QUALITY
MADE IN AUSTRIA



SMB-GN1

SPIDI®

INSTALLATION GUIDE



Marina Tower
Vienna
Eternit, 20,000 m²

SPIDI® Facade system

The certified SPIDI® facade system comprises more than 30 different system variants designed for a wide range of applications, providing a complete solution for nearly all types of ventilated facades. This installation guide serves as a reference for the correct installation of the **SMB-GN1** system.

At the core of all system variants are the patented SPIDI® max wall brackets, manufactured from high-strength aluminium, steel with enhanced corrosion protection through KTL coating, and stainless steel. They are ETA-approved and, in the stainless-steel version, certified for passive-house applications.

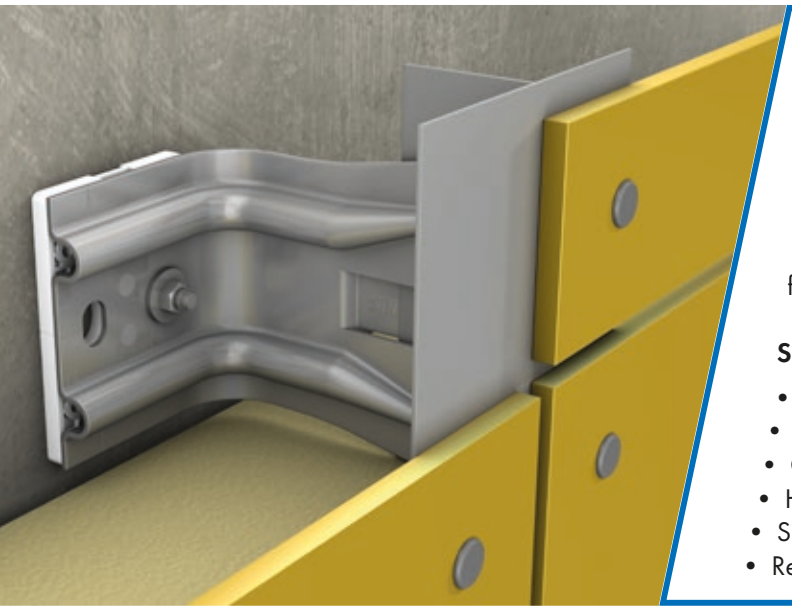
SPIDI® max wall brackets are supplied with a pre-assembled thermostop as standard, can be used as both fixed and sliding points, and may be installed either horizontally or vertically. This accelerates installation, reduces potential sources of error, and minimises storage requirements.

More than 40 years of facade engineering expertise go into every SPIDI® system variant, ensuring the highest quality and reliability — including for customised special constructions.

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ETA-17/0461

ZERTIFIZIERTE KOMPONENTE

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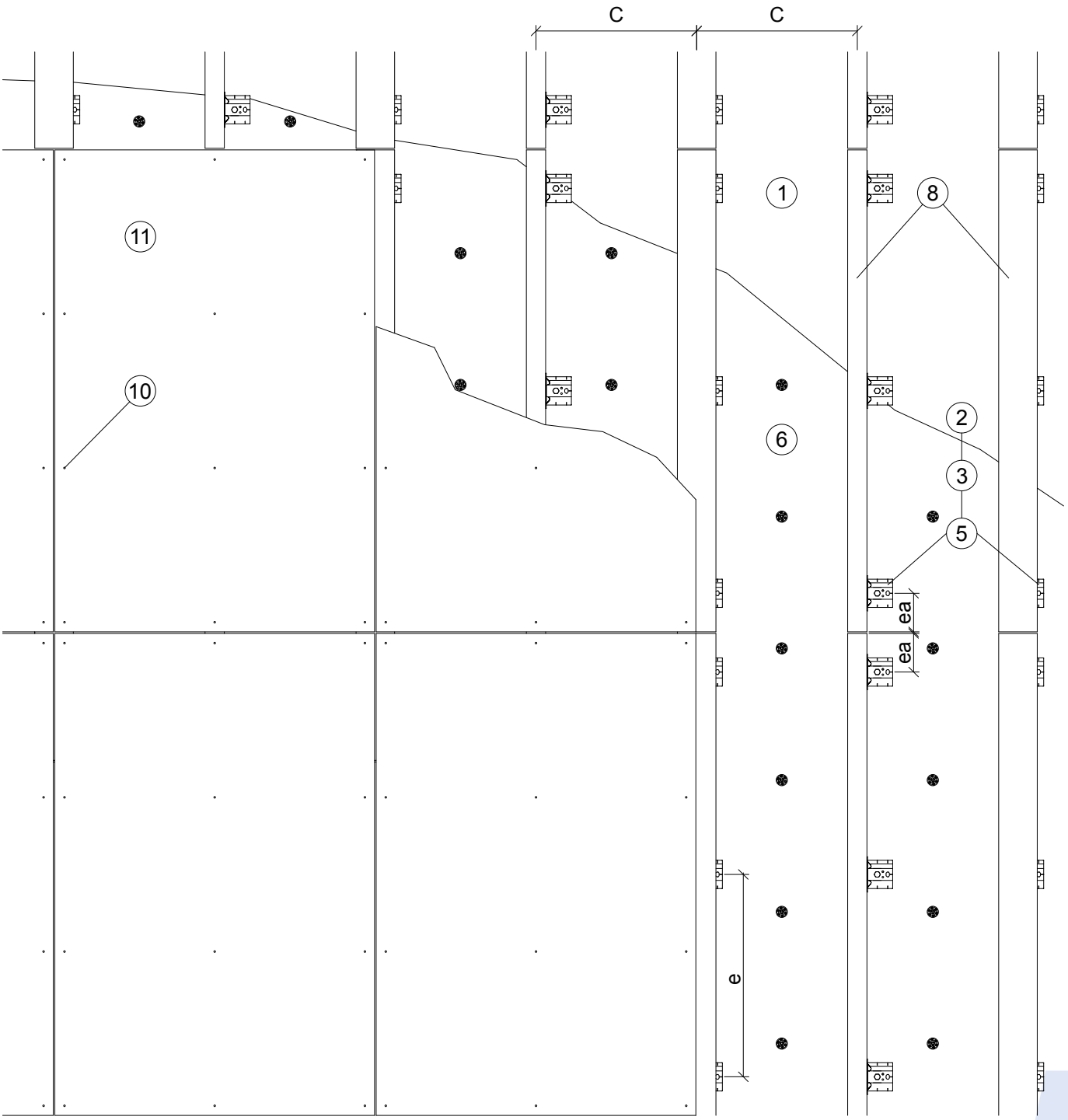
System SMB-GN1

In this system, the ventilated facade cladding is visibly fastened with rivets onto a single-layer SPIDI® max substructure. This construction method has established itself as the most widely used facade system and is known for its economic efficiency. The option of coated rivets allows different aesthetic requirements to be achieved.

Suitable for the following facade claddings:

- Aluminium composite panels
- Fibre-cement panels
- Glass-fibre reinforced concrete
- HPL panels
- Solid aluminium and solid steel sheets
- Render carrier boards

SPIDI® max SMB-GN1 system overview



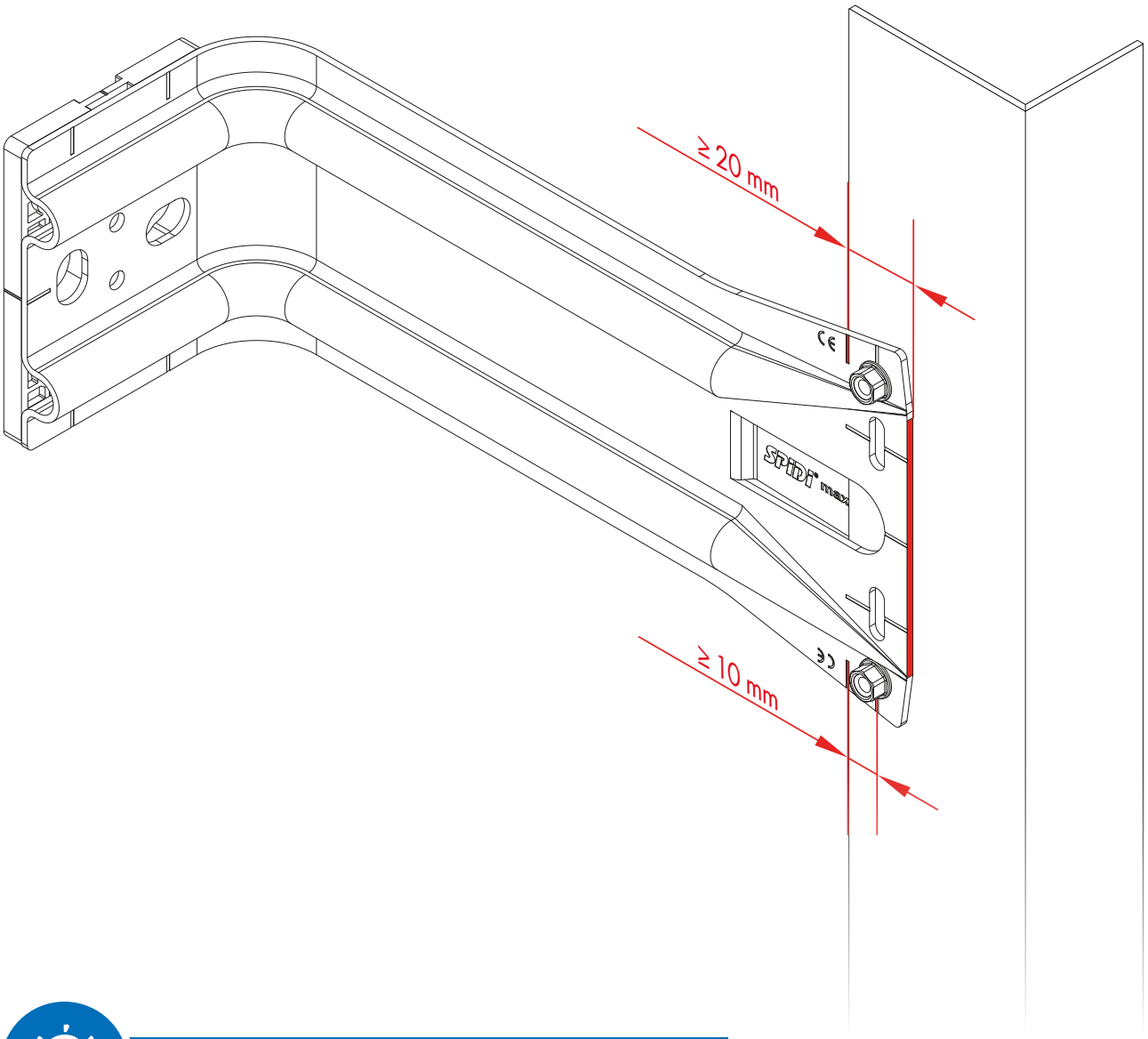
1	Substrate
2	SPIDI® max thermostop (pre-assembled)
3	SPIDI® max wall bracket
5	Anchorage element (depending on substrate condition)
6	Thermal insulation (including insulation retaining pins)
8	Vertical load-bearing profile
10	Rivet
11	Facade cladding

C	Profile spacing
e	Bracket spacing
ea	Cantilever arm

Wall tolerance adjustment

The required bracket length depends on the stand-off distance (distance between the substrate and the rear side of the facade cladding). Brackets are supplied as standard with a 6 mm thermostop. For specific project requirements, thermostops with 6 mm or 10 mm thickness can be supplied separately and replaced.

SPIDI® max brackets feature a visual marking that indicates the required minimum profile insertion depth of 20 mm from the outer profile edge.



DID YOU KNOW ...

... that even with precise planning and execution, concrete components inevitably exhibit dimensional tolerances?

Such tolerances occur in both refurbishment and new-build projects and are technically normal. Proper consideration of dimensional tolerances is essential for a functional and durable facade substructure.

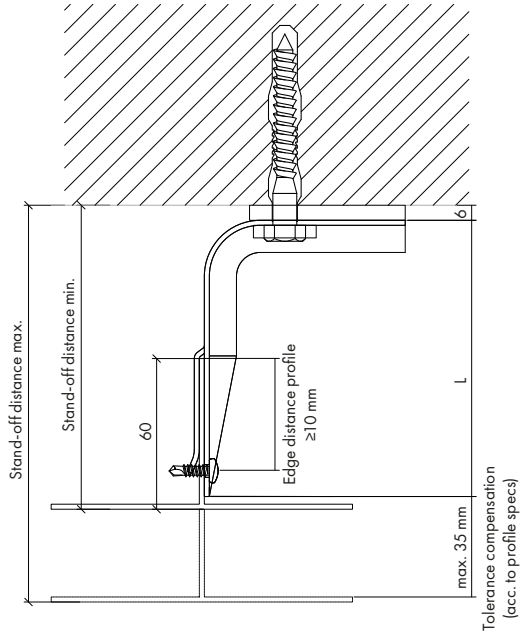
Practical tip:
Measure the as-built wall surfaces before installation and document any deviations. This enables optimal adjustment of the substructure on-site.

Bracket lengths SPIDI® max 85 - 900 mm

with pre-assembled 6 mm thermostop and standard profile depth of 60 mm.

Standard lengths

Bracket length	Length L* [mm]	Distance min [mm]	Distance max [mm]
SPIDI max 85/80	85	96	131
SPIDI max 110/80	110	121	156
SPIDI max 135/80	135	146	181
SPIDI max 160/80	160	171	206
SPIDI max 185/80	185	196	231
SPIDI max 210/80	210	221	256
SPIDI max 240/80	240	251	286
SPIDI max 270/80	270	281	316
SPIDI max 300/80	300	311	346



Special lengths**

Bracket length	Length L* [mm]	Distance min [mm]	Distance max [mm]
SPIDI max 125/80	125	136	171
SPIDI max 170/80	170	181	216
SPIDI max 225/80	225	236	271
SPIDI max 255/80	255	266	301
SPIDI max 285/80	285	296	331
SPIDI max 330/80	330	341	376
SPIDI max 350/80	350	361	396
SPIDI max 360/80	360	371	406
SPIDI max 390/80	390	401	436
SPIDI max 420/80	420	431	466
SPIDI max 450/80	450	461	496
SPIDI max 480/80	480	491	526
SPIDI max 510/80	510	521	556
SPIDI max 540/80	540	551	586
SPIDI max 570/80	570	581	616
SPIDI max 600/80	600	611	646
SPIDI max 630/80	630	641	676
SPIDI max 660/80	660	671	706
SPIDI max 690/80	690	701	736
SPIDI max 720/80	720	731	766
SPIDI max 750/80	750	761	796
SPIDI max 780/80	780	791	826
SPIDI max 810/80	810	821	856
SPIDI max 840/80	840	851	886
SPIDI max 870/80	870	881	916
SPIDI max 900/80	900	911	946

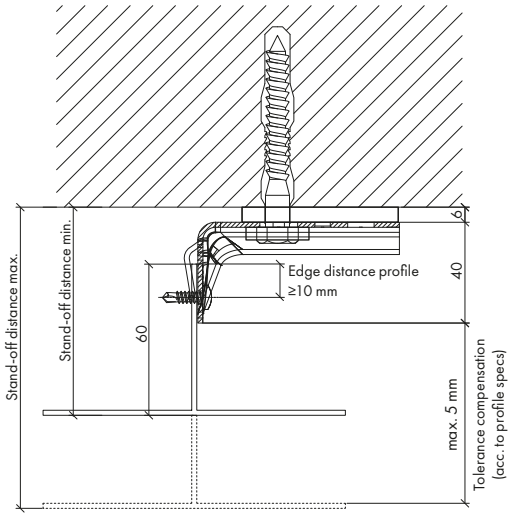
** Bracket length without thermostop*
*** Special Lengths are not held in standard stock and produced only on request.*

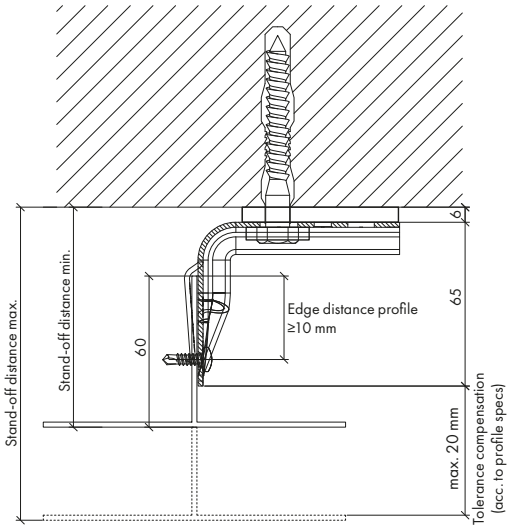
Stand-off distance SPIDI® max 40 - 65 mm – standard profile depth 60 mm

Minimum and maximum stand-off distances (distance between substrate and rear side of the facade cladding) refer to SPIDI® max brackets with lengths of 40 and 65 mm, including pre-assembled 6 mm Thermostop and a standard profile depth of 60 mm.

Bracket length	Length L* (mm)	Distance min (mm)	Distance max (mm)
SPIDI max 40/80	40	80	85
SPIDI max 65/80	65	90	110

**Bracket length without Thermostop*



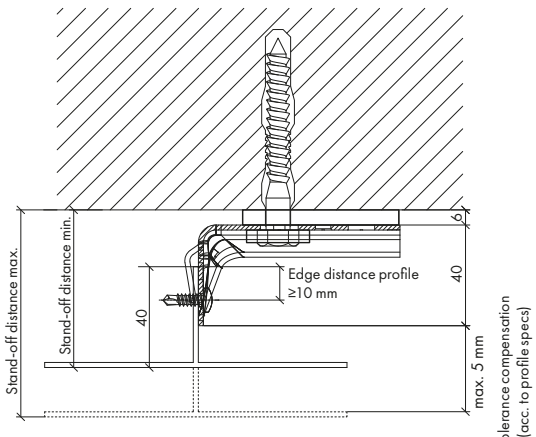


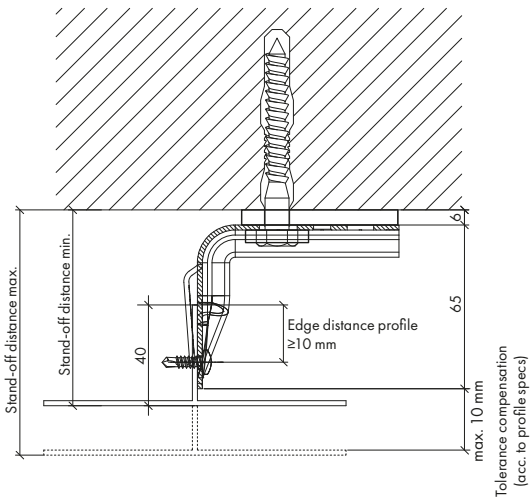
Stand-off distance SPIDI® max 40 - 65 mm – reduced profile depth 40 mm

Minimum and maximum stand-off distances refer to SPIDI® max brackets with lengths of 40 and 65 mm, including pre-assembled 6 mm Thermostop and a reduced profile depth of 40 mm.

Bracket length	Length L* (mm)	Distance min (mm)	Distance max (mm)
SPIDI max 40/80	40	60	65
SPIDI max 65/80	65	80	90

**Bracket length without Thermostop*



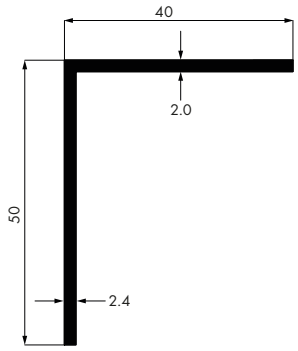


Profile overview

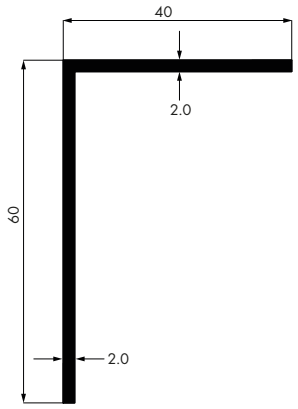
Profiles are supplied as standard in EN AW 6063-T66 aluminum. Other alloy grades, dimensions, powder-coated or anodised versions are available on request.

L-Profiles

L-Profile 50/40/2.4-2.0 mm flat

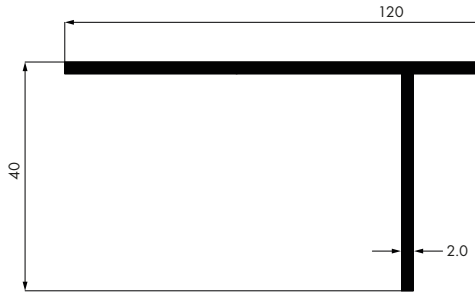


L-Profile 60/40/2.0 mm flat

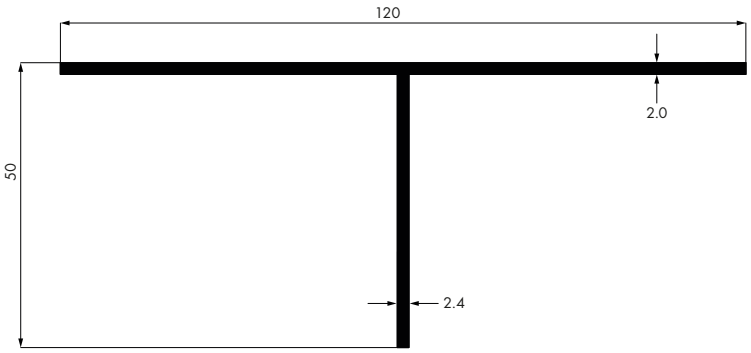


T-Profiles

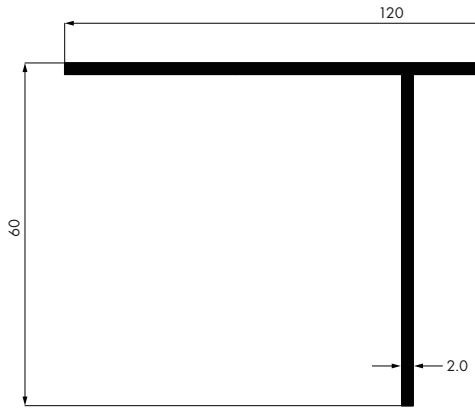
T-Profile 120/40/2.0 mm flat



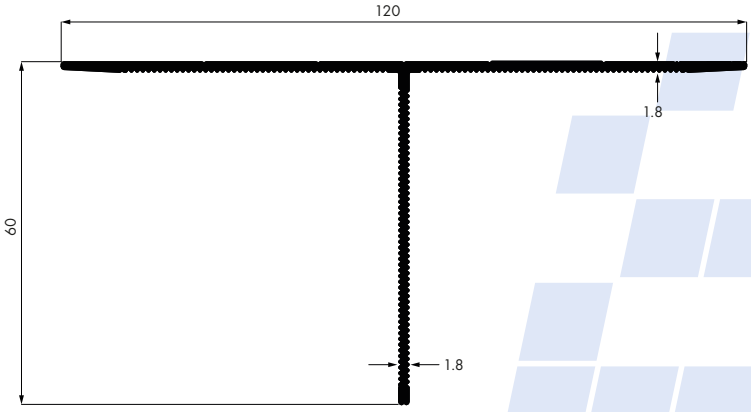
T-Profile 120/50/2,4-2.0 mm flat



T-Profile 120/60/2.0 mm flat



T-Profile 120/60/1.8 mm corrugated-flat



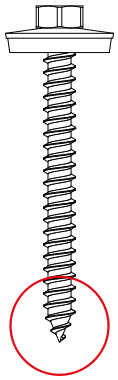
Anchorage elements

All anchorage elements must be installed according to the installation requirements stated in the applicable approvals (such as ETA, abP, abZ). The corresponding approvals can be downloaded from the manufacturer's website or from www.dibt.de, or requested directly from Slavonia.

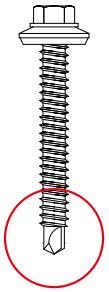
The following specifications regarding minimum head diameter apply to all anchoring elements:

- Installation through slotted hole (slot width: 10.5 mm)
  Used typically on concrete or masonry substrates: head/washer diameter ≥ 18.5 mm
- Installation through round holes (d=6.7 mm)
  Used typically on aluminum or steel substrates: head/washer diameter ≥ 10.5 mm

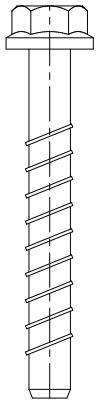
Thread-forming screw
does not have a drilling tip.
Must be pre-drilled according to the dimensions specified in the approval.



Self-drilling screw
e quipped with a drilling tip; no pre-drilling required. Important: maximum drilling capacity must comply with the approval.



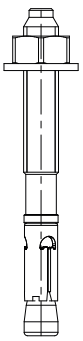
Concrete screw
must be pre-drilled according to the approval. Important: clean the drill hole and apply the installation torque specified in the approval.



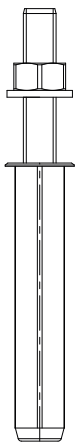
Frame anchor
must be pre-drilled according to the approval. Important: clean the drill hole and tighten hand-tight (normally no torque requirement).



Bolt anchor (expansion anchor)
requires pre-drilling according to the approval. Important: clean the drill hole and apply the installation torque specified in the approval.

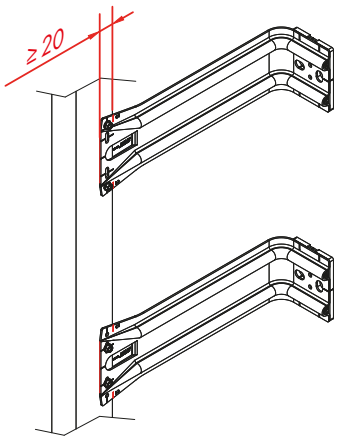


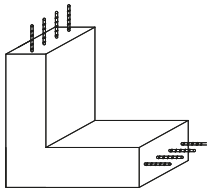
Chemical anchor (injection system)
requires pre-drilling according to the approval. Important: clean the drill hole and apply torque according to the approval. For perforated brick, a sleeve (mesh sleeve) is required.

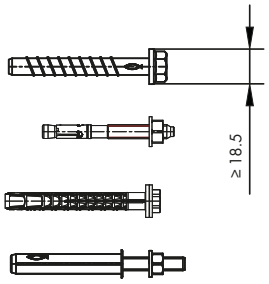


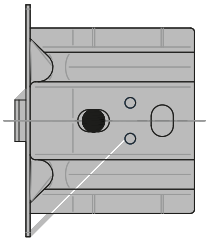
SPIDI® max

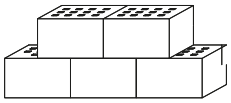
[mm]

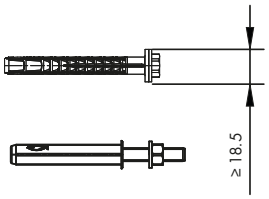


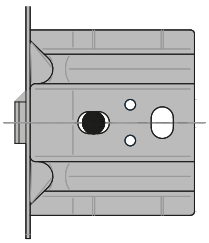


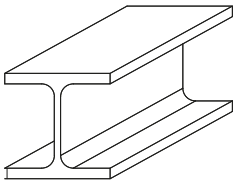


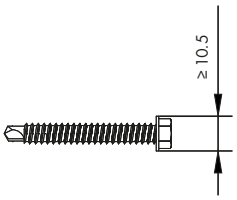


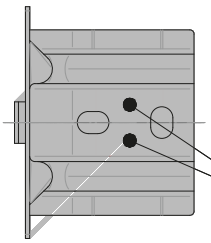




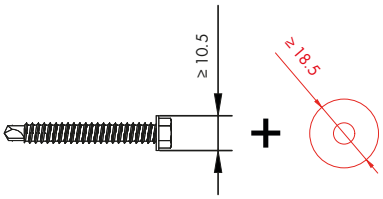


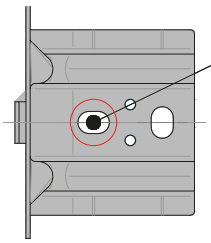


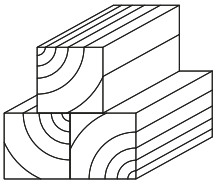


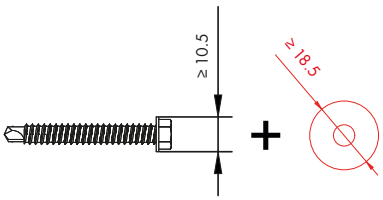


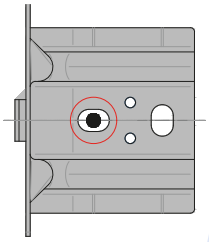








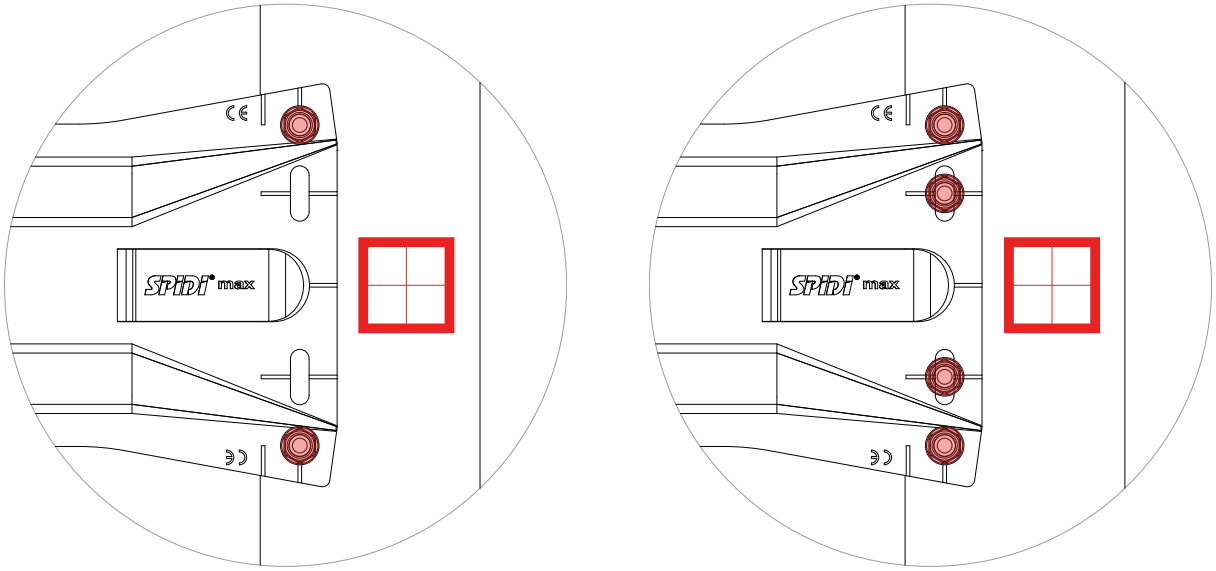




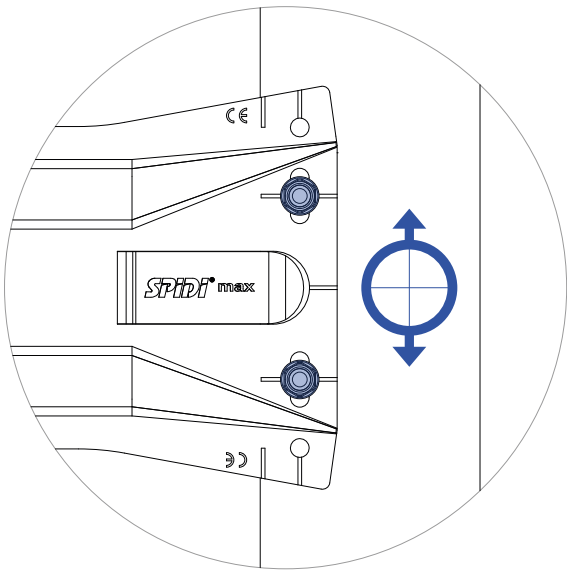
Fixed & sliding points

Aluminium load-bearing profiles are subject to thermal linear expansion. To prevent structural stresses and deformation within the facade substructure, each vertical profile must incorporate both one fixed point and multiple sliding points. The arrangement must always comply with structural calculations and approved installation drawings.
As a rule, the fixed point is located in the center of the support profile. Depending on the static design, the fixed point is secured with two or four self-tapping screws. As a guideline, the maximum length of a support profile should not exceed 3 meters. However, the actual permissible profile length may be specified by the planning guidelines or approval of the cladding manufacturer and must be strictly adhered to in all cases.
During installation, it must be ensured that no cladding elements are installed across support profile joints in order to guarantee proper load transfer and movement compensation. The installation and system guidelines of the respective cladding manufacturer must be strictly observed.

Fixed point:
Depending on the static requirements (wind load category, dead load, spacing), the fixed point must be installed using 2 or 4 screws.



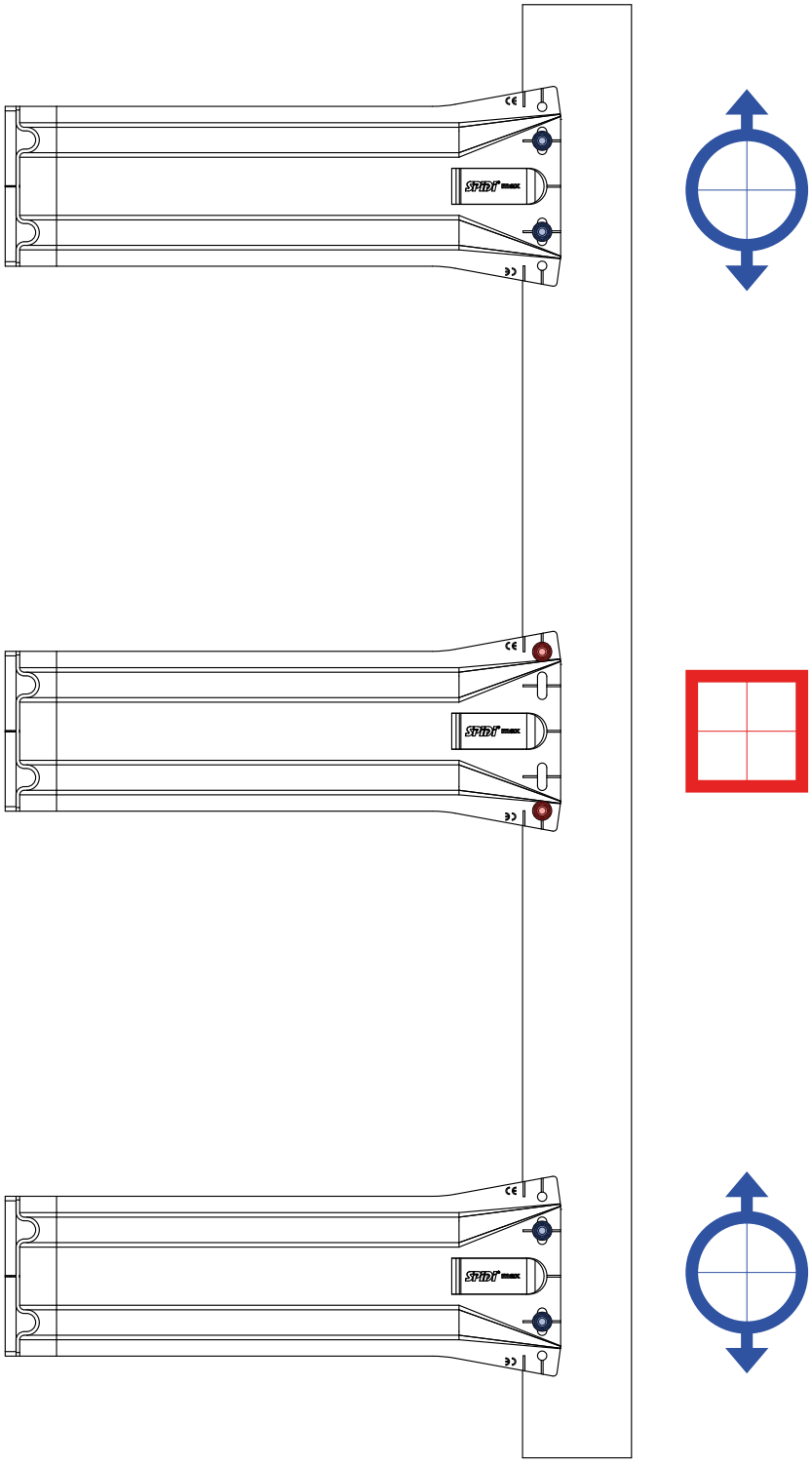
Sliding point:
Screws must be placed centrally within the slotted holes (elongated holes) of the bracket.



NOTE:

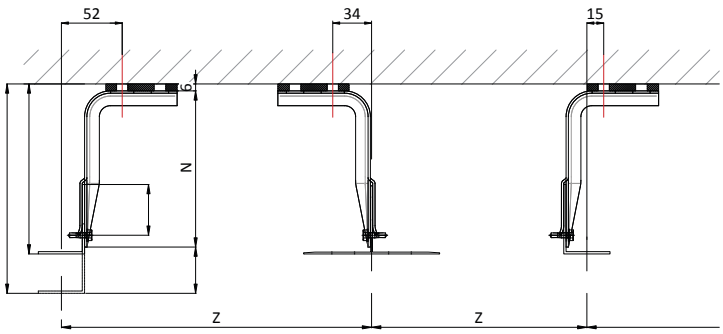
A guideline value for thermal linear expansion is approximately 1.6 mm* per running meter of profile. This is based on DIN 18516: For exterior wall cladding, temperature differences between the installation temperature (usually +10 °C) and the limit temperatures of -20 °C and +80 °C must generally be taken into account. Local deviating regulations and special installation situations under specific climatic conditions must be checked separately.

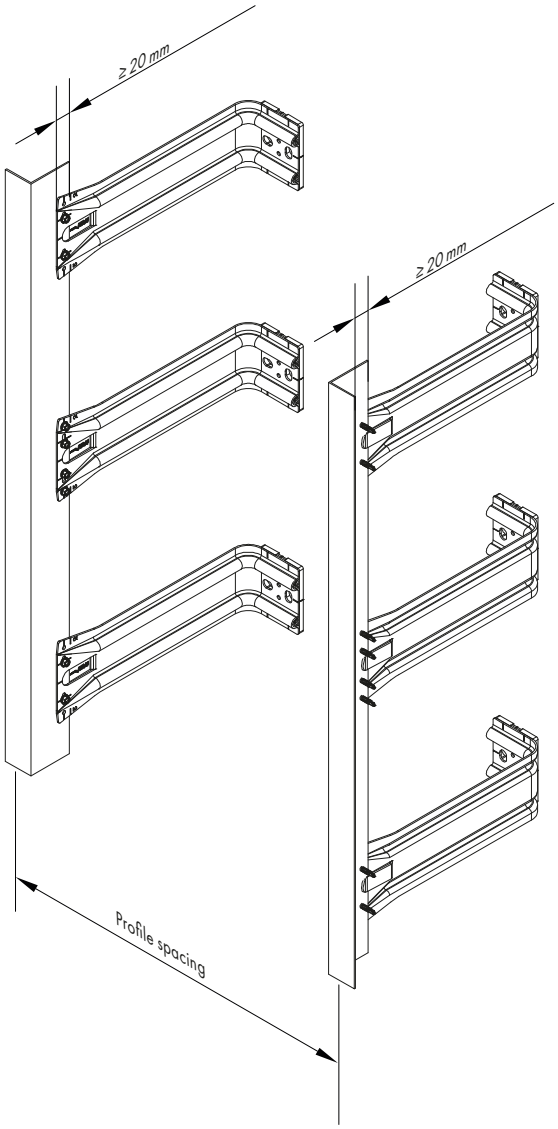
**For guidance and better comprehensibility, DIN 18516 was used with a ΔT=70 °C and α=23 · 10⁻⁶ °C*

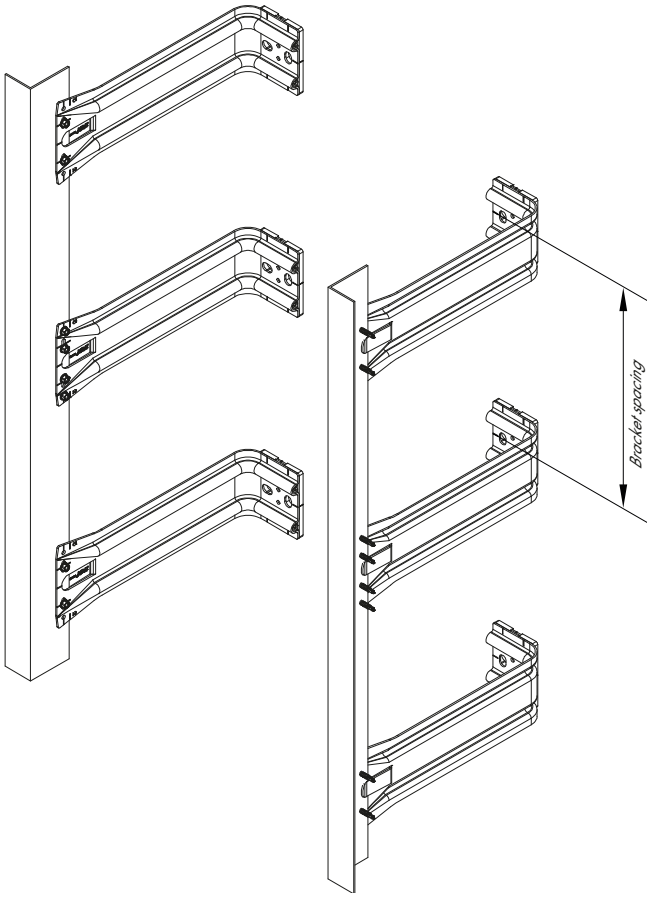


Bracket installation

Brackets are arranged in an alternating pattern to optimise load distribution and system stiffness. Bracket and profile spacing must be taken from the installation plan or structural analysis and strictly adhered to. The support profiles must be mounted in the brackets with a minimum insertion depth of 20 mm.

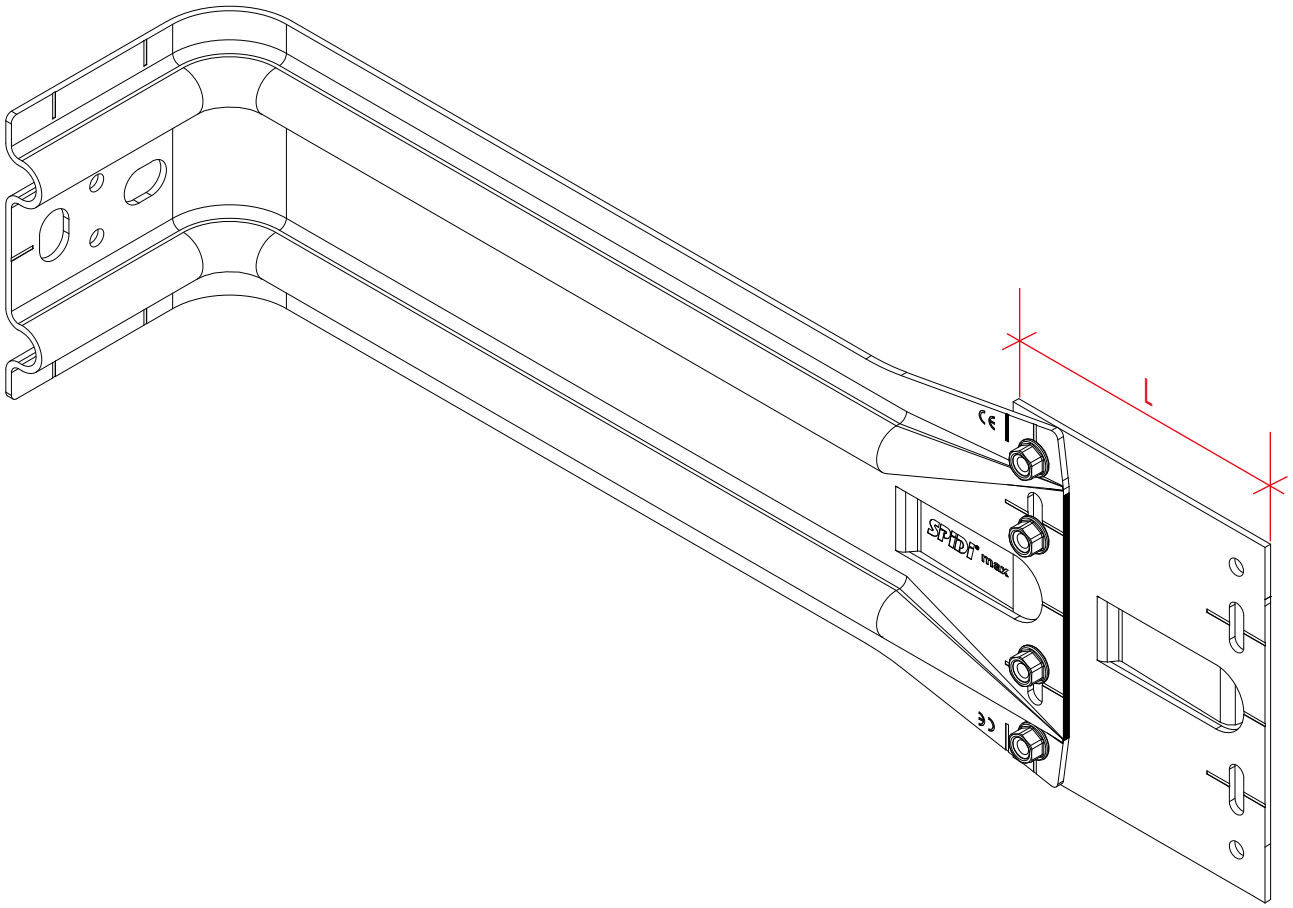






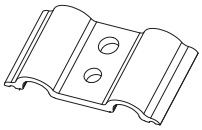
SPIDI® max extensions

Extensions serve as a flexible solution on site to compensate for unexpected gaps and protrusions in the wall or to extend soffits. They are attached to the bracket with four self-tapping screws. A static test is required. The extensions are available in three sizes as standard: L = 90 mm, L = 100 mm, and L = 120 mm. Other lengths are available on request.



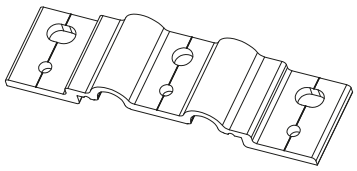
Looking for more stability?

Discover other components of the SPIDI® system for more flexibility and optimal project results. With the proven modular concept, the right solution is quickly at hand – economical, safe, and without additional brackets.



SPIDI® max pressure plate

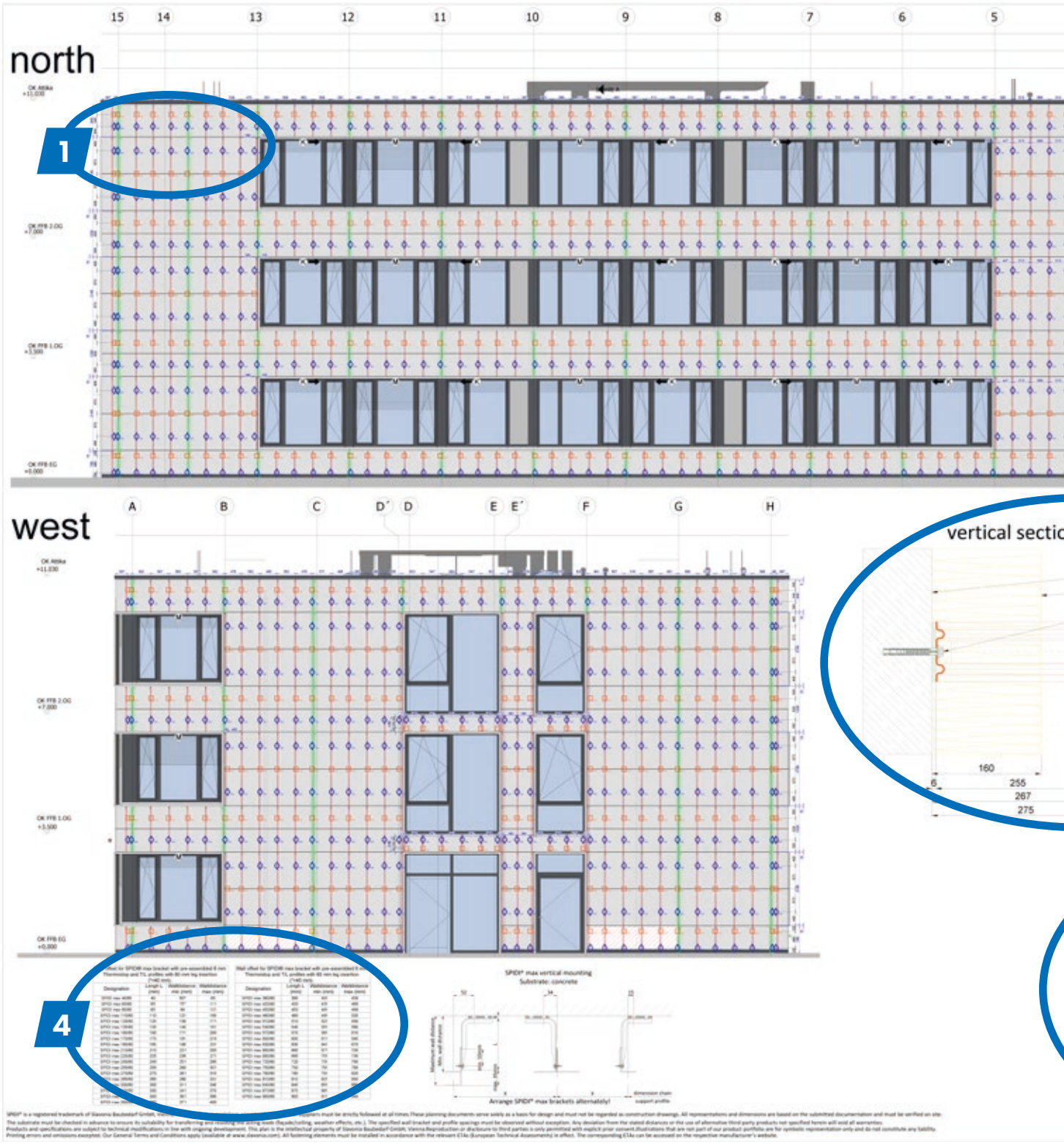
Does the chosen location have increased wind loads? The SPIDI® max pressure plate increases the tensile and compressive load-bearing capacity of SPIDI® max brackets in no time at all.



SPIDI® max torsion plate

Are you planning heavy cladding elements? With the SPIDI® max torsion plate, you can quickly and easily increase the load-bearing capacity of SPIDI® max brackets in the vertical direction.

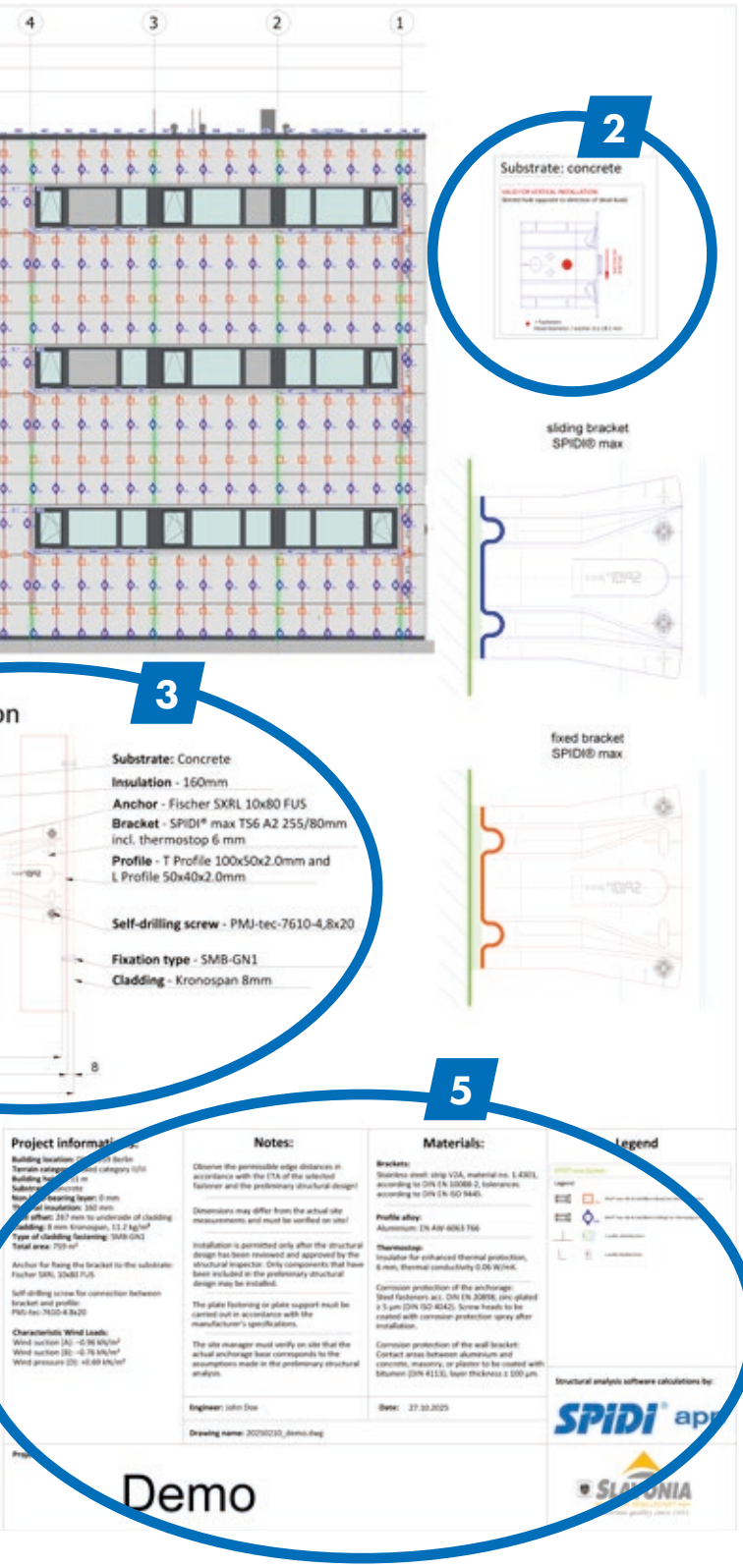
Installation guide demo



DID YOU KNOW THAT ...

... the SPIDI® app, our online structural calculation tool, is available to you 24/7 free of charge?

It helps you calculate projects with a SPIDI® substructure and creates detailed reports in no time at all. We would be happy to show you the functions of our SPIDI® app in a demo presentation. Get in touch with us!



1 Dimensioning of substructure

The dimension chains show the spacing between the brackets and support profiles. Please note whether the center of the support profiles or the position of the anchoring elements is specified.

2 Position of anchoring element

Here you can see where the anchor for the construction project must be placed in the base plate.

3 Substructure Detail

The relevant details such as stand-off distances, insulation thickness, ventilation cavity depth, and the profiles, screws, and anchors to be used are shown here in a sectional drawing.

4 Overview of Stand-off Distances

The installation plan already considers the minimum and maximum stand-off distances. However, conditions on-site may differ and may require alternative wall bracket lengths. The overview table shows our standard portfolio and allows installers to source the correct bracket length quickly and accurately.

5 Title block

The title block includes all project-relevant information:

- Project address / building site
- Substrate type
- Wind loads used for the structural calculation
- Applicable installation requirements
- Anchorage elements and all associated approvals (ETA, abP, abZ)
- Legend for all symbols used in the installation plan

A reliable partner for your project

Our SPIDI® team provides you with comprehensive support: from advice on state-of-the-art facade technology and legal requirements to the optimal implementation of your architectural visions.

When planning your project, take advantage of our free planning documents (2D CAD details, tender texts, and 3D representations) at www.slavonia.com and the practical online structural analysis tool SPIDI® app. We are also happy to provide you with verifiable structural analyses and assembly plans and to train your assembly personnel.







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