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aluminium

Sheet metal accessories Prismatech and Multitube



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Dear customer,

Sheet metal has become a very important material and it offers a variety of applications. However to date, optimal edging and connection profiles that significantly facilitate designing with sheet metal elements have been lacking.

At last, with our sheet metal accessory range sheet metal elements can be interconnected in all conceivable shapes and in a visually appealing manner. In this area we have developed aluminum edge protection profiles, frame profiles, connection profiles, and corner profiles that can be installed with numerous types of sheet metal and other thin-wall panels, such as Plexiglas, hardboard and polystyrene panels, expanded metals, yes even with film webs or fabric webs.

The most essential advantages of these profiles are:

- Safety – never again unprotected, sharp edges
- Stability – through bracing of unstable sheet metal elements
- Easy construction possible

Prismatech stands for elegant and stylish frames.

Multitube stands for sturdy signs and ramps.

Our sheet metal accessory range was developed as the logical supplement of our **combitech®** system. The practical and decorative alignment grooves are a consistent element running through the new product range, and naturally all outer and inner dimensions are matched. This opens up an infinite range of combinations for the do-it-yourselfer.

Sheet edging with Primatech

Primatech aluminum profiles make it possible to edge and frame sheet metal elements in a super flat design or to make spatial sheet metal constructions such as boxes.

The name Primatech stands for the elegant, eight-sided shape of the combined pair of profiles. Injury hazards from sharp sheet edges are safely avoided and weak sheets are stabilized by the profiles. The profile construction set consists of edging profiles, connection profiles, corner profiles, and hinge profiles. Primatech is suitable for a wide variety of panel thicknesses and materials, such as Plexiglas, hardboard and polystyrene panels, expanded metals, yes even for film webs or fabric webs.

Practical and decorative objects can be produced with Primatech, such as signs, picture frames, boxes, cases, cladding elements for heating radiators, spark-protection grilles for open fireplaces, cladding elements for doors, kitchens, mobile homes, drawers, etc.

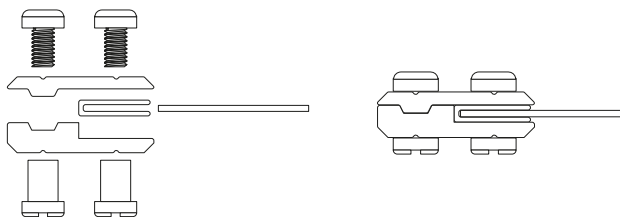
Dimensionally, Primatech profiles are precisely matched to the large **alfer® combitech®** profile system and significantly facilitate the realization of your product ideas.



You need two profiles for connections with Prismatech. A support profile with a groove that runs longitudinally, in which the cover profile engages with its longitudinally running stay. This produces a gap in which the sheet metal is edged. Both profiles are connected through the rust-free, aesthetically appealing **alfer**® aluminum threaded sleeves. Rivets, adhesives or standard screws can also be used.

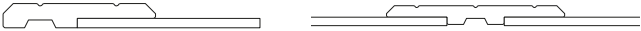


There are two or three alignment grooves on a profile side, depending on the profile. One of these alignment grooves is always directly over the profile groove or the profile stay. Both profiles are connected in this particularly stable area. Thus if you want to exert an additional clamping effect on the sheet metal, this is achieved through additional use of the sealing profile or double-sided adhesive tape.

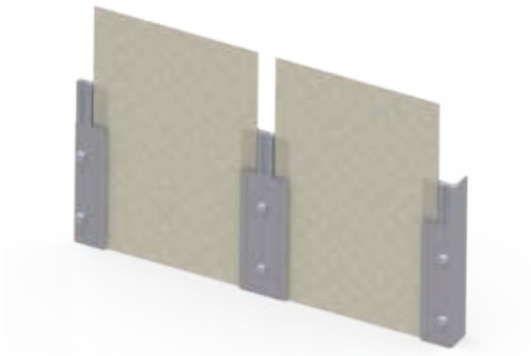


For connections with particularly high tensile strength the pair of profiles is additionally screwed onto the sheet metal. To do this, use the second alignment groove over the profile gap. Then mark the desired bore position on the alignment groove and simultaneously drill through the support profile, cover profile and the sheet metal with a 4-mm bit.

Sheet edging with Primatech



The support profiles can also be used autonomously as sheet metal closure profiles, edge profiles or connection profiles. In this regard optimal profiles are available for sheet metal thicknesses up to 3.1 mm.



What sheet dimension for which frame dimension?

If you are edging a sheet metal element with Primatech profiles, e.g. if you want to build a frame, you must bear in mind that the outer dimension of your frame is not the same as the dimension of your sheet metal element that will be edged. Thus to obtain the dimensions for your sheet metal you must subtract the respective dimension shown on the table below from the desired frame length and frame width.

Example:

For a Primatech frame with the outer dimensions 800×700 mm, one-sided, 19.5 mm, you need a sheet metal dimension of $780.9 \text{ mm} \times 680.9 \text{ mm}$.

Calculation: $780.9 = 800 - 19.1$ or
 $680.9 = 700 - 19.1$

Primatech Profile type	Profile width	Dimension to be subtracted for the sheet metal element
Support, one-sided	19.5mm	19.1 mm
Support, two-sided	29.5mm	39.1 mm
Angle bracket, one-sided	19.5mm	19.1 mm
Angle bracket, two-sided	29.5mm	39.1 mm
Hinge	29.5mm	39.1 mm

Matching sealing profiles

What profile for which sheet metal?

Sheet metal thickn. in mm	0.7	0.8	1.0	1.1	1.5	1.8	2.0	2.2	2.8
Support profile 1.2 mm	B	B	A				A		
Support profile 2.1 mm		C	C	C	D	B	A	A	
Support profile 3.1 mm							D	D	B

Article:

A = Art. no. 30693 = sealing tape on support profile (p. 12)

B = Art. no. 30693 = sealing tape on support and cover profile
(p. 12)

C = Art. no. 30452 = plastic seal 1 (p. 11)

D = Art. no. 30453 = plastic seal 2 (p. 11)

Prismatech support profiles



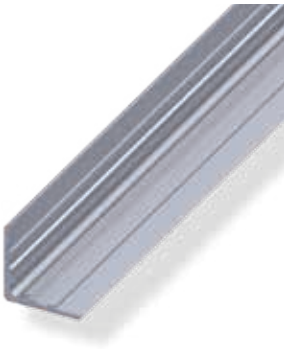
Support profile, one-sided



Support profile, two-sided



Angle profile, two-sided



Angle profile two-sided



Hinge profile

The Prismatech support profile is available in five different types, each in 1.00 m length and aluminum uncoated.

Each Prismatech support profile is available in 1.2 mm. The size information 1.2 mm refers to the maximum sheet metal thickness that fits into the gap that occurs through combination with the cover profile.

To better differentiate the profiles in our sales stand from each other, all Prismatech support profiles have a dimension sticker.

Prismatech cover profiles



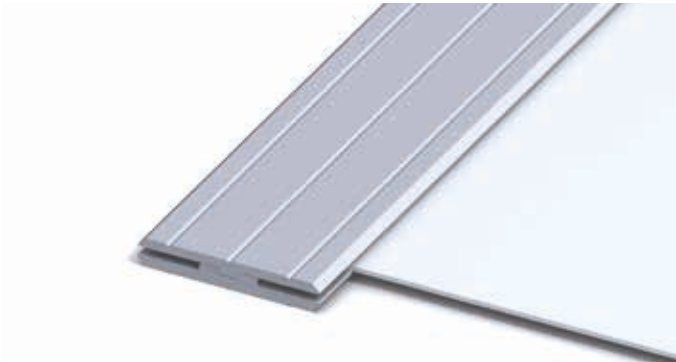
Cover profile, one-sided



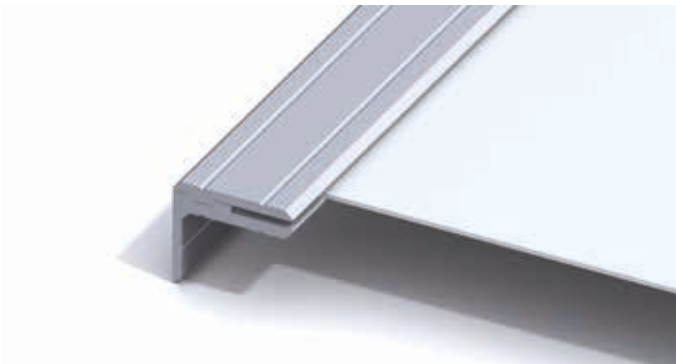
Cover profile two-sided

The one-sided cover profile fits with every support profile type. The two-sided cover profile fits with every support profile type with the exception of the two-sided angle bracket and the hinge.

Prismatech profiles in use



Support profile and cover profile, two-sided



Angle profile and cover profile, one-sided



Support profile and short cover profile, one-sided

Primatech accessories



Sleeve nut set

The sleeve nuts and screws are **alfer**® special designs of aluminum.

This screw connection system is not only ideally suited for Primatech, it can also be used for many other applications.

To simplify selection of the right nuts and screws, we have packed all three lengths in one bag. This means that regardless of which support profile you combine with the cover profiles, you will always find the right screws.

Detailed use instructions are provided on page 5.

Prismatech accessories



Double-sided adhesive tape

Width 6 and 8 mm

Double-sided adhesive tape suitable for Prismatech.

Ideal for:

- Splash-proof execution of the components
- Reduces vibration
- Increased clamping effect of the sheet metal in the Prismatech profile due to thickness compensation, thus all sheet metal thicknesses to 3.0 mm are possible.
- Preliminary fixation of the filling (sheet metal, panel, Plexiglas, etc.)

The adhesive tape is also suitable for many other day-to-day applications.

Double-sided adhesive tape

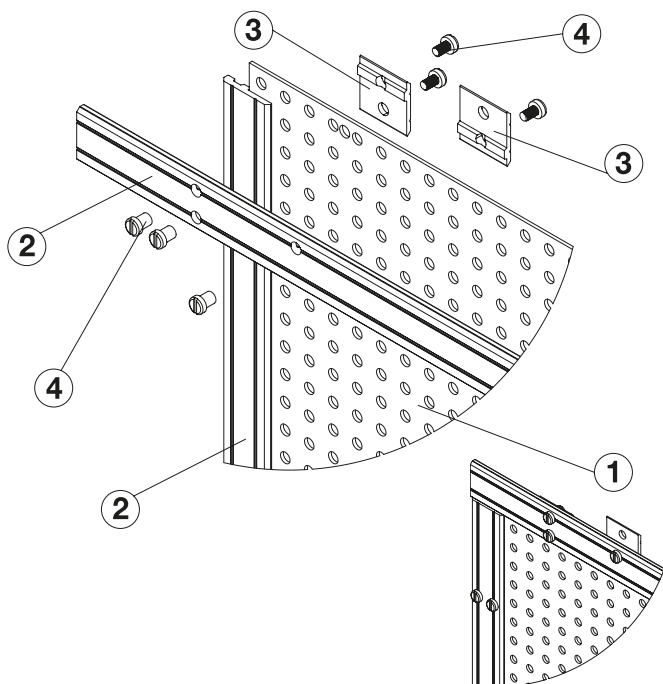
Width 10 mm, thickness 0.4 mm

This adhesive tape is used the same as the adhesive tape listed above with the difference that the adhesive ribbon is twice as thick and has even greater adhesive force.

In addition, it offers greater impermeability to splash-water.

There are many other applications for this double-sided adhesive tape as well.

Assembly drawings – Primatech



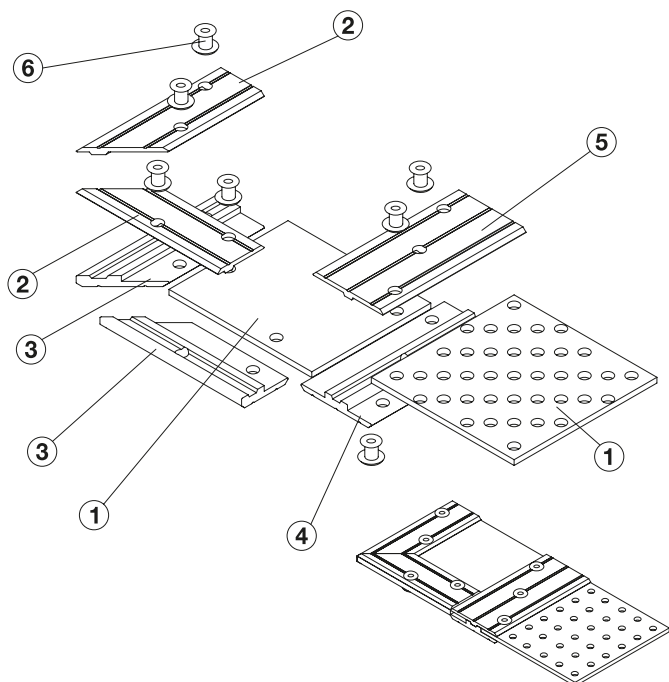
Sheet metal edging with the Primatech cover profile, short

You do not necessarily require contiguous cover profiles for a picture frame. The short 19.5 mm pieces are sufficient for this purpose; these pieces are fitted at certain intervals and keep the picture or other content in the frame. If you mount two covering profiles the other way around on the top part of the frame, you will get suspension eyes.

The front of the frame is formed by the appropriate support profile that runs around the perimeter, and can either be mitered or butt jointed in the corners, as desired.

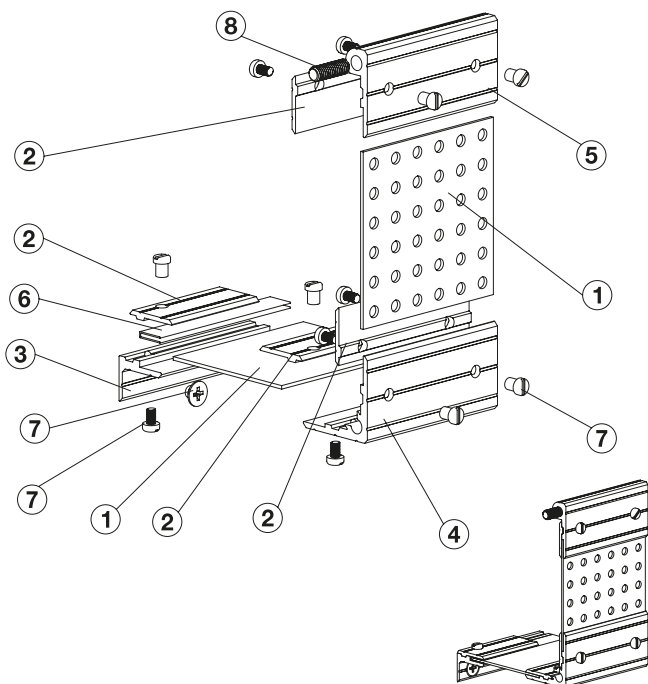
- 1 Sheet metal or other filling
- 2 Primatech support profile, one-sided
- 3 Primatech cover profile, one-sided, short
- 4 Rivets, screws, etc.

Assembly drawings – Prismatech



Two sheet metal elements connected and edged with Prismatech one-sided and two-sided

- 1 Sheet metal element or other filling
- 2 Prismatech cover profile, one-sided
- 3 Prismatech support profile, one-sided
- 4 Prismatech support profile, two-sided
- 5 Prismatech cover profile, two-sided
- 6 Rivets, screws, etc.



Two sheet metal elements connected and edged with Primatech angle, one-sided, Primatech angle two-sided, and Primatech hinge

- 1 Sheet metal element or other filling
- 2 Primatech cover profile, one-sided
- 3 Primatech support angle, one-sided
- 4 Primatech support angle, two-sided
- 5 Primatech support hinge
- 6 Sealing profile (bead)
- 7 Rivets, screws, etc.
- 8 Threaded rod, screw, etc.

Ideas and possibilities with Prismatictech



Lantern



Spark protection

Multitube

Multitube aluminum profiles make it possible to frame sheet metal, Plexiglas, polystyrene panels and expanded metals in an extremely stable design, for example ramps for wheel chairs or garden equipment. Likewise sheet metal elements can also be framed with Multitube aluminum profiles to make stable signs or even spatial sheet metal constructions, such as flower boxes.

The name, Multitube, stands for a technically sophisticated tube, equipped with a longitudinal slot for insertion of the sheet metal element. In addition, guide channels for connection angle brackets, as well as centering and fixation grooves are profiled that offer versatile implementation possibilities. Injury hazards from sharp sheet edges are reliably avoided and unstable sheet metal elements are stabilized. Multitube profiles are available in three different size round tubes and three different size square tubes. They are also suitable for Plexiglas, polystyrene panels and expanded metals.

With Multitube practical and decorative objects can be produced, such as frames for signs, billboards, posters, partition walls, railings, visual screening, sound insulation, sunscreens, windbreaks, as well as ramps for lawn mowers, wheelbarrows, motorcycles, etc.

Dimensionally, Multitube profiles are precisely matched to the large **alfer® combitech®** profile system and significantly facilitate the realization of your product ideas.

Sheet metal edging with Multitube



Insert your (metal) sheet in the slot running lengthways of the Multitube until it engages in the opposite centering and fixation groove.

If you want to make a ramp, repeat this procedure on the other side of the sheet metal element.

For ramps, railings, and large frames, we recommend that you additionally brace the sheet metal in the Multitube profile with sleeve nuts and screws at specific intervals. To do this, proceed as follows: On each profile there is an alignment groove at a right angle to the slid-in sheet metal element; this alignment groove is directly above the centering and fixation groove.



Connect sheet metal element and profile in this particularly stable area as follows:

Measure the positions for the desired bore points, in the usual manner for **combitech**®, starting at one end of a profile, and mark the positions on the alignment groove.

Tip (for maximum precision): Repeat this step on the alignment groove on the opposite side of the profile. Then, starting from each profile side, drill through the profile wall with a 5 mm metal drill bit. Also drill through the edged sheet metal. For the last step firmly connect with the suitable sleeve nuts and screws.

Multitube is extremely flexible and enables two frame variants

Variant 1: Frame with inserted sheet metal element

This frame variant, for which the sheet metal element is completely inserted in the Multitube, is for the most part impermeable to air, light, noise, and heat.
For the first step, determine the outer frame dimension or inner frame dimension you desire (= the desired effective area of the sheet metal element):

Dimension determination with sheet metal element inserted

If you are edging a sheet metal element in a frame of Multitube profiles, you must bear in mind that the outer dimension of your frame is not the same as the dimension of your sheet metal element that will be edged. Thus to obtain the dimensions for your sheet metal element you must subtract the respective dimension shown on the table below from the desired frame length and frame width.

Example:
For a frame with the outer dimensions 800 × 700 mm of Multitube 23.5 mm, installed with a sheet metal element 1.5 mm thick, you need a sheet metal dimension of 795.1 mm × 695.1 mm.
Calculation: $795.1 = 800 - 4.9$ or
 $695.1 = 700 - 4.9$

Multitube profiles, round or square Outer diameter	19.5 mm	23.5 mm	29.5 mm
	Dimension to be subtracted		
For sheet metal thickn. to 0.5 mm	3.1 mm	3.1 mm	4.1 mm
For sheet metal thickn. to 1.0 mm	3.5 mm	3.5 mm	4.5 mm
For sheet metal thickn. to 1.5 mm	4.5 mm	4.9 mm	5.9 mm
For sheet metal thickn. to 2.0 mm	5.7 mm	6.1 mm	7.1 mm

Frame with inserted sheet metal element



You must first notch the sheet metal to be edged on all four corners with a jigsaw. Our notching template that significantly facilitates this work step, is included in each bag of corner brackets.

Then miter the Multitube profiles (ensure that they are the right length!).

>>

Frame with inserted sheet metal element

3



4



The Multitube profiles are connected via the corner brackets as follows: At a distance of approx. 30mm from the end of the tube, drill a 4.0 mm core bore on the alignment groove. Then cut M5 thread. Now insert the Multitube profiles together with the sheet metal and the appropriate corner brackets (guide channels in the profile). To conclude, screw in the threaded pins far enough that they firmly press on the corner brackets.



To brace the sheet metal element with the Multitube profiles, use sleeve nuts and screws and proceed as described on pages 18 and 19.

Variant 2: Frame with suspended sheet metal element

With our suspension set, the sheet metal element or other panels are suspended from the Multitube profile with a decorative distance. For signs and partition walls this produces a different look and it is permeable to air, light, sound, and heat. In this regard it is not necessary to notch the sheet metal element in the corner area.

For the first step, determine the outer frame dimension or sheet metal dimension desire:

Dimension determination for a suspended sheet metal element

If you want to suspend a sheet metal element in a frame of Multitube profiles, you must bear in mind that the outer dimension of your frame is not the same as the dimension of your sheet metal element that will be suspended. Thus to obtain the dimensions for your sheet metal element you must subtract the respective dimension shown on the table below from the desired frame length and frame width.

Example:

For a frame of Multitube profiles 23.5 mm with the outer dimensions 800 × 700 mm, you need a sheet metal dimension of 722.2 mm × 622.2 mm.

Calculation: $722.2 = 800 - 77.8$ or
 $622.2 = 700 - 77.8$

Multitube profiles, round or square			
Outer diameter	19.5 mm	23.5 mm	29.5 mm
Sheet metal dim. to be subtracted	71.0 mm	77.8 mm	88.8 mm

Frame with suspended sheet metal element



The suspension sliders are threaded into the longitudinal slot of the Multitube profiles on both sides. Then the Multitube profiles are fitted and screwed together to form a frame with the corner brackets (see the instructions for frame variant 1 above).

Now position the sliders at the right points and fit on the sheet metal element. Then screw the Primatech support pieces included in the set onto the sliders as counter-pieces, and thus provide preliminary fixation for the sheet metal element.

>>

Frame with suspended sheet metal element

3



4



The first threaded union occurs in the open, i.e. through-hole (on the side facing the Multitube). The appropriate aluminum sleeve nuts and sleeve screws are available in our product range, art. no. 30420 (p. 11).

Then drill through the sheet metal in the second hole of the slider with a 4-mm bit and likewise screw fasten it with the sleeve nuts and screws. Alternatively rivets can be used instead of screws.

Multitube profiles



Round tube



Square tube



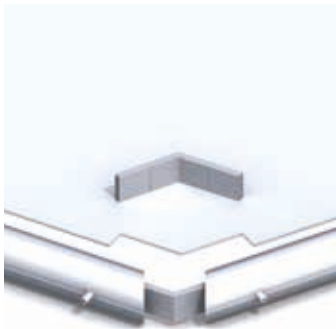
Corner bracket, equal-sided 120°



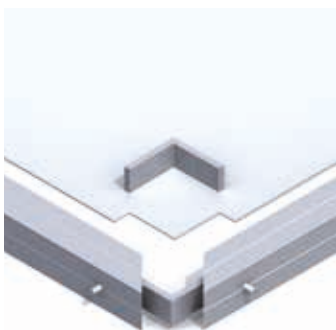
Multitube accessories



Corner angle 120° set

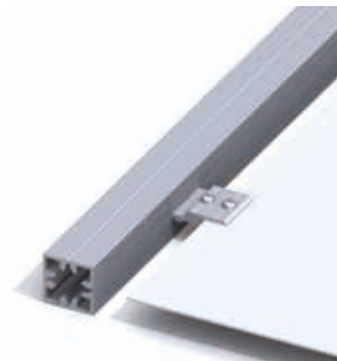


Corner angle 90° set



With these angle brackets you can make 90° connections with the Multitube profiles by miter sawing the tube to 45° and inserting the angle bracket into the guide channel of the profile. Then connect all of this with the threaded pins provide in the set. 90° as well as 120° corner connections are possible. By combining the two corner brackets, and the combination as internal corner or external corner even polygonal geometric shapes can be produced. Example: Flower boxes around pillars or polygonal signs, etc.

With the corner brackets you can also fasten the Multitube profiles flush on wall, floor or ceiling. For example, this is suitable for room dividers or hand rails.



Suspension set

This slider allows a sheet metal element or other panels to be suspended from a Multitube frame with a gap all round. This gives you a different look and different technical properties. The slider pieces are screwed together with the support pieces. The set contains: The slider pieces are screwed together with the support pieces. The set contains: 4x Multitube suspending brackets and 4x Primatech supports in each size, 1.2 mm / 2.1 mm / 3.1 mm.



Magnet

Multitube accessories



Edge protection profile

Provides protection for sharp metal sheet edges, effective prevention of injury for people and animals, excellent bond on sheet metal without glue or rivets, extremely robust thanks to metal core, weather-resistant, can even be bent around tight radii.



Multitube sleeve nut set

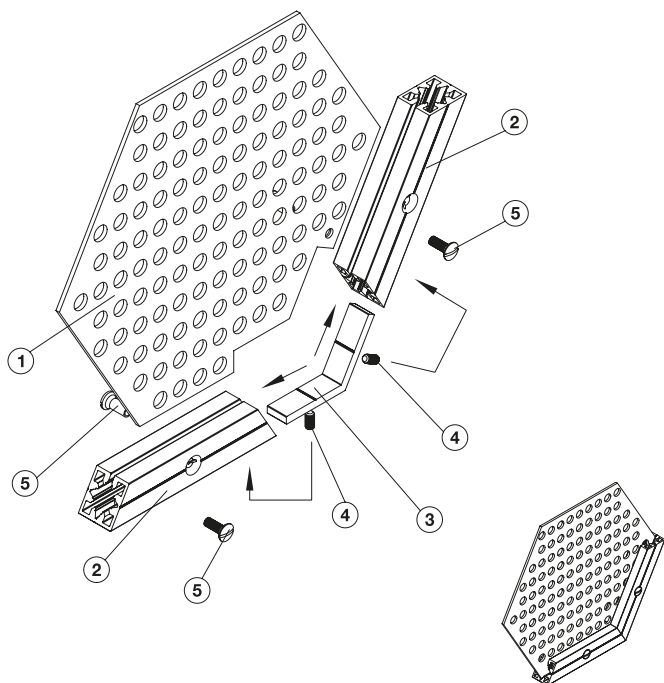
The set can be used to brace sheet metal elements, thin panels, Plexiglas, etc. with the Multitube profiles. This makes the construction even more stable. The set includes the screws for all three Multitube cross-sections: 4x M4 sleeve nuts with slot 13.5 mm 4x M4 raised countersunk-head screws with slot 12.0 mm/16.0 mm/25.0 mm.



Perforated sheet hook

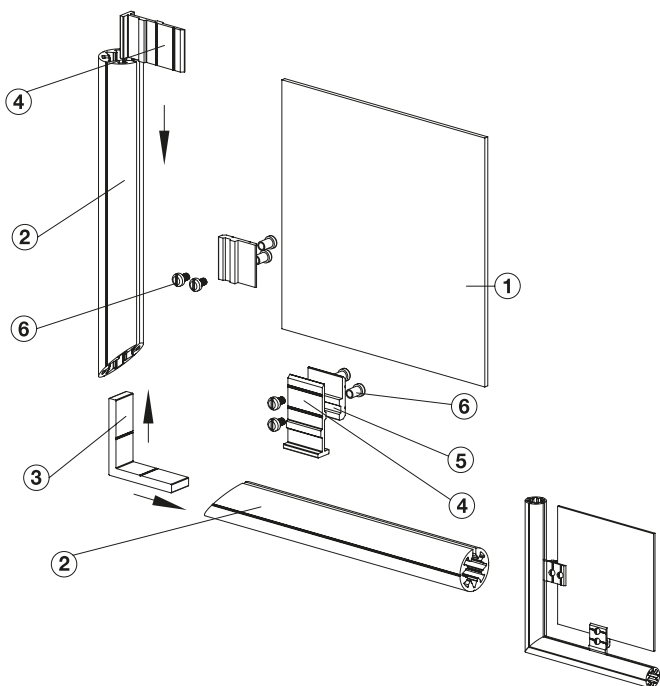
Our round steel and aluminum perforated sheets, Ø 4.5 mm, can be assembled into a stable unit, e.g. frame, both with the Primatech and Multitube technology. These are suitable for pin-boards or tool board storage units for neatly storing your tools on the hooks shown above.

Assembly drawings – Multitube



Edged sheet metal element with Multitube 120°

- 1 Sheet metal element or other filling
- 2 Multitube profile, square
- 3 Corner angle 120°
- 4 Threaded pins
- 5 Standard screws or specially designed **alfer®** sleeve nut set Multitube



Suspended sheet metal element with Multitube

- 1 Sheet metal element or other filling
- 2 Multitube profile, round
- 3 Corner angle 90°
- 4 Suspension sliders
- 5 Primatech support piece
- 6 Rivets, screws, etc.

Ideas and possibilities with Multitube



Serving tray



Picture frame

Notes – technical diagrams

Dimensions

The dimensions indicated in this brochure are approximate values and may deviate slightly in either direction.

Product versions

We reserve the right to make modifications in the interest of technical progress and product improvement.

Warranty

As this is an abridged brochure, no liability can be accepted for either individual cases or the reproduction of the models shown.

Colours

The colours depicted may vary slightly from the original products.

Important notice

The following trademarks (®) are registered to **alfer**® aluminium Gesellschaft mbH, D-79793 Wutöschingen :

alfer ®	(EU) (CH) (CAN) (GB)
alferpro ®	(EU)
aluvally ®	(EU)
clipstech ®	(EU) (MEX)
coaxis ®	(EU) (MEX)
combitech ®	(EU) (CH) (MEX)
ferroplatan ®	(EU)
logika ®	(EU)
verando ®	(EU) (CH)
x-star ®	(EU)

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alfer® hardware range



combitech® system · basis

System profiles · metric threaded rods and threaded tubes · system accessories · tool range

combitech® system · connect 23.5 mm

Connect connectors 23.5 mm · system profiles 23.5 mm · system accessories

combitech® system · model construction

Connect connectors 7.5mm · System profiles 7.5 mm · system accessories

logika® profiles · metric threaded rods · expanded metal, smooth, embossed and perforated sheets

combitech® system · sheets, plates and accessories

Plastic panels · smooth, embossed, perforated and expanded sheets · Primatech · Multitube · checker plate profiles · accessories

Profiles for DIY and professional purposes

Standard profiles made from aluminium, brass, plastic, steel, stainless steel
clampline clamping aluminium profiles

Steel profiles



alfer® building material range



Tile edgings

Angle, round, quarter-circle and square tile edgings · tile edgings for steps
LED profiles · joint cover profiles and expansion joint profiles · wet sealing
profiles **clipstech**® system profiles · balcony angle · mats and accessories

Floor and room profiles

Cover and joint cover profiles · edging, level balancing, angle edging and
end profiles · step edging profiles · Edge protecting profiles · Baseboard and
buckling angles

Profiles for parquet, laminate and designer floors

clipstech®, **clipstech**®-vario, **clipstech**®-plus, **clipstech**®-mini, optifloor
and renovation System profiles and accessories · cover, level balancing,
wall edging and edging profiles · Edge profiles, drilled

verando® Decking boards

verando® combines sophisticated design and sustainability.

The weatherproof profiles, mainly made of rice husks, are more durable than
other wood or wood substitute products, they don't splint, crack or swell.



alfer® classification system range



combitech® system · logika®

The logically perforated profile range: **logika®** profiles and **logika®** accessories

combitech® system · coaxis®

The coaxial system profiles: system profiles, accessories and tools · wall and ceiling hooks

Storage range

System rails and accessories · profile hooks, clothes hooks and utensils supports · bicycle stands · shelving brackets · Furniture construction profiles and plant trolley



