



TiRAX



## 19" system cabinet

The new modular, fully symmetric cabinet system "TiRAX 318" from apraNET provides an ideal framework for both, structured cabling in office and industrial environments as well as for the innovative and design orientated automation engineer in the manufacture of switching cabinets.

The fully symmetric cabinet frame is a complete sheet metal construction, dismountable with just one screw per corner. The force- and positive-fit interconnection systems provide very high stability and attain protection class IP 54.





### TiRAX „plug & play”

- dismantlable steel cabinet frame
- two side sash doors with quick lock
- front viewing door with three-point locking, tinted and toughened safety glass
- sheet metal rear door with three-point locking, mountable also as side door
- both doors accepting profile half cylinder
- 19" level 42U front and rear
- 10 metal cable clamps on the front 19" level
- two cable retainer bars with integrated cable management bracket included
- top plate 2-part, with 3-way fan module, variable speed

- cabinet lamp with service power socket and magnetic holder
- 7-way 19" power socket strip 1U
- earthing set 2.5 mm<sup>3</sup>, mounted
- cable entry H=100 mm
- 19" set of screws M5, 50 pcs

**Delivery:**

fully connected to central junction box pre-wired and tested, base included

Dimensions (HxWxD):	Order no.
2000+100 x 800 x 800	31-8200-01



### TiRAX „active”

- dismantlable steel cabinet frame
- two side sash doors with quick lock
- front viewing door with three-point locking, tinted and toughened safety glass
- sheet metal rear door with three-point locking, mountable also as side door
- both doors accepting profile half cylinder
- 19" level 42U front and rear
- 10 metal cable clamps on the front 19" level
- top plate 2-part, with 3-way fan module

- 7-way 19" power socket strip 1U
- earthing set 2.5 mm<sup>3</sup>, mounted
- cable entry H=100 mm enclosed
- 19" set of screws M5, 50 pcs

**Delivery:**

fully assembled/base included

Dimensions (HxWxD):	Order no.
2000+100 x 800 x 800	31-8200-02



### TiRAX „passive”, IP 54

- dismantlable steel cabinet frame
- two side sash doors with quick lock
- front viewing door with three-point locking, tinted and toughened safety glass
- sheet metal rear door with three-point locking, mountable also as side door
- both doors accepting profile half cylinder
- 19" level 42U front
- 10 metal cable clamps on the front 19" level
- one-piece top plate, liftable on request

- earthing set 2.5 mm<sup>3</sup>, mounted
- cable entry H=100 mm enclosed
- 19" set of screws M5, 50 pcs

**Delivery:**

fully assembled/base included

Dimensions (HxWxD):	Order no.
2000+100 x 800 x 800	31-8200-03



### TiRAX „cool-box“, IP 54

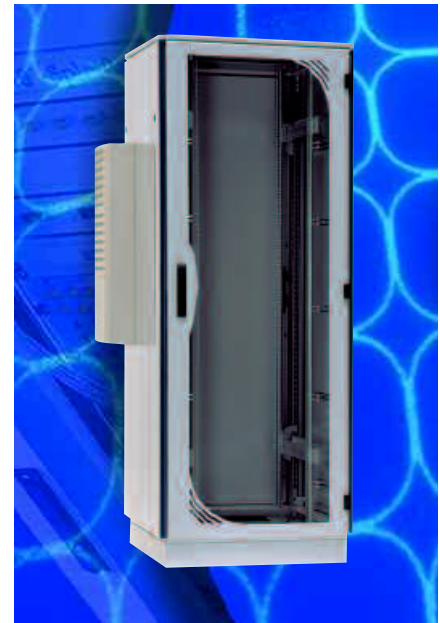
- dismantlable steel cabinet frame
- two side sash doors with quick lock
- front viewing door with three-point locking, tinted and toughened safety glass
- sheet metal rear door with three-point locking, also mountable on the side
- both doors accepting profile half cylinder
- 19" level 42U front and rear
- 10 metal cable clamps on the front 19" level
- one-piece top plate
- 7-way 19" power socket strip 1U
- earthing set 2.5 mm<sup>2</sup>, mounted
- air conditioning unit W 1050 (L35/L35), mounted on the side, the side may also be stipulated later on-site. (Please refer

- to chapter 4 "System technology" for further information on air conditioning technology)
- door contact switch for switching off cooling unit on opening front door
  - cable entry H=100 mm
  - 19" set of screws M5, 50 pcs

**Delivery:**

fully assembled, air conditioning unit is attached with just 6 screws on the prepared side panel / base included

Dimensions (HxWxD):	Order no.
2000+100 x 800 x 800	31-8200-04



### TiRAX „cool-roof“, IP 54

- dismantlable steel cabinet frame
- two side sash doors with quick lock
- front viewing door with three-point locking, tinted and toughened safety glass
- sheet metal rear door with three-point locking
- both doors accepting profile half cylinder
- 19" level 42U front and rear
- 10 metal cable clamps on the front 19" level
- one-piece top plate
- 7-way 19" power socket strip 1U
- earthing set 2.5 mm<sup>2</sup>, mounted
- air conditioning unit 1550W (L35/L35), topmounted. (Please refer to chapter 4

- System technology for further information on air conditioning technology)
- door contact switch for switching off cooling unit on opening front door
  - cable entry H=100 mm
  - 19" set of screws M5, 50 pcs

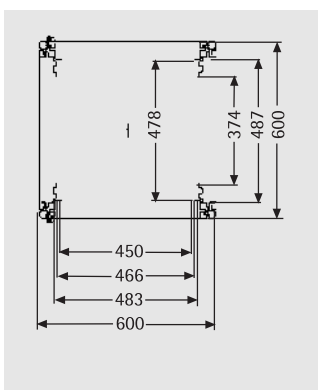
**Delivery:**

fully assembled, air conditioning unit is attached with just 6 screws on top plate/base included

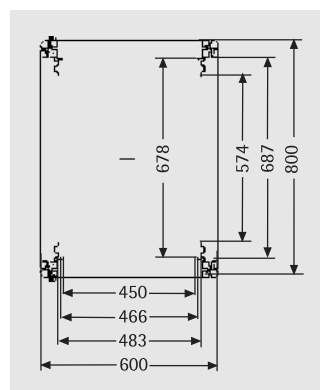
Dimensions (HxWxD):	Order no.
2000+100 x 800 x 800	31-8200-05



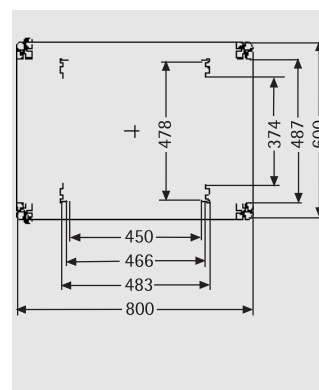
### Technical information 19" mounting sizes



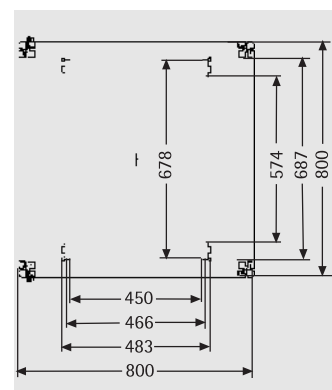
• Top view cabinet frame  
W x D = 600 x 600



• Top view cabinet frame  
W x D = 600 x 800



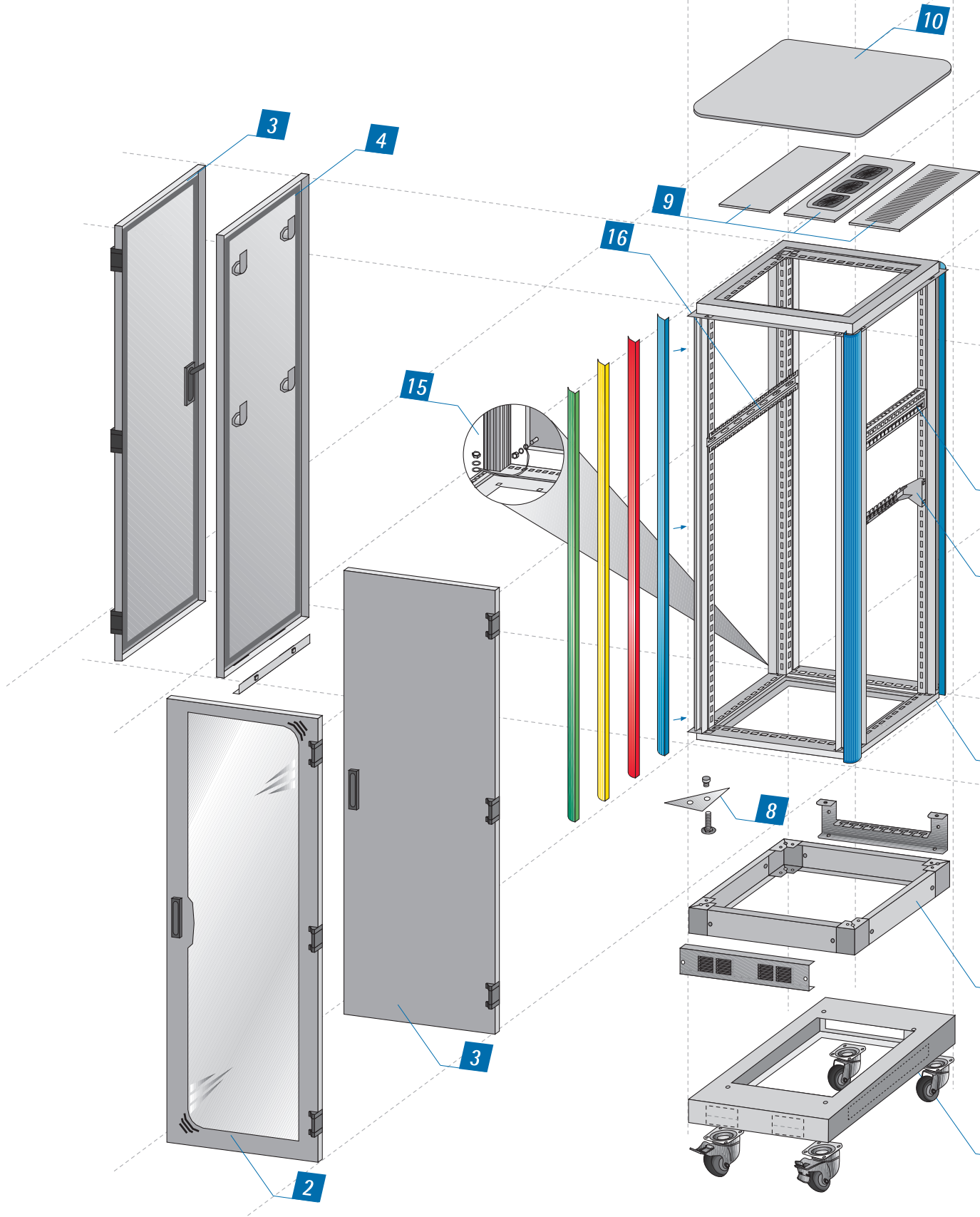
• Top view cabinet frame  
W x D = 800 x 600



• Top view cabinet frame  
W x D = 800 x 800



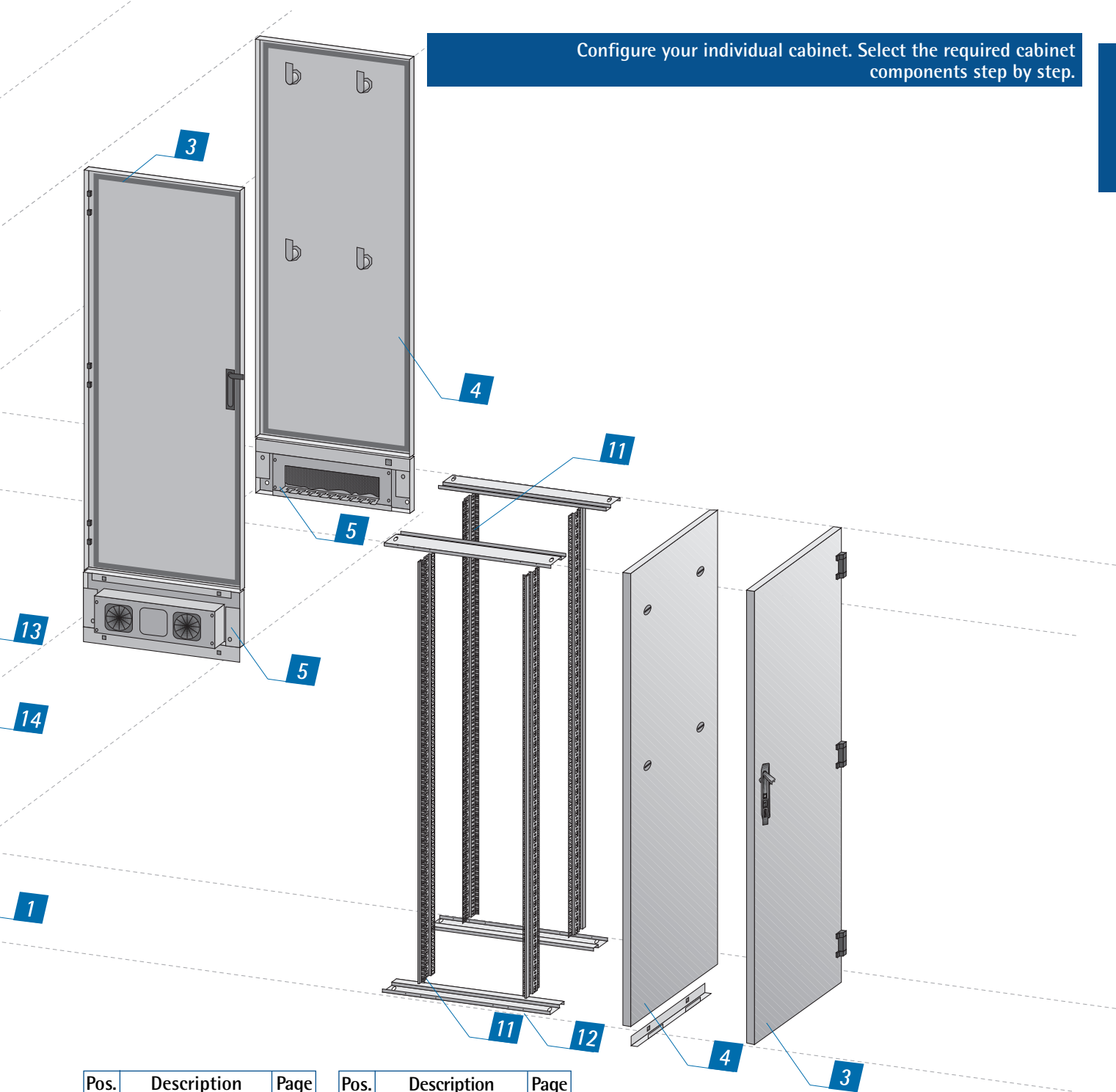
Individual configuration:





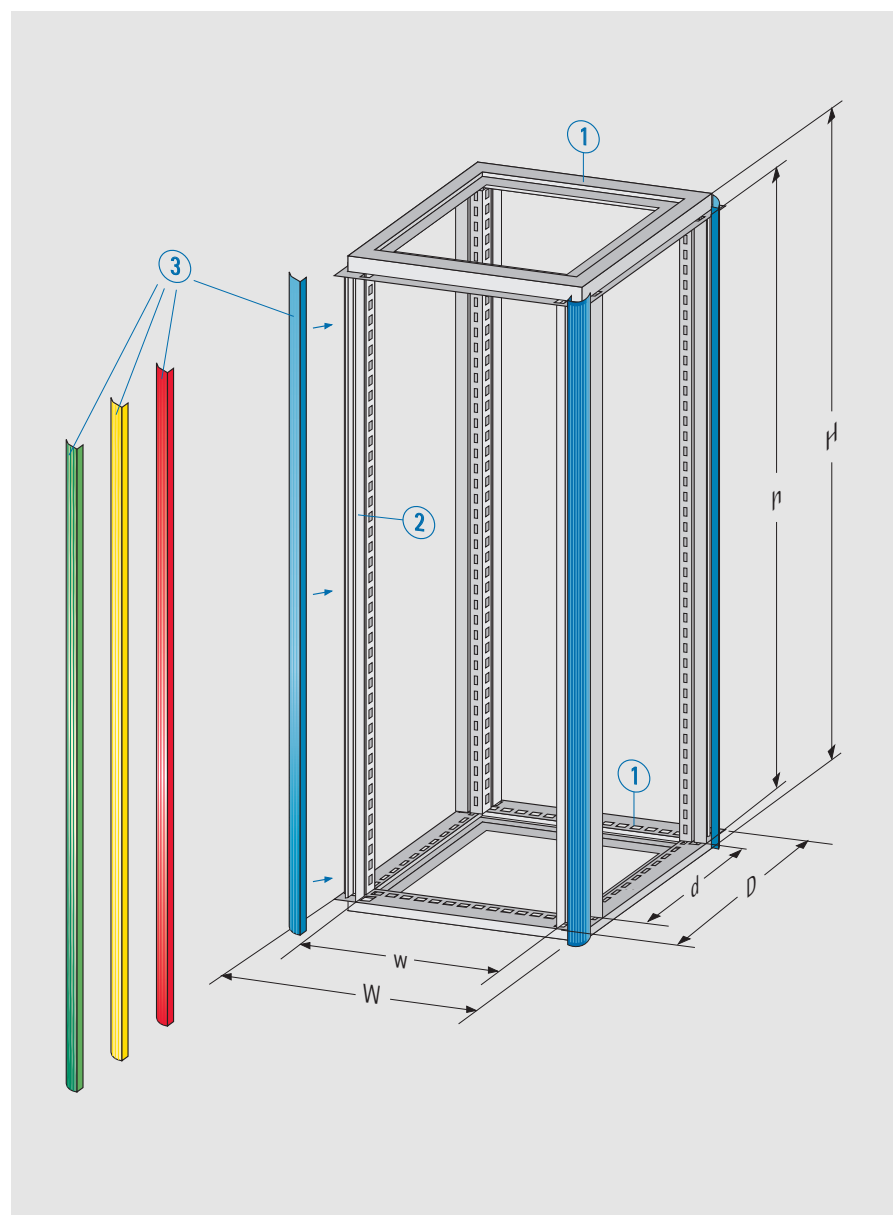
Configure your individual cabinet. Select the required cabinet components step by step.

3 TiRAX 318 cabinet system



Pos.	Description	Page
1	Dismountable cabinet frame	3.6
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Pos.	Description	Page
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12	Traverse for 19" integration	3.10
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14	Traverse for integration of shorter equipment	3.10
15	Protective earthing set	3.10
16	Cable retainer bars	3.12



### 1 Dismountable cabinet frame

The cabinet frame comprises of two identical sheet metal frames ①, four sheet metal extrusions ② and four coloured (RAL 5014 pigeon blue) sheet metal design extrusions ③, clipped on to the extrusions.

**Finish:**

- ① top/bottom plate:  
RAL 7035 light grey
- ② corner profile:  
galvanized (conductive)
- ③ design extrusion\*:  
RAL 5014 pigeon blue  
(standard colour)






**Delivery:**

cabinet frame fully assembled

h= H-100  
w=W-150

\* We can match the colour of the design extrusions ③ to your own company colours if desired.

#### Other preferential colours:

-  RAL 1032 (broom yellow)
-  RAL 5010 (gentian blue)
-  RAL 3002 (carmine red)
-  RAL 6029 (mint green)
-  RAL 7037 (dusty grey)

Dimensions (WxD)	Dimensions (H)	U	Order number
600 x 600	1200	24	31-8660-02
800 x 600	1200		31-8860-02
800 x 800	1200		31-8880-02
600 x 600	1600	33	31-8660-06
800 x 600	1600		31-8860-06
800 x 800	1600		31-8880-06
600 x 600	1800	37	31-8660-08
800 x 600	1800		31-8860-08
800 x 800	1880		31-8880-08
600 x 600	2000	42	31-8660-10
800 x 600	2000		31-8860-10
800 x 800	2000		31-8880-10
600 x 600	2200	46	31-8660-12
800 x 600	2200		31-8860-12
800 x 800	2200		31-8880-12



## 2 Viewing door

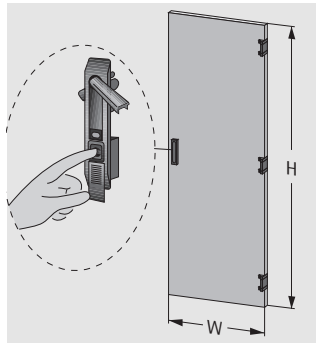


- Toughened safety glass grey 5mm thick, turning lever lock for profile half cylinder

**Finish:**

RAL 7035 light grey

## 3 Closed door

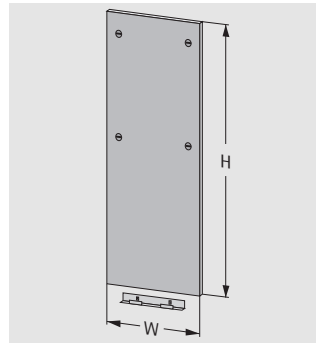


- made from sheet metal, turning lever lock for profile half cylinder

**Finish:**

RAL 7035 light grey

## 4 Sash door

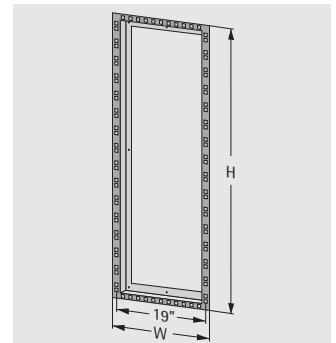


- made from sheet metal, with sash fastener lock

**Finish:**

RAL 7035 light grey

## Frame



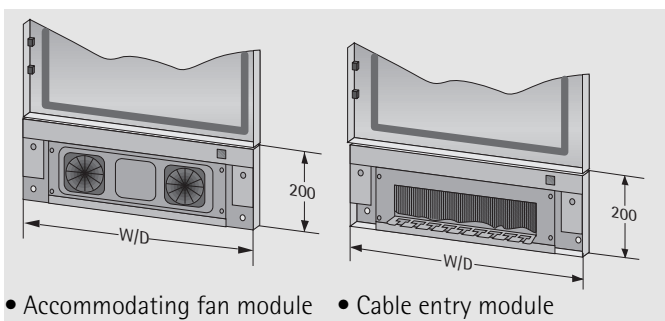
- for closed door
- for attachment of components on the door
- attachment dimensions: 19"

**Finish:**

RAL 7035 light grey

Height (H)	Width (W)	Order number viewing door	Order number closed door	Order number sash door	Order number frame
1200	600	31-8612-01	31-8612-02	31-8612-03	31-8621-12
	800	31-8812-01	31-8812-02	31-8812-03	31-8621-12
1600	600	31-8616-01	31-8616-02	31-8616-03	31-8621-16
	800	31-8816-01	31-8816-02	31-8816-03	31-8621-16
1800	600	31-8618-01	31-8618-02	31-8618-03	31-8621-18
	800	31-8818-01	31-8818-02	31-8818-03	31-8621-18
2000	600	31-8620-01	31-8620-02	31-8620-03	31-8621-20
	800	31-8820-01	31-8820-02	31-8820-03	31-8621-20
2200	600	31-8622-01	31-8622-02	31-8622-03	31-8621-22
	800	31-8822-01	31-8822-02	31-8822-03	31-8621-22

## 5 Universal module for shortened/sash door

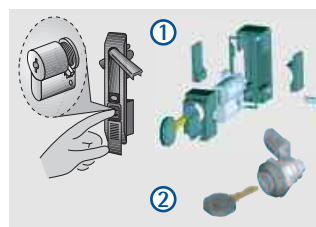


- Accommodating fan module
- Cable entry module

The modular VARIRack system allows, for instance, the fitting of 1.6m high doors to the 2m cabinet frame. The available space below or above the door may be used for cable entry or for the fitting of fans, for example. The modules have a height of 200mm and may be configured one on top of another as required.

Type	(W)/ (D)	Order number
Accom. fan module	600	31-8600-00
	800	31-8800-00
Cable entry module	600	31-8600-02
	800	31-8800-02

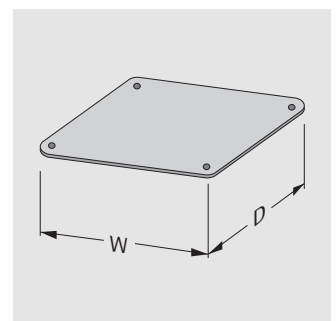
## Profile half cylinder/ Profile sash fastener



- profile half cylinder ① complete with key.
- adapter for integration of individual cylinder (DIN 18252)
- Profile sash fastener ② for locking of sash doors with profile key

Description	Order no.
Profile half cylinder	67-6316-00
Adapter	67-6316-10
Profile sash fastener	676-181
Spare key	676-200

## 10 Top plate, closed

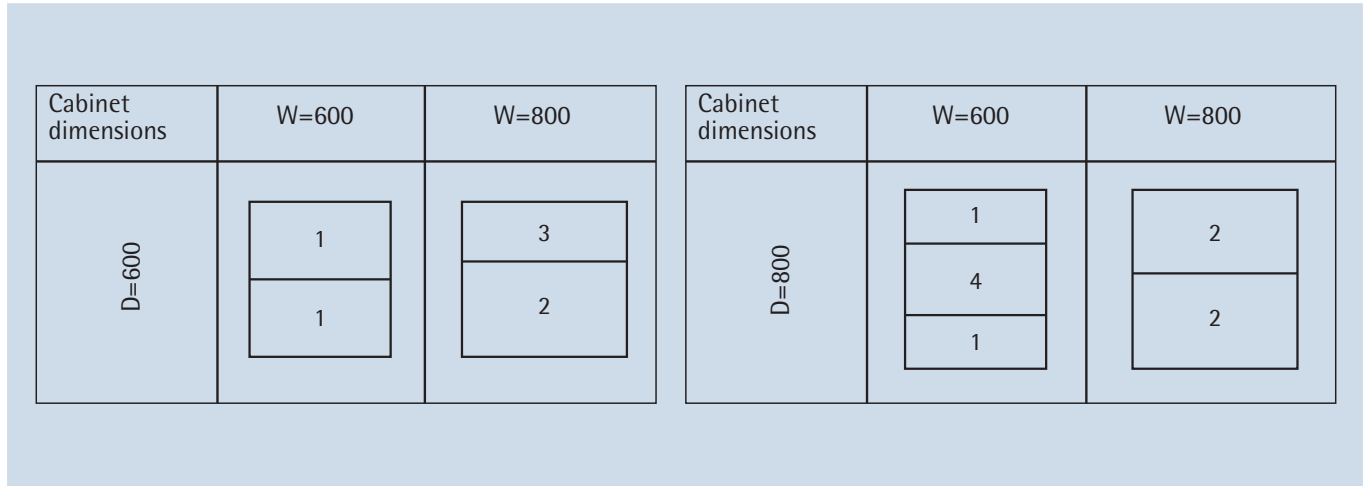


The top plate can be raised approximately 11mm for ventilation and is attached with just 2 screws

Dimensions	Order no. 1 pc.
600 x 600	31-8016-60
800 x 600	31-8018-60
800 x 800	31-8018-80
600 x 800	31-8016-80



**9** Overview for determining cover plates



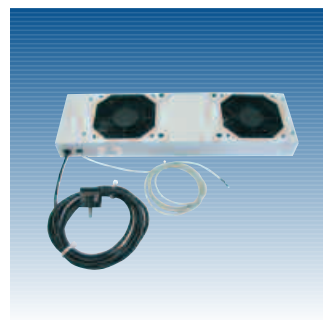
Type	Size	Description	Order number
 closed	1	Cover plate closed 1	
	2	Cover plate closed 2	31-8110-01
	3	Cover plate closed 3	31-8110-02
	4	Cover plate closed 4	31-8110-03
 fans	1	Cover plate fan module 3, W=600	31-8110-04
	2	Cover plate fan module 5, W=800	31-8110-07
 cabling	1	Cover plate for dense cable entry with integrated strain-relief	31-8110-08
	2	Cover plate for dense cable entry with integrated strain-relief	31-8110-05

**Cooling module**



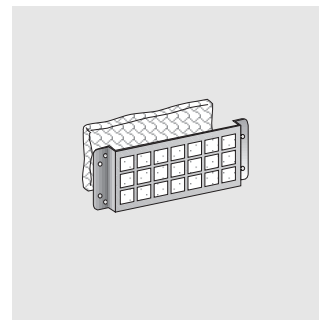
- cooling module fully pre-wired with connector cable 2.5m length
- **temperature regulator** 0°to +60°C
- ventilation or extraction, depending on assembly position

**Variable speed fan module**



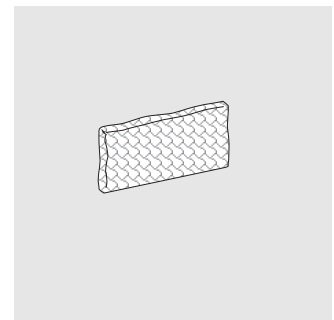
- fan module fully pre-wired with connection cable 2.5m length
- **temperature sensor** for speed regulation
- very quiet
- ventilation or extraction, depending on assembly position

**5.1 Filter set for fan module**



**Material:**  
aluminium / filter mat

**Spare filter set (5pcs) for filter set**



**Material:**  
filter mat

Des.	Throughput (m³/h)	Order number
1 x	160	23-0300-01
2 x	320	23-0300-02
3 x	480	23-0300-03

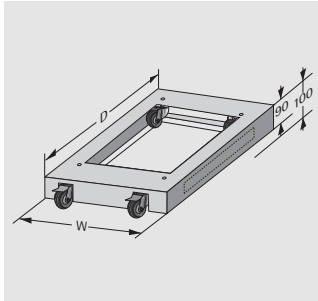
Des.	Throughput (m³/h)	Order number
1 x	150	23-0300-51
2 x	300	23-0300-52
3 x	450	23-0300-53

Order number
31-6100-99

Order number
67-1200-05



### 7 Roller base

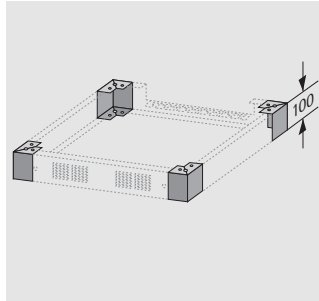


- roller base with two guide castors and two brake rollers
- cable entry rear and sideways
- side cable entry simple to open
- rear entry with brush strip
- load capacity: 400 kg

**Finish:**  
RAL 7035 light grey

Width (W)	Depth (D)	Order number
600	600	31-8126-60
600	800	31-8126-80
800	600	31-8128-60
800	800	31-8128-80

### 6 Base corner set



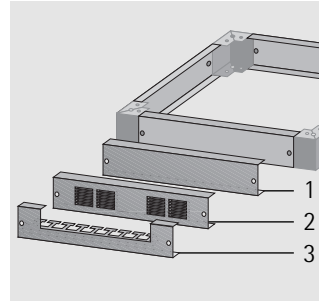
**Material:** sheet metal

**Finish:** RAL 7035

**Delivery:**  
complete with mounting hardware  
kit-form

Height (H)	Order number
100	31-8100-00

### 6.1 Base panels



- for custom base assembly
- four panels complement a base

**Material:** sheet metal

**Finish:** RAL 7035

Type	Width/Depth Cabinet system	Order number
1	600	31-8100-10
1	800	31-8100-20
2	600	31-8100-12
2	800	31-8100-22
3	600	31-8100-14
3	800	31-8100-24

### Cabinet connector set

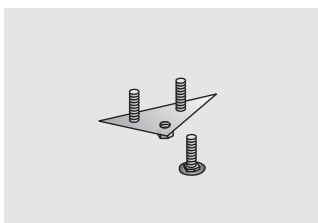


- for adding as many cabinets as required next to or behind each other **with** design extrusion
- H=1200 mm - 1600 mm  
4 fixing plates
- H=1800 mm - 2200 mm  
6 fixing plates

**Delivery:**  
connecting plates, fixing seal, mounting hardware

Dimensions: (H)	Order no. Set
1200-1600	31-8105-10
1800-2200	31-8105-12

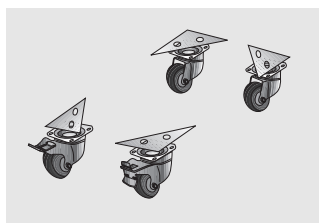
### 8 Adjusting foot



- for screwing to the cabinet frame or to base

Description	Order no. Set
Cabinet frame	31-8026-00
Base	31-8026-02

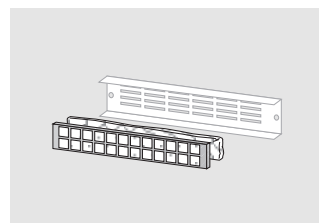
### Set of rollers



- for screwing to the cabinet frame
  - load capacity up to 400 kg
- The roller set comprises of four guide rollers (two with stop brake). It is screwed directly to the cabinet frame, allowing speedy relocation of the network cabinet.

Order number
31-8026-10

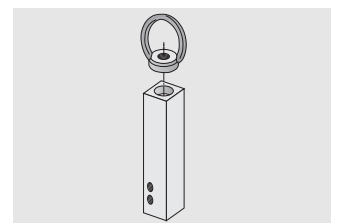
### Filter set for base panels "ventilated"



**Material:**  
sheet metal zinc coated/filter mat

Width/Depth	Order no. Set
600	31-8100-16
800	31-8100-26

### Lifting eye set

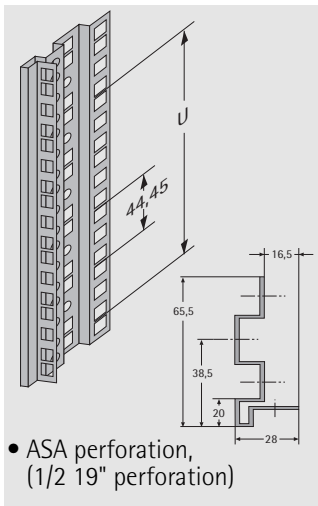


- lifting eyes are used when lifting is required for relocation
- load capacity: up to 500 kg
- set = 4 pcs

Order number
31-8026-20



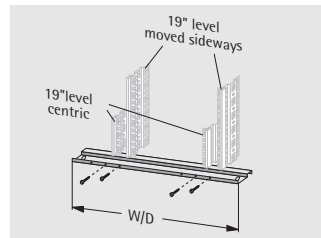
**11** 19"-vertical mountings



- ASA perforation, (1/2 19" perforation)

**Material:**  
galvanized sheet metal

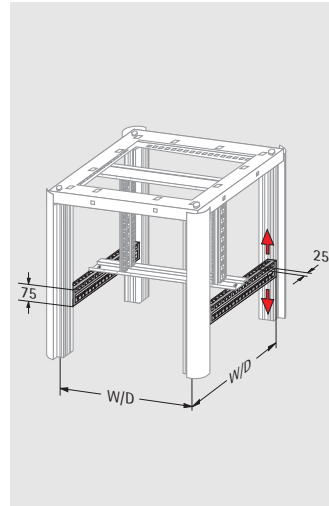
**12** Traverse for 19" integration



- two traverses are required for the integration of the 19" vertical mounting per 19" level
- variable depth adjustable
- with W=800 it is possible to move the 19" level sideways to increase the area for cable switching on one side (see diagram)

**Material:**  
galvanized sheet metal

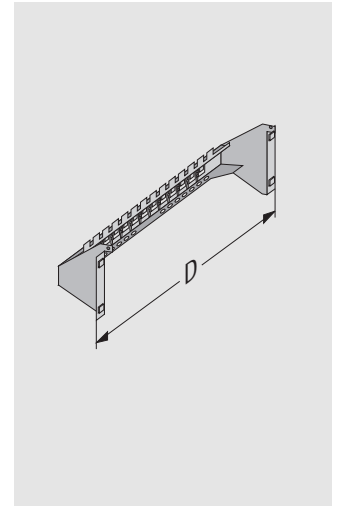
**13** Multifunctional strut



- 19" modular extension
- for tidy cable routing
- variable height adjustable

**Material:**  
galvanized sheet metal

**14** Traverse for integration of shorter equipment



- for reduction of W=800mm to 19"
- with integrated strain-relief bar
- hook in

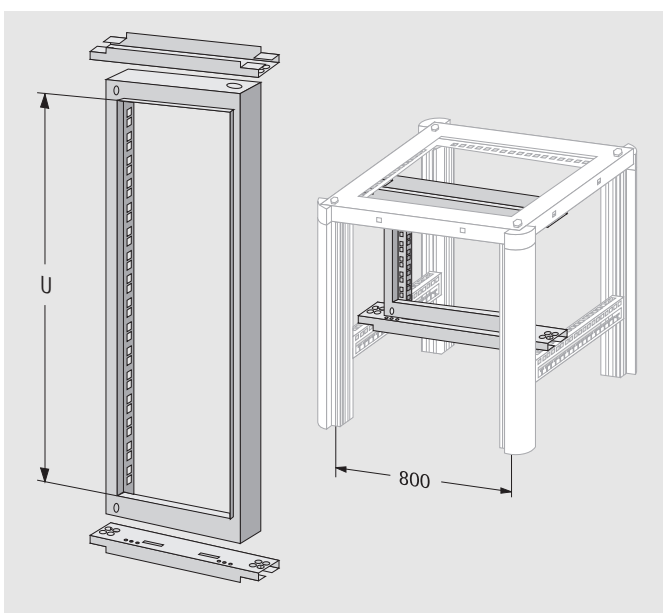
**Material:**  
galvanized sheet metal

U	Order no. 19" vertical mounting	Order no. Traverse B=600	Order no. Traverse B=800
6	31-6120-06	31-8120-00	31-8120-04
12	31-6120-12	31-8120-00	31-8120-04
15	31-6120-15	31-8120-00	31-8120-04
24	31-6120-24	31-8120-00	31-8120-04
33	31-6120-33	31-8120-00	31-8120-04
37	31-6120-38	31-8120-01	31-8120-03
42	31-6120-42	31-8120-00	31-8120-04
46	31-6120-46	31-8120-01	31-8120-03

Depth (D) / Width (W)	Order no. 1 piece
600	31-8120-06
800	31-8120-08

Depth (D) / Width (W)	Order no.
600	31-8120-10
800	31-8120-12

**19"-hinged frame**



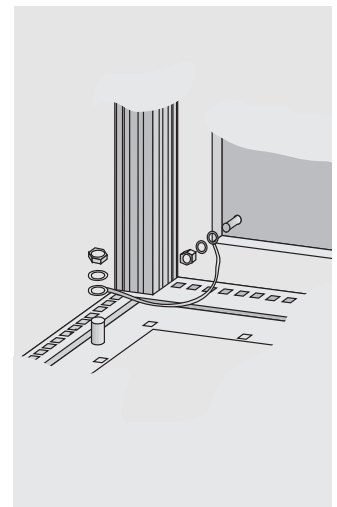
- for cabinet width 800 mm
- depth adjustment in 25mm increments
- central or asymmetric assembly (30 or 60 mm offset)
- additional multifunctional struts (pos. 13) are required for the hinged frame modular extension

**Finish:**  
RAL 7035 light grey  
**Material:** sheet metal  
**Delivery:**  
complete with cross traverses

appropriate for cabinet height (H)	U	Order number 1 piece
	12	31-8122-04
	21	31-8122-10
1600	30	31-8122-16
1800	34	31-8122-18
2000	39	31-8122-20

**Plug-in unit usable depth:**  
centered: 360 mm  
offset by 30 mm: 410 mm  
offset by 60 mm: 460 mm

**15** Earthing set

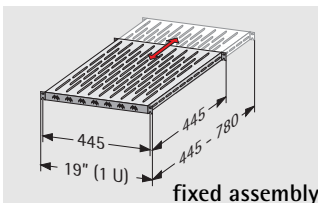
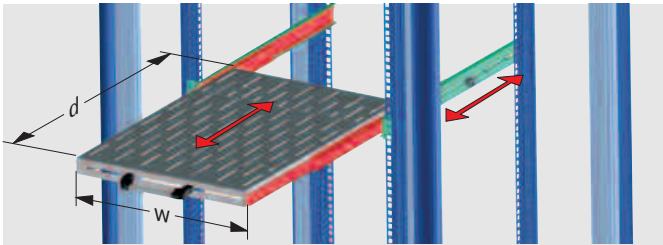


This set allows VDE compliant earthing, cable  $\varnothing$  2,5 mm<sup>2</sup> for connection of the individual cabinet components

Order number
31-8150-00



**19" shelf 1U**  
"fixed assembly" **VARIplain**



- depth variable by the VARI plain technology (see diagram)
- designed as 19" component
- telescopic from 455 - 780 mm (see diagram)
- simple one-man assembly with open slotted hole in the 19" front (hook-in)
- load capacity: up to 80 kg (area load)

**Finish:** RAL 7035

**Material:** sheet metal

**Dimensions (H x W x D):**

1U(44 mm) x 19" (483 mm) x 445mm

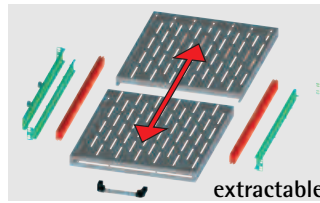
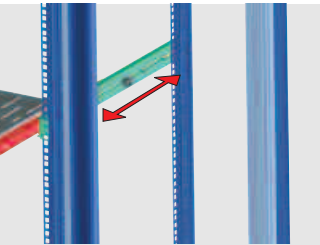
**Storage space (w x d):**

440 mm x 445 mm-780 mm

**Order number**

31-6036-99

**19" shelf**  
"extractable" **VARIplain**



- assembly in 19" cabinets with two 19" levels (cabinet depth variable 650/800/1000 mm)
- **storage space:**  
w = 400 mm  
d = max. 750 mm
- **load capacity:**  
65 kg (area load)

**Finish:**

Shelf: RAL 7035

Assembly rails: zinc coated

**Material:** sheet metal

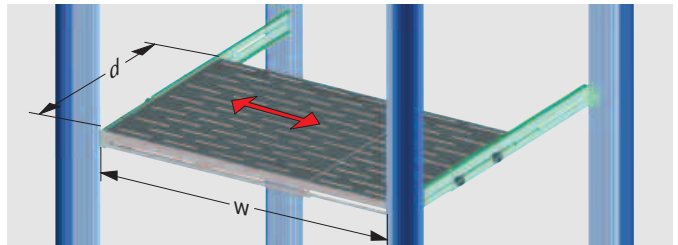
**Dimensions (H x W x D):**

1 U (44 mm) x 19" (483 mm) x 480 mm

**Order number**

31-8140-20

**Shelf without 19" extension**  
"fixed assembly"



- assembly over entire cabinet width 650/800 and depth 650/800/1000 mm using VARI plain system (see diagram)
- **storage space:**  
w = 480 - 650 mm  
d = 400 mm
- **load capacity:**  
50 kg (area load)

**Finish:**

Shelf: RAL 7035

Assembly rails: zinc coated

**Material:** sheet metal

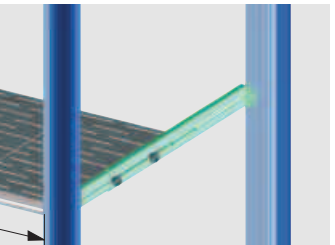
**Dimensions (H x W x D):**

44 x 400 x W = see diagram

**Order number**

31-8140-40

**Shelf without 19" extension**  
"extractable"



- assembly over entire cabinet width 650/800 and depth 650/800/1000 mm via VARI plain system (see diagram)
- **maximum pullout depth:**  
530 mm
- **load capacity:** 50 kg (area load)

**Pullout:**

- can be separated
- fully extended (three part)
- lock pulled out

**Finish:**

Shelf: RAL 7035

Assembly rails: zinc coated

**Material:** sheet metal

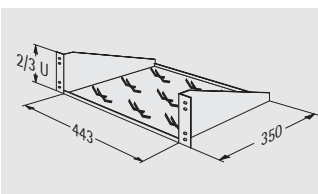
**Dimensions (H x W x D):**

44 x 400 x W = see diagram

**Order number**

31-8140-60

**19" shelf, fixed**



- simple assembly into the 19" metric grid system (only one 19" level required)
- ventilated
- load capacity: approx. 15 kg

**Material:** sheet metal

**Finish:** RAL 7035 light grey

**Height**

**Order number**

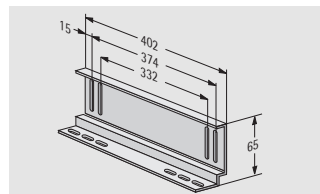
2U

31-5810-20

3U

31-5810-00

**Sliding rails for 19" mountings, screwable**



Sliding rails are mounted on the 19" mountings. They are for supporting heavy 19" plug-in units. Two 19" levels are required for attaching. Delivered in pairs.

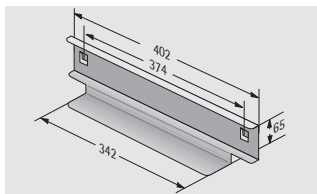
**Material:**

sheet metal 2 mm, zinc coated

**Order number**

31-8120-20

**Sliding rails for 19" mountings, hook-in**



Sliding rails are hooked into the 19" mountings. They are for supporting heavy 19" plug-in units. Two 19" levels are required for mounting. Delivered in pairs.

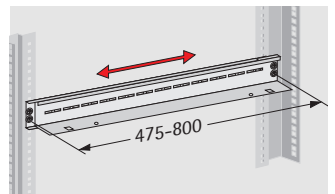
**Material:**

sheet metal 1,5 mm, zinc coated

**Order number**

31-6544-00

**Depth variable sliding rails (set)**



- for accepting 19" plug-in units (e.g. server) irrespective of distance between the first and second 19" level

**Material:**

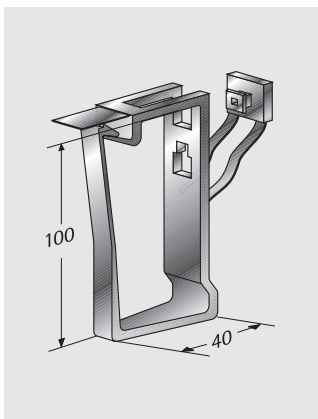
sheet metal 1,5 mm, zinc coated

**Order number**

31-6544-20



### Cable clamp, plastic



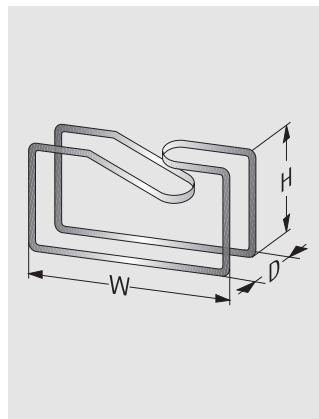
- for lateral fixing at the 19" frame (**800mm** wide cabinets)
- for vertical switching of cabling

**Material:** plastic

**Delivery:** cable clamp with mounting hardware

Order number
64-0035-00

### Cable clamp, metal

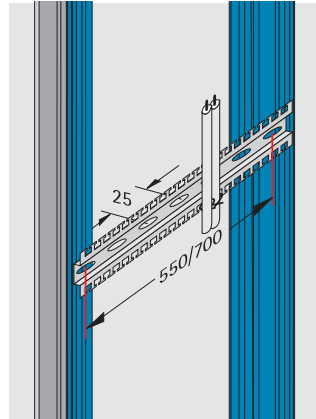


- for attaching to the side of the 19" frame (**800mm** wide cabinets)
- for vertical switching of cabling

**Material:** steel, zinc coated  
**Delivery:** complete with mounting hardware

Dimensions H x W x D	Order number
47 x 85 x 23	64-0036-20
65 x 125 x 23	64-0036-30
95 x 125 x 23	64-0036-40

### 16 Cable retainer bar with integrated cable management bracket

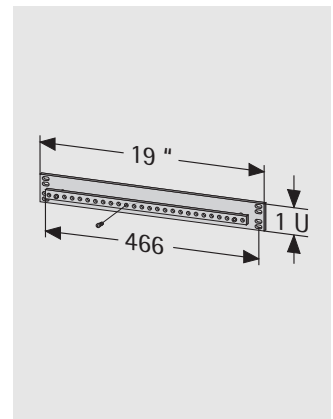


This bar used with cable ties or cable clips allows retainer of cabling. The combination bar is chromated colourless and allows contact between cable shielding and zero potential.

**Material:** aluminium chromated  
**Delivery:** complete with mounting hardware

Depth/Width	Order no.1 p.
600	31-8121-10
800	31-8121-11

### Earthing bar

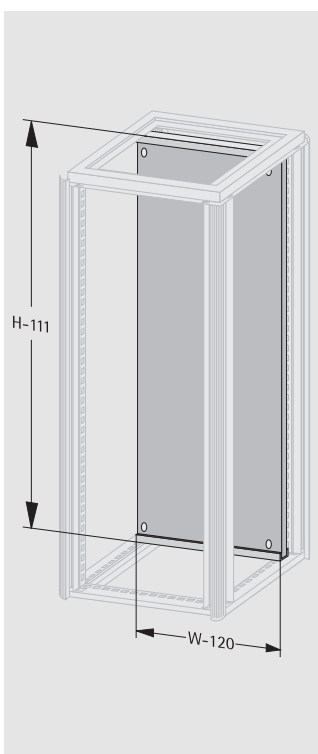


- for 19" assembly and to cabinet frame
- connection options: 27 x M5
- rail cross section: 50 mm<sup>2</sup>

**Material:** sheet metal/copper

Order number
64-0028-00

### Mounting plate

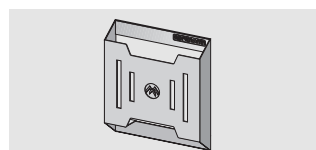


Mounting plates for integration of heavy components. The mounting plate is mounted into the cabinet by using a mounting rail and can be inserted from the side or adjusted from the front/rear. Depth positioning within the 25mm metric grid system is possible. Multifunctional struts are required for modular extension (pos. 13)

**Material:** zinc coated sheet metal  
**Delivery:** mounting plate complete with brackets

Height (H)	Order no. W=600	Order no. W=800
1200	31-8130-12	31-8130-32
1600	31-8130-16	31-8130-36
1800	31-8130-18	31-8130-38
2000	31-8130-20	31-8130-40
2200	31-8130-22	31-8130-42

### Document pocket

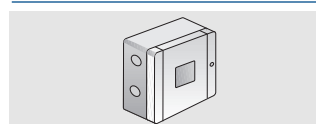


- self adhesive
- heat resistant up to 60 °C
- loadable up to 3 kg
- attachment of your company logo possible

**Material:** polystyrene, black

Order number
640-100

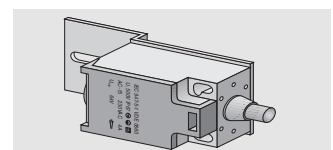
### Mains socket



- cable distribution box
- simple and quick assembly

Order number
640-059

### Door contact switch

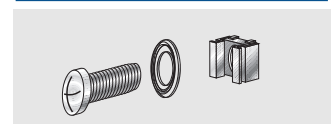


- for the switching on/off of switching cabinet lamps, for example

**Delivery:** 1 door contact switch complete with mounting hardware

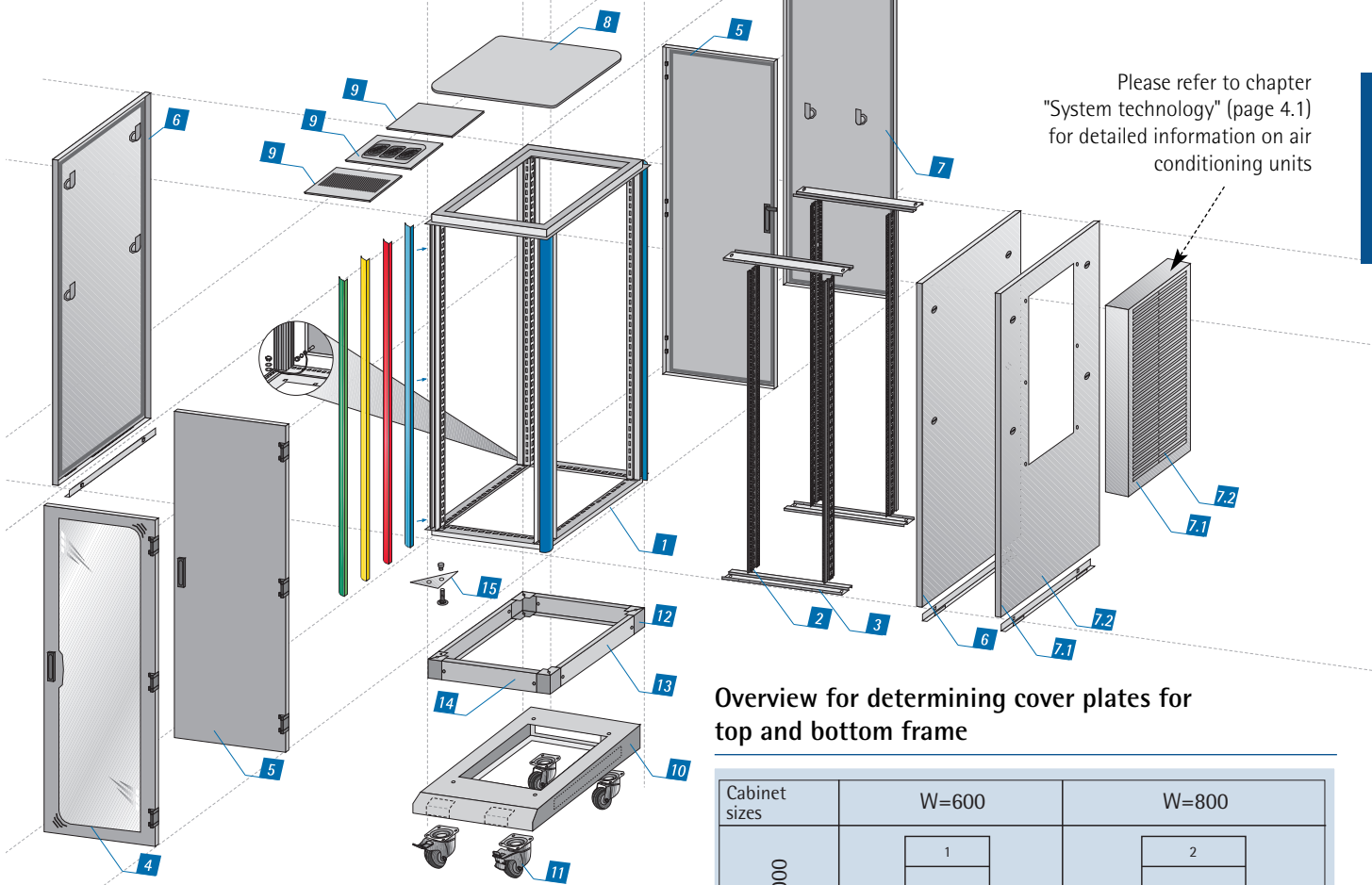
Order number
64-0071-00

### Screw set M5/M6



- for assembly of the 19" components

Description	Order number
M 5	630-991
M 6	630-994



Please refer to chapter "System technology" (page 4.1) for detailed information on air conditioning units

3 TiRAX 318 cabinet system

**Overview for determining cover plates for top and bottom frame**

Cabinet sizes	W=600	W=800
D=1000	1	2
	5	6
	1	2

Overview of modular assembly of server cabinets

Position no.	1	2	3	4	5	6	7	7.1
Description	Cabinet frame	Vertical mounting	Traverse for 19" assembly	Viewing door	Closed door	Side sash door	Rear sash door	Sash door with air conditioning unit 1050 W
HxWxD								
2000x600x1000	31-8610-10	31-6120-42	31-8120-00	31-8620-01	31-8620-02	31-8020-03	31-8620-03	31-8020-31
2000x800x1000	31-8810-10	31-6120-42	31-8120-04	31-8820-01	31-8820-02	31-8020-03	31-8820-03	31-8020-31
	7.2	8	9			9		
	Sash door with air conditioning unit 2050 W	Top plate	Cover plate 1			Cover plate 2		
			closed	fan module	cable entry	closed	fan module	cable entry
2000x600x1000	31-8020-32	31-8020-60	31-8110-01	31-8110-07	31-8110-05	-	-	-
2000x800x1000	31-8020-32	31-8020-80	-	-	-	31-8110-02	31-8110-08	31-8110-06
	9	9	10	11	12	13	14	15
	Cover plate 5	Cover plate 6	Base with tilt prevention	Set of rollers for base with tilt prevention	Base corner set	Side base panels D=1000	Base cross panels	Adjusting foot for cabinet frame
	closed	closed						
2000x600x1000	31-8110-25	-	31-8026-11	31-6026-50	31-8100-00	31-8100-30	31-8100-10	31-8026-00
2000x800x1000	-	31-8110-26	31-8028-11	31-6026-50	31-8100-00	31-8100-30	31-8100-20	31-8026-00



Visions become reality...



Server room