

**Installation Instructions**  
**Wall capping profiles**

MAG-6  
MAG-4  
MAK  
MAK-5  
Special details



## Installation basics

Profiles and preformed details are to be checked upon receipt, noticeable transport damages are to be reported immediately or stated on the consignment note upon receipt.

Aluminium profiles must be stored in a weather-protected place. Dry storage is especially required to prevent irreparable corrosion damage of visible mill and plate finish surfaces. If the packaging has become moist, the material needs to be dried or processed the same day. For drying, keep the profiles separately to ensure sufficient air circulation.

During installation, make sure not to damage the visible profile surfaces. Aluminium profiles must be protected against adverse impacts of both other metals and acids and alkaline substances (e.g. cement plaster, chalk).

### Natural aluminium

When working with mill-finished profiles it is recommended to wear gloves to avoid fingerprints on the visible surface while handling.

As regards preformed details and corners made of natural aluminium (without secondary surface treatment), handling marks cannot be completely excluded and are not considered defects.

Remove the protective film (if any) from profiles directly after installation!

After installation of the profiles, natural aluminium will generate a protective oxide coating. This greyish patina with different patterns does not always meet aesthetic requirements.

## Installation basics

The colour coating provides the aluminium profiles with a permanently decorative smooth surface.

### Colour-coated and surface-treated products

If colour-coated profiles need to be cut to size on site, first **carefully mask** the surface in order to avoid scratches, then use e.g. a jigsaw, circular saw (saw blade for NF metals) or angle grinder (! **thin !** cut-off wheel approx. 1 mm for **thin-gauge** NF metals < 3 mm). Please note that excessive heat impact may damage the colour coating! Subsequently deburr the raw edge using a flat fine file and coat with supplied lacquer (brush or piece of fleece fabric).

With anodised surfaces and special effect coating (metallic, pearlescent finish), visually noticeable irregularities cannot be excluded.

### Fasteners and substrate

Generally, delivery does not include any fastening materials. Suitable fastening materials (screws/plugs/washers) are to be selected according to the substrate. Responsibility lies with the installer.

The installer or the site manager is responsible for checking the load-bearing capacity of the substrate.

### Capping profiles with factory-fitted sound deadening

If capping profiles with factory-fitted sound deadening need to be cut to size on site, the sound deadening has to be removed at approx. 5 cm (cut with cutter knife and tear off) from the section ends (butts/joint connections).

# Standard bracket centre and fastening

## Standard bracket centre

The bracket centre is to be designed depending on the crown width, the wind load zone, the terrain category and the building height.

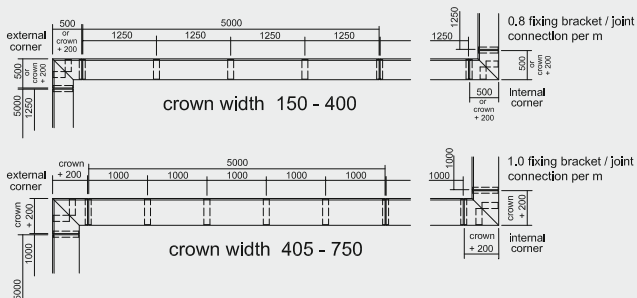
**Maximum building heights for standard fixing bracket distance depending on wind load zone and terrain category according to DIN EN 1991-1-4 (Eurocode), material thickness and crown width**

Material thickness in mm		1.5						2.0				
		Kronenbreite in mm										
		250	300	350	400	450	500	550	600	650	700	750
max. building height in <b>wind load zone 1</b>	Terrain category II	25 m	25 m	25 m	20 m	17 m	7 m	25 m	20 m	14 m	10 m	7.5 m
	Mixed profile inland	25 m	25 m	25 m	25 m	25 m	14 m	25 m	25 m	22 m	18 m	15 m
	Terrain category III	25 m	25 m	25 m	25 m	25 m	19 m	25 m	25 m	25 m	25 m	20 m
max. building height in <b>wind load zone 2</b>	Terrain category II	25 m	25 m	15 m	9 m	7.5 m	-	13 m	8 m	6 m	4.5 m	-
	Mixed profile inland	25 m	25 m	23 m	16 m	15 m	8.5 m	21 m	16 m	13 m	10 m	8.5 m
	Terrain category III	25 m	25 m	25 m	22 m	20 m	10 m	25 m	21 m	16 m	13 m	10 m
max. building height in <b>wind load zone 3</b>	Mixed profile inland	25 m	22 m	14 m	10 m	9 m	-	12 m	9 m	7.5 m	-	-
	Terrain category III	25 m	25 m	18 m	12 m	11 m	-	16 m	11 m	9 m	-	-

In case of different building heights and wind-exposed areas (e.g. wind load zone 4, coastal proximity, building locations > 800 m above sea level, exposed position) additional fixing brackets are required.

The above table shows the maximum building height allowing the use of standard bracket centres. For other building heights and buildings in wind-exposed areas (e.g. wind load zone 4, near-coastal areas, building locations more than 800 m above sea level, exposed areas) additional brackets are required.

### Standard bracket centre (up to crown width 400 mm: 1.25 m, crown width 405 to 750 mm: 1.00 m)



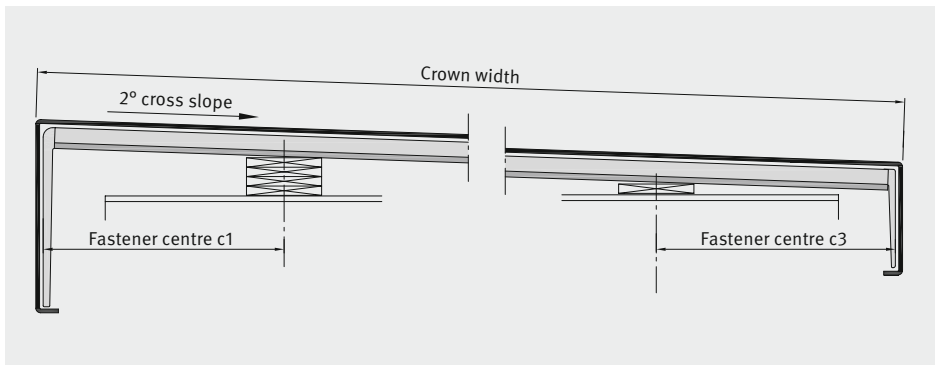
The alwitra standard bracket centre for crown widths 405 to 750 mm is 1.00 m, for crown widths up to 400 mm it is 1.25 m. The standard bracket centres only apply for the scope of the above table. Outside this scope, bracket centres are to be designed in accordance with the individual object.

## Standard bracket centre and fastening

The brackets/joint connections must be firmly fixed on site using suitable fastening elements. Screws/plugs/washers are not included in the scope of delivery of the wall capping profiles. Each bracket is to be fastened with 4 screws (recommended diameter min. 4.5 mm). Washers are required in case of fastening with countersunk screws in oblong holes.

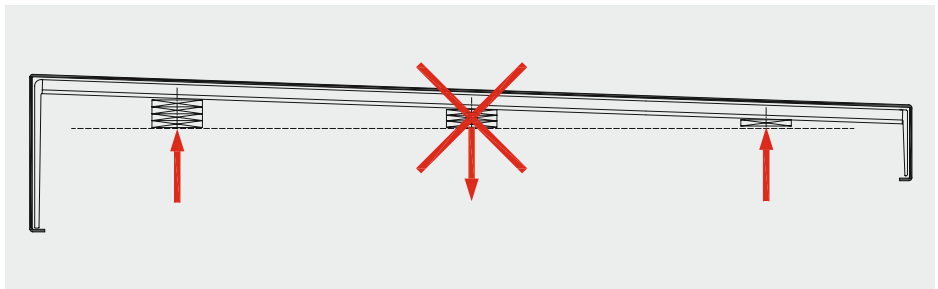
### Fastener centres c1 and c3

If the maximum values according to the table “Maximum building heights for standard bracket centres“ are used, the following maximum fastener centres shall apply:  $c1 = c3 = \max. 130 \text{ mm}$  for crown widths up to 750 mm.



### Note

For crown widths up to 750 mm, additional central fastening with support (levelling plates) is not permissible as it impairs bracket deflection leading to higher fastener forces.

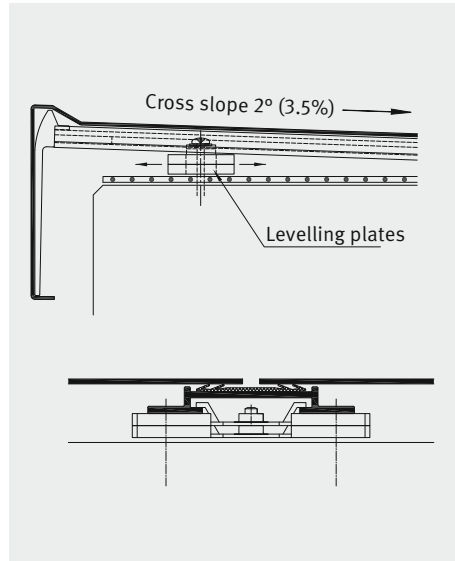


## Standard bracket centre and fastening

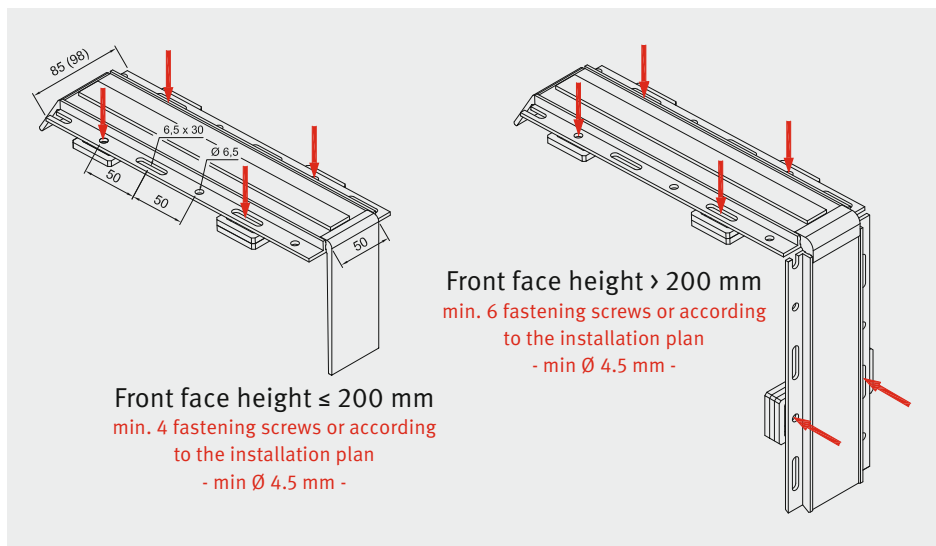
The oblong holes in the bracket plates ensure precise alignment of the brackets and the joint connections.

In order to create the cross slope of 2° towards the roof side and the height alignment of the brackets/joint connections, during installation one or more stackable levelling plates are placed under each bracket.

The rain-resistant joint connections are factory-fitted with a double lip seal.



In case of front face heights over 200 mm the brackets/joint connections (MAK, MAK-S) need to be fastened at the façade side.



## Installation plans

Installation plans will be drawn up for the client/installer by the alwitra Technical Department following a quantity survey for ordering profiles. Material requirements will be determined and optimised in the process of plan development, bracket centres will be indicated in accordance with the individual object.

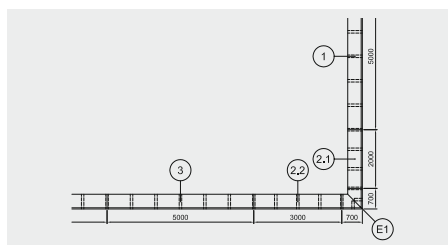
Installation plans may include the following information:

- positioning and distribution of profile sections,
- execution and positioning of corners, preformed details and end sections,
- layout of brackets/joint connections,
- profile cross-sections including description,
- the specified material requirements,
- information on the surface as well as further notes on fabrication and installation.

Drawing up of installation plans is a free-of-charge service from alwitra. However, control responsibility lies with the client/installer. In case of any queries, the consecutive plan number in the text field provides for unmistakable identification. A weatherproof installation plan for the site will be included in the delivery.

In general, profile sections will be supplied in corresponding standard lengths. They are to be installed on site according to the installation plan. Standard length profile sections, which need to be cut to length on site, will be marked with an additional part number separated by a dot, e. g. 2.1, 2.2, following the section number ...

In the example, the 5.00 m standard length profiles pos. ① and pos. ③ are installed as full-length sections, whereas the profiles pos. ②.1 and ②.2 must be cut to length from a standard length profile pos. ② and then installed.



## Joint width

When installing aluminium edge trim profiles, wall capping profiles and wall flashing profiles, possible temperature-induced changes of the profile length must be considered; connections and fixings must be carried out so as to allow the details to expand, to contract or to shift as the temperature changes, without causing any damage. In this case, a temperature difference of 100 K — at a range of -20 °C to +80 °C — shall be assumed.

Joint width between alwitra edge trim profiles or top caps as well as wall flashing profiles depending on the profile temperature at the time of installation:

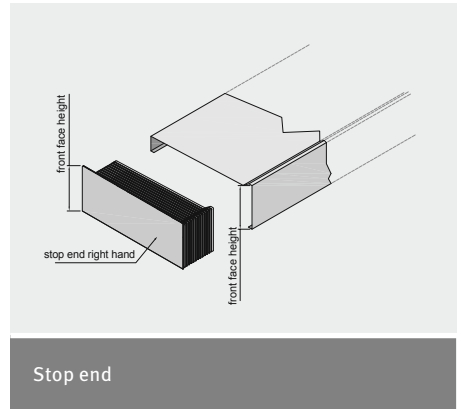
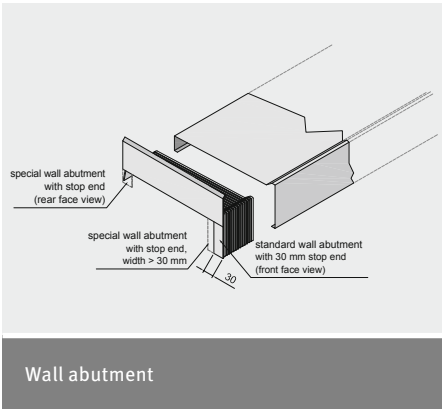
Profile temperature at the time of installation	+5 °C	+10 °C	+20 °C	+30 °C
Minimum joint width per linear metre of profile length <sup>2</sup>	1.8 mm/lin. m	1.6 mm/lin. m	1.4 mm/lin. m	1.2 mm/lin. m
Recommended joint width at 5.00 m profile length	9 mm	8 mm	7 mm	6 mm
Recommended joint width at 2.50 m profile length	4.5 mm	4 mm	3.5 mm	3 mm

Table 1: Joint width depending on profile length and installation temperature

<sup>1</sup> based on linear thermal expansion  $\alpha = 23.8 \cdot 10^{-6} [1/^\circ\text{C}]$



## Wall end sections (wall abutments / stop ends):



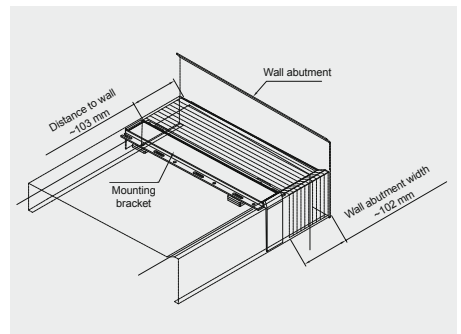
- All standard wall abutments come with a 30 mm wide stop end at the front face side.
- When ordering please specify, if for a wall abutment an additional stop end at the rear face side or a wider stop end is required.
- Stop ends at both sides are included with standard series MAK-5 wall abutments.

Wall abutments must be securely fixed with the adjacent bracket

The upper end is to be sealed on site with a proper sealant bevel.

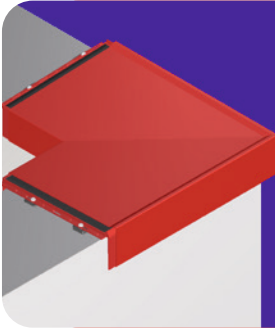
Sealant bevels must be checked in regular intervals.

**For secure installation, end caps need to be securely fixed with a suitable adhesive.**



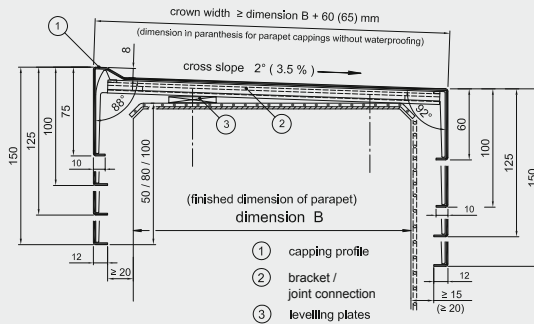
An installation video on wall capping profiles is available at [www.alwitra.de/en/aluminium-profiles/wall-capping-profiles](http://www.alwitra.de/en/aluminium-profiles/wall-capping-profiles) or scan the QR code.



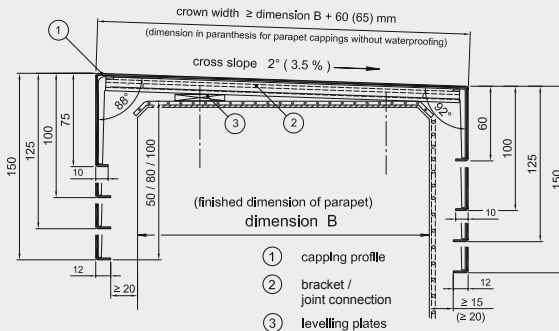


## Wall capping profile MAG-6 / MAG-4

- one-piece bent aluminium profile
- front face height: 75, 100, 125, 150 mm
- rear face height: 60, 100, 125, 150 mm
- variable crown width
- with front face upstand (MAG-6)
- without front face upstand (MAG-4)



MAG-6, front face height 75, 100, 125, 150 mm, rear face height 60, 100, 125, 150 mm



MAG-4, front face height 75, 100, 125, 150 mm, rear face height 60, 100, 125, 150 mm

### Scope of delivery:

- up to 5.00 m long profile sections with protective film
- required brackets/joint connections with levelling plates
- welded corners, preformed details, end caps and wall abutments

## Installation of series MAG-6 / MAG-4

### Installation description:

Installation starts with corners and preformed details.

The joint connections are placed in the corner, underlaid with levelling plates (2° cross slope towards the roof) and aligned with the façade to the required projection.

Both joint connections are then fixed at one side with screws. The corner needs to be uninstalled to allow fastening of the joint connections at the inner side and aligning the required corner brackets with the joint connections and fastening them.

Prior to installing the profile section, the brackets and joint connections can be exactly aligned using a string line.

Washers are required when fastening with countersunk screws in oblong holes.

After installing and aligning the brackets and wall abutments (wall abutments must be securely fixed with the adjacent bracket) the capping profiles are snapped into place and the end caps glued in.

### Strictly observe the installation instructions:

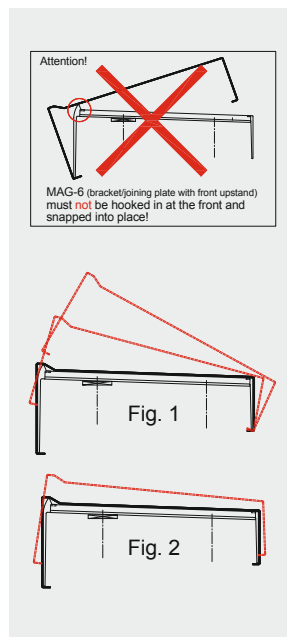
Capping profiles MAG-6 (bracket/joining plate with front upstand) must **not** be hooked in at the front and snapped into place.

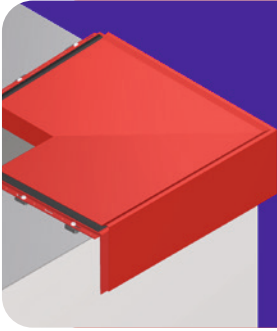
Hook in sections at the rear and snap into place at the front (fig. 1). Position preformed details and corners and snap on by pressing (fig. 2).

Slightly press the section ends together before installing, so the front face will rest against the joining plate.

Impacts during installation will damage the capping!

The joint width as well as the bracket layout and centres must be strictly adhered to.

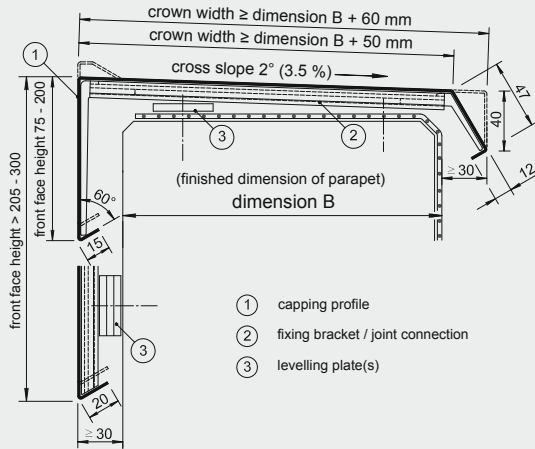




## Wall capping profile

### MAK

- one-piece bent aluminium profile
- variable front face height from 75 to 300 mm
- variable crown width
- rear face height 40 or 47 mm
- with or without front face upstand



MAK, front face height 75 - 300 mm, rear face height 47 / 40 mm

### Cross sections MAK

MAK-4.1

MAK-4.2

Cross sections with water stop

MAK-6.1

MAK-6.2

Cross sections without water stop

### Scope of delivery:

- up to 5.00 m long profile sections with protective film
- required brackets/joint connections with levelling plates
- welded corners, preformed details, end caps and wall abutments

## Installation of MAK

### Installation description:

Installation starts with corners and preformed details.

The joint connections are placed in the corner, underlaid with levelling plates (2° cross slope towards the roof) and aligned with the façade to the required projection.

Both joint connections are then fixed at one side with screws.

For uninstalling the corner one of the two joint connections needs to be unscrewed.

The installed joint connection can now be fastened on the inner side, and both corner brackets can be aligned and also screwed on.

After installing the corner, the uninstalled joint connection is inserted from the side and fastened at one side.

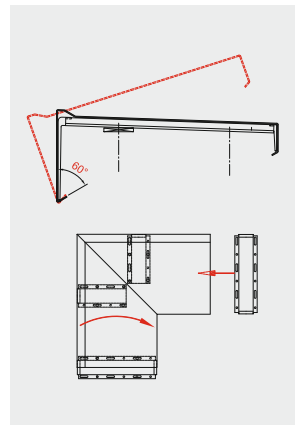
Prior to installing the profile section, the brackets and joint connections can be exactly aligned using a string line.

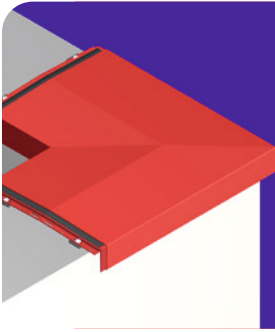
Washers are required when fastening with countersunk screws in oblong holes.

After installing and aligning the brackets and wall abutments (wall abutments must be securely fixed with the adjacent bracket) the capping profiles are snapped into place and the end caps glued in.

### Strictly observe the installation instructions:

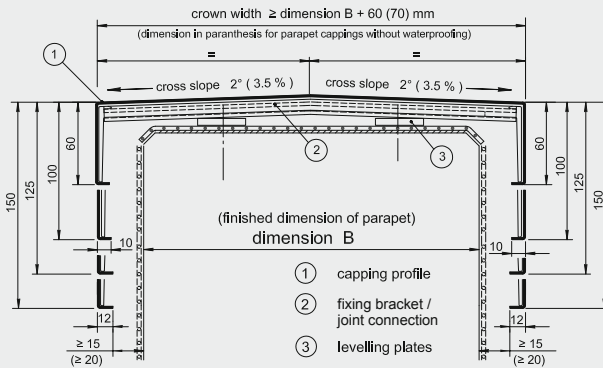
**Series MAK wall capping profiles with a front fold-back of 60° for installation must be hooked into the bracket/joint connection at the front and snapped on at the rear. Corners and preformed details are hooked in at the front and snapped onto the corner brackets and joint connections. During installation, one of the two joint connections is inserted and fastened at one side. Impacts during installation will damage the capping! The joint width as well as the bracket layout and centres must be strictly adhered to.**





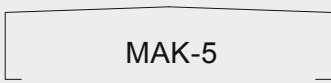
## Wall capping profile MAK-5

- one-piece bent aluminium profile
- front face heights:
  - MAK-5: 60, 100, 125, 150 mm
  - MAK-5.1: 47 mm
  - MAK-5.2: 40 mm
- variable crown width

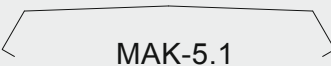


Front face heights: MAK-5: 60, 100, 125, 150 mm

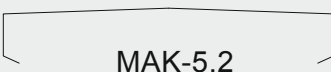
### Cross sections MAK-5



Front face heights 60, 100, 125 and 150 mm  
(as rear face height MAG-6 / MAG-4)



Front face height 47 mm  
(as rear face height MAK 4.1 and MAK 6.1)



Front face height 40 mm  
(as rear face height MAK 4.2 and MAK 6.2)

### Scope of delivery:

- up to 5.00 m long profile sections with protective film
- required brackets/joint connections with levelling plates
- welded corners, preformed details, end caps and wall abutments

## Installation of MAK-5

### Installation description:

Installation starts with corners and preformed details.

The joint connections are placed in the corner, underlaid with levelling plates (2° cross slope towards the roof) and aligned with the façade to the required projection.

Both joint connections are then fixed at one side with screws.

The corner is uninstalled to allow fastening of the joint connections at the inner side and aligning the required corner brackets with the joint connections and fastening them.

Prior to installing the profile section, the brackets and joint connections can be exactly aligned using a string line. Washers are required when fastening with countersunk screws in oblong holes.

After installing and aligning the brackets and wall abutments (wall abutments must be securely fixed with the adjacent bracket) the capping profiles are snapped into place and the end caps glued in.

### Strictly observe the installation instructions:

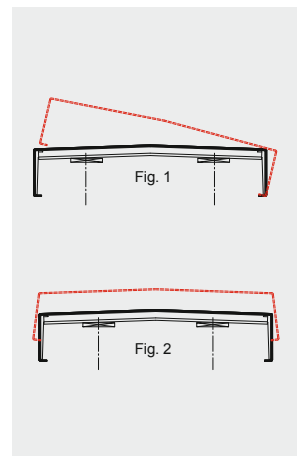
**Hook in sections at one side and snap into place (fig. 1).**

**Position preformed details and corners and snap on by pressing (fig. 2).**

**Slightly press the section ends together before installing, so the front face will rest against the joining plate.**

**Impacts during installation will damage the capping!**

**The joint width as well as the bracket layout and centres must be strictly adhered to.**





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