wieland



Copper

Copper is the shining reddish metal known by the Romans as aes cyprium (ore from Cyprus). However, copper has been known long before the Romans gave it this name. As a natural resource it is valuable in every form, be it as a vital trace element in the human body or a mineral found in the Earth's crust.

Over the centuries, man has discovered the many advantages of copper and its alloys, notably its excellent forming properties, strength, thermal and electrical conductivity. Copper has proved itself to be one of the most important worked metals in modern times.

Copper is a unique material for ecologically sustainable developments and is 100 percent recyclable. More than half of today's raw copper is already produced by reusing returned material.

Copper tubes

- are resistant to ageing and retain their properties
- e.g. pressure resistance and elasticity
- are gas- and diffusion-tight
- are subject to minimal thermal expansion
- exhibit good mechanical resistance
- are easy to install
- can be connected by a variety of techniques, which have
- proven over generations
- are not affected by temperature fluctuations
- are suitable for all domestic plumbing applications
- are readily available in all common sizes

The requirements to be satisfied by copper tubes for domestic plumbing systems are clearly specified in a single standard: EN 1057.



The Wieland Group

The Wieland Group, with headquarters in Ulm, is one of the world's leading manufacturers of semi-finished and special products in copper and copper alloys, such as strip, sheet, tubes, rods, wires and sections. Special products include slide bearings, finned tubes and heat exchangers.

As an international company, Wieland has manufacturing companies, slitting centres and trading companies in many European countries as well as in the USA, in South Africa, Singapore, China and India. The global workforce of the Wieland Group is approx. 6,700 strong of which 4,300 are employed in Germany. The domestic plants (Wieland-Werke AG) are located in Ulm, Velbert-Langenberg, Villingen-Schwenningen and Vöhringen/Iller.

Wieland supplies customers in numerous markets with over 100 different copper alloys which are primarily used in the electrical and electronic industry. Other important sectors are the construction, automotive as well as the air conditioning and refrigeration industries. Wieland materials are used in a variety of everyday products such as contacts in electrical sockets, drinking water and heating pipes, door locks, slide bearings for engines, refrigeration units for cold stores and air conditioning units. Our materials also prove to be indispensable for high-tech applications in computer and telecommunications technologies.

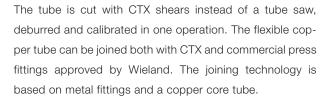


Vöhringen plant – production location for copper plumbing tubes



cuprotherm CTX

cuprotherm CTX tubes are copper tubes with a firmly adherent coating. Due to their structure they can be easily processed and are characterized by a flexibility hitherto unknown in metal tubes. Compared to classical copper tubes, the cuprotherm CTX tube is almost 50 % lighter in weight and, therefore, much easier to handle.







Technical properties

Dimension		14 x 2	16 x 2	18 x 2	20 x 2	26 x 3
Outer diameter, coating	mm	14	16	18	20	26
Wall thickness, coating	mm	1.70	1.65	1.65	1.50	2.50
Wall thickness, copper tube	mm	0.30	0.35	0.35	0.50	0.50
Temper as per DIN EN 1057		R 220	R 220	R 220	R 220	R 220
Permissible operating pressure up to 100 °C*	bar	30	29	25	31	25
Total weight	kg/m	0.147	0.189	0.215	0.311	0.451
Delivery format	in coils					
Coil length	m	100	100	100	50	50
Material, coating		PE-RT				
Thermal conductivity, coating / core tube	W/mK	0.35 / 344				
Coating color		white				
Reaction to fire		EN 13501-1 E				
Max. operating temperature	°C	95	95	95	95	95

^{*} Calculated with 3.5 times safety coefficient on the basis of soft copper tubes with R m 200 N/mm² at an operating temperature of 100 °C

CTX crimp fittings

Yellow brass/Si-bronze:

- Dezincification resistant
- Suitable for drinking water supply

Crimping sleeve:

- Stainless steel
- Tube viewer to control insert depth

Sealing elements:

- Double placed
- | EPDM, acc. to DVGW W270 and KTW





Range of applications

Sanitary applications

Drinking water hot/cold

Copper throughout: copper-alloy fittings, inter-floor distribution with flexible CTX tubes, basement distribution and risers with straight SANCO tubes – as optimal solution in one material.

Copper is very hygienic as it does not release any nutrients to microorganisms. Its high temperature resistance makes it the material of choice in drinking water installations up to the very last tap. The combination of these advantages effectively counteracts the growth of microorganisms, including Legionella.

cuprotherm CTX tubes are tasteless and odourless and pose no health hazard. The material that comes into contact with water is copper. It contains no softeners, colouring pigments, flame-retardant additives, other additives, stabilisers or modifiers.





Heating

Underfloor heating/cooling

Tubes embedded in screed must fulfill two main requirements: diffusion tightness and aging resistance. cuprotherm CTX tubes are permanently 100 % diffusion tight and have an unlimited service life: no fouling, no embrittlement; thanks to copper.

The complete cuprotherm system, including insulating plates, fasteners, manifolds and controllers, is available for underfloor heating and cooling and can be used for all applications, i.e. also for sprung floor heating systems, outdoor surface heating systems and concrete core cooling systems.

Heating/radiator connection

The adapter for copper tube to CTX enables installation of heating systems completely in copper, of traditional bright copper tubes such as SANCO or factory heat-insulated tubes in combination with flexible CTX tubes. This ensures long service life irrespective of the operating temperature.

The fact that temperature variations result in only a minor change in tube length simplifies professional planning and installation.

Other fields of application:

- Industrial compressed air
- Geothermal collectors (water/glycol)

The flexible system

cuprotherm CTX tubes may be joined with both the CTX crimp fittings offered by Wieland and other crimp fittings available on the market and approved by Wieland (Type TH). This is beneficial as far as storage and availability are concerned. All fittings with the C² marking may also be used.







CTX crimp fittings are intended for the use with CTX tubes and are approved, for example for drinking water installations up to pressure rage PN10. The connection is made with the CTX crimping tool contour TH. Commercially available crimping tools from other vendors can also be used (for details see technical documentation). Please contact the factory before using other contours.



Applications:

- Drinking water, hot
- Drinking water, cold
- Panel heating
- Panel cooling
- Hot water heating
- Concrete core activation
- Rainwater harvesting system

Technical properties:

- Fitting corpus resistant to dezincification
- Crimp sleeve made of stainless steel 1.4301, inspection window for checking the insertion depth
- Sealing elements double arranged, according to DIN DVGW W270 tested, in accordance with KTW requirements
- Pressure stage PN 10
- Version with black pastic ring: approved for drinking water according to DIN 50930-6, DVGW W534 and UBA list
- Version with white plastic ring: Use for heating and panel heating

Crimp fittings

Crimp fittings	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX coupling for joining of flexible copper tubes. 650114000	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 5 pieces
	CTX adapter for joining flexible copper tubes to copper plumbing tubes. 650414120	Packed in PE bag 10 pieces 5 pieces 5 pieces



Crimp fittings	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX reducer for reducing flexible copper tubes. 650316140	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 5 pieces
	CTX elbow 90° for flexible copper tubes. 650814000	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 5 pieces
	CTX adapter elbow 90° male with male threading. 652514120	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 10 pieces
	CTX adapter elbow 90° female with female threading. 652614120	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 10 pieces
	CTX tee Branches identical, for flexible copper tubes. 650514000 14/14/14 650516000 16/16/16 650518000 18/18/18 650520000 20/20/20 650526000 26/26/26	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 5 pieces



Crimp fittings	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX reducing tee Branches reduced, for flexible copper tubes. 652120100 16/14/14 652120200 16/14/16 652120300 16/20/16 652120700 18/16/18 652120400 20/16/16 652120500 20/16/20 652120600 20/20/16 652121000 26/16/26 652120900 26/20/20 652120800 26/20/26	Packed in PE bag 10 pieces 5 pieces 5 pieces 5 pieces 5 pieces
	CTX tee with threading female middle branch with female threading, for flexible copper tubes. 652340200	Packed in PE bag 10 pieces 10 pieces 5 pieces
	CTX elbow 45° for flexible copper tubes. 651026000 26 x 3	Packed in PE bag 5 pieces
	CTX male adapter nipple Adapter with male threading, for flexible copper tubes. 650214120 $14 \times 2 - R^{-1}/_2$ " 650216120 $16 \times 2 - R^{-1}/_2$ " 650218120 $18 \times 2 - R^{-1}/_2$ " 650220120 $20 \times 2 - R^{-1}/_2$ " 650220340 $20 \times 2 - R^{-3}/_4$ " 650226340 $26 \times 3 - R^{-3}/_4$ " 650226100 $26 \times 3 - R^{-3}$	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 10 pieces 5 pieces 5 pieces
	CTX crimp union $^3/_4$ " eurocone Nickel-plated, with thread connection 3/4" female, eurocone 18 mm, for connection to manifolds. (Alternative to CTX crimp union with eurocone) 652714340 14 x G $^3/_4$ " 652716340 16 x G $^3/_4$ " 652718340 18 x G $^3/_4$ " 652720340 20 x G $^3/_4$ "	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces



Crimp fittings	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX crimp union flat-sealing with freely rotating nut. 653916340 $16 \times 2 - \text{Rp }^3/_4$ " 653918340 $18 \times 2 - \text{Rp }^3/_4$ " 653920340 $20 \times 2 - \text{Rp }^3/_4$ "	Packed in PE bag 10 pieces 10 pieces 10 pieces
	CTX female adapter Adapter with female threading, for flexible copper tubes. 652214120	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 5 pieces 5 pieces
	CTX back plate elbow, short Brass body with crimp sleeve of stainless steel. 652816120 $16 \times \text{Rp}^{1/2}$ " 652820120 $20 \times \text{Rp}^{1/2}$ " 652820340 $20 \times \text{Rp}^{3/4}$ "	Packed in PE bag 10 pieces 10 pieces 10 pieces
	CTX sound-insulating element, short for CTX back plate elbow, short ½" (for articles 652814120, 652816120, 652820120), for CTX back plate elbow, short ¾" (for article 652820340). 652900100	Packed in PE bag 10 pieces 10 pieces
	CTX back plate elbow, long Brass body with crimp sleeve of stainless steel. 653016120 16 x Rp ½" 653020120 20 x Rp ½"	Packed in PE bag 10 pieces 10 pieces
	CTX sound-insulating element, long (for articles 653016120, 653020120). 653100100 1/2"	Packed in PE bag 10 pieces



Crimp fittings	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX back plate elbow, double, short Short version. 653416120	Packed in PE bag 10 pieces 10 pieces
	CTX sound-insulating element, double for back plate elbow, short (for articles 653416120, 653420120). 653500100 1/2"	Packed in PE bag 10 pieces
	Mounting rail bent. 653500200	Packed in PE bag 10 pieces
The state of the s	CTX stop end fitting to close the flexible copper tubes. 650914000	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces 10 pieces



Accesories for radiator connection

Accessories	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX skirting board connection set nickel-plated, with male thread and press fitting. 655816120	Packed in PE bag 1 Set 1 Set 1 Set
	CTX angle shut-off for radiator connection with CTX skirting board connection. Copper tubes, nickel-plated with compression fitting Rp ½" and integrated shut-off. 655815120 15 x 1	Packed in PE bag 2 pieces
	CTX elbow union with union nut $\frac{3}{4}$ " eurocone and press connection CTX. 650816340 16 x 2 Rp $\frac{3}{4}$ " 650818340 18 x 2 Rp $\frac{3}{4}$ " 650820340 20 x 2 Rp $\frac{3}{4}$ "	Packed in PE bag 10 pieces 10 pieces 10 pieces
	CTX connection bend 15 mm nickel-plated with press connection, Length: 300 mm. 650716150	Packed in PE bag 2 pieces 2 pieces 2 pieces
	CTX crossover tee with branches for crossover-free branching, for flexible copper tubes. Visible size 40 mm. 650616000 16/16/16 650620100 20/16/16 650620200 20/16/20	Packed in PE bag 1 piece 1 piece 1 piece
	CTX insulation box for crossover tee, (for articles 650616000, 650620100, 650620200). 650700100	1 piece loose
	CTX radiator connection block with insulation box of EPS, for grouting in the wall (mounting depth 50 mm), with curved CTX tube 16 x 2 mm, for horizontal radiator connection. Dimensions: Height: 200 mm, Width: 105 mm Mounting depth: 50 mm (base 230 mm) Tube pitch: 215 mm Insulation under: 14 mm 655800100	1 piece loose



Compression fittings

Accessories	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX union with eurocone Thread connection $3/4$, female, brass, nickel-plated, for connection to the heating group manifold. 650014000	Packed in PE bag 10 pieces 10 pieces 10 pieces 10 pieces

Compression sleeve

Accessories	Article Minimum Article number/Dimensions in mm	Minimum packaging unit
	CTX compression sleeve for metallic-sealing joints, 5-part, consiting of body, 2 locking and 2 pressure rings. Material: CUPHIN. 654014200 14 x 2 654016200 16 x 2 654018200 18 x 2 654020200 20 x 2	Packed in PE bag 2 Pieces 2 Pieces 2 Pieces 2 Pieces 2 Pieces



System accessories fixing

Accessories	Article Article number/Dimensions in mm	Minimum packaging unit
	cuprotherm bracket of steel wire, for fastening the CTX tubes on the cuprotherm system insulation by hand. 625201900 Typ 14/16 for tube Ø to 16 mm 625202000 Typ 20 for tube Ø to 20 mm	Boxed 500 Pieces 500 Pieces
	cuprotherm twin bracket of steel wire, for fastening the CTX tubes on the cuprotherm system insulation with a system tacker. 625202200 For tube outside diameter 14 to 20 mm	Boxed 1,000 Pieces
and the state of t	cuprotherm grid foil as insulating layer cover and installation aid with printed spacing grid (the PE foil is not needed when using the cuprotherm insulating boards). 625201000 0.2 mm thick, 1,100 mm wide	1 roll = 50 m
	cuprotherm adhesive tape self-adhesive for making joints. 625207000 50 mm wide, length approx. 33 m, yellow	1 roll (33 m) loose
	cuprotherm foam pad tape for padding tube bends, self-adhesive. 625206000 4 x 30 mm, length 10 m	1 roll (10 m) loose
	cuprotherm plate anchor 110 Plastic anchor with spreader nail. For fastening the wall heating register. Requirement: approx. 3 pc./m². 625407500 Dimensions: Plate Ø 50 mm Total length 110 mm Fastening length 80 mm Bore diameter 10 mm	1 piece loose
	cuprotherm knob panel "ekoBoden" Tube pas distances 7.5 cm, made from stable polystyrene, designed for CTX tube dimension 14x2 mm. Suited for meandering and bifilar (snail) tube installation. Fire resistance class DIN 4102-B2. Colour: black 625271000 1,275 x 975 x 23 Incl. overlap Effective surface per panel: 1.08 m²	1 box = 18 pieces = 19.44 m ²
	cuprotherm door/distributor element for "ekoBoden" suitable for cuprotherm screed knob plate, made of solid polystyrene for the door and distribution area. With cut-outs for one-sided fixation on the burl foil. Building material class B2 according to DIN 4102. Colour: black anthacite. 1,200 x 575 x 1 mm	1 Pieces lose



Insulation

Accessories insulation	Article Article number/Dimensions in mm	Minimum packaging unit
CUPTOTHERM CUPTOT	cuprotherm insulation board 30-2 EPS DES sg 30-2 mm, TCC 040, heat and impact sound insulation to DIN EN 13163 with plastic lining as protection cover to DIN 18560, equipped with 3 cm-wide overlap and adhesive strip on the top. Printed grid.	Packed in PE bag $5 \times 2 \text{ m}^2 = 10 \text{ m}^2$
ourottem	cuprotherm insulation coil 30-2 EPS DES sg 30-2 mm, TCC 040, heat and impact sound insulation to DIN EN 13163 with plastic lining as insulating layer cover to DIN 18560, equipped with 3 cm-wide overlap and adhesive strip on the top. Printed grid. 625270400 5,000 x 1,000 x 30 mm R _x = 0.75 m ² K/W compressive strength: 5 kPa (5 kN/m ²)	Packed in PE bag 2 Rollen à 5 m² = 10 m²
ovanthorm	cuprotherm insulation board 50-2 EPS DES sg 50-2 mm, TCC 040, heat and impact sound insulation to DIN EN 13163 with plastic lining as insulating layer cover to DIN 18560, equipped with 3 cm-wide overlap and adhesive strip on the top. Printed grid. 625270700 1,000 x 1,000 x 50 mm R _x = 1.25 m ² K/W compressive strength: 5 kPa (5 kN/m ²)	Packed in PE bag 5 m ²
	cuprotherm insulation plate PUR 30+3 made from PUR 30 mm, lined with aluminium on both sides, FCKW-free, TCC 025, with 3 mm PE foam layer 625282600 1,000 x 1,000 x 33 mm R _{\text{\text{\text{R}}} = 1.275 m²K/W compressive strength: 40 kN/m²}	Shrink-wrapped 10 boards = 10 m ²
	cuprotherm perimeter strip of extruded polyethylene foam, gauge 8 mm, height 180 mm with self-adhesive edge (renders tacking and nailing superfluous). With foam base 2 mm thick, 30 mm wide and welded-on foil overlap. 625280800 8 x 180 mm, length 25 m	In plastic bag 4 rolls of 25 m each
	cuprotherm perimeter stripe ekoBoden white, of extruded polyethylene foam with reduced height for cuprotherm ekoBoden and cuprotherm dry construction system, with self-adhesive edge (renders tacking and nailing superfluous). With foam base 2 mm thick, 70 mm wide. 625280901 8 x 100 mm, length 25 m	In plastic bag 4 rolls of 25 m each



Manifolds

Accessories Manifolds / Manifold cabinets	Article Article number/Dimensions in mm	Minimum packaging unit
C Samuel	cuprotherm manifold cabinet 110 Basic cabinet for recessed and on-wall mounting of matt galvanised steel plate 1 mm. Universal holder for manifolds. Space for wiring center "Alpha-Basis" or wireless control receiver. Front side equipped with special screed screen (with grouting mesh for direct grouting). Height: 705–830 mm (adjustable), depth 110 mm. 625371100 Size 1, width 450 mm,	Boxed Size depending on the size of the cabinet 1 piece 1 piece 1 piece
•	*vertical installation cuprotherm cabinet frame for recessed mounting Cabinet frame with door incl. turn-lock fastener. Matching the basic manifold cabinet of steel plate 1 mm, powder-coated, white, similar to RAL 9010, "new edge" design, depth adjustable to 70 mm, height 530 mm. 625376100 Size 1, width (overall size) 525 mm 625376200 Size 2, width (overall size) 755 mm 625376300 Size 3, width (overall size) 905 mm 625376400 Size 4, width (overall size) 1,215 mm	Boxed Size depending on the size of the cabinet 1 piece 1 piece 1 piece 1 piece
	cuprotherm distributor hood for wall mounting suitable for basic distribution cabinet made of sheet steel, white powder-coated, similar to RAL 9010, Height 670 mm, depth 130 mm. 625378100 Size 1, width (overall size) 530 mm, sheet thickness 1.0 mm 625378200 Size 2, width (overall size) 760 mm, sheet thickness 1.0 mm 625378300 Size 3, width (overall size) 910 mm, sheet thickness 1.5 mm 625378400 Size 4, width (overall size) 1,210 mm, sheet thickness 1.5 mm	Boxed Size depending on the size of the cabinet 1 piece 1 piece 1 piece 1 piece



Manifolds

Accessories	Article	Minimum
Manifolds / Manifold cabinets	Article number/Dimensions in mm	packaging unit
To a water and a second a second and a second a second and a second and a second and a second and a second an	cuprotherm-manifold Width including ball valve and end pieces. 625310200 2 heating circuits Width 310 mm 625310300 3 heating circuits Width 365 mm 625310400 4 heating circuits Width 420 mm 625310500 5 heating circuits Width 475 mm 625310600 6 heating circuits Width 530 mm 625310700 7 heating circuits Width 585 mm 625310800 8 heating circuits Width 640 mm 625310900 9 heating circuits Width 695 mm 625311000 10 heating circuits Width 750 mm 625311100 11 heating circuits Width 805 mm 625311200 12 heating circuits Width 805 mm 625311400 14 heating circuits Width 915 mm 625311400 14 heating circuits Width 970 mm Of high quality seamless drawn brass tubing for two-way connection, 1" flat sealing. Mounted on galvanized soundinsulated consoles acc. to DIN 4109. Manifold equipped with fill/drain cock valve ½" and vent valve, 2 ball valves 1" with union nut. Circuit ports equipped with lockable valves and flow controllers. Fixing set and self adhesive labels included. Manifold pressure tested and boxed. Height 310 mm, Gauge 90 mm.	Boxed 1 piece
30 40 50 30 40 50 70 70	cuprotherm flow thermometer for the supply pipe. As contact thermometer, spring-fixed. Measuring range 0–80 °C. 625399800	Loose 1 piece
10 20 20 20 20 20 20 20 20 20 20 20 20 20	cuprotherm return thermometer for heating circuit port with eurocone R $^3/_4$ ", Measuring range 0–50 °C. 625398700	lose 1 piece
	CTX union with eurocone Thread connection $^{3/_4}$ ", female, brass, nickel-plated, for connection to the heating group manifold. 650014000 14×2 650016000 16×2 650018000 18×2 650020000 20×2	Packed in PE bag 10 Pieces 10 Pieces 10 Pieces 10 Pieces
	cuprotherm compression fitting 3 pieces, consisting of union nut, clamping ring and support sleeve, Euro cone, for cuprotherm tubes. 625203300 union nut R $^3/_4$ " x 12 x 0.7 mm 625203100 union nut R $^3/_4$ " x 14 x 0.8 mm 625203400 union nut R $^3/_4$ " x 15 x 0.8 mm	Packed in PE bag 10 Pieces 10 Pieces 10 Pieces



Tools

Accessories	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX cutter for cutting Calibrating and deburring CTX tubes for use of CTX crimp fittings. 655100100 14 / 16 / 18 / 20 × 2.0 replacement cutter for CTX cutter 655100200	Loose 1 piece 1 piece
	CTX tube cutter For cutting flexible copper tubes. With integrated deburrer and spare blade. Use, for example, in combination with CTX calibration and expanding pliers. 655900100	Packed in PE bag 1 piece
Z	CTX click grip for tube calibration insert 656000100	Boxed 1 piece
	CTX tube calibration insert Insert, for example, in combination with CTX click grip or cordless screwdriver. With steel protection cover, suitable for CTX crimp fittings. 656014200 14 x 2 656016200 16 x 2 656018200 18 x 2 656020200 20 x 2 656026300 26 x 3	Boxed 1 piece 1 piece 1 piece 1 piece 1 piece 1 piece
	CTX calibration and expanding pliers Use only suitable in combination with CTX calibration attachment. For all sizes. 655700100 14 to 26 mm	Loose 1 piece
	CTX calibration attachment For simple and exact calibration of CTX tubes without the need for strength. Use only in combination with CTX calibration and expanding pliers or with suitable commercially available expanding pliers. For preparation of joints for CTX crimp fittings and CTX sliding sleeves. For tube dimensionsn 655714200	Loose in PE bag 1 piece 1 piece 1 piece 1 piece 1 piece 1 piece
	CTX crimping tool contour: TH For joining CTX tubes with CTX crimp fittings. 655414000 14 655416000 16 655418000 18 655420000 20 655426000 26	1 piece 1 piece 1 piece 1 piece 1 piece 1 piece



Tools

Accessories	Article Article number/Dimensions in mm	Minimum packaging unit
	CTX bending spring for bending CTX tubes. 655314000	Loose 1 piece 1 piece 1 piece 1 piece 1 piece 1 piece
	cuprotherm bending pliers M for cuprotherm.blank 14 x 0.8, cuprotherm.plus 12 x 0.7 and CTX 14 x 2. L for CTX 18 x 2. 625412600 M 625220400 L	Loose 1 piece 1 piece
	cuprotherm tacker for easy fastening of cuprotherm double anchors, suitable for cuprotherm system insulation and commercially available insulation boards of EPS, PU, Styrodur, Foamglas, cork, autoclaved aerated concrete and wood soft fibre boards. 625220700	Loose 1 piece

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