KIM
HENG CHIANG
กิ้มเฮงเชียง

NON-FERROUS METALS & STAINLESS STEEL

Busbar · Flat Bar · Round Bar · Sheet · Tube · Tape · Flexible Connectors

KEEP IT MOVING

Established 1988 · Bangkok, Thailand

www.kimhengchiang.com

ABOUT US · เกี่ยวกับเรา

KEEPING PRODUCTION MOVING SINCE 1988

Kim Heng Chiang Co., Ltd. (บริษัท กิ้มเฮงเชียง จำกัด) is a Thai importer and distributor of non-ferrous metals and stainless steel, established in 1988. From Charoen Krung Road in Bangkok we supply copper, brass, aluminium and stainless steel to manufacturers, panel builders and contractors across Thailand.

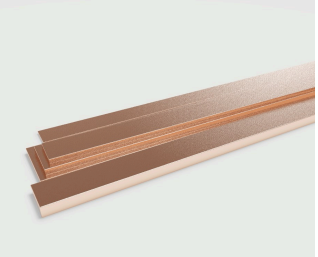
In manufacturing, a delay in material is a delay on the whole line. We supply standard sizes and cut bar and sheet to the length a job needs, so customers order what they use — by the kilogram, by the bar or as a cut piece.

1988	Established
4	Metals — copper, brass, aluminium, stainless steel
mm & inch	Metric and inch sections
Cut to size	Bars, rods and sheet supplied by kg, bar or cut piece

WHAT WE STAND FOR

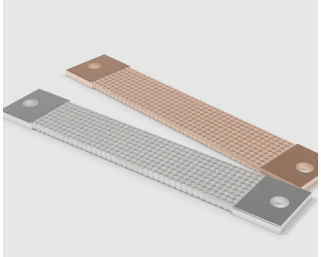
PURPOSE	To power uninterrupted manufacturing through precision copper solutions.
POSITIONING	The dependable custom copper partner for manufacturers who cannot afford downtime.
PROMISE	Reliable delivery. Exact specifications. Continuous support.

WHAT WE SUPPLY



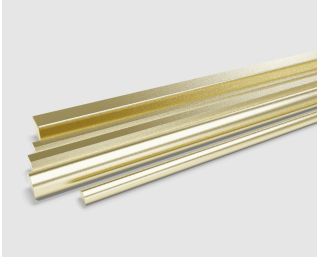
Copper

Busbar · Flat Bar · Round Bar · Sheet · Tube · Tape



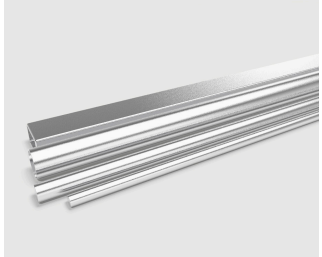
Flexible Copper

Braided Connectors · Laminated Busbar · Braided Wire



Brass

Flat Bar · Hexagonal Bar · Round Bar · Sheet · Tube



Aluminium & Stainless Steel

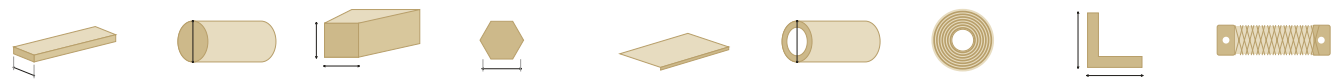
Flat Bar · Round Bar · Sheet · Pipe · Angle

PRODUCT PORTFOLIO · สารบัญสินค้า

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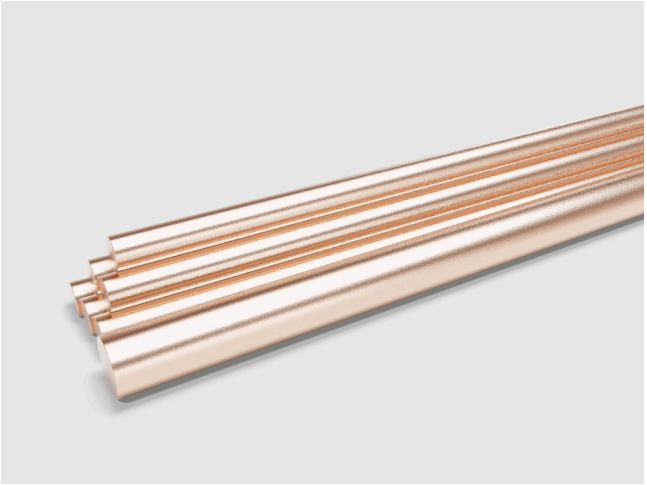


Busbar / Flat bar · Round bar · Square bar · Hexagon bar · Sheet / Plate · Tube / Pipe · Tape / Coil · Angle · Flexible braid

01 COPPER

ทองแดง

Copper busbar and rod in electrolytic tough pitch (ETP) and oxygen-free (OF) copper, with a typical conductivity of about 101% IACS. Sheet, tape, tube, wire and flexible connectors are covered on the following pages.



PROPERTIES — COPPER BUSBAR & ROD

GRADE	C1100 (Cu-ETP) · 99.98% Cu min
RAW MATERIAL	Copper cathode grade “A”, LME registered brand · 99.99% Cu
ELECTRICAL CONDUCTIVITY	≈ 101% IACS (typical)
VOLUME RESISTIVITY AT 20 °C	1.7070 – 1.7241 μΩ·cm
VOLUME CONDUCTIVITY AT 20 °C	58.00 – 58.58 MS/m
DENSITY	8.91 g/cm³
MELTING POINT	1,083 °C
TEMPER	1/2 hard (standard) · Other tempers on request
PACKING	Wooden boxes or bundles, wrapped with paper and plastic

SHAPES

RECTANGULAR BAR	Full round edge (FR) · Slightly round edge (SE)
BAR	Square (SQ) · Round (RB) · Hexagon
SIZE RANGE	Rectangular W 9.53 – 305 mm × T 2.5 – 100 mm · Square 6.35 – 100 mm · Round Ø 6.35 – 150 mm · Hexagon 6.35 – 150 mm A/F

STANDARDS

Copper busbar and rod can be supplied to the following standards when the standard is specified on the order. The applicable standard is stated on the mill test certificate.

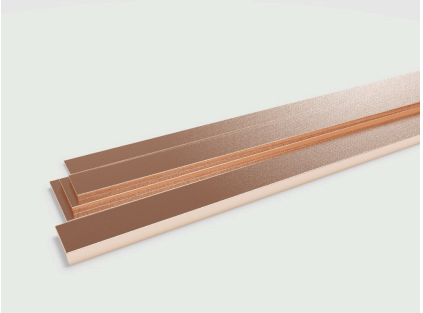
	JIS	BS EN	DIN EN	DIN	ASTM	AS/NZS	TIS (มอก.)
BUSBAR	H 3140	13601	13601	46433	B187/B187M	1567	408-2553
RODS	H 3250	13601	13601	1756	B187/B187M	1567	408-2553

COPPER

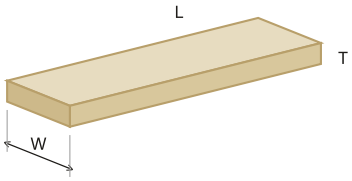
Copper Busbar & Flat Bar

ทองแดงแบน / บัสบาร์

Rectangular and square copper bar for carrying current in switchboards, main distribution boards (MDB), busduct and earthing systems, and for fabricated electrical parts. Supplied in metric and inch sections, standard length 5 m; cut lengths on request.



RECTANGULAR BAR (FR / SE)	W 9.53 – 305 mm · T 2.5 – 100 mm
SQUARE BAR (SQ)	6.35 – 100 mm
INCH SECTIONS	Available — see weight table, p. 6
GRADE	C1100 (Cu-ETP) · 99.98% Cu min · JIS H 3140
TEMPER	1/2 hard (standard) · Other tempers on request
STANDARD LENGTH	5 m (standard) · 2 m · 2.5 m · 3 m
SUPPLIED	By kg · Full bar · Cut to length · Per metre · Per piece
OTHER SIZES	Cut or sourced to order



W = width · T = thickness · L = length

THEORETICAL WEIGHT — METRIC SECTIONS (KG/M)

REFERENCE TABLE

T \ W	15	20	25	30	40	50	60	80	100	120	150	200
3	0.40	0.53	0.67	0.80	1.07	1.34	1.60	2.14	2.67	3.21	4.01	5.35
4	0.53	0.71	0.89	1.07	1.43	1.78	2.14	2.85	3.56	4.28	5.35	7.13
5	0.67	0.89	1.11	1.34	1.78	2.23	2.67	3.56	4.46	5.35	6.68	8.91
6	0.80	1.07	1.34	1.60	2.14	2.67	3.21	4.28	5.35	6.42	8.02	10.69
8	1.07	1.43	1.78	2.14	2.85	3.56	4.28	5.70	7.13	8.55	10.69	14.26
10	1.34	1.78	2.23	2.67	3.56	4.46	5.35	7.13	8.91	10.69	13.37	17.82
12	1.60	2.14	2.67	3.21	4.28	5.35	6.42	8.55	10.69	12.83	16.04	21.38
15	2.00	2.67	3.34	4.01	5.35	6.68	8.02	10.69	13.37	16.04	20.05	26.73
20	2.67	3.56	4.46	5.35	7.13	8.91	10.69	14.26	17.82	21.38	26.73	35.64

kg/m = W × T × 8.91 / 1000 (copper, 8.91 g/cm³). Theoretical values for ordering and freight planning; round edges reduce actual weight slightly and invoices use weighed quantity. The table is a weight reference, not a stock list — availability of any size is confirmed on enquiry. Current rating depends on the panel design and is not listed here.



COPPER

Copper Tape (Coil)

ทองแดงเทป / ม้วน

Bare, annealed copper tape in coils, for earthing conductors and for stamped or formed parts.

SIZE	W 10 – 75 mm · T 2.0 – 5.0 mm
COIL SIZE	ID ≥ 300 mm · OD ≤ 1,000 mm · Length by agreement
TEMPER	Annealed (soft)
STANDARD	BS EN 13601 (formerly BS 1432)
SUPPLIED	By kg · Cut to length · Per metre · Coil
OTHER SIZES	Cut or sourced to order

THEORETICAL WEIGHT — INCH SECTIONS (KG/M)

REFERENCE TABLE

T \ W	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	2 1/2″	3″	4″	5″	6″
1/8″	0.36	0.54	0.72	0.90	1.08	1.44	1.80	2.16	2.87	3.59	4.31
3/16″	0.54	0.81	1.08	1.35	1.62	2.16	2.69	3.23	4.31	5.39	6.47
1/4″	0.72	1.08	1.44	1.80	2.16	2.87	3.59	4.31	5.75	7.19	8.62
3/8″	1.08	1.62	2.16	2.69	3.23	4.31	5.39	6.47	8.62	10.78	12.93
1/2″	1.44	2.16	2.87	3.59	4.31	5.75	7.19	8.62	11.50	14.37	17.25
5/8″	1.80	2.69	3.59	4.49	5.39	7.19	8.98	10.78	14.37	17.96	21.56
3/4″	2.16	3.23	4.31	5.39	6.47	8.62	10.78	12.93	17.25	21.56	25.87
1″	2.87	4.31	5.75	7.19	8.62	11.50	14.37	17.25	22.99	28.74	34.49

Inch sizes converted at 1″ = 25.4 mm; kg/m = W × T × 8.91 / 1000. Weight reference only — not a stock list.

EDGE PROFILES

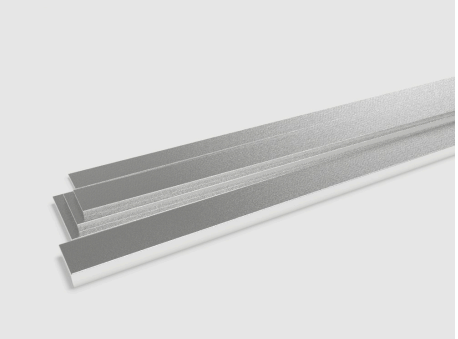


Square edge — Slightly round (SE) — Full round (FR)

Specify the edge on your order — full round (FR) or slightly round (SE) edges are common for busbar; square edge for fabricated parts.

CUT TO LENGTH

- Full bars or cut pieces to your length
- Sold by kg, by bar or by piece
- Send W × T, length and quantity — or your drawing
- Standard and temper confirmed before order



COPPER

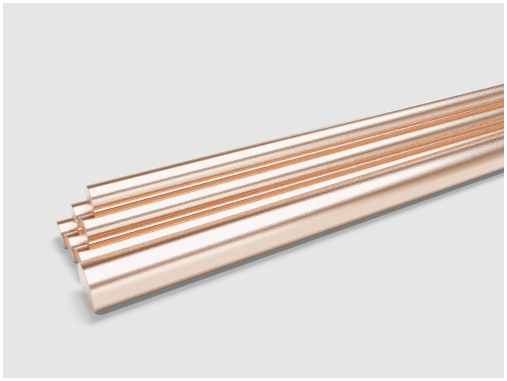
Tin-Plated Copper Busbar

บัสบาร์ทองแดงชุบดีบุก

For switchgear, switchboards, electrical panels, power transformers and busduct.

- **Corrosion protection** — the tin layer protects the copper in humid or polluted atmospheres.
- **Stable contact resistance** — tin slows oxidation of bolted contact surfaces at operating temperature.
- **Documented coating** — tin thickness and adhesion are tested and reported on the mill test certificate.

COATING THICKNESS	3 – 30 µm, to order
TIN PURITY	≥ 99.5% Sn (anode)
PROCESS	Electroplated; computer-controlled line
MILL TEST CERTIFICATE	Adhesion test · Tin thickness test
BASE COPPER	C1100 (Cu-ETP), as copper busbar — p. 5



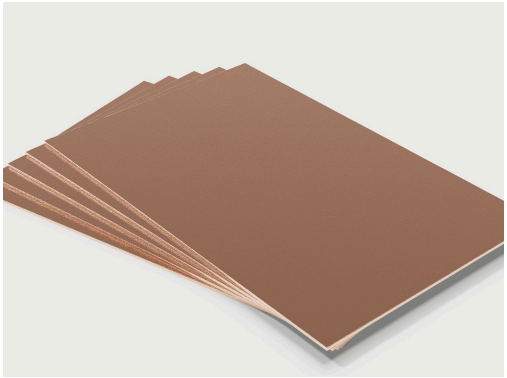
COPPER

Copper Round Bar

ทองแดงกลม / เพลาทองแดง

Copper round bar (rod) for machined electrical parts, terminals, lugs, earthing and fabrication. Metric and inch diameters; full bars or cut pieces.

ROUND BAR (RB)	Ø 6.35 – 150 mm
HEXAGON BAR	6.35 – 150 mm A/F
INCH SIZES	Available
GRADE	C1100 (Cu-ETP) · JIS H 3250
TEMPER	1/2 hard (standard) · Other tempers on request
STANDARD LENGTH	5 m · 3 m · 2 m
SUPPLIED	By kg · Full bar · Cut to length · Per metre · Per piece
OTHER SIZES	Cut or sourced to order



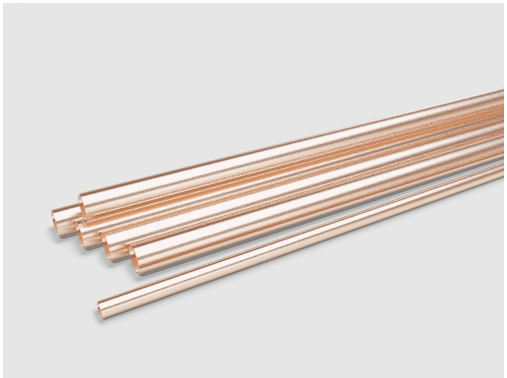
COPPER

Copper Sheet & Plate

ทองแดงแผ่น

Copper sheet and plate for pressed, stamped and fabricated parts — in 2' × 4' and 4' × 8' sheets, smaller standard sizes, or pieces cut to order.

THICKNESS	0.3 – 6 mm
SHEET SIZES	12" × 12" · 14" × 48" · 2' × 4' · 4' × 8'
GRADE	C1100 (ETP) · C1020 (oxygen-free) · JIS H 3100
SUPPLIED	By kg · Full sheet · Cut to size · Per piece
OTHER SIZES	Cut or sourced to order



COPPER

Copper Tube & Pipe

ท่อทองแดง / แป๊บทองแดง

Copper tube in straight lengths or coils, specified by outside diameter and wall thickness — for cooling lines, piping and fabricated parts. Bare copper wire is supplied to order; size on request.

OUTSIDE DIAMETER (OD)	4.76 – 32 mm
WALL THICKNESS	0.9 – 3.17 mm
INCH OD	3/16" – 1 1/4"
STANDARD LENGTH	6 m · 50 ft (15.24 m) · 2.5 m · Coil
SUPPLIED	By kg · Full length · Cut to length · Per metre · Coil
OTHER SIZES	Cut or sourced to order

COPPER

Copper & Copper Alloys

ทองแดงและทองแดงผสม

Special copper grades and copper alloys, supplied to order by UNS number — for resistance-welding electrodes, mould inserts, springs, connectors, bearings and marine fittings. Form (plate, bar or rod), size and lead time are confirmed on enquiry.

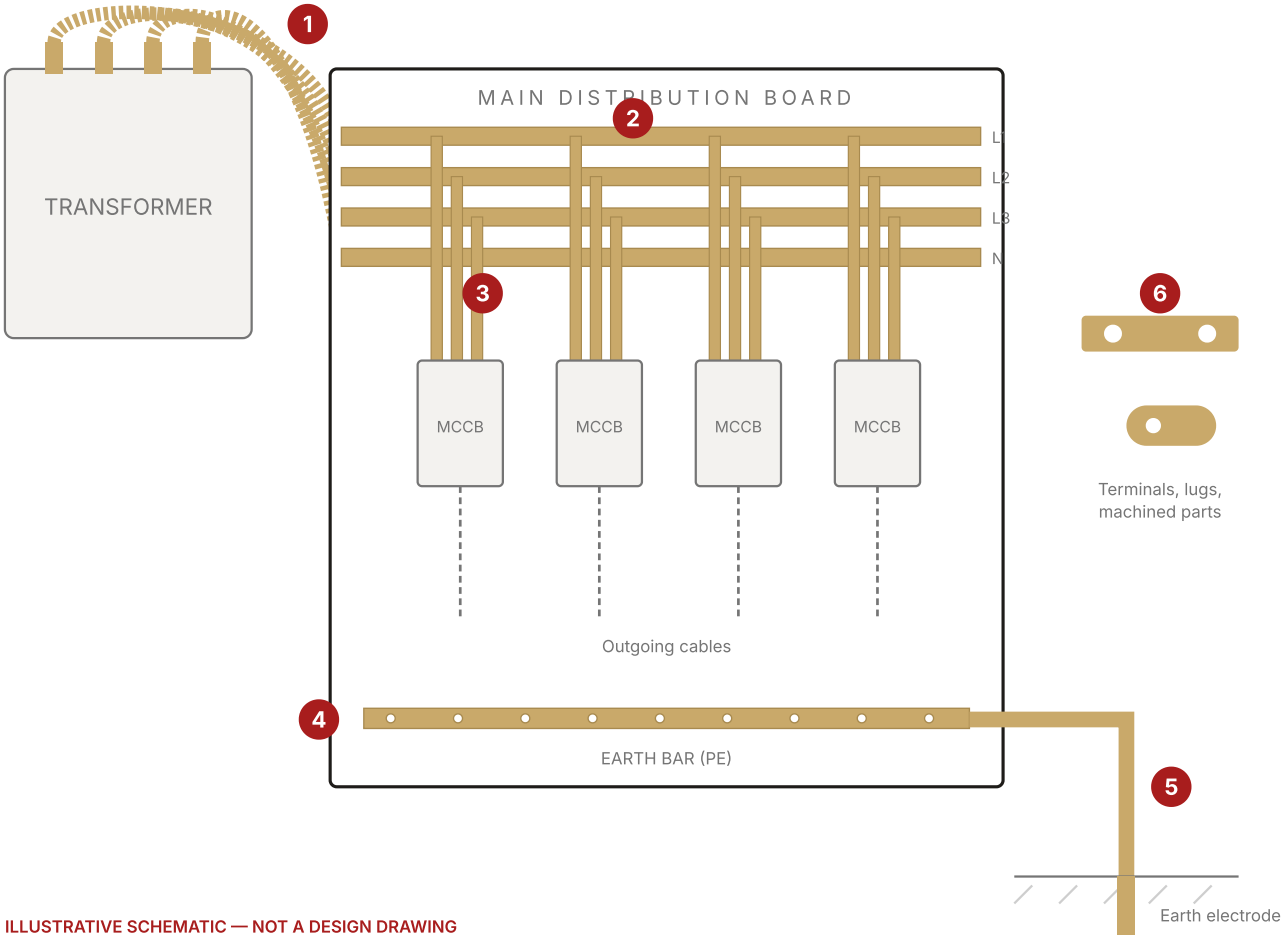
UNS NO.	GRADE	CHEMICAL COMPOSITION (%)
HIGH-CONDUCTIVITY COPPER		
C10100	**Oxygen-free electronic** OFE	Cu 99.99 min · O 5 ppm
C10200	**Oxygen-free** OF	Cu 99.95 min · O 10 ppm
C10400	**Oxygen-free, silver-bearing** OFS	Ag 0.027 · Cu 99.95 min incl. Ag · O 10 ppm
C10700	**Oxygen-free, silver-bearing** OFS	Ag 0.085 · Cu 99.95 min incl. Ag · O 10 ppm
C11000	**Electrolytic tough pitch** ETP	Cu 99.90 min
C11300	**Silver-bearing tough pitch** STP	Ag 0.027 · Cu 99.90 min incl. Ag
C11600	**Silver-bearing tough pitch** STP	Ag 0.085 · Cu 99.90 min incl. Ag
C12200	**Phosphorus-deoxidised** DHP	P 0.015–0.040 · Cu 99.90 min
FREE-MACHINING & HIGH-PERFORMANCE COPPER		
C14500	**Tellurium copper** PTE	Te 0.4–0.7 · P 0.004–0.012 · Cu 99.90 min
C14700	**Sulphur copper** CuS	S 0.2–0.5 · P 0.002–0.005 · Cu 99.90 min incl. Ag
C15000	**Zirconium copper** CuZr	Zr 0.1–0.2 · Cu 99.80 min incl. Ag
BERYLLIUM COPPER		
C17200	**Beryllium copper** CuBe	Be 1.8–2.0 · Co 0.20 · Al 0.2 · Si 0.2 · Cu rem.
C17300	**Free-machining beryllium copper** CuBe	Be 1.8–2.0 · Pb 0.2–0.6 · Co 0.20 · Al 0.2 · Si 0.2 · Cu rem.
C17500	**Beryllium-cobalt copper** CuBeCo	Be 0.4–0.7 · Co 2.4–2.7 · Si 0.2 · Fe 0.1 · Al 0.2 · Cu rem.
C17510	**Beryllium-nickel copper** CuBeNi	Be 0.2–0.6 · Ni 1.4–2.2 · Co 0.3 · Fe 0.1 · Al 0.2 · Si 0.2 · Cu rem.
CHROMIUM & ZIRCONIUM COPPER		
C18000	**Nickel-chromium-silicon copper** CuNiCrSi	Ni 1.8–3.0 · Cr 0.1–0.8 · Si 0.4–0.8 · Fe 0.15 · Cu rem.
C18150	**Chromium-zirconium copper** CuCrZr	Cr 0.5–1.5 · Zr 0.05–0.25 · Cu rem.
C18200	**Chromium copper** CuCr	Cr 0.6–1.2 · Fe 0.1 · Pb 0.05 · Si 0.1 · Cu rem.
C18070	**Chromium-titanium-silicon copper** CuTiCrSi	Cr 0.15–0.4 · Ti 0.01–0.4 · Si 0.02–0.07 · Cu 99.0 min
C18400	**Chromium copper** CuCr	Cr 0.4–1.2 · Fe 0.15 · Si 0.1 · As 0.005 · Cu rem.
BRASS & BRONZE		
C31400	**Leaded commercial bronze**	Cu 87.5–90.5 · Pb 1.3–2.5 · Ni 0.7 · Fe 0.1 · Zn rem.
C32000	**Leaded red brass**	Cu 83.5–86.5 · Pb 1.5–2.2 · Ni 0.25 · Fe 0.1 · Zn rem.
C46400	**Naval brass**	Cu 59.0–62.0 · Sn 0.5–1.0 · Pb 0.2 · Fe 0.1 · Zn rem.
ALUMINIUM BRONZE		
C61300	**Aluminium bronze**	Al 6.0–7.5 · Fe 2.0–3.0 · Sn 0.2–0.5 · Mn 0.2 · Ni 0.15 · Si 0.1 · Zn 0.1 · P 0.015 · Pb 0.01 · Cu rem.
C61400	**Aluminium bronze**	Al 6.0–8.0 · Fe 1.5–3.5 · Mn 1.0 · Zn 0.2 · P 0.015 · Pb 0.01 · Cu rem.
C61900	**Aluminium bronze**	Al 8.5–10.0 · Fe 3.0–4.5 · Zn 0.8 · Sn 0.6 · Pb 0.02 · Cu rem.
C63000	**Nickel-aluminium bronze**	Al 9.0–11.0 · Ni 4.0–5.5 · Fe 2.0–4.0 · Mn 1.5 · Zn 0.3 · Si 0.25 · Sn 0.2 · Cu rem.
SILICON & NICKEL-SILICON BRONZE		
C64700	**Nickel-silicon copper** CuNi2Si	Ni 1.6–2.2 · Si 0.4–0.8 · Zn 0.5 · Pb 0.1 · Fe 0.1 · Cu rem.
C65100	**Low-silicon bronze B**	Si 0.8–2.0 · Zn 1.5 · Fe 0.8 · Mn 0.7 · Pb 0.05 · Cu rem.
C65500	**High-silicon bronze A**	Si 2.8–3.8 · Mn 0.5–1.3 · Zn 1.5 · Fe 0.8 · Ni 0.6 · Pb 0.05 · Cu rem.
COPPER-NICKEL		
C70600	**Copper-nickel 90/10** CuNi10	Ni 9–11 · Fe 1.0–1.8 · Mn 1.0 · Zn 1.0 · Pb 0.05 · Cu rem.
C71500	**Copper-nickel 70/30** CuNi30	Ni 29–33 · Fe 0.4–1.0 · Mn 1.0 · Zn 1.0 · Pb 0.05 · Cu rem.
COPPER-IRON		
—	**Copper-iron alloy** CuFe5	Cu 95 · Fe 5
—	**Copper-iron alloy** CuFe10	Cu 90 · Fe 10
—	**Copper-iron alloy** CuFe15	Cu 85 · Fe 15
—	**Copper-iron alloy** CuFe20	Cu 80 · Fe 20

Single values are maximum; “min” = minimum; rem. = remainder; O in ppm (max). Copper-iron alloys have no UNS number and are identified by iron content. Compositions are nominal; the mill certificate governs each delivery.

COPPER IN USE · การใช้งานทองแดง

WHERE OUR COPPER GOES IN A SWITCHBOARD

A typical low-voltage main distribution board uses several of the copper forms in this catalog. The numbers below point to the product pages.



ILLUSTRATIVE SCHEMATIC — NOT A DESIGN DRAWING

1	**FLEXIBLE COPPER CONNECTORS** Connection between transformer or equipment terminals and the busbar, where vibration, movement or thermal expansion must be absorbed.	p. 10
2	**MAIN BUSBAR** Copper busbar / flat bar carrying the incoming supply along the board (phases and neutral).	p. 5
3	**DROPPERS** Shorter lengths of flat bar taken from the main bars to each breaker — usually cut pieces.	p. 5
4	**EARTH BAR** Drilled copper flat bar collecting the protective-earth conductors.	p. 5
5	**EARTHING TAPE** Bare copper tape (coil) or flat bar run from the earth bar to the earth electrode.	p. 5
6	**MACHINED PARTS** Terminals, lugs and connectors turned or machined from copper round or square bar.	p. 7

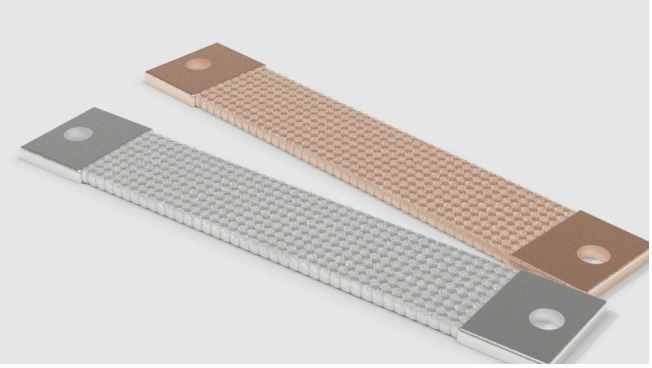
The drawing shows where each product form is typically used. Busbar sizes, current ratings, clearances and earthing design are set by your panel designer and the applicable standard — this catalog does not specify them.

02 FLEXIBLE COPPER

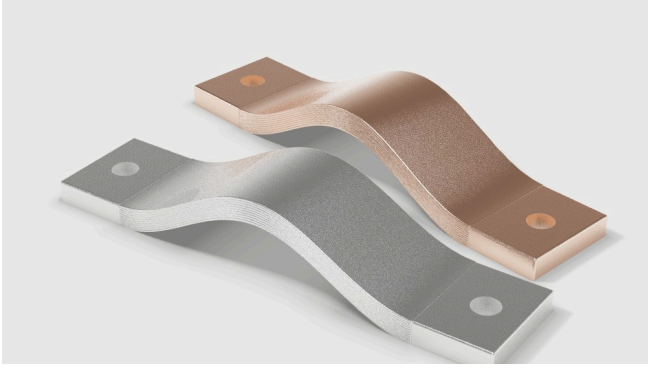
สายทองแดงถัก · ทองแดงเฟล็กซิเบิล

Bolted joints between busbars, transformer terminals and equipment move with thermal expansion, vibration and operation. A flexible copper connector takes up that movement between two fixed terminals. Two constructions are supplied: braided and laminated.

TYPICAL APPLICATIONS Transformers · Switchgear and distribution boards · Welding machines · Generating sets · Electrolysis plants · Electric furnaces · Isolated-phase busduct (IPB)



Braided connectors — bare and tinned braid. Illustration; terminal drilling to drawing.



Laminated connectors — bare and plated. Illustration; shape and drilling to drawing.

TYPE A · BRAIDED
Flexible Copper Braid
ข้อต่อสายทองแดงถัก

Fine copper wires woven into a flat braid. Each end is pressed into a solid copper terminal, which is then drilled for bolting. Suited to joints with high vibration or movement in several directions.

BRAID	Bare or tinned copper
TERMINALS	Pressed solid copper; drilled to drawing
TERMINAL FINISH	Unplated · Tin (Sn) · Silver (Ag)
STANDARD RANGE	W 25 – 200 mm · 38 – 3,500 mm²

TYPE B · LAMINATED
Flexible Copper Busbar
ทองแดงเฟล็กซิเบิลแบบแผ่นซ้อน

Thin copper foils stacked to the required cross-section. The contact ends are joined into a solid block and drilled; the centre stays flexible. Supplied straight or pre-formed — offset, U-bend or L-bend — to suit the installation.

CONSTRUCTION	Laminated copper foil
CONTACT ENDS	Solid; drilled to drawing
SHAPES	Straight · Offset · U-bend · L-bend
DIMENSIONS	Made to drawing — contact us

FLEXIBLE COPPER BRAID — STANDARD RANGE

MADE TO ORDER

WIDTH mm	CROSS-SECTION mm²	THICKNESS mm, approx.
25	38 – 152	6.0 – 12.0
40	50 – 300	5.6 – 13.8
50	100 – 600	6.5 – 19.3
60	200 – 1,000	7.0 – 22.0
75	150 – 1,200	8.5 – 26.4
80	300 – 1,200	10.0 – 23.0
100	200 – 1,500	8.5 – 24.5
120	300 – 1,600	9.0 – 22.5
150	400 – 2,800	9.5 – 30.5
200	500 – 3,500	9.5 – 28.5

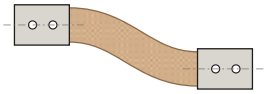
Cross-sections are offered in fixed steps within each width; the exact size list and the current rating for each size, with its rating conditions, are provided with our quotation. Standard sizes are manufactured to order and are not held as stock. Other widths, cross-sections and lengths can be made to customer drawing.

INSTALLATION CONFIGURATIONS

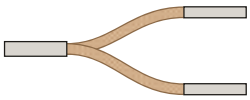
Flexible connectors can be made to suit these common arrangements. Send a sketch or drawing showing both terminal positions.



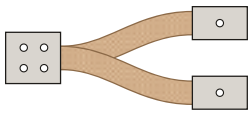
1 Offset in height



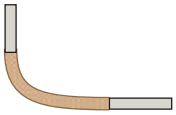
2 Lateral offset



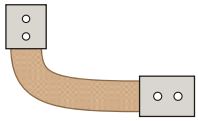
3 Split — vertical



4 Split — horizontal



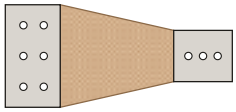
5 Vertical bend



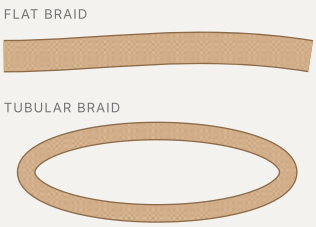
6 L-bend



7 90° twist



8 Different end widths



FLEXIBLE COPPER

Braided Copper Wire

สายทองแดงถัก — ทองแดงเปลือย / ชุบดีบุก

Flat and tubular copper braid supplied by length, for making up flexible leads and for screening.

FORM	Flat braid · Tubular braid
SURFACE	Bare · Tinned
USES	Earthing and bonding leads · Carbon-brush leads · Flexible cable conductors · Cable screening and covering
TUBULAR BRAID	Fixed-diameter or expandable · Coverage 90 – 100%
SIZES	To customer specification — contact us



STRANDED CONDUCTOR — CROSS-SECTION

FLEXIBLE COPPER

Round Stranded Copper Wire

สายทองแดงตีเกลียว — ทองแดงเปลือย / ชุบดีบุก

Bare or tinned stranded copper conductor for flexible connections and earthing.

SURFACE	Bare · Tinned
USES	Earthing conductors · Carbon-brush leads · Low-voltage lighting conductors
SIZES	To customer specification — contact us

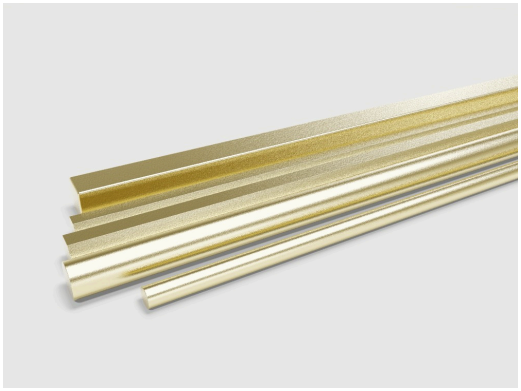
ORDERING A FLEXIBLE CONNECTOR

1. Type: braided (A) or laminated (B).
2. Width and cross-section (mm²), or W × total thickness.
3. Length between hole centres, and terminal length.
4. Terminal drilling: hole diameter, number and pitch.
5. Braid surface and terminal finish (unplated, Sn or Ag).
6. Shape — configuration 1 – 8 above, or your drawing.
7. Required current and operating conditions, if known.
8. Quantity.

We confirm construction, current rating and lead time with the quotation. Rating depends on installation and ambient conditions — final selection rests with the equipment designer.

03 BRASS
ทองเหลือง

Brass is a copper–zinc alloy chosen for machinability, corrosion resistance and appearance — for turned parts, fittings, terminals and decorative work.



TYPICAL USES

- Turned and machined parts
- Fittings, valves and connectors
- Electrical terminals
- Decorative and architectural work

OTHER GRADES ON REQUEST

PRODUCT FORM	SIZE RANGE	GRADE / STANDARD	LENGTH	SUPPLIED
Flat & Square Bar ทองเหลืองแบน / สี่เหลี่ยม	WIDTH (W) 25.4 – 101.6 mm THICKNESS (T) 4.76 – 25.4 mm SQUARE BAR (A × A) 7.94 – 12.7 mm INCH SECTIONS W 1" – 4" · T 3/16" – 1"	Free-cutting brass C3604 · JIS H 3250 · As drawn	2.5 m · 5 m	By kg · Full bar · Cut to length · Per piece
Hexagonal Bar ทองเหลืองหกเหลี่ยม	SIZES Made or sourced to order — send your size	Free-cutting brass C3604 · JIS H 3250 · As drawn	—	On request
Round Bar ทองเหลืองกลม / เพลาทองเหลือง	DIAMETER (Ø) 12 – 63.5 mm INCH SIZES 1" – 2 1/2"	Free-cutting brass C3604 · JIS H 3250 · As drawn	5 m	By kg · Full bar · Cut to length · Per metre
Sheet ทองเหลืองแผ่น	THICKNESS 1 – 3 mm SHEET SIZES 14" × 48" · 4' × 8'	C2600 · C2680 · C2801 · JIS H 3100	—	By kg · Cut to length · Full sheet · Per piece
Tube ท่อทองเหลือง	OUTSIDE DIAMETER (OD) 7.94 – 9.52 mm INCH OD 5/16" – 3/8"	On request	5 m	Full length

Sizes and grades not shown are cut or sourced to order — send your size, grade, length and quantity.

BRASS GRADES — CHEMICAL COMPOSITION (%)

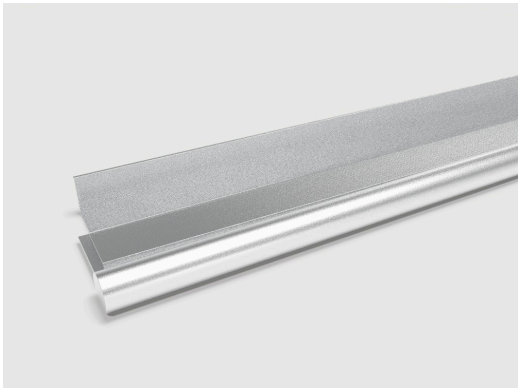
JIS H 3100 (SHEET) · JIS H 3250 (BAR)

GRADE	TYPE	CU	PB	ZN	TYPICAL USE
C2600	70/30 brass	68.5 – 71.5	≤ 0.05	Remainder	Deep drawing, pressing
C2680	65/35 brass	64.0 – 68.0	≤ 0.05	Remainder	General sheet, pressing, decoration
C2801	60/40 brass	59.0 – 62.0	≤ 0.10	Remainder	Sheet, signboards, decoration
C3604	Free-cutting brass	57.0 – 61.0	1.8 – 3.7	Remainder	Machining — screws, bolts, nuts

C3604 also Fe ≤ 0.50. Values per JIS; the mill certificate governs each delivery.

04 ALUMINIUM
อลูมิเนียม

Aluminium is light — about one-third the weight of copper — and corrosion resistant; used for structural sections, fabrication and conductors where weight matters.



TYPICAL USES

- Frames and structural sections
- Fabricated and machined parts
- Covers, panels and enclosures
- Electrical conductors where weight matters

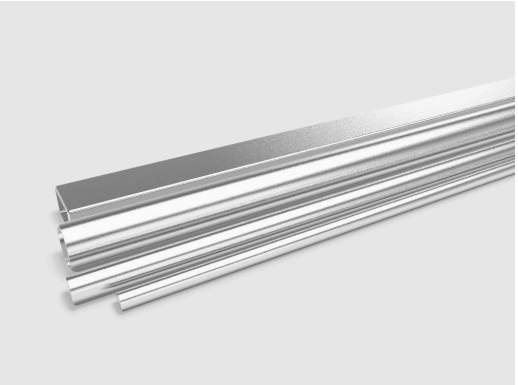
ALLOY & TEMPER ON REQUEST

PRODUCT FORM	SIZE RANGE	GRADE / STANDARD	LENGTH	SUPPLIED
Flat Bar อลูมิเนียมแบน	WIDTH (W) 12.7 – 152.4 mm THICKNESS (T) 3.17 – 25.4 mm INCH SECTIONS W 1/2" – 6" · T 1/8" – 1"	On request	6 m	By kg · Full bar · Cut to length · Per piece
Round Bar อลูมิเนียมกลม	DIAMETER (Ø) 15.88 – 76.2 mm INCH SIZES 5/8" – 3"	On request	6 m · 1 m	By kg · Full bar · Cut to length
Sheet อลูมิเนียมแผ่น	SIZES Made or sourced to order — send your size	1xxx · 3xxx · 5xxx · 6xxx series alloys on request	—	On request
Tube ท่ออลูมิเนียม	SIZES On request	On request	—	Full length
Angle อลูมิเนียมฉาก	SIZES On request	On request	6 m	Full length
Wire ลวดอลูมิเนียม	SIZES Made or sourced to order — send your size	On request	—	On request

Sizes and grades not shown are cut or sourced to order — send your size, grade, length and quantity.

05 STAINLESS STEEL
สแตนเลส

Stainless steel offers strength and corrosion resistance for shafts, frames, fittings and parts exposed to moisture or chemicals.



TYPICAL USES

- Shafts and pins
- Frames, rails and supports
- Food, water and chemical equipment
- Fittings and fasteners

OTHER GRADES ON REQUEST

PRODUCT FORM	SIZE RANGE	GRADE / STANDARD	LENGTH	SUPPLIED
Flat Bar สแตนเลสแบน	WIDTH (W) 25.4 – 50.8 mm THICKNESS (T) 3.17 – 6.35 mm INCH SECTIONS W 1" – 2" · T 1/8" – 1/4"	SUS 304 · No. 1 or hairline finish	6 m	By kg · Full bar · Cut to length · Per piece
Hexagonal Bar สแตนเลสหกเหลี่ยม	SIZES Made or sourced to order — send your size	SUS 304 · SUS 303	—	On request
Round Bar สแตนเลสกลม / เพลาสแตนเลส	DIAMETER (Ø) 4.76 – 31.75 mm INCH SIZES 3/16" – 1 1/4"	SUS 304 · SUS 303 (free-machining)	6 m · 3 m	By kg · Full bar · Cut to length
Sheet สแตนเลสแผ่น	SHEET SIZES 4' × 8'	SUS 304 · 316L · 430 · Finish 2B, BA, No. 1, No. 4, hairline, mirror	—	By kg · Full sheet · Cut to size · Per piece
Pipe แป๊บสแตนเลส	SECTIONS Rectangular — sizes on request	SUS 304 welded tube · #400 polish	6 m	Full length
Angle ฉากสแตนเลส	LEG (A = B) 25.4 – 38.1 mm	SUS 304	—	Full length

Sizes and grades not shown are cut or sourced to order — send your size, grade, length and quantity.

STAINLESS GRADES — CHEMICAL COMPOSITION (%)

JIS G 4303 (BAR) · G 4304 / G 4305 (PLATE, SHEET)

GRADE	C	SI	MN	P	S	NI	CR	MO
SUS 304	0.08	1.00	2.00	0.045	0.030	8.00 – 10.50	18.00 – 20.00	—
SUS 303	0.15	1.00	2.00	0.20	≥ 0.15	8.00 – 10.00	17.00 – 19.00	—
SUS 316L	0.030	1.00	2.00	0.045	0.030	12.00 – 15.00	16.00 – 18.00	2.00 – 3.00
SUS 430	0.12	0.75	1.00	0.040	0.030	—	16.00 – 18.00	—

Maximum values unless shown as a range or minimum. 316L contains molybdenum (Mo); 303 has added sulphur for machinability. Mill certificate governs each delivery.

SELECTION GUIDE · การเลือกสินค้า

CHOOSING THE RIGHT FORM

IF YOU NEED...	CHOOSE	TELL US
A conductor in a switchboard, MDB or busduct	**Copper Busbar / Flat Bar**	W × T, length, edge (FR/SE), standard
An earthing or bonding conductor	**Copper Flat Bar or Copper Tape (Coil)**	W × T, total length or coil size
A flexible connection between bars or equipment that moves or vibrates	**Flexible Copper Braid / Flexible Copper Busbar**	Type, cross-section (mm²), length between hole centres, terminal drilling
Machined or turned electrical parts	**Copper Round Bar · Square Bar**	Ø or A, length per piece, quantity
Pressed, stamped or fabricated parts	**Copper Sheet · Copper Tape**	Thickness, sheet size or strip width
Machined fittings and decorative parts	**Brass Round, Hexagonal or Flat Bar · Brass Sheet**	Size, length, grade if specified
Light structural sections	**Aluminium Flat Bar, Round Bar, Angle**	Size, length, alloy/temper if specified
Corrosion-resistant shafts, frames and fittings	**Stainless Steel Round Bar, Flat Bar, Pipe, Angle**	Size, length, grade if specified

HOW TO ORDER

1. Material and product form (e.g. copper busbar, brass round bar).
2. Size — W × T, Ø, thickness or OD × wall — in mm or inch.
3. Length: full bar or cut length, and quantity in pieces or kg.
4. Standard, grade or temper if your drawing requires one — we confirm availability before order.

SIZES NOT LISTED

Size ranges in this catalog show what we supply; they are not a stock list. Other sizes can be cut, sourced or made to order — send your drawing or dimensions for a quotation.

This guide matches product forms to typical uses. It does not replace the electrical or mechanical design of your equipment.

TECHNICAL REFERENCE · ข้อมูลอ้างอิงทางเทคนิค

THEORETICAL WEIGHT

RECTANGULAR / SQUARE BAR	kg/m = W (mm) × T (mm) × ρ / 1000
ROUND BAR	kg/m = 0.7854 × Ø² (mm) × ρ / 1000
HEXAGON BAR	kg/m = 0.866 × AF² (mm) × ρ / 1000
TUBE	kg/m = π × (OD − t) × t (mm) × ρ / 1000
SHEET	kg/m² = T (mm) × ρ

TYPICAL DENSITY ρ (g/cm³)

COPPER (ETP)	8.91
BRASS	≈ 8.5
ALUMINIUM	≈ 2.7
STAINLESS STEEL	≈ 7.9

Example — 50 × 10 mm copper busbar: 50 × 10 × 8.91 / 1000 = 4.46 kg/m; a 5 m bar ≈ 22.3 kg. Theoretical values for ordering and freight planning; invoices use weighed quantity. Densities of brass, aluminium and stainless steel vary with alloy.

INCH TO MILLIMETRE

INCH	MM	INCH	MM
1/8"	3.17	1 1/2"	38.10
3/16"	4.76	1 3/4"	44.45
1/4"	6.35	2"	50.80
5/16"	7.94	2 1/2"	63.50
3/8"	9.52	3"	76.20
1/2"	12.70	4"	101.60
5/8"	15.88	5"	127.00
3/4"	19.05	6"	152.40
7/8"	22.22	8"	203.20
1"	25.40	10"	254.00
1 1/4"	31.75	12"	304.80

1 inch = 25.4 mm exactly; values shown to 0.01 mm as commonly quoted for trade sizes · 1 ft = 304.8 mm. Sheet sizes: 2' × 4' = 609.6 × 1,219.2 mm · 4' × 8' = 1,219.2 × 2,438.4 mm.

KIM
HENG CHIANG
กิ้มเฮงเชียง

KEEP IT MOVING

KIM HENG CHIANG CO., LTD.
บริษัท กิ้มเฮงเชียง จำกัด

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