Knürr
Cable management

Knürr Cable Management
Strong points

MEC20064

MEC20074

MEC20084

MEC20086

MEC20058

LIG00021

It must be ensured when laying cables that every kind of mechanical stress is avoided.
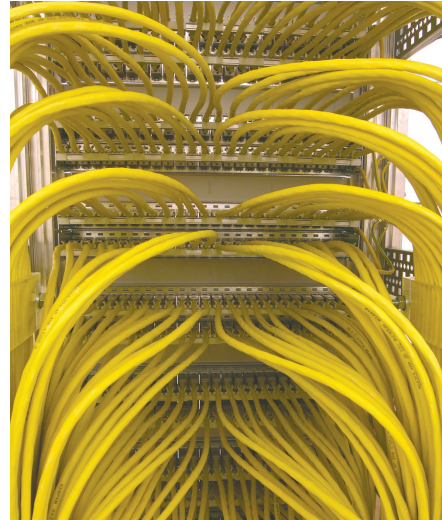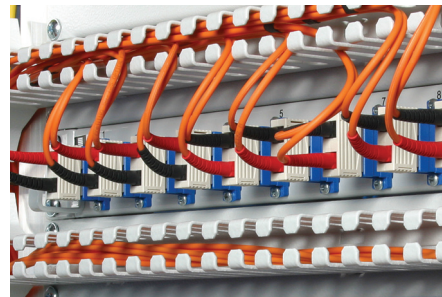
■ **Bending load**
The bending radii may never be less than the values provided by the cable manufacturer in the respective data sheets. At points that bend too much, the electrical properties of the cable change and reduce the transmission bandwidths and ranges.
If manufacturer specifications are not available, then the following rule of thumb applies: With loose cabling, at least 15 times the external cable diameter and with fixed cabling, at least 10 times the external cable diameter.

■ **Buckling load**
The most extreme bending loads can cause the cable to break.

■ **Tensile load**
This is only determined by the copper cross-section of the conductor, as all other materials are too soft. The cable may not be stressed more than $50N/mm^2$ (Cu cross-section) as otherwise the conductors are stretched and the cross-section is reduced. If higher "pulling" forces are required, then cables with additional strain relief elements must be used.

■ **Compressive stress**
Compressive stress is caused by loads bearing down from above, fixed clamping or sharp cable kinking and must always be avoided, as otherwise the "loose" cable structure changes and the electrical transmission properties are impaired.

■ **Torque strains** (twisting)
These must never have an effect on the cable, as they drive the cable elements into one another and therefore impair the transmission properties.

Knürr Cable Management
Strong points

[1] Different components for fiberglass and copper cables, especially the fastening options using Velcro strips and cable bundling using different colored strips, guarantee transparent cable management, which is the optimum starting situation for an intelligent expansion of the network and for the highest standard of service convenience.

[2] With all cable management components, special attention has been paid to ensuring that fixing is possible with Velcro strip cable ties. Velcro cable ties not only guarantee a stress-free fixing of the cables, they can also be released at any time and re-used again and again. Velcro cable ties are also extremely helpful for the installation engineer in providing pinch-free cable bundling – and also because they are so quick to apply.

[3] Excess cable lengths are stored separate from the patch fields, but in a position that is always easy to access. Copper cable excess can be stored separate from fiber glass excess within the Knürr rack systems: the copper cables on the side and the more sensitive fiberglass cables in an excess drawer at the front.
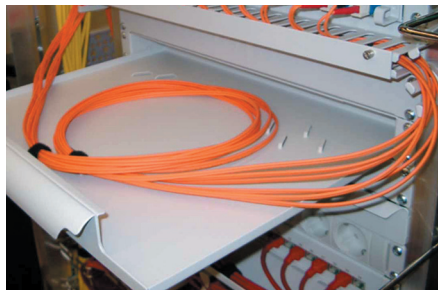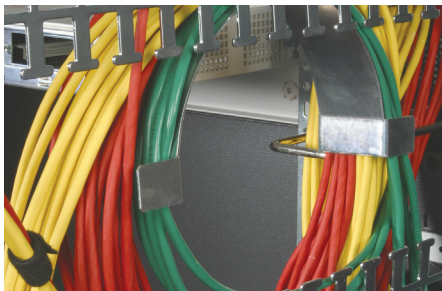
[4] Some true multi-talents appear on closer examination of the individual products. The cable routing multifunctional brace, for example, not only provides the option of routing cables horizontally and vertically using Velcro ties or cable ties, but rather also allows numerous components to be mounted with screws and caged nuts. These caged nuts can also be shifted with room for play in a slot, so that every mounting dimension can be accommodated.
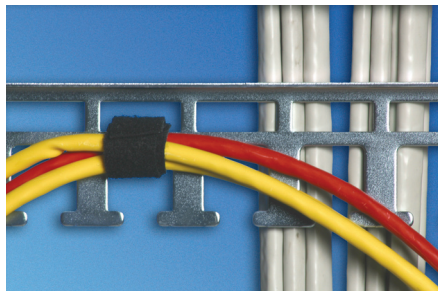
[5] The prescribed radii are preset with the radial limiter. These components ensure that neither a reduction of the transmission bandwidths and ranges nor a cable break occur.
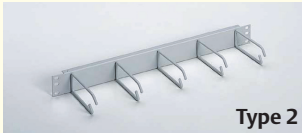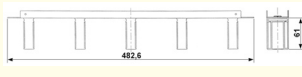

[1] MEC20082

[2] MEC20070

[3] MEC20099

[3] MEC20079

[4] MEC20077

[4] MEC20091

[5] MEC20071

19" Cable Routing Board, 1 U

MEC00110 — **Type 1**
MEC20014 — **Type 2**
MEC20103 — **Type 1** — 482,6 / 61
MEC20104 — **Type 2** — 482,6 / 105

W	H	D	U		Model	Order no.		UP
483			1		Type 1	**05.040.100.1**		1 unit
483			2		Type 2	**05.040.101.1**		1 unit
483			1		Type 1	**05.040.100.8**		1 unit
483			2		Type 2	**05.040.101.8**		1 unit

– For orderly cable routing
– For safe and secure cable routing of copper and fiberglass cables

■ **Material/finish**
Type 1:
Front panel, sheet steel, 1.5 mm Powder-coated, RAL 7035, light gray
Type 2:
Front panel: sheet steel 1.0 mm, powder-coated, RAL 7035 light gray

■ **Color**
Final digit of order number .1: RAL 7035 light gray
Final digit of order number .8: RAL 7021 dark gray

■ **External dimensions**
Cable routing:
Type 1: 55 x 22 mm, plastic
Type 2: 95 x 32 mm, steel

■ **Supply schedule**
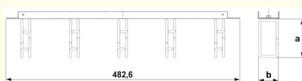1 19" Front panel
5 cable routers

■ **How supplied**
Preassembled

■ **Note**
Please also order front panel mounting material.

W	H	D	U		Model	Order no.		UP
483			1		Type 1	**05.040.111.1**		1 unit
483			1		Type 2	**01.117.144.1**		1 unit
483			1		Type 1	**05.040.111.8**		1 unit
483			1		Type 2	**01.117.144.8**		1 unit
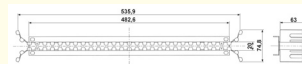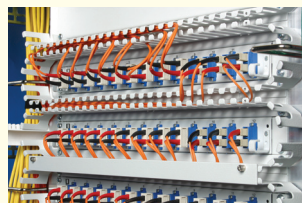
MEC20081
MEC20105 — 538,9 / 482,6 / 63
MEC20058

Fiber Optic Cable Routing Board, 1 U

– For orderly cable routing
– For safe and secure cable routing of fiber optic cables
– Optionally with cover panels to protect the cables and as labeling option

■ **Material/finish**
Sheet steel 1.5 mm, powder-coated texture, RAL 7035

■ **Supply schedule**
1 19" cable routing board

■ **How supplied**
In units

■ **Note**
Please also order front panel mounting material and cover.
Not suitable for rack widths 600 mm and 700 mm (asymmetric)!

W	H	D	U		Model	Order no.		UP
483			1		Cable routing board	**05.040.050.1**		1 unit
					Accessories: Cover	**05.040.051.1**		1 unit

MEC20041
MEC20102 — 482,6 / a / b
MEC20076

19" Cable Routing Board, flexible, 1 U

– For orderly cable routing
– For safe and secure cable routing of copper and fiberglass cables

■ **Material/finish**
Front panel: Sheet steel 1.5 mm, powder-coated texture, RAL 7035
Jumpering bracket, round steel, d = 5 mm, zinc-passivated

■ **Color**
Final digit of order number .1: RAL 7035 light gray
Final digit of order number .8: RAL 7021 dark gray

■ **External dimensions**
Cable routers (a x b):
1 U: 82 x 43 mm
2 U: 102 x 82 mm

■ **Supply schedule**
1 front panel
5" cable routing boards

■ **How supplied**
Preassembled

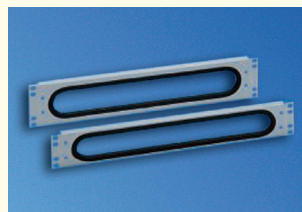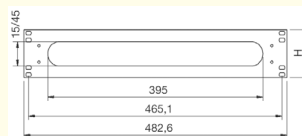■ **Note**
Please also order front panel mounting material.

CUD00021
CUD00023 — 15/45 / 395 / 465,1 / 482,6 / H
CUD00022

19" Blanking Panel Cable Port, threaded connection

– For orderly cable management in the rack internal space
– With edge protector

■ **Material**
Sheet steel, 1.0 mm

■ **Finish**
Final digit of order number .1: Powder-coated texture, RAL 7035, light gray
Final digit of order number .8: Powder-coated texture, RAL 7021 dark gray

■ **Supply schedule**
6 19" blanking panel cable ports

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order front panel mounting material.

W	H	D	U	For rack type	Order no.		UP
483	44		1	Powder-coated	**01.103.231.1**		6 unit
483	88		2	Powder-coated	**01.103.232.1**		3 unit

MEC20091

MEC20078

MIR88001

1 cable routing brace

- For mounting on the Miracel/Smaract basic rack and on the 19" extrusion
- For cable clamping using Velcro strips, cable ties
- For orderly cable management in the rack
- Two-sided installation
- For universal mounting option using caged nuts (all dimensions can be accommodated, as caged nuts are flexible)
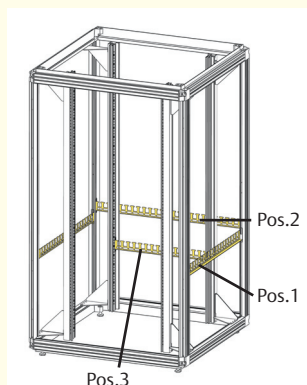
■ **Material**
Sheet steel, 1.5 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 cable routing braces
Mounting material

■ **How supplied**
In units

■ **Note**
If required, please also order Velcro strip.

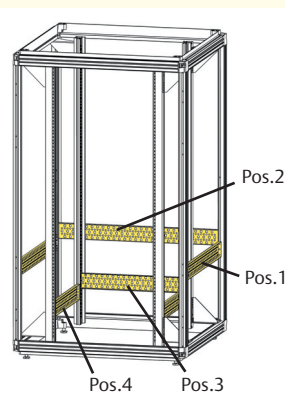| B_Rack	H_Rack	D_Rack	L	Model	for rack type	Order no.	UP
		600	455	Pos. 1	Miracel	05.040.200.9	4 units
		800	655	Pos. 1	Miracel	05.040.201.9	4 units
		900	755	Pos. 1	Miracel	05.040.202.9	4 units
		1000	855	Pos. 1	Miracel	05.040.203.9	4 units
		1200		Pos. 1	Miracel	05.040.205.9	4 units
600			534	Pos. 2	Miracel/Smaract	05.040.213.9	4 units
800			734	Pos. 2	Miracel	05.040.214.9	4 units
			468	Pos. 3	Miracel/Smaract/DPR	05.040.215.9	4 units
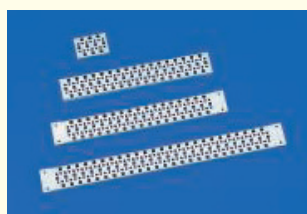
MIR00089

Multifunctional brace

- For routing cables with cable ties
- For universal mounting options
- Holes for mounting caged nuts
- Distance between two multifunctional braces can be variably selected using T-slot
- Installation on the extrusions of the rack frame or on the 19" extrusions, diagonal and lateral

■ **Installation positions**
1 on the basic frame on the depth
2 on the basic frame on the width
3 on the 19" extrusions on the width
4 on the 19" extrusions on the depth
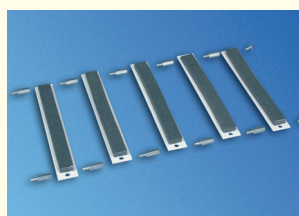
■ **Material**
Sheet steel, 1.5 mm

■ **Finish**
Zinc-passivated

MIR88003

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 multifunctional braces

■ **How supplied**
Flat-packed kit

B_Rack	D_Rack	d	Inst. position	for rack type	Order no.	UP
	600		1	Miracel	05.040.160.9	4 units
	800		1	Miracel	05.040.161.9	4 units
	900		1	Miracel	05.040.162.9	4 units
	1000		1	Miracel	05.040.163.9	4 units
	1100		1	Miracel	05.040.164.9	4 units
	1200		1	Miracel/	05.040.165.9	4 units
600			2	Miracel/Smaract	05.040.173.9	4 units
800			2	Miracel	05.040.174.9	4 units
			3	Miracel/Smaract/DPR	05.040.175.9	4 units
	600	365	4	Miracel/Smaract	05.040.168.9	4 units
	800	565	4	Miracel/Smaract	05.040.169.9	4 units
	600	440	4	Miracel/Smaract	05.040.170.9	4 units
	800	640	4	Miracel/Smaract	05.040.171.9	4 units
	900	740	4	Miracel/Smaract	05.040.172.9	4 units
	1000	740	4	Miracel/Smaract	05.040.172.9	4 units

MEC20045

MEC20074

Cascading

- For orderly cable management and cable clamping
- Can be expanded

■ **Material/finish**
Base cover: Sheet steel, powder-coated texture
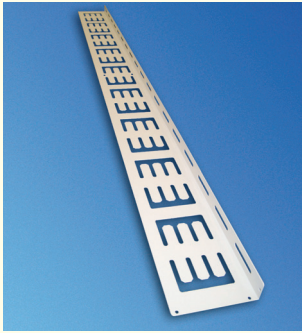RAL 7035
Foam: Polyethylene, anthracite

■ **Supply schedule**
2 end plates with foam
3 plates with foam on both sides
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	Order no.	UP
			05.040.088.9	1 set

Cable Tray

MEC20088

MEC20067

– For orderly cable management in the Miracel rack
– Cable fixing possible using Velcro strips or cable ties
– Combination possible as L, U or T unit

■ **Material/finish**
Sheet steel 1.5 mm, zinc passivated, powder-coated

■ **Color**
.1; *RAL 7035 light gray*
.8; *RAL 7021 dark gray*

■ **Dimensions**
L 150 x W 28 mm

■ **Supply schedule**
1 cable tray
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
If required, please also order Velcro strip.

W	H	w	Model	Order no.	UP
	2000	100	For Miracel and DCM racks	**05.040.251.X**	1 unit
	2200	100	For Miracel and DCM racks	**05.040.252.X**	1 unit
	2000	150	For Miracel and DCM racks	**05.040.254.X**	1 unit
	2200	150	For Miracel and DCM racks	**05.040.255.X**	1 unit
	2000	200	For Miracel and DCM racks	**05.040.257.X**	1 unit
	2200	200	For Miracel and DCM racks	**05.040.258.X**	1 unit

C-Extrusion Rail

MIR00096

Pos. 1
Pos. 2

MIR88002

– For cable clamping using U-clamps or cable clamping bars
– Cable clamping closer to access (type 1)
– Suitable for use in conjunction with top cover with cable entry

■ **Material/finish**
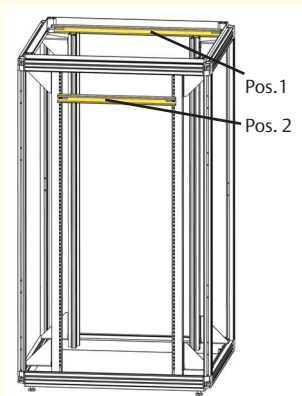Sheet steel, 1.5 mm, zinc-passivated

■ **Supply schedule**
1 C extrusion rail
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
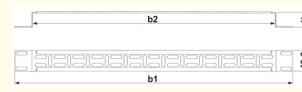Please also order U-clamps, cable clamping bars or threaded plates.

W	H	D	L	Model	Order no.	UP
600			482.5	Pos. 1: Miracel/Smaract	**05.040.080.0**	1 unit
800			682.5	Pos. 1: Miracel	**05.040.082.0**	1 unit
19			508	Pos. 2: Miracel/Smaract/	**01.110.719.9**	1 unit
				DoubleProRack		

Assembly Crossbar

Type 1

MEC20136

Type 1

MEC20120

Type 2

MEC20137

Type 2

MEC20121

MIR00094

– For cable management with Velcro strips
– Universal mounting option for installation accessories, socket strips, telecommunication installation units, mounting panels, etc.
– For side and cross installation

■ **Material/finish**
Sheet steel 1.5 mm, powder-coated texture, RAL 7035

■ **Supply schedule**
1 assembly crossbar

■ **How supplied**
In units

■ **Note**
Please also order the appropriate mounting material.

W/dH	D	U	w1	w2	X	Type	Model	Order no.	UP
19"		1	482	442.6	81.5	1	Pos. 2: Miracel/Smaract	**05.040.018.1**	1 unit
19"		1				2	Pos. 2: DoubleProRack	**05.040.019.1**	1 unit

Cable Clamping Bar

MEC00114

– For clipping to the C-shaped runner

■ **Material**
Polyamide, black

■ **Supply schedule**
1 set of 10 cable clamping bars

■ **How supplied**
Flat-packed kit

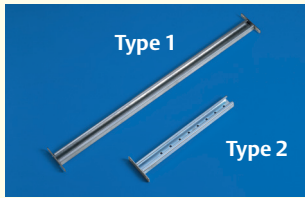| W	H	D	U	d	L	Model	Order no.	UP
							01.130.869.9	10 unit

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

C-Extrusion Rail

Type 1
Type 2

MEC00113

– For cable clamping using U-clamps or cable clamping bars
– Space-saving installation between the extrusions of the basic rack
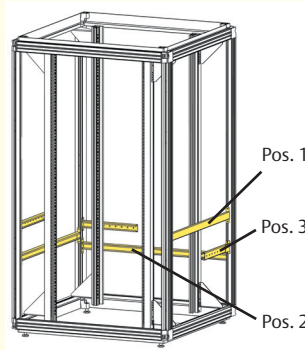– Two-sided installation

■ **Material**
Sheet steel, 1.5 mm, zinc-passivated

■ **Finish**
Zinc-passivated

■ **Supply schedule**
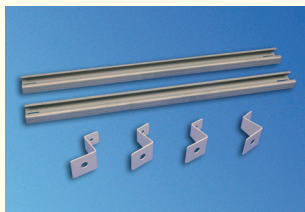4 extrusion rails
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order U-clamps, cable clamping bars or threaded plates.

Pos. 1
Pos. 3
Pos. 2

MIR88004

| B_{Rack}	D_{Rack}	W_{Rack}	Inst. position	for rack type	Order no.	UP
	600		1	Miracel	05.040.180.9	4 units
	800		1	Miracel	05.040.181.9	4 units
	900		1	Miracel	05.040.182.9	4 units
	1000		1	Miracel	05.040.183.9	4 units
	1200		1	Miracel	05.040.185.9	4 units
			3	Miracel/Smaract	05.040.195.9	4 units
		800	2	Miracel/Smaract	05.040.194.9	4 units
		600	2	Miracel/Smaract	05.040.193.9	4 units

Top-mounting for cable tray

MIR20198

– Fixing cable trays with C extrusion rails
– Any position possible

■ **Material/finish**
C extrusion rail: Sheet steel, zinc-passivated
Mounting bracket: Sheet steel, powdered RAL 7021

■ **Supply schedule**
2 C extrusion rails
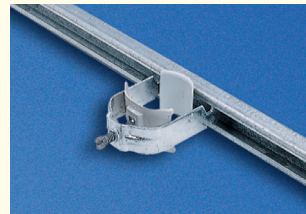4 mounting brackets
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order U-clamps, cable clamping bars or threaded plates.
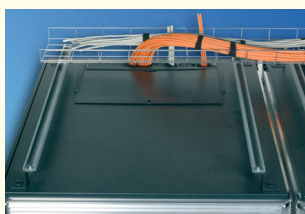
MEC20034

W	H	D_{Rack}	Order no.	UP
		800	05.040.072.8	1 set
		900	05.040.073.8	1 set
		1000	05.040.074.8	1 set
		1200	05.040.076.8	1 set

U-Clamp
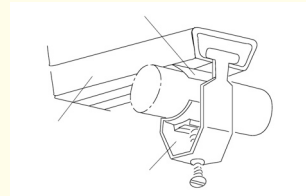

MIR00096

ELM00086

– For strain relief and individual routing of cables and lines
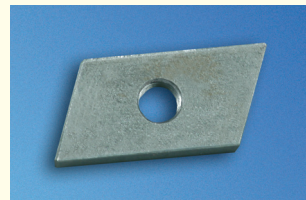– Clamping range, 8-64 mm

■ **Material**
Steel/plastic

■ **Supply schedule**
25 U-clamps
25 clamping saddles

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Clamping range	Order no.	UP
						8-12 mm	05.040.150.9	1 unit
						12-16 mm	05.040.151.9	1 unit
						16-22 mm	05.040.152.9	1 unit
						22-28 mm	05.040.154.9	1 unit
						34-40 mm	05.040.155.9	1 unit
						46-52 mm	05.040.157.9	1 unit
						58-64 mm	05.040.159.9	1 unit

M5 Threaded Plate

MEC20051

MEC20069

– For use in conjunction with C extrusion rails

■ **Material/finish**
Flat rolled steel, 4.0 mm, zinc-passivated

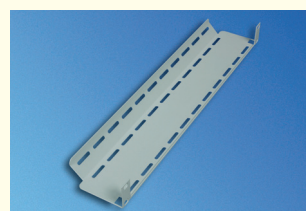■ **Supply schedule**
20 threaded plates

■ **How supplied**
Flat-packed kit

W	H	D	L	Order no.	UP
				05.040.077.9	1 set

19" Cable Tray

MEC20049

– For orderly cable management in front of the 19" front
– Mounting on front panels possible
– Cable fixing possible using Velcro strips

■ **Material/finish**
Sheet steel, 1.5 mm
Powder-coated texture, RAL 7035

■ **Supply schedule**
1 cable tray
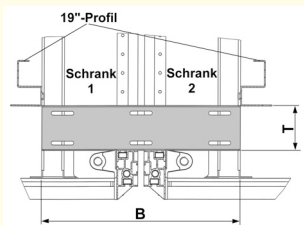
MEC20063

- **How supplied**
  In units
- **Note**
  Please also order front panel mounting material and Velcro strip.

W	H	D	U	Model	Order no.	UP
483	100	1			**05.040.055.1**	1 unit

MEC20042

MEC20119

Cable tray between the racks

- For orderly cable management between linked racks
- Fixing possible using Velcro strips

- **Material/finish**
  Sheet steel, 1.5mm
  Powder-coated texture, RAL 7035
- **Supply schedule**
  1 cable tray
  Mounting material
- **How supplied**
  Flat-packed kit
- **Note**
  Please also order Velcro strip

W	H	D	U	Model	Order no.	UP
265	60				**05.040.058.1**	1 unit
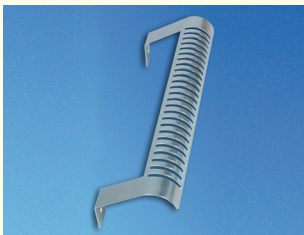
MEC20090

MEC20071

1 Radial Limit

- Various mounting options available:
- on the basic rack for cable clamping
- on the 19" extrusion for cable routing and diverting
- For use in conjunction with C extrusion rails (also order threaded plates!)
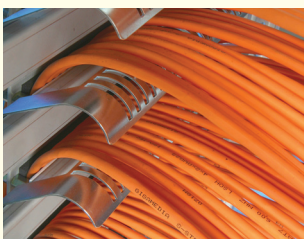
- **Material/finish**
  Sheet steel, 1.5mm, zinc-passivated
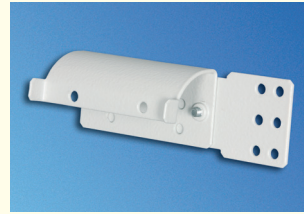- **Supply schedule**
  1 radial limit
  Mounting material
- **How supplied**
  Flat-packed kit

W	H	D	L	Order no.	UP
290	87			**05.040.090.0**	1 set

MEC20132

Radial Limit, 1 U

- For diverting the cables from the patch area vertically
- The cables can be fixed with Velcro strips
- Side use in conjunction with the cable duct is possible

- **Material/finish**
  Sheet steel 1.5mm, powder-coated texture, RAL 7035
- **Supply schedule**
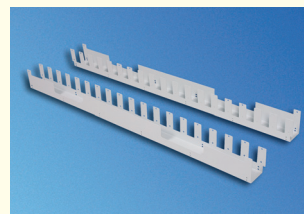 1 radial limit
  1 mounting panel
  Mounting material
- **How supplied**
  Flat-packed kit

MEC20143

W	H	D	U	Model	Order no.	UP
85		32	1		**05.040.091.1**	1 set

MEC20135

Cable Duct, Side

- For orderly cable management
- For use in conjunction with the front panel, swivel
- Cable rerouting with radial limiter, 1 U (optional)

- **Material/finish**
  Sheet steel, 1.5mm
  Powder-coated texture, RAL 7035
- **Supply schedule**
  1 cable duct
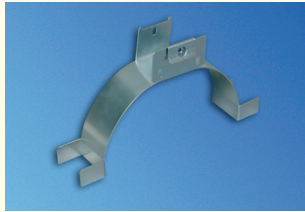 Mounting material
- **How supplied**
  Flat-packed kit

MEC20151

W	H	D	U	Model	Order no.	UP
100		130	41		**05.040.023.1**	1 set

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
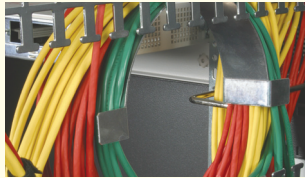
1.133

MEC20052

MEC20079

Excess Copper Cable Storage

– For storing excess copper cable lengths (or fiber optic cables)
– For orderly cable management in the Miracel rack
– Can be expanded

■ **Material/finish**
Sheet steel, 1.5 mm, zinc-passivated

■ **Supply schedule**
1 excess cable holder
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	Model	Order no.	UP
				For rack type Miracel	**05.040.044.0**	1 set

MEC20047

MEC20099

Fiber Optic 19" Excess Cable Drawer, 1 U

– For storing excess fiber optic cable lengths
– Pull-out
– Cable fixing possible with Velcro strips

■ **Material/finish**
Sheet steel, 1.5 mm
Powder-coated texture, RAL 7035

■ **Supply schedule**
1 main unit
1 drawer

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order front panel mounting *material and Velcro strip*

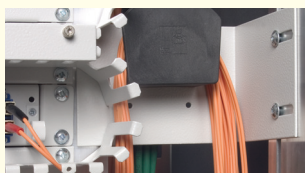| W	H	D	Model	Order no.	UP
483	44	350		**05.040.047.1**	1 set

MEC20044

MEC20146

Excess Fiber Optic Cable Storage

– For orderly fiber optic cable management in the Miracel rack (from W 800 mm)
– For storing excess cable lengths

■ **Material/finish**
Base cover: powder-coated texture, RAL 7035
Cable routing head: Polyamide, black

■ **Supply schedule**
1 base cover
1 cable routing head
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	Model	Order no.	UP
			2		**05.040.041.1**	1 set

MEC20038

MEC20072

Universal Jumpering Bracket

– Can be used for extrusion spacing (from front), 123 mm and 73 mm
– For orderly cable management
– Open version, no threading
– Mounting on the external side of the 19" extrusion
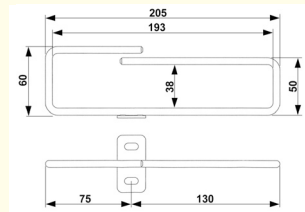– Any installation position selectable

■ **Material**
Round steel, d = 6 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 jumpering brackets
Mounting material

■ **How supplied**
Flat-packed kit

MEC20106

B$_{Rack}$	For rack type	Order no.	UP
From 800	Miracel	**05.040.220.9**	4 units

MEC20039

Square Jumpering Bracket

– For orderly cable management
– Open version, no threading
– Mounting on the external side of the 19" extrusion
– Any installation position selectable
– For large cable volumes
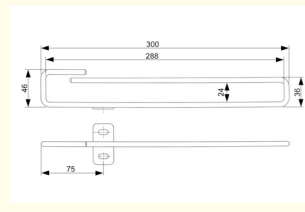
■ **Material**
Round steel, d = 6 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 square jumpering brackets
Mounting material

■ **How supplied**
Flat-packed kit
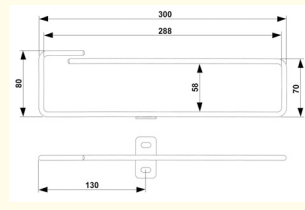
MEC20107　　**Type 1**

MEC20116　　**Type 2**

B$_{Rack}$	Type	For rack type	Order no.	UP
ab 800	Type 1	Miracel	**05.040.221.9**	4 units
ab 700	Type 2	Miracel	**05.040.222.9**	4 units
600	Type 2	Smaract	**05.040.222.9**	4 units

MEC20185

Quick-Strip Velcro strip for T-slot mounting without tools

– Quick fixing without tools
– For bundling cables
– Can be released and used again
– For orderly cable management
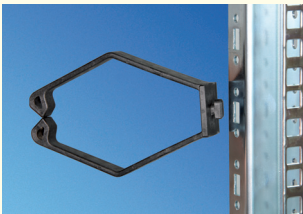– For fixing into T-slots at any position

■ **Material**
Polyethylene and Nylon
F.R.T., UL-94 HB

■ **Color**
Black

■ **Supply schedule**
10 Quick-Strip Velcro strips

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	For rack type	Order no.	UP
						Miracel	**00.218.506.0**	*1 set*

MEC20187

Quick-Clamp plastic jumperingbracket for T-slot mounting without tools

– Quick fixing without tools
– For orderly cable management
– Open version, no threading
– For fixing on T-slots at any position

■ **Material**
Nylon
F.R.T., UL-94 HB

■ **Color**
Black

■ **Supply schedule**
10 plastic jumpering brackets

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	For rack type	Order no.	UP
						Miracel	**00.218.505.0**	*1 set*
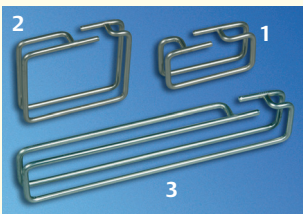
MEC20035

MEC20065

Jumpering Bracket, Flexible

– For flexible and orderly cable routing
– Any installation place and position selectable
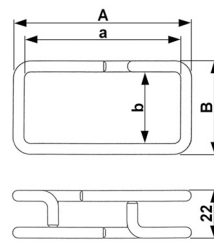– Open version, no threading

■ **Material**
Round steel, d = 5 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
10 jumpering brackets
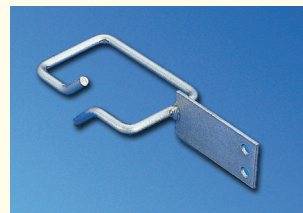Mounting material

■ **How supplied**
Flat-packed kit

MEC20108

| A	a	B	b	Model	Order no.	UP
82	72	43	33	Fig. 1	**05.040.231.9**	10 units
222	212	30	20	Fig. 3	**05.040.232.9**	10 units
102	92	82	72	Fig. 2	**05.040.233.9**	10 units

ELM00117

Square Jumpering Bracket

– For orderly cable management
– Open version, no threading
– Mounting on the external lateral T-slot of the 19" extrusion
– Any installation position selectable

■ **Material**
Round steel, d = 5 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 jumpering brackets
Mounting material

■ **How supplied**
Flat-packed kit
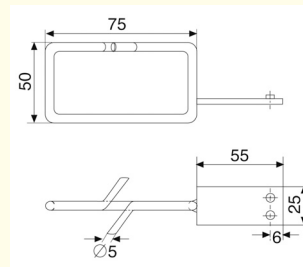
ELM00106

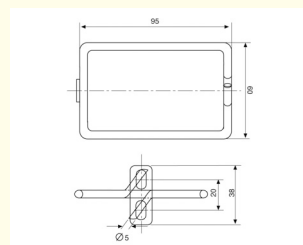| For rack type	Order no.	UP
DoubleProRack	**05.040.226.9**	4 units

MIR00564

Jumpering Bracket

– For orderly cable management
– Open version, no threading

■ **Material/finish**
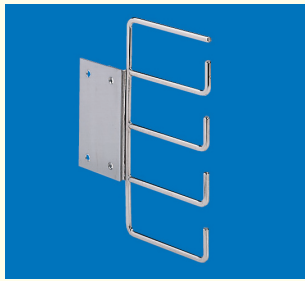Round steel, d = 5 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 jumpering brackets
Mounting material

■ **How supplied**
Flat-packed kit

MEC00122

Model	Order no.	UP
95x60	**05.040.225.9**	4 units

Jumper Tiebar

– Ideal for vertical routing and cable strain relief
– Open version, no threading
– Mounting on the external lateral T-slot of the 19" extrusion
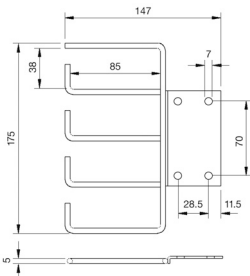– Any installation position selectable
– From rack width 600 mm

■ **Material/finish**
Round steel, d = 5 mm, zinc-passivated

■ **Supply schedule**
2 jumper tiebars

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.

ELM00028

Z56-1/FH

ELM00029

W	H	D	U	d	L	Model	Order no.	UP
							01.117.033.7	2 units

Jumpering Bracket, Square

– For orderly cable management
– Open version, no threading
– Mounting on the external lateral T-slot of the 19" extrusion
– Any installation position selectable
– From rack width 800 mm

■ **Finish**
Zinc-passivated, Zn 10c, white

■ **Supply schedule**
4 vertical jumpering brackets
Mounting material

■ **How supplied**
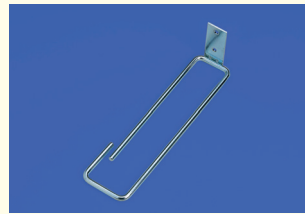Flat-packed kit

MIR00183
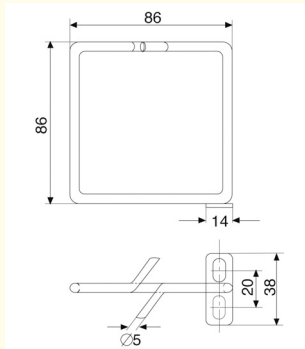
ELM00057

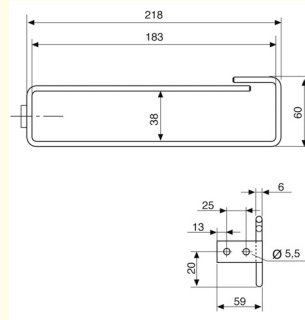| B Rack	Model	Order no.	UP
From 800	86x86	05.040.224.9	4 units

Jumpering Bracket, Vertical

– For orderly cable management
– Open version, no threading
– Mounting on the external side of the 19" extrusion and on the side on the rack T-slot
– Any installation position selectable
– For large cable volumes

■ **Material**
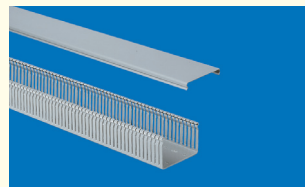Round steel, d = 6 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 vertical jumpering brackets
Mounting material

■ **How supplied**
Flat-packed kit

MIR00566

MEC00123

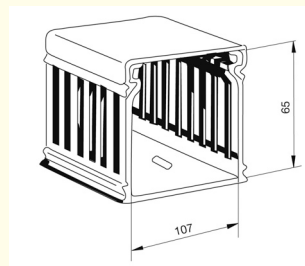| Model	Order no.	UP
218x60	05.040.223.9	4 units

Jumper Cable Duct

– Ideal for orderly and covered cable management of jumper cables
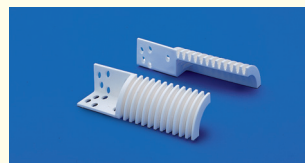
■ **Material**
Hard PVC

■ **Finish**
Stone gray, RAL 7030

■ **Supply schedule**
1 jumper cable duct with cover
Mounting material

ELM00004

ELM00052

W	H	D	U	d	L	Model	Order no.	UP
					2000		01.117.098.3	1 unit

Fiber Optic Cable Router

– For safe and orderly cable management of fiber optic cables
– With step-index extrusion of the slots to provide strain relief of the fiber optic cables
– Mounting on the external side of the 19" extrusion

■ **Material**
PA UL (94-VO)

■ **Supply schedule**
1 pair of fiber optic cable routers
Mounting material

LIG00068

LIG00021

How supplied
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							01.117.099.1	1 pair

ELM00025

Cable Routing Ring

– For orderly cable management
– Open version, no threading
– Mounting on the T-slots of the vertical extrusions
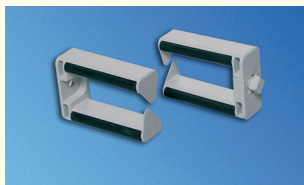– Any installation position selectable

■ **Material/finish**
PA 6, GF 15, black, UL 94-HB

■ **Supply schedule**
5 cable routing rings
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
						54 x 118 mm	01.312.207.9	5 units

MEC20158

Cable Routing Set

– For orderly cable management
– Dimensions:
  External - 61 mm x 42.5 mm
  Internal - 52 mm x 23 mm

■ **Material/finish**
Cable holder: PPO, sim. RAL 7035 light gray
Soft rubber extrusion: EPDM, sim. RAL 7021 dark gray

■ **Supply schedule**
10 cable routers

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.

W	H	D	U	d	L	Model	Order no.	UP
						Threaded	05.040.113.9	10 units
		For cut-out 9.5 x 9.5 mm				*Plug-in*	05.040.112.9	*10 units*

MEC20048

Velcro strip (by the meter)

– For stress-free mounting and bundling of copper and fiber optic cables
– Velcro strip can be cut to any length required

■ **Material/color**
Black: One Wrap Fastener
F.R.T., UL 94-V2
Blue: One Wrap Fastener

MEC20147

■ **Supply schedule**
1-meter or 25-meter Velcro strip

■ **How supplied**
By the meter

W	H	D	L	Model	Order no.	UP
16			*1000*	*Black*	**05.040.060.9**	*1 meter*
16			*1000*	*Blue*	**05.040.061.9**	*1 meter*
16			*25000*	*Black*	**05.040.065.9**	*25 meters*
16			*25000*	*Blue*	**05.040.066.9**	*25 meters*

MEC20025

Velcro Strip with Plastic Eyelet

– For mounting non-standard components
– For bundling cables

■ **Material/color**
Polypropylene/Polyamide, black

■ **Supply schedule**
20 Velcro strips

■ **How supplied**
Flat-packed kit

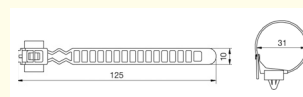| W	H	D	L	Model	Order no.	UP
16			300		**01.240.550.9**	1 set

ELM00049

ELM00050

Cable Band Clip

– For orderly cable management
– For fixing cable harnesses and cables with large cross section
– Quick and easy mounting
– For clipping into T-slots at any position
– With detachable lock

■ **Material**
PA 6.6, black, UL 94-V0

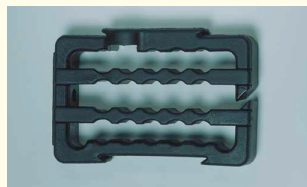■ **Supply schedule**
20

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							01.240.548.9	20 units

Dimensions in mm:
W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

MEC20017

ELM00024

Cable Clamping Frame

– For orderly cable management
– Open version, no threading
– Cross-section for cable routing, variable with removable routing ribs
– Can be expanded by adding on further cable clamping frames
– Optional mounting: lengthwise or across the width

■ **Material**
Polypropylene, black

■ **Supply schedule**
1 cable clamping frame
Mounting material

■ **How supplied**
Flat-packed kit
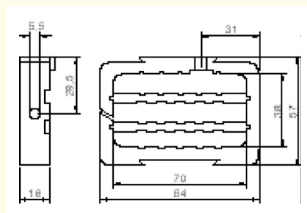
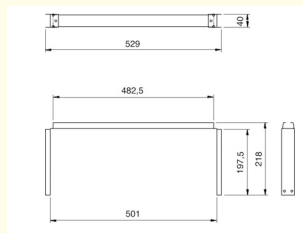| W	H	D	U	d	L	Model	Order no.	UP
							01.113.153.9	1 unit

MIR00086

MIR00182

Cable Clamping, Swing Frame

– Absolutely recommended when using swing frame
– For cable strain relief
– For relief on plug-type connections
– Prevents damage to the cable braided shielding

■ **Supply schedule**
2 mounting brackets
1 extrusion rail
Mounting material

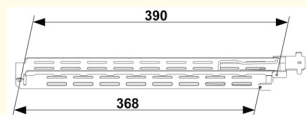| W	H	D	U	d	L	Model	Order no.	UP
							01.113.203.1	1 set

MEC20154

MEC88005
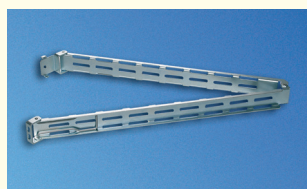
Cable Cantilever

– For easy mounting in rack/on the shelf; quick connecting to and disconnecting from shelf or rack with a spring clip
– Guarantees defined and kink-free cable management
– Minimum space requirement behind the pushed-in shelves, 40 mm

■ **Material/finish**
Sheet steel, 1.5 mm, zinc-passivated

■ **Supply schedule**
1 cable cantilever girder
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	d	W x L	Type	Order no.	UP
						2-piece	05.040.096.0	1 unit

TEL00034

TEL00051

Cable Roller

– For 19" racks and enclosures
– Reduces the cable load on slot-in
– Orderly cabling
– Prevents cable-sagging

■ **Material**
Sheet steel, 1.5 mm

■ **Supply schedule**
1 cable roller

W	H	D	U	d	L	Model	Order no.	UP
							05.043.327.9	1 unit

CUD00025

CUD00024

Cable Clamping Bracket / Earthing Bracket

– For 19" cable routing panel, 2 HU
– For strain relief of cables and plug-type connections with cable ties

■ **Material**
Sheet steel, 1.5 mm

■ **Finish**
Zinc-passivated, Zn 10c, white

■ **Supply schedule**
1 earthing bracket
Mounting material

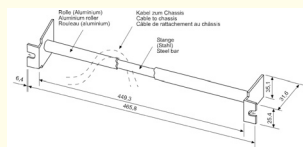| W	H	D	U	d	L	Model	Order no.	UP
							01.117.035.7	1 unit

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height

U = standard height unit
  1 U = 44.45 mm
UP = unit of packaging
kg = weight

d = useful depth
L = length

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound