-3/16	4-11/16	6-7/8
4	4-5/16	5-3/16	6-7/8	4-5/16	5-3/16	7-1/8	4-5/16	5-3/16	7	4-5/16	5-3/16	7-5/8	4-1/16	5-3/16	8-1/8	4-1/16	5-11/16	8-1/4
5	5-5/16	6-3/16	7-3/4	5-5/16	6-7/16	8-1/2	5-5/16	6-7/16	8-3/8	5-5/16	6-7/16	9-1/2	5-5/16	6-7/16	9-3/4	5-1/16	6-15/16	10
6	6-5/16	7-3/16	8-3/4	6-7/16	7-5/8	9-7/8	6-7/16	7-5/8	9-3/4	6-7/16	7-5/8	10-1/2	6-5/16	7-5/8	11-3/8	6	7-9/16	11-1/8
8	8-1/4	9-3/16	11	8-1/4	9-15/16	12-1/8	8-1/4	9-15/16	12	8-1/4	9-15/16	12-5/8	8-1/4	9-15/16	14-1/8	7-7/8	9-3/4	13-7/8
10	10-5/16	11-7/16	13-3/8	10-5/16	12	14-1/4	10-5/16	12	14-1/8	10-5/16	12	15-3/4	10-5/16	12	17-1/8	9-13/16	11-7/8	17-1/8
12	12-3/16	13-9/16	16-1/8	12-7/8	14-1/4	16-5/8	12-7/8	14-1/4	16-1/2	12-7/8	14-1/4	18	12-7/8	14-1/4	19-5/8	11-15/16	13-13/16	20-1/2
14	13-7/16	14-15/16	17-3/4	14-1/4	15-3/4	19-1/8	14-1/4	15-3/4	19	14-1/4	15-3/4	19-3/8	13-13/16	15-9/16	20-1/2	13-7/16	15-3/16	22-3/4
16	15-5/16	16-15/16	20-1/4	16-1/4	17-3/4	21-1/4	16-1/4	17-3/4	21-1/8	16-1/4	17-3/4	22-1/4	15-9/16	17-9/16	22-5/8	15	17	25-1/4
18	17-1/4	19	21-5/8	18-1/4	20-1/4	23-1/2	18-1/4	20-1/4	23-3/8	18-1/4	20-1/4	24-1/8	17-11/16	19-15/16	25-1/8	17-1/4	19-1/2	27-3/4
20	19-1/8	21-1/8	23-7/8	20-1/4	22-3/16	25-3/4	20-1/4	22-3/16	25-1/2	20-1/4	22-3/16	26-7/8	19-11/16	21-15/16	27-1/2	19-3/16	21-7/16	29-3/4
24	23	25-1/4	28-1/4	24-1/4	26-5/16	30-1/2	24-1/4	26-5/16	30-1/4	24-1/4	26-5/16	31-1/8	23-3/16	25-15/16	33	20	25-1/2	35-1/2

NOTES

1. Style CG-RJ gaskets are intended for use as a replacement maintenance item. If spiral-wound gaskets are to be used on new applications, it is advisable to use standard raised face flanges and Style CG Gaskets.
2. It is the users responsibility to ensure that there is sufficient clearance between the flange bore and ring groove for proper seating of the gasket.
3. Clearance dimensions between flange faces should be checked on close-coupled pipe prior to installation of Style CG-RJ Gaskets to insure optimum compression can be achieved without over-stressing bolts and flanges.

Typical positioning of Style CG-RJ Gasket is shown. Dimension A and P-D are controlling factors in the application of Style CG-RJ Gaskets. The maximum available gasket seating surface is the area between the flange bore and the inside dimension of the groove. Use of this full space is not always necessary.



Flexitallic, STYLE 625 GASKETS



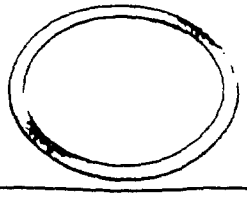
FOR CLAMP-TYPE AND OTHER NON-STANDARD FLANGE ASSEMBLIES

Style 625 Gaskets were originally designed by Flexitallic Gasket Company for clamp-type closures in aircraft, but are now widely used wherever space limitations indicate the need for a wafer-thin or narrow flange spiral-wound gasket.

Style 625 Gaskets are manufactured to nominal thickness of .0625", with compression to .050"—.055".

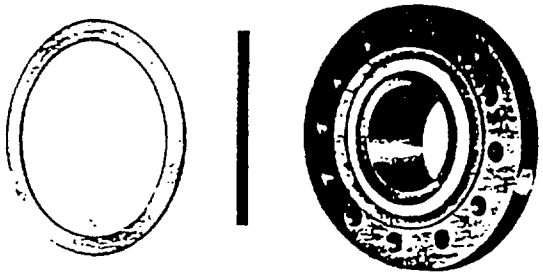
Style 625 Gaskets embody all of the exclusive features of Flexitallic design for keeping compression values in balance with bolting and providing correct resiliency to compensate for variable stresses encountered in service.

Style 625 Gaskets can be manufactured from any combination of materials shown on page 3. Please check with Flexitallic for manufacturing limitations on Style 625 gaskets larger than 8" I.D. or 3/8" radial width.



GASKET I.D. (Inches)	GASKET O.D. (Inches)	GASKET IDENTIFICATION NUMBER	ORIGINAL PART NUMBER
1-1/8	1-5/8	VC-06-1.00	750244-3
1-3/8	1-7/8	VC-06-1.25	750244-4
1-5/8	2-1/8	VC-06-1.50	750244-5
1-7/8	2-3/8	VC-06-1.75	750244-6
2-1/8	2-5/8	VC-06-2.00	750244-7
2-3/8	2-7/8	VC-06-2.25	750244-8
2-5/8	3-1/8	VC-06-2.50	750244-9
2-7/8	3-3/8	VC-06-2.75	750244-10
3-1/8	3-5/8	VC-06-3.00	750244-11
3-1/4	3-3/4	VC-06-3.15	750244-12
3-3/8	3-7/8	VC-06-3.25	750244-13
3-5/8	4-1/8	VC-06-3.50	750244-14
3-7/8	4-3/8	VC-06-3.75	750244-15
4-1/8	4-5/8	VC-06-4.00	750244-16
4-5/8	5-1/8	VC-06-4.50	750244-17
5-1/8	5-5/8	VC-06-5.00	750244-18
5-5/8	6-1/8	VC-06-5.50	750244-19
6-1/8	6-5/8	VC-06-6.00	750244-20

Flexitallic STYLE R GASKETS



FOR ANSI B16.5 MALE & FEMALE AND TONGUE & GROOVE FLANGES

Standard Style R Gaskets embody all the exclusive features of Flexitallic design for keeping compression values in balance with bolting and providing adequate resiliency to compensate for variable stresses encountered in service. Standard Style R Gaskets are manufactured to a nominal thickness of .125". Optimum compression is in the range of .090" to .100" compressed thickness (dependent on test pressures).

There are three types of Style R Gaskets:

a) Style R-1 indicates gaskets designed for use with large male & female flanges.*
b) Style R-3 indicates those designed for use with large tongue & groove flanges.
c) Style R-4 indicates gaskets designed for use with small tongue & groove flanges.

*As a general rule, the use of Flexitallic Spiral-Wound Gaskets with small male & female flange facings is not recommended.

Dimensional limitations established by the proportions of the small tongue & groove facings limit the possibility of increasing gasket dimensions to improve the load carrying capacity in the higher pressure series. For this reason, it is suggested that large tongue & groove facings be selected for new construction when 900, 1500, and 2500 psi flanges are to be used. Style R-4 Gaskets may be compressed an additional amount when exposed to the higher bolt loads, but not to the degree that the gasket will be crushed due to the radial support provided by the confining groove.

Special Style R Gaskets are adaptable to non-standard fittings and can be designed and manufactured according to specifications for high and low pressure applications and for severe corrosive conditions.

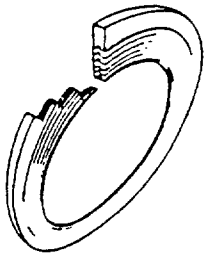
When ordering special Style R Gaskets for non-standard fittings and for special applications, furnish complete data on *Flexitallic Gasket Engineering Data Form.*

NOTE — The following Style R Gaskets are interchangeable:

Style R-1 and R-3 Gaskets

- ¼" sizes - Classes 150, 300, 400 and 600 are interchangeable.
- ½" sizes - Classes 150, 300, 400, 600, 900, 1500 and 2500 (R-3 only) are interchangeable.
- All R-1 and R-3 Gaskets in Classes 300, 400 and 600 are interchangeable within their size category.
- All R-1 and R-3 Gaskets in Classes 900 and 1500 are interchangeable within their size category.

When Gaskets



Must Not Fail!

Flexitallic STYLE R-1 AND STYLE R-3 GASKETS

FOR MALE & FEMALE AND LARGE TONGUE & GROOVE FLANGES

NOMINAL PIPE SIZE (Inches)	150 PSI THRU 1500 PSI GASKET I.D. (Inches)	GASKET O.D. (Inches)	FLEXITALLIC GASKET IDENTIFICATION NUMBERS R1-R3 CLASS 150	R1-R3 CLASS 300, 400, 600	R1-R3 CLASS 900 - 1500	R3 ONLY CLASS 2500	NOMINAL PIPE SIZE (Inches)	R1 ONLY - CLASS 2500 GASKET I.D. (Inches)	GASKET O.D. (Inches)	R1 GASKET NUMBER
1/4	1/2	1	R1-R3-1A	R1-R3-3A-4A-6A	—	—	1/2	13/16	1-3/8	R1-25B
1/2	1	1-3/8	R1-R3-1B	R1-R3-3B-4B-6B	R1-R3-9B-15B	R3-25B	3/4	1-1/16	1-11/16	R1-25C
3/4	1-5/16	1-11/16	R1-R3-1C	R1-R3-3C-4C-6C	R1-R3-9C-15C	R3-25C	1	1-1/4	2	R1-25D
1	1-1/2	2	R1-R3-1D	R1-R3-3D-4D-6D	R1-R3-9D-15D	R3-25D	1-1/4	1-5/8	2-1/2	R1-25E
1-1/4	1-7/8	2-1/2	R1-R3-1E	R1-R3-3E-4E-6E	R1-R3-9E-15E	R3-25E	1-1/2	1-7/8	2-7/8	R1-25F
1-1/2	2-1/8	2-7/8	R1-R3-1F	R1-R3-3F-4F-6F	R1-R3-9F-15F	R3-25F	2	2-3/8	3-5/8	R1-25G
2	2-7/8	3-5/8	R1-R3-1G	R1-R3-3G-4G-6G	R1-R3-9G-15G	R3-25G	2-1/2	3	4-1/8	R1-25H
2-1/2	3-3/8	4-1/8	R1-R3-1H	R1-R3-3H-4H-6H	R1-R3-9H-15H	R3-25H	3	3-3/4	5	R1-25J
3	4-1/4	5	R1-R3-1J	R1-R3-3J-4J-6J	R1-R3-9J-15J	R3-25J	4	4-3/4	6-3/16	R1-25L
3-1/2	4-3/4	5-1/2	R1-R3-1K	R1-R3-3K-4K-6K	R1-R3-9K—	—	5	5-3/4	7-5/16	R1-25N
4	5-3/16	6-3/16	R1-R3-1L	R1-R3-3L-4L-6L	R1-R3-9L-15L	R3-25L	6	6-3/4	8-1/2	R1-25P
4-1/2	5-11/16	6-3/4	R1-R3-1M	R1-R3-3M-4M-6M	R1-R3-9M—	—	8	8-3/4	10-5/8	R1-25Q
5	6-5/16	7-5/16	R1-R3-1N	R1-R3-3N-4N-6N	R1-R3-9N-15N	R3-25N	10	10-3/4	12-3/4	R1-25R
6	7-1/2	8-1/2	R1-R3-1P	R1-R3-3P-4P-6P	R1-R3-9P-15P	R3-25P	12	13	15	R1-25S
8	9-3/8	10-5/8	R1-R3-1Q	R1-R3-3Q-4Q-6Q	R1-R3-9Q-15Q	R3-25Q	—	—	—	—
10	11-1/4	12-3/4	R1-R3-1R	R1-R3-3R-4R-6R	R1-R3-9R-15R	R3-25R	—	—	—	—
12	13-1/2	15	R1-R3-1S	R1-R3-3S-4S-6S	R1-R3-9S-15S	R3-25S	—	—	—	—
14	14-3/4	16-1/4	R1-R3-1T	R1-R3-3T-4T-6T	R1-R3-9T-15T	—	—	—	—	—
16	17	18-1/2	R1-R3-1U	R1-R3-3U-4U-6U	R1-R3-9U-15U	—	—	—	—	—
18	19-1/4	21	R1-R3-1V	R1-R3-3V-4V-6V	R1-R3-9V-15V	—	—	—	—	—
20	21	23	R1-R3-1W	R1-R3-3W-4W-6W	R1-R3-9W-15W	—	—	—	—	—
24	25-1/4	27-1/4	R1-R3-1X	R1-R3-3X-4X-6X	R1-R3-9X-15X	—	—	—	—	—

Flexitallic STYLE R-4 GASKETS

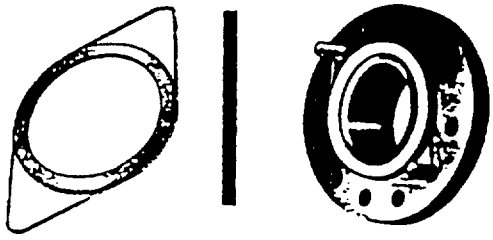
FOR SMALL TONGUE & GROOVE FLANGES

NOMINAL PIPE SIZE (Inches)	GASKET I.D. (Inches)	GASKET O.D. (Inches)	FLEXITALLIC GASKET IDENTIFICATION NUMBERS 150-300-400-600-900-1500-2500 PSI
1/2	1	1-3/8	R4-1B-3B-4B-6B-9B-15B-25B
3/4	1-5/16	1-11/16	R4-1C-3C-4C-6C-9C-15C-25C
1	1-1/2	1-7/8	R4-1D-3D-4D-6D-9D-15D-25D
1-1/4	1-7/8	2-1/4	R4-1E-3E-4E-6E-9E-15E-25E
1-1/2	2-1/8	2-1/2	R4-1F-3F-4F-6F-9F-15F-25F
2	2-7/8	3-1/4	R4-1G-3G-4G-6G-9G-15G-25G
2-1/2	3-3/8	3-3/4	R4-1H-3H-4H-6H-9H-15H-25H
3	4-1/4	4-5/8	R4-1J-3J-4J-6J-9J-15J-25J
3-1/2	4-3/4	5-1/8	R4-1K-3K-4K-6K-9K-15K-25K
4	5-3/16	5-11/16	R4-1L-3L-4L-6L-9L-15L-25L
5	6-5/16	6-13/16	R4-1N-3N-4N-6N-9N-15N-25N
6	7-1/2	8	R4-1P-3P-4P-6P-9P-15P-25P
8	9-3/8	10	R4-1Q-3Q-4Q-6Q-9Q-15Q-25Q
10	11-1/4	12	R4-1R-3R-4R-6R-9R-15R-25R
12	13-1/2	14-1/4	R4-1S-3S-4S-6S-9S-15S-25S
14	14-3/4	15-1/2	R4-1T-3T-4T-6T-9T-15T-25T
16	16-3/4	17-5/8	R4-1U-3U-4U-6U-9U-15U-25U
18	19-1/4	20-1/8	R4-1V-3V-4V-6V-9V-15V-25V
20	21	22	R4-1W-3W-4W-6W-9W-15W-25W
24	25-1/4	26-1/4	R4-1X-3X-4X-6X-9X-15X-25X

Style R-4 Gaskets

- ½" sizes - interchangeable with all ½" R-1 and R-3 Gaskets within the same pressure rating.
- ¾" - interchangeable with all ¾" R-1 and R-3 Gaskets within the same pressure rating.
- All R-4 Gaskets in Classes 300 through 2500 are interchangeable within their size category.

Flexitallic STYLE D "SELF-CENTERING" GASKETS
(NON-STOCK ITEM)



FOR ANSI B16.5 RAISED FACE AND PLAIN OR FLAT FACE FLANGES

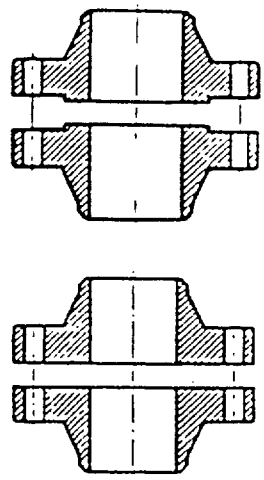
Style D Gaskets, another *original* Flexitallic design, are constructed with an integral centering guide to facilitate assembly. The guide is placed over diametrically opposite bolts to center the gasket properly. Style D Gaskets prevent eccentric assembly.

Style D Gaskets are manufactured to nominal original thickness of .175". Optimum compression is in the range of .125" to .135" (dependent on test pressures). Compression in this range provides ample bonding load within stress limits for specified bolting. Style D Gaskets should be used in the lower pressure/temperature ranges. For more stringent service conditions, Style CG or CGI Gaskets with their greater safety features are recommended.

Style D Gaskets are recommended for all pipe sizes up to and including 24" for 150, 300, and 400 psi fittings, and up to and including 8" for 600 psi fittings.

STYLE D SELF-CENTERING GASKETS

NOMINAL PIPE SIZE (Inches)	ALL CLASSES GASKET I.D. (Inches)	ALL CLASSES GASKET O.D. (Inches)	FLEXITALLIC GASKET IDENTIFICATION NUMBERS CLASS 150	CLASS 300	CLASS 400	CLASS 600
1/4	1/2	7/8	D-1A	D-3A	D-4A	D-6A
1/2	3/4	1-1/4	D-1B	D-3B	D-4B	D-6B
3/4	1	1-9/16	D-1C	D-3C	D-4C	D-6C
1	1-1/4	1-7/8	D-1D	D-3D	D-4D	D-6D
1-1/4	1-11/16	2-3/8	D-1E	D-3E	D-4E	D-6E
1-1/2	2	2-3/4	D-1F	D-3F	D-4F	D-6F
2	2-9/16	3-3/8	D-1G	D-3G	D-4G	D-6G
2-1/2	3-1/16	3-7/8	D-1H	D-3H	D-4H	D-6H
3	3-3/4	4-3/4	D-1J	D-3J	D-4J	D-6J
3-1/2	4-1/8	5-1/4	D-1K	D-3K	D-4K	D-6K
4	4-3/4	5-7/8	D-1L	D-3L	D-4L	D-6L
4-1/2	5-5/16	6-1/2	D-1M	D-3M	D-4M	D-6M
5	5-13/16	7	D-1N	D-3N	D-4N	D-6N
6	6-7/8	8-1/4	D-1P	D-3P	D-4P	D-6P
8	8-7/8	10-3/8	D-1Q	D-3Q	D-4Q	D-6Q
10	10-13/16	12-1/2	D-1R	D-3R	D-4R	—
12	12-7/8	14-3/4	D-1S	D-3S	D-4S	—
14	14-1/4	16	D-1T	D-3T	D-4T	—
16	16-1/4	18-1/4	D-1U	D-3U	D-4U	—
18	18-1/2	20-3/4	D-1V	D-3V	D-4V	—
20	20-1/2	22-3/4	D-1W	D-3W	D-4W	—
24	24-3/4	27	D-1X	D-3X	D-4X	—



Flexitallic. STYLE M AND STYLE MC GASKETS



FOR BOILER MANHOLE COVER ASSEMBLIES

Styles M and MC Gaskets are specifically designed for standard manhole cover assemblies. Selection of required design is made in accordance with service conditions. The widespread use of Styles M and MC Gaskets as original equipment and replacement parts is the result of coordinated Flexitallic design and research with equipment engineering and design to meet specific requirements.

Style M Oval Gaskets are manufactured with thicknesses of .175" and .250" and with flange widths shown in table in the next column. Style M Round Gaskets are manufactured with a thickness of .175" only. Gaskets having a thickness of .250" are recommended for gasket seating surfaces which have become pitted or warped.

Style MC Gaskets, an exclusive Flexitallic design, are manufactured with a thickness of .250" and flange width of 13/16". A preformed spiral-wound centering ring, having a thickness of .175", is snapped into the inner groove of the gasket proper. The centering guide permits the gasket proper to assume its correct position and to compensate for inequality in plate contours and fillets in cold-pressed plates. Shouldering and pinching caused by radial misplacement are also eliminated.

Standard Styles M and MC Gaskets are available in the following three ranges of operating pressure for practically all makes of boilers and auxiliary equipment:

a) 0-499 lbs.
b) 0-999 lbs.
c) 1,000 lbs. and more

ORDERING MANHOLE GASKETS

Standard Styles M and MC Gaskets can be ordered from the table in the next column. Order standard gaskets by furnishing the following information:

a) Name of boiler or equipment manufacturer
b) Gasket style
c) Dimensions of gasket
d) Gasket thickness
e) Flange width of gasket
f) Pressure service rating
g) Type of steel desired

Minor variations in the contour of cover assemblies can be compensated for by flexing the gasket. For cover assemblies in a satisfactory condition, specify .175" thickness, and for pitted, rough or warped conditions, specify .250" thickness. Styles M and MC Gaskets are also available for non-standard manhole cover assemblies and can be designed and manufactured for high and low temperature service and abnormal corrosive conditions. For special applications several combinations of ferrous and non-ferrous alloys and fillers are available. See page 3 for listing of metals and fillers. When ordering Styles M and MC Gaskets for special cover assemblies furnish the following:

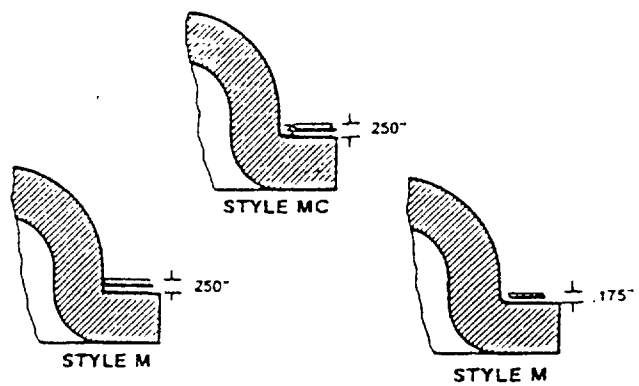
a) Rough sketch or blueprint of cover assembly and mating surfaces with dimensions.
b) Pressure service rating.
c) Type of steel desired.
d) Name of boiler or equipment manufacturer.
e) Width of available seating surface.

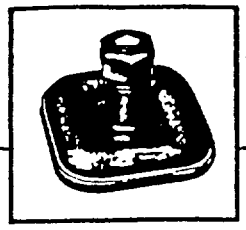
Data for "e" is most important for special gasket design in order to insure total confinement of the gasket between flat surfaces. To expedite the processing of orders for special cover assemblies, it is recommended that a sample gasket or template accompany the orders.

FOR MANHOLE COVER ASSEMBLIES

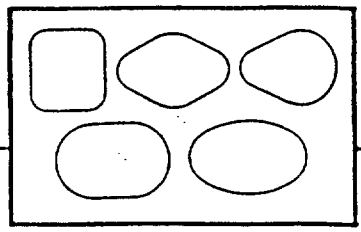
STYLE	NOMINAL I.D. DIMENSIONS (Inches)	THICKNESS (Inches)	FLANGE WIDTH (Inches)
M-Oval	10 x 15	.250	15/16
M-Oval	10 x 16	.250	15/16
M-Oval	11 x 15	.250	15/16
MC-Oval	11 x 15	.250	13/16
M-Oval	11 x 15	.175	3/4
M-Oval	11 x 15	.175	15/16
M-Oval	11 x 15	.175	1/2
M-Oval	11 x 15	.175	1-1/4
M-Oval	11 x 15	.250	1-1/4
M-Obround	11-1/16 x 14-7/8	.250	15/16
M-Obround	11-7/16 x 15-1/16	.250	15/16
M-Oval	12 x 16	.250	15/16
MC-Oval	12 x 16	.250	13/16
M-Oval	12 x 16	.175	1/2
M-Oval	12 x 16	.175	3/4
M-Oval	12 x 16	.175	15/16
M-Oval	12 x 16	.175	1-1/4
M-Oval	12 x 16	.250	1-1/4
M-Obround	12 x 16	.250	15/16
M-Obround	12 x 16	.250	1-1/4
MC-Oval	12-1/8 x 16-1/8	.250	13/16
M-Obround	14 x 16	.175	3/4
M-Round	14	.175	3/4
M-Round	16-1/16	.175	3/4

NOTE: When ordering gaskets specify operating pressure and temperature and type of steel desired





Flexitallic. STYLE T GASKETS



FOR BOILER HANDHOLE AND TUBECAP ASSEMBLIES

Style T Gaskets for boiler handhole and tubecap assemblies have been recognized for their superiority since 1912. The quality and safety of Flexitallic Style T Gaskets are the result of unceasing effort to develop a series of gaskets which will maintain a perfect seal at a minimum maintenance cost.

Style T Gaskets require no compounds and can frequently be reused if not removed from cover assemblies during outage. This economy is due to the exclusive feature of spiral-wound construction and resiliency which permit the gaskets to rebound when they are not under compression. The consistently high standard of performance in Style T Gaskets is the direct result of Flexitallic engineering vision in anticipating design improvements of modern steam generating equipment.

Style T Gaskets, in thicknesses of .125" and .175", are recognized for the following design factors:

a) High safety factor in keeping with specific operating conditions.
b) Compression values and bonding loads proportioned to safe stresses of cover assemblies.
c) Resiliency under concentrated and fluctuating loads.
d) Exceptionally long and sustained service.
e) Reduction of seat cleaning time.

Style T Gasket yield values are calculated for specific ranges of operating pressure to compensate for highly concentrated gasket loads. The compression characteristics are related to the gasket constructions which vary with the ranges of operating pressure for practically all makes of boilers and auxiliary equipment:

a) 0-499 lbs.
b) 0-999 lbs.
c) 1000 lbs. and above.

Installation: See instruction tags attached to each bundle of gaskets supplied.

Style T Gaskets are manufactured from any combination of materials shown on page 3.

Low carbon plated steel continues to serve well in a majority of applications where saturated temperatures are not in excess of 500° F. Although this type of steel is subject to a normal rate of corrosion it does not in any way affect the sealing qualities of the gasket.

Type 304 stainless steel possesses ideal corrosion resistant qualities and is recommended for superheat temperature. The extremely long service life and resistance to corrosion warrant the slightly higher cost of Type 304 stainless steel for use in boilers operating at less than 500° F. The use of stainless steel gaskets also reduces the time required for cleaning gasket seat surfaces.

Style T Gaskets are also manufactured with other types of stainless steel and alloys and are recommended when corrosive acid, alkaline or other conditions warrant their use. Gasket fillers other than Canadian asbestos can be furnished in combination with any metal according to specifications for chemical processes where the use of such materials is indicated. See page 3 for listing of metals and fillers.

Standard Style T Gaskets are manufactured to nominal original thicknesses of .175" and .125". Each thickness possesses design characteristics compatible to the design of handhole and tubecap assemblies. Special gaskets having a thickness of .250" are recommended for use in assemblies having relatively broad seating surfaces and where bonding loads are low. Gaskets having a thickness of .125" are designed for use with assemblies having extremely narrow seating surfaces and where high bonding loads are encountered. Several handhole and tubecap assembly designs permit the use of either thickness.

Standard Style T Gaskets can be ordered from the tables on the facing page. To order standard gaskets give the boiler manufacturer's name and code number listed in the *Identification* column on the facing page, pressure service rating, operating temperature and type of steel desired. When boiler manufacturer's code number is not listed, furnish the following information on inquiries and purchase orders:

a) Name of boiler or equipment manufacturer.
b) Gasket shape.
c) Inside dimensions of gaskets.
d) Flange width of gasket.
e) Gasket thickness.
f) Pressure service rating.
g) Operating temperature.
h) Type of steel desired.

Style T Gaskets are also available for non-standard handhole and tubecap assemblies and can be designed and manufactured for high and low temperature and pressure services and severe corrosive conditions. When ordering Style T Gaskets not listed in the following tables, or for special cover assemblies, furnish the following data:

a) Rough sketch, blueprint or accurate template of cover assembly with necessary dimensions.
b) Width of available seating surface.
c) Pressure service rating.
d) Operating temperature.
e) Name of boiler or equipment manufacturer.

To expedite the processing of inquiries or orders for special cover assemblies, care should be exercised in furnishing complete and accurate data.

Flexitallic. STYLE T FOR BOILER HANDHOLE AND TUBECAP ASSEMBLIES

0-499 Lbs. 0-999 Lbs. 1000 Lbs. and Above ☐ **Specify operating temperature, pressure, and type of stee**

IDENTIFICATION	SHAPE	NOMINAL I.D. (Inches)	FLANGE WIDTH (Inches)
American Engineering	Obround	3-5/16 x 3-11/16	3/16
	Round	3-5/16	3/16
Babcock and Wilcox			
No. 41	Obround	2-9/64 x 2-33/64	5/32
No. 40	Diamond	3-3/8 x 3-3/4	3/16
No. 48	Oval	3-13/16 x 4-3/4	7/32
No. 79	Obround	4-5/32 x 4-25/32	1/4
No. 24	Oval	4-1/2 x 5-1/2	7/32
No. 76	Oval	5-1/32 x 5-31/32	1/4
2" Econ.	Round	1-5/8	1/4
No. 47	Round	2-1/32	3/16
No. 32	Round	3	1/4
No. 70	Round	3-9/32	3/16
No. 89	Round	3-7/16	5/32
No. 92	Round	4-1/32	1/4
No. 28	Rect	4-13/16 x 5	7/32
Badenhausen (See Riley Stoker)			
Bros			
HB-5 and HB-10	Round	2-1/4	1/4
HB-6 and HB-11	Round	3-3/8	1/4
HB-12	Round	4-1/4	1/4
HB-8 and HB-13	Obround	3-3/8 x 4-1/4	1/4
HB-14	Obround	4-1/4 x 5	1/4
Bucyrus-Erie			
0227	Obround	3 x 4-1/2	3/8
0260	Oval	4 x 6	7/16
0208	Round	2-1/2	1/4
Casey-Hedges	Obround	4-1/4 x 5-1/8	3/8
Cleaver-Brooks	Obround	2-27/32 x 3-19/32	5/16
	Obround	3-9/32 x 4-17/32	3/8
	Obround	4 x 6	3/8
Combustion Engineering			
24N-L1206	Diamond	3 x 3-7/8	1/4
29N-L839	Diamond	3-3/8 x 4-1/4	1/4
30N-L866	Diamond	3-5/8 x 4-1/2	1/4
33N-L1205	Diamond	3-3/4 x 4-5/8	1/4
31N-L579	Diamond	4-1/4 x 5-1/8	1/4
21N-L1291	Obround	2-1/8 x 2-1/2	5/32
22N	Oval	2-1/8 x 2-5/8	7/32
23N	Obround	2-25/32 x 3-13/32	7/32
25N-L1278	Obround	3-1/8 x 4-1/8	3/16
27N	Diamond	3-3/8 x 3-3/4	3/16
28N-L1277	Obround	3-3/8 x 3-7/8	3/16
12N	Oval	4-1/2 x 5-1/2	7/32
1N-L1272	Round	1-1/2	3/16
7N-L1131	Round	1-3/4	3/16
3N-L1274	Round	2-5/8	7/32
4N-L740	Round	3-1/8	1/4
L741	Round	3-3/8	1/4
5N-L902	Round	3-5/8	1/4
6N-L744	Round	4-1/8	1/4
51N	Rect.	4-13/16 x 5	7/32
52N-L1117	Rect.	4-7/8 x 5-3/16	7/32
PB9474	Obround	4-1/8 x 4-7/8	3/16
PB9474	Round	3-1/2	3/16
Connelly	Obround	3 x 3-15/16	3/8
Edge Moor	Oval	4-1/8 x 5-1/4	3/8
	Round	2-1/2	1/2
	Round	4-1/16	15/32
Erie City	Pear	3-1/2 x 4-5/8	3/8
	Obround	3 x 4-1/2	3/8
	Oval	3-1/32 x 4-1/32	5/16
	Oval	3-17/32 x 4-17/32	5/16
	Oval	4-1/32 x 5-1/32	5/16
	Oval	4-1/32 x 6-1/32	3/8
	Round	3-1/2	3/8
Foster Wheeler	Diamond	4 x 5	3/8
2-3/4"	Obround	2-25/32 x 3-13/32	7/32
	Obround	3 x 4	3/8
3-15/16"	Obround	3-11/32 x 3-31/32	7/32
	Oval	4-3/16 x 5-3/16	5/16
	Round	15/16	5/32
	Round	2-1/32	13/64
	Round	2-1/32	15/64
	Round	2-1/8 or 2-1/16	3/8
	Round	3-1/8 or 3-1/16	3/8

IDENTIFICATION	SHAPE	NOMINAL I.D. (Inches)	FLANGE WIDTH (Inches)
Foster Wheeler (Con't.)	Round	4-1/8 or 4-1/16	3/8
	Rect.	4-15/16 x 5-3/16	7/32
Geary			
3-1/2"	Obround	3-13/16 x 4-5/8	3/8
4"	Obround	4-1/4 x 5-1/4	7/16
4" (.285" Thick)	Obround	4-1/4 x 5-1/4	7/16
Heine	Obround	3-5/8 x 4-5/8	3/8
	Round	3-5/8	3/8
International	Oval	2-19/32 x 3-19/32	7/16
Keeler	Diamond	4-1/4 x 5-1/4	3/8
	Round	4-1/4	3/8
	Obround	3 x 4	3/8
Murray	Obround	3-5/8 x 4-9/16	3/8
	Obround	3-5/8 x 4-9/16	7/16
	Obround	4-1/32 x 4-29/32	3/8
Oil Field	Obround	2-1/2 x 3-1/2	3/8
	Oval	3 x 4	3/8
	Oval	3-1/2 x 4-1/2	3/8
	Oval	4-1/16 x 5-1/16	7/16
Orr & Sembower	Oval	2-23/32 x 3-21/32	3/8
	Oval	3-13/32 x 4-13/32	3/8
Pacific	Round	1-1/2	1/2
	Round	2	1/2
	Round	2-1/2	1/2
Page			
Larrabee	Oval	2-27/32 x 3-29/32	3/8
Junior	Oval	3-1/8 x 4-1/8	3/8
Page	Oval	3-1/8 x 4-1/4	3/8
P-8	Oval	3-5/16 x 4-5/16	3/8
Drum	Oval	3-25/32 x 5-13/32	5/8
Consol	Round	2-3/16	3/8
Riley Stoker			
W-C22	Oval	3-17/32 x 4-17/32	5/16
W-C2	Obround	3-23/32 x 5-23/32	11/32
W-C16	Round	1-31/32	3/8
W-C6	Round	3-9/32	5/16
W-C9	Square	4 x 4	11/32
	Square	5-1/2 x 5-1/2	3/8
Springfield	Oval	3-17/32 x 4-17/32	5/16
	Oval	4-1/16 x 5-1/16	3/8
	Square	5-1/2 x 5-1/2	3/8
	Square	7-3/8 x 7-3/8	5/8
Superheater	Obround	2-21/32 x 3-9/32	15/64
	Obround	3-3/32 x 4-3/32	1/4
	Obround	3-11/32 x 3-23/32	3/16
	Obround	3-3/8 x 3-7/8	1/4
	Round	15/16	3/16
	Round	3-3/32	1/4
Union			
3-1/4"	Pear	3-7/16 x 4-7/16	3/8
	Pear	3-1/2 x 4-1/2	3/8
	Pear	4-1/4 x 5-1/4	3/8
(.285" Thick)	Pear	4-1/4 x 5-1/4	3/8
	Oval	3-1/2 x 4-1/2	3/8
	Oval	3 x 4	3/8
Vogt	Oval	3 x 4	5/16
	Oval	3-3/8 x 4-1/4	7/32
	Oval	3-1/2 x 4-1/2	5/16
	Oval	3-3/4 x 5	3/8
	Oval	4 x 5	5/16
	Oval	4 x 6	3/8
	Oval	4-1/4 x 5-1/8	7/32 (new)
	Oval	4-1/4 x 5-1/8	5/16 (old)
	Oval	4-9/32 x 5-5/32	7/32
3-1/2"	Round	3-19/32	3/8
	Round	4-1/8	3/8
Ward	Square	4-7/8 x 4-7/8	1/4
Wickes	Pear	4-1/8 x 5-1/8	9/32
	Pear	4-1/4 x 5-1/8	3/8
02300	Oval	3 x 4	5/16
02301	Oval	3-1/2 x 4-1/2	5/16
02361	Oval	4 x 5	5/16
02724	Oval	4 x 6	5/16
	Round	4-1/8	3/8
	Round	4-1/4	3/8

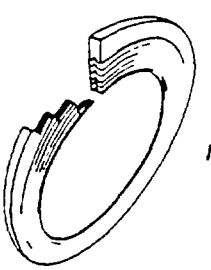
FACING DIMENSIONS FOR ANSI B16.5 FLANGES

CLASS 150, 300, 400, 600, 900, 1500 AND 2500

NOMINAL PIPE SIZE (Inches)	OUTSIDE DIAMETER (Inches) See Note 3			I.D. OF LARGE & SMALL TONGUE See Notes 3 & 5	OUTSIDE DIAMETER (Inches) See Note 3			I.D. OF LARGE & SMALL GROOVE See Note 3 See Note 5	HEIGHT (Inches)		DEPTH OF GROOVE OR FEMALE
	RAISED FACE, LAPPED, LARGE MALE & LARGE TONGUES See Note 5	SMALL MALE See Notes 4 & 5	SMALL TONGUE See Note 5		LARGE FEMALE & LARGE GROOVE See Note 5	SMALL FEMALE See Note 4 See Note 5	SMALL GROOVE See Note 5		RAISED FACE 150 & 300 PSI See Note 1	RAISED FACE LARGE & SMALL MALE & TONGUE 400, 600, 900 1500 & 2500 PSI See Note 2	
	R	S	T	U	W	X	Y	Z			
1/2	1-3/8	23/32	1-3/8	1	1-7/16	25/32	1-7/16	15/16	1/16	1/4	3/16
3/4	1-11/16	15/16	1-11/16	1-5/16	1-3/4	1	1-3/4	1-1/4	1/16	1/4	3/16
1	2	1-3/16	1-7/8	1-1/2	2-1/16	1-1/4	1-15/16	1-7/16	1/16	1/4	3/16
1-1/4	2-1/2	1-1/2	2-1/4	1-7/8	2-9/16	1-9/16	2-5/16	1-13/16	1/16	1/4	3/16
1-1/2	2-7/8	1-3/4	2-1/2	2-1/8	2-15/16	1-13/16	2-9/16	2-1/16	1/16	1/4	3/16
2	3-5/8	2-1/4	3-1/4	2-7/8	3-11/16	2-5/16	3-5/16	2-13/16	1/16	1/4	3/16
2-1/2	4-1/8	2-11/16	3-3/4	3-3/8	4-3/16	2-3/4	3-13/16	3-5/16	1/16	1/4	3/16
3	5	3-5/16	4-5/8	4-1/4	5-1/16	3-3/8	4-11/16	4-3/16	1/16	1/4	3/16
3-1/2	5-1/2	3-13/16	5-1/8	4-3/4	5-9/16	3-7/8	5-3/16	4-11/16	1/16	1/4	3/16
4	6-3/16	4-5/16	5-11/16	5-3/16	6-1/4	4-3/8	5-3/4	5-1/8	1/16	1/4	3/16
5	7-5/16	5-3/8	6-13/16	6-5/16	7-3/8	5-7/16	6-7/8	6-1/4	1/16	1/4	3/16
6	8-1/2	6-3/8	8	7-1/2	8-9/16	6-7/16	8-1/16	7-7/16	1/16	1/4	3/16
8	10-5/8	8-3/8	10	9-3/8	10-11/16	8-7/16	10-1/16	9-5/16	1/16	1/4	3/16
10	12-3/4	10-1/2	12	11-1/4	12-13/16	10-9/16	12-1/16	11-3/16	1/16	1/4	3/16
12	15	12-1/2	14-1/4	13-1/2	15-1/16	12-9/16	14-5/16	13-7/16	1/16	1/4	3/16
14	16-1/4	13-3/4	15-1/2	14-3/4	16-5/16	13-13/16	15-9/16	14-11/16	1/16	1/4	3/16
16	18-1/2	15-3/4	17-5/8	16-3/4	18-9/16	15-13/16	17-11/16	16-11/16	1/16	1/4	3/16
18	21	17-3/4	20-1/8	19-1/4	21-1/16	17-13/16	20-3/16	19-3/16	1/16	1/4	3/16
20	23	19-3/4	22	21	23-1/16	19-13/16	22-1/16	20-15/16	1/16	1/4	3/16
24	27-1/4	23-3/4	26-1/4	25-1/4	27-5/16	23-13/16	26-5/16	25-3/16	1/16	1/4	3/16

NOTES

1. Regular facing for 150 and 300 PSI steel flanged fittings and companion flange standards is a 1/16" raised face included in the minimum flange thickness dimensions. A 1/16" raised face may be supplied also on the 400, 600, 900, 1500, and 2500 PSI flange standards, but it must be added to the minimum flange thickness.
2. Regular facing for 400, 600, 900, 1500, and 2500 PSI flange standards is a 1/4" raised face not included in minimum flange thickness dimensions.
3. Tolerance of plus or minus 0.016 in. (1/64") is allowed on the inside and outside diameters of all facings.
4. For small male and female joints care should be taken in the use of these dimensions to insure that pipe used is thick enough to permit sufficient bearing surface to prevent the crushing of the gasket. The dimensions apply particularly on lines where the joint is made on the end of the pipe. Screwed companion flanges for small male and female joints are furnished with plain face and are threaded with American Standard Locknut Thread.
5. Gaskets for male-female and tongue-groove joints shall cover the bottom of the recess with minimum clearances taking into account the tolerances prescribed in Note 3.



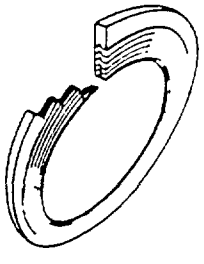
When Gaskets *Must Not Fail!*

BOLTING DATA FOR ANSI B16.5 FLANGES

NOMINAL PIPE SIZE (Inches)	CLASS 150				CLASS 300				CLASS 400				CLASS 600 ANSI			
	FLANGE DIAM. (Inches)	NO. OF BOLTS	BOLT DIAM. (Inches)	B.C. DIAM. (Inches)	FLANGE DIAM. (Inches)	NO. OF BOLTS	BOLT DIAM. (Inches)	B.C. DIAM. (Inches)	FLANGE DIAM. (Inches)	NO. OF BOLTS	BOLT DIAM. (Inches)	B.C. DIAM. (Inches)	FLANGE DIAM. (Inches)	NO. OF BOLTS	BOLT DIAM. (Inches)	B.C. DIAM. (Inches)
1/4	3-3/8	4	1/2	2-1/4	3-3/8	4	1/2	2-1/4	3-3/8	4	1/2	2-1/4	3-3/8	4	1/2	2-1/4
1/2	3-1/2	4	1/2	2-3/8	3-3/4	4	1/2	2-5/8	3-3/4	4	1/2	2-5/8	3-3/4	4	1/2	2-5/8
3/4	3-7/8	4	1/2	2-3/4	4-5/8	4	5/8	3-1/4	4-5/8	4	5/8	3-1/4	4-5/8	4	5/8	3-1/4
1	4-1/4	4	1/2	3-1/8	4-7/8	4	5/8	3-1/2	4-7/8	4	5/8	3-1/2	4-7/8	4	5/8	3-1/2
1-1/4	4-5/8	4	1/2	3-1/2	5-1/4	4	5/8	3-7/8	5-1/4	4	5/8	3-7/8	5-1/4	4	5/8	3-7/8
1-1/2	5	4	1/2	3-7/8	6-1/8	4	3/4	4-1/2	6-1/8	4	3/4	4-1/2	6-1/8	4	3/4	4-1/2
2	6	4	5/8	4-3/4	6-1/2	8	5/8	5	6-1/2	8	5/8	5	6-1/2	8	5/8	5
2-1/2	7	4	5/8	5-1/2	7-1/2	8	3/4	5-7/8	7-1/2	8	3/4	5-7/8	7-1/2	8	3/4	5-7/8
3	7-1/2	4	5/8	6	8-1/4	8	3/4	6-5/8	8-1/4	8	3/4	6-5/8	8-1/4	8	3/4	6-5/8
3-1/2	8-1/2	8	5/8	7	9	8	3/4	7-1/4	9	8	7/8	7-1/4	9	8	7/8	7-1/4
4	9	8	5/8	7-1/2	10	8	3/4	7-7/8	10	8	7/8	7-7/8	10-3/4	8	7/8	8-1/2
5	10	8	3/4	8-1/2	11	8	3/4	9-1/4	11	8	7/8	9-1/4	13	8	1	10-1/2
6	11	8	3/4	9-1/2	12-1/2	12	3/4	10-5/8	12-1/2	12	7/8	10-5/8	14	12	1	11-1/2
8	13-1/2	8	3/4	11-3/4	15	12	7/8	13	15	12	1	13	16-1/2	12	1-1/8	13-3/4
10	16	12	7/8	14-1/4	17-1/2	16	1	15-1/4	17-1/2	16	1-1/8	15-1/4	20	16	1-1/4	17
12	19	12	7/8	17	20-1/2	16	1-1/8	17-3/4	20-1/2	16	1-1/4	17-3/4	22	20	1-1/4	19-1/4
14	21	12	1	18-3/4	23	20	1-1/8	20-1/4	23	20	1-1/4	20-1/4	23-3/4	20	1-3/8	20-3/4
16	23-1/2	16	1	21-1/4	25-1/2	20	1-1/4	22-1/2	25-1/2	20	1-3/8	22-1/2	27	20	1-1/2	23-3/4
18	25	16	1-1/8	22-3/4	28	24	1-1/4	24-3/4	28	24	1-3/8	24-3/4	29-1/4	20	1-5/8	25-3/4
20	27-1/2	20	1-1/8	25	30-1/2	24	1-1/4	27	30-1/2	24	1-1/2	27	32	24	1-5/8	28-1/2
24	32	20	1-1/4	29-1/2	36	24	1-1/2	32	36	24	1-3/4	32	37	24	1-7/8	33

NOMINAL PIPE SIZE (Inches)	CLASS 900				CLASS 1500				CLASS 2500			
	FLANGE DIAMETER (Inches)	NO. OF BOLTS	BOLT DIAMETER (Inches)	B.C. DIAMETER (Inches)	FLANGE DIAMETER (Inches)	NO. OF BOLTS	BOLT DIAMETER (Inches)	B.C. DIAMETER (Inches)	FLANGE DIAMETER (Inches)	NO. OF BOLTS	BOLT DIAMETER (Inches)	B.C. DIAMETER (Inches)
1/2	4-3/4	4	3/4	3-1/4	4-3/4	4	3/4	3-1/4	5-1/4	4	3/4	3-1/2
3/4	5-1/8	4	3/4	3-1/2	5-1/8	4	3/4	3-1/2	5-1/2	4	3/4	3-3/4
1	5-7/8	4	7/8	4	5-7/8	4	7/8	4	6-1/4	4	7/8	4-1/4
1-1/4	6-1/4	4	7/8	4-3/8	6-1/4	4	7/8	4-3/8	7-1/4	4	1	5-1/8
1-1/2	7	4	1	4-7/8	7	4	1	4-7/8	8	4	1-1/8	5-3/4
2	8-1/2	8	7/8	6-1/2	8-1/2	8	7/8	6-1/2	9-1/4	8	1	6-3/4
2-1/2	9-5/8	8	1	7-1/2	9-5/8	8	1	7-1/2	10-1/2	8	1-1/8	7-3/4
3	9-1/2	8	7/8	7-1/2	10-1/2	8	1-1/8	8	12	8	1-1/4	9
4	11-1/2	8	1-1/8	9-1/4	12-1/4	8	1-1/4	9-1/2	14	8	1-1/2	10-3/4
5	13-3/4	8	1-1/4	11	14-3/4	8	1-1/2	11-1/2	16-1/2	8	1-3/4	12-3/4
6	15	12	1-1/8	12-1/2	15-1/2	12	1-3/8	12-1/2	19	8	2	14-1/2
8	18-1/2	12	1-3/8	15-1/2	19	12	1-5/8	15-1/2	21-3/4	12	2	17-1/4
10	21-1/2	16	1-3/8	18-1/2	23	12	1-7/8	19	26-1/2	12	2-1/2	21-1/4
12	24	20	1-3/8	21	26-1/2	16	2	22-1/2	30	12	2-3/4	24-3/8
14	25-1/4	20	1-1/2	22	29-1/2	16	2-1/4	25	—	—	—	—
16	27-3/4	20	1-5/8	24-1/4	32-1/2	16	2-1/2	27-3/4	—	—	—	—
18	31	20	1-7/8	27	36	16	2-3/4	30-1/2	—	—	—	—
20	33-3/4	20	2	29-1/2	38-3/4	16	3	32-3/4	—	—	—	—
24	41	20	2-1/2	35-1/2	46	16	3-1/2	39	—	—	—	—

When Gaskets



Must Not Fail!

TORQUE REQUIRED TO PRODUCE BOLT STRESS

The torque or turning effort required to produce a certain stress in bolting is dependent upon a number of conditions, some of which are:

1. Diameter of bolt.
2. Type and number of threads on bolt.
3. Material of bolt.
4. Condition of nut bearing surfaces.
5. Lubrication of bolt threads and nut bearing surfaces.

The tables below reflect the results of many tests to determine the relation between torque and bolt stress. Values are based on steel bolting well lubricated with a heavy graphite and oil mixture.

It was found that a non-lubricated bolt has an efficiency of about 50 percent of a well lubricated bolt and also that different lubricants produce results varying between the limits of 50 and 100 percent of the tabulated stress figures.

TORQUE DATA FOR USE WITH ALLOY STEEL STUD BOLTS

Load in Pounds on Stud Bolts when Torque Loads are Applied

NOMINAL DIAMETER OF BOLT	NUMBER OF THREADS	DIAMETER AT ROOT OF THREAD	AREA AT ROOT OF THREAD	STRESS					
				30,000 PSI		45,000 PSI		60,000 PSI	
(Inches)	(Per Inch)	(Inches)	Sq. Inch	Torque Ft/Lbs	Compression Lbs.	Torque Ft/Lbs	Compression Lbs.	Torque Ft/Lbs	Compression Lbs
1/4	20	.185	.027	4	810	6	1215	8	1620
5/16	18	.240	.045	8	1350	12	2025	16	2700
3/8	16	.294	.068	12	2040	18	3060	24	4080
7/16	14	.345	.093	20	2790	30	4185	40	5580
1/2	13	.400	.126	30	3780	45	5670	60	7560
9/16	12	.454	.162	45	4860	68	7290	90	9720
5/8	11	.507	.202	60	6060	90	9090	120	12120
3/4	10	.620	.302	100	9060	150	13590	200	18120
7/8	9	.731	.419	160	12570	240	18855	320	25140
1	8	.838	.551	245	16530	368	24795	490	33060
1-1/8	8	.963	.728	355	21840	533	32760	710	43680
1-1/4	8	1.088	.929	500	27870	750	41805	1000	55740
1-3/8	8	1.213	1.155	680	34650	1020	51975	1360	69300
1-1/2	8	1.338	1.405	800	42150	1200	63225	1600	84300
1-5/8	8	1.463	1.680	1100	50400	1650	75600	2200	100800
1-3/4	8	1.588	1.980	1500	59400	2250	89100	3000	118800
1-7/8	8	1.713	2.304	2000	69120	3000	103680	4000	138240
2	8	1.838	2.652	2200	79560	3300	119340	4400	159120
2-1/4	8	2.088	3.423	3180	102690	4770	154035	6360	205380
2-1/2	8	2.338	4.292	4400	128760	6600	193140	8800	257520
2-3/4	8	2.588	5.259	5920	157770	8880	236655	11840	315540
3	8	2.838	6.324	7720	189720	11580	284580	15440	379440

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COLOR CODING FOR THE GASKETS YOU NEED.

Gaskets are color coded to provide easy identification in inventory and during installation. The Flexitallic color code meets the industry standard for metal and filler materials which has been adopted by API 601 and the Metallic Gasket division of the Fluid Sealing Association.

WINDING MATERIAL				FILLER MATERIAL	
Carbon Steel	Silver	Titanium	Purple	Flexite Super	Pink
304SS	Yellow	Alloy 20	Black	Flexicarb (Graphite)	Gray
316LSS	Green	Hast. B	Brown	Blue Dyed Asb	None
347SS	Blue	Hast. C	Beige	PTFE	White
321SS	Turquoise	Inc 600	Gold	Ceramic	Light Green
Monel	Orange	Incoloy	White		
Nickel 200	Red				

HELP FROM FLEXITALLIC is as near as your telephone. Flexitallic offers Bulletin 171 on design criteria involved in the construction of a spiral-wound gasket. It discusses the design and use of spiral-wound gaskets from a design engineer's and user's point of view. A copy will be sent to you on request. Flexitallic also provides Gasket Engineering Data Forms to help you in specifying the right gasket for the right flange to provide the right seal. Also available on request is Bulletin #278 which includes data on Flexitallic Metallic/Non-Metallic Gaskets and Washers.

Flexitallic also provides engineering assistance whenev required. Call on the world's most experienced manufac turer of spiral-wound gaskets to help you determine th type of gasket that will provide the most dependable se for your application. Gasketed joints require attention i the earliest stages of flanged joint design and the sealin engineers at Flexitallic will be happy to work with you

ALSO CALL *Flexitallic.* **FOR THE FOLLOWING:**

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LONG RUN, SHORT RUN, PROTOTYPES
SIMPLE AND INTRICATE SHAPES
WIDE VARIETY OF MATERIALS UP TO 3/16" THICK

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RING JOINT GASKETS

MANUFACTURED TO ANSI B16.20 SPECIFICATIONS