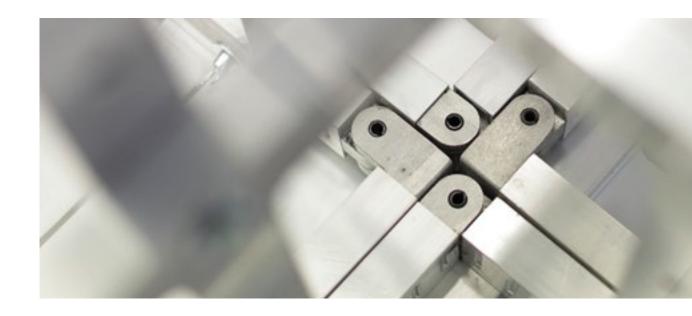
Products MODULAR SYSTEM

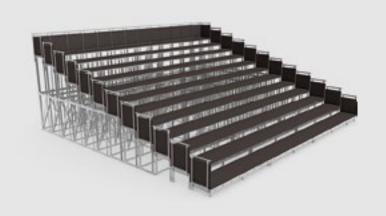


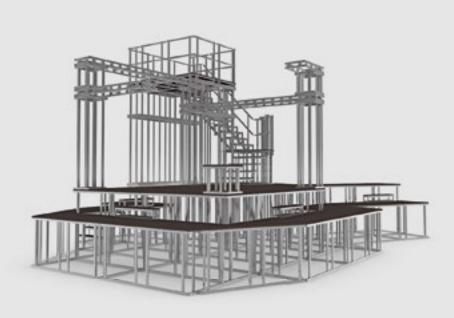


CONTENTS

| | | PAGE |
|-----------|---|------|
| | | |
| THE | E VENTUM-S MODULAR SYSTEM | 5 |
| 1. | PRAKTIKABEL STRUCTURAL ELEMENTS | 9 |
| 1.1 | Praktikabel structural elements | 10 |
| 1.2 | Triangular structural elements | 14 |
| 1.3 | Trapeze-shaped structural elements | 15 |
| 2. | SPECTATOR STANDS | 17 |
| 2.1 | Stand Praktikabel structural elements | 20 |
| 2.2 | Safety rails in public areas | 21 |
| 3. | BRIDGE STRUCTURAL ELEMENTS | 23 |
| | Bridge section structural elements (version 1) | 24 |
| 4. | STAIRWAYS/STEPS/LADDERS | 27 |
| 4.1 | Stairway structural elements | 28 |
| | Step structural elements | 29 |
| 4.3 | Ladder structural elements | 31 |
| 5. | RIGID STRUCTURAL ELEMENTS | 33 |
| | Partition walls/ceilings/concert halls | 35 |
| 6. | MODULAR SYSTEM ACCESSORIES | 37 |
| 6.1 | Intermediate frames | 37 |
| | Moving elements | 38 |
| | Safety rails | 39 |
| | Corner sockets for bridge structural elements | 40 |
| 6.5 | Floor panels/construction panels/lightweight panels | 41 |
| 7. | RAMPS | 43 |
| 7.1 | Universal ramp | 44 |
| 7.2 | Ramp adapters, Initial ramp sections | 45 |
| 2 | SPECIAL ALLIMINIUM DESIGNS | 47 |







↑ Component compatibility plus modular system variability

THE VENTUM-S MODULAR SYSTEM

Variability in all dimensions for your stage.

Are you looking for ONE system for:

stage installations, stages, stands and technical stage sets, constructing trade fair stands, walk-in, multi-storey designs, camera and lighting towers, ramps, stairways and stairway equipment, ceilings, three-dimensional lighting elements, illuminate fabric walls ... ?

The modular system components and component families can be combined with each other in a variety of ways and therefore create a variety of solutions; the basic equipment consists of many parts.

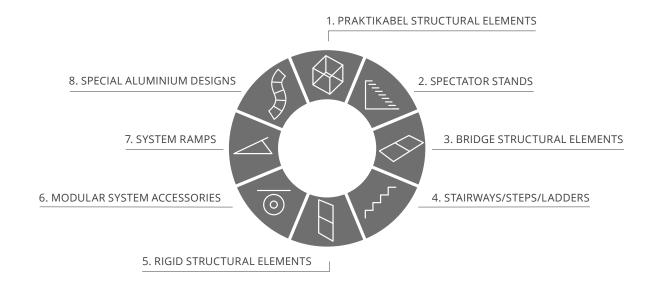
A portfolio of possible solutions for your projects – available at any time ...

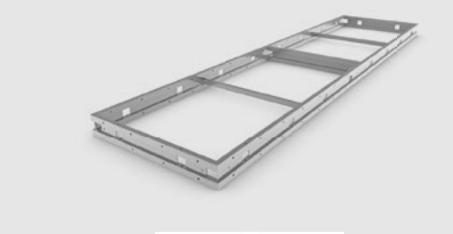
... with one system that creates results with the speed that you need, guarantees safety during construction because of the structure of the system and enables you to plan and look after your finances in the long term. You can reliably introduce your ideas with an unlimited number of options.

For component compatibility plus modular system variability.

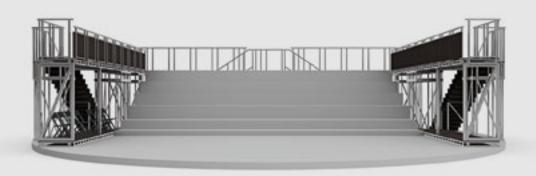
Each component can be used in the component family and is therefore useful when developing solutions.

The component families for the Praktikabel, bridge and stairway modules all function according to this system. These component families complement each other and are completely compatible within the modular system so that you can find an effective solution.



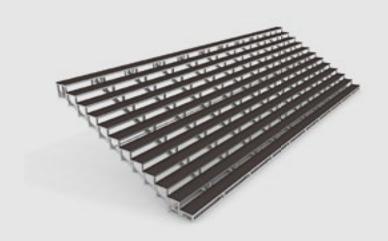






 $[\]uparrow$ \rightarrow Component compatibility plus modular system variability













1. PRAKTIKABEL STRUCTURAL ELEMENTS

The "core" of the Ventum-S modular system.

The system:

The Praktikabel structural elements (hinged units) are used to build any kind of structures in theatre and event technology or for sets or trade fair construction work. The elements can be assembled next to each other, on top of each other or in step formation.

Dimensions:

> Length: 0.5 m / 1.0 m / 1.5 m / 2.0 m

> Width: 0.5 m / 1.0 m

Height: 0.166 m / 0.333 m / ... / 2.0 mStorage area: (L + W) x 0.05 m, collapsed

We also offer special individual dimensions; please get in touch with us. The Praktikabel structural elements are manufactured with a height of 166.6 mm or with 200 mm, if required. The production height of the Praktikabel structural elements is the same as the nominal height minus 25 mm. The nominal height is achieved with a floor panel or an intermediate frame (25 mm).

The Praktikabel structural elements with triangular and trapeze shapes complete the portfolio.

Storage:

The elements have patented corner hinges and can be collapsed diagonally. You only need a fraction of the original space to store them. The space-saving storage resulting from this and the low transport volumes guarantee effective use.

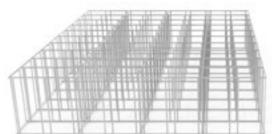
Key parameters to achieve effective solutions:

| > | Praktikabel elements: | 90 Stk. |
|---|-----------------------|--------------------|
| > | Construction volume: | 127 m ³ |
| > | Storage volume: | 12 m ³ |
| > | Constructed area: | 70 m^2 |
| > | Storage space: | 6 m ² |

High-strength aluminium guarantees defined load ratings and is extremely light. A Praktikabel structural element only weighs 12.0 kg.

The elements can be equipped with brackets and corner sockets to cope with special loads.

→ Volume when constructed and storage space for the Praktikabel structural elements





1.1 PRAKTIKABEL STRUCTURAL ELEMENTS



Praktikabel structural elements 0.5 x 0.5 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element | 0.5x0.5x0.166 m | AL (untreated) | 4.5 kg |
| 2 | Praktikabel structural element | 0.5x0.5x0.333 m | AL (untreated) | 5.4 kg |
| 3 | Praktikabel structural element | 0.5x0.5x0.500 m | AL (untreated) | 6.2 kg |
| 4 | Praktikabel structural element | 0.5x0.5x0.666 m | AL (untreated) | 7.1 kg |
| 5 | Praktikabel structural element | 0.5x0.5x0.833 m | AL (untreated) | 8.0 kg |
| 6 | Praktikabel structural element | 0.5x0.5x1.000 m | AL (untreated) | 8.9 kg |
| 7 | Praktikabel structural element | 0.5x0.5x1.166 m | AL (untreated) | 9.7 kg |
| 8 | Praktikabel structural element | 0.5x0.5x1.333 m | AL (untreated) | 10.6 kg |
| 9 | Praktikabel structural element | 0.5x0.5x1.500 m | AL (untreated) | 11.5 kg |
| 10 | Praktikabel structural element | 0.5x0.5x1.666 m | AL (untreated) | 12.3 kg |
| 11 | Praktikabel structural element | 0.5x0.5x1.833 m | AL (untreated) | 13.2 kg |
| 12 | Praktikabel structural element | 0.5x0.5x2.000 m | AL (untreated) | 14.1 kg |
| | | | | |



Praktikabel structural elements 1.0 x 0.5 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element | 1.0x0.5x0.166 m | AL (untreated) | 5.8 kg |
| 2 | Praktikabel structural element | 1.0x0.5x0.333 m | AL (untreated) | 6.7 kg |
| 3 | Praktikabel structural element | 1.0x0.5x0.500 m | AL (untreated) | 7.6 kg |
| 4 | Praktikabel structural element | 1.0x0.5x0.666 m | AL (untreated) | 8.4 kg |
| 5 | Praktikabel structural element | 1.0x0.5x0.833 m | AL (untreated) | 9.3 kg |
| 6 | Praktikabel structural element | 1.0x0.5x1.000 m | AL (untreated) | 10.2 kg |
| 7 | Praktikabel structural element | 1.0x0.5x1.166 m | AL (untreated) | 11.0 kg |
| 8 | Praktikabel structural element | 1.0x0.5x1.333 m | AL (untreated) | 11.9 kg |
| 9 | Praktikabel structural element | 1.0x0.5x1.500 m | AL (untreated) | 12.8 kg |
| 10 | Praktikabel structural element | 1.0x0.5x1.666 m | AL (untreated) | 13.6 kg |
| 11 | Praktikabel structural element | 1.0x0.5x1.833 m | AL (untreated) | 14.5 kg |
| 12 | Praktikabel structural element | 1.0x0.5x2.000 m | AL (untreated) | 15.4 kg |



Praktikabel structural elements 1.0 x 1.0 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element | 1.0x1.0x0.166 m | AL (untreated) | 7.1 kg |
| 2 | Praktikabel structural element | 1.0x1.0x0.333 m | AL (untreated) | 8.0 kg |
| 3 | Praktikabel structural element | 1.0x1.0x0.500 m | AL (untreated) | 8.9 kg |
| 4 | Praktikabel structural element | 1.0x1.0x0.666 m | AL (untreated) | 9.7 kg |
| 5 | Praktikabel structural element | 1.0x1.0x0.833 m | AL (untreated) | 10.6 kg |
| 6 | Praktikabel structural element | 1.0x1.0x1.000 m | AL (untreated) | 11.4kg |
| 7 | Praktikabel structural element | 1.0x1.0x1.166 m | AL (untreated) | 12.3 kg |
| 8 | Praktikabel structural element | 1.0x1.0x1.333 m | AL (untreated) | 13.2 kg |
| 9 | Praktikabel structural element | 1.0x1.0x1.500 m | AL (untreated) | 14.1 kg |
| 10 | Praktikabel structural element | 1.0x1.0x1.666 m | AL (untreated) | 15.0 kg |
| 11 | Praktikabel structural element | 1.0x1.0x1.833 m | AL (untreated) | 15.8 kg |
| 12 | Praktikabel structural element | 1.0x1.0x2.000 m | AL (untreated) | 16.7 kg |
| | | | | |



Praktikabel structural elements 1.5 x 0.5 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element | 1.5x0.5x0.166 m | AL (untreated) | 7.3 kg |
| 2 | Praktikabel structural element | 1.5x0.5x0.333 m | AL (untreated) | 8.6 kg |
| 3 | Praktikabel structural element | 1.5x0.5x0.500 m | AL (untreated) | 9.9 kg |
| 4 | Praktikabel structural element | 1.5x0.5x0.666 m | AL (untreated) | 11.2 kg |
| 5 | Praktikabel structural element | 1.5x0.5x0.833 m | AL (untreated) | 12.5 kg |
| 6 | Praktikabel structural element | 1.5x0.5x1.000 m | AL (untreated) | 13.9 kg |
| 7 | Praktikabel structural element | 1.5x0.5x1.166 m | AL (untreated) | 15.1 kg |
| 8 | Praktikabel structural element | 1.5x0.5x1.333 m | AL (untreated) | 16.4 kg |
| 9 | Praktikabel structural element | 1.5x0.5x1.500 m | AL (untreated) | 17.7 kg |
| 10 | Praktikabel structural element | 1.5x0.5x1.666 m | AL (untreated) | 19.0 kg |
| 11 | Praktikabel structural element | 1.5x0.5x1.833 m | AL (untreated) | 20.3 kg |
| 12 | Praktikabel structural element | 1.5x0.5x2.000 m | AL (untreated) | 21.7 kg |



Praktikabel structural elements 1.5 x 1.0 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element | 1.5x1.0x0.166 m | AL (untreated) | 8.6 kg |
| 2 | Praktikabel structural element | 1.5x1.0x0.333 m | AL (untreated) | 9.9 kg |
| 3 | Praktikabel structural element | 1.5x1.0x0.500 m | AL (untreated) | 11.2 kg |
| 4 | Praktikabel structural element | 1.5x1.0x0.666 m | AL (untreated) | 12.5 kg |
| 5 | Praktikabel structural element | 1.5x1.0x0.833 m | AL (untreated) | 13.8 kg |
| 6 | Praktikabel structural element | 1.5x1.0x1.000 m | AL (untreated) | 15.2 kg |
| 7 | Praktikabel structural element | 1.5x1.0x1.166 m | AL (untreated) | 16.4 kg |
| 8 | Praktikabel structural element | 1.5x1.0x1.333 m | AL (untreated) | 17.7 kg |
| 9 | Praktikabel structural element | 1.5x1.0x1.500 m | AL (untreated) | 19.0 kg |
| 10 | Praktikabel structural element | 1.5x1.0x1.666 m | AL (untreated) | 20.3 kg |
| 11 | Praktikabel structural element | 1.5x1.0x1.833 m | AL (untreated) | 21.7 kg |
| 12 | Praktikabel structural element | 1.5x1.0x2.000 m | AL (untreated) | 23.0 kg |



Praktikabel structural elements 2.0 x 0.5 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element | 2.0x0.5x0.166 m | AL (untreated) | 8.6 kg |
| 2 | Praktikabel structural element | 2.0x0.5x0.333 m | AL (untreated) | 9.9 kg |
| 3 | Praktikabel structural element | 2.0x0.5x0.500 m | AL (untreated) | 11.2 kg |
| 4 | Praktikabel structural element | 2.0x0.5x0.666 m | AL (untreated) | 12.5 kg |
| 5 | Praktikabel structural element | 2.0x0.5x0.833 m | AL (untreated) | 13.8 kg |
| 6 | Praktikabel structural element | 2.0x0.5x1.000 m | AL (untreated) | 15.1 kg |
| 7 | Praktikabel structural element | 2.0x0.5x1.166 m | AL (untreated) | 16.4 kg |
| 8 | Praktikabel structural element | 2.0x0.5x1.333 m | AL (untreated) | 17.7 kg |
| 9 | Praktikabel structural element | 2.0x0.5x1.500 m | AL (untreated) | 19.0 kg |
| 10 | Praktikabel structural element | 2.0x0.5x1.666 m | AL (untreated) | 20.4 kg |
| 11 | Praktikabel structural element | 2.0x0.5x1.833 m | AL (untreated) | 21.7 kg |
| 12 | Praktikabel structural element | 2.0x0.5x2.000 m | AL (untreated) | 23.0 kg |



Praktikabel structural elements 2.0 x 1.0 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element | 2.0x1.0x0.166 m | AL (untreated) | 9.9 kg |
| 2 | Praktikabel structural element | 2.0x1.0x0.333 m | AL (untreated) | 11.2 kg |
| 3 | Praktikabel structural element | 2.0x1.0x0.500 m | AL (untreated) | 12.5 kg |
| 4 | Praktikabel structural element | 2.0x1.0x0.666 m | AL (untreated) | 13.8 kg |
| 5 | Praktikabel structural element | 2.0x1.0x0.833 m | AL (untreated) | 15.1 kg |
| 6 | Praktikabel structural element | 2.0x1.0x1.000 m | AL (untreated) | 16.4 kg |
| 7 | Praktikabel structural element | 2.0x1.0x1.166 m | AL (untreated) | 17.7 kg |
| 8 | Praktikabel structural element | 2.0x1.0x1.333 m | AL (untreated) | 19.0 kg |
| 9 | Praktikabel structural element | 2.0x1.0x1.500 m | AL (untreated) | 20.4 kg |
| 10 | Praktikabel structural element | 2.0x1.0x1.666 m | AL (untreated) | 21.7 kg |
| 11 | Praktikabel structural element | 2.0x1.0x1.833 m | AL (untreated) | 23.0 kg |
| 12 | Praktikabel structural element | 2.0x1.0x2.000 m | AL (untreated) | 24.3 kg |



DF > Front passageway DD > Double passageway

DS

DS > Side passageway DE > Corner passageway

Other combinations available on request!

Praktikabel structural elements with passageway

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|------------------|-----------------|----------------|---------|
| 1 | R-B-Element (DD) | 1.0x1.0x2.000 m | AL (untreated) | 16.9 kg |
| 2 | R-B-Element (DD) | 2.0x1.0x2.000 m | AL (untreated) | 24.5 kg |
| 3 | R-B-Element (DE) | 1.0x1.0x2.000 m | AL (untreated) | 16.8 kg |
| 4 | R-B-Element (DE) | 2.0x1.0x2.000 m | AL (untreated) | 24.4 kg |
| 5 | R-B-Element (DF) | 1.0x0.5x2.000 m | AL (untreated) | 15.5 kg |
| 6 | R-B-Element (DF) | 1.0x1.0x2.000 m | AL (untreated) | 16.8 kg |
| 7 | R-B-Element (DF) | 1.0x1.0x2.000 m | AL (untreated) | 23.1 kg |
| 8 | R-B-Element (DF) | 2.0x1.0x2.000 m | AL (untreated) | 24.4 kg |
| | | | | |



Stabilisation elements

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|---------------|------------------------------------|----------------|--------|
| 1 | Corner socket | For Praktikabel structural element | AL (untreated) | 0.1 kg |
| 2 | Strut (brace) | Reinforced area 1.0x2.0 m | AL (untreated) | 1.3 kg |

1.2 TRIANGULAR STRUCTURAL ELEMENTS



The elements can be collapsed inwards. The storage area measures 1.25 x 0.1 m.

Triangular structural elements $1.0 \times 1.0 \times 1.41 \times h$

| ITEM | DESCRIPTION | 1ST - 3RD SIDE X H | MATERIAL | WEIGHT |
|------|-------------------------------|----------------------|----------------|---------|
| 1 | Triangular structural element | 1.0x1.0x1.41x0.166 m | AL (untreated) | 6.4 kg |
| 2 | Triangular structural element | 1.0x1.0x1.41x0.333 m | AL (untreated) | 7.2 kg |
| 3 | Triangular structural element | 1.0x1.0x1.41x0.500 m | AL (untreated) | 7.9 kg |
| 4 | Triangular structural element | 1.0x1.0x1.41x0.666 m | AL (untreated) | 8.7 kg |
| 5 | Triangular structural element | 1.0x1.0x1.41x0.833 m | AL (untreated) | 9.4 kg |
| 6 | Triangular structural element | 1.0x1.0x1.41x1.000 m | AL (untreated) | 10.2 kg |
| 7 | Triangular structural element | 1.0x1.0x1.41x1.166 m | AL (untreated) | 11.0 kg |
| 8 | Triangular structural element | 1.0x1.0x1.41x1.333 m | AL (untreated) | 11.7 kg |
| 9 | Triangular structural element | 1.0x1.0x1.41x1.500 m | AL (untreated) | 12.5 kg |
| 10 | Triangular structural element | 1.0x1.0x1.41x1.666 m | AL (untreated) | 13.2 kg |
| 11 | Triangular structural element | 1.0x1.0x1.41x1.833 m | AL (untreated) | 14.0 kg |
| 12 | Triangular structural element | 1.0x1.0x1.41x2.000 m | AL (untreated) | 14.8 kg |

Triangular structural elements $1.5 \times 1.5 \times 2.12 \times h$



The elements can be collapsed inwards. The storage area measures $1.96 \times 0.1 \text{ m}$.

| ITEM | DESCRIPTION | 1ST - 3RD SIDE X H | MATERIAL | WEIGHT |
|------|-------------------------------|----------------------|----------------|---------|
| 1 | Triangular structural element | 1.5x1.5x2.12x0.166 m | AL (untreated) | 8.9 kg |
| 2 | Triangular structural element | 1.5x1.5x2.12x0.333 m | AL (untreated) | 10.3 kg |
| 3 | Triangular structural element | 1.5x1.5x2.12x0.500 m | AL (untreated) | 11.7 kg |
| 4 | Triangular structural element | 1.5x1.5x2.12x0.666 m | AL (untreated) | 13.1 kg |
| 5 | Triangular structural element | 1.5x1.5x2.12x0.833 m | AL (untreated) | 14.5 kg |
| 6 | Triangular structural element | 1.5x1.5x2.12x1.000 m | AL (untreated) | 16.0 kg |
| 7 | Triangular structural element | 1.5x1.5x2.12x1.166 m | AL (untreated) | 17.4 kg |
| 8 | Triangular structural element | 1.5x1.5x2.12x1.333 m | AL (untreated) | 18.8 kg |
| 9 | Triangular structural element | 1.5x1.5x2.12x1.500 m | AL (untreated) | 20.2 kg |
| 10 | Triangular structural element | 1.5x1.5x2.12x1.666 m | AL (untreated) | 21.6 kg |
| 11 | Triangular structural element | 1.5x1.5x2.12x1.833 m | AL (untreated) | 23.0 kg |
| 12 | Triangular structural element | 1.5x1.5x2.12x2.000 m | AL (untreated) | 24.4 kg |

The elements can be collapsed inwards. The storage area measures $2.0 \times 0.1 \text{ m}$.

Triangular structural elements 2.0 x 1.0 x 2.24 x h

| ITEM | DESCRIPTION | 1ST - 3RD SIDE X H | MATERIAL | WEIGHT |
|------|-------------------------------|----------------------|----------------|---------|
| 1 | Triangular structural element | 2.0x1.0x2.24x0.166 m | AL (untreated) | 8.8 kg |
| 2 | Triangular structural element | 2.0x1.0x2.24x0.333 m | AL (untreated) | 10.1 kg |
| 3 | Triangular structural element | 2.0x1.0x2.24x0.500 m | AL (untreated) | 11.4 kg |
| 4 | Triangular structural element | 2.0x1.0x2.24x0.666 m | AL (untreated) | 12.7 kg |
| 5 | Triangular structural element | 2.0x1.0x2.24x0.833 m | AL (untreated) | 14.0 kg |
| 6 | Triangular structural element | 2.0x1.0x2.24x1.000 m | AL (untreated) | 15.3 kg |
| 7 | Triangular structural element | 2.0x1.0x2.24x1.166 m | AL (untreated) | 16.6 kg |
| 8 | Triangular structural element | 2.0x1.0x2,24x1.333 m | AL (untreated) | 17.9 kg |
| 9 | Triangular structural element | 2.0x1.0x2.24x1.500 m | AL (untreated) | 19.2 kg |
| 10 | Triangular structural element | 2.0x1.0x2.24x1.666 m | AL (untreated) | 20.5 kg |
| 11 | Triangular structural element | 2.0x1.0x2.24x1.833 m | AL (untreated) | 21.8 kg |
| 12 | Triangular structural element | 2.0x1.0x2.24x2.000 m | AL (untreated) | 23.2 kg |

1.3 TRAPEZE-SHAPED STRUCTURAL ELEMENTS



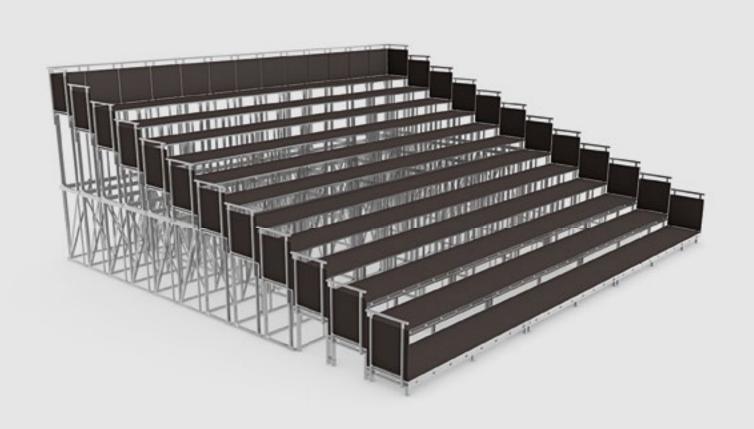
Trapeze-shaped structural elements Dimensions in line with specifications

ITEM DESCRIPTION

1 Price available on request

Production dimensions required:

- > Lenght l
- > Width b1 und b2







2. STANDS

Variable spectator stands using the modular system principle.

The system:

The Ventum-S modular system creates stands quickly and with great variations. The specially reinforced Praktikabel structural elements for stands are designed for use in areas accessible to the public. They are similar to the standard Praktikabel structural elements in their functions and modular system usage and can also be utilised for scenery and decoration purposes. A stand design can then become part of the basic modular system equipment after its original use.



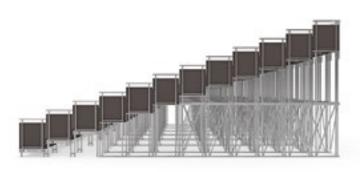
The Praktikabel and bridge structural elements form the basic structure. The modular system step height of 166.6 mm is suitable for use if there is little space available. When using the double height (333.3 mm), the view from all the seats is ideal. When setting up stands in the public arena, we supply all the necessary certification in line with the requirements. We design the necessary accessories like safety rails, intermediate frames and step lighting in line with individual plans and as part of our consultancy work.



↑ Praktikabel structural element with corner bracket

Stand Praktikabel structural elements:

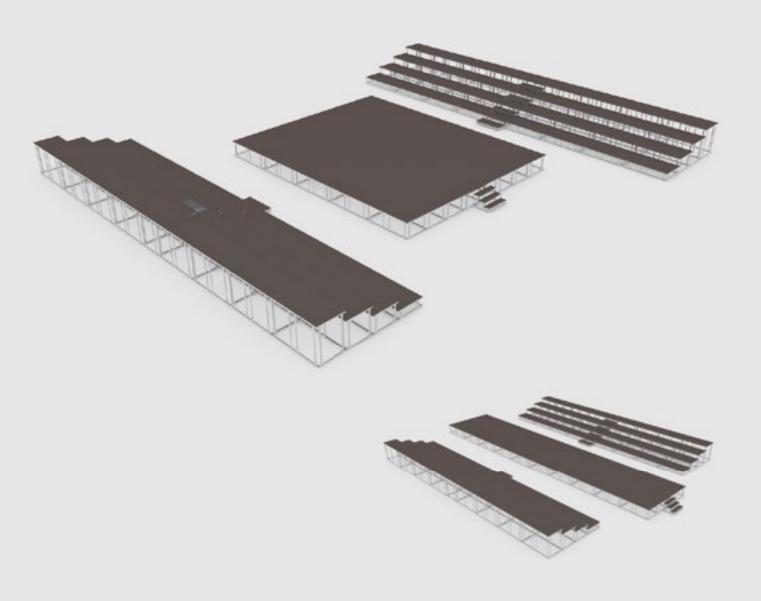
The load rating in the standard Praktikabel structural elements when used as stands is achieved through welded corner brackets or diagonal struts. They clearly distinguish the standard Praktikabel structural elements from the stand Praktikabel structural elements.

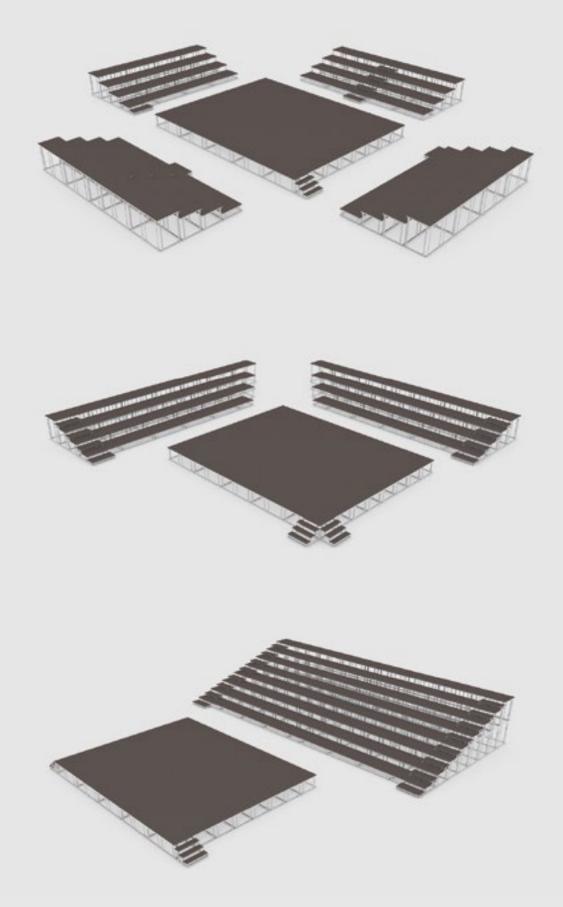


FIVE STAND OPTIONS FROM ONE RANGE OF PARTS

We can advise you individually so that you obtain the best possible configuration for your stand project

You purchase one solution from us and obtain a range of solutions for subsequent projects – your investment will pay off over and again – definitely.





2.1 STAND PRAKTIKABEL STRUCTURAL ELEMENTS



Stand Praktikabel structural elements 1.0 x 1.0 x h

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|------------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element (T) | 1.0x1.0x0.500 m | AL (untreated) | 9.1 kg |
| 2 | Praktikabel structural element (T) | 1.0x1.0x0.666 m | AL (untreated) | 9.9 kg |
| 3 | Praktikabel structural element (T) | 1.0x1.0x0.833 m | AL (untreated) | 10.8 kg |
| 4 | Praktikabel structural element (T) | 1.0x1.0x1.000 m | AL (untreated) | 11.7 kg |
| 5 | Praktikabel structural element (T) | 1.0x1.0x1.166 m | AL (untreated) | 12.6 kg |
| 6 | Praktikabel structural element (T) | 1.0x1.0x1.333 m | AL (untreated) | 13.4 kg |
| 7 | Praktikabel structural element (T) | 1.0x1.0x1.500 m | AL (untreated) | 14.5 kg |
| 8 | Praktikabel structural element (T) | 1.0x1.0x1.666 m | AL (untreated) | 15.4 kg |
| 9 | Praktikabel structural element (T) | 1.0x1.0x1.833 m | AL (untreated) | 16.2 kg |
| 10 | Praktikabel structural element (T) | 1.0x1.0x2.000 m | AL (untreated) | 17.1 kg |





| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|------------------------------------|---------------|----------------|---------|
| 1 | Praktikabel structural element (U) | 1.0x1.0x2.0 m | AL (untreated) | 21.9 kg |
| 2 | Praktikabel structural element (U) | 2.0x1.0x2.0 m | AL (untreated) | 31.1 kg |





| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|------------------------------------|-----------------|----------------|---------|
| 1 | Praktikabel structural element (T) | 2.0x1.0x0.500 m | AL (untreated) | 12.7 kg |
| 2 | Praktikabel structural element (T) | 2.0x1.0x0.666 m | AL (untreated) | 13.8 kg |
| 3 | Praktikabel structural element (T) | 2.0x1.0x0.833 m | AL (untreated) | 15.1 kg |
| 4 | Praktikabel structural element (T) | 2.0x1.0x1.000 m | AL (untreated) | 16.5 kg |
| 5 | Praktikabel structural element (T) | 2.0x1.0x1.166 m | AL (untreated) | 17.8 kg |
| 6 | Praktikabel structural element (T) | 2.0x1.0x1.333 m | AL (untreated) | 19.1 kg |
| 7 | Praktikabel structural element (T) | 2.0x1.0x1.500 m | AL (untreated) | 20.4 kg |
| 8 | Praktikabel structural element (T) | 2.0x1.0x1.666 m | AL (untreated) | 21.7 kg |
| 9 | Praktikabel structural element (T) | 2.0x1.0x1.833 m | AL (untreated) | 23.0 kg |
| 10 | Praktikabel structural element (T) | 2.0x1.0x2.000 m | AL (untreated) | 24.4 kg |

2.2 SAFETY RAILS IN THE PUBLIC AREA

Safety rail structural elements – public areas



ITEM DESCRIPTION

1 Price available on request





3. BRIDGE SECTION STRUCTURAL ELEMENTS

Effectiveness on a horizontal level. Flexibility and safety for building work with aluminium superstructures

The system:

The bridge structural elements are suitable for providing level spaces with any kind of incline and for aluminium superstructure work in conjunction with Praktikabel structural elements. Traversing structures are defined statically and can be safely used to meet your planning objectives.

The bridge sections are designed as an extruded profile (version 1) or as a Vierendeel truss (version 2). The accessories enhance the options for using the system with plug-in feet receptacles, moving trolleys and systematically integrating locking devices and motorised drive systems.

Dimensions:

> Length: 1.0 m / 2.0 m / 3.0 m /

4.0 m / 5.0 m / 6.0 m

Width: 0.5 m / 1.0 m
 Version 1: Extruded profile
 Height Version 1: 141.6 mm

Version 2: Vierendeel truss

> Height Version 2: 116.6 / 141.6 / 308.3 mm

> We can manufacture special dimensions in line with your requirements, if required. The production height of the bridge structural elements is the nominal height. The 166 mm system height is created using a floor panel or intermediate frame.

System integration:

- Corner sockets
- Moving elements
- > Stage carriage locking devices
- > Bridge section drive modules

BRIDGE SECTION STRUCTURAL ELEMENTS

(VERSION 1)





| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Bridge structural elements (1) | 1.0x0.5x0.141 m | AL (untreated) | 7.6 kg |
| 2 | Bridge structural elements (1) | 2.0x0.5x0.141 m | AL (untreated) | 13.3 kg |
| 3 | Bridge structural elements (1) | 3.0x0.5x0.141 m | AL (untreated) | 19.9 kg |
| 4 | Bridge structural elements (1) | 4.0x0.5x0.141 m | AL (untreated) | 25.6 kg |
| 5 | Bridge structural elements (1) | 5.0x0.5x0.141 m | AL (untreated) | 32.1 kg |
| 6 | Bridge structural elements (1) | 6.0x0.5x0.141 m | AL (untreated) | 37.9 kg |

Bridge structural elements (1) 1 x 1.0 x 0.141 m



| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------------------|-----------------|----------------|---------|
| 1 | Bridge structural elements (1) | 1.0x1.0x0.141 m | AL (untreated) | 10.3 kg |
| 2 | Bridge structural elements (1) | 2.0x1.0x0.141 m | AL (untreated) | 16.3 kg |
| 3 | Bridge structural elements (1) | 3.0x1.0x0.141 m | AL (untreated) | 24.3 kg |
| 4 | Bridge structural elements (1) | 4.0x1.0x0.141 m | AL (untreated) | 30.4 kg |
| 5 | Bridge structural elements (1) | 5.0x1.0x0.141 m | AL (untreated) | 38.3 kg |
| 6 | Bridge structural elements (1) | 6.0x1.0x0.141 m | AL (untreated) | 44.4 kg |

Separate bridge structural element section: drilled vertically and horizontally in the system dimensions; can be used with gaps for vertical assembly work; cut on both sides with a 45° join.

Material: EN AW-6060 T66

Bridge section (1)

| ITEM | DESCRIPTION | LXWXH | MATERIAL | WEIGHT |
|------|--------------------|----------------------|----------------|---------|
| 1 | Bridge section (1) | h=141.6 mm/l=1000 mm | AL (untreated) | 2.6 kg |
| 2 | Bridge section (1) | h=141.6 mm/l=2000 mm | AL (untreated) | 5.3 kg |
| 3 | Bridge section (1) | h=141.6 mm/l=3000 mm | AL (untreated) | 8.0 kg |
| 4 | Bridge section (1) | h=141.6 mm/l=4000 mm | AL (untreated) | 10.7 kg |
| 5 | Bridge section (1) | h=141.6 mm/l=5000 mm | AL (untreated) | 13.4 kg |
| 6 | Bridge section (1) | h=141.6 mm/l=6000 mm | AL (untreated) | 16.2 kg |

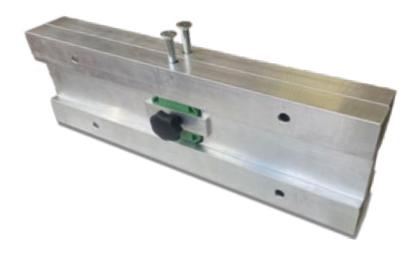
3.2 BBE-/BRIDGE CONNECTOR



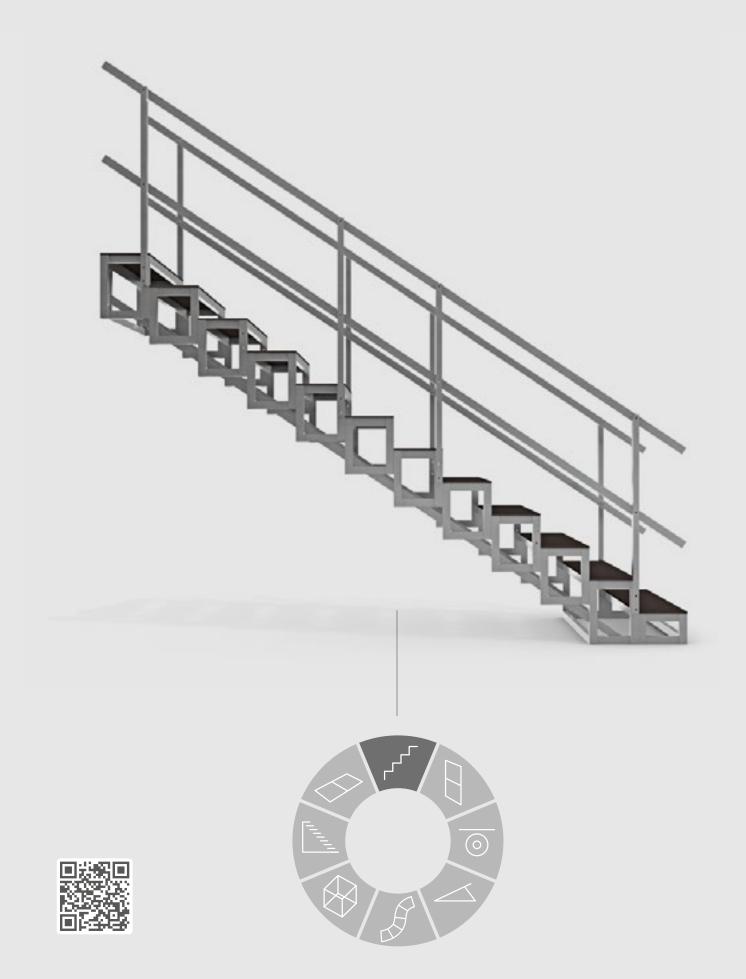
Our new bridge connector makes working with our frames (bridge construction elements) much easier.

We have received a great response from our customers for this system extension.

The easier assembly of the frames with each other and the possibility of fastening the panels from above in the recessed threaded sleeves were particularly emphasised.







4. STAIRWAYS / STEPS / LADDERS

Steps to provide safety.

The system:

The stairways, steps and ladders provide complete variability on several levels. They can be used as a component family and in the modular system in terms of their width and height. You will find the suitable solution for all levels in a wide variety of specific applications.

We can manufacture special dimensions and special designs for stairways/steps with a wide variety of options, e.g. as a conical stairway, a pyramid-shaped, a parabola-shaped or a spiral stairway. We can make individual step height and depth dimensions in line with your wishes.

Safety rails and floor coatings:

- Safety rails Stairways and steps with more than five steps must have safety rails. We provide safety rails that are compatible with the modular system. The assembly work takes place using drilled holes in the system at the side; the safety rails are col lapsed for storage and transport and therefore save space.
- > Finish for stairways and steps The Ventum-S steps are covered with plywood boards as their standard feature. The riser and sides are not faced. We can offer surface finishes (e.g. acrylic glass) and facing for the risers and sides as an individual option, if required.

4.1 STAIRWAY STRUCTURAL ELEMENTS

Dimensions and designs:

Step height: 0.166 m / 0.2 m
 Depth: 0.2 / 0.25 / 0.3 m
 Width: 0.5 / 1.0 m

> Overall height: 2.0 m

Frame stairway: Frame stairways can be assembled as complete stage stairways with variable widths without any intermediate space.

Stringboard stairway: A stringboard stairway is used as an invisible stairway or a folding stairway.

Stairway structural elements frame stairway



Frame stairways are suitable for construction next to each other without any crossover (e.g. complete stage stairways).

(H/D/W) = step height/depth/width

| ITEM | DESCRIPTION | H/D/W | MATERIAL | WEIGHT |
|------|-------------------------------------|---|---|--|
| 1 | Stairway structural element T1/10 | 0.200/0.200/1.0 m | Al/plywood | 48.4 kg |
| 2 | Stairway structural element T1.1/10 | 0.200/0.200/0.5 m | Al/plywood | 33.7 kg |
| 3 | Stairway structural element T2/10 | 0.200/0.250/1.0 m | Al/plywood | 58.8 kg |
| 4 | Stairway structural element T2.1/10 | 0.200/0.250/0.5 m | Al/plywood | 39.2 kg |
| 5 | Stairway structural element T3/10 | 0.200/0.300/1.0 m | Al/plywood | 60.5 kg |
| 6 | Stairway structural element T3.1/10 | 0.200/0.300/0.5 m | Al/plywood | 42.7 kg |
| 7 | Stairway structural element T4/10 | 0.200/0.100/1.0 m | Al/plywood | 33.1 kg |
| 8 | Stairway structural element T4.1/10 | 0.200/0.100/0.5 m | Al/plywood | 22.2 kg |
| 9 | Stairway structural element T5/12 | 0.166/0.200/1.0 m | Al/plywood | 51.5 kg |
| 10 | Stairway structural element T5.1/12 | 0.166/0.200/0.5 m | Al/plywood | 34.3 kg |
| 11 | Stairway structural element T6/12 | 0.166/0.250/1.0 m | Al/plywood | 66.0 kg |
| 12 | Stairway structural element T6.1/12 | 0.166/0.250/0.5 m | Al/plywood | 42.7 kg |
| 13 | Stairway structural element T7/12 | 0.166/0.300/1.0 m | Al/plywood | 64.0 kg |
| 14 | Stairway structural element T7.1/12 | 0.166/0.300/0.5 m | Al/plywood | 42.8 kg |
| | 1 2 3 4 5 6 7 8 9 10 11 12 13 | 1 Stairway structural element T1/10 2 Stairway structural element T1.1/10 3 Stairway structural element T2/10 4 Stairway structural element T2.1/10 5 Stairway structural element T3/10 6 Stairway structural element T3.1/10 7 Stairway structural element T4/10 8 Stairway structural element T4/1/10 9 Stairway structural element T5/12 10 Stairway structural element T5/12 11 Stairway structural element T6/12 12 Stairway structural element T6/12 13 Stairway structural element T7/12 | 1 Stairway structural element T1/10 0.200/0.200/1.0 m 2 Stairway structural element T1.1/10 0.200/0.200/0.5 m 3 Stairway structural element T2/10 0.200/0.250/1.0 m 4 Stairway structural element T2.1/10 0.200/0.250/0.5 m 5 Stairway structural element T3/10 0.200/0.300/1.0 m 6 Stairway structural element T3.1/10 0.200/0.300/0.5 m 7 Stairway structural element T4/10 0.200/0.100/1.0 m 8 Stairway structural element T4.1/10 0.200/0.100/0.5 m 9 Stairway structural element T5/12 0.166/0.200/1.0 m 10 Stairway structural element T5/12 0.166/0.200/0.5 m 11 Stairway structural element T6/12 0.166/0.250/1.0 m 12 Stairway structural element T6.1/12 0.166/0.250/0.5 m 13 Stairway structural element T7/12 0.166/0.300/1.0 m | 1 Stairway structural element T1/10 0.200/0.200/1.0 m Al/plywood 2 Stairway structural element T1.1/10 0.200/0.200/0.5 m Al/plywood 3 Stairway structural element T2/10 0.200/0.250/1.0 m Al/plywood 4 Stairway structural element T2.1/10 0.200/0.250/0.5 m Al/plywood 5 Stairway structural element T3/10 0.200/0.300/1.0 m Al/plywood 6 Stairway structural element T3.1/10 0.200/0.300/0.5 m Al/plywood 7 Stairway structural element T4/10 0.200/0.100/1.0 m Al/plywood 8 Stairway structural element T4.1/10 0.200/0.100/0.5 m Al/plywood 9 Stairway structural element T5/12 0.166/0.200/1.0 m Al/plywood 10 Stairway structural element T5.1/12 0.166/0.200/0.5 m Al/plywood 11 Stairway structural element T6/12 0.166/0.250/1.0 m Al/plywood 12 Stairway structural element T6.1/12 0.166/0.250/0.5 m Al/plywood 13 Stairway structural element T7/12 0.166/0.300/1.0 m Al/plywood |



Stairway structural elements stringboard stairway

| ITEM | DESCRIPTION | H/D/W | MATERIAL | WEIGHT |
|------|-------------------------------------|-------------------|------------|---------|
| 1 | Stairway structural element W1/10 | 0.200/0.200/1.0 m | Al/plywood | 41.8 kg |
| 2 | Stairway structural element W1.1/10 | 0.200/0.200/0.5 m | Al/plywood | 26.8 kg |



Stage safety rails for stairway structural elements (no safety rails for the public area), attached with screws

Stairway safety rails for frame stairways/ stringboard stairways

| ITEM | DESCRIPTION | STEPS / STEP HEIGHT / DEPTH | MATERIAL | WEIGHT |
|------|----------------------|-----------------------------|----------------|---------|
| 1 | Stairway safety rail | 10 Steps/s=200/D=200 mm | AL (untreated) | 7.0 kg |
| 2 | Stairway safety rail | 10 Steps/s=200/D=250 mm | AL (untreated) | 7.9 kg |
| 3 | Stairway safety rail | 10 Steps/s=200/D=300 mm | AL (untreated) | 8.9 kg |
| 4 | Stairway safety rail | 12 Steps/s=166/D=200 mm | AL (untreated) | 7.7 kg |
| 5 | Stairway safety rail | 12 Steps/s=166/D=250 mm | AL (untreated) | 8.9 kg |
| 6 | Stairway safety rail | 12 Steps/s=166/D=300 mm | AL (untreated) | 10.0 kg |

4.2 STEP STRUCTURAL ELEMENTS

Dimensions and designs:

Step height: 0.166 m / 0.2 m
 Depth: 0.2 / 0.25 / 0.3 m
 Width: 0.5 / 1.0 m

> Overall height: 0.166 m / 0.2 m bis 1.0 m

The steps are used as variable lean-to elements, which create suitable access to platforms and structures with several levels with between one and six steps.

Step structural elements Step height 166 mm / depth 200 mm



| ITEN | M DESCRIPTION | H/D/W | MATERIAL | WEIGHT |
|------|---------------------|-------------------|------------|---------|
| 1 | 1 step (h=0.166 m) | 0.166/0.200/1.0 m | Al/plywood | 4.8 kg |
| 2 | 2 steps (h=0.333 m) | 0.166/0.200/1.0 m | Al/plywood | 8.6 kg |
| 3 | 3 steps (h=0.500 m) | 0.166/0.200/1.0 m | Al/plywood | 12.5 kg |
| 4 | 4 steps (h=0.666 m) | 0.166/0.200/1.0 m | Al/plywood | 16.7 kg |
| 5 | 5 steps (h=0.833 m) | 0.166/0.200/1.0 m | Al/plywood | 20.9 kg |
| 6 | 6 steps (h=1.000 m) | 0.166/0.200/1.0 m | Al/plywood | 25.4 kg |
| 7 | 1 steps (h=0.166 m) | 0.166/0.200/0.5 m | Al/plywood | 2.7 kg |
| 8 | 2 steps (h=0.333 m) | 0.166/0.200/0.5 m | Al/plywood | 5.0 kg |
| 9 | 3 steps (h=0.500 m) | 0.166/0.200/0.5 m | Al/plywood | 7.5 kg |
| 10 | 4 steps (h=0.666 m) | 0.166/0.200/0.5 m | Al/plywood | 10.1 kg |
| 11 | 5 steps (h=0.833 m) | 0.166/0.200/0.5 m | Al/plywood | 12.9 kg |
| 12 | 6 steps (h=1.000 m) | 0.166/0.200/0.5 m | Al/plywood | 15.9 kg |
| | | | | |

(H/D/W) = step height/depth/width



Step structural elements Height 166 mm / depth 250 mm

| DESCRIPTION | H/D/W | MATERIAL | WEIGHT |
|---------------------|--|--------------------|--|
| 1 step (h=0.166 m) | 0.166/0.250/1.0 m | Al/plywood | 5.3 kg |
| 2 steps (h=0.333 m) | 0.166/0.250/1.0 m | Al/plywood | 9.6 kg |
| 3 steps (h=0.500 m) | 0.166/0.250/1.0 m | Al/plywood | 14.1 kg |
| 4 steps (h=0.666 m) | 0.166/0.250/1.0 m | Al/plywood | 18.7 kg |
| 5 steps (h=0.833 m) | 0.166/0.250/1.0 m | Al/plywood | 23.5 kg |
| 6 steps (h=1.000 m) | 0.166/0.250/1.0 m | Al/plywood | 28.5 kg |
| 1 steps (h=0.166 m) | 0.166/0.250/0.5 m | Al/plywood | 2.9 kg |
| 2 steps (h=0.333 m) | 0.166/0.250/0.5 m | Al/plywood | 5.6 kg |
| 3 steps (h=0.500 m) | 0.166/0.250/0.5 m | Al/plywood | 8.4 kg |
| 4 steps (h=0.666 m) | 0.166/0.250/0.5 m | Al/plywood | 11.4 kg |
| 5 steps (h=0.833 m) | 0.166/0.250/0.5 m | Al/plywood | 14.5 kg |
| 6 steps (h=1.000 m) | 0.166/0.250/0.5 m | Al/plywood | 17.8 kg |
| | 1 step (h=0.166 m) 2 steps (h=0.333 m) 3 steps (h=0.500 m) 4 steps (h=0.666 m) 5 steps (h=0.833 m) 6 steps (h=1.000 m) 1 steps (h=0.166 m) 2 steps (h=0.333 m) 3 steps (h=0.500 m) 4 steps (h=0.666 m) 5 steps (h=0.833 m) | 1 step (h=0.166 m) | 1 step (h=0.166 m) 0.166/0.250/1.0 m Al/plywood 2 steps (h=0.333 m) 0.166/0.250/1.0 m Al/plywood 3 steps (h=0.500 m) 0.166/0.250/1.0 m Al/plywood 4 steps (h=0.666 m) 0.166/0.250/1.0 m Al/plywood 5 steps (h=0.833 m) 0.166/0.250/1.0 m Al/plywood 6 steps (h=1.000 m) 0.166/0.250/1.0 m Al/plywood 1 steps (h=0.166 m) 0.166/0.250/0.5 m Al/plywood 2 steps (h=0.333 m) 0.166/0.250/0.5 m Al/plywood 3 steps (h=0.500 m) 0.166/0.250/0.5 m Al/plywood 4 steps (h=0.666 m) 0.166/0.250/0.5 m Al/plywood 5 steps (h=0.666 m) 0.166/0.250/0.5 m Al/plywood 5 steps (h=0.833 m) 0.166/0.250/0.5 m Al/plywood |

Step structural elements Height 166 mm / depth 300 mm



| ITEM | DESCRIPTION | H/D/W | MATERIAL | WEIGHT |
|------|---------------------|-------------------|------------|---------|
| 1 | 1 step (h=0.166 m) | 0.166/0.300/1.0 m | Al/plywood | 5.9 kg |
| 2 | 2 steps (h=0.333 m) | 0.166/0.300/1.0 m | Al/plywood | 10.7 kg |
| 3 | 3 steps (h=0.500 m) | 0.166/0.300/1.0 m | Al/plywood | 15.7 kg |
| 4 | 4 steps (h=0.666 m) | 0.166/0.300/1.0 m | Al/plywood | 20.9 kg |
| 5 | 5 steps (h=0.833 m) | 0.166/0.300/1.0 m | Al/plywood | 26.2 kg |
| 6 | 6 steps (h=1.000 m) | 0.166/0.300/1.0 m | Al/plywood | 31.7 kg |
| 7 | 1 steps (h=0.166 m) | 0.166/0.300/0.5 m | Al/plywood | 3.3 kg |
| 8 | 2 steps (h=0.333 m) | 0.166/0.300/0.5 m | Al/plywood | 6.3 kg |
| 9 | 3 steps (h=0.500 m) | 0.166/0.300/0.5 m | Al/plywood | 9.4 kg |
| 10 | 4 steps (h=0.666 m) | 0.166/0.300/0.5 m | Al/plywood | 12.7 kg |
| 11 | 5 steps (h=0.833 m) | 0.166/0.300/0.5 m | Al/plywood | 16.2 kg |
| 12 | 6 steps (h=1.000 m) | 0.166/0.300/0.5 m | Al/plywood | 19.8 kg |



Stage safety rails for step structural elements, no safety rails for the public area, attached with screws

Step safety rails – attached with screws

| ITEM | DESCRIPTION | STEPS / STEP HEIGHT / DEPTH | MATERIAL |
|------|------------------|-----------------------------|----------------|
| 7 | Step safety rail | 3 Steps/s=166/a=200 mm | AL (untreated) |
| 8 | Step safety rail | 3 Steps/s=166/a=250 mm | AL (untreated) |
| 9 | Step safety rail | 3 Steps/s=166/a=300 mm | AL (untreated) |
| 10 | Step safety rail | 3 Steps/s=200/a=200 mm | AL (untreated) |
| 11 | Step safety rail | 3 Steps/s=200/a=250 mm | AL (untreated) |
| 12 | Step safety rail | 3 Steps/s=200/a=300 mm | AL (untreated) |
| 13 | Step safety rail | 4 Steps/s=166/a=200 mm | AL (untreated) |
| 14 | Step safety rail | 4 Steps/s=166/a=250 mm | AL (untreated) |
| 15 | Step safety rail | 4 Steps/s=166/a=300 mm | AL (untreated) |
| 16 | Step safety rail | 4 Steps/s=200/a=200 mm | AL (untreated) |
| 17 | Step safety rail | 4 Steps/s=200/a=250 mm | AL (untreated) |
| 18 | Step safety rail | 4 Steps/s=200/a=300 mm | AL (untreated) |
| 19 | Step safety rail | 5 Steps/s=166/a=200 mm | AL (untreated) |
| 20 | Step safety rail | 5 Steps/s=166/a=250 mm | AL (untreated) |
| 21 | Step safety rail | 5 Steps/s=166/a=300 mm | AL (untreated) |
| 22 | Step safety rail | 5 Steps/s=200/a=200 mm | AL (untreated) |
| 23 | Step safety rail | 5 Steps/s=200/a=250 mm | AL (untreated) |
| 24 | Step safety rail | 5 Steps/s=200/a=300 mm | AL (untreated) |
| 25 | Step safety rail | 6 Steps/s=166/a=200 mm | AL (untreated) |
| 26 | Step safety rail | 6 Steps/s=166/a=250 mm | AL (untreated) |
| 27 | Step safety rail | 6 Steps/s=166/a=300 mm | AL (untreated) |
| 28 | Step safety rail | 6 Steps/s=200/a=200 mm | AL (untreated) |
| 29 | Step safety rail | 6 Steps/s=200/a=250 mm | AL (untreated) |
| 30 | Step safety rail | 6 Steps/s=200/a=300 mm | AL (untreated) |
| | | | |

4.3 LADDER ELEMENTS

Distance between rungs 0.333 m

OA > Without handle

AL > With handle on the left

AR > With handle on the right

2A > Double handle (left + right)

Other heights are available on request.

Ladder elements – for assembly in system structural elements

| ITEM | DESCRIPTION | W/H | MATERIAL | WEIGHT |
|------|-------------|---------------|----------------|--------|
| 1 | Ladder 2-OA | w=0.4/h=2.0 m | AL (untreated) | 4.4 kg |
| 2 | Ladder 2-AL | w=0.4/h=2.0 m | AL (untreated) | 6.3 kg |
| 3 | Ladder 2-AR | w=0.4/h=2.0 m | AL (untreated) | 6.3 kg |
| 4 | Ladder 2-2A | w=0.4/h=2.0 m | AL (untreated) | 8.2 kg |







5. RIGID STRUCTURAL ELEMENTS

Variability for partitions, ramps and ceilings.

The system:

The rigid structural elements are used for variable even structures. With a wide variety of geometrical shapes and low load ratings, the rigid structural elements can be ideally adapted to the application at hand. The basic structural shapes can be combined with the modular system elements and are available in the dimensions listed. We develop and manufacture special shapes in line with your requirements.

The variable concert room illustrates how the rigid structural elements can be used. Rectangular and trapeze-shaped elements with various heights are used for the side walls and are set up at different angles and connected with spacers. Ceilings hung at an angle form the top finish. It is quick and easy to adapt the concert room size to meet your requirements by changing the number of elements.

Dimensions:

> Length: 1.0 m / 2.0 m / 3.0 m / 4.0 m / 5.0 m / 6.0 m

> Width: 0.5 m / 1.0 m

> Height: 0.06 m

We can manufacture triangles, trapezes, polygons or curved elements in special shapes. The Ventum-S floor panels can be used for areas where people have to walk.

Areas of use:

- > Partitions
- > Ramps
- Ceilings
- > Concert rooms

Accessories:

- > Support angles
- > Spacers
- > Adjustable feet
- Connectors

Surfaces:

- > Wood
- Acrylic glass
- Other materials on request



[→] Rigid structural elements in the variable concert room







RIGID STRUCTURAL ELEMENTS

Partition walls \cdot ceilings \cdot concert halls



Rigid structural elements

| ITEM | DESCRIPTION | W / H (M) | MATERIAL | WEIGHT |
|------|--------------------------|-------------------------|----------------|--------|
| 1 | Rigid structural element | w=0.5/h=0.06 m (per m) | AL (untreated) | 3.5 kg |
| 2 | Rigid structural element | w=0.75/h=0.06 m (per m) | AL (untreated) | 3.8 kg |
| 3 | Rigid structural element | w=1.0/h=0.06 m (per m) | AL (untreated) | 4.0 kg |







6. MODULAR SYSTEM ACCESSORIES

Introducing project requirements in great detail

The system:

The accessories supplement the modular system standard elements and offer a broad range of uses. The accessories become the key to maximum variability and safety both in the component families and modular system usage.

A summary of accessories:

- Corner sockets and plug-in feet for bridge structural elements
- Moving elements

Extending the portfolio of solutions:

The accessories guarantee that the modular system works well for a wide variety of stage projects. Our ongoing de-velopment of accessory components enables you to meet individual project requirements.

- > Floor panels / construction panels / lightweight panels
- > Intermediate frames

6.1 INTERMEDIATE FRAME

The key component for structures with the system dimensions.

The step height is achieved by using a panel or an intermediate frame (D=25 mm). One of the two com-ponents must be used to provide the standard sys-tem height when constructing items on top of each other. The production height of the modular system elements comes from the system dimension minus 25 mm. The use of the intermediate frames creates considerable weight reductions in comparison with construction panels. Structures can be pre-assem-bled and taken on to the stage with ideal weights if the installations have to be completed with a tight time schedule.

Intermediate frame for Praktikabel and bridge structural elements



| ITEM | DESCRIPTION | LXWXD | MATERIAL | WEIGHT |
|------|--------------------|-----------------|----------------|--------|
| 1 | Intermediate frame | 0.5x0.5x0.025 m | AL (untreated) | 1.2 kg |
| 2 | Intermediate frame | 1.0x0.5x0.025 m | AL (untreated) | 1.7 kg |
| 3 | Intermediate frame | 1.0x1.0x0.025 m | AL (untreated) | 1.5 kg |
| 4 | Intermediate frame | 1.5x1.0x0.025 m | AL (untreated) | 2.7 kg |
| 5 | Intermediate frame | 2.0x0.5x0.025 m | AL (untreated) | 2.7 kg |
| 6 | Intermediate frame | 2.0x1.0x0.025 m | AL (untreated) | 3.2 kg |

6.2 MOVING ELEMENTS



Lifting device

- Electrically operated system (battery-based)
- · Synchronous lifting process
- · Lifting force is 600 kg per roller
- · Lifting height 30 mm
- Flat design 141 mm when retracted
- 100 mm diameter rolls
- Easy, quick assembly
- · Removal possible in a lowered state
- · Charging of the batteries with a standard 24V charger
- Neutrik cable plug connections

Our lifting device is predestined for movable constructions where the payload is significantly higher than the dead weight.

A typical example of this are, for example, grandstands that stand safely and firmly on the ground when loaded (with an audience) and can be moved quickly and safely when unloaded (without an audience).



Moving elements – insert carriage

| ITEM | DESCRIPTION | SPECIFICATION | MATERIAL | WEIGHT |
|------|----------------------------|-------------------------------|----------------|--------|
| 1 | Insert carriage W0 (1.0 m) | Without wheels | AL (untreated) | 3.6 kg |
| 2 | Insert carriage W1 (1.0 m) | 2 fixed wheels | Al/steel | 7.4 kg |
| 3 | Insert carriage W2 (1.0 m) | 2 casters | Al/steel | 7.4 kg |
| 4 | Insert carriage W3 (1.0 m) | 2 wheels with direction locks | Al/steel | 7.5 kg |

Bridge structural elements become mobile quickly and easily with the insert carriage. The insert carriages are equipped with direction locks or castors and have a functional design and a low weight of 5.2 kg.



Moving elements - Corner rollers

Version 1 bridge construction elements are converted into variably set-up stage wagons with corner castors. The corner rollers are like the corner mounts for the plug-in feet, to be mounted in the functional groove of the frame profile. The corner castors have pivoting wheels (Ø100). The end faces can each be equipped with 2 corner rollers, the middle bars with either 2 or 4 corner rollers.



Moving elements - lock plus wheel

| ITEM | DESCRIPTION | SPECIFICATION | MATERIAL | WEIGHT |
|------|--------------------|-------------------|----------|--------|
| 1 | Lock plus wheel K1 | Without brakes | Al/steel | 3.2 kg |
| 2 | Lock plus wheel K2 | With brake roller | Al/steel | 3.2 kg |

For external assembly with bridge structural elements. K1/2 can be combined with an insert carriage. K2 provides a braking function.

By using locks plus wheels with bridge structural elements, it is easy to position elements on the outsides of the bridge units. The rollers on the locks plus wheels are available as castors, direction locks or total locks.



Moving elements - lifting rollers

| ITEM | DESCRIPTION | LOAD RATING |
|------|---|--------------------|
| 1 | Lifting roller (bridge structural element) | Load rating 160 kg |
| 2 | Lifting roller (Praktikabel structural element) | Load rating 160 kg |

To move bridge structural elements or Praktikabel structural elements (corner assembly – 0.333 mm clearance required)

This makes Praktikabel structural elements mobile, either individually or as stage structures.

5 Rapid assembly5 Sturdy design

> 5 Floor clearance: 25 mm

6.3 SAFETY RAILS



Stage safety rails for Praktikabel structural elements and bridge section structural elements, no railings according to DIN 1055; screw fitting; with or without a base board

Stage safety rails non-public area

| ITEM | DESCRIPTION | HEIGHT / WIDTH | MATERIAL | WEIGHT |
|------|----------------------|----------------------------|----------------|--------|
| 1 | Safety rail (stage) | h=1.0 m/w=1.0 m | AL (untreated) | 3.3 kg |
| 2 | Safety rail (stage) | h=1.0 m/w=1.0 m/base board | AL (untreated) | 4.3 kg |
| 3 | Safety rail (stage) | h=1.0 m/w=1.5 m | AL (untreated) | 6.7 kg |
| 4 | Safety rail (stage) | h=1.0 m/w=1.5 m/base board | AL (untreated) | 6.8 kg |
| 5 | Safety rail (stage) | h=1.0 m/w=2.0 m | AL (untreated) | 7.4 kg |
| 6 | Safety rail (stage) | h=1.0 m/w=2.0 m/base board | AL (untreated) | 8.8 kg |
| 9 | Skirting board extra | Per m | AL (untreated) | 0.7 kg |
| | | | | |

Safety rails are designed for use in the non-public area. They are used to protect edges of stages, stage sets and multi-layer structures consisting of basic modu-lar system materials.

6.4 CORNER SOCKETS / PLUG-IN FEET FOR BRIDGE STRUCTURAL ELEMENTS

Bridge structural elements in version 1 can be com-bined with corner sockets and plug-in feet to form plug-in feet platforms and platform areas. These areas can be set up both on a level and with steps.



Corner socket – for bridge structural elements (Version 1)

| ITEM | DESCRIPTION | MATERIAL | WEIGHT |
|------|--|----------------|--------|
| 1 | Corner socket for bridge structural elements (1) | Cast aluminium | 0.7 kg |

Corner socket for assembly in bridge structural elements (version 1). Suitable plug-in feet 60x60

Plug-in feet - for bridge structural elements (Version 1)



Fits into corner socket for bridge structural elements (version 1)

| ITEM | DESCRIPTION | DIMENSIONS | MATERIAL | WEIGHT |
|------|---|-------------------------------------|----------------|--------|
| 1 | Plug-in feet for bridge structural element | For structural height of 0.333 m | AL (untreated) | 0.3 kg |
| 2 | Plug-in feet for bridge structural element | For structural height of 0.500 m | AL (untreated) | 0.4 kg |
| 3 | Plug-in feet for bridge structural element | For structural height of 0.666 m | AL (untreated) | 0.5 kg |
| 4 | Plug-in feet for bridge structural element | For structural height of 0.833 m | AL (untreated) | 0.6 kg |
| 5 | Plug-in feet for bridge structural element | For structural height of 1.000 m | AL (untreated) | 0.8 kg |



Telescopic plug-in feet for bridge structural elements

ITEM DESCRIPTION

1 Price and design available on request

6.5 FLOOR PANELS / CONSTRUCTION PANELS / LIGHTWEIGHT PANELS



Coated with phenol resin on both sides (dark brown, rough surface on one side); edges varnished; with positioning angles (drilled for screwing to system elements)

Floor panels for modular system usage

| ITEM | DESCRIPTION | LXWXD | MATERIAL | WEIGHT |
|------|------------------|-----------------|----------|---------|
| 1 | Floor panel (PH) | 0.5x0.5x0.024 m | Plywood | 4.0 kg |
| 2 | Floor panel (PH) | 1.0x0.5x0.024 m | Plywood | 8.1 kg |
| 3 | Floor panel (PH) | 1.0x1.0x0.024 m | Plywood | 16.2 kg |
| 4 | Floor panel (PH) | 1.5x1.0x0.024 m | Plywood | 24.3 kg |
| 5 | Floor panel (PH) | 2.0x0.5x0.024 m | Plywood | 16.2 kg |
| 6 | Floor panel (PH) | 2.0x1.0x0.024 m | Plywood | 32.4 kg |

Construction panels for modular system usage



Coated with phenol resin on both sides (dark brown, rough surface on one side); edges varnished; with positioning angles; drilled vertically with the system dimensions; used for intermediate levels where people walk

| ITEM | DESCRIPTION | LXWXD | MATERIAL | WEIGHT |
|------|-------------------------|-----------------|----------|---------|
| 1 | Construction panel (PH) | 0.5x0.5x0.024 m | Plywood | 4.0 kg |
| 2 | Construction panel (PH) | 1.0x0.5x0.024 m | Plywood | 8.1 kg |
| 3 | Construction panel (PH) | 1.0x1.0x0.024 m | Plywood | 16.2 kg |
| 4 | Construction panel (PH) | 1.5x1.0x0.024 m | Plywood | 24.3 kg |
| 5 | Construction panel (PH) | 2.0x0.5x0.024 m | Plywood | 16.2 kg |
| 6 | Construction panel (PH) | 2.0x1.0x0.024 m | Plywood | 32.4 kg |







7. VENTUM-S SYSTEM RAMPS

Variability for inclines.

Systematics:

The bridge construction elements are mounted on the Praktikabel structural elements with adapters. By combining several bridge elements, surfaces of any size can be mounted.



↑ Elliptische Bühnenschräge



7.1 UNIVERSAL SLOPE ADAPTER

The universal bevel adapter, which can be inclined by +/-20° and height-adjusted by 270 mm, allows surfaces of any inclination to be set up.

The support distance can be variably adapted to the frame length and the required load capacity.

Universal incline adapters can also be used as a continuous height adjustment option without inclination.

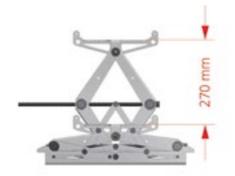


Universal inclination adapter

Inclination +/-20 Height adjustment 270 mm for 0.5 m wide Praktikabel structural elements









7.2 SYSTEM SLOPE ADAPTER

The system slope adapters are manufactured as standard for a slope of 1/6 and 1/12. Surfaces built up with system slope adapters are characterized by excellent longitudinal and transverse stability.

They end in each case with a system height, so that optimal further construction in the system is possible. The inclination adapters can be supplemented with adapted aprelles.



Ramp adapters

| ITEM | DESCRIPTION | LXW | MATERIAL | WEIGHT |
|------|---------------------|-----------|----------------|--------|
| 1 | Ramp adapter 1/6 | 1.0x1.0 m | AL (untreated) | 6.1 kg |
| 2 | Ramp adapter 1-1/12 | 1.0x1.0 m | AL (untreated) | 5.8 kg |
| 3 | Ramp adapter 2-1/12 | 1.0x1.0 m | AL (untreated) | 5.3 kg |

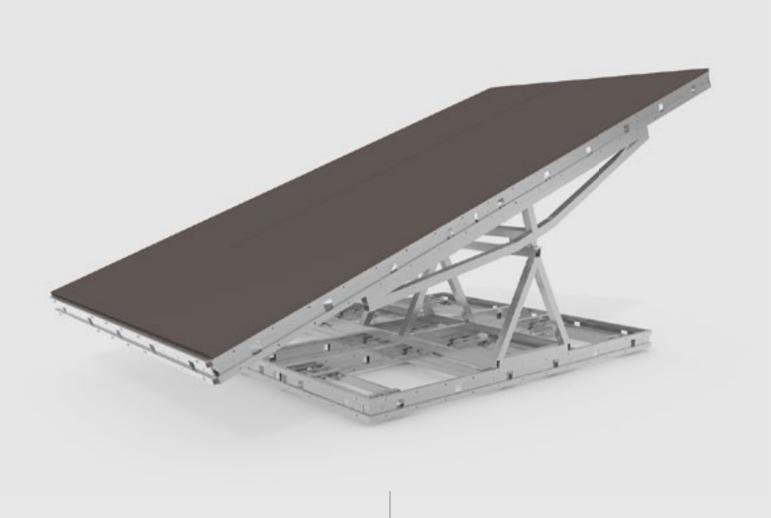


Lean-to initial sections of ramps consisting of bridge structural elements with a 1/6 or 1/12 incline (+5.0 mm on +141.6 mm), wedge made of wood

Initial sections for other ramps or with a solid aluminium wedge available on request.

Ramp initial section

| ITEM | DESCRIPTION | INCLINE | MATERIAL |
|------|---------------------------|---------------|------------|
| 1 | Ramp initial section 1/6 | for 1/6 ramp | Al/plywood |
| 2 | Ramp initial section 1/12 | for 1/12 ramp | Al/plywood |





SPECIAL ALUMINIUM STRUCTURES

Expertise and ideas in aluminium.

Ventum-S stands for expertise in aluminium. We provide our customers with more than 30 years of experience as a professional aluminium welding company. We handle individual requirements and pay attention to all the details, ranging from developing the idea to production.

Project development:

- > Feasibility studies
- Developing solutions with static tests

Project work:

- > Complete design work in 3D
- > Production



- ↑ S-shaped curved ramp for the State Operetta Dresden
- → See-saw for use on stage at the Görlitz-Zittau Theatre



↑ Cube designs for vehicles and people Landesbühnen Sachsen (theatre in Radebeul)

Project partnership:

We complete project teams with our expertise and precision in line with your requirements, if required.

Our engineers are available to help you throughout the course of the project in a constructive manner and guarantee that deadlines are always met.







