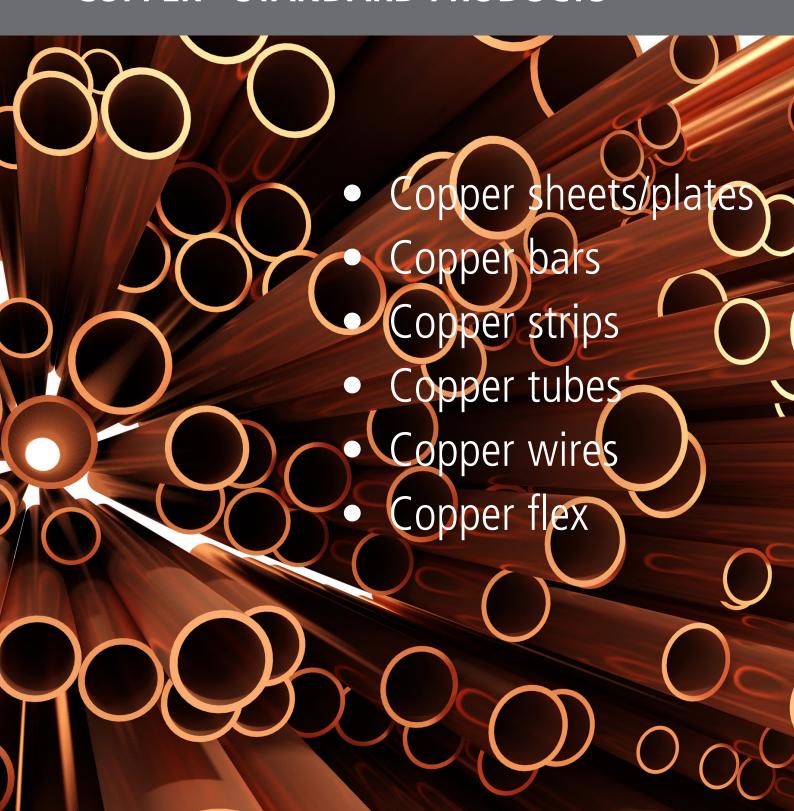
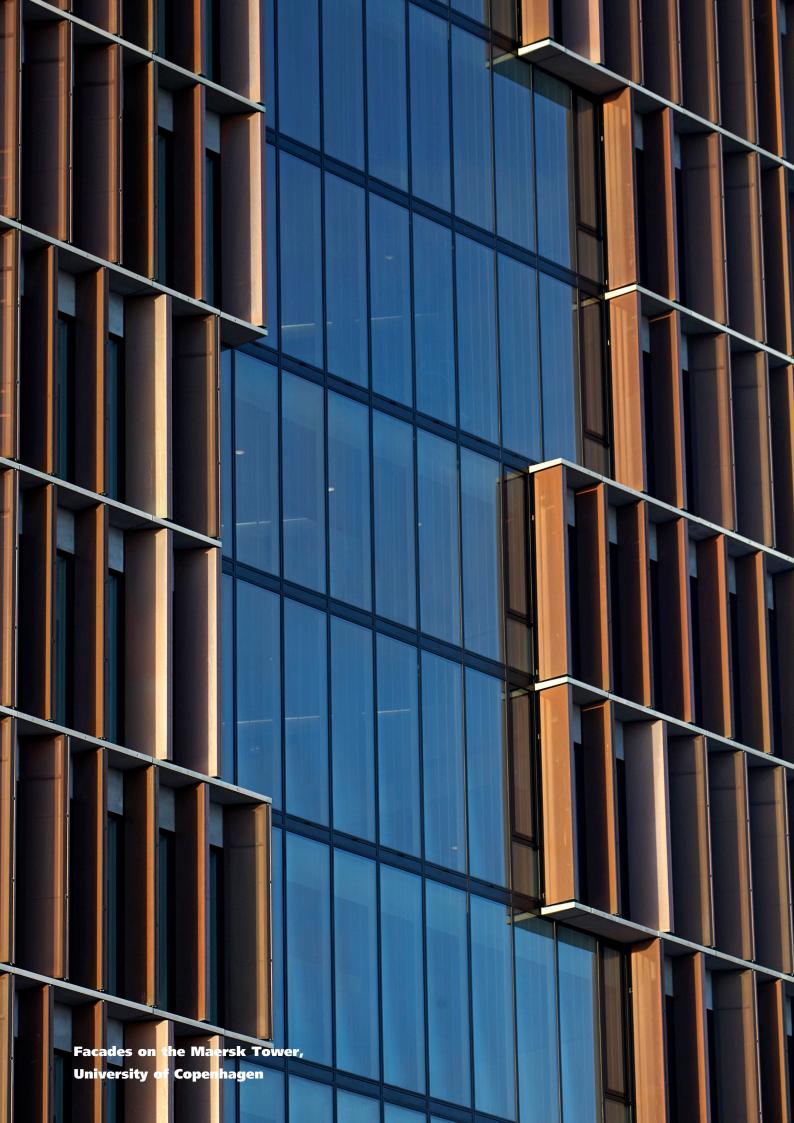
METALCENTER GROUP COPPER - STANDARD PRODUCTS









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METALCENTER GROUP – COMPANY PROFILE



Metalcenter group - Profile

Metalcenter group is 100% owned by **Alumeco** (Scandinavia' largest Aluminium wholeseller). Metalcenter was founded in 2009 – and in 2017 we are one of the largest red-metal wholesalers in North Europe.

Metalcenter is completely integrated with Alumeco – with joint stocks and local logistic centers in Scandinavia and East-Central Europe. We have joint functions like administration, IT, accounting, quality, production, logistic and marketing.

Metalcenter is based in Scandinavia – with 3 metal stocks in Denmark, Sweden and Finland – but also has stock-setup in Germany, and even in the US and China through our group partners in the Alumeco Group.

Facts



Metalcenter Group turnover: Appro. 80 mill. EUR. 15,000 tons yearly



No. of employees: 50



Stock: 3 local stocks in Scandinavia - 2,000 tons in total



Production: 2 sites (slitting, sawing, machining and assembly)



Metals: Copper, brass, bronze and other metals



Material type: Coils / strips, sheets, bars, tubes, wires



Customized products: Busbars, bushings, bearings, cables, fittings..etc.



Metalcenter group - we do all in copper, brass and bronze

Our focus is 100% on "The red metals". We offer you a wide product portfolio of:

- Sheets and strips
- Round, square, hexagonal bars and flat bars
- Tube
- Cut-to-length tubes, bars and sheets
- Customized products
- Ingots

We offer you everything from small deliveries to large individual solutions customized in every way for your needs.

In our cooperation, we **focus on**...:

...Dialogue

Our experienced consultants are ready to help you find the best, most suitable and cost-effective products and solutions for your projects.

...Processing and production flow

On Metalcenter's own processing centers in Denmark and Sweden we can both saw, machine and slit the raw material to fit exactly into your production flow and need.

...Logistic and deliveries

From our centrally placed logistic centers in Denmark, Sweden and Finland we offer day-to-day deliveries.

Should there be items we do not have in stock for immediate delivery, we have a large network of mill partners with stocks all over Europe which gives us fast and flexible access to the goods.

If you need storage between production and delivery, we can offer you this option as part of the solution. We can provide large storage capacity – for buffer and security stocks.

...Service

You will get the same kind of service no matter if you order 10 kg or 1000 tons of material. We offer you professional consulting regardless of the size of your business or the size of your order.

Our **key value** is customer focus and our **key aim** is 100% customer satisfaction through proactive customer service.

Sheets						
EN 1652						
EN-Nr.		CW024A	CW0	24A	CW004A	CW008A
EN-Alloy		Cu-DHP	Cu-I	OHP	Cu-ETP	Cu-OF
EN-Temper		Soft	1/2 h	nard	1/2 hard	1/2 hard
Thickness (mm)	Weight (m²)	1000x 2000mm	1000x 2000mm	1250x 2500mm	1000x 2000mm	1000x 2000mm
0,50	4,50	A	•	A	A	A
0,60	5,40	•	•	A	A	A
0,70	6,25	•	•	•	A	A
0,75	6,68	A	•	A	A	A
0,80	7,20	•	•	A	A	A
1,00	9,00	•	•	•	A	•
1,20	9,85	•	•	A	A	A
1,25	11,13	A	A	A	A	A
1,50	13,50	•	•	•	•	•
2,00	18,00	•	•	A	•	•
2,50	22,40	A	A	A	A	•
3,00	26,85	•	•	A	A	•
4,00	36,00	A	•	A	•	•
5,00	45,00	A	•	A	A	•
6,00	54,00	A	A	A	A	•
8,00	72,00	A	A	A	A	•
10,00	90,00	A	A	A	A	•

Plates		
EN 1652		
EN-Nr.		CW021A
EN-Alloy		Cu-HCP
EN-Temper		Hard as rolled
Thickness (mm)	Weight (m²)	1020x 3020 mm
15	133,5	•
20	178	•
25	222 5	•



Other dimensions / sizes/alloys available on request



COPPER - STRIPS FOR INDUSTRIAL USE

Copper strips



Standard copper strips

Alloys

ISO	EN	UNS
Cu-DHP	CW024A	C 12200
CuSn0,15	CW117C	C 14410
Cu-HCP	CW021A	C 10300
Cu-OFE	CW009A	C10100
Cu-OF	CW008A	
Cu-ETP	CW004A	

Dimensions

Thickness	Width	Hardness HV
0.2 - 2 mm	10-600 mm	53-160

TYPICAL APPLICATIONS:

- Solar energy
- Buildings
- Mechanical industry
- Telecommunication industry



Thin copper strips / foil

Alloys

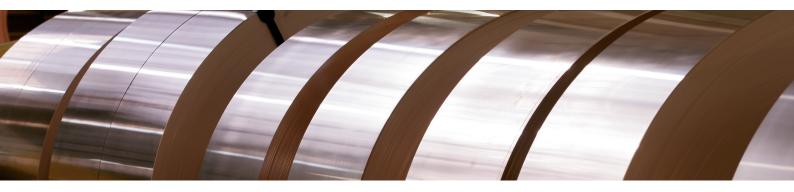
ISO	EN	UNS
Cu-DHP	CW024A	C 12200
CuSn0,15	CW117C	C 14410
Cu-HCP	CW021A	C 10300

Dimensions

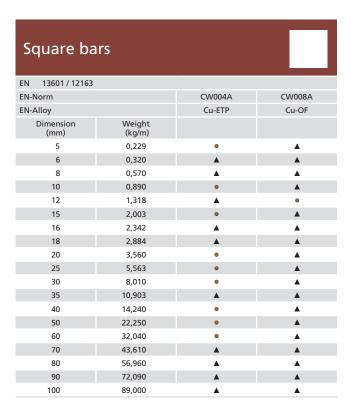
Thickness	Width	Hardness HV
0.025- 0.2 mm	6-600 mm	53-160

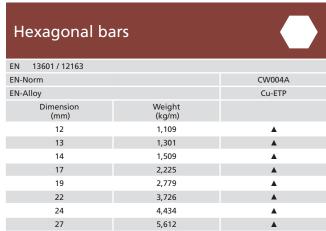
TYPICAL APPLICATIONS:

- Industrial heat exchangers
- radiators
- Heaters
- Charge air coolers
- Oil coolers
- CPU coolers
- Inverter coolers in hybrid vehicles
- Climate control systems

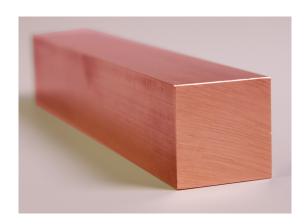


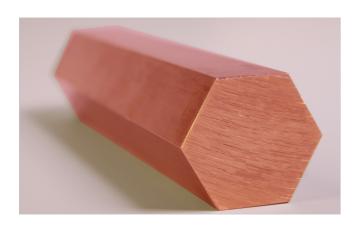
COPPER - BARS SQUARE AND HEXAGONAL





Square and hexagonal bars are supplied in standard lengths of 4 meters!





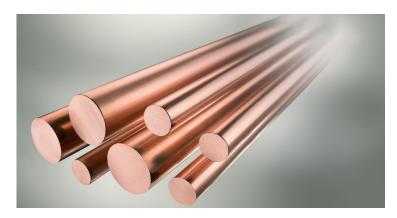
• = Stock

▲ = On request

Round k	oars			
EN 13601				
EN-Nr.		CW004A	CW008A	CW118C
EN-Alloy		Cu-ETP	Cu-OF	CuTeP
EN-Temper		E-Cu 57	OF-Cu	CuTeP
Thickness (mm)	Weight (kg/m²)			
3	0,06	•	A .	A .
4	0,11	•	A	A
5	0,17	•	A	A
6	0,25	•	A	A
7	0,34	A	A .	A
8	0,45	•	A	•
9	0,57	A	A	A
10	0,70	A	•	A
11	0,85	A	A	A
12	1,01	A	•	A
13	1,18	A	A	•
14	1,37	A	•	A
15	1,57	A	•	A
16	1,79	A	•	•
18	2,26	A	•	A
19	2,52	A	A	•
20	2,79	•	•	A
21	3,17	A	A	•
22	3,38	A	•	A
23	3,70	•	A	A
24	4,02	•	A	
25	4,37	A	•	A
26	4,72		•	A
27	5,09	A	A	A
28	5,48	A	A	A
30	6,29	A	•	•
32	7,15	A	•	A
33	7,61	A	A	A
35	8,56	A	•	A
36	9,05	A	A	A
38	10,09	A	A	A
40	11,18	A	•	0
42	12,32	•	A	A

Round l	oars			
EN 13601				
EN-Nr.		CW004A	CW008A	CW118C
EN-Alloy		Cu-ETP	Cu-OF	CuTeP
EN-Temper		E-Cu 57	OF-Cu	CuTeP
Thickness (mm)	Weight (kg/m²)			
45	14,15	A	•	A
48	16,10	A	A	A
49	17,25	A	•	A
50	17,47	A	•	A
54	20,37	A	A	A
55	21,13	A	•	A
60	25,15	A	•	A
62	27,61	A	•	A
65	29,52	A	•	A
70	34,23	A	•	A
75	39,30	A	•	A
80	44,71	A	•	A
85	50,48	A	A	A
90	56,59	A	A	A
100	69,87	A	•	A
110	84,54	A	A	A
120	100,61	A	•	A
130	118,07	A	A	A
140	136,94	A	A	A
150	157,20	A	A	A
160	178,85	A	A	A
170	201,91	A	A	A
180	226,36	A	A	A
190	252,21	A	A	A
200	279,46	A	A	A
210	308,10	A	A	A
220	338,15	A	A	A
230	369,59	A	A	A
240	402,42	A	A	A
250	436,66	A	A	A
260	472,22	A	A	A
280	547,83	A	A	A
300	628.40	_		

Drawn / extruded round bars are supplied in standard lengths of 4 meters. CW118C in 3 meters length.



• = Stock

▲ = On request

Flat bars, e	extruded		
EN 13601			
EN-Norm		CW004A	CW008A
EN-Alloy		Cu-ETP	Cu-OF
Dimension (mm)	Weight (kg/m)		
10 x 3	0,270	•	A
12 x 3	0,320	A	A
15 x 3	0,400	•	•
17 x 3	0,467	•	A
20 x 3	0,530	•	A
30 x 3	0,800	•	A
40 x 3	1,070	A	A
10 x 4	0,360	•	A
12 x 4	0,427	•	A
20 x 4	0,710	A	A
25 x 4	0,890	•	A
30 x 4	1,070	A	A
40 x 4	1,420	•	A
60 x 4	2,136	•	A
10 x 5	0,445	•	A
15 x 5	0,670	•	A
20 x 5	0,890	•	A
25 x 3	0,668	•	A
25 x 5	1,115	•	•
30 x 5	1,340	•	•
35 x 5	1,560	A	A
40 x 5	1,780	•	•
50 x 5	2,230	•	•
60 x 5	2,670	•	A
80 x 5	3,560	•	•
100 x 5	4,450	•	A
125 x 5	5,719	A	A
12 x 6	0,641	•	A
15 x 6	0,801	•	A
20 x 6	1,068	•	A
22 x 6	1,208	•	A
25 x 6	1,340	•	A
30 x 6	1,600	•	
40 x 6	2,146	•	_ _
50 x 6	2,670	•	
60 x 6	3,204	•	•
75 x 6	4,118	•	A
80 x 6	4,270	•	_
90 x 6	4,941	A	<u> </u>

Flat bars,	extruded		
EN 13601			
EN-Norm		CW004A	CW008A
EN-Alloy		Cu-ETP	Cu-OF
Dimension	Weight		
(mm)	(kg/m)		
100 x 6	5,340	•	A
15 x 8	1,070	•	A
30 x 8	2,140	A	A
40 x 8	2,850	•	•
50 x 8	3,560	•	•
60 x 8	4,270	•	A
75 x 8	5,340	A	•
80 x 8	5,700	A	A
15 x 10	1,335	•	A
20 x 10	1,780	•	•
25 x 10	2,230	•	A
30 x 10	2,670	•	•
40 x 10	3,560	•	•
50 x 10	4,450	•	•
60 x 10	5,340	•	•
70 x 10 75 x 10	6,230 6,863	A	•
80 x 10	7,120	•	•
90 x 10	8,235	A	•
90 x 10	8,900	•	A
100 x 10	10,680	•	A
140 x 10	12,810	•	A
150 x 10	13,320	•	•
160 x 10	14,240	•	, , , , , , , , , , , , , , , , , , ,
200 x 10	17,800	A	
18 x 12	1,922	•	Ā
24 x 12	2,563	•	
42 x 12	4,525	A	•
60 x 12	6,410	•	A
66 x 12	7,111	<u> </u>	•
80 x 12	8,540	•	A
150 x 12	16,020	A	
30 x 15	4,005	•	_
40 x 15	5,340	•	
50 x 15	6,680	•	_
100 x 15	13,350	•	
30 x 20	5,448	•	_
40 x 20	7,120	•	
50 x 20	8,900	•	
60 x 20	10,680	•	_
40 x 25	8,900	A	_
	-,	_	_

Flat bars are supplied in standard lengths of 4 meters! $\frac{40 \times 25}{40 \times 30}$



• = Stock

▲ = On request

Tinning

Rolled strip and bars can be supplied with hot tin plated coatings in compliance with the DIN EN 13148 standard. The hot tin plated coatings meet the RoHS European Directive (restrictions of the use of certain hazardous substances in the construction of various types of electrical and electronic equipment).

Hot tin plating is performed on strips that have a width not greater than 330 mm and a thickness between 0.15 and 1.5 mm.

For bars please ask.

Standard coatings	Advantages
0.6-1.3 μm	Lowest mating and unmating forces
0.8-2.0 μm	Reduced mating and unmating forces
1.0-3.0 μm	Standard coating for connectors
2.0-5.0 μm	Good protection against corrosion
4.0-10.0 μm	Good storage and solderability
10-20 μm	Long life and solderability

Electroplating

Optionally silverplating and nickelplating



Connectors

This connector is used in electrical installations



Connectors

Flexible connector tinplated

COPPER - TUBES INDUSTRIAL

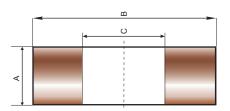
Copper tubes Industrial

EN 12449 (Cu-DHP - CW024A)

Level Wound Coils (LWC)

Standard LWC

Outside diameter	6 - 28 mm
Wall thickness	0.25 - 2.25 mm
Coil weight	100 / 140 / 225 / 280 / 450 / 560
	a) Light annealed
Temper	b) Soft annealed
	c) Hard drawn, hard / stress relieved
	Inner diameter: 610 mm - C
Coil sizes	Outer diameter: max. 1160 mm - B
	Coil height: 200 – 650 mm - A
	a) Super clean
Optional require-	b) Eddy Current tested
ments	c) Ink marked
	d) Decoiling from the center



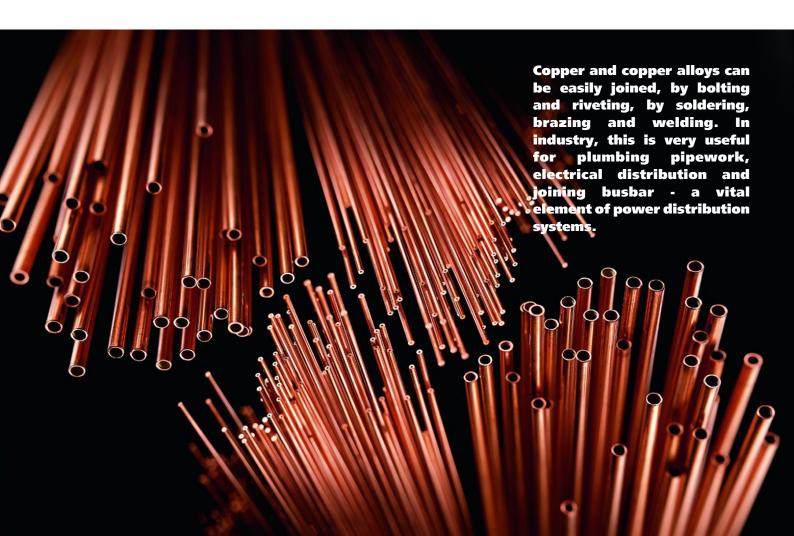
Length

Outside diameter	2 - 450 mm	
Wall thickness	0.5 - 10.0 mm	
Longth	3000 - 8300 mm	
Length	from 8300 - 14000 mm On inquiry	
Temper	Alle	
	a) Super clean	
Optional requirements	b) Engraved marking	
	c) Ink marked	

FITTINGS

we can offer fittings from a leading manufacturer in copper and other materials.





COPPER - TUBES FOR ACR INSTALLATION, MEDICAL GAS SUPPLY EQUIPMENT AND VACUUM INSTALLATIONS

Copper tubes for ACR installation (Air Conditioning)

EN 12735-1 (Cu-DHP - CW024A)



The preferred product for piping, construction and connection of cooling units. This tube features a smooth, clean and dry inside surface.

It surpasses the corresponding requirements of EN 12735-1 (seamless copper tubes for ACR technology; tubes for piping systems) as well as ASTM B 280.

These two international specifications for seamless copper connection tubes for ACR technology require that the maximum allowable contamination on the inside surface of the tube (measured as carbon content) may not be higher than 38 mg/m2.

To ensure inner cleanliness until the time the tubes are installed, each tube is firmly closed at both ends with end caps or plugs. To guarantee traceability as required in the EU Pressure Equipment Directive PED 97/23/EC, the exact manufacturing date, the dimensions of the tube and other information are engraved on each tube.

The tube can be supplied as coil or straight lengths.

Copper tubes for medical gas supply equipment and vacuum installations

EN 13348 (Cu-DHP - CW024A)



This tube features a smooth, dry and particularly clean internal surface. It surpasses the corresponding requirements of EN 13348 (seamless copper tubes for medical gases and vacuum).

This specification requires, among other things, that the maximum allowable contamination of the tube's internal surface (measured as carbon content) may not exceed 20 mg/m2.

The tubes are suitable for medical gas distribution systems according to EN 737-3. Each tube is closed at both ends to ensure that the inner surface remains clean until the moment the tubes are installed.

To guarantee traceability in compliance with the EU Pressure Equipment Directive PED 97/23/EC, the exact manufacturing date, the dimension of the tube and other information are permanently engraved on each tube.

Hard 5 m ler	igth in
mm	
Dimension	Stock
6.0 x 1.0 mm	•
8.0 x 1.0 mm	•
10.0 x 1.0 mm	•
12.0 x 1.0 mm	•
15.0 x 1.0 mm	•
16.0 x 1.0 mm	A
18.0 x 1.0 mm	•
22.0 x 1.0 mm	•
22.0 x 1.5 mm	A
28.0 x 1.0 mm	•
28.0 x 1.5 mm	•
35.0 x 1.5 mm	•
42.0 x 1.5 mm	•
54.0 x 1.5 mm	•
54.0 x 2.0 mm	•
64.0 x 2.0 mm	A
70.0 x 2.0 mm	A
76.1 x 2.0 mm	A
80.0 x 2.0 mm	A
88.9 x 2.0 mm	A
104.0 x 2.0 mm	A
108.0 x 2.5 mm	A

Hard 5 m lengt	h in "	
Dimension	Stock	
9.52 x 0.80 mm	•	41.28 x 1.00 mm
12.70 x 0.80 mm	•	41.28 x 1.22 mm
12.70 x 0.89	•	41.28 x 1.25 mm
15.88 x 0.80 mm	•	41.28 x 1.52 mm
15.88 x 1.02 mm	•	53.98 x 1.20 mm
15.88 x 0.9 mm	•	53.98 x 1.22 mm
19.05 x 0.90 mm	•	53.98 x 1.78 mm
19.05 x 1.02 mm	•	66.68 x 1.63 mm
22.22 x 1.00 mm	•	79.38 x 1.63 mm
22.22 x 0.89 mm	•	92.08 x 2.03 mm
22.22 x 1.14 mm	•	
28.58 x 0.89 mm	•	
28.58 x 1.22 mm	•	
28.58 x 1.25 mm	•	
28.58 x 1.27 mm	•	
34.92 x 1.00 mm	•	
34.92 x 1.25 mm	•	
34.93 x 1.40 mm	•	
34.93 x 1.02 mm	•	

Soft 25 m coils in mm	
Stock	
A	
•	
•	
•	
•	
•	
•	
•	
A	
•	
•	

Soft 15 m coils	
Dimension	
6.35 x 0.80 mm	
9.52 x 0.80 mm	
12.70 x 0.80 mm	
15.88 x 0.80 mm	
19.05 x 0.90 mm	
22.22 x 1.00 mm	



For max. working pressure values in bar, see page 17.



 \blacktriangle = On request



Soft 5 kg coils	
Dimension	Stock
2,0 x 0,50 mm	A
2,0 x 0,65 mm	A
3,0 x 0,75 mm	A
3,0 x 0,90 mm	A
3,0 x 1,00 mm	A
4,0 x 0,75 mm	•
4,0 x 1,00 mm	•
5,0 x 1,00 mm	•

Soft 1 kg coils	
Dimension	Stock
2,0 x 0,50 mm	A
2,0 x 0,60 mm	A
2,0 x 0,65 mm	A
3,0 x 0,75 mm	A
3,0 x 1,00 mm	A
4,0 x 1,00 mm	A
· · · · ·	

Copper tubes high pressure

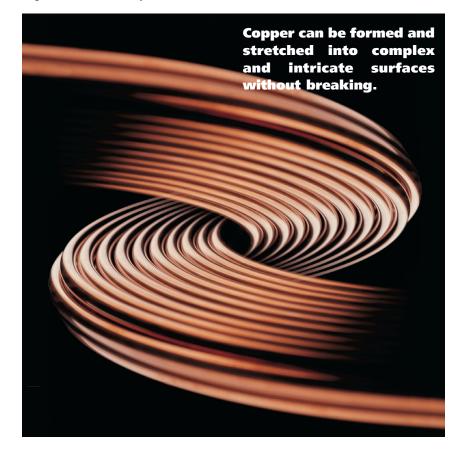
EN 12449 (CuFe2P - CW107C)

The new tube for refrigeration!

These copper tubes can be applied to high pressure (120 bar) refrigeration systems for R410A and R744 (CO2) refrigerant transportation.

Tubes are firmly closed at both ends with end caps or plugs. The exact manufacturing date, the dimensions of the tube and other information are engraved on each tube, to guarantee traceability.

Hard 5 m length in "	
Dimension	Stock
9.52 x 0.65	•
12.70 x 0.85	•
15.88 x 1.05	•
19.05 x 1.30	•
22.22 x 1.50	•
28.58 x 1.90	•
34.93 x 2.30	•
41.28 x 2.70	•
53.97 x 3.55	•



Fittings for high pressure copper tubes CW107C 120 bar

Bend 90 degrees M/F - F/F		
3/8"	•	
1/2"	•	
5/8"	•	
3/4"	•	
7/8"	•	
1 1/8"	•	
1 3/8"	•	
1 5/8"	•	

Bend 45 degrees N	1/F - F/F
3/4"	A
7/8"	A
1 1/8"	A
1 3/8"	A
1 5/8"	A



Tee	
3/8"	•
1/2"	•
5/8"	•
3/4"	•
7/8"	•
1 1/8"	•
1 3/8"	•
1 5/8"	•

Тее	
1/2"x3/8"x3/8"	•
1/2"x1/2"x3/8"	•
5/8"x1/2"x1/2"	•
5/8"x5/8"x1/2"	•
3/4"x3/4"x5/8"	•
7/8"x7/8"x3/4"	•
1 1/8"x7/8"x1/2"	•
1 1/8"x 1 1/8" x 7/8"	•
1 3/8" x 1 3/8" x 7/8"	•
1 3/8" x 1 3/8" x 1 1/8"	•
1 5/8" x 1 5/8" x 1 3/8"	•

Coupling	
3/8"	•
1/2"	•
5/8"	•
3/4"	•
7/8"	•
1 1/8"	•
1 3/8"	•
1 5/8"	•

Reducer	
1/2" x 3/8"	•
5/8"x 3/8"	•
5/8" x 1/2"	•
3/4" x 5/8"	•
7/8" x 3/8"	•
7/8" x 5/8"	•
1 1/8" x 5/8"	•
1 1/8" x 3/4"	•
1 1/8" x 7/8"	•
1 3/8" x 1 1/8"	•
1 5/8" x 1 3/8"	•
1/2" x 12mm	A
5/8" x 15mm	A
3/4" x 18mm	A
7/8" x 22mm	A
1 1/8" x 28mm	
1 3/8" x 35mm	A
1 5/8" x 42mm	A

End Cap	
3/8"	•
1/2"	•
5/8"	•
3/4"	•
7/8"	•
1 1/8"	•
1 3/8"	•
1 5/8"	•

COPPER - TUBES PLUMBING

Copper installation tubes EN1057

Copper tubes EN1057				
Dimension	5M	6M	25M	50M
mm				
6x1	•			•
8x1	•			•
10x1	•			•
12x1	•			•
15x1	•			•
18x1	•	•	•	
22x1	•	•	•	
28x1,2	•	•		
35x1,5	•	•		
42x1,5	•	•		
54x1,5	•	•		
70x2	•	•		
76,1x2	•			
88,9x2	•			
108x2	•			

Copper tubes Wicu insulated

Copper tubes Wicu EN1057			
Dimension	5M	25M	50M
mm	JIVI	23101	JUIVI
8x1		•	
10x1		•	•
12x1	•	•	•
15x1	•	•	•
18x1	•	•	•
22x1	•	•	

Copper tubes Wicu Eco heat insulated

Copper tubes Wicu Eco EN1057		
Dimension mm	5M	25M
12x1	•	0
15x1	•	•
18x1	•	•
22x1	•	•
28x1	•	
35x1,2	•	
42x1,2	•	
54x1,5	•	

Copper tubes Wicu Clim

Copper tubes Wicu Clim EN1057		
Dimension mm 50M 25M		
•		
•		
0		
	•	
	•	
	•	
	50M •	

Copper tubes Wicu Flex insulated

Copper tubes Wicu Flex EN1057 25M.
Dimension mm
12x1
15x1
18x1
22x1



			Multiple wires		
Area (mm²)	Wire (n	ominal)	Conductor (calulated values)		Max. resistance according to IEC 60228 (Ω /km)
	Number of wires	Diameter (mm)	Diameter (mm)	Weight (kg/m)	
10	7	1,37	4,2	92	1,83
16	7	1,71	5,3	145	1,15
25	7	2,13	6,6	225	0,727
35	7	2,52	7,9	315	0,524
50	7	3,02	9,1	453	0,387
50	19	1,85	9,1	463	0,387
70	7	3,57	11,0	633	0,268
70	19	2,17	11,0	638	0,268
95	19	2,52	12,9	861	0,193
95	37	1,81	12,9	866	0,193
120	19	2,84	14,5	1090	0,153
120	37	2,03	14,5	1090	0,153
150	37	2,27	16,2	1360	0,124
185	37	2,52	18,0	1680	0,0991
240	37	2,89	20,6	2180	0,0754
300	37	3,22	23,1	2710	0,0601

Tolerances of dimensions	lay ratio: 11-14. innermost layer right-handed Tolerance of diameter +/- % according to EN 13602	
Requirements	Copper Cu-ETP Density: 8,93 g/cm³ Elongation: A ₂₀₀ min 26%((A026) acc. to EN 13602))	
References	EN 13602: Copper and copper alloys -Drawn. round copper wire for the manufacture of electrical conductors	
	IEC 60228: Conductors of insulated cables	

Coarse Wire
Dimensions: 1,00 to 8,00 mm Ø
Plain course wire
conforming to DIN EN 13602 and AWG
Wire ETP/ETP1/OF-Cu conforming to DIN EN 13602



COPPER - TUBES WORKING PRESSURE (ACR AND MEDICAL)

Max. working pressure for copper tubes: connecting pipes for ACR installation service, industrial, laboratory and medical gasses, and vacuum.

EN 12735-1, EN 13348 - Ends closed - Cu DHP R290 Fixed lengths 5000 mm



Dimension	Max. Working Pressure
metric sizes	in bar
6 x 1 ,0 mm/5 m SL R290 EN 12735-1, 13348	220
8 x 1,00 mm/5m SL R290 EN 12735-1, 13348	157
10 x 1,00 mm/5m SL R290 EN 12735-1, 13348	122
12 x 1,00 mm/5m SL R290 EN 12735-1, 13348	100
15 x 1,00 mm/5m SL R290 EN 12735-1, 13348	79
16 x 1,00 mm/5m SL R290 EN 12735-1, 13348	73
18 x 1,00 mm/5m SL R290 EN 12735-1, 13348	65
22 x 1,00 mm/5m SL R290 EN 12735-1, 13348	52
28 x 1,00 mm/5m SL R290 EN 12735-1, 13348	41
28 x 1,5 mm/5m SL R290 EN 12735-1, 13348	62
35 x 1,5 mm/5m SL R290 EN 12735-1, 13358	49
42 x 1,5 mm/5m SL R290 EN 12735-1, 13348	41
54 x 2,00 mm/5m SL R290 EN 12735-1, 13348	42
64 x 2,00 mm/5m SL R290 EN 12735-1, 13348	35
70 x 2,00 mm/5m SL R290 EN 12735-1, 13348	32
76 x 2,00 mm/5m SL R290 EN 12735-1, 13348	30
80x 2,00 mm/5m SL R290 EN 12735-1, 13348	28
89 x 2,00 mm/5m SL R290 EN 12735-1, 13348	25
104 x 2,00 mm/5m SL R290 EN 12735-1, 13348	22
108 x 2,00 mm/5m SL R290 EN 12735-1, 13348	26

Dimension	Max. Work- ing Pressure
non-metric sizes	in bar
9,52 x 0,80 mm/5 m SL R290 EN 12735-1, 13348	101
12,70 x 0,80 mm/5 m SL R290 EN 12735-1, 13348	74
15,875 x 0,80 mm/5 m SL R290 EN 12735-1, 13348	58
19,05 x 0,90 mm/5 m SL R290 EN 12735-1, 13348	55
22,22 x 0,89 mm/5 m SL R290 EN 12735-1, 13348	46
22,22 x 1,00 mm/5 m SL R290 EN 12735-1, 13348	52
25,40 x 1,00 mm/5 m SL R290 EN 12735-1, 13348	45
28,575 x 0,89 mm/5 m SL R290 EN 12735-1, 13348	35
28,575 x 1,22 mm/5 m SL R290 EN 12735-1, 13348	49
34,925 x 0,92 mm/5 m SL R290 EN 12735-1, 13348	30
34,925 x 1,02 mm/5 m SL R290 EN 12735-1, 13348	33
41,275 x 1,22 mm/5 m SL R290 EN 12735-1, 13348	33
53,975 x 1,22 mm/5 m SL R290 EN 12735-1, 13348	25
66,675 x 1,63 mm/5 m SL R290 EN 12735-1, 13348	28
79,375 x 1,63 mm/5 m SL R290 EN 12735-1, 13348	23
92,075 x 2,03 mm/5 m SL R290 EN 12735-1, 13348	25

Max. working pressure for copper tubes: connecting pipes for ACR installation service, industrial, laboratory and medical gasses, and vacuum.

EN 12735-1, EN 13348 - Ends closed, packed in cartons, Cu DHP R220



Dimension Fixed pancake coil 15 m non-metric sizes	Max. Working Pressure
metric sizes	in bar
12,70 x 0,80 mm Pancake Coil 15.20M EN 12735-1	74
15,88 x 0,80 mm Pancake Coil 15.20M EN 12735-1	58
19,05 x 0,90 mm Pancake Coil 15.20M EN 12735-1	55
22,22 x 1,00 mm Pancake Coil 15.20M EN 12735-1	52



COPPPER - ISOFLEX

Dimension (mm)	Colour	Cross section (mm)	Weight / 2m
3 x 9 x 0,8	black	21,6	0,384
3 x 9 x 0,8	blue	21,6	0,384
3 x 9 x 0,8	green/yellow	21,6	0,384
6 x 9 x 0,8	black	43,2	0,769
6 x 9 x 0,8	blue	43,2	0,769
6 x 9 x 0,8	green/yellow	43,2	0,769
9 x 9 x 0,8	black	64,8	1,153
9 x 9 x 0,8	blue	64,8	1,153
9 x 9 x 0,8	green/yellow	64,8	1,153
3 x 13 x 0,5	black	19,5	0,347
6 x 13 x 0,5	black	39	0,694
6 x 13 x 0,5	blue	39	0,694
6 x 13 x 0,5	green/yellow	39	0,694
4 x 16 x 0,8	black	49,6	0,883
4 x 16 x 0,8	blue	49,6	0,883
4 x 16 x 0,8	green/yellow	49,6	0,883
6 x 16 x 0,8	black	74,4	1,324
6 x 16 x 0,8	blue	74,4	1,324
6 x 16 x 0,8	green/yellow	74,4	1,324
10 x 16 x 0,8	black	124	2,207
10 x 16 x 0,8	blue	124	2,207
10 x 16 x 0,8	green/yellow	124	2,207
2 x 20 x 1	black	40	0,712
3 x 20 x 1	black	60	1,068
4 x 20 x 1	black	80	1,424
2 x 24 x 1	black	48	0,854
3 x 24 x 1	black	72	1,282
4 x 24 x 1	black	96	1,709
5 x 24 x 1	black	120	2,136
6 x 24 x 1	black	144	2,563
8 x 24 x 1	black	192	3,418
10 x 24 x 1	black	240	4,272

Dimension (mm)	Colour	Cross section (mm)	Weight / 2m
2 x 32 x 1	black	64	1,139
3 x 32 x 1	black	96	1,709
4 x 32 x 1	black	128	2,278
5 x 32 x 1	black	160	2,848
6 x 32 x 1	black	192	3,418
8 x 32 x 1	black	256	4,557
10 x 32 x 1	black	320	5,696
5 x 40 x 1	black	200	3,560
6 x 40 x 1	black	240	4,270
8 x 40 x 1	black	320	5,696
10 x 40 x 1	black	400	7,120
4 x 50 x 1	black	200	3,560
5 x 50 x 1	black	250	4,450
6 x 50 x 1	black	300	5,340
8 x 50 x 1	black	400	7,120
10 x 50 x 1	black	500	8,900
5 x 63 x 1	black	315	5,607
6 x 63 x 1	black	378	6,728
8 x 63 x 1	black	504	8,971
10 x 63 x 1	black	630	11,214
4 x 80 x 1	black	320	5,700
5 x 80 x 1	black	400	7,120
6 x 80 x 1	black	480	7,120
8 x 80 x 1	black	640	11,390
10 x 80 x 1	black	800	14,240
5 x 100 x 1	black	500	8,900
6 x 100 x 1	black	600	10,680
8 x 100 x 1	black	800	14,240
10 x 100 x 1	black	1000	17,800
12 x 100 x 1	black	1200	21,360

According to EN 61439-1



COPPPER - ULTRAFLEX

Description	width (mm)	weight/ piece (kg)	Description	width (mm)	weight/ piece (kg)	Description	width (mm)	weight/ piece (kg)
UFLX 25-150-8/10	20	0,04	UFLX 50-900-8/10	20	0,43	UFLX 120-650-10	32	0,80
UFLX 25-200-8/10	20	0,05	UFLX 50-950-8/10	20	0,45	UFLX 120-700-10	32	0,85
UFLX 25-250-8/10	20	0,06	UFLX 50-1000-8/10	20	0,47	UFLX 120-750-10	32	0,91
UFLX 25-300-8/10	20	0,08	UFLX 50-1100-8/10	20	0,52	UFLX 120-800-10	32	0,97
UFLX 25-350-8/10	20	0,09	UFLX 50-1150-8/10	20	0,54	UFLX 120-850-10	32	1,03
UFLX 25-400-8/10	20	0,10	UFLX 100-150-10	20	0,17	UFLX 120-900-10	32	1,09
UFLX 25-450-8/10	20	0,11	UFLX 100-200-10	20	0,22	UFLX 120-950-10	32	1,15
UFLX 25-500-8/10	20	0,12	UFLX 100-250-10	20	0,26	UFLX 120-1000-10	32	1,21
UFLX 25-550-8/10	20	0,13	UFLX 100-300-10	20	0,31	UFLX 120-1100-10	32	1,33
UFLX 25-600-8/10	20	0,15	UFLX 100-350-10	20	0,36	UFLX 120-1150-10	32	1,39
UFLX 25-650-8/10	20	0,16	UFLX 100-400-10	20	0,41	UFLX 240-150-10	32	0,42
UFLX 25-700-8/10	20	0,17	UFLX 100-450-10	20	0,46	UFLX 240-200-10	32	0,54
UFLX 25-750-8/10	20	0,18	UFLX 100-500-10	20	0,50	UFLX 240-250-10	32	0,66
UFLX 25-800-8/10	20	0,19	UFLX 100-550-10	20	0,55	UFLX 240-300-10	32	0,77
UFLX 25-850-8/10	20	0,20	UFLX 100-600-10	20	0,60	UFLX 240-350-10	32	0,89
UFLX 25-900-8/10	20	0,22	UFLX 100-650-10	20	0,65	UFLX 240-400-10	32	1,01
UFLX 25-950-8/10	20	0,23	UFLX 100-700-10	20	0,70	UFLX 240-450-10	32	1,12
UFLX 25-1000-8/10	20	0,24	UFLX 100-750-10	20	0,74	UFLX 240-500-10	32	1,24
UFLX 25-1100-8/10	20	0,26	UFLX 100-800-10	20	0,79	UFLX 240-550-10	32	1,36
UFLX 25-1150-8/10	20	0,28	UFLX 100-850-10	20	0,84	UFLX 240-600-10	32	1,47
UFLX 50-150-8/10	20	0,08	UFLX 100-900-10	20	0,89	UFLX 240-650-10	32	1,59
UFLX 50-200-8/10	20	0,10	UFLX 100-950-10	20	0,94	UFLX 240-700-10	32	1,71
UFLX 50-250-8/10	20	0,13	UFLX 100-1000-10	20	0,98	UFLX 240-750-10	32	1,83
UFLX 50-300-8/10	20	0,15	UFLX 100-1100-10	20	1,08	UFLX 240-800-10	32	1,94
UFLX 50-350-8/10	20	0,17	UFLX 100-1150-10	20	1,13	UFLX 240-850-10	32	2,06
UFLX 50-400-8/10	20	0,20	UFLX 120-150-10	32	0,21	UFLX 240-900-10	32	2,18
UFLX 50-450-8/10	20	0,22	UFLX 120-200-10	32	0,27	UFLX 240-950-10	32	2,29
UFLX 50-500-8/10	20	0,24	UFLX 120-250-10	32	0,33	UFLX 240-1000-10	32	2,41
UFLX 50-550-8/10	20	0,27	UFLX 120-300-10	32	0,39	UFLX 240-1100-10	32	2,41
UFLX 50-600-8/10	20	0,29	UFLX 120-350-10	32	0,44	UFLX 240-1150-10	32	2,41
UFLX 50-650-8/10	20	0,31	UFLX 120-400-10	32	0,50			
UFLX 50-700-8/10	20	0,34	UFLX 120-450-10	32	0,56			
UFLX 50-750-8/10	20	0,36	UFLX 120-500-10	32	0,62			
UFLX 50-800-8/10	20	0,38	UFLX 120-550-10	32	0,68	According to EN	61439-1	
UFLX 50-850-8/10	20	0,40	UFLX 120-600-10	32	0,74	According to Live 01455 1		



CW004A - Cu-ETP

Oxygen-containing electrolytic copper. Common alloy for live purposes.

Contains oxygen and is therefore not suitable for welding and brazing, as this can cause hydrogen embrittlement in the material.

Primarily bars / sheets and plates

CW008A - Cu-OF

Oxygen-free copper - the purest copper alloy.

Refined in oxygen-free atmosphere as copper does not absorb oxygen during the refining process.

Have maximum electrical conductivity and maximum coldformability when the alloy is oxygen-free is very suitable for welding + hard- and soft soldering.

Primarily used where there are requirements for high electrical conductivity. Primarily bars / sheets and plates

CW024A - Cu-DHP

Phosphor deoxidated copper - suitable for all purposes where there is no requirement for conductivity the addition of the phosphorus makes the alloy oxygenfree which makes it very suitable for welding as well as hard and soft soldering Primarily sheets and tubes

CW021A - Cu-HCP

Fosfordeoxideret copper with very low phosphorus content.

Used for demanding high conductivity

The addition of phosphorus makes the alloy oxygenfree which makes it very suitable for welding + hardand soft soldering. Primary thin ribbons.

CW118C - Cu-TeP

Tellurcopper - drilling / turning alloy of copper. Has good electrical conductivity and is suitable for machine processing. Primarily rods.



For more tehnical information please see page 22

As copper is recycled, again and again, without any loss of performance, it is rarely lost from the world's resources.



COPPER

Standard alloys

EN	ISO	Sweden	Denmark	Germany
Standard	Туре	SS	DS	DIN
CW004A	Cu-ETP	5010	5010	E-Cu
CW008A	Cu-OF	5011	5011	OF-Cu
CW024A	Cu-DHP	5015	5015	SF-Cu
CW021A	Cu-HCP	5030	5030	SE-Cu

Characteristics

Mate	Material				Composition in %		
		Cu	Other	kg/dm³	Description		
Г.С.	Min	99.90	Ilt 0.005 - 0.04	8.9			
E-Cu	Max	-			Oxygen containing copper which has a very high electrical and thermal conductivity		
05.6	Min	99.95		8.9 Cu-OF is a high purity, oxygen free, non phosphorus-deoxidized copper tha			
OF-Cu	Max	-			not contain any vacuum evaporating elements.		
CE C	Min	99.90	P = 0.015-0.04	8.9			
SF-Cu	Max	-			Cu-DHP is a phosphorus-deoxidized copper with a limited, high amount of residual phosphorus		
CF C	Min	99.90	P = 0.003	8.9	Cu-PHC is a high purity, low level residual		
SE-Cu	Max	-			phosphorus, deoxidized copper.		

Mechanical properties - EN 1652

Alloy	EN standard	Condition (Temper)	Thickness	Tensile	Yield strength	Elongation T=0-2,5	Elongation T<2,5	HV (Hardness Vickers)
			mm	R _m	R _{p0.2}	A%min.	A%min.	
		R200	over 5	200-250	max 100	-	42	
		H040	-			-	-	40-65
	F CW008A HP CW024A	R220	0.2 - 5	220-260	max 140	33	42	-
Cu-ETP		H040		-		-	-	40-65
Cu-OF		R240	0.2 - 15	240-300-	min 180	8	15	-
Cu-DHP		H065		-		-	-	65-95
Cu-HCP		R290	0.2 - 15	290-360	min 250	4	6	-
		H090		-		-	-	90-110
		R360	0.2 - 2	360-	min 320	2	-	-
		H110		-		-	-	110-

Tolerances - typical

Thickness	Tolerance	Tolerance
mm	Thickness	Width
0.10-0.80	+/- 0.020	-0/+1
0.81-1.20	+/- 0.030	-0/+1
1.21-1.80	+/- 0.035	-0/+1
1.81-2.00	+/- 0.040	-0/+2
2.01-5.00	+/- 0.050	-0/+5
5.01-9.00	+/- 0.100	-0/+5
9.01-30.00	+/- 0.0200	-0/+5
30.10-100.00	+/- 1.000	-0/+5

Norm

Description	Relate norm
Copper sheet Industry	EN 1652
Copper strip Industry	EN 1652
Copper round Industry	EN 1652
Tinning	EN 13148
Galvanazing	EN 14436
Copper sheet Building	EN 1172
Copper flats	EN 13601
Copper rods	EN 13601
Copper squares	EN 13601
Copper tubes Industry	EN1057
Copper ACR tubes	EN 12735-1
Copper tubes Medical gas	EN 13348
Copper tubes Co2	EN 12735-1

1. Validity

The present Terms of Sale and Delivery shall apply to all quotations, sales and deliveries unless otherwise agreed in writing.

Any terms of sale and delivery which may be printed on the order confirmation or to which the customer otherwise refers shall only be valid if this is expressly stated in our order confirmation.

2. Product Information

All information about weight, dimensions and quality as well as technical data and other data stated in catalogues, prospectuses and any other advertising material shall be directional and shall only be binding to the extent they form an express part of the agreement between the parties.

3. Quotations

All prices shall be subject to changes in raw material and exchange rates, delivery time subject to the goods being unsold and change of delivery time from works. If all Seller gives a written quotation which does not state a specific time stipulated for acceptance, the quotation shall lapse if acceptance has not been received by the Seller within 2 weeks from the date of quotation.

4. Quality

Buyer shall be responsible for ensuring that the technical data and the material in its entirety are suitable for his requirements.

A certificate will as agreed be enclosed in accordance with agreement. Seller will check that the certificate meets the demands for the delivery but will not check the information provided in the certificate.

5. Quantity

The total quantity delivered shall be subject to a margin of plus/minus 10% of the quantity specified. Calculation by weight, unit or length shall be in accordance with generally accepted practice.

6. Orders and agreement

In order to be binding on Seller, an order shall be confirmed in writing by Seller, and only Seller's Terms of Sale and Delivery shall apply to the execution of the order.

If Buyer has any objections to the contents of the order confirmation these shall be made in writing and shall be received by Seller not later than one week after the date of the order confirmation.

7. Prices and Delivery

In connection with sales from stock, the prices excl. VAT and terms of payment are stated in Seller's current price list in force at the time in question shall apply. Delivery shall be ex Seller's address.

Freigt payable by Buyer shall always be invoiced Buyer and shall not be paid in cash on receipt.

8. Payment

Seller shall receive payment on the date specified in the invoice as the final due date for payment. If such a date has not been specified payment shall be made in cash on delivery. However, Seller reserves the right to change the terms of payment if Seller receives information that Buyer's ability to pay has deteriorated. If the delivery is postponed because of Buyer's situation (claimant's default), Buyer shall nevertheless, unless otherwise notified by Seller, be under an obligation to make any payment to Seller as if delivery had been made at the agreed time. If payment is made after the due date, Seller shall be entitled to charge interest on the outstanding amount from time to time from the due date at the rate of interest stated on the invoice at any given time. Buyer shall not be entitled to offset any counterclaims against Seller which have not been recognized in writing by Seller and shall not be entitled to withhold any part of the purchase price because of counterclaims of any kind whatsoever.

9. Retention of Title

Seller shall retain title to the goods sold with the restrictions that follow from mandatory rules of law until the full purchase price plus any costs accrued have been paid to Seller or to the party to whom Seller has assigned his right.

10. Delivery

Delivery shall be made from Seller's address whether or not Seller delivers the goods sold to Buyer using his own employees or third party in accordance with a separate agreement. The time of delivery has been fixed by Seller at Seller's best estimate with the reservations made when the quotation was given/the agreement was entered into.

In connection with sale of goods from stock and standard goods, a postponement of the time of delivery by 30 days due to Seller's situation shall be regarded as delivery in due time and shall be respected to the effect that Buyer cannot exercise any remedies against Seller for this reason unless otherwise agreed.

In connection with sale of individually manufactured goods, Seller shall not be liable for any form of delay irrespective of the duration hereof to the effect that Buyer cannot exercise any remedies against Seller for this reason. Each of the parties shall, however, be entitled, without any liability, to cancel the agreement if the delay exceeds three months.

If a delay in delivery is due to Seller being in a situation as stated in Clause 15 (exemption from liability), the time of delivery shall be postponed by the time of duration of the obstacle. However, both parties shall, without any liability, be entitled to cancel the agreement if the obstacle has lasted for more than 3 months. The present provision shall apply whether or not the cause of delay occurs before or after the expiry of the agreed delivery time

In the above case, Seller shall notify Buyer of the change in delivery time without undue delay.

11. Packaging

Packaging shall be on Buyer's account unless it is expressly stated that this has been included in the price.

Packaging may only be returned in accordance with a separate agreement.

12. Cancellation

In connection with cancellation of deliveries, Buyer shall be under an obligation to pay full compensation, including for loss of profit, and generally to indemnify Seller for all costs incurred in connection with the cancellation.

13. Product changes

Seller reserves the right to make changes to agreed specifications without notice if this can be done witout any inconvenience to the Buyer.

14. Defects and Complaints

Upon delivery, Buyer shall immediately perform such inspection of the goods sold as generally accepted business practice requires. Any defects in the goods sold will, within a reasonable period of time, be remedied or a replacement delivery will be made at Seller's discretion.

If such remedial action is not taken or a replacement delivery is not made within a reasonable period of time, Buyer shall be entitled to terminate the agreement, require a reduction in the purchase price or claim damages pursuant to with the general rules of Danish law and the present Terms of Sale and Delivery.

If Buyer wants to claim a defect, Buyer shall notify Seller hereof in writing immediately after the defect has been or should have been discovered and specify the nature of the defect in the written notification. Samples of a sufficient quantity for a certain assessment of the justification of the complaints must be enclosed with complaints about the quality of the goods. If Buyer has discovered or should have discovered the defect, and he does not

submit a complaint in accordance with the above, he cannot subsequently make a claim about the defect

If Buyer has not made a claim about the defect to Seller within 6 months from the date of delivery, he cannot subsequently claim any such defect.

If remedial action has been taken or a replacement delivery has been made, Seller's liability for defects cannot be extended to more than 1 year from the original date of delivery.

15. Limitation of Liability

A claim for damages against Seller cannot exceed the invoice amount for the product sold.

Seller shall not be liable for any consequential loss, loss of profit or any other indirect loss which follows from the agreement, including any indirect loss which has incurred as a result of delay or defects in the goods sold. The following circumstances shall result in exemption of liability for Seller if they prevent performance of the agreement or make the performance of the agreement unnecessarily onerous.

Industrial disputes and any other circumstances beyond the control of the parties such as fire, war, mobilisation or unforeseen military call-ups of an equivalent extent, requisitioning, sequestration, exchange controls, riots and civil unrest, shortage of transport possibilities, general scarcity of goods, fuel restrictions and defects in or delays in deliveries from sub-suppliers which are due to any of the circumstances set out in the present Clause. Circumstances like those set out above which occured before the quotation was given/the agreement was entered into shall only entail exemption of liability if their effect on the performance of the agreement could not have beeen foreseen at the time in question.

Seller shall be under an obligation to notify Buyer in writing without undue delay should any such circumstances occur.

16. Product Liability

Seller shall only be liable for personal injury if it is proved that the injury was suffered as a result of errors or omissions on the part of Seller or other parties for whom, Seller is responsible.

Seller shall not be liable for any damage to real property or movable property.

Seller shall not be liable for any consequential loss, loss of earnings or any other indirect loss.

To the extent to which Seller may incur product liability vis-à-vis a third party, Buyer shall be under an obligation to indemnify Seller to the same extent as Seller's liability is limited in accordance with the above three sentences. If a third party makes a claim against one of the parties for liability for damages in accordance with the present Clause the party in question shall immediately notify the other party.

Seller and Buyer shall be under a mutual obligation to accept that legal proceedings are instituted against them at the court which hears claims for damages brought against one of them on the basis of damage or injury allegedly caused by the delivery.

These limitations to Seller's liability shall not apply if he has shown gross negligence.

17. Returns

Returns will only be accepted in accordance with a special agreement on this with Seller.

Unless otherwise agreed, crediting of returns shall be subject to the returns being undamaged and as for works/factory-packaged materials that they are in original, unbroken packaging.

18. Disputes

Any disputes arising between the parties shall be settled by the courts in Denmark pursuant to Danish law.



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