

## Material used for Brass Fittings

**Straight bodies:** Barstock CA 360 or CA 345  
**Shape bodies:** Extruded barstock CA 360 or Forged CA 377  
**Nuts:** Barstock CA 360 or Forged CA 377

## MATERIAL COMPOSITION

### CA360 Barstock Brass

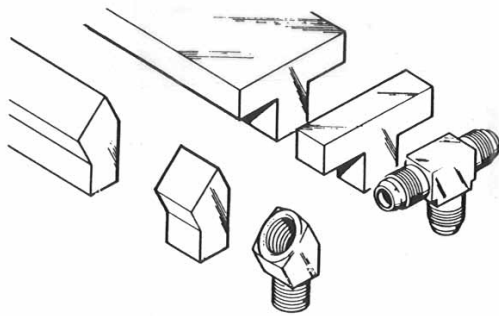
ASTM B16 - 92

Elements	Nominal	Min	Max
Copper	61.5	60	63
Lead	3.1	2.5	3.7
Iron			.35
Other			.50
Zinc	35.4	Balance	

### CA377 Forged Brass

ASTM B 124,283

Elements	Nominal	Min	Max
Copper	59.5	58	61
Lead	2	1.5	2.5
Iron			.30
Zinc	38	Balance	



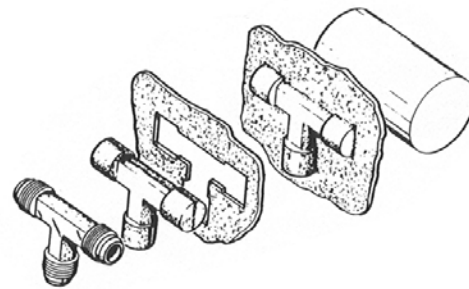
### Extruded Barstock Fittings

Hexagon, round and shaped bars are extruded in the configuration required, drawn to size, cut to length and straightened. First a solid round billet (8 to 12 inches in diameter) is heated to the pliable state and forced by pressure of approximately 80,000 pounds per square inch through a die. The resulting continuous length of bar is cooled and then drawn through dies to the desired external size. ( The drawing process also controls the temper. ) After straightening, the bar is ready for machining.

The process produces a dense, nonporous material somewhat stronger in the longitudinal direction due to an orientated flow of the grain.

### Forged Fittings

Material for forging is extruded in round bars, cut to length and straightened. (At this point in the process, forging rod differs from round extruded machinable bars only in temper and chemical properties. ) After straightening, the bars are cut again into slugs (short lengths), reheated to the pliable state and pressed under a pressure of approximately 25,000 pounds per square inch between upper and lower die cavities. After cooling, the flash is trimmed away and the forging blank is ready for machining.



This process of forming under extreme pressure produces a uniformly dense material of exceptional strength. Because grain flow follows the contour, the fitting has high impact strength and is resistant to mechanical shock and vibration.

### Why Brass Fittings?

Brass fittings are popular because they are strong and durable and hence widely used in industrial and residential applications. The use of brass to make various fittings provides a distinct look because of its yellow color. The advantages of brass for fittings include its good corrosive resistance, and also its plating, joining, polishing and finishing characteristics. Brass as a material is easily machined and hence can be given any shapes of the various types of fittings available.

### Features of Brass Fittings:

Brass fittings have certain unique features which make them highly demanded. Some of these properties are as follows:

- Brass fittings are characterized by good strength.
- These fittings have excellent high temperature ductility.
- They have reasonable cold ductility.
- Fittings made of brass have good conductivity.
- They are excellent in corrosion resistance.
- Brass fittings have good bearing properties.
- They have low magnetic permeability.