

# Specifications

All of the advantages found in copper as a metal have been capitalized to the utmost in the manufacture of NIBCO Fittings. Because of the accuracy of construction and design, copper plumbing is more efficient and less expensive.

NIBCO manufactures nine general types of fittings: Wrot Pressure; Cast Pressure; Wrot Drainage; Cast Drainage; Flanges; Flared Tube; Threaded Bronze; Insert Fittings for PEX; Barbed Insert Fittings for Polybutylene. Each has its particular place and use and each offers its own advantages when used for the proper service requirement.

**ALLOY AND FINISH** — NIBCO Fittings are made from highest quality raw materials available — Cast Fittings are made from Copper Alloy C84400 which consists of 81% Copper, 7% Lead, 3% Tin, and 9% Zinc per ASTM Specification B584. Wrot Copper Fittings are made from commercially pure copper mill products per ASTM Specifications B75 Alloy C12200.

NIBCO fittings are produced to meet requirements of applicable standards wherever practicable.

The majority of NIBCO® brand wrot and cast fittings are manufactured in the U.S.A. and Mexico\*. The manufacturing plants at Stuarts Draft, VA, Nacogdoches, TX and Reynosa, Mexico are registered to ISO 9002 quality standards.

Following is suggested phrasing to be incorporated in your specifications or bills of material for Copper Tube Fittings.

**WROT SOLDER JOINT FITTINGS** — “Wrot Solder Joint Fittings shall be produced to one of the following specifications:

1. Material and workmanship shall be in accordance with ASME/ANSI B16.22; Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.”
2. The dimensional, material and workmanship shall meet the requirements of MSS SP-104; Wrought Copper Solder Joint Pressure Fittings.”
3. The dimensional, material and workmanship of 5”–12” copper fittings shall meet the requirements of MSS SP-109 “Welded Fabricated Copper Solder Joint Pressure Fittings.”
4. Certified to NSF/ANSI 61.

**CAST COPPER ALLOY SOLDER JOINT FITTINGS** — “Cast Copper Alloy Solder Joint Fittings shall be in accordance with ASME B16.18.”

**WROT DRAINAGE FITTINGS** — “Wrot Drainage Fittings shall be in accordance with ASME B16.29.”

**CAST COPPER ALLOY SOLDER JOINT DRAINAGE FITTINGS** — “Cast Copper Alloy Solder Joint Drainage Fittings shall be in accordance with ASME B16.23.”

**CAST COPPER ALLOY FLARED TUBE FITTINGS** — “Cast Copper Alloy Flared Tube Fittings shall be in accordance with ASME B16.26.

**CAST COPPER ALLOY FLANGES AND FLANGED FITTINGS**—

CLASS 150 — Cast Copper Alloy Flanges and Flanged Fittings shall meet the requirements of MSS SP-106 and/or the workmanship and dimensions of Federal Specifications WW-F-406 or ASME Std. B16.24.

CLASS 125 — Material, workmanship and dimensions of flanges shall be in accordance with MSS SP-106.

**CAST BRONZE THREADED FITTINGS** — “Cast Bronze Threaded Fittings shall be in accordance with ANSI/ASME B16.15.”

**POLYBUTYLENE COPPER INSERT TYPE VALVES AND FITTINGS** — “Wrot Copper Insert Fittings shall be manufactured per the following specifications: MSS SP-103 or ASTM F1380.”

NIBCO Copper Tube Fittings are all produced to above Standards. To simplify, write your specifications to read: “Copper Tube Fittings to be in accordance with specifications as outlined in NIBCO Catalog c-cf-0602.”

**WROT COPPER MEDICAL MEDICAL GAS SYSTEM COMPONENTS** — Wrot copper fittings that are to be installed in medical gas applications shall be prepared in accordance with NFPA 99, Health Care Facilities Gas and Vacuum Systems and the Compressed Gas Association, Pamphlet G4.1. Packaging shall be adequately protective and include labeling that identifies the preparer and states that the product has been cleaned and bagged for oxygen or med gas service.

For technical information and dimensions refer to the engineering section contained in this catalog.

\* NIBCO, may, from time to time, source and/or supplement a wrot or cast fitting product from suppliers outside of the U.S.A. and/or Mexico.