The AMERICAN Mechanical Joint provides easy installation under the most adverse conditions. Plain rubber gaskets of SBR are normally used for water and domestic sewage service. Fabric tipped plain rubber gaskets are available, as well as other special gaskets such as oil-resistant rubber. Plain rubber gaskets or tipped gaskets are used for air or liquid temperatures up to 120°F. For applications involving temperatures in excess of 120°F, or for other special service applications, and for installations in contaminated soils where permeation through gaskets might be a concern, consult AMERICAN for recommendations. See Table No. 2-6.

Standard joint accessories furnished with mechanical joint pipe and fittings include ductile iron glands, low-alloy steel tee head bolts with hex nuts and plain rubber gaskets. The cost of these accessories is normally included in the price of the pipe or fittings.

Mechanical Joint Gaskets

Table No. 2-6

Common Name or Trade Name*	Chemical Name	Maximum Service Temperature**		Common Uses
		Water & Sewer	Air	
Plain Rubber	Styrene Butadiene Copolymer(SBR)	150°F	125°F	Fresh Water, Salt Water, Sanitary Sewage
Neoprene	Polychloroprene(CR)	200°F	150°F	Fresh Water, Sewage
Fluoroelastomer Fluorel Viton®***	FKM	212°F	300°F	Aromatic Hydrocarbons, Gasoline, Refined Petroleum Products, most Chemicals and Solvents, High Temp., Air (Least permeable of all available Fastite gasket rubbers)
Buna–N Nitrile	Acrylonitrile Butadiene(NBR)	150°F	125°F	Non–Aromatic Hydrocarbons, Petroleum Oil, Hydraulic Fluids, Fuel Oil, Fats, Oil, Grease†
EPDM	Ethylene Propylene Diene Monomer	212°F	150°F	Water, Sewage, Ketones, Dilute Acids and Alkalies, Vegetable Oil, Alcohols, Air

*AMERICAN reserves the right to furnish any Trade or Brand rubber for the chemical formulation specified.
Temperature is in reference to conveyed fluid. **Lubricating oil in air can adversely affect SBR and EPDM performance. SBR, Nitrile and Neoprene are not recommended for hot air exposure in wastewater treatment systems.
Gaskets shown for use in "Sanitary Sewage" service are also suitable for use with sewage gas.
Refer to Section 11 for temperature and service capabilities of pipe linings.
Refer other special requirements to AMERICAN for recommendation regarding suitable gasket material.
***Viton® is a registered trademark of DuPont Dow Elastomers.
Note that temperature ratings of MJ gaskets per Table No. 2-6 are in some cases lower than the ratings for similar material Fastite gaskets (see Table No. 2-1, pg. 2-7). The designer may wish to consider the use of Fastite pipe and fittings in high-temperature applications.
All MJ gaskets made from the materials in the above table are suitable for use with water containing normal concentrations of chloramine. Where increased resistance to chloramine is desired, neoprene or fluoroelastomer materials should be considered.
†This gasket rubber is chemically resistant for the non-potable water uses shown, but NBR is not as resistant to permeation in potable water applications as FKM.

American Mechanical Joint
ANSI/AWWA C111/A21.11 Standard Dimensions

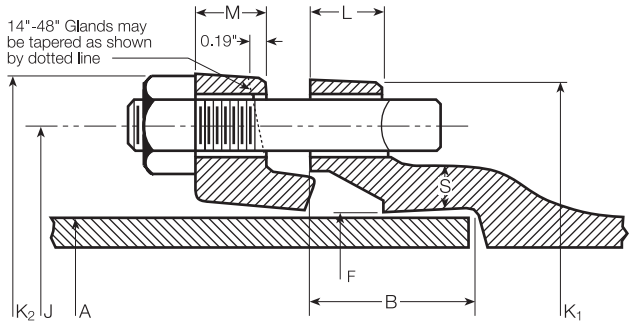

Table No. 2-7

Size in.	Dimensions in Inches											
	A Plain End	B	F	J	K_1		K_2	L		M	S	
					Centrifugal Pipe	Fittings		Centrifugal Pipe	Fittings		Centrifugal Pipe	Fittings
* 2	2.50	2.50	2.61	4.75	6.00	6.25	6.25	.56	.75	.62	.37	.44
* 2 1/4	2.75	2.50	2.86	5.00	6.25	6.50	6.50	.56	.75	.62	.37	.44
* 3	3.96	2.50	4.06	6.19	7.62	7.69	7.69	.87	.94	.62	.40	.52
4	4.80	2.50	4.90	7.50	9.06	9.38	9.12	.91	1.00	.75	.41	.65
6	6.90	2.50	7.00	9.50	11.06	11.31	11.12	.94	1.06	.88	.43	.70
8	9.05	2.50	9.15	11.75	13.31	13.63	13.37	.98	1.12	1.00	.45	.75
10	11.10	2.50	11.20	14.00	15.62	15.81	15.62	.98	1.19	1.00	.47	.80
12	13.20	2.50	13.30	16.25	17.88	18.06	17.88	.98	1.25	1.00	.49	.85
14	15.30	3.50	15.44	18.75	20.25	20.69	20.25	1.02	1.31	1.25	.51	.89
16	17.40	3.50	17.54	21.00	22.50	22.94	22.50	1.08	1.38	1.31	.52	.97
18	19.50	3.50	19.64	23.25	24.75	25.28	24.75	1.14	1.44	1.38	.53	1.05
20	21.60	3.50	21.74	25.50	27.00	27.08	27.00	1.20	1.50	1.44	.54	1.12
24	25.80	3.50	25.94	30.00	31.50	31.75	31.50	1.26	1.62	1.56	.56	1.22
30	32.00	4.00	32.17	36.88	**	39.12	39.12	**	1.81	2.00	**	1.50
36	38.30	4.00	38.47	43.75	**	46.00	46.00	**	2.00	2.00	**	1.80
42	44.50	4.00	44.67	50.62	**	53.12	53.12	**	2.00	2.00	**	1.95
48	50.80	4.00	50.97	57.50	**	60.00	60.00	**	2.00	2.00	**	2.20

*2", 2 1/4" and 3" sizes of pipe are no longer manufactured by AMERICAN and dimensions are given for information only. 2" and 2 1/4" sizes are not shown in AWWA C111.
**14"–48" Mechanical Joints are not available on centrifugal pipe.
The ductile iron pipe bell flanges are in accordance with AWWA C111 which also provides that thicker bell flanges may be furnished.
For additional information and tolerances see AWWA C111.
Bolt Holes are 1/8" larger than the bolt diameters. See Table No. 2–8.
Weights and classes for ductile iron pipe are given in Section 3.