

**ADJUSTABLE BUSBAR
SUPPORT**

310



**PDS BUSBAR SUPPORT
SYSTEM**

312



**ADJUSTABLE, FLAT
BUSBAR SUPPORTS**

313



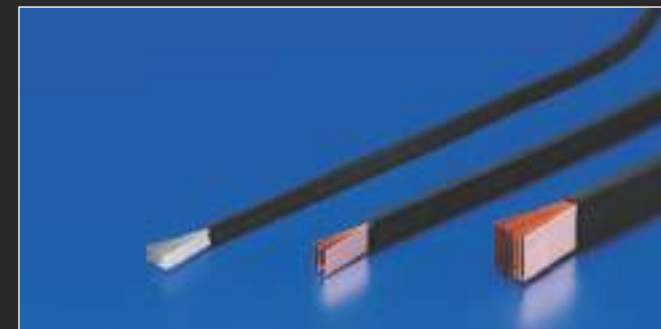
**COMPACT
BUSBAR**

314



**FLEXIBLE
COPPER BUSBAR**

316



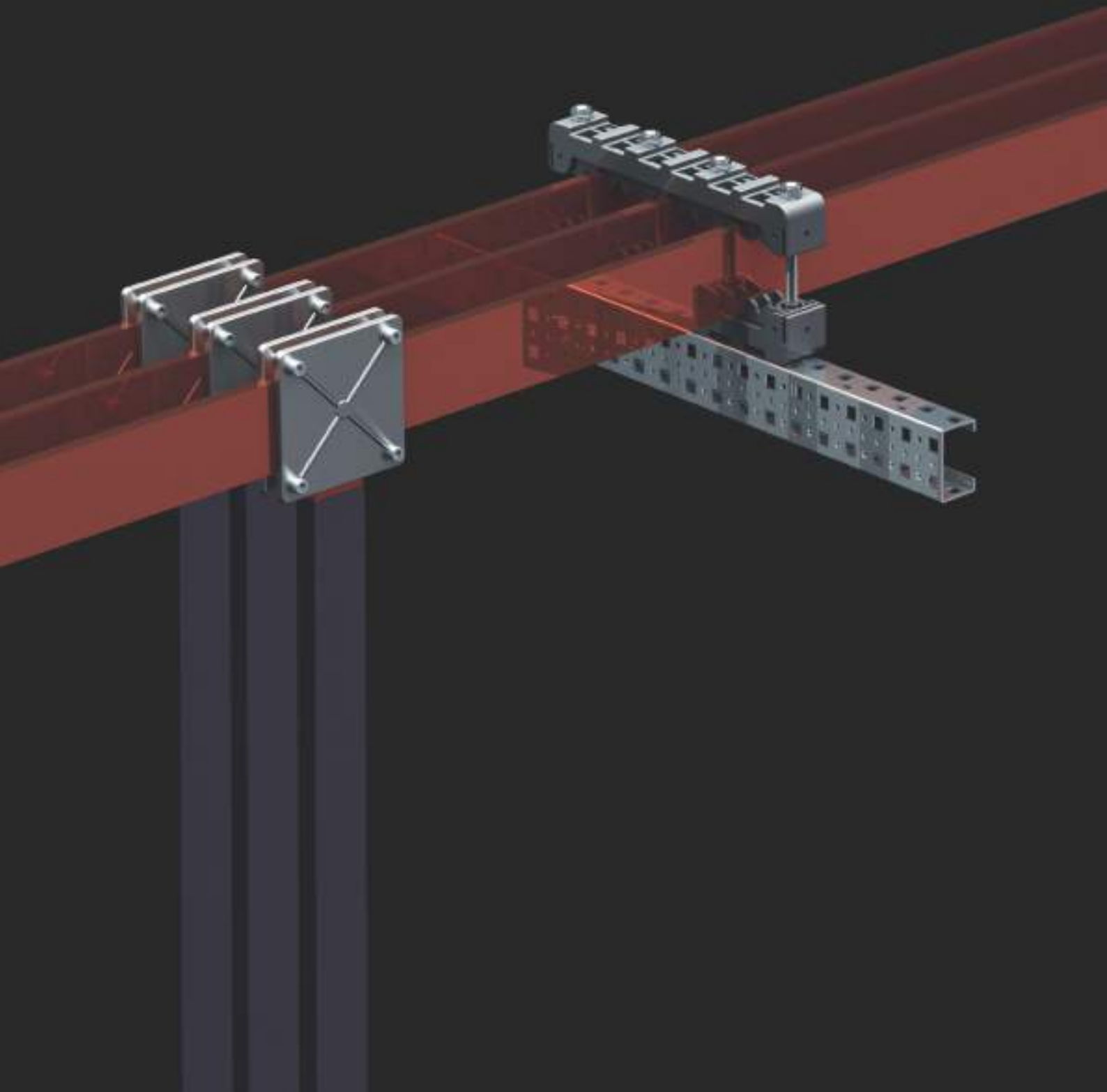
**FLEXIBLE
BUSBAR BRACKETS**

319



**BUSBAR
BRACKETS**

320



ADJUSTABLE BUSBAR SUPPORT



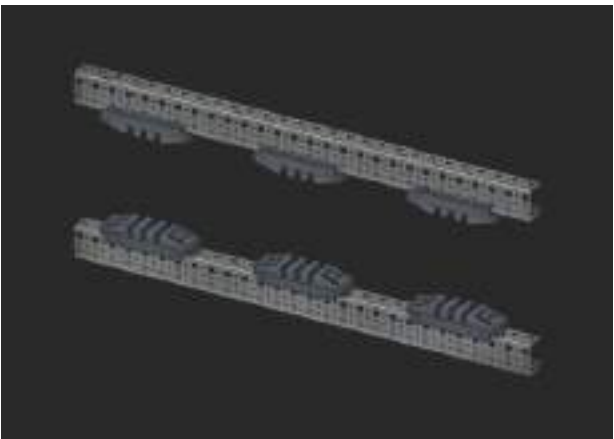
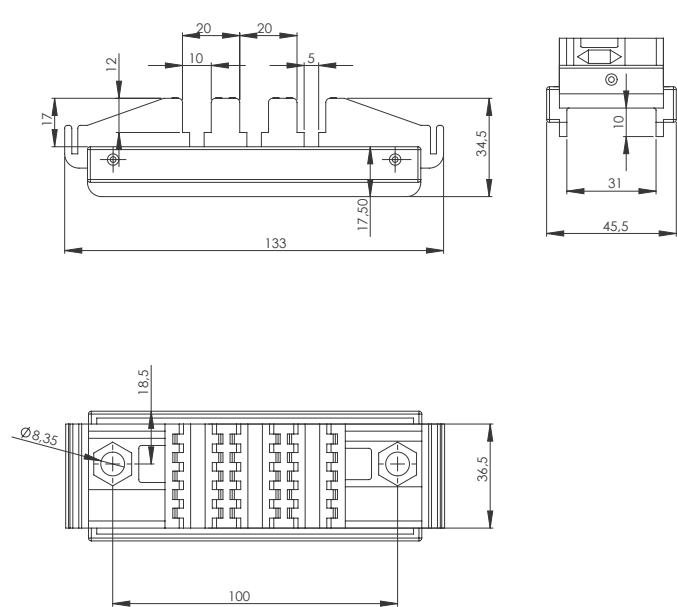
Material : Fibre-reinforced polyamid.

Supply includes : 2 pcs busbar support and combination screws.

Product Code : Plug in type: **600.001 (1 set: 2 pcs)**
Open type : **600.101 (1 set: 2 pcs)**

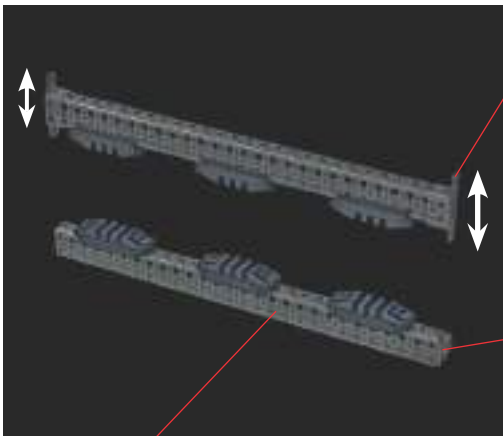
• Please see page 311 for application models.

- Distance between the busbar supports can be adjusted with 25mm steps.
- Easy mounting.
- Cost-effective solution.
- Operating range between -40°C and +130°C.
- Halogen-free.
- Fire protection in line UL 94 VO standard.
- Applicable to 5-10mm busbar cross-sections.
- Applicable to 30-120mm busbar sizes.
- Used in applications between 400A-4500A.
- 3 pcs flat copper application.



ADJUSTABLE BUSBAR SUPPORT

APPLICATION - 1



50x25 Scissile Rail page 171

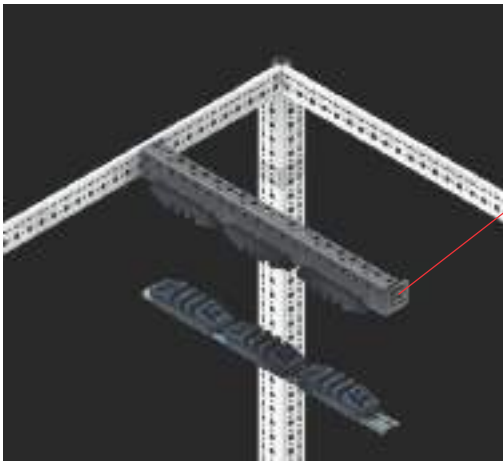
Adjustable Rail Bracket, Type T, page 174

Plug-in Rail Bracket, page 173

APPLICATION - 2



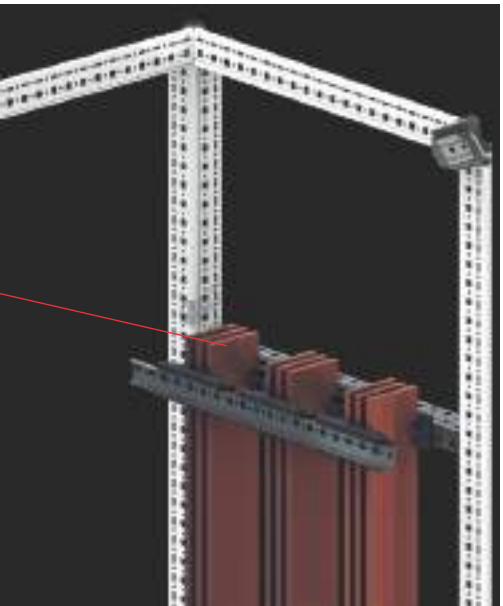
APPLICATION - 3



Adjustable Rail Bracket, Type L, page 175

Adjustable Rail Bracket, Type L, page 175

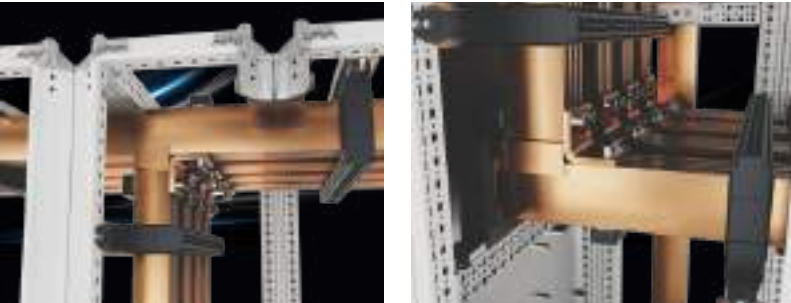
APPLICATION - 4



PDS BUSBAR SUPPORT SYSTEM



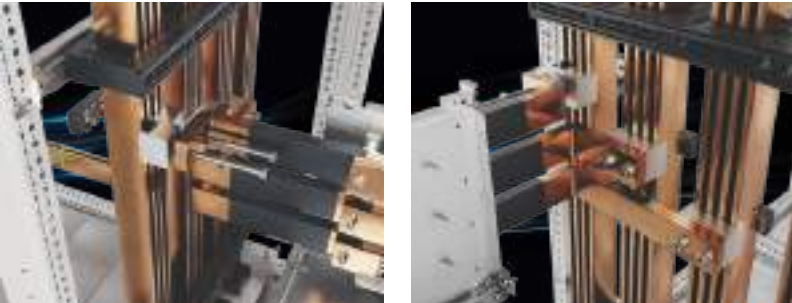
MAIN BUSBAR-DISTRIBUTION BUSBAR CONNECTION



For configurations please go to
PDS-Power Distribution Section
see page 208, 209 and 216, 218.

For ordering please go to
PDS-Power Distribution Section
see page 236, 247

DISTRIBUTION BUSBAR-MCCB (Compact Circuit Breaker) CONNECTION



ADJUSTABLE, FLAT BUSBAR SUPPORTS



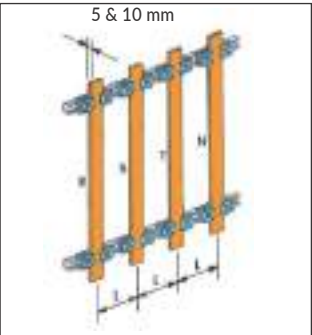
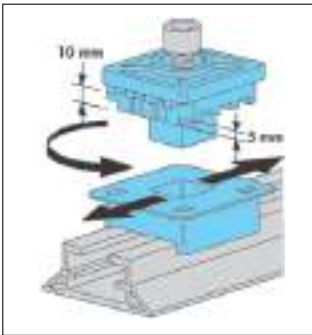
Product Code : 504.991 (12 pcs pack of)
Material : Polyamide, glass fibre reinforced

- Distance between the phases can be adjusted.
- Enables easy mounting.
- High resistance to short current power.

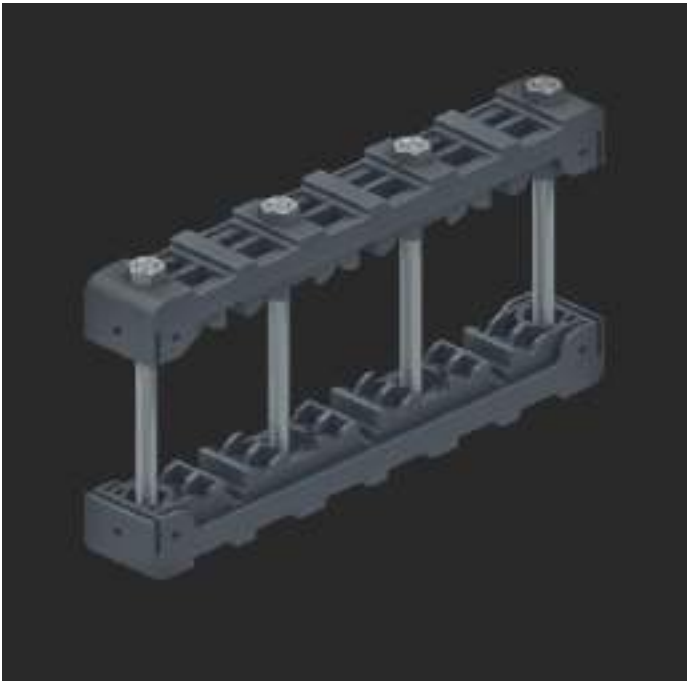
- Operating range between -40°C and -130°C
- Fire protection in line with UL 94 VO standard.
- Applicable to 5-10mm busbar cross-sections
- Copper busbar has flexibility.
- Application up till 2300A.



Heavy equipment profile, page 172



COMPACT BUSBAR SUPPORT

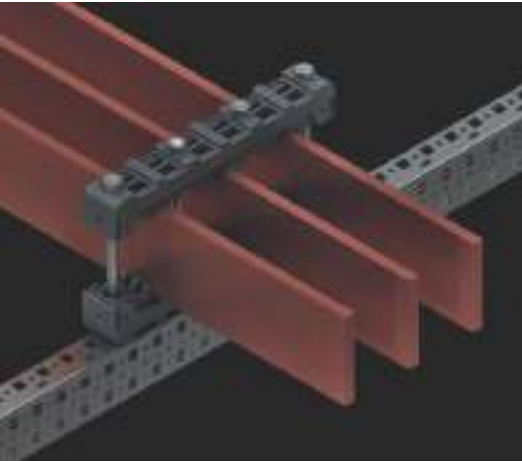
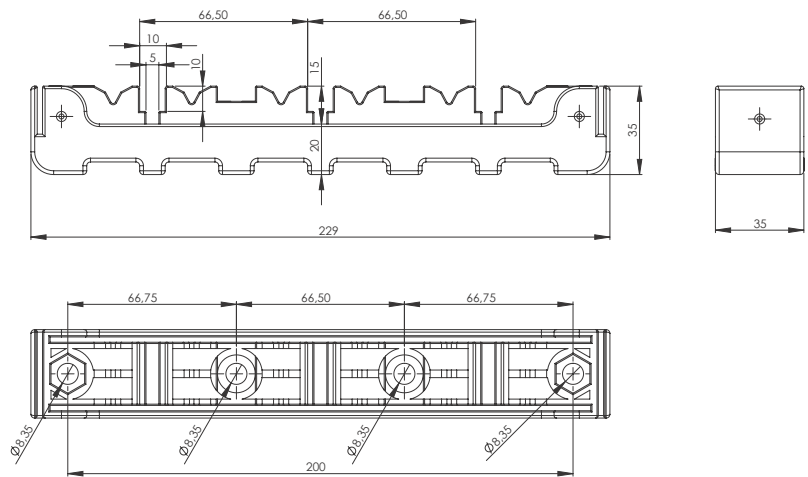


- Material** : Polyamide glass fibre reinforced.

Supply Includes : 2 pcs busbar support and combination screws.

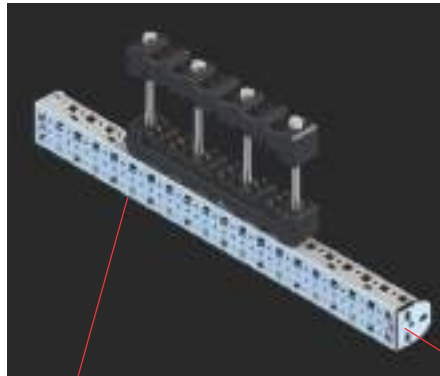
Product Code : 600.002 (1 set: 2 psc)

 - The busbar supports can be adjusted with 25mm steps.
 - Easy mounting
 - Cost-effective solution
- Operating range between -40 oC and + 130 oC
 - Halogen-free
 - Fire protection in line with UL 94 VO standard.
 - 4 screw fastening.
 - Applicable to 5-10mm busbar cross-sections.
 - Applicable to size 25-120 mm busbar.
 - Can be used in applications between 250 A - 1600 A.
 - Suitable for 3 phase application.



COMPACT BUSBAR SUPPORT

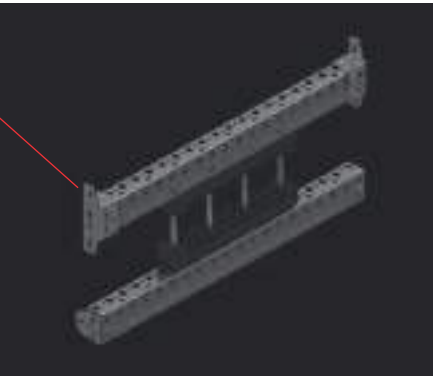
APPLICATION - 1



50x25 Scissile Rail page 171

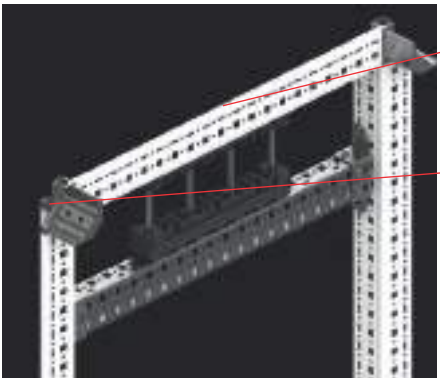
Plug-in Rail Bracket, page 173

APPLICATION - 2



Adjustable Rail Bracket, Type T, page 174

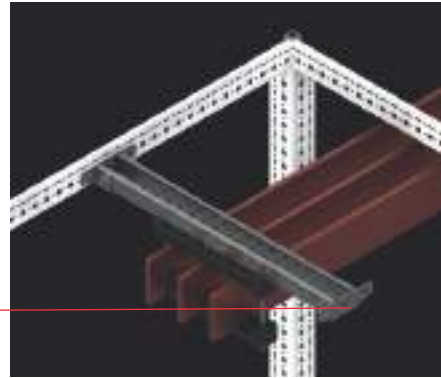
APPLICATION - 3



M6 Hide Nut Page 195

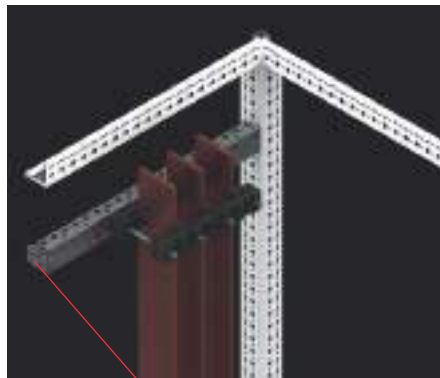
Adjustable Rail Bracket, Type T, page 174

APPLICATION - 4



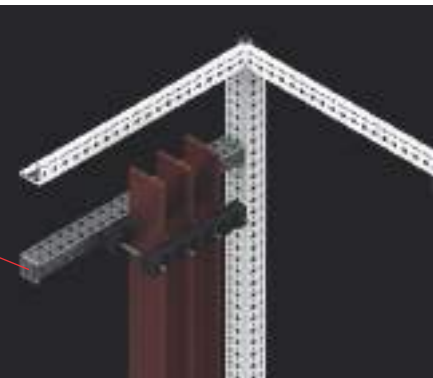
Adjustable Rail Bracket, Type T, page 174

APPLICATION - 5



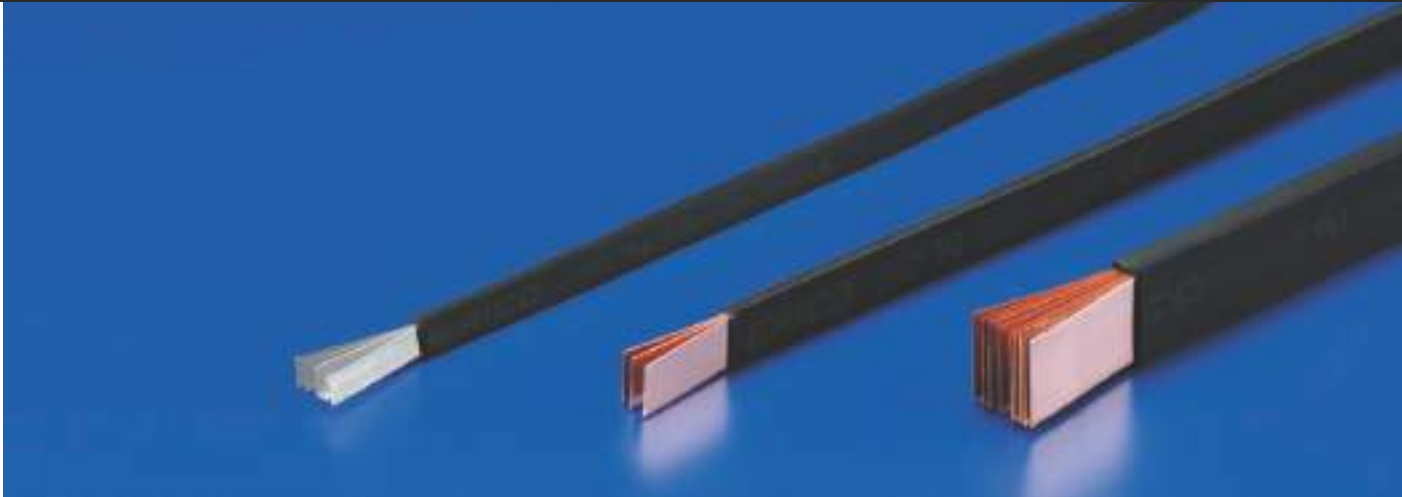
Plug-in Rail Bracket page 173

APPLICATION - 6



Adjustable Rail Bracket, Type L, page 175

FLEXIBLE COPPER BUSBARS

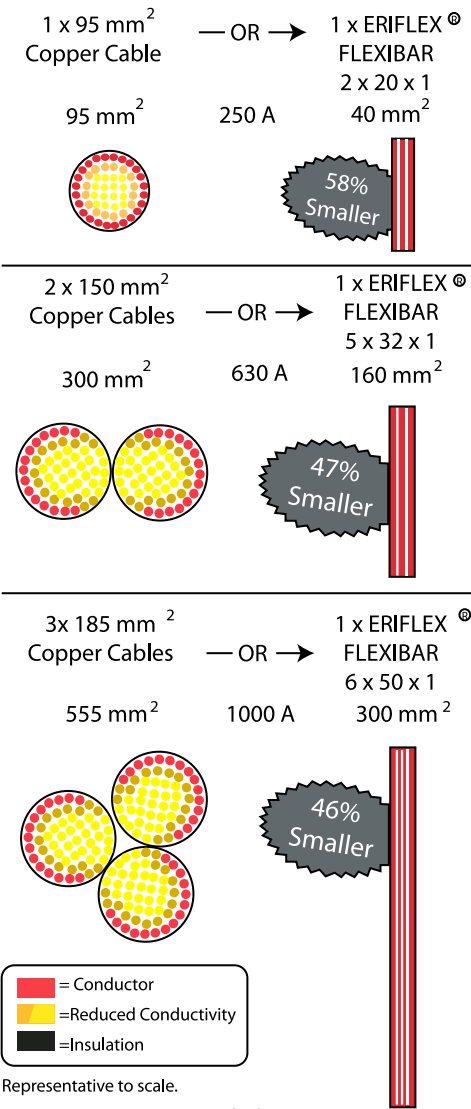


ERIFLEX®

ERICO®

Skin Effect

Comparison of the penetration depth between:



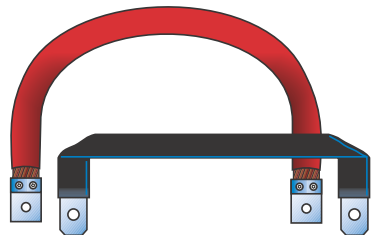
- Made from electrolyte conductive copper.
- Highly-protected support.Made from self-extinguishing PVC or silicon composition.
- Maximum bending and turning.
- Operating range between -25 Co and +150 Co.
- High flexibility: 370%
- Nominal Voltage: 1000V AC/ 1500 V DC



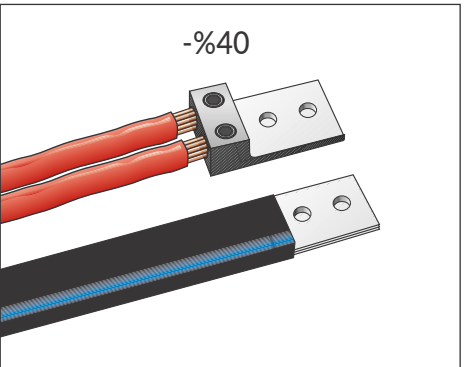
FLEXIBLE COPPER BUSBARS



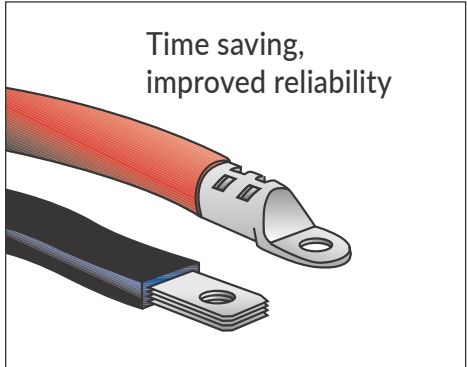
Volume %25



-%40



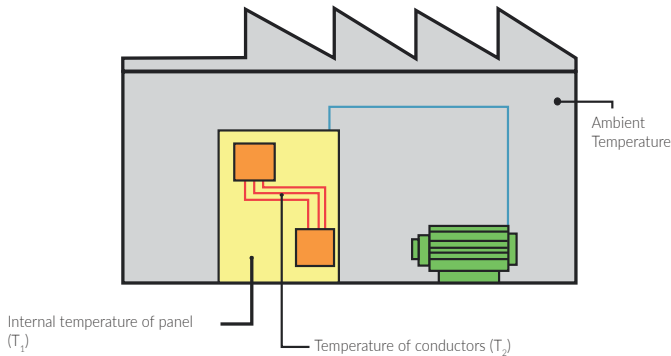
Time saving,
improved reliability



FLEXIBLE COPPER BUSBARS



SELECTION OF ERIFLEX FLEXIBAR ACCORDING TO THE INTERNAL TEMPERATURE OF THE PANEL



Temperature rise of conductor = $T_2 - T_1 = \Delta T$ (K)

Ex.: For a current of 630 A, with

$T_1 = 40^\circ\text{C} - T_2 = 90^\circ\text{C}$

1) $\Delta T = 90 - 40 = 50$ K

2) In the 50°C column, find the closest current value to 630A.
ERIFLEX FLEXIBAR 5 x 32 x 1 - 552650 - 160 mm² - 640A

3) Select ERIFLEX FLEXIBAR according to the terminal width of the equipment being connected.

ADMISSIBLE CURRENTS : This table indicates the temprature rise produced by choosen current in the given section.
This calculation does not take into account the heat dissipation from the switch gear.

A	PRODUCT CODE with Tinned Copper	UNIT METER	PACKS OF				SECTION mm ²	ΔT (K)						CURRENT COEFFICIENT	
				N	A	B		70	60	50	40	30	20		
250A	534.010	2	3	2	20	1	40	326	300	275	246	214	174	1.72	2.25
	534.011	2	3	3	20	1	60	428	395	360	323	280	228	1.72	2.25
400A	534.013	2	3	5	20	1	100	498	460	420	376	326	266	1.72	2.25
	534.014	2	3	6	20	1	120	546	506	462	413	358	292	1.72	2.25
500A	534.019	2	3	5	24	1	120	608	563	514	460	398	325	1.72	2.25
	534.020	2	3	6	24	1	144	670	620	566	506	438	358	1.72	2.25
630A	534.026	2	2	5	32	1	160	758	702	640	573	496	405	1.72	2.25
	534.027	2	2	6	32	1	192	846	783	715	640	555	452	1.72	2.25
800A	534.034	2	2	6	40	1	240	1018	943	860	770	667	544	1.72	2.25
1000A	534.035	2	2	8	40	1	320	1230	1140	1040	930	805	658	1.72	2.25
	534.036	2	2	10	40	1	400	1400	1295	1181	1055	915	747	1.72	2.25
1250A	534.042	2	1	10	50	1	500	1650	1525	1395	1245	1080	882	1.72	2.25
1600A	534.048	2	1	10	63	1	630	1895	1755	1600	1435	1240	1012	1.65	2.12
	534.052	2	1	8	80	1	640	1895	1755	1600	1435	1240	1012	1.65	2.12
	534.053	2	1	10	80	1	800	2100	1945	1775	1585	1375	1123	1.65	2.12
	534.059	2	1	12	100	1	1200	2500	2315	2115	1890	1636	1338	1.6	2.02

When using 2 or 3 busbar in parallel, use the coefficient:

Example : 5 x 32 x 1 - $\Delta T = 50$ K: 640 A
2 parallel bars > 640A x 1,72 = 1100A
3 parellel bars > 640A x 2,25 = 1440A

FLEXIBLE COPPER BUSBARS



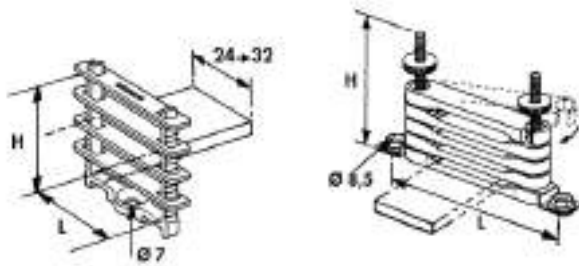
UFS KIT

- Bracket for flexible busbars.
- 2mm aliminium profile and 24 pcs bracket.
- Made from glass-fibre-reinforced, non-halogen polyamid
- Product Code: 553.590



FS SPACER CLAMP

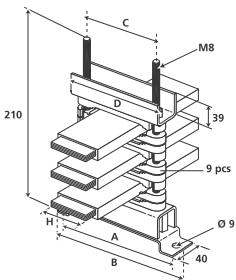
- Holds flexible busbars evenly and in parallel position.
- Sufficent number of perforations for optimum cooling.
- 4 pcs flexible busbar can be held together.



PRODUCT CODE	DESCRIPTION	FLEXIBLE BUSBAR TYPE	H (mm)	L (mm)	PACKS OF
553.550	FS 24	=< 24mm	53	30	25
553.560	FS 32	=< 32mm	53	38	25
553.570	FS 40-63	40,50,63mm	95	150	10
553.580	FS 80-100	80/100mm	140	200	10

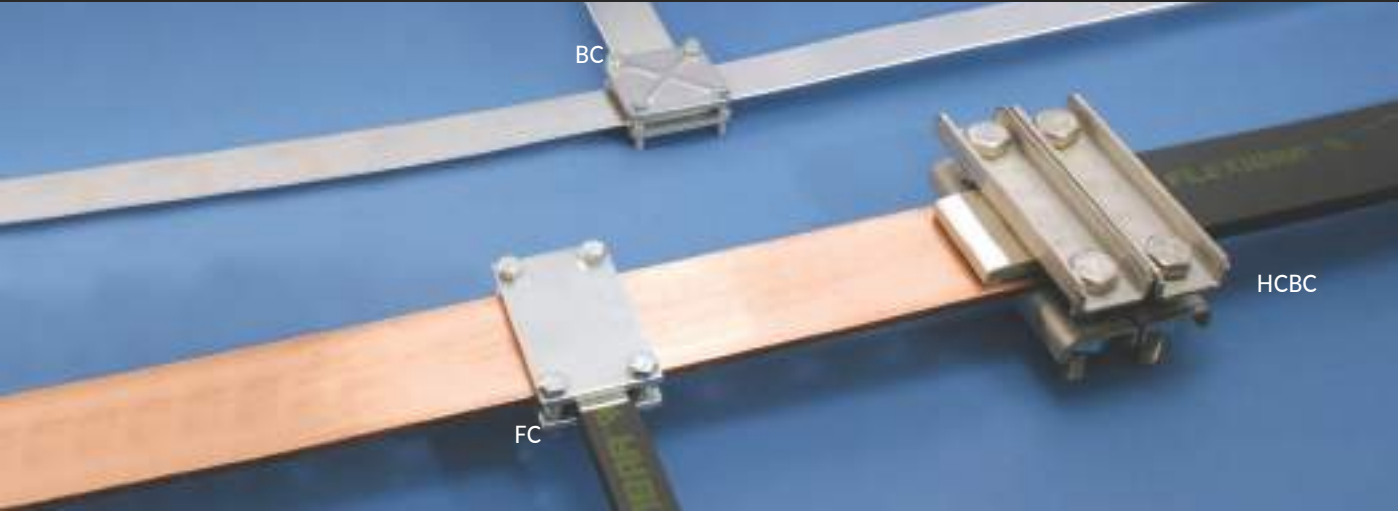
RFS SUPPORT

- Can hold 8 pcs busbar in parallel position.
- Can be mounted with 25mm steps on the plate.
- Recommended distance between the brackets: 400 mm



PRODUCT CODE	DESCRIPTION	FLEXIBLE BUSBAR TYPE	A (mm)	B (mm)	C (mm)	D (mm)	PACKS OF
553.370	RFS 40-63	40,50,63mm	150	175	90	120	1
553.380	RFS 80-100	80/100mm	200	225	140	170	1

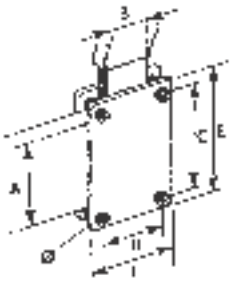
BUSBAR BRACKETS



FC BUSBAR CLAMP

- Holding capacity: 20mm
- 2 pcs mild steel+ zinc-plating part tightened with 8.8 quality M8 screws.

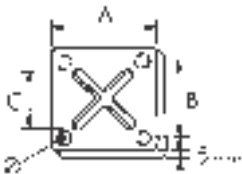
PRODUCT CODE	DESCRIPTION	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	PACKS OF
553.020	FC 50 x24	50	20-24	60	36	75	52	3
553.030	FC 50 x32	50	32	60	44	75	60	3
553.040	FC 50 x40	50	40	60	52	75	68	3
553.050	FC 80 x24	80	20-24	90	36	105	52	3
553.060	FC 80 x32	80	32	90	44	105	60	3
553.070	FC 80 x50	80	50	90	62	105	78	3
568.700	FC 100 x32	100	32	110	44	125	60	3
568.730	FC 120 x32	120	32	130	44	145	60	3



BC RIBBED - STEEL BUSBAR CLAMP

- Holding capacity: 20mm
- 2 pcs zinc-plated, reinforced steel sheet effectively tightened with the help of grooves.
- You can increase the copper connection, holding height up to 50 mm by using different size bolts.

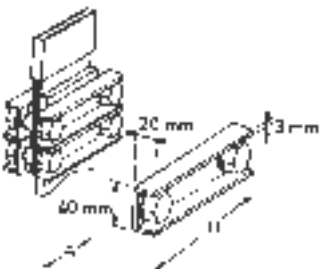
PRODUCT CODE	DESCRIPTION	A (mm)	B (mm)	C (mm)	DIAMETER	PACKS OF
553.200	BC 30	56	42	30	M6	8
553.210	BC 40	66	52	40	M6	8
553.220	BC 50	83	64	50	M8	8
553.230	BC 63	93	74	63	M8	4
553.250	BC 80	118	96	80	M10	4
553.260	BC 100	144	118	100	M10	4



HCBC HIGH-CURRENT BUSBAR CLAMP

- 40 mm/ Holding capacity: 40mm
- This modular busbar bracket is used in transformer combinations.
- The brackets are made from non-magnetic materials for heavy current combinations.
- Please use 2 pcs bracket to assure tightening force.

PRODUCT CODE	DESCRIPTION	A (mm)	B (mm)
553.100	HCBC 80	80	140
553.110	HCBC 100	100	160
553.120	HCBC 120	120	180

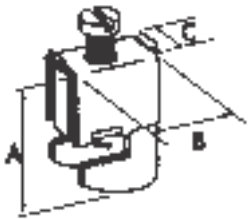


BUSBAR BRACKETS



FBC CONNECTORS FOR CONNECTING without DRILLING

- Applicable to non-perforated busbar combinations.
- Applicable to 5-10 mm busbar thickness.
- Cables from 1 mm² up to 185 mm² or flexibar width 6 to 20 mm



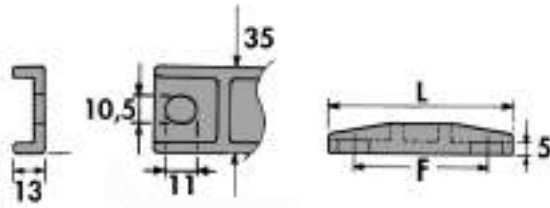
BUSBAR THICKNESS 5 (mm)							
PRODUCT CODE	DESCRIPTION	A (mm)	B (mm)	C (mm)		CABLE SIZE mm²	PACKS OF
553.405	FBC 5x4	23	29	11		4	15
553.400	FBC 5x6	27	23	11.5	6mm	2.5-16	15
553.410	FBC 5x9	38	40	19	9mm	16-50	15
553.510	FBC 5x15,5	44	40	25	15,5mm	35-70	15
553.520	FBC 5x20	49	40	31	20mm	70-185	15

BUSBAR THICKNESS 10 (mm)							
PRODUCT CODE	DESCRIPTION	A (mm)	B (mm)	C (mm)		CABLE SIZE mm²	PACKS OF
553.505	FBC 10x4	28	29	11		4	15
553.430	FBC 10x6	33	23	11.5	6mm	2.5-16	15
553.440	FBC 10x9	42	40	19	9mm	16-50	15
553.530	FBC 10x15,5	49	40	25	15,5mm	35-70	15
553.540	FBC 10x20	54	40	31	20mm	70-185	15



QCC CLAMP

- Applicable to flexible busbars.
- 1 pcs bracket required for a thickness of 5mm or less;
2 pcs bracket for thicker sizes.



		FLEX BAR				
PRODUCT CODE	DESCRIPTION	MIN (mm)	MAX (mm)	L (mm)	F (mm)	PACKS OF
561.200	QCC 6/13	6	13	48	25	5
561.210	QCC 15,5/32	15.5	32	70	50	5
561.220	QCC 40/63	40	63	95	75	5

CONT KIT

- Special steel screw, nut and washer
- For good electrical contact
- Supply Includes : 100 screw, 100 nut and
200 pcs contact washers
- Washers design from: 8/8 ZN8C

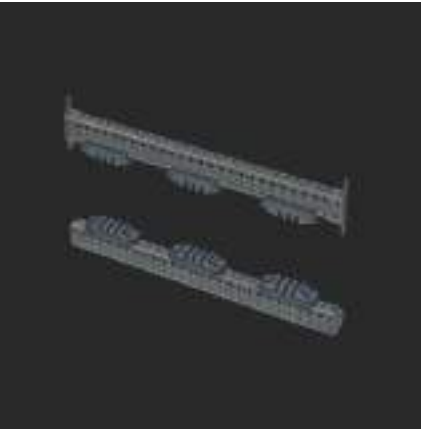
PRODUCT CODE	DESCRIPTION	TORQUE N.m	PACKS OF
558.310	CONT KIT M6 x 16	13	100
558.340	CONT KIT M8 x 30	30	100
558.370	CONT KIT M10 x 30	60	100
558.410	CONT KIT M10 x 50	60	100
558.440	CONT KIT M12 x 30	110	100
558.460	CONT KIT M12 x 40	110	100
558.480	CONT KIT M12 x 50	110	100
558.880	CONT KIT M12 x 60	110	100
558.490	CONT KIT M12 x 80	110	100

CLAMPING TORQUE CALCULATION

Ø	M6	M8	M10	M12	M14	M16
F(daN)	800	1450	2300	3700	4400	6000
Clamping torque Nm	13	30	60	110	174	274



ADJUSTABLE BUSBAR SUPPORT

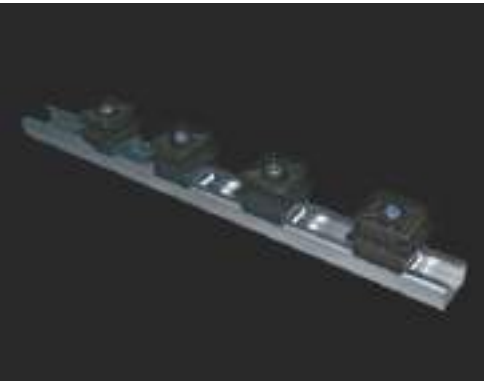


CABS 4/5										
IpK KA	24	48	63	82	114	145	152	165	187	209
Icc rms KA1s	12	23	30	39	52	66	69	75	85	95
Busbar Section	Distance Between Busbar Supports(mm)									
	Distance Between Phases to D=112,5mm									
30x5mm	1000	664	501	385	276	217	207	191	168	150
40x5mm	1000	755	579	445	318	251	240	220	194	174
50x5mm	1000	845	647	498	356	280	268	247	217	194
63x5mm	1000	948	727	559	400	315	301	277	244	207
80x5mm	1000	1000	819	630	451	355	339	312	259	207
100x5mm	1000	1000	916	704	504	397	380	333	259	207
120x5mm	1000	1000	1000	788	568	430	394	333	259	207
Distance Between Phases to D=125mm										
30x5mm	1000	689	528	406	291	229	219	201	177	159
40x5mm	1000	796	610	469	336	264	253	232	205	183
50x5mm	1000	890	682	525	375	296	283	260	229	205
63x5mm	1000	1000	766	589	421	332	317	292	257	230
80x5mm	1000	1000	863	664	475	374	358	329	288	230
100x5mm	1000	1000	965	742	531	418	400	368	288	230
120x5mm	1000	1000	1000	830	594	468	437	370	288	230
Distance Between Phases to D=150mm										
30x5mm	1000	755	579	445	318	251	240	220	194	174
40x5mm	1000	872	669	514	368	290	277	255	225	201
50x5mm	1000	975	748	575	411	324	310	285	251	225
63x5mm	1000	1000	839	645	462	364	348	320	282	252
80x5mm	1000	1000	946	727	520	410	392	361	318	277
100x5mm	1000	1000	1000	813	582	458	438	403	346	277
120x5mm	1000	1000	1000	910	651	513	490	444	346	*

CABS 4/5										
IpK KA	48	63	82	114	145	152	165	187	209	231
Icc rms KA1s	23	30	39	52	66	69	75	85	95	105
Busbar Section	Distance Between Busbar Supports(mm)									
	Distance Between Phases to D=150mm									
30x10mm	1000	1000	891	638	502	480	442	390	341	279
40x10mm	1000	1000	1000	736	580	555	510	427	341	279
50x10mm	1000	1000	1000	824	649	620	548	427	341	279
60x10mm	1000	1000	1000	902	709	648	548	427	341	279
80x10mm	1000	1000	1000	1000	709	648	548	427	341	279
100x10mm	1000	1000	1000	1000	709	648	548	427	341	279
120x10mm	1000	1000	1000	1000	709	648	548	427	341	279
Distance Between Phases to D=175mm										
30x10mm	1000	1000	963	689	543	519	477	421	377	326
40x10mm	1000	1000	1000	796	627	599	551	486	399	326
50x10mm	1000	1000	1000	890	701	670	616	498	399	326
60x10mm	1000	1000	1000	975	768	734	640	498	399	326
80x10mm	1000	1000	1000	1000	827	756	640	498	399	326
100x10mm	1000	1000	1000	1000	827	756	640	498	399	326
120x10mm	1000	1000	1000	1000	827	756	640	498	399	326

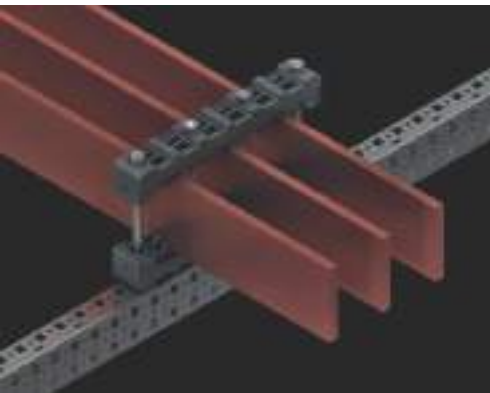
BUSBAR CALCULATION TABLES

ADJUSTABLE FLAT BUSBAR SUPPORT



AFBS 600 - AFB										
IpK KA	11	14	24	48	63	82	114	145	152	165
Icc rms KA1s	23	30	39	52	66	69	75	85	95	105
Busbar Section	Distance Between Busbar Supports(mm)									
30x5mm	1000	1000	1000	698	464	274	140	x	x	x
40x5mm	1000	1000	1000	915	537	317	162	100	x	x
50x5mm	1000	1000	1000	1000	610	361	184	114	104	x
63x5mm	1000	1000	1000	1000	705	416	213	132	121	102
80x5mm	1000	1000	1000	1000	824	490	250	155	142	120
100x5mm	1000	1000	1000	1000	974	576	295	182	167	141
125x5mm	1000	1000	1000	1000	1000	683	350	217	198	168
50X10mm	1000	1000	1000	1000	610	361	184	114	104	x
60x10mm	1000	1000	1000	1000	683	404	206	128	117	x
80x10mm	1000	1000	1000	1000	828	490	250	155	142	120
100x10mm	1000	1000	1000	1000	974	576	295	182	167	141
120x10mm	1000	1000	1000	1000	1000	662	339	210	192	162

COMPACT BUSBAR SUPPORT



COMPACT BUSBAR SUPPORT					
Busbar Section	Distance Between Busbar Supports(mm)				
	414mm	514mm	714mm	914mm	1114mm
	Short Circuit Effective Value (Icc rms)				
30x5mm	26 KA	21 KA	15 KA	11 KA	9 KA
40x5mm	30 KA	24 KA	17 KA	13 KA	11 KA
50x5mm	34 KA	27 KA	20 KA	15 KA	12 KA
60x5mm	36 KA	29 KA	21 KA	17 KA	13 KA
80x5mm	43 KA	35 KA	25 KA	19 KA	16 KA
100x5mm	48 KA	40 KA	28 KA	22 KA	17 KA

COMPACT BUSBAR SUPPORT					
Busbar Section	Distance Between Busbar Supports(mm)				
	414mm	514mm	714mm	914mm	1114mm
	Short Circuit Effective Value (Icc rms)				
40x10mm	48 KA	40 KA	29 KA	22 KA	18 KA
50x10mm	55 KA	44 KA	32 KA	25 KA	20 KA
60x10mm	61 KA	49 KA	35 KA	27 KA	22 KA
80x10mm	70KA	56 KA	40 KA	31 KA	26KA
100x10mm	78KA	63 KA	45 KA	35 KA	29KA
120x10mm	85KA	69 KA	50 KA	39 KA	32KA

