



# SIL-BRAZE FITTINGS, FLANGES & UNIONS

PRODUCT CATALOG

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#### PRODUCT CATALOG

# Navigating This Catalog

## Pricing & Availability

If you have any questions regarding the pricing and availability of our products, we encourage you to contact our sales department. Our team is always happy to assist with any inquiries you may have, and can provide you with up-to-date information on pricing, lead times, and other relevant details. Please don't hesitate to reach out to us via phone or email to discuss your needs and get the information you need to make informed purchasing decisions.

## Dimensions

Please note that the dimensions provided in our product catalog are approximate and subject to change. If you require exact dimensions for a specific product, we recommend that you contact our engineering department. Our team can provide you with the most current and accurate information on the dimensions of our products, as well as any other technical specifications that you may require. We're here to help you make informed purchasing decisions and find the right products for your needs, so please don't hesitate to contact us with any questions or concerns you may have.

# Accuracy of Information



As a company, we strive to ensure the accuracy of information in our product catalog, and have taken the necessary steps to verify the technical specifications and other details provided. However, we cannot guarantee that the information in our catalog is completely error-free or up-to-date at all times. As such, we cannot be held liable for any inaccuracies or errors in our catalog. We encourage customers to verify any information in our catalog and to contact us if any questions or concerns arise.

# Welcome Message



Welcome to BEC Machine Products, where we specialize in manufacturing topquality fittings for naval vessels. We take great pride in providing reliable and durable products that meet the high standards of the naval defense industry. Our team of experts is committed to delivering innovative solutions to enhance the efficiency and effectiveness of your naval operations. With years of experience in the industry, we have gained a reputation for excellence and are trusted by naval forces around the world. We look forward to working with you and providing the best possible solutions for your naval needs. Thank you for choosing our company.

# Company **Mini** Background

For more than 40 years, BEC Machine Products has produced precision machine parts for military systems, water filtration, and numerous commercial industrial applications. We are an internationally known company that takes pride in filling orders for the U.S. Department of Defense and for many private industry customers. Apart from the U.S. government, some of our clients include Northrop Grumman, Dresser-Rand, and Bath Iron Works.

Our technical staff has more than 100 years of experience. Therefore, we can manufacture directly to your requirements or design a new product to meet your needs. In addition to our established product line, we have a library of more than 25,000 drawings. Moreover, we ship anywhere in the world and can provide emergency or rush service.

At BEC Machine Products, we average a 4-to-1 quality ratio for machinist to quality personnel. This approach, coupled with the availability for on-site customer joint inspection, assures that our clients' quality needs are maintained.

Our experience, our commitment to excellence, and our outstanding customer service make us the right choice for any business, public or private, large or small.



Manufacturing is performed at our state-of-the-art Harleysville facility that is located 35 miles northwest of Philadelphia. Centrally located in Northeastern United States, we have access to some of the largest inventories of raw material for quick response and service for our customers. Utilizing the latest in CAD/CAM software for both design and manufacturing, assures precision from design to assembly. Shop floor control from purchase to billing is maintained by the most powerful and comprehensive ERP software available today.

BEC Machine Products takes pride in being an American manufacturer that uses Americanmade software systems and machines to support the men and women who are defending our country around the world.

# Vision & Mission

## Vision

Our vision at BEC Machine Products is to be the leading provider of high-quality valves and fittings for the U.S. Navy. We are committed to delivering the most advanced and reliable products that meet the rigorous standards of the U.S. Navy, ensuring the safety and reliability of their operations at sea. Our team of experts is dedicated to continuous innovation and improvement, leveraging the latest technologies and materials to develop products that exceed our customers' expectations. With a relentless focus on quality, safety, and customer satisfaction, we strive to be the trusted partner of choice for the U.S. Navy and a leader in the industry.

## Mission

At BEC Machine Products, we are committed to providing high-quality valves and fittings for both the U.S. Navy and commercial enterprises. Our mission is to deliver reliable, efficient, and safe products that meet and exceed our customers' expectations, while also ensuring that they comply with all relevant specifications and industry standards.

We understand that our products play a critical role in the safety and effectiveness of our customers' operations, which is why we prioritize excellence in every aspect of our business, from product design and development to manufacturing and customer service. We believe in fostering a culture of continuous improvement, always striving to innovate and optimize our products and processes to better serve our customers.

Above all, we are dedicated to building strong, long-term relationships with our customers based on trust, transparency, and mutual respect. We believe that by working together, we can achieve great things and contribute to the success of our customers and the industries they serve.

# Socket Dimensions

| SIZE  | DEPTH<br>OF<br>SOCKET | METAL<br>THICKNESS<br>OVER<br>SOCKET<br>DIAMETER | BODY<br>METAL<br>THICKNESS | METAL DIAMETER |       |        |       | SIDE<br>METER |       | RADIUS | WII<br>O<br>BA |               | BA<br>DIAM    | ND<br>IETER   |
|-------|-----------------------|--|----------------------------|----------------|-------|--------|-------|---------------|-------|--------|----------------|---------------|---------------|---------------|
|       | MIN                   | MIN  | MIN<br>(A & B)             |                |       |        | PE A  | TYI           | PE B  | MIN    | TYPE A<br>MIN  | TYPE B<br>MIN | TYPE A<br>MIN | TYPE B<br>MIN |
| 1/4   | 17/64                 | .070   | .070                       | .540           | ±.003 | .398   | ±.015 | 0.56          | ±.020 | 5/64   | 9/32           | 0.14          | 0.700         | 0.81          |
| 3/8   | 5/16                  | .080   | .080                       | .675           | ±.003 | .532   | ±.015 | 0.70          | ±.020 | 3/32   | 21/64          | 0.15          | 0.855         | 1.00          |
| 1/2   | 3/8                   | .080   | .080                       | .840           | ±.003 | .697   | ±.020 | 0.87          | ±.030 | 3/32   | 25/64          | 0.17          | 1.020         | 1.17          |
| 3/4   | 13/32                 | .090   | .090                       | 1.050          | ±.003 | .907   | ±.025 | 1.08          | ±.030 | 7/64   | 27/64          | 0.21          | 1.250         | 1.42          |
| 1     | 7/16                  | .100   | .100                       | 1.315          | ±.003 | 1.171  | ±.025 | 1.355         | ±.035 | 7/64   | 15/32          | 0.24          | 1.535         | 1.72          |
| 1-1/4 | 1/2                   | .110   | .110                       | 1.660          | ±.003 | 1.502  | ±.030 | 1.695         | ±.035 | 1/8    | 17/32          | 0.28          | 1.900         | 2.10          |
| 1-1/2 | 5/8                   | .120   | .120                       | 1.900          | ±.005 | 1.742  | ±.030 | 1.935         | ±.035 | 1/8    | 21/32          | 0.31          | 2.160         | 2.38          |
| 2     | 21/32                 | .140   | .140                       | 2.375          | ±.005 | 2.186  | ±.030 | 2.415         | ±.035 | 5/32   | 11/16          | 0.38          | 2.675         | 2.92          |
| 2-1/2 | 25/32                 | .150   | .150                       | 2.875          | ±.007 | 2.686  | ±.030 | 2.930         | ±.050 | 5/32   | 13/16          | 0.44          | 3.215         | 3.49          |
| 3     | 53/64                 | .170   | .170                       | 3.500          | ±.007 | 3.286  | ±.035 | 3.550         | ±.050 | 3/16   | 55/64          | 0.51          | 3.880         | 4.20          |
| 3-1/2 | 7/8                   | .180   | .180                       | 4.000          | ±.007 | 3.786  | ±.035 | 4.050         | ±.050 | 3/16   | 29/32          | 0.56          | 4.400         | 4.75          |
| 4     | 29/32                 | .200   | .200                       | 4.500          | ±.007 | 4.252  | ±.040 | 4.550         | ±.050 | 7/32   | 15/16          | 0.62          | 4.940         | 5.31          |
| 5     | 1                     | .280   | .280                       | 5.563          | ±.007 | 5.278  | ±.040 | 5.610         | ±.050 | 5/16   | 1-1/32         | 0.72          | 6.163         | 6.29          |
| 6     | 1-7/64                | .320   | .320                       | 6.620          | ±.007 | 6.321  | ±.040 | 6.680         | ±.050 | 11/32  | 1-9/64         | 0.85          | 7.305         | 7.42          |
| 8     | 1-5/16                | .380   | .380                       | 8.625          | ±.007 | 8.286  | ±.040 | 8.680         | ±.050 | 13/32  | 1-23/64        | 1.08          | 9.425         | 9.56          |
| 10    | 1-1/2                 | .455   | .455                       | 10.750         | ±.007 | 10.325 | ±.040 |               |       | 1/2    | 1-9/16         |               | 11.70         |               |
| 12    | 1-5/8                 | .540   | .540                       | 12.750         | ±.007 | 12.322 | ±.040 |               |       | 9/16   | 1-11/16        |               | 13.84         |               |

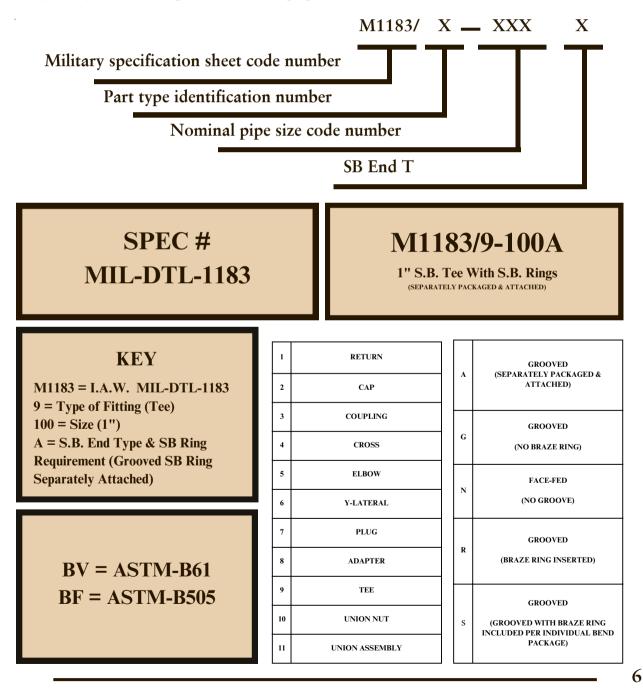
|                                  |      |   | SERVICE R   | ATING TABLE          |                         |               |        |  |                                |
|----------------------------------|------|---|-------------|----------------------|-------------------------|---------------|--------|--|--------------------------------|
|                                  |      | STEAM S                                 | SERVICE     |                      | AIR, OIL, WATER SERVICE |               |        |  |                                |
| NOMINAL<br>PIPE SIZE<br>(INCHES) | PRES | MAXIMUM WORKING<br>PRESSURE<br>(LB/IN2) |             | PRESSURE TEMPERATURE |                         | RATURE        |        |  | MAXIMUM<br>TEMPERATURE<br>(°F) |
| 1/4"-6"                          | 200  |   | 42          | 25                   | 4                       | 00            | 150    |  |                                |
| ABOVE 6"                         | 1:   | 150                                     |             | 425                  |                         | 250           |        |  |                                |
|                                  |      | BRC                                     | ONZE MATERI | AL SPECIFICA         | TIONS                   |               |        |  |                                |
|                                  |      | GRA                                     | ADE         | DE UNS No.           |                         | SPECIFICATION |        |  |                                |
| CAS                              | ΓING | BRO                                     | RONZE C92   |                      | C92200                  |               | ГМ-В61 |  |                                |
|                                  |      |   | ONZE CS     |                      | C90300                  |               | M-B505 |  |                                |
| BAR S                            | ТОСК | BRO                                     | NZE         | C92200               |                         | ASTM-B505     |        |  |                                |

# **BEC Parts Reference**

The U.S. Navy's M1183 Military Specification outlines precise standards for a designated product. Military Specifications (MIL-SPEC) ensure material quality and compatibility. Part numbers, including for M1183, are formed with unique alphanumeric combinations to identify components consistently.

To enhance customer service, we've streamlined ordering with a four-part identification system. Part numbers start with the military spec code, offering a base for easy reference. The second part uses digits to indicate the component type.

For greater clarity and industry alignment, the third part signifies size in digits from our standard system. Lastly, the system's fourth part indicates end-prep and socket condition.



# Section 1

# Elbows & Returns



Elbows are important components in the naval defense industry as they play a critical role in the design and operation of piping systems on surface ships and submarines. Different types of elbows, including street, 45°, 90°, returns, and long turns serve specific purposes in naval applications.

Street elbows, for example, are used to change the direction of a pipe at a right angle while maintaining the same pipe size. This can be useful in tight spaces or when clearance is limited. Street elbows are commonly used in bilge and drainage systems on naval vessels.

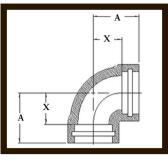


45° and 90° elbows are used to change the direction of fluid flow by 45 or 90 degrees, respectively. These types of elbows are used in a variety of applications in naval vessels, including piping for fuel, water, and other fluids. The choice between a 45° and a 90° elbow will depend on the specific requirements of the system, including flow rate and pressure.

Returns, also known as u-turns or hairpin bends, are used to change the direction of flow in a piping system by 180°. These are used in systems that require the fluid to flow back in the opposite direction, such as in cooling systems.

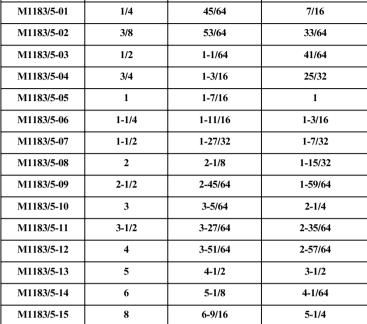
The significance of elbows in the naval defense industry lies in their ability to ensure the safe and efficient operation of critical systems on board ships and submarines. By choosing the right type of elbow for a given application, naval engineers can help ensure that the piping system functions reliably, even under extreme conditions. Additionally, proper installation and maintenance of elbows is essential to prevent leaks and other issues that can compromise the safety and performance of naval vessels.

#### 90° Elbows





#### 



#### Custom reducing sizes available upon request

A

Х

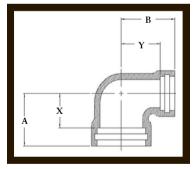
SIZE

### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

#### Reducing 90° Elbows



A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed AT = SB x NPT



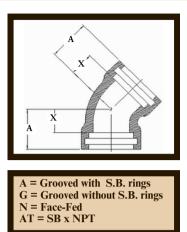


#### Custom reducing sizes available upon request

| PART #      | SIZE          | А       | X       | B       | Y       |
|-------------|---------------|---------|---------|---------|---------|
| M1183/5-149 | 3/4 x 1/2     | 1-3/32  | 11/16   | 1-1/8   | 3/4     |
| M1183/5-197 | 1 x 3/8       | 1-3/16  | 3/4     | 1-9/32  | 31/32   |
| M1183/5-198 | 1 x 1/2       | 1-3/16  | 3/4     | 1-1/4   | 7/8     |
| M1183/5-199 | 1 x 3/4       | 1-5/16  | 7/8     | 1-5/16  | 29/32   |
| M1183/5-248 | 1-1/4 x 3/4   | 1-13/32 | 29/32   | 1-1/2   | 1-3/32  |
| M1183/5-298 | 1-1/2 x 1     | 1-9/16  | 15/16   | 1-23/32 | 1-9/32  |
| M1183/5-299 | 1-1/2 x 1-1/4 | 1-23/32 | 1-3/32  | 1-13/16 | 1-5/16  |
| M1183/5-397 | 2 x 1         | 1-19/32 | 15/16   | 1-15/16 | 1-1/2   |
| M1183/5-398 | 2 x 1-1/4     | 1-25/32 | 1-1/8   | 2-1/32  | 1-17/32 |
| M1183/5-399 | 2 x 1-1/2     | 1-7/8   | 1-7/32  | 2-1/16  | 1-7/16  |
| M1183/5-446 | 2-1/2 x 1     | 1-7/8   | 1-3/32  | 2-3/8   | 1-15/16 |
| M1183/5-449 | 2-1/2 x 2     | 2-3/8   | 1-19/32 | 2-19/32 | 1-15/16 |
| M1183/5-598 | 4 x 3         | 3-5/16  | 2-13/32 | 3-19/32 | 2-49/64 |
| M1183/5-698 | 6 x 4         | 4-1/8   | 3-1/64  | 4-15/16 | 4-1/32  |

### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

#### 45° Elbows





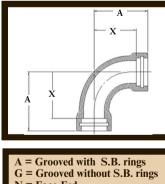
#### Custom reducing sizes available upon request

| PART #     | SIZE              | Α       | X       |
|------------|-------------------|---------|---------|
| M1183/5-21 | 1/4               | 9/16    | 19/64   |
| M1183/5-22 | 3/8               | 5/8     | 5/16    |
| M1183/5-23 | 1/2               | 25/32   | 13/32   |
| M1183/5-24 | 3/4               | 57/64   | 31/64   |
| M1183/5-25 | 1                 | 1-1/16  | 5/8     |
| M1183/5-26 | 33/5-26 1-1/4     |         | 23/32   |
| M1183/5-27 | 1-1/2             | 1-19/64 | 43/64   |
| M1183/5-28 | 2                 | 1-29/64 | 51/64   |
| M1183/5-29 | 183/5-29 2-1/2 1- |         | 1-11/64 |
| M1183/5-30 | 3                 | 2-11/64 | 1-11/32 |
| M1183/5-31 | 3-1/2             | 2-25/64 | 1-33/64 |
| M1183/5-32 | 1183/5-32 4       |         | 1-45/64 |
| M1183/5-33 | 5                 | 3-3/64  | 2-3/64  |
| M1183/5-34 | 6                 | 3-29/64 | 2-11/32 |
|            |                   |         |         |

### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC



#### 90° Long-Turn Elbows



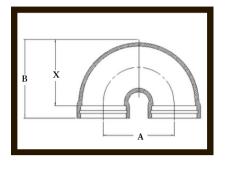
G = Grooved without S.B. rinN = Face-FedAT = SB x NPT



#### Custom reducing sizes available upon request

| PART #     | SIZE  | A       | X       |
|------------|-------|---------|---------|
| M1183/5-41 | 1/4   | 1-1/4   | 63/64   |
| M1183/5-42 | 3/8   | 1-1/2   | 1-3/16  |
| M1183/5-43 | 1/2   | 1-3/4   | 1-3/8   |
| M1183/5-44 | 3/4   | 2       | 1-19/32 |
| M1183/5-45 | 1     | 2-5/16  | 1-7/8   |
| M1183/5-46 | 1-1/4 | 2-3/4   | 2-1/4   |
| M1183/5-47 | 1-1/2 | 3-1/8   | 2-1/2   |
| M1183/5-48 | 2     | 3-3/4   | 3-3/32  |
| M1183/5-49 | 2-1/2 | 4-1/2   | 3-23/32 |
| M1183/5-50 | 3     | 5-7/16  | 4-39/64 |
| M1183/5-51 | 3-1/2 | 6-3/16  | 5-5/16  |
| M1183/5-52 | 4     | 6-15/16 | 6-1/16  |
| M1183/5-53 | 5     | 8-1/8   | 7-1/8   |

#### **Open Returns**



|            | Ũ     |       |         |         |
|------------|-------|-------|---------|---------|
| PART #     | SIZE  | А     | Х       | В       |
| M1183/1-02 | 1/2   | 1-1/2 | 1-5/16  | 1-11/16 |
| M1183/1-03 | 3/4   | 2     | 1-23/32 | 2-1/8   |
| M1183/1-06 | 1     | 2-1/2 | 2-3/16  | 2-5/8   |
| M1183/1-07 | 1-1/4 | 3     | 2-5/8   | 3-1/8   |

### Custom reducing sizes available upon request

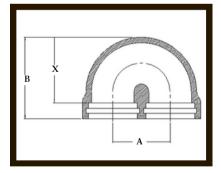


#### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC





A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed

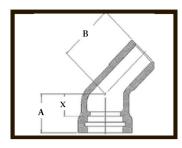




Custom reducing sizes available upon request

| PART #     | SIZE  | А      | X       | В       |
|------------|-------|--------|---------|---------|
| M1183/1-01 | 1/2   | 1"     | 1-5/16  | 1-11/16 |
| M1183/1-05 | 1     | 1-1/2  | 1-11/16 | 2-1/8   |
| M1183/1-09 | 1-1/2 | 2-3/16 | 2-5/16  | 2-15/16 |
| M1183/1-11 | 2     | 2-5/8  | 2-25/32 | 3-7/16  |

#### 45° Street Elbows





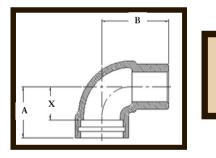


#### Custom reducing sizes available upon request

| 45°    |       |        |       |       |  |  |  |  |
|--------|-------|--------|-------|-------|--|--|--|--|
| PART # | SIZE  | А      | Х     | В     |  |  |  |  |
| 034973 | 1/2   | 7/8    | 1/2   | 1-1/4 |  |  |  |  |
| 034977 | 1-1/2 | 1-7/16 | 13/16 | 1-7/8 |  |  |  |  |

ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

#### 90° Street Elbows







Custom reducing sizes available upon request

| 90°    |       |             |        |         |  |  |  |  |
|--------|-------|-------------|--------|---------|--|--|--|--|
| PART # | SIZE  | Α           | Х      | В       |  |  |  |  |
| 027451 | 1/4   | 13/16       | 35/64  | 1-3/16  |  |  |  |  |
| 027452 | 3/8   | 15/16       | 5/8    | 1-9/32  |  |  |  |  |
| 027453 | 1/2   | 1           | 5/8    | 1-15/32 |  |  |  |  |
| 027454 | 3/4   | 1_3/16<br>A | 25/32  | 1-21/32 |  |  |  |  |
| 027455 | 1     | 1-//10      | 1      | 1-31/32 |  |  |  |  |
| 027456 | 1-1/4 | 1-11/16     | 1-3/16 | 2-1/4   |  |  |  |  |
| 027457 | 1-1/2 | 1-27/32     | 1-7/32 | 2-15/32 |  |  |  |  |
| 027458 | 2     | 2-3/32      | 1-7/16 | 2-9/16  |  |  |  |  |

ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC



Sil-braze tees are commonly used in piping systems to facilitate the directional flow of fluids. The purpose of these fittings is to provide a branch connection to a main pipe while maintaining the same or smaller diameter of the main pipe.

A sil-braze single-sweep tee is designed to have a single smooth curve that connects the branch to the main pipe. This type of tee is used when the flow direction needs to be redirected by 90 degrees, without causing significant turbulence or pressure drop. Single-sweep tees are also useful in applications where the fluid needs to be diverted to a different process line.

A sil-braze double-sweep tee, on the other hand, has two smooth curves that connect the branch to the main pipe. This design is useful in applications where there is a need to change the flow direction by 180° while minimizing turbulence and pressure drop. Double-sweep tees are commonly used in piping systems that require frequent cleaning or maintenance, as they provide easier access to the branch line.

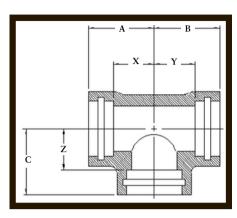


The significance of sil-braze tees lies in their ability to improve the efficiency and functionality of piping systems. By providing a smooth and efficient flow path, these fittings minimize pressure drop, reduce the risk of fluid stagnation, and ensure proper fluid mixing. They also provide a reliable and durable connection that can withstand high-pressure and high-temperature environments.

Overall, sil-braze tees are essential components in a wide range of piping systems and are valued for their ability to facilitate fluid flow while minimizing turbulence and pressure drop.

## ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

| PART #        | SIZE            | Α       | Х      | В      | Y     | С       | Z      |
|---------------|-----------------|---------|--------|--------|-------|---------|--------|
| M1183/9-100   | 1/4             | 45/64   | 7/16   | 45/64  | 7/16  | 45/64   | 7/16   |
| *M1183/9-500  | 1/4 x 1/4 x 1/2 | 57/64   | 5/8    | 57/64  | 5/8   | 29/32   | 17/32  |
| M1183/9-101   | 3/8             | 13/16   | 1/2    | 13/16  | 1/2   | 13/16   | 1/2    |
| M1183/9-401   | 3/8 x 1/4 x 1/4 | 3/4     | 7/16   | 23/32  | 29/64 | 25/32   | 33/64  |
| M1183/9-402   | 3/8 x 3/8 x 1/4 | 3/4     | 7/16   | 3/4    | 7/16  | 25/32   | 33/64  |
| M1183/9-403   | 3/8 x 3/8 x 1/2 | 29/32   | 19/32  | 29/32  | 19/32 | 15/16   | 9/16   |
| M1183/9-102   | 1/2             | 1-1/64  | 41/64  | 1-1/64 | 41/64 | 1-1/64  | 41/64  |
| M1183/9-404   | 1/2 x 1/4 x 1/2 | 1-1/64  | 41/64  | 55/64  | 19/32 | 1-1/64  | 41/64  |
| M1183/9-405   | 1/2 x 3/8 x 3/8 | 15/16   | 9/16   | 13/16  | 1/2   | 29/32   | 19/32  |
| M1183/9-406   | 1/2 x 1/2 x 1/4 | 7/8     | 1/2    | 7/8    | 1/2   | 2/8     | 39/64  |
| M1183/9-407   | 1/2 x 1/2 x 3/8 | 15/16   | 9/16   | 15/16  | 9/16  | 29/32   | 19/32  |
| *M1183/9-503  | 1/2 x 3/8 x 1/2 | 1-1/64  | 41/64  | 29/32  | 19/32 | 1-1/64  | 41/64  |
| M1183/9-408   | 1/2 x 1/2 x 3/4 | 1-1/8   | 3/4    | 1-1/8  | 3/4   | 1-3/32  | 11/16  |
| *M1183/9-505  | 1/2 x 1/2 x 1   | 1-5/16  | 15/16  | 1-5/16 | 15/16 | 1-5/16  | 7/8    |
| M1183/9-103   | 3/4             | 1-3/16  | 25/32  | 1-3/16 | 25/32 | 1-3/16  | 25/32  |
| M1183/9-409   | 3/4 x 3/8 x 3/8 | 1       | 19/32  | 15/16  | 5/8   | 1       | 19/32  |
| M1183/9-410   | 3/4 x 3/8 x 1/2 | 1-1/16  | 21/32  | 29/32  | 19/32 | 1-1/8   | 3/4    |
| M1183/9-411   | 3/4 x 3/8 x 3/4 | 1-3/16  | 25/32  | 1-7/64 | 51/64 | 1-3/16  | 25/32  |
| M1183/9-411.5 | 3/4 x 1/2 x 1/4 | 1       | 19/32  | 15/16  | 9/16  | 1       | 47/64  |
| M1183/9-412   | 3/4 x 1/2 x 1/2 | 1-5/64  | 43/64  | 1-1/64 | 41/64 | 1-7/64  | 47/64  |
| M1183/9-413   | 3/4 x 1/2 x 3/4 | 1-3/16  | 25/32  | 1-7/64 | 47/64 | 1-3/16  | 25/32  |
| M1183/9-414   | 3/4 x 3/4 x 1/4 | 1       | 19/32  | 1      | 19/32 | 1       | 47/64  |
| M1183/9-415   | 3/4 x 3/4 x 3/8 | 1       | 19/32  | 1      | 19/32 | 1       | 11/16  |
| M1183/9-416   | 3/4 x 3/4 x 1/2 | 1-5/64  | 43/64  | 1-5/64 | 43/64 | 1-7/64  | 47/64  |
| M1183/9-417   | 3/4 x 3/4 x 1   | 1-5/16  | 29/32  | 1-5/16 | 29/32 | 1-5/16  | 7/8    |
| M1183/9-104   | 1               | 1-7/16  | 1      | 1-7/16 | 1     | 1-7/16  | 1      |
| *M1183/9-512  | 1 x 1/4 x 1     | 1-1/2   | 1-1/16 | 1-7/32 | 61/64 | 1-1/2   | 1-1/16 |
| M1183/9-418   | 1 x 3/8 x 1     | 1-7/16  | 1      | 1-1/8  | 13/16 | 1-7/16  | 1      |
| M1183/9-419   | 1 x 1/2 x 1/2   | 1-13/64 | 49/64  | 1-5/64 | 45/64 | 1-15/64 | 55/64  |
| M1183/9-420   | 1 x 1/2 x 3/4   | 1-5/16  | 7/8    | 1-1/8  | 3/4   | 1-5/16  | 7/8    |



Tees (Standard & Reducing)

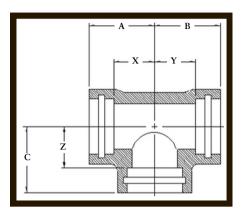


A = Grooved N = Face-Fed BT = SB x SB x NPT(F) RT = SB x NPT(F) x SB BRT = SB x NPT(F) x NPT(F)

\* Type B Casting

Custom and reducing sizes are available upon request.

#### Tees (Standard & Reducing)





A = Grooved N = Face-Fed $BT = SB \times SB \times NPT(F)$  $RT = SB \times NPT(F) \times SB$  $BRT = SB \times NPT(F) \times NPT(F)$ 

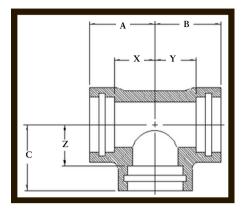
\*Type B Casting

Custom and reducing sizes are available upon request.

| PART #       | SIZE                | Α       | X      | B       | Y      | С       | Z       |
|--------------|---------------------|---------|--------|---------|--------|---------|---------|
| M1183/9-421  | 1 x 1/2 x 1         | 1-7/16  | 1      | 1-15/64 | 55/64  | 1-7/16  | 1       |
| M1183/9-422  | 1 x 3/4 x 3/8       | 1-13/64 | 49/64  | 1-5/64  | 43/64  | 1-15/64 | 59/64   |
| M1183/9-423  | 1 x 3/4 x 1/2       | 1-13/64 | 49/64  | 1-5/64  | 43/64  | 1-15/64 | 55/64   |
| M1183/9-424  | 1 x 3/4 x 3/4       | 1-19/64 | 55/64  | 1-3/16  | 25/32  | 1-5/16  | 29/32   |
| M1183/9-425  | 1 x 3/4 x 1         | 1-7/16  | 1      | 1-5/16  | 29/32  | 1-7/16  | 1       |
| M1183/9-426  | 1 x 1 x 1/4         | 1-1/8   | 11/16  | 1-1/8   | 11/16  | 1-1/8   | 55/64   |
| M1183/9-427  | 1 x 1 x 3/8         | 1-1/8   | 11/16  | 1-1/8   | 11-16  | 1-1/8   | 13/16   |
| M1183/9-428  | 1 x 1 x 1/2         | 1-13/64 | 49/64  | 1-13/64 | 49/64  | 1-15/64 | 55/64   |
| M1183/9-429  | 1 x 1 x 3/4         | 1-19/64 | 55/64  | 1-19/64 | 55/64  | 1-5/16  | 29/32   |
| M1183/9-430  | 1 x 1 x 1-1/4       | 1-19/32 | 1-5/32 | 1-19/32 | 1-5/32 | 1-17/32 | 1-1/32  |
| M1183/9-105  | 1-1/4               | 1-11/16 | 1-3/16 | 1-11/16 | 1-3/16 | 1-11/16 | 1-3/16  |
| M1183/9-431  | 1-1/4 x 1/2 x 1     | 1-17/32 | 1-1/32 | 1-1/4   | 7/8    | 1-19/32 | 1-5/32  |
| M1183/9-432  | 1-1/4 x 3/4 x 3/4   | 1-25/64 | 57/64  | 1-19/64 | 57/64  | 1-31/64 | 1-5/64  |
| M1183/9-433  | 1-1/4 x 3/4 x 1     | 1-33/64 | 1-1/64 | 1-7/16  | 1-1/32 | 1-19/32 | 1-5/32  |
| M1183/9-434  | 1-1/4 x 3/4 x 1-1/4 | 1-11/16 | 1-3/16 | 1-31/64 | 1-5/64 | 1-11/16 | 1-3/16  |
| M1183/9-435  | 1-1/4 x 1 x 3/4     | 1-25/64 | 57/64  | 1-19/64 | 55/64  | 1-31/64 | 1-5/64  |
| M1183/9-436  | 1-1/4 x 1 x 1       | 1-33/64 | 1-1/64 | 1-7/16  | 1      | 1-19/32 | 1-5/32  |
| M1183/9-437  | 1-1/4 x 1 x 1-1/4   | 1-11/16 | 1-3/16 | 1-19/32 | 1-5/32 | 1-11/16 | 1-3/16  |
| *M1183/9-522 | 1-1/4 x 1-1/4 x 1/4 | 1-5/32  | 21/32  | 1-5/32  | 21/32  | 1-9/32  | 1-1/64  |
| M1183/9-438  | 1-1/4 x 1-1/4 x 3/8 | 1-19/64 | 51/64  | 1-19/64 | 51/64  | 1-13/32 | 1-3/32  |
| M1183/9-439  | 1-1/4 x 1-1/4 x 1/2 | 1-19/64 | 51/64  | 1-19/64 | 51/64  | 1-13/32 | 1-1/32  |
| M1183/9-440  | 1-1/4 x 1-1/4 x 3/4 | 1-25/64 | 57/64  | 1-25/64 | 57/64  | 1-31/64 | 1-5/64  |
| M1183/9-441  | 1-1/4 x 1-1/4 x 1   | 1-33/64 | 1-1/64 | 1-33/64 | 1-1/64 | 1-19/32 | 1-5/32  |
| M1183/9-106  | 1-1/2               | 1-27/32 | 1-7/32 | 1-27/32 | 1-7/32 | 1-27/32 | 1-7/32  |
| M1183/9-442  | 1-1/2 x 1/2 x 1-1/2 | 1-27/32 | 1-7/32 | 1-19/32 | 1-7/32 | 1-27/32 | 1-7/32  |
| M1183/9-443  | 1-1/2 x 3/4 x 3/4   | 1-35/64 | 59/64  | 1-33/64 | 1-7/64 | 1-23/32 | 1-5/16  |
| M1183/9-444  | 1-1/2 x 3/4 x 1     | 1-35/64 | 59/64  | 1-33/64 | 1-7/64 | 1-23/32 | 1-9/32  |
| M1183/9-445  | 1-1/2 x 3/4 x 1-1/4 | 1-27/32 | 1-7/32 | 1-19/32 | 1-3/16 | 1-27/32 | 1-11/32 |
| M1183/9-446  | 1-1/2 x 3/4 x 1-1/2 | 1-27/32 | 1-7/32 | 1-19/32 | 1-3/16 | 1-27/32 | 1-7/32  |
| *M1183/9-527 | 1-1/2 x 1 x 3/4     | 1-35/64 | 59/64  | 1-33/64 | 1-5/64 | 1-23/32 | 1-5/16  |

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#### Tees (Standard & Reducing)





A = Grooved N = Face-Fed BT = SB x SB x NPT(F) RT = SB x NPT(F) x SB BRT = SB x NPT(F) x NPT(F)

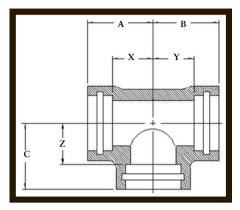
\*Type B Casting

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| PART #        | SIZE                  | Α       | X       | B       | Y       | С       | Z       |
|---------------|-----------------------|---------|---------|---------|---------|---------|---------|
| M1183/9-447   | 1-1/2 x 1 x 1         | 1-35/64 | 59/64   | 1-33/64 | 1-5/64  | 1-23/32 | 1-9/32  |
| M1183/9-448   | 1-1/2 x 1 x 1-1/4     | 1-23/32 | 1-3/32  | 1-11/16 | 1-1/4   | 1-13/16 | 1-5/16  |
| M1183/9-449   | 1-1/2 x 1 x 1-1/2     | 1-27/32 | 1-7/32  | 1-13/16 | 1-3/8   | 1-27/32 | 1-7/32  |
| M1183/9-449.5 | 1-1/2 x 1 x 2         | 2-1/16  | 1-7/16  | 2-1/16  | 1-5/8   | 1-7/8   | 1-7/32  |
| M1183/9-450   | 1-1/2 x 1-1/4 x 1/2   | 1-5/16  | 11/16   | 1-9/32  | 25/32   | 1-17/32 | 1-5/32  |
| *M1183/9-528  | 1-1/2 x 1-1/4 x 3/4   | 1-35/64 | 59/64   | 1-33/64 | 1-1/64  | 1-23/32 | 1-5/16  |
| M1183/9-451   | 1-1/2 x 1-1/4 x 1     | 1-35/64 | 59/64   | 1-33/64 | 1-1/64  | 1-23/32 | 1-9/32  |
| M1183/9-452   | 1-1/2 x 1-1/4 x 1-1/4 | 1-23/32 | 1-3/32  | 1-11/16 | 1-3/16  | 1-13/16 | 1-5/16  |
| M1183/9-453   | 1-1/2 x 1-1/4 x 1-1/2 | 1-27/32 | 1-7/32  | 1-13/16 | 1-5/16  | 1-27/32 | 1-7/32  |
| M1183/9-453.9 | 1-1/2 x 1-1/2 x 1/4   | 1-5/16  | 11/16   | 1-5/16  | 11/16   | 1-17/32 | 1-17/64 |
| M1183/9-454   | 1-1/2 x 1-1/2 x 3/8   | 1-5/16  | 11/16   | 1-5/16  | 11/16   | 1-17/32 | 1-7/32  |
| M1183/9-455   | 1-1/2 x 1-1/2 x 1/2   | 1-5/16  | 11/16   | 1-5/16  | 11/16   | 1-17/32 | 1-5/32  |
| M1183/9-456   | 1-1/2 x 1-1/2 x 3/4   | 1-27/64 | 51/64   | 1-27/64 | 51/64   | 1-19/32 | 1-3/16  |
| M1183/9-457   | 1-1/2 x 1-1/2 x 1     | 1-35/64 | 59/64   | 1-35/64 | 59/64   | 1-23/32 | 1-9/32  |
| M1183/9-458   | 1-1/2 x 1-1/2 x 1-1/4 | 1-23/32 | 1-3/32  | 1-23/32 | 1-3/32  | 1-13/16 | 1-5/16  |
| *M1183/9-529  | 1-1/2 x 1-1/2 x 2     | 2-1/16  | 1-7/16  | 2-1/16  | 1-7/16  | 1-57/64 | 1-15/64 |
| M1183/9-107   | 2                     | 2-1/8   | 1-15/32 | 2-1/8   | 1-15/32 | 2-1/8   | 1-15/32 |
| M1183/9-459   | 2 x 1/2 x 2           | 2-1/8   | 1-15/32 | 1-27/32 | 1-15/32 | 2-1/8   | 1-15/32 |
| M1183/9-460   | 2 x 3/4 x 2           | 2-1/8   | 1-15/32 | 1-27/32 | 1-7/16  | 2-1/8   | 1-15/32 |
| M1183/9-461   | 2 x 1 x 2             | 2-1/8   | 1-15/32 | 2-1/16  | 1-5/8   | 2-1/8   | 1-15/32 |
| M1183/9-462   | 2 x 1-1/4 x 1-1/4     | 1-49/64 | 1-7/64  | 1-23/32 | 1-7/32  | 2-3/64  | 1-35/64 |
| M1183/9-463   | 2 x 1-1/4 x 1-1/2     | 1-57/64 | 1-15/64 | 1-27/32 | 1-11/32 | 1-7/16  | 13/16   |
| M1183/9-464   | 2 x 1-1/4 x 2         | 2-1/8   | 1-15/32 | 2-1/16  | 1-9/16  | 2-1/8   | 1-15/32 |
| M1183/9-464.9 | 2 x 1-1/2 x 3/4       | 1-49/64 | 1-7/64  | 1-23/32 | 1-3/32  | 2-3/64  | 1-41/64 |
| M1183/9-465   | 2 x 1-1/2 x 1         | 1-49/64 | 1-7/64  | 1-23/32 | 1-3/32  | 2-3/64  | 1-39/64 |
| M1183/9-466   | 2 x 1-1/2 x 1-1/4     | 1-25/32 | 1-1/8   | 1-23/32 | 1-3/32  | 2-1/32  | 1-17/32 |
| M1183/9-467   | 2 x 1-1/2 x 1-1/2     | 1-57/64 | 1-15/64 | 1-27/32 | 1-7/32  | 2-1/16  | 1-7/16  |
| M1183/9-468   | 2 x 1-1/2 x 2         | 2-1/8   | 1-15/32 | 2-1/16  | 1-7/16  | 2-1/8   | 1-15/32 |
| *M1183/9-531  | 2 x 2 x 1/2           | 1-15/32 | 13/16   | 1-15/32 | 13/16   | 1-27/32 | 1-15/32 |
| *M1183/9-532  | 2 x 2 x 3/4           | 1-15/32 | 13/16   | 1-15/32 | 13/16   | 1-27/32 | 1-7/16  |

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#### Tees (Standard & Reducing)





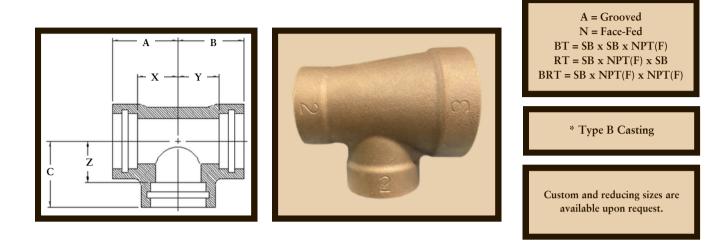
A = GroovedN = Face-Fed $BT = SB \times SB \times NPT(F)$  $RT = SB \times NPT(F) \times SB$  $BRT = SB \times NPT(F) \times NPT(F)$ 

\*Type B Casting

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| PART #        | SIZE                  | Α       | X       | В       | Y       | С       | Z       |
|---------------|-----------------------|---------|---------|---------|---------|---------|---------|
| M1183/9-469   | 2 x 2 x 1             | 1-19/32 | 15/16   | 1-19/32 | 15/16   | 1-61/64 | 1-33/64 |
| M1183/9-470   | 2 x 2 x 1-1/4         | 1-49/64 | 1-7/64  | 1-49/64 | 1-7/64  | 2-3/64  | 1-35/64 |
| M1183/9-471   | 2 x 2 x 1-1/2         | 1-57/64 | 1-15/64 | 1-57/64 | 1-15/64 | 2-1/16  | 1-7/16  |
| *M1183/9-533  | 2 x 2 x 2-1/2         | 2-19/32 | 1-15/16 | 2-19/32 | 1-15/16 | 2-25/64 | 1-39/64 |
| M1183/9-108   | 2-1/2                 | 2-45/64 | 1-59/64 | 2-45/64 | 1-59/64 | 2-45/64 | 1-59/64 |
| M1183/9-474.7 | 2-1/2 x 3/4 x 2-1/2   | 2-11/16 | 1-29/32 | 2-19/32 | 2-3/16  | 2-11/16 | 1-29/32 |
| M1183/9-474.8 | 2-1/2 x 1 x 2-1/2     | 2-11/16 | 1-29/32 | 2-19/32 | 2-5/32  | 2-11/16 | 1-29/32 |
| M1183/9-474.9 | 2-1/2 x 1-1/4 x 2-1/2 | 2-11/16 | 1-29/32 | 2-19/32 | 2-3/32  | 2-11/16 | 1-29/32 |
| M1183/9-473   | 2-1/2 x 1-1/2 x 1-1/2 | 2-25/64 | 1-39/64 | 2-1/4   | 1-5/8   | 2-19/32 | 1-31/32 |
| M1183/9-474   | 2-1/2 x 1-1/2 x 2     | 2-25/64 | 1-39/64 | 2-1/4   | 1-5/8   | 2-19/32 | 1-15/16 |
| M1183/9-475   | 2-1/2 x 1-1/2 x 2-1/2 | 2-11/16 | 1-29/32 | 2-19/32 | 1-31/32 | 2-11/16 | 1-29/32 |
| M1183/9-476   | 2-1/2 x 2 x 1-1/2     | 2-25/64 | 1-39/64 | 2-1/4   | 1-19/32 | 2-19/32 | 1-31/32 |
| M1183/9-477   | 2-1/2 x 2 x 2         | 2-3/8   | 1-19/32 | 2-1/4   | 1-19/32 | 2-19/32 | 1-15/16 |
| *M1183/9-536  | 2-1/2 x 2 x 2-1/2     | 2-45/64 | 1-59/64 | 2-19/32 | 1-15/16 | 2-45/64 | 1-59/64 |
| M1183/9-478   | 2-1/2 x 2-1/2 x 3/4   | 1-7/8   | 1-3/32  | 1-7/8   | 1-3/32  | 2-3/8   | 1-31/32 |
| M1183/9-479   | 2-1/2 x 2-1/2 x 1     | 1-7/8   | 1-3/32  | 1-7/8   | 1-3/32  | 2-3/8   | 1-15/16 |
| *M1183/9-538  | 2-1/2 x 2-1/2 x 1-1/4 | 2-3/64  | 1-17/64 | 2-3/64  | 1-17/64 | 2-29/64 | 1-61/64 |
| M1183/9-480   | 2-1/2 x 2-1/2 x 1-1/2 | 2-5/32  | 1-3/8   | 2-5/32  | 1-3/8   | 2-1/2   | 1-7/8   |
| M1183/9-481   | 2-1/2 x 2-1/2 x 2     | 2-25/64 | 1-39/64 | 2-25/64 | 1-39/64 | 2-19/32 | 1-15/16 |
| M1183/9-109   | 3                     | 3-5/64  | 2-1/4   | 3-5/64  | 2-1/4   | 3-5/64  | 2-1/4   |
| *M1183/9-541  | 3 x 1-1/2 x 3         | 3-1/16  | 2-15/64 | 2-5/8   | 2       | 3-1/16  | 2-15/64 |
| M1183/9-482   | 3 x 2 x 2             | 2-53/64 | 2       | 2-45/64 | 2-3/64  | 2-63/64 | 2-21/64 |
| M1183/9-483   | 3 x 2 x 3             | 3-3/32  | 2-17/64 | 3       | 2-11/32 | 3-3/32  | 2-17/64 |
| M1183/9-483.7 | 3 x 2-1/2 x 1         | 2-53/64 | 2       | 2-45/64 | 1-59/64 | 2-63/64 | 2-35/64 |
| M1183/9-484   | 3 x 2-1/2 x 2         | 2-53/64 | 2       | 2-45/64 | 1-59/64 | 2-63/64 | 2-21/64 |
| M1183/9-485   | 3 x 2-1/2 x 2-1/2     | 2-27/32 | 2-1/64  | 2-11/16 | 1-29/32 | 3       | 2-7/32  |
| *M1183/9-544  | 3 x 3 x 3/4           | 1-7/8   | 1-3/64  | 1-7/8   | 1-3/64  | 2-5/8   | 2-7/32  |
| *M1183/9-546  | 3 x 3 x 1-1/4         | 2-11/64 | 1-11/32 | 2-11/64 | 1-11/32 | 2-47/64 | 2-15/64 |
| M1183/9-486   | 3 x 3 x 1-1/2         | 2-9/32  | 1-29/64 | 2-9/32  | 1-29/64 | 2-13/16 | 2-3/16  |
| M1183/9-487   | 3 x 3 x 2             | 2-17/32 | 1-45/64 | 2-17/32 | 1-45/64 | 2-7/8   | 2-7/32  |

#### Tees (Standard & Reducing)



| PART #         | SIZE                  | Α       | Х       | В       | Y       | С       | Z       |
|----------------|-----------------------|---------|---------|---------|---------|---------|---------|
| M1183/9-488    | 3 x 3 x 2-1/2         | 2-53/64 | 1-31/32 | 2-53/64 | 1-31/32 | 2-63/64 | 2-13/64 |
| M1183/9-110    | 3-1/2                 | 3-27/64 | 2-35/64 | 3-27/64 | 2-35/64 | 3-27/64 | 2-35/64 |
| M1183/9-490    | 3-1/2 x 3 x 2-1/2     | 2-15/16 | 2-1/16  | 2-53/64 | 2       | 3-15/64 | 2-29/64 |
| *M1183/9-550.5 | 3-1/2 x 3-1/2 x 1/2   | 2-5/8   | 1-3/4   | 2-5/8   | 1-3/4   | 3-9/64  | 2-49/64 |
| M1183/9-491    | 3-1/2 x 3-1/2 x 2-1/2 | 2-15/16 | 2-1/16  | 2-15/16 | 2-1/16  | 3-15/64 | 2-29/64 |
| M1183/9-492    | 3-1/2 x 3-1/2 x 3     | 3-27/64 | 2-35/64 | 3-27/64 | 2-35/64 | 3-27/64 | 2-19/32 |
| M1183/9-111    | 4                     | 3-51/64 | 2-57/64 | 3-51/64 | 2-57/64 | 3-51/64 | 2-57/64 |
| *M1183/9-552   | 4 x 3 x 4             | 3-51/64 | 2-57/64 | 3-19/32 | 2-49/64 | 3-51/64 | 2-57/64 |
| *M1183/9-553   | 4 x 4 x 1-1/4         | 2-33/64 | 1-39/64 | 2-33/64 | 1-39/64 | 3-21/64 | 2-53/64 |
| *M1183/9-554   | 4 x 4 x 1-1/2         | 2-33/64 | 1-39/64 | 2-33/64 | 1-39/64 | 3-5/16  | 2-11/16 |
| *M1183/9-555   | 4 x 4 x 2             | 2-47/64 | 1-53/64 | 2-47/64 | 1-53/64 | 3-13/32 | 2-3/4   |
| *M1183/9-556   | 4 x 4 x 2-1/2         | 3-19/64 | 2-25/64 | 3-19/64 | 2-25/64 | 3-19/32 | 2-13/16 |
| M1183/9-494    | 4 x 4 x 3             | 3-19/64 | 2-25/64 | 3-19/64 | 2-25/64 | 3-19/32 | 2-49/64 |
| M1183/9-112    | 5                     | 4-1/2   | 3-1/2   | 4-1/2   | 3-1/2   | 4-1/2   | 3-1/2   |
| *M1183/9-557   | 5 x 5 x 2-1/2         | 3-17/64 | 2-17/64 | 3-17/64 | 2-17/64 | 4-1/8   | 3-11/32 |
| M1183/9-113    | 6                     | 5-1/8   | 4-1/64  | 5-1/8   | 4-1/64  | 5-1/8   | 4-1/64  |
| M1183/9-559    | 6 x 6 x 2             | 3-5/64  | 1-31/32 | 3-5/64  | 1-31/32 | 4-9/16  | 3-29/32 |

#### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

|                |                     | _ L     | Custom and redu<br>available upor |                |         |         |         |
|----------------|---------------------|---------|-----------------------------------|----------------|---------|---------|---------|
|                |                     |         | Standard Sing                     | gle-Sweep Tees |         |         |         |
| PART #         | SIZE                | А       | X                                 | В              | Y       | С       | Z       |
| M1183/9-200    | 1/4                 | 1-1/4   | 63/64                             | 3/4            | 31/64   | 1-1/4   | 63/64   |
| M1183/9-201    | 3/8                 | 1-1/2   | 1-3/16                            | 7/8            | 9/16    | 1-1/2   | 1-3/16  |
| M1183/9-202    | 1/2                 | 1-3/4   | 1-3/8                             | 1              | 5/8     | 1-3/4   | 1-3/8   |
| M1183/9-203    | 3/4                 | 2       | 1-19/32                           | 1-3/16         | 25/32   | 2       | 1-19/32 |
| M1183/9-204    | 1                   | 2-5/16  | 1-7/8                             | 1-5/16         | 7/8     | 2-5/16  | 1-7/8   |
| M1183/9-205    | 1-1/4               | 2-3/4   | 2-1/4                             | 1-11/16        | 1-3/16  | 2-3/4   | 2-1/4   |
| M1183/9-206    | 1-1/2               | 3-1/8   | 2-1/2                             | 1-7/8          | 1-1/4   | 3-1/8   | 2-1/2   |
| M1183/9-207    | 2                   | 3-3/4   | 3-3/32                            | 2-1/8          | 1-15/32 | 3-3/4   | 3-3/32  |
| M1183/9-208    | 2-1/2               | 4-1/2   | 3-23/32                           | 2-9/16         | 1-25/32 | 4-1/2   | 3-23/32 |
| M1183/9-209    | 3                   | 5-7/16  | 4-39/64                           | 2-7/8          | 2-3/64  | 5-7/16  | 4-39/64 |
| M1183/9-210    | 3-1/2               | 6-3/16  | 5-5/16                            | 3-1/4          | 2-3/8   | 6-3/16  | 5-5/16  |
| M1183/9-211    | 4                   | 6-15/16 | 6-1/32                            | 3-9/16         | 2-21/32 | 6-15/16 | 6-1/32  |
| M1183/9-212    | 5                   | 8-1/8   | 7-1/8                             | 4-5/16         | 3-5/16  | 8-1/8   | 7-1/8   |
| M1183/9-213    | 6                   | 9       | 7-57/64                           | 5              | 5-57/64 | 9       | 7-57/64 |
|                |                     |         | Reducing Sing                     | gle-Sweep Tees |         |         |         |
| PART #         | SIZE                | А       | X                                 | В              | Y       | С       | Z       |
| *M1183/9-607   | 3/4 x 3/4 x 1/2     | 2       | 1-19/32                           | 1-3/16         | 25/32   | 2       | 1-5/8   |
| *M1183/9-611   | 1 x 1/2 x 1/2       | 2-5/16  | 1-7/8                             | 1-5/16         | 15/16   | 2-5/16  | 2-9/64  |
| *M1183/9-613   | 1 x 3/4 x 3/4       | 2-5/16  | 1-7/8                             | 1-5/16         | 29/32   | 2-5/16  | 2-9/64  |
| *M1183/9-615   | 1 x 1 x 3/8         | 2-5/16  | 1-7/8                             | 1-5/16         | 7/8     | 2-5/16  | 1-7/8   |
| *M1183/9-616   | 1 x 1 x 1/2         | 2-5/16  | 1-7/8                             | 1-5/16         | 7/8     | 2-5/16  | 1-15/16 |
| *M1183/9-617   | 1 x 1 x 3/4         | 2-5/16  | 1-7/8                             | 1-5/16         | 7/8     | 2-5/16  | 1-29/32 |
| *M1183/9-619   | 1-1/4 x 1/2 x 1/2   | 2-3/4   | 2-1/4                             | 1-5/8          | 1-1/4   | 2-3/4   | 2-3/8   |
| *M1183/9-620   | 1-1/4 x 1/2 x 1-1/4 | 2-3/4   | 2-1/4                             | 1-5/8          | 1-1/4   | 2-3/4   | 2-1/4   |
| *M1183/9-622.8 | 1-1/4 x 1 x 1/2     | 2-3/4   | 2-1/4                             | 1-5/8          | 1-3/16  | 2-3/4   | 2-3/8   |
| *M1183/9-623   | 1-1/4 x 1 x 1       | 2-3/4   | 2-1/4                             | 1-5/8          | 1-3/16  | 2-3/4   | 2-5/16  |
| *M1183/9-624   | 1-1/4 x 1 x 1-1/4   | 2-3/4   | 2-1/4                             | 1-5/8          | 1-3/16  | 2-3/4   | 2-1/4   |
| *M1183/9-626   | 1-1/4 x 1-1/4 x 1/2 | 2-3/4   | 2-1/4                             | 1-5/8          | 1-1/8   | 2-3/4   | 2-3/8   |
| *M1183/9-627   | 1-1/4 x 1-1/4 x 3/4 | 2-3/4   | 2-1/4                             | 1-5/8          | 1-1/8   | 2-3/4   | 2-11/32 |
| *M1183/9-628   | 1-1/4 x 1-1/4 x 1   | 2-3/4   | 2-1/4                             | 1-5/8          | 1-1/8   | 2-3/4   | 2-5/16  |

В -- A - x -- Y ż

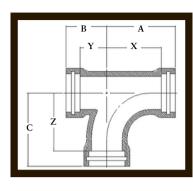
Single-Sweep Tees

A = Grooved N = Face-Fed  $BT = SB \times SB \times NPT(F)$  $RT = SB \times NPT(F) \times SB$  $BRT = SB \times NPT(F) \times NPT(F)$ 

\*Type B Casting



#### Single-Sweep Tees



\*Type B Casting

A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed

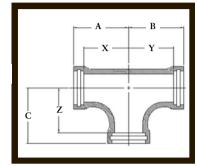
Custom and reducing sizes are available upon request.



| PART #         | SIZE                  | Α       | Х       | В      | Y       | С       | Z       |
|----------------|-----------------------|---------|---------|--------|---------|---------|---------|
| *M1183/9-630   | 1-1/2 x 3/4 x 1-1/2   | 3-1/8   | 2-1/2   | 1-7/8  | 1-15/32 | 3-1/8   | 2-1/2   |
| *M1183/9-631.5 | 1-1/2 x 1 x 1-1/4     | 3-1/8   | 2-1/2   | 1-7/8  | 1-7/16  | 3-1/8   | 2-5/8   |
| *M1183/9-632   | 1-1/2 x 1 x 1-1/2     | 3-1/8   | 2-1/2   | 1-7/8  | 1-7/16  | 3-1/8   | 2-1/2   |
| *M1183/9-634   | 1-1/2 x 1-1/4 x 1-1/4 | 3-1/8   | 2-1/2   | 1-7/8  | 1-3/8   | 3-1/8   | 2-5/8   |
| *M1183/9-635   | 1-1/2 X 1-1/4 x 1-1/2 | 3-1/8   | 2-1/2   | 1-7/8  | 1-3/8   | 3-1/8   | 2-1/2   |
| *M1183/9-639   | 1-1/2 x 1-1/2 x 1     | 3-1/8   | 2-1/2   | 1-7/8  | 1-1/4   | 3-1/8   | 2-11/16 |
| *M1183/9-640   | 1-1/2 x 1-1/2 x 1-1/4 | 3-1/8   | 2-1/2   | 1-7/8  | 1-1/4   | 3-1/8   | 2-5/8   |
| *M1183/9-642   | 2 x 1 x 2             | 3-3/4   | 3-3/32  | 2-1/8  | 1-11/16 | 3-3/4   | 3-3/32  |
| *M1183/9-643   | 2 x 1-1/4 x 1-1/4     | 3-3/4   | 3-3/32  | 2-1/8  | 1-5/8   | 3-3/4   | 3-3/32  |
| *M1183/9-644   | 2 x 1-1/4 x 2         | 3-3/4   | 3-3/32  | 2-1/8  | 1-5/8   | 3-3/4   | 3-3/32  |
| *M1183/9-646   | 2 x 1-1/2 x 1-1/2     | 3-3/4   | 3-3/32  | 2-1/8  | 1-5/8   | 3-3/4   | 3-3/32  |
| *M1183/9-647   | 2 x 1-1/2 x 2         | 3-3/4   | 3-3/32  | 2-1/8  | 1-1/2   | 3-3/4   | 3-3/32  |
| *M1183/9-648   | 2 x 2 x 3/4           | 3-3/4   | 3-3/32  | 2-1/8  | 1-15/32 | 3-3/4   | 3-11/32 |
| *M1183/9-649   | 2 x 2 x 1             | 3-3/4   | 3-3/32  | 2-1/8  | 1-15/32 | 3-3/4   | 3-5/16  |
| *M1183/9-650   | 2 x 2 x 1-1/4         | 3-3/4   | 3-3/32  | 2-1/8  | 1-15/32 | 3-3/4   | 3-1/4   |
| *M1183/9-651   | 2 x 2 x 1-1/2         | 3-3/4   | 3-3/32  | 2-1/8  | 1-15/32 | 3-3/4   | 3-1/8   |
| *M1183/9-656   | 2-1/2 x 2 x 1-1/2     | 4-1/2   | 3-23/32 | 2-9/16 | 1-29/32 | 4-1/2   | 3-7/8   |
| *M1183/9-658   | 2-1/2 x 2 x 2-1/2     | 4-1/2   | 3-23/32 | 2-9/16 | 1-29/32 | 4-1/2   | 3-23/32 |
| *M1183/9-663   | 3 x 1-1/2 x 3         | 5-7/16  | 4-39/64 | 2-7/8  | 2-1/4   | 5-7/16  | 4-39/64 |
| *M1183/9-669.5 | 3 x 3 x 1-1/4         | 5-7/16  | 4-39/64 | 2-7/8  | 2-3/64  | 5-7/16  | 4-15/16 |
| *M1183/9-670   | 3 x 3 x 1-1/2         | 5-7/16  | 4-39/64 | 2-7/8  | 2-3/64  | 5-7/16  | 4-13/16 |
| *M1183/9-671   | 3 x 3 x 2             | 5-7/16  | 4-39/64 | 2-7/8  | 2-3/64  | 5-7/16  | 4-25/32 |
| *M1183/9-674   | 4 x 1 x 4             | 6-15/16 | 6-1/32  | 3-9/16 | 3-1/8   | 6-15/16 | 6-1/32  |
| *M1183/9-682   | 4 x 4 x 2             | 6-15/16 | 6-1/32  | 3-9/16 | 2-21/32 | 6-15/16 | 6-9/32  |

#### Double-Sweep Tees







A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed

Custom and reducing sizes are available upon request.

| PART #      | SIZE  | Α       | X       | В       | Y       | С       | Z       |
|-------------|-------|---------|---------|---------|---------|---------|---------|
| M1183/9-300 | 1/4   | 1-1/4   | 63/64   | 1-1/4   | 63/64   | 1-1/4   | 63/64   |
| M1183/9-301 | 3/8   | 1-1/2   | 1-3/16  | 1-1/2   | 1-3/16  | 1-1/2   | 1-3/16  |
| M1183/9-302 | 1/2   | 1-3/4   | 1-3/8   | 1-3/4   | 1-3/8   | 1-3/4   | 1-3/8   |
| M1183/9-303 | 3/4   | 2       | 1-19/32 | 2       | 1-19/32 | 2       | 1-19/32 |
| M1183/9-304 | 1     | 2-5/16  | 1-7/8   | 2-5/16  | 1-7/8   | 2-5/16  | 1-7/8   |
| M1183/9-305 | 1-1/4 | 2-3/4   | 2-1/4   | 2-3/4   | 2-1/4   | 2-3/4   | 2-1/4   |
| M1183/9-306 | 1-1/2 | 3-1/8   | 2-1/2   | 3-1/8   | 2-1/2   | 3-1/8   | 2-1/2   |
| M1183/9-307 | 2     | 3-3/4   | 3-3/32  | 3-3/4   | 3-3/32  | 3-3/4   | 3-3/32  |
| M1183/9-308 | 2-1/2 | 4-1/2   | 3-45/64 | 4-1/2   | 3-45/64 | 4-1/2   | 3-45/64 |
| M1183/9-309 | 3     | 5-7/16  | 4-23/32 | 5-7/16  | 4-23/32 | 5-7/16  | 4-23/32 |
| M1183/9-310 | 3-1/2 | 6-3/16  | 5-5/16  | 6-3/16  | 5-5/16  | 6-3/16  | 5-5/16  |
| M1183/9-311 | 4     | 6-15/16 | 6-1/32  | 6-15/16 | 6-1/32  | 6-15/16 | 6-1/32  |
| M1183/9-312 | 5     | 8-1/8   | 7-1/8   | 8-1/8   | 7-1/8   | 8-1/8   | 7-1/8   |

# Section 3

# Y-Laterals & Crosses

Sil-braze y-laterals and crosses are important components used in piping systems for the U.S. Navy. These fittings are specifically designed to provide a branch connection to a main pipe while maintaining the same or smaller diameter of the main pipe.

The purpose of sil-braze y-laterals is to provide a smooth and efficient flow path for fluid flow, while also enabling the branch line to be connected at a 45° angle to the main pipe. This type of fitting is commonly used in piping systems that require the branch line to be diverted to a different process line. The significance of these fittings for the U.S. Navy is that they provide reliable and durable connections that can withstand the demanding environments and operating conditions often encountered in naval vessels.

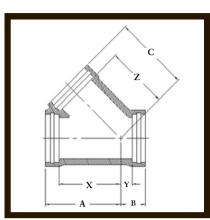


Sil-braze crosses, on the other hand, provide a branch connection at a 90° angle to the main pipe, allowing for the creation of a four-way intersection. These fittings are useful in applications where the fluid flow needs to be directed to multiple process lines or where there is a need for a complex piping system. The significance of socket-weld crosses for the U.S. Navy is that they provide a versatile and flexible solution for designing piping systems that meet the specific needs of naval vessels.

Both sil-braze y-laterals and crosses are important for the U.S. Navy because they enable the efficient and reliable flow of fluids within piping systems, which is crucial for the operation and safety of naval vessels. These fittings are designed to withstand the harsh operating conditions that naval vessels encounter, including high pressure, temperature, and corrosive environments. As such, they are critical components for ensuring the longevity and effectiveness of naval piping systems.

#### **Y-Laterals**

## 



\*Type B Casting

A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed

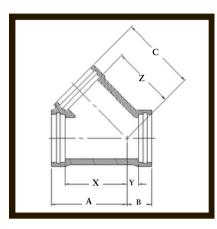
Custom and reducing sizes are available upon request.



|            |       |         | Standard | Y-Laterals |        |         |         |
|------------|-------|---------|----------|------------|--------|---------|---------|
| PART #     | SIZE  | A       | X        | В          | Y      | С       | Z       |
| M1183/6-01 | 1/4   | 1-5/64  | 13/16    | 7/16       | 11/64  | 1-5/64  | 13/16   |
| M1183/6-02 | 3/8   | 1-9/32  | 31/32    | 1/2        | 3/16   | 1-9/32  | 31/32   |
| M1183/6-03 | 1/2   | 1-37/64 | 1-13/64  | 39/64      | 15/64  | 1-37/64 | 1-13/64 |
| M1183/6-04 | 3/4   | 1-29/32 | 1-1/2    | 23/32      | 5/16   | 1-29/32 | 1-1/2   |
| M1183/6-05 | 1     | 2-21/64 | 57/64    | 27/32      | 13/32  | 2-21/64 | 57/64   |
| M1183/6-06 | 1-1/4 | 2-53/64 | 2-21/64  | 1-1/64     | 33/64  | 2-53/64 | 2-21/64 |
| M1183/6-07 | 1-1/2 | 3-9/64  | 2-33/64  | 1-3/32     | 7/16   | 3-9/64  | 2-32/64 |
| M1183/6-08 | 2     | 3-49/64 | 3-7/64   | 1-15/64    | 37/64  | 3-49/64 | 3-7/64  |
| M1183/6-09 | 2-1/2 | 4-47/64 | 3-61/64  | 1-33/64    | 47/64  | 4-47/64 | 3-61/64 |
| M1183/6-10 | 3     | 5-35/64 | 4-23/32  | 1-45/64    | 7/8    | 5-35/64 | 4-23/32 |
| M1183/6-11 | 3-1/2 | 6-1/4   | 5-3/8    | 1-27/32    | 31/32  | 6-1/4   | 5-3/8   |
| M1183/6-12 | 4     | 6-31/32 | 6-1/16   | 2-1/64     | 1-7/64 | 6-31/32 | 6-1/16  |

|               |                       |         | Reducing | Y-Laterals |       |         |         |
|---------------|-----------------------|---------|----------|------------|-------|---------|---------|
| PART #        | SIZE                  | Α       | X        | В          | Y     | С       | Z       |
| *M1183/6-22   | 1/2 x 3/8 x 3/8       | 1-37/64 | 1-17/64  | 39/64      | 15/64 | 1-37/64 | 1-17/64 |
| *M1183/6-29   | 3/4 x 3/4 x 1/2       | 1-29/32 | 1-1/2    | 23/32      | 5/16  | 1-29/32 | 1-17/32 |
| *M1183/6-32   | 1 x 1 x 1/2           | 2-21/64 | 1-57/64  | 27/32      | 13/32 | 2-21/64 | 1-61/64 |
| *M1183/6-33   | 1 x 1 x 3/4           | 2-21/64 | 1-57/64  | 27/32      | 13/32 | 2-21/64 | 1-59/64 |
| *M1183/6-34   | 1-1/4 x 1 x 1         | 2-53/64 | 2-25/64  | 1-1/64     | 33/64 | 2-53/64 | 2-25/64 |
| *M1183/6-35   | 1-1/4 x 1 x 1-1/4     | 2-53/64 | 2-25/64  | 1-1/64     | 33/64 | 2-53/64 | 2-25/64 |
| *M1183/6-38.5 | 1-1/2 x 1 x 1-1/2     | 3-9/64  | 2-45/64  | 1-3/32     | 15/32 | 3-9/64  | 2-33/64 |
| *M1183/6-248  | 1-1/4 x 1-1/4 x 3/4   | 2-53/64 | 2-21/64  | 1-1/64     | 33/64 | 2-53/64 | 1-27/64 |
| *M1183/6-36   | 1-1/4 x 1-1/4 x 1/2   | 2-53/64 | 2-21/64  | 1-1/64     | 33/64 | 2-53/64 | 2-29/64 |
| *M1183/6-286  | 1-1/2 x 1-1/4 x 1/2   | 3-9/64  | 2-41/64  | 1-3/32     | 15/32 | 3-9/64  | 2-49/64 |
| *M1183/6-37   | 1-1/4 x 1-1/4 x 1     | 2-53/64 | 2-21/64  | 1-1/64     | 33/64 | 2-53/64 | 2-25/64 |
| *M1183/6-380  | 2 x 1-1/4 x 2         | 3-49/64 | 3-17/64  | 1-15/64    | 37/64 | 3-49/64 | 3-17/64 |
| *M1183/6-38   | 1-1/2 x 3/4 x 1-1/2   | 3-9/64  | 2-47/64  | 1-3/32     | 15/32 | 3-9/64  | 2-33/64 |
| *M1183/6-39   | 1-1/2 x 1-1/4 x 1-1/4 | 3-9/64  | 2-41/64  | 1-3/32     | 15/32 | 3-9/64  | 2-41/64 |
| *M1183/6-40   | 1-1/2 x 1-1/2 x 1/2   | 3-9/64  | 2-33/64  | 1-3/32     | 15/32 | 3-9/64  | 2-49/64 |

ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC



**Y-Laterals** 

#### \*Type B Casting

A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed

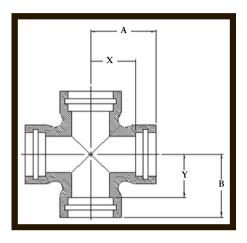
Custom and reducing sizes are available upon request.



|              |                       |         | Reducing | Y-Laterals |        |         |         |
|--------------|-----------------------|---------|----------|------------|--------|---------|---------|
| PART #       | SIZE                  | Α       | X        | В          | Y      | С       | Z       |
| *M1183/6-41  | 1-1/2 x 1-1/2 x 3/4   | 3-9/64  | 2-33/64  | 1-3/32     | 15/32  | 3-9/64  | 2-47/64 |
| *M1183/6-42  | 1-1/2 x 1-1/2 x 1     | 3-9/64  | 2-33/64  | 1-3/32     | 15/32  | 3-9/64  | 2-45/64 |
| *M1183/6-43  | 1-1/2 x 1-1/2 x 1-1/4 | 3-9/64  | 2-33/64  | 1-3/32     | 15/32  | 3-9/64  | 2-41/64 |
| *M1183/6-447 | 2-1/2 x 2-1/2 x 1-1/4 | 4-47/64 | 3-61/64  | 1-33/64    | 47/64  | 4-47/64 | 4-15/64 |
| *M1183/6-448 | 2-1/2 x 2-1/2 x 1-1/2 | 4-47/64 | 3-61/64  | 1-33/64    | 47/64  | 4-47/64 | 4-7/64  |
| *M1183/6-45  | 2 x 1 x 2             | 3-49/64 | 3-21/64  | 1-15/64    | 37/64  | 3-49/64 | 3-7/64  |
| *M1183/6-47  | 2 x 1-1/2 x 1-1/2     | 3-49/64 | 3-9/64   | 1-15/64    | 39/64  | 3-49/64 | 3-7/64  |
| *M1183/6-48  | 2 x 1-1/2 x 2         | 3-49/64 | 3-9/64   | 1-15/64    | 37/64  | 3-49/64 | 3-9/64  |
| *M1183/6-49  | 2 x 2 x 1             | 3-49/64 | 3-7/64   | 1-15/64    | 37/64  | 3-49/64 | 3-21/64 |
| *M1183/6-50  | 2 x 2 x 1-1/4         | 3-49/64 | 3-7/64   | 1-15/64    | 37/64  | 3-49/64 | 3-17/64 |
| *M1183/6-51  | 2 x 2 x 1-1/2         | 3-49/64 | 3-7/64   | 1-15/64    | 37/64  | 3-49/64 | 3-9/64  |
| *M1183/6-52  | 2-1/2 x 2 x 2         | 4-47/64 | 4-5/64   | 1-33/64    | 49/64  | 4-47/64 | 4-5/64  |
| *M1183/6-547 | 3-1/2 x 3-1/2 x 2     | 6-1/4   | 5-3/8    | 1-27/32    | 31/32  | 6-1/4   | 5-19/32 |
| *M1183/6-54  | 2-1/2 x 2-1/2 x 1     | 4-47/64 | 3-61/64  | 1-33/64    | 47/64  | 4-47/64 | 4-19/64 |
| *M1183/6-55  | 2-1/2 x 2-1/2 x 2     | 4-47/64 | 3-61/64  | 1-33/64    | 47/64  | 4-47/64 | 4-5/64  |
| *M1183/6-57  | 3 x 2 x 3             | 5-35/64 | 4-7/8    | 1-45/64    | 7/8    | 5-35/64 | 4-23/32 |
| *M1183/6-58  | 3 x 2-1/2 x 2         | 5-35/64 | 4-49/64  | 1-45/64    | 7/8    | 5-35/64 | 4-57/64 |
| *M1183/6-60  | 3 x 3 x 3/4           | 5-35/64 | 4-23/32  | 1-45/64    | 7/8    | 5-35/64 | 5-9/64  |
| *M1183/6-61  | 3 x 3 x 1-1/2         | 5-35/64 | 5-23/32  | 1-45/64    | 7/8    | 5-35/64 | 4-59/64 |
| *M1183/6-62  | 3 x 3 x 2             | 5-35/64 | 5-23/32  | 1-45/64    | 7/8    | 5-35/64 | 4-57/64 |
| *M1183/6-63  | 3 x 3 x 2-1/2         | 5-35/64 | 5-23/32  | 1-45/64    | 7/8    | 5-35/64 | 4-49/64 |
| *M1183/6-68  | 4 x 2 x 4             | 6-31/32 | 6-5/16   | 2-1/64     | 1-7/64 | 6-31/32 | 6-5/16  |
| *M1183/6-72  | 4 x 4 x 2             | 6-31/32 | 6-1/16   | 2-1/64     | 1-7/64 | 6-31/32 | 6-5/16  |
| *M1183/6-74  | 4 x 4 x 3             | 6-31/32 | 6-1/16   | 2-1/64     | 1-7/64 | 6-31/32 | 6-9/64  |



#### Crosses





A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed

Custom and reducing sizes are available upon request.

| PART #       | SIZE          | Α       | Х       | В       | Y       |
|--------------|---------------|---------|---------|---------|---------|
| M1183/4-01   | 1/4           | 45/64   | 7/16    | 45/64   | 7/16    |
| M1183/4-02   | 3/8           | 13/16   | 1/2     | 13/16   | 1/2     |
| M1183/4-03   | 1/2           | 1-1/64  | 41/64   | 1-1/64  | 41/64   |
| M1183/4-04   | 3/4           | 1-3/16  | 25/32   | 1-3/16  | 25/32   |
| M1183/4-23   | 1/2 x 3/8     | 15/16   | 9/16    | 29/32   | 19/32   |
| M1183/4-05   | 1             | 1-7/16  | 1       | 1-7/16  | 1       |
| M1183/4-27   | 1 x 1/2       | 1-13/64 | 49/64   | 1-15/64 | 55/64   |
| M1183/4-28   | 1 x 3/4       | 1-19/64 | 55/64   | 1-5/16  | 29/32   |
| M1183/4-06   | 1-1/4         | 1-11/16 | 1-3/16  | 1-11/16 | 1-3/16  |
| M1183/4-29   | 1-1/4 x 1/2   | 1-19/64 | 51/64   | 1-13/32 | 1-1/32  |
| M1183/4-07   | 1-1/2         | 1-27/32 | 1-7/32  | 1-27/32 | 1-7/32  |
| M1183/4-34   | 1-1/2 x 1-1/4 | 1-23/32 | 1-3/32  | 1-13/16 | 1-5/16  |
| M1183/4-7-3  | 1-1/2 x 1/2   | 1-5/16  | 11/16   | 1-17/32 | 1-5/32  |
| M1183/4-08   | 2             | 2-1/8   | 1-15/32 | 2-1/8   | 1-15/32 |
| M1183/4-37   | 2 x 1-1/4     | 1-57/64 | 1-15/64 | 2-1/16  | 1-9/16  |
| M1183/4-38   | 2 x 1-1/2     | 1-57/64 | 1-15/64 | 2-1/16  | 1-7/16  |
| M1183/4-39   | 2-1/2 x 2     | 2-25/64 | 1-39/64 | 2-19/32 | 1-15/16 |
| M1183/4-10   | 3             | 3-5/64  | 2-1/4   | 3-5/64  | 2-1/4   |
| M1183/4-11   | 3-1/2         | 3-27/64 | 2-35/64 | 3-27/64 | 2-35/64 |
| M1183/4-10-8 | 3 x 2         | 2-17/32 | 1-33/64 | 2-7/8   | 2-7/32  |
| M1183/4-41   | 4 x 3         | 3-19/64 | 2-25/64 | 3-19/32 | 2-49/64 |

# Section 4

# **Bushings & Couplings**

Reducing couplings and bushings are important components used in piping systems for the U.S. Navy. These fittings are designed to provide a reliable and efficient connection between two pipes of different diameters, while also ensuring a smooth and efficient flow of fluids.

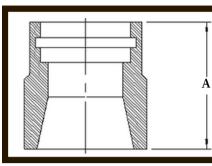
Reducing couplings are used to connect pipes of different diameters, with the larger diameter pipe fitting into the smaller diameter pipe. The purpose of these fittings is to reduce the diameter of the pipe and facilitate a change in the flow path of the fluid. Reducing couplings are commonly used in piping systems for the U.S. Navy to accommodate different equipment sizes and ensure efficient fluid flow. The significance of these fittings is that they provide a reliable and leak-proof connection that can withstand the demanding environments and operating conditions encountered in naval vessels.



Reducing bushings, on the other hand, are used to connect pipes of different diameters, with the larger diameter pipe fitting over the smaller diameter pipe. The purpose of these fittings is to reduce the diameter of the pipe and facilitate a change in the flow path of the fluid. Reducing bushings are commonly used in piping systems for the U.S. Navy to accommodate different equipment sizes and ensure efficient fluid flow. The significance of these fittings is that they provide a reliable and leak-proof connection that can withstand the demanding environments and operating conditions encountered in naval vessels.

Overall, reducing couplings and bushings are critical components of piping systems for the U.S. Navy. These fittings enable the reliable and efficient flow of fluids, accommodate different equipment sizes, and ensure efficient fluid flow. They are designed to withstand the harsh operating conditions encountered in naval vessels, including high pressure, temperature, and corrosive environments, and are essential for ensuring the longevity and effectiveness of naval piping systems. The proper installation and use of reducing couplings and bushings can contribute to the overall reliability and safety of piping systems in U.S. Navy vessels.

#### **Reducing Bushings**





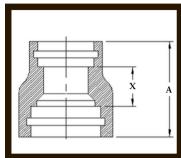


| DADE "      | 0177          | , <u> </u> |             |               |         |
|-------------|---------------|------------|-------------|---------------|---------|
| PART #      | SIZE          | A          | PART #      | SIZE          | Α       |
| M1183/8-039 | 1/4 x 1/8     | 3/4        | M1183/8-445 | 2-1/2 x 3/4   | 2-1/8   |
| M1183/8-41  | 3/8 x 1/4     | 15/16      | M1183/8-446 | 2-1/2 x 1     | 2-1/8   |
| M1183/8-42  | 1/2 x 1/4     | 1-1/16     | M1183/8-447 | 2-1/2 x 1-1/4 | 2       |
| M1183/8-43  | 1/2 x 3/8     | 1-1/16     | M1183/8-54  | 2-1/2 x 1-1/2 | 2-1/64  |
| M1183/8-147 | 3/4 x 1/4     | 1-1/16     | M1183/8-55  | 2-1/2 x 2     | 1-49/64 |
| M1183/8-44  | 3/4 x 3/8     | 1-3/16     | M1183/8-493 | 3 x 1/2       | 2-5/8   |
| M1183/8-45  | 3/4 x 1/2     | 1-3/16     | M1183/8-494 | 3 x 3/4       | 2-1/2   |
| M1183/8-196 | 1 x 1/4       | 1-15/64    | M1183/8-495 | 3 x 1         | 2-31/64 |
| M1183/8-197 | 1 x 3/8       | 1-3/16     | M1183/8-496 | 3 x 1-1/4     | 2-21/32 |
| M1183/8-46  | 1 x 1/2       | 1-5/32     | M1183/8-497 | 3 x 1-1/2     | 2-3/8   |
| M1183/8-47  | 1 x 3/4       | 1-29/64    |             |               |         |
| M1183/8-245 | 1-1/4 x 1/4   | 1-15/32    | M1183/8-56  | 3 x 2         | 2-1/8   |
| M1183/8-246 | 1-1/4 x 3/8   | 1-13/32    | M1183/8-58  | 3 x 2-1/2     | 2-1/4   |
| M1183/8-247 | 1-1/4 x 1/2   | 1-13/32    | M1183/8-545 | 3-1/2 x 1-1/4 | 2-5/8   |
| M1183/8-48  | 1-1/4 x 3/4   | 1-21/64    | M1183/8-546 | 3-1/2 X 1-1/2 | 2-5/8   |
| M1183/8-49  | 1-1/4 x 1     | 1-7/16     | M1183.8-547 | 3-1/2 X 2     | 2-5/8   |
| M1183/8-294 | 1-1/2 x 1/4   | 1-23/32    | M1183/8-59  | 3-1/2 x 3     | 2-3/16  |
| M1183/8-295 | 1-1/2 x 3/8   | 1-21/32    | M1183/8-592 | 4 x 3/4       | 3-1/4   |
| M1183/8-296 | 1-1/2 x 1/2   | 1-41/64    | M1183/8-594 | 4 x 1-1/4     | 2-15/16 |
| M1183/8-297 | 1-1/2 x 3/4   | 1-37/64    | M1183/8-595 | 4 x 1-1/2     | 2-61/64 |
| M1183/8-50  | 1-1/2 x 1     | 1-15/32    | M1183/8-596 | 4 x 2         | 2-45/64 |
| M1183/8-51  | 1-1/2 x 1-1/4 | 1-5/8      | M1183/8-597 | 4 x 2-1/2     | 2-37/64 |
| M1183/8-393 | 2 x 1/4       | 1-31/32    | M1183/8-60  | 4 x 3         | 2-19/64 |
| M1183/8-394 | 2 x 3/8       | 1-15/16    | M1183/8-61  | 4 x 3-1/2     | 2-1/4   |
| M1183/8-395 | 2 x 1/2       | 1-29/32    | M1183/8-645 | 5 x 2         | 3-11/32 |
| M1183/8-396 | 2 x 3/4       | 1-27/32    | M1183/8-646 | 5 x 2-1/2     | 3-1/8   |
| M1183/8-397 | 2 x 1         | 1-47/64    | M1183/8-647 | 5 x 3         | 3-1/8   |
| M1183/8-52  | 2 x 1-1/4     | 1-5/8      | M1183/8-63  | 5 x 4         | 2-3/4   |
| M1183/8-53  | 2 x 1-1/2     | 1-41/64    | M1183/8-695 | 6 x 2-1/2     | 3-27/32 |
| M1183/8-444 | 2-1/2 x 1/2   | 2-19/64    | M1183/8-749 | 8 x 6         | 3-5/8   |

#### Couplings (Standard & Reducing)

| Standard Couplings |       |         |         |  |
|--------------------|-------|---------|---------|--|
| PART #             | SIZE  | A       | X       |  |
| 014300             | 1/8   | 31/32   | 9/16    |  |
| 014301             | 1/4   | 31/32   | 7/16    |  |
| 014302             | 3/8   | 1-3/64  | 27/64   |  |
| 014303             | 1/2   | 1-19/64 | 35/64   |  |
| 014304             | 3/4   | 1-7/16  | 5/8     |  |
| 014305             | 1     | 1-11/16 | 13/16   |  |
| 014306             | 1-1/4 | 1-55/64 | 55/64   |  |
| 014307             | 1-1/2 | 1-59/64 | 43/64   |  |
| 014308             | 2     | 2-13/64 | 57/64   |  |
| 014309             | 2-1/2 | 2-7/8   | 1-5/16  |  |
| 0143010            | 3     | 3-3/16  | 1-17/32 |  |
| 0143011            | 3-1/2 | 3-7/16  | 1-11/16 |  |
| 0143012            | 4     | 3-11/16 | 1-7/8   |  |
| 0143013            | 5     | 4-7/32  | 2-7/32  |  |
| 0143014            | 6     | 4-3/4   | 2-17/32 |  |





Available in SB x NPT(F) Face-feed x Face-Fed Face-Fed x NPT(F)

|          | Reducing      | Couplings |         |            | Reducing      | Couplings |         |
|----------|---------------|-----------|---------|------------|---------------|-----------|---------|
| PART #   | SIZE          | Α         | X       | PART #     | SIZE          | A         | X       |
| 1430-2-1 | 3/8 x 1/4     | 1-1/64    | 7/16    | 1430-8-5   | 2 x 1         | 2         | 1-29/32 |
| 1430-3-1 | 1/2 x 1/4     | 1-1/8     | 31/64   | 1430-8-6   | 2 x 1-1/4     | 2-1/32    | 7/8     |
| 1430-3-2 | 1/2 x 3/8     | 1-11/64   | 31/64   | 1430-8-7   | 2 x 1-1/2     | 2-1/16    | 25/32   |
| 1430-4-1 | 3/4 x 1/4     | 1-1/4     | 37/64   | 1430-9-5   | 2-1/2 x 1     | 3-1/4     | 2-1/32  |
| 1430-4-2 | 3/4 x 3/8     | 1-15/64   | 33/64   | 1430-9-6   | 2-1/2 x 1-1/4 | 3-1/4     | 1-31/32 |
| 1430-4-3 | 3/4 x 1/2     | 1-23/64   | 37/64   | 1430-9-7   | 2-1/2 x 1-1/2 | 3-5/32    | 1-3/4   |
| 1430-5-1 | 1 x 1/4       | 1-1/2     | 51/64   | 1430-9-8   | 2-1/2 x 2     | 3-5/32    | 1-23/32 |
| 1430-5-2 | 1 x 3/8       | 1-9/16    | 9/16    | 1430-10-6  | 3 x 1-1/4     | 3-11/16   | 2-23/64 |
| 1430-5-3 | 1 x 1/2       | 1-31/64   | 43/64   | 1430-10-7  | 3 x 1-1/2     | 3-11/16   | 2-15/32 |
| 1430-5-4 | 1 x 3/4       | 1-9/16    | 23/32   | 1430-10-8  | 3 x 2         | 3-19/32   | 2-7/64  |
| 1430-6-2 | 1-1/4 x 3/8   | 1-21/32   | 27/32   | 1430-10-9  | 3 x 2-1/2     | 3-11/16   | 2-5/64  |
| 1430-6-3 | 1-1/4 x 1/2   | 1-25/32   | 29/32   | 1430-11-9  | 3-1/2 x 2-1/2 | 4         | 2-11/32 |
| 1430-6-4 | 1-1/4 x 3/4   | 1-21/32   | 3/4     | 1430-11-10 | 3-1/2 x 3     | 4         | 2-19/64 |
| 1430-6-5 | 1-1/4 x 1     | 1-49/64   | 53/64   | 1430-12-8  | 4 x 2         | 4-3/8     | 2-13/16 |
| 1430-7-3 | 1-1/2 x 1/2   | 1-13/16   | 13/16   | 1430-12-9  | 4 x 2-1/2     | 4-3/8     | 2-11/16 |
| 1430-7-4 | 1-1/2 x 3/4   | 1-7/8     | 27/32   | 1430-12-10 | 4 x 3         | 4-3/8     | 2-41/64 |
| 1430-7-5 | 1-1/2 x 1     | 1-3/4     | 11/16   | 1430-12-11 | 4 x 3-1/2     | 4-3/8     | 2-19/32 |
| 1430-7-6 | 1-1/2 x 1-1/4 | 1-57/64   | 43/64   | 1430-13-12 | 5 x 4         | 5         | 3-3/32  |
| 1430-8-3 | 2 x 1/2       | 2-13/16   | 1-25/32 | 1430-14-12 | 6 x 4         | 5-3/4     | 3-47/64 |
| 1430-8-4 | 2 x 3/4       | 1-31/32   | 29/32   | 1430-15-14 | 8 x 6         | 6-3/4     | 4-21/64 |

# Section 5



Sil-braze adapters, pipes, and plugs are critical components used in piping systems for the U.S. Navy. These fittings are designed to provide a reliable and durable connection between pipes, while also ensuring a smooth and efficient flow of fluids.

Sil-braze adapters are used to connect two different types of pipes, such as a threaded pipe and a sil-braze pipe. The purpose of these fittings is to provide a reliable and leak-proof connection between the two types of pipes. Sil-braze adapters are commonly used in piping systems for the U.S. Navy to accommodate different equipment types and ensure efficient fluid flow. The significance of these fittings is that they provide a reliable and durable connection that can withstand the demanding environments and operating conditions encountered in naval vessels.

Sil-braze pipes are straight sections of piping that are designed to be joined together using silbraze fittings. The purpose of these pipes is to transport fluids from one location to another within the piping system. Sil-braze pipes are commonly used in piping systems for the U.S. Navy due to their durability and ability to withstand the harsh operating conditions encountered in naval vessels. The significance of these pipes is that they provide a reliable and efficient means of transporting fluids within the piping system.

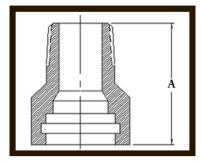


Sil-braze plugs are used to seal off the end of a pipe or fitting. The purpose of these plugs is to prevent fluid from escaping the piping system, or to allow for testing and inspection of the system. Sil-braze plugs are commonly used in piping systems for the U.S. Navy to ensure the integrity of the system and to allow for testing and inspection when necessary. The significance of these fittings is that they provide a reliable and leak-proof seal that can withstand the demanding environments and operating conditions encountered in naval vessels.

Overall, Sil-braze adapters, pipes, and plugs are essential components of piping systems for the U.S. Navy. These fittings enable the reliable and efficient flow of fluids, accommodate different equipment types, and ensure the integrity and safety of the piping system. They are designed to withstand the harsh operating conditions encountered in naval vessels, including high pressure, temperature, and corrosive environments, and are critical for ensuring the longevity and effectiveness of naval piping systems.



#### NPT (M) Adapters





| PART #   | SIZE          | А       |
|----------|---------------|---------|
| 026151   | 1/4           | 1-1/16  |
| 2615-1-3 | 1/4 x 1/2     | 1-5/16  |
| 026152   | 3/8           | 1-1/8   |
| 2615-2-3 | 3/8 x 1/2     | 1-5/16  |
| 026153   | 1/2           | 1-7/16  |
| 2615-3-4 | 1/2 x 3/4     | 1-13/32 |
| 2615-7-6 | 1-1/2 x 1-1/4 | 1-39/64 |
| 026154   | 3/4           | 1-1/2   |
|          |               |         |

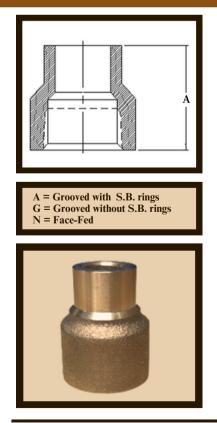
#### Custom reducing sizes available upon request

| PART #   | SIZE      | Α       |
|----------|-----------|---------|
| 026155   | 1         | 1-3/4   |
| 2615-5-7 | 1 x 1-1/2 | 1-7/8   |
| 2615-5-9 | 1 x 2-1/2 | 2-5/8   |
| 026156   | 1-1/4     | 2-1/16  |
| 026157   | 1-1/2     | 2-1/16  |
| 026158   | 2         | 2-1/4   |
| 026159   | 2-1/2     | 2-15/16 |
| 0261510  | 3         | 3-23/64 |
|          |           |         |

### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC



#### NPT (F) Adapters



#### Custom reducing sizes available upon request

| PART #       | SIZE          | А       |
|--------------|---------------|---------|
| M1183/8-039  | 1/4 x 1/8     | 1       |
| M1183/8-81   | 1/4 x 3/8     | 1-3/8   |
| M1183/8-82   | 3/8 x 1/2     | 1-11/64 |
| M1183/8-83   | 3/4 x 1/2     | 1-3/16  |
| M1183/8-84   | 3/4 x 1       | 1-13/32 |
| M1183/8-86   | 1-1/4 x 1-1/2 | 2-1/8   |
| M1183/8-87.5 | 1-1/2 x 2-1/2 | 2-3/16  |
| M1183/8-87   | 1-1/2 x 2     | 2-3/8   |

|  | ſ |
|--|---|
|  |   |

| M1183/7-02 | 3/8   | 3/4     |
|------------|-------|---------|
| M1183/7-03 | 1/2   | 15/16   |
| M1183/7-04 | 3/4   | 1-1/32  |
| M1183/7-05 | 1     | 1-3/16  |
| M1183/7-06 | 1-1/4 | 7/64    |
| M1183/7-07 | 1-1/2 | 1-25/64 |
| M1183/7-08 | 2     | 1-1/2   |
| M1183/7-09 | 2-1/2 | 1-25/32 |

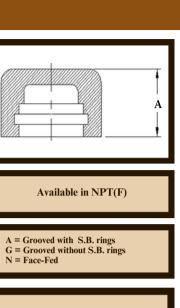
### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

|            | NCE WITH THE MIL- |       |
|------------|-------------------|-------|
|            |                   |       |
|            |                   |       |
| PART #     | SIZE              | A     |
| M1183/7-01 | 1/4               | 11/16 |
| M1183/7-02 | 3/8               | 3/4   |
| M1183/7-03 | 1/2               | 15/16 |

#### Square Head Plugs

|          | PART #     | SIZE              | Α           |
|----------|------------|-------------------|-------------|
| 1        | M1183/2-01 | 1/4               | 19/32       |
| A<br>    | M1183/2-02 | 3/8               | 41/64       |
| <u>*</u> | M1183/2-03 | 1/2               | 13/16       |
|          | M1183/2-04 | 3/4               | 27/32       |
| (F)      | M1183/2-05 | 1                 | 63/64       |
|          | M1183/2-06 | 1-1/4             | 1-3/32      |
| s<br>ngs | M1183/2-07 | 1-1/2             | 1-5/32      |
|          | M1183/2-08 | 2                 | 1-5/16      |
|          | M1183/2-09 | 2-1/2             | 1-45/64     |
|          | M1183/2-10 | 3                 | 1-13/16     |
|          | M1183/2-12 | 4                 | 2-5/64      |
|          | M1183/2-13 | 5                 | 2-5/16      |
|          | ALL DIM    | ENSIONS ARE IN IN | CHES AND IN |

# Caps



# Section 6

## **Union Assembly Components**

Sil-braze adapters, pipes, and plugs are critical components used in piping systems for the U.S. Navy. These fittings are designed to provide a reliable and durable connection between pipes, while also ensuring a smooth and efficient flow of fluids.

Sil-braze adapters are used to connect two different types of pipes, such as a threaded pipe and a socket-weld pipe. The purpose of these fittings is to provide a reliable and leak-proof connection between the two types of pipes. Sil-braze adapters are commonly used in piping systems for the U.S. Navy to accommodate different equipment types and ensure efficient fluid flow. The significance of these fittings is that they provide a reliable and durable connection that can withstand the demanding environments and operating conditions encountered in naval vessels.



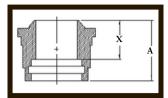
Sil-braze pipes are straight sections of piping that are designed to be joined together using socket-weld fittings. The purpose of these pipes is to transport fluids from one location to another within the piping system. Sil-braze pipes are commonly used in piping systems for the U.S. Navy due to their durability and ability to withstand the harsh operating conditions encountered in naval vessels. The significance of these pipes is that they provide a reliable and efficient means of transporting fluids within the piping system.

Sil-braze plugs are used to seal off the end of a pipe or fitting. The purpose of these plugs is to prevent fluid from escaping the piping system, or to allow for testing and inspection of the system. Sil-braze plugs are commonly used in piping systems for the U.S. Navy to ensure the integrity of the system and to allow for testing and inspection when necessary. The significance of these fittings is that they provide a reliable and leak-proof seal that can withstand the demanding environments and operating conditions encountered in naval vessels.

Moreover, sil-braze adapters, pipes, and plugs are essential components of piping systems for the U.S. Navy. These fittings enable the reliable and efficient flow of fluids, accommodate different equipment types, and ensure the integrity and safety of the piping system. They are designed to withstand the harsh operating conditions encountered in naval vessels, including high pressure, temperature, and corrosive environments, and are critical for ensuring the longevity and effectiveness of naval piping systems.



#### Union Tailpieces



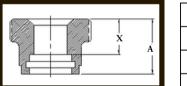


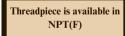


| PART #  | SIZE  | Α       | X       |
|---------|-------|---------|---------|
| 019581  | 1/4   | 7/8     | 39/64   |
| 019582  | 3/8   | 61/64   | 41/64   |
| 019583  | 1/2   | 1-3/64  | 43/64   |
| 019584  | 3/4   | 1-5/32  | 3/4     |
| 019585  | 1     | 1-19/64 | 55/64   |
| 019586  | 1-1/4 | 1-15/32 | 31/32   |
| 019587  | 1-1/2 | 1-5/8   | 1       |
| 019588  | 2     | 1-27/32 | 1-3/16  |
| 019589  | 2-1/2 | 2-5/32  | 1-3/8   |
| 0195810 | 3     | 2-23/64 | 1-17/32 |
|         |       |         |         |

#### ALL DIMENSIONS ARE IN INCHES AND IN **ACCORDANCE WITH THE MIL-DTL-1183 SPEC**

#### Union Threadpieces





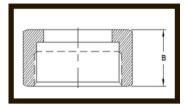


| PART #  | SIZE  | А       | X       |
|---------|-------|---------|---------|
| 019571  | 1/4   | 27/32   | 37/64   |
| 019572  | 3/8   | 15/16   | 5/8     |
| 019573  | 1/2   | 63/64   | 39/64   |
| 019574  | 3/4   | 1-3/16  | 25/32   |
| 019575  | 1     | 1-17/64 | 53/64   |
| 019576  | 1-1/4 | 1-7/16  | 15/16   |
| 019577  | 1-1/2 | 1-33/64 | 57/64   |
| 019578  | 2     | 1-43/64 | 1-1/64  |
| 019579  | 2-1/2 | 2-3/64  | 1-17/64 |
| 0195710 | 3     | 2-5/32  | 1-21/64 |

#### ALL DIMENSIONS ARE IN INCHES AND IN **ACCORDANCE WITH THE MIL-DTL-1183 SPEC**



#### Union Nuts





| PART #          | SIZE  | В       |
|-----------------|-------|---------|
| M1183/10-50-N-1 | 1/4   | 21/32   |
| M1183/10-51-N-1 | 3/8   | 45/64   |
| M1183/10-52-N-1 | 1/2   | 47/64   |
| M1183/10-53-N-1 | 3/4   | 7/8     |
| M1183/10-54-N-1 | 1     | 59/64   |
| M1183/10-55-N-1 | 1-1/4 | 1-1/32  |
| M1183/10-56-N-1 | 1-1/2 | 1-1/16  |
| M1183/10-57-N-1 | 2     | 1-5/21  |
| M1183/10-58-N-1 | 2-1/2 | 1-13/32 |
| M1183/10-59-N-1 | 3     | 1-15/32 |
| M1183/10-61-N-1 | 4     | 1-9/16  |



### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

# Section 7



## **Union Assemblies**

Sil-braze adapters, pipes, and plugs are critical components used in piping systems for the U.S. Navy. These fittings are designed to provide a reliable and durable connection between pipes, while also ensuring a smooth and efficient flow of fluids.

Sil-braze adapters are used to connect two different types of pipes, such as a threaded pipe and a socket-weld pipe. The purpose of these fittings is to provide a reliable and leak-proof connection between the two types of pipes. Sil-braze adapters are commonly used in piping systems for the U.S. Navy to accommodate different equipment types and ensure efficient fluid flow. The significance of these fittings is that they provide a reliable and durable connection that can withstand the demanding environments and operating conditions encountered in naval vessels.



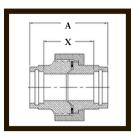
Sil-braze pipes are straight sections of piping that are designed to be joined together using socket-weld fittings. The purpose of these pipes is to transport fluids from one location to another within the piping system. Sil-braze pipes are commonly used in piping systems for the U.S. Navy due to their durability and ability to withstand the harsh operating conditions encountered in naval vessels. The significance of these pipes is that they provide a reliable and efficient means of transporting fluids within the piping system.

Sil-braze plugs are used to seal off the end of a pipe or fitting. The purpose of these plugs is to prevent fluid from escaping the piping system, or to allow for testing and inspection of the system. Sil-braze plugs are commonly used in piping systems for the U.S. Navy to ensure the integrity of the system and to allow for testing and inspection when necessary. The significance of these fittings is that they provide a reliable and leak-proof seal that can withstand the demanding environments and operating conditions encountered in naval vessels.

Moreover, sil-braze adapters, pipes, and plugs are essential components of piping systems for the U.S. Navy. These fittings enable the reliable and efficient flow of fluids, accommodate different equipment types, and ensure the integrity and safety of the piping system. They are designed to withstand the harsh operating conditions encountered in naval vessels, including high pressure, temperature, and corrosive environments, and are critical for ensuring the longevity and effectiveness of naval piping systems.



#### **Union-Female Assemblies**







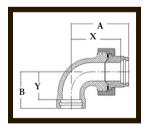
| PART #      | SIZE  | А       | X       |
|-------------|-------|---------|---------|
| M1183/10-10 | 1/4   | 1-41/64 | 1-3/32  |
| M1183/10-11 | 3/8   | 1-13/16 | 1-11/64 |
| M1183/10-12 | 1/2   | 1-5/16  | 1-11/64 |
| M1183/10-13 | 3/4   | 2-15/64 | 1-27/64 |
| M1183/10-14 | 1     | 2-29/64 | 1-37/64 |
| M1183/10-15 | 1-1/4 | 2-7/8   | 1-25/32 |
| M1183/10-16 | 1-1/2 | 3-1/64  | 1-3/4   |
| M1183/10-17 | 2     | 3-25/64 | 2-5/64  |
| M1183/10-18 | 2-1/2 | 4-3/64  | 2-15/32 |
| M1183/10-19 | 3     | 4-5/16  | 2-21/32 |

### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

#### 90° Union Elbow Assemblies



A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed







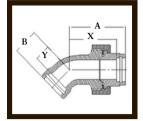
| PART #      | SIZE  | А       | Х       | В       | Y       |
|-------------|-------|---------|---------|---------|---------|
| M1183/11-31 | 1/4   | 15/16   | 21/32   | 1-15/16 | 1-21/32 |
| M1183/11-32 | 3/8   | 1-1/16  | 3/4     | 2-7/32  | 1-29/32 |
| M1183/11-33 | 1/2   | 1-1/4   | 7/8     | 2-13/32 | 2-1/32  |
| M1183/11-34 | 3/4   | 1-7/16  | 1-1/32  | 2-7/8   | 2-15/32 |
| M1183/11-35 | 1     | 1-5/8   | 1-3/16  | 3-5/32  | 2-23/32 |
| M1183/11-36 | 1-1/4 | 1-15/16 | 1-7/16  | 3-21/32 | 3-5/32  |
| M1183/11-37 | 1-1/2 | 2-1/8   | 1-1/2   | 3-15/16 | 3-5/16  |
| M1183/11-38 | 2     | 2-1/2   | 1-27/32 | 4-1/2   | 3-27/32 |
| M1183/11-39 | 2-1/2 | 2-15/16 | 2-5/32  | 5-13/32 | 4-5/8   |

### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

35



#### 45° Union Elbow Assemblies



Also Available: Face-Fed SB x NPT(F) SB x NPT(M)



| PART #      | SIZE  | A       | X           | В       | Y       |
|-------------|-------|---------|-------------|---------|---------|
| M1183/11-11 | 1/4   | 13/16   | 17/32       | 1-9/16  | 1-5/16  |
| M1183/11-12 | 3/8   | 7/8     | 9/16        | 1-3/4   | 1-7/16  |
| M1183/11-13 | 1/2   | 1       | 5/8 1-15/16 |         | 1-9/16  |
| M1183/11-14 | 3/4   | 1-1/8   | 23/32       | 2-3/16  | 1-25/32 |
| M1183/11-15 | 1     | 1-5/16  | 7/8         | 2-1/2   | 2-1/16  |
| M1183/11-16 | 1-1/4 | 1-1/2   | 1           | 2-7/8   | 2-3/8   |
| M1183/11-17 | 1-1/2 | 1-11/16 | 1-1/16      | 3-1/8   | 2-1/2   |
| M1183/11-18 | 2     | 2       | 1-11/32     | 3-11/16 | 3-1/32  |

### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

#### Union Branch Tee Assemblies



A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed

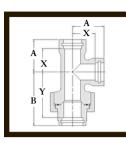
| BY |  |
|----|--|
|    |  |



| PART #      | SIZE  | А       | Х       | В       | Y       |
|-------------|-------|---------|---------|---------|---------|
| M1183/11-51 | 1/4   | 15/16   | 43/64   | 1-15/16 | 1-43/64 |
| M1183/11-52 | 3/8   | 1-1/16  | 3/4     | 2-7/32  | 1-57/64 |
| M1183/11-53 | 1/2   | 1-1/4   | 7/8     | 2-13/32 | 2-1/32  |
| M1183/11-54 | 3/4   | 1-7/16  | 1-1/32  | 2-7/8   | 2-15/32 |
| M1183/11-55 | 1     | 1-5/8   | 1-3/16  | 3-5/32  | 2-23/32 |
| M1183/11-56 | 1-1/4 | 1-15/16 | 1-27/64 | 3-21/32 | 3-9/64  |
| M1183/11-57 | 1-1/2 | 2-1/8   | 1-1/2   | 3-15/16 | 3-5/16  |
| M1183/11-58 | 2     | 2-1/2   | 1-27/32 | 4-1/2   | 3-27/32 |

ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

#### Union-Run Tee Assemblies



A = Grooved with S.B. rings G = Grooved without S.B. rings N = Face-Fed



| PART #      | SIZE  | А       | Х            | В       | Y       |
|-------------|-------|---------|--------------|---------|---------|
| M1183/11-71 | 1/4   | 15/16   | 43/64        | 1-15/16 | 1-43/64 |
| M1183/11-72 | 3/8   | 1-1/16  | 3/4          | 2-7/32  | 1-57/64 |
| M1183/11-73 | 1/2   | 1-1/4   | 7/8          | 2-13/32 | 2-3/8   |
| M1183/11-74 | 3/4   | 1-7/16  | 1-1/32 2-7/8 |         | 2-15/32 |
| M1183/11-75 | 1     | 1-5/8   | 1-3/16       | 3-5/32  | 2-23/32 |
| M1183/11-76 | 1-1/4 | 1-15/16 | 1-7/16       | 3-21/32 | 3-9/64  |
| M1183/11-77 | 1-1/2 | 2-1/8   | 1-1/2        | 3-15/16 | 3-5/16  |
| M1183/11-78 | 2     | 2-1/2   | 1-27/32      | 4-15/32 | 3-13/16 |



### ALL DIMENSIONS ARE IN INCHES AND IN ACCORDANCE WITH THE MIL-DTL-1183 SPEC

# Section 8

# Flanges

Sil-braze flanges are important components used in piping systems for the U.S. Navy. These flanges are designed to provide a reliable and leak-proof connection between pipes, valves, and other equipment, while also allowing for easy disassembly and maintenance.

The purpose of sil-braze flanges is to create a connection point between pipes, valves, and other equipment that can be easily disconnected for maintenance or repairs. These flanges provide a reliable and leak-proof connection, which is critical for the safe and efficient operation of piping systems in U.S. Navy vessels. Sil-braze flanges are commonly used in high-pressure piping systems, where a secure and tight connection is essential to prevent leaks or failures.

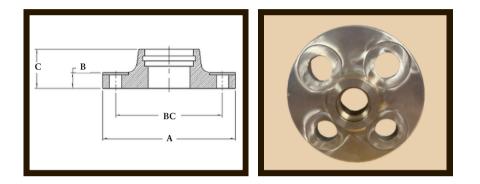
The significance of sil-braze flanges in U.S. Navy vessels cannot be overstated. These flanges are critical for maintaining the reliability and safety of piping systems, which are essential for the operation of the vessel. In addition, sil-braze flanges are designed to withstand the harsh operating conditions encountered in naval vessels, including high pressure, temperature, and corrosive environments. This makes them ideal for use in the demanding environments of naval vessels.



Sil-braze flanges are available in a variety of materials, including stainless steel, carbon steel, and other alloys. The choice of material will depend on the specific application and operating conditions of the piping system. Proper installation and use of socket-weld flanges are essential for ensuring the integrity and safety of the piping system. This includes proper alignment and torqueing of the bolts, as well as regular inspection and maintenance.

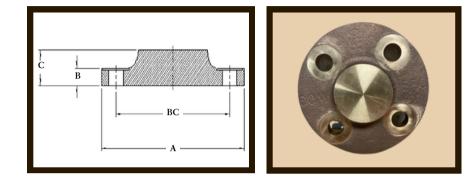
Further, sil-braze flanges are critical components of piping systems for the U.S. Navy. They provide a reliable and leak-proof connection between pipes, valves, and other equipment, while also allowing for easy disassembly and maintenance. The proper selection, installation, and use of socket-weld flanges can contribute to the overall reliability and safety of piping systems in U.S. Navy vessels.

#### Class 150 S.B. Navy Flanges



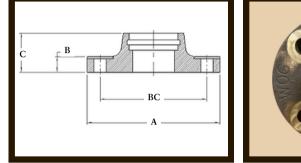
| PART #    | SIZE  | Α       |         | В       | С    | # OF  | BC      |
|-----------|-------|---------|---------|---------|------|-------|---------|
|           | SIZE  | MIN.    | MAX.    | В       | C    | HOLES | вс      |
| 027771    | 1/4   | 3-1/4   | 3-3/8   | 7/8     | 3/8  | 3     | 2-1/8   |
| 027772    | 3/8   | 3-3/8   | 3-1/2   | 15/16   | 3/8  | 3     | 2-1/4   |
| 027773    | 1/2   | 3-9/16  | 3-11/16 | 1       | 3/8  | 3     | 2-7/16  |
| 027774    | 3/4   | 3-13/16 | 3-15/16 | 1-1/16  | 7/16 | 4     | 2-11/16 |
| 027775    | 1     | 4-1/4   | 4-3/8   | 1-1/8   | 7/16 | 4     | 3-1/8   |
| 027776    | 1-1/4 | 4-1/2   | 4-5/8   | 1-1/4   | 7/16 | 4     | 3-3/8   |
| 027777    | 1-1/2 | 5-3/64  | 5-3/16  | 1-3/4   | 7/16 | 6     | 3-15/16 |
| 027778    | 2     | 5-9/16  | 5-11/16 | 1-3/4   | 7/16 | 6     | 4-7/16  |
| 027779    | 2-1/2 | 6-1/8   | 6-5/16  | 1-3/4   | 1/2  | 6     | 5       |
| 0277710   | 3     | 6-5/8   | 6-13/16 | 1-3/4   | 1/2  | 8     | 5-1/2   |
| 0277711   | 3-1/2 | 7-3/16  | 7-3/8   | 1-7/16  | 1/2  | 8     | 6-1/16  |
| 0277712   | 4     | 7-11/16 | 7-7/8   | 1-7/16  | 1/2  | 8     | 6-9/16  |
| 0277712.5 | 4-1/2 | 8-3/16  | 8-3/8   | 1-1/2   | 1/2  | 10    | 7-1/16  |
| 0277713   | 5     | 9-1/16  | 9-1/4   | 1-9/16  | 9/16 | 10    | 7-13/16 |
| 0277713.5 | 5-1/2 | 9-9/16  | 9-3/4   | 1-11/16 | 9/16 | 10    | 8-5/16  |
| 0277714   | 6     | 10-1/8  | 10-5/16 | 1-11/16 | 9/16 | 12    | 8-7/8   |

#### Class 150 S.B. Blind Flanges



| PART #     | SIZE  |         | Α        |      | # OF HOLES | BC      |
|------------|-------|---------|----------|------|------------|---------|
| FARI #     | SIZE  | MIN.    | MAX.     | В    | # OF HOLES | BC      |
| 025611F    | 1/4   | 3-1/4   | 3-3/8    | 3/8  | 3          | 2-1/8   |
| 025612F    | 3/8   | 3-3/8   | 3-1/2    | 3/8  | 3          | 2-1/4   |
| 025613F    | 1/2   | 3-9/16  | 3-11/16  | 3/8  | 3          | 2-7/16  |
| 025614F    | 3/4   | 3-13/16 | 3-15/16  | 7/16 | 4          | 2-11/16 |
| 025615F    | 1     | 4-1/4   | 4-3/8    | 7/16 | 4          | 3-1/8   |
| 025616F    | 1-1/4 | 4-1/2   | 4-5/8    | 7/16 | 4          | 3-3/8   |
| 025617F    | 1-1/2 | 5-3/64  | 5-3/16   | 7/16 | 6          | 3-15/16 |
| 025618F    | 2     | 5-9/16  | 5-11/16  | 7/16 | 6          | 4-7/16  |
| 025619F    | 2-1/2 | 6-1/8   | 6-5/16   | 1/2  | 6          | 5       |
| 0256110F   | 3     | 6-5/8   | 6-13/16  | 1/2  | 8          | 5-1/2   |
| 0256111F   | 3-1/2 | 7-3/16  | 7-3/8    | 1/2  | 8          | 6-1/16  |
| 0256112F   | 4     | 7-11/16 | 7-7/8    | 1/2  | 8          | 6-9/16  |
| 0256112.5F | 4-1/2 | 9-1/16  | 9-1/4    | 1/2  | 10         | 7-1/16  |
| 0256113F   | 5     | 10-1/8  | 10-5/16  | 9/16 | 10         | 7-13/16 |
| 0256113.5F | 5-1/2 | 12-3/8  | 12-9/16  | 9/16 | 10         | 8-5/16  |
| 0256114F   | 6     | 15      | 15-3/16  | 9/16 | 12         | 8-7/8   |
| 0256114.5F | 7     | 17-5/8  | 17-13/16 | 9/16 | 12         | 10      |
| 0256115F   | 8     | 12-3/8  | 12-9/16  | 5/8  | 14         | 11-1/16 |

#### Class 250 S.B. Navy Flanges

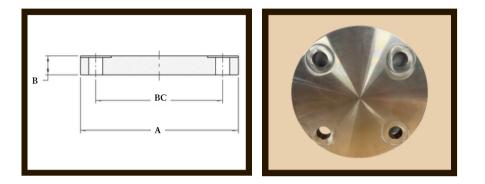




| PART #  | PART # SIZE |         | Α        |         | с      | # OF HOLES | BC      |  |
|---------|-------------|---------|----------|---------|--------|------------|---------|--|
| I AKI # | SIZE        | MIN.    | MAX.     | - B C   |        | # OF HOLES | ВС      |  |
| 027781  | 1/4         | 3-1/4   | 3-3/8    | 1-3/16  | 11/16  | 3          | 2-1/8   |  |
| 027782  | 3/8         | 3-3/8   | 3-1/2    | 1-1/4   | 11/16  | 3          | 2-1/4   |  |
| 027783  | 1/2         | 3-9/16  | 3-11/16  | 1-5/16  | 11/16  | 3          | 2-7/16  |  |
| 027784  | 3/4         | 3-13/16 | 3-15/16  | 1-5/16  | 11/16  | 4          | 2-11/16 |  |
| 027785  | 1           | 4-1/4   | 4-3/8    | 1-7/16  | 3/4    | 4          | 3-1/8   |  |
| 027786  | 1-1/4       | 4-1/2   | 4-5/8    | 1-5/8   | 13/16  | 4          | 3-3/8   |  |
| 027787  | 1-1/2       | 5-3/64  | 5-3/16   | 1-3/4   | 13/16  | 6          | 3-15/16 |  |
| 027787  | 2           | 5-9/16  | 5-11/16  | 1-3/4   | 13/16  | 6          | 4-7/16  |  |
| 027789  | 2-1/2       | 6-1/8   | 6-5/16   | 1-13/16 | 15/16  | 6          | 5       |  |
| 0277810 | 3           | 6-5/8   | 6-13/16  | 1-13/16 | 15/16  | 8          | 5-1/2   |  |
| 0277811 | 3-1/2       | 7-3/16  | 7-3/8    | 1-15/16 | 1      | 8          | 6-1/16  |  |
| 0277812 | 4           | 7-11/16 | 7-7/8    | 1-15/16 | 1      | 8          | 6-9/16  |  |
| 0277813 | 5           | 9-1/16  | 9-1/4    | 2-1/16  | 1-1/16 | 10         | 7-13/16 |  |
| 0277814 | 6           | 10-1/8  | 10-5/16  | 2-5/16  | 1-3/16 | 12         | 8-7/8   |  |
| 0277815 | 8           | 12-3/8  | 12-9/16  | 2-11/16 | 1-5/16 | 14         | 11-1/16 |  |
| 0277816 | 10          | 15      | 15-3/16  | 3       | 1-7/16 | 15         | 13-7/16 |  |
| 0277817 | 12          | 17-5/8  | 17-13/16 | 3-1/4   | 1-1/2  | 18         | 16-1/16 |  |

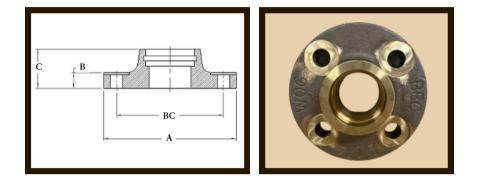
# ////////

#### Class 250 S.B. Blind Navy Flanges



| PART #  | SIZE  |         | Α       |        | # OF HOLES | BC      |
|---------|-------|---------|---------|--------|------------|---------|
|         | SIZE  | MIN.    | MAX.    | В      | # OF HOLES | bC      |
| 032771  | 1/4   | 3-1/4   | 3-3/8   | 11/16  | 3          | 2-1/8   |
| 032772  | 3/8   | 3-3/8   | 3-1/2   | 11/16  | 3          | 2-1/4   |
| 032773  | 1/2   | 3-9/16  | 3-11/16 | 11/16  | 3          | 2-7/16  |
| 032774  | 3/4   | 3-13/16 | 3-15/16 | 11/16  | 4          | 2-11/16 |
| 032775  | 1     | 4-1/4   | 4-3/8   | 3/4    | 4          | 3-1/8   |
| 032776  | 1-1/4 | 4-1/2   | 4-5/8   | 13/16  | 4          | 3-3/8   |
| 032777  | 1-1/2 | 5-3/64  | 5-3/16  | 13/16  | 6          | 3-15/16 |
| 032778  | 2     | 5-9/16  | 5-11/16 | 13/16  | 6          | 4-7/16  |
| 032779  | 2-1/2 | 6-1/8   | 6-5/16  | 15/16  | 6          | 5       |
| 0327710 | 3     | 6-5/8   | 6-13/16 | 15/16  | 8          | 5-1/2   |
| 0327711 | 3-1/2 | 7-3/16  | 7-3/8   | 1      | 8          | 6-1/16  |
| 0327712 | 4     | 7-11/16 | 7-7/8   | 1      | 8          | 6-9/16  |
| 0327713 | 5     | 9-1/16  | 9-1/4   | 1-1/16 | 10         | 7-13/16 |
| 0327714 | 6     | 10-1/8  | 10-5/16 | 1-3/16 | 12         | 8-7/8   |
| 0327715 | 8     | 12-3/8  | 12-9/16 | 1-5/16 | 14         | 11-1/16 |
| 0327716 | 10    | 15      | 15-3/16 | 1-7/16 | 15         | 13-7/16 |

#### Class 400 S.B. Navy Flanges



| PART #    | SIZE  |          | 4       | В       | с      | # OF HOLES | BC      |
|-----------|-------|----------|---------|---------|--------|------------|---------|
| 1 AK1 #   | SIZE  | MIN.     | MAX.    |         | C      | # OF HOLES | bc      |
| 028811    | 1/4   | 3-3/4    | 3-7/8   | 1-3/16  | 11/16  | 3          | 2-5/8   |
| 028812    | 3/8   | 3-7/8    | 4       | 1-1/4   | 11/16  | 4          | 2-3/4   |
| 028813    | 1/2   | 4        | 4-1/8   | 1-5/16  | 11/16  | 4          | 2-7/8   |
| 028814    | 3/4   | 4-5/16   | 4-7/16  | 1-5/16  | 11/16  | 4          | 3-3/16  |
| 028815    | 1     | 5-1/16   | 5-3/16  | 1-7/16  | 3/4    | 5          | 3-3/4   |
| 028816    | 1-1/4 | 5-3/8    | 5-1/2   | 1-5/8   | 13/16  | 5          | 4-1/16  |
| 028817    | 1-1/2 | 5-15/16  | 6-1/16  | 1-3/4   | 13/16  | 6          | 4-5/8   |
| 028818    | 2     | 6-1/2    | 6-5/8   | 1-3/4   | 13/16  | 7          | 5-3/16  |
| 028819    | 2-1/2 | 7-9/16   | 7-3/4   | 2-5/16  | 15/16  | 8          | 6       |
| 0288110   | 3     | 8-1/8    | 8-5/16  | 2-3/8   | 15/16  | 8          | 6-9/16  |
| 0288111   | 3-1/2 | 8-11/16  | 8-7/8   | 2-7/16  | 1      | 9          | 7-1/8   |
| 0288112   | 4     | 9-1/4    | 9-7/16  | 2-5/8   | 1      | 9          | 7-11/16 |
| 0288112.5 | 4-1/2 | 9-13/16  | 10      | 2-5/8   | 1      | 10         | 8-1/4   |
| 0288113   | 5     | 10-3/8   | 10-9/16 | 2-13/16 | 1-1/16 | 11         | 8-13/16 |
| 0288113.5 | 5-1/2 | 11-3/8   | 11-9/16 | 2-15/16 | 1-1/8  | 11         | 9-5/8   |
| 0288114   | 6     | 11-15/16 | 12-1/8  | 3-1/8   | 1-3/16 | 12         | 10-3/16 |

# Section 9

# **Cross-Reference Index**



A cross-reference list for part numbers serves as a crucial resource for naval defense personnel and organizations. It enables them to effectively navigate the diverse array of part numbers and establish connections between different suppliers, systems, and equipment. This ensures compatibility and interchangeability of parts, facilitating efficient maintenance, repairs, and replacements.

By utilizing a cross-reference list, naval defense entities can optimize their supply chain management. They can identify alternative or equivalent parts from various sources, reducing dependence on single suppliers and mitigating risks associated with limited availability or discontinuation of specific parts. This improves procurement flexibility, enables cost-effective solutions, and minimizes downtime during critical operations.

#### Fittings

| ТҮРЕ                                      | BEC SB             | LEE BRASS SB | BEC FACE-FED      | LEE BRASS FACE-FED | PAGE # |
|---|--------------------|--------------|-------------------|--------------------|--------|
| 90° Elbow S.B. x S.B.                     | M1183/5 A          | 5101         | M1183/5-(01-15)N  | 5001               | 8      |
| 90° Elbow S.B. x (F) NPT                  | M1183/5AT          | 5102         | M1183/5-(01-15)NT | 5002               | 8      |
| 45° Elbow S.B. x S.B.                     | M1183/5A           | 5104         | M1183/5-(21-34)N  | 5004               | 9      |
| 90° Street Elbow S.B. x (M) S.W.          | 02745              | 5107         | 03225             | 5007               | 11     |
| 90° Street Elbow S.B. x (M) NPT           | 02585              | 5108         |                   |                    | 11     |
| 45° Street Elbow S.B. x (M) S.W.          | 03497              | 5109         |                   | 5009               | 11     |
| 90° Long-Turn Elbow S.B. x S.B.           | M1183/5 A          | 5111         | M1183/5-(41-53)N  | 5011               | 9      |
| Union Threadpieces                        | 01957              | 5321         | 02015             | 5221               | 32     |
| Union Tailpieces                          | 01958              | 5323         | 02016             | 5223               | 32     |
| Standard Union Assemblies                 | M1183/10(A)        | 5301         | M1183/10(N)       | - 5031             | 34     |
| Elbow/Tee Assemblies                      | M1183/11(A)        |              | M1183/11(N)       |                    |        |
| Tees S.B. x S.B. x S.B.                   | M1183/9(A)         | 5121         | M1183/9(N)        | 5021               | 13-17  |
| Tees S.B. x (F) NPT x S.B.                | M1183/9(RT)        | 5122         | M1183/9(NRT)      | 5022               | 13-17  |
| Tees S.B. x S.B. x (F) NPT                | M1183/9(BT)        | 5123         | M1183/9(MBT)      | 5023               | 13-17  |
| Single-Sweep Tee<br>S.B. x S.B. x S.B.    | M1183/9-(200-213)A | 5130         | M1183/9 N         | 5030               | 18-19  |
| Single-Sweep Tee<br>S.B. x (F) NPT x S.B. | M1183/9 A          | 5131         | M1183/9-(NBT)     |                    | 18-19  |
| Double-Sweep Tee<br>S.B. x S.B. x S.B.    | M1183/9 A          | 5133         | M1183/9 N         | 5033               | 20     |
| Crosses S.B. x S.B. x S.B. x S.B.         | M1183/4(A)         | 5135         | M1183/4(N)        | 5035               | 24     |
| Y-Laterals S.B. x S.B. x S.B.             | M1183/6(A)         | 5140         | M1183/6(N)        |                    | 22-23  |
| Y-Laterals<br>S.B. x S.B. x (F) NPT       | M1183/6(AT)        | 5141         | M1183/6(NT)       |                    | 22-23  |
| Standard Couplings S.B. x S.B.            | 014300-            | 5150         | 1430              | 5050               | 27     |
| Reducing Couplings S.B. x S.B.            | 1430-              |              |                   |                    |        |
| Reducing Couplings<br>S.B. x (F) NPT      | 02614              | 5151         | 02625             | 5051               | 27     |
| Standard Couplings<br>(F) NPT x (F) NPT   | 04516              | 5153         |                   |                    | 27     |
| Caps S.B.                                 | M1183/2(A)         | 5154         | M1183/2(N)        | 5054               | 30     |
| Open/Closed Return S.B. x S.B.            | M1183/1-(A)        | 5155         | M1183/1(N)        | 5055               | 10     |
| Reducing Bushing (M) S.W. x S.B.          | M1183/8(A)         | 5157         | M1183/8(N)        | 5057               | 26     |
| Reducing Bushing<br>S.B. x (F) NPT        | 02654              | 5063         | 2654-             | 5058               | 26     |
| NPT (M) Adapter                           | 2615/02615         | 5160         | 2626/02626        | 5060               | 29     |
| NPT (F) Adapter                           | M1183/8(A)         |              | 2654/02654        | 5058               | 29     |
| Plugs                                     | M1183/7(A)         | 5165         | M1183/7(N)        | 5065               | 30     |
| Class 150 S.B. Navy Flange                | 02777              | 5175         | 02623             | 5075               | 38     |
| Class 150 S.B. Blind Navy Flange          | 02561              | 5177         |                   | 5077               | 36     |
| Class 250 S.B. Navy Flange                | 02778              | 5181         |                   | 5081               | 40     |
| Class 250 S.B. Blind Navy Flange          | 03277              | 5183         |                   | 5083               | 41     |
| Class 400 S.B. Navy Flange                | 02881              | 5178         |                   | 5078               | 42     |





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