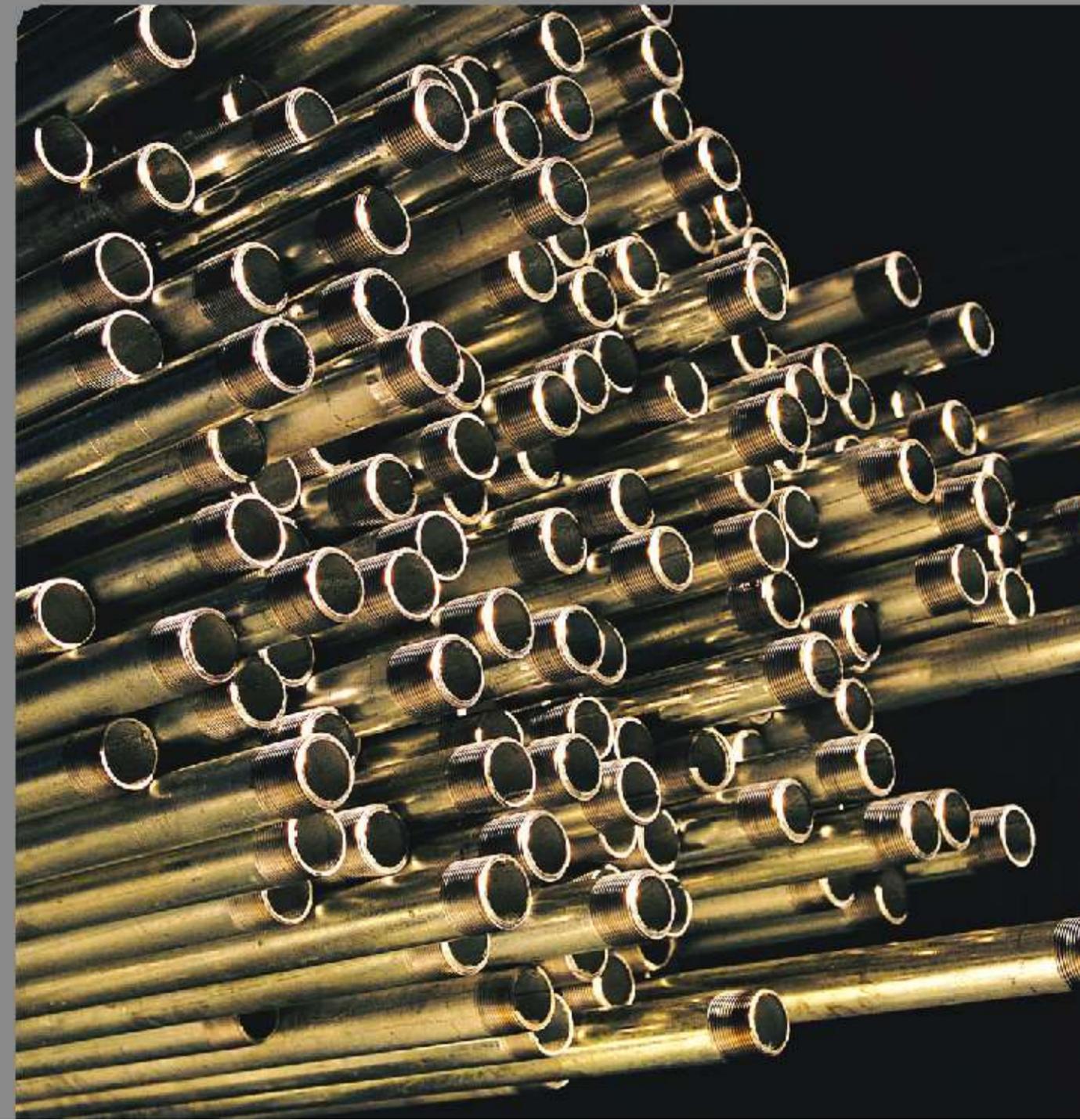
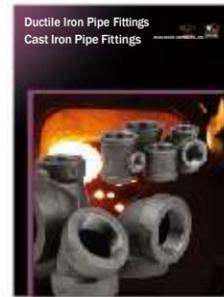


# STEEL PIPES & PIPE NIPPLES

JINAN MECH PIPING TECHNOLOGY CO., LTD.



## MECH FLOW SUPPLIES



**MECH**

JINAN MECH PIPING TECHNOLOGY CO., LTD.

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Http://www.meide-casting.com

## Company Profile

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Jinan Mech Piping Technology Co., LTD was established in 2013, which is specialized on manufacturing welded and seamless steel pipes, pipe nipples and spiral pipes. It has 1 factory of welded and seamless steel pipes, 1 factory of steel nipples and 1 for spiral pipes.

The company invested many sets of advanced automatic production lines, including 5 welding lines of 15, 20, 50, 140, 219, 1 hot-dip galvanizing line, 2 plastic lining line, 2 painting lines, 1 epoxy line, many sets of threaded machines and grooved machines. The company produces all kinds of pipes including Black welded steel pipes, Hot-dip galvanized Steel pipes, Painted steel pipes, Plastic lining pipes, PE coated steel pipes and steel pipe nipples, which comply with domestic and international standards

of ASTM A53, ASTM A795, BS 1387, EN 10255, AS 1074, SANS 62, GB/T 3091-2008, GB/T14291, CJ/T 120-2008, CJ/T 136-2007. The pipes we produced are under diameter from 1/2" to 8". All these pipes are used widely in the industries of water, gas, mining, fire protection, oil and other related fields.

The company organizes the whole production process in accordance with ISO 9001, and gets the approval of API 5L/UL/FM/NSF of US, TUV of Germany, SII of Israel etc. The products are well distributed in more than 50 countries and regions.

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.



## Advanced Equipment

High precision equipment is quality assurance.

Jinan Mech Piping Technology Co., Ltd is equipped with the most advanced facilities and equipment in the industry. The main equipment include: automatic welding line, hot-dip galvanizing line, painting line, epoxy coating line, grooved machine and threaded machine and so on.



Welding Line



Hot-dip Galv. line



Painted Line



Plastic-Lining Line



Epoxy Line



PE Pipe Line



Welding Machine

## Reliable Quality Assurance

Quality is checked and monitored in the whole process from incoming inspection to finished production inspection. 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.

Inspection facilities include: Spectral Analysis Machine, Metallographic Testing Machine, Universal Material Testing Machine, Eddy Current testing Machine, Hydraulic Testing Machine, Impact Testing Machine, etc.



Hydraulic Testing Machine



Annealing



Eddy Current Testing Machine



Tensile Strength Testing Machine



Spectrometer

# Certificates



济南省国产涉及饮用水卫生安全产品卫生许可条件

|          |                         |
|----------|-------------------------|
| 产品名称     | 以氯胺化水为饮用水消毒剂复合管网        |
| 产品类别     | 管材管件类                   |
| 产品规格型号   | DN150-900mm             |
| 申报单位     | 济南通管科技股份有限公司            |
| 申报单位地址   | 山东省济南市高新区               |
| 实际生产企业   | 济南通管科技股份有限公司            |
| 实际生产企业地址 | 山东省济南市高新区               |
| 申报日期     | 2018年04月10日             |
| 批准日期     | 2018年04月10日             |
| 证书有效期    | 2018年04月10日至2020年04月10日 |

济南省国产涉及饮用水卫生安全产品卫生许可条件

|          |                         |
|----------|-------------------------|
| 产品名称     | 以氯胺化水为饮用水消毒剂复合管网        |
| 产品类别     | 管材管件类                   |
| 产品规格型号   | DN150-900mm             |
| 申报单位     | 济南通管科技股份有限公司            |
| 申报单位地址   | 山东省济南市高新区               |
| 实际生产企业   | 济南通管科技股份有限公司            |
| 实际生产企业地址 | 山东省济南市高新区               |
| 申报日期     | 2018年04月10日             |
| 批准日期     | 2018年04月10日             |
| 证书有效期    | 2018年04月10日至2020年04月10日 |

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|          |                         |
|----------|-------------------------|
| 产品名称     | 以氯胺化水为饮用水消毒剂复合管网        |
| 产品规格型号   | DN150-900mm             |
| 申报单位     | 济南通管科技股份有限公司            |
| 申报单位地址   | 山东省济南市高新区               |
| 实际生产企业   | 济南通管科技股份有限公司            |
| 实际生产企业地址 | 山东省济南市高新区               |
| 申报日期     | 2018年04月10日             |
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|          |                         |
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| 产品名称     | 以氯胺化水为饮用水消毒剂复合管网        |
| 产品规格型号   | DN150-900mm             |
| 申报单位     | 济南通管科技股份有限公司            |
| 申报单位地址   | 山东省济南市高新区               |
| 实际生产企业   | 济南通管科技股份有限公司            |
| 实际生产企业地址 | 山东省济南市高新区               |
| 申报日期     | 2018年04月10日             |
| 批准日期     | 2018年04月10日             |
| 证书有效期    | 2018年04月10日至2020年04月10日 |



# Specifications of Welded & Seamless Steel Pipe

ASTMA795 Standard Specification for Black and Hot-Dipped Galvanized Welded and seamless steel pipe for fire Protection Use

| Schedule    | Nominal Size (inch) | Outside Diameter (mm) | Wall Thickness (mm) | Mass of Black Tube Plain End (kg/m) | Test Pressure Grade B (PSI) |
|-------------|---------------------|-----------------------|---------------------|-------------------------------------|-----------------------------|
| Schedule 10 | 3/4"                | 26.7                  | 2.11                | 1.28                                | 700                         |
|             | 1"                  | 33.4                  | 2.77                | 2.09                                | 700                         |
|             | 1 1/4"              | 42.2                  | 2.77                | 2.69                                | 1000                        |
|             | 1 1/2"              | 48.3                  | 2.77                | 3.11                                | 1000                        |
|             | 2"                  | 60.3                  | 2.77                | 3.93                                | 1000                        |
|             | 2 1/2"              | 73                    | 3.05                | 5.26                                | 1000                        |
|             | 3"                  | 88.9                  | 3.05                | 6.46                                | 1000                        |
|             | 4"                  | 114.3                 | 3.05                | 8.37                                | 1200                        |
|             | 5"                  | 141.3                 | 3.4                 | 11.58                               | 1200                        |
|             | 6"                  | 168.3                 | 3.4                 | 13.85                               | 1000                        |
|             | 8"                  | 219.1                 | 4.78                | 25.26                               | 800                         |
|             | 10"                 | 273                   | 4.78                | 31.62                               | 700                         |
|             | Schedule 40         | 1/2"                  | 21.3                | 2.77                                | 1.27                        |
| 3/4"        |                     | 26.7                  | 2.87                | 1.69                                | 700                         |
| 1"          |                     | 33.4                  | 3.38                | 2.5                                 | 700                         |
| 1 1/4"      |                     | 42.2                  | 3.56                | 3.39                                | 1300                        |
| 1 1/2"      |                     | 48.3                  | 3.68                | 4.05                                | 1300                        |
| 2"          |                     | 60.3                  | 3.91                | 5.44                                | 2500                        |
| 2 1/2"      |                     | 73                    | 5.16                | 8.63                                | 2500                        |
| 3"          |                     | 88.9                  | 5.49                | 11.29                               | 2500                        |
| 4"          |                     | 114.3                 | 6.02                | 16.07                               | 2210                        |
| 5"          |                     | 141.3                 | 6.55                | 21.77                               | 1950                        |
| 6"          |                     | 168.3                 | 7.11                | 28.26                               | 1780                        |
| 8"          |                     | 219.1                 | 8.18                | 42.55                               | 1570                        |
| 10"         |                     | 273                   | 9.27                | 60.29                               | 1430                        |

Note: Wall thickness tolerance is -12.5%  
Length tolerance is +20mm/0

ASTMA53 / A106 /API 5L Standard Specification for Pipe, Steel, Black and Hot-Dipped, Welded and Seamless

| Schedule    | Nominal Size (inch) | Outside Diameter (mm) | Wall Thickness (mm) | Mass of Black Tube Plain End (kg/m) | Test Pressure Grade B (PSI) |
|-------------|---------------------|-----------------------|---------------------|-------------------------------------|-----------------------------|
| Schedule 40 | 1/2"                | 21.3                  | 2.77                | 1.27                                | 700                         |
|             | 3/4"                | 26.7                  | 2.87                | 1.69                                | 700                         |
|             | 1"                  | 33.4                  | 3.38                | 2.5                                 | 700                         |
|             | 1 1/4"              | 42.2                  | 3.56                | 3.39                                | 1300                        |
|             | 1 1/2"              | 48.3                  | 3.68                | 4.05                                | 1300                        |
|             | 2"                  | 60.3                  | 3.91                | 5.44                                | 2500                        |
|             | 2 1/2"              | 73                    | 5.16                | 8.63                                | 2500                        |
|             | 3"                  | 88.9                  | 5.49                | 11.29                               | 2500                        |
|             | 4"                  | 114.3                 | 6.02                | 16.07                               | 2210                        |
|             | 5"                  | 141.3                 | 6.55                | 21.77                               | 1950                        |
|             | 6"                  | 168.3                 | 7.11                | 28.26                               | 1780                        |
|             | 8"                  | 219.1                 | 8.18                | 42.55                               | 1570                        |
|             | 10"                 | 273                   | 9.27                | 60.29                               | 1430                        |
|             | 12"                 | 323.8                 | 10.31               | 79.7                                | 1340                        |
|             | 14"                 | 355.6                 | 11.13               | 94.55                               | 1310                        |
|             | 16"                 | 406.4                 | 12.7                | 123.3                               | 1310                        |
| Schedule 80 | 1/2"                | 21.3                  | 3.73                | 1.62                                | 850                         |
|             | 3/4"                | 26.7                  | 3.91                | 2.2                                 | 850                         |
|             | 1"                  | 33.4                  | 4.55                | 3.24                                | 850                         |
|             | 1 1/4"              | 42.2                  | 4.85                | 4.47                                | 1900                        |
|             | 1 1/2"              | 48.3                  | 5.08                | 5.41                                | 1900                        |
|             | 2"                  | 60.3                  | 5.54                | 7.48                                | 2500                        |
|             | 2 1/2"              | 73                    | 7.01                | 11.41                               | 2500                        |
|             | 3"                  | 88.9                  | 7.62                | 15.27                               | 2500                        |
|             | 4"                  | 114.3                 | 8.08                | 22.32                               | 2800                        |
|             | 5"                  | 141.3                 | 8.56                | 30.94                               | 2800                        |
|             | 6"                  | 168.3                 | 10.97               | 42.56                               | 2740                        |
|             | 8"                  | 219.1                 | 12.7                | 64.64                               | 2430                        |
|             | 10"                 | 273                   | 15.09               | 95.97                               | 2320                        |
|             | 12"                 | 323.8                 | 17.48               | 132.04                              | 2270                        |
|             | 14"                 | 355.6                 | 19.05               | 158.1                               | 2250                        |
|             | 16"                 | 406.4                 | 21.44               | 203.53                              | 2220                        |

Note: Wall thickness tolerance is -12.5%  
Length tolerance is +20mm/0

# Specifications of Welded and Seamless Steel Pipe

BS 1387 Specification for Screwed and Socketed Steel Tubes and Tubulars and for Plain End Steel Tubes Suitable for Welding or for Screwing to BS 21 Pipe Threads. ( welded pipe and seamless pipe)

| Classification | Nominal Size | Outside Diameter |          | Wall Thickness | Mass of Black Tube |                         |
|----------------|--------------|------------------|----------|----------------|--------------------|-------------------------|
|                | (mm)         | Min.(mm)         | Max.(mm) | (mm)           | Plain End (kg/m)   | Screw and Socket (kg/m) |
| MEDIUM         | 15           | 21.1             | 21.7     | 2.6            | 1.21               | 1.22                    |
|                | 20           | 26.6             | 27.2     | 2.6            | 1.56               | 1.57                    |
|                | 25           | 33.4             | 34.2     | 3.2            | 2.41               | 2.43                    |
|                | 32           | 42.1             | 42.9     | 3.2            | 3.1                | 3.13                    |
|                | 40           | 48.0             | 48.8     | 3.2            | 3.57               | 3.61                    |
|                | 50           | 59.8             | 60.8     | 3.6            | 5.03               | 5.1                     |
|                | 65           | 75.4             | 76.6     | 3.6            | 6.43               | 6.55                    |
|                | 80           | 88.1             | 89.5     | 4              | 8.37               | 8.54                    |
|                | 100          | 113.3            | 114.9    | 4.5            | 12.2               | 12.5                    |
|                | 125          | 138.7            | 140.6    | 5              | 16.6               | 17.1                    |
|                | 150          | 164.1            | 166.1    | 5              | 19.7               | 20.3                    |
| HEAVY          | 15           | 21.1             | 21.7     | 3.2            | 1.44               | 1.45                    |
|                | 20           | 26.6             | 27.2     | 3.2            | 1.87               | 1.88                    |
|                | 25           | 33.4             | 34.2     | 4              | 2.94               | 2.96                    |
|                | 32           | 42.1             | 42.9     | 4              | 3.8                | 3.83                    |
|                | 40           | 48.0             | 48.8     | 4              | 4.38               | 4.42                    |
|                | 50           | 59.8             | 60.8     | 4.5            | 6.19               | 6.26                    |
|                | 65           | 75.4             | 76.6     | 4.5            | 7.93               | 8.05                    |
|                | 80           | 88.1             | 89.8     | 5              | 10.3               | 10.5                    |
|                | 100          | 113.3            | 114.9    | 5.4            | 14.5               | 14.8                    |
|                | 125          | 138.7            | 140.6    | 5.4            | 17.9               | 18.4                    |
|                | 150          | 164.1            | 166.1    | 5.4            | 21.3               | 21.9                    |

Note: Wall thickness tolerance is -10%  
Length tolerance is +20mm/0

EN 10255 Non-alloy Steel Tubes Suitable for Welding and Threading. ( welded pipe and seamless pipe)

| Classification | Nominal Size | Outside Diameter |          | Wall Thickness | Mass of Black Tube |                         |
|----------------|--------------|------------------|----------|----------------|--------------------|-------------------------|
|                | (mm)         | Min.(mm)         | Max.(mm) | (mm)           | Plain End (kg/m)   | Screw and Socket (kg/m) |
| MEDIUM         | 15           | 21.1             | 21.7     | 2.6            | 1.21               | 1.22                    |
|                | 20           | 26.6             | 27.2     | 2.6            | 1.56               | 1.57                    |
|                | 25           | 33.4             | 34.2     | 3.2            | 2.41               | 2.43                    |
|                | 32           | 42.1             | 42.9     | 3.2            | 3.1                | 3.13                    |
|                | 40           | 48.0             | 48.8     | 3.2            | 3.57               | 3.61                    |
|                | 50           | 59.8             | 60.8     | 3.6            | 5.03               | 5.1                     |
|                | 65           | 75.4             | 76.6     | 3.6            | 6.43               | 6.55                    |
|                | 80           | 88.1             | 89.5     | 4              | 8.37               | 8.54                    |
|                | 100          | 113.3            | 114.9    | 4.5            | 12.2               | 12.5                    |
|                | 125          | 138.7            | 140.6    | 5              | 16.6               | 17.1                    |
|                | 150          | 164.1            | 166.1    | 5              | 19.7               | 20.3                    |
| HEAVY          | 15           | 21.1             | 21.7     | 3.2            | 1.44               | 1.45                    |
|                | 20           | 26.6             | 27.2     | 3.2            | 1.87               | 1.88                    |
|                | 25           | 33.4             | 34.2     | 4              | 2.94               | 2.96                    |
|                | 32           | 42.1             | 42.9     | 4              | 3.8                | 3.83                    |
|                | 40           | 48.0             | 48.8     | 4              | 4.38               | 4.42                    |
|                | 50           | 59.8             | 60.8     | 4.5            | 6.19               | 6.26                    |
|                | 65           | 75.4             | 76.6     | 4.5            | 7.93               | 8.05                    |
|                | 80           | 88.1             | 89.8     | 5              | 10.3               | 10.5                    |
|                | 100          | 113.3            | 114.9    | 5.4            | 14.5               | 14.8                    |
|                | 125          | 138.7            | 140.6    | 5.4            | 17.9               | 18.4                    |
|                | 150          | 164.1            | 166.1    | 5.4            | 21.3               | 21.9                    |

Note: Wall thickness tolerance is -10%  
Length tolerance is +20mm/0

## Specifications of Welded & Seamless Steel Pipe

### AS 1074 Steel Tubes and Tubulars for Ordinary Service

| Classification | Nominal Size | Outside Diameter |          | Wall Thickness | Mass of Black Tube |                         |
|----------------|--------------|------------------|----------|----------------|--------------------|-------------------------|
|                | (mm)         | Min.(mm)         | Max.(mm) | (mm)           | Plain End (kg/m)   | Screw and Socket (kg/m) |
| MEDIUM         | 15           | 21.1             | 21.7     | 2.6            | 1.21               | 1.22                    |
|                | 20           | 26.6             | 27.2     | 2.6            | 1.56               | 1.57                    |
|                | 25           | 33.4             | 34.2     | 3.2            | 2.41               | 2.43                    |
|                | 32           | 42.1             | 42.9     | 3.2            | 3.1                | 3.13                    |
|                | 40           | 48.0             | 48.8     | 3.2            | 3.57               | 3.61                    |
|                | 50           | 59.8             | 60.8     | 3.6            | 5.03               | 5.1                     |
|                | 65           | 75.4             | 76.6     | 3.6            | 6.43               | 6.55                    |
|                | 80           | 88.1             | 89.5     | 4              | 8.37               | 8.54                    |
|                | 100          | 113.3            | 114.9    | 4.5            | 12.2               | 12.5                    |
|                | 125          | 138.7            | 140.6    | 5              | 16.6               | 17.1                    |
|                | 150          | 164.1            | 166.1    | 5              | 19.7               | 20.3                    |
| HEAVY          | 15           | 21.1             | 21.7     | 3.2            | 1.44               | 1.45                    |
|                | 20           | 26.6             | 27.2     | 3.2            | 1.87               | 1.88                    |
|                | 25           | 33.4             | 34.2     | 4              | 2.94               | 2.96                    |
|                | 32           | 42.1             | 42.9     | 4              | 3.8                | 3.83                    |
|                | 40           | 48.0             | 48.8     | 4              | 4.38               | 4.42                    |
|                | 50           | 59.8             | 60.8     | 4.5            | 6.19               | 6.26                    |
|                | 65           | 75.4             | 76.6     | 4.5            | 7.93               | 8.05                    |
|                | 80           | 88.1             | 89.8     | 5              | 10.3               | 10.5                    |
|                | 100          | 113.3            | 114.9    | 5.4            | 14.5               | 14.8                    |
|                | 125          | 138.7            | 140.6    | 5.4            | 17.9               | 18.4                    |
|                | 150          | 164.1            | 166.1    | 5.4            | 21.3               | 21.9                    |

Note: Wall thickness tolerance is -10%      Length tolerance is +20mm/0

### GB/T 3091-2015

| Nominal Size | Outside Diameter | Wall Thickness |        |        |
|--------------|------------------|----------------|--------|--------|
|              |                  | A (mm)         | B (mm) | C (mm) |
| 15           | 21.3             | 2.2            | 2.5    | 2.8    |
| 20           | 26.9             | 2.2            | 2.5    | 2.8    |
| 25           | 33.7             | 2.5            | 3.0    | 3.2    |
| 32           | 42.4             | 2.75           | 3.25   | 3.5    |
| 40           | 48.3             | 3.0            | 3.25   | 3.5    |
| 50           | 60.3             | 3.0            | 3.6    | 3.8    |
| 65           | 76.1             | 3.25           | 3.6    | 4.0    |
| 80           | 88.9             | 3.25           | 3.6    | 4.0    |
| 100          | 114.3            | 3.25           | 3.6    | 4.0    |
| 125          | 139.7            | 3.25           | 3.6    | 4.0    |
| 150          | 165.1            | 3.5            | 4.0    | 4.5    |
| 200          | 219.1            | 4.5            | 4.75   | 4.5    |

## Black Steel Pipe



Raw Material: Hot Rolled Coil

Forming Method: F-F-X

Welding Method: High-frequency Resistance Welding

Size: 1/2" ---8"

Temperature: -30°C--80°C

Normal Pressure: 0.1 Mpa--8Mpa

Connection: Grooved, Threaded, Beveled, Plain

Application: Water System, Sprinkler System, Gas system, Oil and HVAC System

Product Advantages:

Advanced F-F-X forming technics, enhance the controllability.

Thermatool solid state high frequency welding Machine, make sure the welding stability.

On line Heat Treatment, make sure the seam hardness

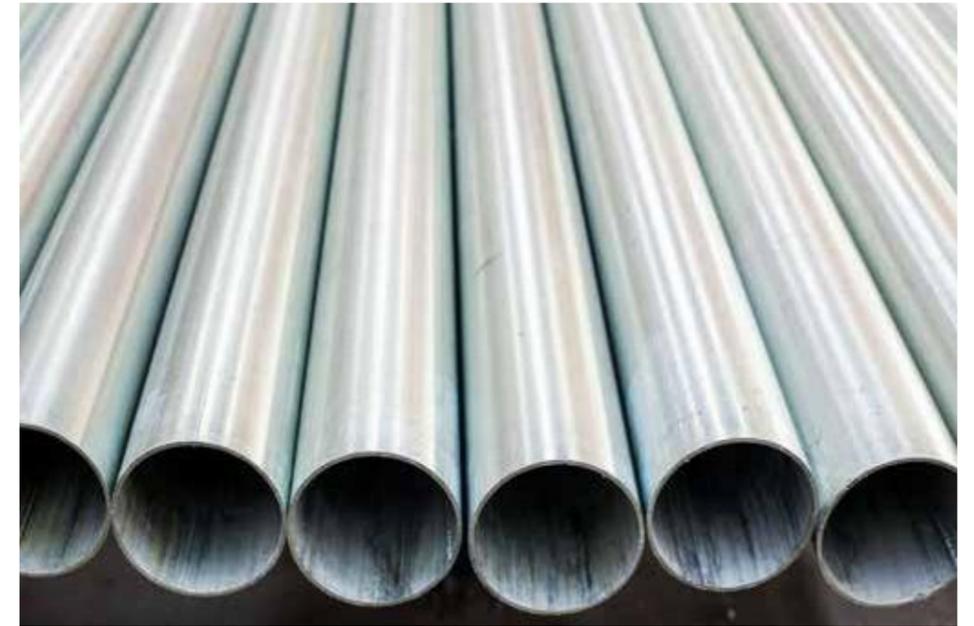
100% on line Eddy Current Testing and Hydrostatic Testing, make sure the welding quality.

## Painted Steel Pipe



Coating Material: Anti-rust Paint, Primer Paint, Epoxy Paint  
 Coating Color: Red, Black, Gray, Varnish  
 Coating Thickness: 30um  
 Coating Method: Painted Outside  
 Size: 1" ---8"  
 Temperature: -30°C--80°C  
 Normal Pressure: 0.1 Mpa--8Mpa  
 Connection: Grooved, Threaded, Plain  
 Application: Sprinkler System, Gas system  
 Product Advantages:  
 Paint is high quality and environmental, meet the requirement of usage  
 Coating is uniformity and smooth.  
 Coating with good adhesion and hardness  
 Coating with good anticorrosion, prolong the pipe life span.

## Galvanized Steel Pipe



Galv.: Hot-dip Galvanizing  
 Size: 1/2" ---8"  
 Temperature: -30°C--80°C  
 Normal Pressure: 0.1 Mpa--8Mpa  
 Connection: Grooved, Threaded, Beveled, Plain  
 Application: Water System, Sprinkler System, Gas system, Oil and HVAC System  
 Product Advantages:  
 Galv. coating is uniformity, clean and bright.  
 Using 0# zinc ingot, with good anti-corrosion ability.

## Epoxy Steel Pipe



Coating Material: Epoxy Resin Powder  
 Coating Color: Red, Blue  
 Coating Thickness: 40um-300um  
 Size: 1/2" ---8"  
 Temperature: -30°C--80°C  
 Normal Pressure: 0.1 Mpa--5Mpa  
 Connection: Grooved, Threaded, Plain  
 Application: Water System, HAVC System  
 Product Advantages:  
 Epoxy powder is high-quality and environmental  
 Coating with good anti-corrosion  
 Coating with good hygienism  
 Small resistance

## Plastic-lining Steel Pipe

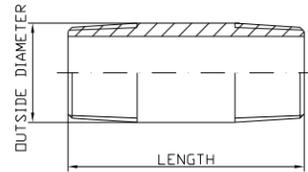


Raw Material: PE, Hot-dip Galv, Pipe  
 Size: 1" ---8"  
 Temperature: -30°C--80°C  
 Normal Pressure: 0.1 Mpa--5Mpa  
 Connection: Grooved, Threaded, Welded  
 Application: Water System, Sprinkler System, Gas system, Oil and HAVC System  
 Product Advantage:  
 Outside is Galv. pipe, with good anti-corrosion, and not easy to distortion.  
 Inside is PE pipe, environmental and health, inside surface is smooth.  
 Ensure the quality i of inside fluid, Improve transport efficiency.

## Brass Pipe Nipple



Material : ASTM B43  
 Dimensions : ASTM B687  
 Threads : ASME B1.20.1, ISO 7/1  
 Schedule : Standard/Extra Heavy



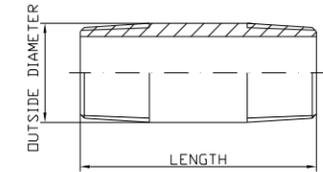
| Brass Pipe Nipple<br>Standard/Extra Heavy |           |              |                            |   |       |   |       |   |       |   |       |   |   |   |   |    |    |    |
|---|-----------|--------------|----------------------------|---|-------|---|-------|---|-------|---|-------|---|---|---|---|----|----|----|
| Pipe Size                                 | Pipe O.D. | Length Close | Pipe Nipple Lengths ( In ) |   |       |   |       |   |       |   |       |   |   |   |   |    |    |    |
| In  | In        | In           | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/8                                       | 0.405     | 3/4          | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/4                                       | 0.540     | 7/8          | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3/8                                       | 0.675     | 1            | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/2                                       | 0.840     | 1 1/8        | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3/4                                       | 1.050     | 1 3/8        | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1   | 1.315     | 1 1/2        | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1-1/4                                     | 1.660     | 1 5/8        | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1-1/2                                     | 1.900     | 1 3/4        | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2   | 2.375     | 2            | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2-1/2                                     | 2.875     | 2 1/2        | X                          | X | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3   | 3.500     | 2 5/8        | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 4   | 4.500     | 2 7/8        | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 5   | 5.562     | 3            | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 6   | 6.625     | 3 1/8        | X                          | X | X     | X | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 8   | 8.625     | 3 1/2        | X                          | X | X     | X | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Noted: Other lengths and size available. Contact us for details.

## Steel Pipe Nipple with American Standard



Material : ASTM A53/A106/A333  
 Dimensions : ASTM A733  
 Threads : ASME B1.20.1  
 Schedule : 40/80/160/XXS



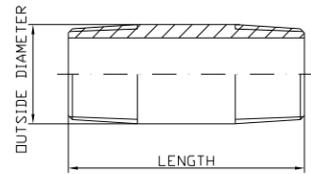
| Carbon Steel Pipe Nipple<br>Sch.40/80/160/XXS, Welded/Seamless |           |              |                            |   |       |   |       |   |       |   |       |   |   |   |   |    |    |    |
|--|-----------|--------------|----------------------------|---|-------|---|-------|---|-------|---|-------|---|---|---|---|----|----|----|
| Pipe Size  | Pipe O.D. | Length Close | Pipe Nipple Lengths ( In ) |   |       |   |       |   |       |   |       |   |   |   |   |    |    |    |
| In   | In        | In           | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/8  | 0.405     | 3/4          | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/4  | 0.540     | 7/8          | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3/8  | 0.675     | 1            | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/2  | 0.840     | 1 1/8        | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3/4  | 1.050     | 1 3/8        | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1  | 1.315     | 1 1/2        | 11/2                       | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1-1/4  | 1.660     | 1 5/8        | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1-1/2  | 1.900     | 1 3/4        | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2  | 2.375     | 2            | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2-1/2  | 2.875     | 2 1/2        | X                          | X | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3  | 3.500     | 2 5/8        | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 4  | 4.500     | 2 7/8        | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 5  | 5.563     | 3            | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 6  | 6.625     | 3 1/8        | X                          | X | X     | X | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 8  | 8.625     | 3 1/2        | X                          | X | X     | X | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Noted: Other lengths and size available. Grooved end, SQ end and Bevel end available. Contact us for details.

## Steel Pipe Nipple with British/Din Standard



Material : BS EN 10241  
 Dimensions : BS EN 10241  
 Threads : ISO7/1  
 Schedule : Medium/Heavy



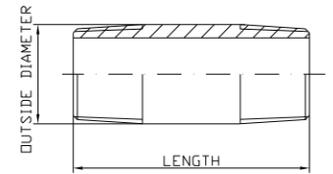
| Carbon Steel Pipe Nipple<br>Medium/Heavy ,Welded/Seamless |           |              |                            |    |    |    |    |     |       |     |     |     |     |     |     |     |     |     |
|---|-----------|--------------|----------------------------|----|----|----|----|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pipe Size   | Pipe O.D. | Length Close | Pipe Nipple Lengths ( mm ) |    |    |    |    |     |       |     |     |     |     |     |     |     |     |     |
| mm  | mm        | mm           |                            |    |    |    |    |     |       |     |     |     |     |     |     |     |     |     |
| 6   | 10.3      | 19           | 30                         | 40 | 50 | 60 | 80 | 100 | 120   | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 8   | 13.7      | 27           | 30                         | 40 | 50 | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 10  | 17.1      | 28           | 30                         | 40 | 50 | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 15  | 21.3      | 37           | X                          | 40 | 50 | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 20  | 26.7      | 39           | X                          | 40 | 50 | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 25  | 33.4      | 46           | X                          | X  | 50 | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 32  | 42.2      | 51           | X                          | X  | 50 | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 40  | 48.3      | 51           | X                          | X  | 50 | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 50  | 60.3      | 60           | X                          | X  | X  | 60 | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 65  | 76.1      | 69           | X                          | X  | X  | X  | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 80  | 88.9      | 75           | X                          | X  | X  | X  | 80 | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 100   | 114.3     | 87           | X                          | X  | X  | X  | X  | 100 | 4 1/2 | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 125   | 141.3     | 96           | X                          | X  | X  | X  | X  | X   | 120   | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 150   | 168.3     | 96           | X                          | X  | X  | X  | X  | X   | 120   | 150 | 180 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |

Noted: Other lengths and size available. Grooved end, SQ end and Bevel end available. Contact us for details.

## Stainless Steel Nipple with American Standard



Material : ASTM A312/A312M  
 Dimensions : ASTM A733  
 Threads : ASME B1.20.1  
 Schedule : 40/80



| Stainless Steel Nipple<br>Sch.40/80, Welded/Seamless |           |              |                            |   |       |   |       |   |       |   |       |   |   |   |   |    |    |    |
|--|-----------|--------------|----------------------------|---|-------|---|-------|---|-------|---|-------|---|---|---|---|----|----|----|
| Pipe Size  | Pipe O.D. | Length Close | Pipe Nipple Lengths ( In ) |   |       |   |       |   |       |   |       |   |   |   |   |    |    |    |
| In   | In        | In           |                            |   |       |   |       |   |       |   |       |   |   |   |   |    |    |    |
| 1/8  | 0.405     | 3/4          | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/4  | 0.540     | 7/8          | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3/8  | 0.675     | 1            | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1/2  | 0.840     | 1 1/8        | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3/4  | 1.050     | 1 3/8        | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1  | 1.315     | 1 1/2        | 1 1/2                      | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1-1/4  | 1.660     | 1 5/8        | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1-1/2  | 1.900     | 1 3/4        | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2  | 2.375     | 2            | X                          | 2 | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2-1/2  | 2.875     | 2 1/2        | X                          | X | 2 1/2 | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3  | 3.500     | 2 5/8        | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 4  | 4.500     | 2 7/8        | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 5  | 5.563     | 3            | X                          | X | X     | 3 | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 6  | 6.625     | 3 1/8        | X                          | X | X     | X | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 8  | 8.625     | 3 1/2        | X                          | X | X     | X | 3 1/2 | 4 | 4 1/2 | 5 | 5 1/2 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

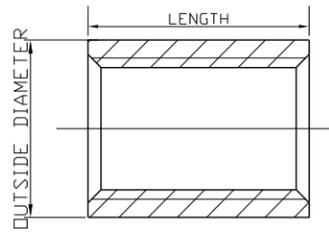
Noted: Other lengths and size available. Grooved end, SQ end and Bevel end available. Contact us for details.

## Steel Merchant Coupling with American Standard



Material : ASTM A865  
 Dimensions : ASTM A865  
 Threads : ASME B1.20.1  
 Schedule : Standard

| Size | In        | 1/8 | 1/4   | 3/8   | 1/2   | 3/4   | 1      | 1 1/4   | 1 1/2 |       |
|------|-----------|-----|-------|-------|-------|-------|--------|---------|-------|-------|
| Full | Pipe O.D. | In  | 0.563 | 0.719 | 0.875 | 1.063 | 1.313  | 1.576   | 1.900 | 2.200 |
|      | Length    | In  | 3/4   | 1-1/8 | 1-1/8 | 1-1/2 | 1-9/16 | 1-15/16 | 2     | 2     |
| Half | Pipe O.D. | In  | 0.563 | 0.719 | 0.875 | 1.063 | 1.313  | 1.576   | 1.900 | 2.200 |
|      | Length    | In  | 0.335 | 0.531 | 0.531 | 0.709 | 0.748  | 0.925   | 0.965 | 0.965 |



| Size | In        | 2  | 2 1/2  | 3      | 3 1/2  | 4      | 5      | 6       |         |
|------|-----------|----|--------|--------|--------|--------|--------|---------|---------|
| Full | Pipe O.D. | In | 2.75   | 3.250  | 4.000  | 4.625  | 5.000  | 6.296   | 7.390   |
|      | Length    | In | 2-1/16 | 3-1/16 | 3-3/16 | 3-5/16 | 3-7/16 | 3-11/16 | 3-15/16 |
| Half | Pipe O.D. | In | 2.75   | 3.250  | 4.000  | 4.625  | 5.000  | 6.296   | 7.390   |
|      | Length    | In | 1.051  | 1.496  | 1.555  | 1.634  | 1.673  | 1.811   | 1.949   |

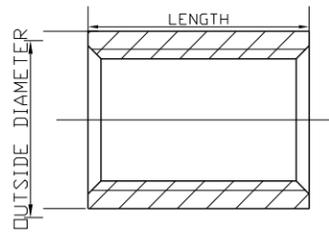
Noted: Other lengths and size available, contact us for details

## Steel Merchant Coupling with American Standard



Material : ASTM A865  
 Dimensions : ASTM A865  
 Threads : ASME B1.20.1  
 Schedule : Extra-Strong

| Size     | In        | 1/8 | 1/4   | 3/8   | 1/2   | 3/4   | 1     | 1 1/4 | 1 1/2 |       |
|----------|-----------|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| Standard | Pipe O.D. | In  | 0.563 | 0.719 | 0.875 | 1.063 | 1.313 | 1.576 | 2.054 | 2.2   |
|          | Length    | In  | 1-1/8 | 1-5/8 | 1-5/8 | 2-1/8 | 2-1/8 | 2-5/8 | 2-3/4 | 2-3/4 |



| Size     | In        | 2  | 2 1/2 | 3     | 3 1/2 | 4     | 5     | 6     |       |
|----------|-----------|----|-------|-------|-------|-------|-------|-------|-------|
| Standard | Pipe O.D. | In | 2.875 | 3.375 | 4.0   | 4.625 | 5.2   | 6.296 | 7.39  |
|          | Length    | In | 2-7/8 | 4-1/8 | 4-1/4 | 4-3/8 | 4-1/2 | 4-5/8 | 4-7/8 |

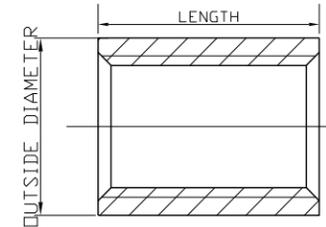
Noted: Other lengths and size available, contact us for details

## Steel Socket with British/Din Standard



Material : BS EN 10241  
 Dimensions : BS EN 10241  
 Threads : ISO 7/1  
 Schedule : Medium

| Size     | mm        | 6  | 8    | 10   | 15   | 20   | 25   | 32   |      |
|----------|-----------|----|------|------|------|------|------|------|------|
| Standard | Pipe O.D. | mm | 15.0 | 18.5 | 21.3 | 26.6 | 31.8 | 39.5 | 48.3 |
|          | Length    | mm | 17   | 25   | 26   | 34   | 36   | 43   | 48   |
| Half     | Pipe O.D. | mm | 15   | 18.5 | 22   | 27   | 32.5 | 39.5 | 49   |
|          | Length    | mm | 8    | 11   | 12   | 16   | 19   | 21   | 25   |



| Size     | mm        | 40 | 50   | 65   | 80 | 100 | 125   | 150   |       |
|----------|-----------|----|------|------|----|-----|-------|-------|-------|
| Standard | Pipe O.D. | mm | 54.5 | 66.2 | 82 | 95  | 121.4 | 146.3 | 173.3 |
|          | Length    | mm | 48   | 56   | 65 | 71  | 83    | 92    | 92    |
| Half     | Pipe O.D. | mm | 56   | 68   | 84 | 98  | 124   | 151   | 177   |
|          | Length    | mm | 25   | 28   | 30 | 35  | 40    | 44    | 44    |

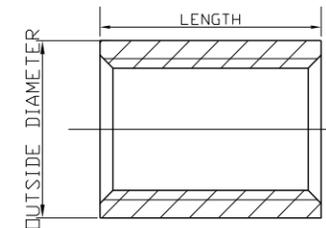
Noted: Other lengths and size available, contact us for details

## Steel Socket with British/Din Standard



Material : BS EN 10241  
 Dimensions : BS EN 10241  
 Threads : ISO 7/1  
 Schedule : Heavy

| Size     | mm        | 6  | 8    | 10   | 15   | 20   | 25   | 32   |      |
|----------|-----------|----|------|------|------|------|------|------|------|
| Standard | Pipe O.D. | mm | 15.0 | 18.5 | 21.3 | 26.6 | 31.8 | 39.5 | 48.3 |
|          | Length    | mm | 19.0 | 27.0 | 28.0 | 37.0 | 39.0 | 46.0 | 51.0 |



| Size     | mm        | 40 | 50   | 65   | 80   | 100  | 125   | 150   |       |
|----------|-----------|----|------|------|------|------|-------|-------|-------|
| Standard | Pipe O.D. | mm | 54.5 | 66.2 | 82   | 95   | 121.4 | 146.3 | 173.3 |
|          | Length    | mm | 51.0 | 60.0 | 69.0 | 75.0 | 87.0  | 96.0  | 96.0  |

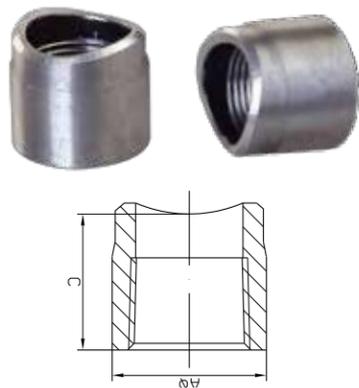
Noted: Other lengths and size available, contact us for details

## Steel Nipple-Tank Type



| Size           | L+2(mm ) | L1 (mm ) | L2(mm ) | Ø (mm ) | R      | G      |
|----------------|----------|----------|---------|---------|--------|--------|
| 1/2X100X52MM   | 100      | 15       | 52      | 21.3    | R1/2   | G1/2   |
| 3/4X100X54MM   | 100      | 15       | 54      | 26.7    | R3/4   | G3/4   |
| 1X100X62MM     | 100      | 17       | 62      | 33.4    | R1     | G1     |
| 1 1/4X150X70MM | 150      | 20       | 70      | 42.2    | R1 1/4 | G1 1/4 |
| 1 1/2X150X71MM | 150      | 20       | 71      | 48.3    | R1 1/2 | G1 1/2 |
| 2X150X82MM     | 150      | 23       | 82      | 60.3    | R2     | G2     |

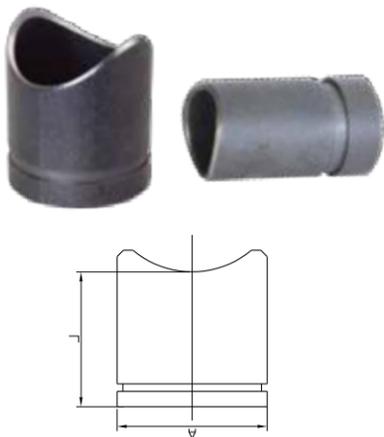
## Threaded Welded Outlet



Material : ASTM A106  
Threads : ASME B1.20.1, ISO 7/1

| Size          | In | 1/2    | 3/4    | 1          | 1 1/4      | 1 1/2  | 2      | 2 1/2  | 3      | 4      |
|---------------|----|--------|--------|------------|------------|--------|--------|--------|--------|--------|
| Pipe Run Size | In | 1 to 4 | 1 to 4 | 1 1/4 to 6 | 1 1/2 to 6 | 2 to 6 | 3 to 6 | 3 to 8 | 4 to 8 | 6 to 8 |
| A             | In | 1.083  | 1.331  | 1.555      | 1.870      | 2.165  | 2.724  | 3.209  | 3.957  | 4.961  |
| C             | In | 1.063  | 1.126  | 1.248      | 1.374      | 1.626  | 1.752  | 2.217  | 2.500  | 3.000  |

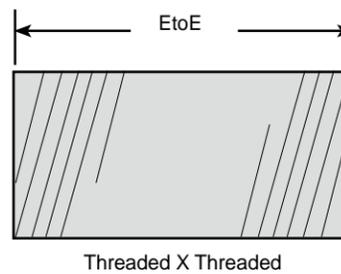
## Grooved Welded Outlet



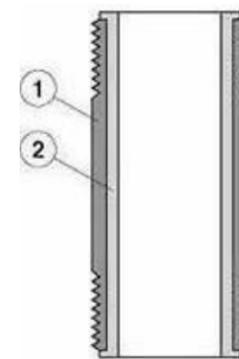
Material : ASTM A53  
Groove : AWWA C606 and ISO 6182-12

| Size          | In | 1 1/4   | 1 1/2   | 2     | 2 1/2   | 3     | 4     | 6     | 8     |
|---------------|----|---------|---------|-------|---------|-------|-------|-------|-------|
| Pipe Run Size | In | 1 1/4-8 | 1 1/2-8 | 2-8   | 2 1/2-8 | 3-8   | 4-8   | 6-8   | 8     |
| A             | In | 1.660   | 1.900   | 2.375 | 2.875   | 3.500 | 4.500 | 6.625 | 8.625 |
| L             | In | 2.969   | 2.969   | 2.969 | 2.969   | 2.969 | 3.976 | 3.976 | 4     |

## Steel Dielectric Nipple



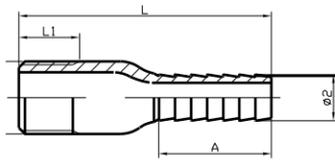
| Nominal Dia. (inches) | Out.Dia. (inches) | Max. Work. Press. (PSI/kPa) | End to End (inches) | Aprx.Wgt.Each (Lbs./kg) |
|-----------------------|-------------------|-----------------------------|---------------------|-------------------------|
| 1/2                   | 0.840             | 300 / 2065                  | 2-1/2               | 0.15 / 0.07             |
| 1/2                   | 0.840             | 300 / 2065                  | 3                   | 0.18 / 0.08             |
| 3/4                   | 1.050             | 300 / 2065                  | 2                   | 0.15 / 0.07             |
| 3/4                   | 1.050             | 300 / 2065                  | 2-1/2               | 0.20 / 0.09             |
| 3/4                   | 1.050             | 300 / 2065                  | 3                   | 0.24 / 0.11             |
| 3/4                   | 1.050             | 300 / 2065                  | 4                   | 0.34 / 0.15             |
| 1                     | 1.315             | 300 / 2065                  | 2-1/2               | 0.27 / 0.12             |
| 1                     | 1.315             | 300 / 2065                  | 3                   | 0.34 / 0.15             |
| 1                     | 1.315             | 300 / 2065                  | 4                   | 0.48 / 0.22             |
| 1-1/4                 | 1.660             | 300 / 2065                  | 4                   | 0.65 / 0.30             |
| 1-1/2                 | 1.900             | 300 / 2065                  | 4                   | 0.78 / 0.36             |
| 2                     | 2.375             | 300 / 2065                  | 4                   | 1.06 / 0.48             |
| 2-1/2                 | 2.875             | 300 / 2065                  | 6                   | 2.47 / 1.12             |
| 3                     | 3.500             | 300 / 2065                  | 6                   | 3.23 / 1.47             |
| 3-1/2                 | 4.000             | 300 / 2065                  | 6                   | 3.90 / 1.77             |
| 4                     | 4.500             | 300 / 2065                  | 6                   | 4.61 / 2.10             |



Material Specifications:

1. Body: Carbon steel pipe to ASTM A-53 type E, zinc electroplated.
2. Liner: Polypropylene (PP) plastic
  - Dimension: ASTM A733
  - Thread: ASME B1.20.1
  - Working Pressure: 300 psi
  - Temperature Range: 32°F to 230°F
  - For cool or heat water supply, good corrosion resistance in water. Plastic-lined steel nipples act as an insulator to prevent destructive electrolytic corrosion between dissimilar metals.
  - Crosslinked polyethylene (PEX) plastic, and polyethylene (PE) plastic available when ask.
  - Meets NSF / ANSI 372 lead free requirement

## Insert Adapter

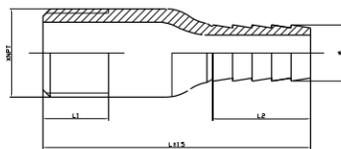


| Size(In) | L±1.2(mm) | L1±1(mm) | Ø2±0.2 | A±1       |
|----------|-----------|----------|--------|-----------|
| 1/2      | 79        | 19.8     | 16.8   | 32.9      |
| 3/4      | 79        | 20       | 21.2   | 32.9      |
| 1        | 83.5      | 25       | 27.3   | 32.9      |
| 1 1/4    | 90        | 25.5     | 36.3   | 32.9      |
| 1 1/2    | 103.5     | 26       | 41.9   | 43.4      |
| 2        | 103.5     | 26.5     | 53     | 44.8      |
| 2 1/2    | 131       | 39.9     | 63.5   | 56(8 bar) |
| 3        | 163       | 41.5     | 80     | 64(8 bar) |
| 4        | 174       | 44       | 102.5  | 72(8 bar) |
| 6        | 182       | 49.4     | 155    | 72(8 bar) |

**Features:**

- Pipe: Carbon steel
- Thread: NPT / BSP
- Extra long barb is available upon request.
- Plated male adapter meets NSF / ANSI 372 lead free requirement.
- Plated steel for greater corrosion resistance than unplated steel, prevent rust and weathering.
- Common use: Cold water sprinkler, irrigation, and pump installation.
- Other sizes available, contact us for details.

## Combination Nipple

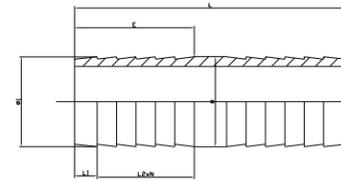


| Size(In) | L±1.5(mm) | L1(mm) | L2(mm) | φ    |
|----------|-----------|--------|--------|------|
| 1/2      | 79.5      | 17.5   | 35     | 13.5 |
| 3/4      | 81        | 17.5   | 35     | 19.8 |
| 1        | 89        | 20.5   | 35     | 26.2 |
| 1 1/4    | 95        | 21.5   | 43     | 32.5 |
| 1 1/2    | 112.5     | 22     | 51     | 38.6 |
| 2        | 124       | 22     | 51     | 51.3 |

**Features:**

- Pipe: Carbon steel
- Thread: NPT / BSP
- Barbed end to create a tight seal on a hose when used with a hose clamp or crimpsleeve, and male NPT / BSP thread on the other end to connection. connect to female NPT / BSP threaded.
- Plated steel for greater corrosion resistance than unplated steel, prevent rust and weathering.
- Recommended for low-pressure discharge or suction applications. Not for air service or steam service.
- The working pressure varies with the construction of the hose, and the application, shall not exceed the working pressure of the lowest rated component in the hose system.
- Other sizes available, contact us for details.

## Insert Coupling

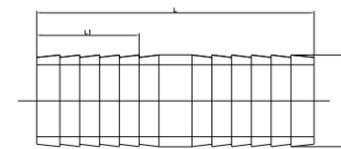


| Size      | L±1.5(mm) | φ    | φ1±0.15 | E±1(mm) | L1±0.1(mm) | L2±0.1(mm) | N |
|-----------|-----------|------|---------|---------|------------|------------|---|
| 1/2X80    | 80        | 17   | 16.5    | 37      | 7          | 5          | 6 |
| 3/4X82    | 82        | 22   | 21.6    | 37      | 7          | 5          | 6 |
| 1X84      | 84        | 28   | 27.5    | 37      | 7          | 5          | 6 |
| 1 1/4X90  | 90        | 36.5 | 35.8    | 44      | 8          | 6          | 6 |
| 1 1/2X102 | 102       | 42.5 | 41.9    | 44      | 8          | 6          | 6 |
| 2X107     | 107       | 54.5 | 53.6    | 50      | 8          | 7          | 6 |

**Features:**

- Pipe: Carbon steel
- Plated male adapter meets NSF / ANSI 372 lead free requirement.
- Plated steel for greater corrosion resistance than unplated steel, prevent rust and weathering.
- Common use: Cold water sprinkler, irrigation, and pump installation.
- Other sizes available, contact us for details.

## Hose Mender



| Size  | L (mm) | L1 (mm) | φ1   |
|-------|--------|---------|------|
| 1/2   | 89     | 35      | 13.5 |
| 3/4   | 89     | 35      | 19.8 |
| 1     | 89     | 35      | 26.2 |
| 1 1/4 | 108    | 43      | 32.5 |
| 1 1/2 | 118    | 51      | 38.6 |
| 2     | 123    | 51      | 51.3 |

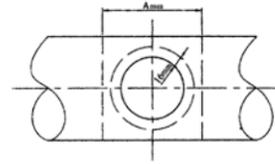
**Features:**

- Material: Plated steel, unplated steel
- Type: Insert x Insert.
- Barbed end to create a tight seal on a hose when used with a hose clamp or crimpsleeve
- Plated steel for greater corrosion resistance than unplated steel, prevent rust and weathering.
- Recommended for low-pressure discharge or suction applications. Not for air service or steam service.
- The working pressure varies with the construction of the hose, and the application, shall not exceed the working pressure of the lowest rated component in the hose system.
- Other sizes available, contact us for details.

# Hole Diameter of pipe



Hole-cutting Machine



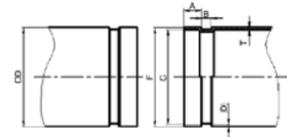
| Run Nominal Size mm/in     | Outlet Nominal Size mm/in | Hole Dia. +3.2,0+0.13,0 mm/in | Run Nominal Size mm/in            | Outlet Nominal Size mm/in | Hole Dia. +3.2,0+0.13,0 mm/in | Run Nominal Size mm/in              | Outlet Nominal Size mm/in | Hole Dia. +3.2,0+0.13,0 mm/in |                     |
|----------------------------|---------------------------|-------------------------------|-----------------------------------|---------------------------|-------------------------------|-------------------------------------|---------------------------|-------------------------------|---------------------|
| 50<br>2"/60.3              | 15<br>1/2                 | 38<br>1.50<br>A89             | 100<br>108.0<br>4"/114.3          | 15<br>1/2                 | 38<br>1.50<br>A89             | 150<br>159.0<br>6"/168.3            | 15<br>1/2                 | 38<br>1.50<br>A89             |                     |
|                            | 20<br>3/4                 |                               |                                   | 20<br>3/4                 |                               |                                     | 20<br>3/4                 |                               |                     |
|                            | 25<br>1                   |                               |                                   | 25<br>1                   |                               |                                     | 25<br>1                   |                               |                     |
|                            | 32<br>1 1/4               | 45<br>1.75<br>A102            |                                   | 32<br>1 1/4               | 51<br>2.00<br>A102            |                                     | 32<br>1 1/4               | 51<br>2.00<br>A102            |                     |
|                            | 40<br>1 1/2               |                               |                                   | 40<br>1 1/2               |                               |                                     | 40<br>1 1/2               |                               |                     |
| 65<br>2 1/2" /73.0<br>76.1 | 15<br>1/2                 | 38<br>1.50<br>A89             |                                   | 50<br>2                   | 64<br>2.50<br>A114            |                                     | 64<br>2.50<br>A114        | 50<br>2                       | 64<br>2.50<br>A114  |
|                            | 20<br>3/4                 |                               |                                   | 65<br>2 1/2/76.1          | 70<br>2.75<br>A120            |                                     |                           | 65<br>2 1/2/76.1              | 70<br>2.75<br>A120  |
|                            | 25<br>1                   |                               |                                   | 80<br>3                   | 89<br>3.50<br>A140            |                                     |                           | 80<br>3                       | 89<br>3.50<br>A140  |
|                            | 32<br>1 1/4               | 51<br>2.00<br>A102            |                                   | 15<br>1/2                 | 38<br>1.50<br>A89             |                                     | 100<br>108.0/4            | 114<br>4.50<br>A165           |                     |
|                            | 40<br>1 1/2               |                               |                                   | 20<br>3/4                 |                               |                                     |                           | 25<br>1                       | 38<br>1.50<br>A89   |
| 80<br>3"/88.9              | 15<br>1/2                 | 38<br>1.50<br>A89             | 125<br>133.0<br>139.7<br>5"/141.3 | 32<br>1 1/4               | 51<br>2.00<br>A102            | 200<br>8"/219.1<br>250<br>10"/273.0 |                           | 32<br>1 1/4                   | 51<br>2.00<br>A102  |
|                            | 20<br>3/4                 |                               |                                   | 40<br>1 1/2               |                               |                                     |                           | 40<br>1 1/2                   |                     |
|                            | 25<br>1                   |                               |                                   | 50<br>2                   | 64<br>2.50<br>A114            |                                     |                           | 40<br>1 1/2                   | 51<br>2.00<br>A102  |
|                            | 32<br>1 1/4               | 51<br>2.00<br>A102            |                                   | 65<br>2 1/2/76.1          | 70<br>2.75<br>A120            |                                     |                           | 50<br>2                       | 64<br>2.50<br>A114  |
|                            | 40<br>1 1/2               |                               |                                   | 80<br>3                   | 89<br>3.50<br>A140            |                                     |                           | 65<br>2 1/2/76.1              | 70<br>2.75<br>A120  |
|                            | 50<br>2                   | 64<br>2.50<br>A114            |                                   | 80<br>3                   | 89<br>3.50<br>A140            |                                     |                           | 80<br>3                       | 89<br>3.50<br>A140  |
|                            |                           |                               |                                   | 100<br>108.0/4            | 114<br>4.50<br>A165           |                                     |                           | 100<br>108.0/4                | 114<br>4.50<br>A165 |

The outside surface of the pipe within 16mm from the hole must be clean and smooth.

# Roll Groove Dimensions



Roll Grooving Machine



| Nominal Size mm/in | Pipe OD         |                 | Gasket seat A ±0.76±0.03 mm/in | Groove Width B ±0.76±0.03 mm/in | Groove Dia C     |                 | Groove Depth D(ref) mm/in | Max Allow Flare Dia F mm/in | Min. Allow wall thickness T mm/in |
|--------------------|-----------------|-----------------|--------------------------------|---------------------------------|------------------|-----------------|---------------------------|-----------------------------|-----------------------------------|
|                    | Basic mm/in     | Tolerance mm/in |                                |                                 | Basic mm/in      | Tolerance mm/in |                           |                             |                                   |
| 25<br>1            | 33.7<br>1.327   | +0.41<br>-0.026 | 15.88<br>0.625                 | 7.14<br>0.281                   | 30.23<br>1.190   | -0.38<br>-0.015 | 1.60<br>0.063             | 34.5<br>1.358               | 1.8<br>0.071                      |
| 32<br>1 1/4        | 42.4<br>1.669   | +0.50<br>-0.023 | 15.88<br>0.625                 | 7.14<br>0.281                   | 38.99<br>1.535   | -0.38<br>-0.015 | 1.60<br>0.063             | 43.3<br>1.705               | 1.8<br>0.071                      |
| 40<br>1 1/2        | 48.3<br>1.900   | +0.44<br>-0.020 | 15.88<br>0.625                 | 7.14<br>0.281                   | 45.09<br>1.779   | -0.38<br>-0.015 | 1.60<br>0.063             | 49.4<br>1.945               | 1.8<br>0.071                      |
| 50<br>2            | 60.3<br>2.375   | +0.61<br>-0.024 | 15.88<br>0.625                 | 8.74<br>0.344                   | 57.15<br>2.250   | -0.38<br>-0.015 | 1.60<br>0.063             | 62.2<br>2.449               | 1.8<br>0.071                      |
| 65<br>2 1/2        | 73.0<br>2.875   | +0.74<br>-0.029 | 15.88<br>0.625                 | 8.74<br>0.344                   | 69.09<br>2.720   | -0.46<br>-0.018 | 1.98<br>0.078             | 75.2<br>2.961               | 2.3<br>0.091                      |
| 65<br>2 1/2        | 76.1<br>3.000   | +0.76<br>-0.030 | 15.88<br>0.625                 | 8.74<br>0.344                   | 72.26<br>2.845   | -0.46<br>-0.018 | 1.99<br>0.078             | 77.7<br>3.059               | 2.3<br>0.091                      |
| 80<br>3            | 88.9<br>3.500   | +0.89<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 84.94<br>3.344   | -0.46<br>-0.018 | 1.98<br>0.078             | 90.6<br>3.567               | 2.3<br>0.091                      |
| 100<br>4           | 108.0<br>4.250  | +1.07<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 103.73<br>4.084  | -0.51<br>-0.020 | 2.11<br>0.083             | 109.7<br>4.319              | 2.3<br>0.091                      |
| 100<br>4           | 114.3<br>4.500  | +1.14<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 110.08<br>4.334  | -0.51<br>-0.020 | 2.11<br>0.083             | 116.2<br>4.575              | 2.3<br>0.091                      |
| 125<br>5           | 133.0<br>5.250  | +1.32<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 129.13<br>5.084  | -0.51<br>-0.020 | 2.11<br>0.083             | 134.9<br>5.311              | 2.9<br>0.114                      |
| 125<br>5           | 139.7<br>5.500  | +1.40<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 135.48<br>5.334  | -0.51<br>-0.020 | 2.11<br>0.083             | 141.7<br>5.579              | 2.9<br>0.114                      |
| 125<br>5           | 141.3<br>5.563  | +1.42<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 137.03<br>5.395  | -0.56<br>-0.022 | 2.13<br>0.084             | 143.5<br>5.650              | 2.9<br>0.114                      |
| 150<br>6           | 159.0<br>6.250  | +1.60<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 154.50<br>6.083  | -0.56<br>-0.022 | 2.16<br>0.085             | 161.0<br>6.339              | 2.9<br>0.114                      |
| 150<br>6           | 165.1<br>6.500  | +1.60<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 160.8<br>6.330   | -0.56<br>-0.022 | 2.16<br>0.085             | 167.1<br>6.579              | 2.9<br>0.114                      |
| 150<br>6           | 168.3<br>6.625  | +1.60<br>-0.031 | 15.88<br>0.625                 | 8.74<br>0.344                   | 163.96<br>6.455  | -0.56<br>-0.022 | 2.16<br>0.085             | 170.7<br>6.720              | 2.9<br>0.114                      |
| 200A<br>8          | 216.3<br>8.516  | +1.60<br>-0.031 | 19.05<br>0.750                 | 11.91<br>0.469                  | 211.60<br>8.331  | -0.64<br>-0.025 | 2.35<br>0.093             | 219.8<br>8.653              | 2.9<br>0.114                      |
| 200<br>8           | 219.1<br>8.625  | +1.60<br>-0.031 | 19.05<br>0.750                 | 11.91<br>0.469                  | 214.40<br>8.441  | -0.64<br>-0.025 | 2.34<br>0.092             | 221.5<br>8.720              | 2.9<br>0.114                      |
| 250A<br>10         | 267.4<br>10.528 | +1.60<br>-0.031 | 19.05<br>0.750                 | 11.91<br>0.469                  | 262.60<br>10.339 | -0.69<br>-0.027 | 2.40<br>0.095             | 270.9<br>10.665             | 3.6<br>0.142                      |
| 250<br>10          | 273.0<br>10.750 | +1.60<br>-0.031 | 19.05<br>0.750                 | 11.91<br>0.469                  | 268.28<br>10.562 | -0.69<br>-0.027 | 2.39<br>0.094             | 275.4<br>10.842             | 3.6<br>0.142                      |
| 300A<br>12         | 318.5<br>12.539 | +1.60<br>-0.031 | 19.05<br>0.750                 | 11.91<br>0.469                  | 312.90<br>12.319 | -0.76<br>-0.030 | 2.77<br>0.109             | 322.0<br>12.677             | 4.0<br>0.158                      |
| 300<br>12          | 323.9<br>12.750 | +1.60<br>-0.031 | 19.05<br>0.750                 | 11.91<br>0.469                  | 318.29<br>12.531 | -0.76<br>-0.030 | 2.77<br>0.109             | 326.2<br>12.842             | 4.0<br>0.158                      |
| 350<br>14          | 377.0<br>14.842 | +1.60<br>-0.031 | 23.83<br>0.938                 | 11.91<br>0.469                  | 371.44<br>14.623 | -0.76<br>-0.030 | 2.77<br>0.109             | 379.5<br>14.941             | 4.5<br>0.177                      |
| 400<br>16          | 426.0<br>16.772 | +1.60<br>-0.031 | 23.83<br>0.938                 | 11.91<br>0.469                  | 420.46<br>16.553 | -0.76<br>-0.030 | 2.77<br>0.109             | 428.5<br>16.870             | 4.5<br>0.177                      |
| 500<br>20          | 529.0<br>20.827 | +1.60<br>-0.031 | 25.40<br>1.000                 | 11.91<br>0.469                  | 523.46<br>20.608 | -0.76<br>-0.030 | 2.77<br>0.109             | 533.0<br>20.984             | 5.0<br>0.197                      |

