

Excellence in Fabricating Copper



ABOUT US

SARKUYSAN was founded by the gold dealers and jewellers of the Grand Bazaar, an important centre of commerce in Istanbul in 1972 to produce electrolytic copper products. Sarkuysan derives its name from the first syllables of the founders' professions (SARraf: Gold dealer; KUYumcu: Jeweller; SANatkar: Artist).

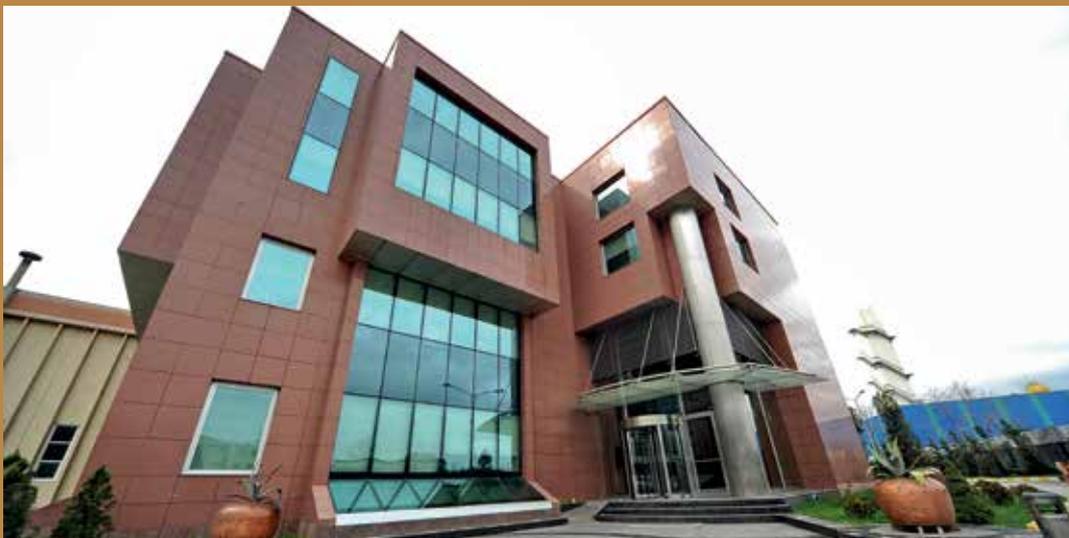
The company has a special place in the history of industrialization of the country as the first successful publicly held corporation. The production plants of Sarkuysan are located in Gebze and Darica, on an area of 180.000 square metres which 77.000 square metres are covered area and where electrolytic copper products, copper tube and busbars are produced.

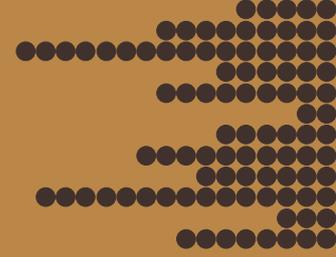
Sarkuysan, with its trademark "sks" products, is the leader in its sector in terms of production and sales in the domestic market, and exports a significant portion of its products to over 60 countries in five continents. It is estimated that almost half of the automobiles and commercial vehicles produced in Europe use Sarkuysan's wires. For many years the company has been selling oxygen free and nickel plated copper wires to the suppliers of NASA and in recent years has been providing to the aerospace industry.

The company has over 700 employees. 90 percent of the workers at the production units are graduates of either vocational schools or high school and they attend training programs every year. The Company manufactures a portion of its own machinery and facilities either under licence or by utilizing own know-how. In addition, a considerable portion of power and steam requirement of the Company is generated at the cogeneration plant on its premises. Sarkuysan, utilizing its technological experience and expertise accumulated during a period over 40 years, obtains successful results both at domestic and international markets.

Sarkuysan is a group of companies, consisting of Sarmakina A.Ş., a manufacturer of machinery, spare parts and supplementary items like reels and pallets for the wire and cable industry, which is also active in supplying to the electrotechnic industry, Demisaş A.Ş., a manufacturer of nodular and gray cast iron and various parts for the automotive industry, Sarda A.Ş. marketing and sales company of Sarkuysan products and Bektaş A.Ş. a participating company in Bemka A.Ş., the enamelled copper wire manufacturer. In line with its intensive export sales marketing efforts, Sarkuysan has a branch, Sarkuysan S.P.A., in Italy and sales and marketing incorporation, Sark-USA, Inc., in the USA since 2002. Sark-Wire, Incorporated in Albany, New York, commenced production at its own plant in Albany towards the end of 2009. The second plant has initiated production at the beginning of 2016 in Toccoa, Georgia. Thus, Sarkuysan has become a pioneer Turkish company with production facilities in the USA. Also high value added products are produced at the Aegean Free Zone plant of the company and exported to various countries. The company also has a sales store at Perpa Business Center in Istanbul to meet retail requirements in smaller quantities.

SARKUYSAN supplies many products in accordance with international standards with "sks" trademark to both the domestic and the world market. These products are used as input material for many industrial sectors that facilitate and add value to our lives. Every year the company offers employment opportunities to many people. With approximately 5000 shareholders, Sarkuysan, with its tax payments and distribution of dividends, and foreign currency revenues, creates added value for the country's economy. Today SARKUYSAN is a dynamic and enterprising International Corporation truly publicly owned and with a modern professional management structure.

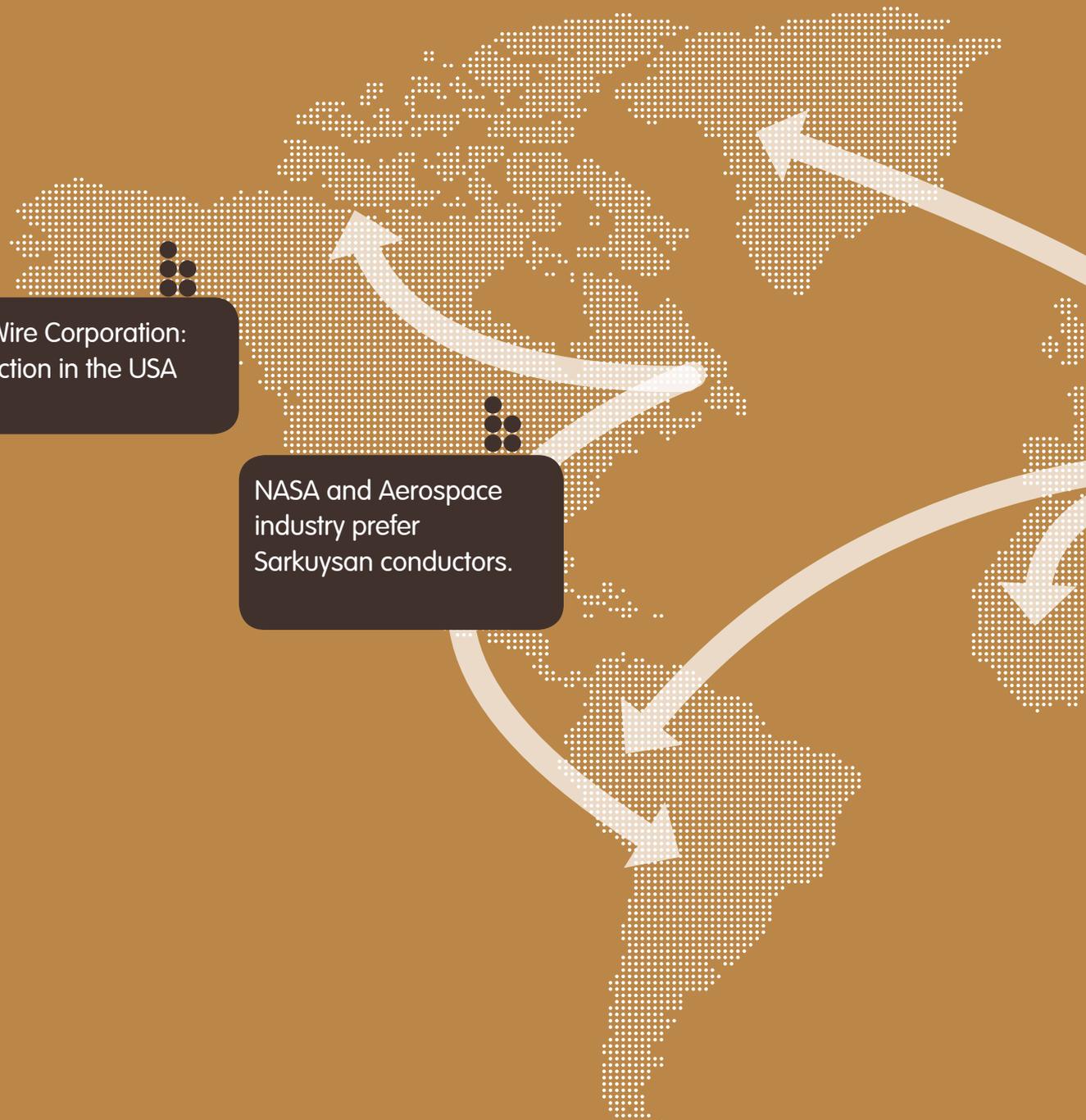




WHY SARKUYSAN?

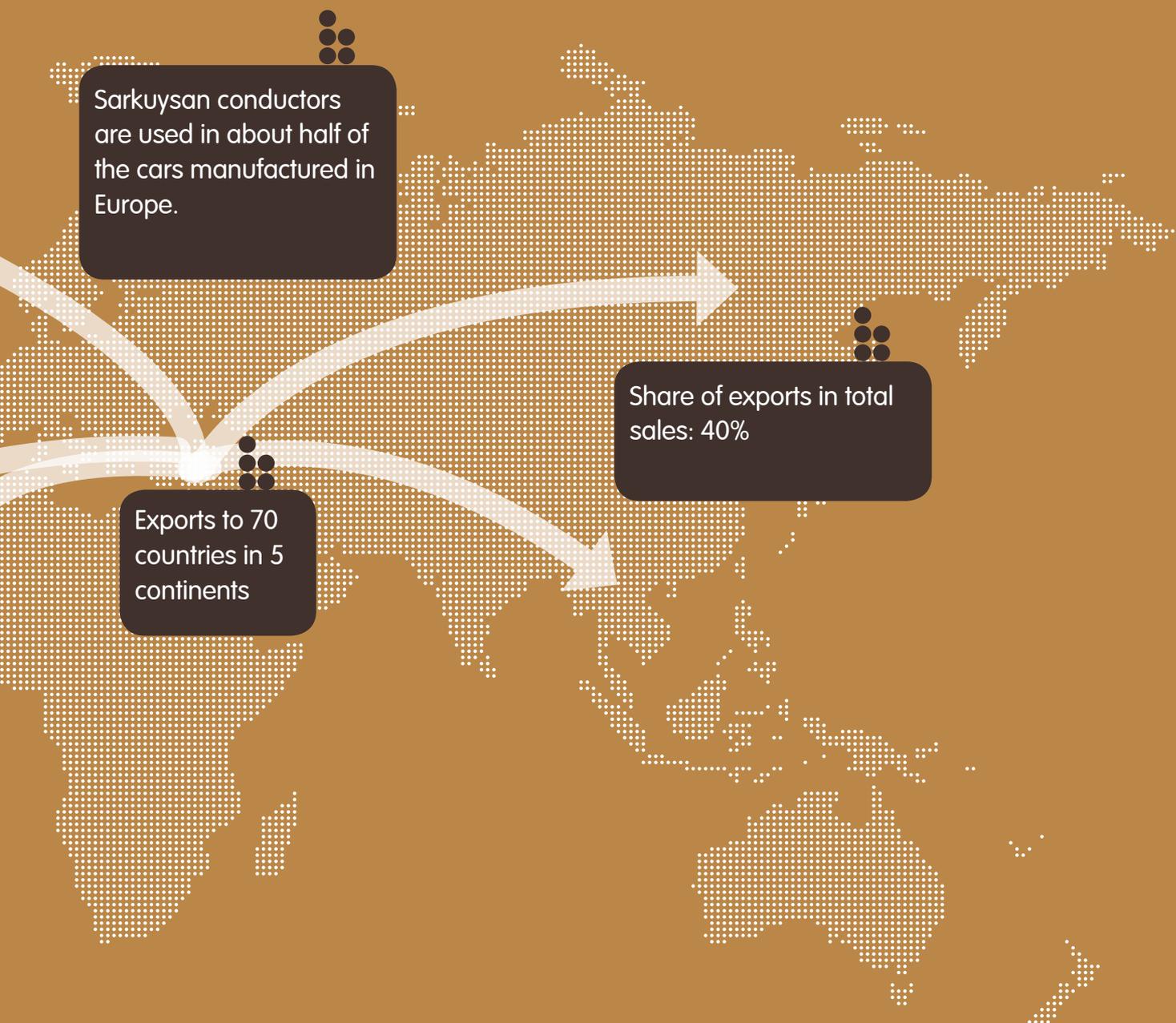
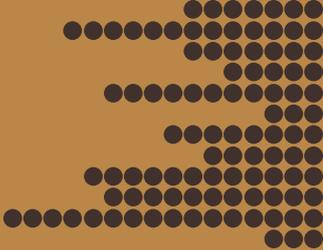


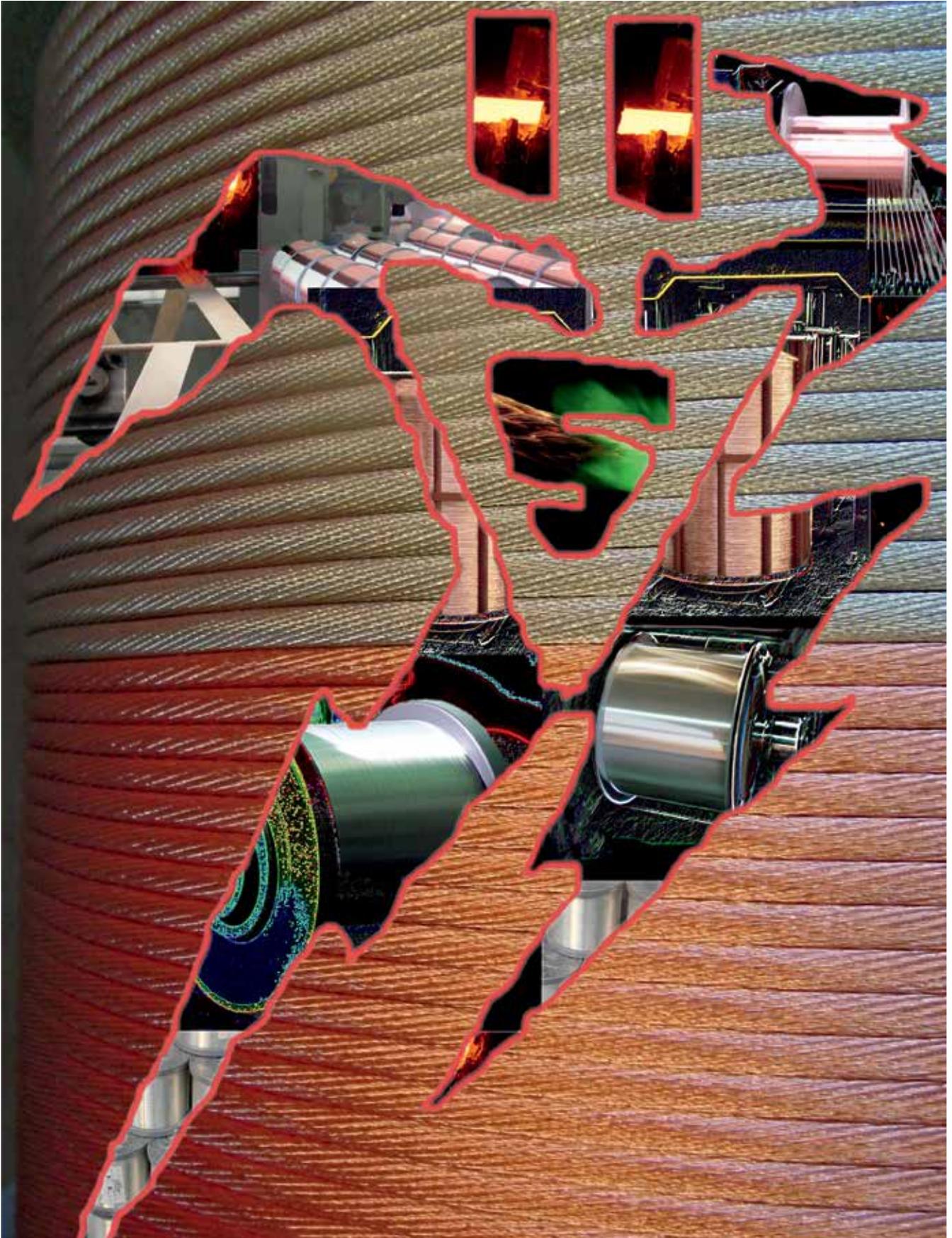
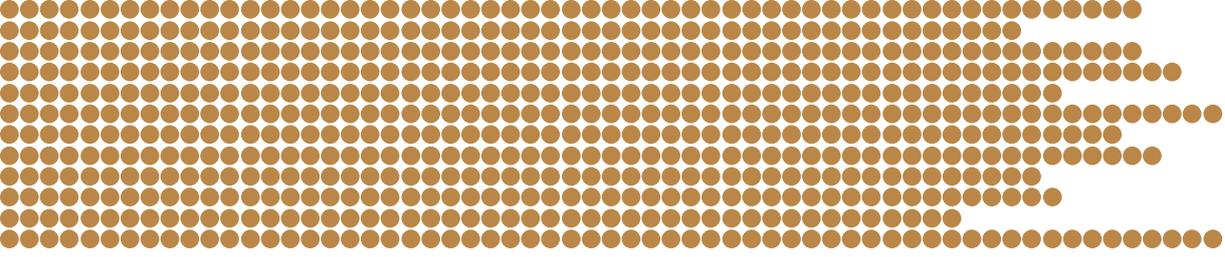
SARKUYSAN IN THE GLOBAL ARENA

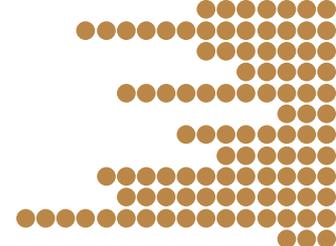


Sark Wire Corporation:
Production in the USA

NASA and Aerospace
industry prefer
Sarkuysan conductors.







WIRE ROD

ETP & OF WIRE ROD		
	ETP WIRE ROD	OF (OXYGEN FREE) WIRE ROD
Nominal Diameter Range	8.0 – 11.0 – 16.0 mm (5/16", 7/16", 5/8")	8.0 - 12.5 – 20.0 mm (5/16", 1/2", 3/4")
Dimensional Tolerance	± 0.38 mm (± 0.015")	
Oxygen Content	180-300 ppm	Max. 3 ppm
Conductivity	Min. 58.58 m/ohm mm ² , > 101 IACS %	
% Elongation	Min. 40%	Min. 35%
Weight	Max. 4,500 kg (9,910 lb)	Max. 3,500 kg (7,710 lb)
Standards	ASTM B49, EN 1977	ASTM B170, ASTM B49, EN 1977

ETP & OF WIRE ROD PACKING

Placed on wooden or steel pallets strapped and shrink-wrapped.

Product Type	Pallet Dimensions (mm)	Coil Dimensions (mm)			Weight (kg)	Tare (kg)
		D	d	h		
ETP-WIRE ROD	1,500X1,500X160	1,600	900	500-775	~2,500-4,500	~50
OF-WIRE ROD		1,400	700	500		



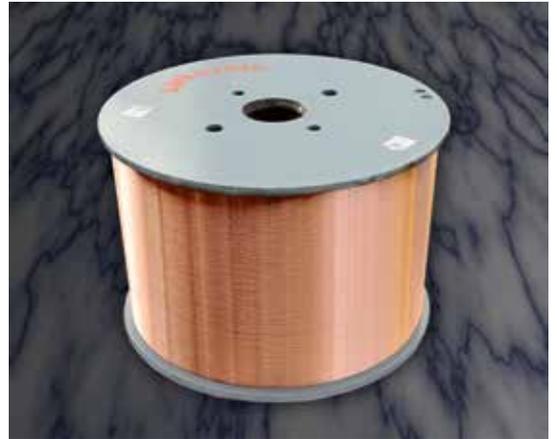
WIRE

MONO WIRE

BARE COPPER WIRE

Size Range: \varnothing 0.05 - 4.50 mm

Standards: ASTM B1, ASTM B2, ASTM B3, EN 13602

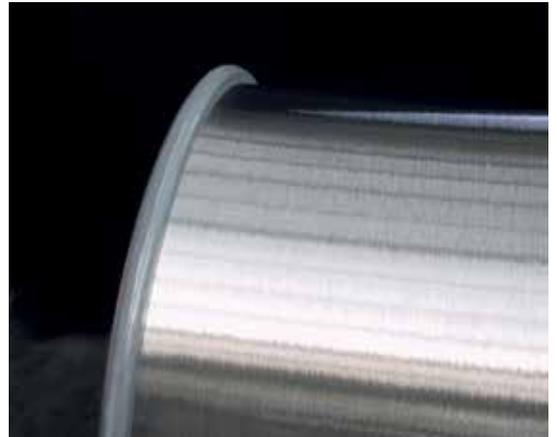


TIN PLATED COPPER WIRE

Diameter Size Range for Input Wire: Maximum \varnothing 3.00 mm

Diameter Size Range for Output Wire: \varnothing 0.05 - 1.60 mm

Standards: EN 13602, ASTM B33



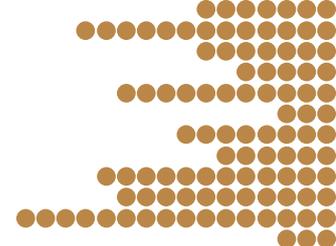
NICKEL PLATED COPPER WIRE

Diameter Size Range for Input Wire: Maximum \varnothing 2.00 mm

Diameter Size Range for Output Wire: \varnothing 0.10 - 1.00 mm

Standards: ASTM B355





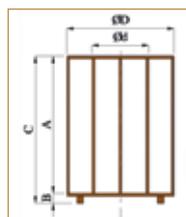
COPPER WIRE PACKING

Carton baskets are tightened with composite straps and shrink-wrapped. Only 1,800-2,000 kg baskets are used for tin plated wires.

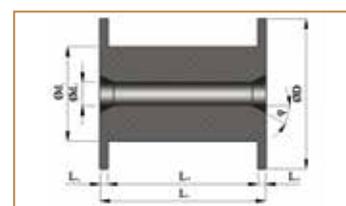
CARTON BASKETS								
Capacity (Kg)	Basket Dimensions (mm)				Pallet Dimensions (mm)			Tare (Kg)
	A	B	D	E	C	E	E1	
500	650	1,020	1,135	650	115	620	650	13-16
1,500-1,750	900	1,500	1,665	940	130	940	940	30-35
1,800-2,000	1,060	1,420	1,560	1,100	130	1,100	1,100	40-50



STEEL BASKETS						
Capacity (Kg)	Basket Dimensions (mm)					Tare (Kg)
	D	d	A	B	C	
500	650	350	1,250	120	1,370	75-90
1,500-1,750	950	440	1,720	120	1,820	181-240
1,800-2,000	1,100	600	1,553	120	1,670	189-226

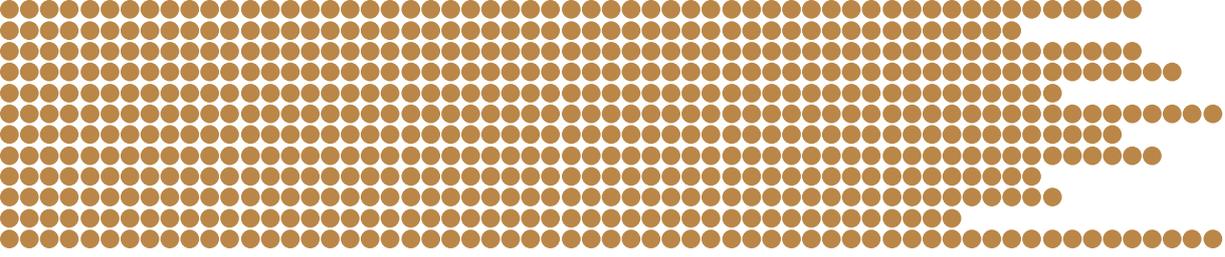


PLASTIC SPOOLS								
Spool Type	Spool Dimensions (mm)						Net Weight (Kg)	Tare (Kg)
	D	d1	d2	L1	L2	b		
100	100	63	16	100	80	30	~2	0.125
160	160	100	22-95	160	128	30	~9	0.35-0.28
200	200	125	22-76-100	200	160	30	~17	0.60-0.54
250	250	160	22-76.2-102-127	200	160	30	~25	1.11-1.35
400	400	250	127	260	300	30	~110	5
560	560	355	127	356	280	30	~200	13.5
630	630	400	127	350	450	30	~250	17



METAL & WOODEN SPOOLS

Please see page 9 for details of metal and wooden spool dimensions.



MULTIWIRE

BARE, TIN PLATED AND NICKEL PLATED MULTIWIRE

Diameter Range for Dynamic Spooling: 0.05 - 1.02 mm (0.002 - 0.04")

Diameter Range for Static Spooling: 0.127 - 0.50 mm (0.005 - 0.02")

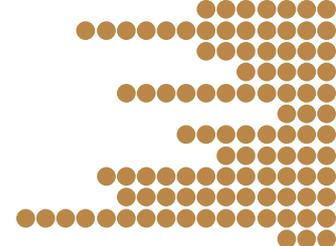
Standards: ASTM B1, ASTM B3, ASTM B33, ASTM B355, EN 13602



MULTIWIRE FOR BRAIDER BOBBINS

Bobbin Types: Spirka – S2; Spirka – S3; Short Wardwell – WSN01; Long Wardwell – WSN02 and Wardwell (without snapping)





BUNCHED WIRE & ROPE CONDUCTOR

Size Range for Bunched Bare and Tin Plated Copper Conductors: 0.055 - 300 mm²

Size Range for Nickel Plated Copper Conductors: 0.20 - 300 mm²

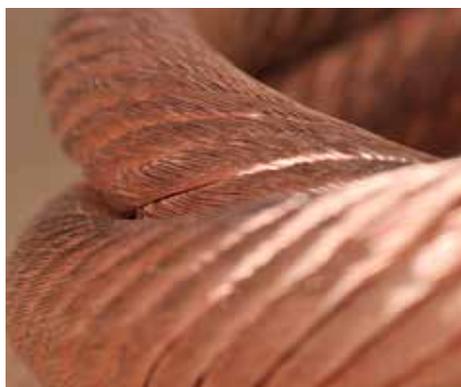
Standards:

Bunched Conductors: ASTM B174, EN 60228

Smoothbunch Conductors: ASTM B174, ASTM B8, ASTM B286, EN 60228

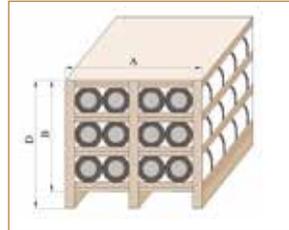
Rope-lay Conductors: ASTM B172, ASTM B173, EN 60228

Tin Overcoated and Top Coated Conductors: ASTM B470

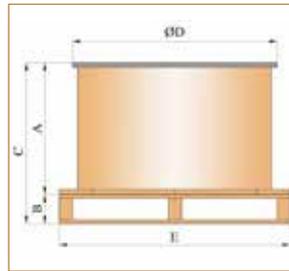


PALLETS

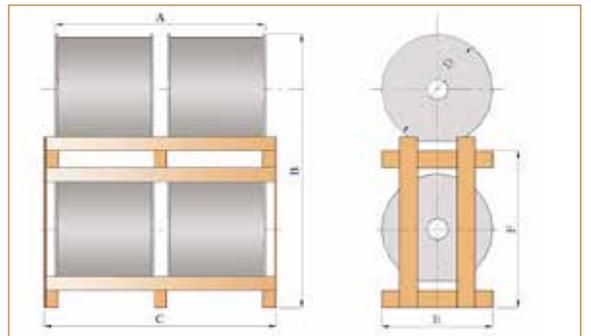
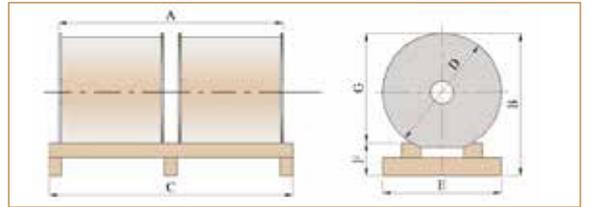
STACKED WOODEN PALLETS								
Spool Type	Pallet Dimensions					Number of Spools	Net Weight (Kg)	Total Tare (Kg)
	A	B	C	D	E			
160	1,000	790	110	900	930	120	~1,150	98-107
200	1,000	720	110	830	930	60	~800	97.5-101
250	1,000	850	110	960	930	48	~1,250	118-130



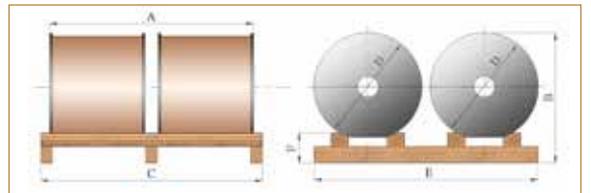
WOODEN PALLETS FOR VERTICAL POSITION OF SPOOLS								
Spool Type	Pallet Dimensions (mm)					Number of Spools	Net Weight (Kg)	Total Tare (Kg)
	A	B	C	D	E			
400	400	143	543	400	900*950	4	~300	150-170
560	400	143	543	560	680x680	1	~329	55-60
630	450	143	593	630	680x680	1	~500	67-74
800	540	155	695	800	850x850	1	~820	180-195

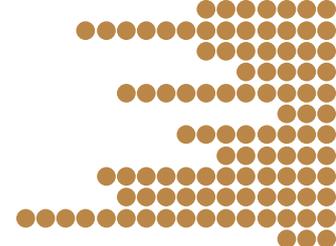


WOODEN PALLETS FOR HORIZONTAL POSITION OF SPOOLS								
Spool Type	Pallet Dimensions (mm)					Number of Spools	Net Weight (Kg)	Total Tare (Kg)
	A	B	C	E	F			
400 (Single Layer)	600	510	1,000	530	185	3	~250	130-150
400 (Single Layer)	900	510	1,000	900	160	6	~500	300-315
560 (Single Layer)	880	670	900	600	190	2	~660	100-120
560 (Double Layer)	880	1,400	900	600	840	4	~1,300	200-240
560 Plastic (Double Layer)	730	1,450	870	610	1,210	4	~700	200-240
560 Plastic (Single Layer)	1,100	690	1,140	1,160	160	6	~1,050	235-265
560 Plastic (Double Layer)	1,100	2,360	1,140	1,210	1,210	12	~2,100	270-285
630 (Single Layer)	920	740	1,000	700	190	2	~1,000	120-144
630 (Double Layer)	920	1,540	1,000	700	910	4	~1,550	240-288



STEEL PALLETS FOR HORIZONTAL POSITION OF SPOOLS								
Spool Type	Steel Pallet Dimensions (mm)					Number of Spools	Net Weight (Kg)	Total Tare (Kg)
	A	B	C	E	F			
630 (Single Layer)	775	780	960	675	200	2	~750	184-194
630 (Single Layer)	775	780	960	1,330	200	4	~1,500	366-386





SPOOLS

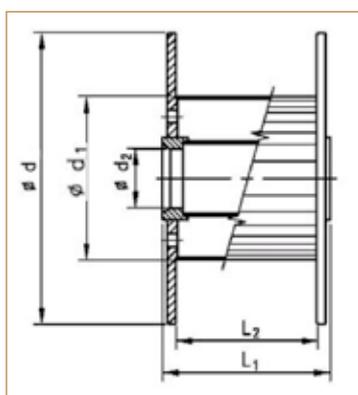
DOUBLE WALLED STEEL SPOOLS							
Spool Type	Spool Dimensions (mm)					Net Weight (Kg)	Tare (Kg)
	d	d1	d2	L1	L2		
400	400	224	127	200	250	~125	37-45
560	560	315	127	400	355	~330	57-64
630	630	355	127	450	400	~515	67-74
1,250	1,250	630	80	800	650	~2,500	195-210



MASSIVE STEEL SPOOLS							
Spool Type	Spool Dimensions (mm)					Net Weight (Kg)	Tare (Kg)
	d	d1	d2	L1	L2		
400	400	224	127	300	250	~125	37-45
560	560	315	127	395	355	~330	57-60
800	800	450	127	600	500	~1,000	180-195



WOODEN SPOOLS							
Spool Type	Spool Dimensions (mm)					Net Weight (Kg)	Tare (Kg)
	d	d1	d2	L1	L2		
630	630	280	127	430	380	300-450	~28
800	800	460	127	530	470	700-800	~30
1,250	1,250	700	80	580	460	1,500-2,500	~200



FLAT WIRE & PROFILE

Size Range:

Cross Section: 3 - 150 mm²

Width: 3 - 30 mm

Thickness: 1 - 12 mm

Standards:

ASTM B272, EN 13601, DIN 46452



TROLLEY WIRE

Size Range:

Cross Section: 80, 100, 107,
120, 150 mm² (Pure Copper)
(120 - 150 mm² - CuAg0,1)

Conductors:

Dropper, Y Dropper, Messenger Wire - CuMg0,5
Feeding Wire and Connection Wire to The Rail
at Pole Earthing (Pure Copper)

Standards:

ASTM B47, UIC 870-0, EN 50149, DIN 43141



PAPER INSULATED FLAT AND ROUND WIRES

Size Range:

Flat Wires:

Width: 3.00 - 20.00 mm

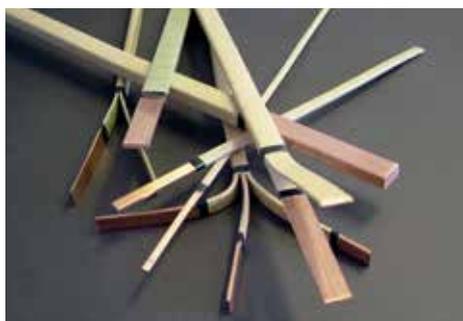
Thickness: 0.90 - 10.00 mm

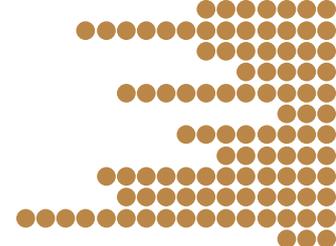
Round Wires:

Diameter Range: 1.25 - 4.00 mm

Paper Type: Thermokraft IEC 554-2 VDE 0311 /
Standard Type Nomex T-410

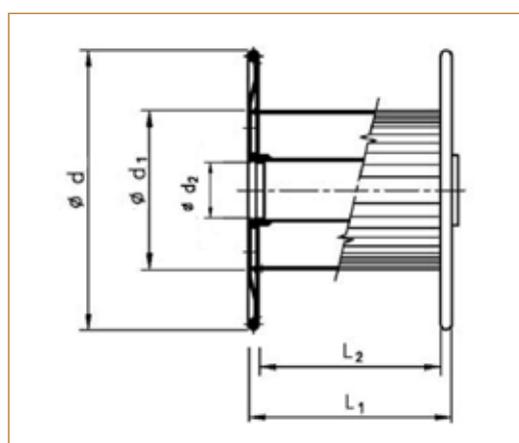
Standards: EN 13601, IEC 60317-0-2,
IEC 60317-27, IEC 60554-3-5,
IEC 60851-1-6





FLAT WIRE & PROFILE PACKING

FLAT WIRE & PROFILE SPOOL DIMENSIONS							
Spool Type	Spool Dimensions (mm)					Net Weight (Kg)	Tare (Kg)
	d	d1	d2	L1	L2		
1300 Wooden	1,300	810	127	515	355	1,200-1,350	160-189
DIN 630 Steel	630	355	127	450	400	350-400	67-74
DIN 800 Steel	800	450	127	540	500	600-750	180-195



FLAT WIRE & PROFILE COIL DIMENSIONS							
Coils	Coil Dimensions (mm)			Pallet Dimensions (mm)	# of Coils	Tare of Pallet (Kg)	Net Weight (Kg)
	D (Outside Diameter)	d (Inside Diameter)	h (Height)				
Horizontal	Depends on the total weight (450-750)	350-450	200	700x700x110	1	6-10	70-510
Vertical				700x550x230	2	13	400
				700x900x230	4	18	800

PV RIBBON WIRE

Thickness: 0,080 – 0,500 mm

Width: 1,000 – 5,000 mm

Coating Thickness: 10 – 40 µm

Copper Core Material: Cu-ETP or Cu-OF

Coating Material: Bare, Sn 100, Sn63Pb37, Sn62Pb36Ag2



TUBE

COPPER TUBE

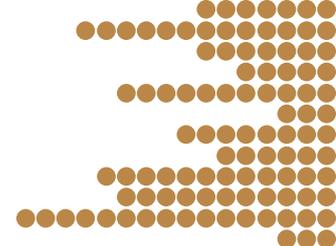
Material: Cu-DHP (C 12 200 / SF-Cu) **Chemical Composition:** Min. 99.90% Cu, 0.015-0.040% P

Standards: ASTM B280, ASTM B68, ASTM B88, EN 1057, EN 12735, EN 12449

COPPER TUBE SIZES								
Outer Diameter		Wall Thickness		Unit Weight		Production		
(in)	(mm)	Min. (mm)	Max. (mm)	Min. (kg/m)	Max. (kg/m)	LWC (kg)	Pancake (m)	Straight (m)
3/16	4.76	0.35	1.0	0.043	0.105	90-150	15-100	2.0-6.0
0.196	5.00	0.35	1.0	0.046	0.112	90-150	-	-
0.236	6.00	0.35	1.0	0.077	0.140	140-155	15-100	2.0-6.0
1/4	6.35	0.35	1.0	0.079	0.150	140-155	15-100	2.0-6.0
0.276	7.00	0.35	1.0	0.091	0.168	140-155	-	-
5/16	7.93	0.35	1.0	0.100	0.194	140-155	15-100	2.0-6.0
0.315	8.00	0.35	1.0	0.105	0.196	140-155	15-100	2.0-6.0
3/8	9.52	0.35	1.0	0.121	0.238	140-155	15-100	2.0-6.0
0.394	10.00	0.35	1.0	0.133	0.252	140-155	15-100	2.0-6.0
0.433	11.00	0.35	1.0	0.147	0.280	140-155	15-100	2.0-6.0
0.472	12.00	0.35	1.0	0.161	0.308	140-155	15-50	2.0-6.0
1/2	12.70	0.35	1.0	0.164	0.327	140-155	15-50	2.0-6.0
0.512	13.00	0.50	1.0	0.175	0.336	140-155	15-50	2.0-6.0
0.531	13.50	0.50	1.0	0.182	0.350	140-155	15-50	2.0-6.0
0.551	14.00	0.50	1.0	0.189	0.363	140-155	15-50	2.0-6.0
0.591	15.00	0.50	1.0	0.203	0.391	140-155	15-50	2.0-6.0
5/8	15.87	0.48	1.0	0.207	0.416	140-155	15-50	2.0-6.0
0.630	16.00	0.50	1.0	0.217	0.419	140-155	15-50	2.0-6.0
0.669	17.00	0.50	1.0	0.231	0.447	140-155	15-50	2.0-6.0
0.709	18.00	0.50	1.0	0.245	0.475	140-155	15-50	2.0-6.0
0.748	19.00	0.50	1.5	0.259	0.734	140-155	15-25	2.0-6.0
3/4	19.05	0.48	1.5	0.249	0.736	140-155	15-25	2.0-6.0
0.787	20.00	1.00	1.5	0.531	0.776	140-155	15-25	2.0-6.0
0.866	22.00	1.00	1.5	0.587	0.860	140-155	15-25	2.0-6.0
7/8	22.22	1.00	1.5	0.672	0.869	140-155	15-25	2.0-6.0
0.894	22.70	1.00	1.5	0.607	0.889	140-155	-	-
0.984	25.00	1.00	1.5	0.671	0.986	-	-	2.0-6.0
1.102	28.00	1.00	1.5	0.755	1.111	-	-	2.0-6.0
1.181	30.00	1.00	1.5	0.811	1.195	-	-	2.0-6.0

Not: Please contact our Marketing Department for the sizes between \varnothing 35 - 108 mm copper tubes and non listed sizes.





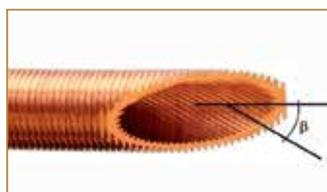
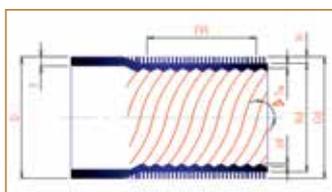
STRAIGHT COPPER TUBES (LARGE SIZES)

Outer Diameter (mm)	Wall Thickness (mm)	Unit Weight (kg/m)		Outer Diameter (mm)	Wall Thickness (mm)	Unit Weight (kg/m)
35.00	0.90	0.858		64.00	1.80	3.130
35.00	1.00	0.951		64.00	2.00	3.467
35.00	1.20	1.134		64.00	4.10	6.867
35.00	1.30	1.225		64.00	4.40	7.332
35.00	1.40	1.315		66.00	1.90	3.405
35.00	1.50	1.405		76.00	2.00	4.138
42.00	0.90	1.034		76.00	2.10	4.339
42.00	1.00	1.146		76.10	2.50	5.145
42.00	1.20	1.369		76.10	2.80	5.738
42.00	1.40	1.589		80.00	2.00	4.362
42.00	2.00	2.237		80.00	2.30	4.997
42.00	2.20	2.448		89.00	2.00	4.865
54.00	1.00	1.482		92.00	2.30	5.768
54.00	1.20	1.772		104.70	2.80	7.977
54.00	1.40	2.059		105.00	2.30	6.604
54.00	1.50	2.202		105.00	2.50	7.165
54.00	2.00	2.908		108.00	2.30	6.797
54.00	3.30	4.678		108.00	2.50	7.374
54.00	3.70	5.204		108.00	4.50	13.022

GROOVED TUBES

LOW FIN TUBE SPECIFICATION

O.D. (D)	Wall Thickness (T)	Number of Fin Per Inch HF (mm)	O.D. (Dd)	R.D. (Dd)	Wall Thickness β (°)	Fin Height (H)	Number of Ridges (N)	Depth of Ridges (HFF)	Helix Angle β (°)
19.05	1.42	40	18.9-19.05	16.8-16.85	0.8	1-1.1	13	0.5-0.6	45
15.88	1.24	19	15.8-15.9	14.25-14.28	0.7-0.8	0.7-0.8	36	0.45-0.5	35



INNER GROOVED TUBE SPECIFICATION

Size	Outer Diameter OD (mm)	Bottom Wall Thickness Tw (mm)	Groove Depth HF(mm)	Groove Bottom Width W3 (mm)	Apex Angle (°)	Helix Angle β (°)	Number of Grooves N
9.52x0.34	9.52 +0.05 -0	0.28±0.02	0.15±0.02	0.25±0.05	40±10	18±2	60
9.52x0.36	9.52 +0.05 -0	0.30±0.02	0.20±0.02	0.24±0.05	53±10	18±2	60
7.00x0.32	7.00 +0.05 -0	0.27±0.02	0.15±0.02	0.14±0.05	50±3	18±2	65
7.00x0.30	7.00 +0.05 -0	0.25±0.02	0.18±0.02	0.24±0.05	40±10	18±1	50

INSULATED COPPER TUBES

SARKUYSAN; its experience and leadership always a frontier in the industry, has established a new production line with the goal of achieving the highest quality manufacturing, has started the production of high-efficiency insulated copper tubes for the air-conditioning sector. In this new product group the high quality SARKUYSAN copper tubes and top quality insulation pipes are used together. Our purpose is to reach the highest process yield by using excellent water vapor resistance ($\mu=7000$) and heat insulation features of the insulation materials. In addition, all the insulation materials used are fire and flame resistant which complies with the terms and limits stated by the standards.

BY CHOOSING SARKUYSAN'S INSULATED COPPER TUBES YOU WILL

- Reach to high copper tube and insulation quality
- Minimize your costs with minimum consumption
- Increase your productivity by saving labor and time.
- Improve installation quality and safety against leakage by using one-piece line.
- Save space by applying the upper or under grout installations.
- Reach to the highest safety against high temperature and pressure.
- Prevent the formation of liquid and flash steam in the hard atmospheric conditions.



TECHNICAL SPECIFICATIONS

The specially developed sks@-PE quality, PE based, white insulation materials are more suitable for external applications. This product group also could be preferred upper grout applications because of its aesthetic image and because of its resistance to atmospheric conditions and UV resistance.

9-13 mm thick, rubber based insulation materials are more suitable for internal applications. sks@-K type insulating material has high water vapor permeability ($\mu=7000$).

Both Class B, B-s2-d0; Class 0 insulation materials comply with standards in the terms of fire resistance and safely be used between $-45\text{ }^{\circ}\text{C}$ / $+110\text{ }^{\circ}\text{C}$.

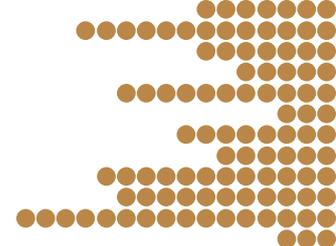


INSULATED TUBE SIZES

Copper Tubes Outside Diameter	(inch)	1/4"	3/8"	1/2"	5/8"	3/4"
	(mm)	6.35	9.52	12.70	15.87	19.05
Copper Tubes Wall Thickness	(mm)	0.80	0.80	0.80/0.90	1.00	1.00
Insulation Material Thickness	White (PE)	9 mm	9 mm	9 mm	9 mm	9 mm
	Black (Rubber)	9-13 mm	9-13 mm	9-13 mm	9-13 mm	9-13 mm

- Insulating materials inserted 50 m. copper coils are packaged separately and put in carton boxes. They will be delivered on wooden pallets in shrink-wrapped form.
- All our copper tubes are produced in accordance with EN 12735-1 standard.





COPPER TUBE PACKING

COPPER COILS (PANCAKE)							
Type of Box	Carton Box Dimensions (mm)			# of Coil	Net Weight (Kg/Box)	Tare of Box (Kg)	Tube Size Range (mm)
	Width	Depth	Height				
525x565	525	565	15	6-12	15-40	0.95	Ø6,35 - Ø12 mm
700x730	700	730	15	2-5	16-46	1.40	>= Ø12 mm

Length of tubes as pancake coils can be 15 - 100 m according to customer requirement and placed into suitable carton box. Both ends of tubes are closed with plastic plugs.

LEVEL WOUND COILS (LWC)										
LWC	LWC Coil Dimensions (mm)			Wooden Pallet Dimensions (mm)			# of Coil	Coil Weight (Kg)	Net Weight (Kg)	Tare of Spool (Kg)
	Outside Diam.	Inside Diam.	Height	Width	Depth	Height				
On wooden pallet	1,150	610	200 - 300	940-1,050-1,100-1,150-1,170	940-1,050-1,100-1,150-1,170	110	3-7	100 -150	375-1,050	20-35

3 or 7 LWCs are placed on wooden pallets as stacked position, strapped and stretched.

LWC Spool Type	Spool Dimensions (mm)				# of Coil	Coil Weight (Kg)	Tare of Spool (Kg)
	Flange Diam.(d1)	Bore Diam. (d3)	Height of Coil (h)	ID of Coil (d2)			
Carton	1,070-1,150	130	195-240-280	600	3-7	100-150	6-7
Wooden	1,070-1,170	130	260-280	600	3-6	100-150	16-18

LWCs are placed on wooden pallets after inserting carton or wooden spool, strapped and stretched.

STRAIGHT TUBES						
Packing Type	Dimensions (mm)				Net Weight (Kg)	Tare (Kg)
	A	B	C	E		
Wooden case	350-500	200-500	100	2,500-6,300	500 - 1,000	40 - 180
Steel container	580	400	140	5,200	700-1,100	203-255

Straight tubes are delivered in wooden cases, steel containers (returnable) or special containers of our customers.

BUSBAR

RECTANGULAR SHAPED BARE AND TIN PLATED COPPER BUSBARS:

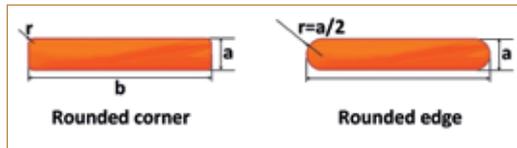
Material: Cu-OF / Cu-ETP

Chemical Composition: Min. 99.90% Cu

Conductivity: 57 - 58 μS

Type: Semi-hard, rounded corners and rounded edges

Standards: TS 435, EN 13601



RECTANGULAR SHAPED BARE COPPER BUSBARS			RECTANGULAR SHAPED TIN PLATED COPPER BUSBARS		
Size (bxa), mm	X-Section (mm ²)*	Unit Weight (kg/m)	Size (axb), mm	X-Section (mm ²)*	Unit Weight (kg/m)
25x3	74	0.66	5x50	249	2.22
30x3	89	0.80	5x60	299	2.66
25x4	99	0.88	5x70	349	3.11
30x4	119	1.06	5x80	399	3.55
20x5	99	0.88	5x20	99	0.88
25x5	124	1.10	5x90	449	4.00
30x5	149	1.33	5x100	499	4.44
30x10	299	2.65	6x50	299	2.66
32x10	319	2.83	6x60	359	3.20
40x5	199	1.77	6x70	419	3.73
40x10	399	3.54	6x80	479	4.26
50x5	249	2.22	6x90	539	4.80
50x10	499	4.43	6x100	599	5.33
50x15	749	6.65	8x40	319	2.84
60x5	299	2.66	5x50	399	3.55
60x10	599	5.32	8x60	479	4.26
60x12	719	6.39	8x70	559	4.98
60x15	899	7.98	8x80	639	5.69
75x6	449	3.99	8x90	719	6.40
80x5	399	3.55	8x100	799	7.11
80x10	799	7.10	8x120	959	8.54
80x15	1,199	10.65	10x40	399	3.55
80x20	1,599	14.20	10x50	499	4.44
90x10	899	7.99	10x60	599	5.33
92x5	459	4.08	10x70	699	6.22
100x5	499	4.44	10x80	799	7.11
100x8	799	7.10	10x90	899	8.00
100x10	999	8.88	10x100	999	8.89
100x12	1,199	10.66	10x120	1,199	10.67
100x15	1,499	13.32	12x30	359	3.20
100x20	1,999	17.76	12x40	479	4.26
100x30	2,999	26.64	12x50	599	5.33
110x6	659	5.86	12x60	719	6.40
120x5	599	5.33	12x70	839	5.33
120x10	1,199	10.66	12x80	959	8.54
120x12	1,439	12.79	12x90	1,079	9.60
120x15	1,799	15.99	12x100	1,199	10.67
120x20	2,399	21.32	12x120	1,439	12.81
125x10	1,249	11.11	10x140	1,399	12.46
128x5	639	5.69			
130x7	909	8.09			
140x10	1,399	12.44			

* Cross section and weight figures are for busbars with rounded corners of 1 mm (0.039 in).



ROUNDED SHAPE COPPER BARS

Delivered in \varnothing of 8-10-12-14-15-16-18-20-22-24-26-28-30-32-34-35-36 mm and in lengths 2-6 m.

Note: Please contact with Marketing Department for 140x10 -230x10 mm sizes, tin plated busbars and non-listed sizes.

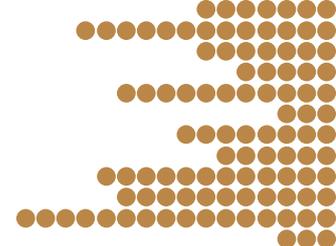


BUSBAR PACKING

Cut in 2 - 6 m (6.5-19 ft) lengths, on wooden pallets and PE covered accordingly to customer requirements.

BUSBAR PACKING DIMENSIONS						
Packing Type	DIMENSIONS				Net Weight (Kg)	Tare (Kg)
	A	B	C	E		
Wooden Box	350-500	200-500	100	2,500-6,300	500-1,000	40-180





ELECTROLYTIC COPPER CATHODE

Type: Grade-A

Size Range:

Length: 960 mm

Width: 960 mm

Thickness: 8-12 mm

Weight: 80-100 kg (Approx.)

Standards: ASTM B115, EN 1978



ETP & DHP COPPER BILLETS

Types of Material: DLP-Cu, DHP-Cu, ETP-Cu

Conductivity: Min. 58 m/ohm mm² for ETP-Cu

Oxygen Content: 50-400 ppm for ETP-Cu

Phosphorus Content: 50-120 ppm for DLP-Cu, 150-400 ppm for DHP-Cu

Size Range:

Diameter: 175 mm (6.8"), 230 mm (9") and 305 mm (12")

Length: 300-900 mm (12" - 36")

Weight: 1 - 4 ton

Standards: ASTM B379, EN 1976



COPPER NUGGET

Copper nuggets can be used in ideal anode material for copper electroplating processes.

Alloy Types for Nuggets: Cu-DXP and Cu-OF

Size Range:

Diameter: 8 mm, **Length:** 10-400 mm

Diameter: 12.5 mm, **Length:** 10-400 mm

Diameter: 20 mm, **Length:** 20-400 mm

Typical Analysis:

PHOSPHORUS BEARING COPPER NUGGET (Cu-DXP)		OXYGEN FREE COPPER NUGGET (Cu-OF)	
% Cu	Min. 99.940	% Cu	Min. 99.995
% P	0.04 – 0.06	% O	< 2 ppm
IMPURITIES (Max.)		IMPURITIES (Max.)	
Sb, Te	5 ppm	Te	2 ppm
Al, As, Si	5 ppm	Se	3 ppm
Bi, Mn	1 ppm	Bi	1 ppm
Ni	5 ppm	Sb	4 ppm
Zn	10 ppm	As	5 ppm
Sn	5 ppm	Sn	2 ppm
Pb	10 ppm	Pb	5 ppm
Fe, S	10 ppm	Fe, Ni	10 ppm
Ag	15 ppm	Ag, S	10 ppm



COPPER NUGGET PACKING

44 lb (20 kg) in plastic bucket, 1,100-2,200 lb (500 – 1,000 kg) in wooden box or 2,200 lb (1,000 kg) in big bag.

Note: Please contact our Marketing Department for other nugget sizes and type of packing.

QUALITY ASSURANCE SYSTEM

We are a successful team in the quality journey...

SARKUYSAN's traditional quality policy is to produce "High Quality Products" which meet the needs and expectations of our customers. SARKUYSAN, whose quality has been certified with respect to all activities with TS EN ISO 9001 and ISO/TS 16949 Quality System Certification, meets precisely the requirements of customers with the products complying with the national and international standards.

Since high quality production is the fruit of the mutual efforts of our workforce, continuous training programs for the further improvement of the quality consciousness of our staff to even upper levels constitute the basis of our quality management policy.

SARKUYSAN maintains all its activities by sticking to the principle of "environment friendly production". In addition to using material and production technologies which do not pollute the environment and minimize negative effects on the environment with recycling possibilities, all necessary measures are taken in order to prevent workplace accidents and to preserve our employees from occupational diseases. In this respect, SARKUYSAN has ISO 14001 Environmental Management System Certificate and OHSAS 18001 Workplace Health and Safety Management System Certificate.

SARKUYSAN is accredited with "ISO 50001 Energy Management System Certificate" that will provide guidance on effective use of the depleting energy resources in the World, energy-saving, energy efficiency and all of our operations carried out based in the environmental awareness principles as well as carrying our energy performance to the highest levels.



