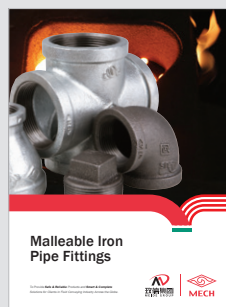


## MECH FLOW SUPPLIES



Malleable Iron  
Pipe Fittings



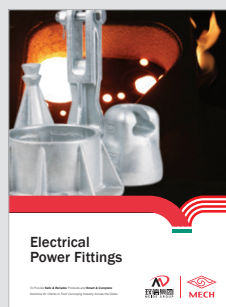
Ductile Iron  
Grooved Fittings  
and Couplings



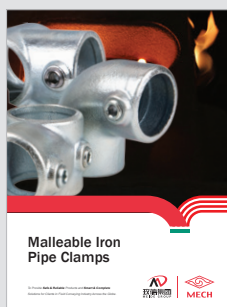
Valves



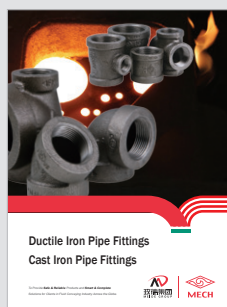
Cast Bronze  
Fittings



Electrical  
Power Fittings



Malleable Iron  
Pipe Clamps



Ductile Iron Pipe Fittings  
Cast Iron Pipe Fittings



Pipe Nipples



**JINAN MEIDE CASTING CO., LTD.**

Address: Meide Science & Technology Park,  
Industrial Park Pingyin, Jinan, China 250400

Phone: (86)531 87856271 87879384 87885060

Fax: (86)531 87879387

Email: [info@meide-casting.com](mailto:info@meide-casting.com)

Http: [www.meide-casting.com](http://www.meide-casting.com)

UPDATED 08/2018



## Ductile Iron Pipe Fittings Cast Iron Pipe Fittings

To Provide **Safe & Reliable** Products and **Smart & Complete**  
Solutions for Clients in Fluid Conveying Industry Across the Globe.





# More than 50 years of Foundry Experience

## Company Profile

Jinan Meide Casting Co. Ltd. was established in 1961. In the past decades, Jinan Meide has seized each opportunity to consolidate its strength, and has finally developed into what it is today, a large-scale enterprise group with advanced technology, equipment and strong comprehensive strength, known for its complete range of products, large producing capacity, high quality and strong R&D strength. The company owns altogether one main factory, three branch factories, two independent accounting steel pipe companys, and a science & technology park.

The company is the well-known manufacturer in the fitting industry with the most complete range of products, supplying malleable iron fittings, grooved fittings, grooved couplings, valves, cast iron fittings, ductile iron fittings, steel pipe nipples and couplings, stainless steel nipples, brass pipe nipples, cast bronze fittings, steel pipes, pipe hangers and supports, electric fittings, etc.

Over 50 years, Jinan Meide has been a trusted name in piping solutions by offering high-quality products, service and support to the PVF industry continuously. We provide expertise and product solutions for a wide range of applications, plumbing, mechanical, industrial, air-conditioning and refrigeration, mining, oil, gas, fire protection, equipment and power system. Many of the company's application technology are advanced in the world, with more than 20 patents registered each year, and the company has presided over and participated in the drafting of many important national standards of the industry.

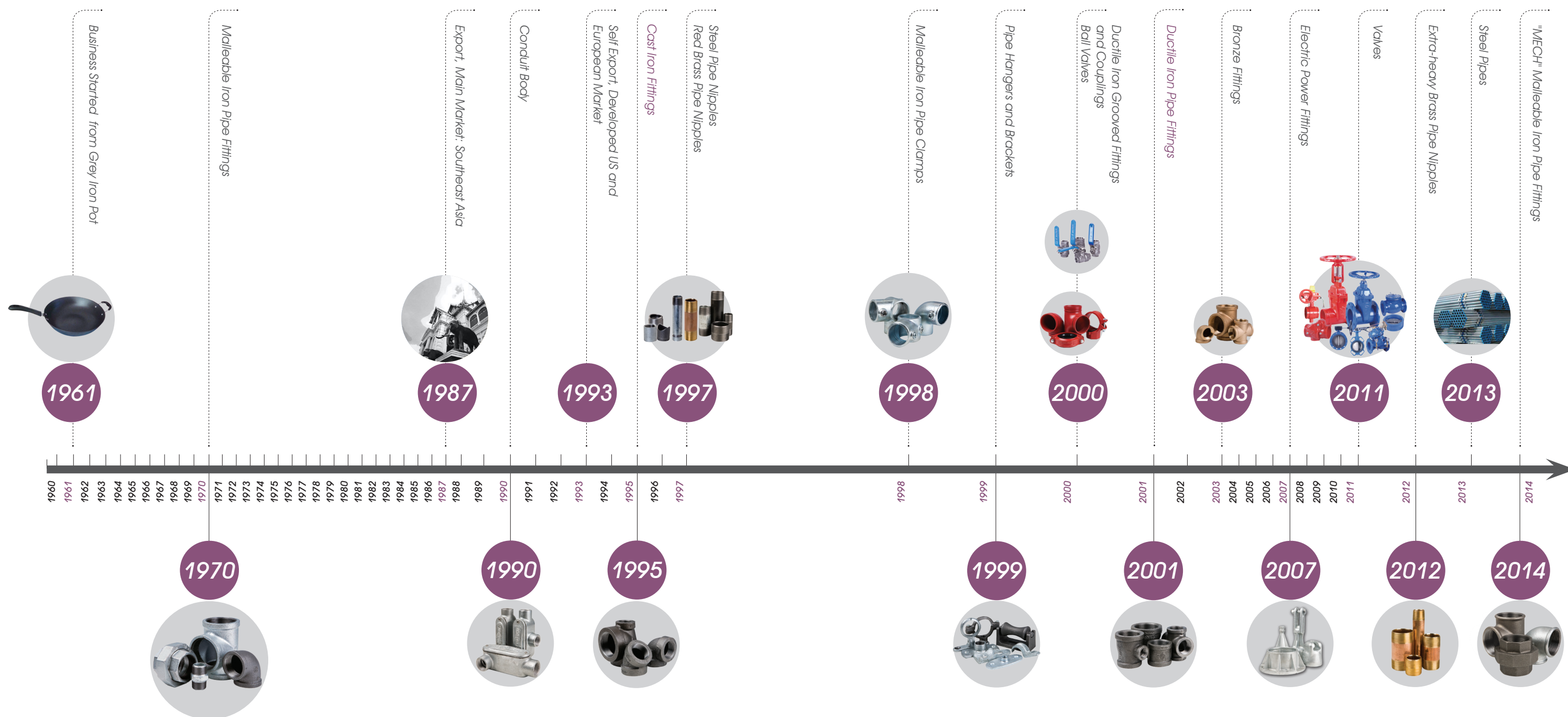
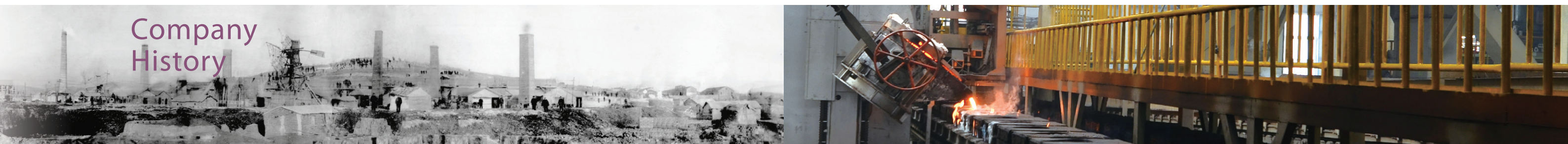
We organize the whole production process in accordance with ISO 9001 and ISO 14001. It has also the most complete certificates in the PVF industry, including UL/FM/NSF of US, CRN/cUL of Canada, DVGW/TUV/CE/VdS of Germany, BSI/LPCB of UK, SII of Israel, JIS of Japan, ABNT of Brazil, GOST-R of Russia, CNBOP of Poland, KS of South Korea, TSE of Turkey, PSB of Singapore, SIRIM of Malaysia, SABS of South Africa etc. The products are well distributed in more than 130 countries and regions.

As an industry leader and key high-tech enterprise of the national torch plan, the company attaches great importance to environmental protection, energy-saving and emission-reduction. US-EEC recognizes MECH brand malleable iron pipe fittings as "the product to promote for the technology exchange of environmental protection". Protecting the environment is the duty of the company.

Customer satisfaction has always been the company's top objective, and we constantly stick to the principle: to provide customers with a value-added solution rather than simply delivering products.



## Company History





## State of the Art Equipment

High precision equipment is quality assurance.

Jinan Meide's 8 factories are all equipped with the most advanced facilities and equipment in the industry. The main production facilities include Sinto automatic molding line, Tokyu automatic molding line, Chinese 416 automatic vertical molding line, automatic molding sand mixers, cupola furnaces, electric furnaces, water-cooled longevous cupola furnaces, CNC vertical machining centers, CNC machines, NC vertical lathes, radial drills, Jinan Meide proprietary automatic machines, hot-dipped galvanization line, automatic box sealing line, stereoscopic warehouse and so on.



Pattern



Core Making



Sand Mulling



Tokyu AMF-111055



DISA



Sinto FCMX



Melting



Pouring



End Grinding Line



Threading, Air Pressure Test, and Anti-rust Treatment



Warehouse



## Reliable Quality Assurance

Jinan Meide is honored as the National enterprise technical center and is capable and qualified to conduct full series of tests and inspections including chemical checking, etc.

Inspection facilities include: spectrometer, carbon sulfur analyzer, metallurgical microscope, tensile strength testing equipment, pressure testing equipment, adhesive force testing equipment, CMM, hardness tester, etc.

From incoming inspection to finished product, quality is checked and monitored in the whole process. Each step of the manufacturing process is carefully documented, regularly reviewed for revision control and updating standard. Quality procedures are constantly monitored and updated to assure that only the highest and most consistent quality products are supplied to our valued customers.



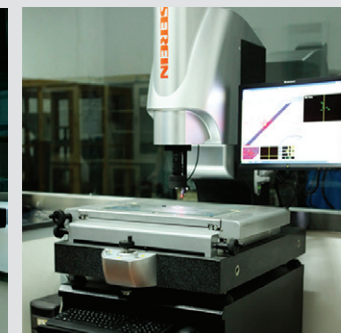
Metallurgical Microscope



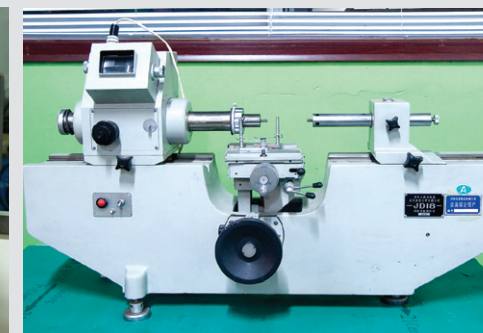
Spectrometer



CMM



Projector



The Length of The Test Instrument



Roughness Tester



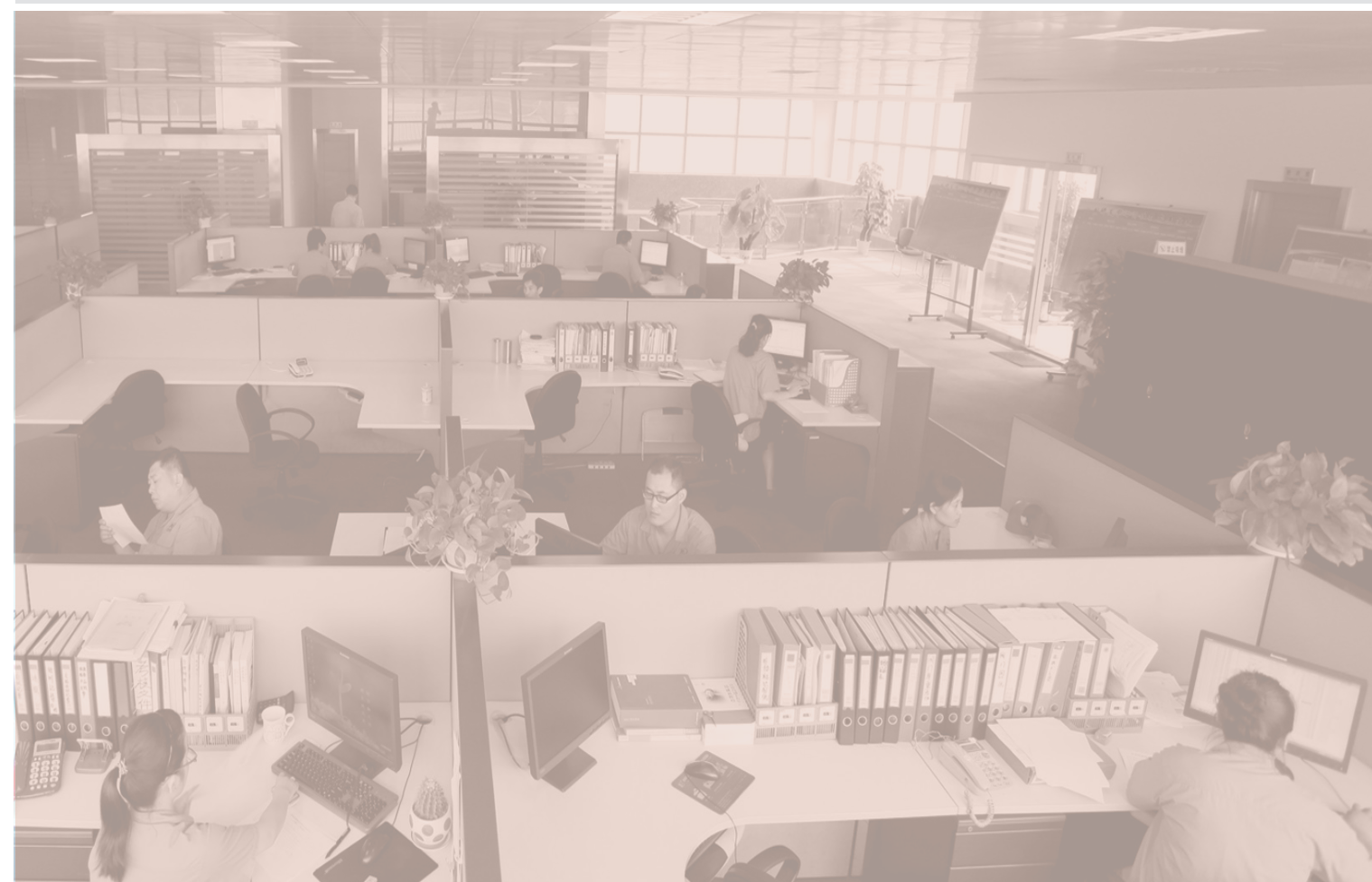
Carbon Sulfur Analyzer



Tensile Strength Testing Equipment

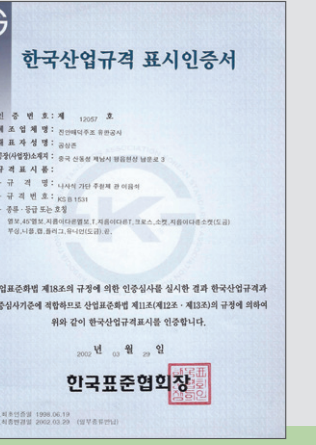
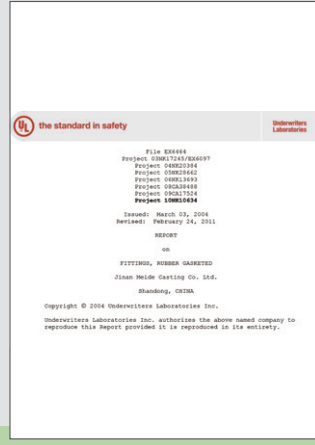
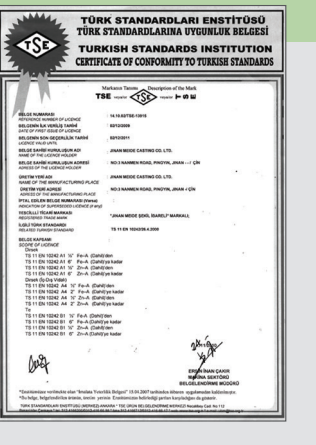
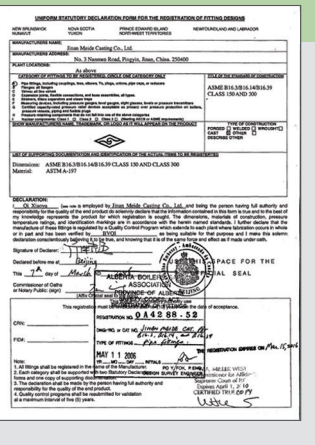
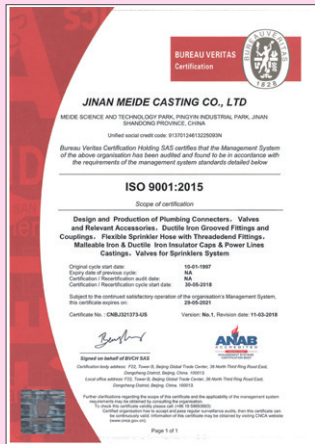
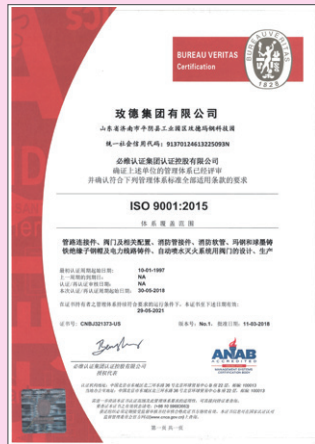


Sand Testing Instrument





# Certificates





# Ductile Iron Pipe Fittings

Material: ASTM A536  
Dimensions: ASME B16.3, B16.14  
Union Dimensions: ASME B16.39  
Threads: ASME B1.20.1, ISO 7-1  
Size Available: 1/2" - 4"



90  
Elbow, 90°



90R  
Reducing Elbow, 90°



96A  
Union Elbow, F/F,conical joint



120  
Elbow, 45°



130  
Tee



130R  
Reducing Tee



130R  
Reducing Tee



130R  
Reducing Tee



130R  
Reducing Tee



130R  
Reducing Tee



180  
Cross



180R  
Reducing Cross



220  
Coupling



1220  
Coupling, plain, with ribs



240  
Reducing Coupling



241  
Outside Hex Bushing



241N  
Inside Hex Bushing



291  
Plug



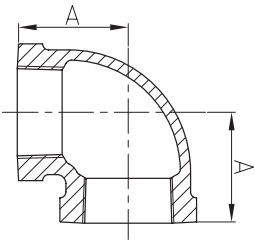
300  
Cap



342  
Union, conical joint,brass to iron seat

90

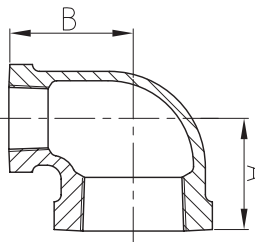
Elbow, 90°



| Size      | Inch | 1/2   | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|-----------|------|-------|------|------|-------|-------|------|
|           | mm   | 15    | 20   | 25   | 32    | 40    | 50   |
| Dim. (mm) | A    | 28.5  | 33.3 | 38.1 | 44.5  | 49.3  | 57.2 |
| Size      | Inch | 2 1/2 | 3    |      |       |       |      |
|           | mm   | 65    | 80   |      |       |       |      |
| Dim. (mm) | A    | 68.6  | 78.2 |      |       |       |      |

90R

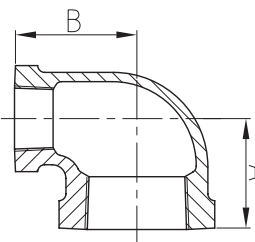
Reducing Elbow, 90°



| Size      | Inch | 3/4X1/2 | 1X1/2     | 1X3/4     | 1 1/4X1/2 | 1 1/4X3/4   |
|-----------|------|---------|-----------|-----------|-----------|-------------|
|           | mm   | 20X15   | 25X15     | 25X20     | 32X15     | 32X20       |
| Dim. (mm) | A    | 30.5    | 32        | 34.8      | 34        | 36.8        |
|           | B    | 31      | 35.5      | 36.8      | 38.9      | 41.2        |
| Size      | Inch | 1 1/4X1 | 1 1/2X1/2 | 1 1/2X3/4 | 1 1/2X1   | 1 1/2X1 1/4 |
|           | mm   | 32X25   | 40X15     | 40X20     | 40X25     | 40X32       |
| Dim. (mm) | A    | 40.1    | 35.8      | 38.6      | 41.9      | 46.2        |
|           | B    | 42.4    | 42.2      | 44.5      | 45.7      | 47.8        |

90R

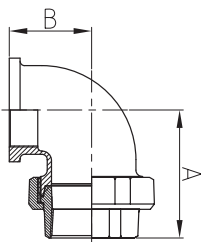
Reducing Elbow, 90°



| Size      | Inch | 2X1/2 | 2X3/4 | 2X1   | 2X1 1/4 | 2X1 1/2 |
|-----------|------|-------|-------|-------|---------|---------|
|           | mm   | 50X15 | 50X20 | 50X25 | 50X32   | 50X40   |
| Dim. (mm) | A    | 37.9  | 40.6  | 43.9  | 48.3    | 51.3    |
|           | B    | 47.8  | 50    | 51.3  | 53.3    | 54.9    |
| Size      | Inch |       |       |       |         |         |
|           | mm   |       |       |       |         |         |
| Dim. (mm) | A    |       |       |       |         |         |
|           | B    |       |       |       |         |         |

96A

Union Elbow, F/F,conical joint

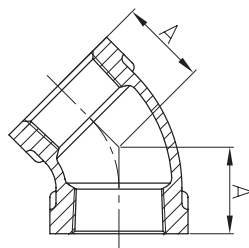


| Size      | Inch | 1/2 | 3/4 | 1  | 1 1/4 | 1 1/2 | 2  |
|-----------|------|-----|-----|----|-------|-------|----|
|           | mm   | 15  | 20  | 25 | 32    | 40    | 50 |
| Dim. (mm) | A    | 57  | 59  | 72 | 82    | 88    | 99 |
|           | B    | 27  | 29  | 34 | 43    | 47    | 56 |
| Size      | Inch |     |     |    |       |       |    |
|           | mm   |     |     |    |       |       |    |
| Dim. (mm) | A    |     |     |    |       |       |    |
|           | B    |     |     |    |       |       |    |



120

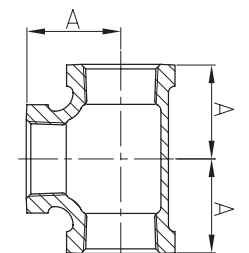
Elbow, 45°



|           |      |       |      |      |       |       |      |
|-----------|------|-------|------|------|-------|-------|------|
| Size      | Inch | 1/2   | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|           | mm   | 15    | 20   | 25   | 32    | 40    | 50   |
| Dim. (mm) | A    | 22.4  | 24.9 | 28.5 | 32.8  | 36.3  | 42.7 |
|           | B    |       |      |      |       |       |      |
| Size      | Inch | 2 1/2 |      |      |       |       |      |
|           | mm   | 65    |      |      |       |       |      |
| Dim. (mm) | A    | 49.5  |      |      |       |       |      |
|           | B    |       |      |      |       |       |      |

130

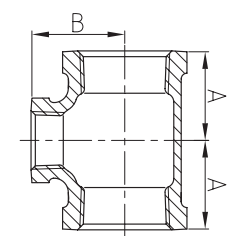
Tee



|           |      |       |      |      |       |       |      |
|-----------|------|-------|------|------|-------|-------|------|
| Size      | Inch | 1/2   | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|           | mm   | 15    | 20   | 25   | 32    | 40    | 50   |
| Dim. (mm) | A    | 28.5  | 33.3 | 38.1 | 44.5  | 49.3  | 57.2 |
|           | B    |       |      |      |       |       |      |
| Size      | Inch | 2 1/2 | 3    | 4    |       |       |      |
|           | mm   | 65    | 80   | 100  |       |       |      |
| Dim. (mm) | A    | 68.6  | 78.2 | 96.3 |       |       |      |
|           | B    |       |      |      |       |       |      |

130R

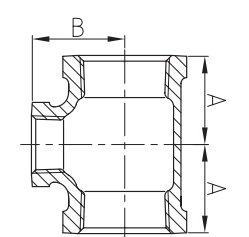
Reducing Tee



|           |      |         |           |           |           |             |
|-----------|------|---------|-----------|-----------|-----------|-------------|
| Size      | Inch | 3/4X1/2 | 1X1/2     | 1X3/4     | 1 1/4X1/2 | 1 1/4X3/4   |
|           | mm   | 20X15   | 25X15     | 25X20     | 32X15     | 32X20       |
| Dim. (mm) | A    | 30.5    | 32        | 34.8      | 34        | 36.8        |
|           | B    | 31      | 35.5      | 36.8      | 38.9      | 41.2        |
| Size      | Inch | 1 1/4X1 | 1 1/2X1/2 | 1 1/2X3/4 | 1 1/2X1   | 1 1/2X1 1/4 |
|           | mm   | 32X25   | 40X15     | 40X20     | 40X25     | 40X32       |
| Dim. (mm) | A    | 40.1    | 35.8      | 38.6      | 41.9      | 46.2        |
|           | B    | 42.4    | 42.2      | 44.5      | 45.7      | 47.8        |

130R

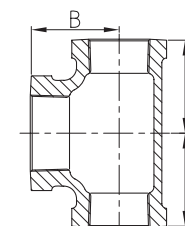
Reducing Tee



|           |      |       |       |       |         |         |
|-----------|------|-------|-------|-------|---------|---------|
| Size      | Inch | 2X1/2 | 2X3/4 | 2X1   | 2X1 1/4 | 2X1 1/2 |
|           | mm   | 50X15 | 50X20 | 50X25 | 50X32   | 50X40   |
| Dim. (mm) | A    | 37.9  | 40.6  | 43.9  | 48.3    | 51.3    |
|           | B    | 47.8  | 50    | 51.3  | 53.3    | 54.9    |
| Size      | Inch |       |       |       |         |         |
|           | mm   |       |       |       |         |         |
| Dim. (mm) | A    |       |       |       |         |         |
|           | B    |       |       |       |         |         |

130R

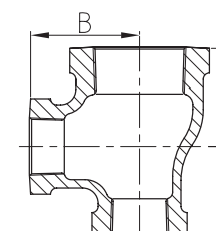
Reducing Tee



|           |      |               |               |           |                   |
|-----------|------|---------------|---------------|-----------|-------------------|
| Size      | Inch | 3/4X3/4X1     | 1X1X1 1/4     | 1X1X1 1/2 | 1 1/4X1 1/4X1 1/2 |
|           | mm   | 20X20X25      | 25X25X32      | 25X25X40  | 32X32X40          |
| Dim. (mm) | A    | 36.8          | 42.4          | 45.7      | 47.8              |
|           | B    | 34.8          | 40.1          | 41.9      | 46.2              |
| Size      | Inch | 1 1/4X1 1/4X2 | 1 1/2X1 1/2X2 | 2X2X2 1/2 |                   |
|           | mm   | 32X32X50      | 40X40X50      | 50X50X65  |                   |
| Dim. (mm) | A    | 53.3          | 54.9          | 66        |                   |
|           | B    | 48.3          | 51.3          | 60.7      |                   |

130R

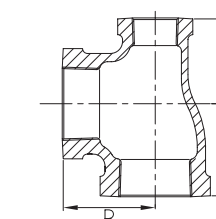
Reducing Tee



|           |      |               |           |           |                   |
|-----------|------|---------------|-----------|-----------|-------------------|
| Size      | Inch | 1X3/4X3/4     | 1 1/4X1X1 | 1 1/2X1X1 | 1 1/2X1 1/4X1 1/4 |
|           | mm   | 25X20X20      | 32X25X25  | 40X25X25  | 40X32X32          |
| Dim. (mm) | A    | 34.8          | 40.1      | 41.9      | 46.2              |
|           | B    | 36.8          | 42.4      | 45.7      | 47.8              |
|           | C    | 33.3          | 38.1      | 38.1      | 44.5              |
| Size      | Inch | 2X1 1/2X1 1/2 |           |           |                   |
|           | mm   | 50X40X40      |           |           |                   |
| Dim. (mm) | A    | 51.3          |           |           |                   |
|           | B    | 54.9          |           |           |                   |
|           | C    | 49.3          |           |           |                   |

130R

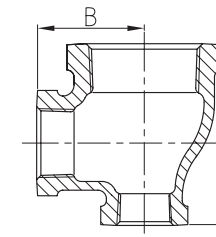
Reducing Tee



|           |      |                   |          |                 |               |               |
|-----------|------|-------------------|----------|-----------------|---------------|---------------|
| Size      | Inch | 1X1/2X1           | 1X3/4X1  | 1 1/4X1/2X1 1/4 | 1 1/4X1X1 1/4 | 1 1/2X1X1 1/2 |
|           | mm   | 25X15X25          | 25X20X25 | 32X15X32        | 32X25X32      | 40X25X40      |
| Dim. (mm) | A    | 38.1              | 38.1     | 44.5            | 44.5          | 49.3          |
|           | B    | 38.1              | 38.1     | 44.5            | 44.5          | 49.3          |
|           | C    | 35.5              | 36.8     | 38.9            | 42.4          | 45.7          |
| Size      | Inch | 1 1/2X1 1/4X1 1/2 | 2X1X2    | 2X1 1/4X2       | 2X1 1/2X2     |               |
|           | mm   | 40X32X40          | 50X25X50 | 50X32X50        | 50X40X50      |               |
| Dim. (mm) | A    | 49.3              | 57.2     | 57.2            | 57.2          |               |
|           | B    | 49.3              | 57.2     | 57.2            | 57.2          |               |
|           | C    | 47.8              | 51.3     | 53.3            | 54.8          |               |

130R

Reducing Tee

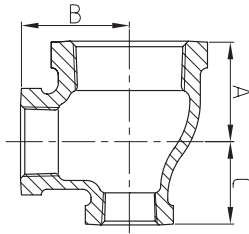


|           |      |             |               |                 |                 |
|-----------|------|-------------|---------------|-----------------|-----------------|
| Size      | Inch | 1 1/4X1X1/2 | 1 1/4X1X3/4   | 1 1/4X1X1/2     | 1 1/2X1X1/2     |
|           | mm   | 32X25X15    | 32X25X20      | 32X25X40        | 40X25X15        |
| Dim. (mm) | A    | 34          | 36.8          | 48              | 35.8            |
|           | B    | 38.9        | 41.2          | 46              | 42.2            |
|           | C    | 32          | 34.8          | 46              | 34              |
| Size      | Inch | 1 1/2X1X3/4 | 1 1/2X1X1 1/4 | 1 1/2X1 1/4X1/2 | 1 1/2X1 1/4X3/4 |
|           | mm   | 40X25X20    | 40X25X32      | 40X32X15        | 40X32X20        |
| Dim. (mm) | A    | 38.6        | 46.2          | 35.8            | 38.6            |
|           | B    | 44.5        | 47.8          | 42.2            | 44.5            |
|           | C    | 34.8        | 42.4          | 34              | 36.3            |



## 130R

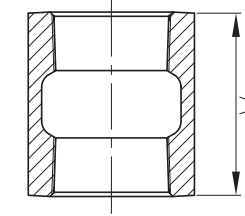
Reducing Tee



| Size      | Inch | 11/2X11/4X1 | 11/2X11/4X2 | 2X1X11/2 | 2X11/4X1    |
|-----------|------|-------------|-------------|----------|-------------|
| mm        |      | 40X32X25    | 40X32X50    | 50X25X40 | 50X32X25    |
| Dim. (mm) | A    | 41.9        | 54.9        | 51.3     | 44          |
|           | B    | 45.7        | 51.3        | 54.9     | 51          |
|           | C    | 40.1        | 53.3        | 45.7     | 40          |
| Size      | Inch | 2X11/2X11/2 | 2X11/2X3/4  | 2X11/2X1 | 2X11/2X11/4 |
| mm        |      | 50X40X15    | 50X40X20    | 50X40X25 | 50X40X32    |
| Dim. (mm) | A    | 37.9        | 40.5        | 43.9     | 48.3        |
|           | B    | 47.8        | 50          | 51.3     | 53.3        |
|           | C    | 35.8        | 38.5        | 41.9     | 46.2        |

## 1220

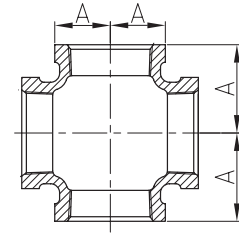
Coupling, plain, with ribs



| Size      | Inch | 1/2  | 3/4 | 1  | 11/4 | 11/2 | 2    |
|-----------|------|------|-----|----|------|------|------|
| mm        |      | 15   | 20  | 25 | 32   | 40   | 50   |
| Dim. (mm) | A    | 35   | 40  | 46 | 50   | 56.5 | 65.5 |
| Size      | Inch | 21/2 |     |    |      |      |      |
| mm        |      | 65   |     |    |      |      |      |
| Dim. (mm) | A    | 74.5 |     |    |      |      |      |

## 180

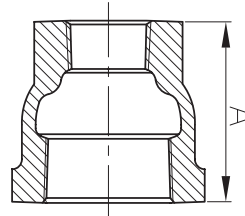
Cross



| Size      | Inch | 3/4  | 1    | 11/4 | 11/2 | 2    |  |
|-----------|------|------|------|------|------|------|--|
| mm        |      | 20   | 25   | 32   | 40   | 50   |  |
| Dim. (mm) | A    | 33.1 | 38.1 | 44.5 | 49.3 | 57.2 |  |
| Size      | Inch |      |      |      |      |      |  |
| mm        |      |      |      |      |      |      |  |
| Dim. (mm) | A    |      |      |      |      |      |  |

## 240

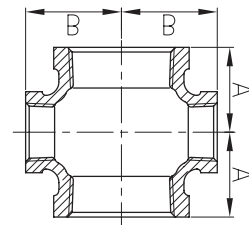
Reducing Coupling



| Size      | Inch | 1X1/2     | 1X3/4 | 11/4X3/4 | 11/4X1 | 11/2X1 |
|-----------|------|-----------|-------|----------|--------|--------|
| mm        |      | 25X15     | 25X20 | 32X20    | 32X22  | 40X25  |
| Dim. (mm) | A    | 42.9      | 42.9  | 52.3     | 52.3   | 58.7   |
| Size      | Inch | 11/2X11/4 | 2X1   | 2X11/4   | 2X11/2 |        |
| mm        |      | 40X32     | 50X25 | 50X32    | 50X40  |        |
| Dim. (mm) | A    | 58.7      | 71.4  | 71.4     | 71.4   |        |

## 180R

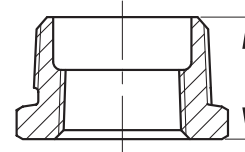
Reducing Cross



| Size      | Inch | 11/4X1 | 11/2X1 | 11/2X11/4 | 2X1   |  |
|-----------|------|--------|--------|-----------|-------|--|
| mm        |      | 32X25  | 40X25  | 40X32     | 50X25 |  |
| Dim. (mm) | A    | 40.1   | 41.9   | 46.2      | 43.9  |  |
|           | B    | 42.4   | 45.7   | 47.8      | 51.3  |  |
| Size      | Inch |        |        |           |       |  |
| mm        |      |        |        |           |       |  |
| Dim. (mm) | A    |        |        |           |       |  |
|           | B    |        |        |           |       |  |

## 241

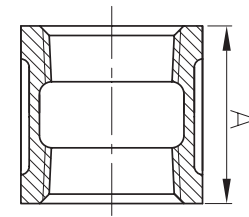
Outside Hex Bushing



| Size      | Inch | 1X1/2  | 1X3/4  | 11/4X1 | 11/2X1 | 11/2X11/4 |
|-----------|------|--------|--------|--------|--------|-----------|
| mm        |      | 25X15  | 25X20  | 32X25  | 40X25  | 40X32     |
| Dim. (mm) | A    | 25.5   | 25.5   | 27.4   | 29     | 29        |
| Size      | Inch | 2X11/4 | 2X11/2 |        |        |           |
| mm        |      | 50X32  | 50X40  |        |        |           |
| Dim. (mm) | A    | 31     | 31     |        |        |           |

## 220

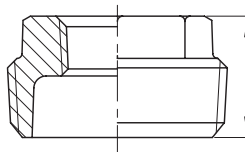
Coupling



| Size      | Inch | 1/2  | 3/4  | 1    | 11/4 | 11/2 | 2    |
|-----------|------|------|------|------|------|------|------|
| mm        |      | 15   | 20   | 25   | 32   | 40   | 50   |
| Dim. (mm) | A    | 34.0 | 38.6 | 42.4 | 49   | 54.6 | 64.3 |
| Size      | Inch |      |      |      |      |      |      |
| mm        |      |      |      |      |      |      |      |
| Dim. (mm) | A    |      |      |      |      |      |      |

## 241N

Inside Hex Bushing

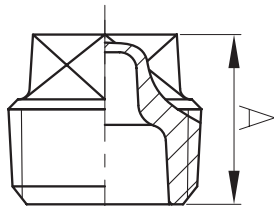
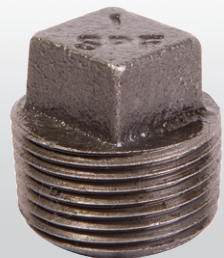


| Size      | Inch  | 2X1   |  |  |  |  |
|-----------|-------|-------|--|--|--|--|
| mm        |       | 50X25 |  |  |  |  |
| Dim. (mm) | A Min | 32.8  |  |  |  |  |
| Size      | Inch  |       |  |  |  |  |
| mm        |       |       |  |  |  |  |
| Dim. (mm) | A Min |       |  |  |  |  |



291

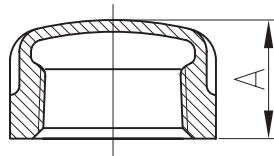
Plug



|              |       |      |      |      |       |       |
|--------------|-------|------|------|------|-------|-------|
| Size         | Inch  | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 |
|              | mm    | 15   | 20   | 25   | 32    | 40    |
| Dim.<br>(mm) | A Min | 23.9 | 27.2 | 31.8 | 34.5  | 36.9  |
|              |       |      |      |      |       |       |
| Size         | Inch  | 2    |      |      |       |       |
|              | mm    | 50   |      |      |       |       |
| Dim.<br>(mm) | A Min | 39.7 |      |      |       |       |
|              |       |      |      |      |       |       |

300

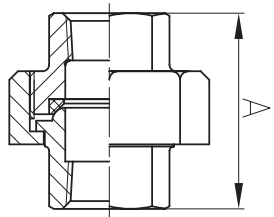
Cap



|              |       |      |       |      |       |       |
|--------------|-------|------|-------|------|-------|-------|
| Size         | Inch  | 1/2  | 3/4   | 1    | 1 1/4 | 1 1/2 |
|              | mm    | 15   | 20    | 25   | 32    | 40    |
| Dim.<br>(mm) | A Min | 22.1 | 24.6  | 29.5 | 32.5  | 33.8  |
|              |       |      |       |      |       |       |
| Size         | Inch  | 2    | 2 1/2 |      |       |       |
|              | mm    | 50   | 65    |      |       |       |
| Dim.<br>(mm) | A Min | 36.8 | 43.2  |      |       |       |
|              |       |      |       |      |       |       |

342

Union, conical joint, brass to iron seat



|              |       |      |       |       |    |  |
|--------------|-------|------|-------|-------|----|--|
| Size         | Inch  | 1    | 1 1/4 | 1 1/2 | 2  |  |
|              | mm    | 25   | 32    | 40    | 50 |  |
| Dim.<br>(mm) | A Min | 52.5 | 57.5  | 61    | 70 |  |
|              |       |      |       |       |    |  |
| Size         | Inch  |      |       |       |    |  |
|              | mm    |      |       |       |    |  |
| Dim.<br>(mm) | A Min |      |       |       |    |  |
|              |       |      |       |       |    |  |

## Cast Iron Pipe Fittings

Material: ASTM A126  
Dimensions: ASME B16.4, B16.14  
Threads: ASME B1.20.1  
Size Available: 1/2" - 4"



90  
Elbow, 90°



90R  
Reducing Elbow, 90°



120  
Elbow, 45°



130  
Tee



130R  
Reducing Tee



130R  
Reducing Tee



130R  
Reducing Tee



130R  
Reducing Tee



130R  
Reducing Tee



180  
Cross



240  
Reducing Coupling



291  
Cored Plug

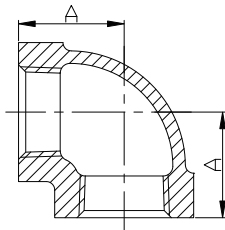


291S  
Solid Plug



90

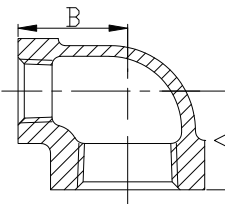
Elbow, 90°



|           |      |       |      |    |       |       |    |
|-----------|------|-------|------|----|-------|-------|----|
| Size      | Inch | 1/2   | 3/4  | 1  | 1 1/4 | 1 1/2 | 2  |
|           | mm   | 15    | 20   | 25 | 32    | 40    | 50 |
| Dim. (mm) | A    | 28.5  | 33.5 | 38 | 44.5  | 49.5  | 57 |
|           | B    |       |      |    |       |       |    |
| Size      | Inch | 2 1/2 |      |    |       |       |    |
|           | mm   | 65    |      |    |       |       |    |
| Dim. (mm) | A    | 68.5  |      |    |       |       |    |
|           | B    |       |      |    |       |       |    |

90R

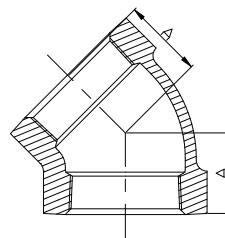
Reducing Elbow, 90°



|           |      |         |             |           |           |         |           |           |
|-----------|------|---------|-------------|-----------|-----------|---------|-----------|-----------|
| Size      | Inch | 1X1/2   | 1X3/4       | 1 1/4X1/2 | 1 1/4X3/4 | 1 1/4X1 | 1 1/2X1/2 | 1 1/2X3/4 |
|           | mm   | 25X15   | 25X20       | 32X15     | 32X20     | 32X25   | 40X15     | 40X20     |
| Dim. (mm) | A    | 32      | 35          | 34        | 37        | 40      | 36        | 38.5      |
|           | B    | 34.5    | 37          | 39        | 41        | 42.5    | 42        | 44.5      |
| Size      | Inch | 1 1/2X1 | 1 1/2X1 1/4 | 2X3/4     | 2X1       | 2X1 1/4 | 2X1 1/2   |           |
|           | mm   | 40X25   | 40X32       | 50X20     | 50X25     | 50X32   | 50X40     |           |
| Dim. (mm) | A    | 42      | 46          | 40.5      | 44        | 48.5    | 51.5      |           |
|           | B    | 45.5    | 48          | 50        | 51.5      | 53.5    | 55        |           |

120

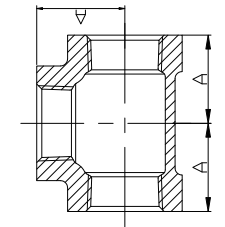
Elbow.45°



|           |      |      |       |       |      |  |  |
|-----------|------|------|-------|-------|------|--|--|
| Size      | Inch | 1    | 1 1/4 | 1 1/2 | 2    |  |  |
|           | mm   | 25   | 32    | 40    | 50   |  |  |
| Dim. (mm) | A    | 28.5 | 33    | 36.5  | 42.5 |  |  |
|           | B    |      |       |       |      |  |  |
| Size      | Inch |      |       |       |      |  |  |
|           | mm   |      |       |       |      |  |  |
| Dim. (mm) | A    |      |       |       |      |  |  |
|           | B    |      |       |       |      |  |  |

130

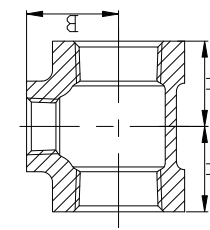
Tee



|           |      |      |    |       |       |    |       |
|-----------|------|------|----|-------|-------|----|-------|
| Size      | Inch | 3/4  | 1  | 1 1/4 | 1 1/2 | 2  | 2 1/2 |
|           | mm   | 20   | 25 | 32    | 40    | 50 | 65    |
| Dim. (mm) | A    | 33.5 | 38 | 44.5  | 49.5  | 57 | 68.5  |
|           | B    |      |    |       |       |    |       |
| Size      | Inch |      |    |       |       |    |       |
|           | mm   |      |    |       |       |    |       |
| Dim. (mm) | A    |      |    |       |       |    |       |
|           | B    |      |    |       |       |    |       |

130R

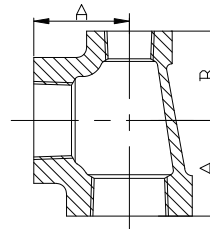
Reducing Tee



|           |      |         |             |         |           |         |           |           |
|-----------|------|---------|-------------|---------|-----------|---------|-----------|-----------|
| Size      | Inch | 1X1/2   | 1X3/4       | 1 1/4X1 | 1 1/4X3/4 | 1 1/4X1 | 1 1/2X1/2 | 1 1/2X3/4 |
|           | mm   | 25X15   | 25X20       | 32X15   | 32X20     | 32X25   | 40X15     | 40X20     |
| Dim. (mm) | A    | 32      | 35          | 34      | 37        | 40      | 36        | 38.5      |
|           | B    | 35.5    | 37          | 39      | 41        | 42.5    | 42        | 44.5      |
| Size      | Inch | 1 1/2X1 | 1 1/2X1 1/4 | 2X1/2   | 2X3/4     | 2X1     | 2X1 1/4   | 2X1 1/2   |
|           | mm   | 40X25   | 40X32       | 50X15   | 50X20     | 50X25   | 50X32     | 50X40     |
| Dim. (mm) | A    | 42      | 46          | 38      | 40.5      | 44      | 48.5      | 51.5      |
|           | B    | 45.5    | 48          | 48      | 50        | 51.5    | 53.5      | 55        |

130R

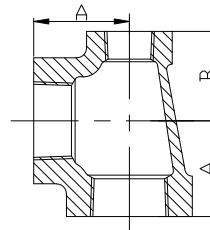
Reducing Tee



|           |      |               |                   |                 |                 |
|-----------|------|---------------|-------------------|-----------------|-----------------|
| Size      | Inch | 1X1/2X1       | 1X3/4X1           | 1 1/4X1/2X1 1/4 | 1 1/4X1/2X1 1/4 |
|           | mm   | 25X15X25      | 25X20X25          | 32X15X32        | 32X25X32        |
| Dim. (mm) | A    | 38            | 38                | 44.5            | 44.5            |
|           | B    | 34.5          | 37                | 39              | 42.5            |
| Size      | Inch | 1 1/2X1X1 1/2 | 1 1/2X1 1/4X1 1/2 | 2X1X2           | 2X1 1/4X2       |
|           | mm   | 40X25X40      | 40X32X40          | 50X25X50        | 50X32X50        |
| Dim. (mm) | A    | 49.5          | 49.5              | 57              | 57              |
|           | B    | 45.5          | 47.5              | 51.5            | 53.5            |

130R

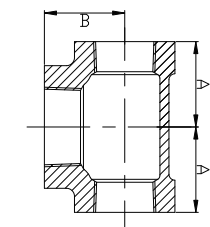
Reducing Tee



|           |      |                 |                 |  |  |
|-----------|------|-----------------|-----------------|--|--|
| Size      | Inch | 1 1/2X1/2X1 1/2 | 1 1/2X3/4X1 1/2 |  |  |
|           | mm   | 40X15X40        | 40X20X40        |  |  |
| Dim. (mm) | A    | 49.5            | 49.5            |  |  |
|           | B    | 42              | 44.5            |  |  |
| Size      | Inch | 2X1 1/2X2       |                 |  |  |
|           | mm   | 50X40X50        |                 |  |  |
| Dim. (mm) | A    | 57              |                 |  |  |
|           | B    | 55              |                 |  |  |

130R

Reducing Tee

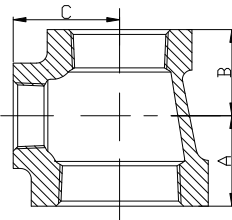


|           |      |               |           |                   |               |
|-----------|------|---------------|-----------|-------------------|---------------|
| Size      | Inch | 1X1X1 1/4     | 1X1X1 1/2 | 1 1/4X1 1/4X1 1/2 | 1 1/4X1 1/4X2 |
|           | mm   | 25X25X32      | 25X25X40  | 32X32X40          | 32X32X50      |
| Dim. (mm) | A    | 42.5          | 45.5      | 48                | 53.5          |
|           | B    | 40            | 42        | 46                | 48.5          |
| Size      | Inch | 1 1/2X1 1/2X2 | 2X2X2 1/2 |                   |               |
|           | mm   | 40X40X50      | 50X50X65  |                   |               |
| Dim. (mm) | A    | 55            | 66        |                   |               |
|           | B    | 51.5          | 60.5      |                   |               |



130R

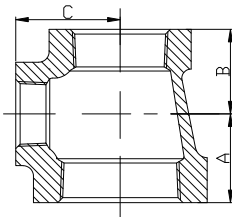
Reducing Tee



|           |      |             |               |               |             |
|-----------|------|-------------|---------------|---------------|-------------|
| Size      | Inch | 11/4X1X1/2  | 11/4X1X3/4    | 11/4X1X11/2   | 11/2X1X3/4  |
|           | mm   | 32X25X15    | 32X25X20      | 32X25X40      | 40X25X20    |
| Dim. (mm) | A    | 34          | 37            | 46.5          | 38.5        |
|           | B    | 32          | 35            | 44.5          | 35          |
|           | C    | 39          | 41            | 44.5          | 44.5        |
| Size      | Inch | 11/2X1X11/4 | 11/2X11/4X1/2 | 11/2X11/4X3/4 | 11/2X11/4X1 |
|           | mm   | 40X25X32    | 40X32X15      | 40X32X20      | 40X32X25    |
| Dim. (mm) | A    | 46          | 36            | 37            | 42          |
|           | B    | 42.5        | 34            | 37            | 40          |
|           | C    | 47.5        | 42            | 44.5          | 45.5        |

130R

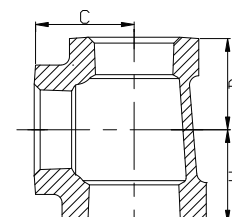
Reducing Tee



|           |      |             |            |            |          |
|-----------|------|-------------|------------|------------|----------|
| Size      | Inch | 11/2X11/4X2 | 2X11/2X1/2 | 2X11/2X3/4 | 2X11/2X1 |
|           | mm   | 40X32X50    | 50X40X15   | 50X40X20   | 50X40X25 |
| Dim. (mm) | A    | 55          | 38         | 40.5       | 44       |
|           | B    | 53.5        | 36         | 38.5       | 42       |
|           | C    | 51.5        | 48         | 50         | 51.5     |
| Size      | Inch | 2X11/2X11/4 |            |            |          |
|           | mm   | 50X40X32    |            |            |          |
| Dim. (mm) | A    | 48.5        |            |            |          |
|           | B    | 46          |            |            |          |
|           | C    | 53.5        |            |            |          |

130R

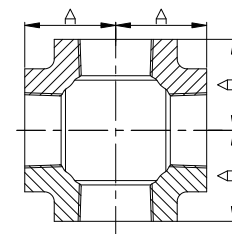
Reducing Tee



|           |      |          |          |                |             |
|-----------|------|----------|----------|----------------|-------------|
| Size      | Inch | 11/4X1X1 | 11/2X1X1 | 11/2X11/4X11/4 | 2X11/2X11/2 |
|           | mm   | 32X25X25 | 40X25X25 | 40X32X32       | 50X40X40    |
| Dim. (mm) | A    | 40       | 42       | 46             | 51.5        |
|           | B    | 38       | 38       | 44.5           | 49.5        |
|           | C    | 42.5     | 45.5     | 48             | 55          |

180

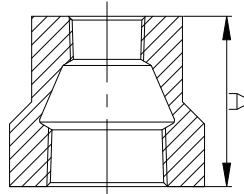
Cross



|           |      |    |  |  |  |  |  |
|-----------|------|----|--|--|--|--|--|
| Size      | Inch | 1  |  |  |  |  |  |
|           | mm   | 25 |  |  |  |  |  |
| Dim. (mm) | A    | 37 |  |  |  |  |  |
|           |      |    |  |  |  |  |  |
| Size      | Inch |    |  |  |  |  |  |
|           | mm   |    |  |  |  |  |  |
| Dim. (mm) | A    |    |  |  |  |  |  |
|           |      |    |  |  |  |  |  |

240

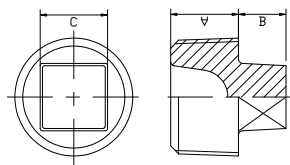
Reducing Coupling



|           |      |       |       |       |  |  |  |
|-----------|------|-------|-------|-------|--|--|--|
| Size      | Inch | 1X1/2 | 1X3/4 | 2X1   |  |  |  |
|           | mm   | 25X15 | 25X20 | 50X25 |  |  |  |
| Dim. (mm) | A    | 43    | 43    | 59    |  |  |  |
|           |      |       |       |       |  |  |  |
| Size      | Inch |       |       |       |  |  |  |
|           | mm   |       |       |       |  |  |  |
| Dim. (mm) | A    |       |       |       |  |  |  |
|           |      |       |       |       |  |  |  |

291

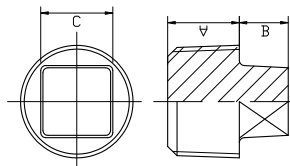
Cored Plug



|           |      |      |      |      |      |      |
|-----------|------|------|------|------|------|------|
| Size      | Inch | 3/4  | 1    | 11/4 | 11/2 | 2    |
|           | mm   | 20   | 25   | 32   | 40   | 50   |
| Dim. (mm) | A    | 16.5 | 19.5 | 20.5 | 21.6 | 22.6 |
|           | B    | 11.5 | 13   | 14.5 | 16   | 17.5 |
|           | C    | 15.6 | 20.4 | 23   | 28   | 32.8 |

291S

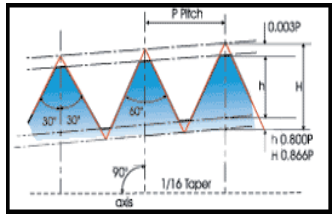
Solid Plug



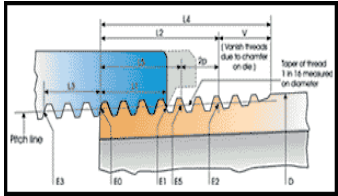
|           |      |      |  |  |  |  |
|-----------|------|------|--|--|--|--|
| Size      | Inch | 1/2  |  |  |  |  |
|           | mm   | 15   |  |  |  |  |
| Dim. (mm) | A    | 14.5 |  |  |  |  |
|           | B    | 10   |  |  |  |  |
|           | C    | 14   |  |  |  |  |



Basic Dimension, for American Standard Pipe Threads



Taper thread  
 $H=0.866025 \quad p=0.866025/n$   
 $h=0.800 \quad p=0.800/n$



Taper thread  
 $L2=(0.8D+6.8) \quad 1/n=(0.80D+6.8)p$

| Nominal<br>Pipe<br>Size(inchs) | O.D. of<br>Pipe<br>(D) | Threads<br>/in<br>(N) | Pitch of<br>Thread<br>(P) | Pitch Dia.<br>at Beginning<br>of External<br>Thread(E0) | Handtight Engagement |        |                | Effective Thread.Extenal |        |               | Depth of<br>Thread<br>h |
|--------------------------------|------------------------|-----------------------|---------------------------|---------------------------------------------------------|----------------------|--------|----------------|--------------------------|--------|---------------|-------------------------|
|                                |                        |                       |                           |                                                         | Length² ( L1)        |        | Diam².<br>(E1) | Length⁴ ( L2)            |        | Diam.<br>(E2) |                         |
|                                |                        |                       |                           |                                                         | Inch                 | Thread |                | Inch                     | Thread |               |                         |
| 1/8                            | 0.405                  | 27.0                  | 0.03704                   | 0.36351                                                 | 0.1615               | 4.36   | 0.37360        | 0.2639                   | 7.12   | 0.38000       | 0.029                   |
| 1/4                            | 0.540                  | 18.0                  | 0.05556                   | 0.47739                                                 | 0.2278               | 4.10   | 0.49163        | 0.4018                   | 7.23   | 0.50250       | 0.044                   |
| 3/8                            | 0.675                  | 18.0                  | 0.05556                   | 0.61201                                                 | 0.2400               | 4.32   | 0.62701        | 0.4078                   | 7.34   | 0.63750       | 0.044                   |
| 1/2                            | 0.840                  | 14.0                  | 0.07143                   | 0.75843                                                 | 0.3200               | 4.48   | 0.77843        | 0.5337                   | 7.47   | 0.79179       | 0.057                   |
| 3/4                            | 1.050                  | 14.0                  | 0.07143                   | 0.96768                                                 | 0.3390               | 4.75   | 0.98887        | 0.5457                   | 7.64   | 1.00179       | 0.057                   |
| 1                              | 1.315                  | 11.5                  | 0.08696                   | 1.21363                                                 | 0.4000               | 4.60   | 1.23863        | 0.6826                   | 7.85   | 1.25630       | 0.069                   |
| 1 1/4                          | 1.660                  | 11.5                  | 0.08696                   | 1.55713                                                 | 0.4200               | 4.83   | 1.58338        | 0.7068                   | 8.13   | 1.60130       | 0.069                   |
| 1 1/2                          | 1.900                  | 11.5                  | 0.08696                   | 1.79609                                                 | 0.4200               | 4.83   | 1.82234        | 0.7235                   | 8.32   | 1.84130       | 0.069                   |
| 2                              | 2.375                  | 11.5                  | 0.08696                   | 2.26902                                                 | 0.4360               | 5.01   | 2.29627        | 0.7565                   | 8.70   | 2.31630       | 0.069                   |
| 2 1/2                          | 2.875                  | 8.0                   | 0.12500                   | 2.71953                                                 | 0.6820               | 5.46   | 2.76216        | 131375                   | 9.10   | 2.79062       | 0.100                   |
| 3                              | 3.500                  | 8.0                   | 0.12500                   | 3.34062                                                 | 0.7660               | 6.13   | 3.38850        | 1.2000                   | 9.60   | 3.41562       | 0.100                   |
| 3 1/2                          | 4.000                  | 8.0                   | 0.12500                   | 3.83750                                                 | 0.8210               | 6.57   | 3.88881        | 1.2500                   | 10.00  | 3.91562       | 0.100                   |
| 4                              | 4.500                  | 8.0                   | 0.12500                   | 4.33438                                                 | 0.8440               | 6.75   | 4.38712        | 1.3000                   | 10.40  | 4.41562       | 0.100                   |
| 5                              | 5.563                  | 8.0                   | 0.12500                   | 5.39073                                                 | 0.9370               | 7.50   | 5.44929        | 1.4063                   | 11.25  | 5.47862       | 0.100                   |
| 6                              | 6.625                  | 8.0                   | 0.12500                   | 6.44609                                                 | 0.9580               | 7.66   | 6.50597        | 1.5125                   | 12.10  | 6.54062       | 0.100                   |

| Nominal<br>Pipe<br>Size<br>(inches) | Length,L1 Plane<br>to L2 Plane<br>External Thread<br>(L2-L1) |        | Wrench Makeup Length<br>for Internal Thread <sup>7</sup> |                 |               | Vanish Thread<br>(V) |        | Overall <sup>8</sup><br>Length<br>External<br>Thread<br>(L4) | Nominal Complete<br>External Thread <sup>5</sup> |         | Height of<br>Thread(h) | Increase in<br>Diam./<br>Thread<br>(0.0625/n) | Basic <sup>6</sup><br>Minor<br>Diam.At<br>Small<br>End of<br>Pipe(K0) |
|-------------------------------------|--------------------------------------------------------------|--------|----------------------------------------------------------|-----------------|---------------|----------------------|--------|--------------------------------------------------------------|--------------------------------------------------|---------|------------------------|-----------------------------------------------|-----------------------------------------------------------------------|
|                                     | Length(L3)                                                   |        | Diam.<br>(E3)                                            | Length.<br>(L5) | Diam.<br>(E5) |                      |        |                                                              |                                                  |         |                        |                                               |                                                                       |
|                                     | Inch                                                         | Thread |                                                          |                 |               | Inch                 | Thread |                                                              | Inch                                             | Thread  |                        |                                               |                                                                       |
| 1/8                                 | 0.1024                                                       | 2.76   | 0.1111                                                   | 3               | 0.35656       | 0.1285               | 3.47   | 0.3924                                                       | 0.1898                                           | 0.37537 | 0.02963                | 0.00231                                       | 0.3339                                                                |
| 1/4                                 | 0.1740                                                       | 3.13   | 0.1667                                                   | 3               | 0.46697       | 0.1928               | 3.47   | 0.5946                                                       | 0.2907                                           | 0.49556 | 0.04444                | 0.00347                                       | 0.4329                                                                |
| 3/8                                 | 0.1678                                                       | 3.02   | 0.1667                                                   | 3               | 0.60160       | 0.1928               | 3.47   | 0.6006                                                       | 0.2967                                           | 0.63056 | 0.04444                | 0.00347                                       | 0.5676                                                                |
| 1/2                                 | 0.2137                                                       | 2.99   | 0.2143                                                   | 3               | 0.74504       | 0.2478               | 3.47   | 0.7815                                                       | 0.3909                                           | 0.78286 | 0.05714                | 0.00446                                       | 0.7013                                                                |
| 3/4                                 | 0.2067                                                       | 2.89   | 0.2143                                                   | 3               | 0.95429       | 0.2478               | 3.47   | 0.7935                                                       | 0.4029                                           | 0.99286 | 0.05714                | 0.00446                                       | 0.9105                                                                |
| 1                                   | 0.2828                                                       | 3.25   | 0.2609                                                   | 3               | 1.19733       | 0.3017               | 3.47   | 0.9845                                                       | 0.5089                                           | 1.24543 | 0.06957                | 0.00543                                       | 1.1441                                                                |
| 1 1/4                               | 0.2868                                                       | 3.30   | 0.2609                                                   | 3               | 1.54083       | 0.3017               | 3.47   | 1.0085                                                       | 0.5329                                           | 1.59043 | 0.06957                | 0.00543                                       | 1.4876                                                                |
| 1 1/2                               | 0.3035                                                       | 3.49   | 0.2609                                                   | 3               | 1.77978       | 0.3017               | 3.47   | 1.0252                                                       | 0.5496                                           | 1.83043 | 0.06957                | 0.00543                                       | 1.7265                                                                |
| 2                                   | 0.3205                                                       | 3.69   | 0.2609                                                   | 3               | 2.25272       | 0.3017               | 3.47   | 1.0582                                                       | 0.5826                                           | 2.30543 | 0.06957                | 0.00543                                       | 2.1995                                                                |
| 2 1/2                               | 0.4555                                                       | 3.64   | 0.2500                                                   | 2               | 2.70391       | 0.4337               | 3.47   | 1.5712                                                       | 0.8875                                           | 2.77500 | 0.10000                | 0.00781                                       | 2.6195                                                                |
| 3                                   | 0.4340                                                       | 3.47   | 0.2500                                                   | 2               | 3.32500       | 0.4337               | 3.47   | 1.6337                                                       | 0.9500                                           | 3.40000 | 0.10000                | 0.00781                                       | 3.2406                                                                |
| 3 1/2                               | 0.4290                                                       | 3.43   | 0.2500                                                   | 2               | 3.82188       | 0.4337               | 3.47   | 1.6837                                                       | 1.0000                                           | 3.90000 | 0.10000                | 0.00781                                       | 3.7375                                                                |
| 4                                   | 0.4560                                                       | 3.65   | 0.2500                                                   | 2               | 4.31875       | 0.4337               | 3.47   | 1.7337                                                       | 1.0500                                           | 4.40000 | 0.10000                | 0.00781                                       | 4.2344                                                                |
| 5                                   | 0.4693                                                       | 3.75   | 0.2500                                                   | 2               | 5.37511       | 0.4337               | 3.47   | 1.8400                                                       | 1.1563                                           | 5.46300 | 0.10000                | 0.00781                                       | 5.2907                                                                |
| 6                                   | 0.5545                                                       | 4.44   | 0.2500                                                   | 2               | 6.43047       | 0.4337               | 3.47   | 1.9462                                                       | 1.2625                                           | 6.52500 | 0.10000                | 0.00781                                       | 6.3461                                                                |

Note:This information is selected from the International Standard for Pipe Threads, ASME B1.20.1.



