



FAUCETS & SANITARY FITTINGS  
 THERMAL POWER PLANTS & COMPTS  
 MACHINERY PARTS & COMPTS  
 L.P.G. VALVES & COMPTS  
 DEFENCE  
 ELECTRONICS  
 AUTOMOBILES  
 SHIP BUILDING  
 SUGAR PLANT TUBES  
 TELE COMMUNICATIONS  
 SURGICAL EQUIPMENTS  
 BUSH & GEARS  
 ELECTRICALS  
 RAILWAYS  
 BEARINGS CAGE  
 REFRIGERATION PLANT  
 HEAT EXCHANGERS  
 BUILDING HARDWARE



SCAN FOR MORE



## Metal Alloys Corporation

Register Office & Plant

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[www.metalco-mgps.com](http://www.metalco-mgps.com) • [www.condensertube.com](http://www.condensertube.com)

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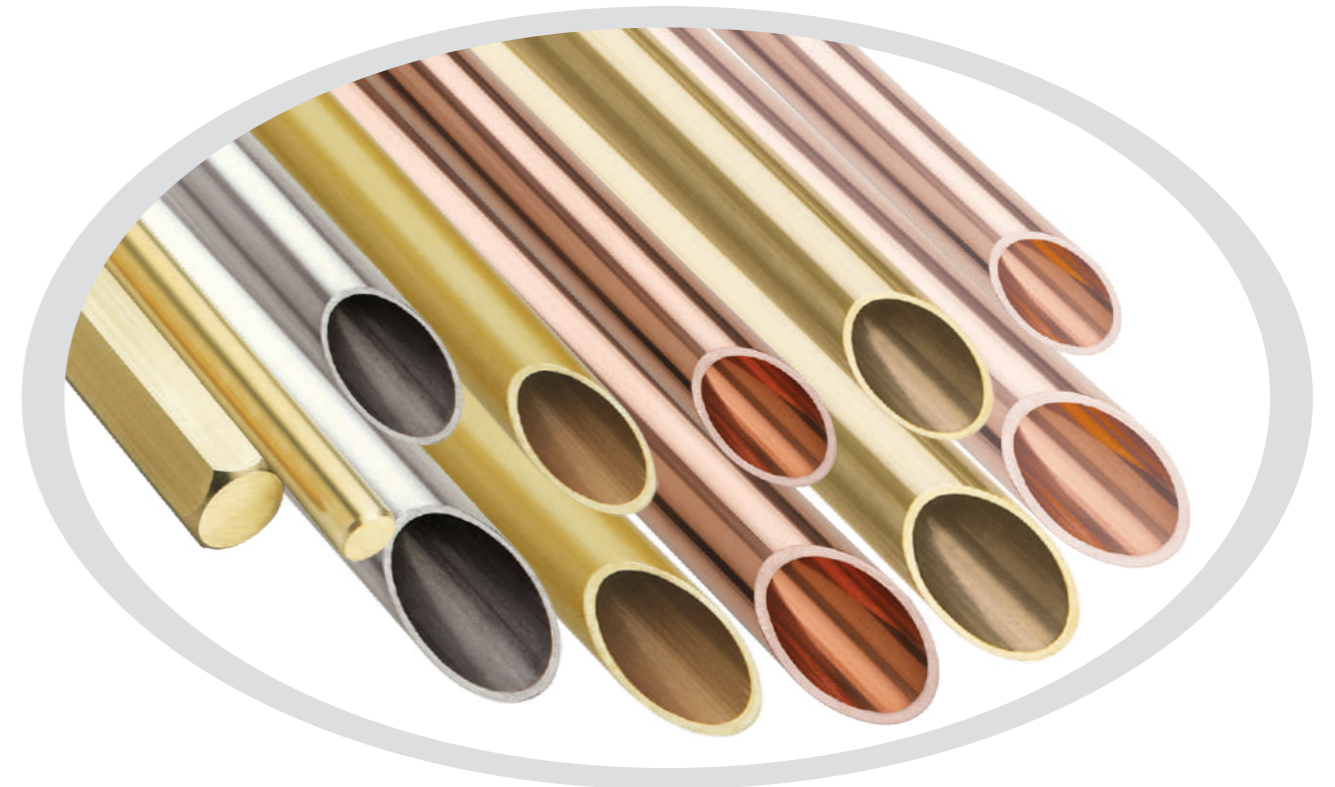
Nearest Domestic Air Port : Jamnagar - 3 kms.  
Nearest International Air Port : Ahmedabad 325 kms.

Nearest Port : Kandla - 222 kms., Mundra - 300 kms.

## Metal Alloys Corporation

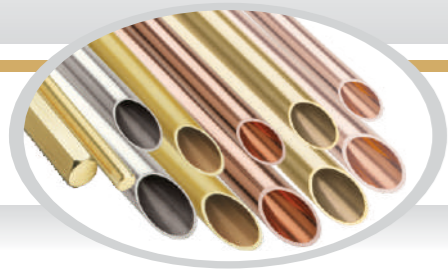
### Quality, Technology & Vision at its Best

World Class Sourcing Solution for Copper & Copper Alloys Products



An ISO 9001 : 2015, 14001 : 2015, 45001 : 2018, PED,  
Star Export House. EIL Registered Company





# Copper & Copper Alloys

# Seamless Tubes & Solids



**MEDIFLOW**

**SABPS**  
South African Alloys Products and Systems Certification (Pty) Ltd



**Lloyd's Register**



**ENGINEERS INDIA LIMITED**  
(A Govt. of India Undertaking)



**We are...**

Metal Alloys Corporation - One of the leading manufacturers of Copper and Copper Alloys Cast, Extruded and Drawn products, viz. Billets/Ingots, Mother Shells, Tubes/Pipes, Hollow/Solid Rods, Sections, Profiles etc.

**QUALITY:**

METALCO is an ISO 9001 Certified unit having sophisticated quality control & quality assurance systems backed up with an ultra modern chemical & physical testing laboratory having Computerized Spectroscopic Analyzer for precise alloying, Multi - Range Microscope for micro structure examination, Chemical & Mechanical Testing, Eddy Current Testing, Hydraulic Pressure Testing, etc.

**TECHNOLOGY:**

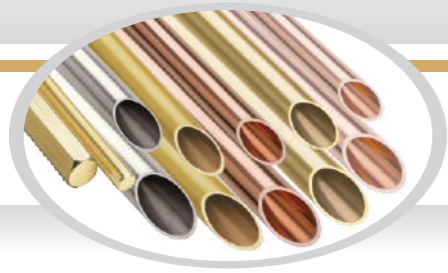
METALCO - with a production capacity of 6000 MT per annum sprawls across an area of 150,000 sq. ft. with a constructed area of 75,000 sq. ft. which maximizes productivity & enables us to transfer benefits of the large scale operations to the customers. In order to consistently manufacture international quality products, the company has employed a dedicated team of highly qualified and experienced Engineers and Management Professionals.

**VISION:**

The vision of the management & the technical expertise of entrepreneurs led to the design, construction and installation of state of art manufacturing facility for casting, extrusion, pilgering, cold drawing, finishing, inspection and testing all under one roof.

**Our Pride**





# Copper & Copper Alloys

# Seamless Tubes & Solids



## Products & Products Details...

METALCO Specializes in manufacturing following Copper & Copper Alloys Seamless Tubes for Heat Exchangers & Condensers.



### ● ADMIRALTY BRASS

Admiralty Brass is generally used with fresh, clean waters free from suspended abrasive solids and Originating from rivers lakes and canals. It may also be used with brackish or even sweet water. The inhibitive action of Arsenic Protects Admiralty Brass from dezincification and the fully annealed alloy can also withstand stress-corrosion cracking.

Admiralty Brass used in Heat exchangers & Condensers, Automobile Industry, General Engineering Purposes, Radiator, Evaporator copper Tubes.

### ● ALUMINUM BRASS

Aluminum Brass is generally used with clean or sea water. Through its arsenic inhibition, it is virtually immune from dezincification and when fully annealed, also practically free from stress corrosion cracking. Aluminum Brass Tubing which are preferred across the globe owing to its superior quality, durability and accurate dimensions.

Aluminum Brass used in Heat exchangers & Condensers, Automobile Industry, Industrial Refrigeration Oil Burner Tube, Radiator, General Engineering Purposes, Evaporator.



### ● 90/10 COPPER NICKEL

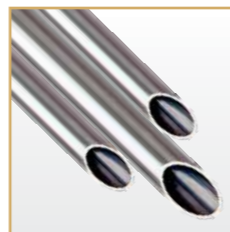
90/10 Copper Nickel is widely used in sea water. It has very good corrosion resistance to clean or moderately polluted marine or estuary water, even containing dissolved incondensable gases Known for their flexibility, high corrosion resistance, superior tensile strength, trouble free installation and maintenance.

Excellent corrosion resistant to turbulently used in condensers for coastal power plants, petroleum refineries and chemical plants.

### ● 70/30 COPPER NICKEL

METALCO 70/30 Copper Nickel Tubes are sturdy in construction dimensionally accurate, corrosion resistant, easy to install and maintenance free. Available in different standard specifications at nominal prices.

High impingement corrosion resistant to brackish sea water at velocities upto 3 to 4 m/sec used in desalination plants and other sea water condenser applications.



### ● U-BEND TUBES / PIPES

METALCO manufactures U-Bend tubes conforming to the international Standards and as per the customer requirements. These tubes have been added to our product range offering value addition to our esteemed customers. Roundness, Straightness, Uniformity of the wall thickness and inner and outer surface of the tube are the unique features so as to make them suitable for intended use.

Applications. U-bend tubes are mainly used to enhance the design of heat exchangers & Condensers.

### ● 85/15 - RED BRASS TUBES

METALCO make 85/15 Red Brass is the most durable of all metals for commercial water pipe line in the practical price range. Excellent for its resistance to dezincification and season cracking for which the high copper brasses are known. Moderate strength and good retention of spring properties. Specified for underground service lines since it offers greatest corrosion resistance to all types of potable waters. Other Applications include costume jewelry, fire hose couplings, zippers, condenser and heat exchanger tubes.



## Products & Products Details

METALCO Specializes in manufacturing following Copper & Copper Alloys Tubes for Sugar, Air - Conditioning, Refrigeration, U Tube Bundle, Finned Tubes



### ● DHP / DLP / DPA COPPER TUBES

METALCO is the leading manufacturers, exporters and suppliers of a large array of DHP/ DLP Copper Tubes These are used in different industries due to their flawless quality, durable finish standards rigid construction, reliable performance and corrosion & wear resistance.

General Engineering Application Purpose & MGPS.

### ● 70/30 SUGAR BRASS TUBE

Being the leaders in the industry, we are engaged in manufacturing and exporting a varied assortment of 70/30 Brass Tubes, Condenser Tubes. Precisely manufactured using premium grade raw materials that are sourced from trusted & reliable dealers, the brass tubes offered by us are used in various industries including, sugar & general engineering. Our 70/30 Brass Tubes are sturdy in construction, easy to install, durable, corrosion proof and offered at nominal costs.

Our Tubes are used in Sugar Industries, Plumbing & Fittings, Furniture, Hand Pumps and Ammunitions.



### ● 63/37 BRASS TUBES

We are one of the leading manufacturers, exporters and suppliers of a complete line of 63/37 Brass Tubes. These are manufactured by adept technicians in accordance with the set domain guidelines & norms to ensure excellent performance, durability, rugged construction, reliable operation and corrosion resistance. We offer Tubes with polish & mirror finished Surface.

Tubes are specially for Faucets & Sanitary, Plumbing & Fittings, Furniture and Hand Pumps.

### ● DZR (LOW LEADED BRASS) / ECO BRASS

The DZR Brass or Eco Brass of products carefully finds a balance between lead free compliance strategies and the reviling necessity of remaining competitive and maintaining productivity. As opposed to other lead free or low lead alternatives; DZR / Eco Brass has taken a more customer-centric approach when it developed its lead free alloys and assembled the products. Instead of simply replacing the lead with potentially, used in Potable water components, fixtures & applications, plumbing applications & systems, Forged products requiring lead free &/or dezincification compliance We are manufacturers and develop dezincification-resistant alloys which retain the appreciated properties of free-machining brass on the one hand and the excellent, lowcost workability into turned or forged parts on the other.



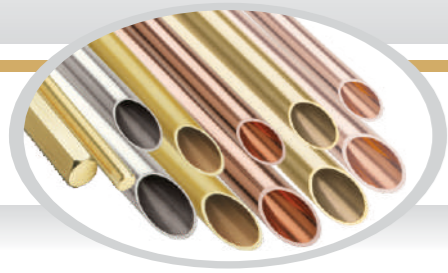
### ● HIGH TENSILE BRASS HOLLOW

Metalco is the world's biggest producer of high-tensile brass, these alloys meet more and more complex requirements given by specific applications. The material properties of brass alloys can be influenced very effectively by alloying additional elements such as aluminum, manganese, silicon, nickel, tin. The so-called high-tensile brass alloys show a modified microstructure resulting in optimized and customized material properties.

### ● LEADED BRASS HOLLOW / PIPES

METALCO is manufacturers of brass hollow rods and brass hollow bar with wide range of inner and outer diameters, alloys & grades. These rods and bars are said to be the best alternative for machined parts which has bore like cable glands, brass sleeves, valves and various other brass components which has bore in its center. Industries using hollow rods are Precision Components, hardware, cable glands, automobile electronic parts. industrial valves, defense components watch case Marine Industry and sanitary parts industry. Hollow bars are very thick seamless tubes that can be used as machining stock instead of solid bar. They offer a cost effective alternative for the manufacture of various turned components used in the automotive industry. Metal Alloys Corp. can supply Hollow Bars as per the national and international standards as well as customized grades.





# Copper & Copper Alloys



## Our Special Products



### ● TUBE FOR BEARING CAGE MANUFACTURER

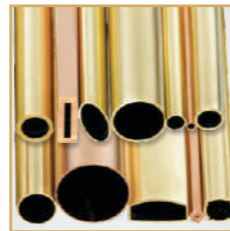
Metal Alloys Corporation is one of the world largest and most diversified manufacturers of specialized seamless tubes. We produce seamless tubes ranging from an outside diameter of 8 mm to 110 mm.

These Tubes are used in manufacturing different Bearing Cages such as Taper Roller Bearings Cage, Spherical Roller Bearing Cage, Ball and Cylindrical Roller Bearing Cages Etc. These Bearing cages find its application in the bearing for construction machinery gear construction, vehicle manufacture, rolling mills & railway wagons. They are suitable for applications which require high-speed rotation, low vibration, and low noise as in transmissions, electric motors & generators, pumps, compressors, gear boxes, drive elevators, textile machinery, printing machinery and two wheeler axles.

### ● TUBES FOR FAUCETS & SANITARY

A Copper and Zinc Alloy containing small amount of Arsenic. This is added as an inhibitor against dezincification. The alloy exhibits a good combination of strength and ductility and is commonly selected whenever excellent cold working properties, bright finish and relatively low cost are desirable. Severe environment must be considered to predict corrosion behavior. The alloy is often used for variety of deep drawn components.

We provide a complete range of sizes and types, engineered to exact specifications meeting the highest standards of performance. with buffing, polishing and bending specially for Faucets and sanitary We offer these tubes in different shapes, Round, Square, Rectangle, D-Profile, octagon and profiles.



### ● TUBES FOR SHIPBUILDING / MARINE & NAVAL APPLICATIONS

Metal Alloys Corporation is proud to serve the marine, naval and defense industries. For decades, seawater pipe systems made of cupronickel alloys have been put to successful use on marine vessels and offshore production unit like platforms, drilling rigs and semi submersible FPSO's. The chemical composition of CuNi 90/10 and CuNi 70/30 cupronickel alloys meet the requirements for all the main international standards. Please read our brochure for more information and specifics.

Metal Alloys Corporation sells alloy 706/7062 copper nickel. Copper nickel is most commonly used for marine applications because of its high seawater corrosion resistance and anti-biofouling properties. 706/7062 copper nickel offers the best characteristics for marine hardware and can be formed, bent, and welded. This product is available in pipe, tube and Rods product forms cut to your specifications. 706/7062 copper nickel has excellent soldering, brazing, gas shielded arc welding, and butt weld fabrication properties.

### ● TUBES FOR SYNCHRONIZER RINGS MANUFACTURER

We supply Tubes/hollows/ring blanks for synchronizer ring manufacturers. These synchronizer rings can be used in highly stressed transmissions and Gears. We have a state-of-the-art production unit that is well equipped with latest technology and sophisticated machinery. Our synchronizer ring blanks are well known for their excellent machinability, corrosion resistance and strength. These are machined in line with the set industry standards catering to fulfill today's need of Automobile industrial sector.

These Tubes are of Grade : **CuZn36MnAl2Si1, CuZn37Mn3Al2PbSi1, CuZn30Mn8Al3Si1NiCr and as per CuZn40(DIN), MBA2 Cr.**



### ● TUBES FOR FITTINGS, FLANGES & ELBOWS

Metal Alloys corporation provide Tubes/pipes which are used in fittings and flanges, we supplied Tubes/Pipes for manufacturer of Flanges & fittings which are used in plumbing, heating and related mechanical applications. air conditioning systems as well as drainage, waste and vent piping for use in residential, commercial, industrial and institutional applications.

Our range of Tubes and Pipes can produce as per your drawings and specifications.

### ● BRASS HOLLOWS FOR AUTOMOBILES & BUSHINGS

Metalco Manufacturers of brass hollow rods with wide range for automobiles and bushing sectors as per international standards. These rods and bars are said to be the best alternative for machined parts which has bore like automobile bushings, component parts and various other parts.

These Tubes are of Grade : **CW713R, CuZn37Mn2Al1PB, CuZn31Si1, C86300.**



# Copper & Copper Alloys

## Finned Tubes



### ● LOW INTEGRAL FINNED TUBES

The fins are manufactured rolling the Fin in the Base tube itself. The fin height is relatively very low. However, number of Fins Per inch or the fin Density can be increased greatly and improve the heat transfer area. The rolling is done on a special machine and the same can be supplied in straight as well as U bend configuration.

### ● EXTRUDED FINNED TUBES

The Extrusion takes place on a Continuous Fin Extruder with Three Tooling rolls and extrusion takes place at high pressures in the range of 1200 psi. Because of the cold working process, the Bond between the Tube and fin is flawless and hence gives excellent Heat Transfer Efficiency. At the same time the mechanical strength of the fins is also enhanced drastically.

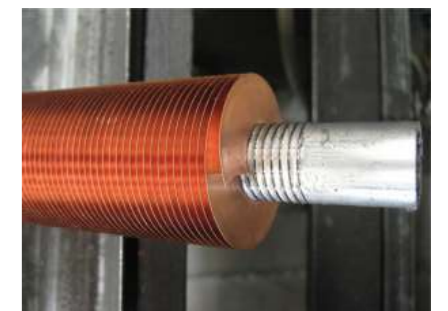


### ● "L" TYPE FINNED TUBES

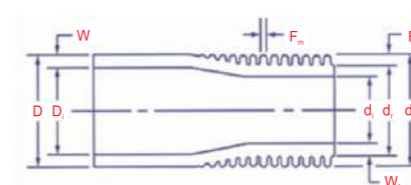
In 'L' Type Fin Tube the finning is done by wrapping around the Fin stock spirally around the base tube. This is as reason also known as spirally wound Fin Tube. The base of the fin stock is Shaped in to and 'L' shape which gives a base for the fin to stand on firmly. Also, the 'L' shape provides a protection against the atmospheric corrosion.

### ● "G" TYPE / EMBEDDED FINNED TUBES

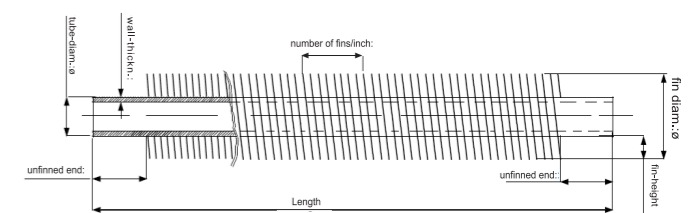
The fins are manufactured by embedding the fin strip into a groove formed on the base tube. The Fin is allowed to be placed in the groove and then the backfilling of the groove is carried out to ensure firm adherence of the fins to the base tubes. Because of the process this type of Fin Tube is also known as 'G' Fin tube or Grooved Fin Tube.

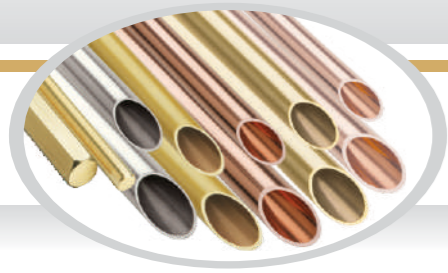


## ● TECHNICAL & DIAGRAM SPECIFICATION OF FINNED TUBES



D: Outside diameter of unenhanced section  
 D<sub>i</sub>: Inside diameter of unenhanced section  
 W: Wall thickness of unenhanced section  
 d<sub>o</sub>: Outside diameter of enhanced section  
 d<sub>i</sub>: Inside diameter of enhanced section  
 W<sub>i</sub>: Wall thickness of enhanced section  
 F: Fin height  
 F<sub>m</sub>: Mean fin thickness





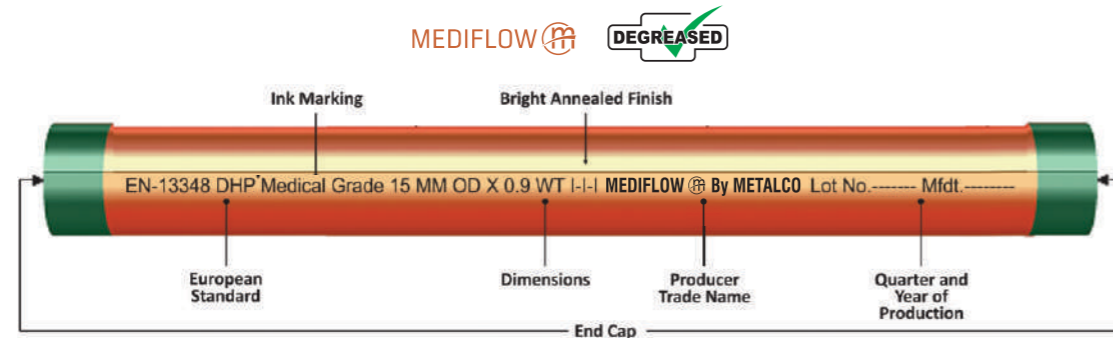
# Seamless Tubes & Solids

# Copper & Copper Alloys



## MEDICAL GRADE COPPER PIPES - MGPS AS PER EN 13348

At Metal Alloys Corporation is the largest manufacturer of **MEDIFLOW** By **METALCO** marked Medical Grade Copper Pipes used in Medical Gas Distribution system. Uninterrupted Medical Gas supply is a necessity in hospitals (ICCU, Operation Theater, Wards, Nursery etc). Pipes facilitate this in most effective manner.



AVAILABLE SIZE OD 10MM To 108MM



Particular	EN 13348 Standard		METALCO
CHEMICAL COMPOSITION	Copper (Cu) + Silver (Ag)	99.90%	Spectro Analysis done per heat as per standard range.
	Phosphorous	0.015% to 0.04%	
CARBON CONTENT TEST	Determining lubricant residue as total Carbon Content by measuring Carbon Dioxide Generated.		Tested with Combustion Method as per EN723:2009
TENSILE / ELONGATION TEST			
Temper		Tensile Strength Mpa min.	Elongation A % min
As per EN1773	Common Term		Hardness (Indicative) HV 5
R220a	annealed	220	40
R250	half hard	250	30
R290	hard	290	3
DRIFTING TEST		Depending on Size and Temper Mandatory / Agreed Terms	
FREE FROM DEFECT TEST		EDDY Current Test for detection of local defects	
CLEANLINESS	Proper Degreasing and End Capped		Conical Mandrel @ 450 with tube end expanding 300 EDDY Current Test conducted in accordance with EN 1971 Our pipes are Degreased as per standard and End Caps are affixed.

## METALCO COPPER TUBES FOR PLUMBING & POTABLE WATER SUPPLY AS PER EN 1057

Metal Alloys Corporation proudly manufactures **METALCO** marked Plumbing & Potable Water Supply Grade Copper Tubes as per EN1057. **METALCO** Plumbing Grade copper tubes are manufactured as per European standard EN : 1057 For Water, gas and sanitation. The pipes are manufactured under thorough inspections and under stringent quality control measures.

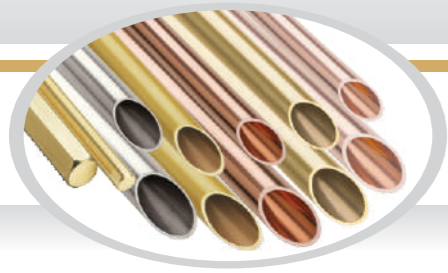


## Capabilities...

### Production range : TUBES / RODS / HEX / SQUARE / FLAT / PROFILE / HOLLOW

Tubes	6.35 mm to 110 mm
Round Rods	6 mm to 150 mm
Hex	5 mm to 60 mm
Square	4 mm to 60 mm
Flat	5 mm Min Thickness and Max Width 120 mm
Profile	As per Customer Drawing
Hollow Rods	Min Bore size 20 MM and Max OD 130 mm

<b>Cupro Nickel</b>	70/30 copper Nickel Ingots / Billets/ Mother tubes/ Pilger Tubes/ Finished Tubes/ Finned Tubes/ U-Bend Tubes/ Rods	ASTM B 111 C 71500/ ASME SB 111 C 71500/ BS 2871 part 3 CN 107/ EN 12451 CuNi 30 Fe 1 Mn/ NFA 51 102 CuNi 30 Fe 1 Mn/ JIS H 3300 C 7150/ ASTM B 111 C 70600/ ASME SB 111 C 70600/ BS 2871 Part 3 CN 102/ EN 12451 CuNi10 Fe 1Mn/ NFA51 102 CuNi10 Fe1Mn/ JIS H 3300 C 7060 ASTM B 111 C 70400/ ASME SB 111 C 70400/ BS 2870 CN 101/ ISO 1635 CuNi5Fe1Mn/ JIS C 2532 GCN10
<b>Brass for condensers/ heat exchangers</b>	Admiralty Brass Aluminum Brass Aluminum Bronze	ASTM B 111 C 44300/ ASME SB 111 C 44300/ BS 2871 Part 3 CZ - 111/ EN 12451 CuZn28 Sn1As/ NFA 51 102 CuZn29Sn1/ JIS H 3300 C 4430 ASTM B 111 C 68700/ ASME SB 111 C 68700/ BS 2871 PART 3 CZ - 110/ EN 12451 CuZn20 AL2As/ NFA 51 102 CuZn22 Al2/ JIS H - 3300 C 6870/ ASTM B 111 C60800/ ASME SB 111 C 60800/ EN 12451 CuAl5As/ CW200G
<b>Lead Free Brasses</b>	70/30 Brass Ingots / Billets/ Mother tubes/ Pilger Tubes/ Finished Tubes/ Rods (Solid and Hollows) - Hex/ Rectangles/ Square/ Profile	ASTM B 135 C 26000/ BS 2871 Part 3 CZ - 126/ EN 12451 CuZn30As/ NFA 51 102 CuZn30/ JIS H 3300 C 2600/ AS 1572 26130 ASTM B135 C 27200/ JIS H33000 C 27200/ ISO 1637 CuZn37 ASTM B135 C 23000/ BS 2870 CZ 102/ JIS H3300 C 2300 ASTM B135 C 22000/
<b>Copper</b>	DHP Copper Ingots / Billets/ Mother tubes/ Pilger Tubes/ Finished Tubes/ Finned Tubes/ U-Bend Tubes/ Rods/ Pancake Coils	ASTM B 68 C 12200/ ASTM B 75 DLP C12000/ BS 2871 Part 2 C 101/ BS 2871 Part 3 C 106/ EN 12451 DHP/ JIS H3300 C 1220/ ASTM B 68 C 12200/ ASTM B 75 DLP C12000/ BS 2871 Part 2 C 101/ BS 2871 Part 3 C 106/ EN 12451 DHP/ JIS H3300 C 1220/ ASTM B 68 C 12200/ ASTM B 75 DLP C12000/ BS 2871 Part 2 C 101/ BS 2871 Part 3 C 106/ EN 12451 DHP/ JIS H3300 C 1220/
<b>Leaded Brasses</b>	Free Cutting Brass Wire Rods (Solid and Hollows) - Hex / Rectangles/ Square/ Profile	ASTM B 455 / B 16 C 38500 / C 36000/ BS 2874 CZ - 121Pb3 or CZ124/ IS319 Grade I/ II/ III/ JIS3250 H C3604 or C3602 ASTM B 124 C37700/ BS 2874 CZ 122/ IS 3488 Forging Brass IS 320 HT1 or HT2/ BS 2874 CZ114 or CZ115/ JIS 3250H C6782 or C6783 IS 4170 CuZn40/ BS 2874 CZ109/ JIS 3250 H C2800/ ASTM B171 C 36500/ IS 4413 CuZn37/ BS 2872 Cz108 IS 10757 Nickel Silver/ BS 2874 NS101/ ASTM C79830
<b>Bronze</b>	Tin Bronze Aluminum Bronze Alu. Silicon Bronze Lead Comm.Bronze Phosphros Bronze	ASTM B30 C92600 ASTM B 111 C60800/ ASME SB 111 C 60800/ EN 12451 CuAl5As/ CW200G ASTM B 150 C 64200 / SAE J 463 C 64200 ASTM B 140 C31400 ASTM B103 C 51000 / SAE J 463 C 51000 / BS 2874 PB 102
<b>U Bend Tubes</b>	Brass,Copper-Nickel & Copper	U-Bend tubes conforming to the international Standards and as per the customer requirements
<b>Finned Tubes</b>	Brass,Copper-Nickel & Copper	Tension wound finned tubes, embedded finned tubes, extruded finned and low finned tubes. Tension wound finned tubes are formed by winding a strip made of aluminum or copper around the tube under tension. The strip winding technology provides different types of fins: L-fin, LL fin, KL fin.



# Copper & Copper Alloys

# Seamless Tubes & Solids

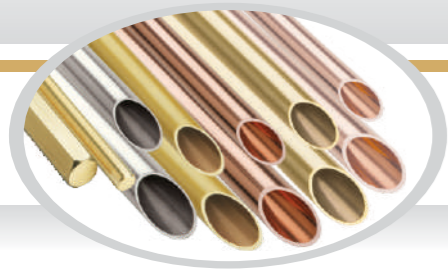


## BRASS ALLOYS

CATEGORY/STANDARD	ASTM	BS	EN	JIS	DIN	ISO
<b>Leaded Brass (General Reference Density 8.5 gm/cm3)</b>						
High Leaded Brass	C34500	CZ131 / CZ119	CW601N/CuZn35Pb2	C3560	2.0331	CuZn34Pb2
Forging Brass	C37700	CZ120	CW608N, CW617N	C3771 BE	2.038	1634-CuZn38Pb2
Threaded Rolling Brass	C35300	CZ119	CW606N	H3260(92)C3501 W	CuZn44Pb2	1639-CuZn43Pb2
Free Cutting Muntz Metal	C37000	CZ124	CW607N	H3100(92)C3713	2.0372	
Free Machining Brass	C36000	CZ124	CW603N	C3601	2.0375	CuZn36Pb3
Architectural Bronze	C38500	CZ121	CW614N	C3603	CuZn39Pb3	1637-CuZn39Pb3
Architectural Bronze	C38000	CZ122	CW618N	H3100 C3561	CuZn39Pb2	1634-CuZn39Sn1
<b>Naval Brass(General Reference Density 8.44 gm/cm3)</b>						
Naval Brass	C46200	CZ112		H3100(92)C4621 P		
Naval Brass	C46400	CZ114	CW719R	H3100(92)C4640 BE	2.053	1634-CuZn38Sn1
Naval Brass	C48200		CW714R		CuZn37Pb1Sn1	426-1 CuZn37pb1Sn1
Naval Brass	C48500	CZ134	CW711R		2.0371	CuZn39Pb2Sn
<b>Nickel Silver Brass (General Reference Density 8.6 gm/cm3)</b>						
Nickel Silver Brass	C77400					
Nickel Silver Brass	C77600					
Nickel Silver Brass	C79800		CW400J		2.077	1637-CuNi10Zn42Pb2
Nickel Silver	C79860		CW407J		2.075	CuNi12Zn37Mn6Pb2
<b>Yellow Brass (General Reference Density 8.45 gm/cm3)</b>						
Cartridge Brass Yellow Brass	C26000	CZ106	CW505L	H3250(92)C2600 BE	2.0265	CuZn30
Yellow Brass	C27000	CZ107	CW507L	H3250(92) C2700 BE	2.0335	CuZn36
Yellow Brass	C27200	CZ108	CW507L	H3100(92)C2720	2.0321,CuZn37,CuZn36	1637-CuZn37
Yellow Brass	C27400	CZ108	CW508L	H3100(92)C2720	CuZn37	1634 -CuZn37
Yellow Brass	C27450	CZ109	CW509L	-	2.036	CuZn37
Yellow Brass	C27451	-	-	-	-	-
Yellow Brass	C28500		CW510L			CuZn42
<b>High Tensile Brass (General Reference Density 8.45 gm/cm3)</b>						
High Tensile Brass	-	BS1400 HTB1	CC765S	-	2.034	CuZn35Mn2AlFe1-C
High Tensile Brass	-	IS:304 HTB2	-	-	-	CuZn36Al4FeMn
High Tensile Brass	-	BS1400 HTB3	CC762S	-	CuZn35Al5	CuZn25Al5Mn4Fe3-C
High Tensile Brass	-	CZ115	CW722 R	-	-	-
High Tensile Brass	-	CZ135	CW713 R	C6782	2.055	-
High Tensile Brass	C67500	CZ114	CW721 R	-	-	CuZn39AlFeMn
<b>Other Brass (General Reference Density 8.45 gm/cm3)</b>						
Aluminum Brass	C68700	CZ110	CW702R	H3300(92) C6870 T	2.046	
Admiralty Brass	C44300	CZ111	CW706R	H3100(92) C4430 P/R	2.047	CuZn28Sn1
Manganese Brass	C66800	CZ110	-	-	-	-
Manganese Brass	C66700					
Silicon Brass	-	-	CW708 R	-	2.049/CuZn31Si1	-
Silicon Red Brass	C69400					
Silicon Red Brass	C69430					
<b>DZR Brass (Dezincification Resistant Brass) / Low Leaded Brass (General Reference Density 8.44 gm/cm3)</b>						
Lead Free Brass	C27450	CZ121				CuZn37
Muntz Metal	C28000	CZ109	CW509L	C2801	CuZn40	1634-CuZn40
Low Leaded Brass	C33000		CW705R			C330
DZR Brass (Dezincification Resistant Brass)	C35330	CZ132	CW602N		2.0375	CuZn36Pb2As
Dezincification Resistant Forging Brass	C48600	CZ111		C4430	2.0371	CuZn28Sn1
Copper-Lead-Zinc Alloy	C36300		CW508L			CuZn37
Leaded Muntz Metal	C36500	CZ123	CW610N			1634 - CuZn40Pb

## COPPER & COPPER ALLOYS

CATEGORY/STANDARD	ASTM	BS	EN	JIS	DIN	ISO
<b>Aluminum Bronze (General Reference Density 7.5 gm/cm3)</b>						
Aluminum Bronze	C61400	CA106	CW303G	H3100(92) C6140 P	2.0932	1634-CuAl8Fe3
Aluminum Bronze	C62500	Ca103				
Aluminum Bronze	C61800		CW305G	Z3341(93)-YCuAl	2.094	1640 -CuAl10Fe
Aluminum Bronze "9A"	C95200		CC331G		2.0941	1338-CuAl10Fe2
Aluminum Bronze	C62300	CA103	CW306G	H3100(92) C6161 BE/ED/BF		2.0966CuAl10Fe3
Aluminum Bronze "9C"	C95400	AB1-C		H5114		
Aluminum Bronze	C62400	Ca106				
Aluminum Bronze	C95900	CW304G		H5111-BC1	2.0962	4382-2 - CuSn8P
<b>Silicon Aluminum Bronze (General Reference Density 8.5 gm/cm3)</b>						
Silicon Aluminum Bronze	C63600					CuAl3Si
Silicon Bronze (AMS 4616)	C65620		CW009A			CuSi3Fe2Sn3
Silicon Aluminum Bronze	C64200	CA107	CW301G			CuAl7Si2
Low Silicon Bronze "B"	C65100		CW115C		2.049	1187-CuSi1
High Silicon Bronze "A"	C65500	CS101	CW116C		2.1525	R1187-CuSi3Mn1
<b>Manganese Bronze (General Reference Density 8.36 gm/cm3)</b>						
Manganese Bronze	C66800					
Manganese Bronze	C67500	CZ114	CW721 R	-	-	CuZn39AlFeMn
Manganese Bronze B	C67000		CW400J		2.077	1637-CuNi10Zn42Pb2
Manganese Bronze	C67600					
Manganese Bronze	C67300	-	-	-	2.0525	-
Manganese Bronze	C86200					
<b>Nickel Aluminum Bronze (General Reference Density 7.6 gm/cm3)</b>						
Nickel Aluminum Bronze	C63000	CA104,CA105	CW307G	H3100(92) C6280 P	2.0966	1634-2-CuAl10Ni5Fe4
Alpha Nickel Aluminum Bronze	C95800	CA104	AB1	H2206(00) AIBCln2	2.0976	CuAl10Fe5Ni5
Nickel Aluminum Bronze	C63020	CA104	CW307G	H3100 C6301	2.0978	1338- CuAl11Ni5Fe5
Nickel Tin Bronze Spinodal	C96900		CW302G			
Nickel Aluminum Bronze	C63200	CA104	CW307G	CAC303 (HBsC3)	2.0978	1637-CuAl10Fe5Ni5
Nickel Aluminum Bronze 9D	C95500	AB2-C	CC333G	H2206(00)-AIBCln3	2.094	1338-CuAl10Fe5Ni5
NES 833 - Nickel Aluminum Bronze	C62730	CA 104	CW307G	C6301	2.0966	CuAl10Ni5Fe4
<b>Leaded Commercial Bronze (General Reference Density 8.84 gm/cm3)</b>						
Leaded Commercial Bronze	C31400					CuZn9Pb2
Nickel Leaded Commercial	C31600					
<b>Copper Nickel (General Reference Density 8.94 gm/cm3)</b>						
Copper Nickel 80/20	C71000					
Copper Nickel 95/5	C70400	CN101		C2532-GCN10		
Copper Nickel 70/30	C71500	CN107	CW354H	H3300(92)-C7164 T	2.0882	1634-CuNi30Mn1Fe
Copper Nickel 90/10	C70600	CN102	CW352H	Z3341(93)-YCuNi-1	2.0872	1634-CuNi10Fe1Mn
<b>Other Copper (General Reference Density 8.94 gm/cm3)</b>						
Electrolytic Tough Pitch (ETP)	C11000	C101	CW004A	H3250(92)-C1100 BE	2.006	R1337-CuETP
Phosphorus Deoxidized	C12000	C106	CW009A	H3300(92)-C1201 T	2.0076	Cu-DLP
Tellurium Copper	C14500	C109	CW118C		2.1546	1637-CuTe
Low Leaded Nickel Copper	C19140					CuNiPbP
Leaded Nickel Copper	C19160					CuNi1Pb1P

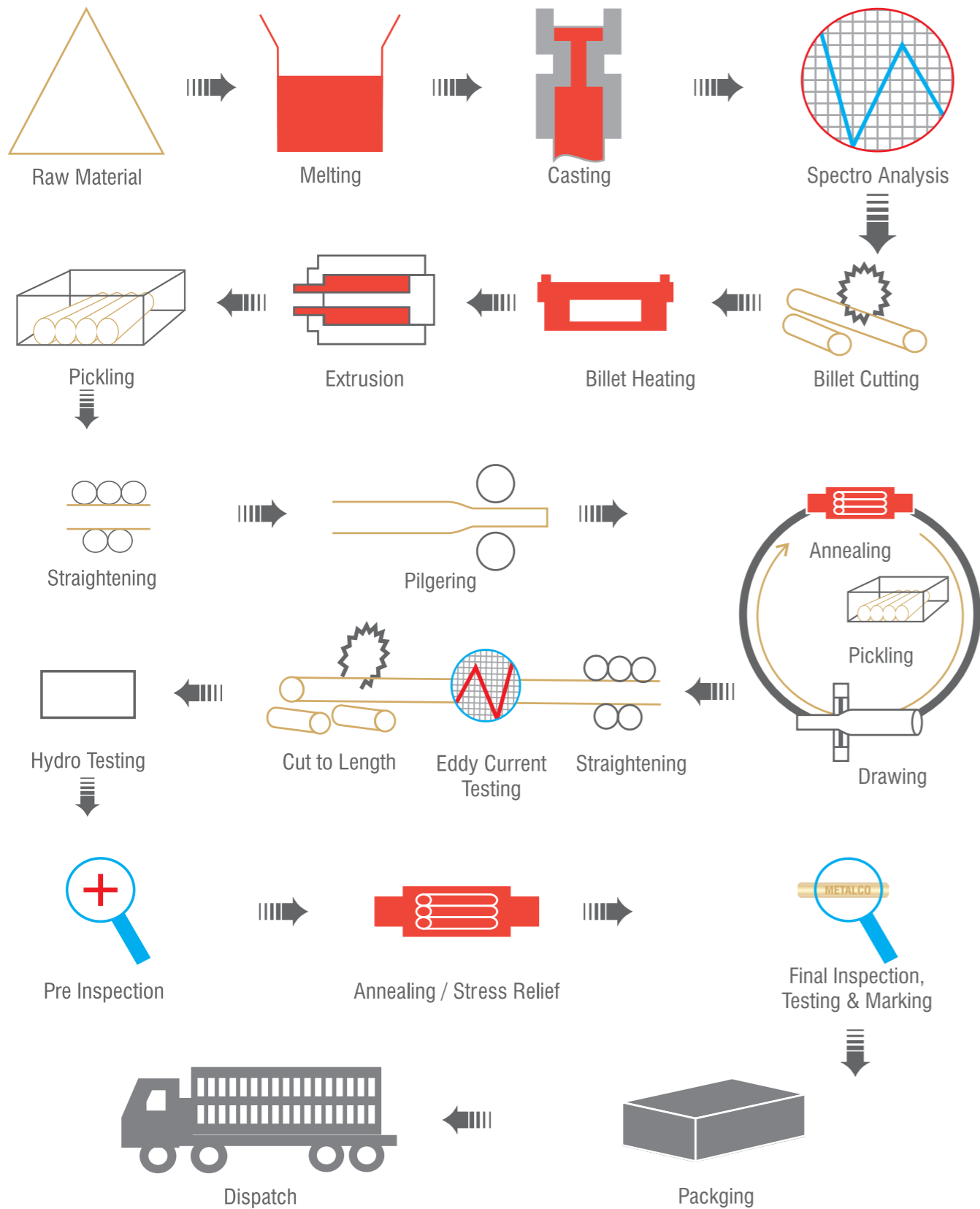


# Copper & Copper Alloys

# Seamless Tubes & Solids



## Process flow chart...



## Our Plant

Coreless Type Induction Melting Furnace



Horizontal Oil Hydraulic Extrusion Press



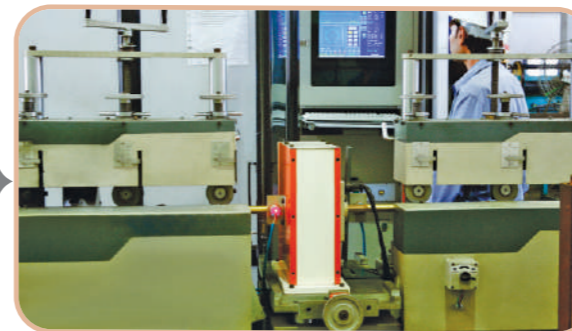
PLC Controlled Draw Benches



Cold Pilger Mill



Eddy Current Testing Machine



Hydraulic Pressure Testing Machine

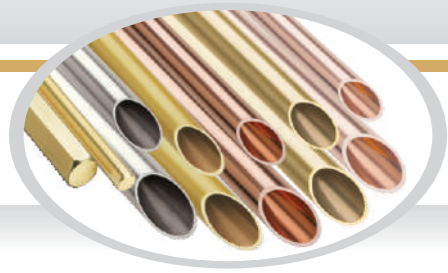


Superior Quality Packing



Roller Hearth Bright Annealing Furnace





# Copper & Copper Alloys

# Seamless Tubes & Solids



## Our Quality Control

Optical Emission Spectrometer



Chemical Laboratory



Universal Testing Machine



Hardness Testing Machine



### PROCESS EQUIPMENTS

- Coreless Type Induction Melting Furnace Gas Fired Billet Heater
- 1250/160 M.T. Horizontal Oil Hydraulic Extrusion Press
- Mannesmann Make Cold Pilger Mill
- Roller Hearth Bright Annealing Furnaces
- PLC Controlled Draw Benches
- Straightening Machine
- Finning Machine
- U Bend Machine
- Stress Relief Test

### QUALITY CONTROL EQUIPMENTS

- Optical Emission Spectrometer.
- Universal Testing Machine
- Rockwell / Brinell / Vickers Cum Brinell Hardness Tester
- Conductivity Meter
- Metallurgical Microscope
- Eddy Current Testing Machine
- Hydraulic Pressure Pneumatic Testing Machine
- Chemical Laboratory
- Ultra-Sonic Thickness Measuring Gauge

### UTILITY

- Diesel Generating Sets
- High Pressure Air Compressors
- Stretch Wrapping Machine
- RO plant for industrial water supply
- Cooling Towers
- EOT Cranes
- Tool & Die Room
- Repair & Maintenance Room
- Effluent Treatment Plant

## Industrial Application



Refinery



Power Plants



Heat Exchangers



Defence



Petrochemicals



Automobiles



Fittings, Flanges & Elbows



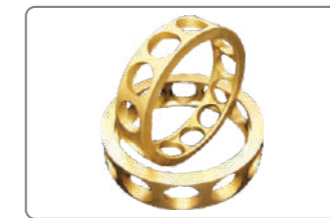
Ship Building



Cable Gland



Faucets & Sanitary Fittings



Ball Bearing Cages



Lugs



Copper Tubes for Isolators



Synchronizing Rings



HTB Busings



Gears

## Industries We Serve

- Thermal and Nuclear Power Plants
- Condenser & Heat Exchanger Manufacturers
- Faucets & Sanitary Fittings
- Sugar Mills
- Synchronizing Rings Manufacturer
- Railways Engine Components
- Fittings, Flanges & Eblow Manufacturer
- Electrical Motors Manufacturers
- Automobiles Parts Manufacturers
- Scientific Equipments Manufacturers
- Petro Chemical Industries & Refinery
- Ball Bearing Industries Manufacturers
- Air Conditioning Plants Manufacturers
- Electronic and Electric Components & Equipments
- Telecommunications Components Manufacturers
- Transformer & Switch Gears
- Surgical Equipments Manufacturers
- Watches & Time Piece Manufacturers
- Air Crafts Components manufacturers
- Agricultural Equipments Manufacturers
- Electrical & Water Meters Manufacturers
- L.P.G. & Industrial Valves Manufacturers
- Sanitary Hardware Fitting Manufacturers
- Ship Building / Naval Dock Components
- Heat Exchangers Manufacturers
- Defence
- Fertilizers
- Cement