FLANGE-TYTE II™
FULL FACE GASKET FOR FLANGED JOINTS







PIPE

FABRICATION

RESTRAINED JOINTS

FITTINGS

GASKETS

COATINGS & LININGS

U.S. PIPE

A QUIKRETE® COMPANY

CONTENTS

INTRODUCTION	**2**
Pressure	**2**
Torque	**2**
Compatibilty	**2**
SPECIAL ELASTOMERS & APPLICATIONS	**3**
SPECIFICATIONS	**4**
Thickness & Material	**4**
Suggested Specification	**4**
Assembly Procedures	**4**
Storage Recommendations	**4**
DRAWING - TECHNICAL DATA	**5**
PRODUCTS FOR WATER, WASTEWATER & FIRE PROTECTION	**6**



INTRODUCTION



Flange-Tyte II™ Gasket

NOTE: U.S. Pipe recommends the use of FLANGE-TYTE II™ Gaskets with Ductile Iron flanged joint products supplied by U.S. Pipe. These gaskets were designed specifically for the unique surface of Ductile Iron. Flat rubber gaskets are NOT considered equal in performance and may not provide the sealing capability the project requires. In addition, their use could result in unintended damage to the flanges and threads of the fabricated pipe by applying excess torque to the bolts/ flanges in order to seal the joint.

The FLANGE-TYTE II™ Gasket is a patent pending, high-performance full-face gasket that incorporates an advanced technological feature designed especially for thread-on style flanges. The innovative elongated bulb seal covers a larger section of the pipe-flange interface, providing a superior seal that is unmatched by any other flange gasket on the market. The FLANGE-TYTE II™ Gasket is compatible with flat-face flanges of pipe, valves and fittings that use flanges compatible with ANSI/AWWA C115/ A21.15, ANSI/AWWA C110/A21.10, ASME B16.1 class 125.

U.S. Pipe offers a solution that provides peace of mind through superior performance and sealing that helps eliminate costly leaks and saves valuable time on project schedules.

Below are some of the high-performance features this product provides.

PRESSURE:

The innovative elongated bulb technology allows the FLANGE-TYTE II™ Gasket to operate safely at high internal pressures and high velocities and still handle the common occurrence of surges in pressure without fear of joint leaks. The gasket can also help resolve installation issues, such as imperfections in the flange face, flange alignment and pipe or equipment alignment.

The FLANGE-TYTE II™ Gasket is rated for a water working pressure of 350 psi for 4"–36" sizes, and 250 psi for 42"-48". If your application requires higher working pressures, please contact your U.S. Pipe Sales Representative.

TORQUE:

The FLANGE-TYTE II™ Gasket employs an elongated sealing bulb on both sides of the gasket (see figure 1.2). This provides a larger sealing surface but uses lower bolt torque. Less torque means reduced stress on flanges, bolts and nuts in addition to providing a much safer and dependable assembly for the installer. Please refer to the bolt torque ratings in Table 1 on page 5.

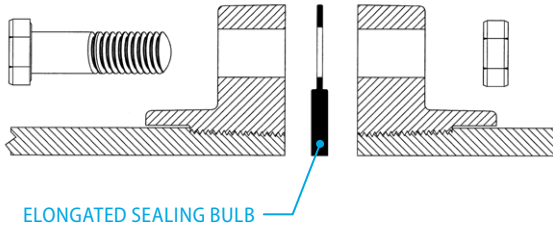


Figure 1.2

COMPATIBILITY: The full face FLANGE-TYTE II Gasket is compatible with flanges conforming to **ANSI/AWWA C115/ A21.15, ANSI/AWWA C110/A21.10, ASME B16.1 class 125,** and **ANSI/AWWA C207 class B, D, and E flanges** *(however, the Maximum pressure rating will be that of Class B,D and E flanges)* and **ANSI B16.5** in sizes 4" - 24" with flat faced flanges. Full face FLANGE-TYTE II gaskets are **NOT** designed for use with class 250 lb flanges or ANSI/AWWA C207 class F flanges.

SPECIAL ELASTOMERS & APPLICATIONS

U.S. Pipe offers the FLANGE-TYTE II™ Gasket, made of special elastomers that may be necessary for special applications. High-temperature water and air applications and piping systems transmitting fluids with certain oils or chemicals may require elastomers with enhanced performance criteria. The table below can be used to assist in gasket selection. If special elastomers are required for your project, it is necessary to include the requirement in the project specifications and on the purchase order to U.S. Pipe.

DESCRIPTION	MAXIMUM SERVICE TEMPERATURE[1,2]		USES[3]
	WATER & SEWER °F	AIR °F	
SBR (Styrene Butadiene)	150	125	**Common:** Drinking Water, Sea Water, Sanitary Sewage, Reclaimed Water, Raw Water, Storm Water
Nitrile (NBR) (Acrylonitrile Butadiene)	150	125	**Common:** Hydrocarbons, Fats, Oils, Greases, Chemicals, Oils & Fluids, Refined Petroleum **Other Acceptable Services:** Drinking Water, Sanitary Sewage, Reclaimed Water, Raw Water, Storm Water
Neoprene® (Polychloroprene)	200	150	**Common:** Greasy Waste **Other Acceptable Services:** Sea Water, Sanitary Sewage, Reclaimed Water, Raw Water, Storm Water
EPDM (Ethylene Propylene Diene Monomer)	212	150	**Common:** Alcohols, Dilute Acids, Dilute Alkalis, Ketones (MEK, Acetone), Vegetable Oil **Other Acceptable Services:** Drinking Water, Sea Water, Sanitary Sewage, Reclaimed Water, Raw Water, Storm Water
FKM[5]	212	300	**Common:** Aromatic Hydrocarbons and Fuels, Acids, Vegetable Oils, Petroleum Products, Chlorinated Hydrocarbons, Most Chemicals and Solvents **Other Acceptable Services:** Drinking Water, Reclaimed Water, Raw Water, Storm Water

[1] Maximum service temperatures listed are intended as general guidelines for ductile iron pipe gaskets. For service temperatures greater than those listed, consult pipe manufacturer for specific recommendations.

[2] Maximum service temperature is not usually a meaningful parameter for piping gaskets; however, low temperatures during pipeline installation may necessitate precautions. Consult your U.S. Pipe Sales Representative for pertinent recommendations.

[3] Water, including sewage, with low levels of the listed contaminants.

[4] Lubricating oil in the air will adversely affect SBR and EPDM performance.

[5] SBR, EPDM, NBR, FKM are NSF-61 approved elastomers Consult your U.S. Pipe Sales Representative for availability of special elastomers other then SBR.

[5] Ratings are per DIPRA Elastomer Chart

SPECIFICATIONS

ANSI /AWWA STANDARDS

ANSI/AWWA C115/A21.15
Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges.

ANSI/AWWA C110/A21.10
Ductile-Iron and Gray-Iron Fittings for Water

ANSI/AWWA C153/A21.53
Ductile-Iron Compact Fittings for Water Service

ANSI/AWWA C111/A21.11
Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

ASME/ANSI B16.1
Cast Iron Pipe Flanges and Flanged Fittings

ASME/ANSI B16.5
Pipe Flanges and Flanged Fittings

AWWA C207
Steel Pipe Flanges for Waterworks Service Sizes 4 in.–144 in.

GASKET THICKNESS AND MATERIAL:

The FLANGE-TYTE II™ Gasket is offered in 1/8" thickness per the recommendation of **ANSI/AWWA C115/A21.15** Appendix A, Sec. A.2. SBR elastomer carries a maximum service temperature of 150°F for water and 125°F for air applications. Other special elastomers are available upon request.

SUGGESTED SPECIFICATION:

Ductile Iron pipe flanged joints shall conform to **ANSI/AWWA C115/A21.15**. Gaskets for Ductile Iron flanged joints shall be full-face type SBR elastomer per **ANSI/AWWA C111/A21.11** and shall be 1/8" thickness. Flanged gaskets shall be the high-performance type satisfying the special recommendations of **ANSI/AWWA C111/A21.11** Appendix C, Sec. C.2 and have an elongated bulb molded into both faces of the gasket. Flanged gaskets shall be U.S. Pipe FLANGE-TYTE II™ Gasket or pre-approved equal.

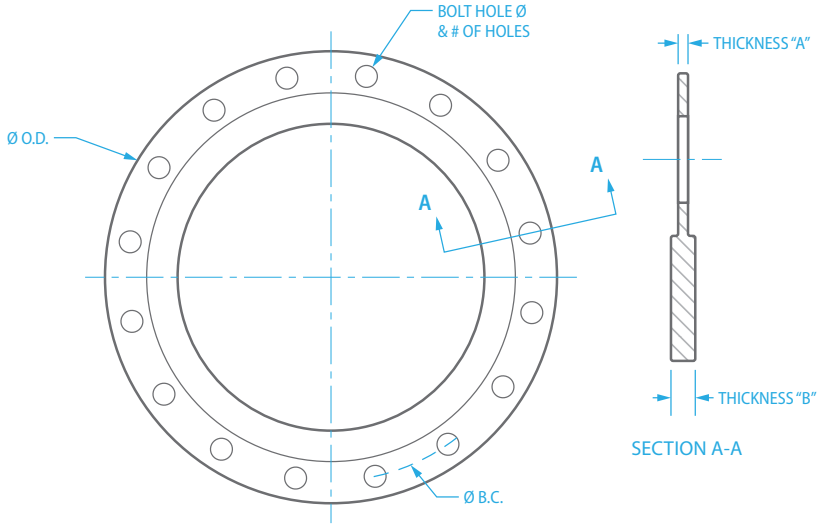
ASSEMBLY PROCEDURES:

The FLANGE-TYTE II™ Gasket should be assembled using the same general procedures and practices for installing flanged joints. **ANSI/AWWA C115/A21.15** Appendix C, Sec. C.3 can be used for general guidance. The use of flanged joints underground is NOT recommended because of the rigidity of the joint. The faces of the flanges must be free of sand, grit, grease, or other foreign matter. Flanged bolts should be tightened in a progressively crisscross pattern, such as tightening the bottom bolt; then, the top bolt; next, the bolts at either side; and finally, the remaining bolts. This process should be repeated until all bolts are sufficiently tightened. **See Table 1 on page 5 for bolt torque requirements**. The tightening sequence may require four or more cycles to achieve the proper torque.

STORAGE RECOMMENDATION:

Gaskets should be stored in a cool location, out of direct sunlight, and shall not come in contact with petroleum products. Gaskets should be inaccessible to vermin and should be stored away from any electrical equipment such as switchgear unless adequate precautions are taken to avoid the concentration of ozone in the storage area. Gaskets should be used on a first-in, first-out basis and should be inspected annually and prior to installation. Evidence of surface cracking, dry rot, or vermin attack is cause for discarding the gaskets and replacement with new gaskets.

DRAWING - TECHNICAL DATA



NOTE: U.S. Pipe recommends the use of FLANGE-TYTE II™ Gaskets with Ductile Iron flanged joint products supplied by U.S. Pipe. Failure to use a Flange- TYTE® gasket on any fabricated pipe product 14" or larger could result in voiding the manufacturer's warranty. These gaskets were designed specifically for the unique surface of Ductile Iron. Flat rubber gaskets are NOT considered equal in performance and may not provide the sealing capability the project requires. In addition, their use could result in unintended damage to the flanges and threads of the fabricated pipe by applying excess torque to the bolts/ flanges in order to seal the joint.

INCHES					NUMBER	INCHES	FT-LB		
SIZE	BC	OD	A	B	BOLT HOLES	BOLT HOLE DIAM.	BOLT TORQUE		
							WORKING PRESSURE (PSI)		
							150	250	350
4	7.50	9.0	1/8	0.25	8	3/4	-	90	110
6	9.50	11.0	1/8	0.25	8	7/8	-	90	110
8	11.75	13.5	1/8	0.25	8	7/8	-	90	110
10	14.25	16.0	1/8	0.25	12	1	-	90	130
12	17.00	19.0	1/8	0.25	12	1	-	90	130
14	18.75	21.0	1/8	0.25	12	1-1/8	-	110	150
16	21.25	23.5	1/8	0.31	16	1-1/8	-	110	160
18	22.75	25.0	1/8	0.31	16	1-1/4	-	120	180
20	25.00	27.5	1/8	0.31	20	1-1/4	-	120	200
24	29.50	32.0	1/8	0.31	20	1-3/8	-	130	220
30	36.00	38.1	1/8	0.31	28	1-3/8	-	140	230
36	42.75	45.1	1/8	0.31	32	1-5/8	-	160	525
42	49.50	51.8	1/8	0.31	36	1-5/8	-	350	-
48	56.00	58.3	1/8	0.31	44	1-5/8	-	624	-

NOTE:

Gasket Thickness: All full face FLANGE-TYTE II™ Gaskets are 1/8" thickness. Thinner gaskets are NOT recommended for use with Ductile Iron flanges.

Material: Unless otherwise specifed by the purchaser, gaskets will be furnished as SBR. Special elastomers such as neoprene, nitrile, EPDM, and fluorocarbon are available upon request. Gaskets made with special elastomers are marked with color dots. Neoprene is yellow, EPDM is orange, Nitrile is green, Fluorocarbon is red.

Assembly: See Page 4 of the full face FLANGE-TYTE II™ Brochure for guidance.

Compatibility: The full face FLANGE-TYTE II Gasket is compatible with flanges conforming to **ANSI/AWWA C115/ A21.15, ANSI/AWWA C110/ A21.10, ASME B16.1 class 125,** and **ANSI/AWWA C207 class B, D, and E flanges** *(however, the Maximum pressure rating will be that of Class B,D and E flanges)* and **ANSI B16.5** in sizes 4" - 24" with flat faced flanges. Full face FLANGE-TYTE II gaskets are **NOT** designed for use with class 250 lb flanges or ANSI/AWWA C207 class F flanges.

PRODUCTS FOR WATER, WASTEWATER & FIRE PROTECTION

Our products are manufactured in conformance with National and International Standards so that our customers may be assured of getting the performance and longevity they expect. Use of accessories or other appurtenances that do not comply with recognized standards may jeopardize the performance and longevity of the project.

Push-on Joint	SIZE RANGE
TYTON JOINT® Pipe	3"–64" Ductile Iron

Restrained Joints	
Mechanical Joint Pipe	4"–12" Ductile Iron
HDSS® Pipe	4" - 54"
Flanged Pipe	4"–64" Ductile Iron
HP LOK™ Restrained Joint	60"–64"
MJ FIELD LOK® Gaskets	4"–12", 16"
FIELD LOK 350® Gaskets	4"–24"
TR FLEX GRIPPER® Rings	4"–36" Ductile Iron
TR TELE FLEX® Assemblies	4"–24" Ductile Iron

Ductile Iron Fittings	
TYTON® Fittings	14"–64" Ductile Iron
M-FLEX™ Restrained Joint Ball Fitting	6"–36"
TRIM TYTON® Fittings	4"–12" Ductile Iron
TR FLEX® Fittings & TR FLEX® Telescoping Sleeves	4"–36" Ductile Iron
Mechanical Joint Fittings	3"–48" Ductile Iron
HP LOK™ Fittings	30"–64" Ductile Iron
TRIM TYTE® MJ Fittings	3"–48" Ductile Iron
Flanged Fittings	3"–64" Ductile Iron
XTRA FLEX® Couplings	4"–24" Ductile Iron

Miscellaneous Products	
PROTECTO 401™ Lined Ductile Iron Pipe for Domestic Sewage and Industrial Wastes	4"–64" Ductile Iron
RING FLANGE-TYTE™ Gaskets	3"–36"
FULL FACE FLANGE-TYTE™ Gaskets	54"–64"
FLANGE-TYTE II Gaskets	4" - 48"
Saddle Outlets	Various Ductile Iron
Welded Outlets	Various Ductile Iron
Polyethylene Encasement	4"–64"

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Flange TYTE II Submittal Document *(Rev. 5/2026)*
Materials and specifications are subject to change without notice.

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Our products are manufactured in conformance with national standards so that our customers may be assured of getting the performance and longevity they expect. Use of accessories or other appurtenances that do not comply with recognized standards may jeopardize the performance and longevity of the project.



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