



Air diffusers

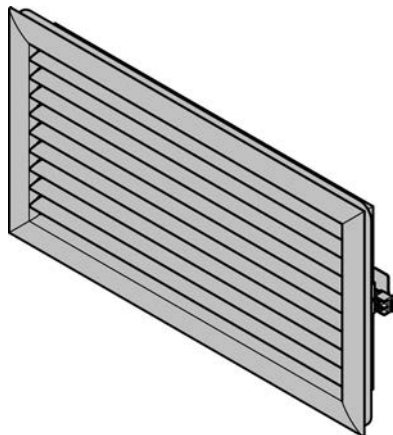
X-GRILLE Basic / Cover

TROX GmbH

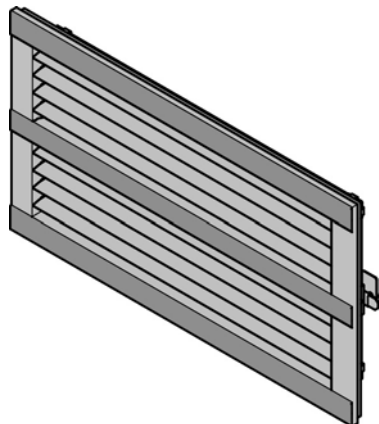
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Product overview

X-GRILLE Basic



X-GRILLE Cover



Important notes

Information on the installation manual

This manual enables operating or service personnel to correctly install the product described below and to use it safely and efficiently.

It is essential that these individuals read and fully understand this manual before starting any work. The basic prerequisite for safe working is to comply with the safety notes and all instructions in this manual.

The local regulations for health and safety at work and general safety regulations also apply.

Correct use

Air terminal devices are used for the ventilation of internal spaces in industrial and comfort areas. The air terminal devices are connected to a supply air or extract air system (by others), which is typically connected to an air handling unit.

Air terminal devices supply cold or warm air to rooms (within the stated supply air to room air temperature differences).

Installation, operation and maintenance may have to meet increased hygiene requirements for certain areas of application.

Installation in humid rooms, areas with potentially explosive atmospheres or rooms with dust-laden or aggressive air has to be assessed beforehand because it depends on the actual conditions on site.

Qualified staff

Specialist personnel

Specialist personnel are individuals who have sufficient professional or technical training, knowledge and actual experience to enable them to carry out their assigned duties, understand any potential hazards related to the work under consideration, and recognise and avoid any risks involved.

Personal protective equipment

Personal protective equipment must be worn for any work in order to reduce health or safety hazards to the minimum.

The appropriate protective equipment for a job must be worn for as long as the job takes.

Industrial safety helmet



Industrial safety helmets protect the head from falling objects, suspended loads, and the effects of striking the head against stationary objects.

Protective gloves



Protective gloves protect hands from friction, abrasions, punctures, deep cuts, and direct contact with hot surfaces.

Safety shoes



Safety shoes protect the feet against crushing, falling parts, and slipping on slippery ground.

Limitation of liability

The information in this manual has been compiled with reference to the applicable standards and guidelines, the state of the art, and our expertise and experience of many years.

The manufacturer does not accept any liability for damages resulting from:

- Non-compliance with this manual
- Incorrect use
- Operation or handling by untrained individuals
- Unauthorised modifications

The actual scope of delivery may differ from the information in this manual for special constructions, additional order options or as a result of recent technical changes.

Transport and storage

Delivery check

Upon delivery, carefully remove the packaging and check the unit for transport damage and completeness. In case of any damage or an incomplete shipment, contact the shipping company and your supplier immediately. Put the product back into its packaging after the delivery check to protect it from dust and contamination.



Fixing and installation material

Fixing and installation material is not part of the supply package (unless stated otherwise), but has to be provided by others; it has to be suitable for the installation situation.

Transport on site



CAUTION!

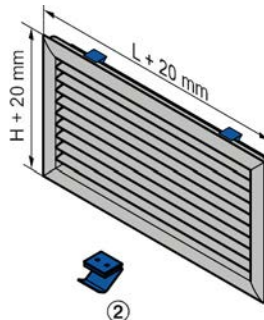
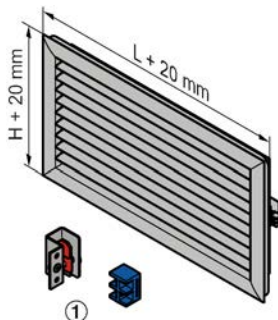
Danger of injury from sharp edges, sharp corners and thin sheet metal parts!

Sharp edges, sharp corners and thin sheet metal parts may cause cuts or grazes.

- Be careful when carrying out any work.
- Wear protective gloves, safety shoes and a hard hat.

Dimensions and weight

X-GRILLE Basic



Please note:

- Be careful when unloading or moving the product, and pay attention to the symbols and information on the packaging.
- If possible, take the product in its transport packaging up to the installation location.
- Use only lifting and transport gear designed for the required load.
- Always secure the load against tipping and falling.
- Do not move bulky items just by yourself. Get help to prevent injuries and damage.

Storage

Please note:

- Store the unit only in its original packaging
- Protect the unit from the effects of weather
- Protect the unit from humidity, dust and contamination
- Storage temperature: $-10 \text{ }^{\circ}\text{C}$ to $50 \text{ }^{\circ}\text{C}$.
- Relative humidity: 95 % max., no condensation

Packaging

Properly dispose of packaging material.

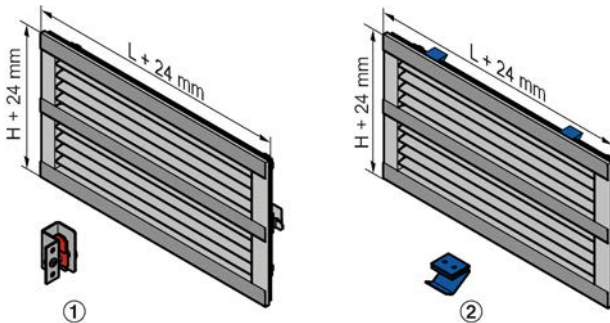
		Fixing												
Height (H) [mm]	Length (L) [mm]													
	Standard grille									Horizontal run section				
										End section		Middle section		
	225	325	425	525	625	825	1025	1225	> 1225 to 2025	to 1225	> 1225	up to 1225 (extra)	> 1225	
125	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6	4/-	3/-	5/-	4/-	6/-	
225	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	4/-	3/-	5/-	4/-	6/-	
325	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	4/-	3/-	5/-	4/-	6/-	
425	4/8	4/8	4/8	4/8	4/8	4/8	4/8	4/8	-/-	-/-	-/-	-/-	-/-	
525	4/8	4/8	4/8	4/8	4/8	4/8	4/8	4/8	-/-	-/-	-/-	-/-	-/-	

2/6 no. of concealed screw fixings ① (depending on grille size)

2/6 No. of spring clip fixings ② (depending on grille size)

		Weights (approx.) [kg]								
Height H [mm]	Length (L) [mm]									
	225	325	425	525	625	825	1025	1225		
125	0.5	0.6	0.8	0.9	1.1	1.4	1.7	2.0		
225	0.8	1.0	1.2	1.5	1.7	2.2	2.7	3.1		
325	1.0	1.4	1.7	2.0	2.3	3.0	3.7	4.3		
425	1.4	1.8	2.2	2.6	3.0	3.9	4.7	5.5		
525	1.7	2.1	2.6	3.1	3.6	4.8	5.7	6.7		

X-GRILLE Cover



Fixing														
Height (H) [mm]	Length (L) [mm]													
	Standard grille								Horizontal run section					
									End section		Middle section			
	225	325	425	525	625	825	1025	1225	> 1225 to 2025	to 1225	> 1225	up to 1225 (extra)	> 1225	
125	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6	4/-	3/-	5/-	4/-	6/-
225	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	4/-	3/-	5/-	4/-	6/-
325	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	4/-	3/-	5/-	4/-	6/-
425	4/8	4/8	4/8	4/8	4/8	4/8	4/8	4/8	4/8	-/-	-/-	-/-	-/-	-/-
525	4/8	4/8	4/8	4/8	4/8	4/8	4/8	4/8	4/8	-/-	-/-	-/-	-/-	-/-

2/6 no. of concealed screw fixings ① (depending on grille size)

2/6 No. of spring clip fixings ② (depending on grille size)

Weights (approx.) [kg]										
Height H [mm]	Length (L) [mm]									
	225	325	425	525	625	825	1025	1225		
125	0.4	0.6	0.7	0.9	1.0	1.7	2.1	2.5		
225	0.6	0.9	1.1	1.3	1.5	2.3	2.9	3.4		
325	0.9	1.1	1.4	1.7	2.0	3.0	3.6	4.3		
425	1.1	1.5	1.9	2.3	2.7	3.9	4.7	5.6		
525	1.4	1.8	2.3	2.7	3.2	4.5	5.5	6.5		

Assembly

General information

Personnel:

- Specialist personnel

Protective equipment:

- Industrial safety helmet
- Protective gloves
- Safety shoes

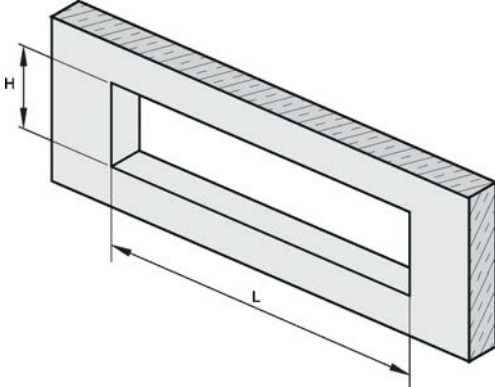
Note:

- Fix the product only to load-bearing structural elements.
- Load suspension systems only with the weight of the product. Adjacent components and connecting ducts must be supported separately.
- Use only approved and adequately sized fixing material (fixing material is not included in the supply package).
- The air terminal devices must remain accessible for cleaning even after installation.
- Installation and sealing material which the manufacturer provides is usually supplied in an extra bag.

Before you install the product, take suitable precautions to protect air distribution components from contamination during installation (VDI 6022). If this is not possible, at least cover the product or take other precautions to protect it from contamination. In this case you have to ensure that the product

cannot be started. Ensure that all components are clean before you install them. If necessary, clean them thoroughly. If you have to interrupt the installation procedure, protect all openings from the ingress of dust or moisture.

Create an appropriate opening



Installation opening with installation subframe

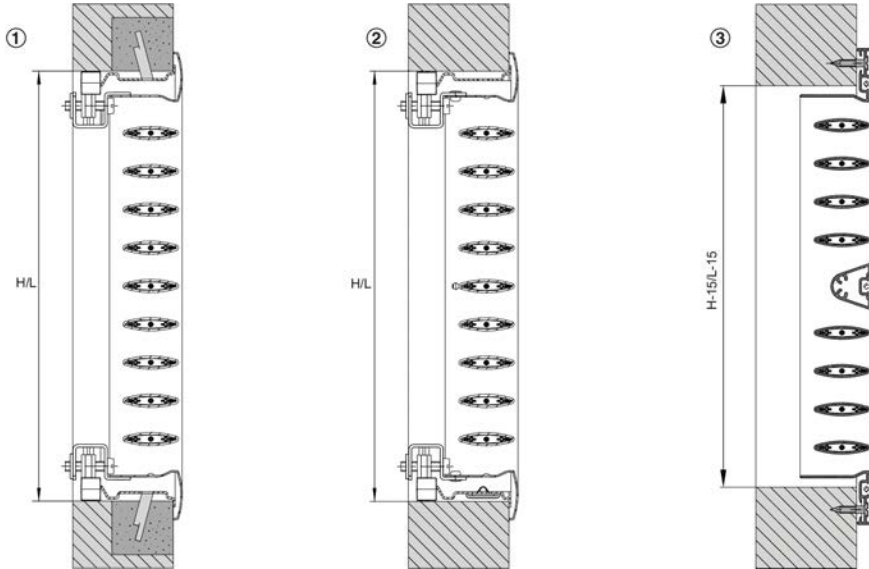
L = Grille length to be ordered

H = Grille height to be ordered

Installation opening without installation subframe

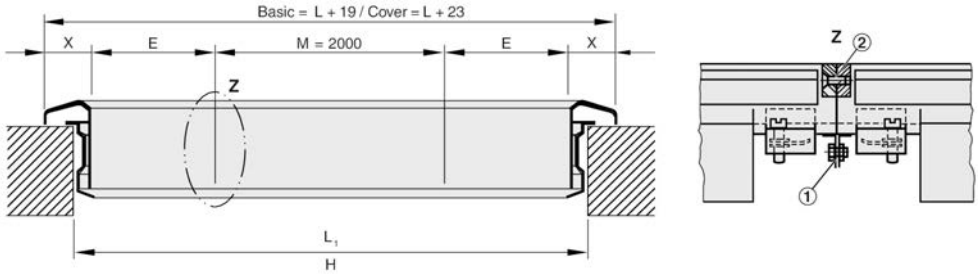
L = Grille length to be ordered - L= 15 mm

H = Grille height to be ordered - H= 15 mm



- ① Installation subframe in a mortar bed – X-GRILLE Basic and X-GRILLE Cover
- ② Installation subframe fixed with screws – X-GRILLE Basic and X-GRILLE Cover
- ③ Installation without subframe – X-GRILLE Cover only

Horizontal run section



- | | | | |
|----------------|---|----------------|--|
| ① | Joined installation subframes, screw fixed | L ₁ | Without installation subframe (X-GRILLE Cover only): 2E + (n × M) + 13 |
| ② | Joined ventilation grilles | x | X-GRILLE Basic x = 26 mm; X-GRILLE Cover x = 28 mm |
| L ₁ | With installation subframe: 2E + (n × M) + 28 | | |

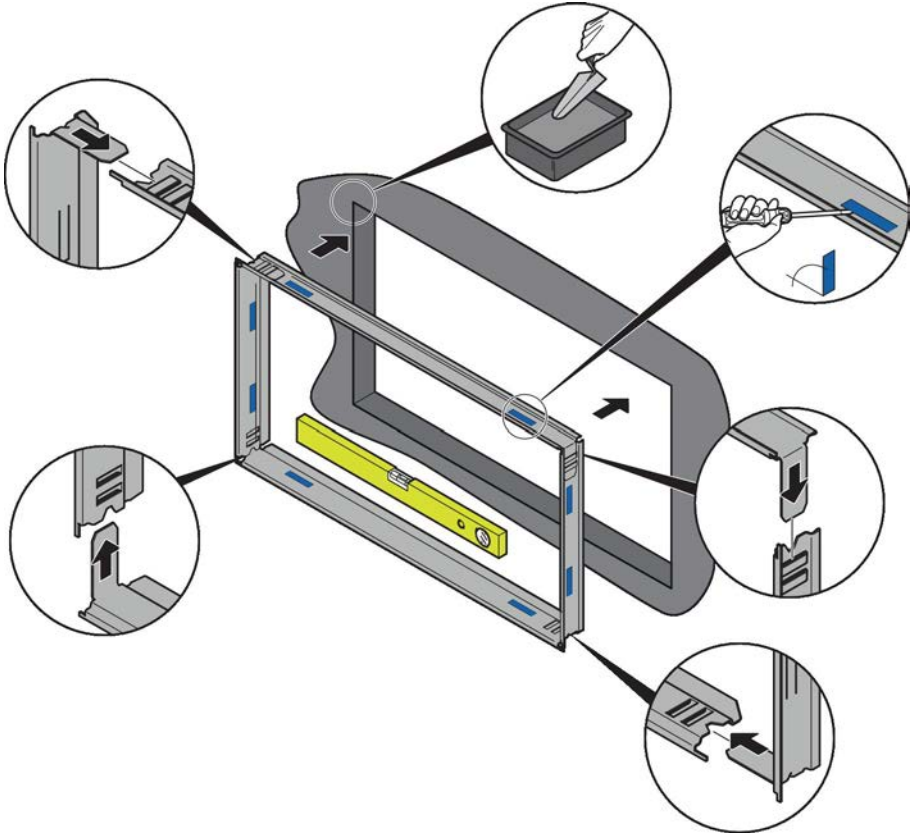
Installation steps:

- Join the installation subframes (screw-fixing)
- Join the ventilation grilles (screw-fixing)

Installing the installation subframe

Assembling and inserting the installation subframe

The installation subframe is an accessory (optional). It is required for concealed screw fixing or spring clip fixing of the grille.

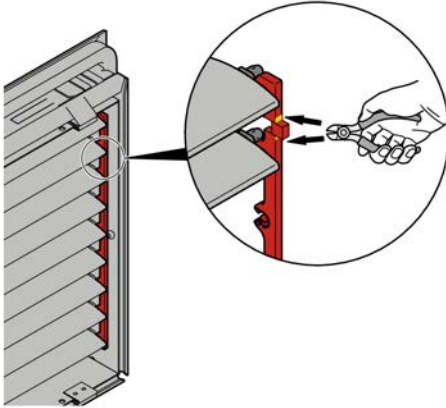


Installation subframe (ER)

- The installation subframe consists of four sections
- Push the sections together
- For wall installation: Spread the fixing tabs, then mortar them in
- Alternatively: Countersunk holes are provided for fixing the frame with screws or rivets to different structures

Preparing the grille

Cutting the blade linkage (optional)



The blades are linked so that they can be adjusted in groups. Up to 9 blades are interconnected. If differing blade settings are required, the blade linkage at the rear must be cut.

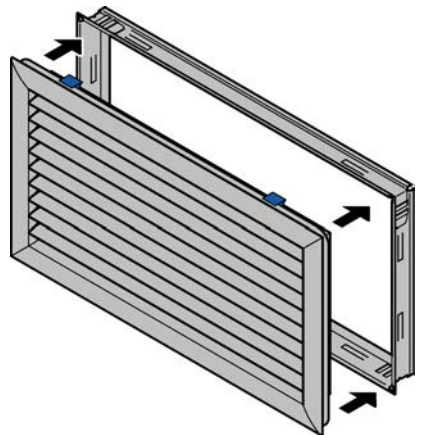
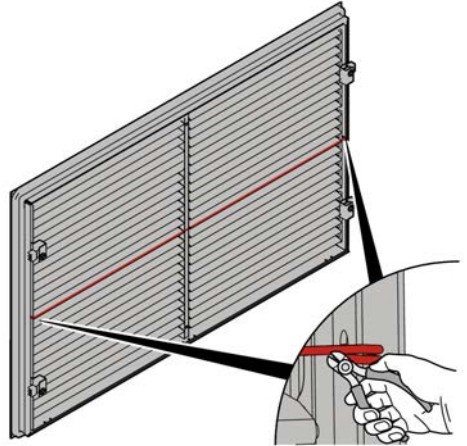
! NOTICE!

Cutting the blade linkage cannot be made undone.

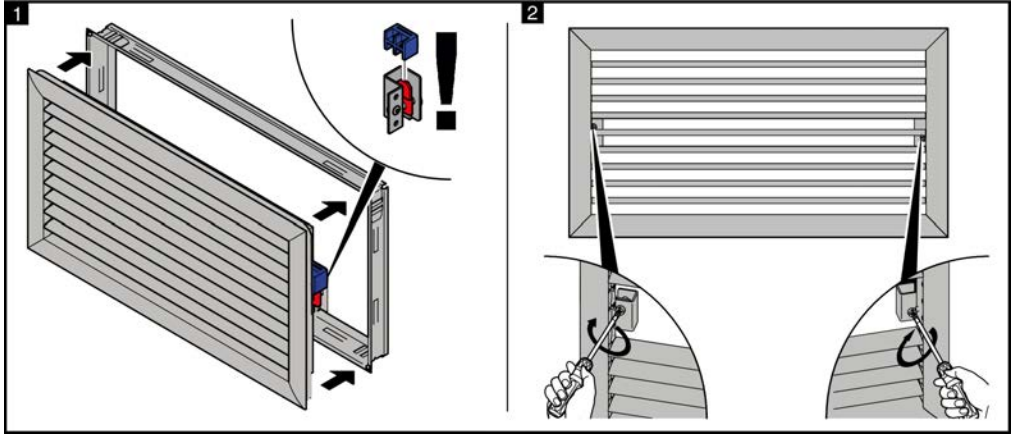
Inserting the grille X-GRILLE Basic, spring clip fixing

Removing the transport protection wire

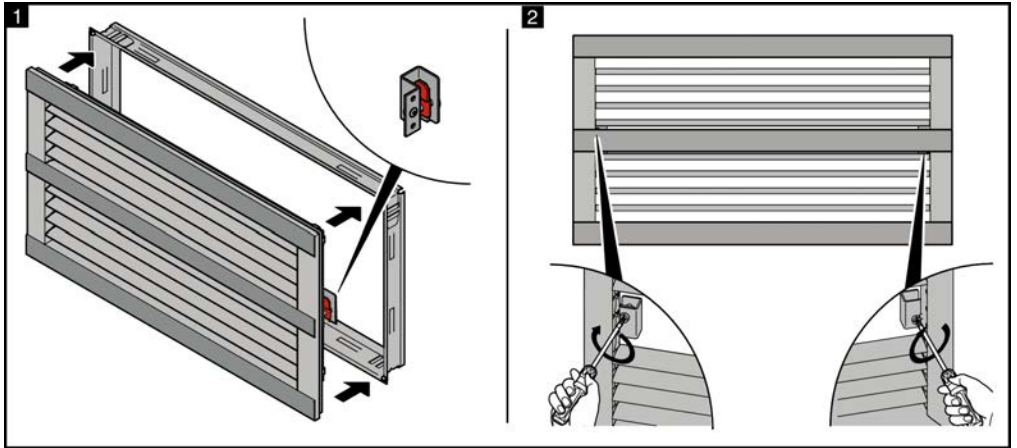
Remove (cut) the transport protection wire at the back of the grille (only for X-GRILLE Basic from size 325)

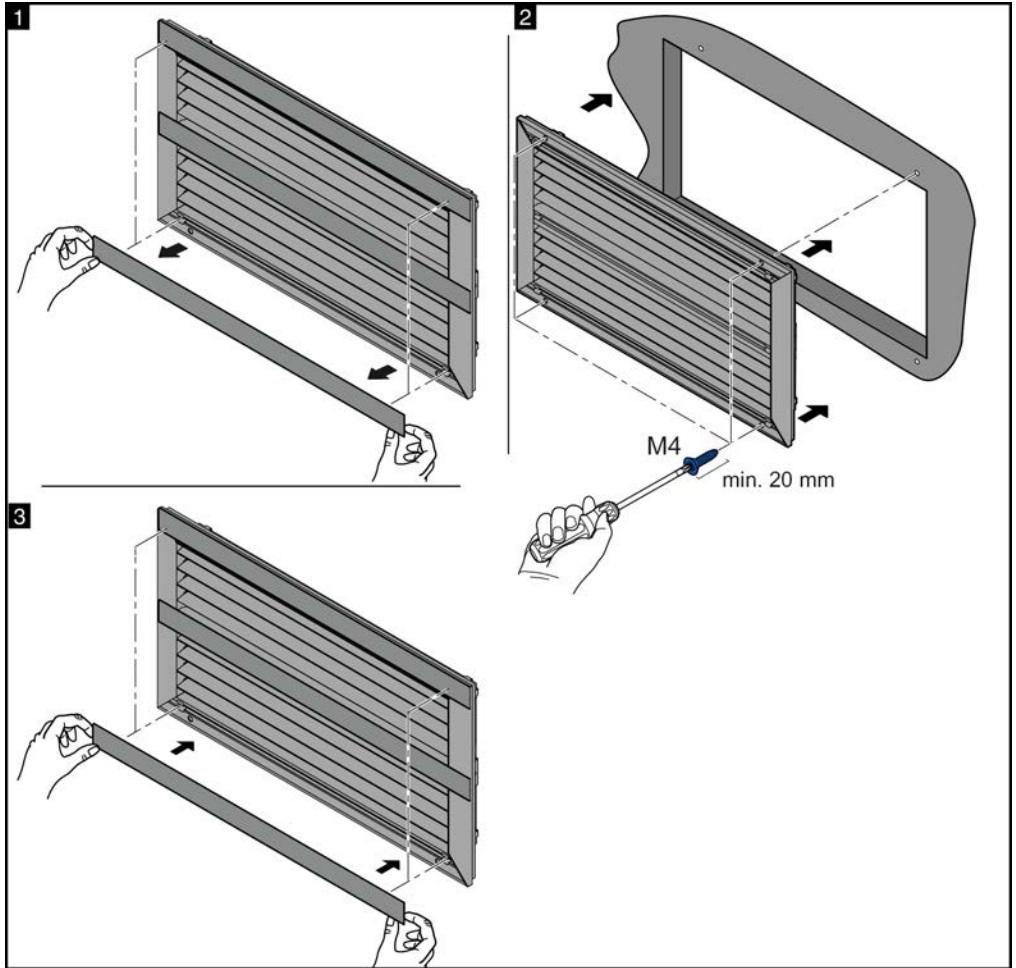


X-GRILLE Basic, concealed screw fixing



X-GRILLE Cover, concealed screw fixing



Fixing X-GRILLE Cover with screws (screws to be provided by others)**Duct connection**

Ventilation grilles are not fitted with a spigot or flange as they are installed into ducts or other openings.

Initial commissioning, maintenance and cleaning

Initial commissioning

Before you start commissioning:

- Check that the grilles are correctly seated.
- Remove protective film, if any.
- Ensure that all grilles are clean and free from residues and foreign matter.
- Ensure that the devices have been correctly fixed and connected to the ducting.

For commissioning see also VDI 6022, part 1 – 'Hygiene requirements for ventilation and air-conditioning systems and units'.

Volume flow rate balancing

When several grilles are connected to just one volume flow controller, it may be necessary to balance the volume flow rates.

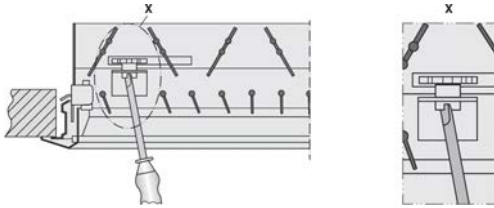


Fig. 1: Attachments -AG, -DG and Types AGW, DGW

Damper unit with opposed action blades, adjustable

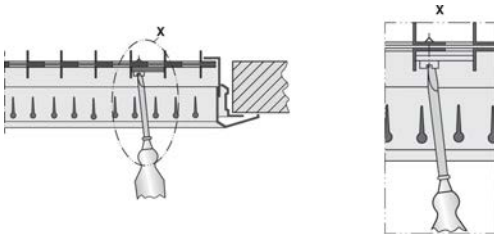
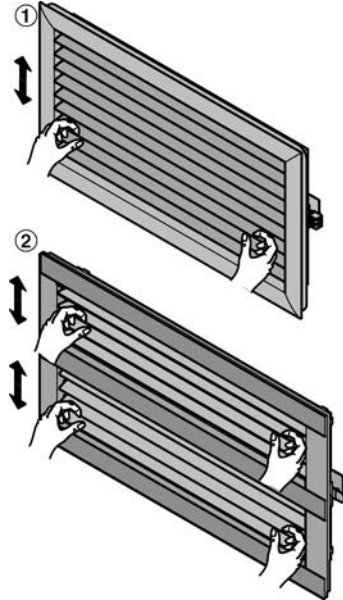


Fig. 2: Attachments -AS, -S and Type ASW

Damper unit with hit and miss damper, adjustable, secured with a locking screw

Air pattern

Adjustable blades: Set the air control blades individually or together and depending on the local conditions



- ① Basic
- ② X-GRILLE Cover

Maintenance and cleaning

Please note:

- The cleaning intervals given in the VDI 6022 standard apply.
- Clean surfaces with a damp cloth.
- Use only common household cleaners, do not use any aggressive cleaning agents.
- Do not use cleaning agents that contain chlorine.
- Do not use equipment for removing stubborn contamination, e.g. scrubbing sponges or scouring cream, as it may damage the surfaces.