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**alfer**<sup>®</sup>  
aluminium

# **combitech**<sup>®</sup> system Basis



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**Dear customers,**

Whether for a handcart, for building shelves, for a dog box for the car, a swing or a hothouse:

the **combitech**<sup>®</sup> system can be universally used and forms the basis for innumerable applications at home – your creativity need know no bounds. You can also combine the system with other materials, especially wood and glass.

The qualities are also clear in relation to model building. The metals used include not only aluminium but also steel, copper and brass.

The **combitech**<sup>®</sup> system can be flexibly combined.

The basic **combitech**<sup>®</sup> range comprises the common aluminium and plastic standard profiles such as tubes, brackets, square tubes and more. The sizes are all perfectly aligned so that everything fits in and over everything else. A further highlight is the typical drill alignment groove – one of many practical ideas from **alfer**<sup>®</sup>.

## Good reasons to choose **combitech**® profiles



The drill alignment groove



Fit in and over each other

### **The drill alignment groove: precise drilling made easy**

Drill alignment grooves help DIY enthusiasts and professionals to drill in exactly the right place. On a round tube, for example, there are four drill alignment grooves – one every 90°. If you want to drill several holes one after the other on a standard round tube, it is very difficult to align them properly. With drill alignment grooves, however, you even know where to drill the hole at the other end of the tube.

If you want to drill through a tube, it is hard to get the drill to come out exactly vertically on the other side because it usually goes astray in the round section. With drill alignment grooves, you simply measure the position of the required hole from the edge and drill through the first wall. Afterwards, twist the tube around 180°, re-measure the required hole position and drill through this wall too. Both holes will now be exactly opposite each other.

As both holes are drilled from the outside inwards, you also get the added benefit of there not being any drill burrs on the outside holes.

### **Fit in and over each other**

Another great feature of **combitech**® is that the profiles fit inside and on top of each other. This is due to the fact that the size of the profiles is in line with the size of the metric threaded rods. A round tube therefore fits over the next threaded rod size down or into the next round tube size up.



Metric threaded rod in tube



Accessories profiles

### **Metric threaded rod in tube**

A square tube also fits into a square tube, a round tube into a square tube, a bracket to a square tube, a flat bar on a rectangular tube, a threaded rod into a square tube, etc. This allows you to make telescopic rods or shafts and many other objects.

Another feature of **combitech®** is that there are many profiles not only made of aluminium but also of plastic. Both materials are non-corrosive. On many components it is not necessary to use sturdy weather-proof aluminium; you can also resort to cheaper plastic.

### **Accessory profiles**

Due to the broad **combitech®** range, there are many accessory profiles available, which increases the variety of applications. For example there are square tubes, 1 branch; square-U, 2 branches; tubes, 1 branch; tubes, 2 branches 180°; tubes, 2 branches 90°; double tubes; triple tubes; tube-tube 90°; tube sleeves; square tubes, 1 branch offset; square tubes, 2 branches offset; etc. The next-size-down threaded rods or round pipes also fit into these tubes.

## Good reasons to choose **combitech**® accessories



Standard accessories



Step drill

### Standard accessories

Further key benefits of **combitech**® are offered by the standard accessories. These include end caps, a step drill, gussets, nuts, washers, rubber buffers, springs, ring nuts, knurled nuts, anchor nuts, a hand wheel, connection sleeves, hinged plates, eyes bolts, tensioners, setting rings, etc. These parts further increase the variety of applications.

### Step drill

The step drill is typical **combitech**® – it adapts to the dimensions and is simple to use – even making it possible to drill large holes without drill stands. Caution: the workpiece must always be firmly secured! The holes can also be countersunk with the next step up in the same process.

The step drill has seven drill steps, which means seven hole diameters in one. Its shaft fits into a size 10 drill chuck. The drill holes match the **combitech**® sizes, e.g. 11.7 mm for the round tube M 8 with the outer dimensions of 11.5 mm. A tolerance of 0.2 mm is required.



Alu-Magic polish



Universal deburrer

### **Alu-Magic polish**

If the shine on the aluminium should fade, you can get help. Treated with the high shine polish Alu-Magic, uncoated aluminium is given a brilliant chrome effect. Also suitable for copper, stainless steel, brass, etc. Lasting protection against oxidation.

### **Universal deburrer**

The universal deburrer enables you to safely and easily deburr the sharp edges created by saw cuts. By deburring the inside edges of square tubes, you can insert the connect connectors more easily. Deburred edges prevent injuries.

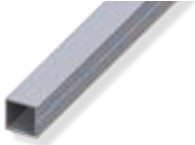
# Aluminium system profiles



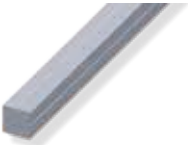
Round tube



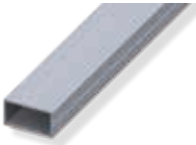
Round bar



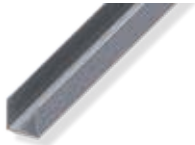
Square tube



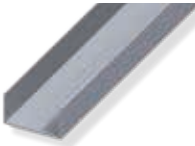
Square rod



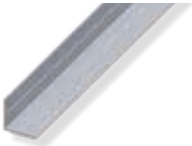
Rectangular tube



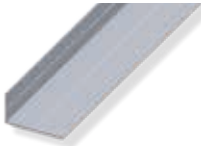
Square U



Rectangular U



Bracket,  
equal-sided



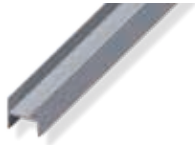
Bracket,  
unequal-sided



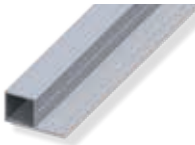
Flat bar



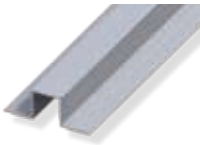
T-profile



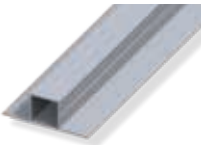
Square H



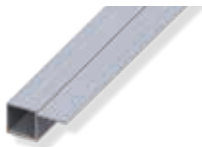
Square tube,  
1 branch



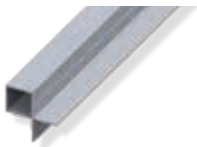
Square U,  
2 branches 180°



Square tube,  
2 branches 180°



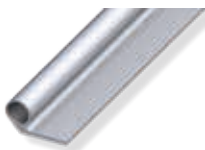
Square tube,  
1 branch offset



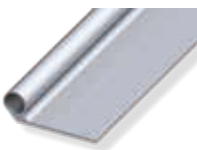
Square tube,  
2 branches inside



Square tube,  
2 branches offset



Tube,  
1 branch, short



Tube,  
1 branch, long



Tube,  
2 branches 90°



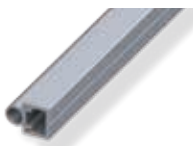
Tube,  
2 branches 180°



Double tube



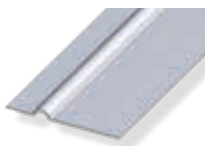
Triple tube



Tube-tube, 90°



Tube sleeve, short



Tube sleeve, long

Tip: the square tube, 1 or 2 branches offset, can be used, for example, to rivet a metal sheet to the offset branch so that the sheet does not protrude from the square tube. This can be both very useful and sensible depending on the application.

## Plastic system profiles



Round tube



Round bar



Square tube



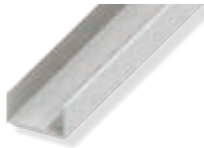
Square rod



Rectangular tube



Square U



Rectangular U



Bracket,  
equal-sided



Bracket,  
unequal-sided



Flat bar



Square T

Tip: plastic profiles are easy to saw or drill. The drill alignment groove naturally lends itself to drilling, as this prevents slippage when drilling. If you heat up a plastic tube with a hair dryer, for example, it can be easily bent.

With plastic profiles, care should be taken that they are only used to a limited extent outdoors, as they become brittle over time due to UV rays.

# Metric threaded rods and threaded tubes



Threaded rod  
Steel, galvanised



Threaded rod  
Stainless steel



Threaded rod  
Brass

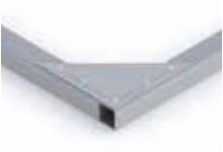


Threaded rod  
Plastic

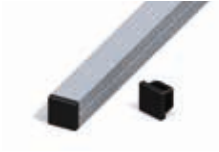


Threaded tube  
Steel, galvanized

# System accessories



Gusset



End cap



Tension spring



Hexagon nut



Wing nut



Washer

These are just a few of our many system accessories. Simply visit our website to find out more!

# Ideas and possibilities



Dog box



Window rails



Shoe rack



Pull-out trestle



Bottle holder



Wine rack

## Tips and tricks for professionals



- If you want to insert a screw into the hole of a round tube, whether it is aluminium or plastic, you can make a thread using a tap and die and screw in a metric screw. You can also insert a suitable plastic plug and screw in a wood screw that fits.
- If, for example, you want to join two threaded rods together vertically, the tube-tube 90° profile lends itself to this. You can push the threaded rod into the round tube. A hole is drilled into the square tube and a nut is pushed in. You can now screw a second threaded rod into the nut giving you two vertical threaded rods on top of each other.
- By using a suitable plastic adhesive, available in any DIY shop, you can easily glue plastic profiles together.
- Plastic profiles can easily be cleaned with a cloth and detergent or with special plastic cleaner. Harsh agents such as nitro thinners or acetone should be avoided because these damage the surface.

## 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.

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# alfer® makes you mobile



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 **alfer®** company information

 **alfer®** product overview

 **alfer®** expertise with tips and usage tricks, videos and instructions

 **alfer®** model construction shop



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## alfer® hardware range



### **combitech® system · basis**

System profiles · accessory profiles, standard parts · metric threaded rods, threaded tubes · system accessories · tool range

### **combitech® system · connect 23.5 mm**

System profiles 23.5 mm · connect connectors 90°, 45° connect-hinge and flange connectors · system accessories

### **combitech® system · model construction**

System profiles 7.5 mm · 150°, 90° and 45° connect connectors · connect-bearing, hinge and flange connectors · end caps, end blocks · 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 · Prismatech · Multitube · checker plate profiles · accessories

### **Profiles for DIY and professional purposes**

Standard profiles made from aluminium, brass, plastic, steel, stainless steel · standard construction profiles · furniture construction profiles



## alfer® building material range



### Tile edgings

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

### Floor and room profiles

Cover and joint cover profiles · edging, level balancing, round edging, flat, angle edging and end profiles · stair and step edging profiles · accessories

### Parquet and laminate profiles

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

### Resysta® Decking boards and click tiles

### cabelino® cable duct baseboards

**cabelino®** support, baseboards, cable ducts and accessories, soft baseboards and buckling angles



## 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 · overhead storage system and plant trolley



