FUNDERMAX®

m.look

m.look Technique

Release October 2015

m.look

for people who create

This brochure is intended to provide you with technical information about the m.look panel for outdoor applications.

Examples of possible applications can be found in the m.look brochure and at www.mlook.at. If you have any questions that are not answered in this brochure, please contact our application engineering (support@fundermax.biz).
We are happy to help.

m.look - for people who create.

Exclusion of Liability

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Not all of the systems mentioned and shown in this document are appropriate or suitable for all areas of application. All customers and third parties are obligated to inform themselves thoroughly about FunderMax products, including their suitability for certain purposes. We explicitly recommend that you and other users of this document seek out independent expert advice on adherence to local planning and use requirements, applicable laws, regulations, standards, guidelines and testing standards. FunderMax accepts no liability in connection with the use of this document.
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m.look Approvals

Fig. 1

Europe
m.look Exterior panels are Euro Class A2-s1, d0 in accordance with EN 13501-1

Austria
Tested in accordance with ÖNORM B3800-5 for vertical facades, slanted facades and soffits.

Requirements regarding fire protection are set out in the national building regulations and the OIB guidelines in the current version. For certain applications, proof of B 3800-5 (facade fire test) is required in addition to proof of Euro Class A2-s1, d0 in accordance with EN 13501-1.
For special constructions, we are happy to support you in clarifying and fulfilling the local building regulations.

Germany
National technical approval by the German Institute for Building Technology. Approval number: Z-33.1-1363

The requirements are set out in the national building regulations and the guidelines for special constructions such as school buildings, high-rise buildings, public buildings, metros, hospitals and airports.

Switzerland
Classification: A2–s1, d0

Current documentation on all standards and approvals relating to m.look panels can be found in the internet at: http://www.mlook.at/technische-details/.
Please be certain to observe the applicable building regulations. FunderMax will assume no liability for a failure to do so.

FunderMax GmbH
A-2355 Wiener Neudorf
Z-33.1-1363
MPA BAU HANNOVER

Fig. 2

m.look and the Environment

Environmentally Friendly Production

The glass veil is impregnated with resins in impregnation lines, dried and pressed under high pressure and heat into durable moisture resistant panels. The exhaust air extracted during the drying is treated by regenerative thermal oxidation and the resulting heat is again reintroduced into the process. FunderMax received the „climate:active“ award as best practice from the Austrian Energy Agency and the Federal Ministry for the Environment for the installation of this efficient air treatment system. The production plant can thus reduce its emissions by approximately 10,000 tons of CO_2 per year.

Natural Resources

FunderMax m.look panels consist mostly of natural mineral resources that are available in unlimited quantities. Glass fibers give the panel the necessary strength and the proven resins make it moisture resistant and durable.

Durable and Maintenance-free

Extensive tests certify the exceptional durability of FunderMax m.look panels. The production process ensures a highly resistant surface. FunderMax m.look panels do not require any maintenance to ensure a long service life. The surface of the panels is highly resistant to soiling. If necessary, they can be cleaned with standard cleaning agents. It is not necessary to seal the edges, even after cutting. The edges will take on their natural color after a short period of time.

Environment

Environmental objectives are fulfilled both for new buildings, as well as for the renovation of existing buildings, through the use of rear-ventilated facades: The measurable reduction in energy required for heating minimizes the carbon dioxide emissions, one of the greatest causes of environmental pollution. State and regional subsidy programs are still available for energy-saving facade renovations.

Disposal and Recycling

The cuttings or dust from machining can be disposed of just like any other building material.

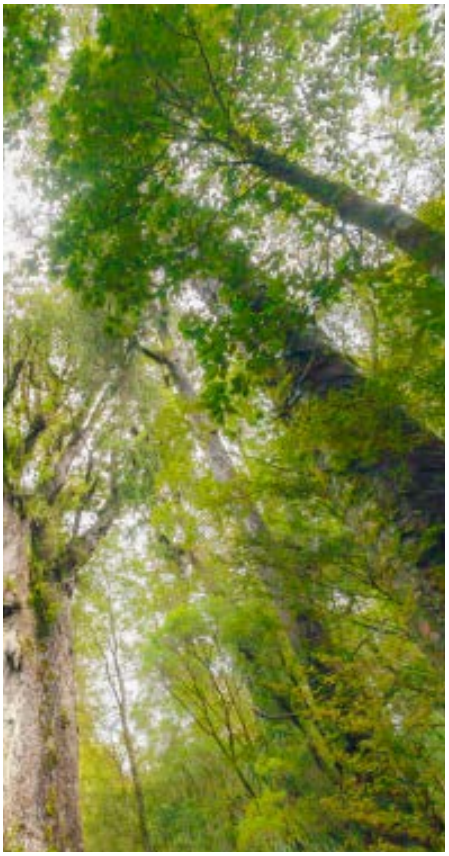


Fig. 3

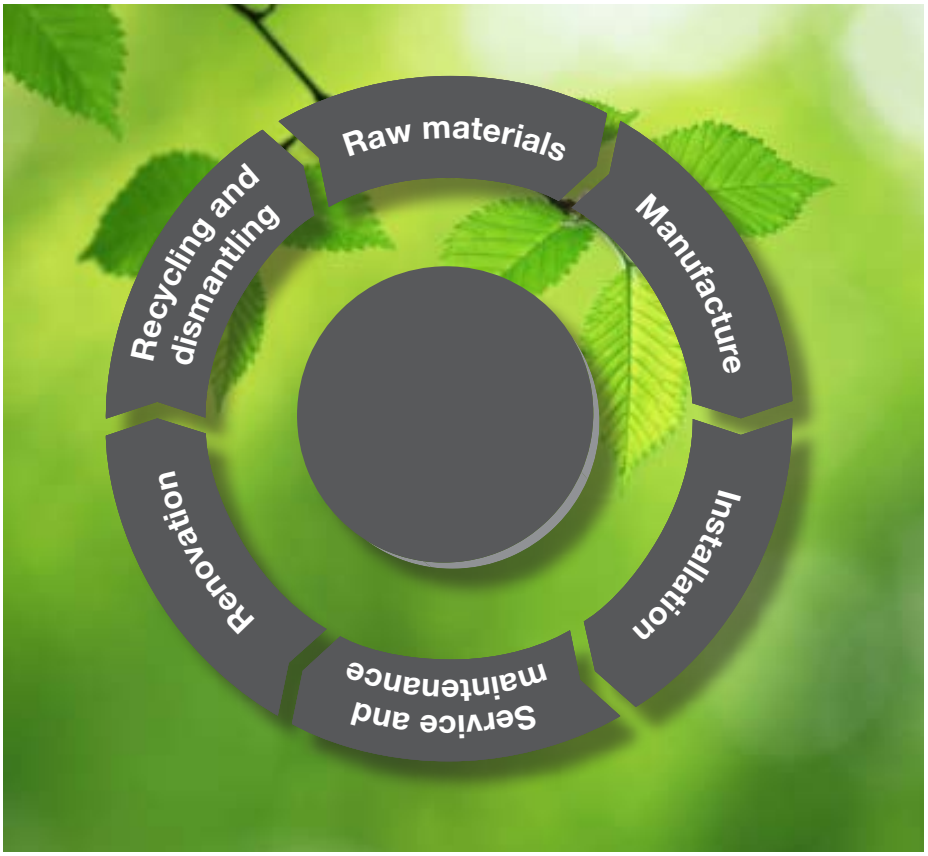


Fig. 4

m.look
General

m.look is an architectural facade panel with heavy duty, reinforced glass fiber, predominantly mineral, non-combustible core with a highly weather resistant decorative surface. The decorative surface is characterized above all by high scratch resistance, light fastness, impact resistance, anti-graffiti properties, ease of cleaning and hail resistance. Properties tested in accordance with EN438-2.

Surface NT

Format 3660 x 1630 mm
Tolerances - 0 / +10 mm

Panel dimensions are production dimensions. It is recommended to cut all sides of the panel if precise dimensions and angles are required. Depending on the cut, the net mass is reduced by approx. 10 mm.

Classification
A2-s1, d0 in accordance with EN 13501-1

Thickness 7.0 mm
Panels with double-sided decorative design, tolerance ± 0.4 mm

Material Properties

m.look panels shrink when they release moisture! m.look panels expand when they absorb moisture! When working with and using m.look panels in construction, these possible dimensional changes must be taken into consideration. The dimensional change for m.look panels is generally about 30% less in the longitudinal direction than it is in the transverse direction (longitudinal direction relative to the standard panel dimensions).

Element length = a
Element width = b

$$\frac{\text{a or b (in mm)}}{500} = \text{Allowance for exp.}$$

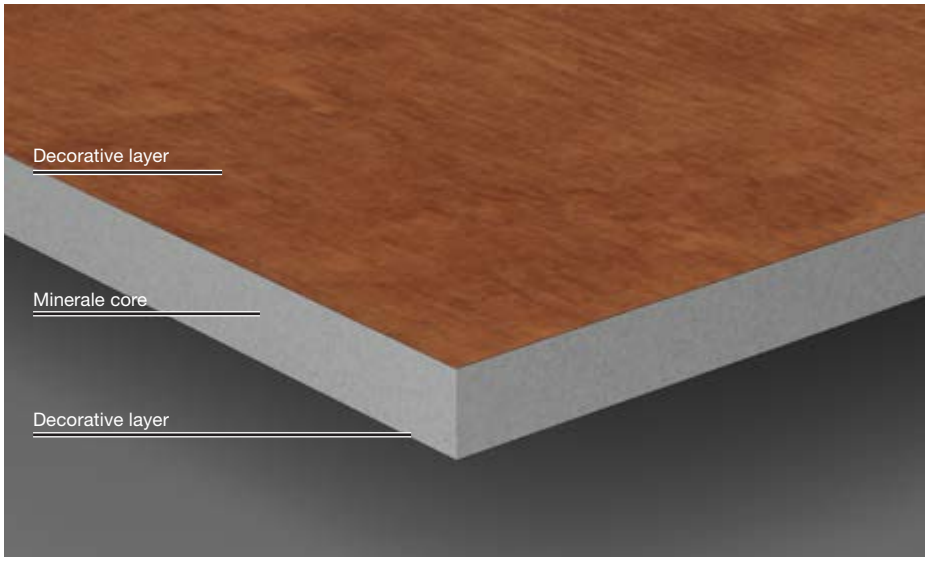


Fig. 5

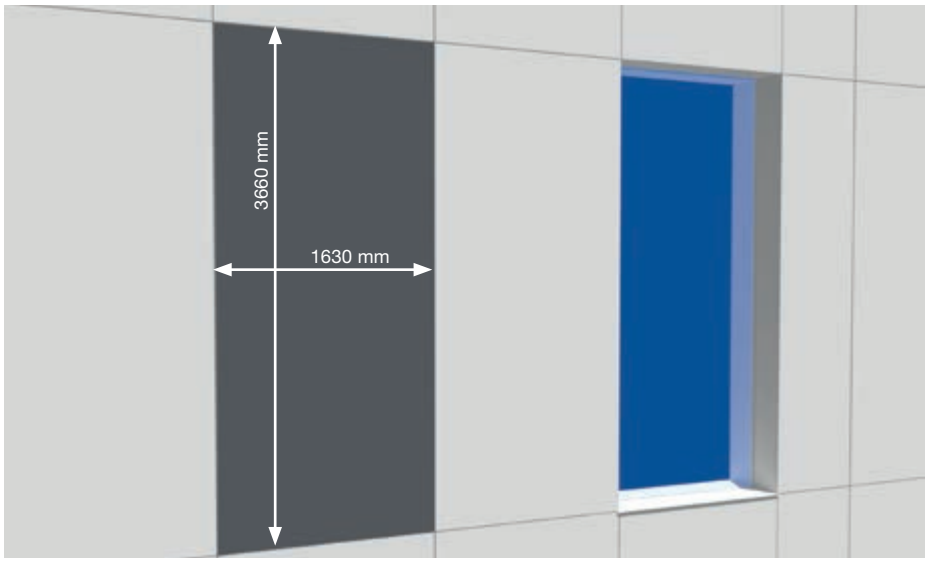


Fig. 6

Fig. 7

m.look Specifications

Panel Dimensions	Test Method	Tolerance	Values	Unit
Length		- 0 / +10 mm	3.660	mm
Width		- 0 / +10 mm	1.630	mm
Strength		+ 0,4	7,0	mm
Flatness	EN 438-6/5.3	≤ 5	≤ 5	mm/m

Types	Test Method	Tolerance	Values	Unit
Decors			based on the current range of decors	
Special decors			on request	
Cut length/width		+ 0,5		mm
Machining (drilling, milling, CNC)			on request	
Surface texture			NT	
Substructure			Aluminium, steel	
Wall anchors			Fassadenniet Alu/Niro K14	
Fastening spacings			up to 800 mm in accordance with the structural standard for the panel type	
Joint width			8 ±1	mm

Physical Properties	Test Method	Standard Value	Values	Unit
Building material class	EN 13501-1	-	A2-s1, d0	
Fire resistance	EN ISO 1716	≤ 3	≤ 3	MJ/kg
Surface protection			Weather protection, consisting of patented, double hardened acrylic polyurethane resin	
Light fastness of the decorative layer (standard)	EN 438-2/29	≥ 3	≥ 3	Gray scale
Light fastness of the decorative layer (special)	EN 438-2/29		≥ 4	Gray scale
Scratch resistance (surface hardness)	EN 438-2/25		≥ 3	Degree
Hail class	VKF Nr. 11	-	HW 5	
Flexural strength	EN ISO 178	-	≥ 36	MPa
E-Module	EN ISO 178	-	≥ 7500	MPa
Basis weight		-	13,5	kg/m²
Density	EN ISO 1183-1	-	1,9	g/cm³
Thermal resistance	EN 12667	-	0,0327	m²K/W
Dimensional change EOTA wall	ETAG 034	-	< 0,8	mm/m
Freeze/thaw cycle test	EN 438-2/19	-	passed	
Thickness swelling 24 hours	EN 317	-	< 0,1	%

Physical Properties	Test Method	Standard Value	Values	Unit
Formaldehyde emission	EN 717-1	≤ 0,1	≤ 0,02	ppm
VOC emission (TVOC)	AgBB	≤ 1,0	0	mg/m³
Disposal			Same as for other building materials (in Austria key number 91401)	

Table 1

Function and advantages of a non-bearing, rear-ventilated facade.

Protection against Rain

The VHF meets the norms for stress group III in accordance with DIN 4108-3 and is driving-rain proof. The low percentage of moisture absorbed from rain water that does not evaporate through the surface of the facade is quickly removed via the ventilation space between the insulation and the wall cladding (weather protection).

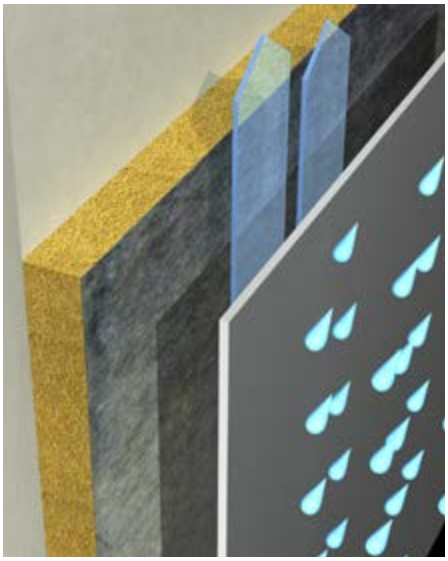


Fig. 8

Insulation

The non-bearing, ventilated facade (VHF) system can be designed for different energy requirements with an individually calculated insulation. Thus, any desired insulation thickness can be used. This means insulation values typical of low-energy, passive-energy or active-energy houses and comply with the current energy savings regulations can easily be achieved.

Based on the energy needs, the insulation maximizes the heat retention of the building. High summer temperatures in the interior of the building are regulated. By reducing the amount of energy needed for heating, the non-bearing facade minimizes the carbon dioxide emissions of the heating system.

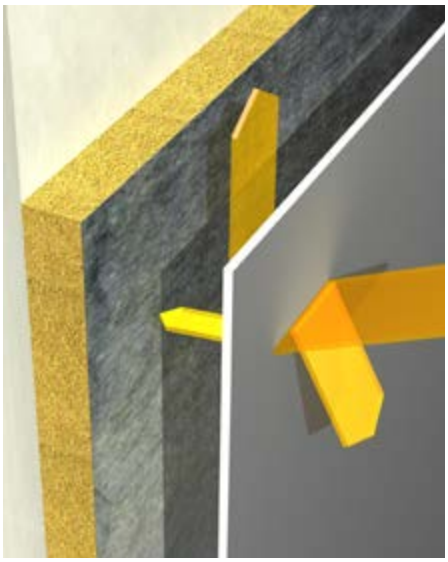


Fig. 9

Protection against Noise

Depending on the thickness of the insulation layer, dimensions of the panels and the proportion of open joints, noise protection can be increased by up to 14 dB.

Protection against Condensation Water

The construction of the non-bearing, rear-ventilated facade (VHF) decreases the vapor diffusion resistance from the interior to the exterior of the building: Moisture from the construction or use of the building is removed through the rear-ventilation space. Thus the lasting function of the insulation can be ensured and makes a significant contribution to a pleasant and healthy indoor climate.

Fig. 10

Fig. 11

Economy

The economic aspects can also be found again in the requirements of sustainable construction:
Longevity and long maintenance intervals are the essential key points.

Cost Certainty

The non-bearing rear-ventilated facades enable exact cost planning, even for renovations.

General Construction Information

During construction and installation, make sure that the material is not exposed to standing water, i.e. the panels must always be able to dry. m.look panels may exhibit planar deviations. These should be corrected though a stable, level substructure. All connections to other components or the subsurface are to be force-fitted. Elastic intermediate layers between the panel and the substructure, as well as between parts of the substructure, that allow a tolerance of greater than ± 0.5 mm are absolutely to be avoided.

Advantages of the Non-bearing, Rear-Ventilated Facade

- Architectural accents can be achieved through various design and joint patterns
- Long-term value retention and appreciation of the building
- Exact cost estimation of the facade
- Long maintenance intervals and low follow-up costs
- Installation under any weather conditions
- Can be installed on virtually any surface
- Savings through the shorter scaffolding times

Installation of m.look panels with rivets on an aluminum substructure.

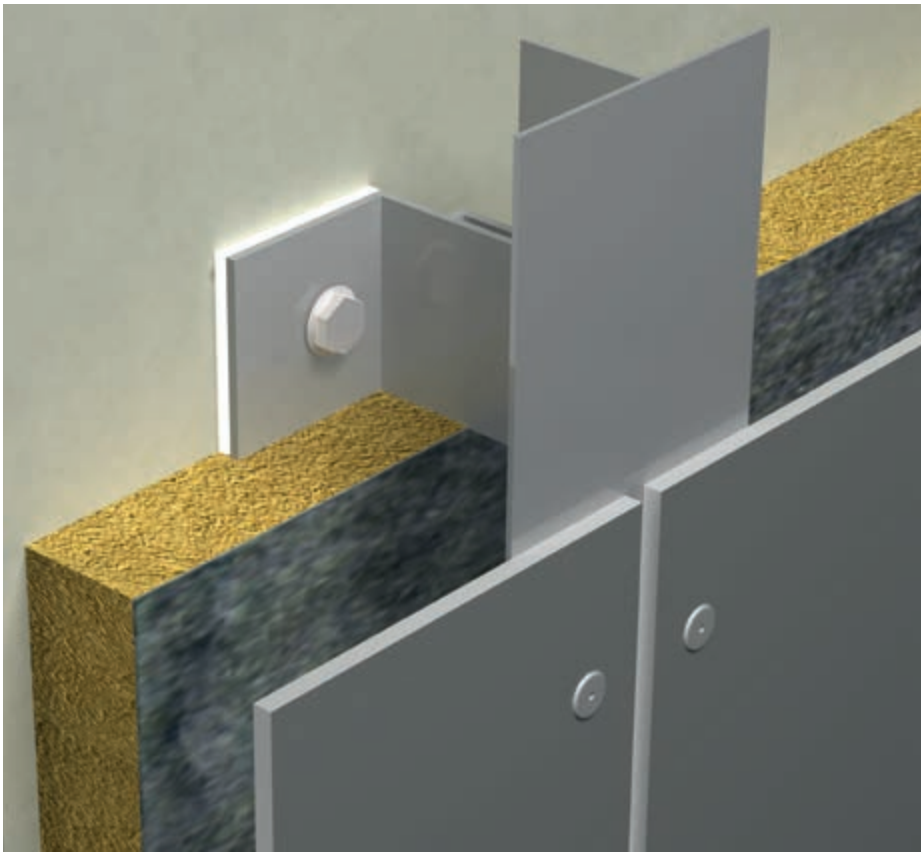


Fig. 12

Substructure

The aluminum substructure must meet the requirements of the national standards and is to be installed according to the manufacturer specifications for the substructure.
The aluminum substructure basically consists of vertical support brackets that are mounted on the wall using angle brackets. Due to the material properties of m.look panels, fixed points and sliding points need to be made to mount the panels (Fig. 13). The dimensions of metal substructures vary with changes in temperature. However, the dimensions of m. look panels vary with changes in relative humidity. These dimensional changes in the substructure and wall panel materials may be in opposite directions. It is therefore essential to ensure there is sufficient expansion space when installing m.look panels.

Sliding point

The drill hole diameter for m.look panels should be 8.5 mm. The head of the fastening means must always cover the hole. The fasteners are to be set such that the panel can move. Rivets must be set centrally using a rivet placement guide. The defined distance of the rivet head to the panel surface (0.3 mm) allows the parts to move in the drill hole (Figure 14). The center of the hole in the substructure must line up with the center of the hole in the m.look panel. The appropriate drill guides should be used. The panels should be fastened from the middle outwards.
Alternatively, the sliding points that are located at the level of the fixed points can be made as loose points with a slot (height = 5.1 mm; width = 8.5 mm).

Fixed point

Fixed points serve the uniform distribution (halving) of the swelling and shrinkage movements. The drill hole diameter for m.look panels should be 5.1 mm.

Fastenings

Alu-Blind rivet with big color lacquered head.
Rivet sleeve:
Material-No. EN AW-5019
Rivet pin:
Material-No. 1.4541
Pull-off strength of rivet pin: 5.6 KN
Diameter of drill hole in m.look panels:
Sliding points: 8.5 mm
Fixed points: 5.1 mm
Diameter of drill hole in the aluminium substructure: 5.1 mm

Rivet 5,0 x 16 K14
for support bracket thickness
2.0 ≤ t ≤ 3.0 mm
Rivet 5,0 x 18 K14
for support bracket thickness
3.0 < t ≤ 5.0 mm

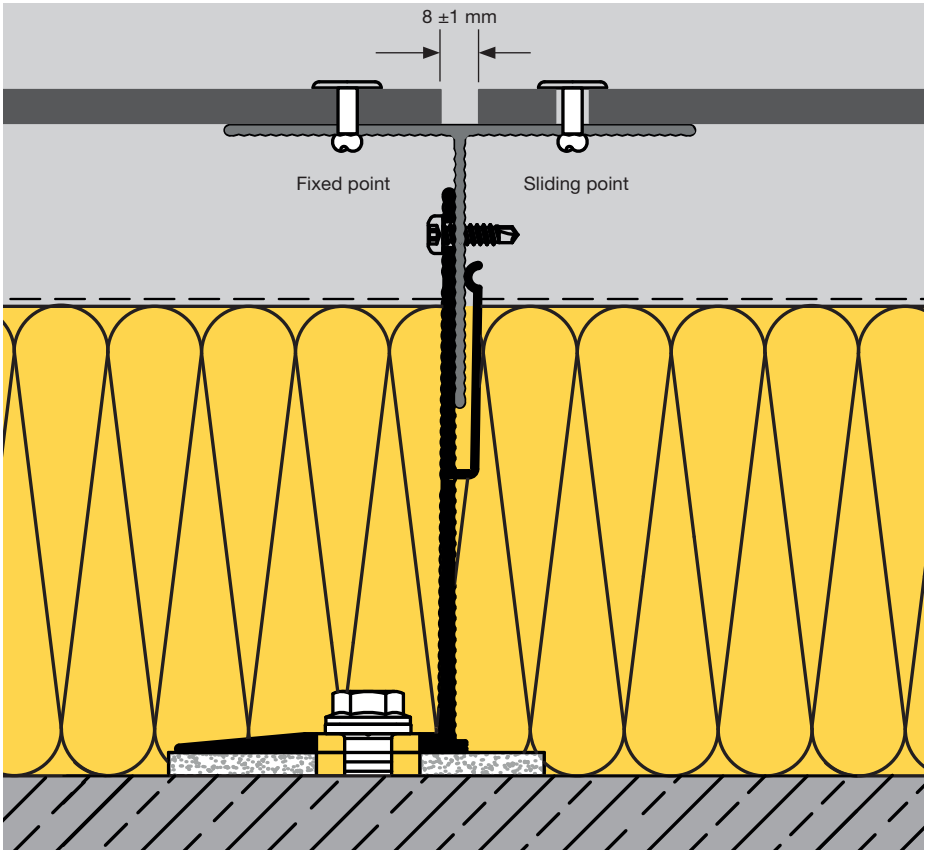


Fig. 13

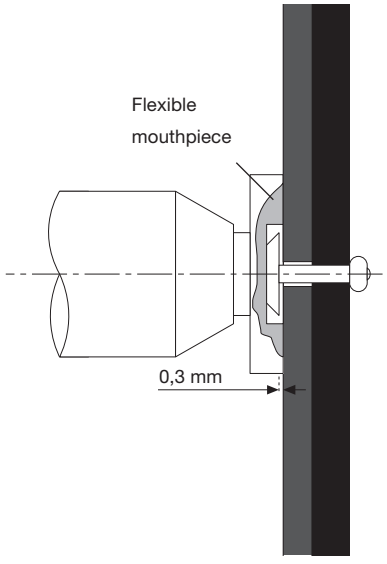
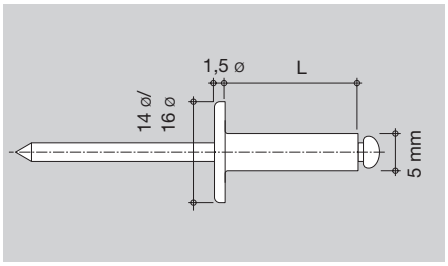


Fig. 14

The rivets must be centered and set with a rivet guide with an offset of no more than 0.3 mm.

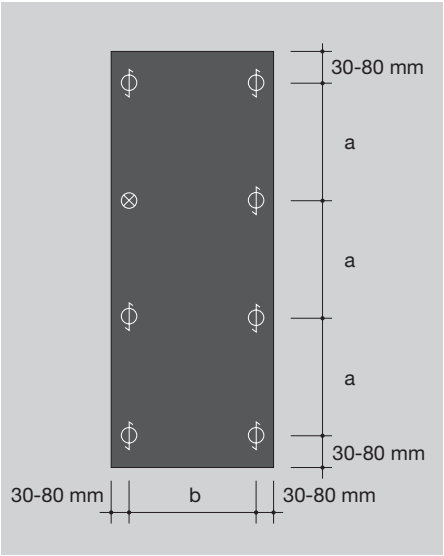


Rivet: Type 5x16K14 Fig. 15

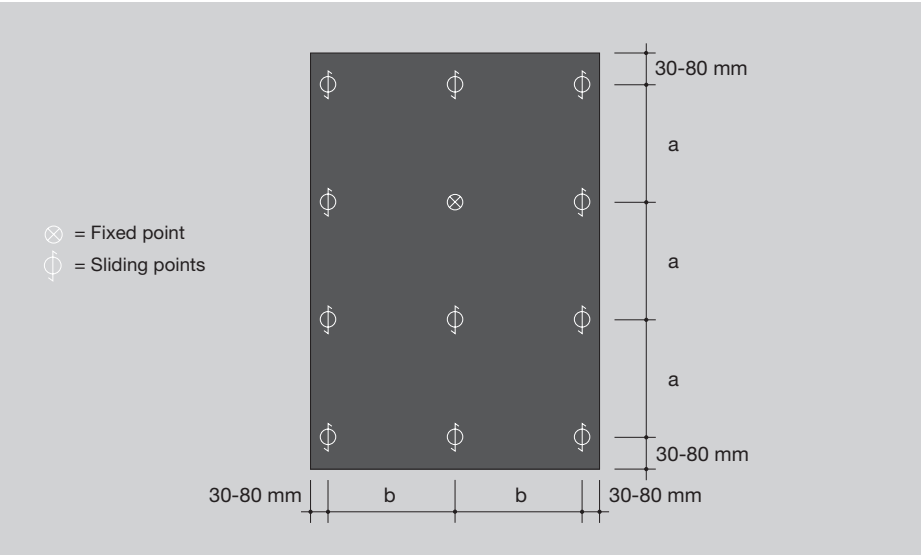
Fig. 16

Instead of a fixed point hole, a fixed point sleeve can also be used.

MBE Art- No. 1240201	Ø 8,5 mm
MBE Art- No. 1240205	Ø 10 mm
SFS Art- No. 1240201	Ø 8,5 mm



Single span Fig. 17



Double span Fig. 18

Edge spacings

It is absolutely necessary to observe the edge distance of 30 mm in order to ensure stability and flatness. In order to accommodate dimensional changes, the joints between the panels must be 8 ±1 mm (Fig. 13).

Fastening spacings

The fixing distance is to be selected in accordance with the structural requirements (calculations) or, if this is not necessary due to local building codes, from Tables 2 to 7. The fixing distances are to be smaller in the peripheral area of the building than in the central area (pressure, suction/Fig. 19).

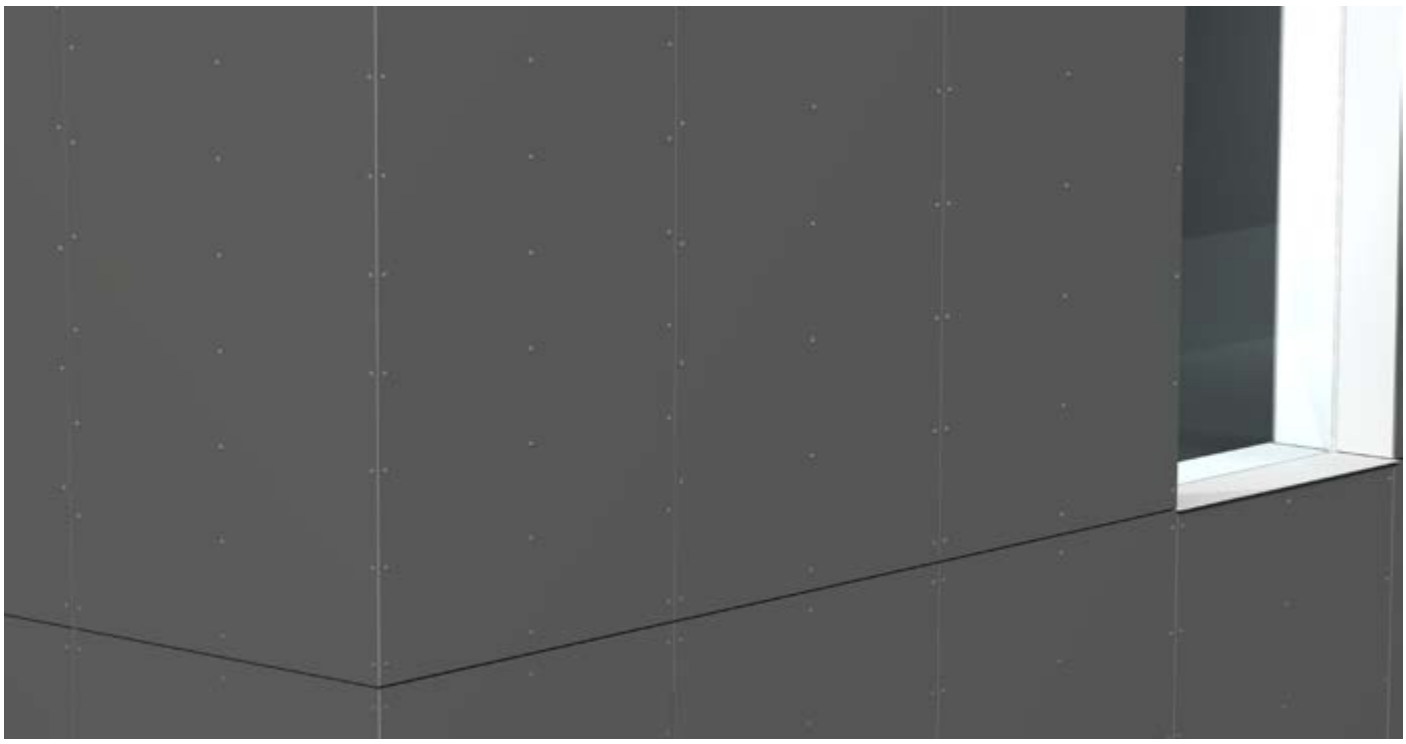


Fig. 19

Fig. 20

Wind Loads

A CH	Load chart (wind loads) single span	
Load q [kN/m²]	**max b [mm]**	**max a [mm]**
0,30	926	926
0,50	775	775
1,00	548	548
1,50	447	447
2,00	387	387
2,50	346	346
3,00	316	316
3,50	293	293
4,00	274	274
4,50	258	258
5,00	245	245

Table 2

A CH	Load chart (wind loads) double span	
Load q [kN/m²]	**max b [mm]**	**max a [mm]**
0,30	1000	746
0,50	775	578
1,00	548	409
1,50	447	334
2,00	387	289
2,50	346	258
3,00	316	236
3,50	293	218
4,00	274	204
4,50	258	193
5,00	245	183

Table 3

A CH	Load chart (wind loads) 3-n-panel	
Load q [kN/m²]	**max b [mm]**	**max a [mm]**
0,30	1090	749
0,50	845	579
1,00	598	409
1,50	488	334
2,00	423	290
2,50	378	259
3,00	345	236
3,50	319	219
4,00	299	205
4,50	282	193
5,00	267	183

Table 4

Fastening spacings for Austria and Switzerland

If the specified axis dimension „b“ is not fully utilized, then the allowable mounting distance „a“ can be calculated as follows (source: Typenstatik m.look Fassadenplatten und m.look Stulpdeckung Dipl.-Ing. Gerald Segeth, Dobel 19. 08. 13):

When installing a double panel with a wind load of 0.5 kN, the following applies: max b = 775 mm and max. a = 578.

If a value of 700 mm is used for „b“ for example, then the maximum allowable „a“ is calculated as follows:

$$\text{allow a} = \frac{\text{max b}}{\text{for given b}} * \text{max a}$$

Example:

$$\text{allow a} = \frac{775\ \text{mm}}{700\ \text{mm}} * 578\ \text{mm} = 639\ \text{mm}$$

Fastening spacings for Germany

D	Load chart (wind loads) single span	
Load q [kN/m²]	**max b [mm]**	**max a [mm]**
0,30	800	800
0,50	800	800
1,00	664	664
1,50	542	542
2,00	470	470
2,50	420	419
3,00	384	378
3,50	355	347
4,00	332	321
4,50	313	300
5,00	297	282

Table 5

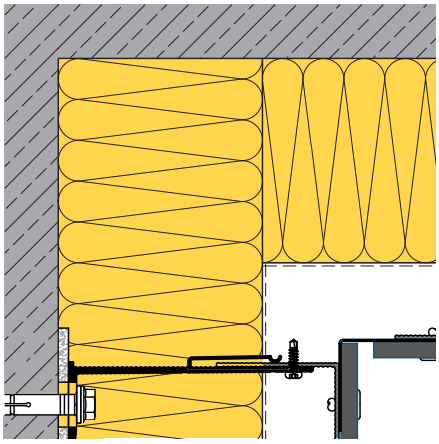
D	Load chart (wind loads) double span	
Load q [kN/m²]	**max b [mm]**	**max a [mm]**
0,30	800	800
0,50	800	573
1,00	664	345
1,50	542	282
2,00	470	244
2,50	420	218
3,00	384	199
3,50	355	185
4,00	332	173
4,50	313	163
5,00	297	154

Table 6

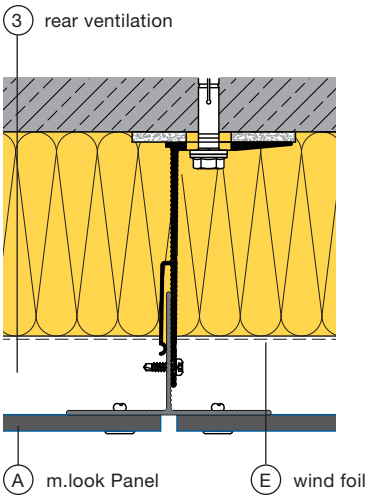
D	Load chart (wind loads) 3-n-panel	
Load q [kN/m²]	**max b [mm]**	**max a [mm]**
0,30	800	800
0,50	800	627
1,00	725	346
1,50	592	283
2,00	513	245
2,50	458	219
3,00	419	200
3,50	387	185
4,00	362	173
4,50	342	163
5,00	324	155

Table 7

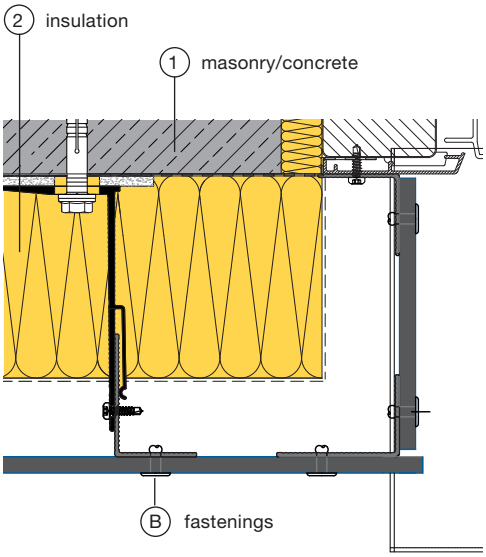
Constructions-details horizontal sections Alu-substructure riveted



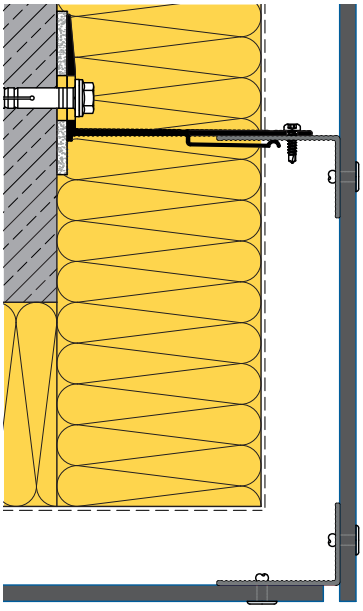
Inner corner A106



Vertical joint A107



Window reveal A104



external corner A105

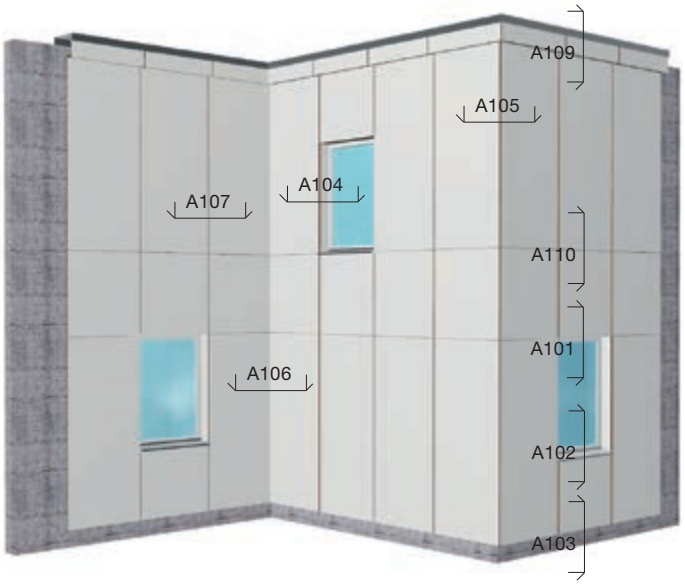
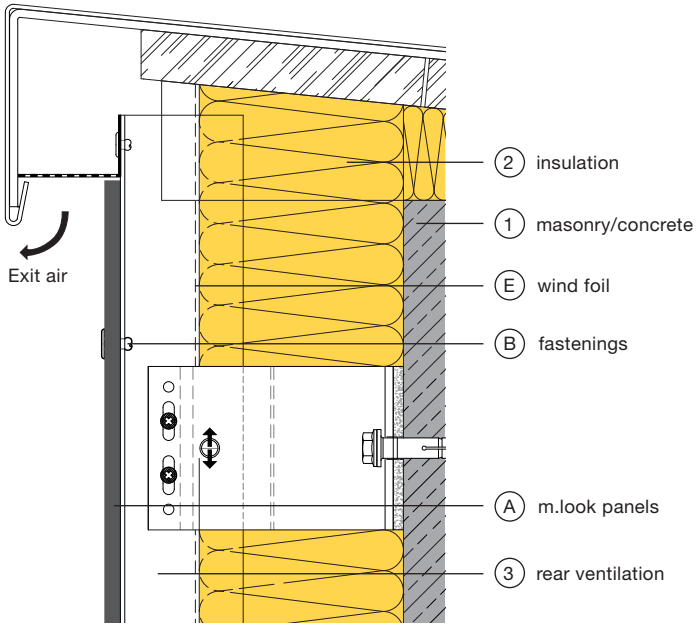


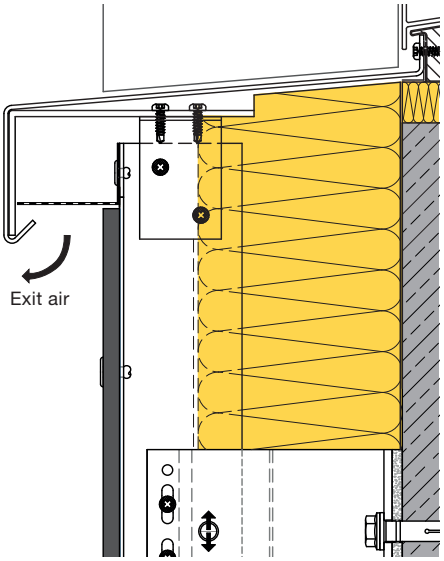
Fig. 21

Note:
All mounting brackets and fastening means shown in this brochure are planning suggestions and are not included with FunderMax panels! All drawings in this brochure are not to scale!
Suppliers: See page 27 at the end of this brochure.

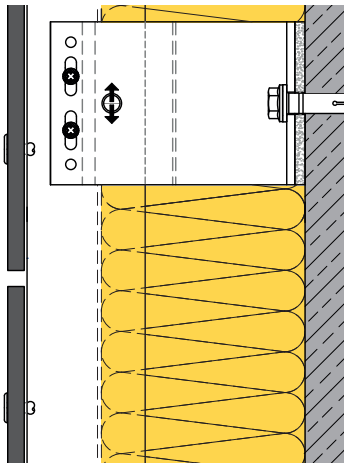
Constructions-details vertical sections Alu-substructure riveted



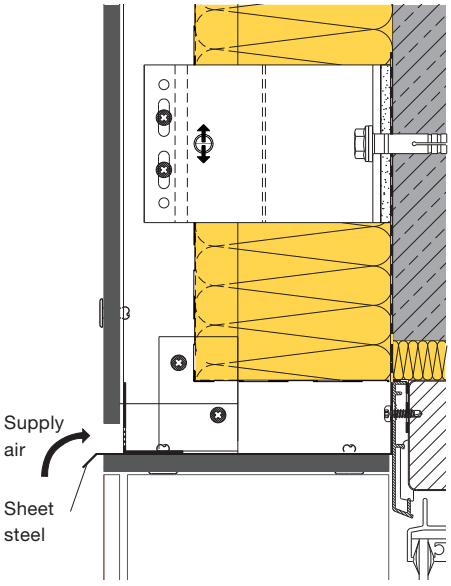
Attica A109



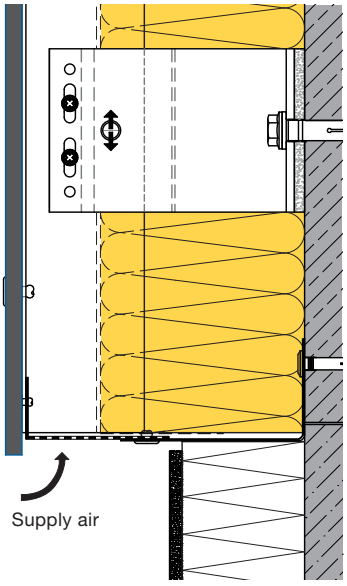
Window sill edge A102



Horizontal joint A110



Window lintel A101



Base connection A103

Transport and Handling

To avoid damaging the edges and surfaces of the high quality material, it should be handled with care.
Two people are required to safely install panels larger than 2,000 x 1,000 mm. Ensure the panels are kept clean and free of dirt and grit in order to avoid damage to their surfaces.

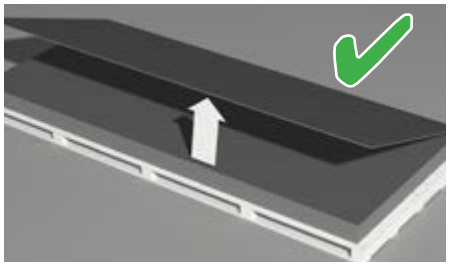
Basis weight: 13,5 kg/m²

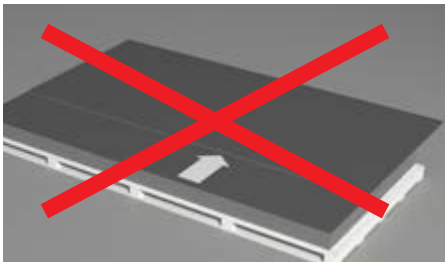
FunderMax m.look panels must be secured to prevent shifting during transport. The panels must be lifted when they are loaded or unloaded. Do not pull or push them over the edge of the stack!

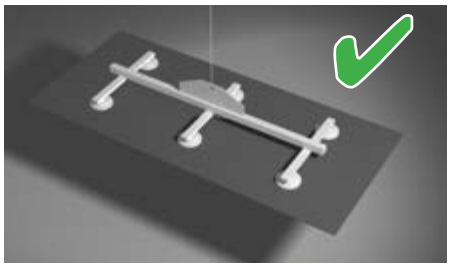
Maximum weight of the pallets: 1800 kg (gross)

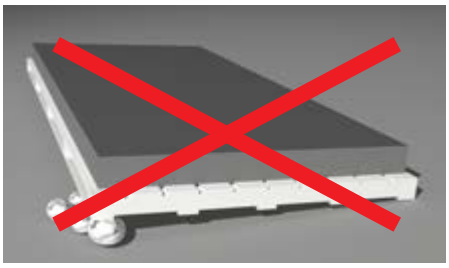
m.look panels can also be delivered with a protective film upon request.

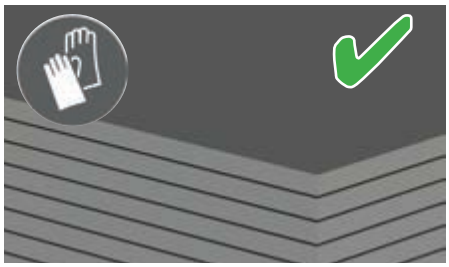
Protective films must always be removed from both sides at the same time. The protective film must not be exposed to heat or direct sunlight.

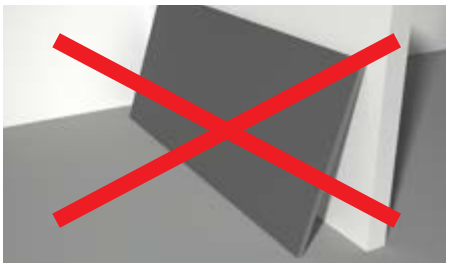

Always lift the panel Fig. 22


Do not slide the panel from the stack Fig. 23

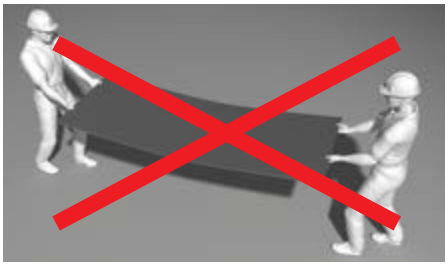

Use lifting system for large-sized panels. Fig. 24


Always place the panels on a flat surface Fig. 25


Caution: sharp edges! Fig. 26

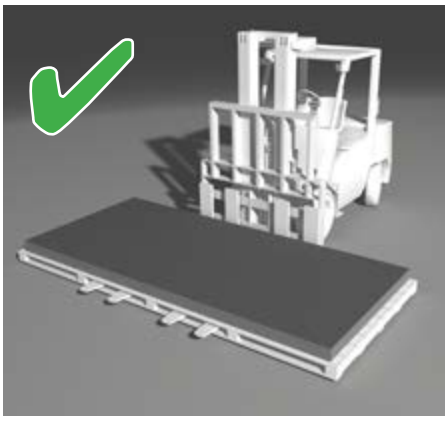

Do not lean the panels upright Fig. 27


Always carry the panels vertically with two people. Fig. 28

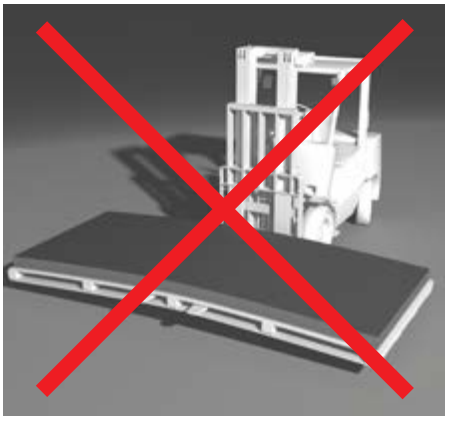

Do not carry the panels horizontally! Fig. 29

Pallet Handling

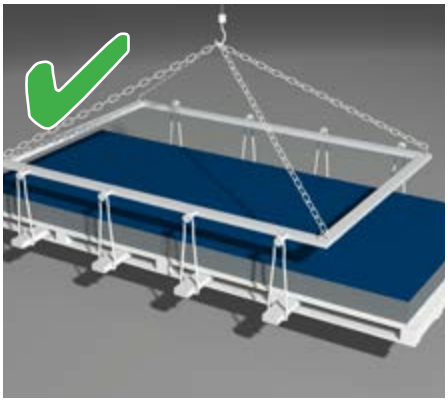
When transporting and lifting the pallets it is essential to use an appropriate forklift with wide forks or a crane with lifting points uniformally distributed along the length of the pallet. Do not stack pallets of cut panels.



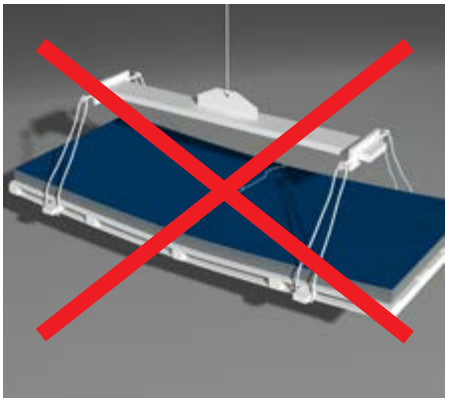
Proper forklift transport Fig. 30



Improper forklift transport Fig. 31



Proper crane transport Fig. 32



Improper crane transport Fig. 33

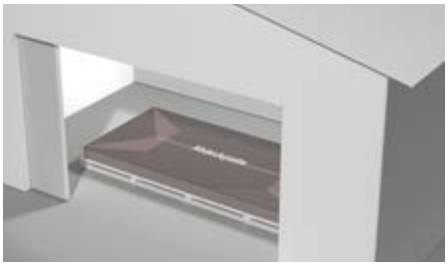
Storage and air conditioning

FunderMax m.look panels must be stacked horizontally on flat, stable supports and supporting panels.
The goodss must lie completely flat.

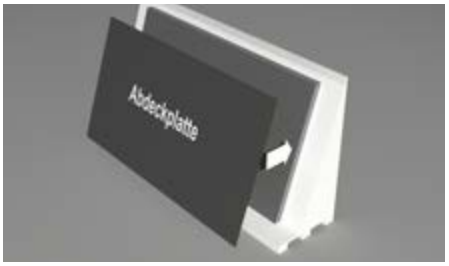
Always leave the stack of panels covered. The cover should be weighted to keep it in place.
After removing any panels, the PE film must be closed over the stack again. The same applies for stacks of cut panels.

Improper storage can lead to permanent deformation of the panels.

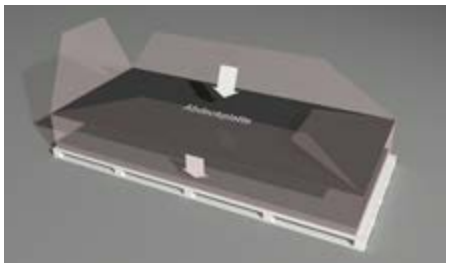
FunderMax m.look panels should be stored in closed rooms under normal climate conditions. Climate differences between both sides of the panel should be avoided.



Do not store panels outdoors Fig. 34



Always store panels on a level surface Fig. 35



Always pack the panels in PE film Fig. 36

Always store panels on a level surface and keep covered Fig. 37

Machining m.look Panels

General

We are happy to cut the panels to your specifications, including interior cutouts. For finishing cuts, please refer to the information below.
The surface of the FunderMax m.look panel consists of double hardened resins and is therefore very durable.
Finishing cuts on site must be performed with diamond-tipped tools. Sharp blades and smooth running tools are required to ensure proper machining. Improper handling or the use of unsuitable tools may result in the breaking, splintering or chipping of the decorative side of the panel. Tables should be smooth and preferably without joints to ensure that no shavings can get stuck there where they might damage the surface of the panel. A circular saw can be used for interior cutouts.
All the machining equipment should be designed with sealed bearings.
In order to avoid chipping the edges, it is necessary to bevel them with a sanding block (45 degrees, approx. 0.25 mm).
Please be sure to observe the standard safety rules when machining m.look panels and to wear proper safety gear such as gloves, long clothing, protective goggles, ear protection and dust protection.

Safety Precautions

This is a list of the recommended personal protective equipment (PPE). The appropriate personal protective equipment required by health and safety regulations (long-sleeved work clothes, safety shoes, hair net, etc.) should always be worn when working with FunderMax m.look panels.

Protective Goggles

When machining FunderMax m.look panels with tools that create shavings or chips, please be sure to wear tightly fitting protective goggles.

Ear Protection

When machining FunderMax m.look panels the noise levels may exceed 80dB(A). Please be sure to always wear adequate ear protection when machining m.look panels.

Dust Protection

Machining FunderMax m.look panels must be performed with suitable dust extraction to keep the work place dust free. Dust from machining the panels may lead to mechanical irritation of the skin and mucous membranes. Adequate respiratory protection (e.g. disposable dust mask P1) must be worn when machining the panels.

Gloves

Non-beveled cut edges are sharp. There is a risk of injury. It is recommended to wear category II protective gloves with at least category II cut resistance when handling freshly cut FunderMax m.look panels.

Drilling

Solid carbide spiral or dowel drill bits should be used. At machining centers it is recommended to use an insert in the main spindle instead of in the drilling head at a speed of 2,000 – 4,000 min-1 and feed speed of 1.5 - 3 m/min.
The exit speed of the drill must be selected such that the surface of the m.look panel is not damaged. Just before the drill exits the rear side of the panel in its full diameter, the feed rate should be reduced by 50%. When drilling holes all the way through the panel, be sure to use a suitable base to ensure there is sufficient counter-pressure.

Leitz-drill bit 10 mm Fig. 38

Leitz-drill bit HW-solid, Z2 Fig. 39

MBE VHM (carbide) facade drill bit Fig. 40

Installation

General

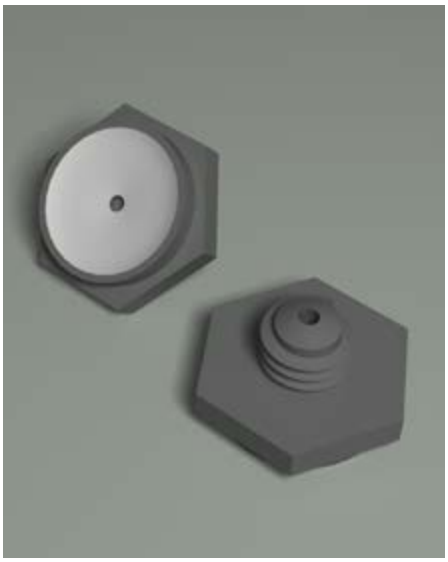
Avoid placing the panels on hard, stony surfaces. Suction handles can be used to place the panel in the correct mounting position (Fig. 45). The recommended joint spacing of 8 ± 1 mm between the panels can be achieved with spacers. We recommend using smooth spacers.

Machining

We are happy to provide prefabricated panels. To perform optimal final cuts, we recommend using a circular saw with (Fig. 46) dust extraction. Please observe the safety instructions on page 20. The center of the hole in the substructure must be aligned with the center of the hole in the m.look panel. We suggest using suitable drill guides (centering tool MBE, SFS) (Fig. 47). We recommend diamond-tipped core drills for drilling drill holes (Fig. 48).

Tools Required for Installation

Rivet gun/caliper Fig. 41

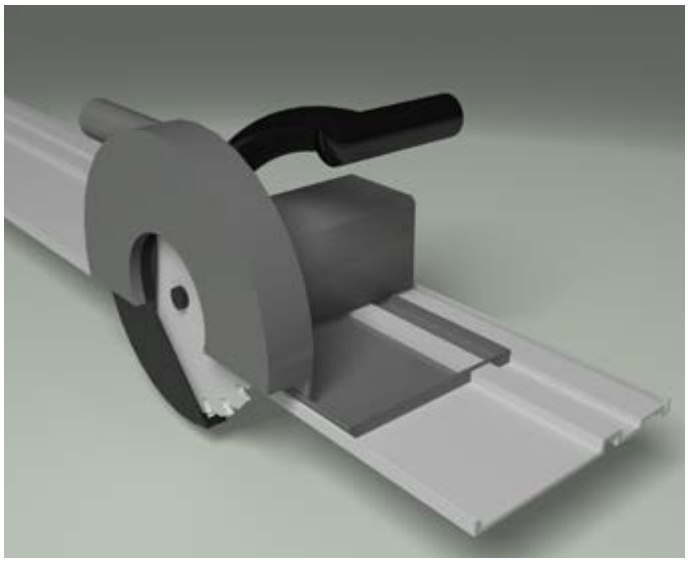


Flexible mouthpiece Fig. 42

Aluminium Substructure Fig. 43

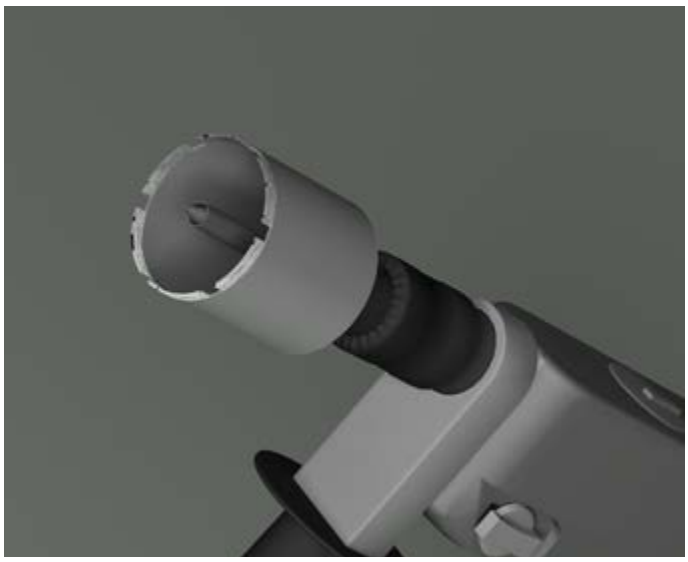
Drill Fig. 44

Suction handle Fig. 45



Circular saw with guide rail Fig. 46

Drill centering tool Fig. 47



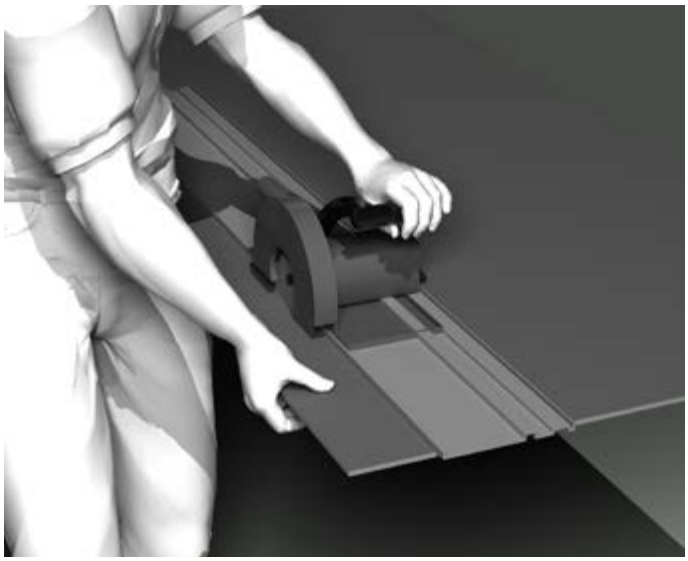
Diamond-tipped core drill Fig. 48

m.look
Recommendations for working

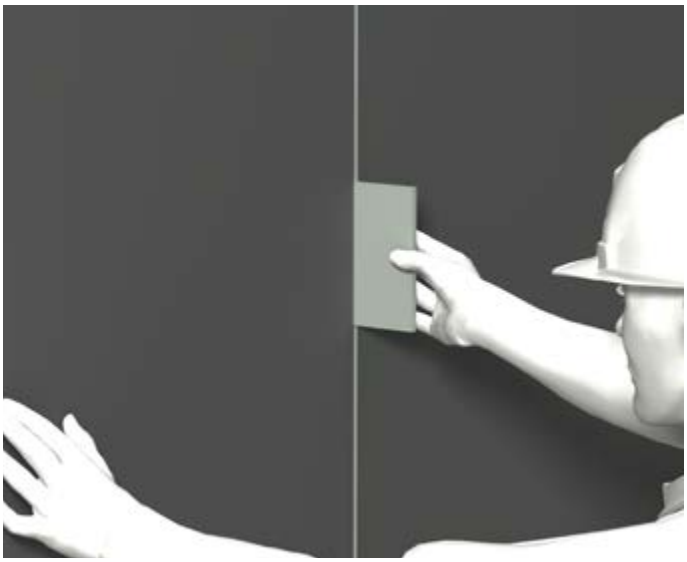
Element sizes

For installation by hand, the recommended m.look panel size is 2,000 x 1,000 mm. This size panel can easily be installed by two people. We recommend carrying the panel vertically (see Fig.28).

For larger sizes, we recommend installing the panels with lifting equipment (Fig. 24).



Final cut Fig. 49



Spacer for ensuring proper joint space Fig. 50

Place panels with suction handles Fig. 51

Rivets

The rivets are placed using an electric rivet gun/caliper (Fig.54).

Fixed points are riveted WITHOUT flexible mouthpiece.

Sliding points are riveted WITH special guides (Fig. 52 and 54).

The flexible mouthpiece ensures the distance of 0.3 mm between the panel and rivet head.

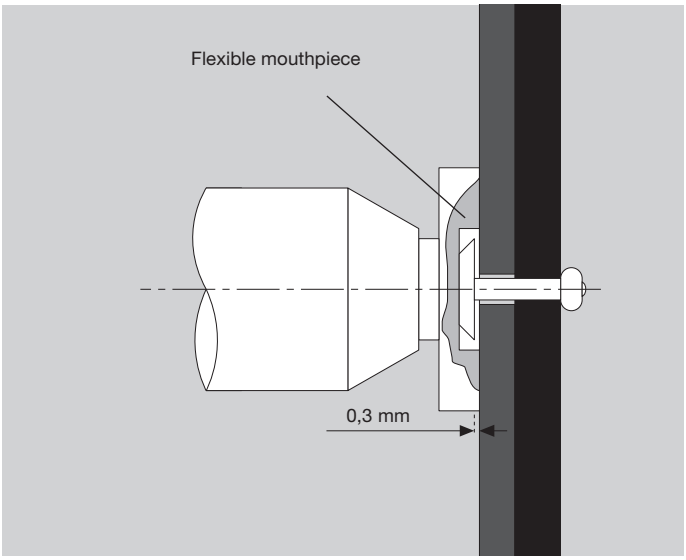
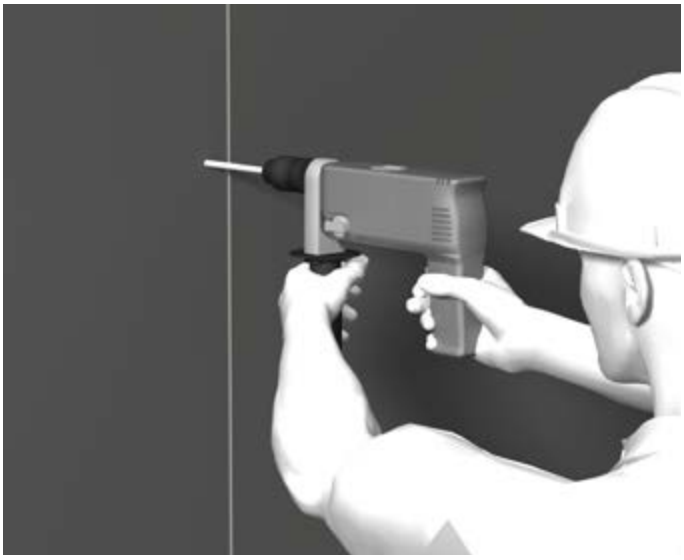
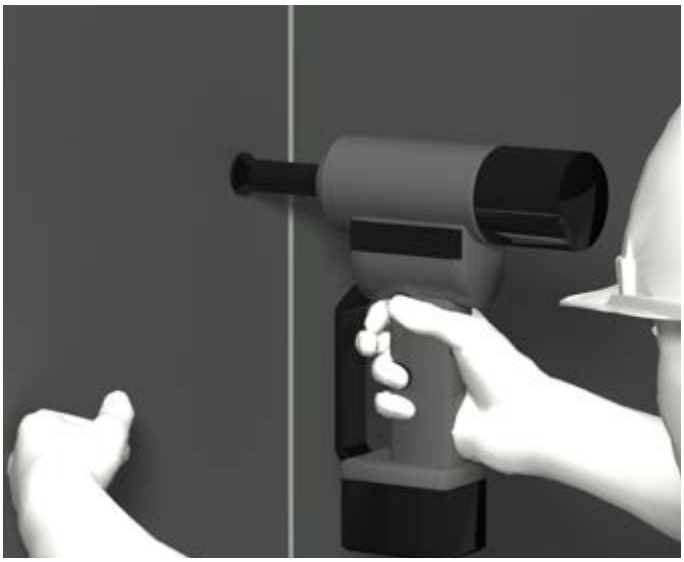


Fig. 52



Pre-drill panel Fig. 53



Sliding point with flexible mouthpiece Fig. 54

Cleaning steps for m.look panels

For removing dust vacuum clean the surface and wipe off residual dust with a clean, dry cotton cloth. Finally wipe with a damp cloth.
For removing any other contamination please follow the cleaning steps until the desired cleaning effect.

Fig. 55

Step 1

Clean the surface with clean hot water and a soft sponge (DO NOT scrub the surface with the „green“ side of the sponge), a soft cloth or a soft brush (e.g. a nylon brush).

Step 2

If there is any dirt that can not be removed with a sponge and warm water, you can use normal, non-abrasive household cleaners such as dishwashing detergent (Palmolive, Fairy) or glass cleaner (Ajax, Frosch). Perform a final cleaning.

Step 3

If there is still any dirt that can not be removed, use a solution of soft soap and water (1:3). If the dirt is particularly stubborn, let it soak for a while. Perform a final cleaning.

Step 4

If any dirt is still remaining, you can repeat step 1 using organic solvents (e.g. aceton, ethyl alcohol, layquer remover, turpentine).
If there is any dirt that still can not be removed, you can try scraping it off physically. Caution: To avoid scratching the panels, use a plastic or wooden spatula. Perform a final cleaning.

Step 5 (for Adhesives, Paints, Sealants or Silicone Residues)

Rub the surface with a soft dry cloth or a soft dry sponge. If the material still can not be removed, use silicone remover (for example from Molto) or ask the manufacturer of the adhesive for the ideal cleaning agents.
Caution: Hardened adhesive, paints, foams and sealant can NO LONGER be removed.

Step 6

If the panel is still dirty you can repeat step 1, using liquid cleaner with polishing chalk (CIF, ATA). Only use liquid cleaner with polishing chalk sparingly! For extremely stubborn lime deposits you can also use acidic cleaning agents (e.g. 10% vinegar or citric acid). Perform a final cleaning.

Final cleaning

Completely remove any remaining detergent to avoid streaking. Finally, wash off with clean water and dry. Wipe the surface dry with an absorbent cloth or paper towel.

When cleaning with solvents: Observe the safety regulations! Always work with an open window! Do not work near any open flames!

m.look
Accessories/Suppliers

Substructure:

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ALLFACE Befestigungstechnologie GmbH & CoKG
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A-2544 Leobersdorf
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Fax: +43 (0)2256/625 18 18
E-mail: office@allface.com
www.allface.com

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www.eurofox.com

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www.slavonia.c

BWM
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Fax: +49 (0) 711 / 90 313–20
www.bwm.de

Systea DWS Pohl GmbH
Margarete-Steiff-Str. 6
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Fax: +49 4193 / 99 11-49
www.pohlnet.com

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www.nauth-sl.de

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www.etanco.fr

Switzerland

WAGNER SYSTEM AG
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CH-3250 Lyss
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Fastenings: (mechanical)

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