Rittal – The System.

Faster – better – everywhere.

▶ # Technical System Catalogue TS 8 Baying Systems

RITTAL

FRIEDHELM **LOH** GROUP

TS 8 baying systems

Ingeniously simple, fully symmetrical and patented worldwide – that is the secret behind a successful design principle which has been sold more than 10 million times for use in all industries and applications. The TS 8 enclosure system has established a new universal standard, raising the bar across all sectors.

- Full flexibility with the use of accessories, thanks to a fully symmetrical frame section, with identical accessories for the width and depth
- High protection category of up to IP 66 NEMA 4/4X
- Bayable on all sides
- Door hinge is easily swapped to the opposite side without machining
- Automatic potential equalisation via the assembly components with all enclosure panels and gland plates
- Enclosure has a high load-bearing capacity of up to 1400 kg

- Simple, fast assembly of the mounting plate. Slide rails may be removed and installed in the side frame section
- Effective space utilisation by using the inner and outer mounting level of the frame section
- The integral enclosure protection channel prevents the ingress of dirt and water when the door is opened
- Maximum space for cable entry with multiple divided gland plates
- Optimum sealing thanks to 4-point lock system

The TS 8 extrusion
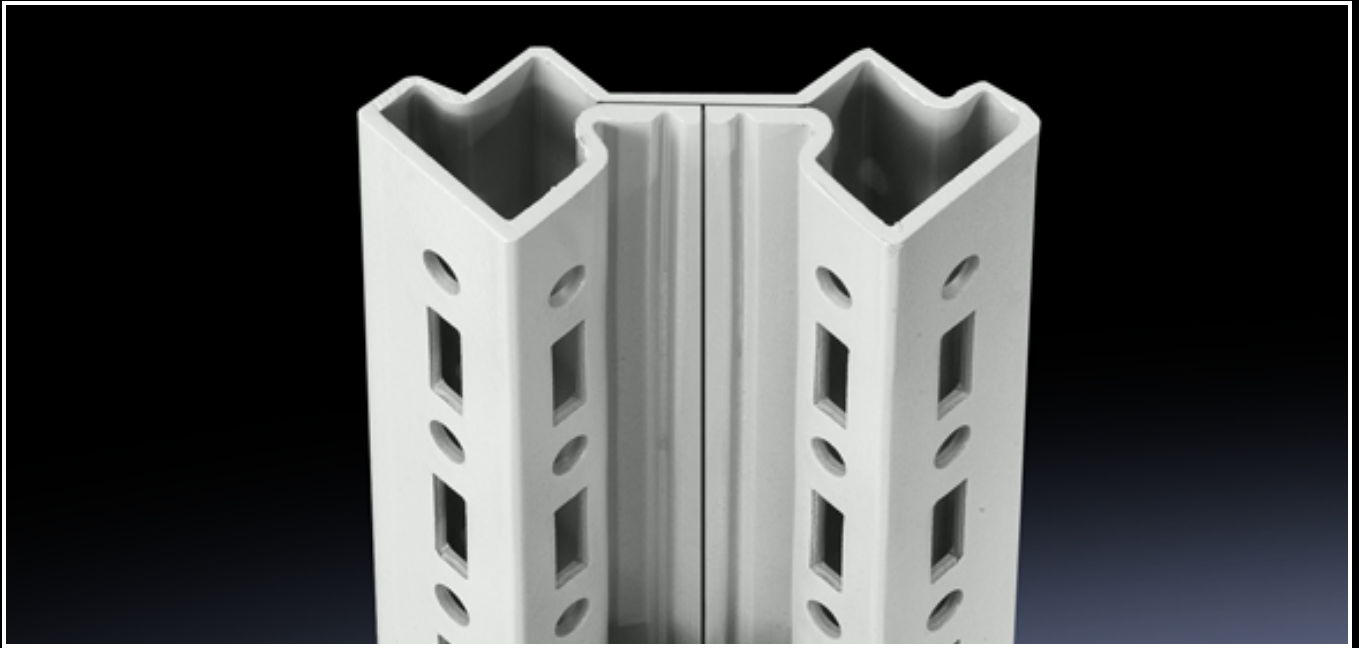
The extrusion is the heart of the TS 8, with its ingenious design offering more efficiency, more flexibility, more quality and more reliability.

The functional details of its extrusion have elevated the TS 8 to a global standard, and hence a genuine classic. The symmetry is an ingeniously simple concept on which all the customer benefits offered by the TS 8 are based.
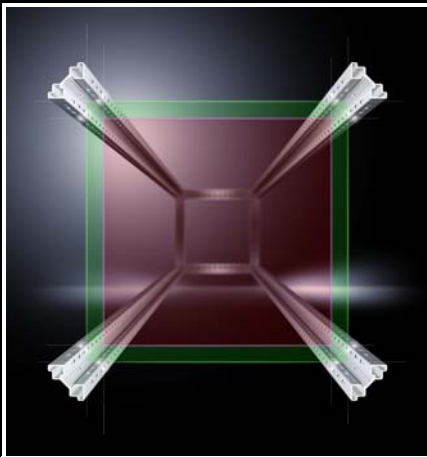
Space gains
15% more installation space with a cleverly designed two-level concept

Stability
The 16-fold profiled vertical extrusion creates a symmetrical TS 8 double pillar with an enormous load capacity

Symmetry
Baying is supported in all directions, thanks to identical pitch patterns in the width and depth

Basic features at a glance

TS 8 baying systems	TS 8 sheet steel	SE 8 sheet steel IP 66/NEMA 4	TS 8 electronic enclosure	TS 8 EMC	TS 8 stainless steel
Material	Sheet steel	Sheet steel	Front frame: aluminium; Rest: sheet steel	Sheet steel with aluminium zinc coating	Stainless steel 1.4301 (AISI 304)
Interior installation Supply includes	Mounting plate	Mounting plate	482.6 mm (19˝) mounting angles	Mounting plate	Mounting plate
Door	With sheet steel door(s) at the front	With sheet steel door at the front	Without front door, with sheet steel rear door	With sheet steel door at the front, with aluminium zinc coating	With stainless steel door 1.4301 (AISI 304) at the front
Protection category IP	IP 55	IP 66	None, as open front	IP 55	IP 55
NEMA protection category	NEMA 12	NEMA 4	None, as open front	NEMA 12	NEMA 12
IEC 61 439-1/-2 compliant	■	■	■	■	■

TS 8 stainless steel IP 66/NEMA 4X	TS 8 distribution enclosure	TS 8 modular enclosure	TS 8 fuse-switch-disconnector enclosure	TS 8 busbar enclosure	TS IT
Stainless steel 1.4301 (AISI 304)	Sheet steel	Sheet steel	Sheet steel	Sheet steel	Sheet steel
Mounting plate	Mounting plate	–	Punched section without mounting flange 23 x 73 mm	–	482.6 mm (19') level front and rear
With stainless steel door 1.4301 (AISI 304) at the front	With sheet steel door(s) at the front	Without front door, for individual front design with partial doors (accessories)	With sheet steel door on the front right, left front open	With front trim panel	Depending on variant, with glazed door (server enclosure) or vented door (network enclosure)
IP 66	IP 55	Up to IP 54, depending on the panels	Up to IP 3X, depending on the panels	IP 55	Depending on variant
NEMA 4X	NEMA 12	–	–	–	Depending on variant
■	■	■	■	■	Standard not relevant for IT

TS 8 baying systems

Internationally recognised approvals and certifications

Rittal products boast a wealth of internationally recognised approvals and certifications, and comply with the most exacting and globally recognised quality standards.

- All components are subjected to the most stringent testing in accordance with international standards and regulations
- The consistently high product quality is ensured by a comprehensive quality management system
- Regular production inspections by external test institutes guarantee compliance with global standards

Rittal offers approvals for maritime use in the following classes:

- Lloyds Register (LR)
- Germanischer Lloyd (GL)
- Det Norske Veritas (DNV)
- American Bureau of Shipping (ABS)

Additionally, the TS 8 meets all requirements for switchgear enclosures to IEC 61439.

All current approvals and certifications can be found on the Rittal website.

CAD data

Rittal's RiCAD-3D online CAD component library is your one-stop source of engineering, climate control, IT and power solutions for a wide variety of enclosures and applications. With professional data for every CAD system, the efficiency of your system design is enhanced and assembly times are reduced.

- CAD data is also available as an app for use on the move and on the Rittal website
- Data can be requested via e-mail
- Choose from over 70 CAD formats
- Direct link to the relevant page in the latest Rittal Catalogue for an "all-in-one" solution
- Optimum planning confidence thanks to accurate, validated drawings
- Saves time by dispensing with the need for lengthy remodelling
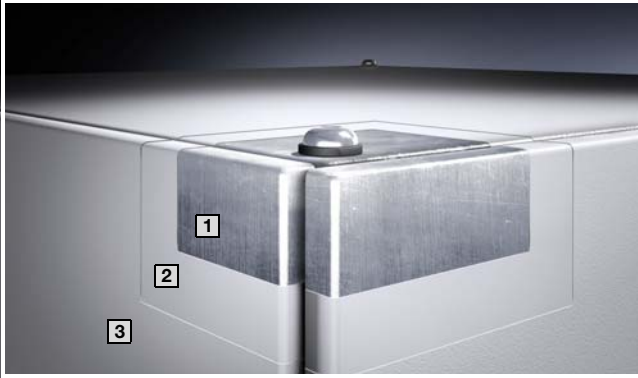
TS 8 baying systems

CAE data

Consistent product data from the EPLAN Data Portal supports interdisciplinary engineering in electrical design and enclosure project management. Integrating the portal solution into the Eplan platform ensures that information is directly available to the engineering team.

▶ **EPLAN Data Portal**
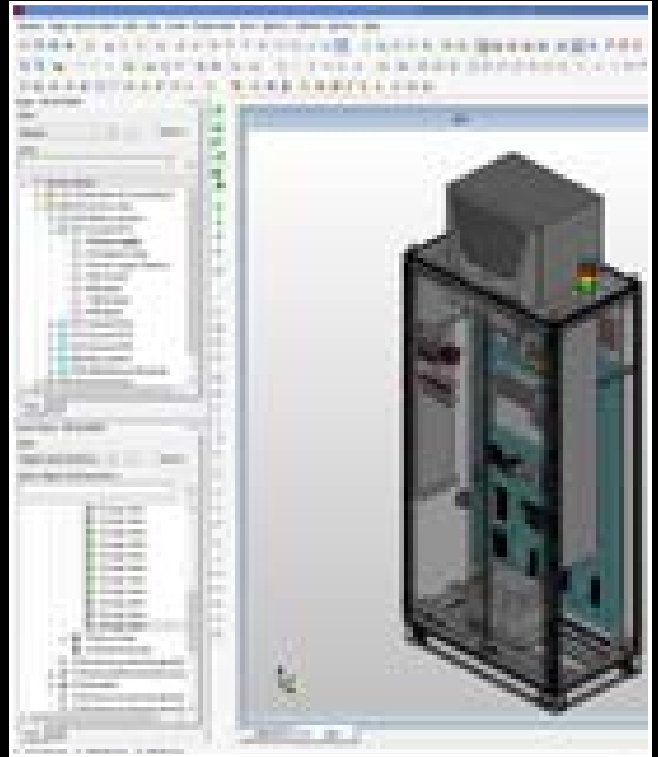
TS 8 baying systems

Optimum surface protection

The three-phase surface finish of the TS 8 baying system promises optimum corrosion protection and is resistant to mineral oils, lubricants, machining emulsions and solvents such as those used in cleaning.

Maximum quality is a 3-step process:

1 1st phase: Nanoceramic primer

2 2nd phase: Electrophoretic dipcoat priming

3 3rd phase: Textured powder coating

A Metal with triple surface treatment (Rittal standard) following a 180-hour salt spray mist test

B Powder-coating of the metal only takes place after a 180-hour salt spray mist test has been completed

TS 8 baying systems

Accessories included with the supply

All this is included with the supply as standard:
- Earthing accessories
- Baying seal
- Seal for gland plates
- Enclosure key
- Assembly parts
- Mounting plate slide rails
- TS support strips (for enclosures from 600 mm depth)
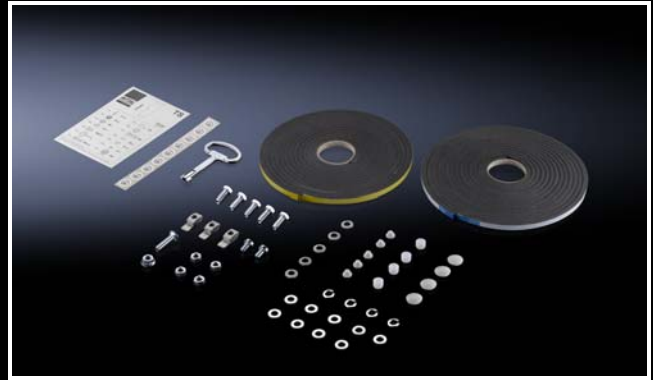
PU foam seal
- Seamlessly foamed-in
- Temperature resistant from -20°C to +80°C
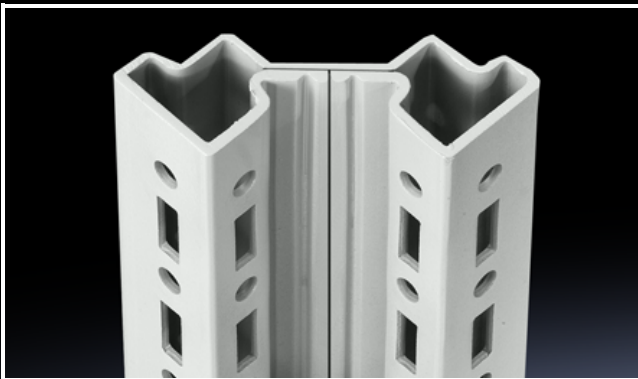- May be over-painted and briefly stove-enamelled at up to 180°C

Integral rain channel
- Prevents dirt and liquids from collecting on the seal
- Removes liquids in a targeted way
- Protects the interior from dirt and water deposits when the door is opened

TS 8 baying systems

Unlimited baying options
- Around corners, forwards, backwards, to the left or right or even upwards – the baying options are unlimited
- Baying connection technology for fast assembly and stable, permanent baying
- Bayed TS 8 enclosures may be transported
- Doors on all fronts

▶ **Baying**

High stability/load capacity
- Tested load capacity of the TS 8 frame up to 1400 kg
- The16-fold profiled extrusion of the TS 8 frame guarantees exceptional stability – with 15% less weight and, at the same time, 30% greater stability than comparable enclosures

TS 8 baying systems

Symmetrical frame

- Symmetrical layout supports access from all sides
- Identical system accessories in the width and depth for interior installation
- Bayable on all sides, thanks to an identical pitch pattern in the depth and width

Securely locked

- Smooth-running locking rod with secure 4-point lock and double-bit insert
- Easily exchanged for comfort handles for semi-cylinders, comfort handles for lock inserts and standard lock inserts
- Lock is located outside of the sealing range
- Easily closed with one hand

Interchangeable door hinge

- Door hinge may be swapped over without machining
- Concealed 130° hinges
- Captive hinge pins

▶ **Swapping the door hinge**

Tubular door frame

- With TS system punchings on a 25 mm pitch pattern
- For the attachment of trunking, utility lecterns, rail systems etc.
- By installing rail systems in the door, space utilisation is imporved even further

TS 8 baying systems
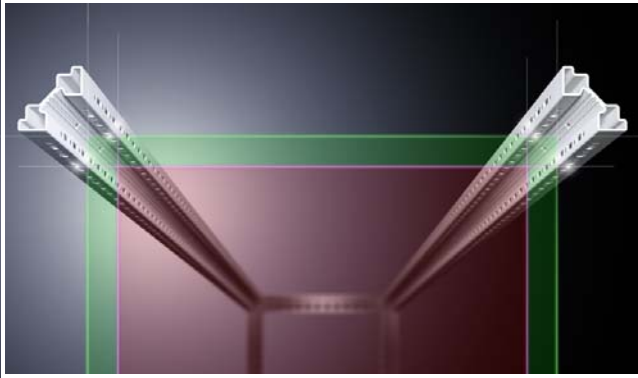
2nd mounting level

- Up to 15% better space utilisation, thanks to consistent use of the outer mounting level
- Extensive system accessories tailored to the frame section for individual interior installation, such as cable trunking and system lights

[1] Use of the second level with cable duct

[2] Use of the second level with LED system light

▶ **Two-level concept**
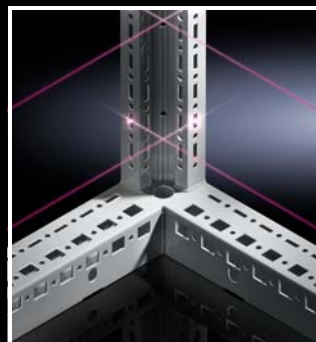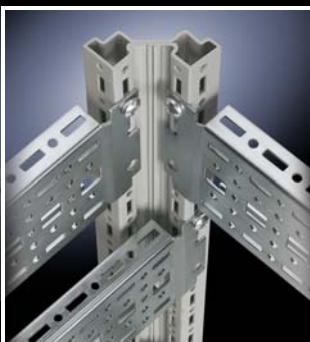
Universal interior installation

- Two symmetrical levels with identical pitch patterns in the width and depth
- Interior installation with two mounting levels
- Straightforward hole count allows you to find your way around the enclosure with ease

TS 8 baying systems

Internal mounting
- Plastic skids allow the mounting plate to slide easily on slide rails
- Slide rails – to aid installation of the mounting plate – can later be used as punched rails for interior installation
- Easy positioning of the mounting plate on a 25 mm pitch pattern
- Tool-free attachment of the mounting plate bracket in the depth
- Retrospective earthing is possible at any time, by inserting the earthing screw from the front
- Convenient one-man assembly of the mounting plate thanks to an attachment aid with mounting clips – optional screw-fastening

1 Fix the mounting plate

2 Secure the mounting plate
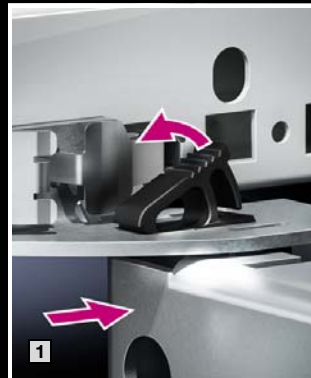
TS 8 baying systems
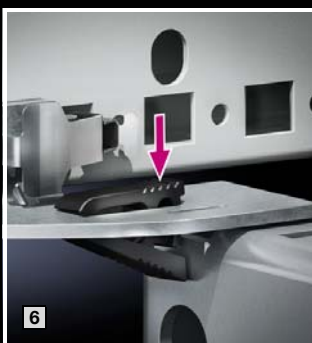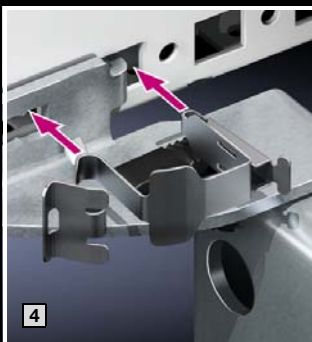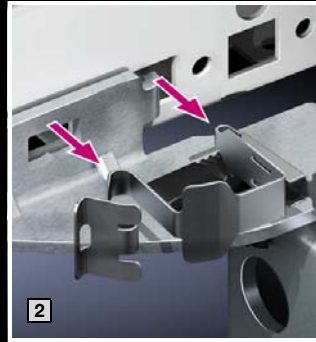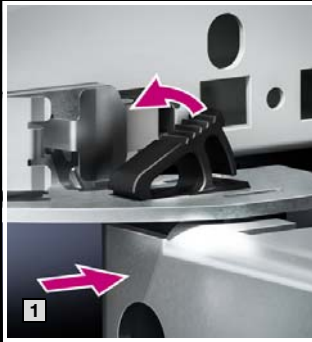
Depth adjuster
- Tool-free adjustment of the mounting plate depth, thanks to simple clip attachment

1 Loosen the fastener

2 Loosen the clip attachment, move the mounting plate bracket

3 Slide the mounting plate into the desired position

4 Lock the clip attachment

5 Fix the mounting plate

6 Secure the mounting plate

▶ **Mounting plate handling**

TS 8 baying systems
Accessories

Side installation
With slide rails for mounting plate TS

- Installation in the front (e.g. swing frames) will not interfere with mounting plate installation
- For easy installation of heavy, populated mounting plates

Width divider

- Width divider divides 1000 or 1200 mm wide TS enclosures into two halves, so that two separate mounting plates can be installed

Partial mounting plates

- Create additional mounting levels
- Universal interior installation, also in conjunction with punched sections with mounting flanges and support strips
- Defective assemblies are quickly and easily replaced

TS 8 baying systems

Automatic potential equalisation

- In standard enclosures, all panels and gland plates may be conductively connected to one another via assembly components
- Where there are no electrical devices mounted on the panel parts, it is possible to dispense with earth straps
- Makes assembly/removal of all enclosure panels easier
- Creates enhanced safety

1 Side panel holder

2 Automatic potential equalisation of side panel

3 Assembly components

4 Automatic potential equalisation of gland plate

5 Lifting eye

6 Automatic potential equalisation of roof plate

▶ **Automatic potential equalisation**

TS 8 baying systems

Safe earthing
- PE conductor connection points on all relevant parts
- Earthing bolts with large contact disc, paint-free and corrosion-proof
- Simply insert earthing bolts into the mounting plate from the front and screw-fasten.

Earthing accessories
- Earth straps in various lengths and designs, earth rails, central earth points and PE busbars
- Earthing braids offer highly flexible connection options for earthing, particularly because with moving parts such as doors, this avoids the risk of a cable breaking

[1] Earth strap

[2] Earthing braid

TS 8 baying systems

Removable roof plate

- Roof plate variants for cable entry and climate control
- Simple machining of the roof for PG screwed cable glands, gland plates, cooling units
- Removable eyebolts may be exchanged for roof mounting screws
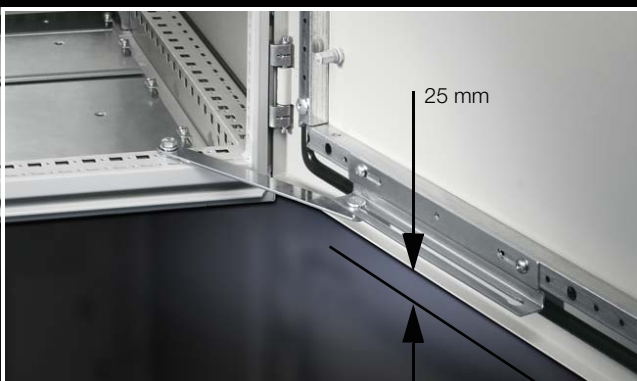
25 mm

Large floor clearance

- Floor clearance of doors: 25 mm
- Door can still be opened on uneven surfaces or in the case of obstacles such as screws, tools etc.

TS 8 baying systems
Accessories

Cable entry options
from all sides

Roof:
- Cable entry in the roof via cable entry gland with protection category IP 55
- Gland available with various knockouts, sealing membranes, entry glands, or sealed

Side:
- Extensive accessories for cable entry via the side panel, e.g. with
  - Stepped collar
  - Connector glands for preassembled cables with sealing frame and modular sealing modules
  - Divider panel and modular plate systems for the optional use of cable entry modules for pre-assembled connectors, cable sleeve modules or modules for 16-/24-pole connectors

Base:
- Multi-divided gland plates in a wide variety of variants
- Maximum space for cable entry
- Accessory modules for every type of cable entry, sealing and clamping
- With a square base area, cable entry may also be installed in the width

▶ **TS 8 cable entry**
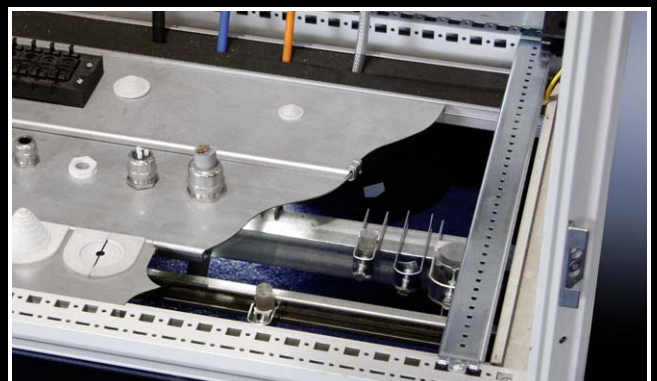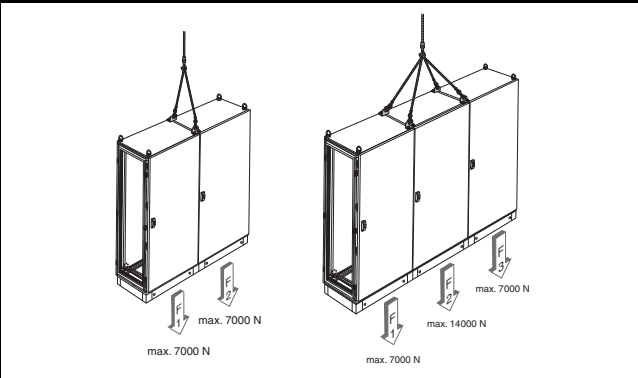
TS 8 baying systems
Accessories

Transportation

- The TS 8 is delivered as standard with lifting eyes for transportation
- Rittal additionally offers a combination angle for transporting bayed TS 8 suites by crane
- When using the Flex-Block or TS base/plinth systems of individual enclosures or bayed suites, transportation is by forklift truck

Note: Please refer to the separate load brochure

🌐 **TS 8 load brochure**

TS 8 baying systems
Accessories – lock systems

TS 8 standard lock

Comfort handles	For lock inserts	For padlock and lock inserts	With lock insert, lock E1[1]	For semi-cylinder	Prepared for ASSA lock system	Comfort handle with code
	Model No.					
RAL 7035	**8611.020**	**8611.290**	**8611.045**	**8611.070**	**8611.280**	**7200.800**
RAL 9005	**8611.350**	–	–	**8611.360**	–	**7200.801**
Matt nickel-plated	**8611.330**	–	–	**8611.340**	–	–

[1] Only for use with VW, Audi, SEAT, SkodaAuto, supplied without key

Lock inserts, type F	
	Model No.
7 mm square	**8611.100**
8 mm square	**8611.110**
7 mm triangular	**8611.120**
8 mm triangular	**8611.130**
Screwdriver	**8611.140**
Daimler insert	**8611.150**
3 mm double-bit	**8611.160**
Fiat	**8611.170**
6.5 mm triangular (CNOMO)	**8611.220**

Lock inserts for handle systems	Lock and push-button inserts		Semi-cylinder
	Model No.		
Lock insert, lock no. 3524 E[1]	**8611.180**	**2467.000**	–
Push-button insert	**8611.190**	**2468.000**	–
Push-button and lock insert[1]	**8611.200[2]**	**2469.000[3]**	–
to DIN 18 252[4]	–	–	**9785.040**
	–	–	**9785.042[5]**

[1] With two keys
[2] Lock no. 12321, no other lock is possible
[3] Lock no. 2123, no other lock is possible

[4] With 3 keys for each lock insert
[5] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs

More detailed information at:
**www.rittal.com**

TS 8 baying systems
Accessories – rail systems

It all fits together perfectly – no corner, no level in the enclosure is left unused.
This facilitates high packaging densities and significantly reduced enclosure volumes.
Allow us to inspire you, and give it a try.

- Simple installation without machining
- Identical pitch pattern in the width and depth
- High static load capacity, even for heavy installations
- Easily used in combination with mounting plates and partial mounting plates
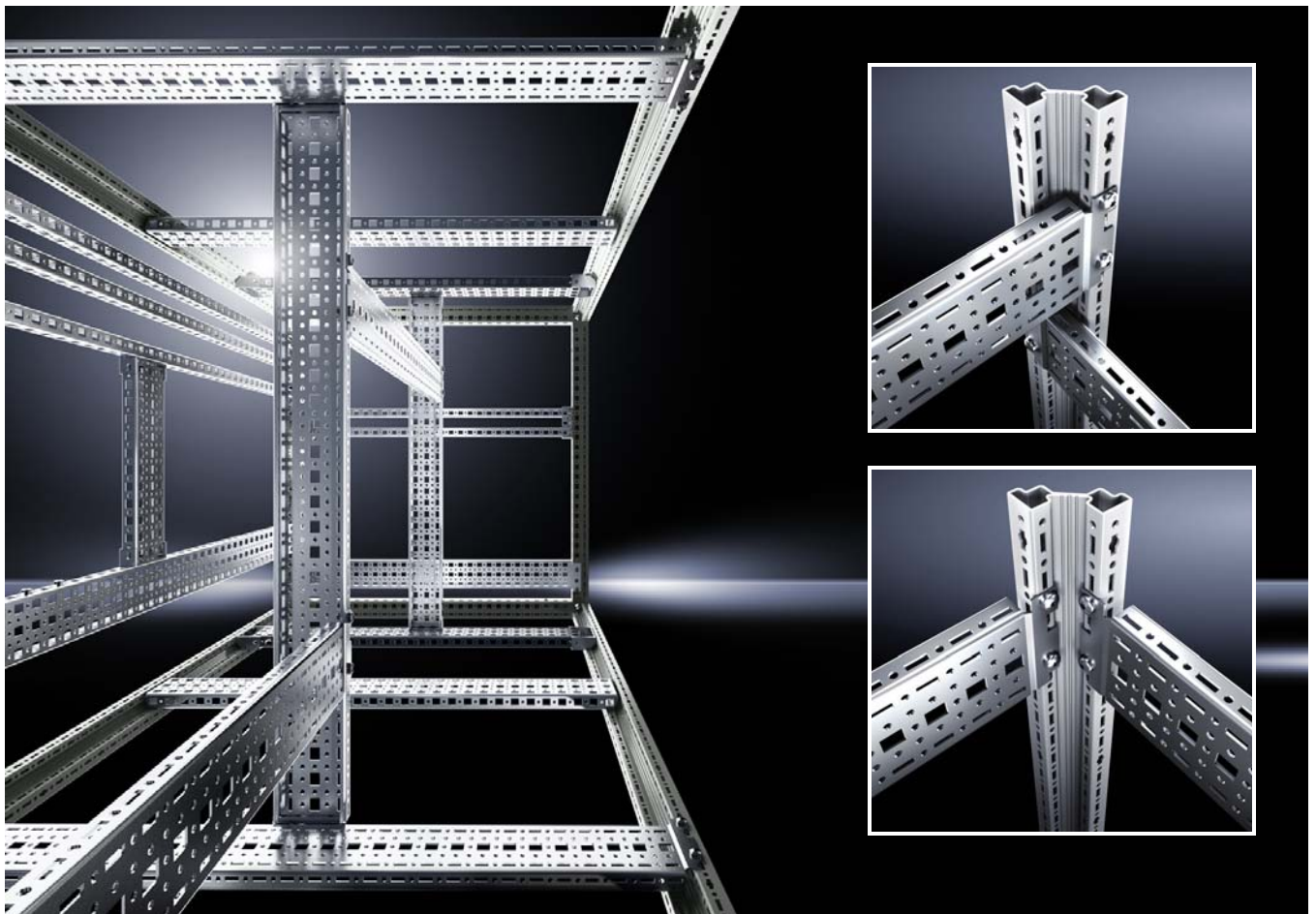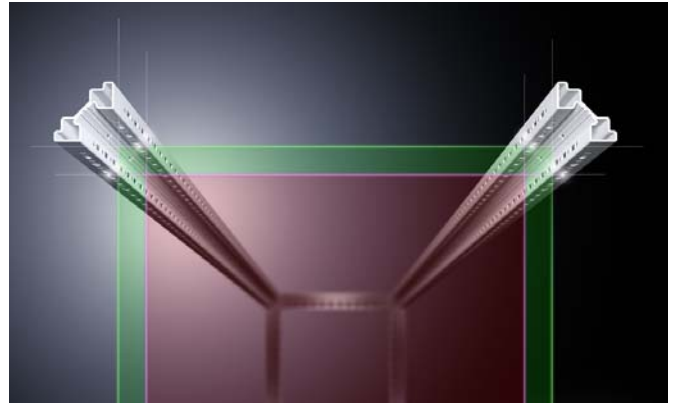
TS 8 baying systems
Accessories – rail systems

As standard, rail systems in the TS 8 baying system contain:

Mounting plate slide rails
- Used for assembling/removing the mounting plate. May be removed after installing the mounting plate and used at any preferred depth and cover width for cable routing, installed equipment, cable clamping etc. inside the enclosure.

Support strips
- From an enclosure depth of 600 mm, TS support strips are installed in the enclosure depth as a shipping brace. These may be removed and reused, e.g. for installing cable trunking, cable routing, cable clamping etc.

Basic rails available as Rittal accessories:
The 25 mm pitch pattern of holes means that any point in the enclosure can be accessed with the basic rails on a three-dimensional pitch pattern.

TS punched section with mounting flange 17 x 73 mm for the inner or outer level
- For all applications
- For simple locating and securing
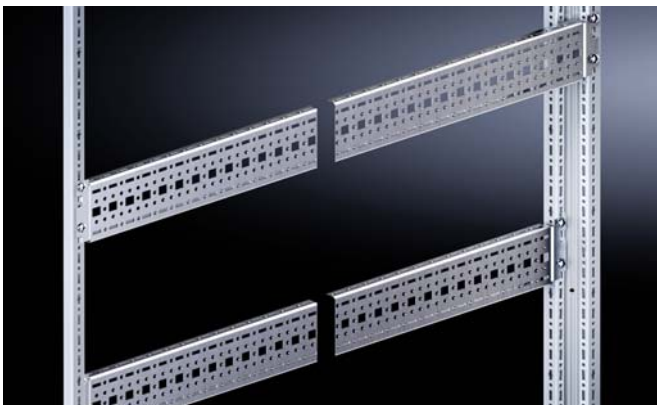
TS punched section with mounting flange 23 x 73 mm for the inner level
- Locate directly into the extrusion and secure with screws; locating hooks carry the load
- May also be used for heavy loads, such as transformers
- For enhanced safety requirements, cage nuts with a metric thread > M8 may be used for installing the client's own components
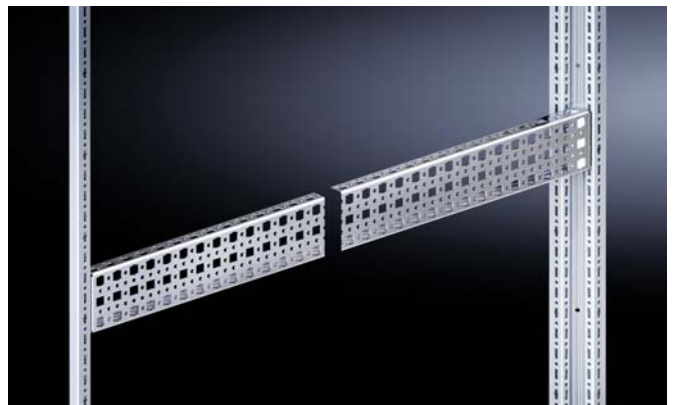
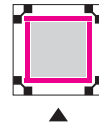# TS 8 baying systems
Accessories – rail systems

Clearance width
Depending on attachment, the following values apply to the clearance between the mounting levels:
- Outer mounting level =
  Enclosure width and depth minus 42 mm
- Inner mounting level =
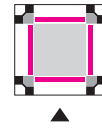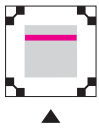 Enclosure width and depth minus 88 mm

Outer level

Inner level

Outer and
inner level

PS-compatible
installation

Roof installation

Installation with:
- PS punched section with mounting flange
- PS punched section without mounting flange
- PS punched rail in three mounting variants
- TS punched rails
- TS punched section without mounting flange
- TS punched section with mounting flange
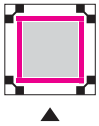
TS 8 rails
for the outer level

- TS punched section with mounting flange
- TS support strip
- TS punched rail

Benefits:
- Largest clearance width
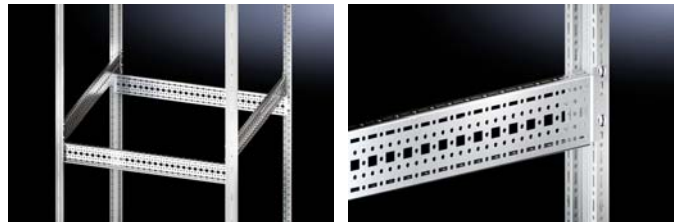- May be installed directly, on one level all round
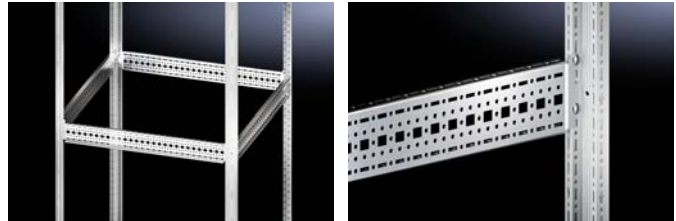
TS 8 rails, PS rail
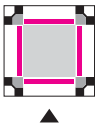## for the inner level

- TS punched section with mounting flange
- TS support strip
- PS punched section without mounting flange,
  with TS support bracket

Benefits:
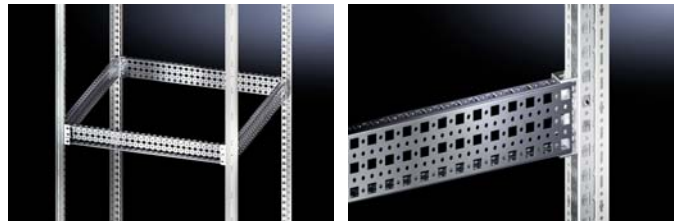- Use of a second level
- Height-offset mounting all-round

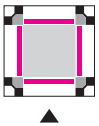## With adaptor rail
for PS compatibility

On one level all round with:
- PS punched section without mounting flange,
  with PS support bracket
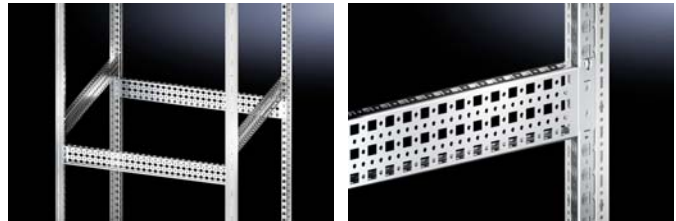- PS punched rail with PS angle bracket,
  mounting bracket or support bracket

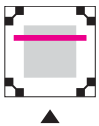## With adaptor rail
for PS compatibility

Height-offset in the width and depth with:
- PS punched section with mounting flange
- PS punched rail with mounting bracket
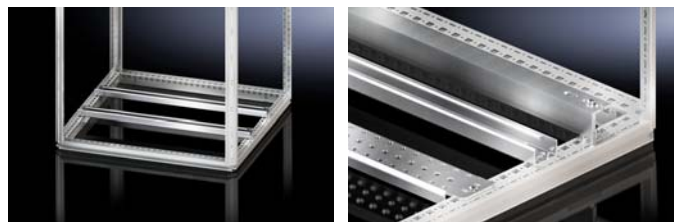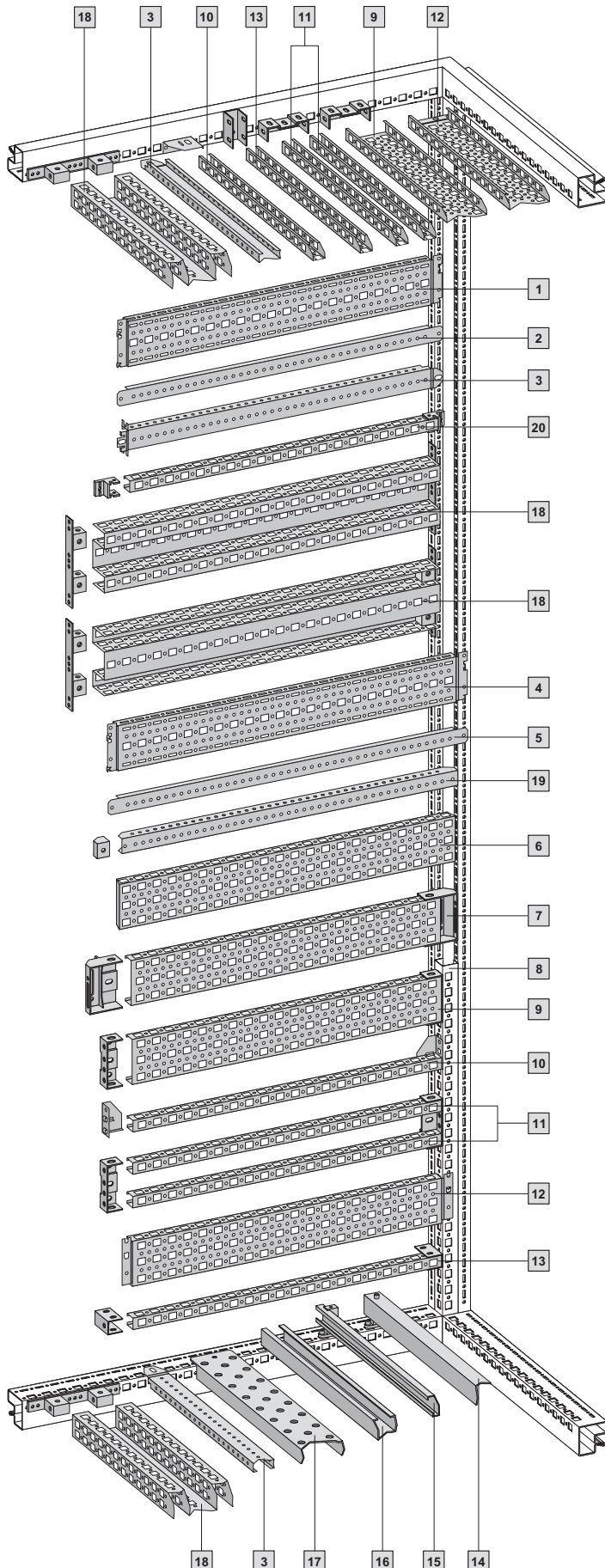- TS punched rail

Base installation

Installation with:
- Cable clamp rails
- C rails 30/15 with bracket/spacer
- System support rails
- Support rail
- TS punched rails

TS 8 baying systems
Accessories – rail systems

Roof installation

Punched sections and rails may be mounted on the horizontal enclosure sections in both the width and depth.

Installation accessories

1	TS punched section with mounting flange 17 x 73 mm for the outer level
2	TS support strip for the outer level
3	TS punched rail 18 x 38 mm[1] for the ■ outer level ■ horizontal enclosure sections ■ adaptor rail for PS compatibility
4	TS punched section with mounting flange 17 x 73 mm for the inner level
5	TS support strip for the inner level
6	TS punched section with mounting flange 23 x 73 mm for the inner level
7	PS punched section without mounting flange 23 x 73 mm, with TS support bracket (alternatively with one or two punched rails 23 x 23 mm)
8	Adaptor rail for PS compatibility
9	PS punched section without mounting flange 23 x 73 mm with PS support bracket
10	PS punched rail 23 x 23 mm with angle bracket
11	PS punched rails 23 x 23 mm with PS support bracket (alternatively with one or two punched rails 23 x 23 mm)
12	PS punched section with mounting flange 23 x 73 mm
13	PS punched rail 23 x 23 mm with PS mounting bracket
14	Cable clamp rail
15	C rails 30/15 with bracket/spacer
16	System support rails
17	Support rail
18	TS punched section without mounting flange 45 x 88 mm
19	TS punched rail 25 x 38 mm with snap-on nut
20	PS punched rail 23 x 23 mm with mounting bracket TS

[1] Two TS punched rails 18 x 38 mm are included in the supply of enclosures with a mounting plate to serve as an installation aid. After installing the mounting plate, the TS punched rail may be inserted, as shown here.

Base installation

Punched sections and rails may be mounted on the horizontal enclosure sections in both the width and depth.
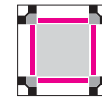
TS 8 baying systems
Accessories – rail systems

Attachment may be made at any point in the TS 8 enclosure space. Not only with horizontal rail installations directly between the TS sections, but by combin- **ing vertical and horizontal rails, any given mounting level in the width, height and depth may be achieved.**
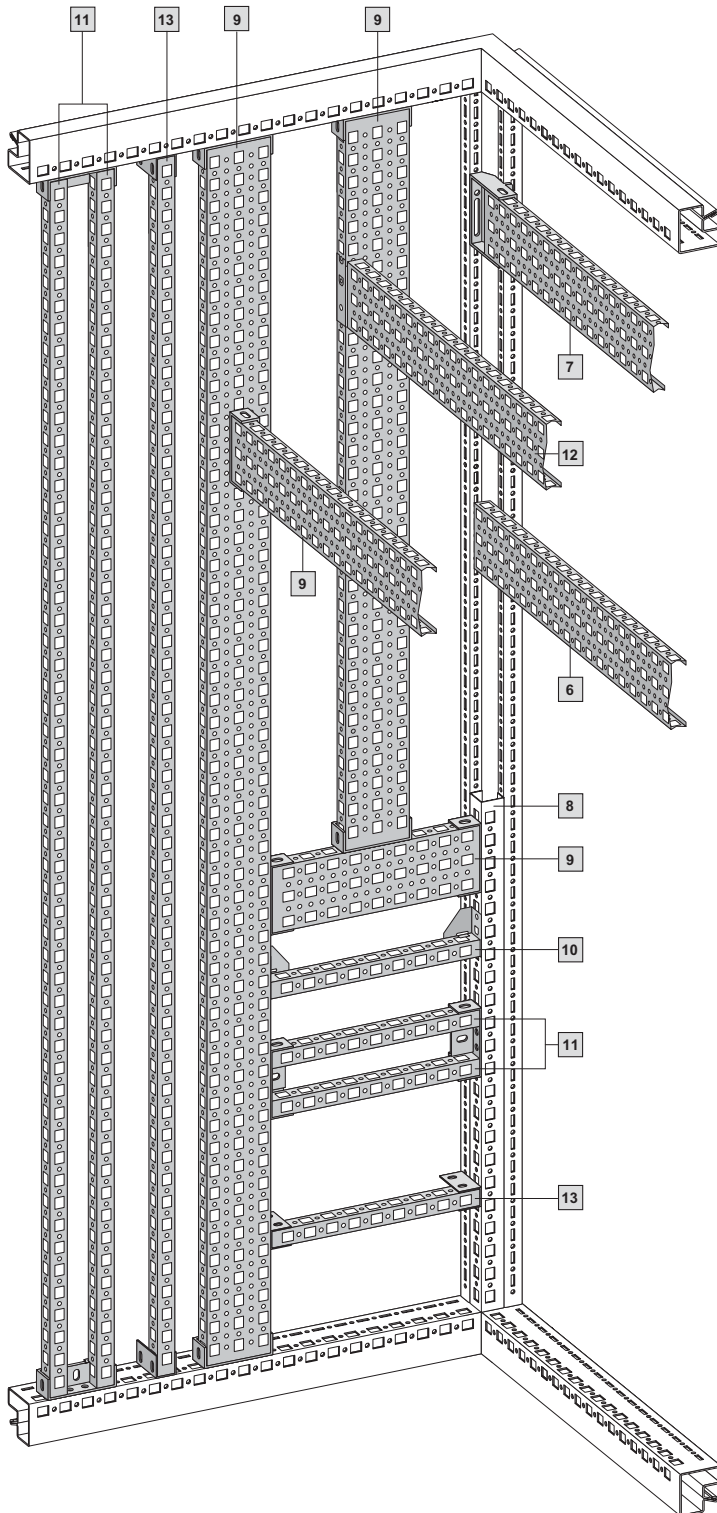
Vertical mounting levels

The basis for a second mounting level across the entire enclosure height is quickly achieved, e.g. with two PS punched sections without mounting flanges 23 x 73 mm **9**. Between these two sections, configuration may be achieved with PS punched rails **10, 11** and **13**, with PS punched sections without mounting flanges **9** and PS punched sections with mounting flanges **12**. When using the adaptor rail for PS compatibility **8**, installation is easily achieved across a suitable sub-height, or with suitable enclosure dimensions, across a sub-width or sub-depth.

Installation accessories
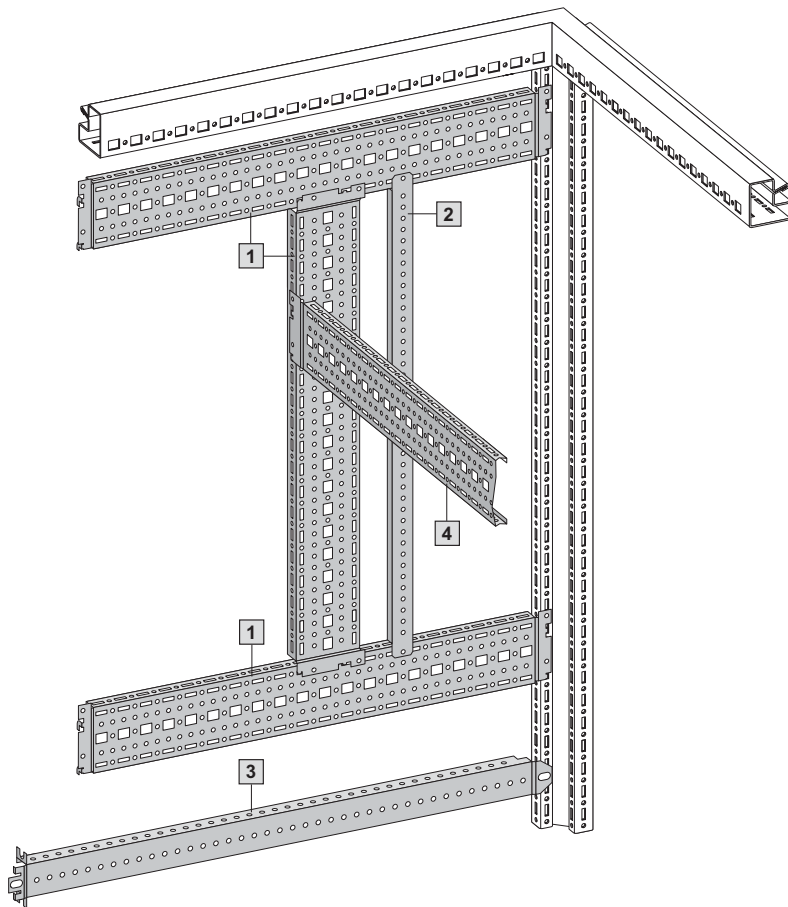(Consecutive numbering in accordance with diagram on page 25)

6	TS punched section with mounting flange 23 x 73 mm for the inner level
7	PS punched section without mounting flange 23 x 73 mm, with TS support bracket (alternatively with one or two punched rails 23 x 23 mm)
8	Adaptor rail for PS compatibility
9	PS punched section without mounting flange 23 x 73 mm with PS support bracket
10	PS punched rail 23 x 23 mm with angle bracket
11	PS punched rails 23 x 23 mm with PS support bracket (alternatively with one or two punched rails 23 x 23 mm)
12	PS punched section with mounting flange 23 x 73 mm
13	PS punched rail 23 x 23 mm with PS mounting bracket

If PS punched rails or PS punched sections without mounting flanges are installed vertically on roof or base frames, a PS rail is also required for horizontal sub-division.

TS 8 baying systems
Accessories – rail systems
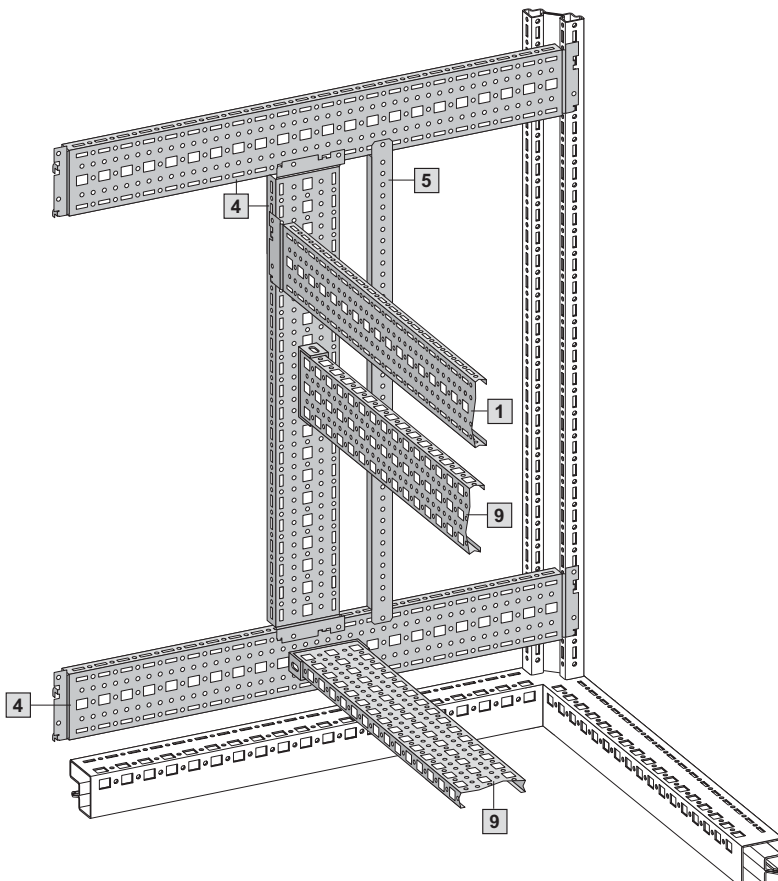

Vertical outer mounting level

Optimum space utilisation and super-fast assembly by mounting the TS punched section with mounting flange directly onto the outer level of the TS 8 vertical section. Simply snap into position and secure!

Installation accessories
(Consecutive numbering in accordance with diagram on page 25)

1	TS punched section with mounting flange 17 x 73 mm for the outer level
2	TS support strip for the outer level
3	TS punched rail 18 x 38 mm[1] for the ■ outer level ■ horizontal enclosure sections ■ adaptor rail for PS compatibility
4	TS punched section with mounting flange 17 x 73 mm for the inner level

[1] Two TS punched rails 18 x 38 mm are included in the supply of enclosures with a mounting plate to serve as an installation aid. After installing the mounting plate, the TS punched rail may be inserted, as shown here.


Vertical inner mounting level

Separate utilisation of the inner level of the TS 8 vertical section, irrespective of the outer level, creates additional opportunities. Even in one enclosure, all installation systems may complement one another perfectly for brand new, customer-specific solutions. Infinite possibilities!
Simply snap into position, secure, and voila! Super-fast assembly by mounting the TS punched section with mounting flange directly onto the inner level of the TS 8 vertical section.

Installation accessories
(Consecutive numbering in accordance with diagram on page 25)

1	TS punched section with mounting flange 17 x 73 mm for the outer level
4	TS punched section with mounting flange 17 x 23 mm for the inner level
5	TS support strip for the inner level
9	PS punched section without mounting flange 23 x 73 mm with PS support bracket
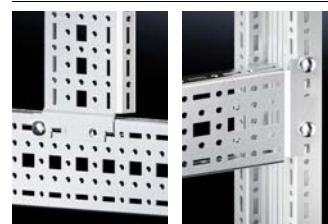
TS 8 baying systems
Accessories – baying system

Bayable on all sides

Whether around corners, forwards, backwards, to the left or right or even upwards if required, the baying options are unlimited.

Side baying
- Conventional baying arrangement
- Often used in the automotive industry

Baying back-to-back
- Enclosures are accessible/usable from both sides
- Often used with high packaging densities, e.g. with power distributors, where large numbers of enclosures must be accommodated in a confined space

Corner baying
- In areas where space is limited
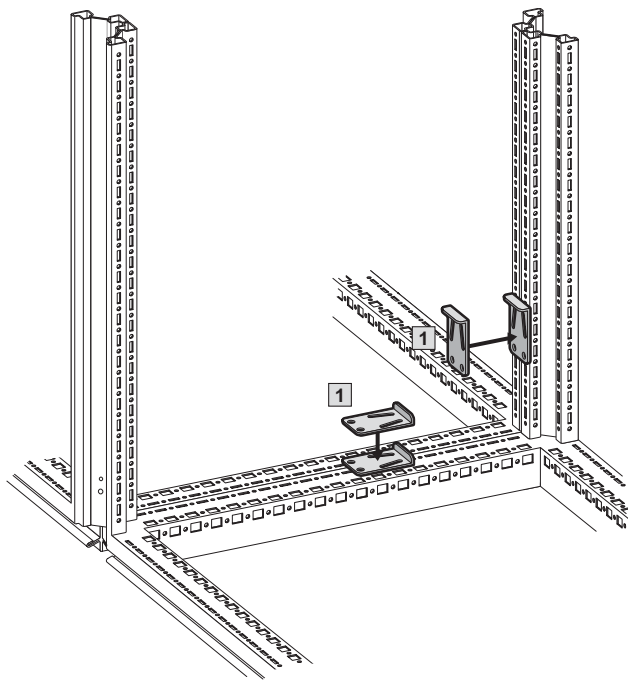- Often used in the power distribution sector and in mechanical and plant engineering

Baying upwards
- For use in all situations where exceptionally tall enclosures are needed due to a lack of space. To this end, Rittal offers a solution based on standard products.
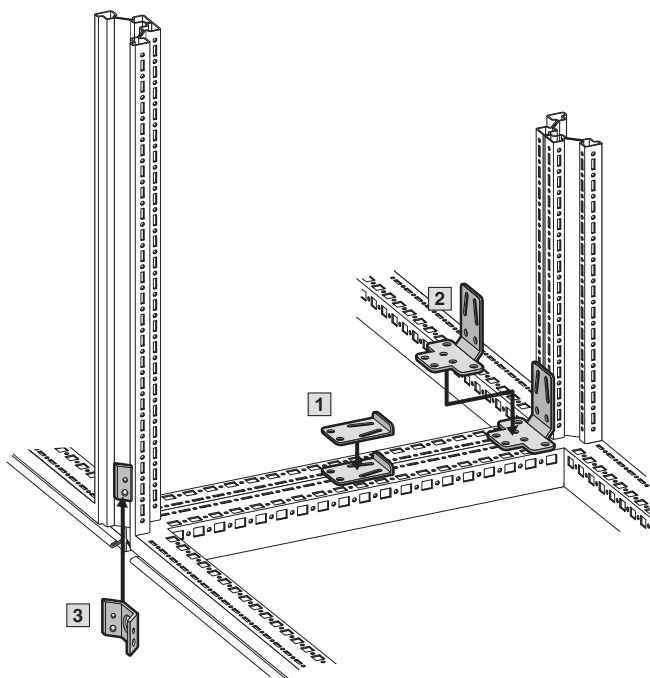- Often used in battery cases or IT server enclosures

TS 8 baying systems
Accessories – baying system

For baying at the installation site or for provisional siting in the workshop

⊡1 Quick-fit baying clamp, one-piece

When transporting bayed enclosures

- Baying from the inside where access to the inner frame section is available
  - Baying bracket and clamp half-way up to compress the seal

⊡1 Quick-fit baying clamp, one-piece

⊡2 Baying bracket for TS/TS

- Baying from the outside if there is no access from the inside
  - Baying connector, external

⊡3 Baying connector, external

Top cover for bayed suites

- A cover with two end caps may additionally be clipped over the seal between two enclosures
  - Protects the baying seal from dirt and liquids
  - Visually improves the appearance of the bayed suite

TS 8 baying systems
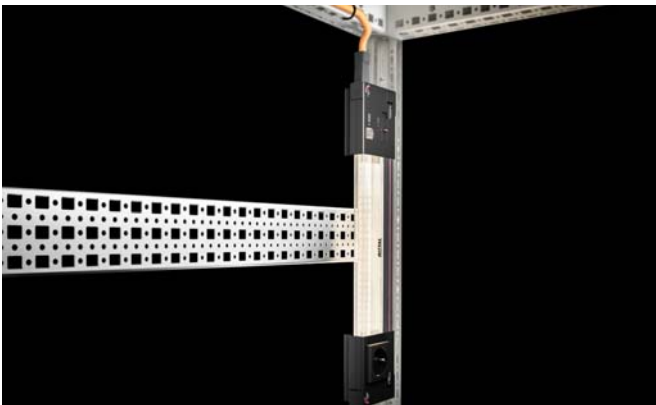## Accessories

LED system light

- Innovative LED technology for even more light into the very last corner
- For direct, tool-free attachment to the horizontal and vertical TS 8 section
- Enormous luminous intensity up to 1,200 lumens
- Intelligent lighting, tailored to the geometry of the enclosure, thanks to a special optical cover with Fresnel structure
- Rotating connectors support installation in the most confined spaces
- Suitable for immediate, global use with wide-range voltage 100 – 240 V (AC) and 24 V (DC)

🌐 **LED system light**

TS 8 baying systems
Accessories

Base/plinth systems

The Rittal base/plinth system is far more than just the base of an enclosure. It offers additional benefits at many levels.

- Base/plinth heights of 100 mm and 200 mm for individual requirements
- Flexibility by combining various base/plinth components
- Allows simple, secure cable routing through the enclosure base
- Makes it easier to transport enclosures, by allowing forklifts and lifting trucks to access underneath
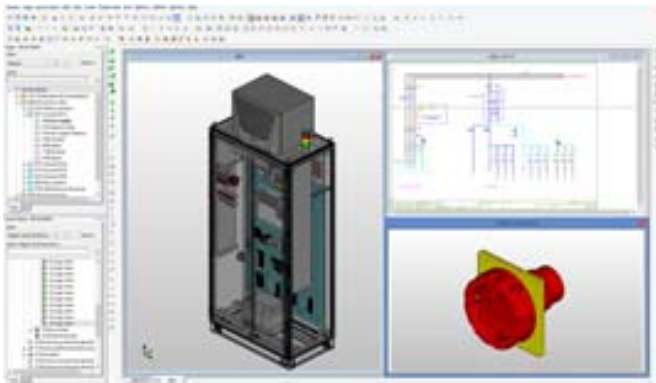
⊕ Flex-Block base/plinth system

⊕ TS base/plinth

# TS 8 baying systems
Engineering and machining

Eplan platform

EPLAN Pro Panel is your software solution for project management and 3D assembly layout of enclosures. Consistent Rittal product data from the EPLAN Data Portal supports interdisciplinary engineering in electrical design and enclosure project management. The virtual 3D product data model provides all the data needed to control NC production machines.

- Planning aids for perfect dimensioning and space utilisation
- Supply of documents for material logistics and manufacturing
- Control interface to mechanical machining and cable preparation machines

⊕ **Eplan platform**
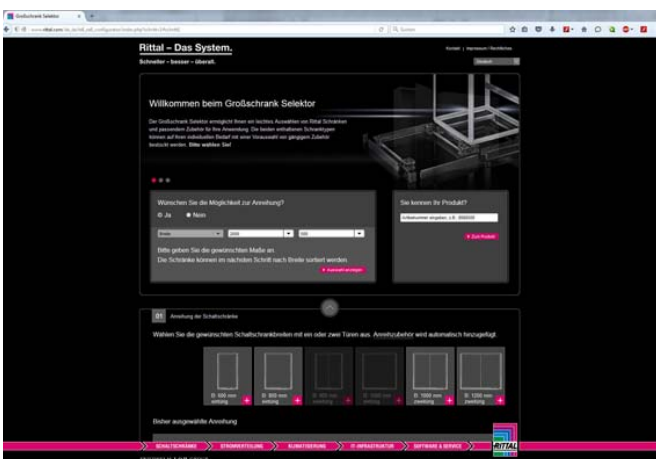
Large enclosure selector

The large enclosure selector allows you to easily select Rittal enclosures and matching accessories for your application. It contains two enclosure types which may be configured to your individual requirements with a pre-selection of standard accessories.

⊕ **Large enclosure selector**

Rittal Automation Systems

Rittal automates enclosure manufacturing.

The new Rittal Automation Systems business unit extends Rittal's comprehensive range of solutions for control and switchgear engineering.

An extensive range of equipment is available for professional workshop operation.

In order to accelerate individual production stages, Rittal Automation Systems offers a range of automation concepts which may be cost-effectively adapted, depending on requirements and the size of the company. The product portfolio ranges from manual tools through to fully automated machining centres.

⊕ **Rittal Automation Systems**

Rittal – The System.

Faster – better – everywhere.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services