



Schroff®

MAIN CATALOG

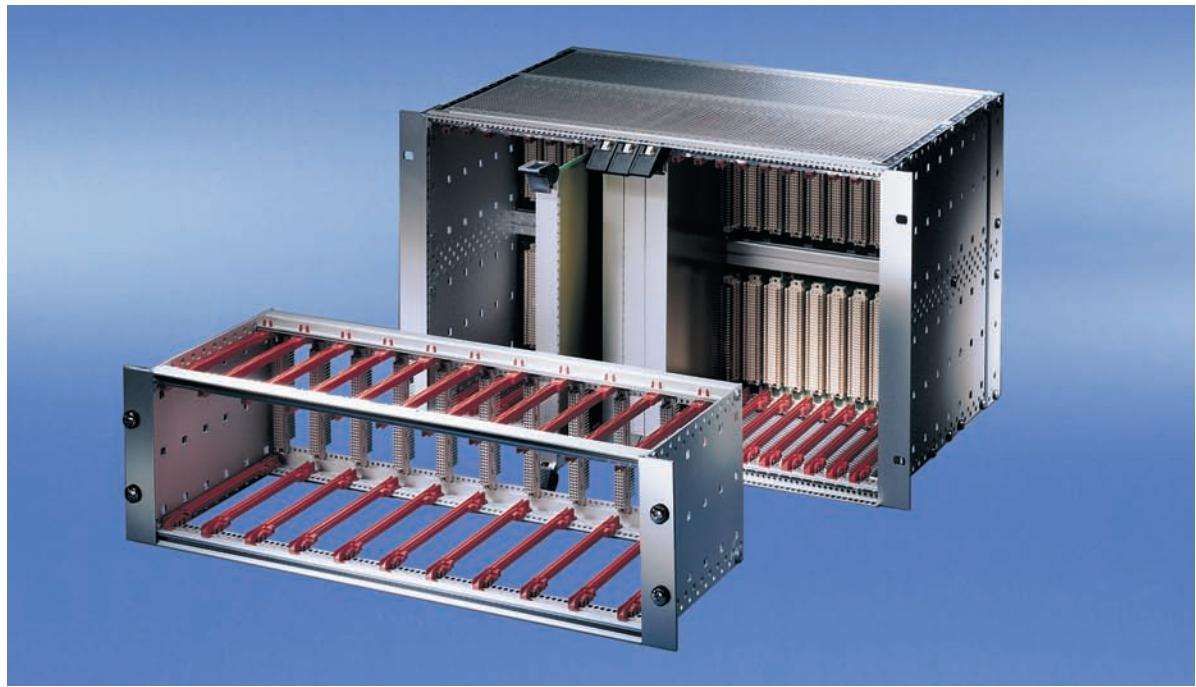
EQUIPMENT PROTECTION SOLUTIONS

24TH EDITION | OCTOBER 2012

6.1 - EuropacPRO

Overview	0
Cabinets	1
Wall mounted cases	2
Accessories for cabinets and wall mounted cases	3
Climate control	4
Desk-top cases	5
Subracks/ 19" chassis	6
Front panels, plug-in units	7
Systems	8
Power supply units	9
Backplanes ..	10
Connectors, front panel component system	11
Appendix	12

Subracks - **europac PRO**



06197001



Different horizontal rails for various applications



The IEEE handles and shielded front panels are designed for the construction of CompactPCI and VME64x subrack systems

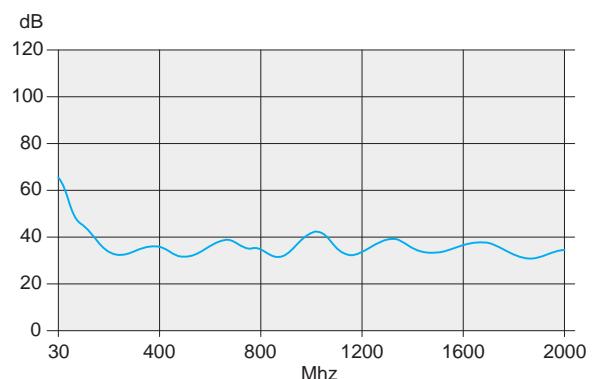


Sequential numbering on horizontal rails (> 28 HP) and markings on the guide rails provide quick optical positioning aids. ESD clips can be used at front or rear, to protect electronics from electrostatic discharge

Standards/certifications

- Inner and outer dimensions meet:
IEC 60297-3-100, -101, -102, -103, -104, -105
IEEE 1101.1 and IEEE 1101.10/11
- Type of protection IP 20 to IEC 60529
- EMC testing to IEC 61587-3
- Shock and vibration test reports:
German "Bahn" standards BN 411002, BN 411003;
NF F 60002, NF F 67012
IEC 61587-2, EN 50155
- Nuclear plants KTA 1401

EMC curve



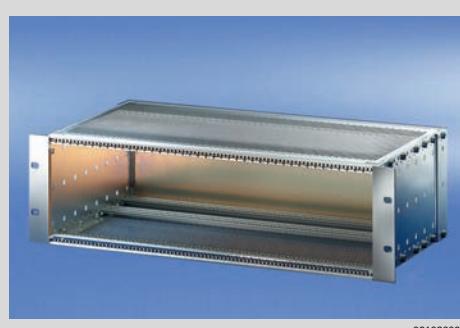
06108081



Downloads and further important information can be found
on the Internet under www.schroff.biz

19" subracks

- Kits or individual configuration
- One product and accessories platform for every kind of customer requirement and application
- Suitable for CompactPCI and VME64x insertion and extractor handles
- EMC shielding can easily be retrofitted if needed
- Shock and vibration resistant up to 5 g
- 3D PDF or CAD 3D data available for download



Kits

- All required parts available under one order number, some pre-fitted
- Most popular dimensions and versions available from stock
- For installed loads up to 7.5 kg, up to 11 kg and up to 15 kg
- As unshielded or shielded version
- Supplied as space-saving flat-pack

Introduction ... 6.4

Kits	
Light	6.8
Flexible	6.9
Heavy	6.12
CompactPCI	6.14

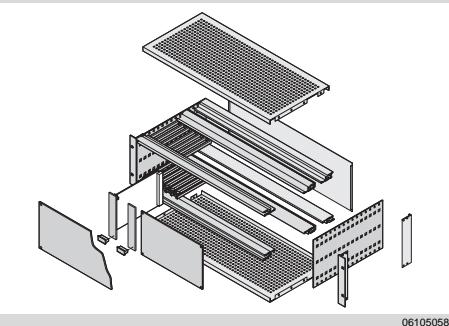
ServicePLUS ... 6.16

ServicePLUS configuration	
Side panels	6.19
Horizontal rails, threaded inserts, perforated strips	6.27
Guide rails	6.35
Cover plates	6.42
EMC shielding ..	6.52
Interior assemblies	6.57
Assembly kits ...	6.63
Application examples	6.69

Subracks for mobile railway applications ... 6.70

europacPRO for industrial applications ... 6.86

europacPRO for rugged applications ... 6.92



ServicePLUS individual configuration

- Single parts may individually be configured, respectively assembled on request (from quantity 1)
- Very wide range of variants in height, width and depth
- Guide rails for different applications
- EMC shielding material to improve EMC performance
- Interior assembly options with mounting plate or combined mounting (3 + 6 U segments)
- Other accessories and assembly kits



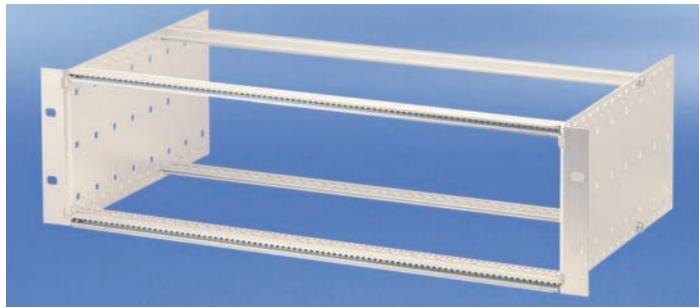
ServicePLUS from page 6.16

- e.g. individual configuration and assembly
- e.g. modification (cut-outs)
- e.g. downloads (CAD drawings, user manuals, test reports)
- e.g. custom solutions

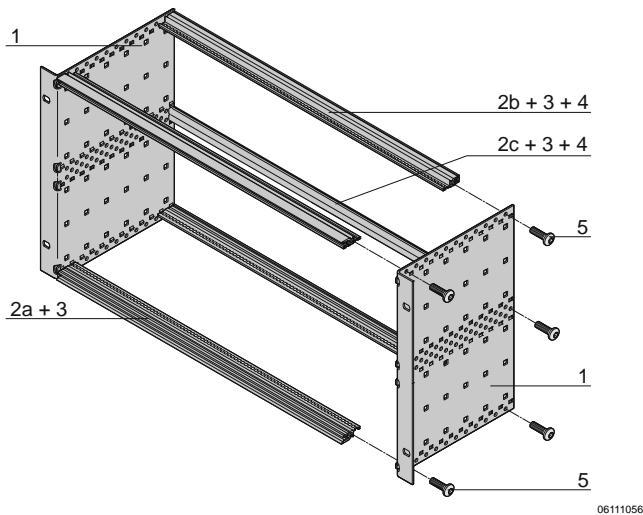
www.schroff.biz/ServicePLUS

30407004

Kit, "light", unshielded,
for backplane mounting

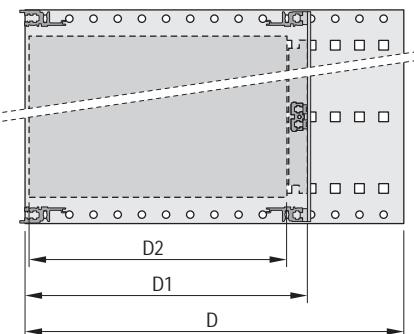


06111002



6 U

06111056



D = overall depth, D1 = insertion depth,
D2 = board depth = D1 - 15 mm

06108051



04400001

Rear horizontal rail for backplane mounting with insulation strip

- Subrack with side panel type L ("light") with firmly fixed 19" brackets
- Rear horizontal rails for backplane mounting with insulation strip
- Installed load up to 7.5 kg
- Cost-optimised

NEW

Delivery comprises (Kit)

Item	Qty	Description
3 U		6 U
1	2	2 Side panel type L, Al, 2 mm, passivated, with built-in 19" support bracket
2a	2	2 Front horizontal rail (L-KD)
2b	2	2 Rear horizontal rail (L-ST)
2c	-	1 Rear horizontal rail centre (ST)
3	4	6 Threaded insert, front and rear (pre-fitted)
4	2	4 Insulation strip (pre-fitted)
5	1	1 Fixing material kit, user manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no.
3	84	175	175	24564-131
3	84	235	175/235	24564-132
3	84	295	175/235/295	24564-133
6	84	175	175	24564-431
6	84	235	175/235	24564-432
6	84	295	175/235/295	24564-433

Accessories

19" assembly kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
--	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379

ESD clips for guide rails PU 50 pieces 24560-255

Cover plates for insertion in horizontal rails (type L)

Depth D2 mm	Width HP	Qty/PU piece	Part no.
160	84	2	24561-051
220	84	2	24561-052

Note

- Subrack is not prepared for shielding
- ServicePLUS configuration from page 6.16



For further information www.schroff.biz/oneclick
oneClick search code = Part no.



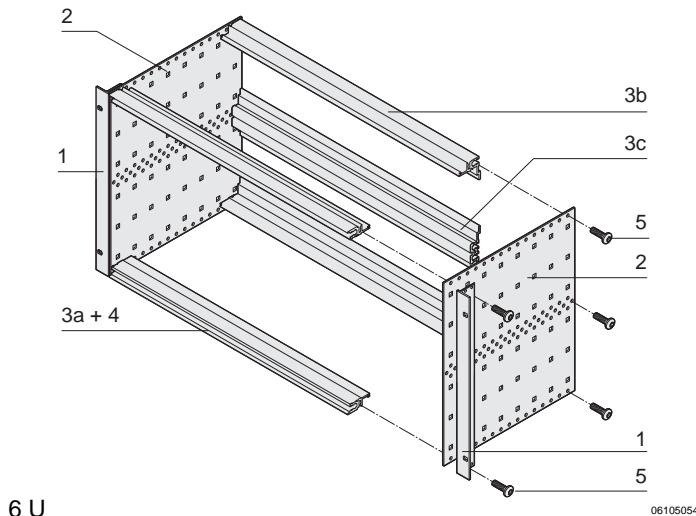
ServicePLUS see page 6.16

Subracks - **europac PRO**

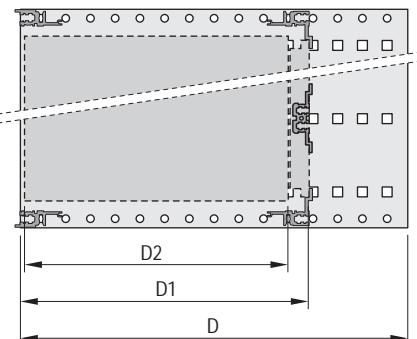
Kit, "flexible", unshielded,
for connector mounting



Photo: 3 U subrack



6 U



D = overall depth, D1 = insertion depth,
D2 = board depth = D1 - 15 mm



Horizontal rail to rear for connector mounting



ServicePLUS see page 6.16

- Subrack with side panel type F ("flexible"), 19" bracket is depth-adjustable

- Rear horizontal rails for connector mounting (IEC 60603-2 / DIN 41612)

- Installed load up to 11 kg

Delivery comprises (kit)

Item	Qty	Description
	3 U	6 U
1	2	19" support bracket, Al extrusion, for EMC gasket (St, stainless)
2	2	Side panel type F, Al, 2 mm
3a	2	Front horizontal rail (L-KD)
3b	2	Rear horizontal rail (L-MZ) for connector mounting
3c	-	Centre horizontal rail (MZ)
4	2	Threaded insert to front (pre-fitted)
5	1	Fixing material kit, user manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no.
3	84	175	175	24563-191
3	84	235	175/235	24563-192
3	84	295	175/235/295	24563-193
3	84	355	175/235/295/355	24563-194
6	84	175	175	24563-491
6	84	235	175/235	24563-492
6	84	295	175/235/295	24563-493
6	84	355	175/235/295/340	24563-494

Accessories

19" assembly kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
--	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379
340	10	24560-380

ESD clip for guide rails PU 50 pieces

Cover plates for insertion in horizontal rails (type L)	24560-255
---	-----------

Cover plates for insertion in horizontal rails (type L)

Depth D2 mm	Width HP	Qty/PU piece	Part no.
160	84	2	24561-051
220	84	2	24561-052

Note

- ServicePLUS configuration from page 6.16



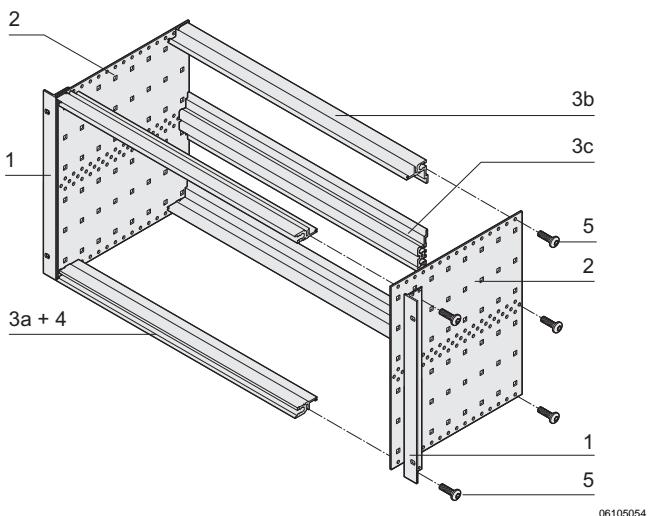
For further information www.schroff.biz/oneclick
oneClick search code = Part no.

Subracks - europac PRO

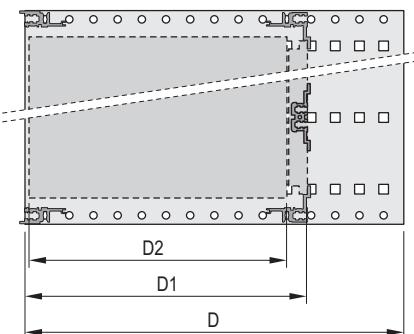
Subrack kit, unshielded for connector, assembly on slide rail



Photo: 3 U subrack



6 U



D=overall depth, D1=insertion depth,
D2=board depth = D1 - 15 mm

06108050



Rear horizontal rail for connector mounting

04400003

- Subrack can be used with slide rails
- Subrack with side panel type F ("flexible"), 19" bracket is depth-adjustable
- Horizontal rails, rear, for connector mounting (IEC 60603-2 / DIN 41612)
- Installed load up to 11 kg

Delivery includes (Kit, flat pack)

Item	Qty	Description
3 U 6 U		
1	2	19" support bracket, Al extrusion, for EMC sealing (St, stainless)
2	2	Side panel type F, Al, 2 mm
3a	2	Front horizontal rail (L-KD)
3b	2	Rear horizontal rail (L-MZ) for connector mounting
3c	-	Center horizontal rail (MZ)
4	2	Threaded insert to front (pre-fitted)
5	1	Fixing materials kit, user manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no.
3	84	235	175/235	24553-192
3	84	295	175/235/295	24553-193
3	84	355	175/235/295/355	24553-194
6	84	235	175/235	24553-492
6	84	295	175/235/295	24553-493
6	84	355	175/235/295/355	24553-494

Accessories

19" fixing material kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
---	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379

ESD clip for guide rails Spring steel, tin-plated, silver, PU	24560-255
50 pieces	

Cover plates for insertion into horizontal rail type L

Depth D2 mm	Width HP	Qty/PU piece	Part no.
160	84	2	24561-051
220	84	2	24561-052

Note

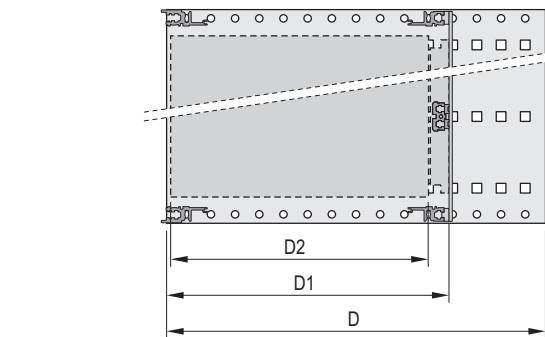
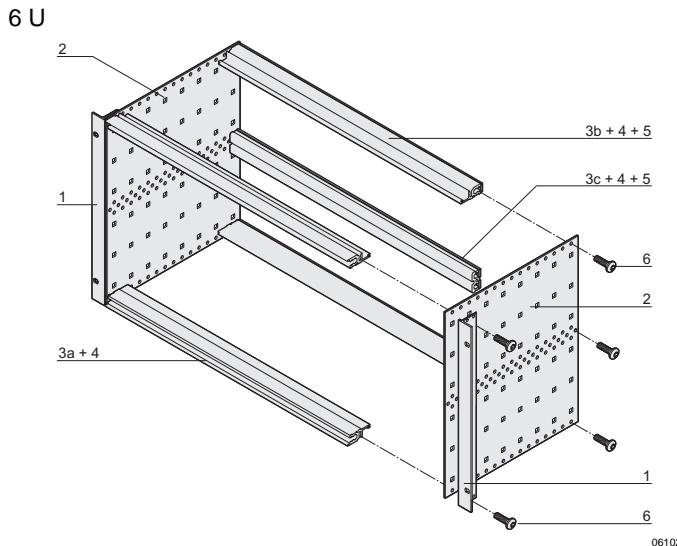
- Alternative product for older europac lab and europacRational subrack series
- ServicePLUS configuration from page 6.18

Subracks - **europac PRO** Kits

Subrack kit, unshielded, flexible for backplane, assembly on slide rail



Photo: 3 U subrack



D=overall depth, D1=insertion depth,
D2=board depth = D1 - 15 mm



Rear horizontal rail for backplane mounting with insulation strip

- Subrack can be used with slide rails
- Subrack with side panel type F ("flexible"), 19" bracket is depth-adjustable
- Rear horizontal rails for backplane mounting with insulation strip
- Installed load up to 11 kg

Delivery includes (Kit, flat pack)

Item	Qty	Description	
		3 U	6 U
1	2	2	19" support bracket, Al extrusion, for EMC sealing (St, stainless)
2	2	2	Side panel type F, Al, 2 mm
3a	2	2	Front horizontal rail (L-KD)
3b	2	2	Rear horizontal rail (L-ST) for backplane mounting
3c	-	1	Rear center horizontal rail (ST)
4	4	6	Threaded inserts, front and rear (pre-fitted)
5	2	4	Insulation strip (pre-fitted)
6	1	1	Fixing materials kit, user manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no.
3	84	235	175/235	24553-132
3	84	295	175/235/295	24553-133
3	84	355	175/235/295/355	24553-134
6	84	235	175/235	24553-432
6	84	295	175/235/295	24553-433
6	84	355	175/235/295/355	24553-434

Accessories

19" fixing material kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
---	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379
340	10	24560-380

ESD clip for guide rails Spring steel, tin-plated, silver, PU 50 pieces	24560-255
---	-----------

Cover plates for insertion into horizontal rail type L

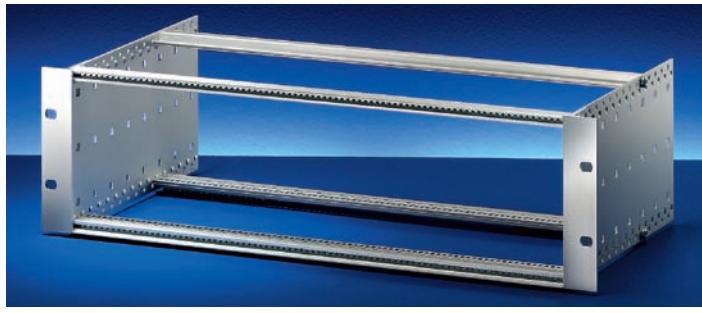
Depth D2 mm	Width HP	Qty/PU piece	Part no.
160	84	2	24561-051
220	84	2	24561-052

Note

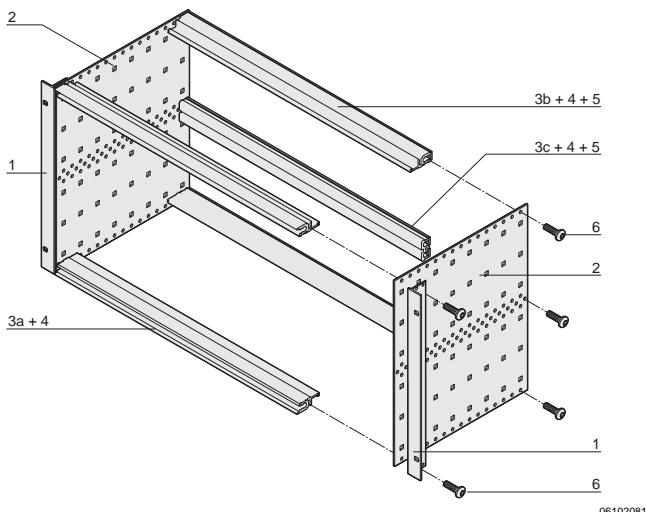
- Alternative product for older europac lab and europac Rational subrack series
- ServicePLUS configuration from page 6.18

Subracks - europac PRO

Kit, "flexible", unshielded,
for backplane mounting

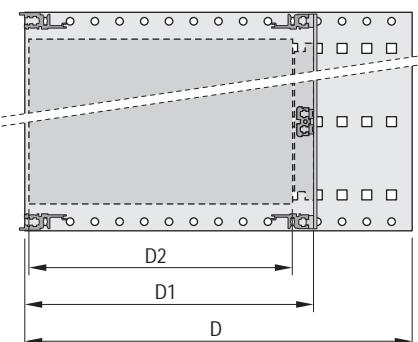


06102007



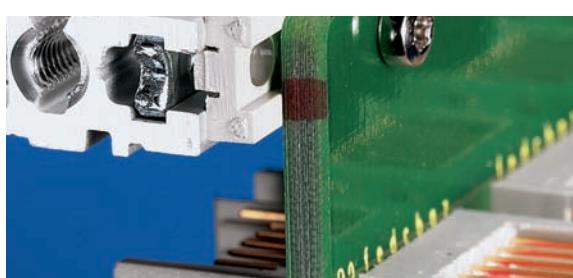
6 U

06102081



D = overall depth, D1 = insertion depth,
D2 = board depth = D1 - 15 mm

06108051



04400001

Rear horizontal rail for backplane mounting with insulation strip



ServicePLUS see page 6.16

- Subrack with side panel type F ("flexible"), 19" bracket is depth-adjustable
- Rear horizontal rail for backplane mounting with insulation strip
- Installed load up to 11 kg

Delivery comprises (kit)

Item	Qty	Description
	3 U	6 U
1	2	2 19" support bracket, Al extrusion, for EMC stainless steel gasket
2	2	Side panel type F, Al, 2 mm
3a	2	Front horizontal rail (L-KD)
3b	2	Rear horizontal rail (L-ST) for backplane mounting
3c	-	Rear horizontal rail centre (ST)
4	4	6 Threaded insert, front and rear (pre-fitted)
5	2	4 Insulation strip (pre-fitted)
6	1	1 Fixing material kit, user manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no.
3	84	175	175	24563-131
3	84	235	175/235	24563-132
3	84	295	175/235/295	24563-133
3	84	355	175/235/295/355	24563-134
3	84	415	175/235/295/355	24563-135
3	84	475	175/235/295/355	24563-136
6	84	175	175	24563-431
6	84	235	175/235	24563-432
6	84	295	175/235/295	24563-433
6	84	355	175/235/295/355	24563-434
6	84	415	175/235/295/355	24563-435
6	84	475	175/235/295/355	24563-436

Accessories

19" assembly kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
--	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379
340	10	24560-380

ESD clip for guide rails PU 50 pieces	24560-255
---------------------------------------	-----------

Cover plates for insertion in horizontal rails (type L)

Depth D2 mm	Width HP	Qty/PU piece	Part no.
160	84	2	24561-051
220	84	2	24561-052

Note

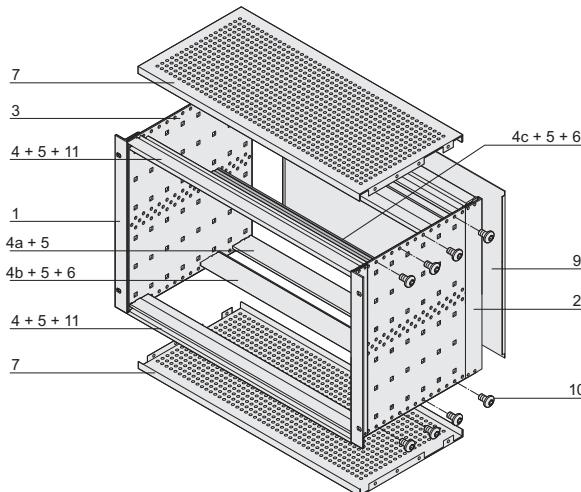
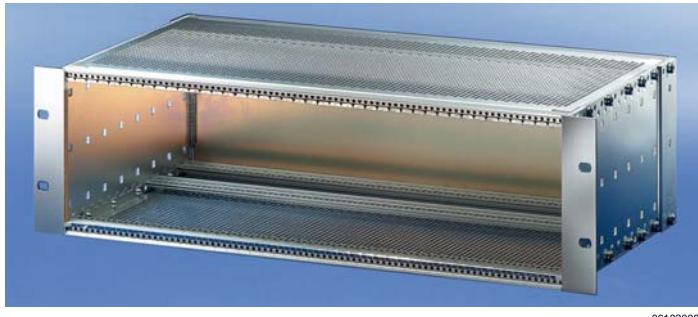
- ServicePLUS configuration from page 6.16



For further information www.schroff.biz/oneclick
oneClick search code = Part no.

Subracks - **europac PRO**

Kit, "flexible", shielded,
for backplane mounting



D = overall depth, D1 = insertion depth,
D2 = board depth = D1 - 15 mm



Rear horizontal rail for backplane mounting with insulation strip

- Subrack with side panel type F ("flexible"), 19" bracket is depth-adjustable
- Rear horizontal rail for backplane mounting with insulation strip
- Shielding typically 40 dB at 1 GHz, 30 dB at 2 GHz, assuming that the front is closed with shielded front panels
- Installed load up to 11 kg

Delivery comprises ((kit))

Item	Qty	Description	
		3 U	6 U
1	2	2	19" support bracket for EMC textile gasket
2	2	2	Rear corner profile for EMC textile gasket
3	2	2	Side panel type F
4	2	2	Front horizontal rail (L-KD)
4 a	2	2	Rear horizontal rail (L-KD)
4 b	2	2	Rear horizontal rail (L-ST) for backplane mounting with insulation strip
4 c	-	1	Centre horizontal rail (ST)
5	6	8	Threaded insert (pre-fitted)
6	2	4	Insulation strip, fixed
7	2	2	EMC cover plate
8	1	1	EMC gasketing material (pre-fitted)
9	1	1	Rear panel
10	1	1	Fixing material kit
11	2	2	Perforated strip (pre-fitted)
12	1	1	User manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no.
3	84	235	175/235	24563-142
3	84	295	175/235/295	24563-143
3	84	355	175/235/295	24563-144
3	84	415	175/235/295	24563-145
3	84	475	175/235/295	24563-146
6	84	235	175/235	24563-442
6	84	295	175/235/295	24563-443
6	84	355	175/235/295	24563-444
6	84	415	175/235/295	24563-445
6	84	475	175/235/295	24563-446

Accessories

19" assembly kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
--	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379
340	10	24560-380

ESD clip for guide rails PU 50 pieces

24560-255

Note

- ServicePLUS configuration from page 6.16

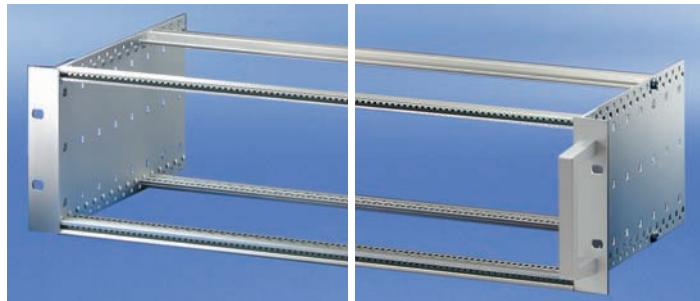


For further information www.schroff.biz/oneclick
oneClick search code = Part no.



ServicePLUS see page 6.16

Kit, 'heavy', unshielded,
for backplane mounting



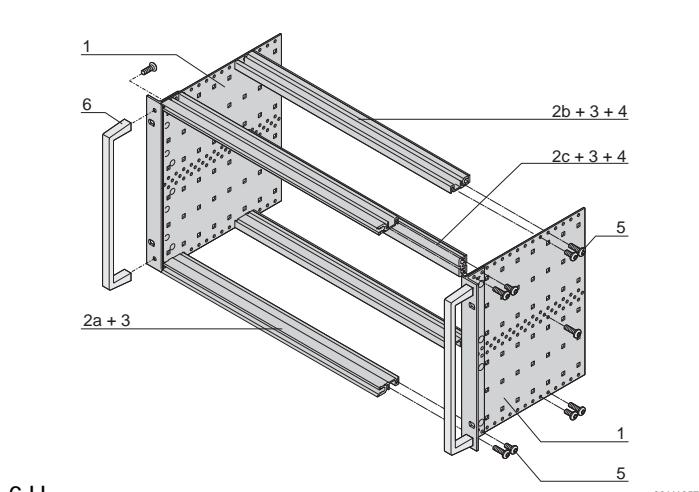
Without front handle

06102007

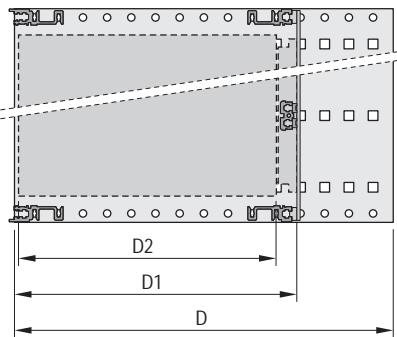
With front handle

06111003

NEW



6 U



D = overall depth, D1 = insertion depth, D2 = board depth



04400001

Rear horizontal rail for backplane mounting with insulation strip



ServicePLUS see page 6.16

- Subrack with side panel type H ("heavy"), 19" bracket is firmly fixed to side panel (tox-cold welded)
- Rear horizontal rail for backplane mounting with insulation strip
- Shock and vibration resistance up to 5 g
- Installed load up to 15 kg
- Versions with/without front handles

Delivery comprises (Kit)

Item	Qty	Description	
		3 U	6 U
1	2	2	Side panel type H, Al, 2 mm, passivated, with 19" support bracket (tox-cold welded) for textile EMC gasket
2a	2	2	Front horizontal rail (H-KD)
2b	2	2	Rear horizontal rail (H-ST)
2c	-	1	Rear horizontal rail centre (H-ST)
3	4	6	Threaded insert, front and rear (pre-fitted)
4	2	4	Insulation strip (pre-fitted)
5	1	1	Fixing material kit, user manual
6	2	2	Front handle (on version with front handle only)

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no. with front handle	Part no. without front handle
3	84	175	175	24567-161	24563-161
3	84	235	175/235	24567-162	24563-162
3	84	295	175/235/295	24567-163	24563-163
3	84	355	175/235/295/355	24567-164	24563-164
6	84	175	175	24567-461	24563-461
6	84	235	175/235	24567-462	24563-462
6	84	295	175/235/295	24567-463	24563-463
6	84	355	175/235/295/355	24567-464	24563-464

Accessories

19" assembly kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
--	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379
340	10	24560-380

ESD clip for guide rails PU 50 pieces 24560-255

Torx panhead screw, for extra bolting of the guide rails, 2.5 x 9.3, zinc-plated, PU 100 pieces; torque max. 0.2 Nm 24560-141

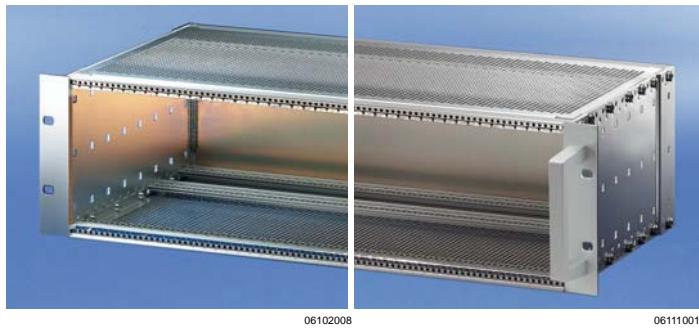
Cover plates for bolting to side panel

Depth D2 mm	Width HP	Qty/PU piece	Part no.
160	84	2	24560-078
220	84	2	24560-079
280	84	2	24560-080
340	84	2	24560-081

Note

- ServicePLUS configuration from page 6.16

Kit, "heavy", shielded,
for backplane mounting

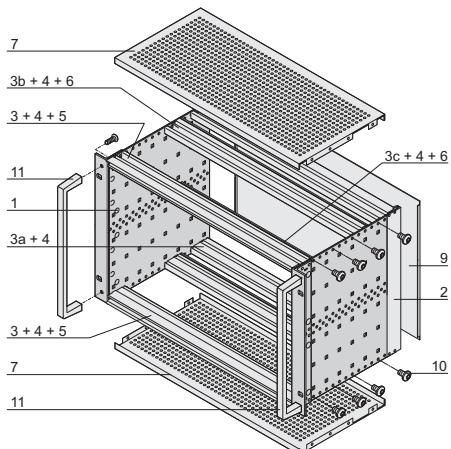


Without front handle

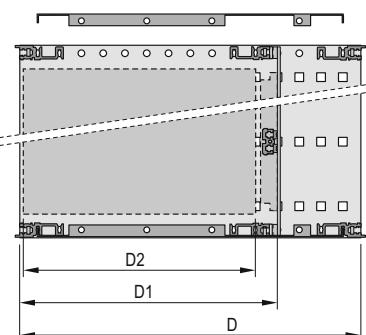
With front handle

- Subrack with side panel type H ("heavy"), 19" bracket is firmly fixed to side panel (tox-cold welded)
- Rear horizontal rail for backplane mounting with insulation strip
- Shielding typically 40 dB at 1 GHz, 30 dB at 2 GHz, assuming that the front is closed with sealed front panels
- Shock and vibration resistance up to 5 g
- Installed load up to 15 kg
- Versions with/without front handles

NEW



6 U



D = overall depth, D1 = insertion depth,
D2 = board depth = D1 - 15 mm



Rear horizontal rail for backplane mounting with insulation strip

Delivery comprises (Kit)

Item	Qty	Description	
		3 U	6 U
1	2	2	2
1	2	2	2
2	2	2	2
3	2	2	2
3 a	2	2	2
3 b	2	2	2
3 c	-	1	1
4	6	8	8
5	2	2	2
6	2	4	4
7	2	2	2
8	1	1	1
9	1	1	1
10	1	1	1
11	2	2	2

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no. with front handle	Part no. without front handle
3	84	235	175/235	24567-172	24563-172
3	84	295	175/235/295	24567-173	24563-173
3	84	355	175/235/295	24567-174	24563-174
6	84	235	175/235	24567-472	24563-472
6	84	295	175/235/295	24567-473	24563-473
6	84	355	175/235/295	24567-474	24563-474

Accessories

19" assembly kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435
--	-----------

Guide rails (standard), ESD clips

Depth D2 mm	Qty/PU piece	Part no.
160	10	24560-351
220	10	24560-353
280	10	24560-379

ESD clip for guide rails PU 50 pieces	24560-255
---------------------------------------	-----------

Torx panhead screw , for extra bolting of the guide rails, 2.5 x 9.3, zinc-plated, PU 100 pieces; torque max. 0.2 Nm	24560-141
--	-----------

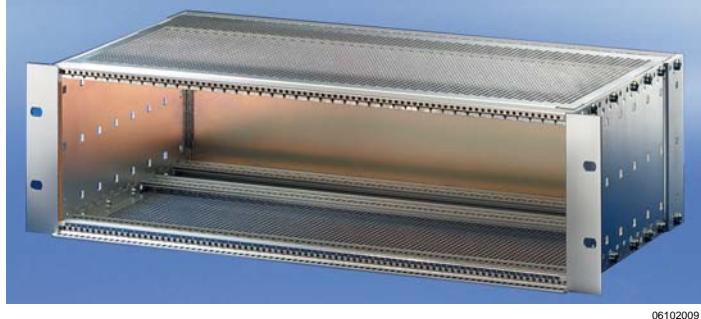
Note

- ServicePLUS configuration from page 6.16

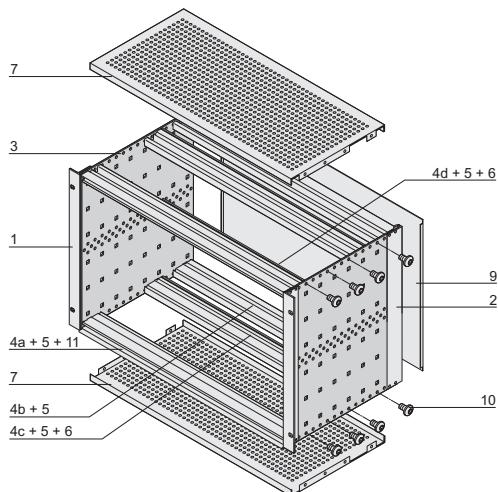


ServicePLUS see page 6.16

Kit, for CompactPCI, for backplane mounting, without rear I/O, shielded



6 U



06102009

- Subrack with side panel type F ("flexible") for CompactPCI plug-in units with high insertion and withdrawal forces
- Rear horizontal rail for backplane mounting with insulation strip
- Shielding typically 40 dB at 1 GHz, 30 dB at 2 GHz, assuming that the front is covered with shielded front panels
- Installed load up to 11 kg

Delivery comprises (kit)

Item	Qty	Description
3 U 6 U		
1	2	2 19" support bracket for EMC textile gasket
2	2	2 Rear corner profile for EMC textile gasket
3	2	2 Side panel type F
4	1	- Front horizontal rail (H-KD)
4 a	1	2 Front horizontal rail IEEE (H-LD)
4 b	2	2 Rear horizontal rail (L-KD)
4 c	2	2 Rear horizontal rail (H-ST), for backplane mounting with insulation strip
4 d	-	1 Centre horizontal rail (ST)
5	6	8 Threaded insert (pre-fitted)
6	2	4 Insulation strip (pre-fitted)
7	2	2 EMC cover plate
8	1	1 EMC gasketing material (pre-fitted)
9	1	1 Rear panel
10	1	1 Fixing material kit
11	2	2 Perforated strip (pre-fitted in item 4+4a)
12	1	1 User manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Part no.
3	84	235	175	24563-152
6	84	235	175	24563-452

Accessories

Guide rail with coding, red 160 mm deep, PBT, UL 94 V-0, groove width 2 mm, PU 10 pieces	24560-356
Guide rail with coding, grey 160 mm deep, PBT, UL 94 V-0, groove width 2 mm, PU 10 pieces	24560-358
Guide rail with coding, green, offset 160 mm deep, PBT, UL 94 V-0, groove width 2 mm, PU 10 pieces	24560-359
ESD clip for guide rails PU 50 pieces	24560-255
ESD clip for alignment pin of CPCI/VME64x handle PU 50 pieces	24560-256
Torx panhead screw 2.5 x 9.3, zinc-plated, PU 100 pieces; torque max. 0.2 Nm	24560-141
Coding peg PC , UL 94 V-0, RAL 7035, PU 100 pieces	20817-501
19" assembly kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435

Note

- ServicePLUS configuration from page 6.16



For further information www.schroff.biz/oneclick
oneClick search code = Part no.

D = overall depth, D1 = insertion depth,
D2 = board depth = D1 - 15 mm

06113055



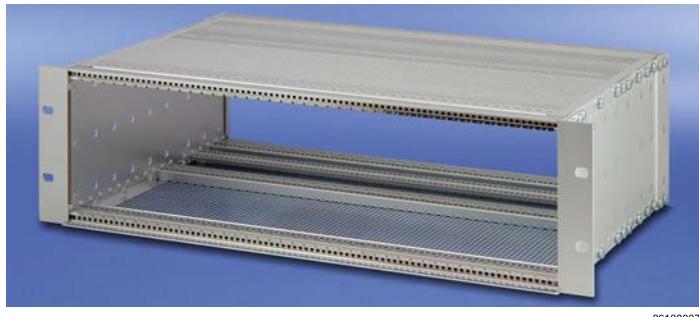
04400001

Rear horizontal rail for backplane mounting with insulation strip

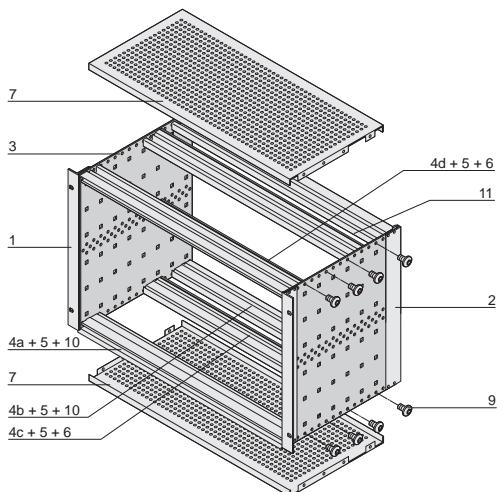


ServicePLUS see page 6.16

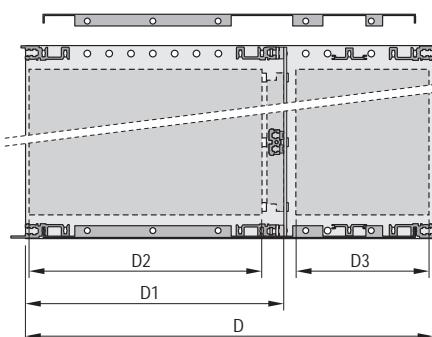
Kit, for CompactPCI, for backplane mounting,
for rear I/O, shielded



6 U



06108007



06105076

D = overall depth, D1 = insertion depth,
D2 = board depth = D1 - 15 mm, D3 = rear I/O board depth



04400001

Rear horizontal rail for backplane mounting with insulation strip



ServicePLUS see page 6.16

- Subrack with side panel type F ("flexible") for CompactPCI plug-in units with high insertion and withdrawal forces
- For rear I/O boards (depth 80 mm)
- Rear horizontal rail for backplane mounting with insulation strip
- Shielding typically 40 dB at 1 GHz, 30 dB at 2 GHz, assuming that the front is covered with shielded front panels
- Installed load up to 11 kg

Delivery comprises (kit)

Item	Qty	Description
	3 U	6 U
1	2	2
2	2	2
3	2	2
4	1	-
4 a	1	2
4 b	2	2
4 c	2	2
4 d	-	1
5	6	8
6	2	4
7	2	2
8	1	1
9	1	1
10	2	2
11	2	2
12	1	1
		User manual

Order Information

Height U	Width HP	Depth D mm	Depth D1 mm	Depth D3 mm	Part no.
3	84	275	175	80	24563-157
6	84	275	175	80	24563-457

Accessories

Guide rail with coding, red 160 mm deep, PBT, UL 94 V-0, groove width 2 mm, PU 10 pieces	24560-356
Guide rail with coding, grey 160 mm deep, PBT, UL 94 V-0, groove width 2 mm, PU 10 pieces	24560-358
Guide rail with coding, green, offset 160 mm deep, PBT, UL 94 V-0, groove width 2 mm, PU 10 pieces	24560-359
ESD clip for guide rails PU 50 pieces	24560-255
ESD clip for alignment pin of CPCI/VME64x handle PU 50 pieces	24560-256
Guide rail with coding, red 70 mm deep, PU 10 pieces	24560-355
Guide rail with coding, grey 70 mm deep, PU 10 pieces	24560-360
Torx panhead screw 2.5 x 9.3, zinc-plated, PU 100 pieces; torque max. 0.2 Nm	24560-141
Coding peg PC, UL 94 V-0, RAL 7035, PU 100 pieces	20817-501
19" fixing material kit (screw, washer, nut) (8 x screws, 8 x plastic washers, 8 x cage nuts)	21100-435

Note

- ServicePLUS configuration from page 6.16



configuration

Components can be varied and combined freely

Simple. Fast. To the ideal product.

- Configuration tables from page 6.17
- Online configuration: www.schroff.co.uk/configuration



assembly

Fitting of all mechanical, electrical and electronic components by our specialists

Assembled by professionals. Double benefit!

- Professional and reliable from quantity 1
- Ready for despatch within 5 working days



modification

Custom drillings, cut-outs and special colours for off-the-shelf products

Small changes. Large impact.

- Custom modifications from quantity 1
- Ready for despatch within 10 working days



solution

Integration and custom developments

Simple. Fast. From one source.

- Special sizes (depth and width)
- Individual heat dissipation concepts
- Ready for despatch within 10 working days



express

Delivery time to customer's request

When fast has to be faster.

- Express logistics



academy

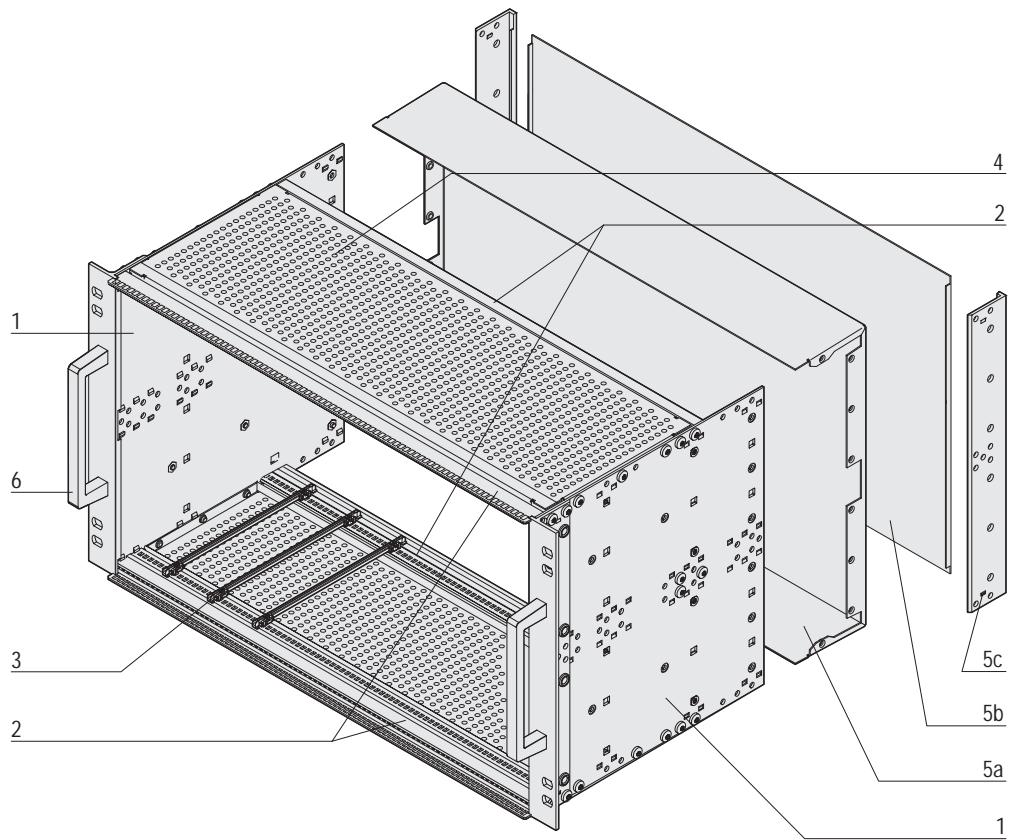
Knowledge transfer and partnership

Knowledge. Sharing. Partnerships.

- Seminars, CAD drawings, test reports, user reports

Subracks - **europac PRO** ServicePLUS

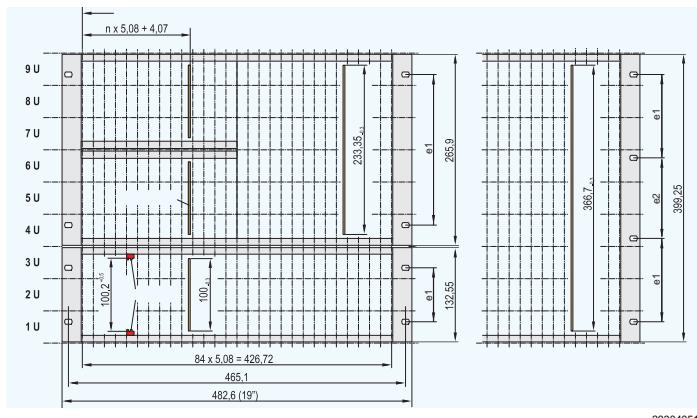
Overview of individual components for shielded or unshielded subracks



06108086

Item	Description	Description	page
Item 1	Side panel	Establishes the height and depth of the subrack; Al, 2 mm, with universal hole positions for assembly of accessories. Three versions: The "flexible" one with separate 19" brackets as well as two others with integrated 19" brackets for "light" and "heavy" applications.	6.19
Item 2	Horizontal rail	Establishes the width of the subrack; Al extrusion, with defined hole positions for guide rails, grooves for threaded inserts, M4 thread, functional rail shapes, basically differing with regard to their mechanical loading capacity: "light" (load up to 7.5 kg) and "heavy" (load > 7.5 kg).	6.27
Item 3	Guide rails	Act as interface between subracks and boards, for different board formats, are available in plastic or metal, optionally codable and can be fitted with ESD clips to allow electrostatic discharge, also optionally.	6.35
Item 4	Cover plates	Provide mechanical protection and/or EMC shielding and are perforated.	6.42
Item 5	Rear/front	Rear hood (5a) or front panel (5b) with corner profile (5c) act as support for EMC shielding gaskets used in conjunction with shielded front panels. Note: Rear hood and corner profile cannot be fitted simultaneously.	6.47
Item 6	Handles	Can be mounted on the 19" brackets.	6.25
-	EMC shielding (without illustration)	Extensive component range for specific shielding of subracks with respect to their application.	6.52
-	Interior assemblies (without illustration)	Universal assemblies, e.g. for horizontal and vertical assembly and for mounting plates.	6.57

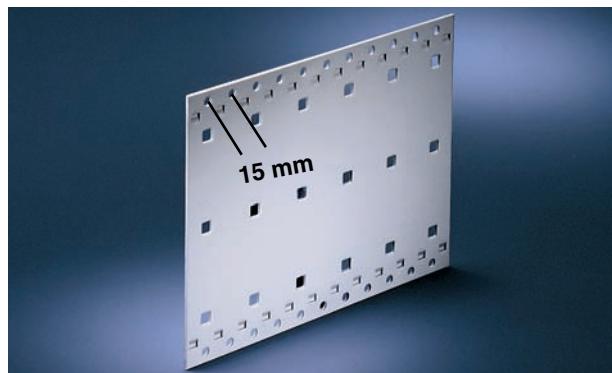
Subrack dimensions



■ Dimensions in accordance with international standards EC 60297-3-100, IEEE 1101.1/10/11; please see the Schroff Standards Summary for details

■ Side panels

- Aluminium, 2 mm
- Round holes for mounting horizontal rails (depth grid 15 mm)
- Impressions on the inner side of the side panel act as an anti-rotation guard and positioning aid for the horizontal rails
- Square holes (6 x 6 mm) provide universal fixing for components such as backplane shielding; version without square holes available on request



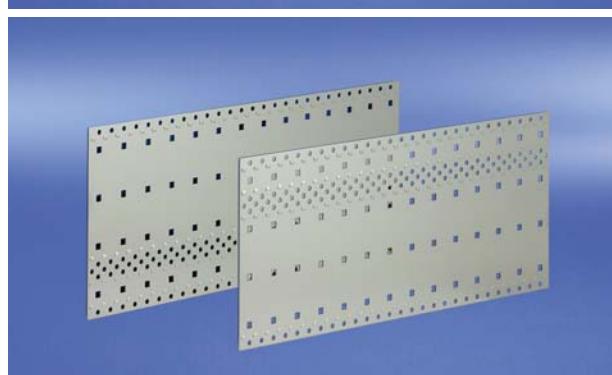
Depth grid

The depth grid is 15 mm, the mounting holes in the side panel are decisive for the configurability of individual components; thus any combination of various individual parts is possible



Side panel 3 U, 6 U and 9 U

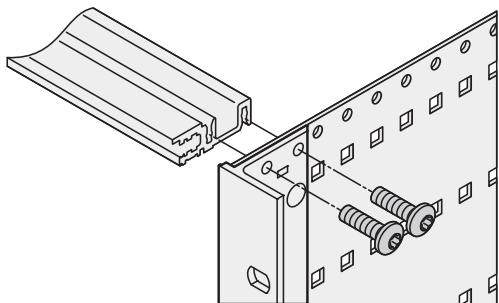
3 and 6 U side panels have the same hole positions (the 6 U is a doubling vertically of the 3 U); thus subdivisions can be made in the vertical dimension (6 U: 2 x 3 U; 9 U: 3 x 3 U)



Side panel 4 U

4 U side panels have the same hole positions as 3 U and additionally 1 U (above or beneath the 3 U installation); this height allows the construction of a 3 U unit with 1 U clearance for cabling or airflow

Side panels



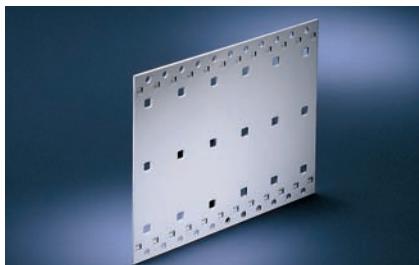
Side panel - horizontal rail assembly

06108062

- Aluminium
- Round holes for mounting horizontal rails (depth grid 15 mm)
- Impressions on the inner side of the side panel act as an anti-rotation guard and positioning aid for the horizontal rails
- Square holes (6 x 6 mm) provide universal fixing for components such as backplane shielding; version without square holes available on request
- Only one type of screw driver is needed for the assembly (torx panhead screw, M4 x 14; torque side panel - horizontal rail 2.4 Nm; torque side panel - cover plate 1.3 Nm)
- 4 versions of the side panel:
 - Type F = flexible
 - Type H = heavy
 - Type L = light
 - Type R = rugged

Note

- Type R - rugged side panels see "Rugged Subracks" section, page 6.97



06197003

Type F (flexible)

- Universal version: 19" bracket (please order separately) can be fitted variably to front, rear or depth-offset
- Heights: 3, 4, 6 and 9 U
Depths: 175, 235, 275, 277.75, 295, 355, 415 and 475 mm;
Other dimensions on request
- 2 EMC shielding concepts for the front/rear:
stainless steel or textile EMC gasket
- Installed load up to 11 kg



06197004

Type H (heavy)

- 19" bracket is hot-cold welded to side panel; particularly designed for mechanically demanding environments (vibration resistance, applications requiring high levels of shock and vibration, e.g. IEC 61587-2)
- Heights: 3 and 6 U
Depths: 175, 235, 295 and 355 mm
Other dimensions on request
- 2 EMC shielding concepts for the front/rear:
with stainless steel or textile EMC gasket
- Installed load up to 15 kg



06197002

Type L (light)

- Side panel with moulded 19" bracket,
for standard applications, unshielded
- Particularly cost-effective version
(not suitable for EMC applications)
- Heights: 3 and 6 U
Depths: 175, 235 and 295 mm
Other dimensions on request
- Installed load up to 7.5 kg

Side panels type F for stainless steel gasket

Order Information

		Side panel type F	19" bracket without handle holes	19" bracket with handle holes	19" bracket depth-adjustable	EMC gasket (stainless steel)	Rear angle	Side panel connection
Height U	Depth mm	1 piece	PU 1 pair	PU 1 pair	PU 1 pair	PU 10 pieces	PU 1 pair	PU 4 pieces
3	175	34560-185						
3	235	34560-187						
3	275 1)	34579-300						
3	277.75 2)	34579-002	24560-197	24560-198	24560-199	21101-705	24561-198	21101-954
3	295	34560-189						
3	355	34560-191						
3	415	34560-193						
3	475	34560-195						
4	175 3)	34560-285						
4	235 3)	34560-287						
4	295 3)	34560-289	24560-297	24560-298	24560-299	21101-713	24561-298	21101-954
4	355 3)	34560-291						
4	415 3)	34560-293						
4	475 3)	34560-295						
6	175	34560-485						
6	235	34560-487						
6	275 1)	34579-038						
6	277.75 2)	34579-012	24560-497	24560-498	24560-499	21101-707	24561-498	21101-954
6	295	34560-489						
6	355	34560-491						
6	415	34560-493						
6	475	34560-495						
6	970	34560-496						
9	175	34560-785						
9	235	34560-787						
9	295	34560-789	24560-797	24560-798	24560-799	21101-709	24561-798	21101-954
9	355	34560-791						
9	415	34560-793						
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel		24560-130	24560-130	24560-130	24560-130	-	24560-130	-
Screw, M4 x 10, required if guide rails are screwed to slot 1, PU 100 pieces		24560-155	24560-155	24560-155	24560-155	-	24560-155	-

1) CompactPCI 2) VME64x 3) Grid holes of side panel 3 + 1 U

■ View of side panels 3, 4, 6, 9 U see page 6.18

Subracks - **europacPRO** ServicePLUS

Side panels type F for textile EMC gasket

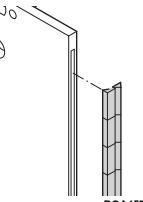
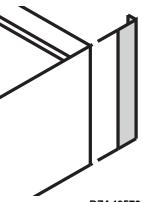
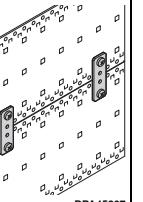
Order Information

		Side panel type F	19" bracket without handle holes	19" bracket with handle holes	19" bracket depth-adjustable	EMC gasket (textile)	Rear angle	Side panel connection
Height U	Depth mm	1 piece	PU 1 pair	PU 1 pair	PU 1 pair	PU 10 pieces	PU 1 pair	PU 4 pieces
3	175	34560-185						
3	235	34560-187						
3	275 1)	34579-300						
3	277.75 2)	34579-002	24564-197	24564-198	24560-199	21101-853	24564-199	21101-954
3	295	34560-189						
3	355	34560-191						
3	415	34560-193						
3	475	34560-195						
4	175 3)	34560-285						
4	235 3)	34560-287						
4	295 3)	34560-289	24564-297	24564-298	24560-299	21101-858	24564-299	21101-954
4	355 3)	34560-291						
4	415 3)	34560-293						
4	475 3)	34560-295						
6	175	34560-485						
6	235	34560-487						
6	275 1)	34579-038						
6	277.75 2)	34579-012	24564-497	24564-498	24560-499	21101-855	24564-499	21101-954
6	295	34560-489						
6	355	34560-491						
6	415	34560-493						
6	475	34560-495						
6	970	34560-496						
9	175	34560-785						
9	235	34560-787						
9	295	34560-789	24564-797	24564-798	24560-799	21101-859	24564-799	21101-954
9	355	34560-791						
9	415	34560-793						
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel		24560-130	24560-130	24560-130	24560-130	-	24560-130	-
Screw, M4 x 10, required if guide rails are screwed to slot 1, PU 100 pieces		24560-155	24560-155	24560-155	24560-155	-	24560-155	-

1) CompactPCI 2) VME64x 3) Grid holes of side panel 3 + 1 U

Side panels type H for stainless steel EMC gasket

Order Information

		Side panel type H for stainless steel EMC gasket without handle holes	with handle holes	EMC gasket (stainless steel)	Rear angle	Side panel connection
Height	Depth					
U	mm	PU 1 pair	PU 1 pair	PU 10 pieces	PU 1 pair	PU 4 pieces
3	175	24566-125	24567-125			
3	235	24566-127	24567-127			
3	275 1)	–	–			
3	277.75 2)	–	–			
3	295	24566-129	24567-129			
3	355	24566-131	24567-131			
3	415	–	–			
3	475	–	–			
4	175 3)					
4	235 3)					
4	295 3)	–	–	–	–	–
4	355 3)					
4	415 3)					
4	475 3)					
6	175	24566-425	24567-425			
6	235	24566-427	24567-427			
6	275 1)	–	–			
6	277.75 2)	–	–			
6	295	24566-429	24567-429			
6	355	24566-431	24567-431			
6	415	–	–			
6	475	–	–			
6	970	–	–			
9	175					
9	235					
9	295	–	–	–	–	–
9	355					
9	415					
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel		24560-130	24560-130	–	24560-130	–
Screw, M4 x 10, required if guide rails are screwed to slot 1, PU 100 pieces		24560-155	24560-155	–	24560-155	–

1) CompactPCI 2) VME64x 3) Grid holes of side panel 3 + 1 U

Side panels type H for textile EMC gasket

Order Information

		Side panel type H for textile EMC gasket without handle holes	with handle holes	EMC gasket (textile)	Rear angle	Side panel connection
Height	Depth					
U	mm	PU 1 pair	PU 1 pair	PU 10 pieces	PU 1 pair	PU 4 pieces
3	175	24564-145	24566-145			
3	235	24564-147	24566-147			
3	275 1)	—	—			
3	277.75 2)	—	—			
3	295	24564-149	24566-149			
3	355	24564-151	24566-151			
3	415	—	—			
3	475	—	—			
4	175 3)					
4	235 3)					
4	295 3)	—	—	—	—	—
4	355 3)					
4	415 3)					
4	475 3)					
6	175	24564-445	24566-445			
6	235	24564-447	24566-447			
6	275 1)	—	—			
6	277.75 2)	—	—			
6	295	24564-449	24566-449			
6	355	24564-451	24566-451			
6	415	—	—			
6	475	—	—			
6	970	—	—			
9	175					
9	235					
9	295	—	—	—	—	—
9	355					
9	415					
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel		24560-130	24560-130	—	24560-130	—
Screw, M4 x 10, required if guide rails are screwed to slot 1, PU 100 pieces		24560-155	24560-155	—	24560-155	—

1) CompactPCI 2) VME64x 3) Grid holes of side panel 3 + 1 U

Side panels type L

Order Information

Height U	Depth mm	Side panel type L	Front cover	Collar screw with slot for assembly of front cover	Sleeves for assembly of front cover	Side panel connection
		1 piece		PU 100 pieces	PU 100 pieces	PU 4 pieces
3	175	34561-185				
3	235	34561-187				
3	275 1)	—				
3	277.75 2)	—				
3	295	34561-189	34561-197	21100-565	21100-566	21101-954
3	355	—				
3	415	—				
3	475	—				
4	175 3)					
4	235 3)					
4	295 3)	—	—	—	—	—
4	355 3)					
4	415 3)					
4	475 3)					
6	175	34561-485				
6	235	34561-487				
6	275 1)	—				
6	277.75 2)	—				
6	295	34561-489	34561-497	21100-565	21100-566	21101-954
6	355	—				
6	415	—				
6	475	—				
6	970	—				
9	175					
9	235					
9	295	—	—	—	—	—
9	355					
9	415					
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel		24560-130	—	—	—	—
Screw, M4 x 10, required if guide rails are screwed to slot 1, PU 100 pieces		24560-155	—	—	—	—

1) CompactPCI 2) VME64x 3) Grid holes of side panel 3 + 1 U

Front handles, wall-mounting brackets

Order Information

				Front handle clear anodised	Front handle black anodised	Universal front handle	Wall-mounting bracket
Height U	Depth mm	H mm	E mm	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	PU 1 pair
3	175	102	88.0				
3	235	102	88.0				
3	275	102	88.0				
3	277.75	102	88.0				
3	295	102	88.0				
3	355	102	88.0				
3	415	102	88.0				
3	475	102	88.0				
4	175	146	133.4				
4	235	146	133.4				
4	295	146	133.4	10501-018	10501-026	10502-057	24562-197
4	355	146	133.4				
4	415	146	133.4				
4	475	146	133.4				
6	175	249	235.0				
6	235	249	235.0				
6	275	249	235.0				
6	277.75	249	235.0				
6	295	249	235.0	10501-008	10501-029	10502-065	24562-497
6	355	249	235.0				
6	415	249	235.0				
6	475	249	235.0				
6	970	249	235.0				
9	175	249	235.0				
9	235	249	235.0				
9	295	249	235.0	10501-008	10501-029	10502-065	24562-797
9	355	249	235.0				
9	415	249	235.0				
Screw M5 x 12, PU 100 pieces				24560-183	24560-183	24560-183	-
Screw M5 x 12, PU 4 pieces				24560-182	24560-182	24560-182	-
Screw, M4 x 14, PU 100 pieces				-	-	-	24560-130

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Subracks - **europac PRO** ServicePLUS

Horizontal rails



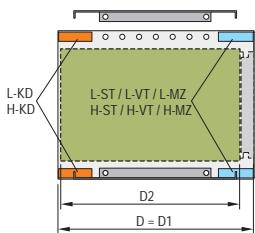
- Aluminium profile, surface anodised, conductive contact surfaces for EMC gaskets
- The horizontal rail is marked with sequential numbering (for sizes > 28 HP) to facilitate positioning of the guide rails
- Horizontal rails are fixed to the side panel using M4 bolts with torx 20 drive
- There are 3 different horizontal rails for different loading levels
 - light, for up to 7.5 kg
 - heavy, for 7.5 kg to 15 kg
 - rugged, for 15 kg to approx. 60 kg

Mounting position of the horizontal rails

PCB as deep as side panel

front

rear

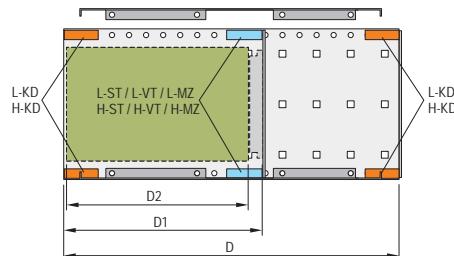


160, 220, 280 mm,

Cabling space behind backplane

front

rear

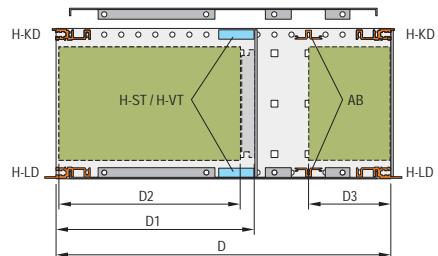


160, 220, 280 mm,

Rear I/O installation
(CompactPCI, VME64x applications)

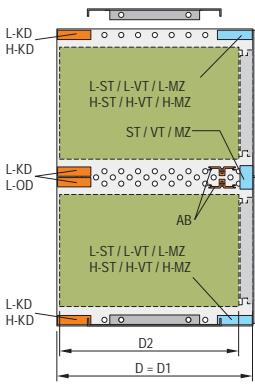
front

rear

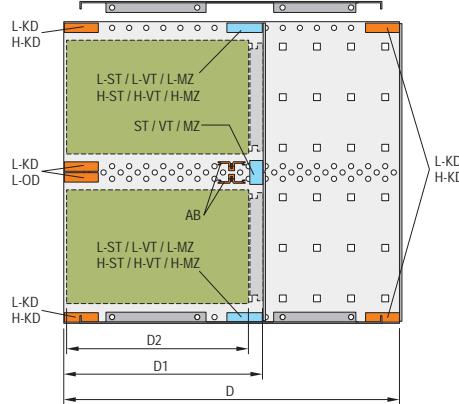


160 mm/80 mm

6 U

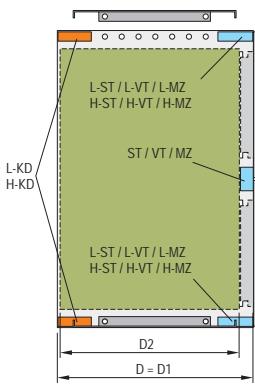


160, 220, 280 mm,

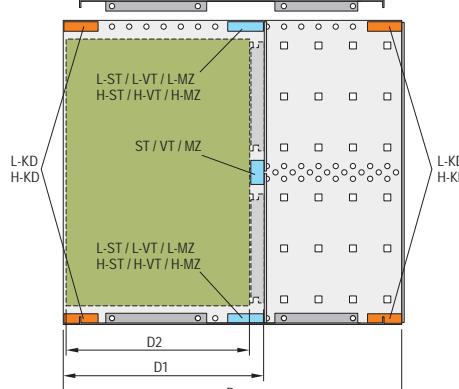


160, 220, 280 mm,

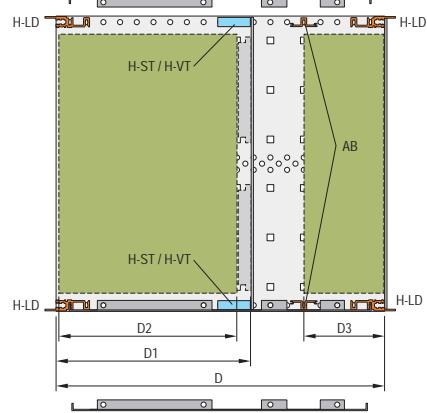
6 U



160, 220, 280 mm,



160, 220, 280 mm,



160 mm/80 mm

Subracks - **europac PRO** ServicePLUS

Front horizontal rails

Assembly 3 U, 2 x 3 U, 6 U

"light" (L)



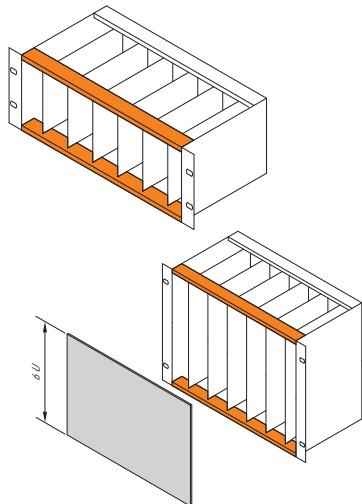
"heavy" (H)



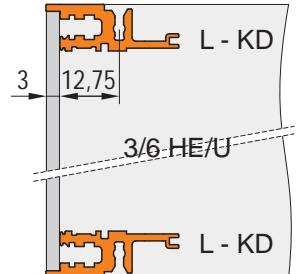
"heavy" (H)



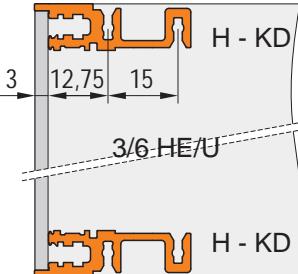
3 U/6 U



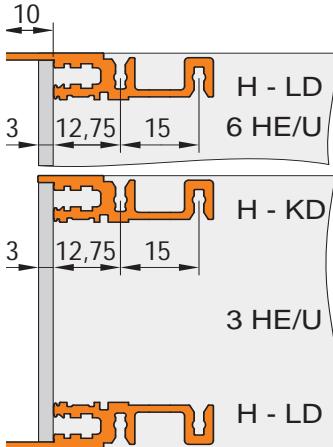
Short lip



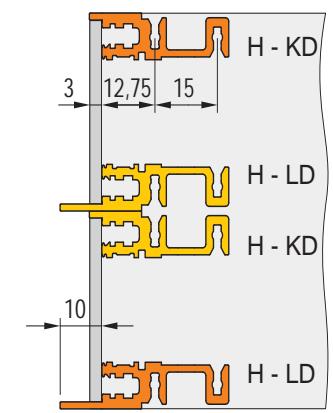
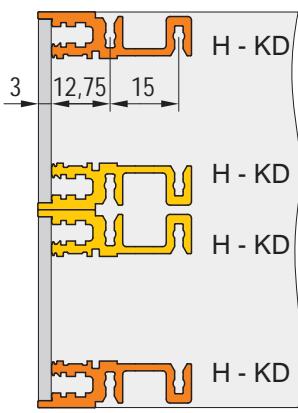
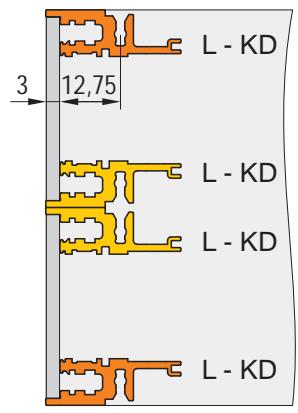
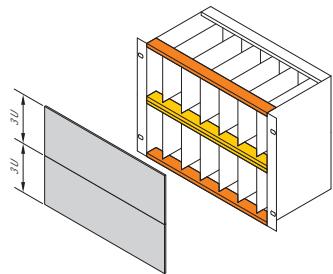
Short lip



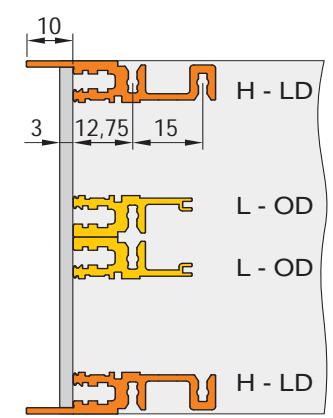
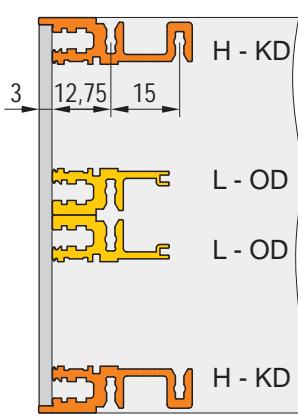
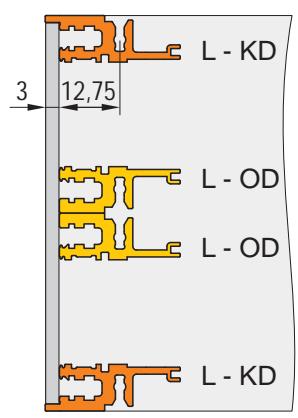
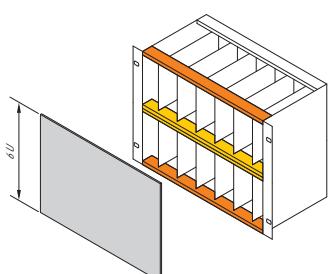
Long lip



2 x 3 U



2 x 3 U, 6 U



L-OD = Light - without lip, L-KD = Light - short lip, H-KD = Heavy - short lip, H-LD = Heavy - long lip

Front horizontal rails

Order Information

		"light" Type L-OD without lip	"light" Type L-KD short lip	"heavy" Type H-KD short lip	With long lip for insertion/ extraction of CompactPCI and VME64x boards "heavy" Type H-LD long lip
Usable length HP	Length mm	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾
20	106.68	34560-020	34560-120	34560-220	34560-320
28	147.32	34560-028	34560-128	34560-228	34560-328
40	208.28	34560-040	34560-140	34560-240	34560-340
42	218.44	34560-042	34560-142	34560-242	34560-342
63	325.12	34560-063	34560-163	34560-263	34560-363
84	431.80	34560-084	34560-184	34560-284	34560-384
—	1000	34560-001	34560-101	34560-201	34560-301
Screw, M4 x 14, PU 100 pieces		24560-130	24560-130	24560-130	24560-130
Screw, M4 x 10, required if guide rails are screwed to slot 1, PU 100 pieces		—	—	24560-155	24560-155
Threaded inserts see page		6.33	6.33	6.33	6.33

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

"light": loading capacity up to approx. 7.5 kg; "heavy": loading capacity > 7.5 kg

Note

- 1000 mm version without M4 thread to front, without printed markings and without notch for 19"-bracket
- Rugged horizontal rails with 3 fixing holes see section "Rugged Subracks", page 6.99

Subracks - **europac PRO** ServicePLUS

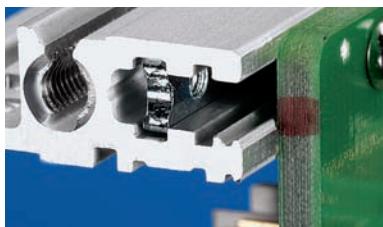
Rear horizontal rails

**Indirect backplane mounting
(with insulation strip)**



04400001

Direct backplane mounting

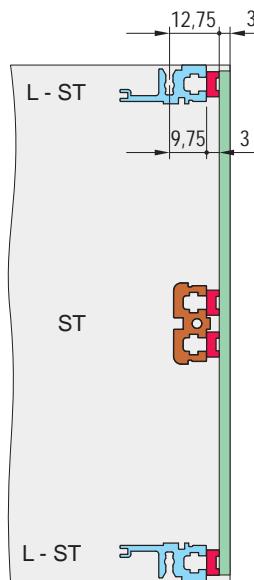


Connector fitting with Z



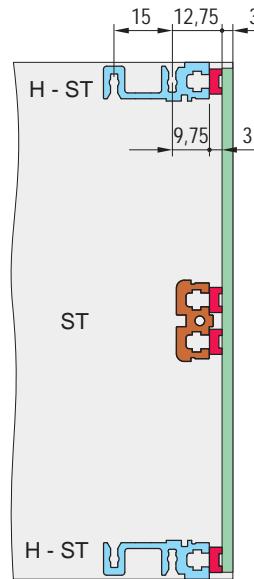
04400003

"light"



06105072

"heavy"



06108066

ST

VT = depth-offset, L = light, H = heavy

ST

VT = depth-offset, L = light, H = heavy

ST = standard, L = light, H = heavy

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Rear horizontal rails, top and bottom

Order Information

		For indirect backplane mounting with insulation strip		For direct backplane mounting		For direct fixing of connectors in accordance with EN 60603-2 (DIN 41612)	
Usable length HP	Length mm	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾
20	106.68	34560-420	34560-520	34560-620	34560-720	34560-820	34560-920
28	147.32	34560-428	34560-528	34560-628	34560-728	34560-828	34560-928
40	208.28	34560-440	34560-540	34560-640	34560-740	34560-840	34560-940
42	218.44	34560-442	34560-542	34560-642	34560-742	34560-842	34560-942
63	325.12	34560-463	34560-563	34560-663	34560-763	34560-863	34560-963
84	431.80	34560-484	34560-584	34560-684	34560-784	34560-884	34560-984
—	1000	34560-401	34560-501	34560-601	34560-701	34560-801	—
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel		24560-130	24560-130	24560-130	24560-130	24560-130	24560-130
Screw, M4 x 10, required if guide rails are screwed to slot 1, PU 100 pieces	—	24560-155	—	24560-155	—	24560-155	—
Perforated rail for connector mounting with insulation strip see page	6.34	6.34	—	—	—	—	—
Z-rail for connector mounting without insulation strip see page	6.34	6.34	—	—	—	—	—
Insulation strips see page	6.33	6.33	—	—	—	—	—
Threaded inserts see page	6.33	6.33	6.33	6.33	6.33	6.33	6.33

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

"light": loading capacity up to approx. 7.5 kg; "heavy": loading capacity > 7.5 kg

Note

- 1000 mm version without M4 thread to front, without printed markings and without notch for 19"-bracket
- Rugged horizontal rails with 3 fixing holes see section "Rugged Subracks", page 6.99

Rear horizontal rails, centre, for 6 U

Order Information

		For indirect backplane mounting with insulation strip	For direct backplane mounting	For direct fixing of connectors in accordance with EN 60603-2 (DIN 41612)
Usable length HP	Length mm	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾
20	106.68	34561-020	34561-120	34561-220
28	147.32	34561-028	34561-128	34561-228
40	208.28	34561-040	34561-140	34561-240
42	218.44	34561-042	34561-142	34561-242
63	325.12	34561-063	34561-163	34561-263
84	431.80	34561-084	34561-184	34561-284
-	1000	34561-001	34561-101	34561-201
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel		24560-130	24560-130	24560-130
Insulation strips see page		6.33	-	-
Threaded inserts see page		6.33	6.33	6.33

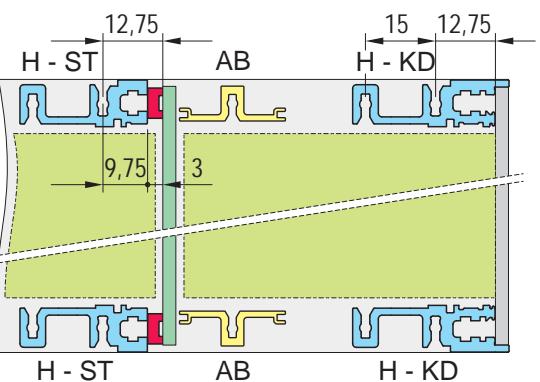
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple
 "light": loading capacity up to approx. 7.5 kg; "heavy": loading capacity > 7.5 kg

Note

- All horizontal rails without printed markings
- 1000 mm version without M4 thread to front

Horizontal rails (type AB) for rear I/O applications

Order Information

 <p>06108069</p>	<p>For CompactPCI in rear I/O area</p> <p>Type AB</p> <p>06197009</p> <p>Al extrusion, anodised surface, conductive contact surface; horizontal rail type AB (AB = support) is required to fix the 80 mm rear I/O boards; without printed markings</p>																										
<p>Usable length HP</p> <table border="1"> <thead> <tr> <th data-bbox="49 1028 192 1096">Usable length HP</th> <th data-bbox="362 1028 441 1096">Length mm</th> <th data-bbox="719 1028 909 1062">1 piece (SPQ 10)¹⁾</th> </tr> </thead> <tbody> <tr> <td data-bbox="49 1096 92 1125">20</td> <td data-bbox="362 1096 441 1125">106.68</td> <td data-bbox="759 1096 878 1125">34561-520</td> </tr> <tr> <td data-bbox="49 1125 92 1154">28</td> <td data-bbox="362 1125 441 1154">147.32</td> <td data-bbox="759 1125 878 1154">34561-528</td> </tr> <tr> <td data-bbox="49 1154 92 1183">40</td> <td data-bbox="362 1154 441 1183">208.28</td> <td data-bbox="759 1154 878 1183">34561-540</td> </tr> <tr> <td data-bbox="49 1183 92 1212">42</td> <td data-bbox="362 1183 441 1212">218.44</td> <td data-bbox="759 1183 878 1212">34561-542</td> </tr> <tr> <td data-bbox="49 1212 92 1242">63</td> <td data-bbox="362 1212 441 1242">325.12</td> <td data-bbox="759 1212 878 1242">34561-563</td> </tr> <tr> <td data-bbox="49 1242 92 1271">84</td> <td data-bbox="362 1242 441 1271">431.80</td> <td data-bbox="759 1242 878 1271">34561-584</td> </tr> <tr> <td data-bbox="49 1271 76 1300">-</td> <td data-bbox="362 1271 441 1300">1000</td> <td data-bbox="759 1271 878 1300">34561-501</td> </tr> <tr> <td data-bbox="49 1300 425 1349" style="text-align: left;">Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel</td><td data-bbox="759 1300 878 1329">24560-130</td></tr> </tbody> </table>	Usable length HP	Length mm	1 piece (SPQ 10) ¹⁾	20	106.68	34561-520	28	147.32	34561-528	40	208.28	34561-540	42	218.44	34561-542	63	325.12	34561-563	84	431.80	34561-584	-	1000	34561-501	Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel	24560-130	
Usable length HP	Length mm	1 piece (SPQ 10) ¹⁾																									
20	106.68	34561-520																									
28	147.32	34561-528																									
40	208.28	34561-540																									
42	218.44	34561-542																									
63	325.12	34561-563																									
84	431.80	34561-584																									
-	1000	34561-501																									
Screw, M4 x 14, PU 100 pieces, for fastening horizontal rail to side panel	24560-130																										

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

"light": loading capacity up to approx. 7.5 kg; "heavy": loading capacity > 7.5 kg

Note

- All horizontal rails without printed markings
- 1000 mm version without M4 thread to front

Threaded inserts, perforated strips, insulation strips

Order Information

Usable length HP	Threaded insert			Perforated strip (item 1)		Insulation strip	
	Length mm	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	Length mm	1 piece (SPQ 10) ¹⁾	Length mm	PU 10 pieces
20	106.18	34561-320	—	106.48	30845-189	101.50	24560-820
28	146.82	34561-328	—	147.12	30845-197	144.20	24560-828
40	207.78	34561-340	—	208.08	30845-209	205.12	24560-840
42	217.94	34561-342	—	218.24	30845-211	210.40	24560-842
63	324.62	34561-363	—	324.92	30845-232	316.88	24560-863
84	431.30	34561-384	34561-484	431.60	30845-253	428.64	24560-884
196	1000.26	34565-196	—	1000.56	34565-396	—	—

Accessories

Grub screw M2.5 x 8, PU 100 pieces	21100-276	—	—	—	—	—
Grub screw M2.5 x 9, PU 100 pieces	—	—	—	21101-359	—	—
Grub screw M3 x 8, PU 100 pieces	—	21100-646	—	—	—	—

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

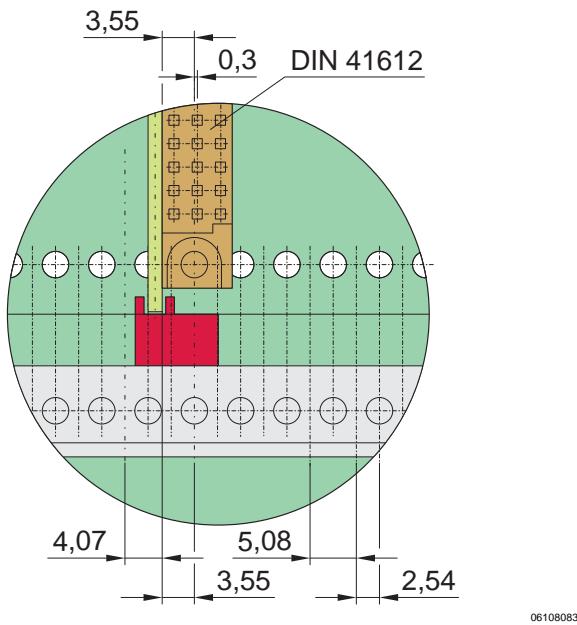
2) Part no. includes one packing unit (PU); delivery is exclusively made in PU

Z-rails, perforated rails

Order Information

Usable length HP	Length mm	Z-rail for connectors DIN EN 60603-2, DIN 41612 item 1	31-pin, DIN 41617	Perforated rail EN 606032, DIN 41612 item 1
		BZA45849	BZA45850	BZA45848
		for connector mounting on ST horizontal rails, please order threaded inserts and screw separately	for connector mounting on ST horizontal rails, please order threaded inserts and screw separately	for connector mounting on VT horizontal rails, please order threaded inserts and screw separately
		1 piece	1 piece	PU 4 pieces
20	101.60	30822-025	—	20822-051
28	142.24	30822-033	—	20822-049
40	203.20	30822-045	30819-763	20822-046
42	213.36	30822-047	—	20822-050
60	304.80	30822-065	30819-783	20822-047
84	426.72	30822-089	30819-808	20822-048
Item 3, torx panhead screw to fix connector to perforated rail., M2.5 x 7, PU 100 pieces		24560-147	24560-147	24560-147
Item 2, torx panhead screw, to fix perforated rails to horizontal rail, M2.5 x 10, PU 100 pieces		24560-148	24560-148	24560-148

Guide rails



Guide rails form the interface between the subrack mechanics and the sub-assemblies (PCBs, plug-in units, frame-type plug-in units, ...).

Guide rails for standard applications are 2 HP wide. Guide rails with coding (e.g. for CompactPCI or VME64bus applications) are 4 HP wide.

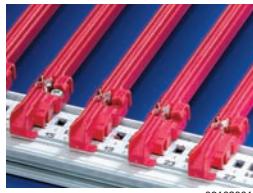
There are groove widths of 2 mm and 2.5 mm.

The guide rails are clipped into the rectangular cut-outs of the horizontal rails. They can additionally be bolted to the horizontal rail (type H only) for higher shock and vibration requirements.

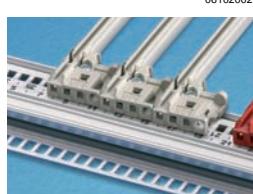
The printed HP markings on the horizontal rail (28 HP and above) allow the rails to be fitted in the correct position easily (position of sub-assembly = "number in viewing window" or in front of the arrow marking on the guide rails).

Applications for guide rails

For plug-in units and frame-type plug-in units (with front panels) (standard type)



For plug-in units and frame type plug-in units or for PCBs without their own front panel (accessory type or robust version)



For CompactPCI or VME64x plug-in units (type IEEE with coding; frame-type plug-in units cannot be fitted)



For plug-in drive unit modules or PCBs in 4.4" (111.7 mm) height (type 4.4")



Rugged guide rails to accommodate conduction cooled assembly (CCA) adaptor

Accessories:

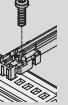
- ESD clip
- Keying/coding pegs
- Board locking

Guide rails for plug-in units and modules, one-piece,
groove width 2 mm and 2.5 mm

Order Information

Assembly - can be clipped into Al extruded horizontal rails - can be clipped into 1.5 mm thick plates Storage temperature from -40 °C ... 130 °C	For plug-in units and frame type plug-in units standard type		
			
	up to 220 mm length, PBT, UL 94 V-0; from 280 mm length, multi-piece, end piece PBT, UL 94 V-0, central section Al extrusion	PBT, UL 94 V-0	06102001
Board length mm	Groove width mm	Colour mm	
			PU 10 pieces²⁾
70	2	red	—
70	2	grey	—
160	2	red	24560-351
220	2	red	24560-353
280	2	red	24560-379
340	2	red	24560-380
160	2.5	red	—
220	2.5	red	—
			1 piece (SPQ 50)¹⁾
			34579-230
			34579-231
			64560-001
			64560-002
			—
			64560-096
			64560-098
			1 pair (SPQ 10)¹⁾
			—
			—
			64560-074
			64560-075
			—
			—
			—
			24560-141
			24560-255
			24560-141
			24560-255

Accessories

 Retention screw, PU 100 pieces; Torque max. 0.2 Nm ESD clip, PU 50 pieces	24560-141	—	24560-141
	24560-255	—	24560-255

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

2) Part no. includes one packing unit (PU); delivery is exclusively made in PU

Description of accessories see from page 6.41

Subracks - **europac PRO** ServicePLUS

Guide rails type "accessory", one-piece,
groove width 2 mm and 2.5 mm

Order Information

Assembly		accessory type	Guide rails	for heavy modules, Al extrusion, silver, robust version	
Board length mm	Groove width mm	PU 10 pieces ²⁾	1 piece (SPQ 50)	1 piece (SPQ 50)	1 piece (SPQ 10) ¹⁾
100	2	red	—	64560-082	—
160	2	red	24560-373	64560-005	64560-076
160	2	grey/silver	—	64560-055	—
220	2	red	24560-374	64560-006	64560-078
220	2	grey/silver	—	64560-166	—
280	2	red/silver	24560-375	—	64560-080
340	2	red/silver	24560-376	—	34562-884
400	2	red/silver	—	—	34562-885
160	2.5	silver	—	—	34564-881
220	2.5	silver	—	—	34564-882
280	2.5	silver	—	—	34564-883
340	2.5	silver	—	—	34564-884
400	2.5	silver	—	—	34564-885

Accessories

Retention screw, PU 100 pieces; torque max. 0.2 Nm 	24560-141	24560-141	24560-141	24560-157
ESD clip, PU 50 pieces	24560-255	24560-255	24560-255	—
Board locking, red, PU 10 pieces	24560-377	24560-377	24560-377	—
Board handle, red, PU 10 pieces	24560-378	24560-378	24560-378	—
Identification strips for board handle, red, PU 1 sheet = 438 pieces	60817-228	60817-228	60817-228	—
Coding see page	6.41			—

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

2) Part no. includes one packing unit (PU); delivery is exclusively made in PU

Description of accessories see from page 6.41

Guide rails for CompactPCI, VME64x with coding,
4.4" PCBs, groove width 2 mm and 2.5 mm

Order Information

Assembly			For CompactPCI, VME64x with coding			For 4.4" PCBs		
			In accordance with IEEE 1101.10 and IEC 60297-3-103		Offset 0.1" for power supply units in accordance with IEEE 1101.10 and IEC 60297-3-103			
Board length mm	Groove width mm	Colour mm	PU 10 pieces	1 piece (SPQ 50) ¹⁾	PU 10 pieces	1 piece (SPQ 50) ¹⁾	PU 10 pieces	1 piece (SPQ 50) ¹⁾
70	2	red	24560-355	64560-085	—	—	—	—
70	2	grey	24560-360	64560-086	—	—	—	—
160	2	red	24560-356	64560-089	—	—	24560-361	64560-143
160	2	grey	24560-358	64560-090	—	—	—	—
160	2	green	—	—	24560-359	64560-071	—	—
220	2	red	—	64560-091	—	—	24560-362	64560-144
220	2	grey	—	64560-092	—	—	—	—
220	2	green	—	—	—	64560-072	—	—
160	2.5	red	—	—	—	—	—	64560-145
220	2.5	red	24561-330	—	—	—	—	64560-146
220	2.5	grey	24561-340	—	—	—	—	—
280	2.5	red	24561-331	—	—	—	—	—
280	2.5	grey	24561-341	—	—	—	—	—
340	2.5	red	24561-332	—	—	—	—	—
340	2.5	grey	24561-342	—	—	—	—	—

Accessories

ESD clip, PU 50 pieces	24560-255	24560-255	—	—	—	—
ESD clips, for alignment pin, PU 50 pieces	24560-256	24560-256	24560-256	24560-256	—	—
Retention screw, PU 100 pieces; torque max. 0.2 Nm	24560-141	24560-141	24560-141	24560-141	24560-158	24560-158
Coding peg, PU 100 pieces	20817-501	20817-501	20817-501	20817-501	—	—

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

2) Part no. includes one packing unit (PU); delivery is exclusively made in PU

Description of accessories see from page 6.41

Guide rails, multi-piece, groove width 2 mm

Order Information

PCBs:		For plug-in units and modules standard type		Accessories type		For 4.4" PCBs	
Description	Length mm	Groove width mm	1 piece (SPQ 10) ¹⁾				
End piece, red, 1 pair	2	64560-004	64560-004	64560-008	64560-008	64560-057	64560-057
Al extrusion, for 160 mm board length	95	2	34560-891	34564-891	34560-891	34564-891	34560-891
Al extrusion, for 220 mm board length	155	2	34560-892	34564-892	34560-892	34564-892	34564-892
Al extrusion, for 280 mm board length	215	2	34560-893	34564-893	34560-893	34564-893	34564-893
Al extrusion, for 340 mm board length	275	2	34560-894	—	34560-894	—	34560-894
Al extrusion, for any board length	1000	2	34560-900	—	34560-900	—	34560-900
Plastic extrusion, for any board length	1000	2	—	34564-900	—	34564-900	34564-900
Accessories							
ESD clip, PU 50 pieces	24560-255	24560-255	24560-255	24560-255	—	—	—
Retention screw, PU 100 pieces; torque max. 0.2 Nm	24560-141	24560-141	24560-141	24560-141	24560-158	24560-158	24560-158
Board locking, red, PU 10 pieces	—	—	24560-377	24560-377	—	—	—
Board handle, red, PU 10 pieces	—	—	24560-378	24560-378	—	—	—
Identification strips for board handle, red, PU 1 sheet = 438 pieces	—	—	60817-228	60817-228	—	—	—
Coding see page	—	—	see page 6.41		—	—	—

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

2) Part no. includes one packing unit (PU); delivery is exclusively made in PU

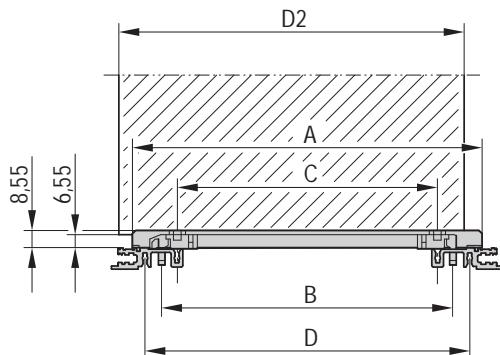
Description of accessories see from page 6.41

Note

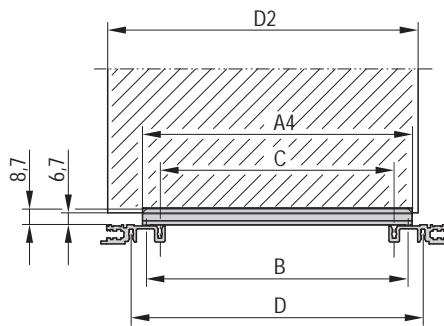
- Strengthening for middle section (plastic extrusion) available on request

Dimension drawings of guide rails

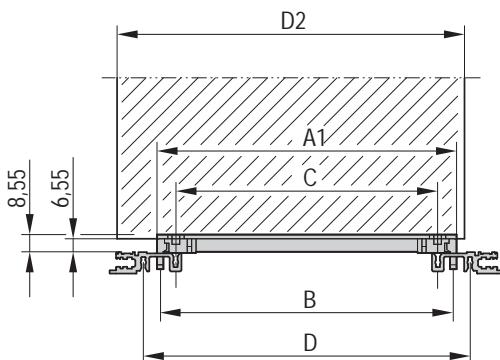
Standard



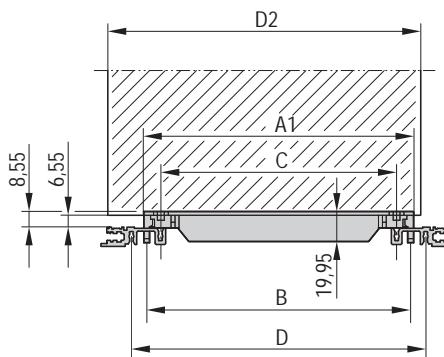
Robust version



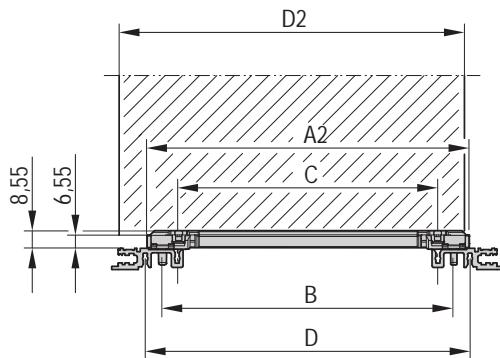
For accessories



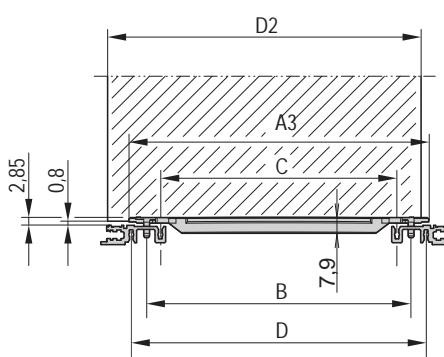
For accessories, strengthened



CompactPCI, VME64x



4.4" (111.7 mm)



Dimensions table

Board length L mm	Dimensions								
	A mm	A1 mm	A2 mm	A3 mm	A4 mm	B mm	C mm	D mm	
70	71.5	47.9	59.39	63	49	45	30	60	
100	101.5	77.9	89.39	93	79	75	60	90	
160	161.5	137.9	149.39	153	139	135	120	150	
220	221.5	197.9	209.39	213	199	195	180	210	
280	281.5	257.9	269.39	273	259	255	240	270	
340	341.5	317.9	322.39	333	319	315	300	330	
400	401.5	377.9	389.39	393	379	375	360	390	

A, A1, A2, A3, A4: Length of rail

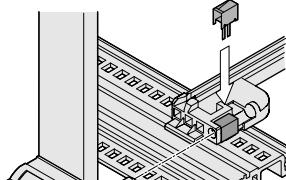
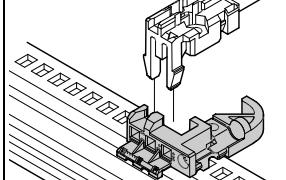
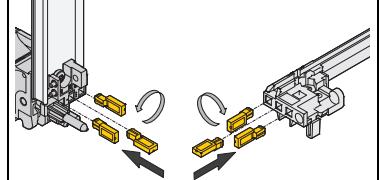
B: Pitch of snap-in fixing

C: Pitch of guide rail retention screws

D: Pitch of horizontal rail retention screws

Guide rail accessories

Order Information

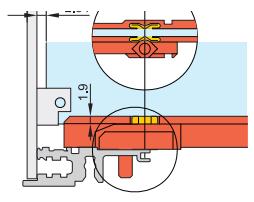
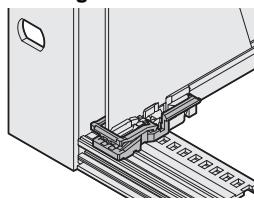
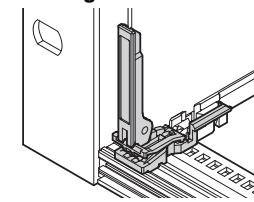
	ESD clips, CompactPCI/VME 64 alignment pin for guide rails	Coding for subracks	
		Keying/coding block for guide rails accessory type	Keying/coding for CompactPCI, VME64x handles to IEEE 1011.10 and IEC 60297-3-103
	 06103052	 06103051	 04612052
	<p>Spring steel, tin-plated, ESD clip, for alignment pin in accordance with IEEE; can be plugged into the guide rails with coding and into the keying/coding block; provides conductive contact between the alignment pin of the insertion/extractor handle (IEL or IET handle) and the horizontal rail</p>	<p>PBT, UL 94 V-0, keying/coding block is clipped into the horizontal rail next to the guide rail; please order keying/coding pegs separately</p>	<p>Keying/coding peg, PBTP, UL 94 V-0, RAL 7035 The keying/coding pegs prevent plug-in units to be mounted in wrong slots. They are inserted in the chambers of the codable card guides as well as in the insertion/extractor handles IEL or IET (4 possible positions), resulting in 64 codings per card guide; when coding the upper and lower card guide, 4096 codings will result;</p>
Assembly	Colour	PU 50 pieces	1 piece (SPQ 50)
above	red	—	34579-232
	grey	—	34579-233
	silver	24560-256	—
below	red	—	34579-234
	grey	—	34579-235
	silver	24560-256	—
		PU 100 pieces	

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

2) Part no. includes one packing unit (PU); delivery is exclusively made in PU

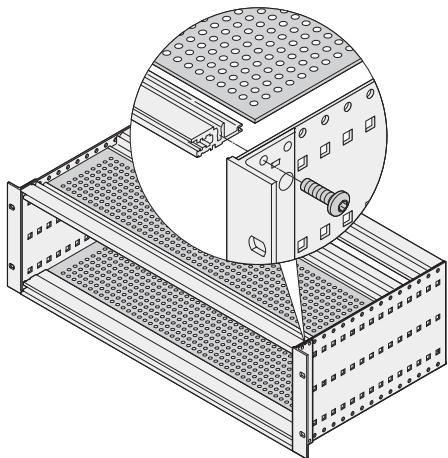
Guide rail accessories

Order Information

	ESD clips for guide rails	Board locking for PCBs without front panel; for accessory type guide rails	PCB handle for board locking; for accessory type guide rails	Identification strips	
				Assembly mm	Colour
	 04503050	 04805050	 04805051		
	<p>Spring steel, tin-plated, provides conductive contact between board and horizontal rail, on both the solder side and the component side</p>	<p>PBT, UL 94 V-0, red, to fix the PCB in the subrack (also slot 1), can also be used without board handle, minimum distance 3 HP</p>	<p>PBT, UL 94 V-0, red, insertion/ extraction function with connection to board locking (also slot 1), mounting directly behind front panel (above and below), minimum distance 3 HP</p>		
above/below	<p>silver</p>	<p>red</p>	<p>red</p>		
	<p>PU 50 pieces</p>	<p>PU 10 pieces</p>	<p>PU 10 pieces</p>		
	<p>24560-255</p>	<p>24560-377</p>	<p>24560-378</p>		
					white/matt
					1 piece
					60817-228

Shielding for top and bottom

Cover plates can be used for electromagnetic shielding (with EMC contact springs) or as mechanical protection (without EMC springs)

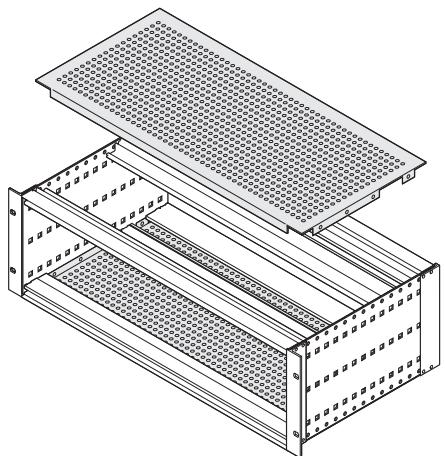


06108077

Cover plates for mechanical protection

- Cover plates are inserted into the grooves of the front and rear horizontal rails, type L "light"

see page 6.43



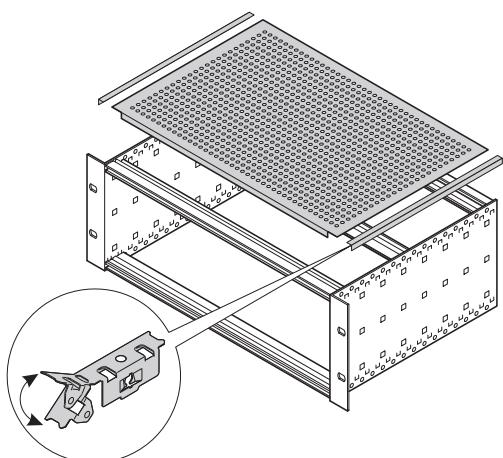
06102084

Cover plates with EMC shielding and mechanical protection

EMC cover plates for top and bottom

- Inserted in the groove of the front and rear horizontal rails; shielding with contact springs, lateral contact by bolting the bracket to the side panel
- Used when standard-depth PCBs (160, 220, 280, ...) are fitted

see page 6.44



06105082

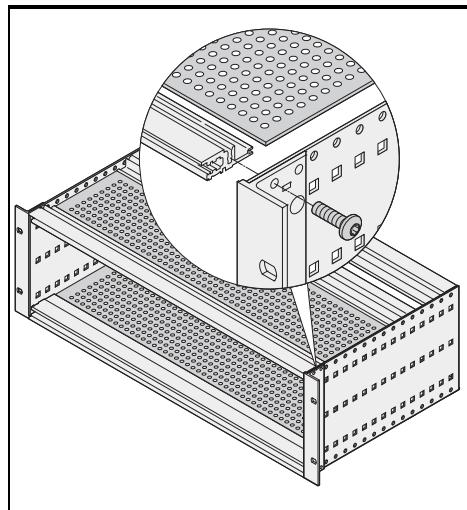
Universal EMC cover plates for top and bottom

- Inserted in the groove of the front and rear horizontal rails; shielding with contact springs, lateral contact by bolting to the side panel with special contact springs
- Used when PCBs with special dimensions are fitted

see page 6.45

Cover plates for mechanical protection
(insertion into horizontal rail type L)

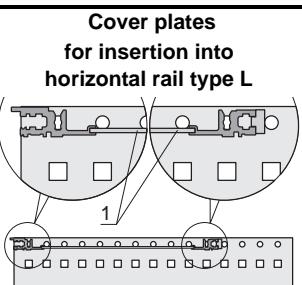
Order Information



06197010

Width HP	Depth mm	Application	
42	175	160 mm board depth	PU 1 pair 24561-031
63	175	160 mm board depth	24561-041
84	175	160 mm board depth	24561-051
84	235	220 mm board depth	24561-052

**Cover plates
for insertion into
horizontal rail type L**



06108058

Perforated Al plate, 1.2 mm,
hole diameter 3.8 mm,
Al, untreated,
perforation degree 60 %;
for insertion into the groove of the
light horizontal rails (type L)

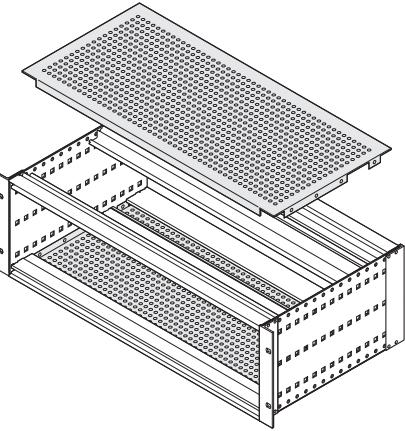
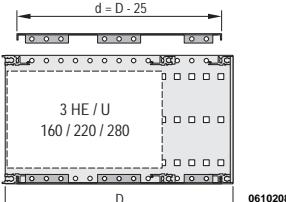
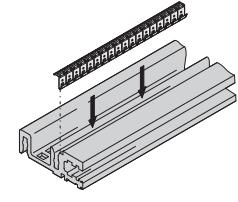
Note

- Other dimensions on request

EMC cover plates and mechanical protection

- Cover plate for bolting to side panel
- Used when standard-depth PCBs (160, 220, 280, ...) are fitted

Order Information

 Width HP Depth mm Application 06197010	Cover plate for bolting to side panel  AI, 1.0 mm, hole diameter 4.0 mm, passivated, perforation degree 58 %, incl. fixing screws; for shielding 4 stainless steel EMC gaskets are required per subrack	Stainless steel EMC gasket, between cover plate and horizontal rail  06106052 stainless steel EMC gasket, clips into the horizontal rail and forms the contact with the cover plate; suitable for all horizontal rails	
	PU 1 pair 24560-064 24560-065 24560-061 24579-090 24560-066	PU 10 pieces 24560-241	PU 100 pieces -
42 175 160 mm board depth	24560-071	24560-243	-
42 235 160, 220 mm board depth	24560-072		
42 275 160, 220 mm board depth CompactPCI (275 mm)	24560-062		
42 277.75 160, 220 mm board depth VME64x (277.75 mm)	24579-092		
42 295 160, 220, 280 mm board depth	24560-073		
63 175 160 mm board depth	24560-078		
63 235 160, 220 mm board depth	24560-079		
63 275 160, 220 mm board depth CompactPCI (275 mm)	24560-063		
63 295 160, 220, 280 mm board depth	24560-080	24560-245	24560-246
84 175 160 mm board depth	24560-081		
84 235 160, 220 mm board depth	24560-082		
84 275 160, 220 mm board depth CompactPCI (275 mm)	24560-083		
84 277.75 160, 220 mm board depth VME64x (277.75 mm)			
84 295 160, 220, 280 mm board depth			
84 355 160, 220, 280 mm board depth			
84 415 160, 220, 280 mm board depth			
84 475 160, 220, 280 mm board depth			
Assembly tool, for EMC gasket, stainless steel (horizontal rails), 1 piece	-		24560-271

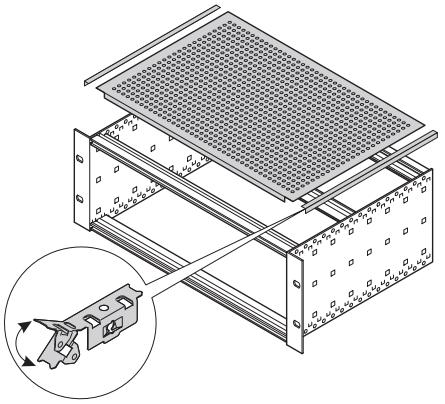
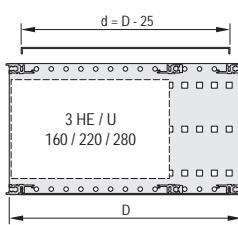
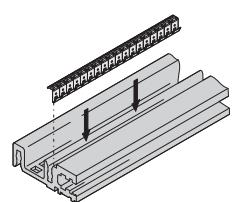
Note

- Cover plates without perforation available on request

Universal EMC cover plates and mechanical protection

- Used when PCBs with special dimensions are fitted

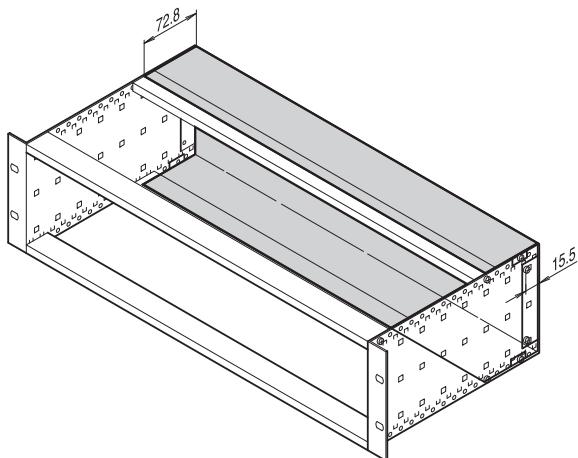
Order Information

 <p style="text-align: right;">06105082</p>	Universal cover plate  <p style="text-align: right;">06108079</p> <p>Al, 1.0 mm, hole diameter 4.0 mm, passivated, perforation degree 58 %, incl. lateral EMC sealing, incl. fixing screws</p>	Stainless steel EMC gasket, between cover plate and horizontal rail  <p style="text-align: right;">06106052</p> <p>stainless steel EMC gasket, clips into the horizontal rail and forms the contact with the cover plate; suitable for all horizontal rails</p>	
Width HP	Depth mm	Application PU 1 pair	PU 10 pieces PU 100 pieces
42	175	160 mm board depth 24560-031	24560-241
42	235	160, 220 mm board depth 24560-032	—
42	295	160, 220, 280 mm board depth 24560-033	—
63	175	160 mm board depth 24560-041	—
63	235	160, 220 mm board depth 24560-042	24560-243
63	295	160, 220, 280 mm board depth 24560-043	—
84	175	160 mm board depth 24560-051	—
84	235	160, 220 mm board depth 24560-052	—
84	295	160, 220, 280 mm board depth 24560-053	24560-245
84	355	160, 220, 280 mm board depth 24560-054	24560-246
84	415	160, 220, 280 mm board depth 24560-055	—
84	475	160, 220, 280 mm board depth 24560-056	—
Assembly tool, for EMC gasket, stainless steel (horizontal rails), 1 piece		—	24560-271

Subracks - **europac PRO** ServicePLUS

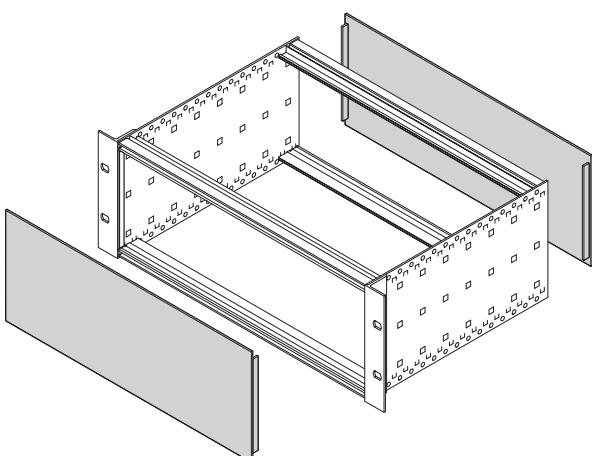
Cover/shielding to front and rear

- The front and rear sides of the subrack can be shielded by a hinged front panel or by a fixed front panel and 19" brackets
- The rear can be shielded with a front panel and a corner profile



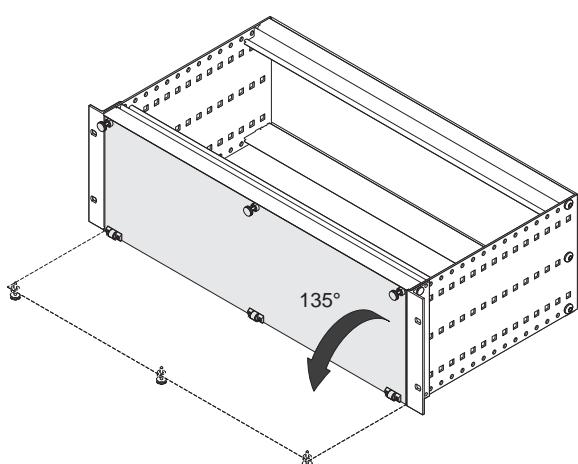
Rear hood

BZA45814



Front panel for front and rear

06112089



Front panel, hinged/pivoted

06112090

Subracks - **europac PRO** ServicePLUS

Rear hood for 3 U and 6 U subracks
(for stainless steel EMC gasket)

Order Information

	Rear hood <p>Al, 1 mm, clear passivated; 60 mm additional side panel depth required (board depth + 60 mm); for shielding please order EMC gasket for horizontal rail separately; cannot be used simultaneously with rear corner profile</p>	Stainless steel EMC gasket, between cover plate and horizontal rail <p>stainless steel EMC gasket, clips into the horizontal rail and forms the contact with the cover plate; suitable for all horizontal rails</p>
Height U	Width HP	1 piece
3	42	34561-750
3	84	34561-752
6	63	34561-763
6	84	34561-764
Torx panhead screw, M4 x 6, St, zinc-plated, PU 100 pieces		24560-135
Assembly tool, for EMC gasket, stainless steel (horizontal rails), 1 piece		—
		24560-271

Note

- Other dimensions of rear hood available on request

Front/rear panels, unshielded

FRONT PANEL

EXPRESS

Order Information

Height U	Height mm	Width HP	Front panel					
			pre-anodised, cut edges plain		anodised		Front anodised, rear iridescent green chromated	
			Al, 2.5 mm	Al, 2.5 mm	Al, 2.5 mm	Al, 2.5 mm	Al, 2.5 mm	Al, 2.5 mm
1	44.45	28	—	—	—	—	20850-423	—
1	44.45	42	—	—	—	—	20850-424	—
1	44.45	63	—	—	—	—	20850-425	—
1	44.45	84	—	—	—	—	20850-426	—
2	84.0	84	30818-271	—	30807-416	—	30847-461	—
3	128.4	2	—	30810-433	—	30810-432	—	30847-470
3	128.4	3	—	30818-272	—	30807-508	—	30847-471
3	128.4	4	—	30818-273	—	30807-481	—	30838-043
3	128.4	5	—	30818-274	—	30807-510	—	30838-044
3	128.4	6	—	30818-275	—	30807-482	—	30838-045
3	128.4	7	—	30818-276	—	30807-509	—	30838-046
3	128.4	8	—	30818-277	—	30807-484	—	30838-047
3	128.4	10	—	30818-279	—	30807-483	—	30838-049
3	128.4	12	—	30818-281	—	30807-485	—	30838-051
3	128.4	14	—	30818-282	—	30807-501	—	30838-053
3	128.4	21	—	30818-289	—	30807-487	—	30838-060
3	128.4	28	—	30818-296	—	30807-496	—	30838-067
3	128.4	42	30818-310	—	30807-494	—	30838-081	—
3	128.4	63	30818-331	—	30808-067	—	30838-102	—
3	128.4	84	30818-352	—	30807-506	—	30838-123	—
4	172.9	42	—	—	—	—	30847-463	—
4	172.9	63	—	—	—	—	30847-464	—
4	172.9	84	30818-434	—	30807-596	—	30847-465	—
6	261.8	2	—	30818-747	—	30818-741	—	30847-472
6	261.8	4	—	30818-518	—	—	—	30838-124
6	261.8	5	—	—	—	—	—	30838-125
6	261.8	6	—	—	—	—	—	30838-126
6	261.8	7	—	—	—	—	—	30838-127
6	261.8	8	—	30818-522	—	—	—	30838-128
6	261.8	10	—	30818-524	—	30807-753	—	30838-130
6	261.8	12	—	30818-526	—	—	—	30838-132
6	261.8	14	—	30818-528	—	30807-758	—	30838-134
6	261.8	16	—	30818-530	—	—	—	30838-136
6	261.8	21	—	30818-535	—	30807-757	—	30838-141
6	261.8	28	—	30818-542	—	30807-766	—	30838-148
6	261.8	42	30818-556	—	30807-764	—	30838-162	—
6	261.8	63	30818-577	—	30807-771	—	30838-183	—
6	261.8	84	30818-598	—	30807-776	—	30838-204	—
9	395.1	4	—	—	—	—	—	30847-476
9	395.1	8	—	—	—	—	—	30847-480
9	395.1	10	—	—	—	—	—	30847-482
9	395.1	12	—	—	—	—	—	30847-484
9	395.1	84	—	—	—	—	30847-556	—

■Front panel assembly kits, sleeves, collar screws, quick-release fasteners see page 6.63

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Front/rear panels shieldable with stainless steel EMC gasket

**FRONT PANEL
EXPRESS****Order Information**

Height U	Height mm	Width HP	Front panel			
			Front panel for shielding with EMC gasket (stainless steel)	Stainless steel EMC gasket		
2	84	84	30846-588	—	PU 10 pieces 21101-775	PU 100 pieces 21101-776
3	128.4	2	—	30846-864		
3	128.4	3	—	20846-425		
3	128.4	4	—	20846-426		
3	128.4	5	—	20846-427		
3	128.4	6	—	20846-428		
3	128.4	7	—	20846-429		
3	128.4	8	—	20846-430		
3	128.4	10	—	20846-431	21101-705	21101-706
3	128.4	12	—	20846-432		
3	128.4	14	—	20846-433		
3	128.4	21	—	20846-434		
3	128.4	28	—	20846-436		
3	128.4	42	20846-437	—		
3	128.4	63	20846-438	—		
3	128.4	84	30846-676	—		
4	172.9	42	30846-681	—		
4	172.9	63	30846-682	—	21101-713	21101-714
4	172.9	84	30846-683	—		
6	261.8	2	—	30846-865		
6	261.8	4	—	20846-443		
6	261.8	5	—	20846-444		
6	261.8	6	—	20846-445		
6	261.8	7	—	20846-446		
6	261.8	8	—	20846-447		
6	261.8	10	—	20846-448		
6	261.8	12	—	20846-449	21101-707	21101-708
6	261.8	14	—	20846-450		
6	261.8	16	—	20846-456		
6	261.8	21	—	20846-451		
6	261.8	28	—	20846-452		
6	261.8	42	20846-453	—		
6	261.8	63	20846-454	—		
6	261.8	84	30846-771	—		
9	395.1	84	30846-859	—	21101-709	21101-710
Assembly tool, for stainless steel EMC gasket					24560-270	

■Front panel assembly kits, sleeves, collar screws, quick-release fasteners see page 6.63

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Front/rear panels shieldable with textile EMC gasket

FRONT PANEL

EXPRESS

Order Information

Height U	Height mm	Width HP	Front panel			
			Front panel for shielding with EMC sealing (textile)	Textile EMC gasket	PU 10 pieces	PU 100 pieces
2	84	84	20848-262	-	-	21101-856
3	128.4	2	-	30849-001		
3	128.4	3	-	30849-004		
3	128.4	4	-	30848-354		
3	128.4	5	-	30848-378		
3	128.4	6	-	30848-380		
3	128.4	7	-	30848-382		
3	128.4	8	-	30848-356		
3	128.4	10	-	30848-386	21101-853	21101-854
3	128.4	12	-	30848-358		
3	128.4	14	-	20848-013		
3	128.4	21	-	20848-020		
3	128.4	28	-	20848-027		
3	128.4	42	20848-047	-		
3	128.4	63	20848-068	-		
3	128.4	84	20848-097	-		
4	172.9	28	-	20848-268		
4	172.9	42	20848-269	-	21101-858	-
4	172.9	63	20848-270	-		
4	172.9	84	20848-271	-		
6	261.8	2	-	30849-002		
6	261.8	4	-	30848-355		
6	261.8	5	-	30848-379		
6	261.8	6	-	30848-381		
6	261.8	7	-	30848-383		
6	261.8	8	-	30848-357		
6	261.8	10	-	30848-387		
6	261.8	12	-	30848-359	21101-855	21101-856
6	261.8	14	-	20848-106		
6	261.8	16	-	20848-108		
6	261.8	21	-	20848-113		
6	261.8	28	-	20848-120		
6	261.8	42	20848-139	-		
6	261.8	63	20848-160	-		
6	261.8	84	20848-189	-		
9	395.1	84	20848-280	-	21101-859	21101-904

■Front panel assembly kits, sleeves, collar screws, quick-release fasteners see page 6.63

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Front panels, hinged and pivoted

Order Information

Height U	Width HP	Front panel, bottom-hinged		Front panel, pivoted
		shielded	unshielded	
3	28	Al, 2.5 mm, front anodised, rear iridescent green chromated; hinge, Zn die-cast, nickel-plated; 2 x sleeve, PA; 2 x knurled screws M2.5 x 12.3, St, nickel-plated; 1 x textile EMC gasket	Al, 2.5 mm, anodised, cut edges plain; hinge, Zn die-cast, nickel-plated; 2 x sleeve, PA; 2 knurled screws M2.5 x 12.3, St, nickel-plated	04295001
3	42	20848-608	20838-280	-
3	63	20848-599	20838-271	-
3	84	20848-600	20838-272	-
4	84	20848-601	20838-273	20848-611
4	42	20848-605	20838-277	-
4	63	20848-606	20838-278	-
4	84	20848-607	20838-279	-
6	28	20848-696	-	-
6	42	20848-602	20838-274	-
6	63	20848-603	20838-275	-
6	84	20848-604	20838-276	20848-617

Note

- Front panel can be removed in opened position (> 135°)

Shielding is required between the following components of a subrack

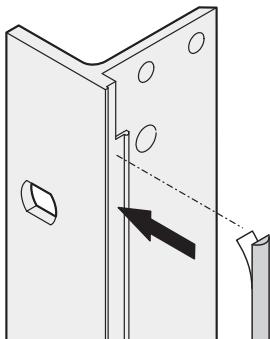
- Front panel/rear panel and horizontal rail, see page 6.53
- Front panel and 19" bracket/corner profile or in case of depth-offset installation, see page 6.53
- Cover plate/horizontal rail, see page 6.42
- Cover plate/side panel, see from page 6.42
- Horizontal rail/horizontal rail in combined mounting (3 U + 3 U and 6 U), see page 6.57
- Shielding for backplane and side panel see page 6.53

EMC shielding concepts

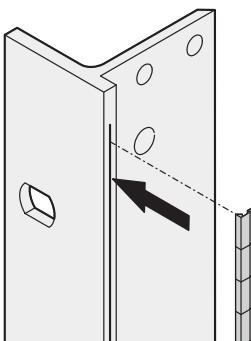
- Shielding concepts in accordance with IEEE and IEC
- Shielding effectiveness has been determined in various series of measurements in accordance with IEC 61587-3 and can be found online together with the relevant standard product
- The combined use of stainless steel and textile EMC gaskets is functionally possible without any problems

EMC shielding concept with EMC textile gaskets

- The seal is affixed to the left-hand side of the subrack (viewed from front) or to the front panel profile, respectively
- An EMC gasket with CuNi coating assures a long-term high level of shielding, typically 40 dB at 2 GHz
- Temperature-resistant adhesive layer is protected by a removable film
- Rear shielding is obtained using front panels or a rear hood
- Temperature range -40° C ... +70° C
- **Note:** rear hood and corner profile cannot be used simultaneously



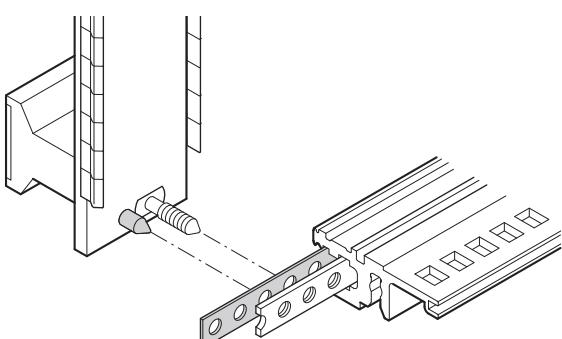
06108073



06108074

EMC shielding concept with stainless steel EMC gaskets)

- Symmetrical arrangement of EMC gaskets on the left and right hand sides of subrack and front panel
- Shielding: typically 40 dB at 2 GHz
- Can be used for temperatures above +70° C
- **Note:** rear hood and corner profile cannot be used simultaneously



06112091

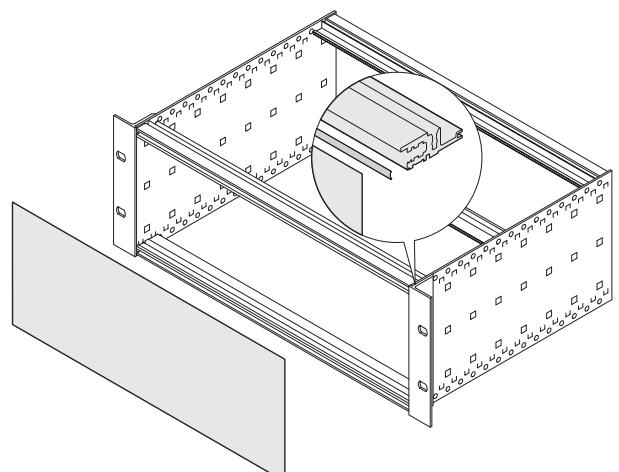
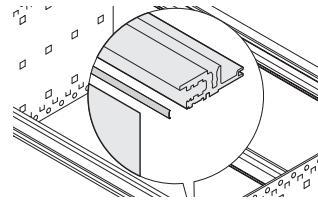
Front panel shielding concept

- Front panels are available for textile or stainless steel EMC gasket options
- Alignment pins are pressed-in in the front panel to position the gaskets securely and to compress them evenly
- An alignment pin positions the perforated strip in the horizontal rail
- Alignment pin and perforated strip provide an optimal positioning of the shielded assemblies; the front panels are not forced sideways by the shielding elements (Schroff patent)

Subracks - **europac PRO** ServicePLUS

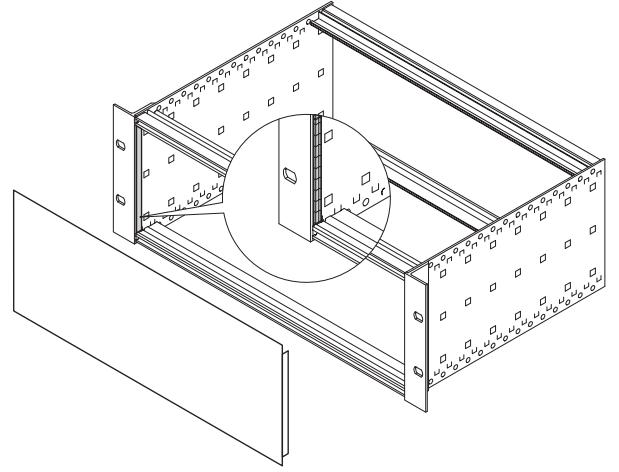
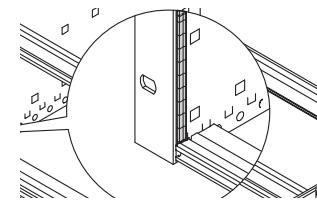
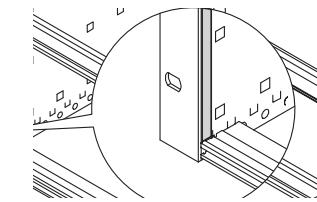
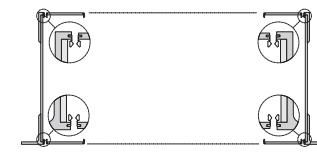
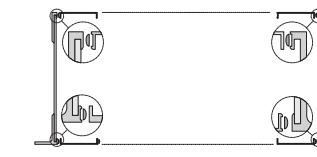
EMC gaskets between front/rear panel and horizontal rail

Order Information

 Width HP	Depth mm	Stainless steel EMC gasket between front panel/rear panel and horizontal rail	
		 stainless steel; for front and rear horizontal rails (type VT)	06102053
		PU 10 pieces	PU 100 pieces
28	131.8	24560-229	-
42	202.9	24560-231	-
63	304.5	24560-233	-
84	416.6	24560-235	24560-236

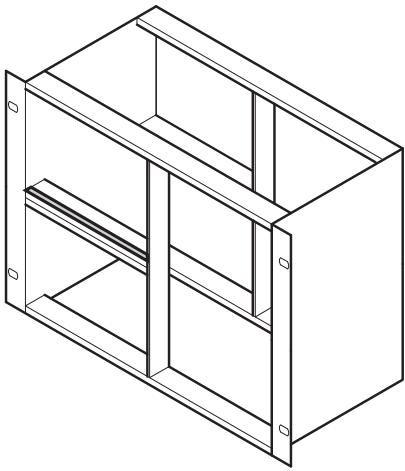
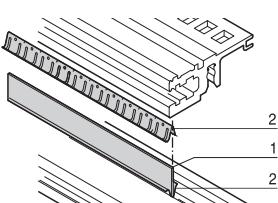
EMC gaskets between front panel and 19" bracket/corner profile

Order Information

 Height U	Depth mm	Stainless steel EMC gasket between front panel/rear panel and 19" bracket/corner profile		Textile EMC gasket between front panel/rear panel and 19" bracket/corner profile	
		 06105077	 06102056	 06108070	 06108054
				inserted laterally into the grooves of the front panel	
		PU 10 pieces	PU 100 pieces	PU 10 pieces	PU 100 pieces
3	97.5	21101-705	21101-706	21101-853	21101-854
4	142.5	21101-713	21101-714	21101-858	-
6	232.5	21101-707	21101-708	21101-855	21101-856
9	365.0	21101-709	21101-710	21101-859	21101-904
Assembly tool, for stainless steel EMC gasket		24560-270		-	

EMC gaskets between horizontal rail and horizontal rail

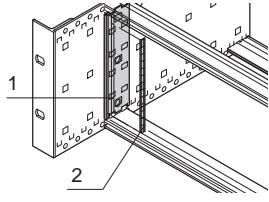
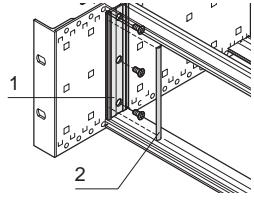
Order Information

	Stainless steel EMC gasket between horizontal rail and horizontal rail	
	 Item 1: cover strip, Al, 1 mm, item 2: 2 x EMC seals (stainless steel); for shielding of 2 horizontal rails positioned directly one above the other if assembly area is divided vertically	
Width HP	Depth mm	
20	107.0	PU 1 kit
28	147.0	24562-520
40	208.0	24562-528
42	218.0	24562-540
63	325.0	24562-542
84	431.0	24562-563
		24562-584

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ);
please order at least the SPQ quantity or a multiple

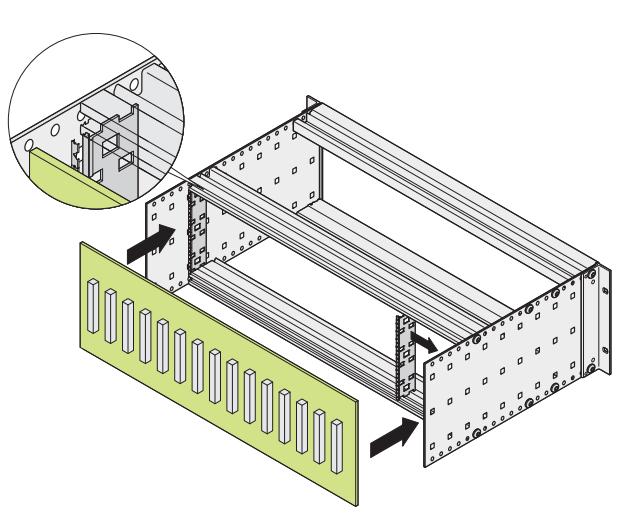
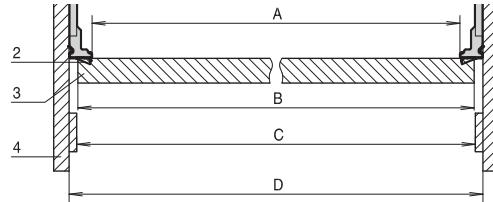
EMC gaskets between front panel and side panel (depth-offset installation)

Order Information

	Stainless steel EMC gasket between front panel and side panel (depth-offset installation)	Textile EMC gasket between front panel and side panel (depth-offset installation)
	 Item 1: 2 x support profiles, Al extrusion; item 2: 2 x stainless steel EMC gasket; fixing material kit for vertical EMC shielding between depth-offset shielded front panels and side panel	 Item 1: 2 x support profiles, Al extrusion; item 2: 1 x EMC textile gasket; fixing material kit for vertical EMC shielding between depth-offset shielded front panels and side panel
Height U	Depth mm	PU 1 kit
3	97.5	24562-199
4	142.5	24562-299
6	187.5	24562-499
Assembly tool, for stainless steel EMC gasket	24560-270	—

EMC gaskets between backplane and side panel

Order Information

 <p>Height U</p> <table border="1"> <tr> <td>3</td> <td>06108078</td> </tr> <tr> <td>6</td> <td></td> </tr> </table>	3	06108078	6		<p>Stainless steel EMC gasket between backplane and side panel (depth-offset installation)</p>  <p>2 x support profile, Al extrusion, 2 x EMC gasket (stainless steel) Fixing materials kit and user manual; for vertical EMC shielding between shielded backplane and side panel;</p> <p>dimensions (84 HP): A = 425.8 mm, B < 429.9 mm, C = 429.8 mm, D = 431.8 mm</p> <p>PU 1 kit</p> <table border="1"> <tr> <td>24561-199</td> </tr> <tr> <td>24561-499</td> </tr> </table>	24561-199	24561-499
3	06108078						
6							
24561-199							
24561-499							

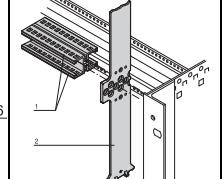
- With an appropriate design the backplane can be used as shielding rear panel; for that purpose a rear horizontal rail (type L-VT or H-VT) for depth-offset installation must be used to ensure the horizontal contact
- For vertical contact the support profile can be fixed to the europacPRO side panel (depth grid 30 mm)

Special interior mounting parts

- Combined mounting: 3 U + 3 U and 6 U, see page 6.57
- Horizontal board mounting, see page 6.58
- Mounting plates, see page 6.59
- Central locking for PCBs, see page 6.60
- Divider plates, see page 6.60
- Air baffles, see page 6.61
- Telescopic slides, see page 6.62
- Fixing parts (bolts, nuts, assembly tools), see page 6.63

Combined mounting (6 U and 2 x 3 U one above the other)

Order Information

Width pitch T1:T2 HP	PU 1 kit	Combined mounting: horizontal and vertical subdivision (incl. front panel for stainless steel EMC gasket)		Alternative front panels for combined mounting unshielded front panel, 6 U, 2 HP item 6	front panel for textile EMC gasket, 6 U, 2 HP item 6	Splitting extrusion for combined mounting item 2  bpa45857
		1 (SPQ 5)	1 piece (SPQ 5) ¹⁾			
20:62	24562-420					
40:42	24562-440					
42:40	24562-442			30847-472	30849-140	64560-010
63:19	24562-463					
84:0	24562-484					
Torx countersunk screw M4 x 14, zinc-plated, PU 100 pieces to fix splitting extrusion/vertical rail	–	–	–	–	–	24560-145
Panhead screw M2.5 x 10, St, zinc-plated, PU 100 pieces to fix horizontal rail/splitting extrusion	–	–	–	–	–	24560-179
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated, PU 100 pieces	–	21101-101	21101-101	–	–	–
Pozidrive/slotted collar screw M2.5, black, zinc-plated, PU 100 pieces	–	21101-102	21101-102	–	–	–
Washer 2.7 x 5 x 1, PA 6, PU 100 pieces	–	21101-121	21101-121	–	–	–
Textile gasket, core: foam, sleeve: textile cladding with CuNi coating, UL 94 V-0 PU 10 pieces	–	–	–	21101-855	–	–

2) The following guide rails cannot be used: type "accessory", type "accessory, strengthened" and type "for 4.4" PCB"

- Subdivision of the 6 U assembly area into:
 - 2 x 3 U
 - 1 x 6 U
- Designed to accommodate euroboards (100 mm high) and double euroboards (233.35 mm high)

Note

- Please order EMC gasketing kit for horizontal rails separately, see page 6.54
- Please order perforated strips for horizontal rails separately, see page 6.33
- Please order rear centre horizontal rail separately, see page 6.31

Horizontal board mounting in 3 or 4 U subrack

Order Information

Horizontal board mounting in 3 or 4 U subrack			
Height U	Usable height h HP	Mounting variants	
3	20		PU 1 kit
3	20		PU 1 kit
4	28		1 piece
Assembly tool, for stainless steel EMC gasket			24564-117
			24564-109
			34564-108
			24564-118
			24564-109
			34564-109
			24564-217
			24564-209
			34564-208
			24560-270
			—

* For direct backplane mounting

Note

- Please order front frame for EMC shielding separately

Mounting plates

Order Information

Width W HP	W mm	Board length mm	Mounting plate can be used in combination with cover plate	Mounting plate for use without cover plate	Mounting plate Fixing strip for partial widths
			1 piece	1 piece	1 piece
28	146.88	160	34563-001	34562-745	30840-021
28	146.88	220	34563-009	34562-749	30840-033
28	146.88	280	—	34562-753	30840-045
28	146.88	340	—	34562-757	30840-057
42	217.99	160	34563-002	34562-746	30840-021
42	217.99	220	34563-014	34562-750	30840-033
42	217.99	280	—	34562-754	30840-045
42	217.99	340	—	34562-758	30840-057
63	324.67	160	34563-003	34562-747	30840-021
63	324.67	220	34563-019	34562-751	30840-033
63	324.67	280	—	34562-755	30840-045
63	324.67	340	—	34562-759	30840-057
84	431.35	160	34563-004	34562-748	30840-021
84	431.35	220	34563-024	34562-752	30840-033
84	431.35	280	—	34562-756	30840-045
84	431.35	340	—	34562-760	30840-057
Assembly kit for mounting plate, PU 1 kit (Torx countersunk screw M4 x 5, St, zinc-plated, 12 pieces; screw M4 x 6, St, zinc-plated, 10 pieces; square nut M4, St, zinc-plated, 10 pieces)			24560-184	24560-184	—
Assembly kit for fixing strips for partial width mounting plates Torx screw M2.5 x 5, St, zinc-plated, PU 100 pieces			—	—	24560-146

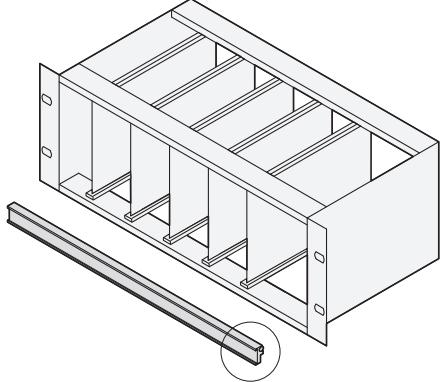
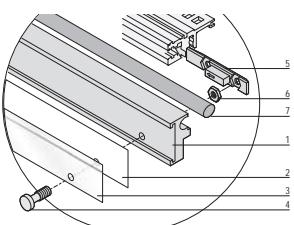
Note

- For installation and fixing of heavy components
- In addition to the mounting plate, (EMC) cover plates can also be fitted to the subrack
- The mounting plate is as wide as the subrack or system case and is fixed to the side panels
- A guide rail can be fitted on the first and last slot
- Guide rails type "4.4" and type "strengthened" cannot be used

Subracks - **europac PRO** ServicePLUS

Central locking

Order Information

	Central locking for PCBs without front panels
	 Item 1: central rail, Al, anodised; item 2: ID cardboard, white; item 3: transparent cover strip, plastic; item 4: 2 x knurled screw; item 5: 2 x slide nut; item 6: 2 x hexagon nut M2.5; item 7: rubber gasket; central locking allows joint locking of PCBs and serves as identification strip; can be fitted to front and rear horizontal rails, suitable for 84 HP width
Width HP	Length mm
84	426.0

06197010

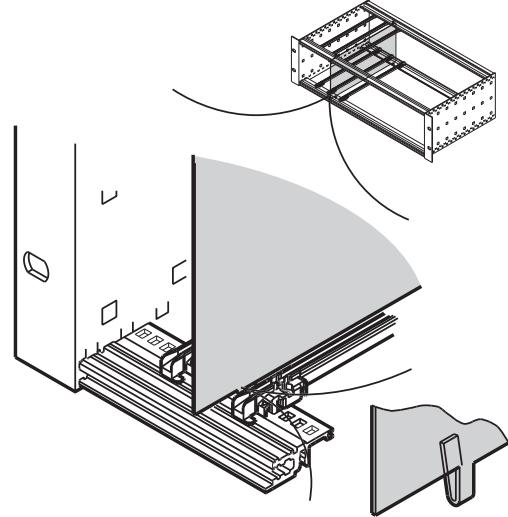
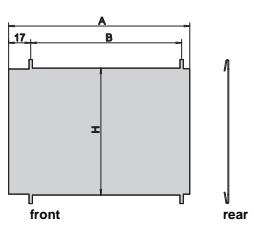
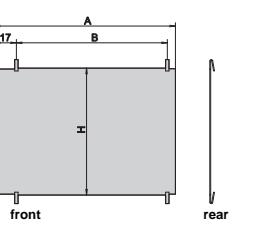
bza45819

1 piece

24560-167

Divider plate

Order Information

					Divider plate
Mounting position when stainless steel EMC gasket is used					Mounting position when textile EMC gasket is used
					
					bpa45911
Stainless steel, 1 mm, is mounted by clipping onto horizontal rail, space requirement on component side 2 mm; mounting direction varies with shielding design (EMC stainless steel or textile gasket); retrofitting the divider plate in an already-assembled subrack/case will first require dismantling of the horizontal rails; where front panels are unshielded, both mounting directions are possible					06105078
Height U	Depth mm	A mm	B mm	H mm	PU 10 pieces
3	160	158.3	135.0	113.5	34562-761
3	220	218.3	195.0	113.5	34562-762
6	160	158.3	135.0	246.9	34562-763
6	220	218.3	195.0	246.9	34562-764

bpa45912

Air baffles for slots

Order Information

Depth mm	Width HP	Height U	Air baffle without front panel	Air baffle with front panel	
			0610805	Front panel with lateral groove for stainless steel EMC gasket	U front panel for textile EMC gasket
160	4	3	34562-823	20848-712	20848-728
160	4	6	34562-826	20848-720	20848-736
160	8	3	34562-833	20848-714	20848-730
160	8	6	34562-836	20848-722	20848-738
160	12	3	34562-843	20848-716	20848-732
160	12	6	34562-846	20848-724	20848-740
220	4	3	34562-824	20848-713	20848-729
220	4	6	34562-827	20848-721	20848-736
220	8	3	34562-834	20848-715	20848-731
220	8	6	34562-837	20848-723	20848-739
220	12	3	34562-844	20848-717	20848-733
220	12	6	34562-847	20848-725	20848-741
Assembly tool for stainless steel EMC gasket, 1 piece			—	24560-270	—

Note

- Air baffle for 280 mm deep and for 80 mm rear I/O boards available on request

Simple telescopic slide for assembly of subracks in cabinets

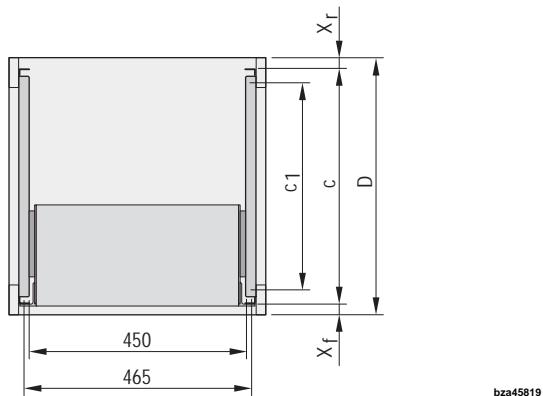


06101006

- For mounting 84 HP wide subracks in the 19" plane
- Loading capacity: 25 kg per pair
- The guiding profile is matched to the fixing dimension in the cabinet (it is bolted to the 19" profile of the cabinet); the adaptor rail is matched to the depth and fixing dimension on the subrack (it is inserted into the guiding profile like a telescopic slide)
- Safety note:
No protection against extraction, no stop at full extension

Order Information

Telescopic slides with guiding profile for fitting in cabinets



bza45819

Description	Depth D mm	x _f mm	x _r mm	C mm	c1 mm	Part no.
VARISTAR	600	50	50	500	369	24562-464
VARISTAR	800	50	50	700	569	24562-466
VARISTAR	900	50	50	800	669	24562-467
VARISTAR	1000	50	50	900	769	24562-468
VARISTAR	1100	50	50	1000	869	24562-472
VARISTAR	1200	50	50	1100	969	24562-473
eurorack	600	60	60	480	397	24562-449
eurorack	800	60	60	680	597	24562-451
eurorack	900	60	60	780	697	24562-452
NOVASTAR	500	33	60	407	350	24562-460
NOVASTAR	600	33	60	507	450	24562-461
NOVASTAR	800	33	60	707	650	24562-474
Lab rack	250	0	0	250	162	24562-446

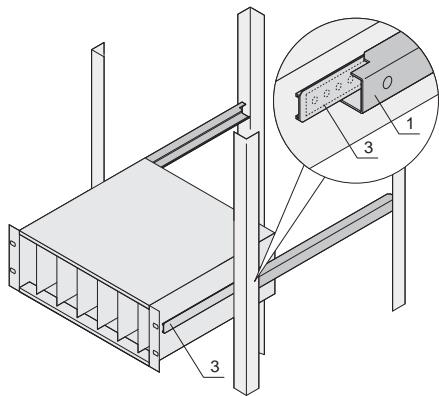
x_f, x_r: Distance of 19" plane to cabinet edge (front, rear)

c: Distance of 19" planes from each other

c1: Fixing dimension of guiding profile on 19" panel/slide mounts

Order Information

Telescopic slides with adaptor rail for subracks



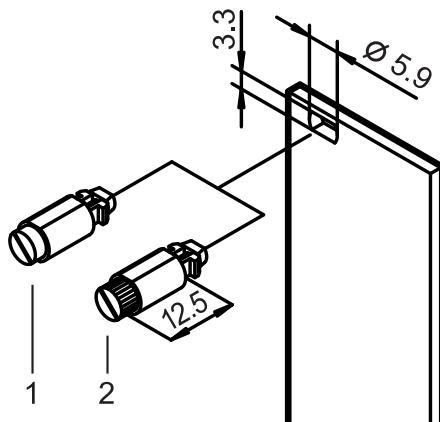
bza45819

For subrack depth mm	Part no.
175	24562-453
235	24562-454
295	24562-455
355	24562-456
415	24562-457
475	24562-458

Assembly parts

- Quick-release fasteners
- Sleeves
- Screws
- Cage nuts
- Tools

Quick-release fasteners



06702062

- Vibration and shock proof
- 1/4 rotary lock with defined stop
- Detection of locking position through slot position

Delivery comprises

Qty	Description
1	Locking pin, St, locking, Zn die-cast
1	Press-in sleeve, POM

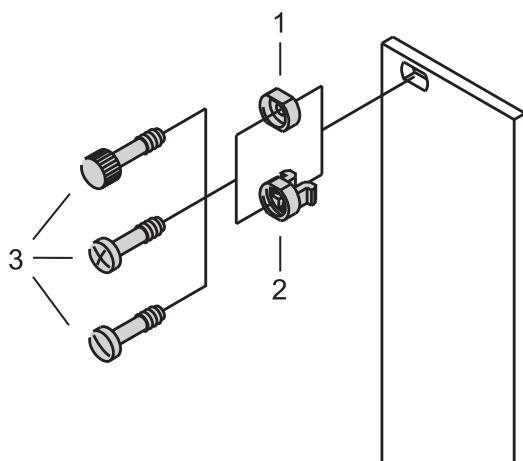
Order Information

Item	Description	Qty/PU	Part no.
1	With slotted head, grey	100	21101-847
1	With slotted head, black	100	21101-848
2	With knurled and slotted head, grey	100	21101-849
2	With knurled and slotted head, black	100	21101-850

Note

Quick-release fasteners: mounting without threaded inserts

Sleeves



06702061

Order Information

Item	Description	Qty/PU	Part no.
2	Plastic sleeve, PA, grey	100	21100-464
2	Plastic sleeve, PA, black	100	21100-591
1	Metal sleeve, brass, nickel-plated	10	21100-659
1	Metal sleeve, brass, nickel-plated	100	21100-660
1	Metal sleeve, brass, black	100	21100-886
1	Metal sleeve, stainless steel	10	21100-661
1	Metal sleeve, stainless steel	100	21100-662

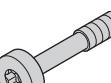
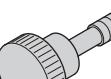
Note

- Metal sleeves must be pressed-in in front panels
- Sleeve does not fit in 2 HP wide front panels

Subracks - **europacPRO** ServicePLUS

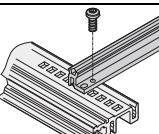
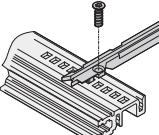
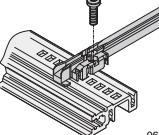
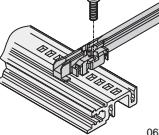
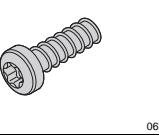
Collar screws

Order Information

Description	Application	Material	Dimension	Qty/PU	Part no.
	Collar screw with pozidrive/slot For mounting of front panels when using threaded inserts	St, nickel-plated	M2.5 x 12.3	100	21101-101
		St, zinc-plated, black	M2.5 x 12.3	100	21101-102
	Torx collar screw For mounting of front panels when using threaded inserts	St, nickel-plated	M2.5 x 12.3	100	21101-782
		St, zinc-plated, black	M2.5 x 12.3	100	21101-783
	For mounting of front panels when using threaded inserts	Brass, nickel-plated	M2.5 x 12.3	100	21101-749
	For mounting of front panels when using threaded inserts for horizontal rails with long lip	Brass, nickel-plated	M2.5 x 12.3	100	21101-909

Torx screws, self-forming

Order Information

Description	Application	Material	Dimension	Qty/PU	Part no.
	Torx panhead screw, self-forming For extra-robust Al guide rails; torque max. 0.2 Nm	St, zinc flake coating, black	2.5 x 7.3	100	24560-157
	Torx countersunk screw, self-forming For 4.4" board height, guide rail on horizontal rail, europacPRO, ratiopacPRO; torque max. 0.2 Nm	St, zinc-plated	2.5 x 7.7	100	24560-158
	Torx panhead screw, self-forming For plastic guide rail on horizontal rail; for panel bracket on horizontal rail; torque max. 0.2 Nm	St, zinc-plated	2.5 x 9.3	100	24560-141
	Torx panhead screw, self-locking For plastic guide rails on horizontal rails	St, zinc-plated	2.5 x 9.3	100	21500-039
	Torx panhead screw For 6 U support member, backplane mounting, centre horizontal rail	St, zinc-plated	2.5 x 10	100	24560-179

Subracks - **europacPRO** ServicePLUS

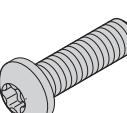
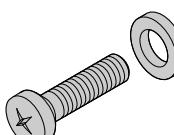
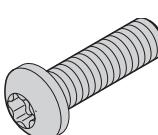
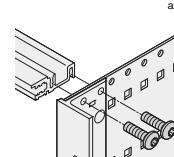
Countersunk screws

Order Information

Description	Application	Material	Dimension	Qty/PU	Part no.
 Torx screw <small>AZA46585</small>	For support profiles europacPRO, ratiopacPRO	St, zinc-plated	M4 x 5	100	24560-139
	For mixed board assembly and assembly of shortened horizontal rail on support member, with GND/earthing function	St, zinc-plated	M4 x 14	100	24560-145

Torx panhead screws

Order Information

Description	Application	Material	Dimension	Qty/PU	Part no.
 Torx panhead screw <small>AZA45940</small>	For Z-rails and connector assembly	St, nickel-plated	M2.5 x 7	100	24560-147
	For perforated rails	St, nickel-plated	M2.5 x 10	100	24560-148
	For backplane mounting	St, nickel-plated	M2.5 x 12	100	24560-161
		St, nickel-plated	M2.5 x 14	100	24560-162
 <small>AZA45178</small>	Washer	Plastic, PA	2.8 x 6.3 x 2	100	21101-964
 <small>AZA45940</small>	Screw + plastic washer (PA)	St, nickel-plated	M2.5 x 12	100	21100-777
 <small>AZA45940</small>	To bolt on support bracket, rear hood, corner profile on side panel, lengthening bracket and connecting bracket	St, zinc-plated	M4 x 6	100	24560-135
	To bolt-on cover plate or mounting plate, with GND/earthing function	St, zinc-plated	M4 x 6	100	24560-151
	To bolt-on cover plate or mounting plate, with GND/earthing function, self-forming thread	St, zinc-plated	M4 x 6	100	21101-884
 <small>06707058</small>	For horizontal rail on side panel if guide rails are bolted to slot 1	St, zinc-plated	M4 x 10	100	24560-155
	For horizontal rail on side panel, with GND/earthing function	St, zinc-plated	M4 x 14	10	24560-131
	For horizontal rail on side panel, with GND/earthing function	St, zinc-plated	M4 x 14	100	24560-130

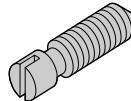
Subracks - **europac PRO** ServicePLUS

Grub screws

Order Information

Description	Application	Material	Dimension	Qty/PU	Part no.
	For threaded inserts M2.5 and perforated strips	Stainless steel	M2.5 x 9	100	21101-359
Grub screw	For threaded inserts M2.5	St, nickel-plated	M2.5 x 8	100	21100-276
	For threaded inserts M3	St, zinc-plated	M3.0 x 8	100	21100-646

06702053

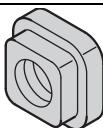


Square nuts

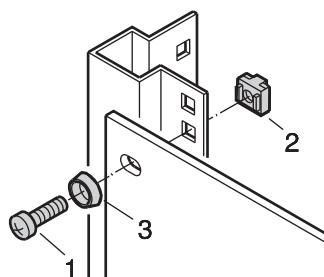
Order Information

Description	Application	Material	Dimension	Qty/PU	Part no.
Square nut	For fixing: parts to side panels, support profiles, mounting plates	St, zinc-plated	M4	100	24560-140

AZA45921



Assembly kits



SC128XXX

- For assembly of subracks in cabinets or 19" cases
- For assembly of desk-top cases in cabinets by means of 19" brackets

Delivery comprises (kit)

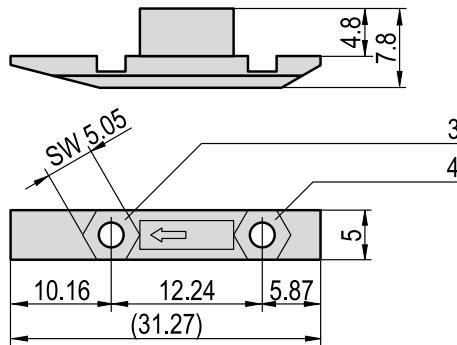
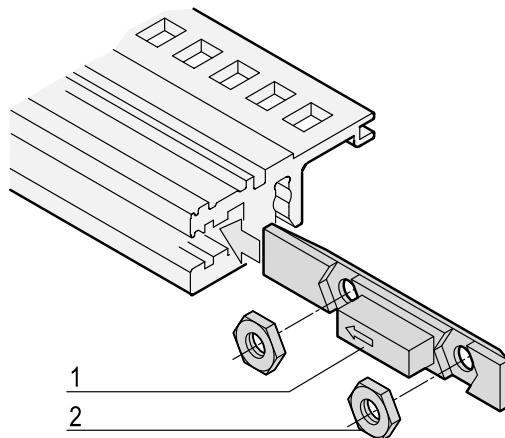
Item	Qty	Description
1	1	Pozidrive screw M6 x 16, zinc-plated
2	1	Plastic washer, ABS, black
3	1	Cage nut M6, zinc-plated

Order Information

Description	Part no.
PU = 8 x screw, washer, nut	21100-435
PU = 50 each of M6 screw, washer and cage nut	21101-809
PU = 100 each of M6 screw, washer and cage nut	21101-810

- For 19" brackets with material thickness of 1.5 mm, see "Assembly kits" in chapter Cabinet accessories

Slide, to accomodate 2 nuts



06702060

- The slide is pushed into the groove of the horizontal rail to front or rear (type VT)

Delivery comprises (kit)

Item	Qty	Description
1	1	Slide, PBT, red, UL 94 V-0
2	2	Nut, M2.5, St, zinc-plated

Order Information

Description	Part no.
Slide nut kit 1	100 slides/200 nuts 24560-165
Slide nut kit 2	12 slides/24 nuts 24560-166

Note

- Nuts used in item 3 suitable for:
 - hinged front panels, 84 HP
 - front or rear panels, 84 HP
- Nuts used in item 4 suitable for:
 - hinged front panels
- Nuts used in item 3 and 4 suitable for:
 - two front panels

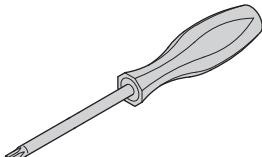
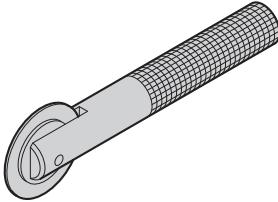
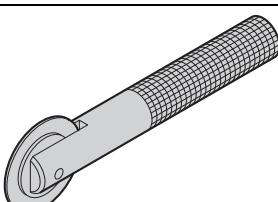


For further information www.schroff.biz/oneclick
oneClick search code = Part no.

Subracks - **europac PRO** ServicePLUS

Assembly tools

Order Information

Description	Application	Dimension	Qty/PU	Part no.
	T 8 torx	T8	1	64560-026
Torx screwdriver				
	T 20 torx	T20	1	64560-027
	Exclusively to fix stainless steel EMC gaskets in horizontal rails	-	1	24560-271
AZA45925				
	To fix stainless steel EMC gaskets on front panels with lateral slots	-	1	24560-270
aza45938				
				
aza45937				

Note

- Assembly tool to insert keying/coding pegs in guide rails is available on request

Tape measure



- Measuring tape with cm, U-, HP-division (length 2 m)

- Plastic housing, metal measuring tape with automatic collection

Order Information

Description	Qty/PU piece	Part no.
Tape measure	1	89009-001



For further information www.schroff.biz/oneclick
oneClick search code = Part no.

Application examples

Application: Transportation/defense sectors

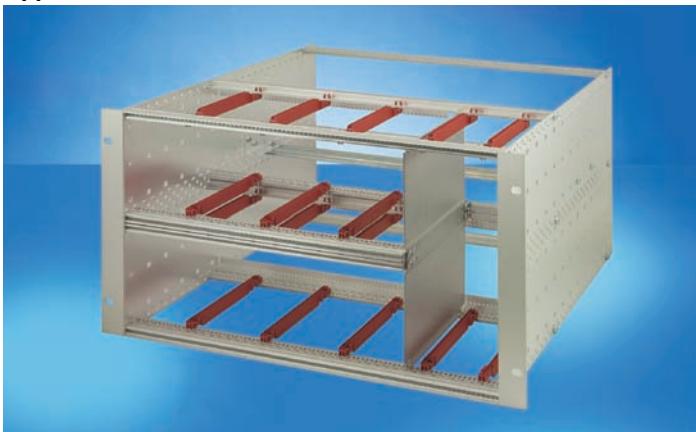


- Mounting frame to accomodate a 36 HP wide railway subrack, frame from stainless steel



- Robust assembly by double bolt-on fixing
- Lateral ducting in cabinet
- Combined mounting 6 U+ 2 x 3 U

Application: Measurement, control and instrumentation sectors



- Combined mounting with 2 x 3 U in 6 U
- Divider plate to separate different sections
- Installation with strengthened guide rails



- Subrack with additional telescopic fan unit
- Adaptation at bottom and top integrated into the side panel

Application: Telecoms sectors



- Shielded subrack for special applications with mounting plate, cover and base plate
- Mounting plate for heavy assemblies



- Subrack with plastic cable ducting for fibre optic cables
- Terminal area at top



SCHROFF GMBH, LANGENALBER STRASSE 96-100, D-75334 STRAUBENHARDT WWW.PENTAIREQUPMENTPROTECTION.COM

39601-641 © 2012 Pentair Equipment Protection