

HYDROFLOW



PRODUCT TECHNICAL STATEMENT

Incorporating BPIR requirements as per
Building Product Information Regulations 2022

Mech Fire Systems tubes and fittings

Supplied by Hydroflow

HYDROFLOW DISTRIBUTORS LTD
221 Bush Road
Rosedale, Albany, North Shore
Auckland
Tel: +64 9 415 6151

Founded in 1961, Meide Group has developed into a modern and diversified multinational enterprise group focusing on fluid conveying products and services. It has 9 intelligent manufacturing bases at home and abroad in Jinan, Linyi, Tai 'an, Weihai, Hebi, Zhaoqing, Thailand, Vietnam and Poland, with totally 21 factories, covering more than 3.3 million m² floor area with about 12,000 employees.

[MEIDE GROUP \(meide-casting.com\)](http://meide-casting.com)

This PTS covers all of the products supplied by Hydroflow, on behalf of Mech, in New Zealand.

Revision control

Revision number	Revision information	Date
v1	New PTS (BPIR)	22 November 2023

Document type	Revision	Revision date
Product Technical Specification & BPIR Mech Fire Systems tubes and fittings	v 1	22 November 2023

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Product Technical Specification & BPIR Mech Fire Systems tubes and fittings	v 1	22 November 2023

Purpose and use

Mech Fire Systems tubes and fittings for use in fire prevention of water supply, are suitable for mains pressure.

Product description

Mech Fire Systems tubes and fittings complies with the NZBC as shown below in the BPIR section.

A full product listing is available on the Hydroflow website: [Hydroflow - Homepage](#)

Key advantages

Each Mech product specification, features and benefits are available on the website as shown above.

Technical Information, Installation Instructions, Maintenance Instructions

All Mech Fire Systems pipe and fitting technical information is available for download at the website:

[MEIDE GROUP \(meide-casting.com\)](#)

Information available as follows:

- Technical Compliance Approvals (12 off)
- Product Technical Specifications
- Technical Installation, Maintenance and Testing Manuals
- Technical & Design Data
- Catalogues
- Software (CAD information)

All of above can be found in: [Bim Revit MEIDE GROUP \(meide-casting.com\)](#)

Login (registration) is required, but no fee applied.

Mech recommends that all installation is done by a registered plumber.

Mech Fire Systems tubes and fittings QA processes

Mech Fire Systems tubes and fittings undertake testing and inspections of all products as part of the QA requirements.

Mech is an ISO9001 certified manufacturer - See Appendix 1

Mech Fire Systems Tube and Fittings currently has at least 12 worldwide product and management performance certifications, including conveyance of water for fire alarm systems with UL and NSF certifications – See Appendix 2

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Mech Australia has an extensive range of products that are WaterMark certified to:

CoC 022511 to AS/NZS 2638.2:2011 - Gate valves for waterworks purposes – Resilient seated

WM 022511 to AS/NZS 2638.2:2011 - Gate valves for waterworks purposes – Resilient seated

WM 022857 to WMTS 012 – In-line valves for use in plumbing water supply systems – Miscellaneous types metallic and non-metallic

See Appendix 3

Contribution to Compliance

Mech Fire Systems tubes and fittings are in full compliance with the requirements as set out in the New Zealand Building Code, as follows:

Building code	Requirement	Compliance evidence
<p>B2 (Durability)</p> <p>B2.3.1 (c) applies</p>	<p>(B2.3.1 Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:</p> <p>(b) 15 years if: (i) Those building elements (including the building envelope, exposed plumbing in the subfloor space, and in-built chimneys and flues) are moderately difficult to access or replace, or (ii) Failure of those building elements to comply with the building code would go undetected during normal use of the building but would be easily detected during normal maintenance.</p> <p>(c) 5 years if: (i) The building elements (including services, linings, renewable protective coatings, and fixtures) are easy to access and replace, and (ii) Failure of those building elements to comply with the building code would be easily detected during normal use of the building.</p>	<p>As part of a plumbing system for supply of cold, hot or mixed water temperatures.</p> <p>These products can be used in residential and/or commercial buildings where cold, hot or mixed water temperatures water is required to be supplied.</p> <p>Not suitable for use in areas which are being permanently concealed such as behind concrete.</p> <p>Maintenance required is shown in the Maintenance and Installation Instructions.</p> <p>Proof of durability – Service history Mech products have been manufactured and supplied worldwide since 1961.</p>

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		<p>Warranty calls are at a minimum and within the quality principles of Mech. All Warranty claims are investigated, and corrective/preventive actions are implemented.</p> <p>Products that are WaterMark certified are subject to endurance testing.</p> <p>Refer warranty statement (Terms and Conditions) as shown in Appendix 4</p>
<p>NZ Building Code C</p> <p>AS 1 to AS 7</p>	<p>Appendix B</p> <p>Automated fire sprinkler systems to comply with NZS 4541</p>	<p>Mech products has a variety of international product certifications, including WaterMark.</p> <p>CoC 022511 to AS/NZS 2638.2:2011 - Gate valves for waterworks purposes – Resilient seated</p> <p>WM 022511 to AS/NZS 2638.2:2011 - Gate valves for waterworks purposes – Resilient seated</p> <p>WM 022857 to WMTS 012 – In-line valves for use in plumbing water supply systems – Miscellaneous types metallic and non-metallic</p> <p>Where products are WaterMarked, this will include compliance with AS/NZS 4020 (contamination of water), where required, and the performance requirements set out by those standards.</p> <p>Refer Appendix 3.</p> <p>Mech Fire System pipe and fitting products enable design engineers and installers to comply with the requirements set out in NZS 4541.</p>

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NOTE Re WaterMark

WaterMark is not compulsory for the New Zealand market. The products listed in these WaterMark certificates, as shown below.

It must be noted that all Mech products complies with the various requirements as stated above for the NZBC.

Products supplied into the New Zealand market might not be listed on these certificates but can be imported and used within the New Zealand building industry.

Refer WaterMark certificate and schedule of products

CoC 022511 to AS/NZS 2638.2:2011 - Gate valves for waterworks purposes – Resilient seated

WM 022511 to AS/NZS 2638.2:2011 - Gate valves for waterworks purposes – Resilient seated

WM 022857 to WMTS 012 – In-line valves for use in plumbing water supply systems – Miscellaneous types metallic and non-metallic

Refer [IAPMO Oceania PLD](#)

Design, construction and installation instructions

Installation Instructions

Mech Fire Systems tubes and fittings installation is to be done by registered plumbers. Installation Instructions are supplied with the product.

For an example of an Installation & Maintenance Instructions, see Appendix 5.

Please refer: [Bim Revit MEIDE GROUP \(meide-casting.com\)](#)

Maintenance requirements

Service/cleaning instructions are available for download as mentioned above for all Mech Fire Systems tubes and fittings.

Please refer: [Bim Revit MEIDE GROUP \(meide-casting.com\)](#)

Limitations

Limitations and use are specified in the technical information sheets obtainable from the website and differs by product.

Quality assurance

The following certifications has been accredited to the product and/or manufacturer.

Mech has a variety of certifications including:

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- Production process certificate of conformance (TUV)
- ISO 9001 Quality Management

Product support

Product data available are as shown above in section: Technical Information, Installation Instructions, Maintenance Instructions.

Full product support can be found at:

HYDROFLOW DISTRIBUTORS LTD
221 Bush Road
Rosedale, Albany, North Shore
Auckland
Tel: +64 9 415 6151

Manufacturer

All Mech products are manufactured by Mech: [Bim Revit MEIDE GROUP \(meide-casting.com\)](http://meide-casting.com) and imported and distributed by Hydroflow.

Warnings and Bans

There is no warning or ban applicable on any Mech products, subject to the Building Act 2004, Section 26.

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Appendix 1 – ISO 9001 certificate



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Appendix 2 – Examples of other international product and production compliance certificates



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CERTIFICATE OF COMPLIANCE

Certificate Number 20170301-EX15973
Report Reference EX15973-20130627
Issue Date 2017-MARCH-01

Issued to: JINAN MEIDE CASTING CO LTD
3 NANMEN RD
PINGYIN
JINAN, SHANDONG 250400 CHINA

**This is to certify that
representative samples of**

GATE VALVES
See addendum page

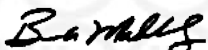
Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: Safety for Gate Valves for Fire Protection Service, UL 262
and ULC/ORD-C262

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please
contact a local UL Customer Service Representative at <http://ul.com/about/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number 20190108-EX26840
Report Reference EX26840-20181223
Issue Date 2019-JANUARY-08

Issued to: JINAN MEIDE CASTING CO LTD
 Meide Science and Technology Park
 Pingyin Industrial Park, JINAN
 SHANDONG 250400 CHINA

This certificate confirms that representative samples of

VALVES, ALARM
 Models ZSFZ8X9 alarm valves in the 3, 4, 6, 6(165.1mm), 6(159.0mm) and 8 in. sizes for a rated pressure of 300, 250, 200, 232, 175 psig for vertical installation, end configuration G by G.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL193, UL Standard for Safety for Alarm Valves for Fire-Protection Service
 ULC/ORD -C193-75, Guide for the Investigation of alarm valves for fire-protection service

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.


 Bruce Maheshwari, Director North American Certification Program
 UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL, ULÉ (SA) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/about-us/contact>.



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Appendix 3 – Watermark Certificates



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IAPMO OCEANIA

7-11 Fullard Road, Narre Warren, Victoria 3805 Australia



IAPMO Oceania is a product certification body which inspects and arranges for the independent laboratory testing of samples taken from the manufacturer's stock or from the market or a combination of both, to verify compliance of the requirements of applicable Standards and Specifications. This activity is coupled with periodic surveillance of the certified product taken from the market place or the manufacturer's factory. This certification is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO R&T Oceana of the product acceptance by Authorities Having Jurisdiction. The IAPMO R&T Oceana 'OceanaMark' Product Certification Scheme is a JAS-ANZ accredited ISO Guide 67 Type 5 Product Certification Scheme.

OCEANAMARK LICENCE

IAPMO Oceania hereby grants to:

Jinan Meide Casting Co., Ltd.

Meide Science & Technology Park, Pingyin, Jinan, Shandong 250400 Australia

the right to use the OceanaMark in accordance with IAPMO R&T Oceana Pty Ltd 'Mark Rules' on the products as described in the attached OceanaMark Schedule. The Certificate is granted subject to IAPMO R&T Oceana Pty Ltd 'Governance Rules'.

Evaluated to:

AS/NZS 2638.2-2011

Gate valves for waterworks purposes - Resilient seated

Manufacturer:

Jinan Meide Casting Co., Ltd.

Licence No.: OMK22511

First Certified: 28 February 2017

Certified Date: 28 February 2022

Expiry Date: 27 February 2027

CEO, The IAPMO Group

This OceanaMark certification is for the period indicated herein and is void after the date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of IAPMO R&T Oceana, or any evidence of non-compliance with applicable Standards, Specifications or of inferior workmanship, may be deemed sufficient cause for revocation of this certification. Reproduction of or reference to this certificate for advertising purposes may be made only by specific written permission of IAPMO R&T Oceana. Any alteration of this certificate could be grounds for revocation of this certification.

IAPMO OCEANIA

7-11 Fullard Road, Narre Warren, Victoria 3805 Australia



IAPMO Oceania is a product certification body which inspects and arranges for the independent laboratory testing of samples taken from the manufacturer's stock or from the market or a combination of both, to verify compliance of the requirements of applicable Standards and Specifications. This activity is coupled with periodic surveillance of the manufacturer's factory and any major subcontractor's site/s as well as the assessment of the manufacturer's Quality Assurance System. This certification is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO R&T Oceania of the product acceptance by Authorities Having Jurisdiction.

CERTIFICATE OF CONFORMITY

IAPMO Oceania hereby grants to:

Jinan Meide Casting Co., Ltd.

Nanmen Road, Pingyin, Jinan,, Shandong, 250400 China

the right to use the WaterMark in accordance with the ABCB Manual for the WaterMark Certification Scheme; Australian Standards WaterMark Technical Specifications and the Plumbing Code of Australia; only in respect of the certified products as described in the WaterMark Certificate of Conformity - Schedule of Certified Product (Refer also IAPMO Product Listing Directory). The Certificate is granted subject to the rules governing the WaterMark Certification Scheme and the Terms and Conditions of the Approved User Agreement and IAPMO Oceania's WaterMark Governance Rules.

Evaluated to:

AS/NZS 2638.2-2011

Gate valves for waterworks purposes - Resilient seated

Manufacturer:

Jinan Meide Casting Co., Ltd.

Licence No.: WM-022511

First Certified: 28 February 2017

Certification Date: 28 February 2022

Expiry Date: 27 February 2027

CEO, The IAPMO Group

This WaterMark Certificate of Conformity is for the period indicated herein and is void after the date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of IAPMO R&T Oceania, or any evidence of non-compliance with applicable Standards, Specifications or of inferior workmanship, may be deemed sufficient cause for revocation of this certification. This Certificate can only be reproduced in its entirety. Any alteration of this certificate could be grounds for revocation of this certification.

"This certificate is issued by a JAS-ANZ accredited Conformity Assessment Body. The ABCB and JAS-ANZ do not in any way warrant, guarantee or represent that the product the subject of this Certificate conforms to the WaterMark Certification Scheme Rules, nor accepts any liability arising out of the use of the product. The ABCB disclaims to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this Certificate."

IAPMO OCEANIA

7-11 Fullard Road, Narre Warren, Victoria 3805 Australia



IAPMO Oceania is a product certification body which inspects and arranges for the independent laboratory testing of samples taken from the manufacturer's stock or from the market or a combination of both, to verify compliance of the requirements of applicable Standards and Specifications. This activity is coupled with periodic surveillance of the manufacturer's factory and any major subcontractor's site/s as well as the assessment of the manufacturer's Quality Assurance System. This certification is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO R&T Oceania of the product acceptance by Authorities Having Jurisdiction.

CERTIFICATE OF CONFORMITY

IAPMO Oceania hereby grants to:

Jinan Meide Casting Co., Ltd

Meide Science & Technology Park, Pingyin Jinan,, Shandong 250400 China

the right to use the WaterMark in accordance with the ABCB Manual for the WaterMark Certification Scheme; Australian Standards WaterMark Technical Specifications and the Plumbing Code of Australia; only in respect of the certified products as described in the WaterMark Certificate of Conformity - Schedule of Certified Product (Refer also IAPMO Product Listing Directory). The Certificate is granted subject to the rules governing the WaterMark Certification Scheme and the Terms and Conditions of the Approved User Agreement and IAPMO Oceania's WaterMark Governance Rules.

Evaluated to:

WMTS012:2018

**In-line valves for use in plumbing water supply systems - Miscellaneous types
metallic and non-metallic**

Manufacturer:

Jinan Meide Casting Co., Ltd

Licence No.: WM-022857

First Certified: 15 May 2019

Certification Date: 15 May 2019

Expiry Date: 14 May 2024

CEO, The IAPMO Group

This WaterMark Certificate of Conformity is for the period indicated herein and is void after the date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of IAPMO R&T Oceania, or any evidence of non-compliance with applicable Standards, Specifications or of inferior workmanship, may be deemed sufficient cause for revocation of this certification. This Certificate can only be reproduced in its entirety. Any alteration of this certificate could be grounds for revocation of this certification.

"This certificate is issued by a JAS-ANZ accredited Conformity Assessment Body. The ABCB and JAS-ANZ do not in any way warrant, guarantee or represent that the product the subject of this Certificate conforms to the WaterMark Certification Scheme Rules, nor accepts any liability arising out of the use of the product. The ABCB disclaims to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this Certificate."

Appendix 4 – Example of Installation Instructions



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Installation Instruction For Rigid & Flexible Coupling



1. Pipe preparation
Check pipe end for proper groove dimensions and to assure that pipe end is free of indentations and projections that would prevent proper sealing.



2. Lubricate gasket
Check gasket to be sure it's compatible for the intended service. Apply thin lubricant to the outside and sealing lips of the gasket.



3. Gasket installation
Slip the gasket over one pipe, making sure the gasket lip does not over-hang the pipe end.



4. Alignment
After aligning two pipe ends together, pull the gasket into position, centering between the grooves on each pipe. The gasket should not extend into the groove on either pipe.



5. Housing installation
Remove one bolt & nut and loosen the other nut. Place one housing over the gasket, making sure the housing keys fit into the pipe grooves. Swing the other housing over the gasket and into the grooves on both pipes. Re-insert the bolt and connect two housings.



6. Tighten nuts
Firstly hand tighten nuts and make sure oval neck bolt completely fits into bolt hole. Then securely tighten nuts alternatively and equally to the specified bolt torque by using spanner.



7 a. Assembly completed- Rigid Coupling
For Rigid Coupling, keep the gaps at bolt pads evenly spaced. Gaskets can't be seen visually.



7 b. Assembly completed- Flexible Coupling
For Flexible Coupling, two housings should be iron to iron connected. Gaskets can't be seen visually.

Caution	
Proper torquing of bolts is required to obtain specified performance.	
- Over torquing the bolts may result in damage to the bolt and / or casting which could result in pipe joint separation.	
- Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.	

Specified Bolt Torque		
ANSI BOLTS		
Bolt Size	Specified Bolt Torque	
	Inch	Specified Bolt Torque
	Lbs-Ft.	N.m
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	130-180	175-245
7/8	180-240	245-325

Installation Instruction For Threaded & Grooved Mechanical Tee



1. Pipe preparation
Clean the gasket sealing surface within 16mm of the hole and visually inspect the sealing surface for defects that may prevent proper sealing of the gasket. Don't drill the hole on weld line.



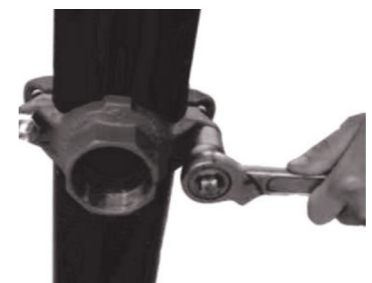
2. Remove burrs
If any burrs or slug exists at the pipe hole, please remove them before assembly, to protect the gasket and avoid leakage.



3. Gasket installation
Insert the gasket into outlet housing making sure the tab in the gasket line up with the tab recesses in the housing. Align outlet housing over the pipe hole making sure that the locating collar is in the pipe hole.



4. Alignment
Align the strap around the pipe, insert the bolts and tighten the nuts finger tight.



5. Tighten nuts
Alternatively and evenly tighten the nuts to the specified bolt torque.



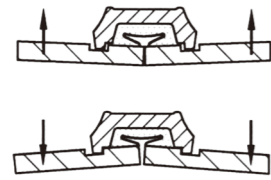
6. Assembly completed
There should be even gaps on two sides between upper and lower housings.

Caution	
Proper torquing of bolts is required to obtain specified performance.	
- Over torquing the bolts may result in damage to the bolt and / or casting which could result in pipe joint separation.	
- Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.	

Specified Bolt Torque		
ANSI BOLTS		
Bolt Size	Specified Bolt Torque	
	Inch	Specified Bolt Torque
	Lbs-Ft.	N.m
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	--	--
7/8	--	--

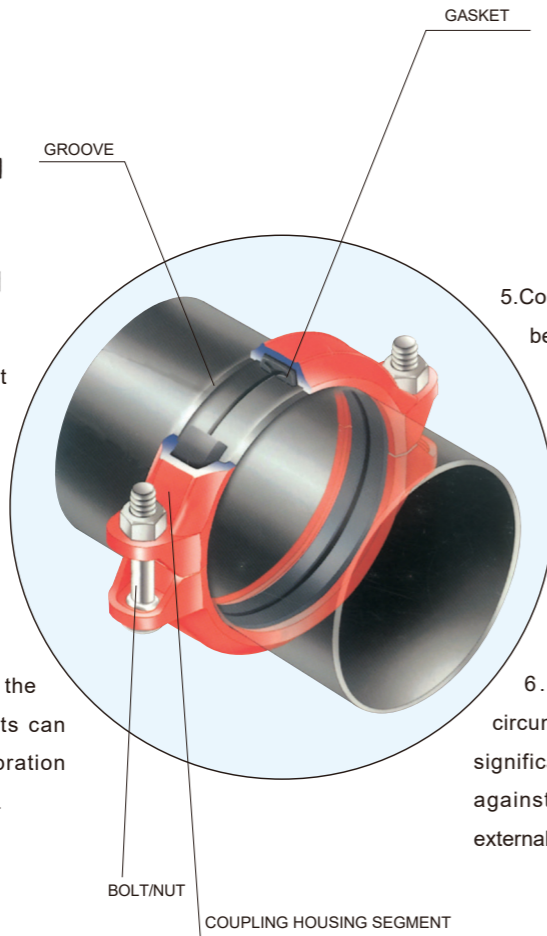
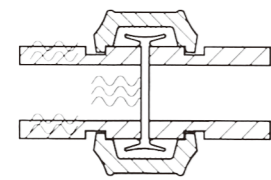
Flexible Coupling

1. A flexible coupling accommodates pipe deflection and or non-alignment as below:
If nominal diameter $\lt; DN200$, deflection angle is $\geq 1^\circ$; If nominal diameter $\geq DN200</math>, deflection angle is $\geq 0.5^\circ$ but $\lt 1^\circ$.$

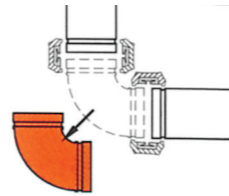


2. The C-shaped rubber gasket provides excellent self-sealing capabilities in both low and high pressure service as well as under certain vacuum conditions.

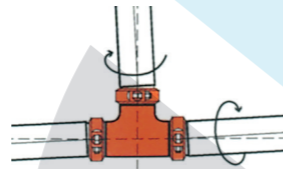
3. The design and construction of the coupling with elastomeric gaskets can provide significant noise and vibration absorption as well as seismic stress.



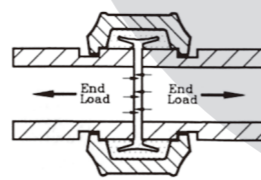
4. With the removal of just a few bolts you can easily access the system for cleaning, maintenance, changes or system expansion.



5. Couplings are non-directional and pipe can be rotated 360° during installation.



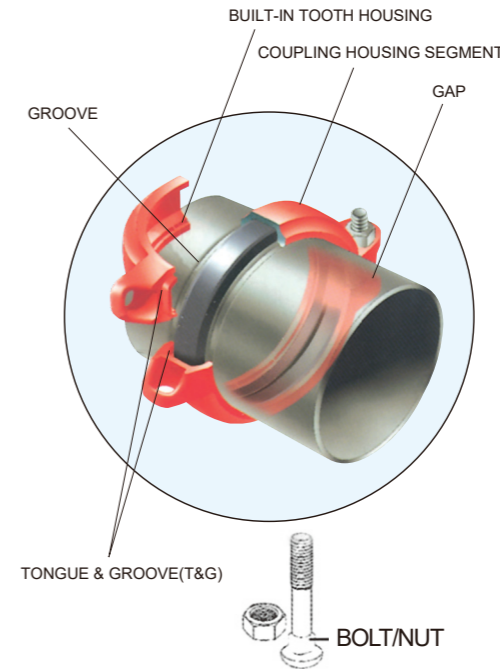
6. Coupling keys engage the full circumference of the grooves and provide significant pressure and end load restraint against pipe movement from internal and external forces.



Rigid Coupling

1. The T&G mechanism in combination with a slightly shortened key diameter provides a mechanical and frictional interlock resulting in a rigid joint which reduces undesired angular movement.

2. The built-in teeth on the coupling grip the groove shoulder and serve to reduce linear movement.

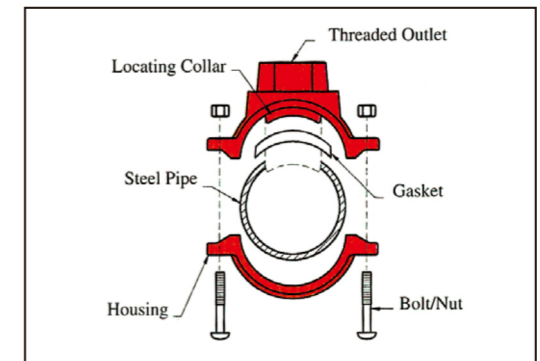


3. The T&G mechanism features a slight offset at the foot of the coupling halves which serve to protect the gasket from exposure.

4. With the T&G style coupling no metal-to-metal contact of the bolt pads is required. You will normally see a 1/16" - 1/8" (1.6mm to 3.2mm) gap between the bolt pads when installed.

Mechanical Tee Connection

The Mechanical Tee (3J, 3G, 3L) provide for a fast and easy grooved or threaded branch outlet and eliminate the need for welding or the use of a reducing tee and couplings. Simply cut a hole to the specified size at the expected location and fasten the mechanical tee to the pipe with the nuts and bolts provided. As the housing bolts are tightened, the pressure responsive gasket forms a leak-tight seal.



Appendix 5 – Warranty statement



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Commitment Letter for Malleable Iron Pipe Fitting Service Life

The Malleable Iron Pipe Fittings provided by MEIDE GROUP to HYDROFLOW DISTRIBUTORS LTD, the service life of the products will be 50 years from the date of shipment.

MEIDE Group hereby clarify, within the service life:

1. MEIDE will responsible for product quality of materials and processes.
2. MEIDE will responsible for losses caused by product quality.

Customers should be comply with the following conditions of using:

1. The product install and operate should follow the installation manual provided by MEIDE, and the installation should be reasonable and correct;
2. Install, maintain, or repair products according to standards;
3. The pipeline should be under standard working conditions, runs without accidental pressure and overload, and bends without external force;
4. The quality of pipes used by customers should comply with the standard requirements, and the ovality should not exceed 1 mm;
5. The product should not be exposed to incompatible chemical



substances or materials;

6. The conveying medium should comply with the standard requirements.

Hereby guarantee.

JINAN MEIDE CASTING CO.,LTD

Nov 23, 2023

