

# Rittal – The System.

Faster – better – everywhere.



## Assembly and operating instructions

9980094  
9980095  
9980096  
9980097  
9980098  
9980099  
9980124  
9980125

ENCLOSURES

POWER DISTRIBUTION

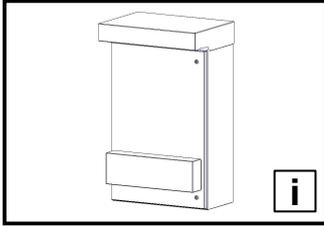
CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

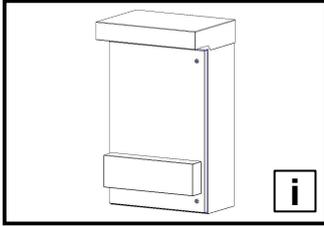
FRIEDHELM LOH GROUP





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## 1. Notes on documentation

The assembly instructions are aimed at all persons who have appropriate specialist training to allow them to equip enclosures to conform to standards with electrical, electronic, mechanical or pneumatic operating equipment, to place or install at the destination site and to connect ready to operate.

The operating instructions are for the operating personnel and appropriately trained specialists for electro-technical and mechanical maintenance.

### 1.1 Storing the documents

The safety notes and the accompanying note are part of the product. They must be given to the plant operator, who is then responsible for the storage of the documents so that they are readily available when needed.

### 1.2 Symbols used

Please observe the following safety instructions and other notes in this guide:



**Danger!**  
Immediate danger to life and limb.



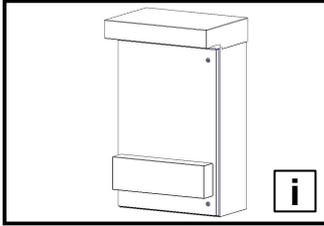
**Caution!**  
Potential threat to the product and its environment.

### 1.3 Other applicable documents

These installation instructions and operating instructions for the described enclosures can be downloaded from [www.rittal.com](http://www.rittal.com). We cannot accept any liability for damage associated with failure to observe these instructions. The instructions for any accessories used also apply.

## 2. Safety instructions

					
Warning against closing movements for mechanical parts of a machine/device	Warning against independently moving parts	The instructions must be read	Climbing on surfaces is prohibited	Installation by specialist electricians	Installation by specialist mechanics
<ul style="list-style-type: none"> <li>– The enclosure must be secured against tilting during transport, assembly and configuration.</li> <li>– Danger to life and health in case of non-observance of the safety instructions.</li> </ul>					



### 3. Device Description

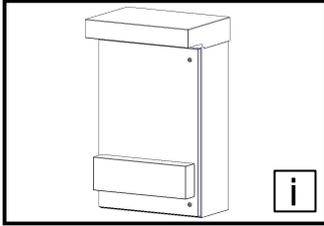
#### 3.1 Proper usage

These Rittal products are empty enclosures for low-voltage switchgear combinations with maximum rated voltage 1000 V AC or 1500 V DC, and incorporate instrumentation and control systems. For special requirements and for outdoor installations, confirmation of suitability must be obtained from Rittal. The load limits specified in the assembly instructions must be observed.

**3.2 Function description and components** As a wall mounting enclosure, the vented WM is suitable for accepting electrical, electronic or mechanical operating equipment and devices in the indoor or outdoor industrial area.

#### 3.3 Scope of delivery

Model No.	9980094	9980095	9980096	9980097	9980098	9980099	9980124	9980125
			Ø 9				5 x	
			M6 x 10				4 x	
			M8x30				1 x	
			M8				4 x	
			Ø 8,4				2 x	
			Ø 8,2				1 x	
			M6				2 x	
			Ø 6,1				2 x	
			M6 x 12				1 x	
			Ø 6,4				6 x	
			Ø 8,1				1 x	
							3 x	
							1 x	
			Ø 16				1 x	



## 4. Assembly and siting

### 4.1 Site requirements

Prior to assembly, ensure that

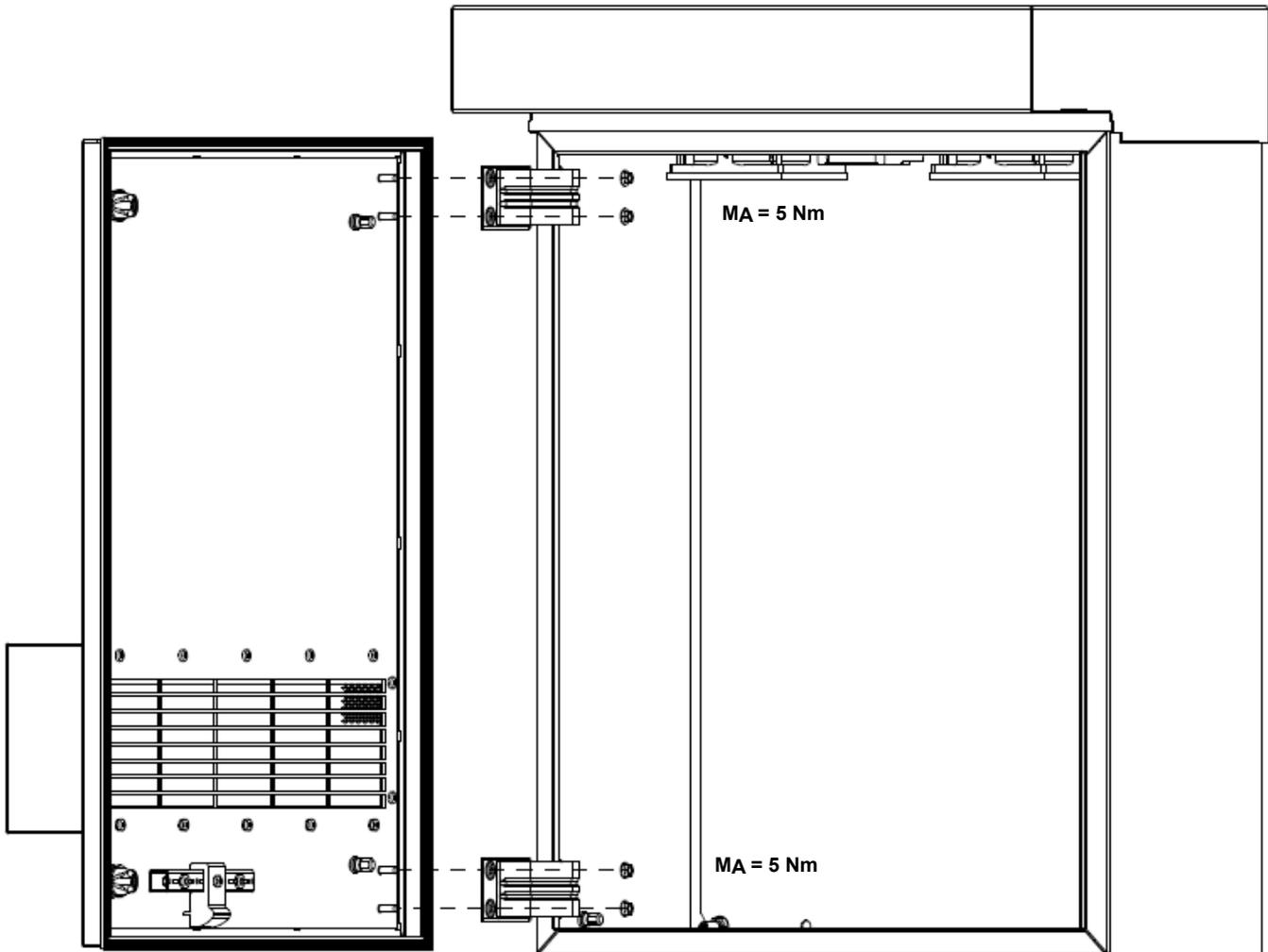
- the ambient temperature at the installation site is not higher than +80°C.
- the ambient temperature at the installation site is not lower than -20°C.
- the relative humidity does not exceed 50% at +40°C (higher humidity levels are permitted at lower temperatures).

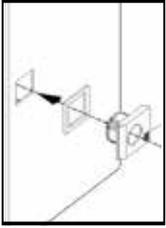
If particular operating conditions apply, special agreements must be made between Rittal and the user.

Assembly instructions

- Observe the load capacities specified on page 13.
- Observe all specified torque values. Over- or undershooting the tensioning torques specified in these instructions can cause system damage, severe injuries or even death.
- Avoid any unnecessary openings in the enclosure. Any opening that is not made and sealed carefully can reduce the degree of protection.
- The equipped mounting plate must be secured for transport.
- Ensure adequate carrying capacity for wall mounting. The notes in the instructions for the deployed system accessories must also be observed.

### 4.2 Dismantling/fitting the door

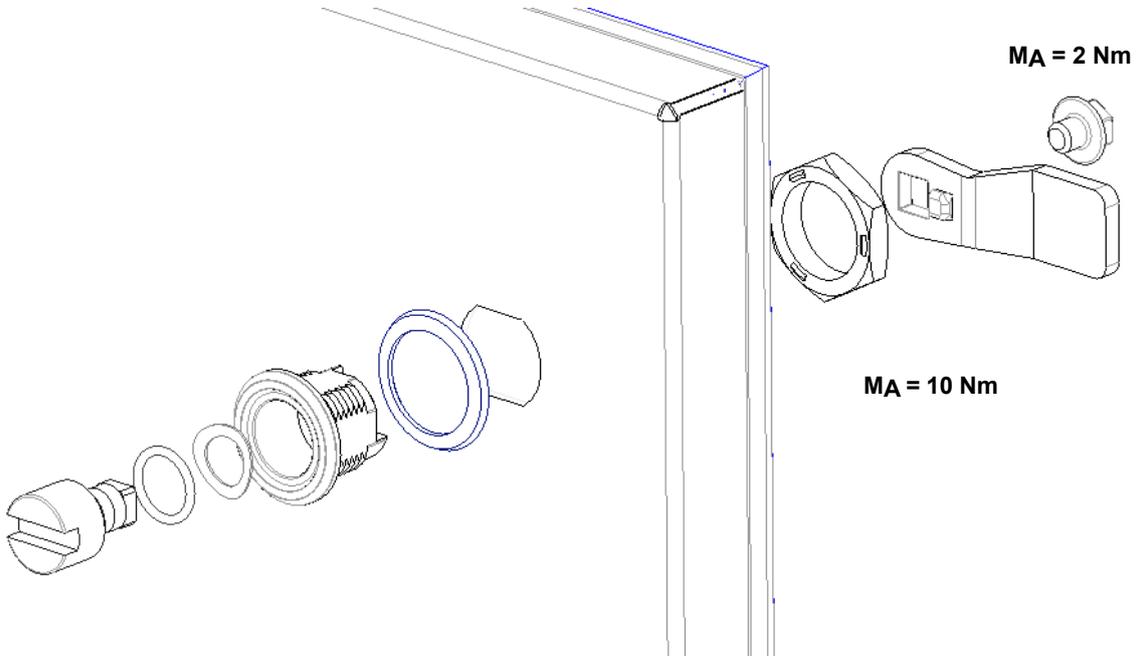


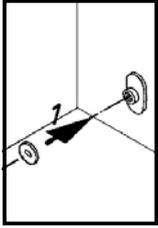


#### 4. Assembly and siting



##### 4.3 Cam lock, installation



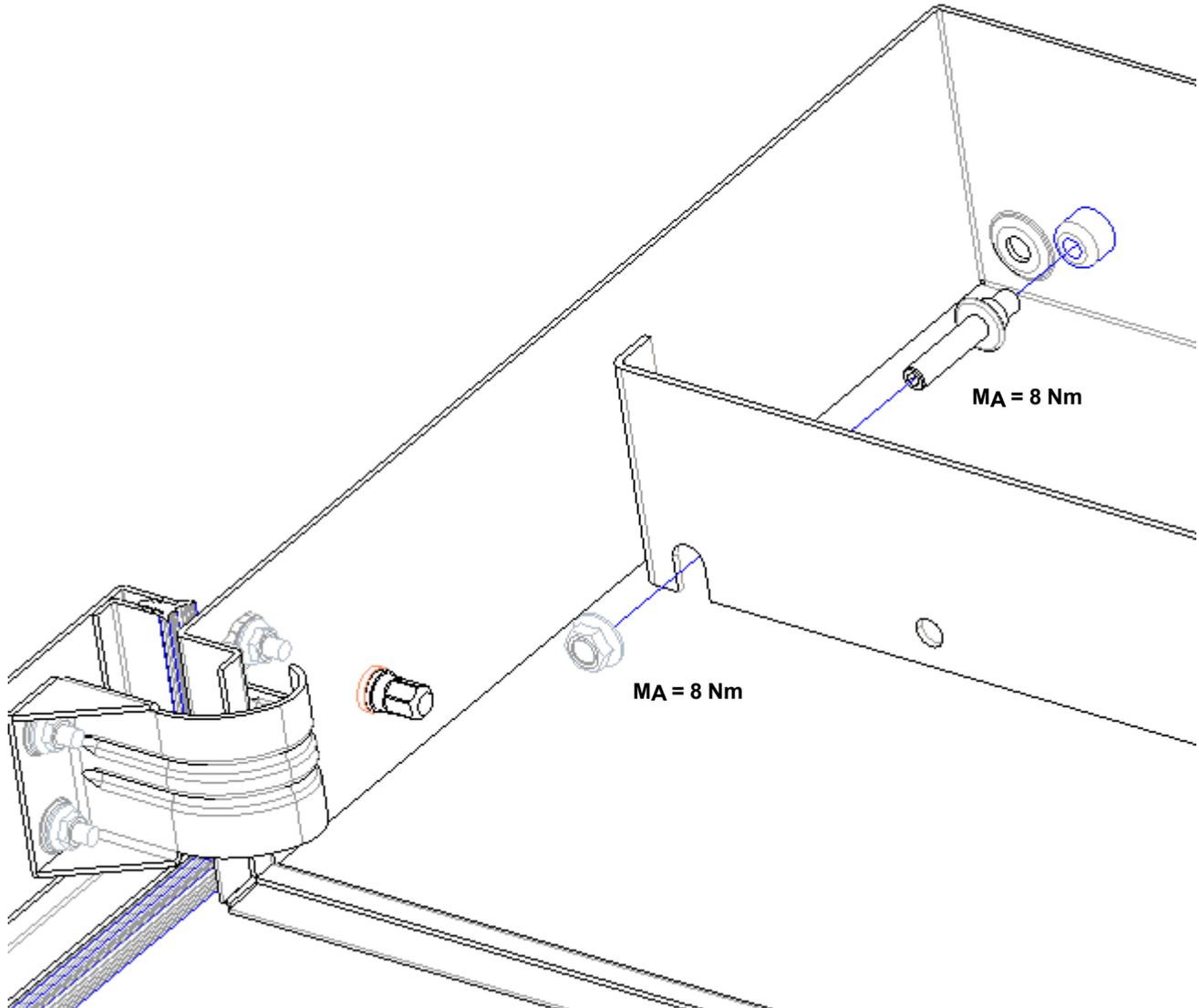


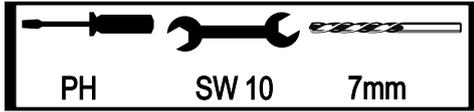
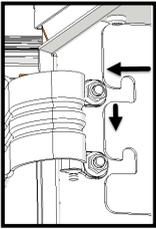
TX 30

SW 13

#### 4. Assembly and siting

##### 4.4 Mounting plate, installation





#### 4. Assembly and siting

##### 4.5 Swing Panel, installation (if present)

Model Nos.:

- 9980.118 - 24"x24"
- 9980.119 - 30"x24"
- 9980.120 - 36"x24"
- 9980.121 - 42"x24"
- 9980.122 - 48"x36"
- 9980.123 - 60"x36"

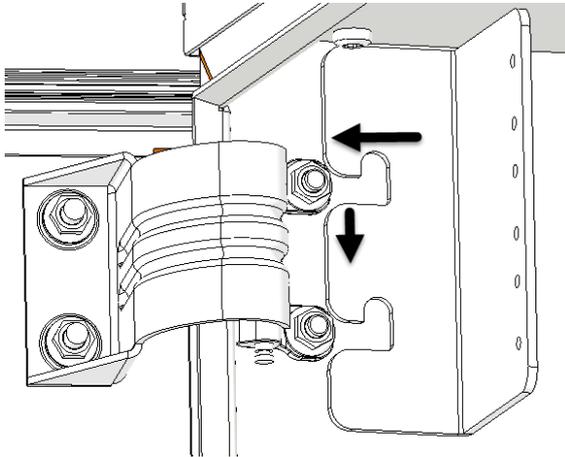
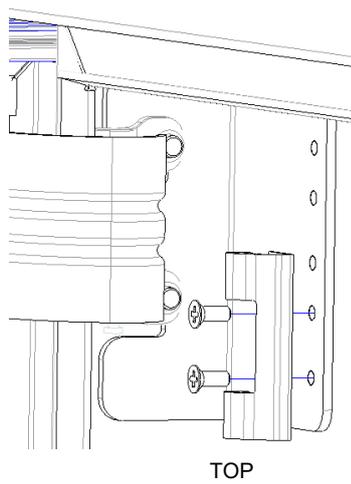
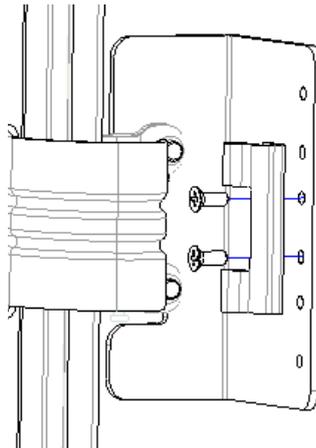


Figure 1: Loosen hinge nuts to allow bracket to slide behind hinge. (2 or 3 places)  
Tighten nuts when all brackets are in place.  
(5 Nm)

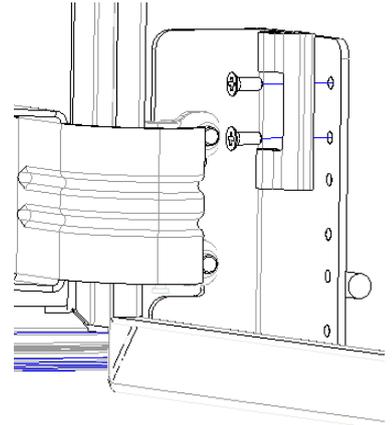
Figure 2: Swing panel hinge installation. (Middle hinge as required.)



TOP



MIDDLE



BOTTOM

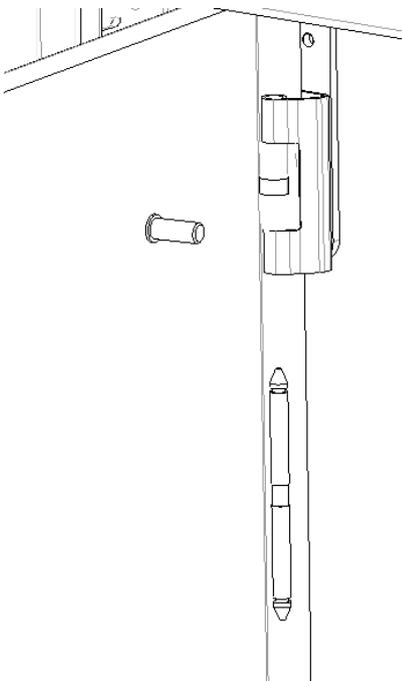
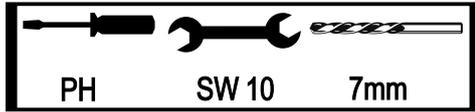
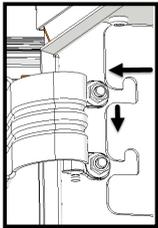


Figure 3: Insert Hinge pins through cabinet and door hinges. Retaining clip in center of Door hinge will secure the hinge pin.



#### 4. Assembly and siting

##### 4.5 Swing Panel, installation (continued)

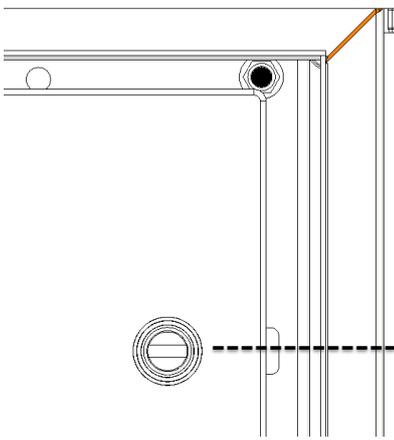


Figure 4: Note the vertical location of Swing Panel locking mechanism.

Figure 5: Peel backer from 2-sided tape or mark location for drilling mounting holes. 2-sided tape has an activation pressure. Be sure to clamp firmly.

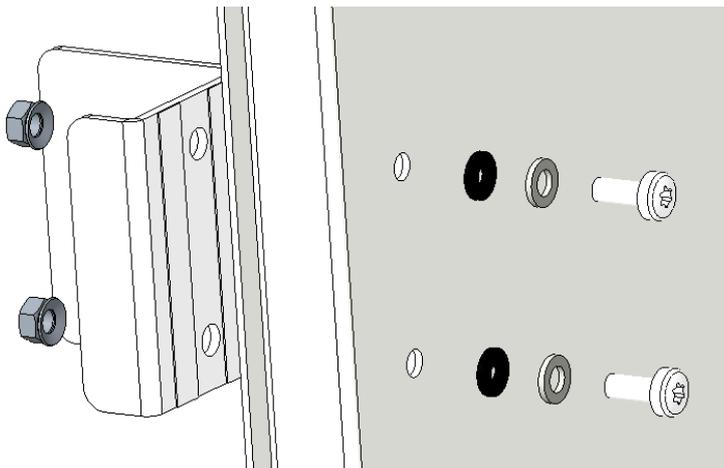
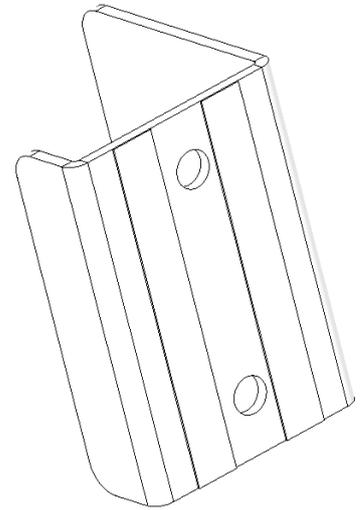
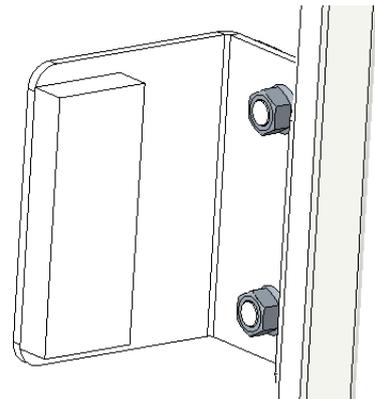
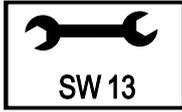
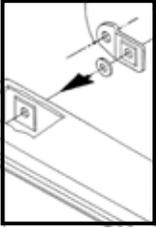


Figure 6: Drill max 7mm hole to maintain regulatory compliance if not using the 2-sided tape. Nitrile washer to be next to enclosure to ensure sealing.

Figure 7: Position foam pad at the edge of the bracket.

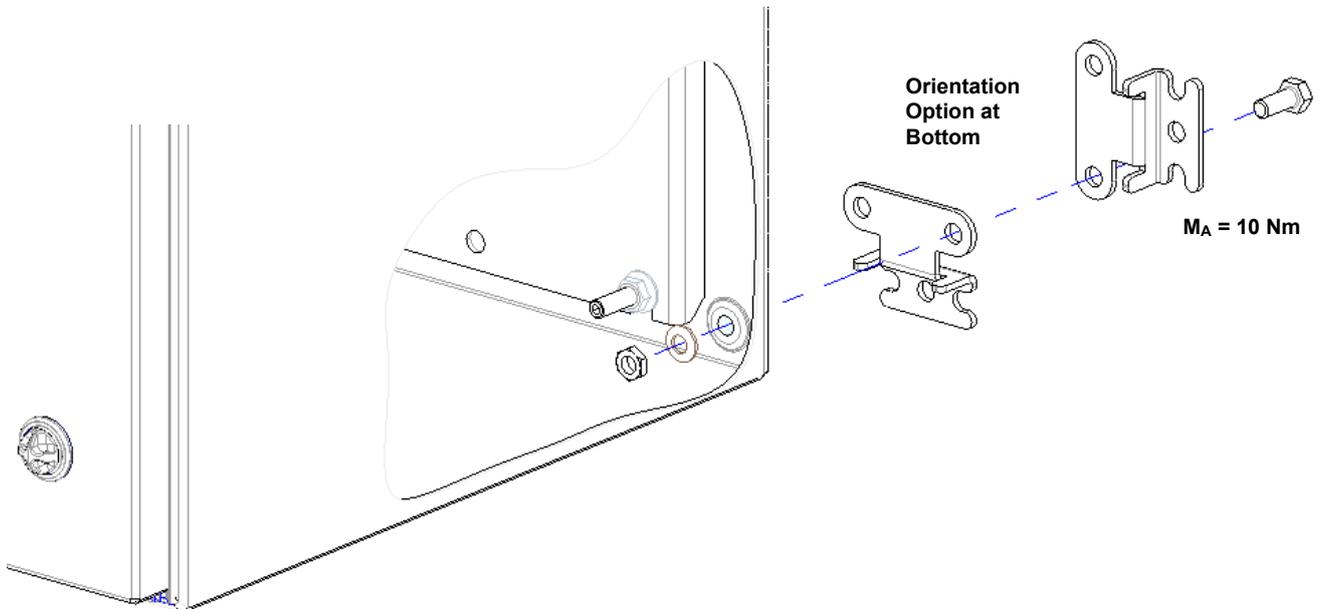
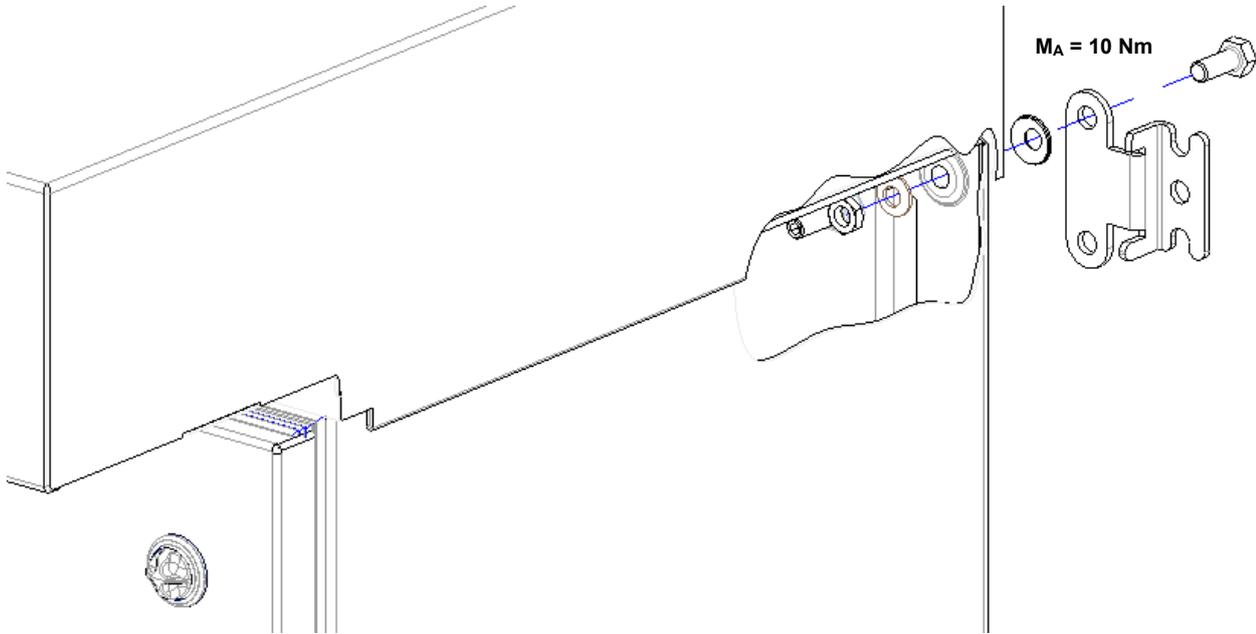


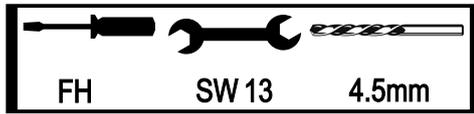
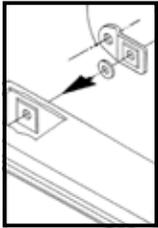


#### 4. Assembly and siting

##### 4.6 Wall mounting

Model No.:  
9980.100





#### 4. Assembly and siting

##### 4.7 Pole mounting, installation (if present)

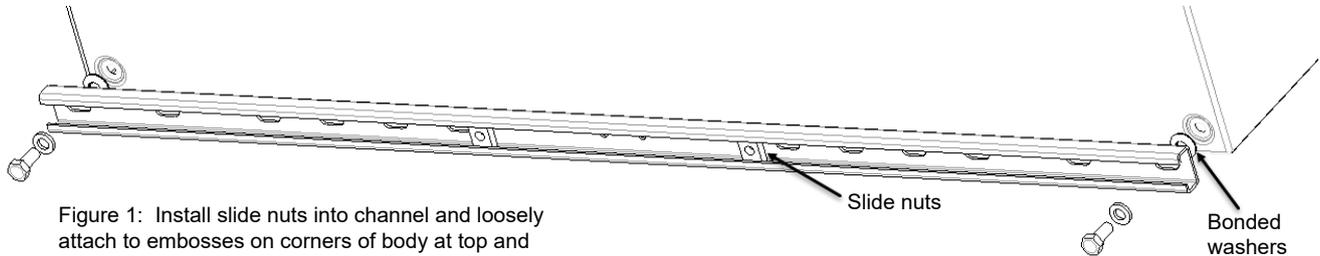


Figure 1: Install slide nuts into channel and loosely attach to embosses on corners of body at top and bottom. Be sure to place bonded washer against body to preserve environmental rating.

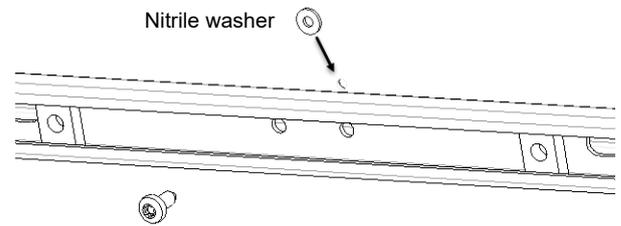


Figure 2: Drill 4.5mm hole through one of the two 6mm holes near the center of the rail. Place nitrile washer between rail and body. Install 5.5x13mm sheet metal screw (5 Nm). Rail attachment screws can now be tightened (10 Nm).

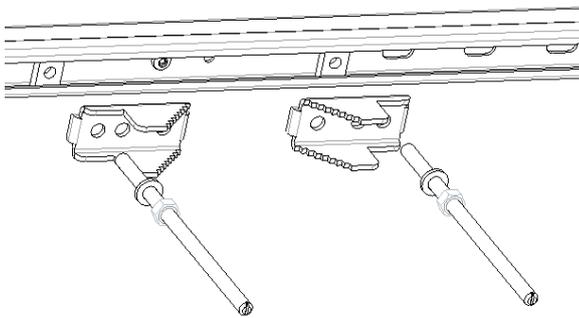


Figure 3: For round poles, orient clamping brackets as shown. Install threaded rods through outermost holes in bracket and into the slide nuts. Install flat washer and nut.

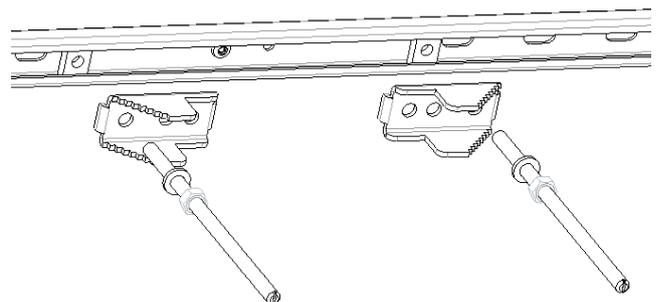
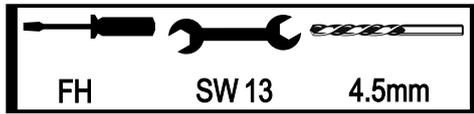
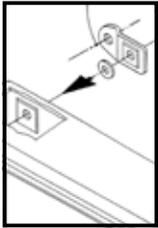


Figure 4: For rectangular poles, orient clamping brackets as shown. Install threaded rods through outermost holes in bracket and into the slide nuts. Install flat washer and nut.



#### 4. Assembly and siting

##### 4.7 Pole mounting, installation (continued)

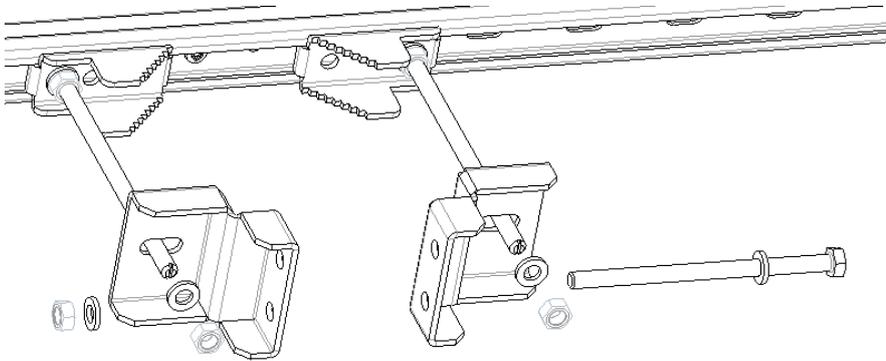


Figure 5: Install rear clamps. Be sure clamps mounted to rails are adjusted laterally for good surface engagement on the pole. All hardware to be progressively tightened while preserving enclosure location and orientation. (10 Nm)

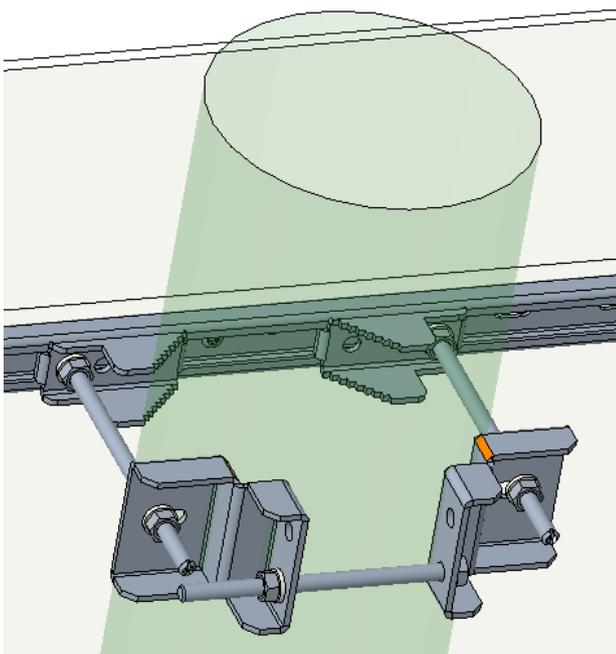
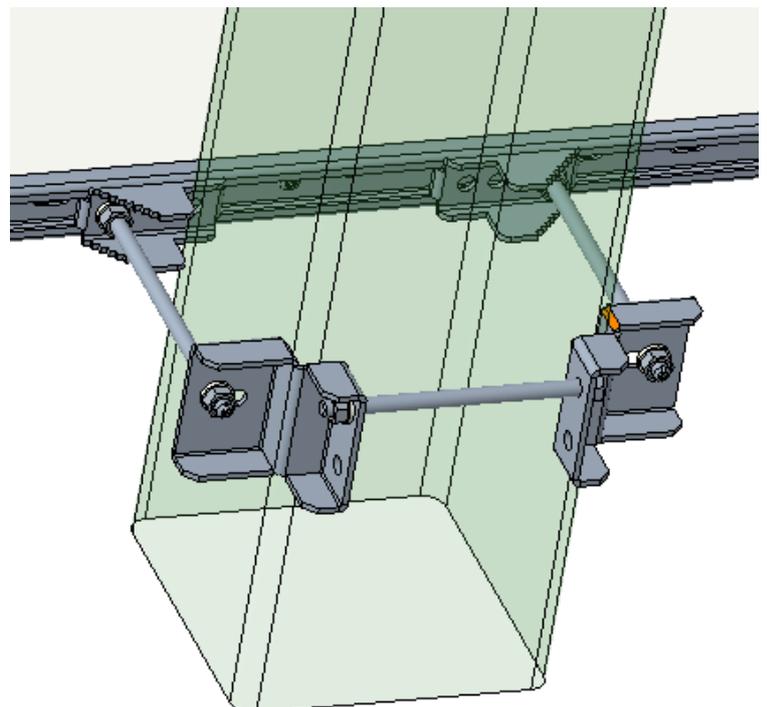
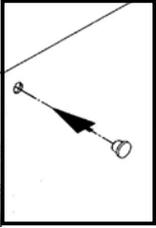


Figure 6: Shown on round pole.

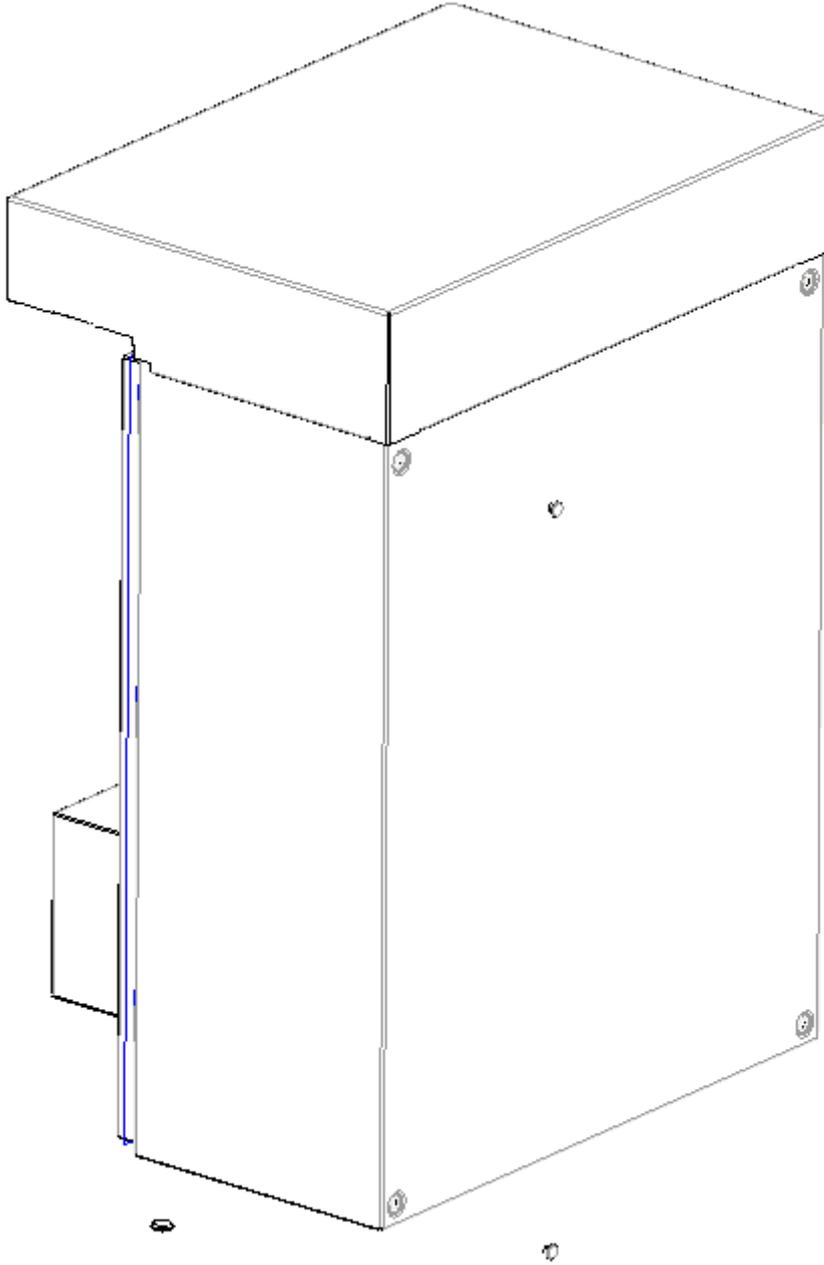
Figure 7: Shown on rectangular pole.

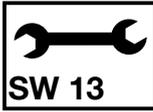
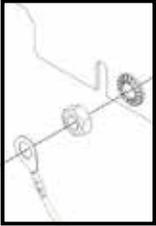




## 4. Assembly and siting

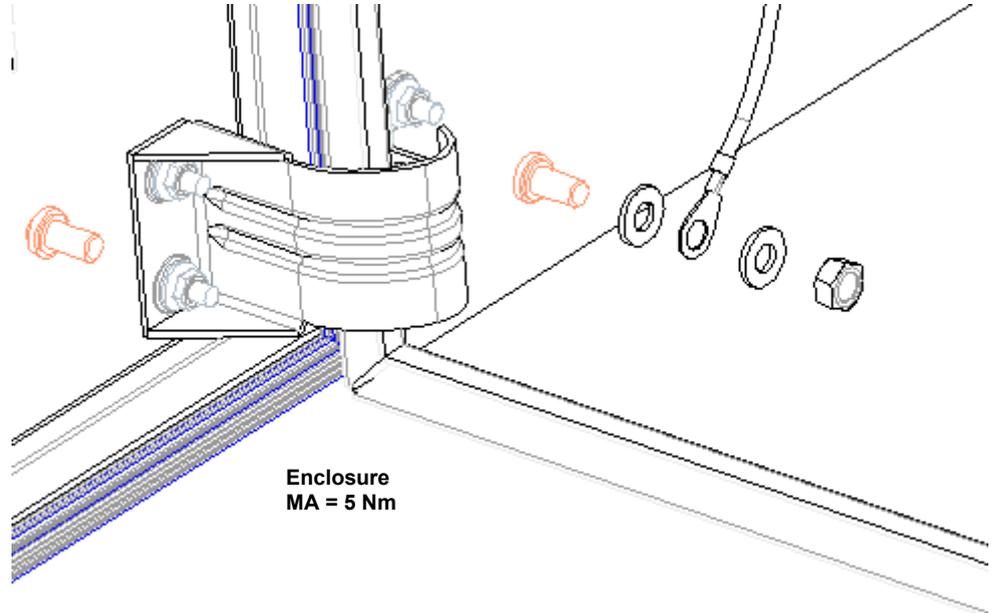
### 4.8 Sealing plugs



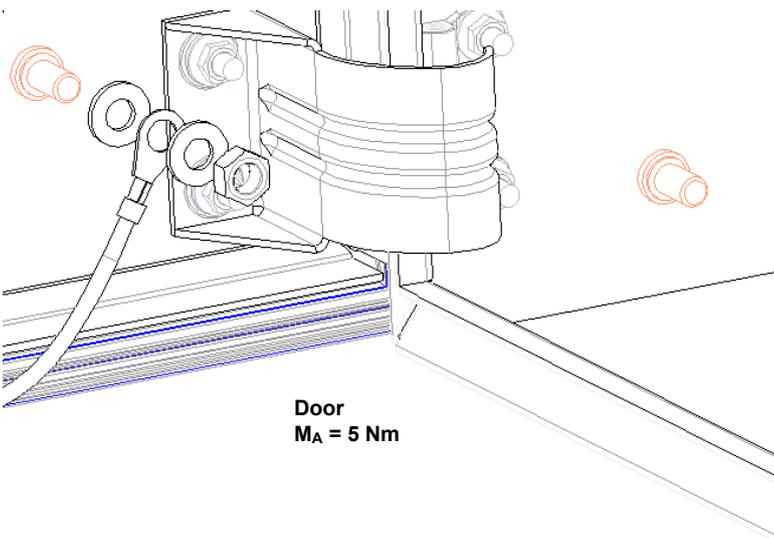


#### 4. Assembly and siting

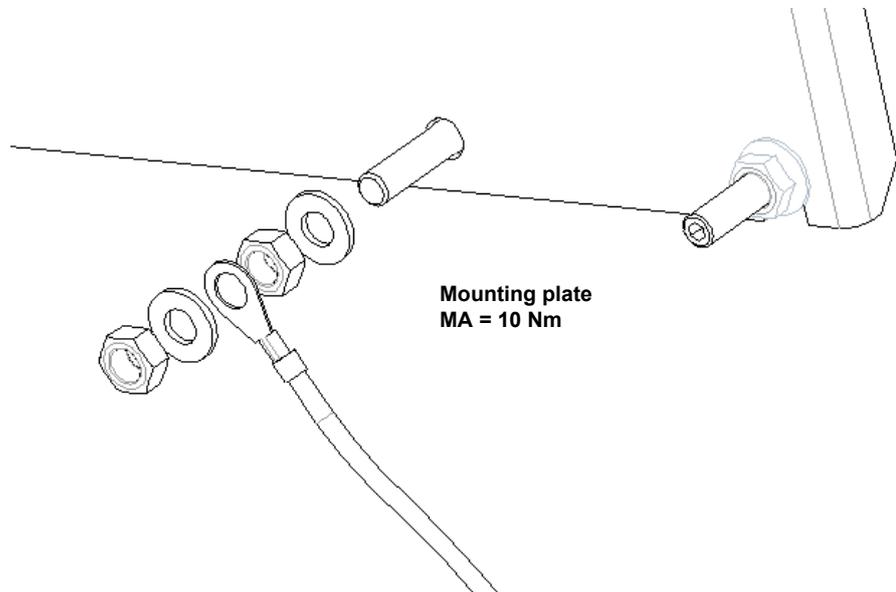
##### 4.9 Earthing and potential equalisation



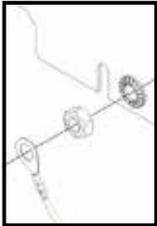
Enclosure  
MA = 5 Nm



Door  
MA = 5 Nm



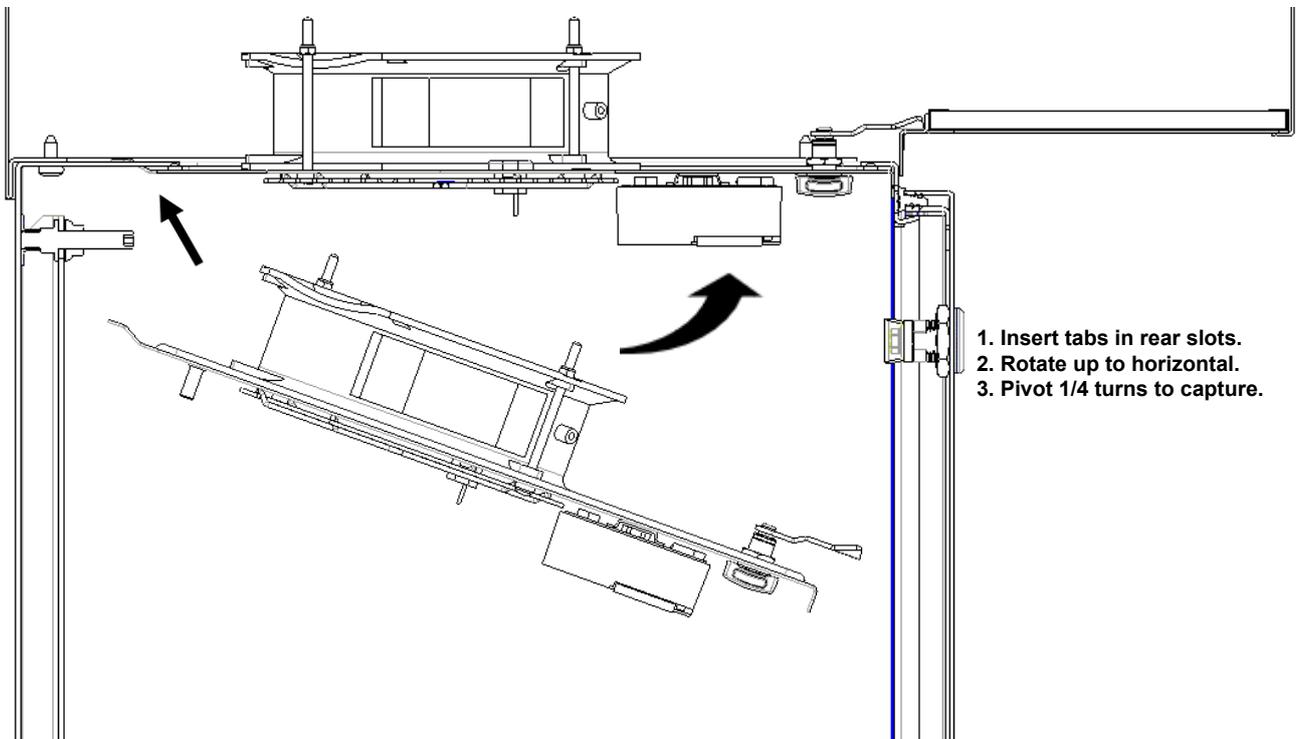
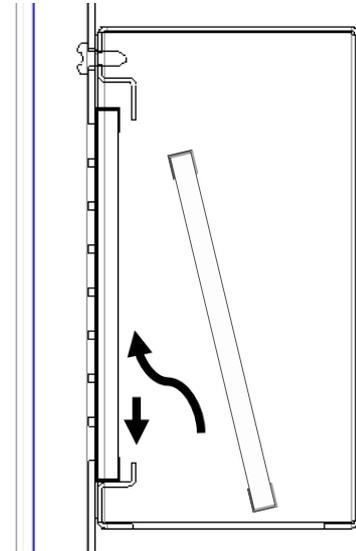
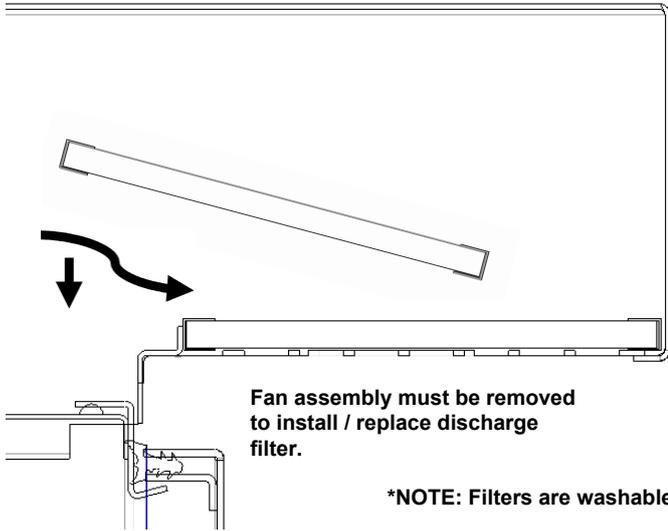
Mounting plate  
MA = 10 Nm

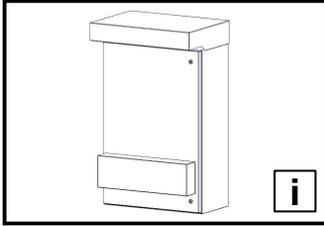


**NO TOOLS REQUIRED**

**4. Assembly and siting**

**4.10 Filters and Fan Assembly**

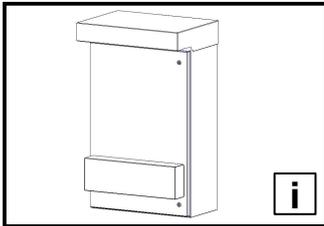




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## 5. Installation

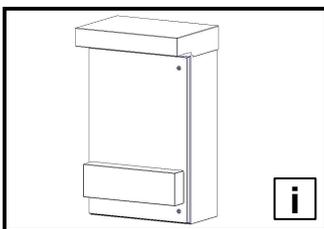
If there is the possibility of high pressures developing within the enclosure, the enclosure parts could burst. To counteract all associated dangers, the user must adopt appropriate safety measures.



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## 6. Earthing and potential equalisation

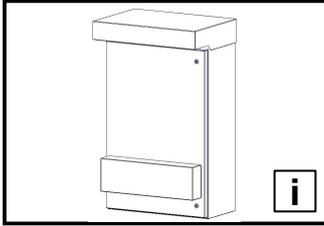
- A physical potential equalisation for the door and the enclosure is present. Additionally the doors are provided with bolts for earth straps to be fitted when the installation requires a system-specific earth connection.
- All connections must be assembled in accordance with the assembly instructions.



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## 7. Operation

- To prevent dust, humidity and air contaminated with pollutants from entering the enclosure, avoid leaving the door open for an unnecessarily long time. The equipped mounting plate must be secured for transport.
- After working on the enclosure, check that the door is closed properly.



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## 8. Inspection and maintenance

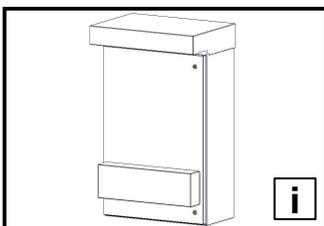
Maintenance must be performed at regular intervals depending on use and ambient conditions, at least once annually and documented accordingly.

Nature and extent of the work to be performed:

- Washable filters to be removed and cleaned to ensure adequate air flow is maintained.
- The door hinges are checked for ease of movement and sprayed with a suitable, water-free lubricant.
- The lock is checked for ease of movement. All moving closure parts are sprayed with a suitable, water-free lubricant.
- Gaskets in the contact edge area must be replaced completely if damaged. If the gasket is damaged outside the contact edges, the sealing effect is still sufficient as a rule.
- Common agents such as talcum, petroleum jelly or wax can be used to prevent damage due to gaskets freezing because of low temperatures. All components and surfaces are examined for external damage.
- Steel enclosures are also inspected for traces of corrosion.

Any damage is repaired as follows:

- Damage to small areas that affect only a part of the surface (e.g. scratches): Lightly sand off the surface at the damaged place and remove all traces of corrosion as well as all contamination. Depending on the degree of damage, apply the Rittal touch-up paint either with a paint stick, a brush or a spray paint can (alternative: 2K-PUR acrylic paint).
- Large area damage: Sand off the surface uniformly and clean with white spirit; then paint over the entire surface with Rittal touch-up paint (alternative: 2K-PUR acrylic paint).

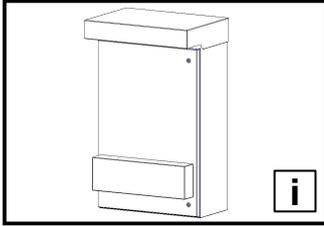


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## 9. Storage

When storing the enclosure, ensure that

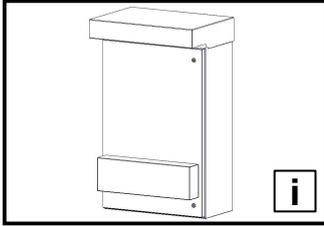
- The ambient temperature is not higher than +80°C.
- The ambient temperature is not lower than -20°C.
- The relative humidity does not exceed 50% at +40°C (higher humidity levels are permitted at lower temperatures).



## 10. Technical specifications/Degrees of protection

Model No.	Dimensions (mm)			Interior Volume (cf)	Mounting plate design	Load (lb)			Degree of protection
	Width	Height	Depth		Thickness (mm)	Total	Mounting plate	Door	Type
9980094	610	710	430	3.0	1.5	225	175	50	Type 3R
9980095	610	870	430	3.9	1.5	270	220	50	Type 3R
9980096	610	1010	430	4.6	1.5	340	290	50	Type 3R
9980097	610	1185	480	6.5	2.0	450	400	50	Type 3R
9980098	910	1335	555	13.1	2.0	560	510	50	Type 3R
9980099	910	1635	555	16.5	2.0	560	510	50	Type 3R
9980124	910	1335	655	16.8	2.0	560	510	50	Type 3R
9980125	910	1635	655	21.1	2.0	560	510	50	Type 3R

Model No.	Fans	Diam	cfm	Fan VAC	Fan Amps (60 Hz)
9980094	1	4"	75	115	.23
9980095	2	4"	160	115	.46
9980096	2	4"	160	115	.46
9980097	1	6"	200	115	.34
9980098	2	6"	400	115	.68
9980099	3	6"	500	115	1.02
9980124	2	6"	400	115	.68
9980125	3	6"	500	115	1.02

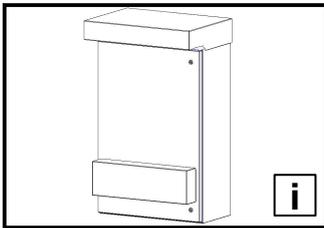


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## 11. Spare parts

EN

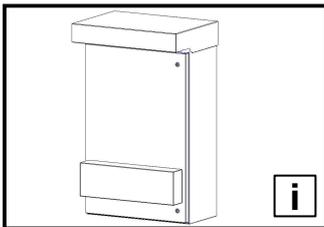
A current overview is available at  
[www.rittal.com](http://www.rittal.com).



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## 12. Guarantee

The conditions named in the sales and delivery conditions of the associated Rittal agents and subsidiaries apply.



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## 13. Customer services addresses

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