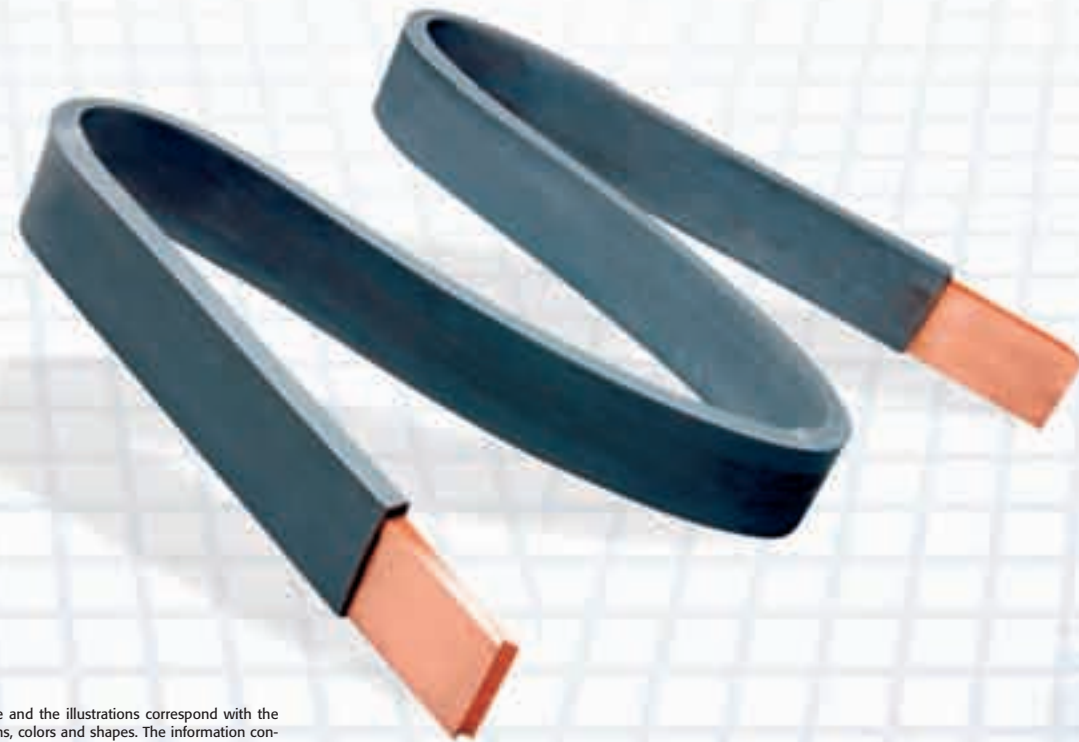




THAT'S IT

ISOFLEXX® - Made in Germany

INSULATED FLEXIBLE BUSBARS + COMPONENTS



General information:
Measurements and technical information listed in this catalog were determined with the greatest possible care and the illustrations correspond with the status at the time of printing. We explicitly reserve the right to technical changes and other changes to dimensions, colors and shapes. The information contained in our order confirmation is binding. The use of photos, drawings or catalog excerpts for your own advertising actions or other uses requires our explicit approval in writing.
This catalog version replaces older ones.

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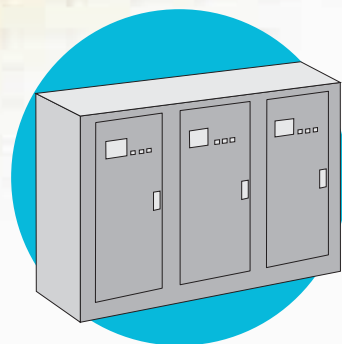
ISOFLEXX® is the insulated, laminated busbar for highest technical requirements. ISOFLEXX® sets a new standard in the field of flexible busbars with its highly developed and proven technology. **ISOFLEXX® - the busbar, which can do MORE! Flexibility alone is not enough!**

ISOFLEXX® consists of several stacked copper lamellas. These are durably protected by a high-quality, special PVC – insulation (ISOFLEXX® Classic) or by an environmentally friendly halogen-free silicone insulation (ISOFLEXX® Premium). Easy bending and twisting is allowed thru free to slide copper laminates. Additionally, the fine lamination contributes to the outstanding flexibility of ISOFLEXX®.

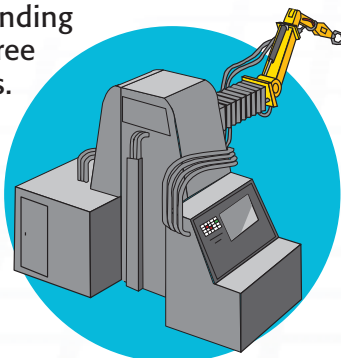
ISOFLEXX® - the innovative and cost-effective connection

- ✦ for all electrical connections in low voltage switch gears and systems
- ✦ as a movable component inside of massive busbar systems
- ✦ for connecting generators, transformers and switches
- ✦ for connecting machines, immersion baths, etc.

SPS Standard Produkte Schwanenmühle GmbH is certified according to ISO 9001:2000 and SPS manufactures ISOFLEXX® with highly qualified employees in Germany.



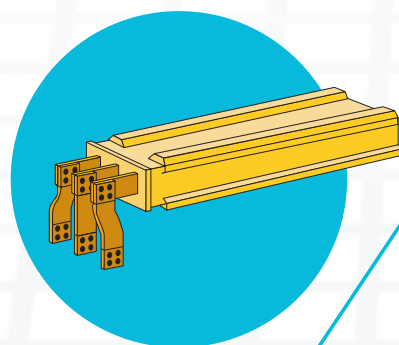
easy bending, highest flexibility



reinforced edges

self-extinguishing insulation

high operating voltage



higher thermal short-circuit proofness
(than other insulated bars or cables)

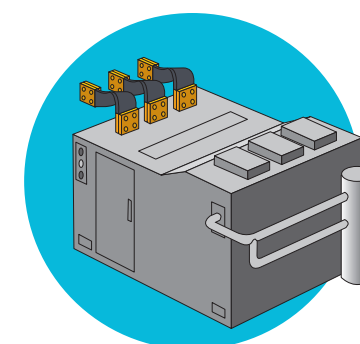
bending with the smallest radii

shorter connections and space-saving

halogen-free insulation

environmentally friendly

suitable for drilling or punching



easy installation

robust insulation

operating temperature up to 105°C^[1] / 180°C^[2]

UL-certified insulation

high conductivity electrolytic copper 99,9%

tinned / bare copper lamellas

0,5mm to 1mm lamella thickness

different colors

lead-free insulation acc.to RoHS-directive

homogeneous, stress-free insulation
(no burst of the insulation)

MADE IN GERMANY

^[1] ISOFLEXX® Classic

^[2] ISOFLEXX® Premium

ISOFLEX® - the busbar that can do MORE! *Flexibility alone is*

See for yourself the advantages of using ISOFLEX® and you will be convinced by the easy way of installation.

With ISOFLEX®, you are saving both time and money.

ISOFLEX® in detail

Acute angles and small bending radii as well as twistings around the longitudinal axis are no problem for ISOFLEX®. The **fine lamination** gives an **outstanding flexibility** to ISOFLEX®.

Nevertheless the strength of the conductor is so high that ISOFLEX® can always be bolted. The electrolytic copper conductor has a minimum conductivity of 57 Sxm/mm² and a strength of approx. 200N/mm². Alternatively, tinned copper or tinned aluminum of the same strength can be used, according to your requirements.

The **special insulation** of ISOFLEX® Classic is flexibilizer stabilized and compatible with other construction materials such as polycarbonate, polymethylmetacrylate, etc... There is no danger of stress crack corrosion at the different insulants in switchgears. By means of a special procedure, the insulation of ISOFLEX® can be color coded according to your requirements. This contributes to a higher clarity and security inside your switch gears and installations.

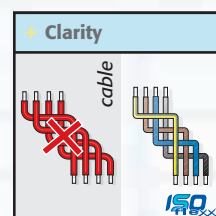
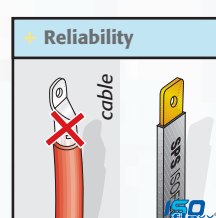
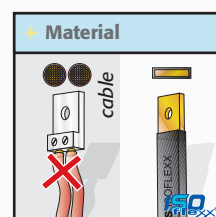
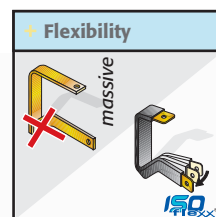
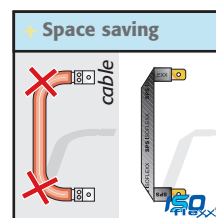
The more complex **halogen-free insulation** of ISOFLEX® Premium consists of a high-quality, self-extinguishing silicone (UL 94 VO). It is manufactured as homogeneous, extruded profile with excellent material properties (in particular **it can be stretched to almost quadruple its length**). The insulation does not burst even due to smallest bending radii.

Due to the **very high continuous operating temperatures of up to 180° C**, it also can be used under high ambient temperature or with high current density. The thermal proof against short-circuits is substantially higher with ISOFLEX® Premium than with other insulated busbars or cables. Thus ISOFLEX® Premium **combines environmental friendliness and innovative technology**.

The standard length of 2 meters permits a flexible use locally: ISOFLEX® is cut to the exact measure, and if necessary insulated, bent, drilled or punched according to the required drilling pattern. Cable lugs are no longer necessary.

Check out the outstanding quality of the laminated busbar ISOFLEX®!

ISOFLEX® - an overview of the advantages *not enough!*



Space saving

The manufacturing process of ISOFLEX® enables SPS to create an unusual flexibility of the ISOFLEX® busbars, smaller bending radii and thus, during same load, a conductor cross section smaller up to 40%.
As user you save resources and work much more efficiently.

Flexibility

Due to the flexibility of ISOFLEX®, the number of contact spots is reduced, compared to conventional massive busbar systems. Furthermore, construction tolerances during installation can be equalized: therefore it is no longer necessary to do any corrections like you have to carry out by use of massive busbars.
With ISOFLEX®, installation time is drastically reduced.

Material

The smaller conductor cross section of ISOFLEX®, compared with cables with the same load, reduces material usage.
Simply and effectively you save time and money.

Reliability

Through stripping the insulation ends, ISOFLEX® offers more security to your plants:

- no cable lugs
- reinforced edges
- extreme heat-proofness
- examination of the dielectric strength
- steady insulation

Count on ISOFLEX®. Count on reliability!

Clear arrangement

ISOFLEX®, by a special production procedure, insulations in different standard colors (green/yellow, blue, brown, black) can be offered or you may specify colors according to your requirements. Due to these various colors, different connections can be easily distinguished, thereby affording your switch cabinets and installations clearer arrangements and greater security.
With ISOFLEX® you will retain the overview.

Product Group	ISOFLEXX® Classic	ISOFLEXX® Premium
Conductor		
Material	E-Cu 99,9 (standard) E-Cu tinned (standard) E-Al MgSi0,5 tinned (on demand)	E-Cu 99,9 (standard) E-Cu tinned (standard) E-Al MgSi0,5 tinned (on demand)
Lamella thickness	0,5 mm for width 13 mm 0,8 mm for width 9 mm/16 mm 1 mm starting width 20 mm	1 mm
Strength	180-220 N/mm ² (F20)	180-220 N/mm ² (F20)
Electrical conductivity	57 S x m/mm ²	57 S x m/mm ²
Insulation		
Material	Special high-quality PVC	High-quality halogen-free silicone
Self-extinguishing	UL 94 VO flexibilizer stabilized compatible with construction materials like polycarbonate, polymethyl- methacrylate, etc.	UL 94 VO Homogeneous, extruded profile
Color	yellow/green, brown, blue, black other colors on demand	grey, brown other colors on demand
Thickness	≥ 1,6 mm	≥ 2 mm
Dielectric strength	20 kV/mm	20 kV/mm
Extension	370%	390%
Operating temperatures	-20 °C/+105 °C	-50 °C/+180 °C
Operating voltage	1000 VAC/1500 VDC	1000 VAC/1500 VDC
Dimensions		
Length	2000 mm (standard) variable lengths of 250–3000 mm	2000 mm (standard) variable lengths of 250–3000 mm
Width	6–100 mm other dimensions on demand	20–120 mm other dimensions on demand
International Standards		
	ISO 9001:2000 -12 DIN VDE 0281 Underwriters Laboratories (UL) Canadian Standards Association (CSA) CE	ISO 9001:2000 -12 DIN VDE 0281 Underwriters Laboratories (UL) CE

Current load values at $\Delta T = 50 \text{ K}$	Laminate dimensions number x width x thickness		Cross section	Cu - weight per 1 meter	Cu-weight per 2 meters (standard- length)	Operating current Values according to DIN 43671 for busbars in switchgear			Thermal short-circuit current carrying capacity (for 1 sec) [kA]
	Cu bare ¹ Cu tinned ¹					Heating ² of the busbar at an ambient temperature of 35 °C			
	[mm]	[mm]				on 65 °C $\Delta T = 30\text{K}$	on 85 °C $\Delta T = 50\text{K}$ recommended value	on 105 °C $\Delta T = 70\text{K}$	
125 A	3x9x0,8	3x9x0,8	21,6	0,19	0,38	98	130	152	4
	4x9x0,8	4x8x0,9	28,8	0,26	0,51	117	156	207	5
	6x9x0,8	6x9x0,8	43,2	0,38	0,77	147	196	228	8
	9x9x0,8	9x9x0,8	64,8	0,58	1,15	179	238	277	12
	3x13x0,5	3x13x0,5	19,5	0,18	0,35	108	144	167	3
250 A	6x13x0,5	6x13x0,5	39,0	0,35	0,69	162	215	251	7
	4x15,5x0,8	4x16x0,8	49,6	0,44	0,88	201	267	312	9
	6x15,5x0,8	6x16x0,8	74,4	0,66	1,32	252	335	391	14
	2x20x1	2x20x1	40,0	0,36	0,71	188	250	291	7
	3x20x1	3x20x1	60,0	0,53	1,07	237	315	367	11
	4x20x1	4x20x1	80,0	0,71	1,42	278	370	431	15
	2x24x1	2x24x1	48,0	0,43	0,85	201	267	312	9
	3x24x1	3x24x1	72,0	0,64	1,28	276	367	428	14
	2x32x1	2x32x1	64,0	0,57	1,14	289	384	448	12
	400 A	10x15,5x0,8	10x16x0,8	124	1,10	2,21	330	439	512
5x20x1		5x20x1	100	0,89	1,78	319	424	494	19
6x20x1		6x20x1	120	1,07	2,14	355	472	550	23
4x24x1		4x24x1	96	0,85	1,71	322	428	499	19
5x24x1		5x24x1x	120	1,07	2,14	369	491	572	23
500 A	3x32x1	3x32x1	96	0,85	1,71	359	477	556	19
	6x24x1	6x24x1	144	1,28	2,56	407	541	631	28
630 A	4x32x1	4x32x1	128	1,14	2,28	418	556	648	25
	10x20x1	10x20x1	200	1,78	3,56	497	661	770	39
	-	11x21x1	231	2,06	4,11	563	749	873	46
	8x24x1	8x24x1	192	1,71	3,42	483	642	749	38
	10x24x1	10x24x1	240	2,14	4,27	559	743	866	47
	5x32x1	5x32x1	160	1,42	2,85	477	634	739	31
	6x32x1	6x32x1	192	1,71	3,42	526	700	815	38
800 A	5x40x1	5x40x1	200	1,78	3,56	573	762	888	39
	8x32x1	8x32x1	256	2,28	4,56	623	829	966	50
	10x32x1	10x32x1	320	2,85	5,70	721	959	1118	63
	8x40x1	8x40x1	320	2,85	5,70	739	983	1145	63
	5x50x1	-	250	2,23	4,45	697	927	1080	49
1000 A	-	10x35x1	350	3,12	6,23	757	1007	1340	69
	10x40x1	10x40x1	400	3,56	7,12	850	1131	1318	79
	8x50x1	-	400	3,56	7,12	891	1185	1381	79
	5x63x1	-	315	2,80	5,61	826	1099	1280	62
1250 A	10x50x1	-	500	4,45	8,90	1020	1357	1581	100
	6x63x1	-	378	3,36	6,73	942	1253	1460	75
	8x63x1	-	504	4,49	8,97	1038	1361	1609	100
	10x63x1	-	630	5,61	11,21	1180	1569	2089	125
	4x80x1	-	320	2,85	5,70	954	1269	1689	63
1600 A	5x80x1	-	400	3,56	7,12	1070	1423	1894	80
	6x80x1	-	480	4,27	7,12	1156	1537	2046	95
	8x80x1	-	640	5,70	11,39	1328	1766	2351	120
	10x80x1	-	800	7,12	14,24	1500	1995	2655	150
2000 A	5x100x1	-	500	4,45	8,90	1300	1729	2301	90
	8x100x1	-	800	7,12	14,24	1606	2136	2843	160
	10x100x1	-	1000	8,90	17,80	1810	2407	3204	200

Standard length 2,000 mm, on request we also supply lengths between 250 and 3000 mm

¹ other dimensions and materials on demand

² heating of the busbar dependent on: current load, ambient temperature, heat dissipation, method of installation, field of application
For 2 bars in parallel multiply with 1,72, for 3 bars with 2,25.

Current load values at $\Delta T = 50\text{ K}$	Laminate dimensions number x width x thickness Cu bare ⁴ [mm]	Cross section [mm ²]	Cu - weight per 1 meter [kg]	Cu-weight per 2 meters (standard- length) [kg]	Operating current Values according to DIN 43671 for busbars in switchgear Heating ² of the busbar at an ambient temperature of 35 °C			Thermal short-circuit current carrying capacity (for 1 sec) [kA]
					on 65 °C $\Delta T = 30\text{K}$	on 85 °C $\Delta T = 50\text{K}$ recommended value	on 125 °C $\Delta T = 70\text{K}$	
					[A]	[A]	[A]	
400 A	5 x 20 x 1	100	0,89	1,78	319	424	565	26
	5 x 24 x 1	120	1,07	2,14	369	491	653	31
630 A	10 x 20 x 1	200	1,78	3,56	497	661	880	52
	10 x 24 x 1	240	2,14	4,27	559	743	989	62
	5 x 32 x 1	160	1,42	2,85	477	634	844	42
	5 x 40 x 1	200	1,78	3,56	573	762	1014	52
800 A	10 x 32 x 1	320	2,85	5,70	721	959	1276	83
	8 x 40 x 1	320	2,85	5,70	739	983	1308	83
	5 x 50 x 1	250	2,23	4,45	697	927	1234	65
1000 A	10 x 40 x 1	400	3,56	7,12	850	1131	1505	100
	8 x 50 x 1	400	3,56	7,12	891	1185	1577	100
	5 x 63 x 1	315	2,80	5,61	826	1099	1462	82
1250 A	10 x 50 x 1	500	4,45	8,90	1020	1357	1805	130
	8 x 63 x 1	504	4,49	8,97	1038	1381	1837	130
	10 x 63 x 1	630	5,61	11,21	1180	1569	2089	160
	5 x 80 x 1	400	3,56	7,12	1070	1423	1894	100
1600 A	8 x 80 x 1	640	5,70	11,39	1328	1766	2351	170
	10 x 80 x 1	800	7,12	14,24	1500	1995	2655	210
	5 x 100 x 1	500	4,45	8,90	1300	1729	2301	130
1250 A	8 x 100 x 1	800	7,12	14,24	1606	2136	2843	210
	10 x 100 x 1	1000	8,90	17,80	1810	2407	3204	260
	8 x 120 x 1	960	8,54	17,09	1794	2386	3175	250
2500 A	12 x 100 x 1	1200	10,68	21,36	1974	2625	3494	310
	10 x 120 x 1	1200	10,68	21,36	2110	2806	3735	310

Standard length 2000 mm, on request we also supply lengths of 250 to 3000 mm

¹ other dimensions and materials on demand

² heating of the busbar dependent on: current load, ambient temperature, carrying - off of the heat, method of installation, installation, field of application

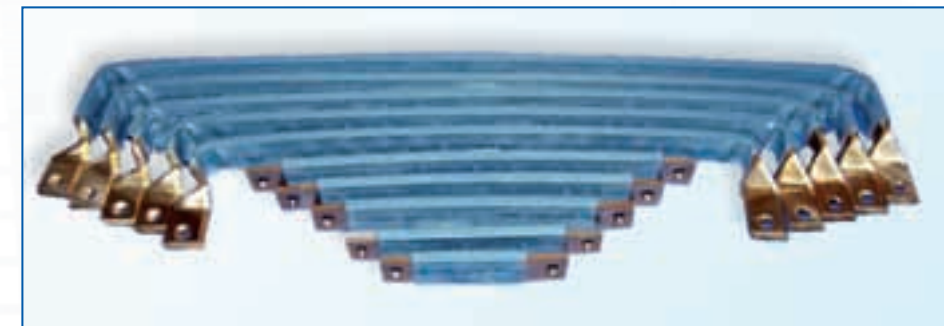
³ color grey (standard), color brown on demand, only brown with UL-approbation

⁴ on demand also E-Cu tinned can be delivered

On request, we manufacture ISOFLEXX® Classic and ISOFLEXX® Premium in other lengths and cross sections, according to your requirements.

ISOFLEXX® "tailor-made" according to your requirements.

- Cutting
- Bending
- Twisting
- Hole pattern
- oblong holes
- Presswelding
- Riveting
- Labeling (names and logos),
- Labeling according to clients' specification
- Packaging according to clients' specification



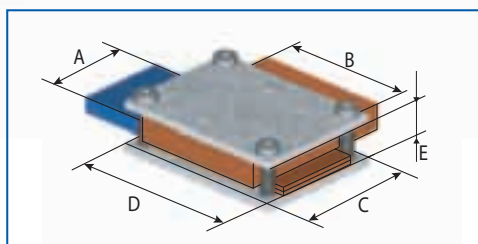
Examples of "tailor-made" ISOFLEXX®.



Flat clamps

To connect *ISO FLEX*® to flat bars without drilling, lengthwise or on 90 degree

Article number	Type	Inner dimension A x B [mm x mm]	Outer dimension C x D [mm x mm]	Screws E [mm]	Unit/box
90010200	FAK 16 x 16	16 x 16	35 x 35	20	9
90010310	FAK 16 x 32	16 x 32	35 x 52	20	9
90010210	FAK 20 x 20	20 x 20	40 x 40	20	9
90010320	FAK 20 x 40	20 x 40	40 x 60	20	6
90010220	FAK 25 x 25	25 x 25	45 x 45	20	9
90010330	FAK 25 x 50	25 x 50	45 x 70	20	6
90010230	FAK 32 x 32	32 x 32	52 x 50	20	6
90010340	FAK 32 x 63	32 x 63	52 x 82	20	6
90010240	FAK 40 x 40	40 x 40	60 x 60	20	3
90010350	FAK 40 x 63	40 x 63	60 x 82	32	3
90010360	FAK 40 x 80	40 x 80	70 x 110	35	3
90010250	FAK 50 x 50	50 x 50	70 x 70	20	3
90010370	FAK 50 x 80	50 x 80	80 x 110	35	3
90010380	FAK 50 x 100	50 x 100	80 x 130	35	3
90010260	FAK 60 x 63	60 x 63	80 x 82	32	3
90010280	FAK 80 x 80	80 x 80	120 x 120	35	3
90010300	FAK 100 x 100	100 x 100	140 x 140	35	3



Pressure plates

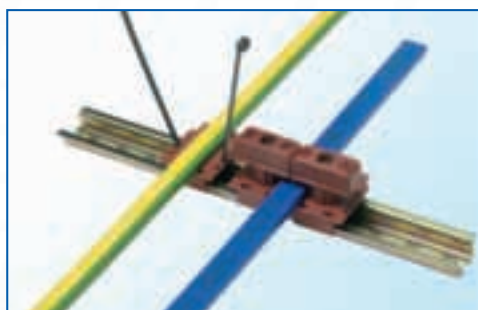
To connect *ISO FLEX*® to flat bars, inclusive screws and nuts; steel plates of 5 mm with drilled hole, according to DIN

Article number	Type	Dimensions [mm]	Number of holes	With screws	Unit/box
90080300	DP 32/1	32 x 30	1	M 8 x 40	3
90080310	DP 40/1	40 x 40	1	M 10 x 40	3
90080330	DP 50/1	50 x 50	1	M 10 x 40	3
90080320	DP 40/2	40 x 80	2	M 10 x 40	3
90080340	DP 50/2	50 x 80	2	M 12 x 40	3

Plastic fixing devices

For the installation of *ISO FLEX*® to DIN profile bars of 35 mm; halogen-free, self-extinguishing, glass fibre reinforced polyamide; type KSH 51 suitable for employment of cable ties

Article number	Type	Description	Unit/box
90080400	KSH 50	complete	4
90080410	KSH 51	only lower part for cable tie	12



High current clamps

To clamp *ISO FLEX*® to flat bars lengthwise, without drilling. Guarantee a constant contact pressure; clamp width = 40 mm; stainless steel with high flexural strength; inclusive screws and nuts

Article number	Type	Width [mm x mm]	Unit/box
90010600	HSSK 80	80	1 connection
90010610	HSSK 100	100	1 connection
90010620	HSSK 120	120	1 connection



Conductor clamps

For the installation without drilling of round conductors or *ISO FLEX*® to flat bars with a thickness of 5 mm

Article number	Type	Connection min - max [mm²]	Insertion max. [A]	Clamp Space W x H [mm]	Unit/box
99010410	LASK 16/5	1,5 - 16	180	7,5 x 7,5	20
99010440	LASK 35/5	4 - 35	270	10,5 x 11	20
99010470	LASK 70/5	16 - 75	400	14 x 14	10



Drilling jig

To drill *ISO FLEX*® without any problems, defined for each lamella width, with different drilling units

Article number	Type	Width [mm]	Drill Hole [mm]	Unit/box
90080100	BL 16	16 mm	6 / 8	1
90080110	BL 20	20 mm	8 / 10 / 12	1
90080120	BL 24	24 mm	8 / 10 / 12	1
90080130	BL 32	32 mm	10 / 12	1



Bending tool

To bend *ISO FLEX*® and massive flat bars by hand; angle limit stop continuously adjustable from 0 – 120 degree; maximum bending capability: Cu-bars 100 x 12 mm

Article number	Type	Packaging Measures L x W x H [mm]	Weight [kg]	Unit/box
90090100	BV - 100	780 x 280 x 290	about 24	1



Twisting tool

To bend *ISO FLEX*® by hand by use of the bending tool BV-100 or another suitable device

Article number	Type	Packaging Measures L x W x H [mm]	Weight [kg]	Unit/box
90090110	VD	480 x 80 x 40	about 1,6	1

On request, we deliver our accessories also in other dimensions.

Earth braids copper bare and tinned

Type	Cross section [mm ²]	Current load max. [A]	Width [mm]	Length [mm]	Weight per Unit [kg]
MBS 6-100-6	6	50	13	100	0,005
MBS 6-150-6	6	50	13	150	0,008
MBS 6-200-6	6	50	13	200	0,011
MBS 6-250-6	6	50	13	250	0,014
MBS 6-300-6	6	50	13	300	0,016
MBS 6-500-6	6	50	13	500	0,027
MBS 10-100-6	10	80	13	100	0,009
MBS 10-150-6	10	80	13	150	0,014
MBS 10-200-6	10	80	13	200	0,018
MBS 10-250-6	10	80	13	250	0,023
MBS 10-300-6	10	80	13	300	0,027
MBS 10-500-6	10	80	13	500	0,045
MBS 16-100-6	16	120	15	100	0,014
MBS 16-150-6	16	120	15	150	0,022
MBS 16-200-6	16	120	15	200	0,029
MBS 16-250-6	16	120	15	250	0,036
MBS 16-300-6	16	120	15	300	0,043
MBS 16-500-6	16	120	15	500	0,072
MBS 16-100-8	16	120	15	100	0,014
MBS 16-150-8	16	120	15	150	0,022
MBS 16-200-8	16	120	15	200	0,029
MBS 16-250-8	16	120	15	250	0,036
MBS 16-300-8	16	120	15	300	0,043
MBS 16-500-8	16	120	15	500	0,072
MBS 25-100-10	25	150	23	100	0,023
MBS 25-150-10	25	150	23	150	0,034
MBS 25-200-10	25	150	23	200	0,045
MBS 25-250-10	25	150	23	250	0,056
MBS 25-300-10	25	150	23	300	0,068
MBS 25-500-10	25	150	23	500	0,113
MBS 30-100-10	30	180	23	100	0,027
MBS 30-150-10	30	180	23	150	0,041
MBS 30-200-10	30	180	23	200	0,054
MBS 30-250-10	30	180	23	250	0,068
MBS 30-300-10	30	180	23	300	0,081
MBS 30-500-10	30	180	23	500	0,135
MBS 35-100-6	35	195	23	100	0,032
MBS 35-150-6	35	195	23	150	0,047
MBS 35-200-6	35	195	23	200	0,063
MBS 35-250-6	35	195	23	250	0,079
MBS 35-300-6	35	195	23	300	0,095
MBS 35-500-6	35	195	23	500	0,158
MBS 50-100-10	50	250	28	100	0,045
MBS 50-150-10	50	250	28	150	0,068
MBS 50-200-10	50	250	28	200	0,090
MBS 50-250-10	50	250	28	250	0,113
MBS 50-300-10	50	250	28	300	0,135
MBS 50-500-10	50	250	28	500	0,225
MBS 50-100-12	50	250	28	100	0,045
MBS 50-150-12	50	250	28	150	0,068
MBS 50-200-12	50	250	28	200	0,090
MBS 50-250-12	50	250	28	250	0,113
MBS 50-300-12	50	250	28	300	0,135
MBS 50-500-12	50	250	28	500	0,225

MBS Earth braids

The earth braids of SPS, type MBS, are unique on the market as the ends of the braids are presswelded under water in a special procedure.

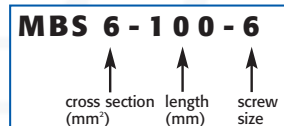
This procedure has several advantages:

- no use of tin-lead solder
- no use of cable shoes
- minimal transition resistance, therefore low heating
- soft thermal transition
- no annealing through heating
- no mechanical slot
- low difference of strength in transition area
- homogeneous structure in connecting area

The earth braids are produced of highly flexible E-Cu flat braids with a single wire dimension of 0,15 mm, Cu bare or tinned.

The braids can be used as earth braids as well as highly flexible transmission elements, if connections with low transfer and connection resistance are needed.

If requested, the earth braids can be supplied with insulation. Other dimensions and cross sections up to 95 mm² on demand.



Flat Braided Flexibles Cu bare and tinned

Single wire dimension 0.15 mm

If requested onto coil, 25 meters; other lengths and round flexibles on demand.



Electromagnetic Compatibility-EMC

In order to prevent that parts of electronic systems influence each other electromagnetically, a very close equipotential bonding has to be produced. Most suitable for that are flat braided flexibles, offered by SPS.

Especially for higher frequencies – electromagnetic disturbances are generally high-frequency – a small inductance of the earth connections is necessary. First this means that these connections have to be short.

Second, the choice of the conductor is important: flat braided flexibles have – dependent on the frequency – an essentially lower impedance than comparable cables. Therefore, the flat braided flexibles by SPS are most suitable – they combine potential equalization with EMC.

Article number	Type	Cross section [mm ²]	Dimensions width x thickness [mm x mm]	N. of single wires	Current load max. [A]	Copper weight per meter [kg]
32100000	FGKB 10	10	13 x 1	560	80	0,10
32200000	FGKB 16	16	15 x 1,5	932	120	0,16
32300000	FGKB 25	25	23 x 1,5	1440	150	0,25
32400000	FGKB 35	35	23 x 2,5	1980	195	0,35
32500000	FGKB 50	50	28 x 3	2832	250	0,50
32600000	FGKB 70	70	30 x 3,5	3948	290	0,70
32700000	FGKB 95	95	40 x 4	5352	340	0,95
33100000	FGKV 10	10	13 x 1	560	80	0,10
33200000	FGKV 16	16	15 x 1,5	932	120	0,16
33300000	FGKV 25	25	23 x 1,5	1440	150	0,25
33400000	FGKV 35	35	23 x 2,5	1980	195	0,35
33500000	FGKV 50	50	28 x 3	2832	250	0,50
33600000	FGKV 70	70	30 x 3,5	3948	290	0,70
33700000	FGKV 95	95	40 x 4	5352	340	0,95

FGKB = Copper bare

FGKV = Copper tinned

Bars, without holes and punched



Copper bars, flat and massive, round edges, standard length 4000 to 4200 mm, according to DIN EN 13601 (DIN 46433, DIN 40500-3). Other dimensions on demand. Material of the bars = E-Cu 57 F25 bare¹ (standard), E-Cu F20 and F30 on demand. Mechanical strength about 250 N/mm² on E-Cu F25 (standard). Electrical conductivity 56 S x m/mm².

Article ² number	Type	Dimensions			Weight per 4m [kg]
		Width [mm]	Thickness [mm]	Cross section [mm ²]	
40405030	SCCU 30x5x4000	30	5	150	5,34
40405040	SCCU 40x5x4000	40	5	200	10,68
40405050	SCCU 50x5x4000	50	5	250	7,12
40405060	SCCU 60x5x4000	60	5	300	14,24
40405080	SCCU 80x5x4000	80	5	400	8,90
40405100	SCCU 100x5x4000	100	5	500	17,80
40410030	SCCU 30x10x4000	30	10	300	10,68
40410040	SCCU 40x10x4000	40	10	400	21,36
40410050	SCCU 50x10x4000	50	10	500	14,24
40410060	SCCU 60x10x4000	60	10	600	28,48
40410080	SCCU 80x10x4000	80	10	800	17,80
40410100	SCCU 100x10x4000	100	10	1000	35,60

¹ tinned on demand

² article number for untreated, bare bars without drilling

Punching - our flexibility - your profit
Hole size, number and placing according to your instructions

SPS, after studying the specific requirements of our customers, has standardized the most commonly used flexibles. We have packaged these in units of three for fast shipment. The flexibles are available in copper and aluminum.

Copper flexibles are made of 0,2 mm thick laminates that are presswelded at the ends. Aluminum flexibles are made of 0,3 mm thick

laminates that are MiG- welded with solid terminals.

We maintain a stock of standard laminated flexibles shown in the chart below. These parts can be delivered to the customer's site in the shortest possible time. Check the table below for the necessary data.

Contents of one box: 3 pcs. flexband, center drill aid, product data sheet.



Article number	Type	Width [mm]	Nominal ¹ current [A]	pcs/box	Weight/box [kg]
90130010	DBCUC 38/5/60/220/S	38	490	3	2,00
90130020	DBCUC 48/5/60/220/S	48	590	3	2,50
90130030	DBCUC 38/10/60/250/S	38	720	3	3,75
90130040	DBCUC 48/10/60/250/S	48	860	3	4,50
90130050	DBCUC 58/10/80/310/S	58	990	3	6,50
90130060	DBCUC 78/10/80/310/S	78	1240	3	8,50
90130070	DBCUC 98/10/100/350/S	98	1490	3	11,75
90130080	DBCUC 118/10/100/350/S	118	1710	3	14,00



Article number	Type	Width [mm]	Nominal ¹ current [A]	pcs/box	Weight/box [kg]
90230010	DBAL 40/5/60/250/S	40	380	3	1,00
90230020	DBAL 40/5/80/310/S	40	380	3	1,25
90230030	DBAL 40/10/80/310/S	40	560	3	1,75
90230040	DBAL 50/10/80/310/S	50	670	3	2,00
90230050	DBAL 60/10/80/310/S	60	770	3	2,50
90230060	DBAL 80/10/100/350/S	80	980	3	3,25
90230070	DBAL 100/10/100/350/S	100	1190	3	4,00



Article number	Type	Width [mm]	Nominal ¹ current [A]	pcs/box	Weight/box [kg]
90140010	LICUC 120/40/60/220	40	370	3	1,25
90140020	LICUC 240/40/60/220	40	580	3	2,00
90140030	LICUC 360/50/60/250	50	700	3	3,25
90114040	LICUC 480/50/60/250	50	850	3	4,20
90114050	LICUC 600/60/80/310	60	990	3	6,25
90114060	LICUC 720/80/80/310	80	1180	3	7,50
90114070	LICUC 960/100/100/350	100	1490	3	11,00

DBCUC 118/10/100/350/S

Flexible width
Flexible thickness
Connection length
Total length
Shape

¹ Nominal current at 35°C ambient temperature and 65°C flexible temperature.

DBAL 40/5/60/250/S

Flexible width
Flexible thickness
Connection length
Total length
Shape

LICUC 120/40/60/220

Cross section
Flexible thickness
Connection length
Total length