

MISSION

UNDERGROUND

If we put our name on it - you can depend on it!





MISSION RUBBER COMPANY LLC

The story of Mission Rubber Company begins with Ben Bryan Garrett. In 1925, Ben founded Garrett Plumbing Co. in San Pedro, CA, servicing the residential plumbing markets throughout the South Los Angeles Basin. In 1933, during the depression, Ben saw an opportunity to expand into the underground utilities business, which included the installation of sewer, water and utilities infrastructure. This business survived, even though money was very tight during the depression. The real turning point of his business came just after WWII (post-1945) when Ben purchased a clay pipe factory as the Southern California economy began to revive.

Mission Rubber Company was founded in 1951 with the purpose of providing a flexible joint for clay sewer pipe and fittings. For over 60 years, Mission Rubber Company has supplied quality, code approved products to the construction industry for the purpose of connecting, adapting, reducing, repairing or capping almost any type of pipe used in sewer and drain waste and vent applications. Our products are sold in the United States and Canada through manufacturers' representatives, and internationally through distributors.

We sincerely value our relationship with our customers and appreciate your choosing to do business with Mission Rubber Company LLC. As part of our on-going effort to remain responsive to your needs, we present our catalog to give you a broad overview of the products we manufacture. You can also review our products at our website. We encourage you to discuss your needs with our trained customer service department, manufacturers' representatives or distributors. We welcome your comments and thank you for your patronage.

For information about our products or to place an order:

Toll Free from anywhere in the U.S. and Canada:

Phone (800) 854-9991 • Fax (800) 637-4601

International (951) 736-1343 • Fax (951) 736-0481

www.missionrubber.com

Mail orders should be sent to:

MISSION RUBBER COMPANY LLC • P.O. Box 2349 • Corona, CA 92878-2349

Attn: Order Department

Our products are listed by major plumbing code agencies locally, nationally and internationally. Independent test reports and approvals available upon request.



*Some products in this catalog are not listed with all model code agencies.
Please call Mission for specific product approval information.*

- 4 Flex-Seal® Unshielded Sewer Couplings**
An extensive line of flexible sewer couplings that connect similar and dissimilar pipe materials and sizes. Sizes 1 1/4" to 96".
- 7 Flex-Seal® Corrugated Transition Couplings**
The best way to connect ribbed/corrugated profile pipe or transition to smooth wall plastic drainage pipe.
- 8 Flex-Seal® ARC Shielded Adjustable Repair Couplings**
Where there is a need for resistance to heavy earth loads, shear forces and improved alignment.
- 11 Large Diameter Repair Couplings**
Suited for the repair, alteration and rehabilitation of large diameter gravity sewer pipe made of the following materials: clay, concrete, cast iron, plastic, ductile iron, asbestos cement and Orangeburg.
- 12 Flo-Bloc® Inflatable Test Plugs**
Engineered to handle all testing requirements from 1 1/4" to 18" nominal size.
- 13 T-Flex® Sewer Saddles**
Designed to make lateral service connections, these saddles demonstrate superior flexibility.
- 14 TwisTee® Tapping Saddles**
Designed to make tapping clay and concrete pipe lines easier than ever.
- 15 Band-Seal® End Caps**
Flexible rubber end caps for capping cast iron, steel, PVC and ABS pipe ends. Sizes 1 1/2" to 12".
- T-Cone® Mechanical Stoppers**
Used for testing gravity flow, non-pressure DWV and sewer systems. Sizes 1 1/2" to 8".
- 16 Multitube Non-Return and Flap Valves**
A range of non-return and flap valves designed to prevent backflow in sewage and drainage systems.
- 17 Band-Seal® Mission Standard "Calder Style" Sewer Couplings**
Manufactured with extra thick rubber sleeve that can be used with or without bushings. Sizes 3" through 12".
- 18 Band-Seal® Eastern Standard Sewer Couplings**
Engineered to join clay pipe and other types of pipe materials.
Used primarily in the Eastern United States.
- 19 Green Certification**
- 20 Standard Pipe Sizes**

LEGEND

CI = Cast Iron; PL = Plastic; CL = Clay; AC = Asbestos Cement; DI = Ductile Iron; Conc = Concrete;
Sch 40 = Schedule 40 Plastic; TWP = Thinwall Plastic; XHCI = Extra Heavy Cast Iron

Flex-Seal® Unshielded Sewer Couplings

FLEX-SEAL® UNSHIELDED SEWER COUPLINGS

An extensive line of flexible sewer couplings that connect similar and dissimilar pipe materials and sizes. Sizes 1¹/₄" to 96".

Features

- **FLEXIBILITY**
Sleeve is manufactured of molded natural and synthetic rubber.
- **LEAKPROOF SEAL**
Inside surfaces of transitional size couplings are stepped to conform better to different pipe sizes.
- **TIGHT FITTING**
Two Series 300 stainless steel worm drive clamping bands hold pipe ends securely.
- **CORROSION RESISTANT**
Use of stainless steel clamping bands are highly effective in a variety of environments.
- **WITHSTANDS TENSION AND COMPRESSION**
Blends of natural and synthetic rubbers permit a substantial degree of distortion without change in basic physical or chemical resistance unlike other manufacturers' thermoplastic coupling materials.

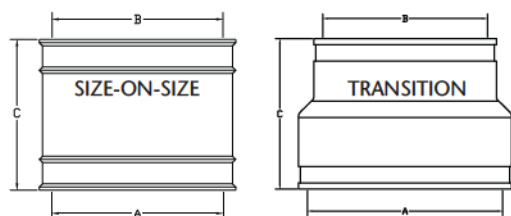
Specifications

- Manufactured with natural and synthetic rubbers conforming to **ASTM C 425** and **ASTM C 1173**.
- Series 300 stainless steel conforms to **ASTM A 240**.
- Conforms to ISO 9001 quality standards.

TECHNICAL DATA SPECIFICATIONS

PROPERTY	Flex-Seal® Compound	Plasticized PVC
Ozone Resistance	A	A
Weathering, Sunlight Aging and Outdoor Use	A	A
Water Resistance	A	A
Low Temperature Flexibility	A	C
High Temperature Resistance	A	D
Animal Fat Resistance	B	D
Vegetable Oils Resistance	B	B
Ammonia	A	A
Compression Set	A	C

RATINGS: A - Excellent; B - Good; C - Fair; D - Poor



MR56 Series

Cast Iron or Plastic to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	
MR56 075	¾" CI/PL to ¾" CI/PL	.97	1.14	.97	1.14	2.00
MR56 100	1" CI/PL to 1" CI/PL	1.25	1.40	1.25	1.40	2.00
MR56 125	1½" Tubing, Copper or 1¼" PL to Same	1.39	1.66	1.39	1.66	2.50
MR56 15/125	1¼" CI/PL to 1½" Tubing, Copper or 1¼" PL to Same	1.81	2.00	1.81	2.00	2.50
MR56 15	1½" CI/PL to 1½" CI/PL	1.81	2.00	1.81	1.90	3.50
MR56 215	2" CI/PL to 1½" CI/PL	2.30	2.50	1.81	2.00	3.50
MR56 22/125	2" CI/PL to 1½" Tubing, Copper or 1¼" PL to Same	2.30	2.50	1.39	1.66	2.50
MR56 22	2" CI/PL to 2" CI/PL	2.30	2.50	2.30	2.50	3.50
MR56 315	3" CI/PL to 1½" CI/PL	3.25	3.50	1.81	2.00	4.00
MR56 32	3" CI/PL to 2" CI/PL	3.25	3.50	2.30	2.50	4.00
MR56 33	3" CI/PL to 3" CI/PL	3.25	3.50	3.25	3.50	4.00
MR56 415	4" CI/PL to 1½" CI/PL	4.21	4.50	1.81	2.00	4.00
MR56 42	4" CI/PL to 2" CI/PL	4.21	4.50	2.30	2.50	4.00
MR56 43	4" CI/PL to 3" CI/PL	4.21	4.50	3.25	3.50	4.00
MR56 43 Offset	4" CI/PL to 3" Eccentric	4.21	4.50	3.25	3.50	4.00
MR56 44	4" CI/PL to 4" CI/PL	4.21	4.50	4.21	4.50	4.00
MR56 44XL	4" CI/PL to 4" CI/PL	4.21	4.50	4.21	4.50	6.00
MR56 53	5" CI/PL to 3" CI/PL	5.30	5.62	3.25	3.50	4.00
MR56 54	5" CI/PL to 4" CI/PL	5.30	5.62	4.21	4.50	4.00
MR56 55	5" CI/PL to 5" CI/PL	5.30	5.62	5.30	5.62	4.00
MR56 63f	6" CI/PL to 3" CI/PL	6.27	6.62	3.25	3.50	6.00
MR56 64	6" CI/PL to 4" CI/PL	6.27	6.62	4.21	4.50	6.00
MR56 65 Type O	6" Oversize CI/PL to 5" CI/PL	6.38	6.78	5.30	5.62	6.50
MR56 66	6" CI/PL to 6" CI/PL	6.27	6.62	6.27	6.62	6.00
MR56 84	8" CI/PL to 4" CI/PL	8.40	9.00	4.30	4.62	7.00
MR56 85 Type O	8" Oversize CI/PL to 5" CI/PL	8.40	9.00	5.30	5.62	7.00
MR56 86	8" CI/PL to 6" CI/PL	8.12	8.75	6.27	6.62	6.00
MR56 88	8" CI/PL to 8" CI/PL	8.12	8.62	8.12	8.62	6.00
MR56 1006 Type O	10" Oversize CI/PL to 6" CI/PL	10.40	11.00	6.35	6.70	7.00
MR56 1008	10" CI/PL to 8" CI/PL	10.20	10.80	8.12	8.75	6.50
MR56 1010	10" CI/PL to 10" CI/PL	10.20	10.80	10.20	10.80	6.50
MR56 1210	12" CI/PL to 10" CI/PL	12.20	12.80	10.20	10.80	6.50
MR56 1212	12" CI/PL to 12" CI/PL	12.20	12.80	12.20	12.80	6.50
MR56 1512f	15" CI/PL to 12" CI/PL	14.90	15.40	12.20	12.80	6.00
MR56 1515	15" TWP to 15" TWP	14.90	15.40	14.90	15.40	6.00
MR56 1616	16" PL (Sch. 40) to 16" PL (Sch. 40)	15.50	16.00	15.50	16.00	10.00
MR56 1815f	18" CI/PL to 15" CI/PL	18.30	18.80	14.90	15.40	10.00
MR56 1818	18" CI/PL to 18" CI/PL	18.30	18.80	18.30	18.80	10.00
MR56 2121	21" CI/PL to 21" CI/PL	21.50	22.00	21.50	22.00	10.00
MR56 2424	24" CI/PL to 24" CI/PL	24.20	24.90	24.20	24.90	10.00
MR56 2727	27" CI/PL to 27" CI/PL	27.50	28.00	27.50	28.00	10.00

f: Supplied with a flanged bushing



MR01 Series

Clay to Clay		A		B		C
		min.	max.	min.	max.	width
MR01 44	4" CL to 4" CL	5.00	5.40	5.00	5.40	4.00
MR01 54f	5" CL to 4" CL	6.03	6.56	5.00	5.40	6.00
MR01 55	5" CL to 5" CL	6.03	6.56	6.03	6.56	6.00
MR01 64f	6" CL to 4" CL	7.20	7.80	5.00	5.40	6.00
MR01 64 Type O	6" Oversize CL to 4" CL	7.50	8.12	5.00	5.40	6.00
MR01 65	6" CL to 5" CL	7.20	7.80	6.27	6.62	6.00
MR01 66	6" CL to 6" CL	7.20	7.80	7.20	7.80	6.00
MR01 86f	8" CL to 6" CL	9.40	10.00	7.20	7.80	6.00
MR01 88	8" CL to 8" CL	9.40	10.00	9.40	10.00	6.00
MR01 1008f	10" CL to 8" CL	11.85	12.45	9.40	10.00	6.00
MR01 1010	10" CL to 10" CL	11.85	12.45	11.85	12.45	6.00
MR01 1210f	12" CL to 10" CL	14.20	14.80	11.85	12.45	6.50
MR01 1212	12" CL to 12" CL	14.20	14.80	14.20	14.80	6.00
MR01 1512f	15" CL to 12" CL	17.80	18.30	14.20	14.80	6.00
MR01 1515	15" CL to 15" CL	17.80	18.30	17.80	18.30	10.00
MR01 1818	18" CL to 18" CL	21.80	22.30	21.80	22.30	10.00
MR01 2121	21" CL to 21" CL	25.50	25.90	25.50	25.90	10.00
MR01 2424	24" CL to 24" CL	29.60	30.30	29.60	30.30	10.00
MR01 2727	27" CL to 27" CL	31.80	32.50	31.80	32.50	10.00

f: Supplied with a flanged bushing

MR02 Series

Clay to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	width
MR02 43	4" CL to 3" CI/PL	5.00	5.40	3.25	3.50	4.00
MR02 44	4" CL to 4" CI/PL	5.00	5.40	4.21	4.50	4.00
MR02 46	4" CL to 6" CI/PL	5.00	5.40	6.27	6.62	6.00
MR02 54	5" CL to 4" CI/PL	6.27	6.62	4.21	4.50	6.00
MR02 55	5" CL to 5" CI/PL	6.27	6.62	5.30	5.62	5.00
MR02 64	6" CL to 4" CI/PL	7.20	7.80	4.21	4.50	6.00
MR02 65f	6" CL to 5" CI/PL	7.20	7.80	5.00	5.40	6.00
MR02 66	6" CL to 6" CI/PL	7.20	7.80	6.27	6.62	6.00
MR02 86	8" CL to 6" CI/PL	9.40	10.00	6.27	6.62	6.00
MR02 88	8" CL to 8" CI/PL	9.40	10.00	8.25	8.62	6.00
MR02 1008f	10" CL to 8" CI/PL	11.85	12.45	8.25	8.62	6.50
MR02 1010	10" CL to 10" CI/PL	11.85	12.45	10.20	10.80	6.50
MR02 1210f	12" CL to 10" CI/PL	14.20	14.80	10.20	10.80	6.50
MR02 1212	12" CL to 12" CI/PL	14.20	14.80	12.20	12.80	6.50
MR02 1512f	15" CL to 12" CI/PL	17.80	18.30	12.20	12.80	6.00
MR02 1515	15" CL to 15" CI/PL	17.80	18.30	14.90	15.40	6.00
MR02 1818f	18" CL to 18" CI/PL	21.80	22.30	18.30	18.80	10.00
MR02 2121f	21" CL to 21" CI/PL	25.50	25.90	21.50	22.00	10.00
MR02 2424f	24" CL to 24" CI/PL	29.60	30.30	24.20	24.90	10.00
MR02 2727f	27" CL to 27" CI/PL	31.80	32.50	27.50	28.00	10.00

f: Supplied with a flanged bushing



MR03 Series

Clay to Asbestos Cement or Ductile Iron		A		B		C
		min.	max.	min.	max.	width
MR03 44	4" CL to 4" AC/DI	5.00	5.40	4.62	4.93	4.00
MR03 54f	5" CL to 4" AC/DI	6.03	6.62	4.62	4.93	5.00
MR03 55f	5" CL to 5" AC/DI	6.03	6.40	5.53	5.90	6.00
MR03 64f	6" CL to 4" AC/DI	7.20	7.80	4.62	4.93	6.00
MR03 65f	6" CL to 5" AC/DI	7.20	7.80	5.75	6.12	6.00
MR03 66	6" CL to 6" AC/DI	7.20	7.80	6.75	7.12	6.00
MR03 85f	8" CL to 5" AC/DI	9.40	10.00	6.03	6.40	6.00
MR03 86f	8" CL to 6" AC/DI	9.40	10.00	6.75	7.12	6.00
MR03 88	8" CL to 8" AC/DI	9.40	10.00	8.75	9.25	6.00
MR03 1008f	10" CL to 8" AC/DI	11.85	12.45	8.75	9.25	6.50
MR03 1010	10" CL to 10" AC/DI	11.85	12.45	10.70	11.20	6.50
MR03 1210f	12" CL to 10" AC/DI	14.20	14.80	10.70	11.20	6.50
MR03 1212	12" CL to 12" AC/DI	14.20	14.80	12.75	13.30	6.50
MR03 1512f	15" CL to 12" AC/DI	17.80	18.30	12.75	13.30	6.00
MR03 1516f	15" CL to 16" AC/DI	17.80	18.30	17.40	17.90	10.00
MR03 1818f	18" CL to 18" AC/DI	21.80	22.30	19.30	19.80	10.00

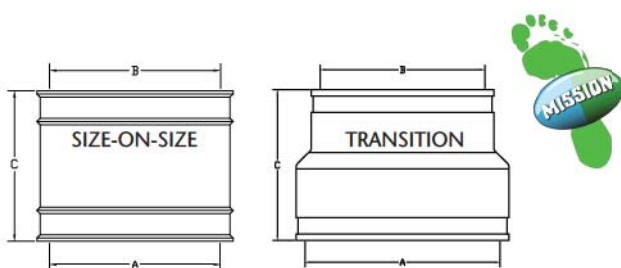
f: Supplied with a flanged bushing

MR04 Series

Concrete to Concrete		A		B		C
		min.	max.	min.	max.	width
MR04 44	4" Conc to 4" Conc	5.50	6.00	5.50	6.00	4.00
MR04 64	6" Conc to 4" Conc	7.50	8.12	5.50	6.00	6.00
MR04 66	6" Conc to 6" Conc	7.50	8.12	7.50	8.12	6.00
MR04 86f	8" Conc to 6" Conc	10.00	10.50	7.50	8.12	6.00
MR04 88	8" Conc to 8" Conc	10.00	10.50	10.00	10.50	6.00
MR04 1008f	10" Conc to 8" Conc	12.30	12.80	10.00	10.50	6.00
MR04 1010	10" Conc to 10" Conc	12.30	12.80	12.30	12.80	6.00
MR04 1210f	12" Conc to 10" Conc	14.60	15.10	12.30	12.80	6.00
MR04 1212	12" Conc to 12" Conc	14.60	15.10	14.60	15.10	6.00
MR04 1515	15" Conc to 15" Conc	19.40	19.90	19.40	19.90	10.00
MR04 1818	18" Conc to 18" Conc	22.10	22.60	22.10	22.60	10.00
MR04 2121	21" Conc to 21" Conc	25.90	26.60	25.90	26.60	10.00
MR04 2424	24" Conc to 24" Conc	29.90	30.60	29.90	30.60	10.00
MR04 2727	27" Conc to 27" Conc	33.40	34.10	33.40	34.10	10.00

f: Supplied with a flanged bushing

Flex-Seal® Unshielded Sewer Couplings



MR06 Series

Concrete to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	
MR06 43f	4" Conc to 3" CI/PL	5.50	6.00	3.21	3.50	4.00
MR06 44	4" Conc to 4" CI/PL	5.50	6.00	4.21	4.50	4.00
MR06 64	6" Conc to 4" CI/PL	7.50	8.12	4.21	4.50	6.00
MR06 65	6" Conc to 5" CI/PL	7.50	8.12	5.00	5.40	6.00
MR06 66	6" Conc to 6" CI/PL	7.50	8.12	6.25	6.62	6.00
MR06 86f	8" Conc to 6" CI/PL	10.00	10.50	6.25	6.62	6.00
MR06 88	8" Conc to 8" CI/PL	10.00	10.50	8.12	8.40	6.00
MR06 1008f	10" Conc to 8" CI/PL	12.55	13.20	8.12	8.75	6.00
MR06 1010	10" Conc to 10" CI/PL	12.55	13.20	10.34	10.85	6.00
MR06 1210f	12" Conc to 10" CI/PL	15.00	15.80	10.34	10.85	6.00
MR06 1212	12" Conc to 12" CI/PL	15.00	15.80	12.30	12.90	6.00
MR06 1515	15" Conc to 15" CI/PL	19.40	19.90	14.90	15.40	10.00
MR06 1818f	18" Conc to 18" CI/PL	22.10	22.60	18.30	18.80	10.00
MR06 2121f	21" Conc to 21" CI/PL	25.90	26.60	21.40	22.10	10.00
MR06 2424f	24" Conc to 24" CI/PL	29.90	30.60	24.40	25.10	10.00
MR06 2727f	27" Conc to 27" CI/PL	33.40	34.10	27.40	28.10	10.00

f: Supplied with a flanged bushing

MR55 Series

Asbestos Cement or Ductile Iron to Asbestos Cement or Ductile Iron		A		B		C
		min.	max.	min.	max.	
MR55 44	4" AC/DI to 4" AC/DI	4.62	4.93	4.62	4.93	4.00
MR55 54f	5" AC/DI to 4" AC/DI	5.62	5.93	4.62	4.93	6.00
MR55 55	5" AC/DI to 5" AC/DI	5.62	5.93	5.62	5.93	6.00
MR55 64	6" AC/DI to 4" AC/DI	6.75	7.12	4.62	4.93	6.00
MR55 65f	6" AC/DI to 5" AC/DI	6.75	7.12	5.62	5.93	6.00
MR55 66	6" AC/DI to 6" AC/DI	6.75	7.12	6.75	7.12	6.00
MR55 86f	8" AC/DI to 6" AC/DI	8.75	9.25	6.75	7.25	6.00
MR55 88	8" AC/DI to 8" AC/DI	8.75	9.25	8.75	9.25	6.00
MR55 1008f	10" AC/DI to 8" AC/DI	10.70	11.20	8.75	9.25	6.00
MR55 1010	10" AC/DI to 10" AC/DI	10.70	11.20	10.70	11.20	6.00
MR55 1210f	12" AC/DI to 10" AC/DI	12.90	13.50	11.30	11.80	6.00
MR55 1212	12" AC/DI to 12" AC/DI	12.90	13.50	12.90	13.50	6.00
MR55 1616	16" AC/DI to 16" AC/DI	17.40	17.90	17.40	17.90	10.00
MR55 1818	18" AC/DI to 18" AC/DI	19.10	19.60	19.10	19.60	10.00

f: Supplied with a flanged bushing

MR51 Series

Asbestos Cement or Ductile Iron to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	
MR51 43f	4" AC/DI to 3" CI/PL	4.62	4.93	3.25	3.50	4.00
MR51 44	4" AC/DI to 4" CI/PL	4.62	4.93	4.21	4.50	4.00
MR51 54	5" AC/DI to 4" CI/PL	5.40	5.90	4.45	4.75	4.00
MR51 54 Type O	5" AC/DI to 4" Oversize CI/PL	5.40	5.90	4.08	5.10	4.00
MR51 55f	5" AC/DI to 5" CI/PL	5.62	5.93	5.30	5.62	5.00
MR51 56	5" AC/DI to 6" CI/PL	5.62	5.93	6.25	6.62	5.80
MR51 64	6" AC/DI to 4" CI/PL	6.75	7.12	4.21	4.50	6.00
MR51 65f	6" AC/DI to 5" CI/PL	6.75	7.12	5.00	5.40	6.00
MR51 66	6" AC/DI to 6" CI/PL	6.75	7.12	6.27	6.62	6.00
MR51 86f	8" AC/DI to 6" CI/PL	8.75	9.25	6.27	6.62	6.00
MR51 88	8" AC/DI to 8" CI/PL	8.75	9.25	8.25	8.62	6.00
MR51 1008f	10" AC/DI to 8" CI/PL	10.84	11.40	8.25	8.62	6.00
MR51 1010	10" AC/DI to 10" CI/PL	10.84	11.40	10.34	10.87	6.00
MR51 1210f	12" AC/DI to 10" CI/PL	12.90	13.50	10.20	10.80	6.00
MR51 1212	12" AC/DI to 12" CI/PL	12.90	13.50	12.20	12.80	6.00
MR51 1615f	16" AC/DI to 15" CI/PL	17.40	17.90	14.90	15.40	10.00
MR51 1818f	18" AC/DI to 18" CI/PL	19.10	19.60	18.30	18.80	10.00

f: Supplied with a flanged bushing

TECHNICAL DATA SPECIFICATIONS

PROPERTY	Flex-Seal® Compound	Plasticized PVC
Ozone Resistance	A	A
Weathering, Sunlight Aging and Outdoor Use	A	A
Water Resistance	A	A
Low Temperature Flexibility	A	C
High Temperature Resistance	A	D
Animal Fat Resistance	B	D
Vegetable Oils Resistance	B	B
Ammonia	A	A
Compression Set	A	C

RATINGS: A - Excellent; B - Good; C - Fair; D - Poor

Flex-Seal® Corrugated Transition Couplings



FLEX-SEAL® MR70 and MR72 SERIES

The best way to connect ribbed/corrugated profile pipe or transition to smooth wall plastic drainage pipe.

Features

- **WIDE SLEEVE AND THICK SHEAR BAND**
Ensures a positive seal.

Specifications

- Manufactured with natural and synthetic rubbers conforming to **ASTM C 425** and **ASTM C 1173**.
- Series 300 stainless steel conforms to **ASTM A 240**.
- Conforms to **ISO 9001** quality standards.



MR70 Series

Ribbed or Corrugated to Plastic		A		B		C
		min.	max.	min.	max.	
MR70 33	3" Ribbed/Corrugated to 3" PL	3.40	3.60	3.30	3.50	4.00
MR70 44	4" Ribbed/Corrugated to 4" PL	4.60	4.80	4.20	4.50	4.00
MR70 64	6" Ribbed/Corrugated to 4" PL	6.75	7.00	4.20	4.50	6.00
MR70 66	6" Ribbed/Corrugated to 6" PL	6.75	7.00	6.30	6.50	6.00
MR70 88	8" Ribbed/Corrugated to 8" PL	9.20	9.50	8.20	8.40	6.00
MR70 1010	10" Ribbed/Corrugated to 10" PL	11.20	11.50	10.20	10.50	6.00
MR70 1212	12" Ribbed/Corrugated to 12" DR 25/26/35 PL	14.30	14.60	12.20	12.50	10.00
MR70 1515	15" Ribbed/Corrugated to 15" DR 26/35 PL	17.45	17.75	15.00	15.30	10.00
MR70 1818	18" Ribbed/Corrugated to 18" DR 25 PL	20.70	21.30	18.50	19.50	10.00
MR70 2424	24" Ribbed/Corrugated to 24" DR 25 PL	27.50	28.20	24.80	25.80	10.00
MR70 3030	30" Ribbed/Corrugated to 30" DR 25 PL	34.60	35.60	31.00	32.00	10.00
MR70 3636	36" Ribbed/Corrugated to 36" DR 25 PL	40.30	41.30	37.30	38.30	10.00
MR70 4242	42" Ribbed/Corrugated to 42" DR 25 PL	47.20	48.20	43.50	44.50	10.00
MR70 4848	48" Ribbed/Corrugated to 48" DR 25 PL	52.90	53.90	49.80	50.80	10.00

MR72 Series

Ribbed or Corrugated to Profile		A		C
		min.	max.	
MR72 1010	10" ADS, Hancor, JM Eagle	11.20	11.50	6.00
MR72 1212	12" ADS, Hancor, JM Eagle	14.30	14.60	10.00
MR72 1515	15" ADS, Hancor, JM Eagle	17.45	17.75	10.00
MR72 1818	18" ADS, Hancor, JM Eagle	20.70	21.30	10.00
MR72 2424	24" ADS, Hancor, JM Eagle	27.50	28.20	10.00
MR72 3030	30" ADS, Hancor, JM Eagle	34.60	35.60	10.00
MR72 3636	36" ADS, Hancor, JM Eagle	40.30	41.30	10.00
MR72 4242	42" ADS, Hancor, JM Eagle	47.20	48.20	10.00
MR72 4848	48" ADS, Hancor, JM Eagle	52.90	53.90	10.00
MR72 6060	60" ADS, Hancor, JM Eagle	65.60	66.60	10.00

Flex-Seal® ARC Shielded Adjustable Repair Couplings

FLEX-SEAL® ARC SHIELDED ADJUSTABLE REPAIR COUPLINGS

Where there is a need for resistance to heavy earth loads, shear forces and improved alignment.

Features

- **STAINLESS STEEL SHEAR RING**
The heaviest in the industry; over 33% thicker than the competition.
- **SEALING "O" RING**
Installed under each sealing clamp band to prevent pipe slippage and provide a more positive seal.
- **MOLDED ONE-PIECE DESIGN FOR MOST POPULAR SIZES**
- **CORROSION RESISTANT**
Surgical Grade 316 stainless steel sealing clamps provide the greatest corrosion resistance possible.
- **NUT AND BOLT CLAMP DESIGN**
Stronger than traditional worm drive design.
- **ALSO AVAILABLE**
Worm Drive or T-Bolt clamps are available on request.

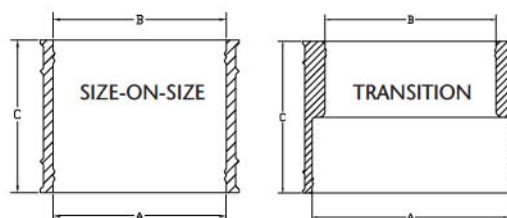
Specifications

- Manufactured with natural and synthetic rubbers conforming to **ASTM C 425** and **ASTM C 1173**.
- Series 300 stainless steel conforms to **ASTM A 240**.
- Conforms to ISO 9001 quality standards.

TECHNICAL DATA SPECIFICATIONS

PROPERTY	Flex-Seal® Compound	Plasticized PVC
Ozone Resistance	A	A
Weathering, Sunlight Aging and Outdoor Use	A	A
Water Resistance	A	A
Low Temperature Flexibility	A	C
High Temperature Resistance	A	D
Animal Fat Resistance	B	D
Vegetable Oils Resistance	B	B
Ammonia	A	A
Compression Set	A	C

RATINGS: A - Excellent; B - Good; C - Fair; D - Poor



MR56 ARC Series

Cast Iron or Plastic to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	
MR56 15 ARC	1½" CI/PL to 1½" CI/PL	1.81	2.00	1.81	1.90	3.50
MR56 22 ARC	2" CI/PL to 2" CI/PL	2.30	2.50	2.30	2.50	3.50
MR56 33 ARC	3" CI/PL to 3" CI/PL	3.25	3.50	3.25	3.50	4.00
MR56 43 ARC	4" CI/PL to 3" CI/PL	4.21	4.50	3.25	3.50	4.00
MR56 44 ARC	4" CI/PL to 4" CI/PL	4.21	4.50	4.21	4.50	4.00
MR56 44 ARC XL	4" CI/PL to 4" CI/PL	4.21	4.50	4.21	4.50	6.00
MR56 54 ARC ^f	5" CI/PL to 4" CI/PL	5.30	5.62	4.21	4.50	4.00
MR56 55 ARC	5" CI/PL to 5" CI/PL	5.30	5.62	5.30	5.62	4.00
MR56 64 ARC	6" CI/PL to 4" CI/PL	6.27	6.62	4.21	4.50	6.00
MR56 65 ARC Type Of	6" Oversize CI/PL to 5" CI/PL	6.38	6.78	5.30	5.62	6.50
MR56 66 ARC	6" CI/PL to 6" CI/PL	6.27	6.62	6.27	6.62	6.00
MR56 86 ARC ^f	8" CI/PL to 6" CI/PL	8.12	8.62	6.27	6.62	6.00
MR56 88 ARC	8" CI/PL to 8" CI/PL	8.12	8.62	8.12	8.62	6.00
MR56 1008 ARC ^f	10" CI/PL to 8" CI/PL	10.20	10.80	8.12	8.75	6.50
MR56 1010 ARC	10" CI/PL to 10" CI/PL	10.20	10.80	10.20	10.80	6.50
MR56 1210 ARC ^f	12" CI/PL to 10" CI/PL	12.20	12.80	10.20	10.80	6.50
MR56 1212 ARC	12" CI/PL to 12" CI/PL	12.20	12.80	12.20	12.80	6.50
MR56 1512 ARC ^f	15" CI/PL to 12" CI/PL	14.90	15.40	12.20	12.80	6.00
MR56 1515 ARC	15" TWP to 15" TWP	14.90	15.40	14.90	15.40	6.00
MR56 1616 ARC	16" PL (Sch. 40) to 16" PL (Sch. 40)	15.50	16.00	15.50	16.00	10.00
MR56 1815 ARC ^f	18" CI/PL to 15" CI/PL	18.30	18.80	14.90	15.40	10.00
MR56 1818 ARC	18" CI/PL to 18" CI/PL	18.30	18.80	18.30	18.80	10.00
MR56 2121 ARC	21" CI/PL to 21" CI/PL	21.50	22.00	21.50	22.00	10.00
MR56 2424 ARC	24" CI/PL to 24" CI/PL	24.20	24.90	24.20	24.90	10.00
MR56 2727 ARC	27" CI/PL to 27" CI/PL	27.50	28.00	27.50	28.00	10.00

^f: Supplied with a flanged bushing

Flex-Seal® ARC Shielded Adjustable Repair Couplings

MR01 ARC Series

Clay to Clay		A		B		C
		min.	max.	min.	max.	
MR01 44 ARC	4" CL to 4" CL	5.00	5.40	5.00	5.40	4.00
MR01 54 ARC ^f	5" CL to 4" CL	6.03	6.56	5.00	5.40	6.00
MR01 55 ARC	5" CL to 5" CL	6.03	6.56	6.03	6.56	6.00
MR01 64 ARC ^f	6" CL to 4" CL	7.20	7.80	5.00	5.40	6.00
MR01 64 Type O ARC ^f	6" Oversize CL to 4" CL	7.50	8.12	5.00	5.40	6.00
MR01 65 ARC ^f	6" CL to 5" CL	7.20	7.80	6.27	6.62	6.00
MR01 66 ARC	6" CL to 6" CL	7.20	7.80	7.20	7.80	6.00
MR01 86 ARC ^f	8" CL to 6" CL	9.40	10.00	7.20	7.80	6.00
MR01 88 ARC	8" CL to 8" CL	9.40	9.85	9.40	9.85	6.00
MR01 1008 ARC ^f	10" CL to 8" CL	11.85	12.45	9.40	10.00	6.00
MR01 1010 ARC	10" CL to 10" CL	11.85	12.45	11.85	12.45	6.00
MR01 1210 ARC ^f	12" CL to 10" CL	14.20	14.80	11.85	12.45	6.00
MR01 1212 ARC	12" CL to 12" CL	14.20	14.80	14.20	14.80	6.00
MR01 1512 ARC ^f	15" CL to 12" CL	17.80	18.30	14.20	14.80	10.00
MR01 1515 ARC	15" CL to 15" CL	17.80	18.30	17.80	18.30	10.00
MR01 1818 ARC	18" CL to 18" CL	21.80	22.30	21.80	22.30	10.00
MR01 2121 ARC	21" CL to 21" CL	25.50	25.90	25.50	25.90	10.00
MR01 2424 ARC	24" CL to 24" CL	29.60	30.30	29.60	30.30	10.00
MR01 2727 ARC	27" CL to 27" CL	31.80	32.50	31.80	32.50	10.00

^f: Supplied with a flanged bushing

MR02 ARC Series

Clay to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	
MR02 43 ARC	4" CL to 3" CI/PL	5.00	5.40	3.25	3.50	4.00
MR02 44 ARC	4" CL to 4" CI/PL	5.00	5.40	4.21	4.50	4.00
MR02 46 ARC ^f	4" CL to 6" CI/PL	5.00	5.40	6.27	6.62	6.00
MR02 54 ARC	5" CL to 4" CI/PL	6.03	6.56	4.21	4.50	6.00
MR02 55 ARC	5" CL to 5" CI/PL	6.03	6.56	5.30	5.64	5.00
MR02 64 ARC	6" CL to 4" CI/PL	7.20	7.80	4.21	4.50	6.00
MR02 65 ARC ^f	6" CL to 5" CI/PL	7.20	7.80	5.00	5.40	6.00
MR02 66 ARC	6" CL to 6" CI/PL	7.20	7.80	6.27	6.62	6.00
MR02 86 ARC ^f	8" CL to 6" CI/PL	9.40	10.00	6.27	6.62	6.00
MR02 88 ARC	8" CL to 8" CI/PL	9.40	10.00	8.25	8.62	6.00
MR02 1008 ARC ^f	10" CL to 8" CI/PL	11.85	12.45	8.25	8.62	6.50
MR02 1010 ARC	10" CL to 10" CI/PL	11.85	12.45	10.20	10.80	6.50
MR02 1210 ARC ^f	12" CL to 10" CI/PL	14.20	14.80	10.20	10.80	6.50
MR02 1212 ARC	12" CL to 12" CI/PL	14.20	14.80	12.20	12.80	6.50
MR02 1515 ARC ^f	15" CL to 15" CI/PL	17.80	18.30	14.90	15.40	10.00
MR02 1818 ARC ^f	18" CL to 18" CI/PL	21.80	22.30	18.30	18.80	10.00
MR02 2121 ARC ^f	21" CL to 21" CI/PL	25.50	25.90	21.50	22.00	10.00
MR02 2424 ARC ^f	24" CL to 24" CI/PL	29.60	30.30	24.20	24.90	10.00
MR02 2727 ARC ^f	27" CL to 27" CI/PL	31.80	32.50	27.50	28.00	10.00

^f: Supplied with a flanged bushing



MR03 ARC Series

Clay to Asbestos Cement or Ductile Iron		A		B		C
		min.	max.	min.	max.	
MR03 44 ARC	4" CL to 4" AC/DI	5.00	5.40	4.62	4.93	4.00
MR03 54 ARC ^f	5" CL to 4" AC/DI	6.03	6.62	4.62	4.93	5.00
MR03 55 ARC ^f	5" CL to 5" AC/DI	6.03	6.40	5.53	5.90	6.00
MR03 66 ARC	6" CL to 6" AC/DI	7.20	7.80	6.75	7.12	6.00
MR03 86 ARC ^f	8" CL to 6" AC/DI	9.40	10.00	6.75	7.12	6.00
MR03 88 ARC ^f	8" CL to 8" AC/DI	9.40	10.00	8.75	9.25	6.00
MR03 1008 ARC ^f	10" CL to 8" AC/DI	11.85	12.45	8.75	9.25	6.50
MR03 1010 ARC ^f	10" CL to 10" AC/DI	11.85	12.45	10.70	11.20	6.50
MR03 1210 ARC ^f	12" CL to 10" AC/DI	14.20	14.80	10.70	11.20	6.50
MR03 1212 ARC ^f	12" CL to 12" AC/DI	14.20	14.80	12.75	13.30	6.50
MR03 1516 ARC ^f	15" CL to 16" AC/DI	17.80	18.30	17.40	17.90	10.00
MR03 1818 ARC ^f	18" CL to 18" AC/DI	21.80	22.30	19.30	19.80	10.00

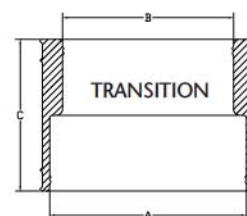
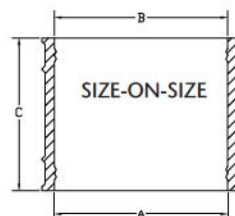
^f: Supplied with a flanged bushing

MR04 ARC Series

Concrete to Concrete		A		B		C
		min.	max.	min.	max.	
MR04 44 ARC	4" Concrete to 4" Concrete	5.50	6.00	5.50	6.00	4.00
MR04 64 ARC ^f	6" Concrete to 4" Concrete	7.50	8.12	5.50	6.00	6.00
MR04 66 ARC	6" Concrete to 6" Concrete	7.50	8.12	7.50	8.12	6.00
MR04 86 ARC ^f	8" Concrete to 6" Concrete	10.00	10.50	7.50	8.12	6.00
MR04 88 ARC	8" Concrete to 8" Concrete	10.00	10.50	10.00	10.50	6.00
MR04 1008 ARC ^f	10" Concrete to 8" Concrete	12.30	12.80	10.00	10.50	6.00
MR04 1010 ARC	10" Concrete to 10" Concrete	12.30	12.80	12.30	12.80	6.00
MR04 1210 ARC ^f	12" Concrete to 10" Concrete	14.60	15.10	12.30	12.80	6.00
MR04 1212 ARC	12" Concrete to 12" Concrete	14.60	15.10	14.60	15.10	6.00
MR04 1515 ARC	15" Concrete to 15" Concrete	19.40	19.90	19.40	19.90	10.00
MR04 1818 ARC	18" Concrete to 18" Concrete	22.10	22.60	22.10	22.60	10.00
MR04 2121 ARC	21" Concrete to 21" Concrete	25.90	26.60	25.90	26.60	10.00
MR04 2424 ARC	24" Concrete to 24" Concrete	29.90	30.60	29.90	30.60	10.00
MR04 2727 ARC	27" Concrete to 27" Concrete	33.40	34.10	33.40	34.10	10.00

^f: Supplied with a flanged bushing.

Flex-Seal® ARC Shielded Adjustable Repair Couplings



MR06 ARC Series

Concrete to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	
MR06 43 ARC ^f	4" Concrete to 3" CI/PL	5.50	6.00	3.21	3.50	4.00
MR06 44 ARC	4" Concrete to 4" CI/PL	5.50	6.00	4.21	4.50	4.00
MR06 64 ARC	6" Concrete to 4" CI/PL	7.50	8.12	4.21	4.50	6.00
MR06 66 ARC	6" Concrete to 6" CI/PL	7.50	8.12	6.25	6.62	6.00
MR06 86 ARC ^f	8" Concrete to 6" CI/PL	10.00	10.50	6.25	6.62	6.00
MR06 88 ARC	8" Concrete to 8" CI/PL	10.00	10.50	8.12	8.40	6.00
MR06 1008 ARC ^f	10" Concrete to 8" CI/PL	12.30	12.80	8.12	8.75	6.00
MR06 1010 ARC ^f	10" Concrete to 10" CI/PL	12.30	12.80	10.34	10.85	6.00
MR06 1212 ARC ^f	12" Concrete to 12" CI/PL	14.60	15.10	12.30	12.90	6.00
MR06 1515 ARC ^f	15" Concrete to 15" CI/PL	19.40	19.90	14.90	15.40	10.00
MR06 1818 ARC ^f	18" Concrete to 18" CI/PL	22.10	22.60	18.30	18.80	10.00
MR06 2121 ARC ^f	21" Concrete to 21" CI/PL	25.90	26.60	21.40	22.10	10.00
MR06 2424 ARC ^f	24" Concrete to 24" CI/PL	29.90	30.60	24.40	25.10	10.00
MR06 2727 ARC ^f	27" Concrete to 27" CI/PL	33.40	34.10	27.40	28.10	10.00

^f: Supplied with a flanged bushing

MR55 ARC Series

Asbestos Cement or Ductile Iron to Asbestos Cement or Ductile Iron		A		B		C
		min.	max.	min.	max.	
MR55 44 ARC	4" AC/DI to 4" AC/DI	4.62	4.93	4.62	4.93	4.00
MR55 54 ARC ^f	5" AC/DI to 4" AC/DI	5.62	5.93	4.62	4.93	6.00
MR55 55 ARC	5" AC/DI to 5" AC/DI	5.62	5.93	5.62	5.93	6.00
MR55 65 ARC ^f	6" AC/DI to 5" AC/DI	6.75	7.12	5.62	5.93	6.00
MR55 66 ARC	6" AC/DI to 6" AC/DI	6.75	7.12	6.75	7.12	6.00
MR55 86 ARC ^f	8" AC/DI to 6" AC/DI	8.75	9.25	6.75	7.25	6.00
MR55 88 ARC	8" AC/DI to 8" AC/DI	8.75	9.25	8.75	9.25	6.00
MR55 1008 ARC ^f	10" AC/DI to 8" AC/DI	10.70	11.20	8.75	9.25	6.00
MR55 1010 ARC	10" AC/DI to 10" AC/DI	10.70	11.20	10.70	11.20	6.00
MR55 1210 ARC ^f	12" AC/DI to 10" AC/DI	12.90	13.50	11.30	11.80	6.00
MR55 1212 ARC	12" AC/DI to 12" AC/DI	12.90	13.50	12.90	13.50	6.00
MR55 1616 ARC	16" AC/DI to 16" AC/DI	17.40	17.90	17.40	17.90	10.00
MR55 1818 ARC	18" AC/DI to 18" AC/DI	19.10	19.60	19.10	19.60	10.00

^f: Supplied with a flanged bushing

MR51 ARC Series

Asbestos Cement or Ductile Iron to Cast Iron or Plastic		A		B		C
		min.	max.	min.	max.	
MR51 43 ARC ^f	4" AC/DI to 3" CI/PL	4.62	4.93	3.25	3.50	4.00
MR51 44 ARC ^f	4" AC/DI to 4" CI/PL	4.62	4.93	4.21	4.50	4.00
MR51 54 Type O ARC ^f	5" AC/DI to 4" CI/PL	5.40	5.90	4.80	5.10	4.00
MR51 55 ARC ^f	5" AC/DI to 5" CI/PL	5.62	5.93	5.30	5.62	5.00
MR51 56 ARC	5" AC/DI to 6" CI/PL	5.62	5.93	6.25	6.62	5.80
MR51 66 ARC	6" AC/DI to 6" CI/PL	6.72	7.12	6.25	6.62	6.00
MR51 86 ARC ^f	8" AC/DI to 6" CI/PL	8.75	9.25	6.25	6.62	6.00
MR51 88 ARC	8" AC/DI to 8" CI/PL	8.75	9.25	8.25	8.62	6.00
MR51 1008 ARC ^f	10" AC/DI to 8" CI/PL	10.84	11.20	8.28	8.62	6.00
MR51 1010 ARC ^f	10" AC/DI to 10" CI/PL	10.84	11.20	10.20	10.80	6.00
MR51 1210 ARC ^f	12" AC/DI to 10" CI/PL	12.90	13.50	10.20	10.80	6.00
MR51 1212 ARC ^f	12" AC/DI to 12" CI/PL	12.90	13.50	12.20	12.80	6.30
MR51 1615 ARC ^f	16" AC/DI to 15" CI/PL	17.40	17.90	14.90	15.40	10.00
MR51 1818 ARC ^f	18" AC/DI to 18" CI/PL	19.10	19.60	18.30	18.80	10.00

^f: Supplied with a flanged bushing



Large Diameter Repair Couplings



LARGE DIAMETER REPAIR COUPLINGS

Suited for the repair, alteration and rehabilitation of large diameter gravity sewer pipe made of the following materials: clay, concrete, cast iron, plastic, ductile iron, asbestos cement and Orangeburg.

Features

- **MULTIPLE SIZES**
Fit pipe O.D.s of up to 96".
- **SUPERIOR SEAL**
Couplings are 10" wide and come with four multiple take-up stainless steel clamps to provide a superior seal on pipe ends.
- **ACCOMMODATING**
Flanged bushings address differences in pipe O.D.s of up to 6".
- **EASY TO USE**
Flanged bushings allow for easy positioning into the coupling during installation.
- **RESILIENT**
Couplings and flanged bushings are manufactured of EPDM rubber; resilient to and unaffected by normal soil conditions and sewer gases.
- **GREATER BAND LOAD**
Exclusive nut and bolt clamps have multiple take-up points, Surgical Grade 316 stainless steel straps and a torque rating of 80 in./lbs. providing greater band load than a traditional worm gear clamp.

Options

- **SERIES 300 OR SURGICAL GRADE 316 STAINLESS STEEL OUTSIDE SHEAR RINGS (ARC)**
Strongly recommended when resistance to heavy earth loads, shear forces and improved alignment is required.
- **T-BOLT CLAMPS**
Available with a wider Surgical Grade 316 stainless steel strap and a torque rating of 150 in./lbs. to provide even greater sealing performance.
- **USAGE**
Strongly recommended for nominal pipe diameters of 24" and larger.

Specifications

- Couplings and flanged bushings meet or exceed ASTM C 425 and ASTM C 1173 requirements.
- Series 300 and Surgical Grade 316 stainless steel conforms to ASTM A 240.

Flo-Bloc® Inflatable Test Plugs

FLO-BLOC® INFLATABLE TEST PLUGS

Engineered to handle all testing requirements from 1 1/4" to 6" nominal size. Only four plugs are required to seal a wide range of pipe and/or fittings (1 1/4" to 6" nominal diameter), making Flo-Bloc® perfect for the full spectrum of testing needs.

Features

- MORE OPTIONS, LESS INVENTORY
 - DURABLE, RUGGED AND EFFECTIVE ON ANY TYPE OF PIPE
 - 1/4" SCHRADER TIRE VALVE STANDARD ON ALL PLUGS
 - ALL TEST BALLS ARE BENDABLE TO 90°
 - 100% INFLATION TESTED FOR SAFETY
- Backed by the service and support of Mission Rubber Company.



Multi-Size Short

Part Number	Nominal Pipe Size	Rated Inflation Pressure	Maximum Allowable Back Pressure	
			Air	Water
MS 1-2	1 1/4" - 2"	40 psig	5 psig	30 ft. hd.
MS 2-3	2" - 3"	35 psig	5 psig	30 ft. hd.
MS 3-4	3" - 4"	40 psig	5 psig	30 ft. hd.
MS 4-6	4" - 6"	30 psig	5 psig	30 ft. hd.



Multi-Size Dual Stage Long

Part Number	Nominal Pipe Size	Rated Inflation Pressure	Maximum Allowable Back Pressure	
			Air	Water
ML 2-3	2" - 3"	45 psig	10 psig	30 ft. hd.
ML 3-4	3" - 4"	40 psig	10 psig	30 ft. hd.
ML 4-6	4" - 6"	35 psig	10 psig	30 ft. hd.

Single-Size Municipal

Part Number	Nominal Pipe Size	Rated Inflation Pressure	Maximum Allowable Back Pressure	
			Air	Water
100-8	8"	25 psig	10 psig	25 ft. hd.
100-10	10"	25 psig	10 psig	25 ft. hd.
100-12	12"	25 psig	10 psig	25 ft. hd.

Multi-Size Municipal

Part Number	Nominal Pipe Size	Rated Inflation Pressure	Maximum Allowable Back Pressure	
			Air	Water
500-610	6" - 10"	30 psig	10 psig	25 ft. hd.
500-812	8" - 12"	20 psig	10 psig	25 ft. hd.
500-1218	12" - 18"	25 psig	10 psig	25 ft. hd.

Accessories

Part Number	Description
HPG 1	Hand Pump with Gauge
EH 24	2' Extension Hose
EH 36	3' Extension Hose
EH 60	5' Extension Hose
EH 120	10' Extension Hose



MISSION T-FLEX® SEWER SADDLES

Designed to make lateral service connections, these saddles demonstrate superior flexibility. Elastomeric construction allows a single size to securely fit most sewer mains.

Flexibility eliminates the need for large inventories of rigid PVC saddles of various sizes.

Features

- **MINIMAL EXCAVATION**
- **ABSORBS VIBRATION**
EPDM rubber gasket with corrosion resistant Series 300 austenitic stainless steel apron provides a flexible, vibration-absorbing joint which accommodates ground movement and prevents shear.
- **LEAK-PROOF**
Series 300 quick-release clamps install rapidly and provide sufficient band load to ensure a leak-proof, root-proof seal.
- **NO INTRUSION**
Internal "pipe stop" prevents lateral pipe intrusion into the sewer main.
- **EASE OF INSTALLATION**
Flanged lip on the EPDM gasket self-centers saddle into the cored sewer main during installation.
- **ECONOMICAL**
Durable, high quality design and low unit price make the T-Flex® a smart choice.

Part Number	Lateral Pipe	Sewer Main O.D.	Lateral Entry	Core I.D.
TF-400	4" PVC or CI	6.27" - 15.75"	90°± 15°	4.60" - 4.90"
TF-500*	5" PVC or CI	8.16" - 21.25"	90°± 15°	6.60" - 6.90"
TF-600	6" PVC or CI	8.16" - 21.25"	90°± 15°	6.60" - 6.90"
4" WYE	4" PVC or CI	6.27" - 15.75"	45°± 15°	—
6" WYE	6" PVC or CI	8.16" - 21.25"	45°± 15°	—

*Requires the use of a bushing

TwisTee® Tapping Saddles

TWISTEE® TAPPING SADDLES

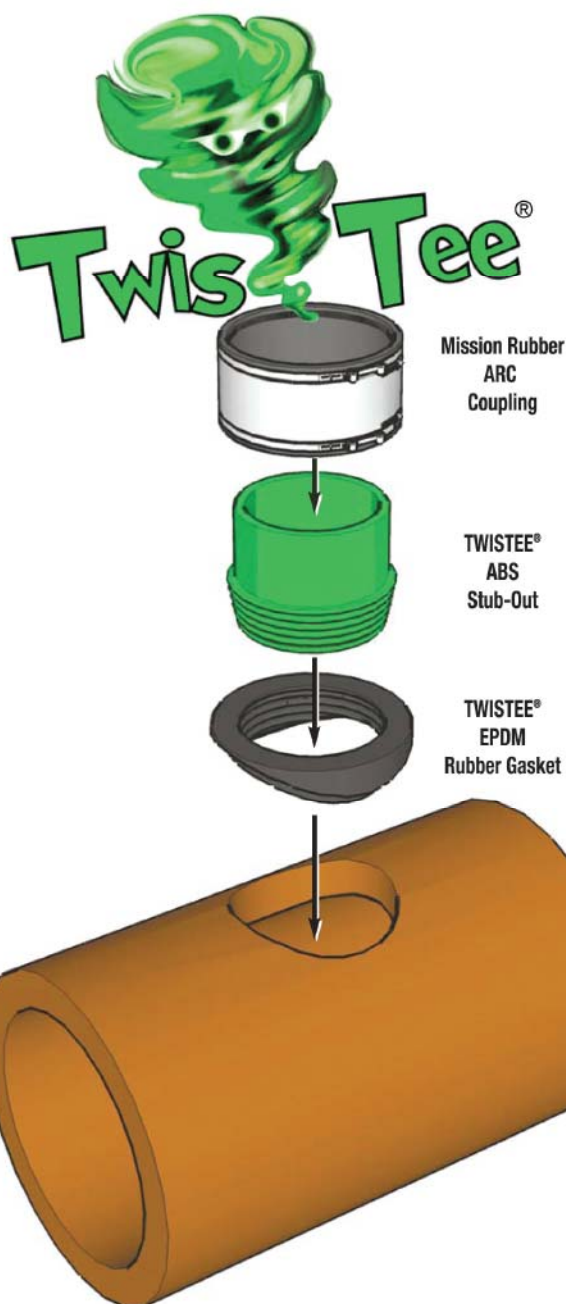
Designed to make tapping CLAY and CONCRETE pipe lines easier than ever!

The TwisTee® is a versatile sewer saddle designed to make lateral service connections, eliminating the need for a T-fitting. It can be connected into any thick wall (min. 1 1/4") sewer main and withstands hydrostatic pressure testing up to 10 psi. The ABS stub-out connects to a 4" or 6" lateral pipe. The EPDM rubber gasket is available in a variety of profiles.

Features

- 2-PIECE SERVICE CONNECTION
- ELIMINATES USUAL T-FITTING
- SAVES TIME AND MONEY
- DURABLE AND DEPENDABLE
- MINIMAL TOOL USE
- ABS STUB-OUT
- CONFORMS TO ASTM C 425, ASTM C 1173 AND ASTM C 923M

Part Number	Size	Description	Lateral Pipe	Sewer Main O.D.
1404632	4"	TT-4-810	CI/PL	8" - 10"
1404634	4"	TT-4-1215	CI/PL	12" - 15"
1404636	4"	TT-4-1627	CI/PL	16" - 27"
1404638	4"	TT-4-2899	CI/PL	28" & larger
3420120	5 1/4" Core Bit	Diamond Tip Core Bit	CI/PL	8" & larger
1406641	6"	TT-6-1215	CI/PL	12" - 15"
1406643	6"	TT-6-1624	CI/PL	16" - 24"
1406645	6"	TT-6-2599	CI/PL	25" & larger
3420130	7 1/4" Core Bit	Diamond Tip Core Bit	CI/PL	12" & larger



Band-Seal® End Caps & T-Cone®



Part Number	Description
0701 011	1 1/2" End Cap
0702 019	2" End Cap
0703 017	3" End Cap
0704 015	4" End Cap
0705 020	5" End Cap
0706 028	6" End Cap
0708 016	8" End Cap
0710 017	10" End Cap
0712 018	12" End Cap

BAND-SEAL® END CAPS

Flexible rubber end caps for capping cast iron, steel, PVC and ABS pipe ends. Sizes 1 1/2" to 12".

Features

- **STRONG X-BRACE**
Molded "X" braces end cap against head pressure encountered in testing. Axially tapered design distributes and dissipates internal stresses.
- **TOUGH AND REUSABLE**
Fast and easy to use over and over, and withstands rough field handling. Series 300 stainless steel clamp may be tightened or loosened in seconds with a screwdriver or wrench.
- **NEEDS NO PLASTIC LINER**
So strong it doesn't need the usual reinforcing plastic disk or liner. So easy to put on and take off that it makes an ideal permanent clean-out. Perfect protection against entry of dirt into pipe plus resists water and ozone.
- **TIGHT-FITTING INTERNAL CONE**
Creates wedge against pipe inside, balancing outward strains against the restricting exterior steel band.



T-CONE® MECHANICAL STOPPERS

Used for testing gravity flow, non-pressure DWV and sewer systems.

Features

- **PERMANENT SEAL AGAINST WATER AND GASES**
- **NO METAL PARTS TO RUST OR CORRODE**
Rigid plug: Reinforced polypropylene
Sealing ring: Thermoplastic rubber 1" to 3"
Polyurethane elastomer 4" to 8"
- **FEWEST COMPONENTS IN THE INDUSTRY**
- **REUSABLE**
- **EASY INSTALLATION AND REMOVAL**
- **HOLDS HIGH TEST PRESSURES**
- **ECONOMICAL**
- **MEETS AND EXCEEDS ASTM C 425 REQUIREMENTS**

Part Number	TEST PLUGS
ST-152	1 1/2" SCH 40 Plastic, Steel
ST-201	2" Cast Iron, SCH 80 Plastic or 1 1/2" SCH 40 Plastic Hub
ST-202	2" SCH 40 Plastic, Steel, Copper (M and DWV)
ST-302	3" SCH 40 Plastic, Steel, Copper (DWV) or 2" SWCI Hub
ST-401	4" Clay, Copper (M)
ST-402	4" Cast Iron, SCH 40 Plastic, Steel, SDR 35 Plastic, Copper (DWV), Clay
ST-601	6" Cast Iron, SDR 35 Plastic, Copper (DWV), Clay
ST-602	6" SCH 40 Plastic, XHCI
ST-802	8" SDR 35 Plastic, SCH 40 Plastic, Clay

Multitube Non-Return and Flap Valves

MULTITUBE NON-RETURN AND FLAP VALVES

A range of non-return and flap valves designed to prevent backflow in sewage and drainage systems. Ideal for sewage disposal, rainwater, surface water, and seawater.

Nominal diameters from 4" (100mm) to 60" (1500mm).

NON-RETURN VALVES are designed to be installed in-line and located in inspection chambers or manholes for ease of maintenance.

FLAP VALVES are designed to be installed at the end of pipelines either on vertical walls or directly onto the end of a pipe.

FLEX-SEAL® ARC COUPLINGS enable a watertight connection to any circular pipe.

Features

- **RELIABLE AND DURABLE**
High mechanical strength due to GRP construction. Design is verified by Finite Element Stress Analysis.
- **WATERTIGHT**
Resistant to 1 bar (10 m head)
Back pressure (0,6 to 1 bar by model)
Integral rubber seals easily replaced if damaged
- **LIGHTWEIGHT**
Fast and easy installation—most sizes can be handled by one person. Very low operating pressure (cracking head) compared with metal flap valves.
- **CORROSION RESISTANT**
Highly resistant to corrosion and UV degradation. No coatings needed.
- **LOW MAINTENANCE**
Long service life and low maintenance.

Quality

Conforms to ISO 9001 quality standards.



**Multi CD
Flap Valve**



**Multi BD
Flap Valve**



**Multi N
Inclined Flap Valve**



**Multi NB 200 to 600
Inclined Flap Valve**



**Multi NB 700 to 1500
Inclined Flap Valve**



**Multi-250
Non-Return Valve**



**Multi-315
Non-Return Valve**



**Multi-400 & 500
Non-Return Valve**

Part	Materials	Advantages
Body and flap	Glass reinforced Isophthalic polyester resin Isophthalic Gelcoat	Low weight combined with strength, durability and corrosion resistance
Seal	EPDM	Long term resistance to ozone, UV and mechanical compression
Hinge	AISI 316 stainless steel	Resistant to normal drainage and sewage effluents, and sea water
Fittings	AISI 316 stainless steel	Resistant to normal drainage and sewage effluents, and sea water



MISSION STANDARD "Calder Style" SEWER COUPLINGS AND BUSHINGS

Extra thick rubber sleeve can be used with or without bushings. Sizes 3" to 12".

Features

- Joins clay, plastic or cast iron to any other kind of pipe with or without a bushing.
- Used primarily in the **Western United States**.
- Thicker rubber sleeve conforms to **ASTM C 425**, and **ASTM C 1173**.
- Surgical Grade 316 stainless steel clamps with nut and bolt or worm drive take-up are standard.



Part Number		COUPLINGS	Minimum Pipe O.D.	Maximum Pipe O.D.
Worm Drive	Nut & Bolt			
	0403 428	3" Type 1 Mission Standard Coupling	4.250	4.500
0403 444		3" CIT, Trailer, Drain (EPDM)	3.250	3.500
0404 616	0404 624	4" Type O Mission Standard Coupling	5.312	5.500
	0404 632	4" AC, DI, Orangeburg	4.625	4.937
0404 715	0404 723	4" CIT, SCH 40 PL, BECI, XHCI or ST	4.215	4.500
0404 749		4" x 3" CIT, SCH 40 PL, XHCI, ST or TWP	4.125 3.250	4.500 3.625
0405 035	0405 027	5" Type 1 (Fits 5" Clay Pipe)	6.550	6.750
0406 645	not available	6" Type 1 Mission Standard Coupling	7.550	7.750
0406 702	0406 694	6" Type O (Clay or Concrete)	7.750	8.125
	0406 751	6" Adjustable Repair Coupling	7.500	8.000
	0406 793	6" Type O Adjustable Repair Coupling (Clay or Concrete)	7.750	8.125
	0406 819	6" x 4" CIT, SCH 40 PL, XHCI, ST or TWP	6.250 4.125	6.625 4.500
0406 835	0406 736	6" x 4" Increaser/Reducer Couplings	7.500 5.275	7.750 5.450
0408 724	not available	8" Type 1 Mission Standard Coupling	9.750	10.125
	0408 781	8" Adjustable Repair Coupling	9.750	10.125
	0408 815	8" Adjustable Repair Coupling for BECI, AC, DI, BF, Armco Truss	8.750	9.400
0408 872	0408 864	8" x 6" Increaser/Reducer Couplings	9.250 7.250	10.125 8.000
	0410 688	10" Adjustable Repair Coupling	12.250	12.600
	0412 635	12" Adjustable Repair Coupling	14.250	14.520
	0410 720	10" Adjustable Repair Coupling for Clay, CI, XHCI, SCH 40 PL, ST or TWP	12.500	13.125
	0412 684	12" Adjustable Repair Coupling Type O for Clay, Concrete and Armco Truss	14.125	15.000

Part Number	BUSHINGS	Minimum Pipe O.D.	Maximum Pipe O.D.
0502 419	4" x 2" Cast Iron Bushing	2.260	2.440
0502 427	4" x 2" SCH 40 PL Bushing	2.575	2.687
0503 417	4" x 3" Cast Iron Bushing	3.260	3.440
0503 425	4" x 3" SCH 40 PL Bushing	3.320	3.500
0504 415	4" x 4" Cast Iron Bushing	4.290	4.470
0504 423	4" x 4" SCH 40 PL Bushing	4.350	4.530
0504 431	4" x 4" Asbestos Cement, Ductile Iron, Orangeburg Bushing	4.687	4.875
0504 506	4" x 4" Thinwall Plastic Bushing	4.100	4.250
0506 410	6" Cast Iron Bushing	6.125	6.500
0506 428	6" SCH 40 PL Bushing	6.500	6.750
0506 436	6" Asbestos Cement, Ductile Iron, Orangeburg Bushing	6.812	7.062
0508 416	8" Cast Iron Bushing	8.250	8.530
0508 424	8" Asbestos Cement, Ductile Iron, Orangeburg Bushing	8.625	9.062
0510 412	10" Cast Iron Bushing	10.250	10.500
0510 420	10" Asbestos Cement, Ductile Iron, Orangeburg Bushing	10.87	11.125
0512 418	12" Cast Iron Bushing	11.875	12.500
0512 426	12" Asbestos Cement, Ductile Iron, Orangeburg Bushing	13.000	13.250

Band-Seal® Sewer Couplings

EASTERN STANDARD SEWER COUPLINGS AND BUSHINGS

Joins clay pipe. Used primarily in the **Eastern United States**.

Features

- Joins clay, plastic or cast iron to any other kind of pipe with or without a bushing.
- Used primarily in the **Eastern United States**.
- Thicker rubber sleeve conforms to **ASTM C 425**, and **ASTM C 1173**.
- Surgical Grade 316 stainless steel clamps with nut and bolt or worm drive take-up are standard.



Part Number	COUPLINGS	Minimum Pipe O.D.	Maximum Pipe O.D.
0403 444	3" Trailer, Drain (EPDM)	3.250	3.500
0404 632	4" AC, DI, Orangeburg	4.625	4.937
0404 665	4" Coupling	5.000	5.281
0404 723	4" Plastic - Sewer/Drain	4.215	4.500
0404 749	4" x 3" Plastic, CI, Sewer/Drain	4.125	4.500
0405 027	5" Type 1 (Fits 5" Clay Pipe)	6.550	6.750
0406 694	6" Type O (Fits 6" Concrete)	7.750	8.125
0406 728	6" Coupling	6.875	7.625
0406 744	6" x 4" Increaser/Reducer Coupling	6.750	7.500
0406 769	6" Adjustable Repair Coupling	6.875	7.625
0406 793	6" Adjustable Repair Type O Coupling	7.750	8.125
0406 819	6" x 4" Plastic, CI, Sewer/Drain	6.250	6.625
0408 807	8" Adjustable Repair Coupling	9.250	10.062
0408 815	8" Adjustable Repair Coupling for BECI, AC, DI, BF, Armco Truss	8.750	9.400
0408 864	8" x 6" Increaser/Reducer Coupling	9.250 7.250	10.125 8.000
0410 704	10" Adjustable Repair Coupling	11.500	12.125
0410 720	10" Adjustable Repair Type O Coupling	12.500	13.125
0412 650	12" Adjustable Repair Coupling	14.125	14.625
0412 684	12" Adjustable Repair Type O Coupling	14.125	15.000

Part Number	BUSHINGS
0502 443	2" I.P.S. Bushing
0503 433	3" x 3" CI, PL or ST (use with 0404 723)
0504 449	4" Cast Iron Bushing
0504 456	4" I.P.S. Bushing
0504 464	4" Asbestos Cement, Ductile Iron, Orangeburg Bushing
0504 472	4" AC, DI, Orangeburg to 4" CI, PL or ST (use with 0404 632)
0504 514	4" Thinwall Plastic Bushing
0506 410	6" Cast Iron Bushing
0506 428	6" I.P.S. Bushing
0506 436	6" Asbestos Cement, Ductile Iron, Orangeburg Bushing
0508 432	8" Cast Iron Bushing
0508 440	8" Asbestos Cement, Ductile Iron, Orangeburg Bushing
0510 438	10" Cast Iron Bushing
0510 446	10" Asbestos Cement, Ductile Iron, Orangeburg Bushing
0510 453	10" AC, DI, Orangeburg (use with 0410 720)
0512 434	12" Cast Iron Bushing
0512 442	12" Asbestos Cement, Ductile Iron, Orangeburg Bushing



About MBDC

MBDC (McDonough Braungart Design Chemistry, LLC) is a product and process design firm dedicated to revolutionizing the design of products and services worldwide. By means of a new design paradigm called Cradle to Cradle Design, and the implementation of eco-effective design principles, MBDC has introduced a fundamental conceptual shift away from the designing of products and systems based on the take-make-waste model of the last century in which products were dumped in landfills after fulfilling their initial intended purpose ('cradle to grave'). In 'cradle to cradle' cycles materials are perpetually circulated, maximizing material value without damaging ecosystems. Cradle to Cradle focuses on the characteristics of sustainable materials, products and systems.

What is Cradle to Cradle Certification?

Cradle to Cradle Certification is a comprehensive evaluation of the environmental impact of a product and the manufacturing process. Mission Flex-Seal® products have been certified as Cradle to Cradle Silver Products by MBDC. Mission Flex-Seal® products have been evaluated for their human health, environmental health, lifecycle attributes, social responsibility, renewable energy, and water stewardship characteristics against stringent certification criteria and are considered ecologically intelligent products.

STANDARD PIPE SIZES

	MATERIAL	4"	5"	6"	8"	10"	12"	14"	15"	16"	18"	20"	21"	24"	27"
CLAY	Mission Clay	5.37	6.65	7.68	9.90	12.43	14.46		18.30		22.30		25.80	30.30	33.60
	Building Products Clay	5.20		7.75	9.80	12.40	14.40		18.25		22.25		25.88	30.30	33.60
	Eastern Standard Clay	5.23	6.31	7.44	9.84	11.99	14.36		18.20		21.93		25.91		
	Gladding/McBean Clay	5.36		7.82	9.99	12.47	14.52		18.03		21.47		25.22	28.85	32.80
	Pacific Clay	5.36		7.93	9.93	12.88	15.30		18.60		22.40		26.40	30.10	33.90
METAL	No Hub Cast Iron	4.38	5.30	6.30	8.38	10.56	12.50		15.83						
	Service Weight Cast Iron	4.30	5.30	6.30	8.38	10.50	12.50		15.88						
	Extra Heavy Cast Iron	4.50	5.50	6.50	8.62	10.75	12.75		15.88						
	Ductile Iron	4.80		6.90	9.05	11.10	13.20	15.30		17.40	19.50	21.60		25.80	
	Steel	4.50	5.56	6.62	8.62	10.75	12.75	14.00		16.00	18.00	20.00	21.00	24.00	
	Copper	4.13	5.13	6.13	8.13	10.13									
	Stainless Steel	4.00	5.00	6.00	8.00	10.00									
PLASTIC	Schedule 40 Plastic	4.50	5.56	6.62	8.62	10.75	12.75	14.00		16.00	18.00	20.00	21.00	24.00	
	Thinwall Plastic PVC (ASTM 3033) - SDR 41	4.21		6.27	8.16	10.20	12.24								
	Thinwall Plastic PVC (ASTM 3034) - SDR 35	4.21		6.27	8.40	10.50	12.50		15.30		18.70		22.05	24.80	
	Thinwall Plastic ABS (ASTM 2751)	4.21	5.30	6.27	8.40	10.50	12.50								
MISC.	Armco Truss				9.40	11.80	14.10								
	Orangeburg	4.64	5.82	6.92	9.14	11.24	13.44								
	Asbestos Cement Class 1500 - Transite	4.62	5.90	6.92	9.02	11.12	13.22	15.30	16.34	17.38					
	Concrete	6.00	6.50	8.00	10.25	12.75	15.10		19.90		22.60		26.60	30.60	34.10

Limited Warranty

Mission Rubber Company LLC warrants (its) products against defects in workmanship or materials for a period of one (1) year and will replace defective product returned to it within that time period. No charges for labor or expenses required to repair defective materials or damages occasioned by them will be allowed. No warranty of merchantability or fitness for particular purpose shall apply. Mission Rubber Company LLC shall not in any case be liable for special, incidental, economical or consequential damages, and makes no other representations or warranties, whether oral or written, expressed or implied.



Keep Smilin'



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