

# Rittal – The System.

Faster – better – everywhere.

## ► Technical System Catalogue Hygienic Design



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# Hygienic Design



Hygienic Design terminal boxes and compact enclosures are crucial elements when designing open processes in the food and consumables industry and for clean rooms where ease of cleaning is crucial.

- 1** Silicone seal: Highly resistant to aggressive media; easily replaced
- 2** Inclined roof: Prevents pooling of liquids, and ensures that surfaces are readily visible
- 3** Slot-free design – No hollow spaces between the enclosure and door
- 4** Fine brushed surface finish makes it easier to clean: Fully sealed enclosures with a uniform 400 grain size brushed finish for a uniform surface roughness of  $< 8 \mu\text{m}$
- 5** Easy-to-clean lock system: Tailored to the requirements of the food and consumables industry
- 6** Interior installation:
  - Attachment points for fitting interior installation rails, for individual installation in the depth with HD compact enclosures
  - HD terminal boxes can accommodate support rails and KL mounting plates, thanks to the flexible 6.25 mm pitch pattern of installation holes

# Hygienic Design

## Internationally recognised approvals and certifications

The Rittal Hygienic Design is based on European standards and directives, as well as EU Regulations on food safety.

Rittal system solutions for hygienic production in the food and consumables industry are tested by:

- Berufsgenossenschaft für Nahrungsmittel und Gaststätten (German Employer's Liability Insurance Association for the Food and Catering Industry, BGN)
- Fachausschuss Nahrungs- und Genussmittel (Technical Committee for Food and Consumables)

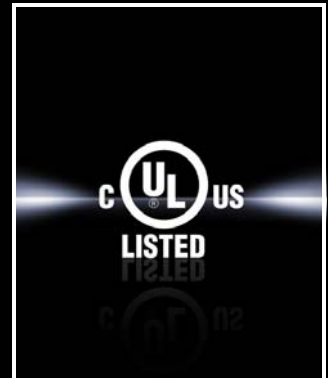
A range of hygiene standards including EN 1672-2-2009-07 are met.

The cULus listed approval applies to terminal boxes and compact enclosures.

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

The DGUV test certificates are valid for following products:

- NV 16201 terminal boxes HD
- NV 13091 compact enclosures HD



## CAD data

Rittal's RiCAD 3D online CAD component library offers engineering, climate control, IT and power solutions for a wide variety of enclosures and applications from a single source. 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

The **EPLAN Data Portal** gives you access to all the component data you need for integration into the Eplan Engineering Platform.

- Macro files with comprehensive component information, such as commercial data, 2D data, 3D models, drill hole patterns, connection macros and accessory selection aids from the EPLAN Data Portal



# Compact enclosures and terminal boxes HD



## Optimum surface protection

All enclosures, covers and doors are made of stainless steel 1.4301 (AISI 304).

Brushed surface finish, grain size 400, ensures a peak-to-valley height  $R_A < 0.8 \mu\text{m}$ . With folds, internal radii of  $r > 3 \text{ mm}$  are maintained.

In its delivered state, the enclosure does not have any openings, thereby effectively averting any hygiene risks. After bespoke machining, openings are only provided where they are actually needed.

- Higher productivity thanks to greater system availability
- Reduced cleaning effort required (faster cleaning, reduced energy demand, reduced use of chemicals)
- Superior product quality and longer durability by reducing the contamination risk, which in turn helps to avoid production losses



## Silicone seal

- Gap- and cavity-free transition between the door and the enclosure, thanks to the all-round external silicone seal
- Highly resistant to detergents commonly used in the food and consumables industry
- All non-metallic parts (seals, twist locks) are dyed blue (RAL 2010) to ensure that they are clearly distinguishable from foodstuffs
- Quickly and easily replaced for maintenance purposes
- No external cavity between the enclosure and the door
- Compliant with FDA Guideline 21 CFR 177.2600
- Suitable for cleaning with hosed water, thanks to a high protection category of IP 69K to DIN 40 050-9

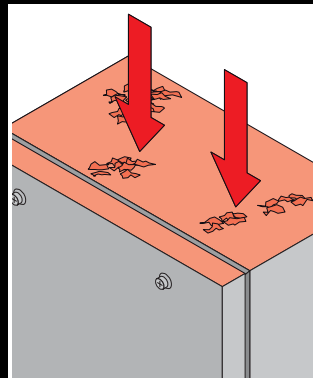


# HD terminal boxes

## Sloped enclosure sides

The sloped enclosure sides and all-round snugly fitting silicone cover seal make the enclosure ideally suited for open processes in the food and consumables industry.

- All-round slopes
  - Enclosure sides: 3°
  - Cover: 10°
- Allows fluids to drain off rapidly



## Interior installation

- Mounting hole pitch of 6.25 mm for greater flexibility
- Preassembled installation brackets included with the supply
- Support rails and mounting plates can be fitted directly



## Lock

- Captive quick-release fastener with seal and hexagon for perfect cleanliness

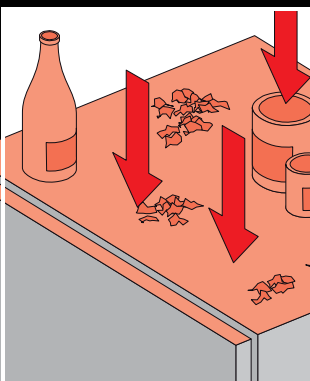


# Compact enclosures HD



## Roof with 30° slope

- Readily visible, even with taller installed enclosures
- Effectively deters people from placing objects on the roof, and prevents the accumulation of liquids and loose dirt particles
- Allows fluids to drain off rapidly
- Makes for easier, controllable cleaning when enclosures are attached higher up on the wall



## All-round chamfered edge folds with overhang edge

- Protect the upper door sealing gasket from dirt deposits
- Plenty of space for cleaning, thanks to the gap from the upper door edge

# Compact enclosures HD

## Door, hinges

Hinges that are inside the sealing zone create an exceptionally easy-clean design.

- No risk in terms of germs and cross-contamination
- Hygiene conditions remain consistently high when the door hinge is swapped over

Two locking rods made from stainless steel ensure secure and sealed closing.



## Lock

- Easy-to-clean lock insert
- Meets hygiene criteria with cleaning-friendly minimum radii and guarantees access protection
- External parts made of stainless steel
- Seals between the lock and the enclosure for optimum cleaning



## Mounting plate

- Enclosure body equipped with sheet steel mounting plate (zinc-plated)
- Simple one-person assembly even with free-standing enclosures, by screwing a combination bolt and lock nut into position



# Accessories

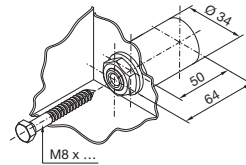


## HD wall spacer bracket

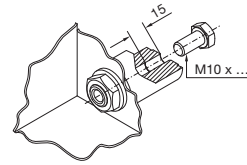
- For ease of cleaning between the enclosure and the wall
- Can be attached from the inside or outside as required
- Hygienic connection to the enclosure and wall

### Mounting alternatives:

Attachment from inside

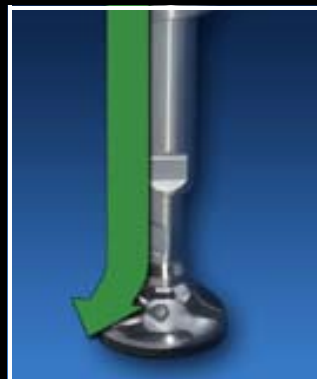
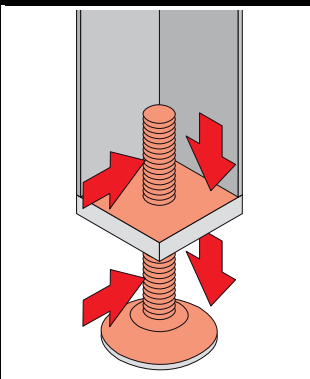


Attachment from outside



## HD levelling feet

- No external thread
- Levelling range between 122 and 175 mm
- Compensation of floor inclines up to a maximum of 10°, thanks to flexible base plate
- Versions with or without base mounting
- Minimises cleaning time due to fully covered, permanently sealed threads



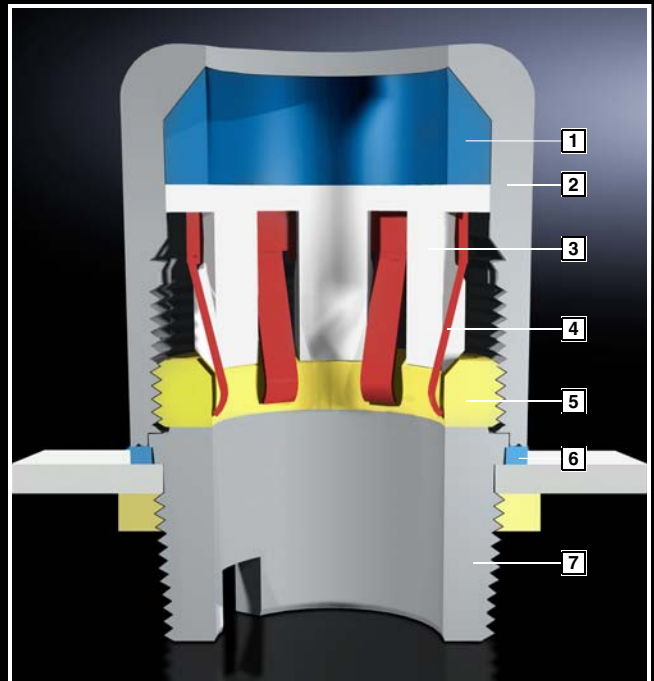
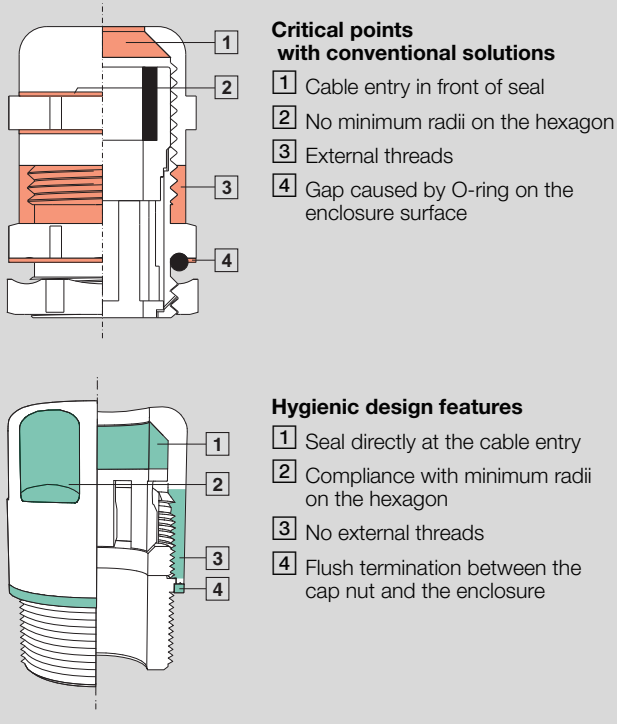


# Accessories

## Cable gland HD

- Hygienic design to prevent deposits of harmful micro-organisms
- Easier, cheaper cleaning compared with conventional cable glands
- High protection category up to IP 69K

### Why use hygienic cable glands?



- 1 Seal
- 2 Cap nut
- 3 Gripper jaws
- 4 Shield spring (EMC version only)
- 5 Clamping ring
- 6 Enclosure seal
- 7 Base with locator for assembly tool




# Accessories



## Interior installation rail

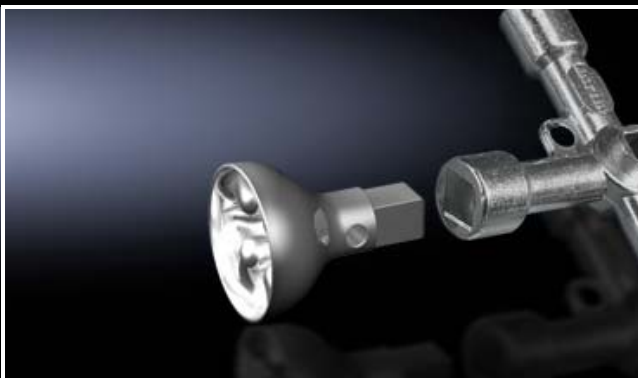
- Retrospective interior installation without machining
- Allows time-saving mounting on the sides and base
- Variable with two rows of TS 8 system punchings, creates additional mounting space
- TS 8 system punchings support the use of TS 8 accessories
- May still be fitted after installation of the mounting plates
- Mounting option for door-operated switch

 Sample application



## HD/Bit HD enclosure key

- Consistent styling of the lock insert reduces the risk of contamination
- No place for micro-organisms to hide



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- Climate Control
- IT Infrastructure
- Software & Services

You can find the contact details of all Rittal companies throughout the world here.



[www.rittal.com/contact](http://www.rittal.com/contact)

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