

MANUFACTURERS & EXPORTERS OF COPPER BRAIDS & COPPER LAMINATED CONNECTORS



understands your values



AI EARTHING is a Manufacturer of Copper Braided products having weaving plant located in Palghar, Mumbai – India. We are specialist in Copper Braid in Manufacturing of Copper Braids, Customized Copper Braided Connectors, Copper Braid Bond (Pipe Bond), Copper Braided Connectors in Lugs Fittings, Copper Earth Straps, Copper Braided Ropes etc. having more than 10 years' experience in Indian and Overseas Market.

Our Firm AI EARTHING, is well established organization in India and overseas market and Manufactures and Export the following products :

- 01) Copper Bonded Rod and its accessories (Factory situated in Vapi - Gujrat)
- 02) Copper Braided & Laminated Connectors (Factory situated in Palghar - Maharashtra)
- 03) Exothermic Weld Powder & Graphite Molds (Factory situated in Thailand)
- 04) Brass Parts Components, Accessories and Fittings (Factory situated in Jamnagar - Gujarat)

We have earned good reputation amongst our international customers with our Quality Assurance, On time delivery and High Customer Satisfaction. To ensure consistent product quality, we work within a quality system that is approved with **ISO 9001 - 2015 certification**. We manufactures all Products with **CE & ROHS Compliance**. Strict quality checks are carried out at different stages of manufacturing and only that material which passes stringent norms finds its way in the market around the Globe.

Our customer bases are the industries that deals or manufactures Transformers, Bus Ducts, Cable, Switch gears, Breakers, Isolators etc.

Our vision

The four pillars of our vision set out the long term direction for the company where we want to go and how we are going to get there:

- We work to create a better future every day.
- We help our customers feel good, have good and get more out of life with our brands and services that are good for them and good for others.
- Whilst the company has ambitious plans for the future for its product range and its manufacturing abilities, our greatest objective will always be to maintain the highest level of quality assurance & service to the customer.
- We will develop new ways of doing business with the aim of doubling the size of our company while reducing our environmental impact.

**We always believe in the power of our brands to improve the quality of people's lives
and in doing the right thing.**

Some of our Esteemed Customers



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I. COPPER BRAID

1) Copper Braided Wire / Copper Braid Strips

We manufacture Copper Braided Wire in high grade Copper Quality.

Copper Material: Electrolytic Copper

Finish Offers: Bare Copper, Tinned Plated & Silver Plating

Wire Sizes Offer – From Swg 30 to Swg 45. Standard is 36 Gauge (0.2mm)

Cross Sectional Area Range: From 2 Sqmm and Above



We Manufacture the Following Basic Sizes for Copper Braid:

Dimensions Width X Thick	Cross Section sq. mm	Appx. Weight per 100 Meters*	Current Rating Amps*	Product Code Sr. No.
4 X 1	2	2	25	AI CBS-4x1
6 X 1	3.6	3.6	36	AI CBS-6X1
8 X 1	5	5	47	AI CBS-8X1
10 X 1	6.1	6.1	55	AI CBS-10X1
10 X 2	9.8	9.8	83	AI CBS-10X2
12 X 1	7	7	62	AI CBS-12X1
12 x 1.5	8.40	8	40	AI CBS-1215
12 x 3	16.80	17	105	AI CBS-12
30 19 x 1.5	12.10	12	63	AI CBS-1915
19 x 3	22.40	22.5	145	AI CBS-1930
25 x 1.5	19.60	20	85	AI CBS-2515
25 x 3	36.50	35	200	AI CBS-530
25 x 6	73.00	72.5	400	AI CBS-2560
32 x 1.5	36.50	38	120	AI CBS-3215
32 x 3	42.10	42	240	AI CBS-3230
32 x 6	81.40	80	400	AI CBS-3260
38 x 3	53.30	52.5	300	AI CBS-3830
38 x 6	80.00	85	500	AI CBS-3860
50 x 3	70.20	70	400	AI CBS-5030
50 x 6	109.50	110	800	AI CBS-5060
50 x 12	280.00	275	1500	AI CBS-5012
75 x 6	140.40	140	1000	AI CBS-7560
90 x 12	240.00	330	40	AI CBS-9012



The Copper Braids are usually made in

- 36 Gauge SWG (0.02927 Sqmm per Wire i.e 0.193 wire diameter) - Standard

- 39 Gauge SWG (0.0137 Sqmm per Wire i.e 0.132 wire diameter)

- 42 Gauge SWG (0.008107per Wire i.e 0.102 wire diameter)

More the Gauge SWG – More will be Flexibility

*****Above are the Standard Size for the ready reference. Copper Braids in any other sizes can be manufactured and supply**

P.N-Current rating measured at 35°C room temperature and max. permitted Conductor Temp of 70°C, Since several influencing factors generally apply, the value specified for current rating must be considered as non-binding guideline values.

2) Copper Braided Wire Rope / Copper Braid Rope

We manufacture Copper Braided Ropes in high grade Copper Quality.

Copper Material: Electrolytic Copper

Finish Offers: Bare Copper, Tinned Plated & Silver Plating

Wire Sizes Offer – From 30 swg to 45 swg. Standard is 36 swg (0.2mm)

Cross Sectional Area Range: From 1.5 Sqmm and Above

We Manufacture the Following Basic Sizes for Copper Braided Ropes:

Diameter In mm	Cross Section Sq.mm	Appx. Wgt Per 100 Mtr.	Amp. Approx	Product Code
2	1.70	1.700	23	AI CBR-02
3	4.20	4.200	41	AI CBR-03
4	7.30	7.300	64	AI CBR-04
5	11.60	11.600	95	AI CBR-05
6	16.70	16.700	122	AI CBR-06
7	21.50	21.500	140	AI CBR-07
8	27.40	27.400	160	AI CBR-08
9	37.20	37.200	203	AI CBR-09
10	39.50	39.500	213	AI CBR-10
12	51.70	51.700	256	AI CBR-12
15	75.00	75.000	305	AI CBR-15
16	82.20	82.000	334	AI CBR-16
18	100.50	100.500	374	AI CBR-18
20	121.00	120.000	424	AI CBR-20



3) Copper Wire Stranded Braided Rope

We also manufacture Copper Wire Stranded Braided Ropes.

Copper Material: Electrolytic Copper

Finish Offers: Bare Copper, Tinned Plated, Silver Plated

Wire Sizes Offer – From 30 swg to 45 swg. Standard is 36 swg (0.2mm)

Cross Sectional Area Range: From 1.5 Sqmm and Above

We Manufacture the Following Basic Sizes for Copper Braided Ropes:

Diameter In mm	Cross Section Sq.mm	Appx. Wt. Per 100 Mtr.	Amp. Approx	Product Code
2	1.80	1.800	23	AI CBSR-02
3	4.10	4.100	41	AI CBSR-03
4	6.50	6.500	64	AI CBSR-04
5	10.6	10.600	95	AI CBSR-05
6	14.70	14.700	122	AI CBSR-06
8	24.60	24.600	160	AI CBSR-08
9	30.70	30.700	203	AI CBSR-09
10	42.90	42.900	213	AI CBSR-10
12	60.30	60.300	256	AI CBSR-12
16	120.80	120.800	334	AI CBSR-16
18	150.80	150.800	374	AI CBSR-18
20	181.30	181.300	424	AI CBSR-20



4) Copper Wire Stranded Conductors

We manufacture Copper Stranded Conductors used in Substation Earthing.

Copper Material: Electrolytic Copper

Finish Offers: Bare Copper, Tinned Plated

Wire Sizes Offer – From 15 swg to 30 swg.

Cross Sectional Area Range: From 10 Sqmm and Above



We Manufactures the following Copper Wire Stranded Conductors:

Normal Area in Sq.mm	Stranding & Wire Diameter in mm.	Appx.O.D in mm.	Appx.Wght Per 100 Mtr.	Product
				Code
10	3 x 2.12	4.5	9=800	AI CSC-10
	7 x 1.40	4.5	9=900	
16	7 x 1.70	5.1	15=600	AI CSC-16
25	7 x 2.24	7	24=700	AI CSC-25
35	7 x 2.50	8.0	32=000	AI CSC-35
50	19 x 1.80	10.50	48=000	AI CSC-50
70	19 x 2.24	11.5	71=000	AI CSC-70
95	19 x 2.50	13	89=000	AI CSC-95
120	37 x 2.06	15	118=000	AI CSC-120
150	37 x 2.24	16.5	143=000	AI CSC-150
185	2.5*37	19	170=00	AI CSC-185
240	61 x 2.24	22	245=000	AI CSC-240

5) Copper Braided Sleeve (EXPANDABLES)

Copper Material: Electrolytic Copper

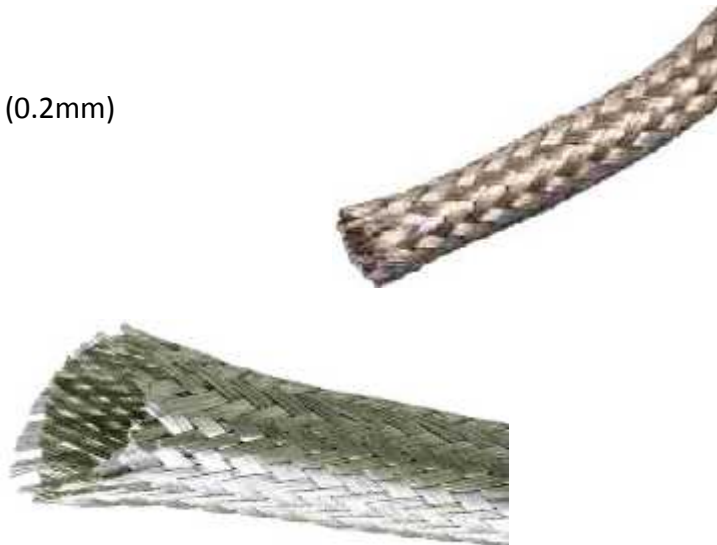
Finish Offers: Bare Copper, Tinned Plated, Silver Plated

Wire Sizes Offer – From 30 swg to 45 swg. Standard is 36 swg (0.2mm)

Cross Sectional Area Range: From 1.5 Sqmm and Above

We Manufactures the below Copper Braided Sleeves

Former OD mm	Coverage %	Usable Max	OD (mm) Min	Item Code Sr. No.
3	80 - 90	5	2	AI CSB-0300
4	80 - 90	6	3	AI CSB-0400
5	80 - 90	8	4	AI CSB-0500
6	80 - 90	12	5	AI CSB-0600
8	80 - 90	14	6	AI CSB-0800
10	80 - 90	16	8	AI CSB-1000
12	80 - 90	18	10	AI CSB-1200



***** Above are the Standard Size for the ready reference. Copper Braids in any other sizes can be manufactured and supply**

P.N-Current rating measured at 35°C room temperature and max. permitted Conductor Temp of 70°C, Since several influencing factors generally apply, the value specified for current rating must be considered as non-binding guideline values.

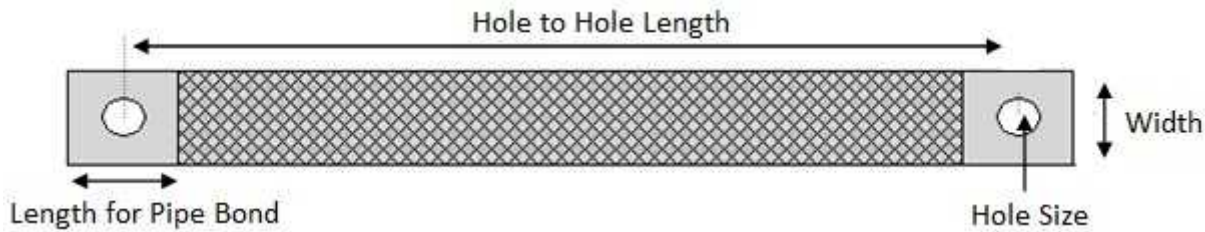
6) Copper Braided Bond with Pipe Fittings

We manufacture Copper Braid Bond also called as Copper Flexible Connector.

Copper Material: Electrolytic Copper

Finish Offers: Bare Copper & Tinned Plated

Wire Sizes Offer – From 30 swg to 45 swg. Standard is 36 swg (0.2mm)



The Copper Braid with Pipe Bond is Customized Design and we manufacture as per Customers Specification depending on their **Current rating and Cross Sectional Requirement.**

OR

Our Customers need to give following Information in order to submit the Quote for any inquiry:

- 1) Copper Braid Width (Width)
- 2) Hole to Hole Length
- 3) Length for Pipe Bond (Normally it's the same of Width)
- 4) Thickness of Copper Braid
- 5) Hole Size
- 6) Wire Diameter (Usually its Manufactured in 36 Swg (Gauge))

[The above require information can also be referred on Page 4 from the same Catalog given above](#)

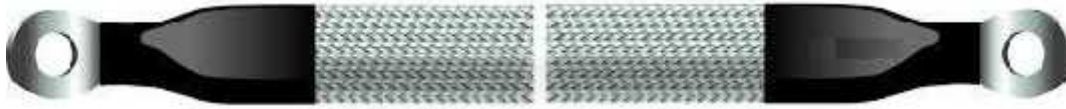


7) Copper Wire Braided Strip with Lugs Fittings

Copper Material: Electrolytic Copper

Finish Offers: Bare Copper & Tinned Plated

Wire Sizes Offer – From 30 swg to 45 swg. Standard is 36 swg (0.2mm)



The Copper Braid with Copper Lugs Bond is Customized Design and we manufacture as per Customers Specification depending on their **Current rating and Cross Sectional Requirement.**

OR

Our Customers need to give following Information in order to submit the Quote for any inquiry:

- 1) Total Width of the Copper Braid
- 2) Hole to Hole Length
- 3) Cable Lugs Size
- 4) Thickness of Copper Braid
- 5) Hole Size
- 6) Wire Diameter (Usually its Manufactured in 36 Swg (Gauge))

[The above require information can also be referred on Page 4 from the same Catalog given above](#)

8) Copper Braided Wire Rope with Lugs Fittings

Copper Material: Electrolytic Copper

Finish Offers: Bare Copper & Tinned Plated

Wire Sizes Offer – From 30 swg to 45 swg. Standard is 36 swg (0.2mm)



The Copper Braided Rope with Copper Lugs Bond is Customized Design and we manufacture as per Customers Specification depending on their **Current rating and Cross Sectional Requirement.**

[The above require information can also be referred on Page 5 from the same Catalog given above.](#)

II. COPPER LAMINATED FLEXIBLE CONNECTORS

1) Laminated Copper Flexibles

We offer the finest quality Laminated Copper Flexible Connectors that are manufactured by stacking several foils of electrolytic copper and then applying high current under high pressure. These types of flexible connectors are commonly used as the flexible expansion joints for connecting the bus bars in different applications.

Features:

-) Endurable and Long Lasting
-) Available in different sizes
-) Easy to use

Industry Use:

-) Switchgear industries
-) Power plants
-) Cathodic Protection
-) Bus Ducts
-) Transformer
-) V.C.B.
-) Resistance welding engineering
-) Electric Locomotives
-) Galvano Engineering
-) Furnaces



These Laminated Copper Flexible Connections are produced from high conductivity electrolytic grade copper foils/sheets. We follow various methods to produce these flexible jumpers.

The method used is described below:

Press Welding

In Press welding, individual Copper strips are fused (one homogeneous mass) together by applying direct current and pressure without the use of any foreign material. It results in producing a solid mass with properties of a plain busbar of the same cross section. This method assures minimum resistance thus increasing the product life & reduction in downtime. Welding provides the best mechanical & electrical properties at high temperatures. These are available in all sizes covering the desired cross section area. Slotted holes can be provided up on request.

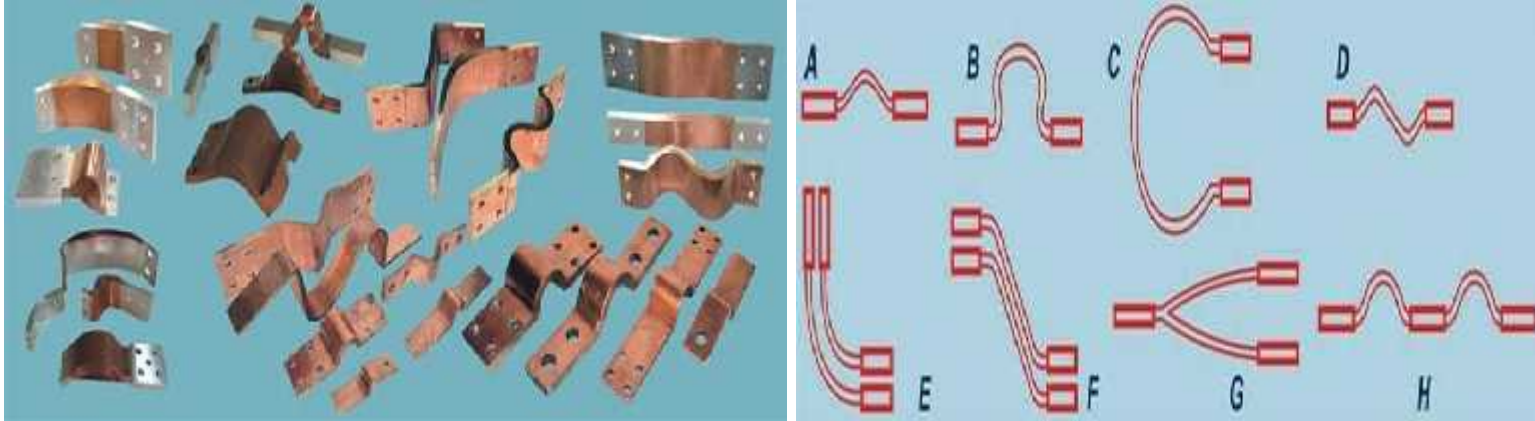
Copper laminated flexible Connectors consist of several stacked strips with riveted or welded contact areas. They have a constant cross-section over the whole length. Busbars and laminated connectors with the same cross-section can be loaded with the same current. A part of laminated connectors are utilized as flexible expansion connectors in order to connect busbars of switch gears, transformers, generators, etc. Thanks to their elasticity, thermal expansion of busbars is being compensated.

Most of the parts are being used as expansion connectors to prevent damages by vibration caused by switch gear operations. Another part is utilised as flexible components inside parts of machines (Like welding machines or switch gears). These kind of connectors have to realise movement inside machines and switch gears. To manufacture suitable connectors for the variable applications we have different methods of production.

2) COPPER LAMINATED FLEXIBLE JUMPERS

Copper laminated flexible jumpers are manufactured by stacking several foils of electrolytic copper and then applying high current under high pressure. This is a special metal diffusion whereby the metal itself melts and forms homogenous bonds thus giving a very negligible, almost nil, mill volt drop across the connector, thereby reducing the temperature rise and increasing the current carrying capacity of the jumper. In this process, no filler metal is used to join two layers together. They have a constant cross section over whole length. The current carrying capacity of solid bus bar and copper laminated jumper manufactured by this process is the same. Therefore Laminated Copper flexible Jumper jumpers are a substitute for solid bus bar.

Copper flexible jumpers are manufactured in all possible shapes & sizes as per customer's requirements. Some of various shapes are shown in the images.



Copper laminated flexible jumpers are manufactured by laminating high conductivity, electrolytic grade copper foils. These laminated foils are then sweated or pressure welded / fused as per customer's requirements. Such copper jumpers carry the same current as that of Busbars as they have a constant cross section over the whole length giving a nil millivolt drop. So these jumpers are a best substitute for solid busbars. Our Copper flexible jumpers are widely used in following Industries: Transformers switchgear's, power plants, Electric locomotives, furnaces, chemical plants, electricity boards & all current carrying equipment manufacturing Industries.

It is also possible to drill, saw, braze, mill & weld the contact areas without any problem. These types of flexible connectors are used as flexible expansion joints in order to connect bus bars in Switchgear industries,

-) Power plants,
-) Caustic Soda,
-) Chlorine plant using mercury Cell,
-) Modular Cell,
-) Membrane Cell,
-) Diaphragm Cell,
-) Hydrochloride Cell,
-) Manganese Dioxide Cell and Cathodes Protection,
-) Bus Ducts, Transformer, V.C.B.,
-) Resistance welding engineering,
-) In Electric Locomotives, Furnaces etc..

It is used as expansion connectors to prevent damages by other parts of machines or switchgears and to take care of thermal and dynamic stresses caused by short circuit current in the system. These jumpers have to realize movements inside machines and switchgear. Flexible Copper Laminate jumper is individually designed and manufactured keeping in view the user's requirement and application. We also offer jumpers with contact area electro tinned, silver or gold plated to give perfect contact.

If want to order Please mention:

Outside length (O.L), Width required (W), Thickness (less clip) (T), Hole Diameter, Type (letter shape), Hole pattern & dimensions

III. COPPER LAMINATED FLEXIBLE SHUNTS

FLEXIBLE LAMINATED SHUNTS are custom designed to customer requirements and specifications and are available in any hole pattern or size. The secondary conductor strips are of High Conductivity Copper. Terminal ends can either be deep riveted or solder dipped to allow a more positive current transfer area for improved efficiency.

Copper laminated flexible shunts are manufactured by stacking several foils of Electrolytic Copper (0.035 to 0.3 mm thick) and then forging it by applying high current under high pressure. This is a special metal diffusion process whereby the metal itself melts and forms homogenous bond thus giving a very negligible, almost nil millivolt drop across the connector, thereby reducing the temperature rise & increasing the current carrying capacity of the jumper. In this process, no filler metal is used to join layers together. They have a constant cross section over whole length. The current carrying capacity of solid bus bar and Copper laminated jumper manufactured by this process is same. Therefore these jumpers are a substitute of solid bus bar. It is also possible to drill, saw or mill the contact areas without any problem.

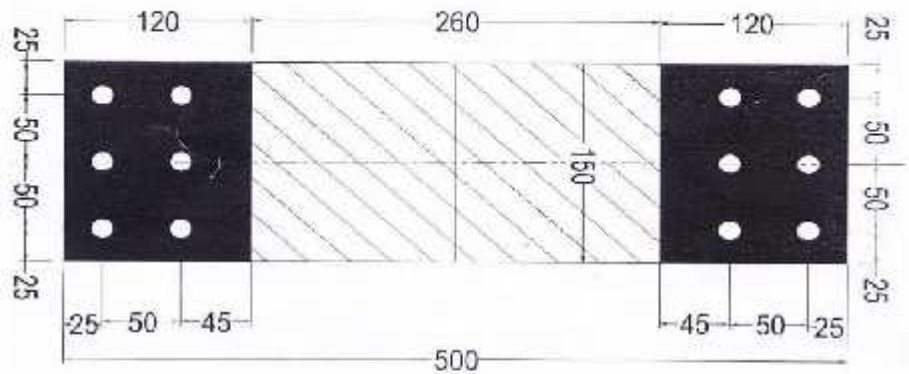
These type of flexible connectors are used as flexible expansion joints in order to connect bus bars in Switchgear Industries, Power Plants, Caustic Soda & Chlorine Plant using Mercury Cell, Modular Cell, Membrane Cell, Diaphragm Cell, Hydrochloride Cell, Manganese Dioxide Cell and Cathodic Protection, Bus Ducts, Transformer, V.C.B., Resistance welding equipment's, Electric Locomotives, Furnaces etc. to prevent damages by other parts of machines or switchgear. These kinds of jumpers have to realize movements inside machines and switchgear. These jumpers are individually designed and manufactured keeping in view, the user requirements and application. We also offer jumpers with contact area electro - tinned, Silver plated or Gold plated to give perfect contact.

If want to order Please mention:

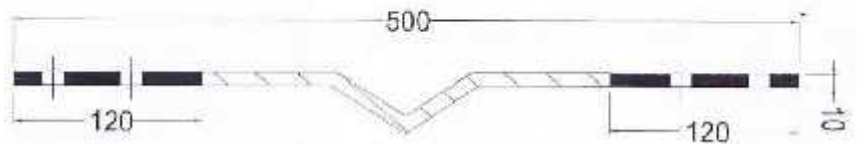
- 1) Total Width
- 2) Total Thickness
- 3) Fusion Welded Width on Left end
- 4) Fusion Welded Width on Right end
- 5) Hole Dimension and Hole Size
- 6) Total Length
- 7) Copper Foil Diameter
- 8) Plating Require if any
- 9) Any other Shape in Fusion Welded Req.



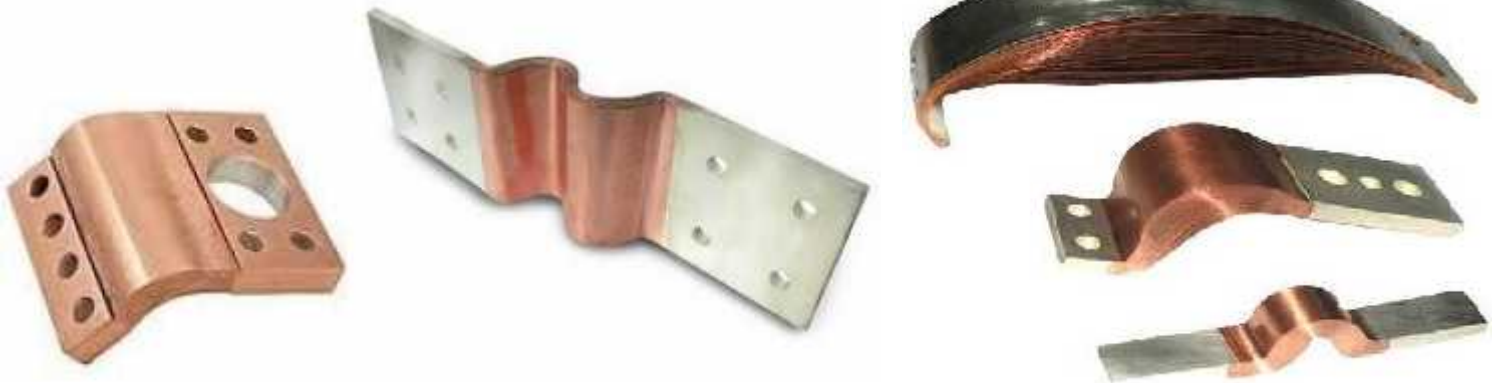
INQUIRY FORMAT STYLE:



Copper Foil Diameter - 0.20 mm



If any shape require than additional drawing specification also require





AI EARTHING

understands your values

AI EARTHING

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