

# Central Grooved Piping Products



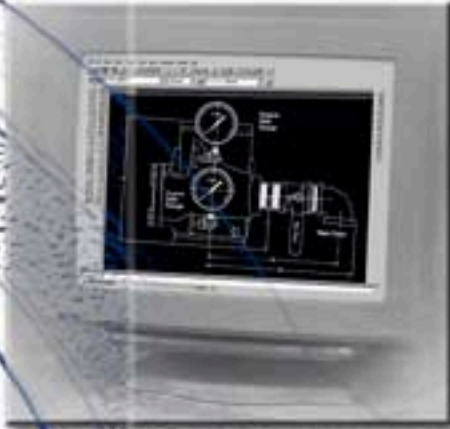
# FIRE PROTECTION

**tyco** / Flow Control / **Tyco Fire Products**



## INDUSTRY LEADERSHIP THROUGH **INNOVATION AND ENGINEERING EXCELLENCE**

Tyco Fire Products and Central Grooved Piping Products are ISO 9001 Certified with products manufactured in our newly constructed domestic ductile iron foundry and manufacturing facilities. We are committed to maintaining our leadership role in the grooved piping industry through aggressive research and development. The products that will improve our industry tomorrow are being designed today. With this level of investment and commitment, Tyco Fire Products is quickly becoming the industry standard.



Tyco Fire Products is a world leader in the manufacture and distribution of piping products. Years of development, engineering, pattern and tooling making, and the acquisition of the necessary resources have provided the finest grooved products available on the market today. Grooved Piping Products are domestically manufactured to the highest quality standards as set forth by independent testing laboratories.

Our grooved product line utilizes industry leading manufacturing technology. Our Disamatic molding centers have the ability to cast ductile iron products to extremely tight tolerances. Computer controlled data systems in the foundry provide confidence that all equipment and processes are operating within specified guidelines. Rubber gaskets and components are injection molded at our facility using innovative processes to comply with exacting tolerances and specifications.

Tyco Fire Products takes pride in its total quality management approach as demonstrated by our ISO 9001 Certification. Quality management is defined in terms of performance, features, dependability, conformance, and durability.

The Quality process starts in the design phase. Performance and durability are designed into each product. Our modern manufacturing facilities conform to rigid engineering specifications.

Tyco Fire Products Engineering Facility, directs product development from the concept through design, testing and manufacturing. Our engineering & technical services group establishes all parameters of application engineering and quality assurance. Owners, architects, consulting engineers, contractors and tenants demand the most dependable, quality grooved products for their piping systems—our engineering staff ensures their demands are met each and every time.



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Refer to our Grooved Piping Products Handbook for detailed installation instructions

**Factory Mutual Research Corporation  
CERTIFICATE OF REGISTRATION**

FMRC certifies herewith that

**TYCO FIRE PRODUCTS  
1550 Valley Center Parkway, Suite 135  
Bethlehem, PA 18017**

has demonstrated a Quality Assurance System  
that complies with the requirements of

**ISO 9001**

Scope:

**DESIGN AND MANUFACTURE OF CASTINGS,  
PIPE COUPLINGS, FITTINGS, VALVES, AND  
RELATED PIPING SYSTEM PRODUCTS**


Registration No.

**990604.1**

Expiration Date

**June 30, 2002**

This registration is subject to ongoing audits by FMRC.  
Any change to the basis of this registration requires  
acceptance in writing by FMRC.

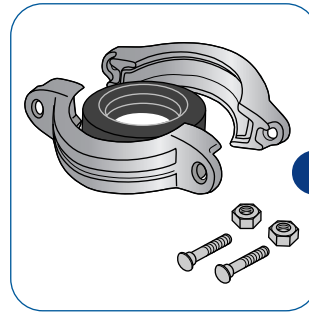
  
John Rennie, Vice President

June 10, 1999  
Date



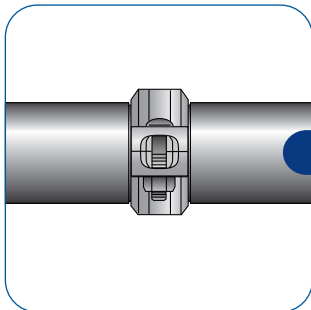
Central Grooved Piping Products provide several design and economic advantages compared to welded or flanged joints.

The Central grooved system makes field modifications easier since every joint is a union.



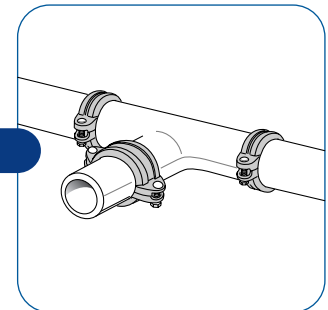
## Economical

Central grooved couplings are the fastest method of joining steel pipe. Grooved coupling eliminate the need for two holing , and the potential of fire hazards associated with welding.



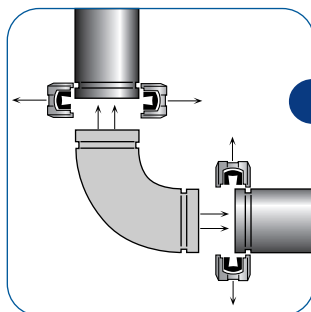
## Rigidity

Central rigid grooved couplings are ideally suited for arm over, valve and fitting connections, long runs, and risers where pipe movement is undesirable. Rigid couplings provide for joints that are comparable to threaded, welded & flanged joints.



## Alignment

Every Central grooved coupling is a union that provides easy access for maintenance or piping system modification. Field modification can be handled easily with minimal effort due to the interchangeability of the grooved products.



## Retrofit

The Central Grooved System method allows for quick economical changes as necessary for field retrofit, and the ability to isolate equipment and piping systems for tenant changes and system repair.

## Dependability

The coupling housings are designed to engage into the pipe grooves and provide a secure joint. The pipe ends are sealed by a pressure responsive gasket which is encapsulated by the coupling's ductile iron housing.

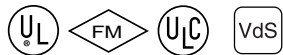
## Flexibility

Central flexible grooved couplings allow for deflection of the piping system.

**ISO 9001 CERTIFIED - Tyco Fire Products is ISO 9001 Certified confirming conformance to the quality standards of our products.**

### GOVERNMENT AGENCIES

**Coast Guard** - Approved each vessel individually  
**Corps of Engineers (COE)** - GEGS 15000  
**Federal Aviation Administration (FAA)**  
 HVAC, Plumbing and Fire Protection  
**Federal Housing Administration (FHA)**  
**General Services Administration (GSA)** - 15000 Series  
**Military Specifications (MIL)**  
 MIL P - 10388 Fittings;  
 MIL - C - 10387 Couplings;  
 MIL - P - 11087A (CE) Steel Pipe,  
 Grooved MIL - I - 45208 Inspection Procedure  
**National Aeronautics and Space Administration (NASA)**  
**Naval Facilities Engineering Command (NAVFAC)** -  
 NFGS 15000 Series  
**National Institute of Health (NIH)** - Dept. of Health - 15000 Series  
**Veterans Affairs (VA)** - 15000 Series



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

### GENERAL CODE GROUPS, ASSOCIATIONS, LABORATORIES AND APPROVAL BODIES

**American Bureau of Shipping (ABS)**  
**American National Standards Institute / American Water Works Association (ANSI / AWWA)**  
**American Petroleum Institute (API)** - API Std. 5L, Sect. 7.5  
**American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)**  
**American Society of Mechanical Engineers (ASME)**  
 Power Piping, B-31.1; Chemical Plant and Petroleum Refinery Piping, B-31.3; Refrigeration Piping, B-31.5; Building Services Piping, B-31.9.  
**Building Officials and Code Administrators (BOCA)**  
**Factory Mutual Engineering Corp. (FM)** - Approved for Fire Protection Services  
**Material Equipment and Acceptance (MEA)**  
**National Fire Protection Association (NFPA)**  
**New York Board of Standards and Appeals (NY-BSA)**  
**Southern Building Code Congress International (SBCCI)** - Standard Plumbing  
**Underwriter's Laboratories, Inc. (UL)** - Listed for Fire Protection Services  
**Underwriters Laboratories of Canada (ULC)** — Listed for Fire Protection Services

## Material Specifications

### Metallurgical Specifications:

Central Grooved Piping Products are domestically manufactured in our state of the art ductile iron foundry. The following applicable material specifications for ductile iron, galvanizing and gaskets apply:

### Housing / Fitting Specifications:

ASTM A-536 - Standard Specification for Ductile Iron Castings Grade 65-45-12  
 Tensile Strength, minimum psi - 65,000  
 Yield Strength, minimum psi - 45,000  
 Elongation - 2" or 50mm, minimum - 12%  
 ASTM A-153 - Standard Specification for Hot Dip Galvanizing

### Gasket Specifications:

Grade 'E' EPDM gaskets have a green color code identification and conform to ASTM D-2000 for service temperature from -30°F (-34°C) to 230°F (110°C). They are recommended for hot water not to exceed 230°F (110°C), plus a variety of dilute acids, oil free air and many chemical services. They are not recommended for petroleum services.

Grade 'A' EPDM gaskets have a violet color code identification, and conform to ASTM D-2000 for fire protection services. They are not recommended for hot water services. **For dry pipe or freezer systems, use tri-seal Grade 'E' gaskets with a petroleum free silicone lubricant.**

### Bolt / Nut Specifications:

Bolts and Nuts: Coupling bolts and nuts are heat treated carbon steel, oval-neck track head bolts and heavy hex nuts, conform to ASTM A-183 with a minimum tensile strength of 110,000 psi. Bolts and nuts are Zinc electroplated.

### Paint Specifications:

Orange - non lead (standard)  
 Fire Brigade Red - non lead (optional)

Figure 572 Rigid Couplings are capable of pressures up to 300 psi and provide a rigid joint by firmly gripping the pipe grooves. Rigid Couplings are preferred for dry pipe and freezer applications. Figure 572 Rigid Couplings are a proven dependable method of joining pipe and are an economical alternative to welding, threading, or flanges, and can be used on a variety of pipe and wall thicknesses. The Figure 572 Coupling has an

Anti-Rotation Feature of “gripping teeth” along the coupling keys that make the Figure 572 perfectly suited for “arm over” installations where the likelihood of rotation is greatest. This feature may eliminate the need of extra hangers to support the arm over, saving time and cost.



Patented



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

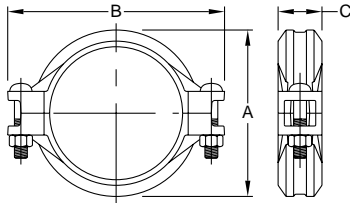


Figure 572 - Rigid Coupling

Pipe		Max. * End Gap Inches mm	Max. † Pressure psi kPa	Max. † End Load Lbs. N	Dimensions			Bolt Size Dia. x Lg.	Net Wt. Lbs. Kg.
Size	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm		
1¼"	1.660 42.2	0.06 1.5	300 2,068	650 2,891	2.56 65.0	4.09 103.9	1.69 42.9	¾" x 2¼" 0.9 0.4	
1½"	1.900 48.3	0.06 1.5	300 2,068	850 3,783	2.81 71.4	4.38 111.3	1.81 46.0	¾" x 2¼" 1.0 0.5	
2"	2.375 60.3	0.06 1.5	300 2,068	1,329 5,914	3.31 84.1	4.82 122.4	1.88 47.8	¾" x 2¼" 1.2 0.5	
2½"	2.875 73.0	0.06 1.5	300 2,068	1,948 8,668	3.81 96.8	5.38 136.7	1.88 47.8	¾" x 2¼" 1.3 0.6	
3"	3.500 88.9	0.06 1.5	300 2,068	2,886 12,843	4.50 114.3	6.06 153.9	1.88 47.8	¾" x 2¼" 1.7 0.8	
4"	4.500 114.3	0.19 4.8	300 2,068	4,771 21,231	5.69 144.5	7.38 187.5	1.88 47.8	¾" x 2¼" 2.7 1.2	
6"	6.625 168.3	0.19 4.8	300 2,068	10,341 46,018	7.94 201.7	9.88 251.0	1.88 47.8	½" x 3" 5.3 2.4	
8"	8.625 219.1	0.19 4.8	300 2,068	17,528 78,000	10.13 257.3	12.69 322.3	2.25 57.2	5⁄8" x 3" 7.2 3.3	

\* Maximum available gap between pipe ends. Minimum gap = 0.

† Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe materials and/or wall thickness. Contact Tyco Fire Products for details.

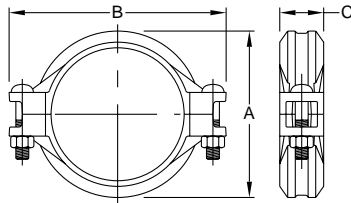
**General Notes:** This catalog is general in nature and does not include details on assembly instructions. Additional information is included in our data sheets and is available upon request. It is the Designer's responsibility to select products suitable for the intended service and to ensure that pressure ratings and performance data is not exceeded. Systems should always be depressurized and drained before removing any piping component. Material and gasket selections should be verified to be compatible for the specific application. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

The Figure 772 Rigid Coupling provides a rigid joint by firmly gripping the circumference of the pipe grooves. Rigid Couplings are preferred for dry pipe and freezer applications. Central rigid couplings are a proven dependable method of joining pipe and are an economical alternative to

welding, threading or flanges, and can be used on a variety of pipe material and wall thicknesses. The Figure 772 Coupling is UL Listed for grounding and bonding, and is suitable for bonding systems with a maximum service entrance capacity of 200 amps.



Patented



Sizes 1¼" - 12"



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 772 - Rigid Coupling									
PIPE		Max. ‡ End Gap Inches mm	Max. † Pressure psi Kpa	Max. † End Load Lbs. N	DIMENSIONS			Bolt Size** Dia. X Lg.	Net Wt. Lbs. Kg.
Size	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm		
1¼"	1.660 42.2	0.06 1.5	300 2,068	649 2,887	2.75 69.9	4.38 111.3	1.81 46.0	¾" x 2¼"	1.0 0.5
1½"	1.900 48.3	0.08 2.0	500 3,447	1,417 6,303	3.00 76.2	4.62 117.3	1.81 46.0	¾" x 2¼"	1.0 0.5
2"	2.375 60.3	0.13 3.3	500 3,447	2,214 9,848	3.41 86.6	5.12 130.0	1.88 47.8	¾" x 2¼"	1.5 0.7
2½"	2.875 73.0	0.13 3.3	500 3,447	3,244 14,430	3.91 99.3	5.63 143.0	1.88 47.8	¾" x 2¼"	2.5 1.1
76.1mm	3.000 76.2	0.13 3.3	300 2,068	2,120 9,430	4.19 106.4	5.72 145.3	2.00 50.8	M10 x 57	2.6 1.2
3"	3.500 88.9	0.13 3.3	500 3,447	4,808 21,387	4.63 117.6	6.25 158.8	1.88 47.8	¾" x 2¼"	2.6 1.2
4"	4.500 114.3	0.19 4.8	500 3,447	7,948 35,353	5.81 147.6	7.50 190.5	1.97 50.0	¾" x 2¼"	3.5 1.6
5"	5.563 141.3	0.19 4.8	300 2,068	7,288 32,417	7.09 180.1	9.72 246.9	2.06 52.3	⅝" x 3¼"	7.5 3.4
165.1mm	6.500 165.1	0.19 4.8	300 2,068	9,950 44,258	8.09 205.5	10.53 267.5	2.13 54.1	M16 x 83	7.6 3.4
6"	6.625 168.3	0.19 4.8	400 2,758	13,782 61,302	8.09 205.5	10.53 267.5	2.13 54.1	⅝" x 3¼"	7.6 3.4
8"	8.625 219.1	0.19 4.8	450 3,103	26,278 116,885	10.56 268.2	13.56 344.4	2.62 66.5	¾" x 4¾"	18.0 8.2
10"	10.750 273.1	0.13 3.3	250 1,724	22,679 100,876	12.84 326.1	16.41 416.8	2.62 66.5	1" x 6½"	24.6 11.2
12"	12.750 323.9	0.13 3.3	250 1,724	31,903 141,905	15.41 391.4	18.84 478.5	2.62 66.5	1" x 6½"	42.0 19.1

\* Maximum available gap between pipe ends. Minimum gap = 0.

† Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe and/or wall thickness. Contact Tyco Fire Products for details. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

\*\*Metric bolt size used on 76.1mm and 165.1mm couplings.

‡ Max End Gap is for cut grooved standard weight pipe. Values for roll grooved pipe will be ½ that of cut grooved.

Refer to General Notes on Page 8.

Figure 575 Flexible Couplings are capable of pressures up to 300 psi depending on pipe size and wall thickness. They provide a dependable method of joining pipe and are suitable for use in a variety of applications. The Figure 575 incorporates “gripping teeth” along the coupling keys that increase the rotation resistance of the product when pressurized, while still allowing for linear and angular deviations.



Patent Pending



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

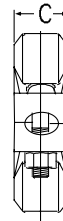
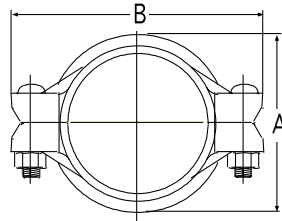


Figure 575 - Flexible Coupling											
Pipe		Max. *‡ End Gap Inches mm	Max. † Pressure psi kPa	Max. † End Load Lbs. N	Dimensions			Deflection‡		Bolt Size Dia. x Lg.	Net Wt. Lbs. Kg.
Size	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm	°Per Coupling	Inches/ Foot mm/m		
1¼"	1.660 42.2	0.09 2.3	300 2,068	650 2,891	2.48 63.0	4.07 103.4	1.69 42.9	3° - 13'	0.67 55.8	¾" x 2¼"	0.9 0.4
1½"	1.900 48.3	0.09 2.3	300 2,068	1,083 4,817	2.72 69.1	4.32 109.7	1.69 42.9	2° - 48'	0.59 49.2	¾" x 2¼"	1.0 0.5
2"	2.375 60.3	0.09 2.3	300 2,068	1,329 5,912	3.22 81.8	4.82 122.4	1.69 42.9	2° - 15'	0.47 39.2	¾" x 2¼"	1.2 0.5
2½"	2.875 73.0	0.09 2.3	300 2,068	1,948 8,665	3.72 94.5	5.38 136.7	1.72 43.7	1° - 51'	0.39 32.5	¾" x 2¼"	1.3 0.6
3"	3.500 88.9	0.09 2.3	300 2,068	2,886 12,838	4.38 111.3	6.06 153.9	1.72 43.7	1° - 31'	0.32 26.7	¾" x 2¼"	1.7 0.8
4"	4.500 114.3	0.19 4.8	300 2,068	4,771 21,222	5.58 141.7	7.38 187.5	1.80 45.7	2° - 24'	0.50 41.7	¾" x 2¼"	2.7 1.2
6"	6.625 168.3	0.19 4.8	300 2,068	10,341 45,999	7.86 199.6	9.88 251.0	1.88 47.8	1° - 38'	0.34 28.3	½" x 3"	5.3 2.4
8"	8.625 219.1	0.19 4.8	300 2,068	17,527 77,964	10.06 255.5	12.66 321.6	2.25 57.2	1° - 16'	0.26 21.7	⅝" x 3"	7.2 3.3

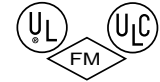
\* Maximum available gap between pipe ends. Minimum gap = 0.

† Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe and/or wall thickness. Contact Tyco Fire Products for details. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

‡ Max end gap and deflection are for cut groove standard weight pipe. Values for roll groove pipe will be ½ that of cut groove.

Refer to General Notes on Page 8.

The Figure 705 Flexible Coupling is capable of pressures up to 300 psig depending on pipe size and wall thickness. It provides a dependable method of joining pipe and is suitable for use in a variety of applications.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

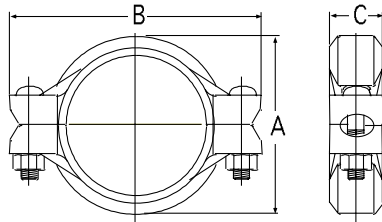


Figure 705 - Flexible Coupling

PIPE		Max. *‡ End Gap Inches mm	Max. † Pressure psi Kpa	Max. † End Load Lbs. N	DIMENSIONS			DEFLECTION ‡		Bolt Size** Dia. X Lg.	Net Wt. Lbs. Kg.
Size	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm	Degrees Per Coupling	In/Ft mm/m		
1¼"	1.660 42.2	0.13 3.3	300 2,068	649 2,887	2.53 64.3	4.19 106.4	1.81 46.0	4° - 19'	0.90 75.0	¾" x 2¼"	1.5 0.7
1½"	1.900 48.3	0.13 3.3	300 2,068	850 3,781	2.75 69.9	4.43 112.5	1.81 46.0	3° - 46'	0.79 65.8	¾" x 2¼"	1.6 0.7
2"	2.375 60.3	0.13 3.3	300 2,068	1,328 5,907	3.25 82.6	4.84 122.9	1.88 47.8	3° - 1'	0.63 52.5	¾" x 2¼"	1.7 0.8
2½"	2.875 73.0	0.13 3.3	300 2,068	1,947 8,660	3.69 93.7	5.50 139.7	1.88 47.8	2° - 29'	0.52 43.3	¾" x 2¼"	2.0 0.9
76.1mm	3.000 76.2	0.13 3.3	300 2,068	2,120 9,430	3.97 100.8	5.75 146.1	1.88 47.8	2° - 23'	0.50 41.7	M12 x 76	3.1 1.4
3"	3.500 88.9	0.13 3.3	300 2,068	2,885 12,832	4.38 111.3	6.50 165.1	1.88 47.8	2° - 3'	0.43 35.8	½" x 3"	3.0 1.4
4"	4.500 114.3	0.25 6.4	300 2,068	4,769 21,213	5.68 144.3	7.75 196.9	2.06 52.3	3° - 11'	0.67 55.8	½" x 3"	4.0 1.8
5"	5.563 141.3	0.25 6.4	300 2,068	7,288 32,417	6.88 174.8	9.72 246.9	2.06 52.3	2° - 35'	0.54 45.0	⅝" x 3¼"	7.0 3.2
165.1mm	6.500 165.1	0.25 6.4	300 2,068	9,950 44,258	7.75 196.9	10.68 271.3	2.06 52.3	2° - 12'	0.46 38.3	M16 x 83	7.1 3.2
6"	6.625 168.3	0.25 6.4	300 2,068	10,336 45,975	7.91 200.9	10.68 271.3	2.06 52.3	2° - 10'	0.45 37.5	⅝" x 3¼"	7.1 3.2
8"	8.625 219.1	0.25 6.4	300 2,068	17,519 77,925	10.19 258.8	13.56 344.4	2.47 62.7	1° - 40'	0.35 29.2	¾" x 4¾"	14.5 6.6
10"	10.750 273.1	0.25 6.4	250 1,724	22,679 100,876	12.69 322.3	16.38 416.1	2.63 66.8	1° - 20'	0.28 23.3	1" x 6½"	28.0 12.7
12"	12.750 323.9	0.25 6.4	250 1,724	31,903 141,905	14.91 378.7	18.84 478.5	2.63 66.8	1° - 7'	0.23 19.2	1" x 6½"	36.5 16.6

\* Maximum available gap between pipe ends. Minimum gap = 0.

† Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe and/or wall thickness.

Contact Tyco Fire Products for details. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

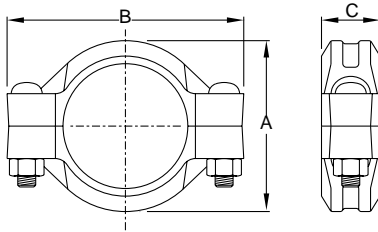
\*\*Metric bolt size used on 76.1mm and 165.1mm couplings.

‡ Max End Gap and Deflection are for cut grooved standard weight pipe. Values for roll grooved pipe will be ½ that of cut grooved.

Refer to General Notes on Page 8.

# FIGURE 707 — HEAVY DUTY FLEXIBLE COUPLING

The Figure 707 Flexible Coupling is a heavy duty coupling capable of pressures up to 500 psig depending on pipe size and wall thickness. It provides a dependable method of joining pipe and is suitable for use in a variety of applications. Flexible couplings allow linear and angular movement of the pipes.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

**Figure 707 - Heavy Duty Flexible Coupling**

PIPE		Max. †‡ End Gap Inches mm	Max. † Pressure psi Kpa	Max. † End Load Lbs. N	DIMENSIONS			DEFLECTION ‡		Bolt Size** Dia. X Lg.	Net Wt. Lbs. Kg.
Size	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm	Degrees Per Coupling	In/Ft mm/m		
1½"	1.900 48.3	0.13 3.3	500 3,447	1,418 6,308	2.97 75.4	4.63 117.6	1.81 46.0	3° - 46'	0.79 65.8	½" x 3"	2.5 1.1
2"	2.375 60.3	0.13 3.3	500 3,447	2,215 9,853	3.54 89.9	5.25 133.4	1.88 47.8	3° - 1'	0.63 52.5	½" x 3"	3.0 1.4
2½"	2.875 73.0	0.13 3.3	500 3,447	3,246 14,439	4.06 103.1	5.75 146.1	1.88 47.8	2° - 29'	0.52 43.3	½" x 3"	3.5 1.6
76.1mm	3.000 76.2	0.13 3.3	300 2,068	2,121 9,435	4.19 106.4	5.75 146.1	1.88 47.8	2° - 23'	0.50 41.7	M12 x 76	3.7 1.7
3"	3.500 88.9	0.13 3.3	500 3,447	4,811 21,400	4.69 119.1	6.38 162.1	1.88 47.8	2° - 3'	0.43 35.8	½" x 3"	4.0 1.8
4"	4.500 114.3	0.25 6.4	500 3,447	7,952 35,372	5.95 151.1	8.25 209.6	2.06 52.3	3° - 11'	0.67 55.8	⅝" x 3¼"	7.0 3.2
5"	5.563 141.3	0.25 6.4	500 3,447	12,153 54,059	7.08 179.8	10.00 254.0	2.06 52.3	2° - 35'	0.54 45.0	¾" x 4¾"	10.5 4.8
165.1mm	6.500 165.1	0.25 6.4	300 2,068	9,955 44,282	8.19 208.0	11.25 285.8	2.06 52.3	2° - 12'	0.46 38.3	M20 x 121	12.5 5.7
6"	6.625 168.3	0.25 6.4	500 3,447	17,236 76,670	8.30 210.8	11.25 285.8	2.06 52.3	2° - 10'	0.45 37.5	¾" x 4¾"	12.5 5.7
8"	8.625 219.1	0.25 6.4	500 3,447	29,213 129,946	10.68 271.3	14.00 355.6	2.47 62.7	1° - 40'	0.35 29.2	7⁄8" x 6½"	23.5 10.7
10"	10.750 273.1	0.25 6.4	500 3,447	45,381 201,864	13.06 331.7	16.44 417.6	2.63 66.8	1° - 20'	0.28 23.3	1" x 6½"	33.0 15.0
12"	12.750 323.9	0.25 6.4	500 3,447	63,838 283,966	15.39 390.9	18.84 478.5	2.63 66.8	1° - 7'	0.23 19.2	1" x 6½"	37.0 16.8

\* Maximum available gap between pipe ends. Minimum gap = 0.

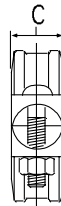
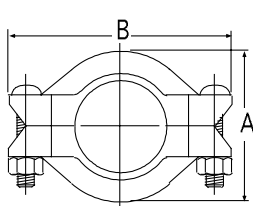
† Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe and/or wall thickness. Contact Tyco Fire Products for details. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

\*\*Metric bolt size used on 76.1mm and 165.1mm couplings.

‡ Max End Gap and Deflection are for cut grooved standard weight pipe. Values for roll grooved pipe will be ½ that of cut grooved.

Refer to General Notes on Page 8.

The Figure 716 Reducing Coupling allows a direct transition between two different pipe sizes, and replaces two couplings and a reducing fitting.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 716 - Reducing Coupling											
PIPE		Max. †‡ End Gap Inches mm	Max. † Pressure psi Kpa	Max. † End Load Lbs. N	DIMENSIONS			DEFLECTION ‡		Bolt Size** Dia. X Lg.	Net Wt. Lbs. Kg.
Size	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm	Degrees Per Coupling	In/Ft mm/m		
2" x 1½"	2.375 x 1.900 60.3 x 48.8	0.13 3.3	350 2,413	992 4,412	3.50 88.9	5.06 128.5	1.88 47.8	1° - 53'	0.39 32.5	¾" x 2¼"	2.0 0.9
2½" x 2"	2.875 x 2.375 73.0 x 60.3	0.13 3.3	350 2,413	1,550 6,894	4.00 101.6	5.50 139.7	1.88 47.8	1° - 33'	0.32 26.7	¾" x 2¼"	2.5 1.1
3" x 2"	3.500 x 2.375 88.9 x 60.3	0.13 3.3	350 2,413	1,550 6,894	4.69 119.1	6.50 165.1	1.88 47.8	1° - 17'	0.27 22.5	½" x 3"	4.5 2.0
3" x 2½"	3.500 x 2.875 88.9 x 73.0	0.13 3.3	350 2,413	2,271 10,101	4.69 119.1	6.50 165.1	1.88 47.8	1° - 17'	0.27 22.5	½" x 3"	4.6 2.1
4" x 2"	4.500 x 2.375 114.3 x 60.3	0.19 4.8	350 2,413	1,550 6,894	6.00 152.4	8.13 206.5	2.00 50.8	2° - 38'	0.55 45.8	⅝" x 3¼"	6.0 2.7
4" x 2½"	4.500 x 2.875 114.3 x 73.0	0.19 4.8	350 2,413	2,271 10,101	6.00 152.4	8.13 206.5	2.00 50.8	2° - 38'	0.55 45.8	⅝" x 3¼"	6.1 2.8
4" x 3"	4.500 x 3.500 114.3 x 88.9	0.19 4.8	350 2,413	3,366 14,972	6.00 152.4	8.13 206.5	2.00 50.8	2° - 38'	0.55 45.8	⅝" x 3¼"	6.2 2.8
5" x 4"	5.563 x 4.500 141.3 x 114.3	0.25 6.4	350 2,413	5,564 24,749	7.13 181.1	9.56 242.8	2.06 52.3	2° - 5'	0.44 36.7	¾" x 4¾"	10.1 4.6
6" x 4"	6.625 x 4.500 168.3 x 114.3	0.25 6.4	300 2,068	4,769 21,213	8.38 212.9	10.88 276.4	2.06 52.3	1° - 44'	0.36 30.0	¾" x 4¾"	11.6 5.3
6" x 5"	6.625 x 5.563 168.3 x 141.3	0.25 6.4	300 2,068	7,288 32,417	8.38 212.9	10.88 276.4	2.06 52.3	1° - 44'	0.36 30.0	¾" x 4¾"	11.7 5.3
8" x 6"	8.625 x 6.625 219.1 x 168.3	0.25 6.4	300 2,068	10,336 45,975	10.69 271.5	13.75 349.3	2.25 57.2	1° - 15'	0.26 21.7	⅞" x 6½"	21.6 9.8

\* Maximum available gap between pipe ends. Minimum gap = 0.06" (with optional metal insert).

† Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe and/or wall thickness. Contact Tyco Fire Products for details. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

‡ Max End Gap and Deflection are for cut grooved standard weight pipe. Values for roll grooved pipe will be ½ that of cut grooved.

Refer to General Notes on Page 8.

Figure 730 Mechanical Tees are rated at 300 psi on Schedule 40 steel pipe and can be used in place of a tee, a cross, or a welded connection where a threaded or grooved outlet is needed. The Mechanical Tee is ideal for use in retrofit or

equipment hookup installations, as it can be positioned along the pipe at the proper location in the field, ensuring exact lineup of the branch outlet connection.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

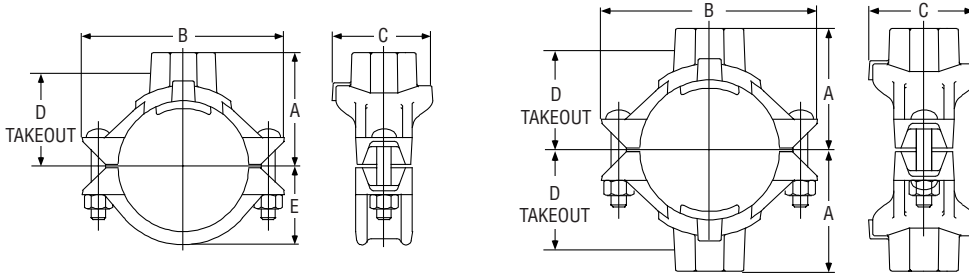


Figure 730 - Mechanical Tee (Threaded)

Nom. Size Run x Branch	Hole Dia. †		DIMENSIONS					Net Wt. Lbs. Kg.
	Hole In. mm	Max. In. mm	A In. mm	B In. mm	C In. mm	D In. mm	E In. mm	
2" x 1/2", 3/4", 1"	1 1/2 38.1	1 5/8 41.3	2.62 66.5	4.88 124.0	3.07 78.0	2.12 53.8	1.59 40.4	2.2 1.0
2" x 1 1/4"	1 3/4 44.5	1 7/8 47.6	2.78 70.6	4.88 124.0	3.32 84.3	1.93 49.0	1.59 40.4	2.5 1.1
2" x 1 1/2"	1 3/4 44.5	1 7/8 47.6	2.78 70.6	4.88 124.0	3.32 84.3	1.93 49.0	1.59 40.4	2.5 1.1
2 1/2" x 1/2", 3/4", 1"	1 1/2 38.1	1 5/8 41.3	2.88 73.2	5.25 133.4	3.07 78.0	2.38 60.5	1.81 46.0	2.7 1.2
2 1/2" x 1 1/4"	2 50.8	2 1/8 54.0	3.00 76.2	5.25 133.4	3.56 90.4	2.19 55.6	1.81 46.0	3.1 1.4
2 1/2" x 1 1/2"	2 50.8	2 1/8 54.0	3.07 78.0	5.25 133.4	3.59 91.2	2.17 55.1	1.81 46.0	3.3 1.5
3" x 1/2", 3/4", 1"	1 1/2 38.1	1 5/8 41.3	3.19 81.0	6.13 155.7	3.07 78.0	2.56 65.0	2.21 56.1	3.7 1.7
3" x 1 1/4"	1 3/4* 44.5	1 7/8 47.6	3.34 84.8	6.13 155.7	3.32 84.3	2.50 63.5	2.21 56.1	3.9 1.8
3" x 1 1/2"	2 50.8	2 1/8 54.0	3.38 85.9	6.13 155.7	3.56 90.4	2.48 63.0	2.21 56.1	4.2 1.9
3" x 2"	2 1/2 63.5	2 5/8 66.7	3.50 88.9	6.13 155.7	4.09 103.9	2.75 69.9	2.21 56.1	4.7 2.1
4" x 1/2", 3/4", 1"	1 1/2 38.1	1 5/8 41.3	3.69 93.7	7.13 181.1	3.07 78.0	3.06 77.7	2.78 70.6	5.5 2.5
4" x 1 1/4"	1 3/4* 44.5	1 7/8 47.6	3.92 99.6	7.13 181.1	3.32 84.3	3.00 76.2	2.78 70.6	5.5 2.5
4" x 1 1/2"	2 50.8	2 1/8 54.0	4.00 101.6	7.13 181.1	3.56 90.4	2.98 75.7	2.78 70.6	5.5 2.5
4" x 2"	2 1/2 63.5	2 5/8 66.7	4.00 101.6	7.13 181.1	4.06 103.1	3.25 82.6	2.78 70.6	6.0 2.7
4" x 2 1/2"	2 3/4 69.9	2 7/8 73.0	4.00 101.6	7.13 181.1	4.38 111.3	3.12 79.2	2.78 70.6	6.0 2.7
4" x 76.1mm	2 3/4 69.9	2 7/8 73.0	4.00 101.6	7.13 181.1	4.38 111.3	3.12 79.2	2.78 70.6	6.0 2.7
4" x 3"	3 1/2 88.9	3 5/8 92.1	4.13 104.9	7.13 181.1	5.13 130.3	3.31 84.1	2.78 70.6	7.0 3.2
5" x 1 1/2"	2 50.8	2 1/8 54.0	4.63 117.6	8.13 206.5	3.56 90.4	4.00 101.6	3.37 85.6	6.5 2.9
5" x 2"	2 1/2 63.5	2 5/8 66.7	4.63 117.6	8.13 206.5	4.06 103.1	3.88 98.6	3.37 85.6	7.1 3.2
5" x 2 1/2"	2 3/4 69.9	2 7/8 73.0	4.75 120.7	8.13 206.5	4.38 111.3	3.88 98.6	3.37 85.6	7.3 3.3
5" x 76.1mm	2 3/4 69.9	2 7/8 73.0	4.75 120.7	8.13 206.5	4.38 111.3	3.88 98.6	3.37 85.6	7.3 3.3
5" x 3"	3 1/2 88.9	3 5/8 92.1	5.00 127.0	8.13 206.5	5.13 130.3	4.06 103.1	3.37 85.6	7.6 3.4
6" x 1 1/2"	2 50.8	2 1/8 54.0	5.13 130.3	9.25 235.0	3.56 90.4	4.04 102.6	3.90 99.1	7.4 3.4
6" x 2"	2 1/2 50.8	2 5/8 66.7	5.13 130.3	9.25 235.0	4.06 103.1	4.31 109.5	3.90 99.1	7.5 3.4
6" x 2 1/2"	2 3/4 69.9	2 7/8 73.0	5.13 130.3	9.25 235.0	4.38 111.3	4.18 106.2	3.90 99.1	7.5 3.4
6" x 76.1mm	2 3/4 69.9	2 7/8 73.0	5.13 130.3	9.25 235.0	4.38 111.3	4.18 106.2	3.90 99.1	7.5 3.4
6" x 3"	3 1/2 88.9	3 5/8 92.1	5.50 139.7	9.25 235.0	5.13 130.3	4.37 111.0	3.90 99.1	9.5 4.3
6" x 4"	4 1/2 114.3	4 5/8 117.5	5.38 136.7	9.25 235.0	6.13 155.7	4.56 115.8	3.90 99.1	10.0 4.5
8" x 2 1/2"	2 3/4 69.9	2 7/8 73.0	6.25 158.8	12.50 317.5	4.38 111.3	5.12 130.0	4.90 124.5	10.2 4.6
8" x 76.1mm	2 3/4 69.9	2 7/8 73.0	6.25 158.8	12.50 317.5	4.38 111.3	5.12 130.0	4.90 124.5	10.2 4.6
8" x 3"	3 1/2 88.9	3 5/8 92.1	6.50 165.1	12.50 317.5	5.13 130.3	5.37 136.4	4.90 124.5	12.5 5.7
8" x 4"	4 1/2 114.3	4 5/8 117.5	6.38 162.1	12.50 317.5	6.13 155.7	5.56 141.2	4.90 124.5	12.5 5.7

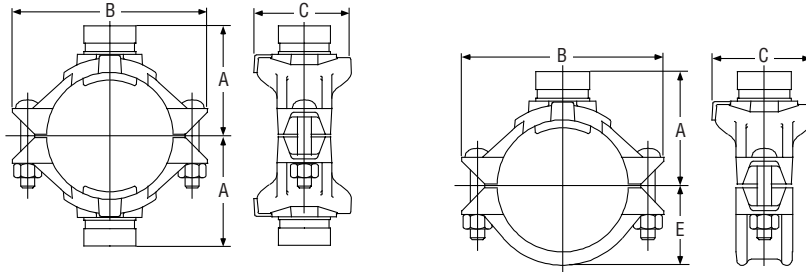
† Proper hole preparation is required for effective sealing and performance. Check the pipe seal surface within 1/8" of the hole to be certain it is free from conditions which would affect proper gasket sealing. Remove any sharp or rough edges from the hole or upper housing contact area, which might affect assembly, proper seating of the locating collar or flow from the outlet. For crosses, ensure double outlet holes are aligned on opposite sides of the pipe. The use of threaded products other than steel pipe, such as dry pendants, etc. may not be compatible with the female threaded outlet on the Mechanical Tee. Always confirm compatibility by contacting Tyco Fire Products.

\* 3" and 4" x 1 1/4" changed from 2" previously used on the Figure 720.

Note: Outlet threads conforming to BSP are available; contact Tyco Fire Products for details.

Refer to General Notes on Page 8.

All Central Mechanical Tees are provided with a ductile iron lower housing section for increased strength and dependability. This provides stability, rigidity, and inhibits damage to the pipe during tightening, as compared to U-Bolt designs. In addition, all sizes can easily be made into a cross configuration. The gasket is Grade "E" EPDM.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 730 - Mechanical Tee (Grooved)

Nom. Size Run x Branch	HOLE DIA.†		DIMENSIONS				Net Wt. Lbs. Kg.
	Hole Inches mm	Max. Inches mm	A Inches mm	B Inches mm	C Inches mm	E Inches mm	
2" x 1¼"	1¾ 44.5	1⅞ 47.6	2.78 70.6	4.88 124.0	3.32 84.3	1.59 40.4	2.5 1.1
2" x 1½"	1¾ 44.5	1⅞ 47.6	2.62 66.5	4.88 124.0	3.32 84.3	1.59 40.4	2.5 1.1
2½" x 1¼"	2 50.8	2⅞ 54.0	3.00 76.2	5.25 133.4	3.56 90.4	1.81 46.0	3.1 1.4
2½" x 1½"	2 50.8	2⅞ 54.0	3.07 78.0	5.25 133.4	3.59 91.2	1.81 46.0	3.3 1.5
3" x 1¼"	1¾* 44.5	1⅞ 47.6	3.34 84.8	6.13 155.7	3.32 84.3	2.21 56.1	3.9 1.8
3" x 1½"	2 50.8	2⅞ 54.0	3.38 85.9	6.13 155.7	3.56 90.4	2.21 56.1	4.2 1.9
3" x 2"	2½ 63.5	2⅞ 66.7	3.50 88.9	6.13 155.7	4.09 103.9	2.21 56.1	4.7 2.1
4" x 1¼"	1¾* 44.5	1⅞ 47.6	3.92 99.6	7.13 181.1	3.32 84.3	2.78 70.6	5.5 2.5
4" x 1½"	2 50.8	2⅞ 54.0	4.00 101.6	7.13 181.1	3.56 90.4	2.78 70.6	5.5 2.5
4" x 2"	2½ 63.5	2⅞ 66.7	4.00 101.6	7.13 181.1	4.06 103.1	2.78 70.6	6.0 2.7
4" x 2½"	2¾ 69.9	2⅞ 73.0	4.00 101.6	7.13 181.1	4.38 111.3	2.78 70.6	6.0 2.7
4" x 76.1mm	2¾ 69.9	2⅞ 73.0	4.00 101.6	7.13 181.1	4.38 111.3	2.78 70.6	6.0 2.7
4" x 3"	3½ 88.9	3⅞ 92.1	4.13 104.9	7.13 181.1	5.13 130.3	2.78 70.6	7.0 3.2
5" x 1½"	2 50.8	2⅞ 54.0	4.63 117.6	8.13 206.5	3.56 90.4	3.37 85.6	6.5 2.9
5" x 2"	2½ 63.5	2⅞ 66.7	4.63 117.6	8.13 206.5	4.06 103.1	3.37 85.6	7.1 3.2
5" x 2½"	2¾ 69.9	2⅞ 73.0	4.75 120.7	8.13 206.5	4.38 111.3	3.37 85.6	7.3 3.3
5" x 76.1mm	2¾ 69.9	2⅞ 73.0	4.75 120.7	8.13 206.5	4.38 111.3	3.37 85.6	7.3 3.3
5" x 3"	3½ 88.9	3⅞ 92.1	5.00 127.0	8.13 206.5	5.13 130.3	3.37 85.6	7.6 3.4
6" x 1½"	2 50.8	2⅞ 54.0	5.13 130.3	9.25 235.0	3.56 90.4	3.90 99.1	7.4 3.4
6" x 2"	2½ 50.8	2⅞ 66.7	5.13 130.3	9.25 235.0	4.06 103.1	3.90 99.1	7.5 3.4
6" x 2½"	2¾ 69.9	2⅞ 73.0	5.13 130.3	9.25 235.0	4.38 111.3	3.90 99.1	7.5 3.4
6" x 76.1mm	2¾ 69.9	2⅞ 73.0	5.13 130.3	9.25 235.0	4.38 111.3	3.90 99.1	7.5 3.4
6" x 3"	3½ 88.9	3⅞ 92.1	5.50 139.7	9.25 235.0	5.13 130.3	3.90 99.1	9.5 4.3
6" x 4"	4½ 114.3	4⅞ 117.5	5.38 136.7	9.25 235.0	6.13 155.7	3.90 99.1	10.0 4.5
8" x 2½"	2¾ 69.9	2⅞ 73.0	6.25 158.8	12.50 317.5	4.38 111.3	4.90 124.5	10.2 4.6
8" x 76.1mm	2¾ 69.9	2⅞ 73.0	6.25 158.8	12.50 317.5	4.38 111.3	4.90 124.5	10.2 4.6
8" x 3"	3½ 88.9	3⅞ 92.1	6.50 165.1	12.50 317.5	5.13 130.3	4.90 124.5	12.5 5.7
8" x 4"	4½ 114.3	4⅞ 117.5	6.38 162.1	12.50 317.5	6.13 155.7	4.90 124.5	12.5 5.7

† Proper hole preparation is required for effective sealing and performance. Check the pipe seal surface within ⅛" of the hole to be certain it is free from conditions which would affect proper gasket sealing. Remove any sharp or rough edges from the hole or upper housing contact area, which might affect assembly, proper seating of the locating collar or flow from the outlet. For crosses, ensure double outlet holes are aligned on opposite sides of the pipe.

\* 3" and 4" x 1¼" changed from 2" previously used on the Figure 720.

Refer to General Notes on Page 8.



The Figure 40-5 Strap is provided with a grade “E” EPDM gasket and is an economical alternative to welded pipe outlets on steel pipe. It may be used with full lengths of pipe and eliminates threading and welding, decreasing installation time. The

40-5 Strap may be used at 175 psi in fire protection wet, dry pipe and deluge systems. The Figure 40-5 is available with Zinc electroplating conforming to ASTM B-633.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

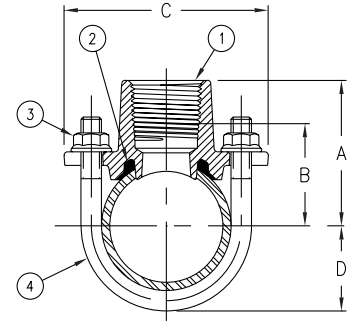


Figure 40-5 - Strap						
Size	A Inches mm	B Inches mm	C Inches mm	D Inches mm	Hole Size Inches mm	Net Wt. Lbs. Kg.
1¼" x ½"	2.00 50.8	1.50 38.1	3.50 88.9	1.20 30.5	1⅜" 30.2	0.84 0.4
1¼" x ¾"	2.00 50.8	1.50 38.1	3.50 88.9	1.20 30.5	1⅜" 30.2	0.88 0.4
1¼" x 1"	2.31 58.7	1.68 42.7	3.50 88.9	1.20 30.5	1⅜" 30.2	1.13 0.5
1½" x ½"	2.12 53.8	1.62 41.1	3.50 88.9	1.32 33.5	1⅜" 30.2	0.84 0.4
1½" x ¾"	2.12 53.8	1.62 41.1	3.50 88.9	1.32 33.5	1⅜" 30.2	0.88 0.4
1½" x 1"	2.43 61.7	1.80 45.7	3.50 88.9	1.32 33.5	1⅜" 30.2	1.13 0.5
2" x ½"	2.36 59.9	1.86 47.2	3.74 95.0	1.55 39.4	1⅜" 30.2	0.88 0.4
2" x ¾"	2.36 59.9	1.86 47.2	3.74 95.0	1.55 39.4	1⅜" 30.2	0.95 0.4
2" x 1"	2.67 67.8	2.04 51.8	3.74 95.0	1.55 39.4	1⅜" 30.2	1.16 0.5
2½" x ½"	2.61 66.3	2.11 53.6	4.25 108.0	1.80 45.7	1⅜" 30.2	0.90 0.4
2½" x ¾"	2.61 66.3	2.11 53.6	4.25 108.0	1.80 45.7	1⅜" 30.2	0.99 0.4
2½" x 1"	2.92 74.2	2.29 58.2	4.25 108.0	1.80 45.7	1⅜" 30.2	1.21 0.5

Note: Outlet threads conforming to BSP are available; Contact Tyco Fire Products for details.

Refer to General Notes on Page 8.

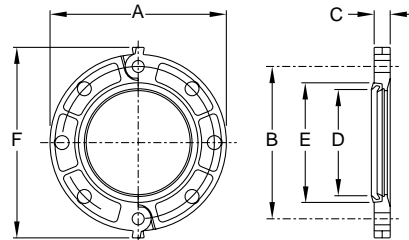
Components	
Item	Description
1	Housing
2	Gasket
3	Flanged Nut
4	U-Bolt

The 1 inch outlets can be used in fire protection systems with a nipple leading directly to a sprinkler. These fittings should be used for hydraulically calculated systems only. This table shows equivalent feet of pipe for various fittings with 1 inch outlets:

Equivalent Feet of Pipe	
Fittings Size	Equivalent Length (1 inch Pipe), Ft.
1¼" x 1"	8'
1½" x 1"	6'
2" x 1"	6'
2½" x 1"	4'

The Figure 71 Flange Adapter allows a direct transition from flanged components to a grooved piping system. Flange bolt patterns conform to ANSI Class 125 and 150 standards.

The gasket seal is designed with optimum amount of rubber to provide a dependable seal and also avoid the overfilling of the gasket pocket that makes assembly difficult.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 71 - Flange Adapter

PIPE		Max.† Pressure psi Kpa	Max.† End Load lbs Kg	DIMENSIONS						BOLTS		Net Lbs. Kg.
Size	O.D. Inches mm			A Inches mm	B Inches mm	C Inches mm	D* Inches mm	E* Inches mm	F Inches mm	Size** Dia. X Lg.	Wt. Qty.	
2"	2.375"	250 1,724	1,107 4,924	6.38 162.1	4.75 120.7	0.75 19.1	2.38 60.5	3.41 86.6	7.25 184.2	5/8" x 3"	4	3.0 1.4
2½"	2.875"	250 1,724	1,622 7,215	7.00 178.0	5.50 140.0	0.88 22.0	2.88 73.0	3.91 99.0	7.88 200.0	5/8" x 3"	4	5.0 2.3
3"	3.500"	250 1,724	2,404 10,693	7.50 190.5	6.00 152.4	0.94 23.9	3.50 88.9	4.53 115.1	9.88 251.0	5/8" x 3"	4	5.6 2.5
4"	4.500"	250 1,724	3,974 17,676	9.00 228.6	7.50 190.5	0.94 23.9	4.50 114.3	5.53 140.5	9.90 251.5	5/8" x 3"	8	7.0 3.2
5"	5.563"	250 1,724	6,073 27,013	10.00 254.0	8.50 215.9	1.00 25.4	5.56 141.2	6.72 170.7	11.38 289.1	¾" x 3½"	8	9.2 4.2
6"	6.625"	250 1,724	8,614 38,315	11.00 279.4	9.50 241.3	1.00 25.4	6.62 168.1	7.78 197.6	11.88 301.8	¾" x 3½"	8	10.0 4.5
8"	8.625"	250 1,724	14,599 64,936	13.50 342.9	11.75 298.5	1.13 28.7	8.62 218.9	9.94 252.5	14.38 365.3	¾" x 3½"	8	16.6 7.5
10"	10.750"	250 1,724	22,679 100,876	16.00 406.4	14.25 362.0	1.19 30.2	10.75 273.1	12.31 312.7	16.88 428.8	7/8" x 4"	12	21.8 9.9
12"	12.750"	250 1,724	31,903 141,905	19.00 482.6	17.00 431.8	1.25 31.8	12.75 323.9	14.31 363.5	20.00 508.0	7/8" x 4"	12	24.2 11.0

† Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe and/or wall thickness. Contact Tyco Fire Products for details. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

\* Dimensions D and E represent minimum and maximum sealing surfaces.

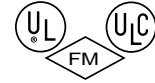
\*\*Bolts are not supplied. Bolt lengths shown are standard; it is the responsibility of the purchaser to verify correct length for the intended application.

Refer to General Notes on Page 8.

# FITTINGS ———— FIGURE 201, 210, 219, 501, 510, 519

Central Grooved fittings provide an economical and efficient method of changing direction, adding an outlet, reducing, or capping grooved piping systems. Central fittings are available in durable ductile iron (indicated by note "d"), stainless steel, and fabricated

steel. Grooved fittings are rated at the pressure rating of the coupling, and pipe being used, not to exceed the maximum rating in the chart at the bottom of this page. Series 300 and 501, 510, 510 DE and 519 grooved fittings maximum rating 300 psi.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

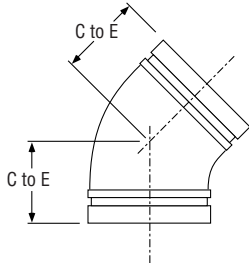


Figure 201/501

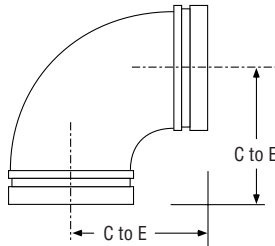


Figure 210/510

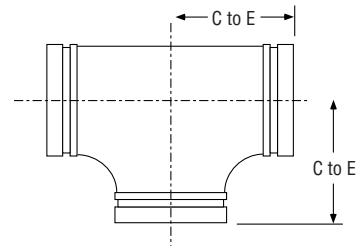


Figure 219/519

Figure 201, 210, 219, 501, 510, 519 - Fittings

Nominal Size Inches	FIGURE 201 45° ELBOW		FIGURE 501 45° ELBOW		FIGURE 210 90° ELBOW		FIGURE 510 90° ELBOW		FIGURE 219 TEE		FIGURE 519 TEE	
	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to E Inches mm	Appx. Wt. Lbs. Kg.
1¼"	1.75 <sup>d</sup> 44.5	0.9 0.4	1.75 <sup>d</sup> 44.5	0.8 0.4	2.75 <sup>d</sup> 69.9	1 0.5	2.75 <sup>d</sup> 69.9	1 0.5	2.75 <sup>d</sup> 69.9	1.4 0.6	2.75 <sup>d</sup> 69.9	1.4 0.6
1½"	1.75 <sup>d</sup> 44.5	1.1 0.5	1.75 <sup>d</sup> 44.5	1 0.5	2.75 <sup>d</sup> 69.9	1.2 0.5	2.75 <sup>d</sup> 69.9	1.4 0.6	2.75 <sup>d</sup> 69.9	1.8 0.8	2.75 <sup>d</sup> 69.9	1.8 0.8
2"	2.00 <sup>d</sup> 50.8	1.8 0.8	2 <sup>d</sup> 50.8	1.3 0.6	3.25 <sup>d</sup> 82.6	2 0.9	3.25 <sup>d</sup> 82.6	1.8 0.8	3.25 <sup>d</sup> 82.6	2.7 1.2	3.25 <sup>d</sup> 82.6	2.6 1.2
2½"	2.25 <sup>d</sup> 57.2	2.2 1.0	2.25 <sup>d</sup> 57.2	1.9 0.9	3.75 <sup>d</sup> 95.3	3 1.4	3.75 <sup>d</sup> 95.3	2.7 1.2	3.75 <sup>d</sup> 95.3	5.8 2.6	3.75 <sup>d</sup> 95.3	3.9 1.8
76.1mm	2.25 <sup>d</sup> 57.2	2.2 1.0	-	-	3.75 <sup>d</sup> 95.3	3 1.4	-	-	3.75 <sup>d</sup> 95.3	5.8 2.6	-	-
3"	2.50 <sup>d</sup> 63.5	3.5 1.6	2.50 <sup>d</sup> 63.5	2.6 1.2	4.25 <sup>d</sup> 108	4.5 2	4.25 <sup>d</sup> 108	3.7 1.7	4.25 <sup>d</sup> 108	7.0 3.2	4.25 <sup>d</sup> 108	5.4 2.4
4"	3.00 <sup>d</sup> 76.2	5.2 2.4	3 <sup>d</sup> 76.2	5 2.3	5.00 <sup>d</sup> 127	8.5 3.9	5.00 <sup>d</sup> 127	7.0 3.2	5.00 <sup>d</sup> 127	11.8 5.4	5.00 <sup>d</sup> 127	10.1 4.6
5"	3.25 <sup>d</sup> 82.6	8.5 3.9	3.50 <sup>d</sup> 88.9	8.6 3.9	5.50 <sup>d</sup> 139.7	13.5 6.1	6.5 <sup>d</sup> 165.1	13.4 6.1	5.50 <sup>d</sup> 139.7	17.0 7.7	6.50 <sup>d</sup> 165.1	18.8 8.5
165.1mm	3.50 <sup>d</sup> 88.9	12.0 5.4	-	-	6.50 <sup>d</sup> 165.1	18.5 8.4	-	-	6.50 <sup>d</sup> 165.1	26.0 11.8	-	-
6"	3.50 <sup>d</sup> 88.9	12.0 5.4	4.25 <sup>d</sup> 108	17.2 7.8	6.50 <sup>d</sup> 165.1	18.5 8.4	7.75 <sup>d</sup> 196.9	26.3 11.9	6.50 <sup>d</sup> 165.1	26.0 11.8	7.75 <sup>d</sup> 196.9	36.3 16.5
8"	4.25 <sup>d</sup> 108	23.0 10.4	-	-	7.75 <sup>d</sup> 196.9	36.5 16.6	-	-	7.75 <sup>d</sup> 196.9	45.0 20.4	-	-
10"	4.75 <sup>d,†</sup> 120.7	31.0 14.1	-	-	9.00 <sup>d,*</sup> 228.6	60 27.2	-	-	9.00 <sup>d,**</sup> 228.6	72.1 32.7	-	-
12"	5.25 <sup>d,†</sup> 133.4	40.0 18.1	-	-	10.00 <sup>d,*</sup> 254	67 30.4	-	-	10.00 <sup>d,**</sup> 254	92.5 42	-	-

d - These fittings are only available in domestic ductile iron. All other sizes are fabricated steel.

‡ - Sizes 1¼" thru 12" are available with ½" and 1" tap plug, sizes 14" thru 24" are fabricated dished end caps.

\* - These sizes can also be ordered in the Figure 110 which is cast ductile iron purchased from a foreign supplier.

† - These sizes can also be ordered in the Figure 111 which is cast ductile iron purchased from a foreign supplier.

\*\* - These sizes can also be ordered in the Figure 120 which is cast ductile iron purchased from a foreign supplier.

Refer to General Notes on Page 8.

Figure 201, 210, 219 - Fittings

Figure	Nominal Size (Inches)	RATED PRESSURE (psi)		
		UL	ULC	FM
201	1¼" - 3"	500	500	500
	76.1mm	300	-	300
210	4"	500	400	500
	5"	500	500	500
219	165.1mm	300	-	300
	6"	400	400	400
	8" - 12"	450	450	450

# FITTINGS & END CAP ———— FIGURE 260, 312, 313, 327



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 260 <sup>‡</sup> - End Cap					
Nominal Size Inches	C to E Inches mm	Appx. Wt. Lbs. Kg.	Rated Pressure (psi)		
			UL	ULC	FM
1 1/4"	0.88 <sup>d</sup> 22.4	0.4 0.2	500	500	500
1 1/2"	0.88 <sup>d</sup> 22.4	0.6 0.3	500	500	500
2"	0.88 <sup>d</sup> 22.4	0.9 0.4	500	500	500
2 1/2"	0.88 <sup>d</sup> 22.4	0.9 0.4	500	500	500
76.1mm	0.94 <sup>d</sup> 23.9	1.1 0.5	300	-	300
3"	0.88 <sup>d</sup> 22.4	1.1 0.5	500	500	500
4"	1.00 <sup>d</sup> 25.4	2.6 1.2	500	500	500
5"	1.00 <sup>d</sup> 25.4	5.0 2.3	400	400	400
165.1mm	1.00 <sup>d</sup> 25.4	7.5 3.4	300	-	300
6"	1.00 <sup>d</sup> 25.4	7.5 3.4	400	400	400
8"	1.19 <sup>d</sup> 30.2	12.8 5.8	450	450	450
10"	1.25 <sup>d</sup> 31.8	20.0 9.1	450	450	450
12"	1.25 <sup>d</sup> 31.8	36.0 16.3	250	250	250

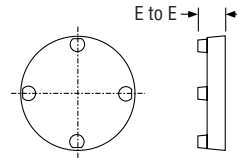


Figure 260  
Sizes 1 1/4" - 12"

d - These fittings are available in domestic ductile iron.

‡ - Sizes 1 1/4" thru 12" are available with 1/2", 3/4" and 1" tap plug. Figure 260 end caps are constructed of durable ductile iron.

Refer to General Notes on Page 8.

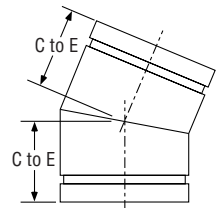


Figure 312

Figure 312, 313, 327 - Fittings						
Nominal Size Inches	FIGURE 312 22 1/2° ELBOW		FIGURE 313 11 1/4° ELBOW		FIGURE 327 CROSS	
	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to E Inches mm	Appx. Wt. Lbs. Kg.
1 1/4"	1.75 44.5	0.4 0.2	1.38 35.1	0.4 0.2	2.75 69.9	2.0 0.9
1 1/2"	1.75 44.5	0.5 0.2	1.38 35.1	0.5 0.2	2.75 69.9	2.2 1.0
2"	1.88 47.8	0.6 0.3	1.38 35.1	0.6 0.3	3.25 82.6	2.7 1.2
2 1/2"	2.00 50.8	0.7 0.3	1.50 38.1	1.1 0.5	3.75 95.3	5.0 2.3
3"	2.25 57.2	1.4 0.6	1.50 38.1	1.2 0.5	4.25 108.0	7.1 3.2
4"	2.63 66.8	2.4 1.1	1.75 44.5	2.2 1.0	5.00 127.0	11.9 5.4
5"	2.88 73.2	4.1 1.9	2.00 50.8	3.3 1.5	5.50 139.7	17.1 7.8
6"	3.13 79.5	5.6 2.5	2.00 50.8	4.6 2.1	6.50 165.1	27.5 12.5
8"	3.88 98.6	11.1 5.0	2.00 50.8	8.7 3.9	7.75 196.9	47.0 21.3
10"	4.38 111.3	14.0 6.4	2.13 54.1	9.1 4.1	9.00 228.6	68.0 30.8
12"	4.88 124.0	22.0 10.0	2.25 57.2	16.7 7.6	10.00 254.0	107.0 48.5

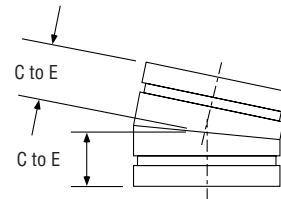


Figure 313

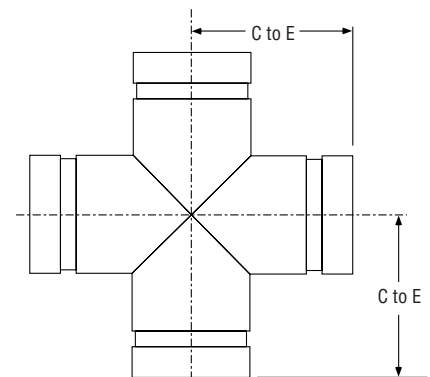


Figure 327

Refer to General Notes on Page 8.

# FITTINGS ———— FIGURE 315, 320, 341, 510 DE

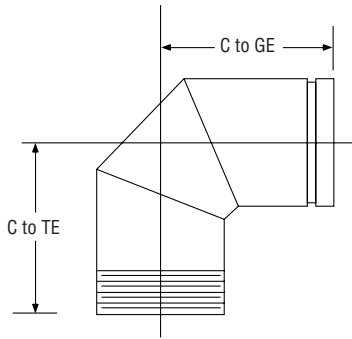


Figure 315

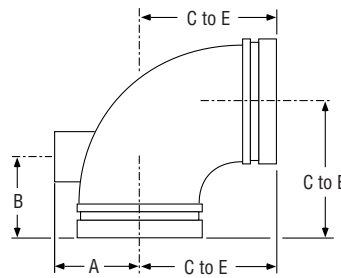


Figure 510DE

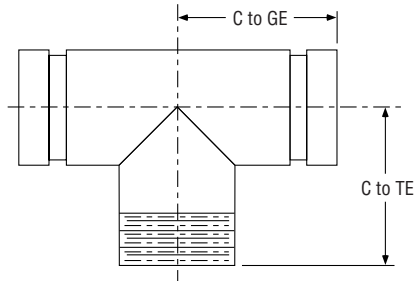


Figure 320

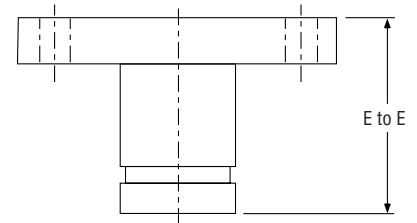


Figure 341



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 315, 320, 326, 341 - Fittings												
Nominal Size Inches	FIGURE 315 GR. X THD 90° ELBOW			FIGURE 320 GR. X GR. X THD TEE			FIGURE 341 150 LBS. FLANGE ADAPTER		FIGURE 510 DE 90° DRIAN ELBOW			
	C to GE Inches mm	C to TE Inches mm	Appx. Wt. Lbs. Kg.	C to GE Inches mm	C to TE Inches mm	Appx. Wt. Lbs. Kg.	E to E Inches mm	Appx. Lbs. Kg.	C to E Inches mm	A Inches mm	B Inches mm	Appx. Wt. Lbs. Kg.
1 1/4"	2.75 69.9	2.75 69.9	1.0 0.5	2.75 69.9	2.75 69.9	1.5 0.7	4.00 101.6	2.8 1.3	-	-	-	-
1 1/2"	2.75 69.9	2.75 69.9	1.2 0.5	2.75 69.9	2.75 69.9	1.9 0.9	4.00 101.6	3.2 1.5	-	-	-	-
2"	3.25 82.6	4.25 108.0	2.3 1.0	3.25 82.6	4.25 108.0	3.2 1.5	4.00 101.6	5.2 2.4	-	-	-	-
2 1/2"	3.75 95.3	3.75 95.3	3.7 1.7	3.75 95.3	3.75 95.3	4.0 1.8	4.00 101.6	8.0 3.6	3.75 95.3	2.00 50.8	2.75 69.9	2.7 1.2
3"	4.25 108.0	6.00 152.4	6.5 2.9	4.25 108.0	6.00 152.4	6.0 2.7	4.00 101.6	10.2 4.6	4.25 108.0	2.34 59.4	2.75 69.9	3.7 1.7
4"	5.00 127.0	7.25 184.2	11.0 5.0	5.00 127.0	7.25 184.2	11.0 5.0	6.00 152.4	17.2 7.8	5.00 127.0	2.85 72.4	2.75 69.9	7.0 3.2
5"	-	-	-	5.50 139.7	5.50 139.7	23.0 10.5	6.00 152.4	21.4 9.7	5.50 139.7	3.38 85.9	2.75 69.9	13.0 6.1
6"	6.50 165.1	6.50 165.1	19.8 9.0	6.50 165.1	6.50 165.1	23.0 10.5	6.00 152.4	26.0 11.8	6.50 165.1	3.92 99.6	2.75 69.9	13.4 6.1
8"	-	-	-	7.75 196.9	7.75 196.9	38.7 17.6	6.00 152.4	38.4 17.4	7.75 196.9	4.95 125.7	2.75 69.9	26.3 11.9
10"	-	-	-	9.00 228.6	9.00 228.6	72.1 32.8	8.00 203.2	65.0 29.5	-	-	-	-
12"	-	-	-	10.00 254.0	10.00 254.0	92.5 42.0	8.00 203.2	91.0 41.3	-	-	-	-

\* - Figure 510 DE 90° Drain Elbows have a standard 1" female threaded outlet  
Refer to General Notes on Page 8.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

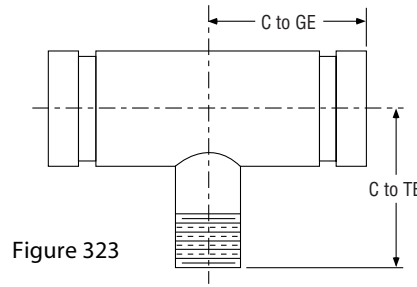
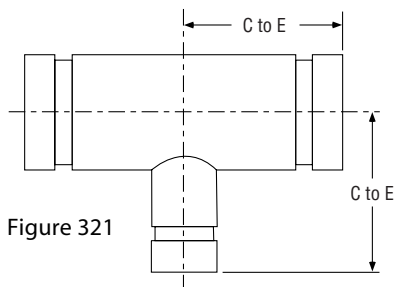


Figure 321 (Groove x Groove), Figure 323 (Groove x Thread) - Reducing Tee

Nominal Size Inches	Figure 321		Figure 323		
	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to GE Inches mm	C to TE Inches mm	Appx. Wt. Lbs. Kg.
1½ x 1½ x 1¼	3.25 82.60	2 0.9	3.25 82.60	3.25 82.60	2.7 1.2
2 x 2 x 1½*	3.25 82.60	2.7 1.2	3.25 82.60	3.25 82.60	2.7 1.2
2½ x 2½ x 1¼	3.75 95.30	4.2 1.9	3.75 95.30	3.75 95.30	4.3 2.0
2½ x 2½ x 1½	3.75 95.30	4.2 1.9	3.75 95.30	3.75 95.30	4.2 1.9
2½ x 2½ x 2*	3.75 95.30	4.3 2	3.75 95.30	3.75 95.30	4.3 2.0
3 x 3 x 1½	4.25 108.00	5.3 2.4	4.25 108.00	4.25 108.00	5.3 2.4
3 x 3 x 2*	4.25 108.00	5.5 2.5	4.25 108.00	4.25 108.00	5.5 2.5
3 x 3 x 2½	4.25 108.00	5.8 2.6	4.25 108.00	4.25 108.00	5.8 2.6
4 x 4 x 1¼	5.00 127.00	9.8 4.4	-	-	-
4 x 4 x 1½	5.00 127.00	9.9 4.5	5.00 127.00	5.00 127.00	9.9 4.5
4 x 4 x 2*	5.00 127.00	10.1 4.6	5.00 127.00	5.00 127.00	10.1 4.6
4 x 4 x 2½*	5.00 127.00	10.3 4.7	5.00 127.00	5.00 127.00	10.3 4.7
4 x 4 x 3*	5.00 127.00	10.5 4.8	5.00 127.00	5.00 127.00	10.5 4.8
5 x 5 x 2	5.50 139.70	14.5 6.6	5.50 139.70	5.50 139.70	14.5 6.6
5 x 5 x 2½	5.50 139.70	14.8 6.7	-	-	-
5 x 5 x 3	5.50 139.70	15.2 6.9	5.50 139.70	5.50 139.70	15.2 6.9
5 x 5 x 4	5.50 139.70	15.8 7.2	5.50 139.70	5.50 139.70	15.8 7.2
6 x 6 x 2	6.50 165.10	26.3 11.9	6.50 165.10	6.50 165.10	26.3 11.9
6 x 6 x 2½	6.50 165.10	26.5 12	6.50 165.10	6.50 165.10	26.5 12.0
6 x 6 x 3*	6.50 165.10	26.5 12	6.50 165.10	6.50 165.10	26.5 12.0

Nominal Size Inches	Figure 321		Figure 323		
	C to E Inches mm	Appx. Wt. Lbs. Kg.	C to GE Inches mm	C to TE Inches mm	Appx. Wt. Lbs. Kg.
6 x 6 x 4*	6.50 165.10	26.6 12.1	6.50 165.10	6.50 165.10	26.6 12.1
6 x 6 x 5	6.50 165.10	27 12.2	6.50 165.10	6.50 165.10	27.0 12.2
8 x 8 x 2	7.75 196.90	36.2 16.4	7.75 196.90	7.75 196.90	36.2 16.4
8 x 8 x 3	7.75 196.90	36.5 16.6	7.75 196.90	7.75 196.90	36.5 16.6
8 x 8 x 4	7.75 196.90	36.6 16.6	7.75 196.90	7.75 196.90	36.6 16.6
8 x 8 x 5	7.75 196.90	36.8 16.7	7.75 196.90	7.75 196.90	36.8 16.7
8 x 8 x 6	7.75 196.90	37 16.8	7.75 196.90	7.75 196.90	37.0 16.8
10 x 10 x 2	9.00 228.60	57.1 25.9	9.00 228.60	9.00 228.60	57.1 25.9
10 x 10 x 3	9.00 228.60	57.4 26	9.00 228.60	9.00 228.60	57.4 26.0
10 x 10 x 4	9.00 228.60	57.6 26.1	9.00 228.60	9.00 228.60	57.6 26.1
10 x 10 x 5	9.00 228.60	57.8 26.2	9.00 228.60	9.00 228.60	57.8 26.2
10 x 10 x 6	9.00 228.60	58 26.3	9.00 228.60	9.00 228.60	58.0 26.3
10 x 10 x 8	9.00 228.60	58.4 26.5	9.00 228.60	9.00 228.60	58.4 26.5
12 x 12 x 3	10.00 254.00	80.2 36.4	10.00 254.00	10.00 254.00	80.2 36.4
12 x 12 x 4	10.00 254.00	80.5 36.5	10.00 254.00	10.00 254.00	80.5 36.5
12 x 12 x 5	10.00 254.00	80.7 36.6	10.00 254.00	10.00 254.00	80.7 36.6
12 x 12 x 6	10.00 254.00	80.9 36.7	10.00 254.00	10.00 254.00	80.9 36.7
12 x 12 x 8	10.00 254.00	91.4 41.5	10.00 254.00	10.00 254.00	91.4 41.5
12 x 12 x 10	10.00 254.00	91.8 41.6	10.00 254.00	10.00 254.00	91.8 41.6

\* - These sizes can also be ordered in the Figure 121 which is cast ductile iron purchased from a foreign supplier. Refer to General Notes on Page 8.

# REDUCERS & NIPPLES — FIGURE 301, 302, 303, 350, 372



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

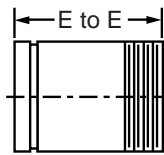


Figure 301

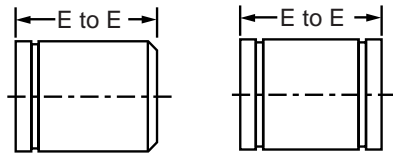


Figure 303

Figure 302

Figure 301, 302, 303 -Adapter Nipples

Nominal Size Inches	E to E Inches mm	Appx. Wt. Lbs. Kg.	Nominal Size Inches	E to E Inches mm	Appx. Wt. Lbs. Kg.
1 <sup>1</sup> / <sub>4</sub>	4.00 101.6	0.8 0.4	5	6.00 152.4	7.4 3.4
1 <sup>1</sup> / <sub>2</sub>	4.00 101.6	0.9 0.4	6	6.00 152.4	9.5 4.3
2	4.00 101.6	1.2 0.5	8	6.00 152.4	14.2 6.4
2 <sup>1</sup> / <sub>2</sub>	4.00 101.6	1.9 0.9	10	8.00 203.2	27.0 12.2
3	4.00 101.6	2.5 1.1	12	8.00 203.2	33.0 15.0
4	6.00 152.4	5.5 2.5			

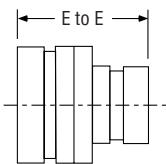


Figure 350  
Sizes 1<sup>1</sup>/<sub>2</sub>" to 6"  
Groove x Groove

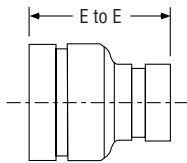


Figure 350  
Sizes 8" to 24"  
Groove x Groove

Figure 350 - Concentric Reducer					
Nominal Size Inches	E to E Inches mm	Appx. Wt. Lbs. Kg.	Nominal Size Inches	E to E Inches mm	Appx. Wt. Lbs. Kg.
1 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	0.6 0.3	6 x 2*	4.00 101.6	6.0 2.7
2 x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	0.8 0.4	6 x 2 <sup>1</sup> / <sub>2</sub>	4.00 101.6	6.0 2.7
2 x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	0.8 0.4	6 x 3*	4.00 101.6	6.0 2.7
2 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	1.0 0.5	6 x 4*	4.00 101.6	5.9 2.7
2 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.3 0.6	6 x 5*	4.00 101.6	5.8 2.6
2 <sup>1</sup> / <sub>2</sub> x 2*	2.50 63.5	1.2 0.5	8 x 2	5.00 127.0	12.2 5.5
3 x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	1.3 0.6	8 x 2 <sup>1</sup> / <sub>2</sub>	5.00 127.0	12.1 5.5
3 x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.3 0.6	8 x 3	5.00 127.0	12.0 5.5
3 x 2*	2.50 63.5	1.3 0.6	8 x 4*	5.00 127.0	11.9 5.4
3 x 2 <sup>1</sup> / <sub>2</sub> *	2.50 63.5	1.5 0.7	8 x 5	5.00 127.0	11.3 5.1
4 x 1 <sup>1</sup> / <sub>4</sub>	3.00 76.2	2.2 1.0	8 x 6*	5.00 127.0	10.8 4.9
4 x 1 <sup>1</sup> / <sub>2</sub>	3.00 76.2	2.3 1.0	10 x 4	6.00 152.4	21.9 10.0
4 x 2*	3.00 76.2	2.3 1.0	10 x 5	6.00 152.4	21.6 9.8
4 x 2 <sup>1</sup> / <sub>2</sub> *	3.00 76.2	2.3 1.0	10 x 6*	6.00 152.4	21.1 9.6
4 x 3*	3.00 76.2	2.6 1.2	10 x 8*	6.00 152.4	19.5 8.9
5 x 1 <sup>1</sup> / <sub>2</sub>	3.50 88.9	4.6 2.1	12 x 4	7.00 177.8	28.0 12.7
5 x 2	3.50 88.9	4.6 2.1	12 x 6	7.00 177.8	30.0 13.6
5 x 2 <sup>1</sup> / <sub>2</sub>	3.50 88.9	4.5 2.0	12 x 8*	7.00 177.8	28.0 12.7
5 x 3	3.50 88.9	4.4 2.0	12 x 10*	7.00 177.8	33.0 15.0
5 x 4*	3.50 88.9	4.5 2.0			

\* These sizes can also be ordered in the Figure 150 Grooved Concentric Reducer which is cast ductile iron purchased from a foreign supplier.

Refer to General Notes on Page 8.

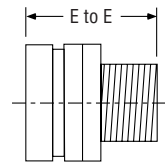


Figure 372  
Groove x Thread

Figure 372

Concentric Reducer

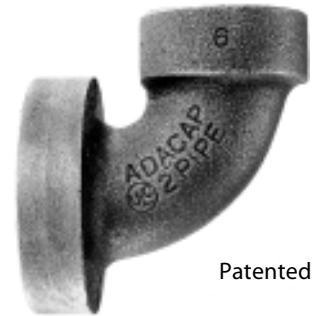
Nominal Size Inches	E to E Inches mm	Appx. Wt. Lbs. Kg.	Nominal Size Inches	E to E Inches mm	Appx. Wt. Lbs. Kg.
1 <sup>1</sup> / <sub>2</sub> x 1	2.50 63.5	0.6 0.3	2 x 3 <sup>1</sup> / <sub>4</sub>	2.50 63.5	1.0 0.5
2 x 3 <sup>1</sup> / <sub>4</sub>	2.50 63.5	1.0 0.5	2 x 1	2.50 63.5	0.8 0.4
2 x 1	2.50 63.5	0.8 0.4	2 x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	0.8 0.4
2 x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	0.8 0.4	2 x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	0.8 0.4
2 x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	0.8 0.4	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	1.0 0.5
2 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>4</sub>	2.50 63.5	1.0 0.5	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.3 0.6
2 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.3 0.6	2 <sup>1</sup> / <sub>2</sub> x 2	2.50 63.5	1.2 0.5
2 <sup>1</sup> / <sub>2</sub> x 2	2.50 63.5	1.2 0.5	3 x 1	2.50 63.5	1.3 0.6
3 x 1	2.50 63.5	1.3 0.6	3 x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.3 0.6
3 x 1 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.3 0.6	3 x 2	2.50 63.5	1.3 0.6
3 x 2	2.50 63.5	1.3 0.6	3 x 2 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.5 0.7
3 x 2 <sup>1</sup> / <sub>2</sub>	2.50 63.5	1.5 0.7	3 <sup>1</sup> / <sub>2</sub> x 3	2.50 63.5	1.5 0.7
3 <sup>1</sup> / <sub>2</sub> x 3	2.50 63.5	1.5 0.7	4 x 1 <sup>1</sup> / <sub>2</sub>	3.00 76.2	2.3 1.0
4 x 1 <sup>1</sup> / <sub>2</sub>	3.00 76.2	2.3 1.0	4 x 2	3.00 76.2	2.3 1.0
4 x 2	3.00 76.2	2.3 1.0	4 x 2 <sup>1</sup> / <sub>2</sub>	3.00 76.2	2.3 1.0
4 x 2 <sup>1</sup> / <sub>2</sub>	3.00 76.2	2.3 1.0	4 x 3	3.00 76.2	2.6 1.2
4 x 3	3.00 76.2	2.6 1.2	5 x 4	3.50 88.9	4.5 2.0
5 x 4	3.50 88.9	4.5 2.0	6 x 2	4.00 101.6	6.0 2.7
6 x 2	4.00 101.6	6.0 2.7	6 x 3	4.00 101.6	6.0 2.7
6 x 3	4.00 101.6	6.0 2.7	6 x 4	4.00 101.6	5.9 2.7
6 x 4	4.00 101.6	5.9 2.7	6 x 5	4.00 101.6	5.8 2.6
6 x 5	4.00 101.6	5.8 2.6			

The Central Ada-Cap is a grooved end cap with an elbow formed into it. It is typically used for installing the last sprinkler head on branch line piping or as a drain fitting. It is available with 1/2", 3/4", or 1" N.P.T outlet sizes.

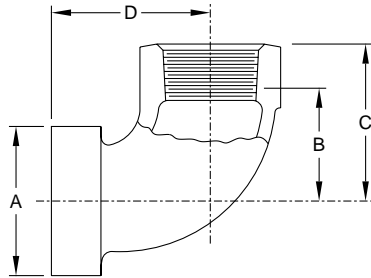
Ada-Caps are rated at 300 psi for fire protection systems. See the specific data sheet for the coupling being used to determine the actual rating.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.



Patented



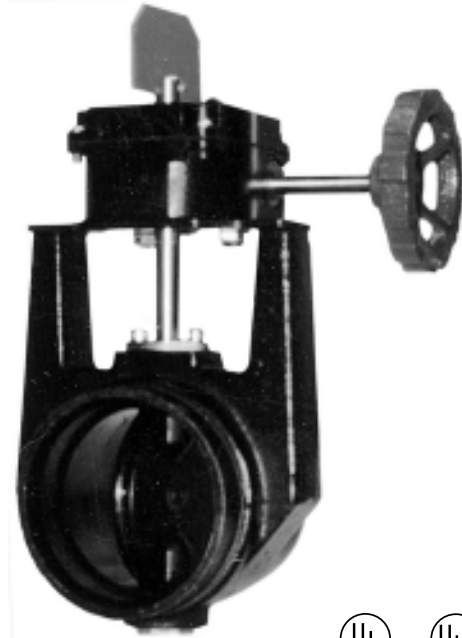
Ada-Cap®						
PIPE		DIMENSIONS				Net Wt. Lbs. Kg.
Size Inches	Outlet NPT*	O.D. A Inches mm	Takeout B Inches mm	Center to End		
				C Inches mm	D Inches mm	
1 1/2"	1/2"	1.900 48.3	1.25 31.8	1.75 44.5	1.89 48.0	0.77 0.3
	3/4"		1.25 31.8	1.75 44.5	1.89 48.0	0.77 0.3
	1"		1.37 34.8	2.00 50.8	2.02 51.3	0.88 0.4
2"	1/2"	2.375 60.3	1.25 31.8	1.75 44.5	1.89 48.0	0.92 0.4
	3/4"		1.25 31.8	1.75 44.5	1.89 48.0	0.92 0.4
	1"		1.37 34.8	2.00 50.8	2.02 51.3	1.06 0.5
2 1/2"	1/2"	2.875 73.0	1.47 37.3	1.97 50.0	1.89 48.0	1.28 0.6
	3/4"		1.47 37.3	1.97 50.0	1.89 48.0	1.28 0.6
	1"		1.37 34.8	2.00 50.8	2.02 51.3	1.50 0.7

\* BSP threaded outlets are available upon request  
Refer to General Notes on Page 8.

## Butterfly Valve

Central's Figures 570 and 580 Butterfly Valves are specifically designed to provide for efficient control of fire protection water supplies. The Figure 570 is designed to operate in systems up to and including 175 psi. The Figure 580 is designed to meet the increasing pressure requirements of the Fire Protection Industry and has a maximum operating pressure of 300 psi. Flow may be from either direction, and the valves can be positioned in any orientation. The valves have grooved ends and can easily be adapted to flanged components utilizing our Figure 71 Class 150 flange adapters. The body and disc construction provides for increased strength and durability. The Figure 570 and 580 Butterfly Valves are provided with a grade "E" EPDM encapsulated disc and 2 sets of SPDT Supervisory Switches for use in outdoor and indoor applications. A high strength conventional stainless steel upper stem is provided for dependability as compared to iron upper stem designs.

The surfaces at the upper stem and lower trunnion areas incorporate a reduced dynamic torque and anti-compression set design to ensure low operating torque and seal longevity. This innovative feature prevents elastomeric failure of the disc encapsulation that is common to other designs. This is accomplished by providing uniform compression throughout the opening and closing operation of the disc. Other manufacturers have non-uniform compression, that can result in permanent compression set and subsequent splitting of the material and undermining of the seal.

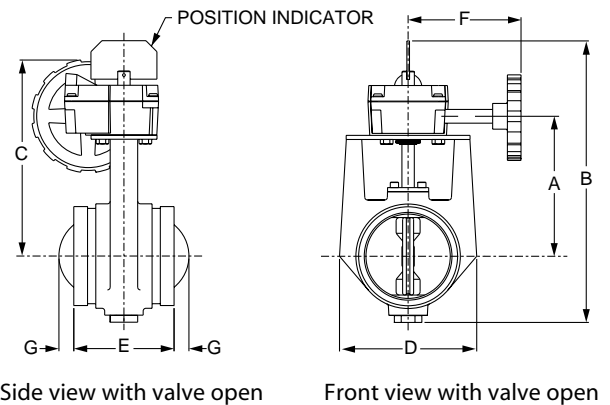


See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 570 & 580 - Butterfly Valve								
Size	A Inches mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	G Inches mm	Weight Lbs. Kg.
2½"	5.34 135.6	10.41 264.4	7.22 183.4	2.88 73.0	3.81 96.8	5.72 145.3	NA*	12.0 5.4
3"	5.67 144.0	11.38 289.1	8.75 222.3	3.50 88.9	3.81 96.8	5.72 145.3	NA*	14.0 6.4
4"	6.76 171.7	12.70 322.6	9.65 245.1	4.75 120.7	4.56 115.8	5.72 145.3	NA*	22.0 10.0
5"	7.15 181.6	14.56 369.8	10.23 259.8	6.25 158.8	5.81 147.6	6.18 157.0	NA*	31.0 14.1
6"	7.88 200.2	15.23 386.8	10.96 278.4	6.75 171.5	5.81 147.6	6.18 157.0	NA*	36.0 16.3
8"	9.24 234.7	17.50 444.5	13.37 339.6	10.00 254.0	5.25 133.4	6.43 163.3	1.22 31.0	52.0 23.6
10"	11.81 299.9	21.78 553.2	16.93 430.0	12.00 304.3	6.25 158.8	7.96 202.2	1.75 44.5	75.0 34.1
12"	12.97 329.4	24.11 612.4	19.10 485.1	14.27 362.5	6.50 165.1	8.83 224.3	2.60 66.0	90.0 40.9

\* Contact Tyco Fire Products for availability.

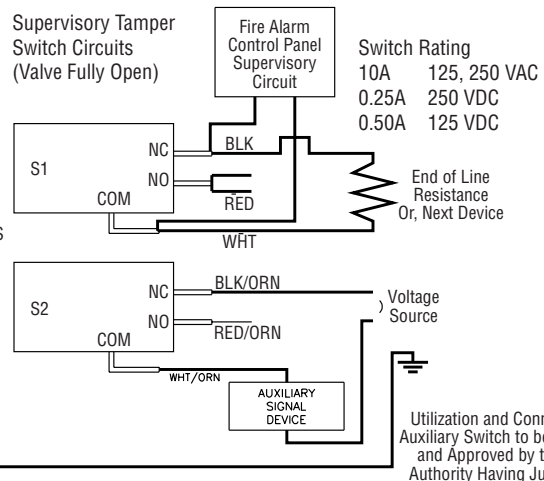
Refer to General Notes on Page 8.



Side view with valve open

Front view with valve open

Equivalent Feet of Pipe	
Size	Equivalent Length in Feet
2½"	6'
3"	7'
4"	6'
5"	10'
6"	13'
8"	14'
10"	16'
12"	18'



## Grooved End Check Valve

All Figure 590F Check Valves have been designed with a removable cover for ease of field maintenance. They can be installed either horizontally or vertically in system with flow in either the upward or downward direction. The maximum working pressure is 300 psi (2068 KPa). The standard seal is Grade "E" EPDM.

Applications: Figure 590F Check Valves are general purpose valves intended for use in fire protection systems as follows:

1. From public water supplies to automatic sprinkler or standpipe systems.
2. From fire department pumper connections to automatic sprinkler or standpipe systems.
3. In fire pump discharge or bypass piping.
4. From gravity, suction, or pressure tanks to automatic sprinkler systems.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

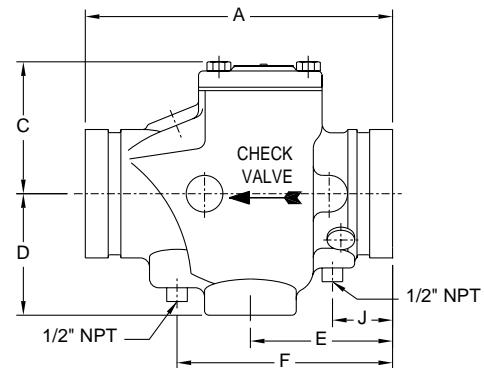
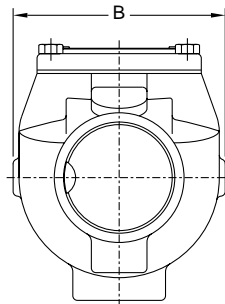


Figure 590F - Check Valves								
Size Inches	A Inches mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	J Inches mm	Net Wt. Lbs. Kg.
2½"	8.00 203.2	5.80 147.3	3.41 86.6	3.40 86.4	3.88 98.6	6.00 152.4	1.70 43.2	10.0 4.5
3"	8.37 212.6	5.76 146.3	3.60 91.4	3.40 86.4	3.88 98.6	6.00 152.4	1.70 43.2	11.0 5.0
4"	9.63 244.6	6.74 171.2	4.61 117.1	3.63 92.2	4.53 115.1	7.13 181.1	1.84 46.7	25.0 11.3
5"	10.50 266.7	7.50 190.5	5.29 134.4	4.20 106.7	4.90 124.5	7.60 193.0	1.90 48.3	29.0 13.2
6"	11.50 292.1	8.05 204.5	5.75 146.1	4.50 114.3	5.00 127.0	7.60 193.0	1.48 37.6	47.0 21.3
8"	14.00 355.6	10.25 260.4	7.75 196.9	5.62 142.7	5.45 138.4	8.40 213.4	2.20 55.9	66.0 29.9

Refer to General Notes on Page 8.

### Maintenance Kit for Figure 590F Check Valve

The Maintenance Check Valve Kit is designed to allow the maintenance procedure of backflushing through the fire department connection without removing the Figure 590F Check Valve from the pipe line. This is accomplished by replacing the cap / clapper assembly with the maintenance kit (see Installation Section for full procedure).

**IMPORTANT:**

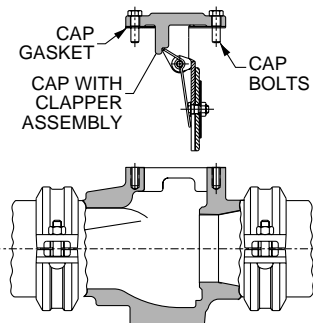
**All replacement parts must be obtained from the manufacturer to assure proper operation of the valve.**

**Never remove any piping component without verifying that the system is depressurized and drained.**

The owner is responsible for the proper operating condition of all fire protection devices and accessories. The NFPA Standard 25 entitled, "Care and Maintenance of Sprinkler Systems" contains guidelines and minimum maintenance requirements. Furthermore, the *Authority Having Jurisdiction* may have additional regulations and requirements for maintenance, testing and inspection that must be obeyed.

**Step 1:** Verify that the system is depressurized and drained on both sides of the Check Valve.

**Step 2:** Remove the bolts from the cap and remove cap with clapper assembly and cap gasket from the check valve. Inspect the elastomer seal facing on the spring loaded clapper to verify that there is no damage. If there is damage to the elastomer seal, a clapper repair kit will be required (Contact Tyco Fire Products for details).



**Step 3:** Inspect the seat surface to verify it is free of all loose debris and dirt which could affect proper sealing.

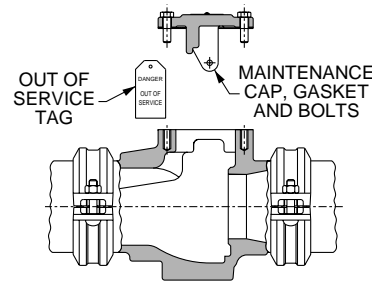
**Step 4:** Clean the surface for the cap gasket and place the new gasket (supplied) on the cleaned surface.

**Warning:**

The Maintenance Cap is provided with warning labels and tags to indicate that the check valve is out of service.

Any system maintenance or inspection that involves placing a valve "out-of-service" will eliminate the fire protection normally provided by the fire protection system. Prior to proceeding, be certain to secure permission from all *Authorities Having Jurisdiction* and notify all personnel who may be affected during system shutdown. A fire watch during maintenance periods is a recommended precaution.

**Step 5:** Insert the Maintenance Cap (supplied). Tighten all bolts (supplied) uniformly to bring the cap and gasket firmly together and ensure that the bolts are sufficiently torqued to the proper values.



Cover Bolt Torque	
Check Valve Size Inches	Bolt Torque Lbs.-ft.
2½", 3"	30
4", 5"	32
6"	54
8"	58

**Step 6:** Backflush the system. When done backflushing, verify that the system is depressurized and drained.

**Step 7:** Remove the bolts from the maintenance cap, and remove the cap.

**Step 8:** Replace the cap with clapper assembly (removed in Step 2) into the Check Valve body. Torque all bolts (per torque values in Step 5), uniformly bringing the cap and gasket firmly together.

**Step 9:** Restore system into service.

## Grooved End Riser Check Valve

Central Figure 590FR Fire Protection Riser Check Valves are furnished with grooved ends and can be installed using Central grooved couplings. The Figure 590FR can be installed with ANSI class 150 Flanges utilizing our Figure 71 flange adapters and also ANSI class 300 Flange Adapters on the upstream connection. Should flanged connections be used on the downstream connection, longer ¼" gauge nipple connections are required for clearance. All Figure 590FR Check Valves have been designed with a removable cover for ease of field maintenance. They may be installed in either horizontal or vertical piping systems. The maximum working pressure is 300 psi (2068 KPa). The standard seal is Grade "E" EPDM.

**Applications:** Figure 590FR Riser Check Valves are intended for use in wet type automatic sprinkler system risers, as a more attractive and economical alternative to an alarm check valve. Provision must be made for a local alarm using an approved flow switch (*not included*).

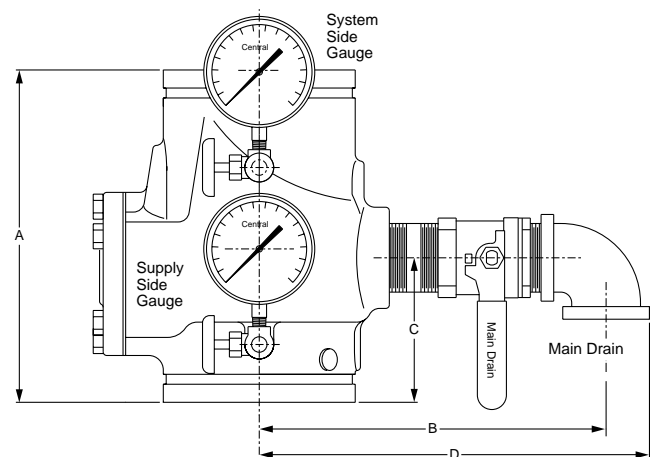


See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

Figure 590FR - Riser (Check Valve)						
Size Inches	A Inches mm	B Inches mm	C Inches mm	D Inches mm	Cover Bolt Torque Lbs.-ft. Nm	Net Wt. Lbs. Kg.
2½"	8.00 203.2	12.53 318.3	3.88 98.6	13.20 335.3	30 41	10.0 4.5
3"	8.37 212.6	13.02 330.7	3.88 98.6	13.65 346.7	30 41	11.0 5.0
4"	9.63 244.6	14.38 365.3	4.96 126.0	15.38 390.7	32 43	25.0 11.3
5"	10.50 266.7	14.95 379.7	4.96 126.0	15.95 405.1	32 43	29.0 13.2
6"	11.50 292.1	15.25 387.4	4.98 126.5	16.25 412.8	54 73	47.0 21.3
8"	14.00 355.6	16.37 415.8	5.48 139.2	17.37 441.2	58 74	66.0 29.9

Refer to General Notes on Page 8.

**Note:** Trim kit is sold separately, unassembled.



Trim Kits	
<b>2½" &amp; 3" RISER CHECK VALVE</b>	<b>4", 5", 6" &amp; 8" RISER CHECK VALVE</b>
<b>Main Drain</b> 1¼" X 2½" Nipple 1¼" M X F Ball Valve 1¼" 90° Elbow	<b>Main Drain</b> 2" X 2½" Nipple 2" M X F Ball Valve 2" 90° Elbow
<b>Gauge (system side)</b> 0-300 psi Gauge ¼" X 2" Nipple ¼" Three-Way Globe Valve ¼" Plug	<b>Gauge (system side)</b> 0-300 psi Gauge ¼" X 2" Nipple ¼" Three-Way Globe Valve ¼" Plug
<b>Gauge (supply side)</b> 0-300 psi Gauge ¼" X 5" Nipple ¼" Three-Way Globe	<b>Gauge (supply side)</b> 0-300 psi Gauge ¼" X 5" Nipple ¼" Three-Way Globe

The Figure 513, 513D/513R Riser Manifold provides all of the accessory equipment for a riser in a single assembly. The availability of the Riser Manifold in different configurations allows cost effective riser installations in commercial (NFPA 13) systems, high rise buildings requiring floor control assemblies, and residential systems (NFPA 13D/13R).

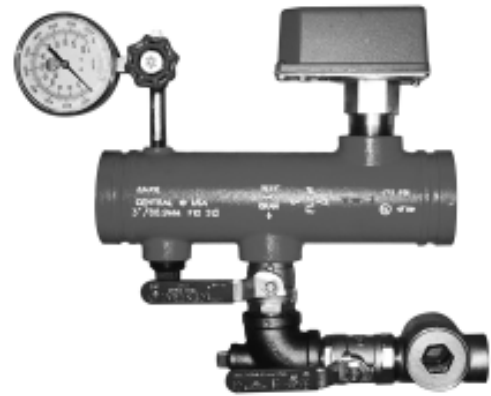
The threaded ends of the 1" and 1½" bodies, the threaded by grooved ends of the 2" bodies, and the grooved ends of the 1½" - 6" bodies allow for an easy transition to either check or control valves. The exclusive and dedicated flow switch designed for the manifolds has been tested and Listed for use in this specific configuration by Underwriters Laboratories, Underwriters Laboratories of Canada and Factory Mutual.

Installation is simplified with one convenient take-out for the 1" and 1½" threaded and 1½" grooved versions, as well as one take-out for the 2" threaded by grooved and the grooved sizes 2" - 6".

The Riser Manifold is approved for installation in either the horizontal or the vertical position. The optional relief valve assembly is available for locations that require this feature.

Riser Manifolds for use in Canada are provided with a Water Flow Switch that has a Tamper Switch mounted inside for cover removal detection.

Refer to general notes on page 8.



See Fire Protection Submittal Sheet for pressure rating and Listing and Approval information.

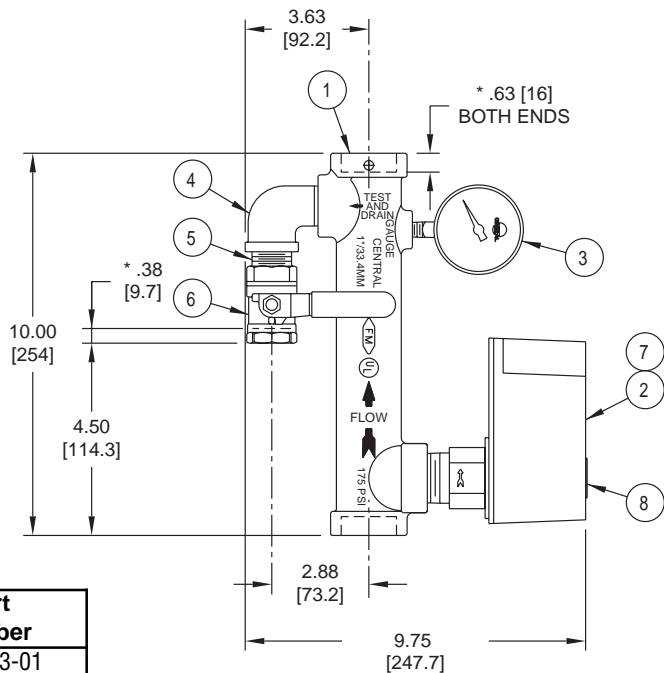
**Figure 513D**

**1" Threaded Residential Riser Manifold**

Approximate Trimmed Weight -  
7.5 lbs. (3.4Kg.)

The width of the Riser Manifold  
is approximately 3½".

Note: Items 7 & 8 are used on Manifolds  
for use in Canada Only



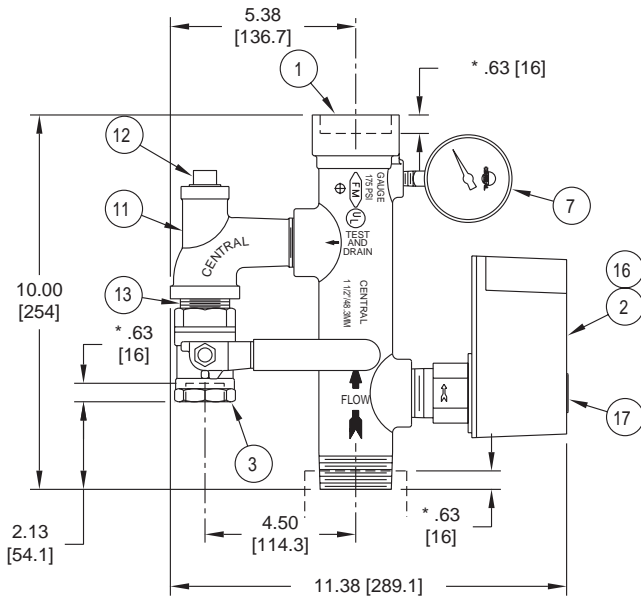
**1" Threaded Residential Riser Manifold**

Detail No.	Description	Part Number
1	Manifold Body F x F	976-363-01
2	Potter Waterflow Switch # VSR-SF w/Paddle	H-416-01
3	¼" Water Pressure Gauge	971-118-02
4	¾" 90° Street Elbow	H-463-075
5	¾" Close Nipple	H-474-12
6	¾" Ball Valve	971-116-02
7	Tamper Switch (ULC only)	H-419-01
8	Label (ULC only)	976-343-01

\*Approximate thread engagement.  
Note: Values shown in parenthesis are in millimeters

**Figure 513D/513R**

**1½" Threaded Residential Riser Manifold**

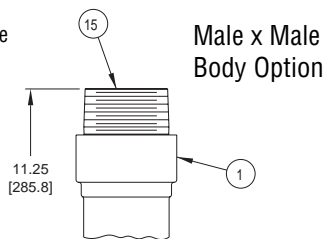


\*Approximate thread engagement.  
Note: Values shown in parenthesis are in millimeters

Approximate Trimmed Weight - 8.7 lbs. (3.9Kg.)

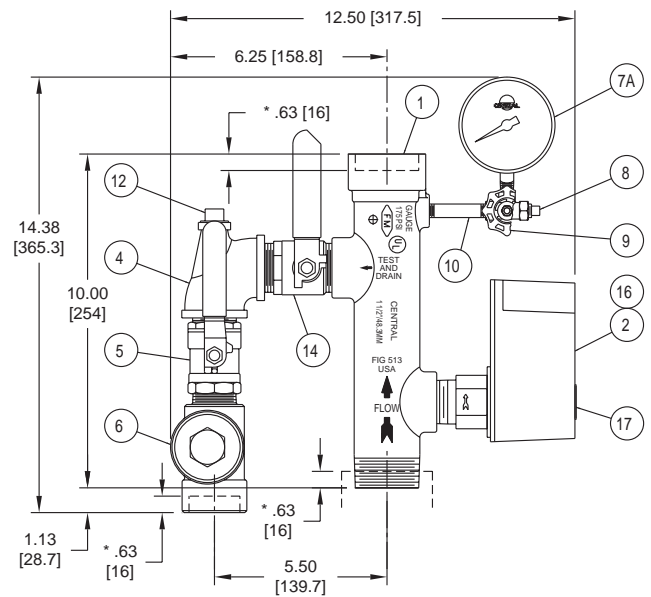
The width of the Riser Manifold is approximately 3½".

Note: Items 16 & 17 are used on Manifolds for use in Canada Only.



**Figure 513**

**1½" Threaded Commercial Riser Manifold**

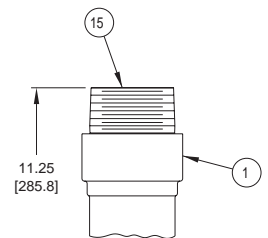


\*Approximate thread engagement.  
Note: Values shown in parenthesis are in millimeters

Approximate Trimmed Weight - 11.2 lbs. (5.1Kg.)

The width of the Riser Manifold is approximately 3½".

Note: Items 16 & 17 are used on Manifolds for use in Canada Only.



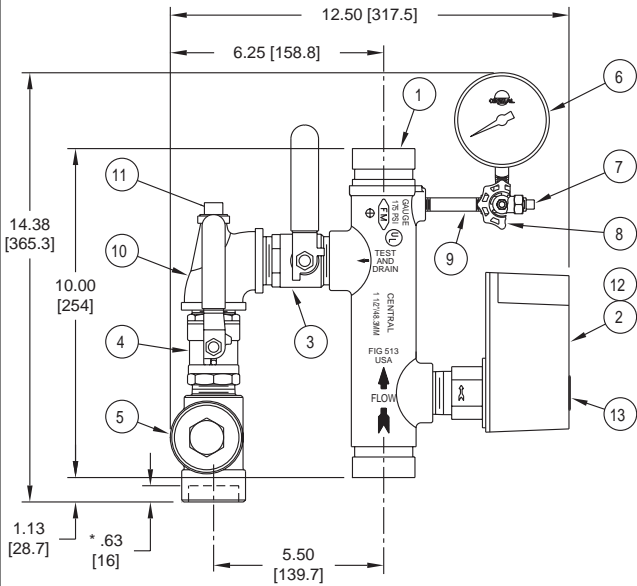
Male x Male Body Option

**Figure 513 & 513D/513R**  
**1½" Threaded Residential and Commercial Riser Manifold**

Detail No.	Description	No. Req'd		Part Number
		Com.	Res.	
1	Manifold Body M x F	1	1	976-339-01
2	Potter Waterflow Switch # VSR-SF w/ 1¼" Paddle	1	1	H-416-02
3	1" Ball Valve F101	0	1	971-116-03
4	1" x ½" x 1" Reducing Tee	1	0	H-469-100-050-100
5	1" Insp. Test & Drain Valve F202 w/ ½" Test Orifice	1	0	971-122-04
6	Sight Glass M x F	1	0	H-418-100
7	¼" Water Pressure Gauge	0	1	971-118-02
7a	¼" Water Pressure Gauge	1	0	971-118-01
8	¼" Pipe Plug	1	0	H450-025-000
9	¼" 3-Way Globe Valve	1	0	971-119-01
10	¼" x 3" Nipple	1	0	H-459-025-30
11	1" x ½" x 1" California Tee	0	1	976-385-01
12	½" Pipe Plug	1	1	H450-050-000
13	1" Close Nipple	0	1	H-474-16
14	1" Ball Valve	1	0	971-121-01
15	1½" Close Nipple	1	1	H-474-24
16	Tamper Switch (ULC only)	1	1	H-419-01
17	Label (ULC only)	1	1	976-343-01

# FIGURE 513, 513D/513R — RISER MANIFOLD

**Figure 513**  
**1½" Grooved Commercial Riser Manifold**



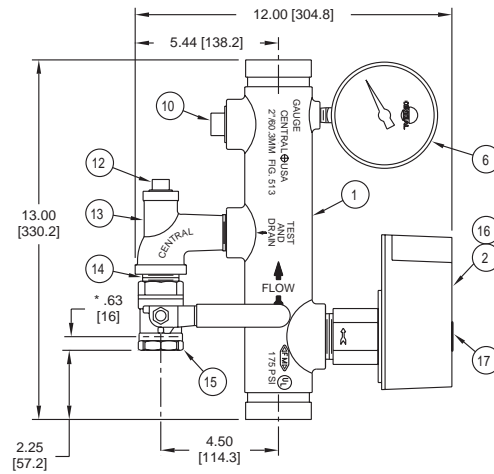
\* Approximate thread engagement.  
Note: Values shown in parenthesis  
are in millimeters

Approximate Trimmed Weight - 11.2 lbs. (5.1Kg.)  
The width of the Riser Manifold is approximately 3½".  
Note: Items 12 & 13 are used on Manifolds  
for use in Canada Only.

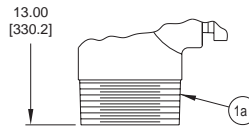
**1½" Grooved Commercial Riser Manifold - Bill of Material**

Detail No.	Description	Part Number
1	Manifold Body G x G	976-399-02
2	Potter Waterflow Switch #VSR-SF w/1¼" Paddle	H-416-02
3	1" Ball Valve F101	971-121-01
4	1" Insp. Test & Drain Valve F202 w/½" Test Orifice	971-122-04
5	Sight Glass M x F	H-418-100
6	¼" Water Pressure Gauge	971-118-01
7	¼" Pipe Plug	H-450-025-000
8	¼" 3-Way Globe Valve	971-119-01
9	¼" x 3" Nipple	H-459-025-30
10	1" x ½" x 1" Reducing Tee	H-469-100-050-100
11	½" Pipe Plug	H-450-050-000
12	Tamper Switch (ULC only)	H-419-01
13	Label (ULC only)	976-343-01

**Figure 513D/513R**  
**2" Grooved Residential Riser Manifold**



\* Approximate thread engagement.  
Note: Values shown in parenthesis  
are in millimeters



**2" Male x Groove Body Option**

Approximate Trimmed Weight - 11.0 lbs. (5.0Kg.)  
The width of the Riser Manifold is approximately 3½".

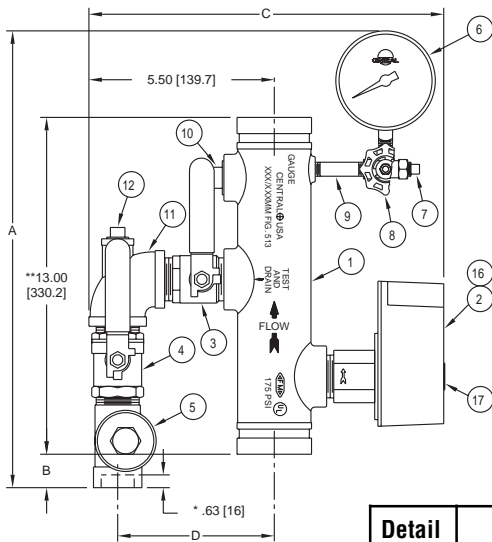
**2" Grooved Residential Riser Manifold - Bill of Material**

Detail No.	Description	Part Number
1	2" Manifold Body Groove x Groove	976-254-01
1a	2" Manifold Body Male x Groove	976-411-01
6	¼" Water Pressure Gauge	971-118-01
10	1" Pipe Plug	H-450-100-000
12	½" Pipe Plug	H-450-050-000
13	1" x ½" x 1" California Tee	976-385-01
14	1" Close Nipple	H-474-16
15	1" Ball Valve F101	971-116-03
16	Tamper Switch (ULC only)	H-419-01
17	Label (ULC only)	976-343-01

Note: Items 16 & 17 are used on Manifolds for use in Canada Only.

**Figure 513**

**2", 2½", 3", 4" and 6" Grooved Commercial Riser Manifold**



**Approximate Weights and Dimensions of Trimmed 2", 2½", 3", 4", and 6" Grooved Commercial Riser Manifolds**

Size Inches	A Inches mm	B Inches mm	C Inches mm	D Inches mm	Appx. Width Inches mm	Weight Lbs. Kg.
2	17.13 135.0	0.88 22.2	12.88 327.0	5.25 139.7	3.50 88.9	13.5 6.1
2½	18.13 460.4	1.88 47.6	13.75 349.3	6.38 155.6	3.50 88.9	16.8 7.6
3	18.13 460.4	1.88 47.6	14.38 365.1	6.25 158.8	3.50 88.9	18.7 8.5
4	20.00 508.0	3.75 95.3	17.38 441.3	8.38 212.7	4.50 114.3	32.7 14.8
6	20.00 508.0	3.75 95.3	19.25 489.0	9.25 235.0	6.63 182.3	41.6 18.9

**2", 2½", 3", 4", & 6" Grooved Commercial Riser Manifold - Bill of Material**

Detail No.	Description	Part Number
1	2" Manifold Body Groove x Groove	976-254-01
	2½" Manifold Body Groove x Groove	976-254-02
	3" Manifold Body Groove x Groove	976-254-03
	4" Manifold Body Groove x Groove	976-254-04
	6" Manifold Body Groove x Groove	976-254-05
1a	2" Manifold Body Male x Groove	976-411-01
2	Potter Waterflow Switch # VSC w/ 2" Paddle	976-357-01
	Potter Waterflow Switch # VSC w/ 2½" Paddle	976-357-02
	Potter Waterflow Switch # VSC w/ 3" Paddle	976-357-03
	Potter Waterflow Switch # VSC w/ 4" Paddle	976-357-04
	Potter Waterflow Switch # VSC w/ 6" Paddle	976-357-05
3	1" Ball Valve F101 (2")	971-121-01
	1¼" Ball Valve F101 (2½" and 3")	971-121-02
	2" Ball Valve F101 (4" and 6")	971-121-03
4	1" Insp. Test & Drain Valve F202 (2") w/ ½" Test Orifice	971-122-04
	1¼" Insp. Test & Drain Valve F202 (2½" and 3") w/ ½" Test Orifice	971-122-05
	2" Insp. Test & Drain Valve F202 (4" and 6") w/ ½" Test Orifice	971-122-06
5	1" Sight Glass (2")	H-418-100
	1¼" Sight Glass (2½" and 3")	H-418-125
	2" Sight Glass (4" and 6")	H-418-200
6	¼" Water Pressure Gauge	971-118-01
7	¼" Pipe Plug	H-450-025-000
8	¼" 3-Way Globe Valve	971-119-01
9	¼" x 3" Nipple	H-459-025-30
10	1" Pipe Plug	H-450-100-000
11	1" x ½" x 1" Reducing Tee (2")	H-469-100-050-100
	1¼" x ½" x 1¼" Reducing Tee (2½" and 3")	H-469-125-050-125
	2" x ½" x 2" Reducing Tee (4" and 6")	H-469-200-050-200
12	½" Pipe Plug	H-450-050-000
13	1" x ½" x 1" California Tee	976-385-01
14	1" Close Nipple	H-474-16
15	1" Ball Valve F101	971-116-03
16	Tamper Switch (ULC only)	H-419-01
17	Label (ULC only)	976-343-01

\* Approximate thread engagement.  
 \*\* 13" is the take-out for all sizes 2" through 6"  
 Note: Values shown in parenthesis are in millimeters

Note: Items 16 & 17 are used on Manifolds for use in Canada Only.

Gaskets				
Grade	Temp. Range	Compound	Color Code	General Service Application
A	Ambient to +150°F (+66°C)	EPDMA	Violet	Fire Protection Systems. Not Recommended for Hot Water Systems. For dry pipe or freezer systems, use Tri-Seal Grade E Gasket
E	-30°F (-34°C) to +230°F (+110°C)	EPDM	Green	Fire Protection Systems. For dry pipe or freezer systems use Tri-Seal grade E Gasket.

## Pre-Lube Gasket - Patent Pending

Prelubricated gaskets are provided with a proprietary coating which eliminates the need for the installer to apply a lubricant during the assembly process.

- Grade A EPDMA violet color code ambient to +150°F (+66°C) for fire protection systems. Not recommended for hot water systems.



Note: For dry pipe and freezer applications, use the Tri-Seal Freezer Gasket with a petroleum free silicone lubricant.

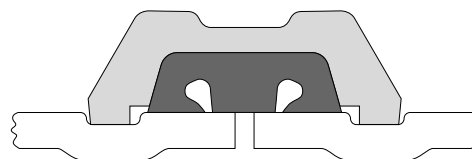
**Refer to General notes on Page 8.**

## Tri-Seal Freezer Gasket

The Tri-Seal Grade E freezer gasket is used primarily for dry pipe fire protection systems, vacuum service, and freezer applications. The Tri-Seal freezer gasket differs from standard gaskets by closing off the gap or gasket cavity. This is accomplished by positioning the center “rib” of the gasket over the gap between the pipes. The Tri-Seal freezer gasket has two tapered sealing edges in addition to the center rib for additional strength and sealing.

The Tri-Seal freezer gasket is available in sizes 1¼" to 12" and is designed for use with Central Figure 572 and 772 Couplings. A petroleum-free silicone based lubricant is recommended for dry pipe systems. For low temperature services or dry systems in cold storage or freezer applications, use Tri-Seal freezer gaskets. For vacuum services greater than 10" Hg, Tri-Seal gaskets should be used.

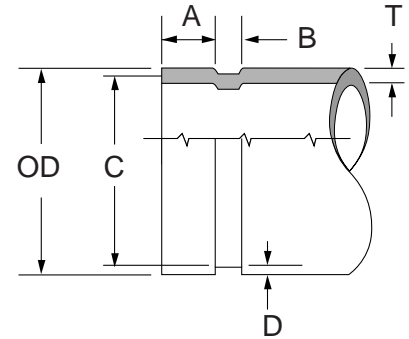
Note: Rigid couplings figures 572 and 772 are preferred for vacuum, dry pipe and freezer applications.



# ROLL GROOVE SPECIFICATIONS

## Roll Groove

- 1) The maximum allowable tolerances for IPS pipe from square cut ends is 0.030" (0.76mm) for sizes 1¼" - 3"; 0.045" (1.14mm) for sizes 4" - 6"; and 0.060" (1.52mm) for sizes 8" and above.
- 2) Gasket Seating Surface "A" must be free from score marks, ridges, indentations, projections, loose paint, scale, dirt chips, grease, rust, etc.
- 3) Groove diameter "C" must be of uniform depth around the circumference of the pipe.
- 4) Groove Depth "D" is a reference dimension only. The Groove Diameter "C" must be maintained.
- 5) Minimum Wall Thickness "T" is the minimum wall thickness that should be roll grooved.
- 6) Maximum allowable pipe end flare diameter is measured at the pipe end diameter.



Roll Groove Specifications										
Nom Pipe Size	Pipe O.D. Inches mm			A ± 0.030" ±0.76mm Inches mm	B ± 0.030" ±0.76mm Inches mm	C Groove Diameter Inches mm		D Groove Depth Inches mm	T Minimum Wall Inches mm	Maximum Allow. Flare Diameter Inches mm
	O.D.	Tolerance		mm	mm	Actual	Tol.+0.00	mm	mm	mm
		+	-							
1¼"	1.660	0.016	0.016	0.625	0.281	1.535	-0.015	0.062	0.065	1.77
	42.2	0.41	0.41	15.88	7.14	38.99	-0.38	1.60	1.65	44.96
1½"	1.900	0.019	0.019	0.625	0.281	1.775	-0.015	0.062	0.065	2.01
	48.3	0.48	0.48	15.88	7.14	45.09	-0.38	1.60	1.65	51.05
2"	2.375	0.024	0.024	0.625	0.344	2.250	-0.015	0.062	0.065	2.48
	60.3	0.61	0.61	15.88	8.74	57.15	-0.38	1.60	1.65	62.99
2½"	2.875	0.029	0.029	0.625	0.344	2.720	-0.018	0.078	0.083	2.98
	73.0	0.74	0.74	15.88	8.74	69.09	-0.46	1.98	2.11	75.69
76.1mm	3.000	0.030	0.030	0.625	0.344	2.845	-0.018	0.076	0.083	3.10
	76.1	0.76	0.76	15.88	8.74	72.26	-0.46	1.93	2.11	78.74
3"	3.500	0.035	0.031	0.625	0.344	3.344	-0.018	0.078	0.083	3.60
	88.9	0.89	0.79	15.88	8.74	84.94	-0.46	1.98	2.11	91.44
4"	4.500	0.045	0.031	0.625	0.344	4.334	-0.020	0.083	0.083	4.60
	114.3	1.14	0.79	15.88	8.74	110.08	-0.51	2.11	2.11	116.84
5"	5.563	0.056	0.031	0.625	0.344	5.395	-0.022	0.084	0.109	5.66
	141.3	1.42	0.79	15.88	8.74	137.03	-0.56	2.13	2.77	143.76
165.1mm	6.500	0.063	0.031	0.625	0.344	6.330	-0.022	0.085	0.109	6.60
	165.1	1.60	0.79	15.88	8.74	160.78	-0.56	2.16	2.77	167.64
6"	6.625	0.063	0.031	0.625	0.344	6.455	-0.022	0.085	0.109	6.73
	168.3	1.60	0.79	15.88	8.74	163.96	-0.56	2.16	2.77	170.94
8"	8.625	0.063	0.031	0.750	0.469	8.441	-0.025	0.092	0.109	8.80
	219.1	1.60	0.79	19.05	11.91	214.40	-0.64	2.34	2.77	223.52
10"	10.750	0.063	0.031	0.750	0.469	10.562	-0.027	0.094	0.134	10.92
	273.1	1.60	0.79	19.05	11.91	268.27	-0.69	2.39	3.40	277.37
12"	12.750	0.063	0.031	0.750	0.469	12.531	-0.030	0.109	0.156	12.92
	323.9	1.60	0.79	19.05	11.91	318.29	-0.76	2.77	3.96	328.17

# ORDER PROCEDURE, CARE & MAINTENANCE, LIMITED WARRANTY

**Ordering Procedure**     **Ordering Information:** When placing an order, indicate the full product name. Please specify the quantity, figure number and size.

**Availability and Service:** Grooved Piping Products, valves, accessories and other products are available throughout the U.S., Canada, and internationally, through a network of distribution centers. You may write directly or call 215-362-0700 for the distributor nearest you.

**Care and Maintenance**     The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in accordance with the applicable standards of the National Fire Protection Association (e.g., NFPA 25), in addition to the standards of any authority having jurisdiction. The installing contractor or product manufacturer should be contacted relative to any questions. Any impairment must be immediately corrected.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service.

**Limited Warranty**     Products manufactured by Tyco Fire Products are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by Tyco Fire Products. No warranty is given for products or components manufactured by companies not affiliated by ownership with Tyco Fire Products or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association (NFPA), and/or the standards of any other Authorities Having Jurisdiction. Materials found by Tyco Fire Products to be defective shall be either repaired or replaced, at Tyco Fire Products' sole option. Tyco Fire Products neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Tyco Fire Products shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

IN NO EVENT SHALL TYCO FIRE PRODUCTS BE LIABLE, IN CONTRACT, TORT, STRICT LIABILITY OR UNDER ANY OTHER LEGAL THEORY, FOR INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LABOR CHARGES, REGARDLESS OF WHETHER TYCO FIRE PRODUCTS WAS INFORMED ABOUT THE POSSIBILITY OF SUCH DAMAGES, AND IN NO EVENT SHALL TYCO FIRE PRODUCTS' LIABILITY EXCEED AN AMOUNT EQUAL TO THE SALES PRICE.

**THE FOREGOING WARRANTY IS MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**Governing Law**     These terms and conditions of sale shall be construed under and in accordance with the laws of the Commonwealth of Pennsylvania. Buyer consents and agrees to the jurisdiction and venue of the Court of Common Pleas of Montgomery County, Pennsylvania and the U.S. District Court for the Eastern District of Pennsylvania with respect to any proceeding arising out of or in connection with any transaction entered into between Central and Buyer. Buyer further agrees that mailing to either party by certified registered mail shall constitute lawful and valid service of process.

**Design  
Innovations**

**Maximum  
Performance**



# **Superior Warranty**

## **FEATURES**

- Anti Rotation Flexible (575) and Rigid (572) Couplings
- 300 psi Rated Fire Protection Working Pressures
- Pre-Lube and Standard Gaskets
- Available in Painted and Galvanized Coatings
- Strong Technical Support
- Available World-Wide
- Guarantee Customer Satisfaction

## **CENTRAL GROOVED PRODUCTS**

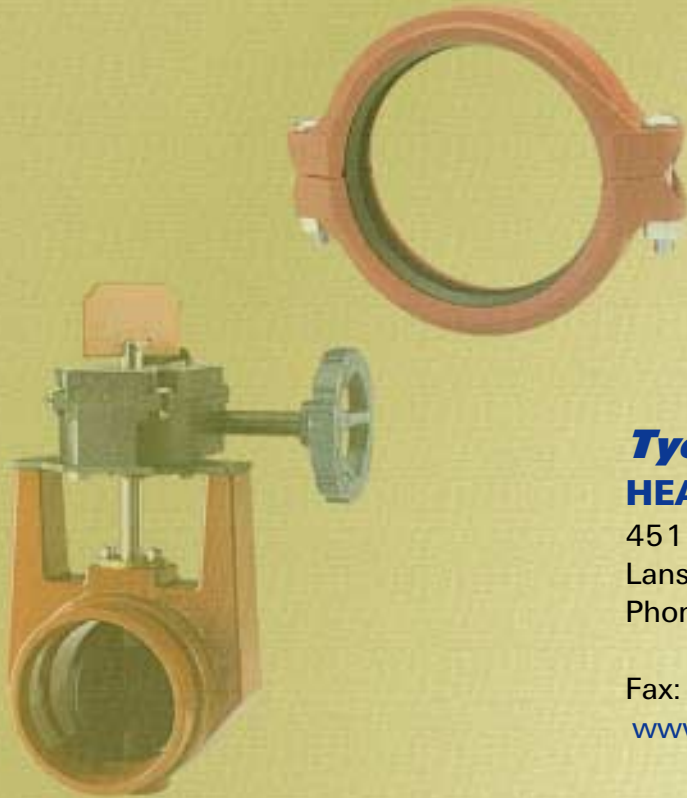
***We Design It, We Make It, We Guarantee It!***

For more information call

TFP Distribution 800-558-5236 or Central Sprinkler Company at 800-523-6512

visit our website at [www.tyco-fire.com](http://www.tyco-fire.com)

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## **Tyco Fire Products** **HEADQUARTERS**

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[www.tyco-fire.com](http://www.tyco-fire.com)

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