

# **FIRE PROTECTION**

# **VISION INTERNATIONAL**

Grooved Piping System | System Components | Pipe Hangers & Supports











**Right Connection** 





# **About Us VISION COMPANY**

# Shanghai VISION | Ningbo VISION | Sule M&E Ruvjax Power Transmission

#### **SHANGHAI VISION**

In 1999, Grooved piping system was introduced by Shanghai VISION into Chinese market, that's a significant development of the pipe connection for Fire protection system of China. In 2006, National Standard GB5135.11 of 《The Grooved Coupling and Fittings was promulgated and implemented officially, Since then, The Grooved piping system is much more popular among the various kinds of applications, In nowadays, Grooved piping system become to one of the standard pipe connections of modern China.

After 15-years development and innovation, VISION has a great achievement and impact on the domestic piping industries and factories which leads to develop and improve more than 10 series piping system in wide range applications cover different piping systems, the design of systems and products are environment-friendly, hi-performance and convenient for connection and maintenance.

In the past 10 years, VISION continuously develop new products and services, such as pipe hangers and supports, pre-fabrication service, Foam system etc..VISION also established the subsidiary corporations including NingBo VISION, SULE M&E, Ruvjax Power Transmission, JINWEI Fire & Security, at the same time, we keep improving our services to meet the demandsof the markets and industries.

At present, Shanghai VISION is dedicated to working on the piping Supply System, Fire protection System, Pre-fabrication Service, Fluid System and Power Transmission System in all diversity of custom requirement, all these systems can be potentially applied to the Petro Chemical ,off-Shore platform, power plant and mining industry.

Looking forward to the future, sustainable development and continuous innovation are the aims we always pursue. Also competitive advanced technology, hi-quality products and worry-free services is our diamond standard guarantee.

Contact:Mr. Luke FANG(Lujun FANG) Tel:+86-21-5954-6861

#### NINGBO VISION www.visionpiping.com

Focusing on international market, we sincerely provide the products and service which related to the piping system, fire protection system, pipe hangers & supports and pre-fabrication service, etc., Since the 2003, our quality products and services had been exported to more than 60 countries/areas of the world, Self-innovation products and system service are our guidance for the international market development.

Contact:Mr. Sam WU(Xusheng WU) Tel:+86-21-5954-6863

#### SULE M&E www.sule1.com

Focusing on commercial building and industrial building, we provide global resource integration and national sales network services in order to establish sales and services platform for the Building Electromechnical products industry. We have already integrated dozens of famous brand from the international and national suppliers after only one-year development. Contact:Ms. Annie LIU(Ying LIU) Tel:+86-21-5954-6839

Ruviax Power Transmission www.lovejoyinc.com.cn Focusing on power transmission industry, we are specialized to provide couplings, back stop, gear box and other power transmission products. "Rouvjax" has become a famous brand in power transmission industry of China and prossesses more than 2000 customers through our hard working for 8 years. Contact:Ms. Ann QUAN(Hua QUAN) Tel:+86-21-5954-6962

#### **JINWEI Fire & Security**

Focusing on fire protection and security divestiy, we are aiming to provide technical consultation, performance based design and safety assessment service. In order to establish service platform for the fire protection and industry safety system, we have worked together with the National Fire Research Institution and the prestigious International fire protection consultant company.

Contact:Mr. Sky BIAN(Jianxin BIAN) Tel:+86-21-5954-6749

Pi	ping	a Su	uste	m

Fire Protection System

Pipe Hanger & Support

**Fabrication System** 

**Power Transmission** 











ISO9001:2001 BGC







# **Grooved Piping System**Fire Protection Mechanical

Standard Grooved | Ultra Grooved | Installation Ready Forged Steel

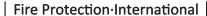


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# **Grooved Piping System**

Fire Protection System

Couplings | Fittings | Mechanical Tee | Accessories











Protect Your Life and Property





# **Historical Evidence**

Classic Case Worldwide

Commercial | Industrial | Process Industry



Shanghai Finacial Center

· InterIKEA

Tianjin 117 Skyscraper

New York La Guardia Air Port

Cecit Ozdilek Shoping Center

Nanjing

Bosch

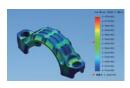
Shenyang BMW International Air Port

Kuala Lumpur

In the past 15 years, VISION grooved products has been installed into more than 20,000 projects all over the world, including lots of great and famous projects and supper skyscrapers.We are keen to provide total solution of piping systems for the clients. Our products and service were well approved in the real practice, and we are keep ourselves developing and strengthening.

VISION people strongly believe the philosophy that Science and Technology can create the productivity. We have already established a strong and professional -R&D team over these years. We are able to improve and optimize our products and service, and continuously develop new products and service because of our R&D team. Due to our development and efforts, several series of piping products that has successful embodied our technology capability and technical support for our customers.

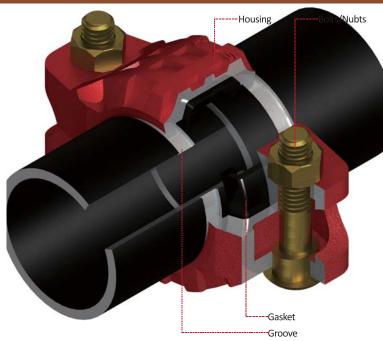




# **Grooved End Technology**

# **Environment-friendly Jiont**

Easy Installation | Economy and Efficiency | Safety and Reliability



Housing: Ductile Iron Conforming to ASTM A 536, Grade 65-45-12, refer to publication 14.01-1 for details. Other material is available upon special request.

#### **Housing Coating:**

North America: Orange Epoxy, Dipped. Other Countries: Red Epoxy, Dipped or Powder.

Galvanized coating is also available.

Gasket: EPDM rubber, more available gasket material options refer to page 7, or refer to "General Catalog".

½"(M12) and less, Class 9.8 bolts is used for all couplings and Mechanical Tee. 5/8"(M16) and larger, Class 8.8 bolts is used. Other material is available upon special request.

North America: White Zinc. Other Countries: Gold Zinc.

**PRESSURIZED** VACUUM VIBRATION ATTENUATION SEISMIC PREVENTION EASY MAINTENANCE ALIGNMENT EASE 300psi(21bar) UL Listed: 300psi(21bar) LPC Approved: 16bar

VISION grooved piping system is the most versatile, economical, and reliable piping VISION piping system can be used in a variety of system available. It is up to three times faster to install than welding, easier and more pipe materials, which including: Carbon steel pipes reliable than threading or flanging, resulting in lower total installed cost. The system (seamless pipe, ERW pipe, SAW pipe, Alloy steel pipe), is designed for roll grooved or cut grooved standard pipe or roll grooved light wall pipe. Stainless steel pipes, Copper tube, and Ductile iron

VISION Piping system provides both rigid and flexible joints. The selection of rigid or flexible coupling is depending on its application. Sometimes you can combine rigid with flexible couplings for some certain piping systems.

pipe. The selection of roll groove or cut groove is depending on the type of pipe line and pipe wall thickness. That is the one of best option for the fire protection piping system.





# Gasket Technology Selection Guide

C-Shape | E-Shape | Triple Seal | EPDM Gasket

The grooved piping concept is simple and reliable. The coupling housing performs several functions as an integral part of the pipe joint. It contains the gasket, Which is fully enclosed, reinforcing and securing it in position for proper sealing. The housing also engages on the pipe around the full pipe circumference and creates a unified joint while providing the advantages of mechanical joining.

VISION gasket consists of bridge, ribs and lips. All these three parts are designed in accordance with Fluid Mechanical and elastic seal theory. The VISION gasket is pressure responsive, providing the sealing efficiently.

The combination of VISION gasket characteristics creates a permanent, leak-tight triple seal on a variety of piping materials.

#### Initial Seal:

The gasket forms an initial seal as it is stretched over the pipe ends, similar as O-ring sealing principle.

#### Secondary Seal:

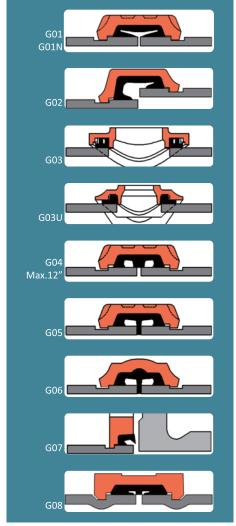
The gasket is then slightly compressed as the housings are tightened to secure the gasket lips in a firm seat on the pipe, between the grooves and the pipe ends, it forms a secondary seal.

#### Final Seal:

Line pressure serves to strengthen the seal through the combination of normal gasket resilience, housing reinforcement and the action of pressure downward on the lips, it forms a final seal.

Dry Fire-fighting system is applicable for the frozen/ice-cold occasion. Preaction fire-fighting system is suitable for sensitive water area and easy frozen occasion. While there is the compressed air inside of the pipe. Under the frozen circumstance, the remaing water may frozen to ice and then destroy the joint, or the ice grain may block the sprinkler head end. At the same time ,condense water would be presented while the dew point temperature is higher than ambient environment. The internal surface of pipeline will be corroded by condense water if it still leave in the pipe for long time. So Go4 gasket is recommended to be used for Dry system and preaction system which to prevent the water remaining problem in the cavity of gasket.

For the large pipe connection in Dry hydrant system and sprinkler system. UGS is highly recommended to be used. G08 gasket is able to prevent the cavity of gasket from water.





Material	Temperature	General Service Recommendation
EPDM	-40-125°C	Recommended for hot water service within the specified temperature range plus a variety of dilute acids. NOT RECOOMENDED FOR PETROLEUM SERVICES.
NBR	-30-85°C	Recommended for petroleum products, hydrocarbons, air with oil vapors, Vegetable and mineral oils within the specified temperature range; not recommended for hot dry air over+140 $^{\rm T}/+60$ $^{\rm C}$ and water over +150 $^{\rm T}/+66$ $^{\rm C}$
SILICON	-70-150°C	Recommended for portable water , sea water, hot water and dry heat, air without hydrocarbons to +300 $^{\circ}F$ /+150 $^{\circ}C$
CR	-25-125°C	Recommended for sea water service
For more	gasket materi	al ,please refer to Publication 14.03





# **Design Data** INTERNATIONAL

# Owner | Consultant | Designer | Contractor | Supervisor

#### Introduction

This Catalog is organized to provide information in the context and form most readily useable for international market only .VISION fire-protection piping solution is written for the piping system consultant, designer, engineer of Insurance, Contractor, specification writer, owner and equipment manufacturer as a basic reference guide for data about VISION mechanical piping products. All performance data and arguments are collected from design ,production and tests by VISION, however ,they may changed by improvement of VISION products. please contact VISION for latest updated products information.

VISION maintains a policy of continual product improvement and therefor, reserves the right to change product specification, designs, and standard equipment without notice and without incurring obligation, for the most up-to-dated VISION products information, please visit VISION website:

The technical and performance data, weight, dimension and specifications publications published in this catalog supersede all previous published

#### Important Information

VISION has been developing for 15 years, which becomes a professional company providing solution in fire protection system. its products and services cover grooved end piping system, pipe hangers & support, general Valve, Foam extinguishing system, Fire sprinkler cooing system, V-fab pipe fabrication service, etc. all those products and services are supplied into commercialbuilding, general Industries , fluid industries as well as other equipment.

c606,UL213,FM1920,ISO6182-12 standards, all grooved fittings and couplings are UL listed and FM approved.

VISION Grooved piping system is applicable to a wide variety of pipe materials including: seamless pipe, ERW pipe and SAW pipe, all those pipe can be connected with cut groove or roll groove, for the minimum wall thickness of pipe ,please refer to page 92-93,for SAW pipe ,roll groove is not applied to the pipe end but welded at the end of pipe by Grooved pipe nipple.or connected by VISION shoulder coupling.

EPDM is recommended for Fire protection, the selection of Rubber for special application ,please refer to Page 7 "Gasket selection guide".

#### Design

The VISION grooved piping system may be used for joining a variety of piping system for wide variety of services. Products are available to provide rigid or flexible systems. Same as any piping method, the nature of method should be considered in designing the piping system. The material presented is intended solely for piping design reference in utilization of VISION products for their intended application. Good piping practice should always prevail. Meanwhile specific pressures, temperatures, environment and internal and external loads, performance of product must be considered to match the presented specification of VISION products hereafter.

Despite every effort has been made to ensure its accuracy, VISION and its subsidiaries make no express or implied warranty or merchantability or suitability for a particular purpose respecting the information contained in this catalog or the materials referred to therein. Illustrations shown within this catalog are not drawn to scale and may have been exaggerated for clarity. Anyone making use of the information or material contained hereby does so at this risk and assumes any and all liability resulting from such use.

#### Installation

Please refer to page 91 "GENARAL OF INSTALLATION" for VISION groove piping system while you are installing VISION products, and follow AZ-100-EN "INSTALLATION MANUAL" strictly. While making groove on the pipe end, all important groove parameters should comply with VISION groove parameters listed in page 92-93.

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VISION provide total solution for fire protection in order to enhance the safety and reliability of piping system, meanwhile ensure the longer service life of piping system.

VISION also provide customized solution for customers according to verities of application, including expansion/contraction, settlement, Vibration and Earthquake protection ,etc. as well as other piping system, also including underground and cross-over pipeline, for more application please contact VISION.

Grooved Piping System Design Data	15.01
Accommadating Pipeline Expasion/Contraetion Design Data	15.02
Accommadating Pipeline Settlement Design Data	15.03
Accommadating Pipeline Vibaration Design Data	15.04
Seismic Prevention Design Data	15.05
Jnderground Pipeline Design Data	15.06
Cross-over Pipeline Design Data	15.07

# **Total Piping Solution**





# Global Pipe Size Designations INTERNATIONAL

GB | ISO | ANSI | BS | DIN | JIS | AS

Nomin	al Size	OD	GB	ISO	ANSI	BS	DIN	JIS	AS
mm	Inches	mm	mm	mm	Inches	mm	mm	mm	mm
15	1/2	21.3	21.3	21.3	1/2	21.3	21.3	15A/21.7	21.3
20	3/4	26.7	26.9	26.9	3/4	26.9	26.9	20A/27.2	26.9
25	1	33.7	33.7	33.7	1	33.7	33.7	25A/34.0	33.7
32	11/4	42.4	42.4	42.4	11/4	42.4	42.4	32A/42.7	-
40	1½	48.3	48.3	48.3	1½	48.3	48.3	40A/48.6	48.3
50	2	60.3	60.3	60.3	2	60.3	60.3	50A/60.5	60.3
65	2½	73.0	73.0	-	21/2	-	-	-	-
65	3OD	76.1	76.1	76.1	-	76.1	76.1	65A/76.3	76.1
80	3	88.9	88.9	88.9	3	88.9	88.9	80A/89.1	88.9
100	4	114.3	114.3	114.3	4	114.3	114.3	100A/114.3	114.3
125	5½OD	139.7	139.7	139.7	-	139.7	139.7	125A/139.8	139.7
125	5	141.3	141.3	-	5	-	-	-	-
150	6½OD	165.1	165.1	-	-	165.1	-	150A/165.2	165.1
150	6	168.3	168.3	168.3	6	-	168.3	-	-
200A	200A	216.3	-	-	-	-	-	200A/216.3	-
200	8	219.1	219.1	219.1	8	219.1	219.1	-	-
250A	250A	267.4	267.3	-	-	-	-	250A/267.4	-
250	10	273.0	273.0	273.0	10	273.0	273.0	-	-
300A	300A	318.5	318.5	-	-	-	-	300A/318.5	-
300	12	323.9	323.9	323.9	12	323.9	323.9	-	-

VISION product data is utilized worldwide and all technical data is shown in both imperial (U.S) and Metric term. The above chart shows a comparison between typical metric and IPS pipe sizes.

#### **IMPORTANT NOTES:**

Nominal designations are used where the actual O.D. of the pipe matcher the ANSI size.Otherwise both the nominal and actual O.D. are listed.

GB:National Standard of The P. R. of China ISO:Internatiaonl Standard Organization

ANSI: America National Standard Institute

**BS: British Standard** 

DIN: Deutsche Industie Normen JIS: Janpanese Industial Standard

AS: Australia Standard

**GB/T3091-2008:** Welded steel pipe for low-pressure fluid transport

GB/T17395-2008: Seamless steel pipe Parameter

ASME B36.10M-2004: Welded and seamless steel pipe

**BS EN10255:2004:** Non-alloy steel tubes suitable for welding and threading-Technical delivery conditions

JIS G 3452-2010: Carbon steel pipes for ordinary piping JIS G 3454-1988: Carbon Steel Pipes for Pressure Service

**GB5310-2008:** seamless steel pipe for high-pressure furnace

BS1387-1985: Screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable forwelding or for screwingto BS 21 pipe threads ISO4200-1991: Plain end steel tubes, welded and seamless -General tables of dimensions and masses perunit length

Meet All Standards





| Fire Protection International |

# SureX

# Fire Protection System Components

Sprinkler Escutcheon | Sprinkler Stopper | Angle Valve Test&Drain Valves | Air Relief Valves





Γ	7 B36'B	2 Sprin	klor	Escutcheon	c
	102311			Locululeon	э.

SureX is dedicated to developing and producing fire protection system components, including sprinkler accessories, sprinkler components and other components. SureX gradually becomes a professional manufacturer of components for fire protection system and extends the products line for international fire protection manufacturers and distributors. To meet the needs of international market, SureX is going to apply for UL/FM approval for some products.

# Specialty Quality Service

<sup>☐</sup> SS1·SS2 Sprinkler Stopper

<sup>☐</sup> TD1 Test&Drain Valves

<sup>☐</sup> AD1 Angle Valves

<sup>☐</sup> ARV Air Relief Valves





# **Grooved Couplings**

# All Standards

# Rigid Coupling | Flexible Coupling | Split Flange Adaptor

STYLE	DESCRIPTION	SIZE	PAGE
LIGID	Rigid Coupling	2"-8"(50-200mm)	14
001	Rigid Coupling	1"-12"(25-300mm)	15
101(Standard)	Flexible Coupling	1"-12" (25-300mm)	16
101H(Heavy)	Flexible Coupling	1"-12" (25-300mm)	17
020-ANSI	Reducing Coupling	1½x1¼-8x6	18
020-BS & DIN	Reducing Coupling	1½x1¼-8x6	19
007A1	Split Flange Adaptor	2"-8" (50-200mm)	20
007D2	Split Flange Adaptor	2"-8" (50-200mm)	21

<sup>☐</sup> More Grooved Couplings refer to "General Catalog", or Contact VISION

#### **GENERAL NOTES**

Working Pressure and End Load are total, from all internal and external loads, based on the standard weight(ANSI) steel pipe, standard roll or cut grooved in accordance with VISION specifications. For design instruction of each size, please refer to page 13.

**CAUTION:** Site pressure test of pipeline should not exceed 1.5 times maximumworking pressure. Maximum allowable pipe ends separation and deflectionare based on standard roll grooves in each size .These values are MAXIMUMS, standard cut grooved pipe will provide double expansion/contraction or deflection capabilities of same size standard roll groove pipe .For design and installation purposes these figures should be reduced by the following factors to allow for pipe groove tolerances. 50% for 3" /80mm, 25% for 4"/100mm and larger.



VISION grooved piping system is the most versatile, economical, and reliable piping system available. It is up to three times faster to install than welding, easier and more reliable than threading or flanging, resulting in lower total installed cost. The system is designed for roll grooved or cut grooved standard pipe or roll grooved light wall pipe.

VISION groove piping provides both rigid and flexible connections. Rigid Coupling - does not allow for movement, similar to a flanged or welded joint. Flexible Coupling - allows for controlled linear and angular movement, which accommodates pipeline deflection as well as expansion/contraction.

VISION grooved coupling is suitable for wide fire protections, including sprinkler system, water supply and hydrant fire protection system, foam system, and other systems. The selection of coupling is depending on each project and application. We also can provide customized service.

# **Total Piping Solution**

# Flexible System

Flexible Coupling (such as 101,101H,020,KZ26 and UG28) allow controlled angular ,and rotational movement at each joint, if an assembly of two flexible coupling, it can allow lateral movement to accommodate expansion/contraction, vibration, noise. these features provide advantages in designing piping system, but must be considered when determining hanger and support spacing and location, for designing pipe hanger and support, please refer to Publication 15.01.

Note: Maximum Linear movement and Angular movement is not allowed to occur at the same time by flexible coupling. meanwhile flexible coupling is not able to accommodate expansion/contraction itself, Allowable pipe end separation must be considered when designing piping system.in fixed piping system, free expansion of pipe line must be considered. in unfixed piping system, sufficient length of pipe line for movement must be considered to avoid over deflection of coupling.

Allowable pipe end separation figures show the maximum nominal range of movement available at each joint .for Allowable pipe end separation of each flexible coupling, please refer to data sheet .

#### **Provides Expansion and Contraction**

Each flexible coup	ling provide	s linear mov	ement as listed;
Minimizes or elim	inates costly	expansion	joints and loops.

For details of expansion/contraction, please refer to Publication :15.02

#### **Absorbs Stress of Settlement**

Each flexible coupling provides angular deflection as listed;
Reduces or eliminates stresses from settlement of buried
pipe.

☐ Minimized stress enhances system service time;

For details of settlement, please refer to publication:15.03.

#### **Minimizes Noise and Vibration Transmission**

☐ Isolates noise and vibration;

☐ Resilient gasket helps absorb noise and vibration;

☐ Permits elimination of noise suppression devices.

For details of Noise and Vibration, please refer to Publication 15.04.

For Seismic Prevention, please refer to Publication 15.05

## Rigid System

Rigid Coupling (such as LIGID,001,HR24,021,007 and UG28) provides a rigid joint allowing no linear movement and angular movement. the separation at each joint is the maximum if under stress. the allowable pipe end separation must be considered when installation. listed data of allowble pipe end separation is the maximum valuve. for Maximum separation of each coupling, please refer to Data sheet.

LIGID is a light weight rigid coupling with spigot and socket design, The coupling housing is designed to grip the bottom of the groove tightly while the nut are tightened. Unique tooth on key section can prevent the axial movement and spinning to increase the rigidity of the joint.

021 and 007 have same rigid function as LIGID coupling.

Style 001 rigid coupling has a 60° angled pad design which constricts the housing key into the groove around circumference to create a rigid joint by permitting the housing to slide on the opposed angle pad.

HR24 rigid coupling has flat-pad design which constricts wide key into the groove around the full circumference to create a rigid joint .

UG28R is heavy duty system with flat-pad design which constrict the key into the groove around the full circumference to create a rigid joint not allowing linear movement and angular movement.

Nominal	OD	,	Allow compens	ation
Size		axial	Angular	radial
Inches mm	Inches mm	Inches mm	Degree	Inches Ft(mm/m)
1¼	1.660	0-0.14	2.06	0.64
32	42.4	0-3.6	3.06	53.4
1½	1.900	0-0.14	2.05	0.64
40	48.3	0-3.6	3.06	53.4
2	2.375	0-0.14	2.05	0.64
50	60.3	0-3.6	3.06	53.4
21/2	2.875	0-0.14	2.62	0.55
65	73.0	0-3.5	2.62	45.7
3OD	3.000	0-0.14	2.62	0.55
65	76.1	0-3.5	2.62	45.7
3	3.500	0-0.14	2.25	0.47
80	88.9	0-3.5	2.25	39.3
4	4.500	0-0.14	1.83	0.38
100	114.3	0-3.5	1.05	31.9
5%OD	5.500	0-0.16	1.52	0.32
125	139.7	0-4.0	1.52	26.5
5	5.563	0-0.16	1.52	0.32
125	141.3	0-4.0	1.52	26.5
6½OD	6.500	0-0.19	1.25	0.26
150	165.1	0-4.7	1.23	21.8
6	6.625	0-0.19	1.15	0.24
150	168.3	0-4.7	1.13	20.1
8	8.625	0-0.19	1.05	0.22
200	219.1	0-4.9	1.05	18.3
10	10.750	0-0.19	0.02	0.17
250	273.0	0-4.9	0.82	14.3
12	12.750	0-0.19	0.75	0.16
300	323.9	0-4.9	0.75	13.1



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# Max. Work Pressure & Max. End Load

Nominal	OD	LIG	ID	001	101	101	.н	HR	24	KZ	26	00	7
		Max.Work	Max.	Max.Work	Max.End	Max.Work	Max.End	Max.Work	Max.End	Max.Work	Max.	Max.Work	Max.
		Pressure	End Load	Pressure	Load	Pressure	Load	Pressure	Load	Pressure	End Load	Pressure	End Load
Inches mm	Inches mm	Psi Bar	Lbs.	Psi Bar	Lbs. N	Psi Bar	Lbs. N	Psi Bar	Lbs. N	Psi Bar	Lbs. N	Psi/Bar	Lbs. N
1		Dal -	N -					Ddl -	-	Ddl	IN		14
	1.315			750	1018	1500	2036	-		-	-	-	-
25	33.7	-	-	51.8	4618	103.5	9227	-	-	-	-	-	-
1¼	1.660	-	-	750	1622	1250	2704	-	-	-	-	-	-
32	42.4	-	-	51.8	7310	86.0	12137	-	-	-	-	-	-
1½	1.900	-	-	750	2125	1250	3542	-	-	-	-	-	-
40	48.3	-	-	51.8	9486	86.0	15749	-	-	-	-	-	-
2	2.375	-	-	750	3321	1250	5535	1000	4428	750	3321	-	-
50	60.3	-	-	51.8	14785	86.0	24547	69.0	19695	51.8	14785	-	-
2½	2.875	500	3244	750	4866	1000	6489	1000	6489	750	4866	500	3244
65	73.0	34.5	14432	51.8	21669	69.0	28865	69.0	28865	51.8	21669	34.5	14432
3OD	3.000	500	3533	750	5299	1000	7065	1000	7065	750	5299	500	3533
65	76.1	34.5	15684	51.8	23549	69.0	31368	69.0	31368	51.8	23549	34.5	15684
3	3.500	500	4808	750	7212	1000	9616	1000	9616	750	7212	500	4808
80	88.9	34.5	21404	51.8	32137	69.0	42808	69.0	42808	51.8	32137	34.5	21404
4	4.500	500	7948	750	11922	1000	15896	1000	15896	750	11922	500	7948
100	114.3	34.5	35382	51.8	53124	69.0	70764	69.0	70764	51.8	53124	34.5	35382
5½OD	5.500	500	11873	750	17810	1000	23746	1000	23746	750	17810	500	11873
125	139.7	34.5	52854	51.8	79358	69.0	105709	69.0	105709	51.8	79358	34.5	52854
5	5.563	500	12147	750	18220	1000	24293	1000	24293	750	18220	500	12147
125	141.3	34.5	54072	51.8	81186	69.0	108144	69.0	108144	51.8	81186	34.5	54072
6½OD	6.500	500	16583	750	24875	1000	33166	1000	33166	750	24875	500	16583
150	165.1	34.5	73822	51.8	110839	69.0	147643	69.0	147643	51.8	110839	34.5	73822
6	6.625	-	-	750	25841	1000	34454	1000	34454	750	25841	500	17227
150	168.3	-	-	51.8	115178	69.0	153422	69.0	153422	51.8	115178	34.5	76711
8	8.515	-	-	600	34150	800	45533	-	-	-	-	-	-
200A	216.3	-	-	41.4	152049	55.0	201997	-	-	-	-	-	-
8	8.625	400	23359	600	35038	800	46717	800	46717	600	-	400	23359
200	219.1	27.5	103630	41.4	156011	55.0	207261	55.0	207261	41.4	-	27.5	103630
10	10.525	-	-	600	52175	800	69567	-	-	-	-	-	-
250A	267.4	-	-	41.4	232377	55.0	308713	-	-	-	-	-	-
10	10.750	-	-	600	54430	800	72573	800	72573	-	-	-	-
250	273.0	-	-	41.4	242212	55.0	321779	55.0	321779	-	-	-	-
12	12.539	-	-	600	74054	800	98738	-	-	-	-	-	-
300A	318.5	-	-	41.4	329677	55.0	437977	-	-	-	-	-	-
12	12.750	-	-	600	76567	800	102089	800	102089	-	-	-	-
300	323.9	-	-	41.4	340951	55.0	452954	55.0	452954	-	-	-	-

 $<sup>\</sup>hfill \square$  More informance please contact VISION

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<sup>☐</sup> Lpc Approval pending, The Approval pressure is 16bar.

<sup>☐</sup> More information, refer to "General Catalog", or contact VISION.

UL FM UD CE

| Style LIGID | Rigid Coupling | 2"-8"



- Spigot and Socket Design
- Unique Teech on Key Section
- "C"-Type Gasket
- EPDM Rubber
- Class 9.8 Bolts
- Epoxy Coating

#### Light Weight

Economic • Easy of Installation

# **Style LIGID**

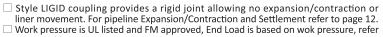
**Rigid Coupling** 

Publication: 01.01EN

LIGID rigid coupling is designed for fire protection system with light weight and compact structure. Unique teeth on key section can restrict the axial movement and spinning to increase the rigidity of joint.

The unique"C"-Type gasket design performs a triple seal, optimized design for gasket structure extend service life of coupling.

Nominal Size	OD	Work Pressure	End Load	Pipe End Separation	х	Υ	z	ΔL	Bolts Size	Approx. Wt. Ea.
Inchs mm	Inchs mm	Psi bar	Lbs.	Inchs mm	Inchs mm	Inchs mm	Inchs mm	Inchs mm	Inchs mm	Lbs. kg
2	2.375	300	1328	0.09	3.58	5.28	1.89	0.59	3⁄8x2	1.5
50	60.3	20.7	5908	2.24	91	134	48	15	M10x50	0.7
3OD	3.000	300	2120	0.10	4.06	5.79	1.89	0.59	3/8×21/4	2.0
65	76.1	20.7	9410	2.64	103	147	48	15	M10x55	0.9
3	3.500	300	2885	0.10	4.57	6.42	1.89	0.59	3/8×21/4	2.2
80	88.9	20.7	12842	2.64	116	163	48	15	M10x55	1.0
4	4.500	300	4769	0.10	5.67	7.64	1.93	0.59	3/8×2½	2.9
100	114.3	20.7	21229	2.64	144	194	49	15	M10x60	1.3
5½OD	5.500	300	7124	0.11	6.77	9.06	1.93	0.91	½x3	4.0
125	139.7	20.7	31713	2.84	172	230	49	23	M12x75	1.8
6½OD	6.500	300	9950	0.10	7.72	10.16	1.93	0.91	½x3	4.8
150	165.1	20.7	44293	2.64	196	258	49	23	M12x75	2.2
8	8.625	300	17519	0.19	10.04	12.99	2.40	1.26	%x3½	9.0
200	219.1	20.7	78005	4.90	255	330	61	32	M16x90	4.1



to page 11.

Max. Work pressure and Max. End Load refer to page 13.

2" and less, Style 001 Standard Rigid Coupling is recommended. 10" and 12", Style 001 Standard Rigid Coupling is recommended.

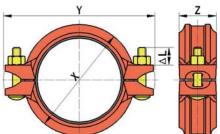
For correct installation, Please refer to page 91"General of Installation"and publication AZ-100-EN of "Installation Manual".

 $\square$  Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation".

☐ There is a gap with 1.6-3.0mm between two bolt-pads in both sides after finishing installation, but it should be same.

 $\hfill \Box$  For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

§ Refer to page 6 for details





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| Style OO1 | Rigid Coupling | 1"-12"



- 60° angled pad Design
- "C"-shape Gasket
- EPDM Rubber
- Class 9.8 Bolts
- Epoxy Coating

#### Classical Design

Easy of Installation • More Safety

## Style 001

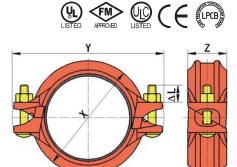
**Rigid Coupling** 

Style 001 rigid coupling has a 60° angled pad design which constricts the housing key into the groove around circumference to create a rigid connection by permitting the housing to slide on the opposed angle pad. housing key into the groove around circumference to create a rigid connection by permitting the housing to slide on the opposed angle pad.

Publication: 01.02EN

The unique"C"-Type gasket design performs a triple seal, optimized design for gasket structure extend service life of coupling.

Nominal	OD	Work	End	Pipe End	х	Υ	z	ΔL	Bolts	Approx
Size	0.0	Pressure	Load	Separation	^	'		Δ.	Size	Wt. Ea
Inchs	Inchs	Psi	Lbs.	Inchs	Inchs	Inchs	Inchs	Inchs	Inchs	Lbs.
mm	mm	bar	N	mm	mm	mm	mm	mm	mm	kg
1	1.315	300	407	0.09	2.17	3.86	1.77	0.59	3%x2	1.3
25	33.7	20.7	1845	2.20	55	98	45	15	M10x50	0.6
1¼	1.660	300	649	0.09	2.36	4.21	1.77	0.59	3/8x2	1.3
32	42.4	20.7	2921	2.20	60	107	45	15	M10x50	0.6
1½	1.900	300	850	0.09	2.80	4.49	1.77	0.59	3%x2	1.5
40	48.3	20.7	3791	2.20	71	114	45	15	M10x50	0.7
2	2.375	300	1328	0.09	3.35	5.04	1.85	0.59	3⁄8x2	1.8
50	60.3	20.7	5908	2.20	85	128	47	15	M10x50	0.8
2½	2.875	300	1947	0.09	3.82	5.63	1.89	0.59	3/8×2	2.4
65	73.0	20.7	8659	2.20	97	143	48	15	M10x50	1.1
3OD	3.000	300	2120	0.11	3.94	5.79	1.89	0.59	3/8×21/4	2.4
65	76.1	20.7	9410	2.70	100	147	48	15	M10x55	1.1
3	3.500	300	2885	0.11	4.45	6.34	1.89	0.59	3/8×21/4	2.6
80	88.9	20.7	12842	2.70	113	161	48	15	M10x55	1.2
4	4.500	300	4769	0.19	5.63	7.68	2.09	0.59	3/8×21/2	3.5
100	114.3	20.7	21229	4.70	143	195	53	15	M10x60	1.6
5½OD	5.500	300	7124	0.19	6.69	9.06	2.09	0.91	½x3	5.1
125	139.7	20.7	31713	4.70	170	230	53	23	M12x75	2.3
5	5.563	300	7288	0.19	6.77	9.06	2.09	0.91	½x3	5.1
125	141.3	20.7	32443	4.70	172	230	53	23	M12x75	2.3
6½0D	6.500	300	9950	0.19	7.80	10.20	2.05	0.91	½x3	5.7
150	165.1	20.7	44293	4.70	198	259	52	23	M12x75	2.6
6	6.625	300	10336	0.19	7.87	10.43	2.13	0.91	½x3	6.0
150	168.3	20.7	46027	4.70	200	265	54	23	M12x75	2.7
200A %	216.3	20.7	76024	5.90	253	321	59	36	M20x110	4.6
8	8.625	300	17519	0.23	10.24	13.94	2.32	1.42	3/4×41/4	10.4
200	219.1	20.7	78005	5.90	260	354	59	36	M20x110	4.7
250A %	267.4	20.7	116118	6.40	312	402	63	36	M20x120	5.9
10	10.750	300	27215	0.25	12.40	15.98	2.48	1.42	3/4×43/4	13.2
250	273.0	20.7	121106	6.40	315	406	63	36	M20x120	6.0
300A %	318.5	20.7	164839	6.40	362	457	64	36	M20x120	7.8
12	12.750	300	38283	0.25	14.49	18.19	2.52	1.42	3/4×43/4	17.6
300	323.9	20.7	170475	6.40	368	462	64	36	M20x120	8.0



- ☐ Style 001 coupling provides a rigid joint allowing no expansion/contraction or liner movement. For pipeline Expansion/Contraction and Settlement refer to page 12.
- ☐ Work pressure is UL listed and FM approved, End Load is based on wok pressure, refer to page 11.
- ☐ Max. Work pressure and Max. End Load refer to page 13.
- ☐ For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation".
- ☐ Bolt-pads of the 2-pieces coupling housings must touch opposed in both sides when installation is completed. but it should be same.
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC refer to page 13 for details.

§ Refer to page 6 for details

% JIS Standard

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| Style 101 | Flexible Coupling | 1"-12" |



- "C"-shape Gasket
- EPDM Rubber
- Class 9.8 Bolts
- Epoxy Coating

#### Real Flexibility

Expansion-Contraction-Deflection-Rotation



## Style 101

#### Standard Flexible Coupling

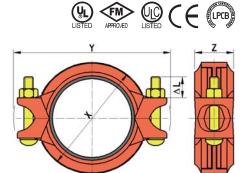
Style 101 flexible coupling is designed with flat-pad to create a flexible connection in both angular and axial direction by keeping a certain gap between housing key and pipe groove.

Publication: 01.03EN

The unique "C" shape gasket performs a triple sealing, Optimized design for gasket structure to extend service life of coupling. It retains sealing even if the pipe moves as deflection and rotation.

Nominal Size	OD	Work Pressure	End Load	Pipe End Separation	х	Υ	Z	ΔL	Bolts Size	Approx. Wt. Ea.
Inchs	Inchs	Psi	Lbs.	Inchs	Inchs	Inchs	Inchs	Inchs	Inchs	Lbs.
mm	mm	bar	N	mm	mm	mm	mm	mm	mm	kg
1	1.315	300	407	0-0.09	2.17	3.98	1.77	0.59	3/8×2	1.1
25	33.7	20.7	1845	0-2.24	55	101	45	15	M10x50	0.5
11/4	1.660	300	649	0-0.09	2.52	4.37	1.77	0.59	3⁄8x2	1.3
32	42.4	20.7	2921	0-2.24	64	111	45	15	M10x50	0.6
1½	1.900	300	850	0-0.09	2.76	4.61	1.77	0.59	3⁄8×2	1.5
40	48.3	20.7	3791	0-2.24	70	117	45	15	M10x50	0.7
2	2.375	300	1328	0-0.10	3.43	5.16	1.85	0.59	3⁄8x2	1.8
50	60.3	20.7	5908	0-2.64	87	131	47	15	M10x50	0.8
21/2	2.875	300	1947	0-0.12	3.98	5.91	1.93	0.59	3⁄8x2	2.2
65	73.0	20.7	8659	0-2.94	101	150	49	15	M10x50	1.0
3OD	3.000	300	2120	0-0.12	4.09	6.02	1.93	0.59	3/8x21/4	2.4
65	76.1	20.7	9410	0-2.94	104	153	49	15	M10x55	1.1
3	3.500	300	2885	0-0.12	4.65	6.50	1.93	0.59	3/8x21/4	2.6
80	88.9	20.7	12842	0-3.14	118	165	49	15	M10x55	1.2
4	4.500	300	4769	0-0.15	5.79	7.91	2.09	0.91	½x3	4.2
100	114.3	20.7	21229	0-3.74	147	201	53	23	M12x75	1.9
5½OD	5.500	300	7124	0-0.16	6.85	9.49	2.09	1.26	5⁄8x3½	5.5
125	139.7	20.7	31713	0-4.04	174	241	53	32	M16x90	2.5
5	5.563	300	7288	0-0.16	6.93	9.57	2.09	1.26	5⁄8x3½	5.5
125	141.3	20.7	32443	0-4.04	176	243	53	32	M16x90	2.5
6½OD	6.500	300	9950	0-0.19	8.07	10.67	2.09	1.26	5⁄8x3½	6.4
150	165.1	20.7	44293	0-4.74	205	271	53	32	M16x90	2.9
6	6.625	300	10336	0-0.19	8.07	11.26	2.09	1.26	5⁄8x3½	6.8
150	168.3	20.7	46027	0-4.74	205	286	53	32	M16x90	3.1
200A %	216.3	20.7	76024	0-4.90	258	330	63	36	M20x100	5.3
8	8.625	300	17519	0-0.19	10.35	13.43	2.48	1.42	3/4×4	11.9
200	219.1	20.7	78005	0-4.90	263	341	63	36	M20x100	5.4
250A %	267.4	20.7	116118	0-4.90	312	391	63	36	M20x120	7.4
10	10.750	300	27215	0-0.19	12.56	15.83	2.48	1.42	3/4×43/4	16.5
250	273.0	20.7	121106	0-4.90	319	402	63	36	M20x120	7.5
300A %	318.5	20.7	164839	0-4.90	362	449	64	36	M20x120	11.5
12	12.750	300	38283	0-0.19	14.57	17.91	2.52	1.42	3/4×43/4	26.2
300	323.9	20.7	170475	0-4.90	370	455	64	36	M20x120	11.9

☐ More size refer to "General Catalog".



- $\square$  Style 101 standard flexible coupling provides a flexible Joint for piping system to accommodate pipeline expansion/contraction and settlement. For pipeline Expansion/Contraction and Settlement refer to page 12.
- ☐ Work pressure is UL listed and FM approved, End Load is based on wok pressure, refer to page 11. ☐ Max. Work pressure and Max. End Load refer to page 13.
- $\square$  For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation". ☐ Bolt-pads of the 2-pieces coupling housing must
- metal to metal in both sides when installation is completed.
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC refer to page 13 for details. § Refer to page 6 for details

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Style 101H | Flexible Coupling | 1"-12"

- Enhanced Flat-pad Design
- "C"-shape Gasket
- EPDM Rubber
- Class 9.8 Bolts
- Epoxy Coating

#### **Heavy Duty**

Publication: 01.04EN

More Satey • More Peliabity



## Style 101H

**Heavy Duty Flexible Coupling** 

Style 101H Flexible coupling is designed with enhanced flat-pad to create a flexible connection in both angular and axial direction by keep a certain gap between housing key and pipe groove.

The unique "C" shape gasket performs a triple sealing, Optimized design for gasket structure to extend service life of coupling.the gakest retains sealing even if the pipe deflection and rotation.

Nominal Size	OD	Work Pressure	End Load	Pipe End Separation	х	Υ	Z	ΔL	Bolt Size	Approx. Wt. Ea.
Inches	Inches	Psi	Lbs.	Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	bar	N	mm	mm	mm	mm	mm	mm	kg
1	1.315	300	407	0-0.09	2.17	3.98	1.77	0.71	3⁄8x2	1.5
25	33.7	20.7	1845	0-2.24	55	101	45	18	M10x50	0.7
1¼	1.660	300	649	0-0.09	2.60	4.45	1.77	0.71	½x2½	1.8
32	42.4	20.7	2921	0-2.24	66	113	45	18	M12x60	0.8
1½	1.900	300	850	0-0.10	2.91	4.69	1.77	0.71	½x2½	2.0
40	48.3	20.7	3791	0-2.44	74	119	45	18	M12x60	0.9
2	2.375	300	1328	0-0.10	3.50	5.55	1.85	0.71	½x2½	2.6
50	60.3	20.7	5908	0-2.64	89	141	47	18	M12x60	1.2
2½	2.875	300	1947	0-0.12	3.94	5.79	1.93	0.91	½x3	3.3
65	73.0	20.7	8659	0-2.94	100	147	49	23	M12x75	1.5
3OD	3.000	300	2120	0-0.12	4.17	6.26	1.93	0.91	½x3	3.3
65	76.1	20.7	9410	0-2.94	106	159	49	23	M12x75	1.5
3	3.500	300	2885	0-0.12	4.72	6.85	1.93	0.91	½x3	3.7
80	88.9	20.7	12842	0-2.94	120	174	49	23	M12x75	1.7
4	4.500	300	4769	0-0.14	5.91	9	2.01	1.26	%x3½	5.7
100	114.3	20.7	21229	0-3.54	150	218	51	32	M16x90	2.6
5%OD	5.500	300	7124	0-0.16	7.01	9.96	2.01	1.42	34x4	8.4
125	139.7	20.7	31713	0-4.04	178	253	51	36	M20x100	3.8
5	5.563	300	7288	0-0.16	7.09	10.04	2.01	1.42	34x4	8.6
125	141.3	20.7	32443	0-4.04	180	255	51	36	M20x100	3.9
6½0D	6.500	300	9950	0-0.19	8.11	11.1	2.01	1.42	3/4×4	9.7
150	165.1	20.7	44293	0-4.74	206	282	51	36	M20x100	4.4
6	6.625	300	10336	0-0.19	8.19	11.06	2.01	1.42	34x4	10.1
150	168.3	20.7	46027	0-4.74	208	281	51	36	M20x100	4.6
8	8.625	300	17519	0-0.19	10.59	14.17	2.48	1.57	%x5¼	19.4
200	219.1	20.7	780054	0-4.90	269	360	63	40	M22x130	8.8
10	10.750	300	27215	0-0.19	12.76	17.28	2.56	1.57	1x6	24.2
250	273.0	20.7	121106	0-4.90	324	439	65	40	M24x150	11.0
12	12.750	300	38283	0-0.19	14.88	19.33	2.56	1.57	1x6	28.6
300	323.9	20.7	170475	0-4.90	378	491	65	40	M24x150	13.0

☐ More size refer to "General Catalog".

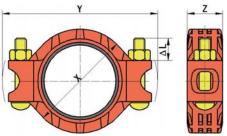












- ☐ Style 101H heavy duty flexible coupling provides a flexible Joint for piping system to accommodate pipeline expansion/contraction and settlement. For pipeline Expansion/Contraction and Settlement refer to page 12.
- ☐ Work pressure is UL listed and FM approved, End Load is based on work pressure, refer to page 11. ☐ Max. Work pressure and Max. End Load refer to page 13.
- ☐ For dry system and pre-action system,G04 gasket is recommended to use, for details please refer
- ☐ For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation".
- ☐ Bolt-pads of the 2-pieces coupling housing must metal to metal in both sides when installation is completed.
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC refer to page 13 for details. § Refer to page 6 for details



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#### **VISION Grooved Couplings**

| Style 020 ANSI | Reducing Coupling |

- Flat-pad Design
- C-shape Gasket
- EPDM Rubber
- Class 9.8 Bolts
- Epoxy Coating



Publiction: 01.06EN

Instead of two couplings and one reducer



# Style 020 ANSI

#### **Reducing Coupling**

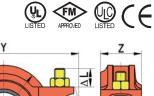
Style 020 Reducing Flexible Coupling is designed with flat-pad, to create flexibility of the pipeline in both axial and angular direction, by keeping a certain gap between the housing

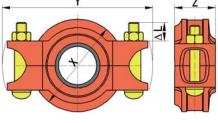
Style 020 Reducing Flexible Coupling is an alternative and economic option to replace a combination of two couplings and a concentric reducer.

The unique G02 "C" shape gasket performs triple sealing functions with tested and proven compression set and pocket volumetric, which maintains enough seal function when the coupling is deflected.

Note: VISION Style 021 Transition Coupling adapt the pipe joint of imperial(U.S) and Metricpipe and valves sizes with different standards.

OD	Work Pressure	End Load	Pipe End Separation	х	Υ	z	ΔL	Bolts Size	Approx. Wt. Ea.
Inches mm	Psi bar	Lbs. N	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
1½x1¼	300	649	0-0.10	2.76	4.21	1.77	0.59	3⁄8x2	1.5
48.3x42.4	20.7	2921	0-2.44	70	107	45	15	M10x50	0.7
2x11/4	300	649	0-0.10	3.35	4.84	1.85	0.59	3⁄8x2	2.0
60.3x42.4	20.7	2921	0-2.64	85	123	47	15	M10x50	0.9
2x1½	300	850	0-0.10	3.35	4.84	1.85	0.59	3⁄8x2	2.0
60.3x48.3	20.7	3791	0-2.64	85	123	47	15	M10x50	0.9
2½x2	300	1328	0-0.12	3.82	5.75	1.93	0.91	½x3	2.9
73.0x60.3	20.7	5908	0-2.94	97	146	49	23	M12x75	1.3
3x2	300	1328	0-0.12	4.45	6.38	1.93	0.91	½x3	3.5
88.9x60.3	20.7	5908	0-3.14	113	162	49	23	M12x75	1.6
3x2½	300	1947	0-0.12	4.45	6.38	1.93	0.91	½x3	3.3
88.9x73.0	20.7	8659	0-3.14	113	162	49	23	M12x75	1.5
4x2	300	1328	0-0.16	5.63	7.95	2.01	1.26	5⁄8x3½	6.2
114.3x60.3	20.7	5908	0-4.04	143	202	51	32	M16x90	2.8
4x2½	300	1947	0-0.16	5.63	7.95	2.01	1.26	5⁄8x3½	5.5
114.3x73.0	20.7	8659	0-4.04	143	202	51	32	M16x90	2.5
4x3	300	2885	0-0.16	5.63	7.95	2.01	1.26	5⁄8x3½	5.3
114.3x88.9	20.7	12842	0-4.04	143	202	51	32	M16x90	2.4
5x3	300	2885	0-0.16	6.73	9.45	2.01	1.42	34x4	7.9
141.3x88.9	20.7	12842	0-4.04	171	240	51	36	M20x100	3.6
5x4	300	4769	0-0.16	6.73	9.45	2.01	1.42	3⁄4x4	7.0
141.3x114.3	20.7	21229	0-4.04	171	240	51	36	M20x100	3.2
6x4	300	4769	0-0.16	7.87	10.59	2.01	1.42	34x4	9.3
168.3x114.3	20.7	21229	0-4.04	200	269	51	36	M20x100	4.2
6x5	300	7288	0-0.16	7.87	10.59	2.01	1.42	3/4×4	8.4
168.3x141.3	20.7	32443	0-4.04	200	269	51	36	M20x100	3.8
8x6	300	10336	0-0.25	10.20	13.58	2.40	1.57	%x5¼	15.0
219.1x168.3	20.7	46027	0-6.30	259	345	61	40	M22x130	6.8





- ☐ Style 020 reducing coupling provides a flexible Joint for piping system to accommodate pipeline Expansion / Contraction. For Expansion / Contraction and settlement, please refer to Page 12.
- ☐ Work pressure is UL listed and FM approved, End Load is based on wok pressure, refer to page 11. ☐ Max. Work pressure and Max. End Load refer to page 13.
- ☐ For dry system and pre-action system, Style 020 reducing coupling is not recommended to use, For more details, please refer to page 7.
- ☐ For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- $\hfill\Box$  Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation".
- $\hfill \square$  Bolt-pads of the 2-pieces coupling housing must metal to metal in both sides when installation is completed.
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

§ Refer to page 6 for details



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020 BS & DIN | Reducing Coupling |

- Flat-pad Design
- C-shape Gasket
- EPDM Rubber
- Class 9.8 Bolt§
- Epoxy Coating



Publiction: 01.06EN

Instead of two couplings and one reducer



## Style 020 BS & DIN

#### **Reducing Coupling**

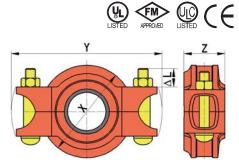
Style 020 Reducing Flexible Coupling is designed with flat-pad, to create flexibility of the pipeline in both axial and angular direction, by keeping a certain gap between the housing key and pipe groove.

Style 020 Reducing Flexible Coupling is an alternative and economic option to replace a combination of two couplings and a concentric reducer.

The unique G02 "C" shape gasket performs triple sealing functions with tested and proven compression set and pocket volumetric, which maintains enough seal function when the coupling is deflected.

Note: VISION Style 021 Transition Coupling adapt the pipe joint of imperial(U.S) and Metricpipe and valves sizes with different standards.

OD	Work Pressure	End Load	Pipe End Separation	х	Υ	z	ΔL	Bolts Size	Approx. Wt. Ea.
Inches mm	Psi bar	Lbs. N	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
3ODx2	300	1328	0-0.12	3.94	5.91	1.93	0.91	½x3	2.9
76.1x60.3	20.7	5908	0-2.94	100	150	49	23	M12x75	1.3
3x3OD	300	2120	0-0.12	4.45	6.38	1.93	0.91	½x3	3.3
88.9x76.1	20.7	9410	0-3.14	113	162	49	23	M12x75	1.5
4x3OD	300	2120	0-0.16	5.63	7.95	2.01	1.26	5⁄8x31⁄2	5.5
114.3x76.1	20.7	9410	0-4.04	143	202	51	32	M16x90	2.5
5½ODx3	300	2885	0-0.16	6.69	9.37	2.01	1.42	3/4×4	7.9
139.7x88.9	20.7	12842	0-4.04	170	238	51	36	M20x100	3.6
5½ODx4	300	4769	0-0.16	6.69	9.37	2.01	1.42	3/4×4	7.0
139.7x114.3	20.7	21229	0-4.04	170	238	51	36	M20x100	3.2
6½ODx4	300	4769	0-0.16	7.72	10.51	2.01	1.42	3/4×4	9.0
165.1x114.3	20.7	21229	0-4.04	196	267	51	36	M20x100	4.1
6½ODx5½OD	300	7124	0-0.16	7.72	10.51	2.01	1.42	3/4×4	8.1
165.1x139.7	20.7	31713	0- 4	196	267	51	36	M20x100	3.7
8x6½OD	300	9950	0-0.25	10.20	13.58	2.40	1.57	%x5¼	15.2
219.1x165.1	20.7	44293	0-6.30	259	345	61	40	M22x130	6.9



- ☐ Style 020 reducing coupling provides a flexible Joint for piping system to accommodate pipeline Expansion /Contraction. For Expansion /Contraction and settlement, please refer to Page 12.
- Work pressure is UL listed and FM approved, End Load is based on wok pressure, refer to page 11.
   Max. Work pressure and Max. End Load refer to page 13.
- ☐ For dry system and pre-action system, Style 020 reducing coupling is not recommended to use, For more details, please refer to page 7.
- ☐ For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation".
- ☐ Bolt-pads of the 2-pieces coupling housing must metal to metal in both sides when installation is completed.
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.
- ☐ Some BS & DIN Sizes are the same as ANSI Standard, please refer to page 18.

§ Refer to page 6 for details



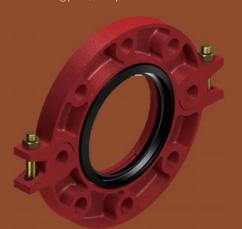
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| Style 007A1 | Flange Adaptor |



- Spigot and Socket design
- C-shape Gasket
- **EPDM Rubber**
- Class 9.8 Bolt<sup>§</sup>
- Epoxy Coating

#### Compact·Connection

Direct Joint ·Ecomical

Publiction: 01.08EN

#### Style 007A1 ANSI

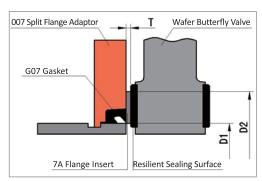
**Split Flange Adaptor** 

Style 007A1 provides a rigid connection with a spigot and socket design. The diameter between key sections can be adjusted by tightening nuts, until key section grips groove bottom around the full circumference rigidly.

Style 007A1 Split Flange Adaptor is Not allowed linear movement and rotation due to a inner tooth design.

Style 007A1 Split Flange Adaptor is a rigid coupling, it is applied to connect grooved Valves tightly prevent rotating

	,			_									
Nominal Size	I OD	Work Pressure	End Load	A	В	D1	D2	х	Υ	Z	ΔL		Approx Wt. Ea
Inches mm	Inches mm	Psi/bar	Lbs.	Inches mm	Lbs. kg								
2	2.375	300	1328	2.40	3.07	2.36	3.90	6.06	8.5	0.87	0.59	3/8x21/2	3.5
60	60.3	20.7	5908	61	78	60	99	154	216	22	15	M10x60	1.6
2½	2.875	300	1947	2.91	3.58	2.87	4.65	7.09	9.45	0.87	0.59	3/8×2½	4.0
65	73.0	20.7	8659	74	91	73	118	180	240	22	15	M10x60	1.8
3	3.500	300	2885	3.54	4.21	3.50	5.20	7.76	9.8	0.87	0.59	3/8x21/2	4.2
80	88.9	20.7	12842	90	107	89	132	197	249	22	15	M10x60	1.9
4	4.500	300	4769	4.57	5.24	4.49	6.14	8.54	10.59	0.87	0.59	3/8x21/2	6.4
100	114.3	20.7	21229	116	133	114	156	217	269	22	15	M10x60	2.9
5	5.563	300	7288	5.63	6.34	5.55	7.24	10.08	12.76	0.94	0.91	½x3	8.4
125	141.3	20.7	32443	143	161	141	184	256	324	24	23	M12x75	3.8
6	6.625	300	10336	6.69	7.44	6.61	8.31	11.10	13.54	0.94	0.91	½x3	9.9
150	168.3	20.7	46027	170	189	168	211	282	344	24	23	M12x75	4.5
8	8.625	300	17519	8.70	9.57	8.62	10.75	13.27	15.71	1.10	0.91	½x3	14.6
200	219.1	20.7	78005	221	243	219	273	337	399	28	23	M12x75	6.6



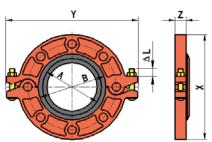
 $\hfill\Box$  7A Flange Insert, refer to "General Catalog".











- $\hfill \square$  Style 007A1 Split flange adaptor provides rigid connection only, allowing no Expansion/Contraction.
- ☐ Max. Work pressure and Max. End Load refer to page 13.
- ☐ 10" and larger, Style 015A1 flange adaptor is recommended to use, for details please refer to
- $\hfill \Box$  For dry system and pre-action system, Style 007A1 Split flange adaptor is not recommended to use, For more details, please refer to page 7.
- ☐ For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation".
- ☐ Bolt-pads of the 2-pieces housing should be same after finishing installation.
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.
  - § Refer to page 6 for details

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| Style 007D2 | Flange Adaptor



- Spigot and Socket design
- C-shape Gasket
- EPDM Rubber
- Class 9.8 Bolts
- **Epoxy Coating**

#### Compact·Connection

Direct Joint ·Ecomical

Publiction: 01.08EN

#### **Style 007D2 METRIC**

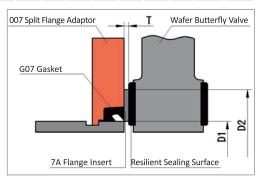
**Split Flange Adaptor** 

Style 007D2 provides a rigid connection with a spigot and socket design. The diameter between key sections can be adjusted by tightening nuts, until key section grips groove bottom around the full circumference rigidly.

Style 007D2 Split Flange Adaptor is Not allowed linear movement and rotation due to a inner tooth design.

Style 007D2 Split Flange Adaptor is a rigid coupling, it is applied to connect grooved Valves tightly prevent rotating

Nomina Size	OD	Work Pressure	End Load	А	В	D1	D2	х	Υ	z	ΔL		Approx. Wt. Fa.
Inches mm	Inches mm	Psi bar	Lbs.	Inches mm	Lbs. kg								
2	2.375	365	1616	2.40	3.07	2.36	3.90	6.06	8.5	0.87	0.59	3/8x21/2	3.5
60	60.3	25	7136	61	78	60	99	154	216	22	15	M10x60	1.6
3OD	3.000	365	2579	3.03	3.70	2.99	4.65	7.17	9.21	0.87	0.59	3/8x21/2	4.6
65	76.1	25	11365	77	94	76	118	182	234	22	15	M10x60	2.1
3	3.500	365	3510	3.54	4.21	3.50	5.20	7.76	9.8	0.87	0.59	3/8×21/2	5.1
80	88.9	25	15510	90	107	89	132	197	249	22	15	M10x60	2.3
4	4.500	365	5802	4.57	5.24	4.49	6.14	8.54	10.59	0.87	0.59	3/8x21/2	5.5
100	114.3	25	25639	116	133	114	156	217	269	22	15	M10x60	2.5
5½0D	5.500	365	8667	5.55	6.26	5.24	7.24	9.72	12.17	0.87	0.91	½x3	7.0
125	139.7	25	38300	141	159	133	184	247	309	22	23	M12x75	3.2
6½OD	6.500	365	12106	6.57	7.32	6.50	8.31	11.10	13.54	0.94	0.91	½x3	9.0
150	165.1	25	53494	167	186	165	211	282	344	24	23	M12x75	4.1
6	6.625	365	12576	6.69	7.44	6.61	8.31	11.10	13.54	0.94	0.91	½x3	9.0
150	168.3	25	55588	170	189	168	211	282	344	24	23	M12x75	4.1
8	8.625	365	21315	8.70	9.57	8.62	10.75	13.27	15.71	1.10	0.91	½x3	13.7
200	219.1	25	94209	221	243	219	273	337	399	28	23	M12x75	6.2



 $\hfill\Box$  7A Flange Insert, refer to "General Catalog".

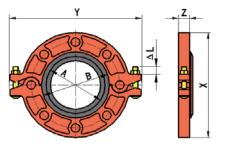












- $\hfill \square$  Style 007D2 Split flange adaptor provides rigid connection only, allowing no Expansion/Contraction.
- ☐ Max. Work pressure and Max. End Load refer to page 13.
- ☐ 10" and larger, Style 015D2 flange adaptor is recommended to use, for details please refer to page 34.
- $\square$  For dry system and pre-action system, Style 007D2 Split flange adaptor is not recommended to use, For more details, please refer to page 7.
- ☐ For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ Tightening Torque for Bolts should follow the value listed in page 91"Torque of Coupling Installation".
- ☐ Bolt-pads of the 2-pieces housing should be same after finishing installation.
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC refer to page 13 for details. § Refer to page 6 for details

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# **Ultra Grooved Piping System**

Large Diameter Piping Solution

Rigid Coupling | Flexible Coupling | Grooved fitting



#### Compare with Standard Grooved Coupling, Ultra Groove have obvious performance:

- ☐ Wider sealing surface provides safer sealing and smaller flare at the pipe ends reducing stress by roll groove.
- $\square$  Size DN350 thru DN600(14" to 24") have same grooves, simplifying the grooving work.
- Deeper grooving increases safety factor for joint.
- ☐ Unique design of groove have better performance.

#### "E"-Shape Gasket Design

Extra width sealing face prevents leak from the joint of the pipe with defects. With consideration of many factors, "E"-Shape gasket design can adapt to more applications in practices.

Ultra Grooved Piping System is specialized for Underground and Cross-Over pipeline of Large Scale Protection System. it can provide a long service life with "E"-Shape gasket and make the joint much safer.

# **Total Piping Solution**





# **Grooved Fittings**

# Short Pattern & Standard

Elbow | Tee | End Cap | Reducer | Nipple

STYLE	DESCRIPTION	SIZE	PAGE
002	Short Pattern 90°Elbow	2"-8"(50-200mm)	25
004	Short Pattern Equal Tee	2"-8"(50-200mm)	25
010	Short Pattern Cross	2"-8"(50-200mm)	25
002L	90°Elbow	1¼"-12(32-300mm)	26
004L	Equal Tee	1¼"-12(32-300mm)	26
010L	Cross	1¼"-12(32-300mm)	26
003	45° Elbow	1¼"-12(32-300mm)	27
0031	22.5° Elbow	1¼"-12(32-300mm)	27
0032	11.25° Elbow	1¼"-12(32-300mm)	27
005	End Cap	1¼"-12(32-300mm)	28
005WH	End Cap With Hole	2"-12"(50-300mm)	28
002D	90°Drain Elbow	2"-8"(50-200mm)	29
006RT	End of Run Elbow	1¼x½"-2x1"	29
040	Standpipe Tee	4x4x2½"-6x6x3"	29
800	Concentric Reducer (G)	2x1¼"-12x10"	30
009	Concentric Reducer (T)	1¼x1"-8x2"	31
013	Eccentric Reducer (T)	2x1¼"-12x10"	31
011	Short Pattern Reducing Tee (G)	30Dx1½"-8x4"	32
012	Short Pattern Reducing Tee (T)	2½x1"-8x3OD"	32
011L	Reducing Tee (G)	2½x1¼"-12x10"	33
012L	Reducing Tee (T)	2½x1¼"-12x3"	33
015A1	Flange Adaptor Class 150	1¼"-12(32-300mm)	34
015A2	Flange Adaptor Class 300	1¼"-12(32-300mm)	34
015D2	Flange Adaptor PN16	2"-12"(50-300mm)	34
018	Adaptor Nipple (G/G)	1"-12" (25-300mm)	35
018M	Adaptor Nipple (G/T)	1"-12" (25-300mm)	35
019	Hose Nipple	1¼"-10"(32-250mm)	35

<sup>☐</sup> More products refer to "General Catalog"



Same as all grooved piping system, VISION grooved piping system provides various grooved fittings in order to make piping design and installation easily. VISION grooved fitting consist of Elbow, Tee, Cross, Reducer, Adaptor Nipple, End Cap and Special Fittings.

According to different application and features, VISION grooved fittings serviced in Short Pattern Series, Standard Pattern Series, long radius Elbow, Reducer, Adaptor nipple and special fittings.

VISION grooved fittings are designed by CAD and Finite Element Analysis, with advanced structure and high safety factor, it provides excellent flow character.

character.
All grooved ends on fittings are standard machined cut groove, it can match
VISION standard grooved coupling. the selection of fittings is depending
on different piping system.

Total Piping Solution

#### **Equivalent Length**

**Standard Pattern Fittings** 

Nominal Size	OD	90° Elbows	45° Elbows		qual
Inches	Inches	Ft	Ft	Run Ft	Branch Ft
mm	mm	m	m	m	m
1¼	1.660	2.3	1.3	2.3	5.9
32	42.4	0.7	0.4	0.7	1.8
1½	1.900	2.6	1.3	2.6	6.6
40	48.3	0.8	0.4	0.8	2.0
2	2.375	3.3	1.6	3.3	8.5
50	60.3	1.0	0.5	1.0	2.6
21/2	2.875	4.3	2.3	4.3	10.8
65	73.0	1.3	0.7	1.3	3.3
3OD	3.000	4.3	2.3	4.3	10.8
65	76.1	1.3	0.7	1.3	3.3
3	3.500	5.2	2.6	5.2	12.8
80	88.9	1.6	0.8	1.6	3.9
4	4.500	6.6	3.3	6.6	16.7
100	114.3	2.0	1.0	2.0	5.1
5½OD	5.500	8.2	4.3	8.2	21.0
125	139.7	2.5	1.3	2.5	6.4
5	5.563	8.2	4.3	8.2	21.0
125	141.3	2.5	1.3	2.5	6.4
6½OD	6.500	9.8	4.9	9.8	24.9
150	165.1	3.0	1.5	3.0	7.6
6	6.625	10.2	5.2	10.2	25.2
150	168.3	3.1	1.6	3.1	7.7
8	8.625	13.4	6.6	13.4	33.1
200	219.1	4.1	2.0	4.1	10.1
10	10.750	16.7	8.5	16.7	41.6
250	273.0	5.1	2.6	5.1	12.7
12	12.750	20.0	9.8	20.0	49.8
300	323.9	6.1	3.0	6.1	15.2

#### **Short Pattern Fittings**

Nominal Size	OD	90° Short Elbows	Run	Branch
Inches	Inches	Ft	Ft	Ft
mm	mm	m	m	m
2	2.375	3.6	3.6	8.9
50	60.3	1.1	1.1	2.7
2½	2.875	3.9	3.9	11.5
65	73.0	1.2	1.2	3.5
3OD	3.000	3.9	3.9	11.5
65	76.1	1.2	1.2	3.5
3	3.500	5.9	5.9	14.8
80	88.9	1.8	1.8	4.5
4	4.500	8.2	8.2	20.0
100	114.3	2.5	2.5	6.1
5½OD	5.500	10.2	10.2	24.9
125	139.7	3.1	3.1	7.6
5	5.563	10.2	10.2	24.9
125	141.3	3.1	3.1	7.6
6½OD	6.500	12.5	12.5	29.8
150	165.1	3.8	3.8	9.1
6	6.625	12.8	12.8	30.2
150	168.3	3.9	3.9	9.2
8	8.625	14.4	14.4	34.8
200	219.1	4.4	4.4	10.6

- ☐ Listed figures is based on Hazen-Williams formula, C=120, SCH40 Steel pipe.
- ☐ Short Patter Series contains 90 degree Elbow, Equal Tee and Reducing Tee etc. The equivalent length was calculated by 8.2 ft./s(2.5m/s) velocity, because the equivalent length of short radius fitting is changed along with flow rate.
- ☐ Standard patter series contains 90 degree Elbow, 45 degree Elbow, Equal Tee, Reducing Tee, for equivalent length please refer to the data sheet.
- ☐ Equivalent length for Run size of Short pattern reducing tee may refer to Equal Tee, Equivalent length for branch size of short radius reducing Tee can refer to listed same size equal tee. for example, 4"x 3OD, equivalent length of run size is the same as 3OD equal Tee, 8.2Ft(2.5m), and equivalent length of branch size is the same as 3OD equal Tee, 11.5Ft(3.5m). Equivalent length of standard pattern reducing Tee can be sure as the same way.
- $\hfill\Box$  Equivalent length of style 040 equal to Short pattern reducing Tee.
- ☐ Equivalent length of Short pattern reducing cross equals to Short pattern reducing Tee. Equivalent length of standard reducing cross equals to standard reducing Tee.



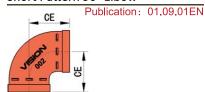
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#### Style 002

Short Pattern 90° Elbow

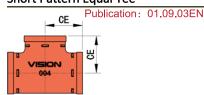
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#### Style 004

**Short Pattern Equal Tee** 

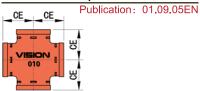
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## Style 010

**Short Pattern Equal Cross** 





Nominal Size	OD	CE	Approx. Wt. Ea.
Inches	Inches	Inches	Lbs.
mm	mm	mm	kg
2	2.375	2.76	1.5
50	60.3	70	0.7
2½	2.875	2.99	2.4
65	73.0	76	1.1
3OD	3.000	2.99	2.4
65	76.1	76	1.1
3	3.500	3.39	2.6
80	88.9	86	1.2
4	4.500	4.02	4.8
100	114.3	102	2.2
5%OD	5.500	4.88	7.9
125	139.7	124	3.6
5	5.563	4.88	7.9
125	141.3	124	3.6
6½OD	6.500	5.51	11.5
150	165.1	140	5.2
6	6.625	5.51	11.7
150	168.3	140	5.3
8	8.515	6.81	20.0
200A %	216.3	173	9.1
8	8.625	6.81	20.0
200	219.1	173	9.1

Nominal Size	OD	CE	Approx. Wt. Ea.
Inches	Inches	Inches	Lbs.
mm	mm	mm	kg
2	2.375	2.76	2.2
50	60.3	70	1.0
2½	2.875	2.99	3.1
65	73.0	76	1.4
3OD	3.000	2.99	3.1
65	76.1	76	1.4
3	3.500	3.39	4.0
80	88.9	86	1.8
4	4.500	4.02	6.8
100	114.3	102	3.1
5%OD	5.500	4.88	10.6
125	139.7	124	4.8
5	5.563	4.88	10.6
125	141.3	124	4.8
6½OD	6.500	5.51	15.4
150	165.1	140	7.0
6	6.625	5.51	15.9
150	168.3	140	7.2
8	8.515	6.81	30.0
200A %	216.3	173	13.6
8	8.625	6.81	30.0
200	219.1	173	13.6

Nominal Size	OD	CE	Approx. Wt. Ea.
Inches	Inches	Inches	Lbs.
mm	mm	mm	kg
2	2.375	2.76	2.9
50	60.3	70	1.3
2½	2.875	2.99	4.2
65	73.0	76	1.9
3OD	3.000	2.99	4.4
65	76.1	76	2.0
3	3.500	3.39	5.3
80	88.9	86	2.4
4	4.500	4.02	8.1
100	114.3	102	3.7
5½OD	5.500	4.88	12.3
125	139.7	124	5.6
5	5.563	4.88	12.3
125	141.3	124	5.6
6½OD	6.500	5.51	17.8
150	165.1	140	8.1
6	6.625	5.51	18.1
150	168.3	140	8.2
8	8.515	6.81	37.9
200A %	216.3	173	17.2
8	8.625	6.81	37.9
200	219.1	173	17.2

- ☐ Style 002, 004, 010 are short pattern design, Equivalent length please refer to page 24.
- ☐ UL Listed and FM Approved pressure rate of Style 002, 004 and 010 are the same as Style 001coupling, please refer to page 15.
- $\ \square$  For Style 003 standard 45 $^{\circ}$ Elbow, Please refer to page 27. For Style 005 end cap, please refer to page 28.
- ☐ Less than 2", Style 002L, 004L and 010L standard pattern fittings are recommended to use.
- $\hfill \square$  10" and 12", Style 002L, 004L and 010L standard pattern fittings are recommended to use.
- ☐ Standard pattern fittings are used for Large Scale Fire Protection System in order to reduce the friction loss.
- ☐ For correct installation, please refer to page 91"General of Installation" and Publication AZ-100-EN "Installation Manual".
- ☐ For ONE TIME FIELD TEST ONLY, the Max. Joint working pressure may be increased to 1.5 times the figures shown.

  LPC refer to page 13 for details.

% JIS Standard



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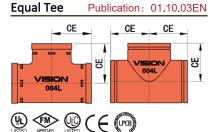
#### Style 002L

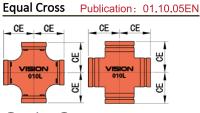
#### Style 004L

#### Style 010L

90° Elbow Publication: 01.10.01EN







(ÅF)	<b>⟨FM⟩</b>	(II)	(	$\subset$
LISTED	APPROVED	LISTED	~	~

Nominal	OD	CE	Approx.	Nominal	OD	CE	Approx.	Nominal	OD	CE	Approx.
Size	OD	CL	Wt. Ea.	Size	OD	CL	Wt. Ea.	Size	00	CL	Wt. Ea.
Inches	Inches	Inches	Lbs.	Inches	Inches	Inches	Lbs.	Inches	Inches	Inches	Lbs.
mm	mm	mm	kg	mm	mm	mm	kg	mm	mm	mm	kg
1¼	1.660	2.76	1.1	1¼	1.660	2.76	1.8	1¼	1.660	2.76	2.0
32	42.4	70	0.5	32	42.4	70	0.7	32	42.4	70	0.9
1½	1.900	2.76	1.3	1½	1.900	2.76	1.8	1½	1.900	2.76	2.4
40	48.3	70	0.6	40	48.3	70	0.8	40	48.3	70	1.1
2	2.375	3.27	2.0	2	2.375	3.27	2.6	2	2.375	3.27	3.7
50	60.3	83	0.9	50	60.3	83	1.2	50	60.3	83	1.7
2½	2.875	3.74	3.1	2½	2.875	3.74	4.2	2½	2.875	3.74	6.8
65	73.0	95	1.4	65	73.0	95	1.9	65	73.0	95	3.1
3OD	3.000	3.74	3.1	3OD	3.000	3.74	4.2	3OD	3.000	3.74	7.0
65	76.1	95	1.4	65	76.1	95	1.9	65	76.1	95	3.2
3	3.500	4.25	4.0	3	3.500	4.25	5.5	3	3.500	4.25	10.1
80	88.9	108	1.8	80	88.9	108	2.5	80	88.9	108	4.6
4	4.500	5	7.0	4	4.500	5.00	9.5	4	4.500	5.00	17.2
100	114.3	127	3.2	100	114.3	127	4.3	100	114.3	127	7.8
5½OD	5.500	5.51	10.8	5½OD	5.500	5.51	13.7	5½OD	5.500	5.51	25.1
125	139.7	140	4.9	125	139.7	140	6.2	125	139.7	140	11.4
5	5.563	5.51	11.0	5	5.563	5.51	13.7	5	5.563	5.51	25.6
125	141.3	140	5.0	125	141.3	140	6.2	125	141.3	140	11.6
6½OD	6.500	6.5	15.4	6½OD	6.500	6.50	20.5	6½OD	6.500	6.50	37.7
150	165.1	165	7.0	150	165.1	165	9.3	150	165.1	165	17.1
6	6.625	6.5	15.4	6	6.625	6.50	20.5	6	6.625	6.50	39.0
150	168.3	165	7.0	150	168.3	165	9.3	150	168.3	165	17.7
8	8.515	7.76 &	26.4	8	8.515	7.76 #	37.9	8	8.515	7.76 #	70.3
200A %	216.3	197 &	12.0	200A %	216.3	197#	17.2	200A %	216.3	197#	31.9
8	8.625	7.76	26.4	8	8.625	7.76	37.9	8	8.625	7.76	70.3
200	219.1	197	12.0	200	219.1	197	17.2	200	219.1	197	31.9
10	10.525	9.02 &	51.6	10	10.525	9.02 #	62.4	10	10.525	9.02 #	103.3
250A %	267.4	229 &	23.4	250A %	267.4	229#	28.3	250A %	267.4	229#	46.9
10	10.750	9.02	44.1	10	10.750	9.02	61.7	10	10.750	9.02	115.6
250	273.0	229	20.0	250	273.0	229	28.0	250	273.0	229	52.5
12	12.539	10.00 &	76.9	12	12.539	10.00#	91.2	12	12.539	10.00 #	153.7
300A %	318.5	254 &	34.9	300A %	318.5	254#	41.4	300A %	318.5	254#	69.8
12	12.750	10	72.7	12	12.750	10.00	88.1	12	12.750	10.00	169.6
300	323.9	254	33.0	300	323.9	254	40.0	300	323.9	254	77.0

- $\ \square$  Style 002L, 004L, 010L are standard pattern design, Equivalent length please refer to page 24.
- UL Listed and FM Approved pressure rate of Style 002L, 004L and 010L are the same as Style 101H coupling, please refer to page 17.
- ☐ For Style 003 standard 45ºElbow, Please refer to page 27. For Style 005 end cap, please refer to page 28.
- ☐ Standard patter fittings are used for Large Scale Fire Protection System in order to reduce the friction loss.
- ☐ For correct installation, please refer to page 91"General of Installation" and Publication AZ-100-EN "Installation Manual".
- ☐ For ONE TIME FIELD TEST ONLY, the Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC refer to page 13 for details. % JIS Standard # Segmentally Welded Steel. & Punched Elbow & Nipples Welded.



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## Style 003

#### **Style 0031**

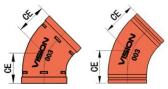
#### **Style 0032**

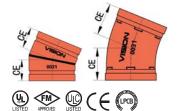
45° Elbow

Publication: 01.10.02EN

22.5° Elbow Publication: 01.10.09EN

11.25° Elbow Publication: 01.10.09EN







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Nominal Size	OD	CE	Approx. Wt. Ea.
Inches	Inches	Inches	Lbs.
mm	mm	mm	kg
1¼	1.660	1.73	0.7
32	42.4	44	0.3
1½	1.900	1.73	0.9
40	48.3	44	0.4
2	2.375	2.01	1.3
50	60.3	51	0.6
21/2	2.875	2.24	1.8
65	73.0	57	0.8
3OD	3.000	2.24	1.8
65	76.1	57	0.8
3	3.500	2.52	2.2
80	88.9	64	1.0
4	4.500	2.99	4.0
100	114.3	76	1.8
5½OD	5.500	3.27	5.7
125	139.7	83	2.6
5	5.563	3.27	5.7
125	141.3	83	2.6
6½OD	6.500	3.5	8.6
150	165.1	89	3.9
6	6.625	3.5	8.8
150	168.3	89	4.0
8	8.515	4.25	15.9
200A	216.3	108	7.2
8	8.625	4.25	15.9
200	219.1	108	7.2
10	10.525	4.76 #	29.6
250A	267.4	121#	13.5
10	10.750	4.76	33.5
250	273.0	121	15.2
12	12.539	5.24#	44.3
300A	318.5	133#	20.1
12	12.750	5.24	52.6
300	323.9	133	23.9
□ C+ula 003	0021 022	ara stand	

Nominal Size	OD	CE	Approx. Wt. Ea.
Inches	Inches	Inches	Lbs.
mm	mm	mm	kg
1¼	1.660	1.73 #	0.7
32	42.4	44#	0.3
1½	1.900	1.73 #	0.9
40	48.3	44#	0.4
2	2.375	2.01#	1.3
50	60.3	51#	0.6
2½	2.875	2.01#	2.0
65	73.0	51#	0.9
3OD	3.000	2.01	2.0
65	76.1	51	0.9
3	3.500	2.24#	2.9
80	88.9	57#	1.3
4	4.500	2.87	5.3
100	114.3	73	2.4
5½OD	5.500	2.87#	6.8
125	139.7	73 #	3.1
5	5.563	2.87 #	6.8
125	141.3	73 #	3.1
6½OD	6.500	3.11	9.5
150	165.1	79	4.3
6	6.625	3.11#	10.6
150	168.3	79#	4.8
8	8.515	3.27 #	15.6
200A %	216.3	83 #	7.1
8	8.625	3.27 #	15.6
200	219.1	83 #	7.1
10	10.525	4.37 #	25.0
250A %	267.4	111#	11.4
10	10.750	4.37	23.8
250	273.0	111	10.8
12	12.539	4.88#	37.5
300A %	318.5	124#	17.0
12	12.750	4.88	35.9
300	323.9	124	16.3

Nominal Size	OD	CE	Approx Wt. Ea
Inches	Inches	Inches	Lbs.
mm	mm	mm	kg
1¼	1.660	1.38	0.7
32	42.4	35	0.3
1½	1.900	1.38	0.7
40	48.3	35	0.3
2	2.375	1.38	0.9
50	60.3	35	0.4
21/2	2.875	1.5	1.5
65	73.0	38	0.7
3OD	3.000	1.5	1.5
65	76.1	38	0.7
3	3.500	1.5	2
80	88.9	38	0.9
4	4.500	1.73 C	3.3
100	114.3	44 C	1.5
5½0D	5.500	1.73	4.2
125	139.7	44	1.9
5	5.563	1.73	4.4
125	141.3	44	2.0
6½OD	6.500	2.01 C	6.2
150	165.1	51 C	2.8
6	6.625	2.01	6.4
150	168.3	51	2.9
8	8.515	2.01	10.1
200A %	216.3	51	4.6
8	8.625	2.01	10.1
200	219.1	51	4.6
10	10.525	2.13	12.2
250A %	267.4	54	5.5
10	10.750	2.13	15.2
250	273.0	54	6.9
12	12.539	2.24	17.2
300A %	318.5	57	7.8
12	12.750	2.24	22.7
300	323.9	57	10.3

☐ Style 003, 0031, 032 are standard pattern design, Equivalent length please refer to page 24.

☐ UL Listed and FM Approved pressure rate of Style 003, 0031 and 0032 are the same as Style 101H coupling, please refer to page 15.

☐ Standard pattern fittings are used for Large Scale Fire Protection System in order to reduce the friction loss.

☐ For correct installation, please refer to page 91"General of Installation" and Publication AZ-100-EN "Installation Manual".

☐ For ONE TIME FIELD TEST ONLY, the Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC refer to page 13 for details. % JIS Standard # Segmentally Welded Steel. & Punched Elbow & Nipples Welded.



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## Style 005

#### **End Cap**

Publication: 01.09.04EN





Nominal Size	OD	EE	Approx. Wt. Ea.
Inches mm	Inches mm	Inches mm	Lbs. kg
1¼	1.660	0.91	0.2
32	42.4	23	0.1
1½	1.900	0.91	0.4
40	48.3	23	0.2
2	2.375	0.98	0.4
50	60.3	25	0.2
2½	2.875	0.98	0.7
65	73.0	25	0.3
3OD	3.000	0.98	0.7
65	76.1	25	0.3
3	3.500	0.98	0.9
80	88.9	25	0.4
4	4.500	0.98	1.1
100	114.3	25	0.5
5½OD	5.500	0.98	2.2
125	139.7	25	1.0
5	5.563	0.98	2.2
125	141.3	25	1.0
6½OD	6.500	0.98	3.1
150	165.1	25	1.4
6	6.625	0.98	3.1
150	168.3	25	1.4
8	8.515	1.22	8.4
200A %	216.3	31	3.8
8	8.625	1.22	8.4
200	219.1	31	3.8
10	10.525	1.22	13.9
250A %	267.4	31	6.3
10	10.750	1.22	14.1
250	273.0	31	6.4
12	12.539	1.22	19.6
300A %	318.5	31	8.9
12	12.750	1.22	19.8

300 323.9 31 9.0

#### Style 005WH

**End Cap with Hole** 





Nominal Size	OD	т	t	h	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	kg
2	2.375	1.10	0.98	0.28	0.7
50	60.3	28	25	7.0	0.3
2½	2.875	1.10	0.98	0.51	0.9
65	73.0	28	25	13.0	0.4
3OD	3.000	1.10	0.98	0.55	0.9
65	76.1	28	25	14.0	0.4
3	3.500	1.10	0.98	0.81	1.1
80	88.9	28	25	20.5	0.5
4	4.500	1.10	0.98	1.38	1.5
100	114.3	28	25	35.0	0.7
5½0D	5.500	1.10	0.98	1.79	2.0
125	139.7	28	25	45.4	0.9
5	5.563	1.10	0.98	1.79	2.0
125	141.3	28	25	45.4	0.9
6½OD	6.500	1.10	0.98	2.26	3.3
150	165.1	28	25	57.5	1.5
6	6.625	1.10	0.98	2.32	3.3
150	168.3	28	25	59.0	1.5
8	8.625	1.73	1.22	3.15	9.3
200	219.1	44	31	80.0	4.2
10	10.750	1.73 #	1.22	4.27	32.6
250	273.0	44#	31	108.5	14.8
12	12.750	1.73 #	1.22	5.19	46.3
300	323.9	44#	31	132.0	21.0

- ☐ UL Listed and FM Approved pressure rate of Style 005 and 005WH End Cap is the same as Style 001 coupling, for details please refer to
- ☐ Style 005 End Cap is not suitable for use in vacuum service unless with extra treatment. For example, Inlet of fire pump, Style 005B is recommended to use.
- ☐ Style 005WH is not suitable for use in vacuum service unless with extra treatment. For example, Inlet of fire pump, Style 005B is recommended to use, Style 005B refer to "General Catalog".
- $\square$  Hole size of Style 005WH can be customized. 91"General of Installation" and Publication AZ-100-EN "Installation Manual".
- ☐ For ONE TIME FIELD TEST ONLY, the Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC refer to page 13 for details. % JIS Standard # Segmentally Welded Steel.

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## Style 002D

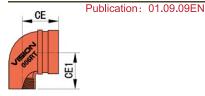
#### **Drain Elbow**



Publication: 01.09.10EN

# Style 006RT

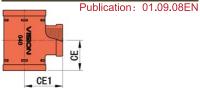
**End of Run Elbow** 



(l)	FM>	<b>@</b>
LISTED	PETROVED	LIGITED

## Style 040

Standpipe Tee



LIGITED AFRO					
Nominal Size	OD	CE	н	Р	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	kg
2	2.375	2.76	2.05	1.85	1.8
50	60.3	70	52	47	0.8
21/2	2.875	2.99	2.52	2.09	2.6
65	73.0	76	64	53	1.2
3OD	3.000	2.99	2.6	2.13	2.6
65	76.1	76	66	54	1.2
3	3.500	3.39	3.23	2.40	3.1
80	88.9	86	82	61	1.4
4	4.500	4.02	4.29	2.87	5.5
100	114.3	102	109	73	2.5
5½OD	5.500	4.88	5.67	3.35	8.1
125	139.7	124	144	85	3.7
5	5.563	4.88	5.71	3.39	8.1
125	141.3	124	145	86	3.7
6½OD	6.500	5.51	6.77	3.82	11.7
150	165.1	140	172	97	5.3
6	6.625	5.51	6.85	3.90	11.9
150	168.3	140	174	99	5.4
8	8.515	6.81	9.17	4.84	20.5
200A %	216.3	173	233	123	9.3
8	8.625	6.81	9.17	4.84	20.5
200	219.1	173	233	123	9.3

OD	CE	CE1	Approx. Wt. Ea.
Inches	Inches	Inches	Lbs.
mm	mm	mm	kg
11/4×1/2	1.89	1.26	0.7
42.4x21.3	48.0	32	0.3
11/4x3/4	2.01	1.34	0.7
42.4x26.7	51.0	34	0.3
1¼x1	2.15	1.42	0.7
42.4x33.4	54.5	36	0.3
1½x½	1.89	1.38	0.7
48.3x21.3	48.0	35	0.3
1½x¾	2.01	1.46	0.9
48.3x26.7	51.0	37	0.4
1½x1	2.15	1.56	0.9
48.3x33.4	54.5	39.5	0.4
2x½	1.89	1.38	0.9
60.3x21.3	48.0	35	0.4
2x¾	2.01	1.46	0.9
60.3x26.7	51.0	37	0.4
2x1	2.01	1.79	0.9
60.3x33.4	51.0	45.5	0.4

OD	CE	CE1	Approx. Wt. Ea.
Inchs mm	Inchs mm	Inchs	Lbs. kg
4x4x2½	3.27	4.02	5.5
114.3x114.3x73.0	83	102	2.5
4x4x3OD	3.27	4.02	5.5
114.3x114.3x76.1	83	102	2.5
6½ODx6½ODx3OD	3.27	5.12	10.8
165.1x165.1x76.1	83	130	4.9
6x6x2½	3.27	5.12	11.0
168.3x168.3x73.0	83	130	5.0
6x6x3OD	3.27	5.12	11.0
168.3x168.3x76.1	83	130	5.0
168.3x168.3x76.1	83	130	5.0

- ☐ Style 040 Standpipe Tees All are segmently welded steel
- $\hfill \square$  Ductile iron casting is available upon request.
- $\hfill \square$  UL Listed and FM Approved is upon request.

- $\hfill \Box$  Style 002D is short pattern fitting, For Equivalent length, please refer to page 28.
- For larger size of 002D, please contact VISION.
- ☐ Style 006RT is designed for Sprinkler system only, UL Listed and FM Approved pressure rate is the same as Style 001 coupling, please refer to page 15.
- ☐ For correct installation, please refer to page 91"General of Installation" and Publication AZ-100-EN "Installation Manual".
- $\Box$  For ONE TIME FIELD TEST ONLY, the Max. Joint working pressure may be increased to 1.5 times the figures shown.

% JIS Standard



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Lbs. 10.1 4.6 10.4 4.7 10.6 4.8 10.8 4.9 11.2 5.1 11.5 5.2 11.5 5.2 23.3 10.6 247

24.9 11.3 26.4 12.0 26.4 12.0 30.3

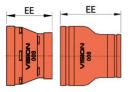
30.6 13.9 32.4 14.7 34.0

34.0 15.5 39.7 18.0 46.4

#### Style 008

Concentric Reducer (G)

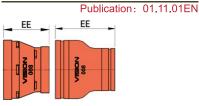
Publication: 01.11.01EN





#### Style 008 CONT'D

Concentric Reducer (G)

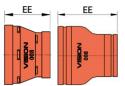




#### Style 008 CONT'D

Concentric Reducer (G)

Publication: 01.11.01EN





OD	EE	Approx. Wt. Ea.	OD	EE	Approx. Wt. Ea.	OD	EE	
Inches	Inches	Lbs.	Inches	Inches	Lbs.	Inches	Inches	
Mm	mm	kg	Mm	mm	kg	Mm	mm	
2x1¼	2.52	0.7	5½ODx2	7.76	7.7	8x2	5.00	
60.3x42.4	64	0.3	139.7x60.3	197 #	3.5	219.1x60.3	127	
2x1½	2.52	0.7	5½ODx3OD	7.76	8.4	8x3OD	5.00	
60.3x48.3	64	0.3	139.7x76.1	197#	3.8	219.1x76.1	127	
2½x1¼	2.52	0.9	5½ODx3	7.76	9	8x3	5.00	
73.0x42.4	64	0.4	139.7x88.9	197#	4.1	219.1x88.9	127	
2½x1½	2.52	0.9	5½ODx4	3.50	3.7	8x4	5.00	
73.0x48.3	64	0.4	139.7x114.3	89	1.7	219.1x114.3	127	
2½x2	2.52	1.1	5x2	7.76	7.7	8x5½OD	5.00	
73.0x60.3	64	0.5	141.3x60.3	197#	3.5	219.1x139.7	127	
30Dx11/4	2.52	0.9	5x2½	7.76	8.6	8x6½OD	5.00	
76.1x42.4	64	0.4	141.3x73.0	197#	3.9	219.1x165.1	127	
30Dx1½	2.52	0.9	5x3	7.76	9.3	8x6	5.00	
76.1x48.3	64	0.4	141.3x88.9	197#	4.2	219.1x168.3	127	
3ODx2	2.52	1.1	5x4	3.50	3.7	10x4	10.35	
76.1x60.3	64	0.5	141.3x114.3	89	1.7	273.0x114.3	263#	
3x1¼	2.52	0.9	6½ODx2	4.02	4.8	10x5½OD	10.35	
88.9x42.4	64	0.4	165.1x60.3	102	2.2	273.0x139.7	263#	
3x1½	2.52	0.9	6½ODx3OD	4.02	5.1	10x5	10.35	
88.9x48.3	64	0.4	165.1x76.1	102	2.3	273.0x141.3	263#	
3x2	2.52	1.1	6%ODx3	4.02	5.7	10x6½OD	10.35	
88.9x60.3	64	0.5	165.1x88.9	102	2.6	273.0x165.1	263#	т
3x2½	2.52	1.3	6%ODx4	4.02	6.2	10x6	10.35	
88.9x73.0	64	0.6	165.1x114.3	102	2.8	273.0x168.3	263 #	т
3x3OD	2.52	1.3	6½ODx5½OD	4.02	6.4	10x8	10.35	
88.9x76.1	64	0.6	165.1x139.7	102	2.9	273.0x219.1	263#	
4x1¼	2.99	2.2	6x2	4.02	4.8	12x4	11.34	
114.3x42.4	76	1.0	168.3x60.3	102	2.2	323.9x114.3	288#	
4x1½	2.99	2.4	6x2½	4.02	4.8	12x5	11.34	
114.3x48.3	76	1.1	168.3x73.0	102	2.2	323.9x141.3	288#	
4x2	2.99	2.4	6x3OD	4.02	5.1	12x6½OD	11.34	
114.3x60.3	76	1.1	168.3x76.1	102	2.3	323.9x165.1	288#	
4x2½	2.99	2.6	6x3	4.02	5.7	12x6	11.34	
114.3x73.0	76	1.2	168.3x88.9	102	2.6	323.9x168.3	288#	
4x3OD	2.99	2.6	6x4	4.02	6.2	12x8	11.93	
114.3x76.1	76	1.2	168.3x114.3	102	2.8	323.9x219.1	303 #	
4x3	2.99	3.1	6x5½OD	8.27	14.3	12x10	11.93	
	76						303 #	
114.3x88.9	/6	1.4	168.3x139.7	210#	6.5	323.9x273.0	303 #	

 $\ \square$  UL Listed and FM Approved pressure rate is the same as Style 101H Coupling, for more details refer to page 17.

 $\hfill \square$  For more size ,please refer to "General catalog"

☐ For correct installation ,please refer to Page 91"General of installation" and Publication AZ-100-EN"Installation Manual"

 $\hfill \Box$  FOR ONE TIME FIELD TEST ONLY, the Max. Joint Working Pressure may be increased to 1.5 times the figures shown.

# Segmentally Welded Steel. LPC refer to page 13 for details.

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| FIRE PROTECTION SYSTEM | INTERNATIONAL |

A VISION COMPANY | NINGBO VISION PIPEFITTING CO.,LTD.,Xiaogang,Xinquan Village,Beilun District,Ningbo,Zhejiang P.R.of China ,Tel:+86-574-8615-6262

## Style 009

Concentric Reducer (T)

 $\underbrace{ \begin{array}{c} \Psi_{\!\!\scriptscriptstyle L} \\ \downarrow_{\!\!\scriptscriptstyle LSTED} \end{array}}_{\scriptscriptstyle APPROJED} \underbrace{ \begin{array}{c} \Psi_{\!\!\scriptscriptstyle L} \\ \downarrow_{\!\!\scriptscriptstyle LSTED} \end{array}}_{\scriptscriptstyle APPROJED} \underbrace{ \begin{array}{c} \Psi_{\!\!\scriptscriptstyle L} \\ \downarrow_{\!\!\scriptscriptstyle LSTED} \end{array}}_{\scriptscriptstyle APPROJED} \underbrace{ \begin{array}{c} \Psi_{\!\!\scriptscriptstyle L} \\ \downarrow_{\!\!\scriptscriptstyle LSTED} \end{array}}_{\scriptscriptstyle APPROJED} \underbrace{ \begin{array}{c} \Psi_{\!\!\scriptscriptstyle L} \\ \downarrow_{\!\!\scriptscriptstyle LSTED} \end{array}}_{\scriptscriptstyle APPROJED} \underbrace{ \begin{array}{c} \Psi_{\!\!\scriptscriptstyle L} \\ \downarrow_{\!\!\scriptscriptstyle LSTED} \end{array}}_{\scriptscriptstyle APPROJED} \underbrace{ \begin{array}{c} \Psi_{\!\!\scriptscriptstyle L} \\ 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Publication: 01.11.01EN

## Style 009 CONT'D

Concentric Reducer (T)

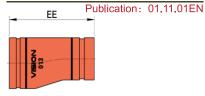
Publication: 01.11.01EN

EE



## Style 013

**Eccentric Reducer (G)** 





OD	EE	Approx. Wt. Ea.	OD	EE	Approx. Wt. Ea.
Inches	Inches	Lbs.	Inches	Inches	Lbs.
mm	mm	kg	mm	mm	kg
1¼x1	2.52	0.4	4x2	2.99	2.6
42.4x33.7	64	0.2	114.3x60.3	76	1.2
1½x1	2.52	0.4	5½ODx1	3.50	3.7
48.3x33.7	64	0.2	139.7x33.7	89	1.7
1½x1¼	2.52	0.7	5%ODx1%	3.50	3.7
48.3x42.4	64	0.3	139.7x42.4	89	1.7
2x1	2.52	0.7	5%ODx1%	3.50	3.7
60.3x33.7	64	0.3	139.7x48.3	89	1.7
2x11/4	2.52	0.7	5½ODx2	3.50	3.7
60.3x42.4	64	0.3	139.7x60.3	89	1.7
2x1½	2.52	0.7	5x1	3.50	3.7
60.3x48.3	64	0.3	141.3x33.7	89	1.7
2½x1	2.52	0.9	5x1¼	3.50	3.7
73.0x33.7	64	0.4	141.3x42.4	89	1.7
2½x1¼	2.52	0.9	5x1½	3.50	3.7
73.0x42.4	64	0.4	141.3x48.3	89	1.7
2½x1½	2.52	0.9	5x2	3.50	3.7
73.0x48.3	64	0.4	141.3x60.3	89	1.7
2½x2	2.52	1.1	6½ODx1	4.02	4.9
73.0x60.3	64	0.5	165.1x33.7	102	2.2
30Dx1	2.52	0.9	6%ODx1%	4.02	4.9
76.1x33.7	64	0.4	165.1x42.4	102	2.2
30Dx11/4	2.52	0.9	6%ODx1%	4.02	5.1
76.1x42.4	64	0.4	165.1x48.3	102	2.3
30Dx1½	2.52	0.9	6½ODx2	4.02	5.3
76.1x48.3	64	0.4	165.1x60.3	102	2.4
3ODx2	2.52	0.9	6x1	4.02	4.9
76.1x60.3	64	0.4	168.3x33.7	102	2.2
3x1	2.52	0.9	6x1¼	4.02	4.9
88.9x33.7	64	0.4	168.3x42.4	102	2.2
3x1¼	2.52	1.1	6x1½	4.02	5.1
88.9x42.4	64	0.5	168.3x48.3	102	2.3
3x1½	2.52	1.1	6x2	4.02	5.3
88.9x48.3	64	0.5	168.3x60.3	102	2.4
3x2	2.52	1.1	8x1	5.00	9.7
88.9x60.3	64	0.5	219.1x33.7	127	4.4
4x1	2.99	2.2	8x1¼	5.00	9.7
114.3x33.7	76	1.0	219.1x42.4	127	4.4
4x11⁄4	2.99	2.4	8x1½	5.00	9.9
114.3x42.4	76	1.1	219.1x48.3	127	4.5
4x1½	2.99	2.4	8x2	5.00	10.1
114.3x48.3	76	1.1	219.1x60.3	127	4.6

UL Listed and FM Approved pressure rate is the same as Style 101H
coupling, for more details refer to page 17.

 $\hfill \square$  For more size ,please refer to "General catalog".

 $\ \square$  For correct installation ,please refer to Page 91 "General of installation" and Publication AZ-100-EN"Installation Manual"

<sup>☐</sup> FOR ONE TIME FIELD TEST ONLY, the Max. Joint Working Pressure may be increased to 1.5 times the figures shown. LPC refer to page 13 for details.

OD	EE	Approx. Wt. Ea.
Inches	Inches	Lbs.
mm	mm	kg
2x1¼	5.75	1.5
60.3x42.4	146	0.7
2x1½	5.75	1.5
60.3x48.3	146	0.7
2½x1½	6.26	2.2
73.0x48.3	159	1.0
2½x2	6.26	2.4
73.0x60.3	159	1.1
30Dx1½	6.26	2.2
76.1x48.3	159	1.0
3ODx2	6.26	2.4
76.1x60.3	159	1.1
3x2	6.26	2.8
88.9x60.3	159	1.3
3x2½	6.26	3.3
88.9x73.0	159	1.5
3x3OD	6.26	3.3
88.9x76.1	159	1.5
4x2½	6.77	4.6
114.3x73.0	172	2.1
4x3OD	6.77	4.7
114.3x76.1	172	2.1
4x3	6.77	5.2
114.3x88.9	172	2.4
5½ODx3	7.76	7.0
139.7x88.9	197	3.2
5x3	7.76	7.0
141.3x88.9	197	3.2
5x4	7.76	8.1
141.3x114.3	197	3.7
6x4	8.27	10.1
168.3x114.3	210	4.6
6x5½OD	8.27	11.4
168.3x139.7	210	5.2
8x5½OD	9.33	16.8
219.1x139.7	237	7.6
8x6	9.33	18.2
219.1x168.3	237	8.3
10x6	10.35	26.4
273.0x168.3	263	12.0
10x8	10.35	30.3
273.0x219.1	263	13.7
12x8	11.93	39.7
323.9x219.1	303	18.0
12x10	11.93	46.4
323.9x273.0	303	21.1
☐ Style 013 Ecce	ntric Reducer All an	e Segmentally

Style 013 Eccentric Reducer All are Segmentally welded steel.



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#### Style 011

#### Short Pattern Reducing Tee (G)

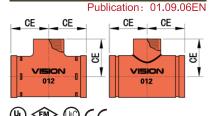
Publication: 01.09.06EN CE CE 뜅 VISION



OD	CE	Approx. Wt. Ea.
Inches	Inches	Lbs.
mm	mm	kg
30Dx1½	2.99	2.9
76.1x48.3	76	1.3
3ODx2	2.99	3.1
76.1x60.3	76	1.4
3x1½	3.39	3.5
88.9x48.3	86	1.6
3x2	3.39	3.5
88.9x60.3	86	1.6
4x1½	4.02	6.2
114.3x48.3	102	2.8
4x2	4.02	6.4
114.3x60.3	102	2.9
4x2½	4.02	6.4
114.3x73.0	102	2.9
4x30D	4.02	6.4
114.3x76.1	102	2.9
4x3	4.02	6.6
114.3x88.9	102	3.0
5x2½	4.88#	13.9
141.3x73.0	124#	6.3
5x3	4.88#	14.1
141.3x88.9	124#	6.4
6½ODx2	5.51	15.0
165.1x60.3	140	6.8
6%ODx3OD	5.51	15.0
165.1x76.1 6½ODx3	140 5.51	6.8 <b>15.0</b>
165.1x88.9	140	6.8
6x1½	5.51	15.9
168.3x48.3	140	7.2
6x2	5.51	16.1
168.3x60.3	140	7.3
6x2½	5.51	16.1
168.3x73.0	140	7.3
6x3OD	5.51	16.1
168.3x76.1	140	7.3
6x3	5.51	16.1
168.3x88.9	140	7.3
8x2	6.81#	38.5
219.1x60.3	173 #	17.5
8x2½	6.81#	38.5
219.1x73.0	173 #	17.5
8x3	6.81#	38.5
219.1x88.9	173 #	17.5

#### Style 012

#### **Short Pattern Reducing Tee (T)**



LISTED	APPROVED	LISTED	CE	

OD	CE	Approx. Wt. Ea.
Inches	Inches	Lbs.
mm	mm	kg
2½x1	2.99	2.6
73.0x33.7	76	1.2
2½x1¼	2.99	2.9
73.0x42.4	76	1.3
2½x1½	2.99	3.1
73.0x48.3	76	1.4
3ODx1	2.99	3.3
76.1x33.7	76	1.5
30Dx11/4	2.99	3.3
76.1x42.4	76	1.5
30Dx1½	2.99	3.3
76.1x48.3	76	1.5
3x1¼	3.39	3.7
88.9x42.4	86	1.7
3x1½	3.39	3.7
88.9x48.3	86	1.7
3x2	3.39	3.7
88.9x60.3	86	1.7
3x2½	3.39#	4.0
88.9x73.0	86#	1.8
3x3OD	3.39	4.0
88.9x76.1	86	1.8
4x1½	4.02	7.0
114.3x48.3	102	3.2
4x2	4.02	7.0
114.3x60.3	102	3.2
4x2½	4.02	6.8
114.3x73.0	102	3.1
4x3OD	4.02	6.4
114.3x76.1	102	2.9
5x2	4.88#	13.9
141.3x60.3	124#	6.3
5x2½	4.88#	14.1
141.3x73.0	124#	6.4
6½ODx3OD	5.51	16.5
165.1x76.1	140	7.5
6x2½	5.51#	20.5
168.3x73.0	140#	9.3
6x3OD	5.51#	20.5
168.3x76.1	140#	9.3
8x2	6.81#	39.2
219.1x60.3	173 #	17.8
8x2½	6.81#	39.2
219.1x73.0	173 #	17.8
8x3OD	6.81#	39.2
219.1x76.1	173 #	17.8
8x3OD		39.2

- ☐ Both Style 011 and Style 012 are short pattern fittings, For Equivalent length please refer to page 24.
- ☐ UL Listed and FM Approved pressure rate is the same as Style 001 coupling, for details please refer to page 15.
- ☐ Style 012M (male threaded outlet ) reducing Tee is also available. For details please contact
- $\hfill \Box$  Above 10" size, Style 011L, 012L standard pattern reducing Tee are recommended to use. For more size, please refer to General Catalog.
- ☐ For correct installation ,please refer to Page 91 "General of installation" and Publication AZ-100-EN"Installation Manual"
- ☐ FOR ONE TIME FIELD TEST ONLY, the Max. Joint Working Pressure may be increased to 1.5 times the figures shown

# Segmentally welded steel. Ductile Iron Casting is available upon request.

More size ,please refer to "General Catalog".

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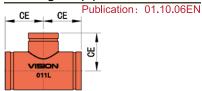
28.6 13.0

8x4

6.81

#### Style 011L

#### Reducing Tee (G)





OD.	USTED	CE	Approx. Wt. Ea.
Inches		Inches	Lbs.
mm		mm	kg
2½x1¼		3.75	4.2
73.0x42		95	1.9
2½x1½		3.75	4.4
73.0x48		95	2.0
30Dx13	4	3.75	4.2
76.1x42		95	1.9
30Dx13		3.75	4.4
76.1x48		95	2.0
3x1½		4.25	6.0
88.9x48	3	108	2.7
3x2		4.25	6.2
88.9x60	3	108	2.8
4x11/4		5.00	11.2
114.3x42	2.4	127	5.1
4x1½		5.00	11.2
114.3x48	3.3	127	5.1
4x2	,,,,	5.00	11.2
114.3x60	0.3	127	5.1
4x2½	7.10	5.00	11.2
114.3x73	3.0	127	5.1
4x30D		5.00	11.2
114.3x76		127	5.1
5x2½	7.1	5.51	14.3
141.3x73	3.0	140	6.5
5x3	7.0	5.51	14.5
141.3x88	3 9	140	6.6
6½ODx30		6.50	25.3
165.1x76		165	11.5
6x2½	7.1	6.50	25.8
168.3x73	3.0	165	11.7
6x3OD		6.50	25.8
168.3x76		165	11.7
6x3	J.1	6.50	26.0
168.3x88	3 9	165	11.8
8x4		7.76	38.3
219.1x11		197	17.4
8x5½0l		7.76	43.6
219.1x13		197	19.8
8x6		7.76	47.4
219.1x16	8.3	197	21.5
10x6		9.02	61.2
273.0x16	8.3	229	27.8
10x8		9.02	63.9
273.0x21	9.1	229	29.0
12x8		10.00	81.5
323.9x21		254	37.0
12x10		10.00	83.7
323.9x27		254	38.0
323.3127	0.0	254	30.0

#### Style 012L

Reducing Tee (T)



CE	Approx. Wt. Ea.
Inches	Lbs.
mm	kg
3.74	4.4
95	2.0
3.74	4.4
95	2.0
3.74	4.4
95	2.0
3.74	4.4
95	2.0
4.25	6.2
108	2.8
4.25	6.4
108	2.9
5.00	10.1
127	4.6
	CF Inches mm 3.74 95 3.74 95 3.74 95 4.25 108 4.25 108 5.00

Inches	Inches	Lbs.
mm	mm	kg
2½x1¼	3.74	4.4
73.0x42.4	95	2.0
2½x1½	3.74	4.4
73.0x48.3	95	2.0
30Dx11/4	3.74	4.4
76.1x42.4	95	2.0
30Dx1½	3.74	4.4
76.1x48.3	95	2.0
3x1½	4.25	6.2
88.9x48.3	108	2.8
3x2	4.25	6.4
88.9x60.3	108	2.9
4x1¼	5.00	10.1
114.3x42.4	127	4.6
4x1½	5.00	10.4
114.3x48.3	127	4.7
4x2	5.00	11.2
114.3x60.3	127	5.1
4x2½	5.00	11.2
114.3x73.0	127	5.1
4x3OD	5.00	11.7
114.3x76.1	127	5.3
5x2½	5.51	14.5
141.3x73.0	140	6.6
5x3	5.51	15.9
141.3x88.9	140	7.2
6½ODx3OD	6.50	26.0
165.1x76.1	165	11.8
6x2½	6.50	26.4
168.3x73.0	165	12.0
6x3OD	6.50	26.4
168.3x76.1	165	12.0
6x3	6.50	28.4
168.3x88.9	165	12.9
8x2½	7.76	37.4
219.1x73.0	197	17.0
8x3	7.76	39.6
219.1x88.9	197	18.0
10x2½	9.02	54.6
273.0x73.0	229	24.8
10x3	9.02	56.8
273.0x88.9	229	25.8
12x2½	10.00	80.4
323.9x73.0	254	36.5

- ☐ Both Style 011L and 012L are Standard pattern fittings, For Equivalent length please refer to page 24
- ☐ UL listed and FM approved pressure rate of Style 011L and 012L is the same as Style 101H coupling, for details please refer to page 17.
- $\hfill \square$  Style 011L Standard reducing Tee with Grooved outlet, Style 012L Standard reducing Tee with female threaded outlet. Style 012LM (male threaded outlet ) reducing Tee is also available. for details please contact VISION.
- $\hfill \square$  Segmentally welded steel. If Ductile Iron Casting is required, please contact VISION.
- $\hfill \square$  For more size ,please refer to General catalog  $\hfill \square$  Standard series fittings are used for large scale fire protection system in order to reduce the partial friction loss.
- ☐ For correct installation, please refer to Page 91"General of installation" and Publication AZ-100-EN"Installation Manual".
- ☐ FOR ONE TIME FIELD TEST ONLY, the Max. Joint Working Pressure may be increased to 1.5 times the figures shown
- # All Reducing Tee is segmentally welded steel. Ductile Iron Casting is available upon request.
- ☐ More size ,please refer to "General Catalog".

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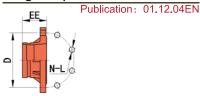
| FIRE PROTECTION SYSTEM | INTERNATIONAL |

12x3 10.00

323.9x88.9 254

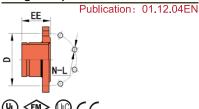
## Style 015A1

Flange Adaptor Class150



## Style 015A2

Flange Adaptor Class300





Flange Adaptor PN16



UL STED OF USTED CE
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Nominal Size	OD	EE	D	N-L	Approx. Wt. Ea.
Inches	Inches	Inches		Inches	Lbs.
mm	mm	mm	mm	mm	kg
2	2.375	2.76	4.92	4-Ф0.71	3.7
50	60.3	70	125	4-Ф18	1.7
3OD	3.000	2.76	5.71	8-Ф0.71	5.3
65	76.1	70	145	8-Ф18	2.4
3	3.500	2.76	6.3	8-Ф0.71	5.9
80	88.9	70	160	8-Ф18	2.7
4	4.500	3.15	7.09	8-Ф0.71	7.5
100	114.3	80	180	8-Ф18	3.4
5½0D	5.500	3.15	8.27	8-Ф0.71	9.3
125	139.7	80	210	8-Ф18	4.2
6½0D	6.500	3.94	9.45	8-Ф0.91	12.8
150	165.1	100	240	8-Ф23	5.8
6	6.625	3.94	9.45	8-Ф0.91	12.8
150	168.3	100	240	8-Ф23	5.8
8	8.625	3.94	11.61	12-Ф0.91	19.4
200	219.1	100	295	12-Ф23	8.8
10	10.750	3.94	13.98	12-Ф0.98	27.8
250	273.0	100	355	12-Ф25	12.6
12	12.750	3.94	16.14	12-Ф0.98	32.8
300	323.9	100	410	12-Ф25	14.9

Nominal Size	OD	EE	D	N-L	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	kg
11/4	1.660	2.36	3.50	4-Ф0.63	2.9
32	42.4	60	88.9	4-Ф16	1.3
1½	1.900	2.36	3.87	4-Ф0.63	3.7
40	48.3	60	98.4	4-Ф16	1.7
2	2.375	2.76	4.75	4-Ф0.75	3.7
50	60.3	70	120.7	4-Ф19	1.7
21/2	2.875	2.76	5.50	4-Ф0.75	9.3
65	73.0	70	139.7	4-Ф19	4.2
3	3.500	2.76	6.00	4-Ф0.75	10.8
80	88.9	70	152.4	4-Ф19	4.9
4	4.500	3.15	7.50	8-Ф0.75	13.9
100	114.3	80	190.5	8-Ф19	6.3
5	5.563	3.15	8.50	8-Ф0.91	17.0
125	141.3	80	215.9	8-Ф23	7.7
6	6.625	3.94	9.5	8-Ф0.91	21.2
150	168.3	100	241.3	8-Ф23	9.6
8	8.625	3.94	11.75	8-Ф0.91	26.5
200	219.1	100	298.5	8-Ф23	12.0
10	10.750	3.94	14.25	12-Ф1.02	41.4
250	273.0	100	362	12-Ф26	18.8
12	12.750	3.94	17.00	12-Ф1.02	57.5
300	323.9	100	431.8	12-Ф26	26.1

Nominal Size	OD	EE	D	N-L	Approx. Wt. Ea.
Inches Mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
11/4	1.660	2.36	3.87	4-Ф0.75	4.8
32	42.4	60	98.4	4-Ф19	2.2
1½	1.900	2.36	4.50	4-Ф0.91	7.0
40	48.3	60	114.3	4-Ф23	3.2
2	2.375	2.76	5.00	8-Ф0.75	7.9
50	60.3	70	127.0	8-Ф19	3.6
21/2	2.875	2.76	5.87	8-Ф0.91	11.2
65	73.0	70	149.2	8-Ф23	5.1
3	3.500	2.76	6.63	8-Ф0.91	14.8
80	88.9	70	168.3	8-Ф23	6.7
4	4.500	3.15	7.87	8-Ф0.91	18.9
100	114.3	80	200.0	8-Ф23	8.6
5	5.563	3.15	9.25	8-Ф0.91	27.5
125	141.3	80	235.0	8-Ф23	12.5
6	6.625	3.94	10.63	12-Ф0.91	35.2
150	168.3	100	269.9	12-Ф23	16.0
8	8.625	3.94	13.00	12-Ф1.02	45.4
200	219.1	100	330.2	12-Ф26	20.6
10	10.750	3.94	15.25	16-Ф1.14	69.4
250	273.0	100	387.4	16-Ф29	31.5
12	12.750	3.94	17.75	16-Ф1.26	94.5
300	323.9	100	450.8	16-Ф32	42.9

 $\hfill \square$  UL Listed and FM Approved pressure rate is the same as Style 001 Coupling.

 $\hfill \Box$  A1: Class 125 or Class 150,A2:Class 300, D2: 16bar.

☐ All Flange Adaptor designed to mate with raised-face flanges, but can supply with flat-face.

☐ For correct installation ,please refer to Page 91"General of installation" and Publication AZ-100-EN"Installation Manual"

 $\hfill\Box$  FOR ONE TIME FIELD TEST ONLY, the Max. Joint Working Pressure may be increased to 1.5 times the figures shown.

Australia Standard-Table E

Nominal Size	OD	EE	D	N-L	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	kg
2	2.375	2.76	4.49	4-Ф0.71	3.5
50	60.3	70	114	4-Ф18	1.6
3OD	3.000	2.76	5.00	4-Ф0.71	5.1
65	76.1	70	127	4-Ф18	2.3
3	3.500	2.76	5.75	4-Ф0.71	5.7
80	88.9	70	146	4-Ф18	2.6
4	4.500	3.15	7.01	8-Ф0.71	7.0
100	114.3	80	178	8-Ф18	3.2
5½0D	5.500	3.15	8.27	8-Ф0.71	8.8
125	139.7	80	210	8-Ф18	4.0
6½0D	6.500	3.94	9.25	8-Ф0.87	12.1
150	165.1	100	235	8-Ф22	5.5
6	6.625	3.94	9.25	8-Ф0.87	12.1
150	168.3	100	235	8-Ф22	5.5
8	8.625	3.94	11.50	8-Ф0.87	18.5
200	219.1	100	292	8-Ф22	8.4
10	10.750	3.94	14.02	12-Ф0.87	26.4
250	273.0	100	356	12-Ф22	12.0
12	12.750	3.94	15.98	12-Ф1.02	31.3
300	323.9	100	406	12-Ф26	14.2



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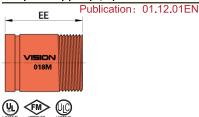
# Style 018

#### Adaptor Nipple (G/G)



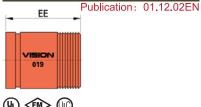
# Style 018M

Adaptor Nipple (G/T)



# Style 019

**Hose Nipple** 



Nominal Size	OD	EE	Approx. Wt. Ea.
Inches	Inches	Inches	
mm	mm	mm	Lbs./kg
1	1.315	2.99	0.4
25	33.7	76	0.2
1¼	1.660	4.02	0.8
32	42.4	102	0.3
1½	1.900	4.02	1.0
40	48.3	102	0.4
2	2.375	4.02	1.2
50	60.3	102	0.6
2½	2.875	4.02	1.9
65	73.0	102	0.9
3OD	3.000	4.02	2.0
65	76.1	102	0.9
3	3.500	4.02	2.5
80	88.9	102	1.2
4	4.500	5.98	5.4
100	114.3	152	2.4
5%OD	5.500	5.98	7.1
125	139.7	152	3.2
5	5.563	5.98	7.2
125	141.3	152	3.3
6½OD	6.500	5.98	9.1
150	165.1	152	4.1
6	6.625	5.98	9.3
150	168.3	152	4.2
8	8.515	5.98	13.8
200A	216.3	152	6.2
8	8.625	5.98	13.9
200	219.1	152	6.3
10	10.525	7.99	27.0
250A	267.4	203	12.3
10	10.750	7.99	27.6
250	273.0	203	12.5
12	12.539	7.99	34.0
300A	318.5	203	15.4
12	12.750	7.99	34.6
300	323.9	203	15.7

Nominal Size	OD	EE	Approx. Wt. Ea.
Inches mm	Inches mm	Inches mm	Lbs./kg
1	1.315	2.99	0.4
25	33.7	76	0.2
11/4	1.660	4.02	0.8
32	42.4	102	0.3
1½	1.900	4.02	1.0
40	48.3	102	0.4
2	2.375	4.02	1.2
50	60.3	102	0.6
21/2	2.875	4.02	1.9
65	73.0	102	0.9
3OD	3.000	4.02	2.0
65	76.1	102	0.9
3	3.500	4.02	2.5
80	88.9	102	1.2
4	4.500	5.98	5.4
100	114.3	152	2.4
5½OD	5.500	5.98	7.1
125	139.7	152	3.2
5	5.563	5.98	7.2
125	141.3	152	3.3
6½OD	6.500	5.98	9.1
150	165.1	152	4.1
6	6.625	5.98	9.3
150	168.3	152	4.2
8	8.515	5.98	13.8
200A	216.3	152	6.2
8	8.625	5.98	13.9
200	219.1	152	6.3
10	10.525	7.99	27.0
250A	267.4	203	12.3
10	10.750	7.99	27.6
250	273.0	203	12.5
12	12.539	7.99	34.0
300A	318.5	203	15.4
12	12.750	7.99	34.6
300	323.9	203	15.7

Nominal Size	OD	EE	Approx. Wt. Ea.
Inches	Inches	Inches	lha /la
mm	mm	mm	Lbs./kg
11/4	1.660	3.86	0.7
32	42.4	98	0.3
1½	1.900	3.86	0.9
40	48.3	98	0.4
2	2.375	4.49	1.3
50	60.3	114	0.6
2½	2.875	5.39	2.2
65	73.0	137	1.0
3OD	3.000	5.39	2.2
65	76.1	137	1.0
3	3.500	8.75	3.3
80	88.9	146	1.5
4	4.500	7.01	5.5
100	114.3	178	2.5
5½OD	5.500	8.74	8.1
125	139.7	222	3.7
5	5.563	8.74	8.1
125	141.3	222	3.7
6½OD	6.500	10.12	13.2
150	165.1	257	6.0
6	6.625	10.12	13.2
150	168.3	257	6.0
8	8.515	11.89	23.3
200A	216.3	302	10.6
8	8.625	11.89	24.0
200	219.1	302	10.9
10	10.525	12.52	28.6
250A	267.4	318	13.0
10	10.750	12.52	29.1
250	273.0	318	13.2

<sup>☐</sup> For details please contact VISION.



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<sup>☐</sup> Material: Carbon Steel

<sup>☐</sup> Finish: Eletro-Galvanized or Plain

 $<sup>\</sup>hfill \square$  Both Groove and Threaded are available.





# Pipe Fabrication System

Fire Protection system

Pipe | Fittings | Customized





Design Quality Package





# **Hole Cut Piping System**

# **Outlet Connection**

## Mechanical Tee | Mechanical Cross | U-bolt Tee

STYLE	DESCRIPTION	SIZE	PAGE
301	Mechanical Tee (G)	2x1"-8x4"	38-40
302	Mechanical Tee (T)	2x1"-8x3"	41-43
303	Mechanical Cross (G)	2x1x1"-8x4x4"	44
304	Mechanical Cross (T)	2x1x1"-8x4x4"	44
305	Mechanical Cross (G/T)	2x1x1"-8x4x4"	44
300U	MechanicalTee	1¼x½"-4x1"	45

Nominal Size	OD	Grooved branch	Threaded branch
Inches	Inches	Ft	Ft
mm	mm	m	m
1/2	0.825	-	2.6
15	21.3	-	0.8
3/4	1.050	-	3.3
20	26.7	-	1.0
1	1.315	-	3.9
25	33.7	-	1.2
11/4	1.660	5.2	5.6
32	42.4	1.6	1.7
1½	1.900	8.2	8.5
40	48.3	2.5	2.6
2	2.375	9.2	9.5
50	60.3	2.8	2.9
2½	2.875	11.8	12.5
65	73.0	3.6	3.8
3OD	3.000	11.8	12.5
65	76.1	3.6	3.8
3	3.500	14.1	15.4
80	88.9	4.3	4.7
4	4.500	20.3	-
100	114.3	6.2	-

☐ Listed Equivalent length is based on Harzen Williams Formula, C=120,SCH40 Steel Pipe.

VISION developed a Hole Cut Piping System conform to UL213, FM1920 standards. This system is a fast, easy Mid-pipe outlet that would not require welding. Both grooved and threaded outlet are available for

- Mechanical Tee and Cross are available.The housing, Gasket and Bolts &Nuts ar The housing, Gasket and Bolts & Nuts are the same as Grooved
- ☐ Standard Hole Cut Spacing at intervals and Standard structure design.
   ☐ For small size outlet, Style 300U is recommended to use.



- ☐ VISION hole cut products are mounted to the pipe using either a locating collar(Style 301 and 302) or Style 300U, and provide a smooth flow area.
- ☐ Pressure responsive gasket design performs leak-tight, Hi-performance Rubber keep a long service life.
- ☐ Anti-corrosion treatment for smooth thread.

### **Style 301**

**Mechanical Tee** 

Style 301 Mechanical Tee with groove outlet provides a direct branch connection at any location where a hole can be cut in the pipe. Gasket is a pressure responsive design which provides the

Publication: 03.01EN

Style 303 assemblies can be achieved with the use of two Style 301 of same run size and the same or differing outlet size. Style 305 can be achieved with the use of one Style 301 outlet parts and one Style 302 outlet parts.

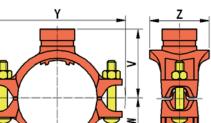
OD	Work Pressure	Hole Size	w	Υ	Z	V	BoltS Size	Approx. Wt. Ea.
Inches mm	Psi bar	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
2x1	300	1.50	1.42	5.47	2.72	2.64	½x2½	2.2
60.3x33.7	20.7	38.1	36	139	69	67	M12x60	1.0
2x1¼	300	1.75	1.42	5.47	2.95	2.64	½x2½	2.4
60.3x42.4	20.7	44.5	36	139	75	67	M12x60	1.1
2x1½	300	1.75	1.42	5.47	3.27	2.68	½x2½	2.6
60.3x48.3	20.7	44.5	36	139	83	68	M12x60	1.2
2½x1	300	1.50	1.69	6.02	2.72	2.91	½x3	2.4
73.0x33.7	20.7	38.1	43	153	69	74	M12x75	1.1
2½x1¼	300	1.75	1.69	6.02	2.95	2.91	½x3	2.6
73.0x42.4	20.7	44.5	43	153	75	74	M12x75	1.2
2½x1½	300	2.00	1.69	6.02	3.27	2.91	½x3	2.9
73.0x48.3	20.7	50.8	43	153	83	74	M12x75	1.3
2½x2	300	2.00	1.69	6.02	3.27	2.91	½x3	3.1
73.0x60.3	20.7	50.8	43	153	83	74	M12x75	1.4
3ODx1	300	1.50	1.77	6.14	2.72	2.99	½x3	2.4
76.1x33.7	20.7	38.1	45	156	69	76	M12x75	1.1
30Dx11/4	300	1.75	1.77	6.14	2.95	2.99	½x3	2.6
76.1x42.4	20.7	44.5	45	156	75	76	M12x75	1.2
30Dx1½	300	2.00	1.77	6.14	3.27	2.99	½x3	2.9
76.1x48.3	20.7	50.8	45	156	83	76	M12x75	1.3
3ODx2	300	2.50	1.77	6.14	3.78	2.99	½x3	3.1
76.1x60.3	20.7	63.5	45	156	96	76	M12x75	1.4
3x1	300	1.50	2.01	6.54	2.72	3.23	½x3	2.6
88.9x33.7	20.7	38.1	51	166	69	82	M12x75	1.2
3x1¼	300	1.75	2.01	6.54	2.95	3.23	½x3	2.9
88.9x42.4	20.7	44.5	51	166	75	82	M12x75	1.3
3x1½	300	2.00	2.01	6.54	3.27	3.23	½x3	3.1
88.9x48.3	20.7	50.8	51	166	83	82	M12x75	1.4
3x2	300	2.50	2.01	6.54	3.74	3.23	½x3	3.3
88.9x60.3	20.7	63.5	51	166	95	82	M12x75	1.5
4x1	300	1.50	2.52	7.52	2.72	3.78	½x3	3.1
114.3x33.7	20.7	38.1	64	191	69	96	M12x75	1.4
4x1¼	300	1.75	2.52	7.52	2.95	3.78	½x3	3.3
114.3x42.4	20.7	44.5	64	191	75	96	M12x75	1.5
4x1½	300	2.00	2.52	7.52	3.27	3.78	½x3	3.5
114.3x48.3	20.7	50.8	64	191	83	96	M12x75	1.6
4x2	300	2.50	2.52	7.52	3.74	3.78	½x3	3.7
114.3x60.3	20.7	63.5	64	191	95	96	M12x75	1.7
4x2½	300	2.75	2.52	7.52	4.02	3.82	½x3	4.2
114.3x73.0	20.7	69.9	64	191	102	97	M12x75	1.9
4x3OD	300	2.75	2.52	7.52	4.02	3.82	½x3	4.2
114.3x76.1	20.7	69.9	64	191	102	97	M12x75	1.9
4x3	300	3.50	2.52	7.52	4.80	3.82	½x3	4.8
114.3x88.9	20.7	88.9	64	191	122	97	M12x75	2.2











- ☐ Style 301 is Mechanical Tee with Groove outlet.
- ☐ UL listed and FM approved is 300psi (21Bar).
- $\ \square$  10" and larger, Reducing Tee is recommended to use.
- ☐ For correct installation, Please refer to page 91" General of Installation" and publication AZ-100-EN of "Installation Manual".
- $\hfill \square$  For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 50±4 lbs.ft (68±5 N.m)
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the  $\,$ figures shown.

LPC Approval refer to page 13.

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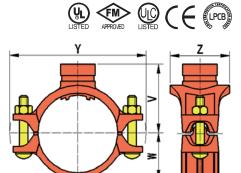
### Style 301 CONT'D

Mechanical Tee Publication: 03.01EN

Style 301 Mechanical Tee with groove outlet provides a direct branch connection at any location where a hole can be cut in the pipe. Gasket is a pressure responsive design which provides the seal.

Style 303 assemblies can be achieved with the use of two Style 301 of same run size and the same or differing outlet size. Style 305 can be achieved with the use of one Style 301 outlet parts and one Style 302 outlet parts.

OD	Work Pressure	Hole Size	w	Υ	Z	V	BoltS Size	Approx. Wt. Ea.
Inches Mm	Psi bar	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
5½ODx1	300	1.50	3.07	9.21	2.72	4.33	%x3½	4.4
139.7x33.7	20.7	38.1	78	234	69	110	M16x90	2.0
5½0Dx1¼	300	1.75	3.07	9.21	2.95	4.33	%x3½	4.6
139.7x42.4	20.7	44.5	78	234	75	110	M16x90	2.1
5½0Dx1½	300	2.00	3.07	9.21	3.27	4.33	%x3½	4.8
139.7x48.3	20.7	50.8	78	234	83	110	M16x90	2.2
5½ODx2	300	2.50	3.07	9.21	3.74	4.33	%x3½	5.3
139.7x60.3	20.7	63.5	78	234	95	110	M16x90	2.4
5½ODx3OD	300	2.75	3.07	9.21	4.02	4.33	%x3½	5.9
139.7x76.1	20.7	69.9	78	234	102	110	M16x90	2.7
5½ODx3	300	3.50	3.07	9.21	4.80	4.33	%x3½	6.4
139.7x88.9	20.7	88.9	78	234	122	110	M16x90	2.9
5x1	300	1.50	3.11	9.25	2.72	4.37	%x3½	4.6
141.3x33.7	20.7	38.1	79	235	69	111	M16x90	2.1
5x11⁄4	300	1.75	3.11	9.25	2.95	4.37	%x3½	4.6
141.3x42.4	20.7	44.5	79	235	75	111	M16x90	2.1
5x1½	300	2.00	3.11	9.25	3.27	4.37	%x3½	4.8
141.3x48.3	20.7	50.8	79	235	83	111	M16x90	2.2
5x2	300	2.50	3.11	9.25	3.74	4.37	5⁄8x3½	5.1
141.3x60.3	20.7	63.5	79	235	95	111	M16x90	2.3
5x2½	300	2.75	3.11	9.25	4.02	4.41	%x3½	5.7
141.3x73.0	20.7	69.9	79	235	102	112	M16x90	2.6
5x3	300	3.50	3.11	9.25	4.80	4.41	5%x3½	6.4
141.3x88.9	20.7	88.9	79	235	122	112	M16x90	2.9
6½ODx1	300	1.50	3.11	9.25	2.72	4.88	%x3½	5.1
165.1x33.7	20.7	38.1	79	235	69	124	M16x90	2.3
6½ODx1¼	300	1.75	3.58	10.16	2.95	4.88	%x3½	5.1
165.1x42.4	20.7	44.5	91	258	75	124	M16x90	2.3
6½0Dx1½	300	2.00	3.58	10.16	3.27	4.88	%x3½	5.3
165.1x48.3	20.7	50.8	91	258	83	124	M16x90	2.4
6½ODx2	300	2.50	3.58	10.16	3.74	4.88	%x3½	5.7
165.1x60.3	20.7	63.5	91	258	95	124	M16x90	2.6
6½ODx3OD	300	2.75	3.58	10.16	4.02	4.88	%x3½	6.4
165.1x76.1	20.7	69.9	91	258	102	124	M16x90	2.9
6½ODx3	300	3.50	3.58	10.16	4.80	4.88	%x3½	7.0
165.1x88.9	20.7	88.9	91	258	122	124	M16x90	3.2
6½ODx4	300	4.50	3.58	10.16	5.75	4.96	%x3½	7.3
165.1x114.3	20.7	114.3	91	258	146	126	M16x90	3.3
6x1	300	1.50	3.66	10.28	2.72	4.96	%x3½	5.1
168.3x33.7	20.7	38.1	93	261	69	126	M16x90	2.3
6x1¼	300	1.75	3.66	10.28	2.95	4.96	%x3½	5.3
168.3x42.4	20.7	44.5	93	261	75	126	M16x90	2.4
6x1½	300	2.00	3.66	10.28	3.27	4.96	%x3½	5.5
168.3x48.3	20.7	50.8	93	261	83	126	M16x90	2.5



- $\hfill \square$  Style 301 is Mechanical Tee with Groove outlet.
- ☐ UL listed and FM approved is 300psi (21Bar).
- $\hfill \square$  10" and larger, Reducing Tee is recommended to use.
- ☐ For correct installation, Please refer to page 91" General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 50±4 lbs.ft (68±5 N.m)
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC Approval refer to page 13.

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A VISION COMPANY NINGBO VISION PIPEFITTING CO.,LTD.,Xiaogang,Xinquan Village,Beilun District,Ningbo,Zhejiang P.R.of China ,Tel:+86-574-8615-6262

### Style 301 CONT'D

#### Mechanical Tee

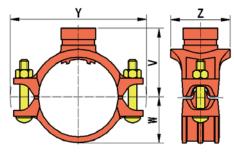
Publication: 03.01EN

Style 301 Mechanical Tee with groove outlet provides a direct branch connection at any location where a hole can be cut in the pipe. Gasket is a pressure responsive design which provides the seal

Style 303 assemblies can be achieved with the use of two Style 301 of same run size and the same or differing outlet size. Style 305 can be achieved with the use of one Style 301 outlet parts and one Style 302 outlet parts.

OD	Work Pressure	Hole Size	w	Υ	Z	v	BoltS Size	Approx. Wt. Ea.
Inches mm	Psi bar	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
6x2	300	2.50	3.66	10.28	3.74	4.96	5⁄8x3½	5.9
168.3x60.3	20.7	63.5	93	261	95	126	M16x90	2.7
6x2½	300	2.75	3.66	10.28	4.02	4.96	5/8x31/2	6.8
168.3x73.0	20.7	69.9	93	261	102	126	M16x90	3.1
6x3OD	300	2.75	3.66	10.28	4.02	4.96	%x3½	7.0
168.3x76.1	20.7	69.9	93	261	102	126	M16x90	3.2
6x3	300	3.50	3.66	10.28	4.80	4.96	%x3½	7.7
168.3x88.9	20.7	88.9	93	261	122	126	M16x90	3.5
6x4	300	4.50	3.66	10.28	5.75	5.04	%x3½	7.9
168.3x114.3	20.7	114.3	93	261	146	128	M16x90	3.6
8x1	300	1.50	4.72	12.99	2.72	5.98	3⁄4×4	7.7
219.1x33.7	20.7	38.1	120	330	69	152	M20x100	3.5
8x11/4	300	1.75	4.72	12.99	2.95	5.98	3⁄4x4	7.9
219.1x42.4	20.7	44.5	120	330	75	152	M20x100	3.6
8x1½	300	2.00	4.72	12.99	3.27	5.98	3/4×4	8.4
219.1x48.3	20.7	50.8	120	330	83	152	M20x100	3.8
8x2	300	2.50	4.72	12.99	3.74	5.98	3/4×4	8.8
219.1x60.3	20.7	63.5	120	330	95	152	M20x100	4.0
8x2½	300	2.75	4.72	12.99	4.02	5.98	3/4×4	9.7
219.1x73.0	20.7	69.9	120	330	102	152	M20x100	4.4
8x3OD	300	2.75	4.72	12.99	4.02	5.98	3/4×4	10.1
219.1x76.1	20.7	69.9	120	330	102	152	M20x100	4.6
8x3	300	3.50	4.72	12.99	4.80	5.98	3/4×4	10.1
219.1x88.9	20.7	88.9	120	330	122	152	M20x100	4.6
8x4	300	4.50	4.72	12.99	5.67	6.06	3/4×4	11.0
219.1x114.3	20.7	114.3	120	330	144	154	M20x100	5.0





- $\hfill \square$  Style 301 is Mechanical Tee with Groove outlet.
- ☐ UL listed and FM approved is 300psi (21Bar).
- 10" and larger, Reducing Tee is recommended to use.For correct installation, Please refer to page 91"
- General of Installation, Please refer to page 91"
  General of Installation" and publication AZ-100-EN of 
  "Installation Manual".
- ☐ For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 50±4 lbs.ft (68±5 N.m).
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC Approval refer to page 13.



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### **Style 302**

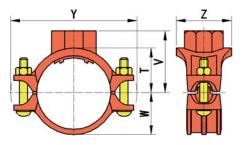
Mechanical Tee Publication: 03.01EN

Style 302 Mechanical Tee with thread outlet provides a direct branch connection at any location where a hole can be cut in the pipe. Gasket is a pressure responsive design which provides the seal.

Style 304 assemblies can be achieved with the use of two Style 302 of same run size and the same or differing outlet size. Style 305 can be achieved with the use of one Style 302 outlet parts and one Style 301 outlet parts.

OD	Work Pressure	Hole Size	w	Υ	z	т	v	Bolts Size	Approx. Wt. Ea.
Inches mm	Psi bar	Inches mm	Lbs. kg						
2x1	300	1.50	1.42	5.47	2.72	1.73	2.48	½x2½	2.2
60.3x33.7	20.7	38.1	36	139	69	44	63	M12x60	1.0
2x11/4	300	1.75	1.42	5.47	2.95	1.81	2.64	½x2½	2.4
60.3x42.4	20.7	44.5	36	139	75	46	67	M12x60	1.1
2x1½	300	1.75	1.42	5.47	3.27	1.81	2.64	½x2½	2.6
60.3x48.3	20.7	44.5	36	139	83	46	67	M12x60	1.2
2½x1	300	1.50	1.69	6.02	2.72	1.97	2.72	½x3	2.4
73.0x33.7	20.7	38.1	43	153	69	50	69	M12x75	1.1
2½x1¼	300	1.75	1.69	6.02	2.95	2.01	2.83	½x3	2.6
73.0x42.4	20.7	44.5	43	153	75	51	72	M12x75	1.2
2½x1½	300	2.00	1.69	6.02	3.27	2.01	2.83	½x3	2.9
73.0x48.3	20.7	50.8	43	153	83	51	72	M12x75	1.3
2½x2	300	2.00	1.69	6.02	3.27	2.13	2.91	½x3	3.1
73.0x60.3	20.7	50.8	43	153	83	54	74	M12x75	1.4
3ODx1	300	1.50	1.77	6.14	2.72	1.85	2.60	½x3	2.4
76.1x33.7	20.7	38.1	45	156	69	47	66	M12x75	1.1
30Dx11/4	300	1.75	1.77	6.14	2.95	1.89	2.72	½x3	2.6
76.1x42.4	20.7	44.5	45	156	75	48	69	M12x75	1.2
30Dx1½	300	2.00	1.77	6.14	3.27	1.89	2.72	½x3	2.9
76.1x48.3	20.7	50.8	45	156	83	48	69	M12x75	1.3
3ODx2	300	2.50	1.77	6.14	3.78	2.01	2.99	½x3	3.1
76.1x60.3	20.7	63.5	45	156	96	51	76	M12x75	1.4
3x1	300	1.50	2.01	6.54	2.72	2.13	2.87	½x3	2.6
88.9x33.7	20.7	38.1	51	166	69	54	73	M12x75	1.2
3x1¼	300	1.75	2.01	6.54	2.95	2.13	2.95	½x3	2.9
88.9x42.4	20.7	44.5	51	166	75	54	75	M12x75	1.3
3x1½	300	2.00	2.01	6.54	3.27	2.13	2.95	½x3	3.1
88.9x48.3	20.7	50.8	51	166	83	54	75	M12x75	1.4
3x2	300	2.50	2.01	6.54	3.74	2.13	3.11	½x3	3.3
88.9x60.3	20.7	63.5	51	166	95	54	79	M12x75	1.5
4x1	300	1.50	2.52	7.52	2.72	2.68	3.43	½x3	3.3
114.3x33.7	20.7	38.1	64	191	69	68	87	M12x75	1.5
4x1¼	300	1.75	2.52	7.52	2.95	2.68	3.50	½x3	3.5
114.3x42.4	20.7	44.5	64	191	75	68	89	M12x75	1.6
4x1½	300	2.00	2.52	7.52	3.27	2.68	3.50	½x3	3.7
114.3x48.3	20.7	50.8	64	191	83	68	89	M12x75	1.7
4x2	300	2.50	2.52	7.52	3.74	2.68	3.66	½x3	4.2
114.3x60.3	20.7	63.5	64	191	95	68	93	M12x75	1.9
4x2½	300	2.75	2.52	7.52	4.02	2.64	3.82	½x3	4.6
114.3x73.0	20.7	69.9	64	191	102	67	97	M12x75	2.1
4x3OD	300	2.75	2.52	7.52	4.02	2.64	3.82	½x3	4.6
114.3×76.1	20.7	69.9	64	191	102	67	97	M12x75	2.1
4x3	300	3.50	2.52	7.52	4.80	2.64	3.94	½x3	5.3
114.3x88.9	20.7	88.9	64	191	122	67	100	M12x75	2.4





- ☐ Style 302 is Mechanical Tee with female threaded outlet. Male threaded also available upon request.
- $\ \square$  UL listed and FM approved is 300psi (21Bar).
- ☐ 10" and larger, Reducing Tee is recommended to use.
- ☐ For correct installation, Please refer to page 91"
  General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 50±4 lbs.ft (68±5 N.m)
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC Approval refer to page 13.

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### Style 302 CONT'D

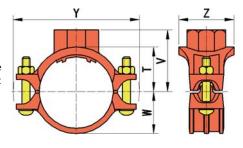
Mechanical Tee Publication: 03.01EN

Style 302 Mechanical Tee with thread outlet provides a direct branch connection at any location where a hole can be cut in the pipe. Gasket is a pressure responsive design which provides the seal.

Style 304 assemblies can be achieved with the use of two Style 302 of same run size and the same or differing outlet size. Style 305 can be achieved with the use of one Style 302 outlet parts and one Style 301 outlet parts.

OD	Work Pressure	Hole Size	w	Υ	z	т	v	Bolts Size	Approx. Wt. Ea.
Inches mm	Psi bar	Inches mm	Lbs. kg						
5%ODx1	300	1.50	3.07	9.21	2.72	3.31	4.06	5⁄8x3½	4.6
139.7x33.7	20.7	38.1	78	234	69	84	103	M16x90	2.1
5½0Dx1¼	300	1.75	3.07	9.21	2.95	3.43	4.25	%x3½	4.8
139.7x42.4	20.7	44.5	78	234	75	87	108	M16x90	2.2
5½0Dx1½	300	2.00	3.07	9.21	3.27	3.43	4.25	5⁄8x3½	5.1
139.7x48.3	20.7	50.8	78	234	83	87	108	M16x90	2.3
5½ODx2	300	2.50	3.07	9.21	3.74	3.31	4.33	%x3½	5.5
139.7x60.3	20.7	63.5	78	234	95	84	110	M16x90	2.5
5½ODx3OD	300	2.75	3.07	9.21	4.02	3.35	4.53	%x3½	6.4
139.7x76.1	20.7	69.9	78	234	102	85	115	M16x90	2.9
5½ODx3	300	3.50	3.07	9.21	4.80	3.43	4.72	%x3½	6.6
139.7x88.9	20.7	88.9	78	234	122	87	120	M16x90	3.0
5x1	300	1.50	3.11	9.25	2.72	3.31	4.37	5⁄8x3½	4.6
141.3x33.7	20.7	38.1	79	235	69	84	111	M16x90	2.1
5x1¼	300	1.75	3.11	9.25	2.95	3.35	4.37	5⁄8x3½	4.8
141.3x42.4	20.7	44.5	79	235	75	85	111	M16x90	2.2
5x1½	300	2.00	3.11	9.25	3.27	3.35	4.37	%x3½	5.1
141.3x48.3	20.7	50.8	79	235	83	85	111	M16x90	2.3
5x2	300	2.50	3.11	9.25	3.74	3.31	4.37	%x3½	5.5
141.3x60.3	20.7	63.5	79	235	95	84	111	M16x90	2.5
5x2½	300	2.75	3.11	9.25	4.02	3.31	4.41	%x3½	6.2
141.3x73.0	20.7	69.9	79	235	102	84	112	M16x90	2.8
5x3	300	3.50	3.11	9.25	4.80	3.35	4.41	5/8×3½	6.8
141.3x88.9	20.7	88.9	79	235	122	85	112	M16x90	3.1
6½ODx1	300	1.50	3.58	10.16	2.72	3.74	4.49	5/8×3½	5.1
165.1x33.7	20.7	38.1	91	258	69	95	114	M16x90	2.3
6½ODx1¼	300	1.75	3.58	10.16	2.95	3.74	4.57	5⁄8x3½	5.3
165.1x42.4	20.7	44.5	91	258	75	95	116	M16x90	2.4
6½ODx1½	300	2.00	3.58	10.16	3.27	3.78	4.61	5⁄8x3½	5.5
165.1x48.3	20.7	50.8	91	258	83	96	117	M16x90	2.5
6½ODx2	300	2.50	3.58	10.16	3.74	3.70	4.72	%x3½	5.9
165.1x60.3	20.7	63.5	91	258	95	94	120	M16x90	2.7
6½ODx3OD	300	2.75	3.58	10.16	4.02	3.70	4.88	%x3½	6.8
165.1x76.1	20.7	69.9	91	258	102	94	124	M16x90	3.1
6½ODx3	300	3.50	3.58	10.16	4.80	3.70	5.00	%x3½	7.5
165.1x88.9	20.7	88.9	91	258	122	94	127	M16x90	3.4
6x1	300	1.50	3.66	10.28	2.72	3.82	4.57	%x3½	5.3
168.3x33.7	20.7	38.1	93	261	69	97	116	M16x90	2.4
6x1¼	300	1.75	3.66	10.28	2.95	3.90	4.65	5⁄8x3½	5.5
168.3x42.4	20.7	44.5	93	261	75	99	118	M16x90	2.5
6x1½	300	2.00	3.66	10.28	3.27	3.86	4.69	5⁄8x3½	5.7
168.3x48.3	20.7	50.8	93	261	83	98	119	M16x90	2.6
6x2	300	2.50	3.66	10.28	3.74	3.98	4.80	5⁄8x3½	6.2
168.3x60.3	20.7	63.5	93	261	95	101	122	M16x90	2.8





- ☐ Style 302 is Mechanical Tee with female threaded outlet. Male threaded also available upon request.
- ☐ UL listed and FM approved is 300psi (21Bar).
- $\ \square$  10" and larger, Reducing Tee is recommended to use.
- ☐ For correct installation, Please refer to page 91" General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 50±4 lbs.ft (68±5 N.m)
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC Approval refer to page 13.

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### Style 302 CONT'D

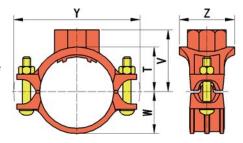
Mechanical Tee Publication: 03.01EN

Style 302 Mechanical Tee with thread outlet provides a direct branch connection at any location where a hole can be cut in the pipe. Gasket is a pressure responsive design which provides the seal.

Style 304 assemblies can be achieved with the use of two Style 302 of same run size and the same or differing outlet size. Style 305 can be achieved with the use of one Style 302 outlet parts and one Style 301 outlet parts.

OD	Work Pressure	Hole Size	w	Υ	Z	Т	V	Bolts Size	Approx. Wt. Ea.
Inches mm	Psi bar	Inches mm	Lbs. kg						
6x2½	300	2.75	3.66	10.28	4.02	3.90	4.92	%x3½	6.8
168.3x73.0	20.7	69.9	93	261	102	99	125	M16x90	3.1
6x3OD	300	2.75	3.66	10.28	4.02	3.94	5.12	%x3½	7.0
168.3x76.1	20.7	69.9	93	261	102	100	130	M16x90	3.2
6x3	300	3.50	3.66	10.28	4.80	3.78	5.08	5⁄8x3½	7.7
168.3x88.9	20.7	88.9	93	261	122	96	129	M16x90	3.5
8x1	300	1.50	4.72	12.99	2.72	4.96	5.71	3⁄4x4	7.7
219.1x33.7	20.7	38.1	120	330	69	126	145	M20x100	3.5
8x1¼	300	1.75	4.72	12.99	2.95	4.88	5.71	3/4×4	7.9
219.1x42.4	20.7	44.5	120	330	75	124	145	M20x100	3.6
8x1½	300	2.00	4.72	12.99	3.27	4.88	5.71	3/4×4	8.4
219.1x48.3	20.7	50.8	120	330	83	124	145	M20x100	3.8
8x2	300	2.50	4.72	12.99	3.74	4.80	5.83	3/4×4	8.8
219.1x60.3	20.7	63.5	120	330	95	122	148	M20x100	4.0
8x2½	300	2.75	4.72	12.99	4.02	4.80	5.98	3/4×4	9.7
219.1x73.0	20.7	69.9	120	330	102	122	152	M20x100	4.4
8x3OD	300	2.75	4.72	12.99	4.02	4.80	5.98	3/4×4	9.7
219.1x76.1	20.7	69.9	120	330	102	122	152	M20x100	4.4
8x3	300	3.50	4.72	12.99	4.80	4.80	6.10	3/4×4	10.1
219.1x88.9	20.7	88.9	120	330	122	122	155	M20x100	4.6





- Style 302 is Mechanical Tee with female threaded outlet.Male threaded also available upon request.
- $\ \square$  UL listed and FM approved is 300psi (21Bar).
- $\hfill \square$  10" and larger, Reducing Tee is recommended to use.
- ☐ For correct installation, Please refer to page 91" General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 50±4 lbs.ft (68±5 N.m)
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC Approval refer to page 13.



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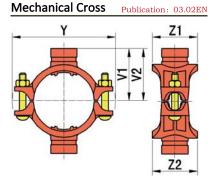
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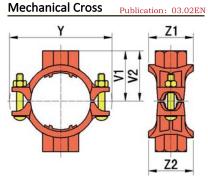
### **Style 303**

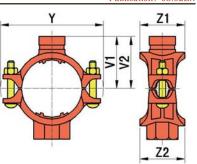
### **Style 304**

**Style 305 Mechanical Cross** 

Publication: 03.02EN







- ☐ For size please refer to Page 38 to page 43.
- ☐ Style 303 consists of two Style 301 of same run size and same grooved outlet.
- $\square$  Style 304 consists of two Style 302 of same run size and same threaded outlet.
- $\ \square$  Style 305 consists of one style 301 grooved outlet and one style 302 threaded outlet
- ☐ Work pressure, please refer to page 38 to page 43.
- $\hfill\Box$  10" and up size, Reducing cross is recommended to use.
- $\ \square$  For correct installation, Please refer to page 91"General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 68.±5N.m
- $\ \square$  For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

Hole Cutting Illustration

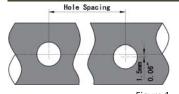


Figure 1 Hole Spacing

NOTE: The hole cut diameter ,please refer to Mechanical Tee date sheet, Tolerance is ±0.04 inch(1.0mm). The hole at intervals for Mechanical Tee refer to Figure 1.Mechanical Cross refer to Figure 2.Tolerance must conform to ±0.06inch (1.5mm)



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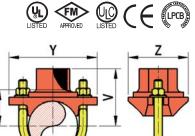
## Style 300U

Mechanical Tee Publication: 03.03EN

Style 300U Sprinkler Mechanical Tee with thread outlet provides a direct branch connection at any location where a hole can be cut in the pipe. Gasket is a pressureresponsive design which provides the seal.

Style 300U is recommended for connection drop nipple or sprinkler head in sprinklersystem, also for other application.

OD	Work Pressure	Hole Size	Υ	Z	т	v	Bolts Size	Approx. Wt. Ea.
Inches	Psi	Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	bar	mm	mm	mm	mm	mm	mm	kg
1¼x½	300	1.19	3.35	2.28	1.26	1.85	3%U	0.9
42.4x21.3	20.7	30.2	85	58	32	47	M10U	0.4
1¼x¾	300	1.19	3.35	2.28	1.22	1.85	¾U	0.9
42.4x26.7	20.7	30.2	85	58	31	47	M10U	0.4
1¼x1	300	1.19	3.35	2.28	1.42	2.17	¾U	1.1
42.4x33.7	20.7	30.2	85	58	36	55	M10U	0.5
1½x½	300	1.19	3.35	2.28	1.38	1.97	¾U	0.9
48.3x21.3	20.7	30.2	85	58	35	50	M10U	0.4
1½x¾	300	1.19	3.35	2.28	1.34	1.97	¾U	0.9
48.3x26.7	20.7	30.2	85	58	34	50	M10U	0.4
1½x1	300	1.19	3.35	2.28	1.54	2.28	¾U	1.1
48.3x33.7	20.7	30.2	85	58	39	58	M10U	0.5
2x1/2	300	1.19	3.90	2.28	1.61	2.20	3⁄8U	0.9
60.3x21.3	20.7	30.2	99	58	41	56	M10U	0.4
2x¾	300	1.19	3.90	2.28	1.57	2.20	3⁄8U	0.9
60.3x26.7	20.7	30.2	99	58	40	56	M10U	0.4
2x1	300	1.19	3.90	2.28	1.81	2.56	3%U	1.1
60.3x33.7	20.7	30.2	99	58	46	65	M10U	0.5
2½x½	300	1.19	4.53	2.28	1.85	2.44	¾U	1.1
73.0x21.3	20.7	30.2	115	58	47	62	M10U	0.5
2½x¾	300	1.19	4.53	2.28	1.81	2.44	¾U	1.1
73.0x26.7	20.7	30.2	115	58	46	62	M10U	0.5
2½x1	300	1.19	4.53	2.28	2.01	2.76	3%U	1.1
73.0x33.7	20.7	30.2	115	58	51	70	M10U	0.5
30Dx1/2	300	1.19	4.69	2.28	1.85	2.44	3%U	1.1
76.1x21.3	20.7	30.2	119	58	47	62	M10U	0.5
30Dx¾	300	1.19	4.69	2.28	1.81	2.44	3%U	1.1
76.1x26.7	20.7	30.2	119	58	46	62	M10U	0.5
3ODx1	300	1.19	4.69	2.28	2.01	2.76	¾U	1.1
76.1x33.7	20.7	30.2	119	58	51	70	M10U	0.5
3x½	300	1.19	4.96	2.28	2.17	2.76	¾U	1.1
88.9x21.3	20.7	30.2	126	58	55	70	M10U	0.5
3x¾	300	1.19	4.96	2.28	2.13	2.76	¾U	1.1
88.9x26.7	20.7	30.2	126	58	54	70	M10U	0.5
3x1	300	1.19	4.96	2.28	2.24	2.99	3⁄8U	1.3
88.9x33.7	20.7	30.2	126	58	57	76	M10U	0.6
4x½	300	1.19	6.02	2.28	2.60	3.19	¾U	1.5
114.3x21.3	20.7	30.2	153	58	66	81	M10U	0.7
4x¾	300	1.19	6.02	2.28	2.56	3.19	3⁄8U	1.5
114.3x26.7	20.7	30.2	153	58	65	81	M10U	0.7
4x1	300	1.19	6.02	2.28	2.44	3.19	3%U	1.5
114.3x33.7	20.7	30.2	153	58	62	81	M10U	0.7



- Style 300U is designed for sprinkler system only, it is recommended for connection drop nipple or sprinkler head in sprinkler system, also for other application.
- ☐ Equivalent Length, please refer to page 24.
- ☐ UL listed and FM approved is 300psi (21Bar).
- ☐ For correct installation, Please refer to page 91 "General of Installation" and publication AZ-100-EN of "Installation Manual".
- ☐ For Hole cutting requirement please refer to page 44, Tightening Torque for Bolts and nuts is 19±4 lbs.ft (25+5 N m)
- ☐ For ONE TIME FIELD TEST ONLY, The Max. Joint working pressure may be increased to 1.5 times the figures shown.

LPC Approval refer to page 13.

2½",76.1mm and up size no LPC Approved.

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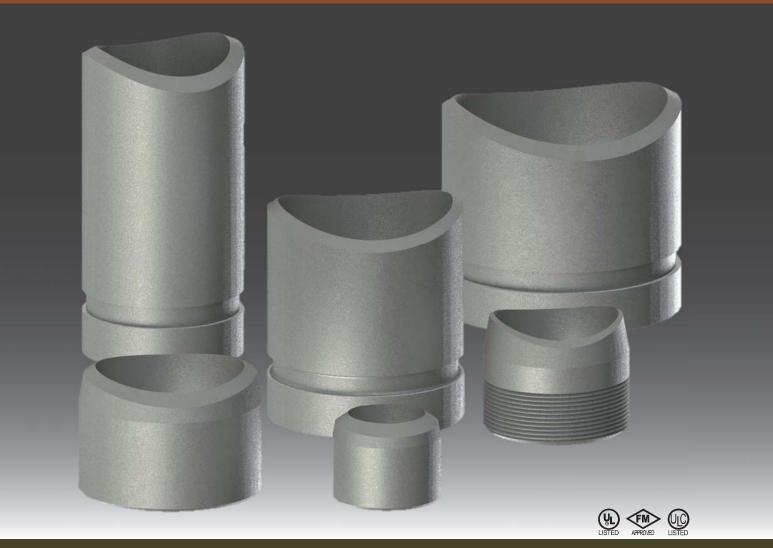




# Weld-O-Lets

# **Fabrication System**

Cut Groove | Roll Groove | Female Threaded | Male Threaded



025: Cut Groove UL Listed FM Approved

025R: Roll Groove

035: Female Threaded UL Listed FM Approved

035M: Male Threaded



Economy Quality Specialty





# Pipe System Accessories

Flexible Fittings Fabrication Fittings

Sprinkler Hose | Expansion Joint | Weld-O-Lets

STYLE	DESCRIPTION	SIZE	PAGE
280	Unbraided Sprinkler Flexible Drop	1x½"-1x¾"	48
280W	Braided Sprinkler Flexible Drop	1x½"-1x¾"	49
P-9700	Clean Room Sprinkler Flexible Drop	1x½"-1x¾"	50
P-9900	Duct Sprinkler Flexible Drop	1x½"-1x¾"	51
P-1200	Flexible Connector	1x½"-1x¾"	52
P-3200	ExpansionJoint	1¼"-12"	53
220	ExpansionJoint	1¼"-6"	54
221	ExpansionJoint	2½"-12"	55
025	Weld-O-Lets(Grv.)	1x1¼"-8x8"	56
035	Weld-O-Lets(Thr.)	½x1"-4x8"	57











Total Piping Solution

## Style 280

#### **Unbraided Sprinkler Flexible Drop**



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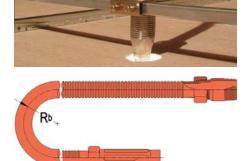


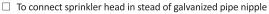
VISION Style 280 unbraided sprinkler drop ,which is the most popular sprinkler drop, is suitable for automatic sprinkler fire protection system in Commercial building and Industrial workshop .Due to its easy installation and convenience for sprinkler head connection in complicated occasion.

Most parts of Style 280 are SUS-304 Stainless steel ,partial components are hot-dip galvanized coating. Customized service is available upon your request. Such as SUS-316 Stainless steel material .

UL listed working pressure is up to 200PSI/13.8bar

Nom Inlet by Outlet Size	Assembly Length(L)	Max No.of 90 Degree bends	Min Bend Radius	Equivalent Length of 1 in. Schedule 40 Steel Pipe (C =120)
Inches	Ft	Qty.	Inches	Ft
mm	m		mm	m
1x½	2.30	1	5.00	26
25x15	700	1	127	7.9
1x½	3.28	1	5.00	36
25x15	1000	1	127	11
1x½	3.94	3	5.00	67
25x15	1200	3	127	20.4
1x½	4.92	3	5.00	84
25x15	1500	3	127	25.6
1x½	5.91	3	5.00	101
25x15	1800	3	127	30.8
1x¾	2.30	1	5.00	32
25x20	700	1	127	9.8
1x¾	3.28	1	5.00	42
25x20	1000	1	127	12.8
1x¾	3.94	3	5.00	73
25x20	1200	3	127	22.3
1x¾	4.92	3	5.00	77
25x20	1500	3	127	23.5
1x¾	5.91	3	5.00	105
25x20	1800	3	127	32





 $<sup>\</sup>hfill \square$  Easy installation, especially for special occasion , and comply to UL and NFPA13.

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### Style 280W

#### **Braided Sprinkler Flexible Drop**

Publication: 12.02EN

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VISION Style 280W braid sprinkler drop ,which is the most popular sprinkler drop, is suitable for automatic sprinkler fire protection system in Commercial building and Industrial workshop . Due to its easy installation and convenience for sprinkler head connection in complicated occasion.

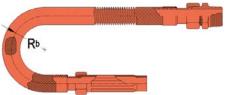
Most parts of Style 280W are SUS-304 Stainless steel ,partial components are hot-dip galvanized coating. Customized service is available upon your request. Such as SUS-316 Stainless steel material .

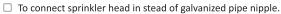
UL listed and FM approved working pressure is up to 200PSI/13.8bar

Style 280W not only has a higher Max.working pressure but also has a better capability of flexibility if compare with Style 280.

Nom Inlet by Outlet Size	Assembly Length(L)	k-Factor	Max No.of 90 Degree bends	Min Bend Radius	Equivalent Length of 1 in. Schedule 40 Steel Pipe (C =120)
Inches	Ft	Inches	Qty.	Inches	Ft
mm	m	mm	ζ.,.	mm	m
1x½	2.30	5.6	1	11.8	33.0
25x15	700	80	1	300	10.1
1x½	3.28	5.6	2	11.8	55.9
25x15	1000	80	2	300	17.0
1x½	3.94	5.6	3	11.8	43.6
25x15	1200	80	3	300	13.2
1x½	4.92	5.6	4	11.8	67.5
25x15	1500	80	4	300	20.6
1x½	5.91	5.6	4	11.8	78.8
25x15	1800	80	4	300	23.9
1x¾	2.30	8.0	1	11.8	28.3
25x20	700	115	1	300	8.6
1x¾	3.28	8.0	2	11.8	48.1
25x20	1000	115	2	300	14.7
1x¾	3.94	8.0	3	11.8	86.8
25x20	1200	115	3	300	26.4
1x¾	4.92	8.0	4	11.8	111.0
25x20	1500	115	4	300	33.8
1x¾	5.91	8.0	4	11.8	120.8
25x20	1800	115	4	300	36.8







☐ Easy installation, especially for special occasion ,and comply with FM friction loss data.

### **Style P-9700**

#### Clean Room Sprinkler Flexible Drop

Style P-9700, which is the most popular sprinkler drop, is used for clean room Sprinkler system, Due to its easy installation and convenience for sprinkler head connection in complicated occasion.

Publication: 12.06EN

Style P-9700 can be installed easily with one piece structure design and thread joint in both ends.

Style P-9700 are SUS-304 Stainless steel ,partial carbon steel parts are hot-dip galvanized coating. Customized service is available upon your request. Such as SUS-316 Stainless steel material .

Nom Inlet by Outlet Size	Assembly Length(L)	Max No.of 90 Degree bends	Min Bend Radius	Equivalent Length of 1 in. Schedule 40 Steel Pipe (C =120)
Inches	Ft	Qty.	Inches	Ft
mm	m	.,	mm	m
1x½	1.97	1	5.91	4.7
25x15	600	1	150	1.4
1x½	3.28	1	5.91	6.5
25x15	1000	1	150	2.0
1x½	3.94	1	5.91	7.5
25x15	1200	1	150	2.3
1x½	4.92	1	5.91	9.0
25x15	1500	1	150	2.8
1x½	5.91	1	5.91	10.4
25x15	1800	1	150	3.2
1x½	6.89	1	5.91	11.7
25x15	2100	1	150	3.6
1x¾	1.97	1	5.91	4.7
25x20	600	1	150	1.4
1x¾	3.28	1	5.91	6.5
25x20	1000	1	150	2.0
1x¾	3.94	1	5.91	7.5
25x20	1200	1	150	2.3
1x¾	4.92	1	5.91	9.0
25x20	1500	1	150	2.8
1x¾	5.91	1	5.91	10.4
25x20	1800	1	150	3.2
1x¾	6.89	1	5.91	11.7
25x20	2100	1	150	3.6

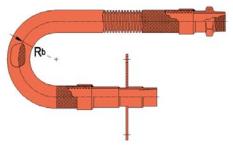


☐ Easy installation, especially for special occasion ,and comply with FM friction loss data.

Model P-9700 1 in. nominal dia. flexible metal sprinkler hose for providing a connection to automatic sprinklers in cleanroom ceilings. Approval is limited for use in the following cleanroom ceilings:

- Fuji Electric Co., Ltd.
- M+W Zander Facility Engineering GmbH.
- Shanghai Huiya Aluminum Alloy Products Co., Ltd
- Tenryo Technology and Engineering Co., Ltd.
- Tien Hann Engineering Co., Ltd.
- Topline Engineering Co., Ltd.
- Topwell Engineering Co., Ltd.
- United Information Systems Co., Ltd.
- Vero Veria Corporation.
- Yung Cheng Feng Engineering Co., Ltd.







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## **Style P-9900**

#### **Duct Sprinkler Flexible Drop**

Style P-9900, which is the most popular sprinkler drop, is used for dust Sprinkler system, Due to its easy installation and convenience for sprinkler head connection in complicated occasion.

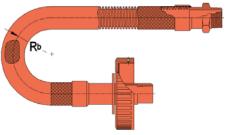
Publication: 12.09EN

Style P-9900 can be installed easily with one piece structure design and thread joint in both ends.

Style P-9900 are SUS-304 Stainless steel ,partial carbon steel parts are hot-dip galvanized coating. Customized service is available upon your request. Such as SUS-316 Stainless steel material .

Nom Inlet by Outlet Size	Assembly Length(L)	Max No.of 90 Degree bends	Min Bend Radius	Equivalent Length of 1 in. Schedule 40 Steel Pipe (C =120)
Inches	Ft	Qtv.	Inches	Ft
mm	m	.,	mm	m
1x½	1.97	1	5.91	4.7
25x15	600	1	150	1.4
1x½	3.28	1	5.91	6.5
25x15	1000	1	150	2.0
1x½	3.94	1	5.91	7.5
25x15	1200	1	150	2.3
1x½	4.92	1	5.91	9.0
25x15	1500	1	150	2.8
1x½	5.91	1	5.91	10.4
25x15	1800	1	150	3.2
1x½	6.89	1	5.91	11.7
25x15	2100	1	150	3.6
1x¾	1.97	1	5.91	4.7
25x20	600	1	150	1.4
1x¾	3.28	1	5.91	6.5
25x20	1000	1	150	2.0
1x¾	3.94	1	5.91	7.5
25x20	1200	1	150	2.3
1x¾	4.92	1	5.91	9.0
25x20	1500	1	150	2.8
1x¾	5.91	1	5.91	10.4
25x20	1800	1	150	3.2
1x¾	6.89	1	5.91	11.7
25x20	2100	1	150	3.6





<sup>☐</sup> To connect sprinkler head in stead of galvanized pipe nipple.

<sup>☐</sup> Easy installation, especially for special occasion ,and comply with FM friction loss data.

## **Style P-1200**

**Flexible Connector** 

Publication: 12.10EN

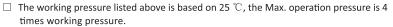
Style P-1200 has good capacity of compensation, which designed for flexible connection in building settling application to compensate linear movement. This products can be connected to inlet of fire pump to provide Vibration attenuation in systems instead of rubber coupling. and also can be connected to flange connection of equipment.

Style P-1200 has a entirety structure design with two flanged ends in both sides, which is connected by normal tooling without being welded.

Style P-1200 are SUS-304 Stainless steel, partial carbon steel parts are hot-dip galvanized coating. Customized service is available upon your request. Such as SUS-316 Stainless steel material.

Flange rating:PN10,PN16,PN25.other standard flange are available ,Such as ANSI,DIN,BS

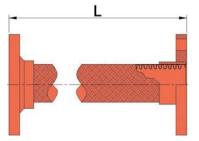
Nom Inlet by Outlet Size3	Assembly Length(L)	Bellows Type	Braids Type	Allowable Movement Vibration	Allowable Movement Static	Working Pressure	Unit Weight
Inches	Inches	H/A	S/D	Inches	Inches	Psi	Lbs.
mm	mm	11//	3/0	mm	mm	bar	kg
2½	9.06	Α	D	0.72	1.03	385	12.3
65	230	Α	D	18.3	26.1	26.5	5.6
3	9.06	Α	D	0.63	0.86	300	16.7
80	230	Α	D	15.9	21.9	21.0	7.6
4	9.06	Α	D	0.48	0.66	290	22.0
100	230	Α	D	12.3	16.8	20.0	10.0
5	11.02	Α	D	0.60	0.85	260	33.0
125	280	Α	D	15.3	21.6	18.0	15.0
6	11.02	Α	D	0.50	0.70	225	42.7
150	280	Α	D	12.8	17.8	15.5	19.4
8	11.81	Α	D	0.44	0.63	230	55.7
200	300	Α	D	11.3	15.9	16.0	25.3
10	12.99	Α	D	0.49	0.68	190	91.2
250	330	Α	D	12.5	17.3	13.0	41.4
12	13.78	Α	D	0.37	0.54	150	113.2
300	350	Α	D	9.3	13.7	10.5	51.4
14	13.78	Α	D	0.33	0.47	145	155.3
350	350	Α	D	8.3	12.0	10.0	70.5
16	15.75	Α	D	0.39	0.56	130	215.2
400	400	Α	D	9.9	14.3	9.0	97.7



<sup>☐</sup> The listed length of Bellows pipe is standard value, Custermized length is available.









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# StyleP-3200

#### **Axial/Single Expansion Joint**

Publication: 12.11EN

APPRO.

Style P-3200 has good capacity of compensation, which designed for flexible connection in Expansion/Contraction application to compensate linear movement. Especially be used for compressed pipe connection instead of rubber coupling and metal flexible hose. and also can be used for moveable flange connection of equipment.

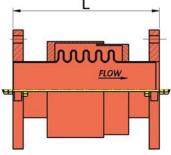
Style P-1200 has a entirety structure design with two flanged ends in both sides, which is connected by normal tooling without being welded

Style P-3200 are SUS-304 Stainless steel , partial carbon steel parts are hot-dip galvanized coating. Customized service is available upon your request. Such as SUS-316 Stainless steel material .

Flange rating: PN10, PN16, PN25. other standard flange are available , Such as ANSI, DIN, BS etc..

Inlet by Outlet Nominal Size	Total Length(L)	Eff. Length(L)	Axial Movement Extension	Axial Movement Compression	Working Pressure	Unit Weight
Inches	Inches	Inches	Inches	Inches	Psi	Lbs.
mm	mm	mm	mm	mm	bar	kg
1¼	7.87	3.46	0.20	1.18	230	10.8
32	200	88	5.0	30.0	16.0	4.9
1½	9.84	3.78	0.20	1.18	230	11.9
40	250	96	5.0	30.0	16.0	5.4
2	11.81	4.72	0.20	1.38	230	14.3
50	300	120	5.0	35.0	16.0	6.5
2½	11.81	4.72	0.20	1.38	230	19.4
65	300	120	5.0	35.0	16.0	8.8
3	11.81	4.72	0.39	1.57	230	24.9
80	300	120	10.0	40.0	16.0	11.3
4	11.81	5.20	0.39	1.77	230	32.2
100	300	132	10.0	45.0	16.0	14.6
5	11.81	5.67	0.39	1.77	230	43.8
125	300	144	10.0	45.0	16.0	19.9
6	13.78	6.50	0.39	1.97	230	60.8
150	350	165	10.0	50.0	16.0	27.6
8	13.78	7.09	0.39	2.17	230	82.8
200	350	180	10.0	55.0	16.0	37.6
10	13.78	8.66	0.39	2.36	230	122.7
250	350	220	10.0	60.0	16.0	55.7
12	13.78	8.66	0.39	2.36	230	150.0
300	350	220	10.0	60.0	16.0	68.1





- $\hfill \square$  The listed length of Bellows pipe is standard value, Custermized length is available

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| VISION | Style 220 |



- Compensate linear movement Max.to 2-1/2"(76mm)
- Vibration Attenuation and Buffering
- Innerstress free

# Accommodate Expansion /Contraction

Innerstress Free

# Style 220

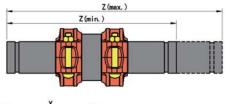
**Expansion Joint** 

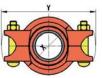
Publication: 12.03EN

220 Expansion Joint consists of special reducing couplings and grooved pipe nipples. it can compensate linear movement Maximum to 2-1/2" (76mm)with a superior Vibration attenuation and buffering performance to accommodate expansion/contraction .

220 Expansion joint can be adjusted before installation to accommodate heat expansion and contraction.

Nominal Size	OD	Work Pressure	Max Displacement	х	Υ	Zmin	Zmax	Approx. Wt. Ea.
Inchs	Inchs	Psi	Inchs	Inchs	Inchs	Inchs	Inchs	Lbs.
mm	mm	bar	mm	mm	mm	mm	mm	kg
1¼	1.660	300	3.00	3.35	4.84	11.89	14.88	7.4
32	42.4	20.7	76	85	123	302	378	3.4
1½	1.900	300	3.00	3.35	4.84	11.89	14.88	8.0
40	48.3	20.7	76	85	123	302	378	3.6
2	2.375	300	3.00	3.94	5.91	11.89	14.88	10.9
50	60.3	20.7	76	100	150	302	378	4.9
21/2	2.875	300	3.00	5.63	7.95	12.13	15.12	20.3
65	73.0	20.7	76	143	202	308	384	9.2
3OD	3.000	300	3.00	5.63	7.95	12.13	15.12	20.6
65	76.1	20.7	76	143	202	308	384	9.3
3	3.500	300	3.00	5.63	7.95	12.13	15.12	21.3
80	88.9	20.7	76	143	202	308	384	9.7
4	4.500	300	3.00	6.73	9.45	14.13	17.13	31.3
100	114.3	20.7	76	171	240	359	435	14.2
5½OD	5.500	300	3.00	7.72	10.51	14.13	17.13	39.2
125	139.7	20.7	76	196	267	359	435	17.8
5	5.563	300	3.00	7.87	10.59	14.13	17.13	40.3
125	141.3	20.7	76	200	269	359	435	18.3
6½OD	6.500	300	3.00	10.20	13.58	15.98	18.98	65.7
150	165.1	20.7	76	259	345	406	482	29.9
6	6.625	300	3.00	10.20	13.58	15.98	18.98	66.2
150	168.3	20.7	76	259	345	406	482	30.1





- ☐ Style 220 Expansion Joint can be adjusted before installation to compensate linear movement Maximum to 2-1/2"(76mm)and suitable for expansion /contraction.
- ☐ Style 220 compensate linear movement only, if to compensate radial movement, Style 221 is recommended to use. for details please refer to page 55.
- ☐ For Compensation above 2-1/2"(76mm),please contact VISION.
- ☐ A position guide set and pipe support must be applied to each part of separated pipeline for linear movement freely. for details please refer publication 15.02.



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A VISION COMPANY | NINGBO VISION PIPEFITTING CO., LTD., Xiaogang, Xinquan Village, Beilun District, Ningbo, Zhejiang P.R. of China, Tel:+86-574-8615-6262

| VISION | Style 221 |



- Free Combination
- Vibration protection and Buffering
- Innerstress free

# Compensation for linear movement and settling

Suitable for Building Settling• Cross-over

## Style 221

**Expansion Joint** 

Size	OD	Displacement	Compression	Middle	Inflation	Х	Υ	Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	mm	mm	mm	kg
		0.77	12.72	13.10	13.49	3.98	5.91	15.0
2½	2.875	19.6	323.0	332.8	342.6	101	150	6.8
65	73.0	0.96	14.96	15.44	15.93	3.98	5.91	18.3
		24.5	380.0	392.3	404.5	101	150	8.3
		0.77	12.72	13.10	13.49	4.65	6.50	18.7
3	3.500	19.6	323.0	332.8	342.6	118	165	8.5
80	88.9	0.96	14.96	15.44	15.93	4.65	6.50	22.7
		24.5	380.0	392.3	404.5	118	165	10.3
		0.98	19.06	19.54	20.03	5.79	7.91	33.9
4	4.500	24.8	484.0	496.4	508.8	147	201	15.4
100	114.3	1.22	21.42	22.03	22.64	5.79	7.91	40.1
		31	544.0	559.5	575.0	147	201	18.2
		0.98	19.06	19.54	20.03	6.85	9.49	44.7
5½OD	5.500	24.8	484.0	496.4	508.8	174	241	20.3
125	139.7	1.22	21.42	22.03	22.64	6.85	9.49	53.1
		31	544.0	559.5	575.0	174	241	24.1
		0.98	19.06	19.54	20.03	6.93	9.57	45.2
5	5.563	24.8	484.0	496.4	508.8	176	243	20.5
125	141.3	1.22	21.42	22.03	22.64	6.93	9.57	53.5
		31	544.0	559.5	575.0	176	243	24.3
		0.98	19.06	19.54	20.03	8.07	10.67	54.6
6½0D	6.500	24.8	484.0	496.4	508.8	205	271	24.8
150	165.1	1.22	21.42	22.03	22.64	8.07	10.67	64.5
		31	544.0	559.5	575.0	205	271	29.3
		0.98	19.06	19.54	20.03	8.07	11.26	57.5
6	6.625	24.8	484.0	496.4	508.8	205	286	26.1
150	168.3	1.22	21.42	22.03	22.64	8.07	11.26	68.1
		31	544.0	559.5	575.0	205	286	30.9
		0.98	24.25	24.74	25.23	10.35	13.43	105.3
8	8.625	24.8	616.0	628.4	640.8	263	341	47.8
200	219.1	1.22	27.01	27.62	28.23	10.35	13.43	123.8

686.0

24.25

616.0

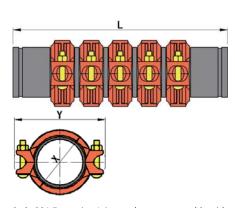
27.01 686.0

24 25

616.0

27.01

24 74



Style 221 Expansion Joint works as an assembly with several of flexible couplings and grooved short nipples compensate especially settlement or expansion/contraction. Such as Building settlement, expansion/contraction of external cross-over pipeline. The quantities of flexible couplings and grooved short nipples for assembly is depending on the demand of compensation rate for linear movement and radial movement.

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31

0.98

24.8

1.22

0.98

24.8

1 22

10.750

273.0

12.750

323.9

**10** 250

**12** 300

| FIRE PROTECTION SYSTEM | INTERNATIONAL |

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701.5 717.0 263 341 56.2

24.74 25.23 12.56 15.83 147.8

628.4 640.8 319 402 67.1

27.62 28.23 12.56 15.83 173.8

701.5 717.0 319 402 78.9

628.4 640.8 370 455 96.7

27.62 28.23 14.57 17.91 251.5

701.5 717.0 370 455 114.2

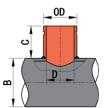
25.23 14.57 17.91 213.0

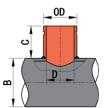
Publication: 12.04EN

### Style 025

### Style 025 CONT'D

Weld-O-LetsPublication: 12.13ENWeld-O-LetsPublication: 12.13EN





OD	В	С	D	E	F	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	mm	kg
	11/4-11/2	3.00	1.05	1.31	0.13	0.4
	32-40	76	26.7	33.4	3.4	0.2
	1½-2	3.00	1.05	1.31	0.13	0.4
	40-50	76	26.7	33.4	3.4	0.2
1x	2-21/2	3.00	1.05	1.31	0.13	0.4
25x	50-65	76	26.7	33.4	3.4	0.2
	2½-4	3.00	1.05	1.31	0.13	0.4
	65-100	76	26.7	33.4	3.4	0.2
	5-8	3.00	1.05	1.31	0.13	0.4
	125-200	76	26.7	33.4	3.4	0.2
	11/4	3.00	1.37	1.67	0.14	0.7
	32	76	34.7	42.4	3.6	0.3
	1½	3.00	1.37	1.67	0.14	0.7
	40	76	34.7	42.4	3.6	0.3
11/4×	2-21/2	3.00	1.37	1.67	0.14	0.7
32x	50-65	76	34.7	42.4	3.6	0.3
	3-4	3.00	1.37	1.67	0.14	0.7
	80-100	76	34.7	42.4	3.6	0.3
	5-8	3.00	1.37	1.67	0.14	0.7
	125-200	76	34.7	42.4	3.6	0.3
	1½	3.00	1.61	1.90	0.15	0.7
	40	76	40.9	48.3	3.7	0.3
	2	3.00	1.61	1.90	0.15	0.7
	50	76	40.9	48.3	3.7	0.3
1½x	2½	3.00	1.61	1.90	0.15	0.7
40x	65	76	40.9	48.3	3.7	0.3
	3-4	3.00	1.61	1.90	0.15	0.7
	80-100	76	40.9	48.3	3.7	0.3
	5-8	3.00	1.61	1.90	0.15	0.7
	125-200	76	40.9	48.3	3.7	0.3
	2	3.00	2.07	2.37	0.15	0.9
	50	76	52.5	60.3	3.9	0.4
	2½	3.00	2.07	2.37	0.15	0.9
	65	76	52.5	60.3	3.9	0.4
	3	3.00	2.07	2.37	0.15	0.9
	80	76	52.5	60.3	3.9	0.4
2x	4	3.00	2.07	2.37	0.15	0.9
2x 50x	100	76	52.5	60.3	3.9	0.4
	5	3.00	2.07	2.37	0.15	0.9
	125	76	52.5	60.3	3.9	0.4
	6	3.00	2.07	2.37	0.15	0.4
	150	76	52.5	60.3	3.9	0.9
		3.00	2.07	2.37	0.15	0.4
	8					

OD	В	С	ı	)	E	F	Approx. Wt. Ea.
Inches mm	Lbs. kg						
	2½	3.00	2.64	2.47	3.00	0.20	1.5
	65	76	67	62.7	76.2	5.2	0.7
	3	3.00	2.64	2.47	3.00	0.20	1.5
	80	76	67	62.7	76.2	5.2	0.7
	4	3.00	2.64	2.47	3.00	0.20	1.5
2½x	100	76	67	62.7	76.2	5.2	0.7
65x	5	3.00	2.64	2.47	3.00	0.20	1.5
	125	76	67	62.7	76.2	5.2	0.7
	6	3.00	2.64	2.47	3.00	0.20	1.5
	150	76	67	62.7	76.2	5.2	0.7
	8	3.00	2.64	2.47	3.00	0.20	1.5
	200	76	67	62.7	76.2	5.2	0.7
	3	3.00	3.27	3.07	3.50	0.22	2.0
	80	76	83	78	88.9	5.5	0.9
	4	3.00	3.27	3.07	3.50	0.22	2.0
	100	76	83	78	88.9	5.5	0.9
3x	5	3.00	3.27	3.07	3.50	0.22	2.0
80x	125	76	83	78	88.9	5.5	0.9
	6	3.00	3.27	3.07	3.50	0.22	2.0
	150	76	83	78	88.9	5.5	0.9
	8	3.00	3.27	3.07	3.50	0.22	2.0
	200	76	83	78	88.9	5.5	0.9
	4	4.02	4.25	4.02	4.50	0.24	3.7
	100	102	108	102	114.3	6.0	1.7
	5	4.02	4.25	4.02	4.50	0.24	3.7
4x	125	102	108	102	114.3	6.0	1.7
100x	6	4.02	4.25	4.02	4.50	0.24	3.7
	150	102	108	102	114.3	6.0	1.7
	8	4.02	4.25	4.02	4.50	0.24	3.7
	200	102	108	102	114.3	6.0	1.7
	6	4.02	6.38	6.06	6.63	0.28	6.6
6x	150	102	162	154	168.3	7.1	3.0
150x	8	4.02	6.38	6.06	6.63	0.28	6.6
	200	102	162	154	168.3	7.1	3.0
8x	8	4.02	8.35	7.99	8.63	0.32	10.1
200x	200	102	212	203	219.1	8.2	4.6

VISION Welding Outlet fittings offer the user a high strength,Cost-efficient threaded and grooved line of fittings which designed and manufactured to be installed on standard wall pipe. The material used in manufacture is carbon steel,they are UL listed and FM approved with 300psi for use confirming to the requirement of the NFPA when used in fire sprinkler systems.

- ☐ Material: Carbon Steel
- ☐ Welding face available with/without Chamfer
- $\hfill\Box$  Threaded type: NPT & BSPT
- ☐ Threaded End and Grooved End are available.

☐ Style 025R Weld-O-Lets,Please contact VISION for details.

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## Style 035

Weld-O-Lets Publication: 12.13EN

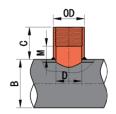
VISION Welding Outlet fittings offer the user a high strength, Cost-efficient threaded and grooved line of fittings which designed and manufactured to be installed on standard wall pipe. The material used in manufacture is carbon steel, they are UL listed and FM approved with 300psi for use confirming to the requirement of the NFPA when used in fire sprinkler systems.

Material: Carbon Steel

Welding face available with/without Chamfer

Thread type: NPT & BSPT

Thread End and Grooved End are available.



☐ Style 035M Weld-O-Lets, Please contact VISION for details.

OD	В	С	M	D	Approx.
Inches	Inches	Inches	Inches	Inches	Wt. Ea. Lbs.
mm	mm	mm	mm	mm	kg
	1-1½	1.06	0.50	0.70	0.2
	25-40	27	12.7	17.8	0.1
	1½-2	1.06	0.50	0.70	0.2
½x	40-50	27	12.7	17.8	0.1
15x	2-21/2	1.06	0.50	0.70	0.2
	50-65	27	12.7	17.8	0.1
	21/2-8	1.06	0.50	0.70	0.2
	65-200	27	12.7	17.8	0.1
	1-11/2	1.14	0.50	0.90	0.2
	25-40	29	12.7	22.9	0.1
	1½-2	1.14	0.50	0.90	0.2
3/4X	40-50	29	12.7	22.9	0.1
20x	2-21/2	1.14	0.50	0.90	0.2
	50-65	29	12.7	22.9	0.1
	21/2-8	1.14	0.50	0.90	0.2
	65-200	29	12.7	22.9	0.1
	11/4-11/2	1.26	0.50	1.15	0.4
	32-40	32	12.7	29.1	0.2
	1½-2	1.26	0.50	1.15	0.4
	40-50	32	12.7	29.1	0.2
	2-21/2	1.26	0.50	1.15	0.4
1x	50-65	32	12.7	29.1	0.2
25x	2½-3	1.26	0.50	1.15	0.2
	65-80	32	12.7	29.1	0.1
	3-4	1.26	0.50	1.15	0.2
	80-100	32	12.7	29.1	0.1
	5-8	1.26	0.50	1.15	0.2
	125-200	32	12.7	29.1	0.1
	1%-1½	1.38	0.50	1.49	0.4
	32-40	35	12.7	37.8	0.2
	1½-2	1.38	0.50	1.49	0.4
	40-50	35	12.7	37.8	0.2
	2-21/2	1.38	0.50	1.49	0.4
1¼x	50-65	35	12.7	37.8	0.2
32x	2½-3	1.38	0.50	1.49	0.4
	65-80	35	12.7	37.8	0.2
	3-4	1.38	0.50	1.49	0.4
	80-100	35	12.7	37.8	0.2
	5-8	1.38	0.50	1.49	0.4
	125-200	35	12.7	37.8	0.2

OD	В	С	М	D	Approx. Wt. Ea.
Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
	1½-2½	1.61	0.87	1.61	0.4
	40	41	22.2	40.9	0.2
1½x	3-4	1.61	0.87	1.61	0.4
40x	80-100	41	22.2	40.9	0.2
	5-8	1.61	0.87	1.61	0.4
	125-200	41	22.2	40.9	0.2
	2-4	1.77	0.87	2.07	0.9
	50-100	45	22.2	52.5	0.4
	5	1.77	0.87	2.07	0.7
2x	125	45	22.2	52.5	0.3
50x	6	1.77	0.87	2.07	0.7
	150	45	22.2	52.5	0.3
	8	1.77	0.87	2.07	0.7
	200	45	22.2	52.5	0.3
	2½	2.13	1.13	2.47	1.3
	65	54	28.6	62.7	0.6
	3	2.13	1.13	2.47	1.3
	80	54	28.6	62.7	0.6
	4	2.13	1.13	2.47	1.1
2½x 65x	100	54	28.6	62.7	0.5
037	5 125	2.13 54	1.13 28.6	2.47 62.7	0.5
	6	2.13	1.13	2.47	1.1
	150	54	28.6	62.7	0.5
	8	2.13	1.19	2.47	1.1
	200	54	30.2	62.7	0.5
	3	2.52	1.50	3.07	1.8
	80	64	38.1	78	0.8
	4	2.52	1.50	3.07	1.8
	100	64	38.1	78	0.8
3x	5	2.52	1.50	3.07	1.8
80x	125	64	38.1	78	0.8
	6	2.52	1.50	3.07	1.8
	150	64	38.1	78	0.8
	8	2.52	1.50	3.07	1.8
	200	64	38.1	78	0.8
	4	2.99	2.00	4.02	3.1
	100	76	50.8	102	1.4
	5	2.99	2.00	4.02	2.9
4x	125	76	50.8	102	1.3
100x	6	2.99	2.00	4.02	2.9
	150	76	50.8	102	1.3
	8	2.99	2.00	4.02	2.9
	200	76	50.8	102	1.3

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| FIRE PROTECTION SYSTEM | INTERNATIONAL |

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# Sprinkler Flexible Drop

**Unbraided**·Braided

280 | 280W | P-9700 | P-9900



280: Unbraided Sprinkler Flexible Drop
280W: Braided Sprinkler Flexible Drop
P-9700: Clean Room Sprinkler Flexible Drop
P-9900: Duct Sprinkler Flexible Drop



Easy Installation





# **Fire Protection Values**

System Values & Trim Values

Butterfly Value | Gate Value | Y Strainer | Swing Check Value Angle Value | Three Way value | Ball value

STYLE	DESCRIPTION	SIZE	PAGE
211W	Wafer Butterfly Valve	2½"8"(65-200mm)	60
211W1	Wafer Butterfly Valve	2½"8"(65-200mm)	60
211G	Grooved Butterfly Valve	2½"8"(65-200mm)	61
211G1	Grooved Butterfly Valve	2½"8"(65-200mm)	61
211BT	Bronze Butterfly Valve Threaded	1"-2½"(25-65mm)	62
211BG	Bronze Butterfly Valve Grooved	2"-30D"(50-65mm)	62
399FF	OS & Y Gate Valves	2"-12"(50-300mm)	63
399FG	OS & Y Gate Valves	2"-12"(50-300mm)	63
399GG	OS & Y Gate Valves	2"-12"(50-300mm)	63
388FF	NRS Gate Valve	2"-12"(50-300mm)	64
388FG	NRS Gate Valve	2"-12"(50-300mm)	64
388GG	NRS Gate Valve	2"-12"(50-300mm)	64
G388	Indicator Post - Underground	-	65
W388	Indicator Post - Wall	-	65
70FF	Y Strainer	2"-12"(50-300mm)	66
70FG	YStrainer	2"-12"(50-300mm)	66
70GG	Y Strainer	2"-12"(50-300mm)	66
50FF	Swing Check Valve	2"-12"(50-300mm)	67
50GG	Swing Check Valve	2"-8"(50-200mm)	67
ARV	Air Release Valve	½"-1"(15-25mm)	68
TD1	Test&Drain Valves	1"-2"(25-50mm)	69
AD1	Angle Valve	¾"-2"(20-50mm)	70
AD2	Angle Valve	¾"-2"(20-50mm)	70
APR1	Adjustable Pressure Relief Valve	½"-¾"(15-20mm)	71
3W	Three Way valve	1/4"	72
221	Brass Ball valve	½"-2"(15-50mm)	73











Meet All Your Demand



■ Wafer-Type

- Ductile Iron for Valve body, Nylon Encapsulated.
- Ductile Iron for Disc, EPDM **Encapsulated**
- Gear Acuator
- External Indicator
- Internal Two Micro-switches

### Compact Design

Easy Installation • Cost-Effective

# Style 211W | 211W1

Wafer-type Butterfly Valve

Publication: 18.01EN

Style 211W is designed for sprinkler system with compact structure and light weight to control Materials List and supervise the water flow effectively .

Style 221W consists of Gear Acuator, external indicator and internal two micro-switches.

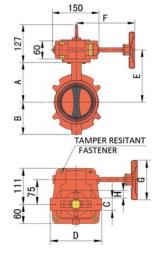
#### 211W-175Psi

Nominal Size	l Work Pressure	А	В	С	D	E	F	G	н
Inches mm	Psi bar	Inches mm							
2½	300	4.72	3.35	1.93	4.57	5.91	5.31	4.92	0.37
65	20.7	120	85	49	116	150	135	125	9.5
3	300	5.00	3.62	1.93	5.20	6.18	5.31	4.92	0.63
80	20.7	127	92	49	132	157	135	125	16.0
4	300	5.71	4.25	2.17	5.98	6.89	5.31	4.92	0.98
100	20.7	145	108	55	152	175	135	125	25.0
6	300	7.09	5.71	2.32	8.15	8.27	7.60	8.86	1.78
150	20.7	180	145	59	207	210	193	225	45.3
8	300	8.03	6.69	2.48	10.31	9.21	7.60	8.86	2.70
200	20.7	204	170	63	262	234	193	225	68.5





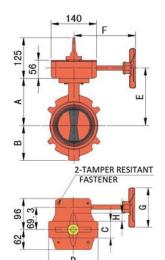
Name	Materials
Body	Ductile Iron ASTM-A536 EPDM Encapsulated
Disc	Al-Bronze, Ni-Cr Plated
Stem	Stainless Steel, Hardened & Tempered
Housing	Ductile Iron ASTM-A536
Hand Wheel	Ductile Iron ASTM-A536



#### 211W1-300Psi

Nominal Size	Work Pressure	Α	В	С	D	E	F	G	н
Inches mm	Psi bar	Inches mm							
2½	300	4.72	3.35	1.93	4.57	5.91	6.61	4.92	0.37
65	20.7	120	85	49	116	150	168	125	9.5
3	300	5.00	3.62	1.93	5.20	6.18	6.61	4.92	0.63
80	20.7	127	92	49	132	157	168	125	16.0
4	300	5.71	4.25	2.17	5.98	6.89	6.61	4.92	0.98
100	20.7	145	108	55	152	175	168	125	25.0
6	300	7.09	5.71	2.32	8.15	8.27	8.19	8.86	1.78
150	20.7	180	145	59	207	210	208	225	45.3
8	300	8.03	6.69	2.48	10.31	9.21	8.19	8.86	2.70
200	20.7	204	170	63	262	234	208	225	68.5

 $\ \square$  For flow loss and installation ,please refer to publiation 18.01EN



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- Grooved-End
- Ductile Iron for Valve body, Nylon Encapsulated.
- Ductile Iron for Disc, EPDM Encapsulated
- Gear Acuator
- External Indicator
- Internal Two Micro-switches

#### **Grooved Connection**

Easy Installation

# Style 211G | 211G1

**Grooved End Butterfly Valve** 

Publication: 18.02EN

(UL)





Style 211G/211G1 is designed for sprinkler system with compact structure and light weight to control and supervise the water flow effectively .

Style 221G/211G1 consists of Gear Acuator, external indicator and internal two microswitches.

#### 211G-175Psi

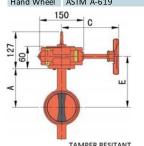
Nominal Size	Work Pressure	А	В	С	D	E	F	G
Inches	Psi	Inches						
mm	bar	mm						
2½	175	4.13	3.80	5.31	2.875	5.31	4.92	
65	12.0	105	96.4	135	73.0	135	125	-
3OD	175	4.13	3.80	5.31	3.000	5.31	4.92	
65	12.0	105	96.4	135	76.1	135	125	-
3	175	4.41	3.80	5.31	3.500	5.59	4.92	
80	12.0	112	96.4	135	88.9	142	125	-
4	175	5.71	4.54	5.31	4.500	6.89	4.92	
100	12.0	145	115.4	135	114.3	175	125	-
6½OD	175	7.05	5.21	7.60	6.500	8.23	8.86	0.27
150	12.0	179	132.4	193	165.1	209	225	6.8
6	175	7.05	5.21	7.60	6.625	8.23	8.86	0.27
150	12.0	179	132.4	193	168.3	209	225	6.8
8	175	8.03	5.80	7.60	8.625	9.21	8.86	0.95
200	12.0	204	147.4	193	219.1	234	225	24.2

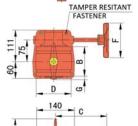
#### 211G1-300Psi

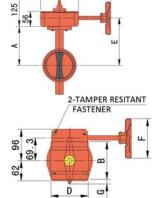
Nominal Size	Work Pressure	А	В	С	D	Е	F	G
Inches	Psi	Inches						
mm	bar	mm						
2½	175	4.13	3.80	6.61	2.875	5.39	4.92	
65	12.0	105	96.4	168	73.0	137	125	-
3OD	175	4.13	3.80	6.61	3.000	5.39	4.92	
65	12.0	105	96.4	168	76.1	137	125	-
3	175	4.41	3.80	6.61	3.500	5.67	4.92	
80	12.0	112	96.4	168	88.9	144	125	-
4	175	5.71	4.54	6.61	4.500	6.97	4.92	
100	12.0	145	115.4	168	114.3	177	125	-
6½OD	175	7.05	5.21	8.19	6.500	8.31	8.86	0.27
150	12.0	179	132.4	208	165.1	211	225	6.8
6	175	7.05	5.21	8.19	6.625	8.31	8.86	0.27
150	12.0	179	132.4	208	168.3	211	225	6.8
8	175	8.03	5.80	8.19	8.625	9.29	8.86	0.95
200	12.0	204	147.4	208	219.1	236	225	24.2

**Materials List** 

	-
Name	Materials
Body	Ductile Iron ASTM-A536, Nylon-11 coated
Disc	Al-Bronze, Ductile IronASTM-A536 EPDM Encapsulated
Stem	Stainless Steel, Hardened & Tempered
Housing	Ductile Iron ASTM-A536
Hand Wheel	ΔSTM Δ-619







 $\hfill \Box$  For flow loss and installation ,please refer to publiation 18.01EN

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- Threaded End Type
- Grooved End Type
- Bronze Body
- Bronze Disc
- Gear Acuator
- **External Indicator**
- Internal Two Micro-switches

### For Small size connection

Easy Installation • Cost-Effective

# Style 211BT | 211BG

Threaded & Grooved End Type Bronze Butterfly Valve Publication: 18.03EN

Style 211BT is designed for sprinkler system with compact structure and light weight to control and supervise the water flow effectively .

Style 221BT consists of gear acuator, external indicator and internal two micro-switches.

#### **Materials List**

Name	Materials
Body	Ductile Iron ASTM-A536, EPDM Encapsulated
Disc	Al-Bronze, Ni-Cr Plated
Stem	Stainless Steel, Hardened & Tempered
Housing	Ductile Iron ASTM-A536

#### 211BT-175Psi

Nominal Size	А	В	С	D	E	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	mm	kg
1	1.72	1.56	2.13	2.05	1.46	3.3
25	43.7	39.7	54.0	52.0	37.0	1.5
11/4	2.09	1.93	2.64	2.20	1.61	3.7
32	53.2	49.0	67.0	56.0	41.0	1.7
1½	2.30	2.20	2.87	2.32	1.73	4.0
40	58.5	56.0	73.0	59.0	44.0	1.8
2	2.99	2.76	3.24	2.52	1.93	5.3
50	76.0	70.0	82.4	64.0	49.0	2.4
2½	3.50	3.31	4.09	2.56	1.97	6.8
65	89.0	84.0	104.0	65.0	50.0	3.1

#### 211BG-175Psi

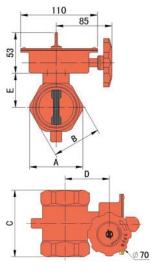
Nominal Size	А	В	С	D	E	F	G	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	mm	mm	mm	kg
2	4.49	2.375	2.25	0.62	0.31	1.97	2.56	4.8
50	114	60.3	57.1	15.8	7.9	50.0	65.0	2.2
21/2	4.49	2.875	2.72	0.62	0.31	1.97	2.56	5.5
65	114	73.0	69.0	15.8	7.9	50.0	65.0	2.5
3OD	4.49	3.000	2.72	0.62	0.31	1.97	2.56	5.5
65	114	76.1	69.0	15.8	7.9	50.0	65.0	2.5

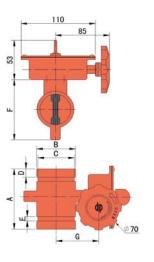
 $\hfill \Box$  For flow loss and installation ,please refer to publication 18.03EN













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# Style399FF | 399FG | 399GG







Resilient Seated OS & Y Gate Valves

Publication: 18.04EN

#### **Materials List**

Part Name	Material	Specification
Body	Ductile Iron	A536 65-45-12
Wedge	Ductile Iron EPDM Coated	
Wedge Nut	Stainless Steel	AISI304
Steam	Stainless Steel	AISI304/302
Bonnet	Ductile Iron	A536 65-45-12
Gasket	EPDM	Commerical
Packing	Graphite	Non-asbestos
Steam Nut	Bronze	ASTM B62
Handwheel	Ductile Iron	A536 65-45-12

#### Valve Standard

Conforms to AWWA C515 / BS5163

#### Working pressure

200PSI / 250PSI / 300PSI

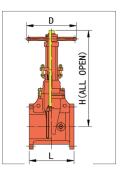
#### Flanged Ends

- ☐ ANSI B16.1 Class125/150/300,
- ☐ EN1092-2 PN10/PN16/PN25
- ☐ BS10 Table D/Table E

#### 399FF-Flanged/Flanged Ends

	<u> </u>						
9	SIZE		L		н		D
inches	mm	inches	mm	inches	mm	inches	mm
2.00	50.00	7.00	178.00	16.46	418.00	7.20	183.00
2.50	65.00	7.50	191.00	16.46	418.00	7.20	183.00
3.00	80.00	8.00	203.00	19.21	488.00	9.96	253.00
4.00	100.00	9.00	229.00	21.18	538.00	9.96	253.00
5.00	125.00	10.00	254.00	25.75	654.00	12.05	306.00
6.00	150.00	10.50	267.00	29.13	740.00	12.05	306.00
8.00	200.00	11.50	292.00	36.81	935.00	13.98	355.00
10.00	250.00	13.00	330.00	44.33	1126.00	17.52	445.00
12.00	300.00	14.00	356.00	51.81	1316.00	17.52	1445.00

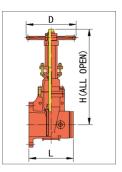




#### 399FG-Flange/Groove Ends

SI	ZE	L		н		D	
inches	mm	inches	mm	inches	mm	inches	mm
2	50	7	178	16.46	418	7.2	183
2.5	65	7.5	191	16.46	418	7.2	183
3	80	8	203	19.21	488	9.96	253
4	100	9	229	21.18	538	9.96	253
5	125	10	254	25.75	654	12.05	306
6	150	10.5	267	29.13	740	12.05	306
8	200	11.5	252	36.81	935	13.98	355
10	250	13	330	44.33	1126	17.52	445
12	300	14	356	51.81	1316	17.52	445

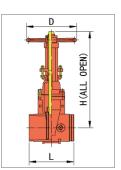




#### 399GG-Groove/Groove Ends

33300-010	39900-0100Ve/0100Ve Lilus										
SIZ	SIZE			н		D					
inches	mm	inches	mm	inches	mm	inches	mm				
2	50	7	178	16.46	418	7.2	183				
2.5	65	7.5	191	16.46	418	7.2	183				
3	80	8	203	19.21	488	9.96	253				
4	100	9	229	21.18	538	9.96	253				
5	125	10	254	25.75	654	12.05	306				
6	150	10.5	267	29.13	740	12.05	306				
8	200	11.5	292	36.81	935	13.98	355				
10	250	13	330	44.33	1126	17.52	445				
12	300	14	356	51.81	1316	17.52	445				





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# Style 388FF | 388FG | 388GG







**NRS Resilient Gate Valve** 

Publication: 18.05EN

#### Materials List

Part Name	Material	Specification
Body	Ductile Iron	A536 65-45-12
Wedge Disc	Ductile Iron EPDM Coated	
Disc Nut	Bronze	ASTM B62
Steam	Stainless Steel	AISI 304/302
Gasket	EPDM	Commercial
Bonnet	Ductile Iron	A536 65-45-12
Thrust Collar	Bronze	ASTM M62
Gland	Ductile Iron	A536 65-45-12
Wrench Nut	Ductile Iron	A536 65-45-12
Post Plate	Ductile Iron	A536 65-45-12

■ Valve Standard

Conforms to AWWA C515 / BS5163

Working pressure

200PSI / 250PSI / 300PSI

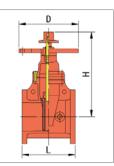
Flanged Ends

- ☐ ANSI B16.1 Class125/150/300
- ☐ EN1092-2 PN10/PN16/PN25
- ☐ BS10 Table D/Table E

388FF-Flanged/Flanged Ends

300FF-Flatigeu/Flatigeu Elius							
SIZE		L		Н		D	
inches	mm	inches	mm	inches	mm	inches	mm
2.00	50.00	7.00	178.00	11.61	295.00	12.01	305.00
2.50	65.00	7.50	191.00	11.61	295.00	12.01	305.00
3.00	80.00	8.00	203.00	12.72	323.00	12.01	305.00
4.00	100.00	9.00	229.00	13.46	342.00	12.01	305.00
5.00	125.00	10.00	254.00	16.06	408.00	12.01	305.00
6.00	150.00	10.50	267.00	17.32	440.00	12.01	305.00
8.00	200.00	11.50	292.00	21.14	537.00	12.01	305.00
10.00	250.00	13.00	330.00	25.20	640.00	12.01	305.00
12.00	300.00	14.00	356.00	28.46	723.00	12.01	305.00

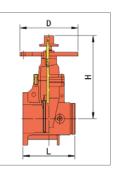




388FG-Flange/Groove Ends

SIZE			L	Н		D	
inches	mm	inches	mm	inches	mm	inches	mm
2.00	50.00	7.00	178.00	11.61	295.00	12.01	305.00
2.50	65.00	7.50	191.00	11.61	295.00	12.01	305.00
3.00	80.00	8.00	203.00	12.72	323.00	12.01	305.00
4.00	100.00	9.00	229.00	13.46	342.00	12.01	305.00
5.00	125.00	10.00	254.00	16.06	408.00	12.01	305.00
6.00	150.00	10.50	267.00	17.32	440.00	12.01	305.00
8.00	200.00	11.50	292.00	21.14	537.00	12.01	305.00
10.00	250.00	13.00	330.00	25.20	640.00	12.01	305.00
12.00	300.00	14.00	356.00	28.46	723.00	12.01	305.00

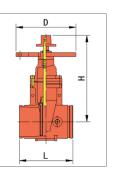




399GG-Groove/Groove Ends

•	33300-0100Ve/0100Ve Lilus								
SIZE		L		н		D			
	inches	mm	inches	mm	inches	mm	inches	mm	
	2.00	50.00	7.00	178.00	11.61	295.00	12.01	305.00	
	2.50	65.00	7.50	191.00	11.61	295.00	12.01	305.00	
	3.00	80.00	8.00	203.00	12.72	323.00	12.01	305.00	
	4.00	100.00	9.00	229.00	13.46	342.00	12.01	305.00	
	5.00	125.00	10.00	254.00	16.06	408.00	12.01	305.00	
	6.00	150.00	10.50	267.00	17.32	440.00	12.01	305.00	
	8.00	200.00	11.50	292.00	21.14	537.00	12.01	305.00	
	10.00	250.00	13.00	330.00	25.20	640.00	12.01	305.00	
	12.00	300.00	14.00	356.00	28.46	723.00	12.01	305.00	







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# **Style G388 | W388**

G388 Indicator Post - Underground Type

Indicator Post-Underground Type | Indicator Post-Wall Type | Publication: 18.05EN



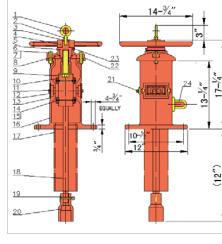




DET	QTY	Desciption	Material
1	1	Locking Wrench	ASTM A126B
2	1	Qperating Nut	ASTM B62
3	2	Hex Nut Screw	ASTM A105
4	2	Hex Nut	ASTM A105
5	1	Snap Ring	AISI 066
6	1	Taget Carrier Nut	ASTM B62
7	4	Taget	ASTM B108
8	4	Hex Cap Screw	ASTM A105
9	2	Window Glass	LEXAN-UM
10	2	Window Glass Gasket	PTFE
11	4	Hex Cap Screw	ASTM A105
12	4	Hex Nut	ASTM A105
13	1	Body	ASTM A536
14	6	Hex Cup Screw	ASTM A105
15	6	Hex Nut	ASTM A105
16	1	Base Flange	ASTM A126B
17	4	Hex Cap Screw	ASTM A105
18	4	Hex Nut	ASTM A105
19	1	Crane Couping	ASTM A536
20	1	Cotter Pin	AISI 304
21	1	Stand Pipe	ASTM A53
22	1	Steam	AISI 1045
23	1	Plug	AISI 304
24	1	Cover	ASTM A126B
25	1	Cross Recessed Countersunk Head Screw	AISI 304
26	1	Locking Nose	ASTM 307 B

#### Field Adjustment:

- ☐ Remove the top section from the top of the Indicator Post assembly.
- Cut the required length off the bottom of the Standpipe for the Ground Line to match up with Standpipe Ground Line mark.
- ☐ Set the "OPEN" and "SHUT" targets for the appropriate valve size.
- ☐ Reattach the Top Section to the top of the Indicator Post assembly.
- ☐ Design and dimensions are subject to change without notice



#### W388 Indicator Post - Wall Type

W388 Indicator Fost - Wall Type							
DET	QTY	Desciption	Material				
1	1	Lifting Eyey Bolt	ASTM A105				
2	1	Hex Nut	ASTM A105				
3	1	Washer	ASTM A105				
4	1	Hand Wheel	ASTM A536				
5	1	Operating Nut	ASTM B62				
6	2	Hex Cap Screw	ASTM A105				
7	2	Hex Nut	ASTM A105				
8	1	Snap Ring	AISI 066				
9	1	Target Carrier Nut	ASTM B62				
10	4	Target	ASTM B108				
11	4	Hex Cap Screw	ASTM A105				
12	2	Window Glass	LEXAN-UM				
13	2	Window Glass Gasket	PTFE				
14	4	Hex Cap Screw	ASTM A105				
15	4	Hex Nut	ASTM A105				
16	1	Body	ASTM A536				
17	1	Stand Pipe	ASTM A53				
18	1	Steam	AISI A1045				
19	1	Cotter Pin	AISI 304				
20	1	Crane Couping	ASTM A536				
21	1	Plug	AISI 304				
22	1	Cover	ASTM A126B				
23	1	Cross Recessed Countersink Head Screw	AISI 304				
24	1	Locking Nose	ASTM A307B				

#### Field Adjustment:

- Remove the top section from the top of the Indicator Post assembly.
- ☐ Set the "OPEN" and "SHUT" targets for the appropriate valves size.
- Reattach the Top Section to the top of the Indicator Post assembly.
- Design and materials are subject to change without notice.

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# Style 50FF | 50GG

Publication: 18.08EN







#### **Materials List**

Swing Check Valve

Part N	lame	Material	Specification
Body		Ductile Iron	A536 65-45-12
Seat		Bronze	ASTM B62
Clappe	er	Stainless Steel	AISI 304
Facing	Seal	EPDM Rubber	
Clamp	ing Ring	Stainless Steel	AISI 304
Gaske	t	EPDM Rubber	
Spring		Stainless Steel	AISI 304
Hinge	Pin	Stainless Steel	AISI 304
Bolt		Stainless Steel	AISI 304
Lockm	nul	Stainless Steel	AISI 304
Plug1,	/4" NPT	Carbon Steel	
Plug1	/2" NPT	Carbon Steel	

Valve Standard

Conforms to AWWA C508, Clear Waterway

Working pressure

200PSI / 250PSI / 300PSI

#### Flanged/Flanged Ends

- ☐ ANSI B16.1 Class125/150/300,
- □ EN1092-2 PN10/PN16/PN25
- ☐ BS10 Table D/Table E

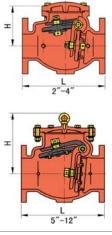
#### **Groove/Groove Ends**

☐ AWWA C606

#### 50FF-Flanged/Flanged Ends

5011 Hanged/Hanged Ends							
SIZ	ZE .	L		H	1		
inches	mm	inches	mm	inches	mm		
2.00	50.00	8.00	203.00	4.80	122.00		
2.50	65.00	10.00	254.00	5.23	133.00		
3.00	80.00	11.00	279.00	5.37	136.50		
4.00	100.00	13.00	330.00	6.40	162.50		
5.00	125.00	14.00	356.00	11.65	296.00		
6.00	150.00	16.00	406.00	11.75	298.50		
8.00	200.00	19.50	495.00	14.06	357.00		
10.00	250.00	22.00	559.00	16.14	410.00		
12.00	300.00	26.00	660.00	18.31	463.00		

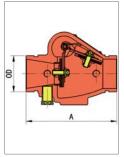




#### 50GG-Groove/Groove Ends

•					
9	SIZE	L		OD	
inches	mm	inches	mm	mm	
2.00	50.00	6.65	169.00	60.30	
2.50	65.00	7.20	183.00	73.0/76.1	
3.00	80.00	7.80	198.00	88.90	
4.00	100.00	8.85	218.00	114.30	
5.00	125.00	9.76	248.00	139.7/141.3	
6.00	150.00	10.63	270.00	165.1/168.3	
8.00	200.00	12.80	325.00	219 10	





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# **Style 70FF | 70FG | 70GG**





Y Strainer Publication: 18.07EN

Mate	rials	List
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Part Name	Material	Specification
Body	Ductile Iron	A536 65-45-12
Cover	Ductile Iron	A536 65-45-12
Screen	Stainless Steel	AISI 304
Gasket	EPDM	
Plug	Carbon Steel	

Working pressure
200PSI / 250PSI / 300PSI

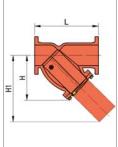
#### Flanged Ends

- □ ANSI B16.1 Class125/150/300
   □ EN1092-2 PN10/PN16/PN25
   □ BS10 Table D/Table E
- ☐ AWWA C606

#### 70FF-Flanged/Flanged Ends

SIZE		L		н		H1	
inches	mm	inches	mm	inches	mm	inches	mm
2.00	50.00	7.99	203.00	5.20	132.00	7.68	195.00
2.50	65.00	254.00	254.00	6.22	158.00	9.45	240.00
3.00	80.00	10.24	260.00	6.89	175.00	10.63	270.00
4.00	100.00	12.13	308.00	7.99	202.00	12.60	320.00
5.00	125.00	15.67	398.00	11.42	290.00	16.73	425.00
6.00	150.00	18.58	472.00	13.15	334.00	19.49	495.00
8.00	200.00	21.56	550.00	15.39	391.00	22.44	570.00
10.00	250.00	25.75	654.00	18.11	460.00	27.56	700.00
12.00	300.00	30.00	762.00	23.23	590.00	33.07	840.00

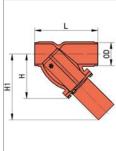




#### 70FG-Flange/Groove Ends

S	IZE		L		H	H	11		OD
inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
2.00	50.00	8.00	203.00	5.12	130.00	7.68	195.00	2.37/	60.30
2.50	65.00	10.00	254.00	6.22	158.00	9.45	240.00	2.87/3	73.0/76.1
3.00	80.00	10.24	260.00	6.89	175.00	10.63	270.00	3.50	88.90
4.00	100.00	12.13	308.00	7.95	202.00	12.60	320.00	4.50	114.30
5.00	125.00	15.67	398.00	11.42	290.00	16.73	425.00	5.5/5.56	139.7/141.3
6.00	150.00	18.58	472.00	13.15	334.00	19.49	495.00	6.5/6.63	165.1/168.3
8.00	200.00	21.65	550.00	15.39	391.00	22.44	570.00	8.63	219.10
10.00	250.00	25.75	654.00	18.11	460.00	27.56	700.00	10.75	273.00
12.00	300.00	30.00	762.00	23.23	590.00	33.07	840.00	12.75	323.90

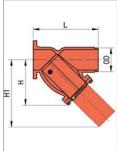




#### 70GG-Groove/Groove Ends

SI	ZE		L		Н	ŀ	11	0	D
inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
2.00	50.00	9.06	230.00	5.12	130.00	7.68	195.00	2.37	60.30
2.50	65.00	10.00	254.00	6.22	158.00	9.45	240.00	2.87/3	73/76.1
3.00	80.00	10.71	272.40	6.89	175.00	10.63	270.00	3.50	3.50/88.9
4.00	100.00	12.13	308.00	8.00	202.00	12.60	320.00	4.50	4.5/114.3
5.00	125.00	15.67	398.00	11.42	290.00	16.73	425.00	5.5/5.56	139.7/141.3
6.00	150.00	18.58	472.00	13.15	334.00	19.49	495.00	6.05/6.63	165.1/168.3
8.00	200.00	21.65	550.00	15.39	391.00	22.44	570.00	8.63	219.10
10.00	250.00	25.75	654.00	18.11	460.00	27.56	700.00	10.75/273	273.00
12.00	300.00	30.00	762.00	23.23	590.00	33.07	840.00	12.75/323.9	323.90





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# Style ARV

Air release Valve

The Air release valve features a stainless steel spherical float design with Cast Iron Body. Air in the piping system is vented through the discharge valve that is normally open. Rising water activates the float to close the valve. The valve outlet is tapped to take a safety drain line.

Publication: 18.09EN

Spherical float: Stainless Steel

Body: Cast Iron

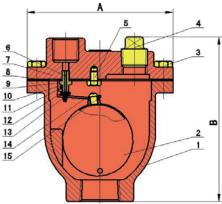
Max.Working pressure: 300 psi

#### **Materials List**

Name	Materials
Body	Ductile Iron ASTM-A536
Floating Ball	Stainless Steel-T304
Cover Bolt	Carbon Steel A105
Pipe Plug	Carbon Steel A105
Locating Bolt	Stainless Steel-T304
Seat	Stainless Steel-T304
Bonnet	Ductile Iron ASTM-A536
Gasket	EPDM
Lever Frame	Stainless Steel-T304
Pin Retainer	Stainless Steel-T316
Shaft Pin	Stainless Steel-T304
Float Arm	Stainless Steel-T304
Orifice Button	EPDM
Semicircular Screw	Stainless Steel-T304
Lock Washer	Stainless Steel-T304

Valve Size	Max.Water Pressure	Inlet Size	Outlet Size Rc or NPT	Orifice Size	Α	В	Approx. Wt. Ea.
Inches mm	Psi bar	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbs. kg
1/2	150	1/2	1/2	0.08	4.76	5.37	5.46
15	10.0	15	15	2.0	121	136.5	2.48
3/4	150	3/4	3/4	0.08	4.76	5.37	5.46
20	10.0	20	20	2.0	121	136.5	2.48
1	150	1	1	0.08	4.76	5.37	5.46
25	10.0	25	25	2.0	121	136.5	2.48





☐ FM Approval Pending



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# Style TD1

Test&Drain Valves Publication: 18.10EN

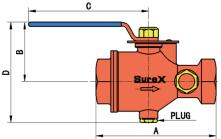
VISION test & Drain Valves consist of forged brass body with a three-position ball valve (OFF-TEST-DRAIN),integral sight glass with acrylic see-through windows and a 1/2" restricted orifice for sprinkler system test position.they are UL listed and FM approved with 300psi rating.Most commonly used to test water flow.For more information call VISION directly.

#### **Materials List**

Name	Materials
Body	Cast Brass
Bonnet	Cast Brass
Limit dashboard	Carbon Steel
Handle	Carbon Steel
Sphere	Stainless Steel-T304/Cast Brass
Sphere support block	Polyurethane (pu)
Stem	Cast Brass
Sealing piece	Polyurethane (pu)
Plug	Brass Rod

Valve Size	Max.Water Pressure	Plug	А	В	С	D
Inches mm	Psi bar	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm
1	300	1/4	5.12	2.54	5.12	4.29
25	20.7	6.35	130	64.5	130	109
1¼	300	1/4	5.12	2.54	5.12	4.29
32	20.7	6.35	130	64.5	130	109
2	300	1/4	5.91	3.05	5.51	5.16
50	20.7	6.35	150	77.5	140	131





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# **Style AD1 | AD2**Angle Valve 300PSI | 200PSI

Standard installation trim and drain valves for the Fire Sprinkler Industry, this Valves are recommended where tight shut-off and frequent operation is required. Water ,Oil or Gas.Both 200psi and 300psi are available .for details please contact VISION .

Publication: 18.11EN

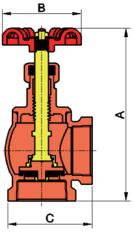
#### AD1 Angle Valve-300Psi

TOT THIS C VALVE O				
Nominal Size	Max.Water Pressure	А	В	С
Inches	Psi	Inches	Inches	Inches
mm	bar	mm	mm	mm
3/4	300	4.72	2.56	2.11
20	20.7	120.0	65.0	53.5
1	300	5.31	2.56	2.48
25	20.7	135.0	65.0	63.0
11/4	300	5.71	2.76	2.89
32	20.7	145.0	70.0	73.5
1½	300	7.09	3.11	3.27
40	20.7	180.0	79.0	83.0
2	300	8.46	3.94	3.96
50	20.7	215.0	100.0	100.5



#### AD2 Angle Valve-200Psi

Nominal Size	Max.Water Pressure	А	В	С
Inches mm	Psi bar	Inches mm	Inches mm	Inches mm
3/4	200	4.72	2.56	2.11
20	13.8	120.0	65.0	53.5
1	200	5.31	2.56	2.48
25	13.8	135.0	65.0	63.0
1¼	200	5.71	2.76	2.89
32	13.8	145.0	70.0	73.5
1½	200	7.09	3.11	3.27
40	13.8	180.0	79.0	83.0
2	200	8.46	3.94	3.96
50	13.8	215.0	100.0	100.5





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## **Stely APR1**

#### Adjustable pressure relief Valve

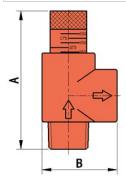
Designed for use in grid systems or any sprinkler system where pressure relief is required. The Adjustable Pressure Relief Valve can be adjusted from 75-175 psi. Adjustment to the desired pressure is achieved with the use of an approved fire sprinkler system pressure gauge. The pressure markings one the adjustable cap are for reference only, Use the system gauge for proper relief setting.

Publication: 18.12EN

Name	Materials
Body	brass
Bonnet	Brass
Disc Holder	Brass
Disc	Buna-N (Nitrile)
Adjustable Spring	Stainless Steel
Flat Washer	Buna-N (Nitrile)
Spring Washer	Brass
Screw	Brass
Ball	Stainless Steel

Nominal Size	А	В	Approx. Wt. Ea.
Inches mm	Inches mm	Inches mm	Lbs. kg
1/2	2.99	1.61	0.37
15	76.0	41.0	0.17
3/4	2.99	1.61	0.35
20	76.0	41.0	0.16







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# Style 3W

### Three Way valve

This is inspection test valve which permits inspector to check accuracy or replace gauge without shutting down entire line.the material of body is cast brass.for detailed information, please refer to data sheet of Inspection Test Valve ,3 way.

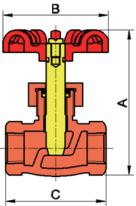
Publication: 18.13EN

#### **Materials List**

Name	Materials
Body	Cast Brass
Stem	Brass Rod
Wheel Nut	Carbon
O-ring	EPDM
Hand Wheel	Cast Iron
Washer	Brass Rod

Valve Size	Max.Water Pressure	А	В	С
Inches mm	Psi bar	Inches mm	Inches mm	Inches mm
1/4	200	2.45	1.97	1.69
8	13.8	62.3	50.0	42.8







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### Style 221

**Brass Ball valve** 





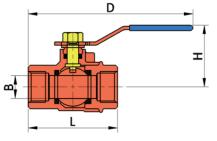


RIAN ball valves feature forged components machined to exacting specifications. Listed for fire sprinkler systems for trim, test or drain application, and ball valves are rated 300psi for size 1/2"-1 1/2" IPS and 300psi for the 2" size. Each valve is complete with plastic coated valve handle marked as required by UL.

Publication: 18.14EN

Valve Size	Max.Water Pressure	В	D	н	L
Inches mm	Psi bar	Inches mm	Inches mm	Inches mm	Inches mm
1/2	60	0.55	3.74	1.57	2.20
20	4.1	14	95	40	56.0
3/4	60	0.75	3.74	1.77	2.48
20	4.1	19	95	45	63.0
1	60	0.94	4.33	2.01	2.95
25	4.1	24	110	51	75.0
11/4	60	1.22	4.33	2.24	3.35
32	4.1	31	110	57	85.0
1½	60	1.54	6.18	2.87	3.64
40	4.1	39	157	73	92.5
2	60	1.89	6.18	3.19	4.33
50	4.1	48	157	81	110.0







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| FIRE PROTECTION SYSTEM | INTERNATIONAL |





# **Values & Accessories**

## **Fire Protection**

Sprinkler System | standpipe and Hose System | Fire pump System













- ☐ Wet Barrel Fire Hydrant
- ☐ Dry Barrel Fire Hydrant
- ☐ SINGLE CLAPPER TWO-WAY INLETS(Exposed type)
  PIN LUG SWIVEL STRAIGHT OUTLET
- ☐ SINGLE CLAPPER TWO-WAY INLETS(Exposed type)
  PIN LUG SWIVEL ANGLE OUTLET
- ☐ DOUBLE CLAPPER TWO-WAY INLETS(Exposed type)
  PIN LUG SWIVEL ANGLE OUTLET
- ☐ STRAIGHT DOUBLE CLAPPER TWO-WAY INLETS PIN LUG SWIVEL STRAIGHT OUTLET

- $\square$  Hose Valves
- ☐ Pressure Reducing Valve
- $\ \square$  Pressure Relief Valve
- ☐ Direct Read Flowmeter
- □ ....

# Convenient Your Purchase



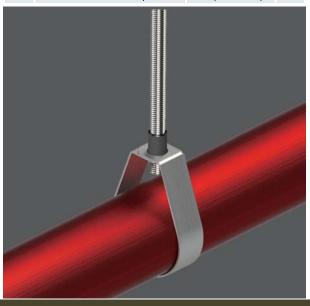


# Pipe Hangers & Supports

Fire Protection System

Hangers | Clamps | Beam Clamps Attachments | CPVC Straps | Accessories

STYLE	DESCRIPTION	SIZE	PAGE
702	Adjustable Swivel Ring	½"-8"(15-200mm)	76
703	Clevis Hanger	½"-12"(15-300mm)	77
704	Sprinkler Hanger	½"-10"(15-250mm)	78
705	Riser Clamp	¾"-12"(20-300mm)	79
705M	Pipe Clamp	¾"-12"(20-300mm)	80
733	C-Clamp	3/8"-½"(M10-M12)	81
734	C-Clamp (L)	¾"-½"(M10-M12)	81
721	Threaded Rod	3/8"-½"(M10-M12)	82
710	Rod Coupling	¾"-1"(M10-M24)	82
713	Socket, Rod Threaded	3/8"-½"(M10-M22)	82
769	One Hole Pipe Straps	¾"-2"(20-50mm)	83
770	Two Hole Pipe Straps	¾"-2"(20-50mm)	83
771	Two Hole 90 $^\circ$ Side Mount Straps	¾"-2"(20-50mm)	83
772	Two Hole Stand Off Straps	¾"-2"(20-50mm)	83





All Kind of Type

#### **Style 702**

**Adjustable Swivel Ring** 

Publication: 13.01EN



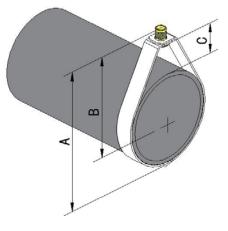


Style 702 Adjustable Swivel Ring is designed for horizontal suspension of Non-insulated stationary pipe line with one-piece structure and a knurled swivel nut, easy installation.

- $\hfill \square$  One-piece structure design , Carbon steel
- $\hfill \square$  Optimized design with standard load.
- ☐ "T"-Shape knurled Swivel Nut with Galvanized finish.
- ☐ Finish: Electro-Galvanized or Plain.
- ☐ Size: ½"-8"

Pipe Size	Rod Size	А	В	С	Width	Max Load	Approx. Wt. Ea.
Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbf N	Lbs. kg
1/2	3/8	2.56	2.13	1.22	0.86	300	0.09
15	M10	65.0	54.0	31.0	22.0	1335	0.04
3/4	3/8	2.83	2.26	1.14	0.86	300	0.11
20	M10	72.0	57.5	29.0	22.0	1335	0.05
1	3/8	3.07	2.36	0.98	0.86	300	0.13
25	M10	78.0	60.0	25.0	22.0	1335	0.06
11/4	3/8	3.46	2.58	0.94	0.86	300	0.13
32	M10	88.0	65.5	24.0	22.0	1335	0.06
1½	3/8	3.74	2.76	0.98	0.86	300	0.15
40	M10	95.0	70.0	25.0	22.0	1335	0.07
2	3/8	4.13	2.89	1.30	0.86	300	0.18
50	M10	105.0	73.5	33.0	22.0	1335	0.08
2½	3/8	4.92	3.37	1.18	0.86	525	0.20
65	M10	125.0	85.5	30.0	22.0	2335	0.09
3	3/8	5.51	3.70	1.22	0.86	525	0.22
80	M10	140.0	94.0	31.0	22.0	2335	0.10
4	3/8	6.81	4.47	1.57	0.86	650	0.37
100	M10	173.0	113.5	40.0	22.0	2893	0.17
5	1/2	8.23	5.35	1.26	1.26	1000	0.73
125	M12	209.0	136.0	32.0	32.0	4450	0.33
6	1/2	9.80	6.38	2.09	1.26	1000	0.84
150	M12	249.0	162.0	53.0	32.0	4450	0.38
8	1/2	12.17	7.76	2.40	1.57	1000	1.26
200	M12	309.0	197.0	61.0	40.0	4450	0.57







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| 703 | Clevis Hanger |

#### **Style 703**

Clevis Hanger Publication: 13.02EN





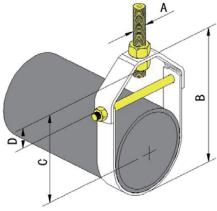


Style 703 Clevis Hanger is two-pieces structure design and assembly by clevis bolt, which can provide linear movement to accommodate pipeline Expansion/Contraction, also accommodate heavy load piping system, It is recommended for horizontal suspension of Non-insulated stationary pipe line.

- $\hfill\Box$  Two-pieces structure design, Carbon steel.
- $\hfill\Box$  Clevis shape design with standard load
- ☐ Assembly by Bolt and nut with Galvanized coating.
- ☐ Finish: Electro-Galvanized or Plain.
- ☐ Size: 3/4"-12"

Pipe Size	Rod Size A	В	С	D	Width	Max Load	Approx. Wt. Ea.
Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbf N	Lbs. kg
3/4	3/8	2.76	1.61	0.67	0.87	610	0.22
20	M10	70.0	41.0	17.0	22.0	2713	0.10
1	3/8	3.27	1.89	0.87	0.87	730	0.27
25	M10	83.0	48.0	22.0	22.0	3247	0.12
11/4	3/8	3.15	1.85	0.71	0.87	730	0.26
32	M10	80.0	47.0	18.0	22.0	3247	0.12
1½	3/8	3.54	2.09	0.79	0.87	730	0.31
40	M10	90.0	53.0	20.0	22.0	3247	0.14
2	3/8	4.37	2.64	0.98	0.87	730	0.34
50	M10	111.0	67.0	25.0	22.0	3247	0.15
2½	1/2	5.39	4.17	1.61	1.10	1350	0.96
65	M12	137.0	106.0	41.0	28.0	6009	0.44
3	1/2	6.30	4.49	1.93	1.10	1350	1.07
80	M12	160.0	114.0	49.0	28.0	6009	0.49
4	5/8	7.76	4.96	1.65	1.10	1430	1.32
100	M16	197.0	126.0	42.0	28.0	6365	0.60
5	5/8	9.25	5.98	2.17	1.10	1430	1.65
125	M16	235.0	152.0	55.0	28.0	6365	0.75
6	3/4	10.87	6.54	2.24	1.50	1940	2.68
150	M20	276.0	166.0	57.0	38.0	8635	1.22
8	7∕8	14.02	8.07	2.91	1.50	2000	3.75
200	M22	356.0	205.0	74.0	38.0	8900	1.70
10	7∕8	17.56	10.08	3.54	1.89	3600	7.74
250	M22	446.0	256.0	90.0	48.0	16020	3.51
12	7∕8	20.91	11.77	4.25	1.89	3800	11.62
300	M22	531.0	299.0	108.0	48.0	16910	5.27







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### Style 704

Sprinkler Hanger Publication: 13.03EN

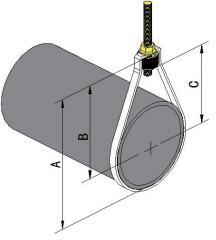


Style 704 Adjustable Swivel Ring is designed for horizontal suspension of Non-insulated stationary Sprinkler pipe line with one-piece structure and a knurled swivel nut, easy installation.

- $\hfill \square$  One-piece structure design , Carbon steel
- $\square$  Optimized design with standard load.
- ☐ Special Swivel Nut design, Easy adjustment in position.
- ☐ Finish: Electro-Galvanized or Plain.
- ☐ Size: 1/2"-10"

Pipe Size	А	В	С	Width	Max Load	Approx. Wt. Ea.
Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Lbf N	Lbs. kg
1/2	2.70	2.17	1.50	0.35	300	0.11
15	68.5	55.0	38.0	9.0	1335	0.05
3/4	2.99	2.36	1.69	0.35	300	0.11
20	76.0	60.0	43.0	9.0	1335	0.05
1	3.33	2.56	1.89	0.35	300	0.13
25	84.5	65.0	48.0	9.0	1335	0.06
11/4	3.70	2.76	2.09	0.35	300	0.13
32	94.0	70.0	53.0	9.0	1335	0.06
1½	4.02	2.95	2.28	0.35	300	0.13
40	102.0	75.0	58.0	9.0	1335	0.06
2	4.45	3.15	2.48	0.35	300	0.15
50	113.0	80.0	63.0	9.0	1335	0.07
21/2	5.18	3.54	2.68	0.39	1000	0.29
65	131.5	90.0	68.0	10.0	4450	0.13
3	5.83	3.94	3.07	0.39	1000	0.31
80	148.0	100.0	78.0	10.0	4450	0.14
4	7.50	5.12	4.25	0.39	1000	0.35
100	190.5	130.0	108.0	10.0	4450	0.16
5	8.43	5.51	4.57	0.39	1100	0.40
125	214.0	140.0	116.0	10.0	4895	0.18
6	10.16	6.69	5.75	0.39	1100	0.46
150	258.0	170.0	146.0	10.0	4895	0.21
8	13.52	9.06	7.87	0.63	1250	0.97
200	343.5	230.0	200.0	16.0	5563	0.44
10	18.13	12.60	11.30	0.79	1250	1.50
250	460.5	320.0	287.0	20.0	5563	0.68





☐ Style 704 sprinkler Hanger is Europe Style



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705 | Riser Clamp

#### Style 705

Riser Clamp Publication: 13.06EN



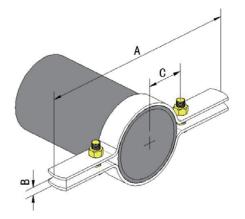


Style 705 Riser Clamp is recommended for support of stationary steel pipe riser. Clamp is fitted and bolted preferably by tighten bolts. Clamp is designed for standard steel pipe O.D. and this must be considered in sizing for riser for other types of piping.

- $\hfill \square$  Two-pieces structure design, easy installation.
- ☐ Special design for support.
- $\hfill \square$  Simplified structure design with two Galvanized bolts.
- ☐ Finish: Electro-Galvanized or Plain.
- ☐ Size: 3/4"-12".

Pipe Size	А	В	С	Max Load	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Lbf	Lbs.
mm	mm	mm	mm	N	kg
3/4	8.86	0.39	1.28	220	0.99
20	225.0	10.0	32.5	978	0.45
1	8.86	0.39	1.38	220	0.99
25	225.0	10.0	35.0	978	0.45
1¼	10.04	0.39	1.57	250	1.28
32	255.0	10.0	40.0	1112	0.58
1½	10.24	0.39	1.77	250	1.30
40	260.0	10.0	45.0	1112	0.59
2	10.24	0.47	2.07	300	1.57
50	260.0	12.0	52.5	1334	0.71
2½	11.22	0.47	2.36	400	1.72
65	285.0	12.0	60.0	1778	0.78
3	11.42	0.47	2.76	500	1.76
80	290.0	12.0	70.0	2223	0.80
31/2	12.80	0.47	3.05	500	1.98
90	325.0	12.0	77.5	2223	0.90
4	12.80	0.47	3.25	750	2.01
100	325.0	12.0	82.5	3337	0.91
5	13.78	0.47	3.94	1500	3.02
125	350.0	12.0	100.0	6674	1.37
6	14.76	0.47	4.43	1600	3.31
150	375.0	12.0	112.5	7118	1.50
8	18.50	0.63	5.61	2500	6.39
200	470.0	16.0	142.5	11125	2.90
10	20.24	0.63	6.69	2500	10.21
250	514.0	16.0	170.0	11125	4.63
12	22.76	0.79	7.87	2700	15.32
300	578.0	20.0	200.0	12015	6.95





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### Style 705M

Pipe Clamp Publication: 13.04EN



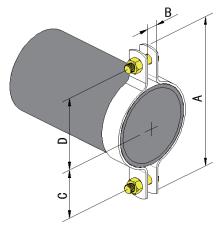


Style 705M Pipe Clamp is two-pieces design to clamp pipeline by tightening nuts in both sides, which recommended for horizontal suspension of cold pipe lines or hot pipe lines where no insulation is required. Style 705M also recommended for seismic bracing.

- $\hfill \square$  Two-pieces structure design, easy installation.
- ☐ Simplified design with two Galvanized bolts and nuts.
- ☐ Finish: Electro-Galvanized or Plain.
- ☐ Size: 3/4"-12"

Pipe Size	Α	В	С	D	Max Load	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Lbf	Lbs.
mm	mm	mm	mm	mm	N	kg
3/4	3.46	0.47	1.10	1.26	500	0.29
20	88.0	12.0	28.0	32.0	2223	0.13
1	3.54	0.47	1.10	1.38	500	0.29
25	90.0	12.0	28.0	35.0	2223	0.13
11/4	4.13	0.47	1.42	1.61	500	0.33
32	105.0	12.0	36.0	41.0	2223	0.15
11/2	4.25	0.47	1.57	1.69	800	0.37
40	108.0	12.0	40.0	43.0	3555	0.17
2	5.51	0.47	2.13	2.13	1040	0.90
50	140.0	12.0	54.0	54.0	4620	0.41
21/2	6.54	0.63	2.64	2.64	1040	0.97
65	166.0	16.0	67.0	67.0	4620	0.44
3	7.01	0.63	2.87	2.87	1040	1.12
80	178.0	16.0	73.0	73.0	4620	0.51
31/2	7.64	0.63	3.19	3.19	1040	1.17
90	194.0	16.0	81.0	81.0	4620	0.53
4	8.50	0.63	3.50	3.50	1040	1.43
100	216.0	16.0	89.0	89.0	4620	0.65
5	9.84	0.75	4.17	4.17	1040	2.54
125	250.0	19.0	106.0	106.0	4620	1.15
6	11.50	0.75	4.88	4.88	1615	4.50
150	292.0	19.0	124.0	124.0	7178	2.04
8	13.78	0.75	5.98	5.98	1615	5.45
200	350.0	19.0	152.0	152.0	7178	2.47
10	17.09	0.98	7.44	7.44	2490	10.71
250	434.0	25.0	189.0	189.0	11065	4.86
12	19.13	0.98	8.43	8.43	2490	13.56
300	486.0	25.0	214.0	214.0	11065	6.15







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## Style 733 | 734

C-Clamp Publication: 13.10EN





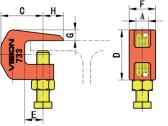


#### Style 733 C-Clamp

- ☐ Size: 3/8"-1/2"(M10-M12).
- $\square$  Material: Ductile iron or Forged steel
- ☐ Finish: Electro-Galvanized or Plain.
- $\hfill \square$  Application: Be attached to horizontal flanges of structural members in either the top beam or bottom beam positions.

Rod Size A	С	D	Е	F	G	н	Max Load	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Inches	Inches	Lbf	Lbs.
mm	mm	mm	mm	mm	mm	mm	N	kg
3/8	1.34	1.57	0.55	0.83	0.35	0.67	2223	0.33
M10	34.0	40.0	14.0	21.0	9.0	17.0	500.0	0.15
1/2	1.42	1.77	0.51	1.02	0.43	0.71	4223	0.53
M12	36.0	45.0	13.0	26.0	11.0	18.0	950.0	0.24



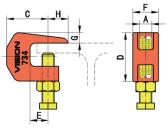


#### Style 734 C-Clamp

- ☐ Size: 3/8"-1/2"(M10-M12).
- ☐ Material: Ductile iron or Forged steel
- $\hfill \square$  Finish: Electro-Galvanized or Plain.
- $\square$  Application: Be attached to horizontal flanges of structural members in either the top beam or bottom beam positions.

Rod Size A	С	D	E	F	G	н	Max Load	Approx. Wt. Ea.
Inches	Inches	Inches	Inches	Inches	Inches	Inches	Lbf	Lbs.
mm	mm	mm	mm	mm	mm	mm	N	kg
3/8	1.34	2.09	0.55	0.83	0.35	0.67	2223	0.33
M10	34.0	53.0	14.0	21.0	9.0	17.0	500.0	0.15
1/2	1.42	2.28	0.51	1.02	0.43	0.71	4223	0.53
M12	36.0	58.0	13.0	26.0	11.0	18.0	950.0	0.24







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# Style 721 | 710 | 713 |

Threaded Rod | Rod Coupling | Socket | Publication: 13.11EN

#### Style 721 Threaded Rod

All Threaded Rod meets the minimum physical requirements of(ASTM A36 & 307) All Zinc Thread Rod is plated according to(ASTM B633).

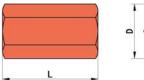
Finish : Plain, Electro-Zinc plated

Rod Size	Max Load	Rod Size	Max Load	Rod Size	Max Load
Inches mm	Lbf N	Inches mm	Lbf N	Inches mm	Inches mm
3/8	730	5/8	2160	7∕8	4480
M10	3250	M16	9610	M22	19936
1/2	1350	3/4	3230	1	5900
M12	6008	M20	14375	M24	26255



#### Style 710 Rod Coupling

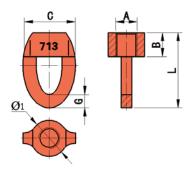
Rod Size A	Max Load	D	ι	Approx. Wt. Ea.
Inches mm	Lbf N	Inches mm	Inches mm	Lbs.kg
3/8	730	0.63	1.13	0.09
M10	3248	16.0	29.0	0.04
1/2	1350	0.71	1.50	0.12
M12	6008	18.0	38.0	0.06
5/8	2160	0.95	1.88	0.24
M16	9610	24.0	48.0	0.11
1/4	3230	1.18	2.25	0.42
M20	14375	30.0	57.0	0.19
7/8	4480	1.30	2.38	0.66
M22	19934	33.0	60.0	0.30
1	5900	1.41	3.00	1.00
M24	26254	36.0	76.0	0.46





#### Style 713 Socket

Style 725 Societ											
В	С	G	L	Ø1	Max Load	Approx. Wt. Ea.					
Inches	Inches	Inches	Inches	Inches	Lbf	Lbs					
mm	mm	mm	mm	mm	N	kg					
0.59	1.06	0.26	1.61	1.42	610	0.07					
15	27	7	41	36	2715	0.04					
0.65	1.06	0.26	1.81	1.57	1130	0.13					
17	27	7	46	40	5029	0.06					
0.71	1.54	0.39	2.20	2.13	1400	0.19					
18	39	10	56	54	6230	0.09					
0.87	1.89	0.47	2.64	2.36	1900	0.31					
22	48	12	67	60	8455	0.15					
0.87	2.01	0.47	2.72	2.68	2200	0.44					
22	51	12	69	68	9790	0.20					
	B Inches mm 0.59 15 0.65 17 0.71 18 0.87 22 0.87	B         C           Inches         Inches           mm         mm           0.59         1.06           15         27           0.65         1.06           17         27           0.71         1.54           18         39           0.87         1.89           22         48           0.87         2.01	B         C         G           Inches         Inches           mm         mm         mm           0.59         1.06         0.26           15         27         7           0.65         1.06         0.26           17         27         7           0.71         1.54         0.39           18         39         10           0.87         1.89         0.47           22         48         12           0.87         2.01         0.47	B         C         G         L           Inches         Inches         Inches           mm         mm         mm         mm           0.59         1.06         0.26         1.61           15         27         7         41           0.65         1.06         0.26         1.81           17         27         7         46           0.71         1.54         0.39         2.20           18         39         10         56           0.87         1.89         0.47         2.64           22         48         12         67           0.87         2.01         0.47         2.72	B         C         G         L         Ø1           Inches         Inches         Inches         Inches           mm         mm         mm         mm           0.59         1.06         0.26         1.61         1.42           15         27         7         41         36           0.65         1.06         0.26         1.81         1.57           17         27         7         46         40           0.71         1.54         0.39         2.20         2.13           18         39         10         56         54           0.87         1.89         0.47         2.64         2.36           22         48         12         67         60           0.87         2.01         0.47         2.72         2.68	B         C         G         L         Ø1         Max Load Load Load Load Load Load           Inches         Inches         Inches         Inches         Lbf           mm         mm         mm         mm         N           0.59         1.06         0.26         1.61         1.42         610           15         27         7         41         36         2715           0.65         1.06         0.26         1.81         1.57         1130           17         27         7         46         40         5029           0.71         1.54         0.39         2.20         2.13         1400           18         39         10         56         54         6230           0.87         1.89         0.47         2.64         2.36         1900           22         48         12         67         60         8455           0.87         2.01         0.47         2.72         2.68         2200					



 $\label{thm:more Pipe Hangers \& Supports, Accessries, Contact with VISION for details. \\$ 

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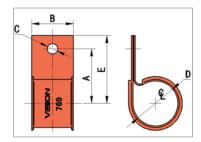
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# Style 769 | 770 | 771 | 772 |

CPVC Straps Publication: 13.25EN

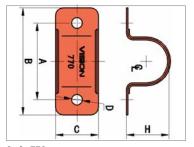
Deigned to mount CPVC pipe to wood or composite wood joints with a Minimum 3/8" thickness, Galvanized steel, Beveled edge design.

Pipe Size	Α	В	С	D	Е	Approx.Wt.
Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	mm	kg
3/4	1.42	1.10	0.28	1.18	1.77	0.15
20	36.0	28.0	7.0	30.0	45.0	0.07
1	1.77	1.10	0.28	1.46	2.17	0.15
25	45.0	28.0	7.0	37.0	55.0	0.07
11/4	1.77	1.10	0.28	1.81	2.17	0.18
32	45.0	28.0	7.0	46.0	55.0	0.08
1½	1.89	1.10	0.28	2.05	2.28	0.18
40	48.0	28.0	7.0	52.0	58.0	0.08
2	1.97	1.10	0.28	2.52	2.36	0.20
50	50.0	28.0	7.0	64.0	60.0	0.09



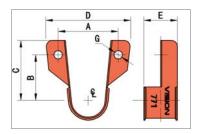
**Style 769** One Hole Pipe Strap

Pipe Size	Α	В	С	D	Н	Approx. Wt.
Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
Mm	mm	mm	mm	mm	mm	kg
3/4	1.97	2.76	1.10	0.28	1.10	0.11
20	50.0	70.0	28.0	7.0	28.0	0.05
1	2.52	3.23	1.10	0.28	1.50	0.11
25	64.0	82.0	28.0	7.0	38.0	0.05
11/4	2.60	3.35	1.10	0.28	1.69	0.13
32	66.0	85.0	28.0	7.0	43.0	0.06
11/2	3.15	3.86	1.10	0.28	2.13	0.13
40	80.0	98.0	28.0	7.0	54.0	0.06
2	3.62	4.29	1.10	0.28	2.56	0.15
50	92.0	109.0	28.0	7.0	65.0	0.07



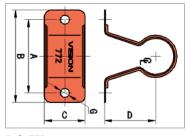
**Style 770** Two Hole Pipe Strap

Pipe Size	Α	В	С	D	E	G	Approx. Wt.
Inches	Inches	Inches	Inches	Inches	Inches	Inches	Lbs.
mm	mm	mm	mm	mm	mm	mm	kg
3/4	1.97	1.50	1.97	2.76	1.10	0.28	0.09
20	50.0	38.0	50.0	70.0	28.0	7.0	0.04
1	2.20	1.50	1.97	3.15	1.10	0.28	0.11
25	56.0	38.0	50.0	80.0	28.0	7.0	0.05
1¼	2.60	1.73	2.36	3.74	1.10	0.28	0.11
32	66.0	44.0	60.0	95.0	28.0	7.0	0.05
1½	2.99	1.89	2.56	4.13	1.10	0.28	0.13
40	76.0	48.0	65.0	105.0	28.0	7.0	0.06
2	3.46	1.97	2.68	4.53	1.10	0.28	0.15
50	88.0	50.0	68.0	115.0	28.0	7.0	0.07



Style 770 Two Hole 90° Side Mount Strap

Pipe Size	Α	В	С	D	G	Approx. Wt.
Inches	Inches	Inches	Inches	Inches	Inches	Inches
mm	mm	mm	mm	mm	mm	mm
3/4	2.60	3.27	1.10	2.17	0.28	0.15
20	66.0	83.0	28.0	55.0	7.0	0.07
1	2.76	3.35	1.10	2.28	0.28	0.18
25	70.0	85.0	28.0	58.0	7.0	0.08
11⁄4	2.99	3.70	1.10	2.44	0.28	0.20
32	76.0	94.0	28.0	62.0	7.0	0.09
1½	3.78	4.33	1.10	2.56	0.28	0.20
40	96.0	110.0	28.0	65.0	7.0	0.09
2	4.33	4.72	1.10	2.87	0.28	0.22
50	110.0	120.0	28.0	73.0	7.0	0.10



Style 770 Two Hole Stand off Strap

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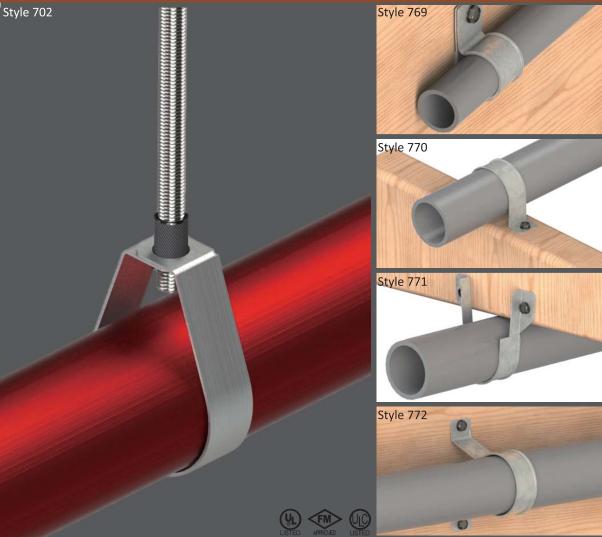




# **Adjustable swivel Ring**

**CPVC Straps** 

702 | 703 | 769 | 770 | 771 | 772



702: Adjustable Swivel Ring

703: Clevis Hanger

769: One Hole Pipe Straps 770: Two Hole Pipe Straps

771: Two Hole 90°Side Mount Straps

772: Two Hole Stand Off Straps

| CPVC Straps | Robust Design | 0.04"(1.0mm) Wall Thickness |



# Right Choice

UL Listed·FM Approved

UL Listed·FM Approved

**UL** Listed

**UL** Listed

**UL** Listed

**UL** Listed





# Sprinkler Accessories Fire Protection System

Sprinkler Escutcheons | Sprinkler Guards | Sprinkler Stoppers

STYLE	DESCRIPTION	SIZE	PAGE
R2	Recessed Sprinkler Escutcheon	1/2",3/4"	86
R2S	Recessed Sprinkler Escutcheon	1/2",3/4"	86
R2L	Recessed Sprinkler Escutcheon	1/2",3/4"	87
E1	One-Piece Steel Canopy	1/2",3/4"	87
E2	Sprinkler Escutcheon	1/2",3/4"	87
SG	Sprinkler Guards	1/2",3/4"	88
SE	Sprinkler Extension	1/2",3/4"	88
WP	Wall Plate	1/4"-10"	88
SS1	Sprinkler Stopper	-	89
SS2	Sprinkler Stopper	-	89





Economy Quality Package

### Style R25 | R2

#### Recessed Sprinkler Escutcheon

The Two-Pieces recessed escutcheon has been widely accepted as the preferred method of finished sprinkler head installation. SureX's recessed escutcheon is available in three standard finishes and two standard thread sizes.

Publication: 17.01EN

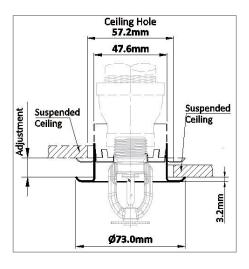
Publication: 17.01EN

Finishes: Chrome, White Painted, Black Painted, Special.

Thread sizes: 1/2" and 3/4" IPS Adjustable: 1/2" and 3/4"

Style R2C are available with 1/2"(12.7mm) height.

Model	Thread Specification	Total Height	Adjustment
	Inches	Inches	Inches
	mm	mm	mm
R2	1/2	1	3/4
R2	15	25.4	19.05
R2	3⁄4	1	3/4
R2	20	25.4	19.05
R2S	1/2	3/4	1/2
R2S	15	19.05	12.70
R2S	3⁄4	3/4	1/2
R2S	20	19.05	12.70



#### Style R2L

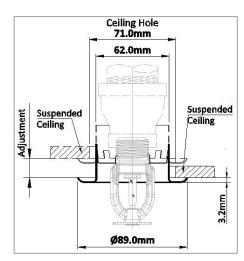
#### **Recessed Sprinkler Escutcheon**

The Two-Pieces recessed escutcheon has been widely accepted as the preferred method of finished sprinkler head installation. SureX's recessed escutcheon is available in three standard finishes and two standard thread sizes.

Finishes: Chrome, White Painted, Black Painted, Special.

Thread sizes: 1/2" and 3/4" IPS Adjustable: 1/2" and 3/4"

Model	Thread Specification	Total Height	Adjustment
	Inches	Inches	Inches
	mm	mm	mm
R2L	1/2	1½	1¼
R2L	15	38.1	31.75
R2L	3/4	1½	1%
R2I	20	38.1	31.75



#### Installation

Proper installation of the recessed sprinkler escutcheon can be accomplished with tools ordinarily found on the job site. The installer must make sure that the face of the reducing coupling must extend to within 3/4" of finished ceiling material but no farther than flush with the finished ceiling. Thread the cup(retainer) by hand all the way on to the sprinkler head threads. Then install the sprinkler into the reducing coupling at the end of the drop nipple according to the sprinkler head manufacturer specifications. The skirt can be installed after the finished ceiling has been completed. Firmly push the skirt over the retainer until the skirt is firmly seated against the finished ceiling. Installation is now complete.

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#### Style E1

#### One-Piece Steel Canopy

SureX One-Piece steel canopies provide a simple, low cost and effective choice for the installation of fire sprinklers in either a pendent or sidewall application. The one piece canopy provides an aesthetically pleasing concealment of the sprinkler piping servicing the individual sprinkler head.

Both heavy and light canopy are available Finishes: Chrome, White, Special Thread sizes: 1/2" and 3/4" IPS



Publication: 17.02EN



#### Style E2

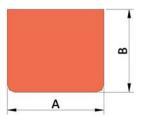
#### Sprinkler Escutcheon | Pendant Cups & Skirts | Publication: 17.05EN

Material: Carbon Steel Thick: 0.40-0.50mm Size: 1/2" and 3/4"

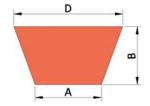
Finish: Chrome, White, Special



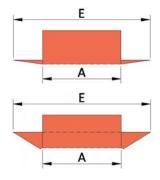
Cups Model	Thread Specification	А	В
	Inches	Inches	Inches
	mm	mm	mm
E2C	⅓2	21/8	1.875
E2C	15	54.0	47.6
E2C	3/4	21/8	1.875
E2C	20	54.0	47.6
E2CS	1/2	21/8	1.000
E2CS	15	54.0	25.4
E2CS	3/4	21/8	1.000
E2CS	20	54.0	25.4
E2CL	1/2	21/8	2.875
E2CL	15	54.0	73.0



Skirts Model	Adjustment	Α	В	D	Cup Model
	Inches	Inches	Inches	Inches	
	mm	mm	mm	mm	
E2S	2-3	21/8	1.375	3½	E2C
E2S	50.8-76.2	54.0	34.9	88.9	E2C
E2SL	3-4	21/8	2.375	41/2	E2C
E2SL	76.2-101.6	54.0	60.3	114.3	E2C
E2SL	3-5	21/8	2.375	41/2	E2CL
E2SL	76.2-127.0	54.0	60.3	114.3	E2 CL



Adiustment	Α	E	Cup Model
Inches	Inches	Inches	
mm	mm	mm	
1/4-3/4	21/8	3¾	E2CS
6.35-19.05	54.0	95.3	E2CS
1/4-15/8	21/8	3¾	E2C
6.35-41.28	54.0	95.3	E2C
34-1	21/8	3¾	E2CS
19.05-25.40	54.0	95.3	E2CS
3/4-11/8	21/8	3¾	E2C
19.05-47.63	54.0	95.3	E2C
	Inches mm %-¾ 6.35-19.05 %-1% 6.35-41.28 %-1 19.05-25.40 %-1%	Inches         Inches           mm         mm           ¼-½         2½           6.35-19.05         54.0           ¼-1½         2½           6.35-41.28         54.0           ¾-1         2½           19.05-25.40         54.0           ¾-1½         2½	Inches mm         Inches mm         Inches mm           ½-¼         3½         3½           6.35-19.05         54.0         95.3           ½-1½         2½         3½           6.35-41.28         54.0         95.3           ¾-1         2½         3¾           19.05-25.40         54.0         95.3           ¾-1½         2½         3¾





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| FIRE PROTECTION SYSTEM | INTERNATIONAL |

#### Style SG

Sprinkler Guards

Publication: 17.03EN

Publication: 17.06EN

SureX Sprinkler Head Guards provide sprinkler head protection from occasional light contact in warehoused, institutional and other applications where the occupancy exposes the sprinkler head to potential damage from its environment. Sprinkler head guards do not protect sprinkler heads from impact or abuse.





SG1

#### Style SE

**Sprinkler Extension** 

Designed to be used as sprinkler head extensions when a drop nipple length has been cut too short or when the finished ceiling has changed from its intended location. Using the appropriate length extension will allow for realignment of the sprinkler head without removing and recutting the drop nipple.

- ☐ Forged brass body
- $\hfill \square$  Both hex shape and knurled shape are available
- ☐ Fire safe
- $\ \square$  One piece forged solid brass construction
- $\hfill \square$  Significant cost savings to the sprinkler installer.

Size	Length
½ IPS	1/2
½ IPS	3/4
½ IPS	1
½ IPS	1½
½ IPS	2
¾ IPS	1/2
¾ IPS	3/4
¾ IPS	1
¾ IPS	1½
¾ IPS	2





HEX

KNURL

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#### Style SS

#### **Sprinkler Stopper**

Sprinkler stopper designed to fit into recessed sprinkler heads but can be set to stop the flow of water from most sprinkler heads.

Publication: 17.04EN

When one or two sprinkler heads control or extinguish a small fire, the sprinkler stop valve allows fire crews to stop water damage from occuring without shutting the sprinkler system down while they attend to other tasks such as evacuation of the building, ventilation, checking for extension of fire, and starting salvage and overhaul operations.

Simply push rubber stop into opening of sprinkler head and turn handle until water flow stops.





SS2

#### Style WP

Wall plate Publication: 17.07EN

Hinged floor and ceiling plate with spring steel inserts and positive locking tabs. Available 1/4" to 10" ips and 3/8" to 4" cps

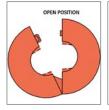
SureX also offers light gauge steel, plastic, aluminum, stainless steel, forged steel and forged brass wall plates.

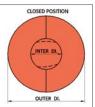
Designed to offer aesthetically pleasing concealment of pipe penetrations through walls. Utilizing two piece hinged construction allows for easy installation and closure around pipe diameters from 1/2" IPS to 10" IPS. Centering springs are used for "automatic" alignment and a secure installation on the pipe. A simple clasp allows for the wall plate to stay in place.

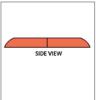
Pipe Size	Inter Dimension	Outer Dimension
1/4 IPS & 3/4 CPS	1/2	2
% IPS & ½ CPS	5/8	2-1/4
1/2 IPS & 3/4 CPS	7/8	2-1/4
<sup>3</sup> ⁄ <sub>4</sub> IPS	1-1/8	2-3/4
1 IPS	1-1/8	3-1/4
		3-1/4
1 CPS	1-1/8	-
1¼ CPS	1-3/4	3-1/4
1% IPS & 1½ CPS	1-3/4	3-1/2
1½ IPS	2-1/16	3-7/8
2 IPS	2-1/2	4-1/2
2 CPS	2-1/8	4
2½ IPS	2-15/16	5-3/8
2½ CPS	2-5/8	4-7/8
3 IPS	3-9/16	5-7/8
3 CPS	3-1/8	5-11/16
3½ IPS & 4 CPS	4-1/8	6-5/8
4 IPS	4-9/16	7-1/8
5 IPS	5-5/8	9
6 IPS	6-13/16	10
8 IPS	8-15/16	13-14
10 IPS	10-3/4	15











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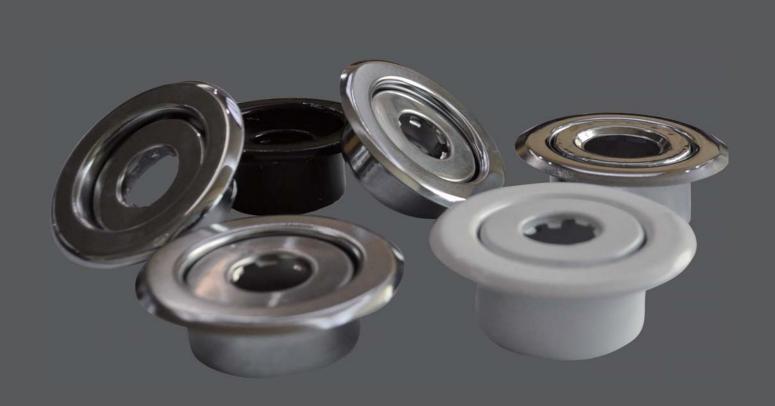




# SureX

# Sprinkler Escutcheons

Sprinkler shutoff Tools | Extension Nipples | Sprinkler Guard



All Finish you need Chrome·White·Painted·Black painted·Customized Fast delivery & More Economic



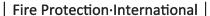




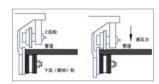




Meet All your Demand







# **General of Installation**

## Fire Protection system

General of Intallation | Groove Dimensions
Distance at intervals of Pipe hangers & Supports

#### Standard and Code

Installation for VISION grooved couplings &fittings,

Mechnical Tee &Cross etc. please comply to following standards and Codes strictly

UL 213-Rubber Gasketed Fittings for Fire-protection service.

FM 1920-Pipe Couplings and fittings for Aboveground Fire Protection Systems

 ${\tt ISO6182-12-Requirements} \ {\tt and} \ {\tt Test} \ {\tt Methods} \ {\tt for} \ {\tt Grooved} \ {\tt End} \ {\tt Pipe} \ {\tt Couplings}.$ 

☐ Please read AZ-100 "Installation Manual" carefully with correct selection

AWWA C606- Grooved and Shoulder Joints

#### Warning Notes

- of VISION products before installation ,disassembly and Pressure test

  Selection of equipment and installation tooling must be correct ,such as Groove machine ,Hole drilling machine and Torqure Wrench ,to avoid injuries .

  ☐ The pressure and water of piping system must be released and drained before maintenance .

  ☐ The pipe hangers &supports Not be installed on the position of connection with Coupling and Mechanical Tee.

  ☐ O.D ,Wall thickness and Groove dimension of pipe must comply with the requirement and specification of groove .

  ☐ It will be subjected to failure installation even injuries and property
- loss if failing to follow AZ-100 "Installation Manual".

  ☐ Vision will provide proposals and solutions for piping system, but not
- Vision will provide proposals and solutions for piping system, but not take any responsibility for the results from incorrect design of piping system.

#### Grooved connection for Spiral Steel Pipe

It is not suit to apply roll groove or cut groove directly on Spiral Steel Pipe if connecting the Spiral Steel Pipe with Groove connection. The Welded nipple with grooved End (018w or UG18w) is recommended to be welded on the End of Spiral Steel Pipe in order to avoid the destruction of original Weld line on the Pipe. for details please refer to AZ-100 "Installation Manual".

#### Installation

Correct preparation of Pipe and installation of Coupling is crucial for superior performance of Couplings.

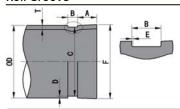
- O.D and groove dimension shall meet the requirements of Groove parameter.
- ☐ Gasket must be lubricated before installation, Including external surface of full circumference of gasket ,Lips ,inter surface of Coupling and gasket seat .
- ☐ Tightening torque must comply to following data.

Bolts					
Size	Install torque				
Inches/mm	Ft.Lbs/N.m				
3/8	30-45				
M10	40-60				
1/2	60-90				
M12	80-120				
5/8	130-180				
M16	180-240				
3/4	200-265				
M20	280-360				
%	295-350				
M22	400-480				
1	380-440				
M24	520-600				
11/8	470-530				
M27	640-720				
1¼	570-700				
M30	780-960				

FM1920 NFPA 13 Pipe Couplings and Fittings for Aboveground Fire Standard for the Installation of Sprinkler Systems **Protection Systems** NFPA 14 Standard for the Installation of Standpipe and Hose UL213 Rubber Gasketed Fittings for Fire-Protection Service ISO/DIS 6182-12 Requirements and test methods for grooved end pipe NFPA 20 Standard for the Installation of Stationary Pumps for couplings Fire Protection AWWA C606 Grooved and Shouldered Joints NFPA 25 Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems FM2-0 Installation Guidelines For Automatic Sprinklers FM3-7 Fire Protection Pumps

#### **Groove Dimensions**

#### **Roll Groove**



	SIZE			Gasket seat	Grv. Width	Gr	v.Dia. C	Grv. Depth	Min Wall	Max. Flare
Nominal	OD	Toler	ance	Α	В	Std	Tolerance	D(Reference)	Thick T	F
Inches mm	Inches mm	+	-	±0.03in 0.76mm	±0.03in 0.76mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm
1	1.315	0.013	0.027	0.625	0.28	1.19	-0.015	0.06	0.06	1.36
25	33.7	0.33	0.68	15.88	7.14	30.23	-0.38	1.60	1.65	34.5
1¼	1.660	0.016	0.024	0.625	0.28	1.54	-0.015	0.06	0.06	1.77
32	42.4	0.41	0.60	15.88	7.14	38.99	-0.38	1.60	1.65	45.0
1½	1.900	0.019	0.020	0.625	0.28	1.78	-0.015	0.06	0.06	2.01
40	48.3	0.48	0.52	15.88	7.14	45.09	-0.38	1.60	1.65	51.1
2	2.375	0.024	0.024	0.625	0.34	2.25	-0.015	0.06	0.06	2.48
50	60.3	0.61	0.61	15.88	8.74	57.15	-0.38	1.60	1.65	63.0
2½	2.875	0.029	0.029	0.625	0.34	2.72	-0.018	0.08	0.08	2.98
65	73.0	0.74	0.74	15.88	8.74	69.09	-0.46	1.98	2.11	75.7
3OD	3.000	0.030	0.030	0.625	0.34	2.84	-0.018	0.08	0.08	3.10
65	76.1	0.76	0.76	15.88	8.74	72.26	-0.46	1.98	2.11	78.7
3	3.500	0.035	0.031	0.625	0.34	3.34	-0.018	0.08	0.08	3.60
80	88.9	0.89	0.79	15.88	8.74	84.94	-0.46	1.98	2.11	91.4
4	4.500	0.045	0.031	0.625	0.34	4.33	-0.020	0.08	0.08	4.60
100	114.3	1.14	0.79	15.88	8.74	110.08	-0.51	2.11	2.11	116.8
5½OD	5.500	0.056	0.031	0.625	0.34	5.33	-0.020	0.08	0.11	5.60
125	139.7	1.42	0.79	15.88	8.74	135.48	-0.51	2.11	2.77	142.2
5	5.563	0.056	0.031	0.625	0.34	5.39	-0.020	0.08	0.11	5.66
125	141.3	1.42	0.79	15.88	8.74	137.03	-0.51	2.11	2.77	143.8
6½OD	6.500	0.063	0.031	0.625	0.34	6.33	-0.022	0.09	0.11	6.60
150	165.1	1.60	0.79	15.88	8.74	160.90	-0.56	2.16	2.77	167.6
6	6.625	0.063	0.031	0.625	0.34	6.46	-0.022	0.09	0.11	6.73
150	168.3	1.60	0.79	15.88	8.74	163.96	-0.56	2.16	2.77	170.9
8	8.515	0.063	0.031	0.750	0.47	8.33	-0.025	0.09	0.11	8.69
200A	216.3	1.60	0.79	19.05	11.91	211.60	-0.64	2.34	2.77	220.7
8	8.625	0.063	0.031	0.750	0.47	8.44	-0.025	0.09	0.11	8.80
200	219.1	1.60	0.79	19.05	11.91	214.40	-0.64	2.34	2.77	223.5
10	10.528	0.063	0.031	0.750	0.47	10.34	-0.027	0.09	0.13	10.70
250A	267.4	1.60	0.79	19.05	11.91	262.60	-0.69	2.39	3.40	271.8
10	10.750	0.063	0.031	0.750	0.47	10.56	-0.027	0.09	0.13	10.92
250	273.0	1.60	0.79	19.05	11.91	268.28	-0.69	2.39	3.40	277.4
12	12.539	0.063	0.031	0.750	0.47	12.32	-0.030	0.11	0.16	12.71
300A	318.5	1.60	0.79	19.05	11.91	313.00	-0.76	2.77	3.96	322.8
12	12.750	0.063	0.031	0.750	0.47	12.53	-0.030	0.11	0.16	12.92
300	323.9	1.60	0.79	19.05	11.91	318.29	-0.76	2.77	3.96	328.2

<sup>\*</sup> Maximum allowable pipe ovality should not vary more than 1%. Greater variations between the major and minor diameters will result in difficult coupling assembly.

please contact VISION.

\*Maximum allowable pipe end flare diameter "F". For roll grooves only. Measured at the most extreme pipe end diameter square cut or beveled.

Note: coatings applied to the interior surface, including bolt pad mating surfaces, of our grooved and bolted plain end couplings should not exceed 0.015" (0.40mm). In special case, required anti-corrosion coat will exceed the limit, please contact VISION for solution.

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<sup>\*</sup>Maximum tolerance allowable for pipe end verticality is 0.06"(1.5mm).

<sup>\*</sup>Any internal and external weld beads or seams must be ground flush to the pipe surface. The inside diameter of the pipe end must be cleaned to remove coarse scale, dirt and other foreign material that might interfere with or damage grooving rolls.

<sup>\*</sup>Gasket seat "A". The pipe surface shall be free from indentations, roll marks, and projections from the end of the pipe to the groove, to provide a leak-tight seal for the gasket. All loose paint, scale, dirt, chips, grease and rust must be removed. Gasket "A" is measured from the end of the pipe.

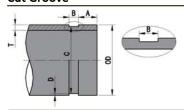
<sup>\*</sup>Groove width "B" controls expansion, contraction and angular deflection of flexible couplings by the distance it is located from the pipe and its width is relation to the coupling housings "key" width. Attention to the round corner at the groove bottom.

\*Groove outside diameter "C" is the proper diameter at the base of the groove. The groove must be of uniform depth for the entire pipe circumference.

<sup>\*</sup>Groove depth "D". For reference as a 'trial groove' only. Groove must conform to the groove diameter "C" listed. Attention: groove must comply with "C" size request. \*Minimum allowable wall thickness "T", this is the minimum wall thickness which may be roll grooved. To groove pipes with less wall thickness,

#### **Groove Dimensions**

#### **Cut Groove**



	SIZE			Gasket seat	Grv. Width	Grv. Dia. C		Grv. Depth	Min Wall
Nominal	OD	Tolera	nce	Α	В	Std	Tolerance	D(Reference)	Thick T
Inches mm	Inches mm	+	-	±0.03inches 0.76mm	±0.03inches 0.76mm	Inches mm	Inches mm	Inches mm	Inches mm
1	1.315	0.013	0.027	0.625	0.31	1.19	-0.015	0.06	0.13
25	33.7	0.33	0.68	15.88	7.95	30.23	-0.38	1.60	3.3
1¼	1.660	0.016	0.024	0.625	0.31	1.54	-0.015	0.06	0.14
32	42.4	0.41	0.60	15.88	7.95	38.99	-0.38	1.60	3.5
1½	1.900	0.019	0.020	0.625	0.31	1.78	-0.015	0.06	0.14
40	48.3	0.48	0.52	15.88	7.95	45.09	-0.38	1.60	3.6
2	2.375	0.024	0.024	0.625	0.31	2.25	-0.015	0.06	0.14
50	60.3	0.61	0.61	15.88	7.95	57.15	-0.38	1.60	3.6
2½	2.875	0.029	0.029	0.625	0.31	2.72	-0.018	0.08	0.16
65	73.0	0.74	0.74	15.88	7.95	69.09	-0.46	1.98	4.0
3OD	3.000	0.030	0.030	0.625	0.31	2.84	-0.018	0.08	0.16
65	76.1	0.76	0.76	15.88	7.95	72.26	-0.46	1.98	4.0
3	3.500	0.035	0.031	0.625	0.31	3.34	-0.018	0.08	0.2
80	88.9	0.89	0.79	15.88	7.95	84.94	-0.46	1.98	4.5
4	4.500	0.045	0.031	0.625	0.38	4.33	-0.020	0.08	0.20
100	114.3	1.14	0.79	15.88	9.53	110.08	-0.51	2.11	5.0
5½OD	5.500	0.056	0.031	0.625	0.38	5.33	-0.020	0.08	0.20
125	139.7	1.42	0.79	15.88	9.53	135.48	-0.51	2.11	5.0
5	5.563	0.056	0.031	0.625	0.38	5.39	-0.020	0.08	0.20
125	141.3	1.42	0.79	15.88	9.53	137.03	-0.51	2.11	5.0
6½OD	6.500	0.063	0.031	0.625	0.38	6.33	-0.022	0.09	0.21
150	165.1	1.60	0.79	15.88	9.53	160.90	-0.56	2.16	5.4
6	6.625	0.063	0.031	0.625	0.38	6.46	-0.022	0.09	0.21
150	168.3	1.60	0.79	15.88	9.53	163.96	-0.56	2.16	5.4
8	8.515	0.063	0.031	0.750	0.44	8.33	-0.025	0.09	0.21
200A	216.3	1.60	0.79	19.05	11.13	211.60	-0.64	2.34	5.4
8	8.625	0.063	0.031	0.750	0.44	8.44	-0.025	0.09	0.21
200	219.1	1.60	0.79	19.05	11.13	214.40	-0.64	2.34	5.4
10	10.528	0.063	0.031	0.750	0.50	10.34	-0.027	0.09	0.25
250A	267.4	1.60	0.79	19.05	12.70	262.60	-0.69	2.39	6.3
10	10.750	0.063	0.031	0.750	0.50	10.56	-0.027	0.09	0.25
250	273.0	1.60	0.79	19.05	12.70	268.28	-0.69	2.39	6.3
12	12.539	0.063	0.031	0.750	0.50	12.32	-0.030	0.11	0.28
300A	318.5	1.60	0.79	19.05	12.70	313.00	-0.76	2.77	7.1
12	12.750	0.063	0.031	0.750	0.50	12.53	-0.030	0.11	0.28
300	323.9	1.60	0.79	19.05	12.70	318.29	-0.76	2.77	7.1

<sup>\*</sup> Maximum allowable pipe ovality should not vary more than 1%. Greater variations between the major and minor diameters will result in difficult coupling assembly.

please contact VISION. Maximum allowable pipe end flare diameter "F". For roll grooves only. Measured at the most extreme pipe end diameter square cut or beveled.

Note: coatings applied to the interior surface, including bolt pad mating surfaces, of our grooved and bolted plain end couplings should not exceed 0.015" (0.40mm). In special case, required anti-corrosion coat will exceed the limit, please contact VISION for solution.

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<sup>\*</sup>Maximum tolerance allowable for pipe end verticality is 0.06"(1.5mm).
\*Any internal and external weld beads or seams must be ground flush to the pipe surface. The inside diameter of the pipe end must be cleaned to remove coarse scale,

dirt and other foreign material that might interfere with or damage grooving rolls. \*Gasket seat "A". The pipe surface shall be free from indentations, roll marks, and projections from the end of the pipe to the groove, to provide a leak-tight seal for the gasket. All loose paint, scale, dirt, chips, grease and rust must be removed. Gasket "A" is measured from the end of the pipe.

<sup>\*</sup>Groove width "B" controls expansion, contraction and angular deflection of flexible couplings by the distance it is located from the pipe and its width is relation to the coupling housings "key" width. Attention to the round corner at the groove bottom.
\*Groove outside diameter "C" is the proper diameter at the base of the groove. The groove must be of uniform depth for the entire pipe circumference.

<sup>\*</sup>Groove depth "D". For reference as a 'trial groove' only. Groove must conform to the groove diameter "C" listed. Attention: groove must comply with "C" size request. \*Minimum allowable wall thickness "T", this is the minimum wall thickness which may be roll grooved. To groove pipes with less wall thickness,

## **Grooved Products Comparisos**

Product Name	VISION	Victaulic	Gruvlok	Shurjoint	Grinnell	Anvilstar	Modgal
Rigid Coupling	LIGID	005	7400	K-9	-	C-4	75RT
Rigid Coupling	001	07	7401	Z07	772	_	-
Flexible Coupling	101	75	7000	7705	705	C-1	75
Heavy Duty Flexible Coupling	101H	77	7001	7707/7707N	707	_	07
Reducing Coupling	020	750	7010	7706	716	RC-2	71
Heavy Duty Rigid Coupling	HR24	HP70	7004	XP-1000	770	_	-
Split Flange Adptor Class150	007A1	741	7012	7041/CLASS125/150	71	F-3	90
Split Flange Adptor PN16	007D2	_	_	7041-PN10/PN16	71	F-3	90
Mechanical Tee (T)	300U	_	7043	723	_	MT-30	99
Mechanical Tee (G)	301	920	7046	7722	730	MT-2	08G
Mechanical Tee (T)	302	920N	7045	7721	730	MT-1	08T
Mechanical Cross (G)	303	-	7048	-	730	MT-8	88
Mechanical Cross (T)	304	-	7047	-	730	MT-8	88
Short Pattern 90° Elbow	002	001	7450	901	201	SE-1	66
90° Drain elbow	002D	10-DR	7050DR	7110DR	-	E-9	-
45° Elbow	003	003	7051	7111	-	E-2	64
Short Pattern Tee	004	002	7460	903	-	ST-1	65
Short Pattern End Cap	005	006	7074	7160/7060H	260	SK-1	02
End Cap With Hole	005WH	-	-	7160P	-	K-9	02D
End of Run Elbow	006RT	67	-	-	-	SE-5	-
Short Pattern Cross	010	-	-	-	-	-	-
Short Pattern Reducing Tee (G)	011	-	-	-	-	-	-
Short Pattern Reducing Tee (T)	012	-	-	-	-	-	-
90° Elbow	002L	10	7050	7110	210	E-1	06
45° Elbow	3L	11	7051	7111	201	E-2	64
22.5° Elbow	0031	12	7052	7112	212	E-3	42
11.25° Elbow	0032	13	7053	7113	211	E-4	41
7° Elbow	0033	-	-	-	-	-	-
Equal Tee	004L	20	7060	7120	219	T-1	05
End Cap	5L	60	7074	7160/7060H	-	SK-1	-
Concentric Reducer (GxG)	800	50	7072	7150	250/350	R-1	15
Concentric Reducer (GxT)	009	52,52F	-	7050F	372	R-3	-
Equal Cross	010L	35	7068	7135	227/327	X-1	-
Reducing Tee (G)	011L	25	7061	7121	221/321	T-2	55
Reducing Tee (T)	012L	29	7064	7121(Threaded)	-	T-3	-
Eccentric Reducer (GxG)	013	51	7073	7151	251/351	R-2	16
Flange Adapter Nipple PN16	015D2	-	-	7180	-	-	91
Flange Adapter Class150	015A1	45F,45R	7084	W170	341	F-2	91
Flange AdapterClass300	015A2	46F,46R	7085	7170	342	-	-
Adaptor Nipple(GxG)	018	43	7080	57	392	N-3	-
Adaptor Nipple(GxB)	018W	42	7082	58	393	N-2	-
Adaptor Nipple(GxT)	018M	40	7081	59	391	-	-
Hose Nipple	019	48	7086	56	395	N-1	-
Standpipe Tee	040	27	7065	7127	-	-	-

<sup>☐</sup> More information please contact VISION

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## **Pipe Hangers & Supports Comparison**

Product Name	VISION	ANVIL	ERICO	TOLCO	PHD	CARPENTER & PATERSON	EMPIRE INDUSTRIES
Adjustable Swivel Ring	702	69	130	200	141	800	31
Clevis Hanger	703	260	405	1	450	200T	11
Sprinkler Hanger	704	-	-	-	-	-	-
Riser Clamp	705	261	520	6	550	126	55
Pipe Clamp	705M	212	450	4	520/521	175	212
C-Clamp	733	92	300	65	350	192	62
C-Clamp (L)	734	93	310	68	360		61
Thread Rod	721	146	50	100	20	94	54
Rod Coupling	710	135	25	70	100	123	51
Socket	713	110R	47	307	30	12	47
One Hole Pipe Straps	769	185	107	22	-	-	-
Two Hole Pipe Straps	770	186	108	23	-	-	-
Two Hole 90°Side Mount Straps	771	187	109	24	-	-	-
Two Hole Stand Off Straps	772	188	SO	28M	-	-	-

## Pipe Hangers & Supports Spacing

Nominal Diameter	ISO6182-11	NFPA13	FM1951 1952,1953	UL203
Inches	Feet	Feet	Feet	Feet
mm	m	m	m	m
1	15.1	11.8	11.8	15.1
25	4.60	3.60	3.60	4.60
11/4	15.1	11.8	11.8	15.1
32	4.60	3.60	3.60	4.60
1½	15.1	15.1	15.1	15.1
40	4.60	4.60	4.60	4.60
2	15.1	15.1	15.1	15.1
50	4.60	4.60	4.60	4.60
2½	15.1	15.1	15.1	15.1
65	4.60	4.60	4.60	4.60
3	15.1	15.1	15.1	15.1
80	4.60	4.60	4.60	4.60
4	15.1	15.1	15.1	15.1
100	4.60	4.60	4.60	4.60
5	15.1	15.1	15.1	15.1
125	4.60	4.60	4.60	4.60
6	15.1	15.1	15.1	15.1
150	4.60	4.60	4.60	4.60
8	15.1	15.1	15.1	15.1
200	4.60	4.60	4.60	4.60
10	15.1	15.1	15.1	15.1
250	4.60	4.60	4.60	4.60
12	15.1	15.1	15.1	15.1
300	4.60	4.60	4.60	4.60

 $<sup>\</sup>hfill \square$  More information please contact VISION

VISION

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# **Work Together**

# Third Party Design and Sourcing

OEM & ODM | Procurement Package | EPC Project Service

#### **OEM & ODM**

In the past 15 years, VISION accumulates many experiences in Research & Development, Production and Quality control for our products, including Grooved Coupling &Fittings, Compact Flange, Clamp Connector, Ball Joint as well as Customized products. We have been striving to be a leader in piping industry and fire protection system. At present, VISION has developed and improved more than 10 series piping system in a wide range of applications, we always insist on providing environment friendly, hi-performance and convenient for connection and maintenance, this is our goal in future and we keep working hard to achieve the goal. Due to our professional technical acknowledge, advanced production equipment and adequate management experience, so VISION can provide not only OEM service but also ODM service to reduce your cost and enhance competitiveness of the brand.

<b>Grooved Couplings &amp; Fitting</b>
Compact Flanges
Clamp Connectors
Ball Joints
Customized

#### **Procurement Package**

VISION performs itself as a manufacturer and product integrator, We devote to provide fire-protection products and piping systems as one-stop shop service applier for the clients to reduce their cost and shorten the purchasing circle time. We keep improving the service for customers, looking forward to providing fullest professional service for all of you.

#### **EPC Project Integrated Service**

VISION is able to provide integrated service for international EPC customers due to our experience and acknowledge in fire protection system and piping system, Including Mining, Oil & Gas, Power Plant, Water & Waste Water, General industry and Commercial building. Our main service contain Project plan, Code consult, Scheduled delivery, On-site technical guidance service, we are always the good partner beside you.

Mining
Oil & Gas
Power Plant
Water & Waste Water
General Industry
Commercial Building

3 years ago, VISION started to be a distributor of many fire protection products in China which are quite popular brand all over the world. We work together to promote and develop products, and which dominates the major share in China market. At present China is a highly developing country with the fastest business growth and most potential opportunity for business in the world. So far VISION is the exclusive distributor of many international well-known brands and had a win-win situation to both side .you are more than welcome to join the VISION line card to promote the products along with VISION together in the great China.













# International EPC Projects Service

Project plan, Code consult

Sprinkler System | Fire Pump System | Hydrant System | Extinguisher Hose & Standpipe System | Foam System | Gas Extinguishing System







































#### **Products Index**

STYLE	DESCRIPTION	SIZE	PAGE	PUBLICATION NO.
LIGID	Rigid Coupling	2"-8"(50-200mm)	14	01.01EN
001	Rigid Coupling	1"-12"(25-300mm)	15	01.02EN
101(Standard)	Flexible Coupling	1"-12" (25-300mm)	16	01.03EN
101H(Heavy)	Flexible Coupling	1"-12" (25-300mm)	17	01.04EN
020-ANSI	Reducing Coupling	1½x1¼-8x6	18	01.06EN
020-BS & DIN	Reducing Coupling	1½x1¼-8x6	19	01.06EN
007A1	Split Flange Adaptor	2"-8" (50-200mm)	20	01.08EN
007D2	Split Flange Adaptor	2"-8" (50-200mm)	21	01.08EN
002	Short Pattern 90°Elbow	2"-8"(50-200mm)	25	01.09.01EN
004	Short Pattern Equal Tee	2"-8"(50-200mm)	25	01.09.03EN
010	Short Pattern Cross	2"-8"(50-200mm)	25	01.09.05EN
002L	90°Elbow	1¼"-12(32-300mm)	26	01.10.01EN
004L	Equal Tee	1¼"-12(32-300mm)	26	01.10.03EN
010L	Cross	1¼"-12(32-300mm)	26	01.10.05EN
003	45° Elbow	1¼"-12(32-300mm)	27	01.10.02EN
0031	22.5° Elbow	1¼"-12(32-300mm)	27	01.10.09EN
0032	11.25° Elbow	1¼"-12(32-300mm)	27	01.10.09EN
005	End Cap	1¼"-12(32-300mm)	28	01.09.04EN
005WH	End Cap With Hole	2"-12"(50-300mm)	28	01.09.11EN
002D	90°Drain Elbow	2"-8"(50-200mm)	29	01.09.10EN
006RT	End of Run Elbow	1¼x½"-2x1"	29	01.09.09EN
040	Standpipe Tee	4x4x2½"-6x6x3"	29	01.09.08EN
008	Concentric Reducer (G)	2x1¼"-12x10"	30	01.11.01EN
009	Concentric Reducer (T)	1¼x1"-8x2"	31	01.11.01EN
013	Eccentric Reducer (T)	2x1¼"-12x10"	31	01.11.03EN
011	Short Patern Reducing Tee (G)	30Dx1½"-8x4"	32	01.09.06EN
012	Short Patern Reducing Tee (T)	2½x1"-8x3OD"	32	01.09.06EN
011L	Reducing Tee (G)	2½x1¼"-12x10"	33	01.10.06EN
012L	Reducing Tee (T)	2½x1¼"-12x3"	33	01.10.06EN
D15A1	Flange Adaptor Class150	1¼"-12(32-300mm)	34	01.12.04EN
D15A2	Flange Adaptor Class300	1¼"-12(32-300mm)	34	01.12.04EN
D15D2	Flange Adaptor PN16	2"-12"(50-300mm)	34	01.12.03EN
018	Adaptor Nipple(G/G)	1"-12" (25-300mm)	35	01.12.01EN
018M	Adaptor Nipple(G/T)	1"-12" (25-300mm)	35	01.12.01EN
019	Hose Nipple	1¼"-10"(32-250mm)	35	01.12.02EN
301	Mechanical Tee (G)	2x1"-8x4"		03.01EN
302	Mechanical Tee (T)	2x1"-8x3"		03.01EN
303	Mechanical Cross (G)	2x1x1"-8x4x4"	44	03.02EN
304	Mechanical Cross (T)	2x1x1"-8x4x4"	44	03.02EN
305	Mechanical Cross (G/T)	2x1x1"-8x4x4"	44	03.02EN
300U	Mechanical Tee	1¼x½"-4x1"	45	03.03EN
280	Unbraided Sprinkler Flexible Drop	1x½"-1x¾"	48	12.01EN
280W	Braided Sprinkler Flexible Drop	1x½"-1x¾"	49	12.02EN
P-9700	Clean Room Sprinkler Flexible Drop	1x½"-1x¾"	50	12.06EN
P-9900	Duct Sprinkler Flexible Drop	1x½"-1x¾"	51	12.09EN
P-1200	Flexible Connector	1x½"-1x¾"	52	12.1EN
P-3200	Expansion Joint	1½"-12"(32-300mm)	53	12.11EN
	Expansion Joint  Expansion Joint	, ,		
220		1¼"-6"(32-150mm)	54	12.03EN
221	Expansion Joint	2½"-12"(65-300mm)	55	12.04EN
025	Weld-o-lets(Grv.)	1x1¼"-8x8"	56	12.13EN

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### Products Index CONT'D

STYLE	DESCRIPTION	SIZE	PAGE	PUBLICATION NO.
211W	Wafer Butterfly Valve	2½"8"(65-200mm)	60	18.01EN
211W1	Wafer Butterfly Valve	2½"8"(65-200mm)	60	18.01EN
211G	Grooved Butterfly Valve	2½"8"(65-200mm)	61	18.02EN
211G1	Grooved Butterfly Valve	2½"8"(65-200mm)	61	18.02EN
211BT	Bronze Butterfly Valve Threaded	1"-2½"(25-65mm)	62	18.03EN
211BG	Bronze Butterfly Valve Grooved	2"-30D"(50-65mm)	62	18.03EN
399FF	OS & Y Gate Valves	2"-12"(50-300mm)	63	18.04EN
399FG	OS & Y Gate Valves	2"-12"(50-300mm)	63	18.04EN
399GG	OS & Y Gate Valves	2"-12"(50-300mm)	63	18.04EN
388FF	NRS Gate Valve	2"-12"(50-300mm)	64	18.05EN
388FG	NRS Gate Valve	2"-12"(50-300mm)	64	18.05EN
388GG	NRS Gate Valve	2"-12"(50-300mm)	64	18.05EN
G388	Indicator Post - Underground	- 12 (30 3001111)	65	18.06EN
W388	Indicator Post - Wall		65	18.06EN
70FF	Y Strainer	2"-12"(50-300mm)	66	18.07EN
70FG	Y Strainer	2"-12"(50-300mm)	66	18.07EN
70GG	Y Strainer	2"-12"(50-300mm)	66	18.07EN
50FF	Swing Check Valve	2"-12"(50-300mm)	67	18.08EN
50GG	Swing Check Valve	2"-8"(50-200mm)	67	18.08EN
ARV	Air release Valve	½"-1"(15-25mm)	68	18.09EN
	Test&Drain Valves	, ,		18.10EN
TD1		1"-2"(25-50mm)	69	
AD1	Angle Valve	¾"-2"(20-50mm)	70	18.11EN
AD2	Angle Valve	¾"-2"(20-50mm)	70	18.11EN
1-Apr	Adjustable Pressure Relief Valve	½"-¾"(15-20mm)	71	18.12EN
3W	Three Way valve	¼"	72	18.13EN
221	Ball valve	½"-2"(15-50mm)	73	18.14EN
702	Adjustable Swivel Ring	½"-8"(15-200mm)	76	13.01EN
703	Clevis Hanger	½"-12"(15-300mm)	77	13.02EN
704	Sprinkler Hanger	½"-10"(15-250mm)	78	13.03EN
705	Riser Clamp	¾"-12"(20-300mm)	79	13.06EN
705M	Pipe Clamp	¾"-12"(20-300mm)	80	13.04EN
733	C-Clamp	3/8"-1/2"(M10-M12)	81	13.10EN
734	C-Clamp (L)	3/8"-½"(M10-M12)	81	13.10EN
721	Threaded Rod	3/8"-½"(M10-M12)	82	13.11EN
710	Rod Coupling	3/8"-1"(M10-M24)	82	13.11EN
713	Socket	3/8"-½"(M10-M22)	82	13.11EN
769	One Hole Pipe Straps	¾"-2"(20-50mm)	83	13.25EN
770	Two Hole Pipe Straps	¾"-2"(20-50mm)	83	13.25EN
771	Two Hole 90°Side Mount Straps	¾"-2"(20-50mm)	83	13.25EN
772	Two Hole Stand Off Straps	¾"-2"(20-50mm)	83	13.25EN
R2	Recessed Sprinkler Escutcheon	1/2",3/4"	86	17.01EN
R2S	Recessed Sprinkler Escutcheon	1/2",3/4"	86	17.01EN
R2L	Recessed Sprinkler Escutcheon	1/2",3/4"	87	17.01EN
E1	One-Piece Steel Canopy	1/2",3/4"	87	17.02EN
E2	Sprinkler Escutcheon	1/2",3/4"	87	17.02EN
SG	Sprinkler Guards	1/2",3/4"	88	17.03EN
SE	Sprinkler Extension	1/2",3/4"	88	17.03EN
WP	Wall Plate	1/4"-10"	88	17.03EN
SS1	Sprinkler Stopper	-	89	17.04EN
SS2	Sprinkler Stopper	-	89	17.04EN

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# Fire Protection System

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SULE M&E provides global resource integration and national sales network services in order to establish sales and services platform for the Building Electromechanical products industry. We have already integrated dozens of famous brands from the international and national suppliers after only one-year development.



















Quality Technology Service















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