

19" TiRAX cabinet system

from page 11



19" NETcell cabinet system

from page 65



Open 19" racks

from page 83



19" floor-standing / wall-mounted enclosure VARi IT

from page 97



Wall-mounting enclosure systems

from page 111



Air conditioning technology

from page 129



Power distribution system

from page 137



Cabinet monitoring

from page 155



Cable management

from page 163



Distribution technology

from page 169



General accessories /
distribution technology

from page 177



You can read more about products from the apra-group at www.apra-norm.com



Open distribution rack easyVARI

- can be completely dismantled
- easy transport to installation site
- simple assembly and installation of passive and active network components without interfering with cabinet mounts
- easy ventilation and installation, since no trim parts interfere
- 10 metal clamps are attached to every rack for cable entry (included in delivery).
- Cross-connection between individual racks is realised through the base
- 19" frame, variable depth 450-900 mm in 50 mm jumps

Material:

sheet metal

Finish:

RAL 7035 light grey

Delivery:

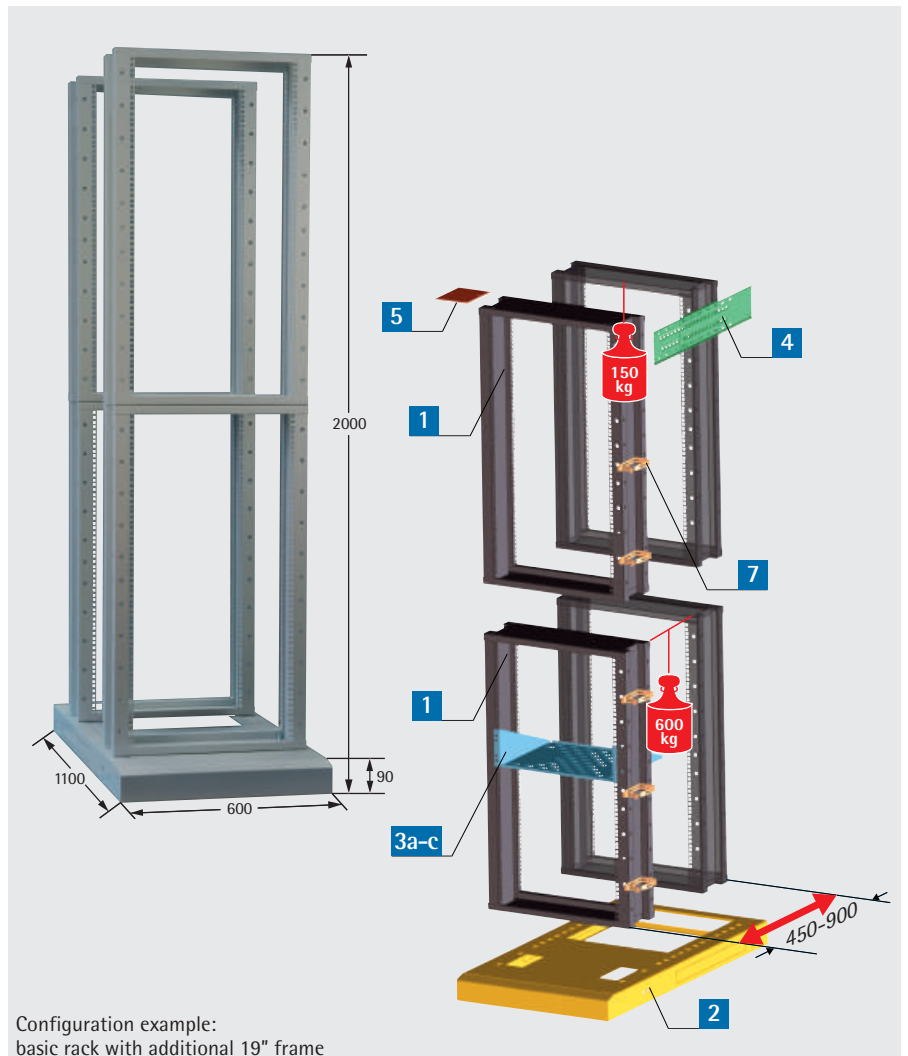
unmounted

Components

Item	Description
1	19" frame 21 U
2	Base, H0100 mm
3a-c	19" shelves
4	Depth struts, variable depth
5	Cabinet connector set
6a-c	Slide rails (without fig.)
7	Cable clamps

Delivery

Basic rack		
Item	pc.	Description
1	2	19" frame 21 U
2	1	Anti-tip base H = 100 mm, D = 1100 mm, cable inputs/outputs back and side
7	10	Cable clamps 125 x 66 mm
Connector rack		
Item	pc.	Description
1	2	19" frame 21 U
2	1	Anti-tip base H = 100 mm, D = 1100 mm, cable inputs/outputs back and side
5	1	Cabinet connector set
7	10	Cable clamps 125 x 66 mm
Extension frame		
Item	pc.	Description
1	2	19" frame 21 U

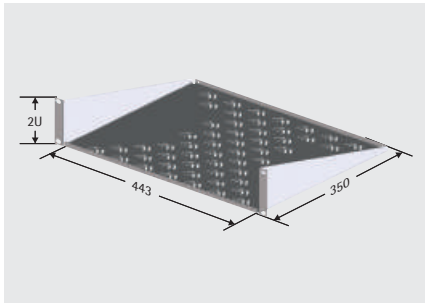


Configuration example:
basic rack with additional 19" frame

Description	Dimensions (H x W x D) mm	Order no.
Basic rack	2100 x 600 x 1100	582-101-00
Connector rack	2100 x 600 x 1100	582-101-10
Extension frame	1970 x 600 x 190	582-101-15



3a 19" shelf 2 U, fixed installation



- simple assembly on a 19" grid (only one 19" level required)
- ventilated

Material:

sheet metal

Finish:

RAL 7035 light grey

Load capacity:

15 kg (distributed load/static)

Dimensions (H x W x D):

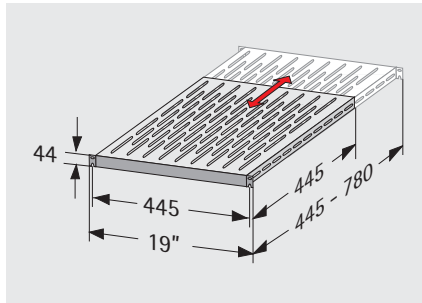
2 U (88 mm) x 19" (482,6 mm) x 350 mm

Floor space (w x d):

443 x 350 mm

Order no.
315-810-20

3b 19" shelf 1 U "VARlplain" fixed installation



- depth variable due to VARlplain technology
- telescopic: 445 - 780 mm (see fig.)
- simple one-person assembly through open long hole in the 19" front (hook-in)

Material:

sheet metal

Finish:

RAL 7035 light grey

Load capacity:

150 kg (distributed load/static)

Dimensions (H x W x D):

1 U (44 mm) x 19" (482,6 mm) x 445 - 780 mm

Floor space (w x d):

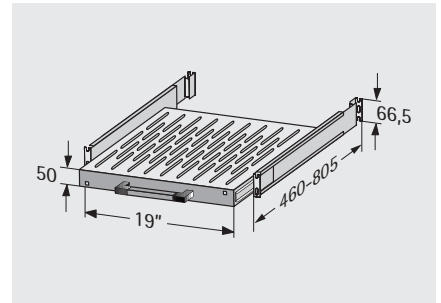
445 mm x (445 - 780) mm

Delivery

mounting material included

Order no.
316-036-99

3c 19" shelf 1.5 U extractable



- variable-depth installation
- extraction length 500 mm
- simple one-person assembly

Material:

sheet metal

Finish:

RAL 7035 light grey

Load capacity:

60 kg (distributed load)

Dimensions (H x W x D):

1,5 U (66,5 mm) x 19" (482,6 mm) x 465 - 665 mm

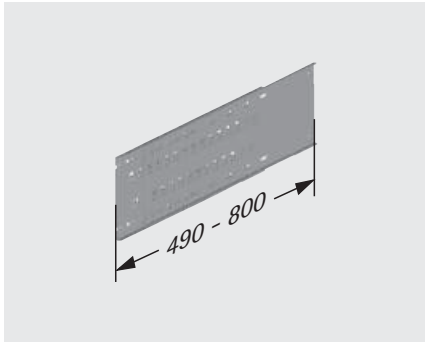
Floor space (w x d):

410 x (465 - 665) mm

Depth D mm	Order no.
465	318-141-00
665	318-141-01



4 Depth struts, variable depth



- to connect two 19" frames installed one behind the other

Order no.
582-101-32

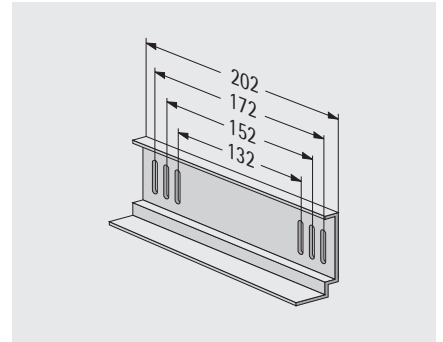
5 Cabinet connector set



- for the lateral connection of other distribution racks

Order no.
582-101-34

6a Slide rail



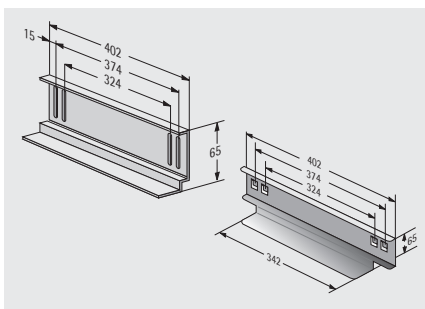
- for the installation on one 19" level
- Delivery: 1 pair

Load capacity:

50 kg

Order no.
312-543

6b Slide rail, hook-in/screwed on



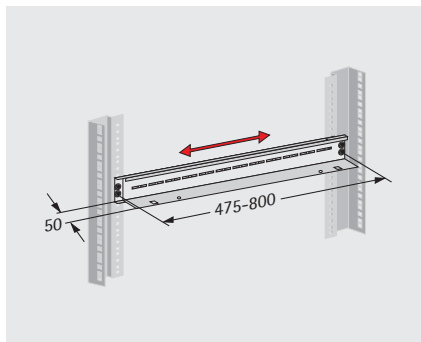
- to support heavy 19" plug-in units
- two 19" levels are required for mounting
- Delivery: 1 pair

Load capacity:

50 kg

Description	Order no.
hook-in	316-544-00
screwed on	312-544

6c Slide rail, variable depth



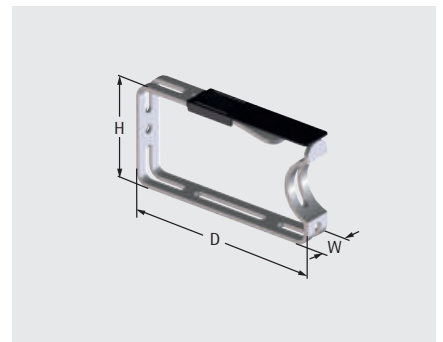
- for 19" plug-in units irrespective of the clearance to the 19" levels
- depth-adjustable
- for use as of a cabinet depth of 800 mm
- Delivery: 1 pair

Load capacity:

50 kg

Order no.
316-544-20

7 Cable clamp set



- for positioning cables vertically on the 19" frame
- set = 10 pieces

Material:

steel

Dimensions (H x W x D) mm	Order no.
66 x 125 x 23	640-036-12
88 x 125 x 23	640-036-13



19" laboratory rack 21 U

- for frequent access to 19" equipment, for example in laboratories, and development departments

Material:

sheet metal / die cast

Finish:

RAL 7035 light grey

Pedestal: RAL 7037 dusty grey

Load capacity:

120 kg

Delivery:

unmounted

The following can be used as accessories: Shelves 2 U (page 85) and cable clamp set (page 86).

Delivery

Laboratory rack

pc.	Description
1	19" sheet metal frame 21 U with grid in front and rear
2	Pedestal with integrated adjusting feet
1	Mounting material

Extension module

pc.	Description
1	19" sheet steel frame 21 U with front and rear grid
1	Mounting material



Laboratory rack

Laboratory rack Extension module

Dimensions (H x W x D) mm	Description	Order no.
1044 x 561 x 770	Laboratory rack 21 U	585-010-20
984 x 561 x 190	Extension module 21 U	585-010-22

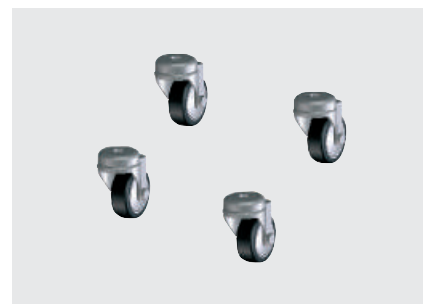
Castor set for laboratory rack

- for installation on the pedestal set
- H = 100 mm
- two castors with brake

Load capacity:

225 kg

Order no.
582-101-30





582 • 19" wall rack

19" wall rack

The 19" wall rack represents a flexible, effective and cost-effective 19" alternative in the wall distribution sector.

The 19" level can be depth adjusted from 300 mm up to a maximum of 500 mm providing enough space for cable routing even for deep plug-in units.

A second 19" level at the rear of the rack allows the assembly of sliding rails to accept heavy plug-in units. The cable feed above and below is fitted with an integrated strain-relief strip.

The 19" wall rack is simple to mount since the fixing holes can be marked to the wall by using the mounted 19" rack and subsequently be drilled and screwed.

Construction:

The 19" wall rack comprises two wall brackets (1), upper and lower extraction rails (2) and a front and/or rear 19" level (3).

Finish:

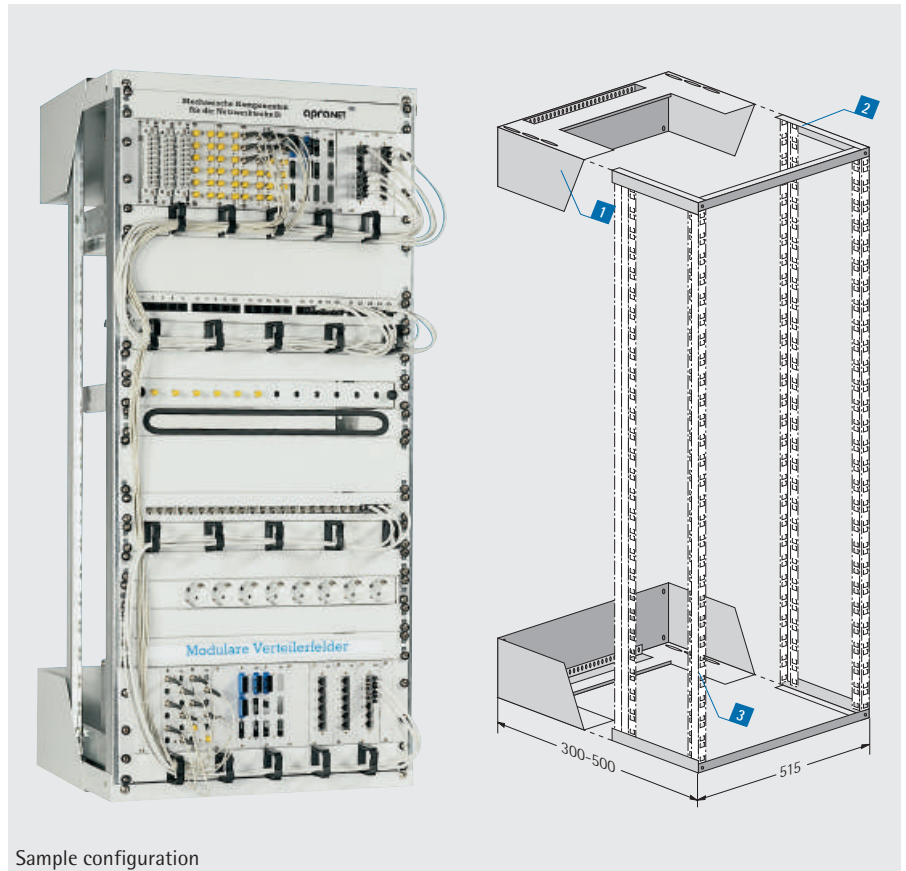
Wall bracket: RAL 7035 light grey
Extraction rails / 19" level: galvanised

Load capacity:

19" level front: 60 kg
19" level front and rear: 100 kg

Delivery:

unmounted



Sample configuration

A maximum of 4 vertical mountings can be integrated into the open wall rack. 19" vertical mountings (3) please order separately based on your U re-quirements (see page 89).

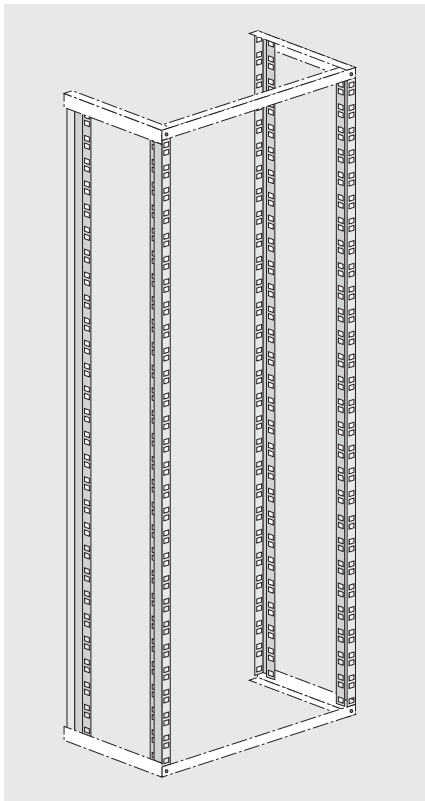
Delivery

Item	pc.	Description
1	2	Wall bracket
2	2	Extraction rails

Order no.
582-010-00



3 19" vertical mountings

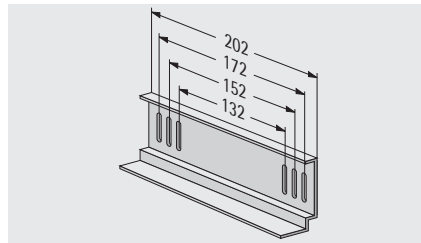


Finish:
galvanised

A maximum of 4 vertical mountings can be incorporated into the open wall rack.

U	Order no.
9	500-309
12	500-312
15	500-315
18	500-318
24	500-324

Slide rail for 19" vertical mounting



- to support heavy plug-in units
- includes mounting material

Material:
sheet metal
Finish:
galvanised
Delivery:
1 pair

Four 19" vertical mountings are required for mounting.

Order no.
312-543

19" cable entry panel 1 U / 2 U with metal clips



- for controlled and clearly arranged horizontal cable guiding at the 19" level
- including 4 cable hoops and lockings

Finish:
painted/chrome-plated
RAL 7035 light grey
RAL 9005 jet black
Dimensions (H x W x D):
1 U: 44 x 482,6 x 90 mm
2 U: 88 x 482,6 x 130 mm

U	Colour	Order no.
1	RAL 7035	213-145-41
1	RAL 9005	213-145-42
2	RAL 7035	213-145-43
2	RAL 9005	213-145-44

19" cable entry panel 1 U with plastic clips

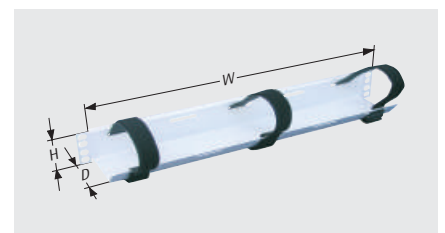


- for clear, neat horizontal cable entry in the 19" level
- including 5 cable clamps and mounting material

Finish:
RAL 7035 light grey
RAL 9005 jet black
Dimensions (H x W x D):
44 x 482,6 x 60 mm
Delivery:
mounting material included

Colour	Order no.
RAL 7035	213-145-00
RAL 9005	213-145-30

19" cable entry panel 1 U with Velcro fasteners



- for clear and neat horizontal cable entry at the 19" level with Velcro fastener
- including 3 Velcro strips and mounting material

Finish:
RAL 7035 light grey
RAL 9005 jet black
Dimensions (H x W x D):
44 x 482,6 x 90 mm

Colour	Order no.
RAL 7035	213-161-00
RAL 9005	213-161-10



582 • 19" desk rack 4 U

19" desk rack 4 U

- the small 19" frame is ideal for space-saving yet secure mounting of 19" components
- can be mounted both horizontally and vertically
- with two extra drill holes in the bottom panel, it can also be mounted under a desktop or as simple wall rack
- includes raised floor shelf to accommodate excess cable lengths
- fast time-saving assembly
- cost-saving solution for small networks
- designed as simple assembly stands for 19" components in laboratories or test rooms

Material:

sheet metal

Finish:

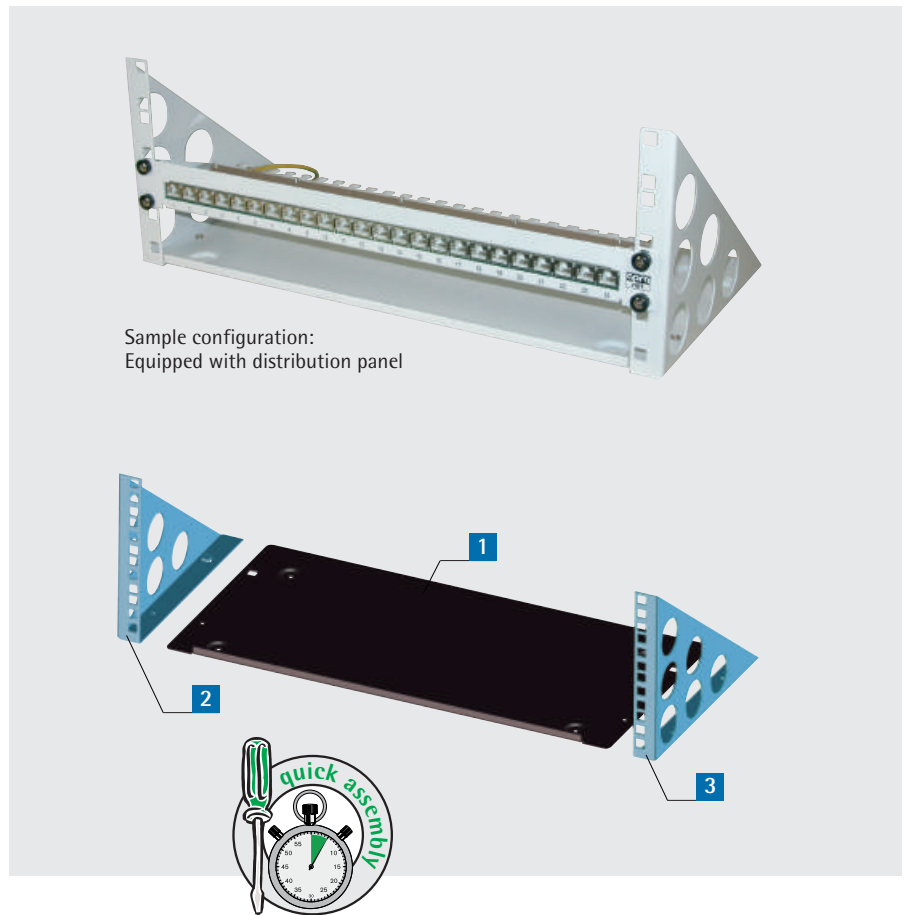
RAL 7035 light grey

Dimensions (H x W x D):

190 x 502 x 250 mm

Delivery:

unmounted



Delivery

Item	pc.	Description
1	1	Basic plate
2	1	Side part left
3	1	Side part right
	16	Screws M 5 x 12
	16	Decorative washers M5
	16	with collar
	16	Cage nuts M5-8
	1	Mounting material

Order no.

582-004-00



1 19" / 21" rack system "NETcell 800"

- open 19" / 21" cabinet system with large volume integrated cable ducts across the entire rack height, as well as in the depth of the system.
- The vertical 19" spars (42 U) can be adjusted to the ETSI (21") track by 90°, if required, by simply repositioning them.
- With further options for cable routing "on top" via optional cable guide brackets (item 6) as well as an excess length tray (item 5) / integrated cable tray expandable.
- The cabinet system can be used as a closed rack using trim components (items 2, 3 and 4).
- Installation as a single cabinet and cabinet row possible.
- Cabinet system completely dismantled.

Installation height:
19" = 42 U / 21" = 75 U

Material:
sheet metal

Finish:
RAL 7035 light grey

Load capacity:
1500 kg (distributed load)



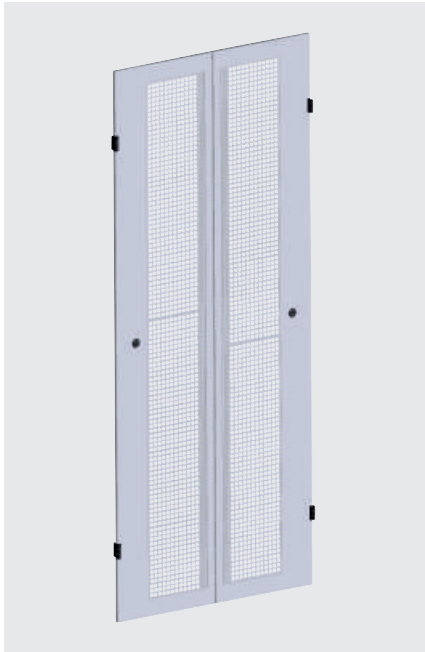
Table of components

Item	Description
1	Basic system
2	Door divided, perforated
3	Side wall / bulkhead
4	Roof plate
5	Oversize tub
6	Cable management angle / final panel
7	Adjustable feet

Dimensions (H x W x D) mm	Order no.
2000 x 800 x 1000	583-901-90
2000 x 800 x 800	583-902-00



2 Door divided, perforated



The door is divided and 82% perforated. This is for passive ventilation of the NET-cell system. The doors can each be closed individually via cam locks. The two doors cover the entire cabinet front including the channels.

- including two cam locks with double bit closure
- Profile closure possible (see right)

Material:

sheet metal

Finish:

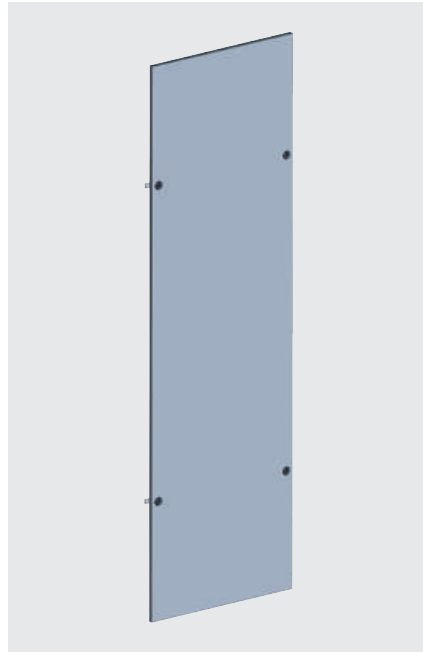
RAL 7035 light grey

Dimensions (H x W x D):

2000 x 800 x 35 mm

Order no.
583-902-02

3 Side wall / bulkhead



The side walls are provided with four cam locks. This is for easy and quick installation of the side walls.

- including four sash closures with double-bit closure
- Profile closure possible (see closure system)

Material:

sheet metal

Finish:

RAL 7035 light grey

Dimension (H x W) mm	Order no.
2000 x 1000	583-002-25
2000 x 800	583-002-72

Locking systems for doors and side panel



- sash fastener with EK 333 closing for locking the shared door (Item 2) and the side panel (Item 3)

Description	Order no.
Sash fastener	676-181
Spare key EK 333	676-200



4 Roof



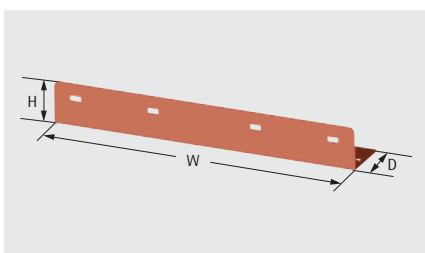
- The roof contains two pre-stamped plates that can be broken out for cable entry.

Material:
sheet metal

Finish:
RAL 7035 light grey

Depth D mm	Order no.
1000	583-902-04
800	583-902-03

6 cable management bracket / cover



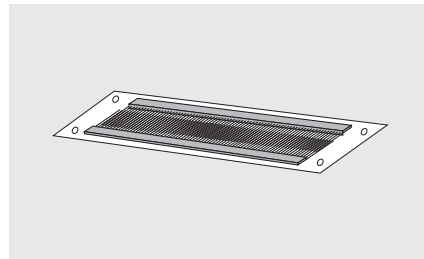
- serve for cable routing on the cabinet system
- are mounted on the roof without tools
- can be placed individually in the depth
- can also serve as the end panel of the excess length tub

Material:
sheet metal

Finish:
RAL 7035 light grey
Dimensions (H x W x D):
80 x 580 x 100 mm

Order no.
583-901-99

Brush set



- After removing the pre-stamped panels of the roof panel, this brush set is used to close the openings or for cable entry through the roof.

Order no.
316-111-10

Adjusting feet

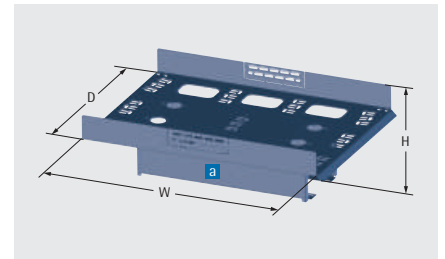


- are bolted to the frame
- serve to align the cabinet, e.g. on uneven ground
- 1 set = 4 pieces

Material:
sheet metal, plastic
Finish:
RAL 7035 light grey

Order no.
500-001-28

5 Oversize tub



- is screwed onto the cabinet system
- serves as a cable tray system for cabinet rows and can replace hinged cable trays
- can be closed by the tool-free installation of a cover on the front side

Material:
sheet metal

Finish:
RAL 7035 light grey
Dimensions (H x W x D):
250 x 800 x 580 mm

Order no.
583-009-78



582 • 19"- / 21" Rack

1 19"- / 21" Rack

The frame is an open 19" / 21" frame with side bar outcrops for optimal cable routing. With further options for cable routing "on top" via cable guide bracket (item 5). The special feature of the grid bars is that the mounting frame can be used as a 19" (45 U) version or as a 21" (41 U) version, depending on the installation method.

Installation as a single cabinet and cabinet row possible. Rack system welded.

Material:

sheet metal

Finish:

RAL 7035 light grey

Load capacity:

600 kg (distributed load)

Dimensions (H x W x D):

2200 x 600 x 300 mm

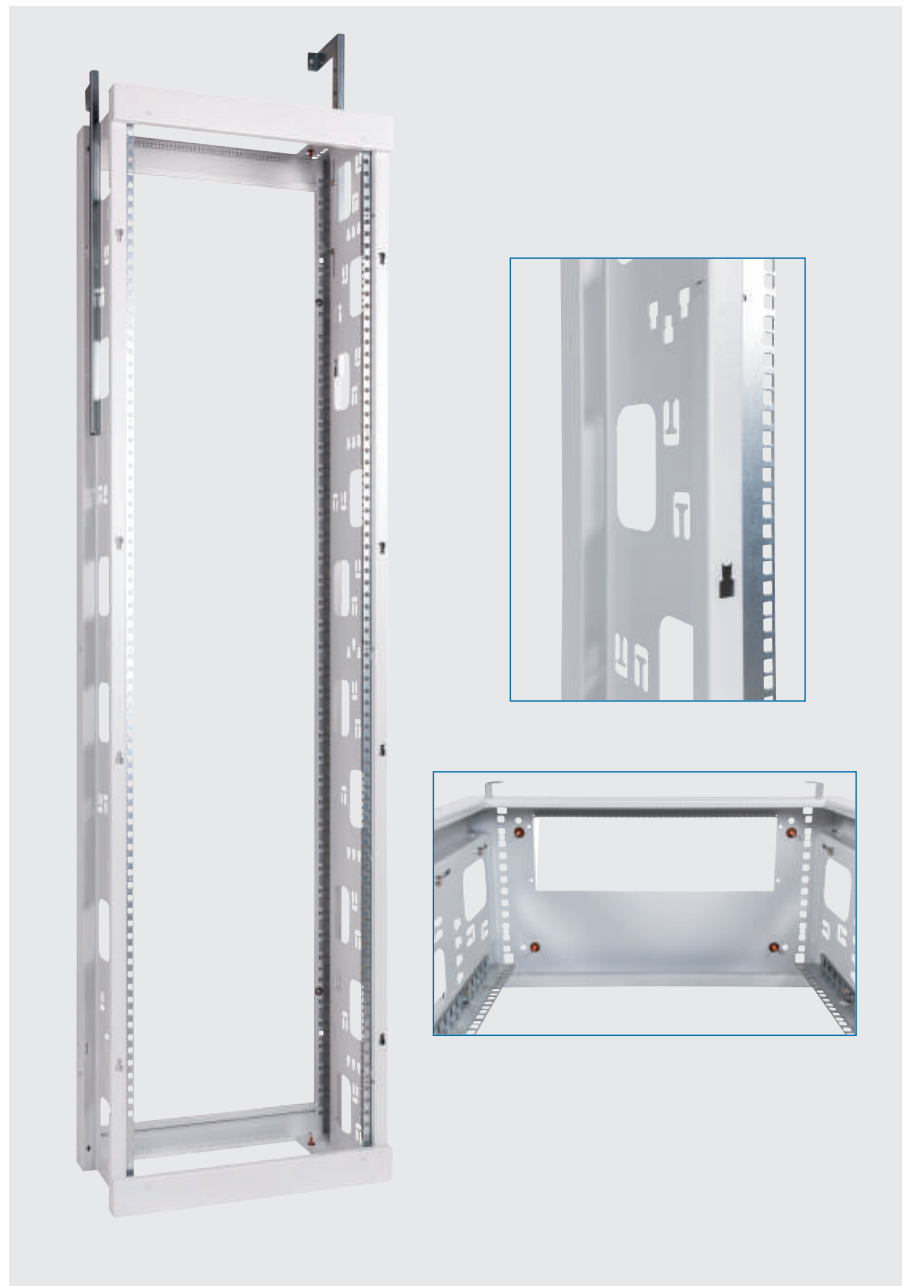
Einbauhöhe:

19"= 45 U, 21"= 81 U

Table of components

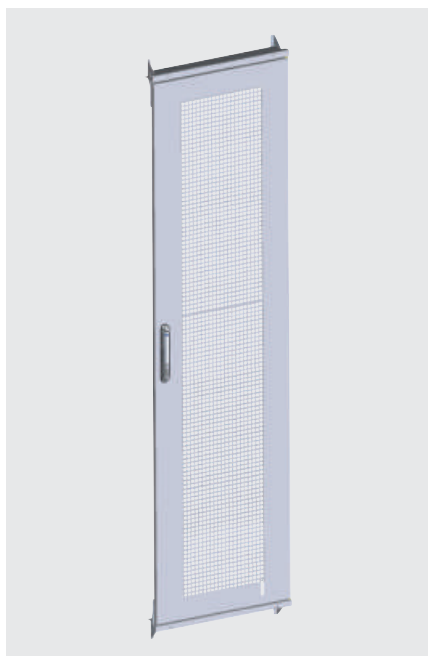
Item	Description
1	ETSI rack
2	door, ventilated
3	side wall
4	rear panel
5	cable management bracket
6	cable channel

Order no.
582-030-00





2 Door, ventilated



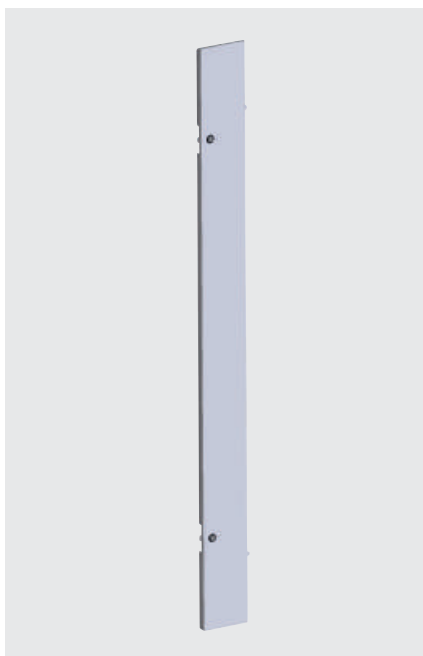
- 83% perforated for passive ventilation of the frame
- through the door, the entire cabinet front is covered
- Dimensions for H x W: 2000 x 600 mm
- the door can be closed with a two-point lock, profile half cylinder possible (see locking systems)

Material:
sheet metal

Finish:
RAL 7035 light grey

Order no.
582-030-24

3 Side wall

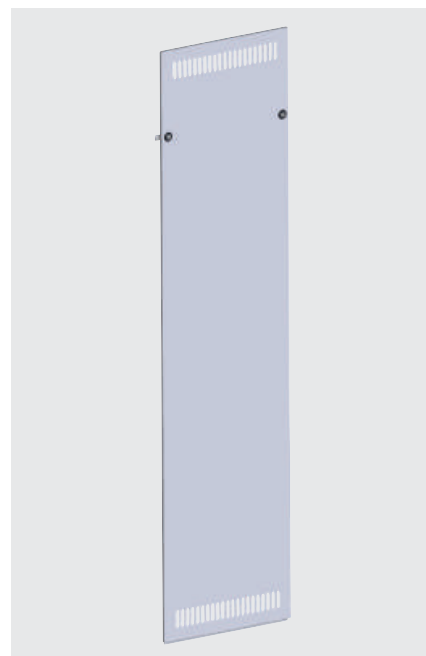


- equipped with two cam locks for easy and quick installation of the side walls
- Dimensions for H x W: 2000 x 300 mm
- Profile closure possible (see closure systems)

Material:
sheet metal
Finish:
RAL 7035 light grey

Order no.
582-030-28

4 Rear panel



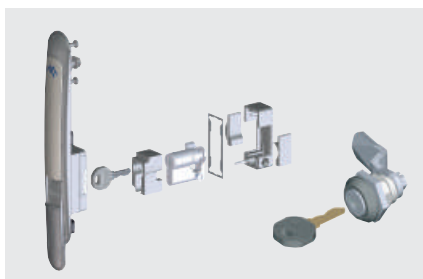
- equipped with two cam locks for easy and quick installation of the rear wall
- Dimensions for H x W: 2000 x 600 mm
- Profile closure possible (see closure systems)

Material:
sheet metal
Finish:
RAL 7035 light grey

Order no.
582-030-25

Locking systems for doors and side panel

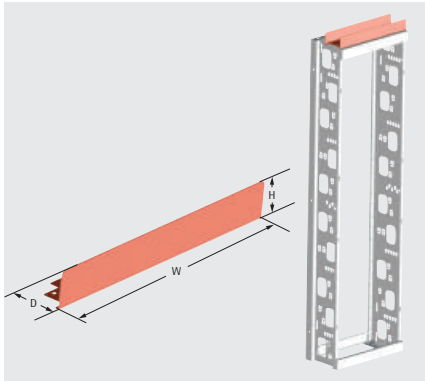
- **profile semi-cylinder** L = 40 mm with EK 333 closing for turning lever lock on door Item 2
- **adapter** for installing a profile semi-cylinder with L = 40 mm acc. to DIN 18252 Item 2
- **sash fastener** with EK 333 closing for locking the side panel Item 4



Description	Order no.
Profile half cylinder	676-316-00
Sash fastener	676-181
Adapter	676-316-10
Spare key EK 333	676-200



5 Cable management brackets



- for maneuvering cables on the rack

Material: sheet metal
Finish: RAL 7035 light grey
Dimensions (H x W x D):
 80 x 570 x 100 mm

Order no.
582-030-22

LED cabinet light

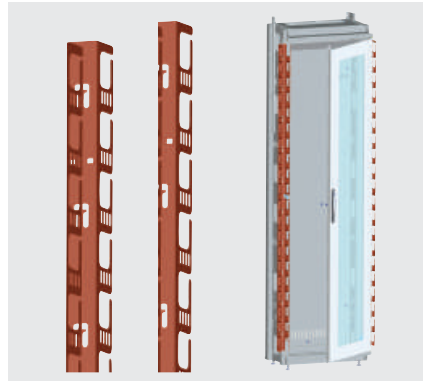


- cost-optimised LED technology with a power consumption of 5 W (light intensity equivalent to a 75 W light bulb)
- internal power supply unit with wide range voltage 100 - 230 V / AC
- long-life and no maintenance (service life at 20 °C = 60,000 h)
- available with switch or motion detector
- magnetic attachment for individual mounting in the cabinet
- pressure clamp connection

Connections must be ordered separately!

Description	Order no.
LED cabinet light with switch	640-143-05
LED cabinet light with motion detector	640-143-06
Connection with Euro plug, L = 2.5 m	640-143-08

6 Cable channel set



- for vertical cable routing in front of the 19" / 21" level
- is mounted on the frame
- Set = 2 pieces

Material: sheet metal
Finish: RAL 7035 light grey

Order no.
582-030-26

Document pocket

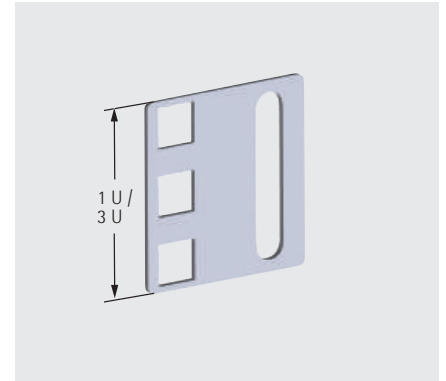


- self-adhesive
- heat-resistant up to 60 °C
- load capacity of up to 3 kg
- your company's logo can be affixed

Material: plastic, black
Dimensions (H x W x D):
 235 x 260 x 27 mm

Order no.
640-100

ETSI on 19" adapter plate

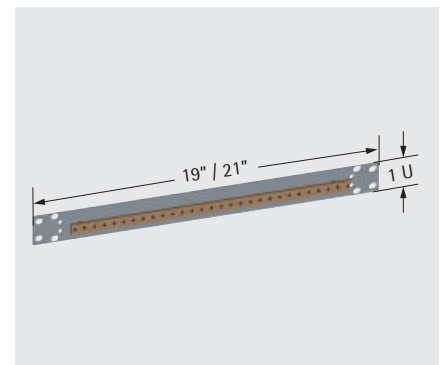


- Adapter bracket for mounting 19" components in a 21" mounting frame
- The adapter brackets are simply mounted in the 21" plane using a screw and cage nut.
- Set = 5 pairs

Material: sheet metal
Finish: galvanised

Description	Order no.
1 U	213-900-93
3 U	213-900-94

Potential equalization rail 19" / 21"



- can be installed in a 19" and 21" plane
- Connection possibility: 27 x M 5
- Rail cross-section: 50 mm²

Material: sheet metal / copper
Finish: galvanised
Dimensions (H x W x D):
 44 x 535 x 19 mm

Order no.
582-030-27