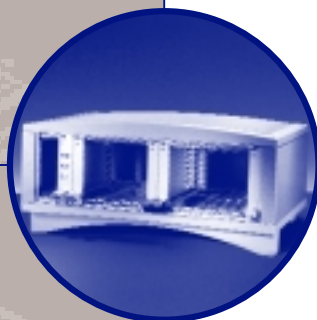
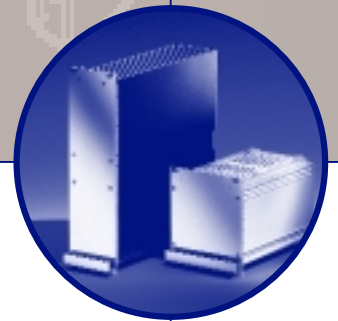
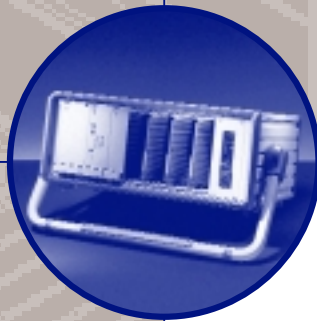


Subracks, Cases and Plug-In Units

Schroff[®]

Last update: 04/2002

2





ratiopac PRO/-air case

Case
ratiopacPRO/-air 4



06800006

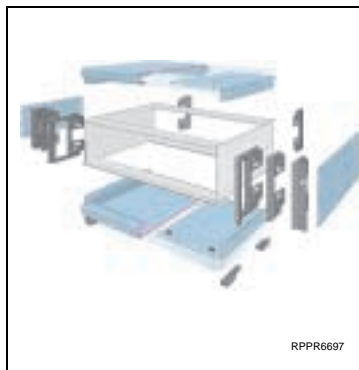


06800005

ratiopac PRO air

The case has integrated ventilation (2 x 1/2 U) for increased heat extraction.

On the exterior, it is 1 U higher than ratiopacPRO. Inside, the same installation conditions apply. It is especially suitable for cabinet installation, as the cold air can flow in from the front and bottom and the warmed air can escape from the rear and top.



RPPR6697

ratiopac PRO

The space-optimized version, light and compact. With a few simple adjustments, the user can convert the desk-top case into a 19" subrack case. The space in the cabinet is used in the best possible way.

Design

The platform for the complete ratiopacPRO/air case range is the 19" subrack europacPRO. The entire range of accessories is identical. The symmetrical design means that plug-in units can be inserted in the case both from the front and from the rear. The top and side plates are easy to remove. A clip-in device enables quick and easy handling without special tools. And if special requirements demand a greater mechanical loading capability, the cover plates can also be screwed in place.

Even the standard version offers a high level of EMC shielding (> 25 dB at 1 GHz). All inner parts are conductively connected. EMC clips attached to the cover plates also ensure additional security against interference.

Material/finish

Cover plate/side plate:
chromated, visible surface powder-coated, RAL 9006 white

Side panel:
Aluminium, clear chromated

Rear and front trim:
Diecast zinc, powder-coated, RAL 7016 anthracite grey

Front handle, 19" mounting bracket
Diecast aluminium, powder-coated, RAL 7016 anthracite grey

Horizontal rail:
Aluminium, powder-coated, RAL 7016 anthracite grey

Modifications

- Simple conversion from desk-top case to 19" subrack case
- Special painting

- On request, cut-outs in front panel, rear panels, top and base covers
- Assembly service according to customer specification
- Fan rear panels
- Other depths and widths

Standards

The interior and exterior dimensions comply with IEC 60297-3, type of protection IP 20 complying with IEC 60529, EN 60529. Protective earth connections correspond to: EN 50178 / VDE 0160, EN 60950 / VDE 0805, EN 61010 Part 1.



Case and 19" subrack in one

- *ratiopacPRO*, the space-optimized version
- *ratiopacPRO* air with integrated ventilation
- Interior and exterior dimensions complying with IEC 60297-3, cabinet installation possible
- High level of EMC shielding
- Identical front and rear symmetrical design
- Suitable for extraction handles complying with IEEE 1101.10/11 for CompactPCI and VME64x applications



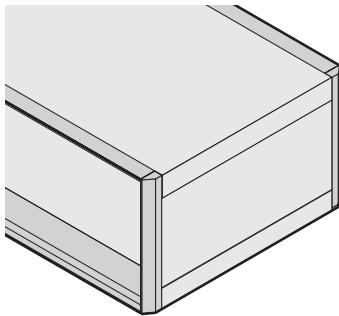
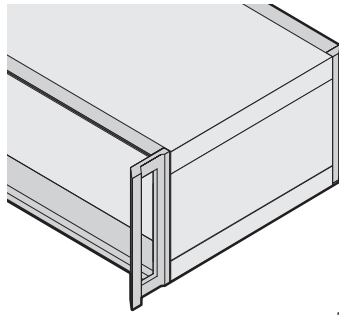
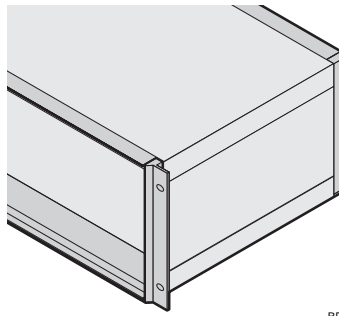
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ratiopac PRO - Case

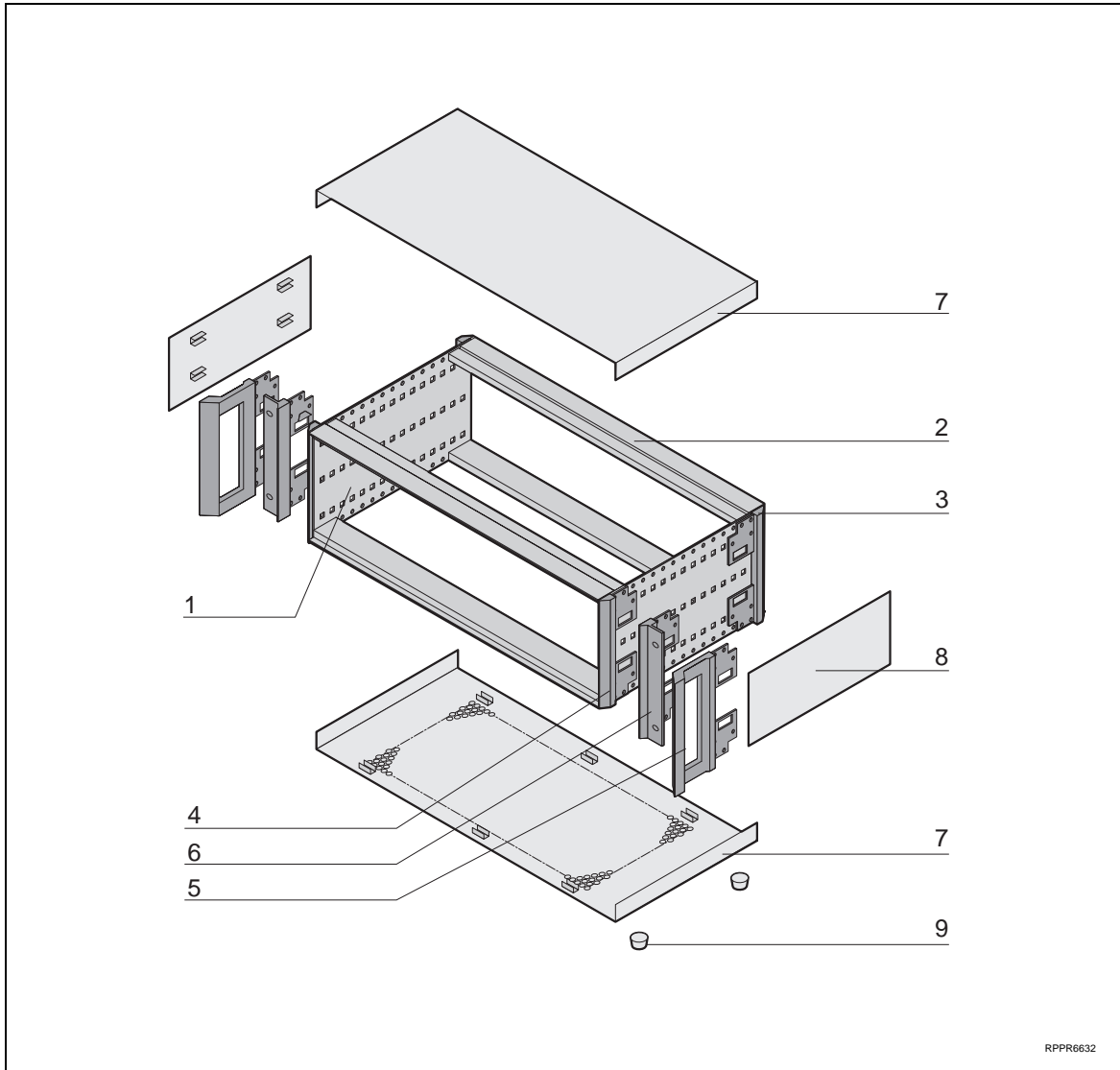
Case
ratiopacPRO/-air 4

ratiopacPRO

	Width:	Case Depth mm		Order No.		
		Exterior D	useful d = T-20	3 U	4 U	6 U
With trim  <small>RPPR6629</small>	28 HP 164.3 mm	255	235	24571-002	-	-
		315	295	24571-005	-	-
	42 HP 235.4 mm	255	235	24571-014	24571-062	-
		315	295	24571-017	24571-065	24571-113
	63 HP 342.1 mm	375	355	-	24571-066	24571-114
		255	235	24571-026	-	-
		315	295	24571-029	24571-077	24571-125
	84 HP 448.8 mm	375	355	24571-030	24571-078	24571-126
		255	235	24571-038	-	-
		315	295	24571-041	24571-089	24571-137
		375	355	24571-042	24571-090	24571-138
		435	415	24571-043	24571-091	24571-139
With front handle  <small>RPPR6630</small>	28 HP 164.3 mm	255	235	24571-702	-	-
		315	295	24571-705	-	-
	42 HP 235.4 mm	255	235	24571-714	24571-762	-
		315	295	24571-717	24571-765	24571-813
	63 HP 342.1 mm	375	355	-	24571-766	24571-814
		255	235	24571-726	-	-
		315	295	24571-729	24571-777	24571-825
	84 HP 448.8 mm	375	355	24571-730	24571-778	24571-826
		255	235	24571-738	-	-
		315	295	24571-741	24571-789	24571-837
375		355	24571-742	24571-790	24571-838	
435		415	24571-743	24571-791	24571-839	
With 19" mounting bracket  <small>RPPR6631</small>	84 HP 448.8 mm	255	235	24571-438	24571-486	-
		315	295	24571-441	24571-489	24571-537
		375	355	24571-442	24571-490	24571-538
		435	415	24571-443	24571-491	24571-539
		495	475	-	-	24571-540

d = useful internal dimension

ratiopacPRO - Case



RPPR6632

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- Cable holder 35
- Retention parts 36

Delivery comprises

Item	Description	Qty	Material	Surface	Remarks
1	Side plate	2	Al	Clear chromated	
2	Horizontal rail, standard 3 + 4 U:				
2 a	with lip, perforated at bottom for IEEE handle unperforated	1	Al	Visible surface powder-coated RAL 7016	With EMC contact between cover and horizontal rail
2 b	6 U:	3			
2 a	with lip, perforated at bottom and top for IEEE handle unperforated at rear	2			
2 b		2			
3	Rear trim	2	Diecast zinc	powder-coated, RAL 7016	
4	Trim	2	Diecast zinc	powder-coated, RAL 7016	Depends on selection
5	Front handle	2	Diecast aluminium	powder-coated, RAL 7016	Depends on selection
6	19" mounting bracket	2	Diecast aluminium	powder-coated, RAL 7016	Depends on selection
7	Cover with GND/earthing connection	2	Al	chromated, visible surfaces powder-coated, RAL 9006	Base with ventilation
8	Side trim	2	Al	chromated, visible surfaces powder-coated, RAL 9006	
9	Case foot	4	PC	black	with anti-slip protection
10	Assembly parts	1 Set			

Delivery: In kit form



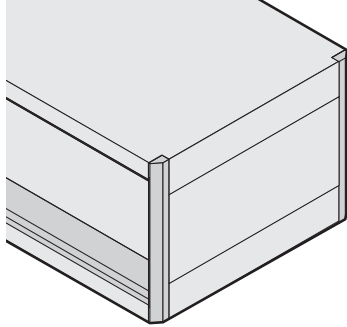
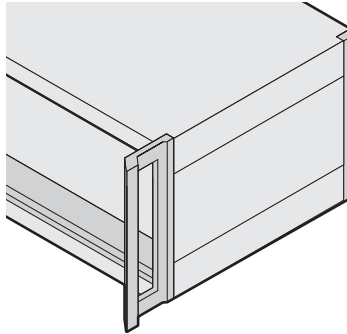
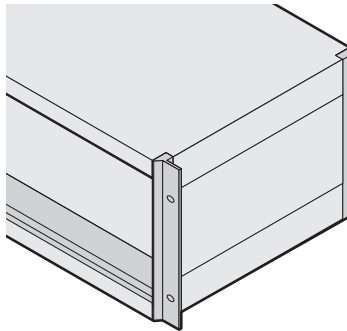
ratiopac PRO air - Case

Case
ratiopacPRO/-air 4

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19" compatible..... 38

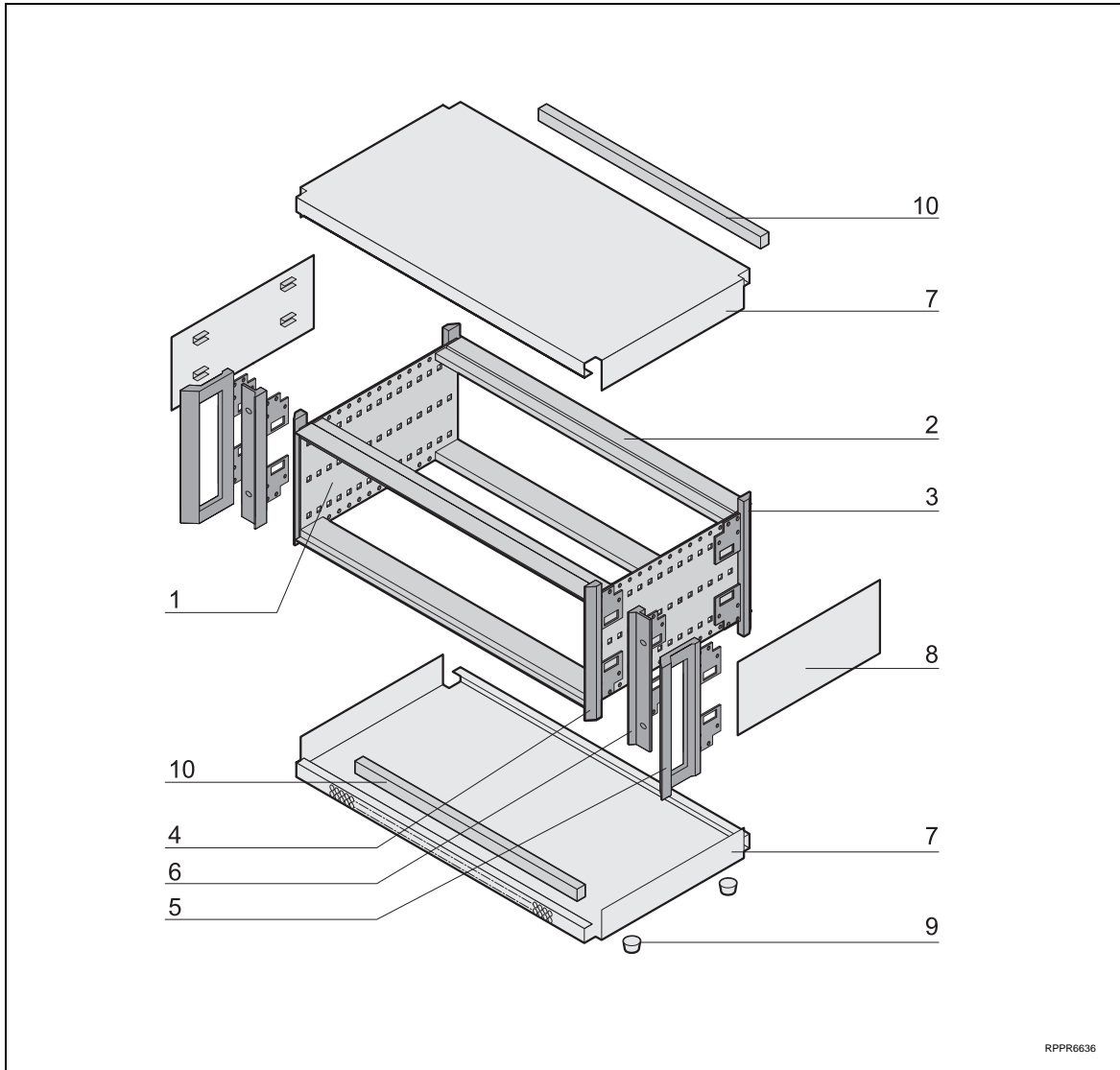
Backplanes
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ratiopacPRO air

	Width:	Case Depth mm		Order No.		
		Exterior D	useful d = D - 20	3/4 U	4/5 U	6/7 U
With trim  <small>RPPR6633</small>	28 HP 164.3 mm	255	235	24571-146	-	-
		315	295	24571-149	-	-
	42 HP 235.4 mm	255	235	24571-158	-	-
		315	295	24571-161	24571-209	24571-257
	63 HP 342.1 mm	375	355	24571-162	24571-210	24571-258
		255	235	24571-170	-	-
		315	295	24571-173	24571-221	24571-269
	84 HP 448.8 mm	375	355	24571-174	24571-222	24571-270
		435	415	-	24571-223	-
		255	235	24571-182	-	-
		315	295	24571-185	24571-233	24571-281
	With front handle  <small>RPPR6634</small>	28 HP 164.3 mm	255	235	24571-846	-
315			295	24571-849	-	-
42 HP 235.4 mm		255	235	24571-858	-	-
		315	295	24571-861	24571-909	24571-957
63 HP 342.1 mm		375	355	24571-862	24571-910	24571-958
		255	235	24571-870	-	-
	315	295	24571-873	24571-921	24571-969	
84 HP 448.8 mm	375	355	24571-874	24571-922	24571-970	
	435	415	-	24571-923	-	
	255	235	24571-882	-	-	
	315	295	24571-885	24571-933	24571-981	
With 19" mounting bracket  <small>RPPR6635</small>	84 HP 448.8 mm	375	355	24571-886	24571-934	24571-982
		435	415	24571-887	24571-935	24571-983
		495	475	24571-888	-	24571-984
		255	235	24571-582	-	-
		315	295	24571-585	24571-633	24571-681
		375	355	24571-586	24571-634	24571-682
		435	415	24571-587	24571-635	24571-683
		495	475	-	24571-636	24571-684

d = useful internal dimension

ratiopacPRO air - Case



RPPR6636

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Delivery comprises

Item	Description	Qty	Material	Surface	Remarks
1	Side plate	2	Al	Clear chromated	
2	Horizontal rail, with lip and perforated at top and bottom for IEEE handle	4	Al	Visible surface powder-coated RAL 7016	With EMC gasketing between cover and horizontal rail
3	Rear trim	2	Diecast zinc	powder-coated, RAL 7016	
4	Trim	2	Diecast zinc	powder-coated, RAL 7016	Depends on selection
5	Front handle	2	Diecast aluminium	powder-coated, RAL 7016	Depends on selection
6	19" mounting bracket	2	Diecast aluminium	powder-coated, RAL 7016	Depends on selection
7	Cover with GND/earthing connection	2	Aluminium	chromated, visible surfaces powder-coated, RAL 9006	Base and cover plate with ventilation fins
8	Side trim	2	Aluminium	chromated, visible surfaces powder-coated, RAL 9006	
9	Case foot	4	PC	black	with anti-slip protection
10	Filter mat	2	synthetic fibres		
11	Assembly parts	1 Set			

Delivery: In kit form



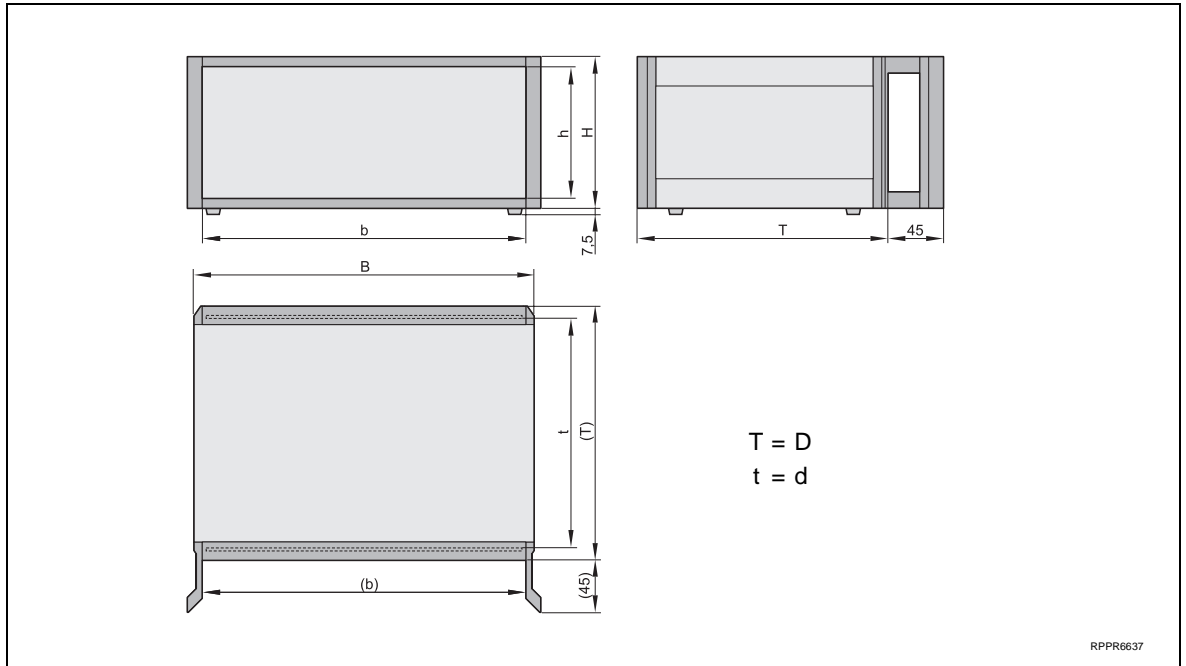
ratiofac PRO - Case

Case
ratiofacPRO/-air 4

Power Supply
19" compatible..... 38

Backplanes
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Dimensions



Dimensions table ratiofacPRO

U	Height H		Width W			Depth (mm)									
	mm	h mm	HP	mm	w mm	235		295		355		415		475	
						D mm	d mm	D mm	d mm	D mm	d mm	D mm	d mm	D mm	d mm
3	132.55	112.35	28	164.22	142.82	255.5	235.5	315.5	295.5	375.5	355.5	435.5	415.5	495.5	475.5
			42	235.54	213.94										
			63	342.02	320.62										
			84	448.70	427.30										
4	177.00	156.80	42	235.54	213.94	255.5	235.5	315.5	295.5	375.5	355.5	435.5	415.5	495.5	475.5
			63	342.02	320.62										
			84	448.70	427.30										
6	265.90	245.70	42	235.54	213.94	255.5	235.5	315.5	295.5	375.5	355.5	435.5	415.5	495.5	475.5
			63	342.02	320.62										
			84	448.70	427.30										

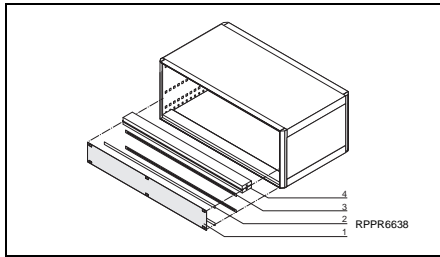
Dimensions table ratiofacPRO air

U	Height H		Width W			Depth (mm)									
	mm	h mm	HP	mm	w mm	235		295		355		415		475	
						D mm	d mm	D mm	d mm	D mm	d mm	D mm	d mm	D mm	d mm
3/4	177.00	112.35	28	164.22	142.82	255.5	235.5	315.5	295.5	375.5	355.5	435.5	415.5	495.5	475.5
			42	235.54	213.94										
			63	342.02	320.62										
			84	448.70	427.30										
4/5	221.45	156.80	42	235.54	213.94	255.5	235.5	315.5	295.5	375.5	355.5	435.5	415.5	495.5	475.5
			63	342.02	320.62										
			84	448.70	427.30										
6/7	310.35	245.70	42	235.54	213.94	255.5	235.5	315.5	295.5	375.5	355.5	435.5	415.5	495.5	475.5
			63	342.02	320.62										
			84	448.70	427.30										

d = useful internal dimension

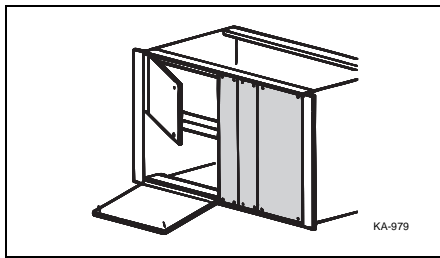


Overview of components, EMC shielding



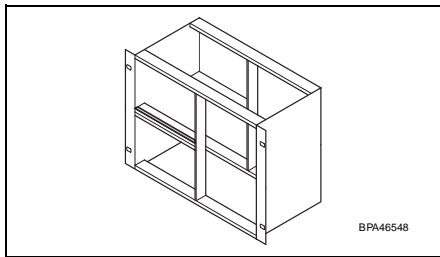
EMC partial width front panel 1 U

■ Only for 4 U and 4/5 U case

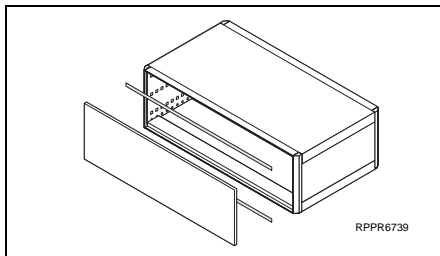


EMC partial width front panel 2 - 6 U / 2 - 84 HP

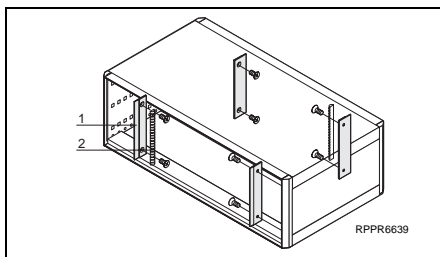
■ Extensive range of sizes. For front and rear installation for securing to horizontal rails



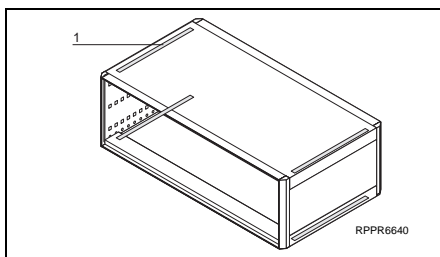
EMC gasketing Gasketing kit for horizontal rails



EMC gasketing Front panel - horizontal rail



EMC gasketing Front panel - side panel



EMC gasketing Side panel - cover

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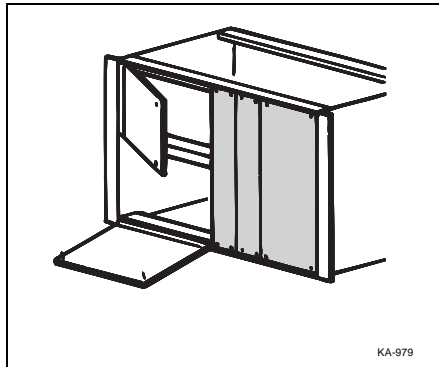
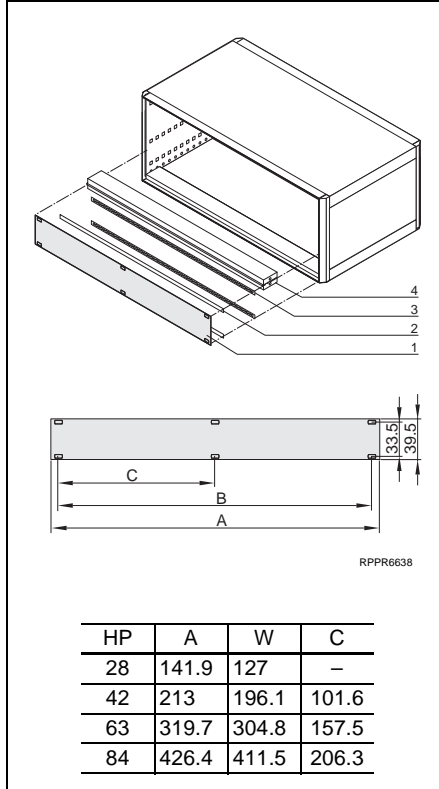


ratiopacPRO/-air EMC Shielding

Case
ratiopacPRO/-air 4

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19" compatible..... 38

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CompactPCI..... 46



Partial front panels

- EMC partial width front panel 1 U
- Partial width front panel 2 – 6 U

EMC partial width front panel 1 U

- Mounting on EMC horizontal rails
- Only for 4 U and 4/5 U case

Description	Case width HP	Order No.
EMC partial width front panel, 1 U	28	20850-284
	42	20850-285
	63	20850-286
	84	20850-287

Delivery comprises

Item	Qty	Description	Material	Surface	Remarks
1	1	Partial width front panel EMC	Al 2.5 mm	Front anodised, rear side yellow chromated	Metal sleeve pressed in
	1 set	Assembly parts			

Delivery: In kit form

Please order separately:

- Item 2: see EMC gasketing, gasketing kit for horizontal rails
- Item 3: see Internal mounting, threaded inserts (insert 2 units)
- Item 4: see Front horizontal rails (2 units)

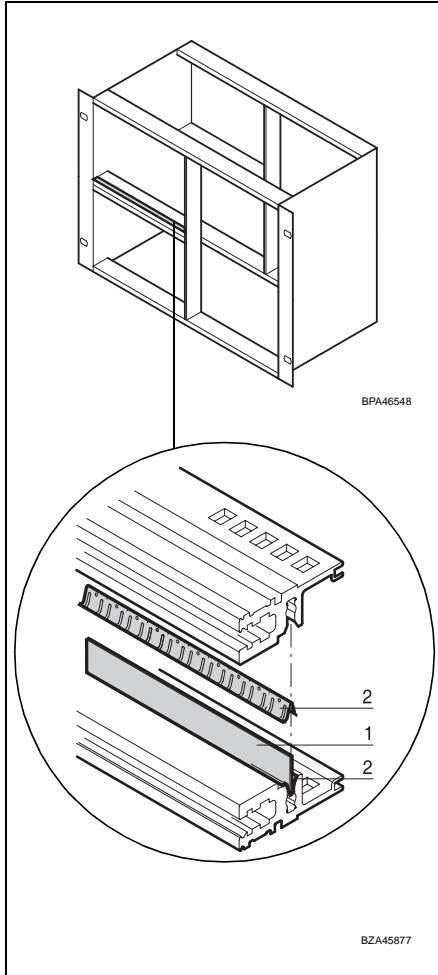
Partial width front panel 2 – 6 U

- Partial width front panels shielded and unshielded
- For front and rear installation
- Earthing of partial front panels
- Mounting on horizontal rails only
- ordering information in catalogue 2, chapter 'Plug-in units'
- Assembly parts, see 'Sleeves and collar screws M 2.5'



EMC gasketing

- The EMC accessories consist of contact strips that form a seamless contact between the components.



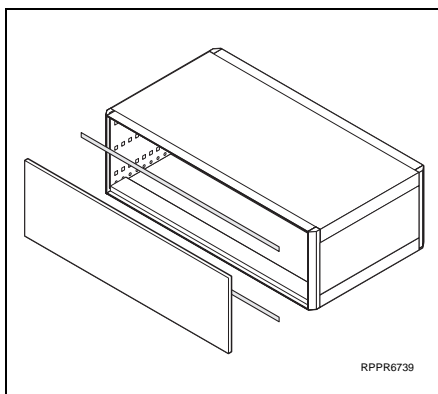
Gasketing kit, horizontal rails

- For shielding 2 horizontal rails located one directly above the other with vertical division of the mounting height

HP	Order No.
20	24562-520
28	24562-528
40	24562-540
42	24562-542
63	24562-563
84	24562-584

Delivery comprises

Item	Qty	Description	Material	Surface
1	1	Cover strip	Aluminium 1 mm	
2	2	Contact strip	Stainless steel	



Front panel – horizontal rail

- The contact strip is clipped onto the horizontal rail and sets up the contact to the front panel or rear panel. The front panels must have a conductive finishes on the rear side.

Material: Stainless steel

Width in HP	Length in mm	Quantity	Order No.
28	131.8	10	24560-229
42	202.9	10	24560-231
63	304.8	10	24560-233
84	416.3	10	24560-235
84	416.3	100	24560-236

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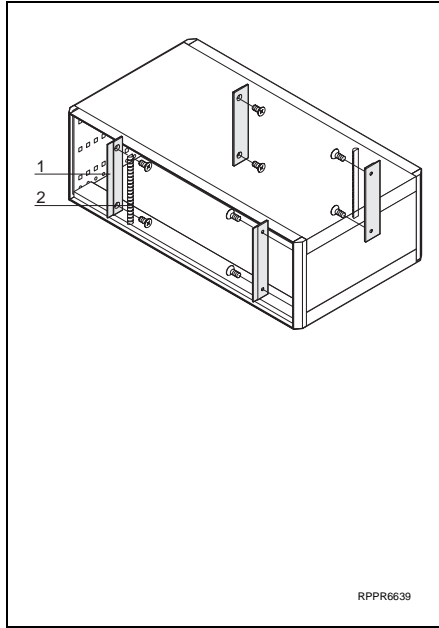


ratiopacPRO/-air EMC Shielding

Case
ratiopacPRO/-air 4

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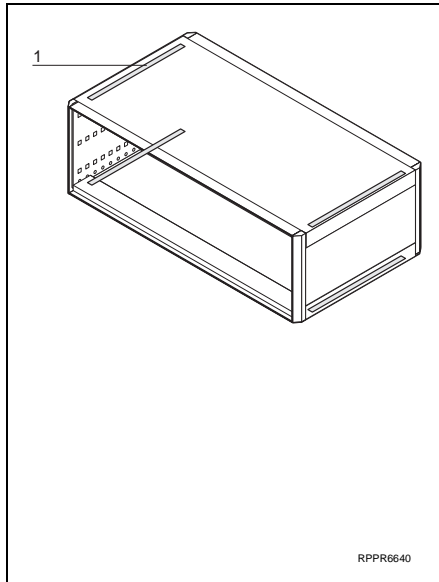
Front panel – side panel

- For vertical EMC shielding between shielded plug-in units and the side panel.

Case height U	Description	Order No.
3	EMC contact strip	24571-331
4	EMC contact strip	24571-332
6	EMC contact strip	24571-333

Delivery comprises

Item	Qty	Description	Material
1	4	EMC contact strip	Aluminium extrusion
2	2	EMC profile seal	Core: foam Sleeve: textile cladding with CuNi mesh
	1 set	Assembly parts	



Side panel – cover plate

- For horizontal EMC shielding between side panels and cover plates.

Case depth D in mm	Order No.
255	24571-338
315	24571-339
375	24571-340
435	24571-341
495	24571-342

Delivery comprises

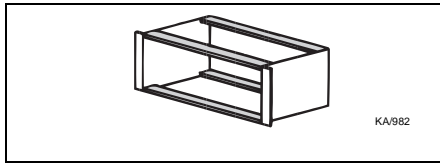
Item	Qty	Description	Material
1	4	Contact strip	Stainless steel

Delivery: In kit form

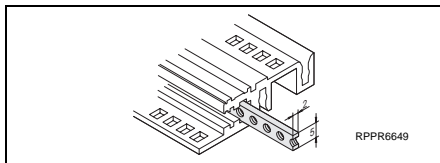


Overview of Components Internal Mounting

For installation of partial width front panels, plug-in units and frame-type 5 plug-in units, you will need the following components; refer to:

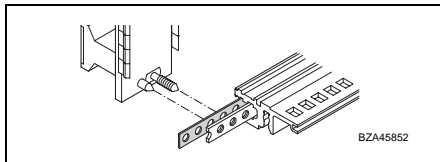


Horizontal rail, central rail and Z-rails



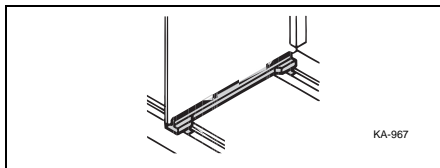
Threaded strip

- For mounting components



Perforated strips

- For centring shielded components



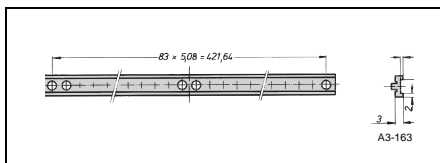
Guide rails for printed circuit boards

- For engaging in horizontal rails (see board guidance)



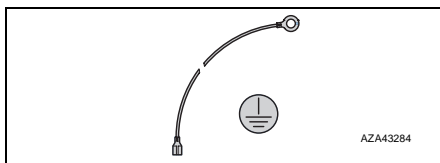
Z and perforated rails

- For mounting of connectors complying with EN 60603 (DIN 41612)



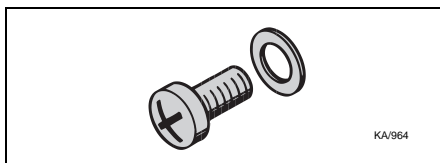
Insulation strip

- For insulated mounting of components

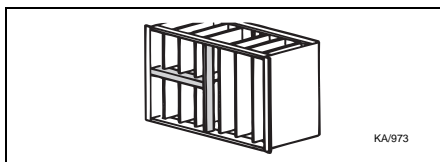


Earthing kit

- Protective earth connection



Assembly parts



Subdivided extension

- For mixed board installation

ratiopacPRO	6
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ratiopac PRO/-air Internal mounting

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ratiopacPRO/-air 4

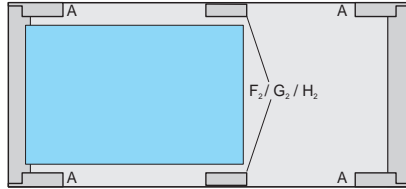
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Assembly positions for horizontal rails

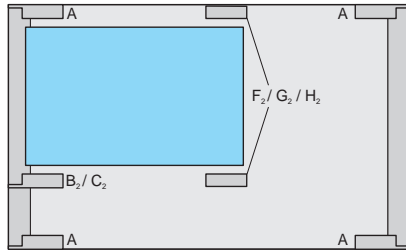
ratiopac PRO

3 U



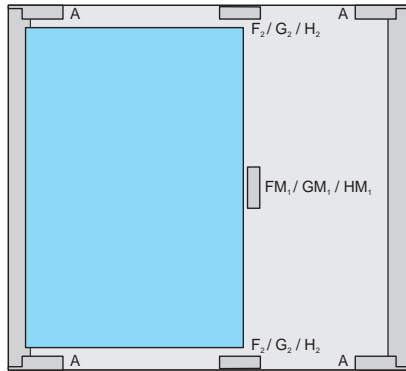
RPPR6641

4 U (3 + 1)



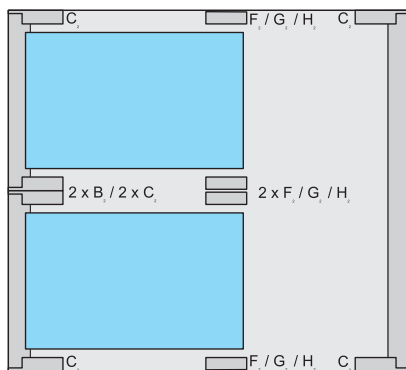
RPPR6642

6 U



RPPR6643

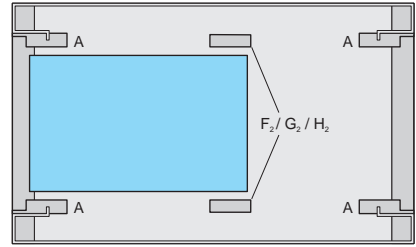
6 U (2 x 3)



RPPR6644

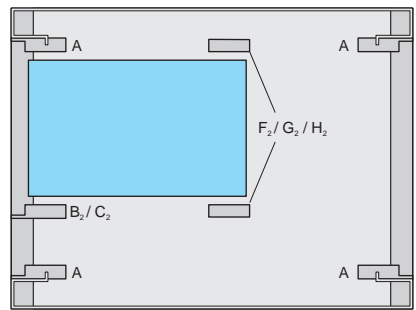
ratiopac PRO air

3/4 U (1/2 + 3 + 1/2)



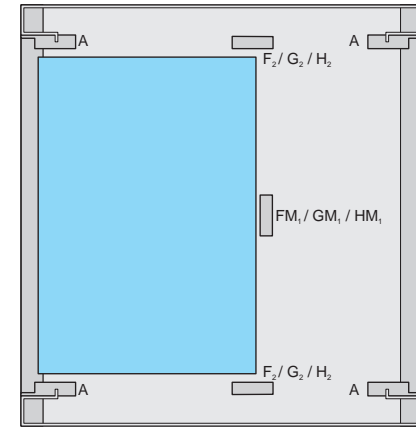
RPPR6645

4/5 U (1/2 + 3 + 1 + 1/2)



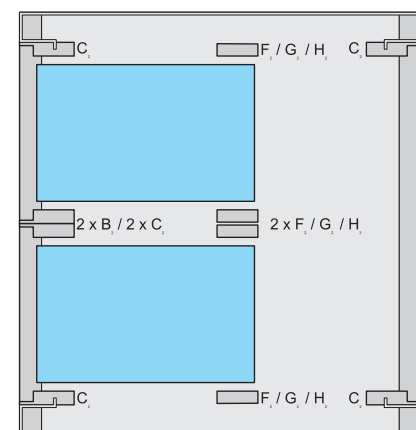
RPPR6646

6/7 U (1/2 + 6 + 1/2)



RPPR6647

6/7 U (1/2 + 3 + 3 + 1/2)



RPPR6648

A = Delivery comprises case ratiopacPRO/-air (Form corresponds to C₂)

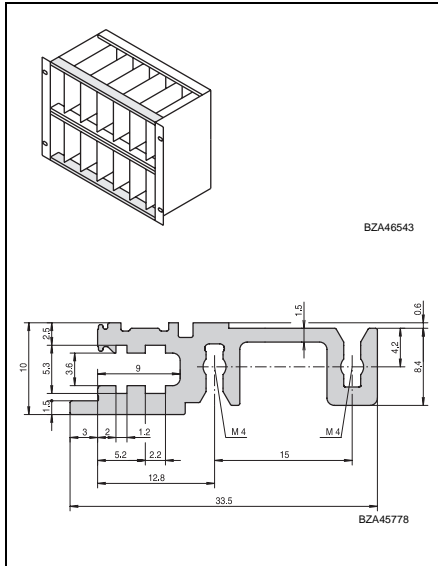


Horizontal rails front

- All versions are printed with HP increments

All front horizontal rails can also be used in a mixed assembly with vertical division of the mounting height.

For shielding, use the contact strip front panel – horizontal rail in the chapter 'EMC gasketing'.



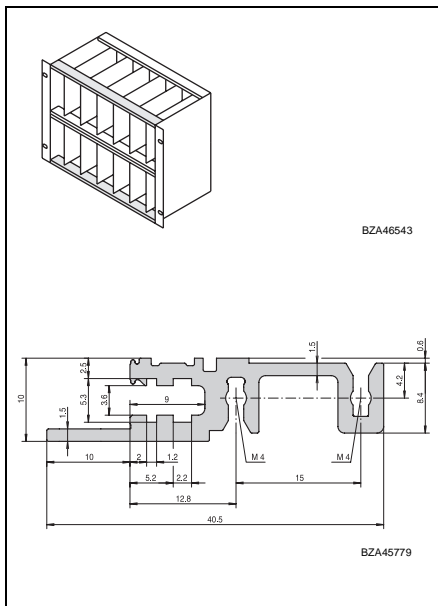
Type B₂ – heavy duty, short lip

- Short lip (H-SL)
- For extreme mechanical load

Usable HP	Length in mm	Order No.
20	106.68	34560-220
28	147.32	34560-228
40	208.28	34560-240
42	218.44	34560-242
63	325.12	34560-263
84	431.80	34560-284

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces



Type C₂ – heavy duty, long lip

- Long lip (H-LL)
- For plug-in units with IEEE handle
- For CPCI and VME 64x systems

Usable HP	Length in mm	Order No.
20	106.68	34560-320
28	147.32	34560-328
40	208.28	34560-340
42	218.44	34560-342
63	325.12	34560-363
84	431.80	34560-384

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces



06196007

- ratiopacPRO6
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- Air baffle for ratiopacPRO air 34
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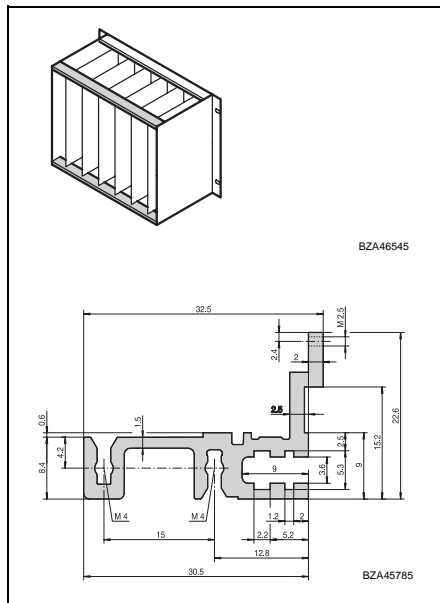
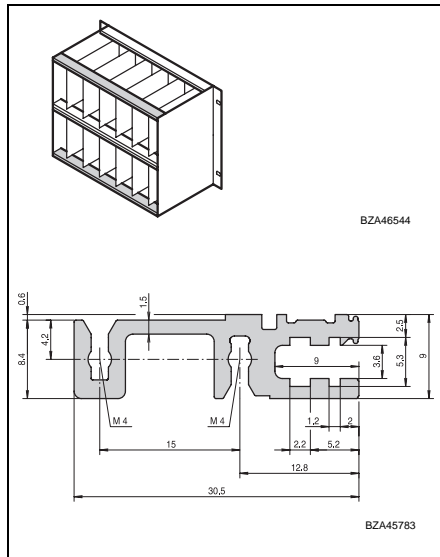
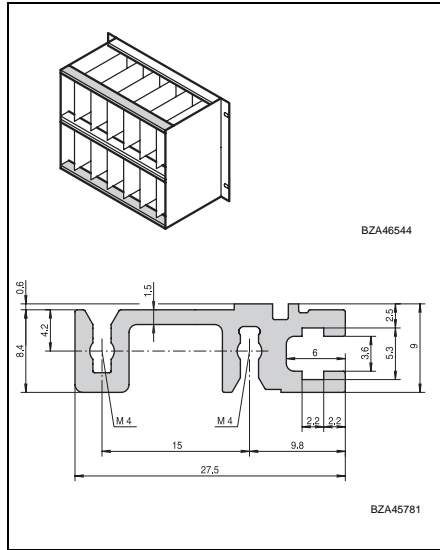


ratiopac PRO/-air Internal mounting

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Horizontal rails rear

- All versions are printed with HP increments

Type F₂ – heavy duty, standard

- For high mechanical load (H-ST)
- For indirectly mounting backplanes with insulation strip

Usable HP	Length in mm	Order No.
20	106.68	34560-520
28	147.32	34560-528
40	208.28	34560-540
42	218.44	34560-542
63	325.12	34560-563
84	431.80	34560-584

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces

Type G₂ – heavy duty + 3 mm

- For high mechanical load (H-VT)
- For directly mounting backplanes

Usable HP	Length in mm	Order No.
20	106.68	34560-720
28	147.32	34560-728
40	208.28	34560-740
42	218.44	34560-742
63	325.12	34560-763
84	431.80	34560-784

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces

Type H₂ – heavy duty, with Z-rails

- For high mechanical load (H-MZ)
- For directly mounting connectors complying with EN 60603 (DIN 41612)

Usable HP	Length in mm	Order No.
20	106.68	34560-920
28	147.32	34560-928
40	208.28	34560-940
42	218.44	34560-942
63	325.12	34560-963
84	431.80	34560-984

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces



Rear horizontal rails, centre

Type FM₁ – standard

■ For indirectly mounting backplanes with insulation strip

HP	Length in mm	Order No.
20	106.68	34561-020
28	147.32	34561-028
40	208.28	34561-040
42	218.44	34561-042
63	325.12	34561-063
84	431.80	34561-084

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces

Type GM₁ – standard + 3 mm

■ For directly mounting backplanes

HP	Length in mm	Order No.
20	106.68	34561-120
28	147.32	34561-128
40	208.28	34561-140
42	218.44	34561-142
63	325.12	34561-163
84	431.80	34561-184

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces

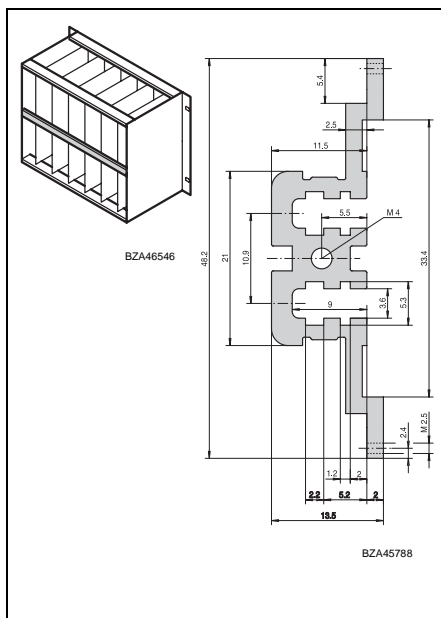
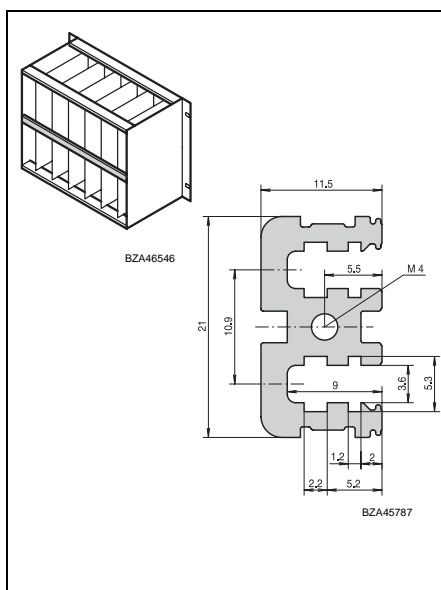
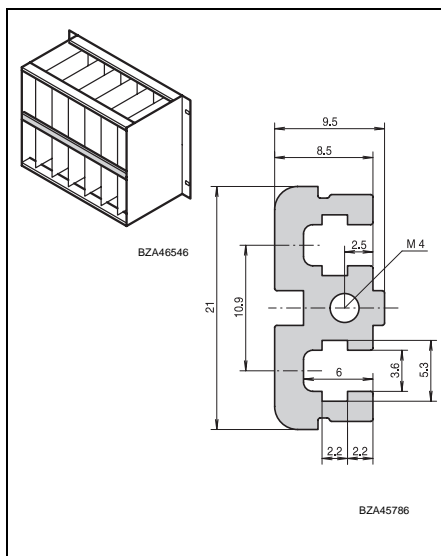
Type HM₁ – with Z-rails

■ For directly mounting connectors complying with EN 60603 (DIN 41612)

Usable HP	Length in mm	Order No.
20	106.68	34561-220
28	147.32	34561-228
40	208.28	34561-240
42	218.44	34561-242
63	325.12	34561-263
84	431.80	34561-284

Delivery comprises

Qty	Material	Surface
1	Aluminium extrusion	Anodised, conductive contact surfaces



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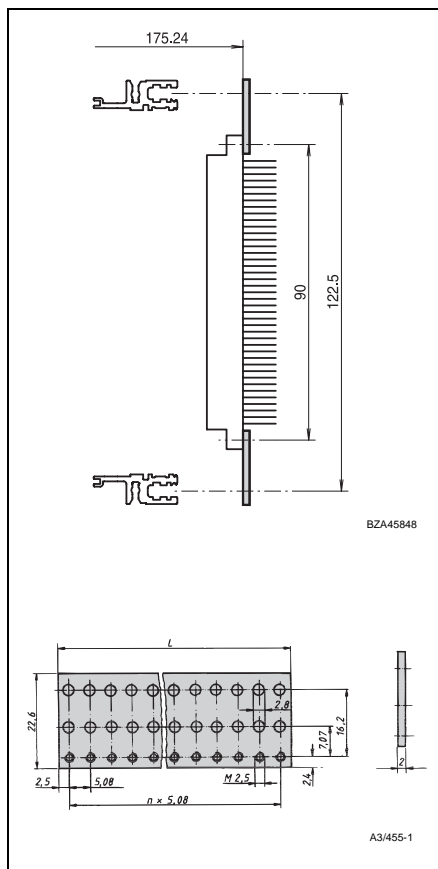
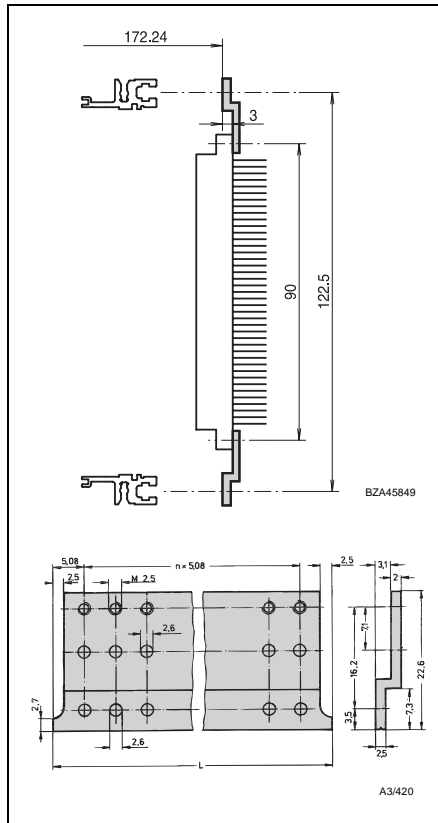


ratiopac PRO/-air Internal mounting

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Z and perforated rails

For mounting of connectors complying with:

- EN 60603 (DIN 41612)
- DIN 41617

Z-rail for connector complying with EN 60603 (DIN 41612)

- In conjunction with rear horizontal rail, F₂

HP	Length L in mm	Order No.
28	142.24	30822-033
40	203.20	30822-045
42	213.36	30822-047
60	304.80	30822-065
84	426.70	30822-089

Delivery comprises

Qty	Description	Material	Surface
1	Z-rails	Al	Anodised

Assembly part for Z-rails

- A threaded insert is required for bolting to the horizontal rail

Delivery comprises

Qty	Description	Order No.
100	Socket cap head screw with Torx 2.5 × 7 (for Z-rail)	24560-147

Perforated rail for connector complying with EN 60603 (DIN 41612)

- In conjunction with rear horizontal rail, G₂ deepened installation

HP	Length L in mm	Order No.
28	142.24	30497-006
40	203.20	30822-202
42	213.36	30822-203
60	304.80	30822-204
84	426.70	30822-206

Delivery comprises

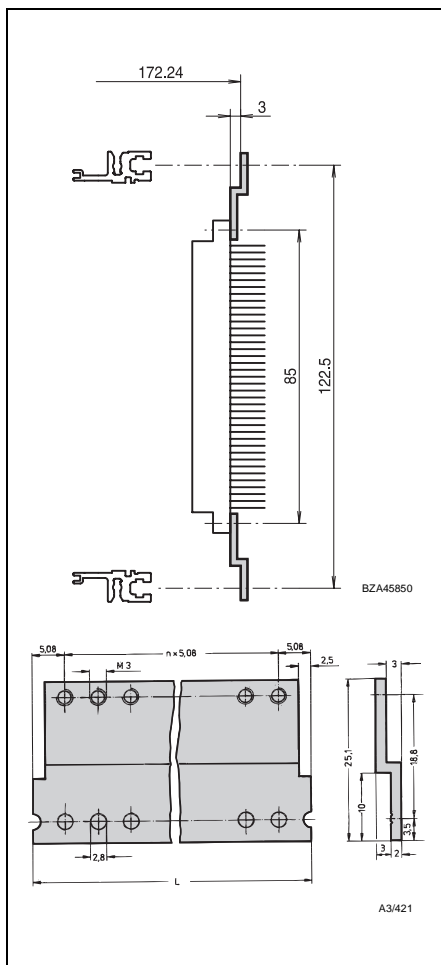
Qty	Description	Material	Surface
1	Perforated rail	Al	Clear chromated

Assembly part for perforated rails

- A threaded insert is required for bolting to the horizontal rail

Delivery comprises

Qty	Description	Order No.
100	Socket cap head screw with Torx 2.5 × 10 (for perforated rail)	24560-148



Z-rail for connector complying with DIN 41617

■ In conjunction with rear horizontal rail, F₂

HP	Length L in mm	Order No.
28	142.24	30819-752
40	203.20	30819-763
42	213.36	30819-766
60	304.80	30819-783
84	426.70	30819-808

Delivery comprises

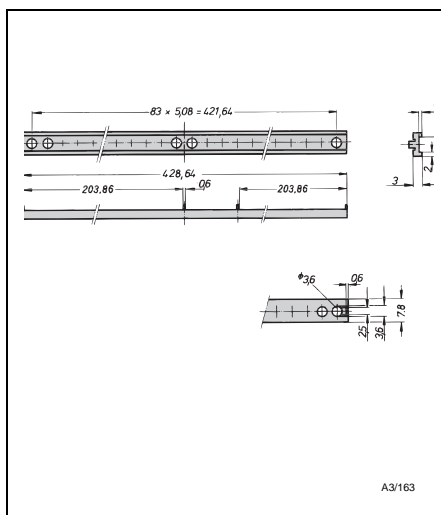
Qty	Description	Material	Surface
1	Z-rails	Al	Anodised

Assembly part for Z-rails

■ A threaded insert is required for bolting to the horizontal rail

Delivery comprises

Qty	Description	Order No.
100	Socket cap head screw with Torx 2.5 × 7 (for Z-rail)	24560-147



Insulation strip

■ For insulated mounting of backplanes

■ In conjunction with rear horizontal rails, F₂ and FM₁ Standard

HP	Length in mm	Order No.
28	142.24	30835-110
40	210.20	60817-118
42	213.36	30899-206
63	316.90	30894-444
84	428.60	60817-061

Delivery comprises

Qty	Description	Material	Surface
1	Insulation strip	PBT UL 94 V-0	grey

- ratiopacPRO6
- ratiopacPRO air8
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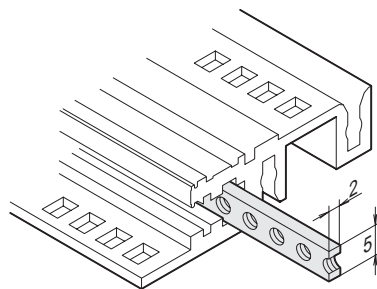
ratiopac PRO/-air Internal mounting

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Thread spacing: 1 HP (5.08 mm)



RPPR6649

Threaded strip

- Can be used for all horizontal rails
- The collar screws for mounting partial width front panels must be 12.3 mm long.

Thread	HP	Length in mm	Order No.
M 2.5	20	106.2	34561-320
	28	146.8	34561-328
	42	217.9	34561-342
	63	324.6	34561-363
M 3	84	431.3	34561-384
	84	431.3	34561-484

Delivery comprises

Qty	Description	Material	Surface
1	Threaded strip	Steel profile	Zinc-plated

Perforated strips

- For centring the shielded plug-in modules, front panels and rear panels via guide dowels

HP	Length in mm	Order No.
40	208.28	30845-209
42	217.90	30845-211
63	324.60	30845-232
84	431.30	30845-253

Delivery comprises

Qty	Description	Material	Surface
1	Perforated strips	Aluminium 1 mm	

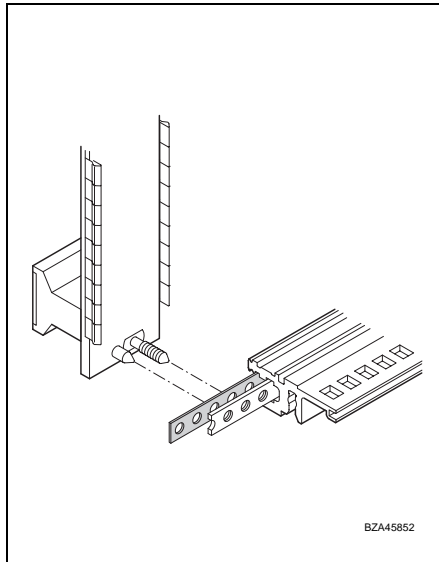
Note

Can only be used with threaded insert M 2.5.

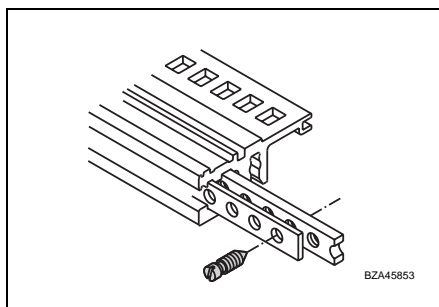
Grub screw

- For attaching the threaded insert in the horizontal rail. Additional attachment of the perforated strip for M 2.5.

Description	Thread	Qty	Order No.
Grub screw	M 2.5	100	21101-359
	M 3	100	21100-646

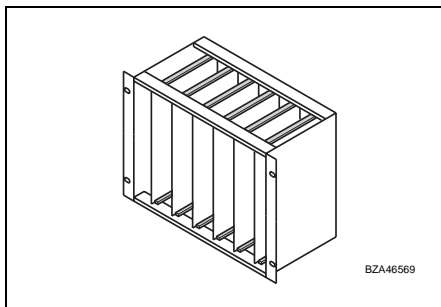


BZA45852



BZA45853

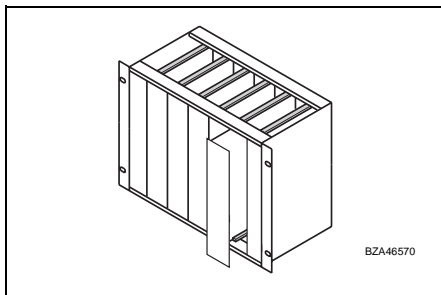
ratiopacPRO/-air Internal mounting



Board guidance

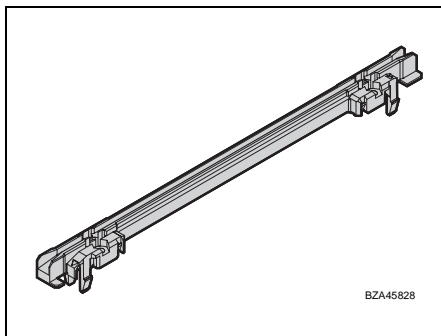
The following guide rails are available for board guidance:

- Plug-in units and modules
- Euroboards without front panel
- Plug-in units with insertion/extraction handle complying with IEEE 1101.11
- Board height 4.4" and drive units



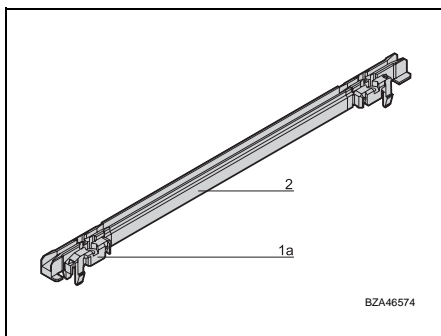
Guide rails for plug-in units and modules

- End foot, type Standard
- All guide rails are clipped in, but can also be bolted on.



Guide rail, Standard

Board length mm	Groove width mm	Material	Colour	Order No.
70	2.0	UL 94 V-0	red	34579-230
160				64560-001
220				64560-002
160	2.5			64560-096
220				64560-098



Guide rail

Board length mm	Groove width mm	Material	Order No.
280	2.0	End piece: PBT UL 94 V-0, red Middle part: Aluminium extrusion, anodised	24560-331
340			24560-332

Assembly part for guide rail

- For additional bolting of guide rails to horizontal rails

Delivery comprises

Qty	Description	Material	Surface
100	Torx screw 2.5 × 9.3	Steel	Zinc-plated

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Air filter for ratiopacPRO	34
Earthing kit	34
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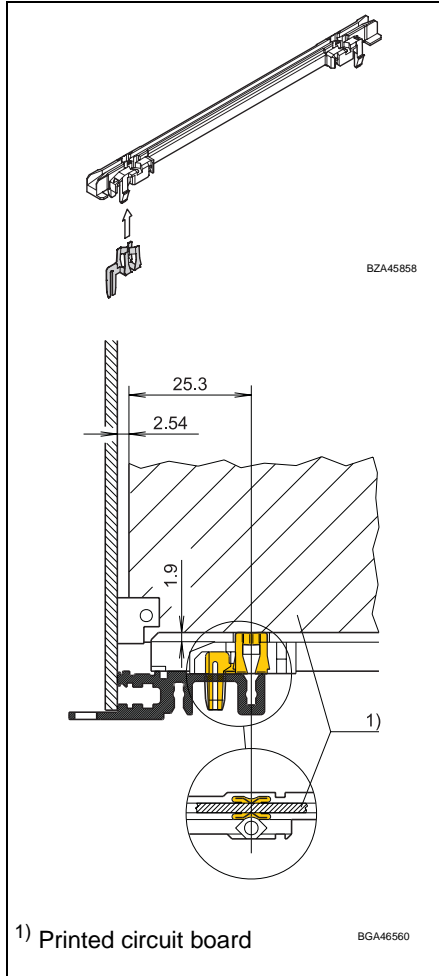


ratiopac PRO/-air Internal mounting

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ESD clip for printed circuit boards

- The ESD clip can be used in all guide rail types at the front and rear. It ensures a conductive contact between the board and horizontal rail, both on the solder side and on the component side

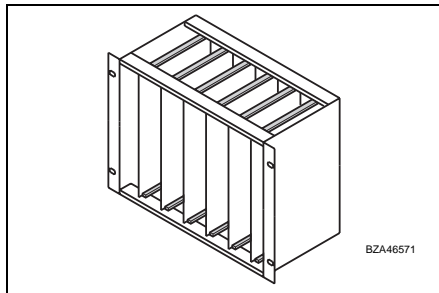
ESD clip Order No. **24560-255**

Delivery comprises

Qty	Description	Material	Surface
50	ESD clip for printed circuit boards	Steel	Tin-plated

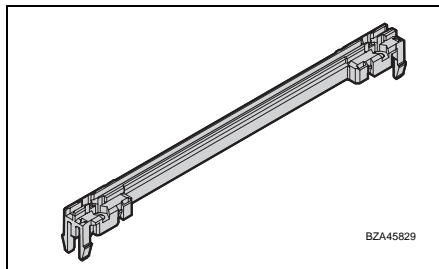
Note:

Not suitable for guide rails with 0.1" offset and for board height 4.4".



Guide rails for boards without front panels

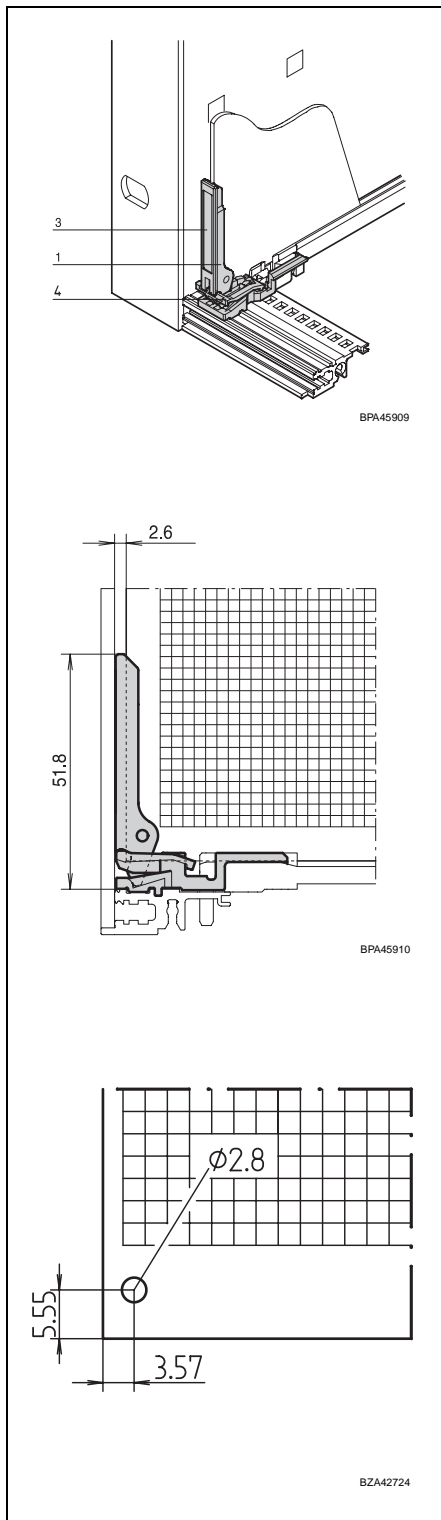
- End foot for accessories
- All guide rails are clipped in, but can also be bolted on.



Guide rail, accessories

- For fitting board retainers

Board length mm	Groove width mm	Material	Colour	Order No.
160	2.0	UL 94 V-0	red	64560-005
220				64560-006



Board retainers

- Can also be used without a printed circuit board handle

Item	Description	Material	Colour	Order No.
1	Board retainer europac PRO	PBT UL 94 V-0	red	64560-009

Note

Minimum spacing of guide rail 3 HP.

Printed circuit board handle

- Insertion/extraction function only in conjunction with board retainer
- Assembly directly behind front panel
- Application to upper and lower horizontal rail
- Can also be used at slot position 1

Delivery comprises

Item	Qty	Description	Material	Finish	Order No.
1	1	Printed circuit board handle	PBT UL 94 V-0	red	64560-014
3	1 sheet (438 units)	Label strips	Polyester film, self-adhesive	white/ matt	60817-228

Note

Can only be used together with guide rail for accessories.
Minimum spacing of guide rail to guide rail 3 HP.

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Stacking aid, case	33
Air filter for ratiopacPRO	34
Earthing kit	34
Air baffle for ratiopacPRO air	34
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Retention parts	36

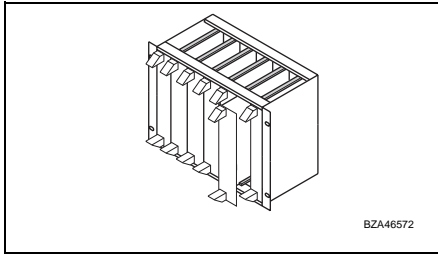


ratiopac PRO/-air Internal mounting

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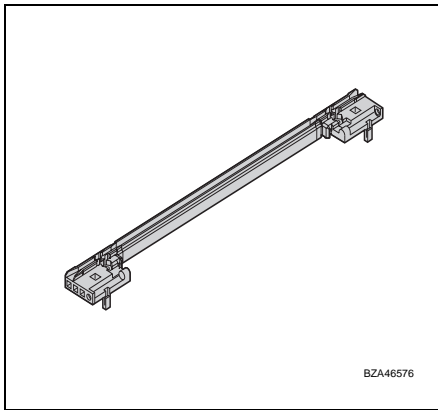
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Guide rails for plug-in units with insertion/extraction handle complying with IEEE 1101.10

- A keying/coding system prevents the use of plug-in units at slot positions that are not permissible
- Can only be used with IES/IEL and IET handles, see section on plug-in units

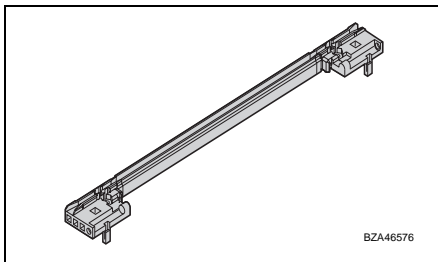


Guide rail, keying/coding

- With keying/coding block

Board length mm	Groove width mm	Material	Colour	Order No.
70 ¹⁾	2.0	UL 94 V-0	red	64560-085
160				64560-089
220				64560-091
70 ¹⁾	2.0	UL 94 V-0	grey	64560-086
160				64560-090
220				64560-092

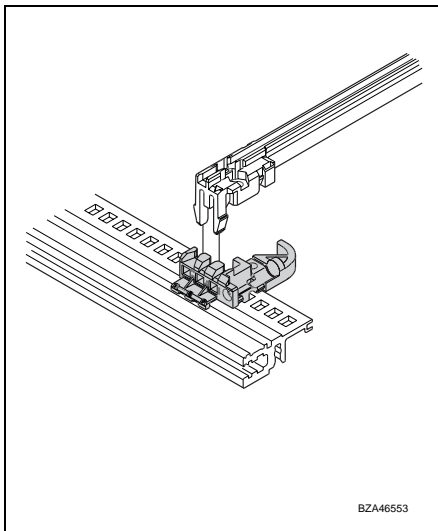
1) For 80 mm reverse installation



Guide rail with 0.1" offset

- With keying/coding block
- ESD clip cannot be used

Board length mm	Groove width mm	Material	Colour	Order No.
160	2.0	UL 94 V-0	green	64560-071



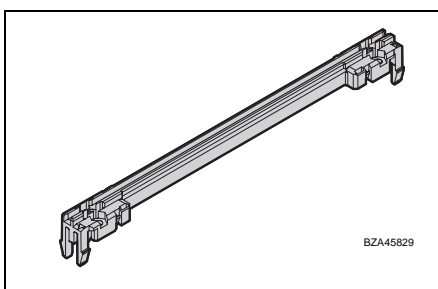
Coding block

- The keying/coding block is inserted in the horizontal rail and placed in front of a guide rail for accessories. The keying/coding pegs can be inserted in this keying/coding block. With 3 keying/coding clips, each with 4 positions, the result is 64 keying/coding possibilities per guide rail.

Mounting position	Material	Colour	Order No.
At the bottom	PBT UL 94 V-0	red	34579-234
		grey	34579-235
At the top		red	34579-232
		grey	34579-233

Note

Can only be used together with guide rail for accessories.
Minimum spacing of guide rail: 4 HP.

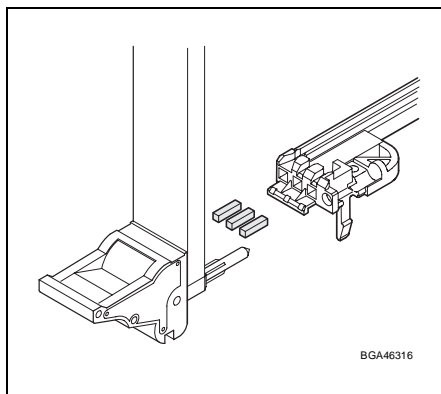


Guide rail, accessories

- For fitting board retainers

Board length mm	Groove width mm	Material	Colour	Order No.
160	2.0	UL 94 V-0	red	64560-005
220				64560-006

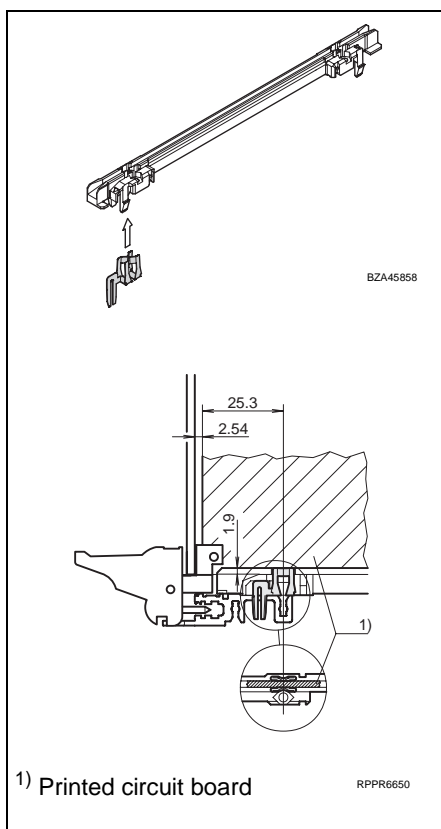
ratiopacPRO/-air Internal mounting



Coding peg

- The keying/coding pegs (3 units) are inserted in the keying/coding block or IEL handle, as the case may be

Qty	Material	Colour	Order No.
100	PBT UL 94 V-0	grey, RAL 7030	20817-499



ESD clip for printed circuit boards

The ESD clip for boards can be inserted in the front and rear guide rails. It ensures a conductive contact between the board and horizontal rail, both on the solder side and on the component side.

ESD clip	Order No.	24560-255
----------	-----------	------------------

Delivery comprises

Qty	Description	Material	Surface
50	ESD clip for printed circuit boards	Steel	Tin-plated

Note

Not suitable for guide rail with 0.1" offset and for board height 4.4".

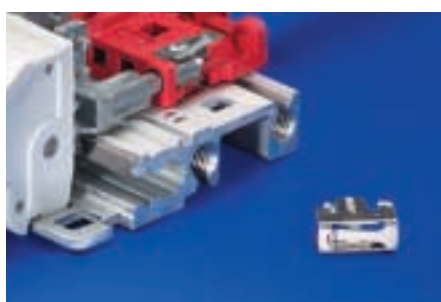


ESD clip for the alignment pin

- The ESD clip for alignment pins (complying with IEEE) can be mounted in the guide rails with keying/coding and in the keying/coding block. It ensures a conductive contact between the alignment pin of the insertion/extraction handle (IES, IEL or IET handle) and the horizontal rail.

Order No.	24560-256
-----------	------------------

Qty	Material	Colour	Surface
50	ESD clip for the alignment pin	Steel	Tin-plated



- ratiopacPRO6
- ratiopacPRO air8
- Overview of components, EMC shielding 11
- Partial front panels 12
- EMC gasketing 13
- Front panel – side panel 14
- Side panel – cover plate 14
- Overview of Components Internal Mounting 15
- Assembly positions for horizontal rails 16
- Horizontal rails front... 17
- Horizontal rails rear 18
- Rear horizontal rails, centre..... 19
- Z and perforated rails .20
- Insulation strip21
- Threaded strip22
- Perforated strips22
- Board guidance23
- Board retainers25
- Dimensions for guide rails28
- Chassis plate29
- Combined mounting...30
- Tip-up feet made of plastic33
- Stacking aid, case33
- Air filter for ratiopacPRO34
- Earthing kit34
- Air baffle for ratiopacPRO air34
- Front handle.....35
- 19" mounting bracket.....35
- Cable holder35
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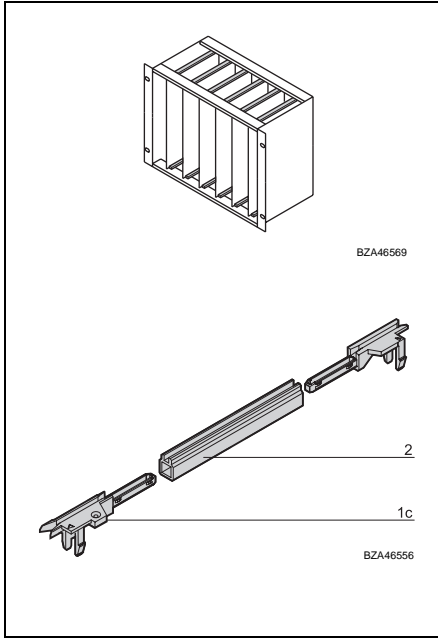


ratiopac PRO/-air Internal mounting

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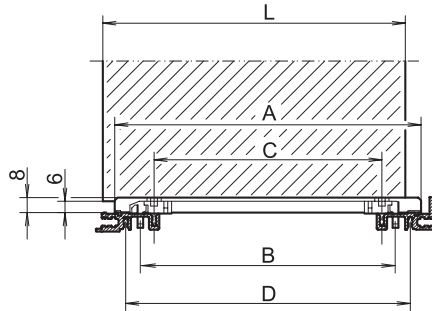
Guide rail for board height 4.4" and drive units

- ESD clip cannot be used
- End foot type 4.4" board height
- A guide rail consists of 1 pair of end feet and 1 extrusion

Item	Qty	Description	Material/finish	Length mm	Groove width mm	Order No.
1c	1 pair	End foot for 4.4" board height	UL 94 V-0 red		2.0	64560-057
2	1	Profile	Aluminium extrusion, anodised	1000.0	2.0	34560-900
		Profile for board depth 160 mm		95.0		34560-891
Profile for board depth 220 mm	155.0	34560-892				

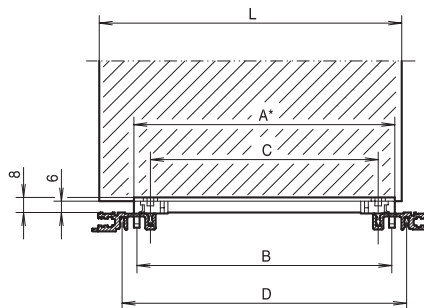
Dimensions for guide rails

Guide rail, Standard



BZA45808

Guide rail for accessories



BZA45809

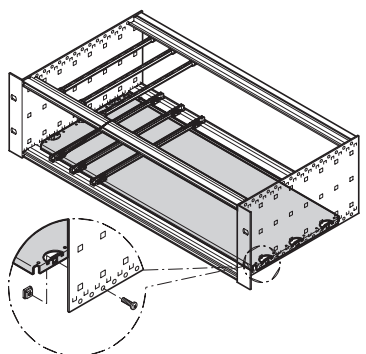
Table of dimensions

Board height L	Dimensions mm				
	A	A*	W	C	D
160	161.5	138	135	120	150
220	221.5	198	195	180	210
280	281.5	258	255	240	270
340	341.5	318	315	300	330
400	401.5	378	375	360	390

- A: Length, Standard rail
- A*: Length, rail
- B: Spacing of snap-in fixing
- C: Guide rail bolt spacing
- D: Horizontal rail bolt spacing

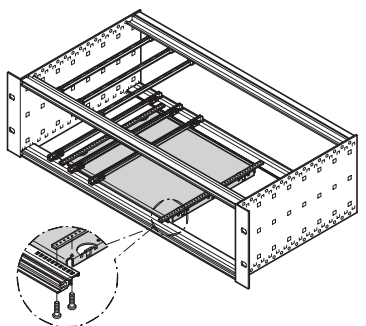


Figure A

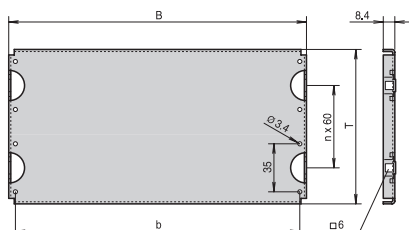


BPA45875

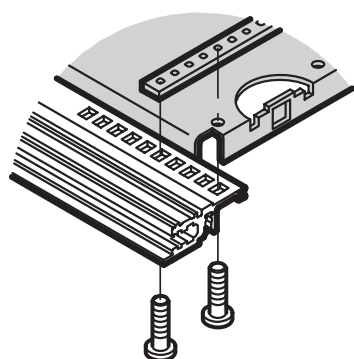
Figure B



BPA45876



BPA45882



BPA46557

Chassis plate

- For mounting heavy elements

Figure A – Chassis plate, full width

The chassis plate width is always the same as the subrack/case width (e. g. 84 HP/84 HP).

The chassis plate is secured at both side panels. Depending on the depth of the chassis plate, there are n (1, 2 or 4) bolting points for each side panel.

Figure B – chassis plate, shortened

The chassis plate width is always smaller than the case width (e. g. 63 HP in 84 HP).

The chassis plate is attached to one of the side panels and a mounting strip or with two mounting strips.

Depending on the depth of the chassis plate, there are n (1, 2 or 4) bolting points.

HP	Width:		For board height mm	Depth mm	Number n	Order No.
	W mm	b mm				
28 HP	147.0	137.2	160	112.5	1	34562-745
			220	172.5	2	34562-749
			340	292.5	4	34562-757
42 HP	218.0	208.3	160	112.5	1	34562-746
			220	172.5	2	34562-750
			340	292.5	4	34562-758
63 HP	324.7	315.0	160	112.5	1	34562-747
			220	172.5	2	34562-751
			340	292.5	4	34562-759
84 HP	431.4	421.6	160	112.5	1	34562-748
			220	172.5	2	34562-752
			340	292.5	4	34562-760

Delivery comprises

Qty	Description	Material	Surface
1	Chassis plate	Aluminium 1.5 mm	

Assembly parts

Qty	Description	Material	Surface	Order No.
100	Torx screw 4 × 6	Steel	Zinc-plated	24560-151
100	Square nut M 4.	Steel	Zinc-plated	24560-140

Mounting strips for chassis plate

- For mounting chassis plates according to Figure B
- Can be used for all horizontal rails
- 4 bolts / screws are required per mounting strip

For board height	Length in mm	Order No.
160	142.4	30840-021
220	202.4	30840-033
340	322.4	30840-057

Assembly parts

Qty	Description	Material	Surface	Order No.
100	Torx screw 2.5 × 5	Steel	Zinc-plated	24560-146

- ratiopacPRO6
- ratiopacPRO air8
- Overview of components, EMC shielding 11
- Partial front panels 12
- EMC gasketing 13
- Front panel – side panel 14
- Side panel – cover plate 14
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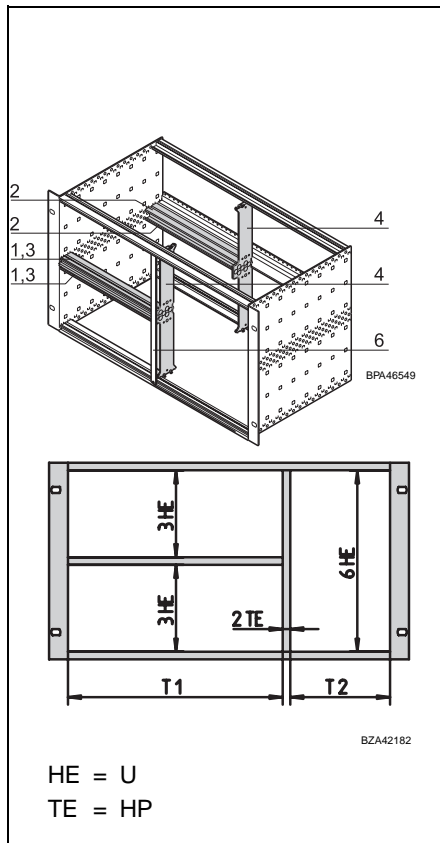
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Combined mounting

- Division of the mounting height in:
2 × 3 U area and 1 × 6 U area
- For single-height euroboard 100 mm high and double-height euroboard 233.4 mm high
- Matching partial width front panel 6 HP/2 HP for covering the splitting extrusion

Combined mounting as kit

Pitch T1 : T2 in HP	Order No. Subrack conversion kit
20 : 62	24562-420
40 : 42	24562-440
42 : 40	24562-442
63 : 19	24562-463



Delivery comprises

Item	Qty	Description	Material	Surface
1	2	Front horizontal rail, B ₂	Aluminium extrusion	Anodised
2	2	Rear horizontal rail	Aluminium extrusion	Anodised
3	2	Threaded strip	Steel profile	Zinc-plated
4	2	Support members	Diecast zinc	
5	1 Set	Assembly parts		

Delivery: In kit form

Note

Please order separately:

- EMC gasketing kit for horizontal rails
- Perforated strip for centering plug-in units
- Cover for support member

EMC contact strip

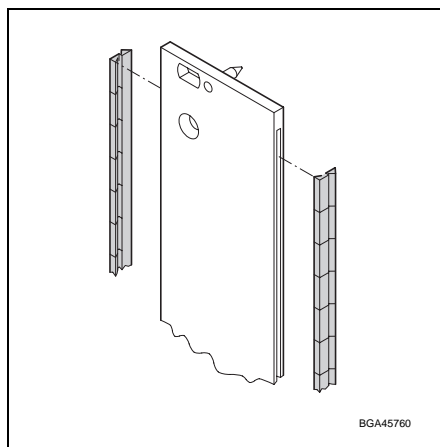
- For front panels with slots

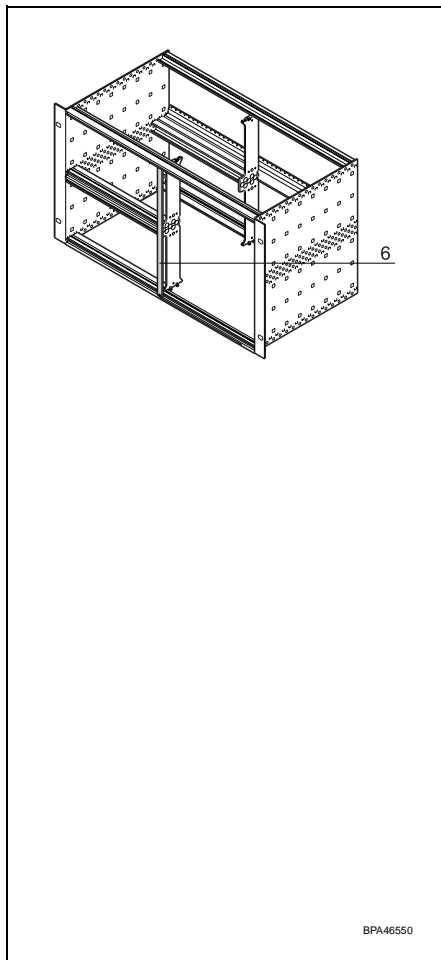
Material: stainless steel

Plug-in unit Height in U	Length in mm	Quantity	Order No.
3	97	10	21101-705
		100	21101-706
6	232	10	21101-707
		100	21101-708

Assembly tool

Order No. **24560-270**





BPA46550

Cover for support member

■ Partial width front panel 6 U, 2 HP

Dimension see 'Plug-in units – Partial width front panels' (catalogue 2)

Partial front panel (1 piece)	
Unshielded	(with slot for EMC contact strip)
30847-472	30846-865

Delivery comprises

Item	Qty	Description	Material	Surface
6	1	Partial front panel	Al 2.5 mm	Front anodised Rear side yellow chromated

Note

Please order contact strip separately.

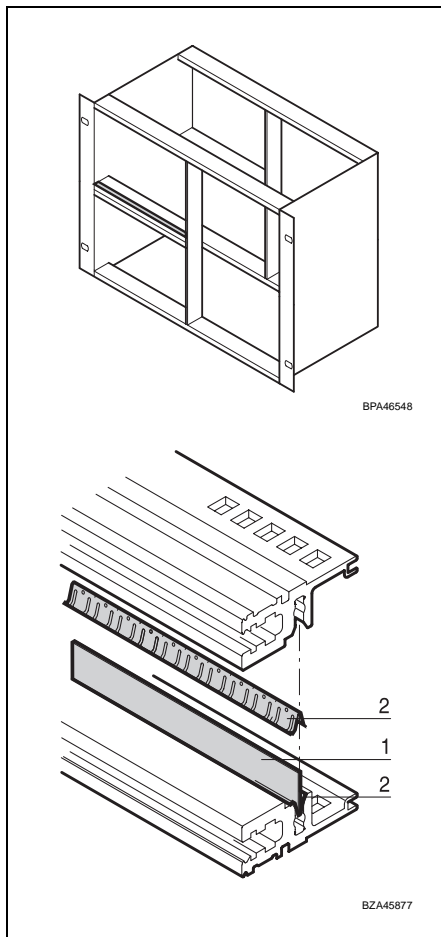
Only 4 U contact strips may be used for the divided area! 2 on the side of the support bracket and 2 on the side of the divided area of the 2 HP partial width front panel.

Assembly part, partial width front panels

Description	Material/finish	Order No.
Collar screw pozidrive/slot M 2.5 × 12.3	Nickel-plated, 100 pieces	21101-101
	Black, 100 pieces	21101-102
Washer 2.7 × 5 × 1	PA-6, 100 pieces	21101-121

Note

In the case of an extension with EMC front panels, perforated strips are required.



BPA46548

BZA45877

Gasketing kit, horizontal rails

■ For shielding 2 horizontal rails located one directly above the other with vertical division of the mounting height

HP	Order No.
20	24562-520
28	24562-528
40	24562-540
42	24562-542
63	24562-563
84	24562-584

Delivery comprises

Item	Qty	Description	Material	Surface
1	1	Cover strip	Aluminium 1 mm	
2	2	Contact strip	Stainless steel	

ratiopacPRO	6
ratiopacPRO air	8
Overview of components, EMC shielding	11
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EMC gasketing	13
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Earthing kit	34
Air baffle for ratiopacPRO air	34
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19" mounting bracket.....	35
Cable holder	35
Retention parts	36

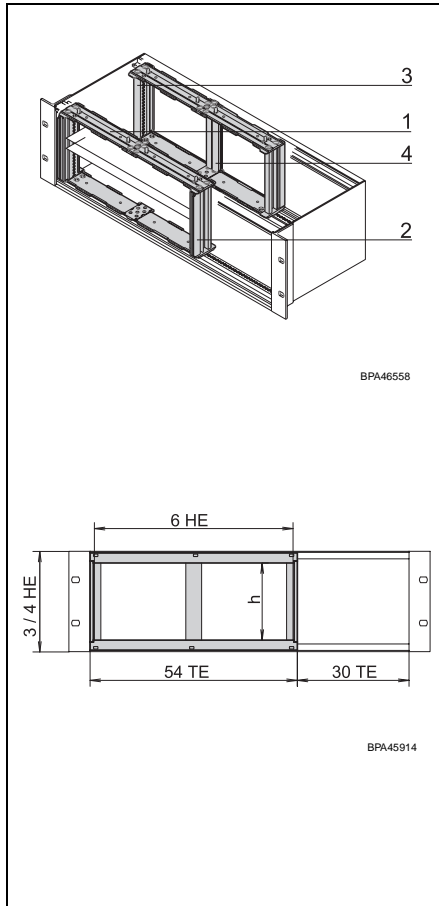


ratiopac PRO/-air Internal mounting

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Horizontal board mounting

- For horizontal installation of double-height euroboards
- Front frame EMC retrofittable for case with at least 54 HP mounting width

Note

At the rear of the case, no horizontal rails with Z-rails(84 HP) may be used.

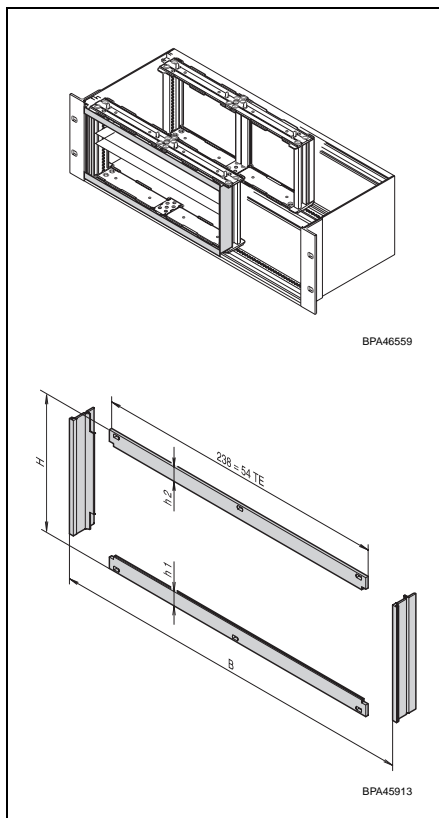
Case height in U	Kit		Order no. for 1 kit Long lip ¹⁾
	Horizontal rail, rear, vertical	Usable height in HP	
3	extended + 3 mm with Z-rail	20	24564-118 24564-128

¹⁾ for use of IEEE handle (e. g. CPCI or VME64x systems)

Delivery comprises

Item	Qty	Description	Material
1	4	Mounting bracket	Diecast zinc
2	2	Front horizontal rail, type heavy duty	Aluminium extrusion
3	2	Rear horizontal rail, type heavy duty	Aluminium extrusion
4	1	Horizontal rail, centre	Aluminium extrusion
5	6	Threaded insert for rear horizontal rail: extended + 3 mm with Z-rail	Steel profile
2			
6	1 Set	Assembly parts	

Delivery: in kit form



Front frame EMC shielded

For horizontal board mounting. The front frame sets up the contact between the kit and the case.

- Vertical between kit / side panel kit / partial width front panel
- Horizontal between kit and horizontal rail

For subrack conversion kit	Dimensions in mm			Order No.
	H	H1	H2	
3 U	106.7	13.2	13.2	24564-109

Delivery comprises

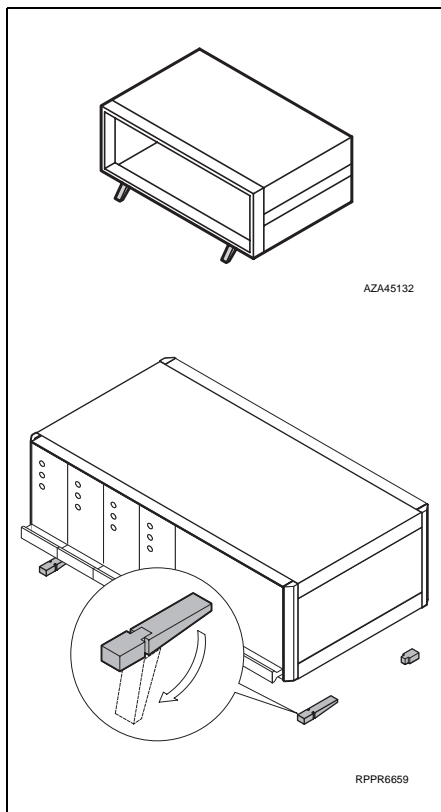
Qty	Description	Material	Surface
2	Horizontal cover	Al 2.5 mm	Front anodised, rear side chromated
2	Vertical cover	Aluminium extrusion	chromated
2	Contact strip for horizontal rail/vertical cover	Stainless steel	

Note

Please order other accessories separately, see:

- Assembly parts for horizontal panel, mounting on horizontal rail (collar screw or quick-release fastener)
- EMC contact strip for vertical panel / side panel; see combined mounting
- Perforated strip for centering

ratiopacPRO/-air Internal mounting



Tip-up feet made of plastic

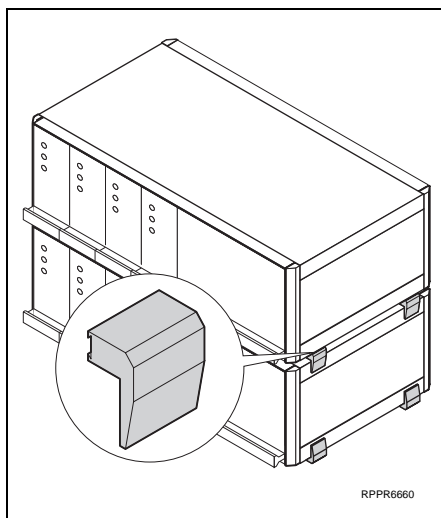
- Can be used instead of standard feet
- Mounting holes available in bottom of casing
- Safe case stance with slip-proof rubber inserts

Load-carrying capacity: 25 kg per foot

Description	Order No.	
	silver	anthracite
Tip-up foot	20603-001	20603-002

Delivery comprises

Item	Qty	Description	Material	Surface
1	4	Foot	Pa	front / rear
2	4	Anti-slip protection	TPE	
3	2	Tip-up	Pa	front
	1 Set	Assembly parts		



Stacking aid, case

A stacking aid can be rearranged into a design element

Description	Order No.	
	silver	anthracite
Stacking aid	20603-004	20603-003

Delivery comprises

Qty	Description	Material
4	Stacking aid	PA UL 94 V-0

Note:

Mounting only possible on tip-up feet.
Please order separately.

ratiopacPRO	6
ratiopacPRO air	8
Overview of components, EMC shielding	11
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EMC gasketing	13
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Earthing kit	34
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Retention parts	36

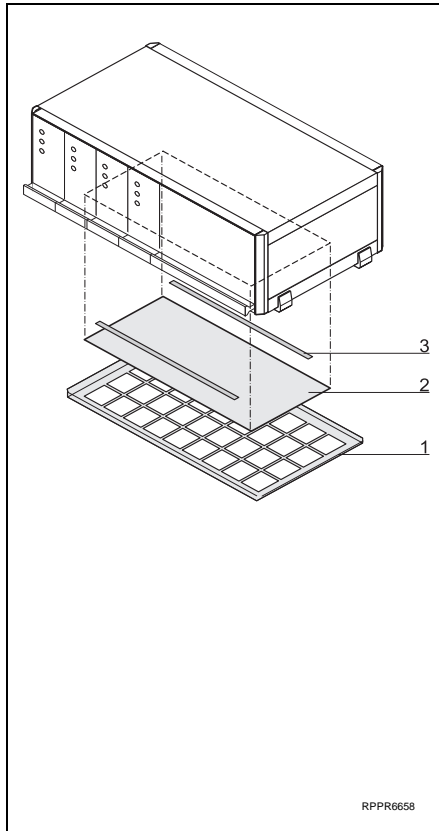


ratiopacPRO/-air Accessories

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Air filter for ratiopacPRO

- Subsequent assembly without reworking and tools
- Filter replacement without the need to open the case, type of protection remains

Case width HP	Dimension A mm	Air filter	Replacement filter
28		24571-325	
42	198	24571-326	*
63	304	24571-327	*
84	411	24571-328	*

* Available on request

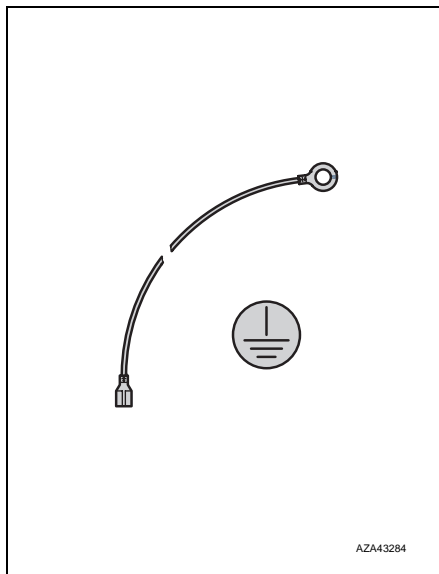
Delivery comprises

Item	Qty	Description	Material	Surface
1	1	Filter holder	Aluminium 1 mm	powder-coated, RAL 9006
2	1	Filter mat	synthetic fibre	
3	2	Velcro/loop belt		

Delivery: In kit form

Note

When fitting the air filter, plastic tip-up feet are to be attached to the case.



Earthing kit

Establishes earth connections between side panels, base and cover plates and rear panel.

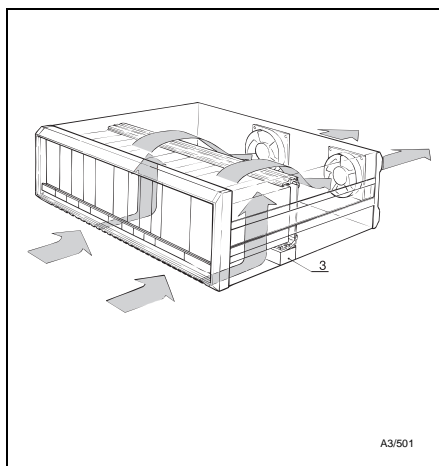
The earth connections comply with:

- EN 50178
- EN 60 950
- EN 61 010 Part 1

Description	Order No.
Earthing kit	24571-380

Delivery comprises

Qty	Description	Material	Surface
1 Set	Earthing kit	Cu wire 1.5 mm ² PVC sleeve	green/yellow



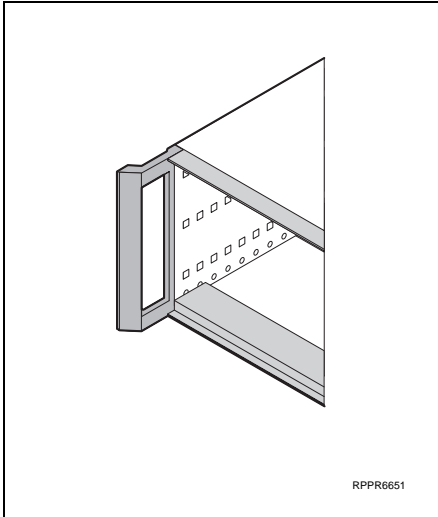
Air baffle for ratiopacPRO air

- The air baffle (item 3) reliably seals off the space (½ U) between the rear horizontal rail and base plate

HP	Length mm	Material	Temperature range	Order No.
42	218.4	PE foam, self-adhesive	-20° C to +120° C	20833-351
63	325.1			20833-352
84	431.8			20833-353

Fan rear panel available on request

ratiopac PRO/-air Accessories



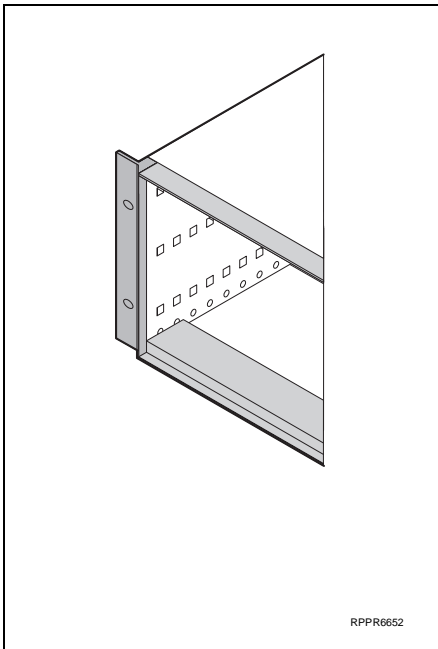
Front handle

Description	Case height U	Order No.
Front handle ratiopacPRO	3	24571-301
	4	24571-302
	6	24571-303
Front handle ratiopacPRO air	3/4	24571-304
	4/5	24571-305
	6/7	24571-306

Delivery comprises

Qty	Description	Material	Surface
2	Front handle	Diecast aluminium	powder-coated, RAL7016
1 Set	Assembly parts		

Delivery: In kit form



19" mounting bracket

Description	Case height U	Order No.
19" mounting bracket ratiopacPRO	3	24571-295
	4	24571-296
	6	24571-297
19" mounting bracket ratiopacPRO air	3/4	24571-298
	4/5	24571-299
	6/7	24571-300

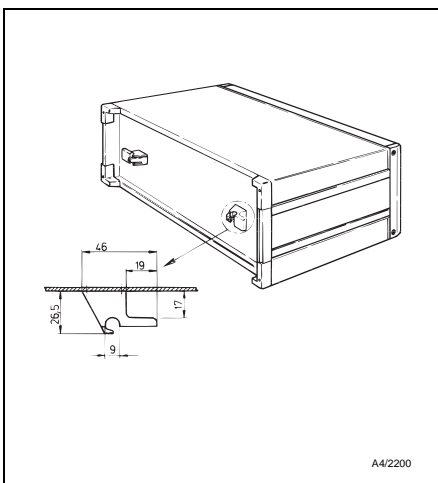
Delivery comprises

Qty	Description	Material	Surface
2 units	19" mounting bracket	Diecast aluminium	powder-coated, RAL 7016
1 Set	Assembly parts		

Delivery: In kit form

Note

No slide rails can be used for installation in cabinets and 19" cases.



Cable holder

Order No. **20842-109**

Delivery comprises

Qty	Description	Material	Surface	Remarks
2	Cable bracket	ABS UL 94 V-0	colour RAL 7030	Notch device for cable between 8 mm and 12 mm
1	Drilling template			Two holes must be drilled in the rear panel for each bracket
1 Set	Assembly parts			

Delivery: In kit form

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ratiopacPRO/-air Assembly parts

Case
ratiopacPRO/-air 4

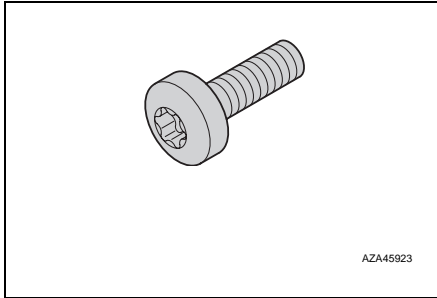
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Retention parts

- Bolts
- Nuts
- Sleeves
- Quick-release fasteners

Bolts



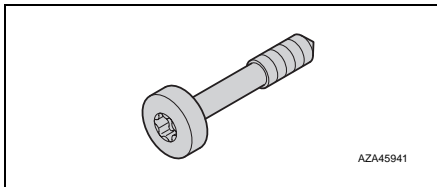
Torx pan head screw, 4

- For horizontal rail on side panel, with earthing function

Dimension	Surface	Qty.	Order No.
4 × 14	Zinc-plated	100	24571-371

- For horizontal rail on side panel if guide rail screwed to pin position 1

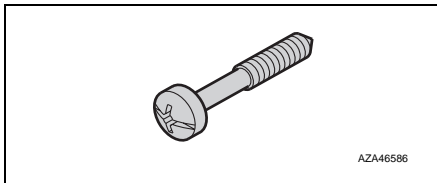
Dimension	Surface	Qty.	Order No.
4 × 10	Zinc-plated	100	24571-372



Torx collar screw, 2.5

- For partial width front panels and plug-in units

Dimension	Surface	Qty.	Order No.
2.5 × 123	Nickel-plated	100	21101-782
	Black	100	21101-783



Collar screw with pozidrive/slot, M 2.5

- For plug-in units

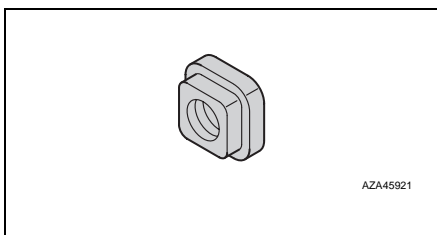
Dimension	Surface	Qty.	Order No.
M 2.5 × 12.3	Nickel-plated	100	21101-101
	Black	100	21101-102

Nuts

Square nut, M 4

- For mounting variable parts to side panels

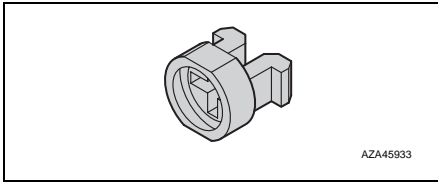
Dimension	Surface	Qty.	Order No.
M 4	Zinc-plated	100	24560-140





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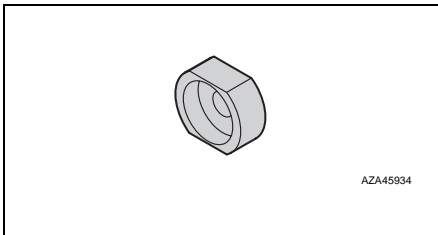
Sleeves



Plastic sleeve

- For mounting partial width front panels

Material	Surface	Qty.	Order No.
Pa	Grey	100	21 100-464
	Black	100	21 100-591



Metal sleeve

- For mounting partial width front panels

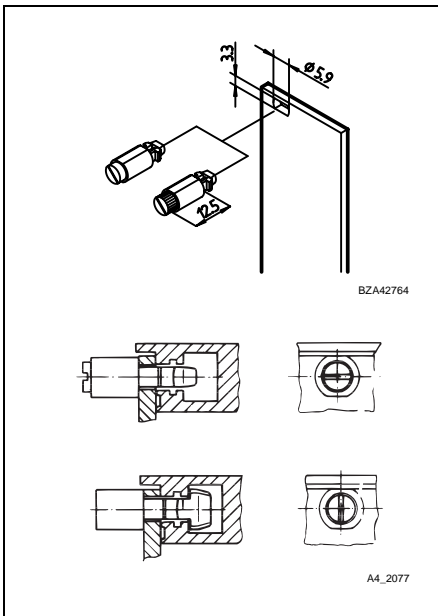
Material	Surface	Qty.	Order No.
Brass	Nickel-plated	100	21 100-660
Brass	Black	100	21 100-886
Stainless steel		100	21 100-662



Quick-release fasteners for partial width front panels

Mounting of partial width front panels to horizontal rails

- Quarter-turn fastener:
Mounting without threaded insert



Quarter-turn fastener with defined locking position

- Vibration and shakeproof
- 1/4 turn fastener with defined limit stop
- Simple detection of fastening position with slot position

Quarter-turn fastener with slotted head

Colour	Material	Qty.	Order No.
Grey	Locking pin: Diecast steel	100	21 101-847
Black	press-in sleeve: POM	100	21 101-848

Quarter-turn fastener with knurled head

Colour	Material	Qty.	Order No.
Grey	Locking pin: Diecast steel	100	21 101-849
Black	press-in sleeve: POM		21 101-850

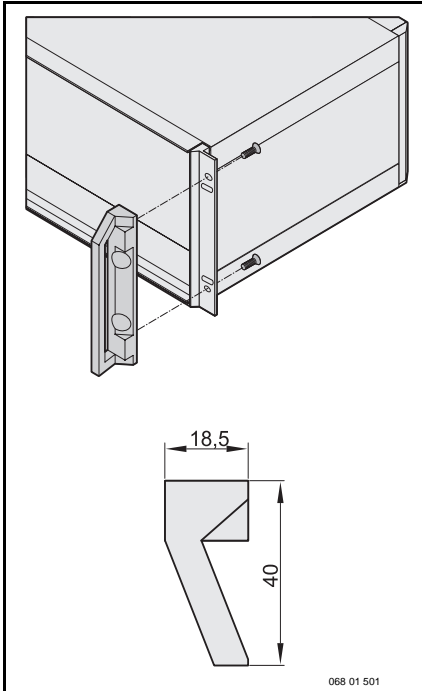
ratipacPRO/-air Cases



Front Handles

The front handles are screwed to the 19"-bracket of the ratipacPRO case.

- Can be retrofitted
- Load-carrying capacity 35 kg

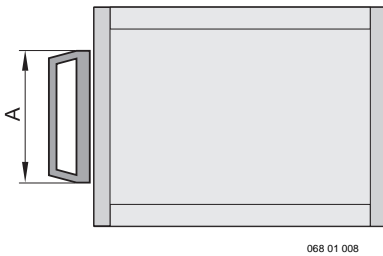


Case Height	Case Type	Handle Height A (mm)	Order-No.
3 U	ratipacPRO	129,0	24571-349
4 U	ratipacPRO	173,5	24571-350
6 U	ratipacPRO	262,4	24571-351
3/4 U	ratipacPRO air	173,5	24571-350
4/5 U	ratipacPRO air	129,0	24571-349
6/7 U	ratipacPRO air	173,5	24571-350

Delivery comprises

Qty	Description	Detail
1 Kit	Handles with Assembly Kit	Colour: RAL 7016

ratipacPRO air 4/5 and 6/7 U

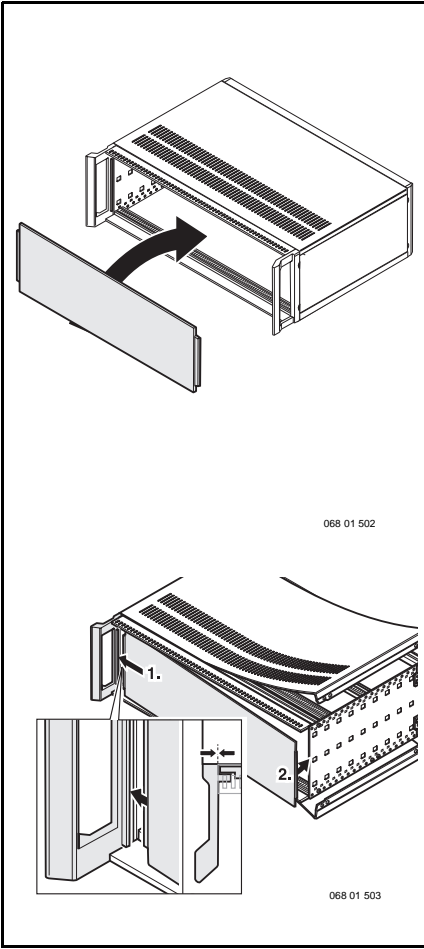


ratipacPRO air 3/4 U
ratipacPRO 3 to 6 U





ratiopacPRO/-air Cases



Full-width Front Panel

With the full-width front panel assembly parts can be avoided to give the case a more attractive appearance. The full-width front panel is inserted between the side panel and the die-cast, like the cover, 19"-bracket or handle.

Very easy assembly

Height	Width	Order-No..
3 U	28 HP	34571-605
	42 HP	34571-606
	63 HP	34571-607
	84 HP	34571-608
4 U	28 HP	34571-609
	42 HP	34571-610
	63 HP	34571-611
	84 HP	34571-612
6 U	28 HP	34571-613
	42 HP	34571-614
	63 HP	34571-615
	84 HP	34571-616

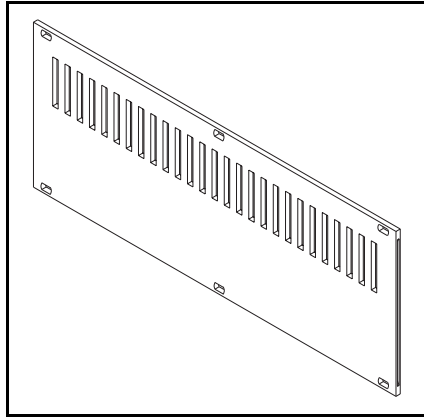
Note:
Minimum order: 25 Pcs

Delivery comprises

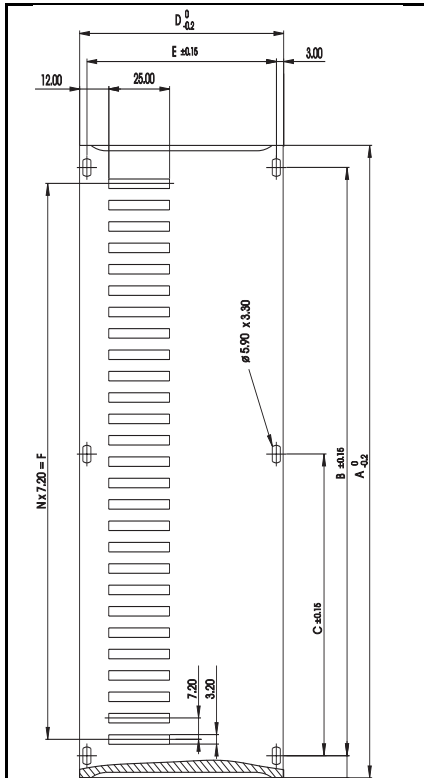
Qty	Description	Detail
1	Full-width Front Panel	Material: Al 2,5 mm Front: anodized Rrear: yellow chromated



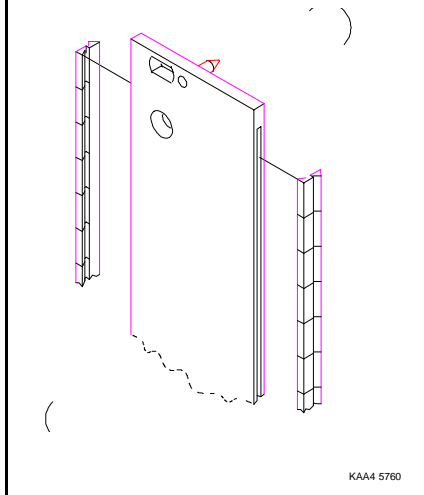
radiopacPRO/-air Cases



029 01 501



029 01 502



KAA4 5760

Rear Panels with Slots

The rear panel with slots is an addition to the front panels in the subrack section

- Installation only possible on a horizontal rail.
- Can be used with propac, radiopac, cardpac, radioPRO/air and subracks.

Height	Width	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Order-No.
2 U	28 HP	141,9	127,0	-	84,0	78,0	30848-433
	42 HP	213,0	198,1	101,6	84,0	78,0	30848-434
	63 HP	319,7	304,8	157,5	84,0	78,0	30848-435
	84 HP	426,4	411,5	208,3	84,0	78,0	30848-436
3 U	28 HP	141,9	127,0	-	128,4	122,4	30848-440
	42 HP	213,0	198,1	101,6	128,4	122,4	30848-441
	63 HP	319,7	304,8	157,5	128,4	122,4	30848-442
4 U	28 HP	141,9	127,0	-	173,0	166,9	30848-447
	42 HP	213,0	198,1	101,6	173,0	166,9	30848-448
	63 HP	319,7	304,8	157,5	173,0	166,9	30848-449
6 U	28 HP	141,9	127,0	-	261,8	255,8	30848-454
	42 HP	213,0	198,1	101,6	261,8	255,8	30848-455
	63 HP	319,7	304,8	157,5	261,8	255,8	30848-456
	84 HP	426,4	411,5	208,3	261,8	255,8	30848-457

Delivery comprises

Qty	Description	Detail
1	Rear Panel with Slots for EMC-Contact Strips	Front: anodized Rear: yellow chromated

Note:

Please order assembly kit separately.

See: Subracks, Assembly Kits

EMC-Contact Strips

- For front panels with slots

Height	Length	Qty	Order-No.	Material
2 U	52	10	21101-775	Stainless Steel
		100	21101-776	
3 U	97	10	21101-705	
		100	21101-706	
4 U	142	10	21101-713	
		100	21101-714	
6 U	232	10	21101-707	
		100	21101-708	

Qty	Description	Order-No.
1	Assembly tools	21101-776



ratiopac **PRO** /-air Cases



Tower 3 and 4 U

- 3/4 U 84 HP depth 475 mm.

Tower	Order-No.
3 U	24571-390
4 U	24571-395

Delivery: in kit form

Delivery comprises

Item	Description	Qty	Material
1	Side Panel	2	Al, clear chromated
2	Horizontal Rail	4	Al, visible surfaces painted, RAL 7016, with EMC-contact strips between the cover and the horizontal rail
3	Rear Frame	2	Zn die-cast, RAL 7016
4	Front Frame	2	Zn die-cast, RAL 7016
5	Side Panel	2	Al, chromated, visible surfaces painted, RAL 9006
6	Deckblech	1	Al, chromated, visible surfaces painted, RAL 9006
7	Gehäusefuß	2	Al, painted RAL 7016, with anti-slip protection
	Assembly Kit	1 Kit	

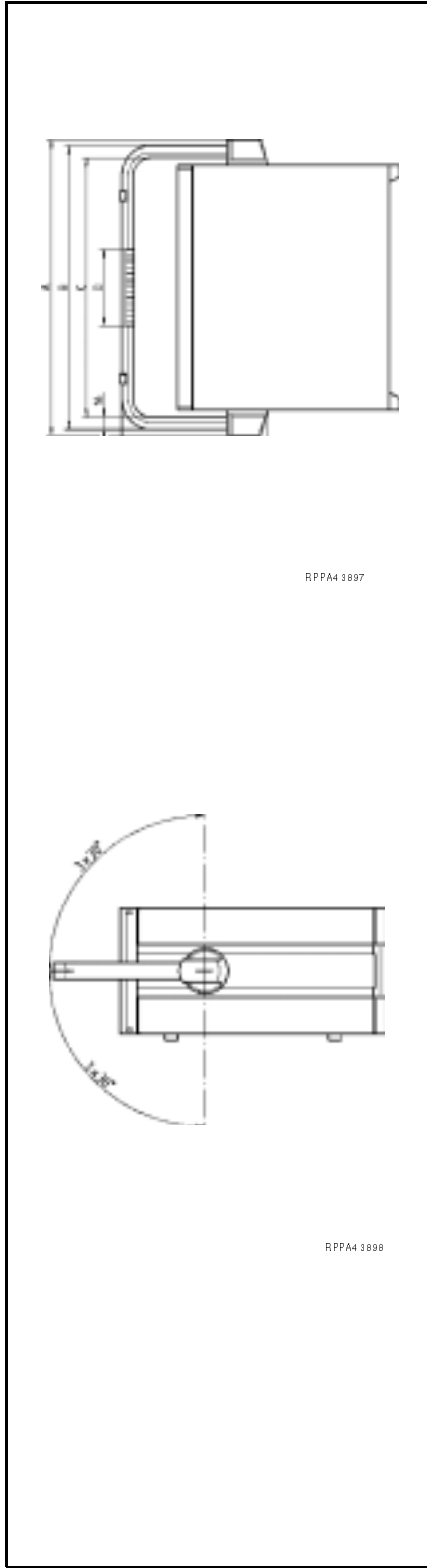


ratiopac PRO/-air Cases

Handles

Tip-up handle

- Assembly by changing the side panels
- Can be retrofitted without mechanical adjustment of the cases
- Adjustable in 30° increments
- Load-carrying capacity 30 kg



Tip-up handle

Case height U	Case width	Order no.
3 + 4 + 3/4 + 4/5	42 HP	24571-320
	63 HP	24571-321
	84 HP	24571-322

Delivery: in kit form

Delivery comprises

Qty	Description	Material
1	Carrying bar	Material: Al-extrusion, coated, RAL 9006
1	Handle shell	ABS, UL 94 V-0, RAL 7016
2	Tip-up protector	ABS, UL 94 V-0, RAL 7016
2	Adjustment device	Al-die cast
2	Cover for adjustment device	ABS, UL 94 V-0, RAL 7016
1 kit	Assembly parts	

Assembly kit for side panel

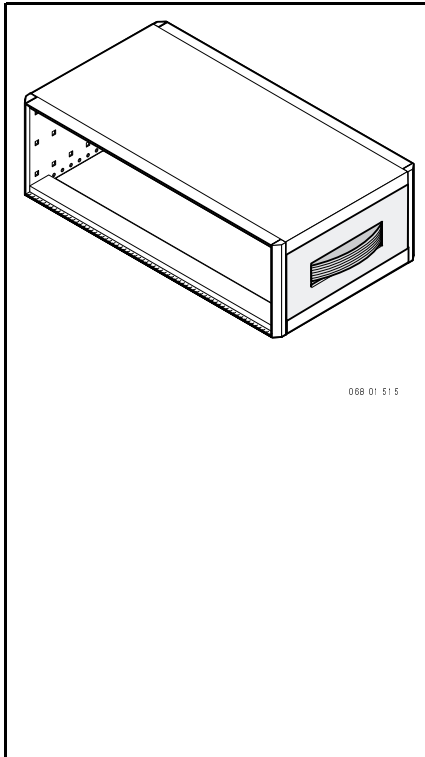
Case height U	Case depth in mm		Order no.
	outside	inside	
3 + 3/4	255	235	24571-352
	315	295	24571-353
	375	355	24571-354
	435	415	24571-355
	495	475	24571-356
4 + 4/5	255	235	24571-359
	315	295	24571-360
	375	355	24571-361
	435	415	24571-362
	495	475	24571-363

Delivery: in kit form

Delivery comprises

Item	Qty	Description	Material
1	1	Side panel	Al-extrusion, coated RAL 9006
2	1	Bow handle-adaptor	Al-die cast, coated, RAL 7016
	1 Kit	Assembly parts	

Case width in HP	Measurements in mm			
	A	B	C	D
42	283,4	279,4	247,4	115
63	390,1	386,1	354,1	195
84	496,8	492,8	460,8	195



Strap handle

- Can be retrofitted without mechanical adjustment to the case
- Load-carrying capacity 20 kg

Strap handle

Case depth in mm outside	Order no. for case height	
	3, 3/4 U	4, 4/5 U
255	24571-307	24571-313
315	24571-308	24571-314
375	24571-309	24571-315
435	24571-310	24571-316
495	24571-311	24571-317

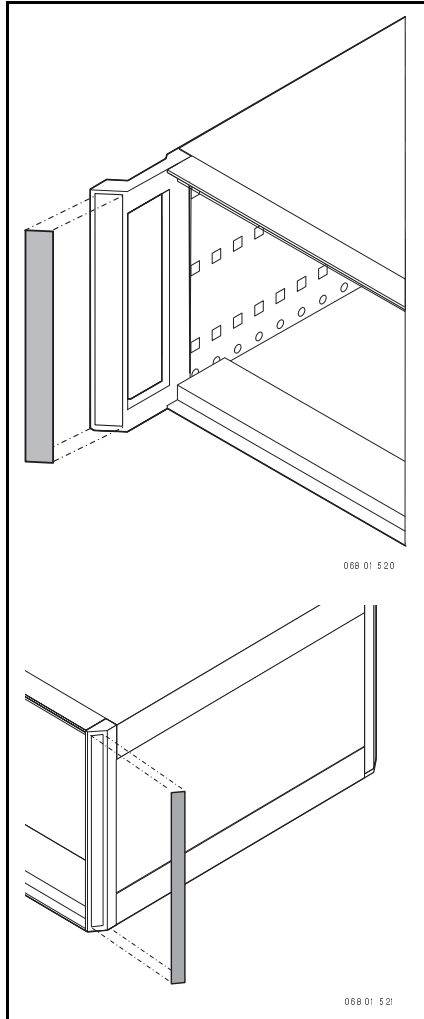
Delivery: in kit form

Delivery comprises

Qty	Description	Material
1	Handle	Steel spring, plastic-coated (soft plastic) RAL 7016
1	Side panel	AL, chromated, visible areas painted, RAL 9006
1	Cover foil	Polyester, RAL 9006
2	Adaptor	Al-die cast
1 kit	Assembly parts	



ratiopac PRO/-air Cases



Colour Foil

For the optical configuration of the cover strip and front handles. The colour foil is self-adhesive on one side.

Colour Foil, 1 Sheet

Handle Height U	White RAL 9006	Yellow RAL 1018	Raspberry Red RAL 3027
3	64571-041	64571-042	64571-043
3/4; 4	64571-045	64571-046	64571-047
4/5	64571-049	64571-050	64571-051
6	64571-053	64571-054	64571-055
6/7	64571-057	64571-058	64571-059

Delivery: In kit form

Delivery comprises

Description	Handle Height U	Measurement in mm	Foil/Sheet
Polyester foil 0.07 mm with adhesive film	3	9 x 116,4	32
	3/4; 4	9 x 160,8	16
	4/5	9 x 205,3	16
	6	9 x 249,7	16
	6/7	9 x 294,2	16

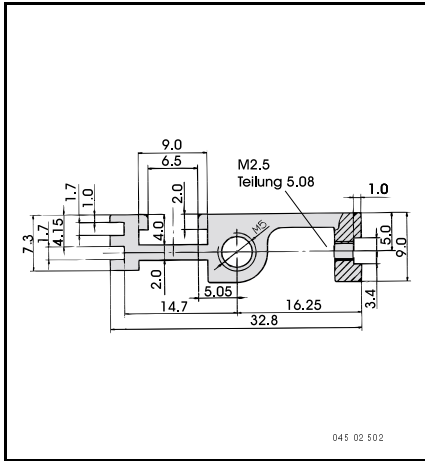


europac *PRO* - Accessories

Horizontal rails for backplane assembly

Indirect assembly

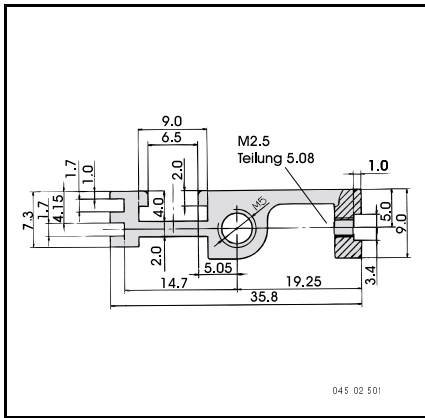
- Easy assembly
- No threaded inserts required
- For insulation strip and Z-rails



Usable HP	Length in mm	Order no.	
		anodized	clear chromated
20	106,68	30838-450	30838-346
21	111,76	30838-451	30838-347
42	218,44	30838-472	30838-368
63	325,12	30838-493	30838-389
84	431,80	30838-514	30838-410

Delivery comprises

Qty	Description	Material
1	Horizontal rail	Al-extrusion



Direct assembly

- Easy assembly
- No insulation strips or threaded inserts required

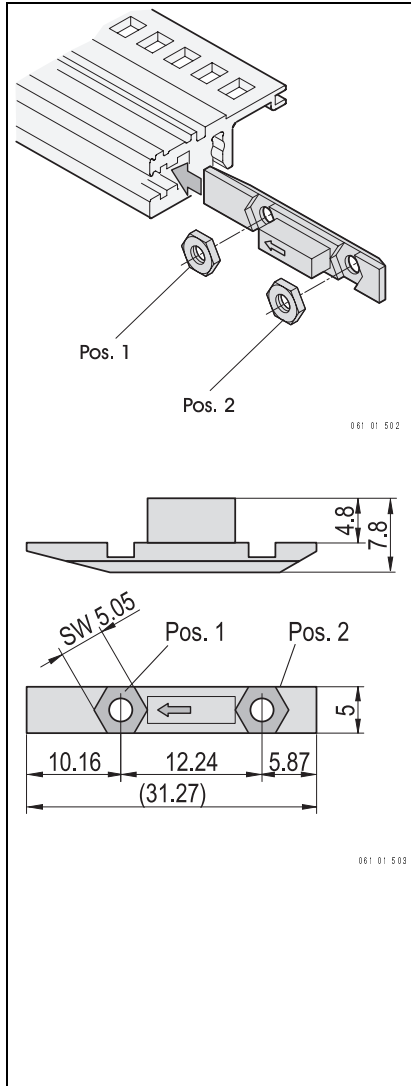
Usable HP	Length in mm	Order no. clear chromated
42	218,44	30847-122
63	325,12	30847-143
84	431,80	30847-164

Delivery comprises

Qty	Description	Material
1	Horizontal rail	Al-extrusion



europacPRO Accessories



Slide Nut

This allows for the easy fixing of front panels, hinged front panels and rear panels to horizontal rails. The slide nut slides into the recess for the threaded inserts.

Description	Number		Order-No.
	Slide	Nuts	
Schiebemutter Set 1	100	200	24560-165
Schiebemutter Set 2	12	24	24560-166

Delivery comprises

Item	Description	Material
1	Slide	Crestin, UL 94 V-0, PBT, colour: red
2	Nut M 2,5	Steel, zinc-plated

Note

The slide serves to receive a max. of 2 nuts M 2,5.

In positions 1:

Usable for:

- Hinged front panels 84 HP
- Front panels or rear panels 84 HP
- Two split front panels.zwei Teilfrontplatten

The arrow on the slide nut should always point outwards, to the side panel of the subrack. Through this the position required for the assembly of the front panels and the hinged panels is guaranteed.

In location 1 and 2:

Usable for:

- hinged front panels.

The arrow of the slide nut should always point inwards, away from the side panels of the subrack. This way the required position for the assembly of the hinged front panel is guaranteed.