Always a little more flexible:

X-frame
Our customers always place high demands on X-frame systems. Sometimes bigger and sometimes smaller – but very often requirements are quite different from standard.

These individual requirements are always the focus when you call häwa. We are convinced if we combine your experience and particular specifications with our experience over numerous projects the optimum solution can be achieved.

All customized solutions are based on our X-frame systems which have been proven in thousands of applications. Our standard range of products with its ergonomic design and functions, its stability and very high load carrying capacity, as well as the various size and versions and its wide range of accessories, offer numerous application possibilities.

On that basis, we firmly believe working together is the best method to being an asset to you, our customers. Everything from a simple adjustment for better usage of enclosure space or special material requirements to customized development of a complete machine enclosure or assembly line. We will do our very best to fulfill your and/or your customers’ wishes if possible.

We are not here to just sell you our products, we are here to do all we can to make your final product even better if we can.
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<th>Section</th>
<th>Page</th>
</tr>
</thead>
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</tr>
</tbody>
</table>
Endless Possibilities

Each machine cell is functionally different, but they have one thing in common:

They are designed to your specific requirements and must be able to grow in line with the requirements.

We developed X-frame for this purpose – a modular system which offers maximum flexibility in the implementation of your individual solution.

Depending on your requirements, each component can be used as
- load-bearing element and / or
- cable duct for electric, pneumatic, hydraulic installations
- or an electric operating room, i.e. a control cabinet

The manufacturing of single cells, for assembly stations, test systems or rotary applications, cell lines for linear applications, upgrading or adaption of the control technology for example are very simple with the X-frame system.

Change your machine frame into a flexible system that grows in line with your requirements – we support you.

The Machine Frame that combines Design and Functionality

Owing to its modular structure, the X-frame is the perfect standard for various product ranges, one-off production or special requirements.

X-frame can be used flexibly and is easily and quickly adaptable to your needs.

Your basic concept serves as internal standard for the realization of a wide variety of applications.

X-frame can be easily adapted at any time to new customer specifications.

Advantages

- Save time and money: You can concentrate on your core business while we support you in the construction of your machine frame.
- Low-priced one-off production: Owing to its simple construction, the X-frame system is ideal for manufacturing low-priced special or one-off products.
- Integrate control cabinets and save money: It is possible to integrate control cabinets on all levels. The control cabinet becomes a supporting part of the cell.
- Additional cable ducts are not required: The continuously open structure of the X-frame system forms an integrated three-dimensional cable duct.
- Additional devices or equipment are not necessary: The simple and modular structure of the X-frame system requires no additional equipment.
- A one-stop service: We carry out the assembly of your X-frame cell, including base plates, windows, doors, safety switches, light curtains and further components of our wide range of accessories.
- Your benefits: No stockpiling of materials, no further machining of frames or cells, much shorter assembly time.

Design

- Individual color choice to customer specification.
- Powder coated sheet steel or stainless steel.
- Ergonomic design that distinguishes you from your competitors.
Modular Single Cells

The design and manufacturing of single cells for e.g.: assembly stations, test systems or laser cells is very simple with the X-frame system. It is possible to assemble the cells within a very short time and they can be expanded and upgraded at any time.

Through additions of further X-frame components, it is possible to realize widths up to 3,000 mm. With additional vertical struts, the working width can generally be expanded “indefinitely”.

Linear Applications

For the construction of linear applications, X-frame components are lined-up. This can be achieved with single or double elements. Multiple cells can be extended and combined to create complete facilities.

Rotary Applications

Several options are available within the X-frame system for the design of rotary applications. It is possible to build hexagonal or octagonal systems.

Pro-X for Heavy Applications

We developed X-frame components in Pro-X design for high dynamic or static loads.

Each component...

... is a supporting element.

... is a cable duct.

... is a pneumatic channel.

... includes optimized properties.

... can be adapted to your requirements.

Subject to national and international patent and trademark rights
European patent: EP 2124 302 B1
**Key Features**

- Ideal for the production of single cells, e.g.: manual assembly stations, test systems or laser cells
- Low-cost standard solutions
- Easily expandable
- Full re-usability for expansions

**Product Description**

With just a few optimized components, it is possible to create customized solutions for your individual applications. All X-frame components are based on function modules, as each component is a supporting element, a cable duct and a pneumatic channel. Each function module includes optimized features and can be adapted to your wishes.

- Select your width, height and depth from the drawing supplied with the standard values or insert individual dimensions required for your application.
- You can draft your individual applications on pages 8 and 9. Select the appropriate modules for level 1 to 3.
- Select for each component color, material and position. If you select in level 2 the Control panel Touch for side A, this module will be on the front side, as shown in the drawing on the right side (see marking). Each side per level can only be occupied once.

**Technical Data**

- Width = width of the component without vertical struts
- Height = height of the vertical struts without feet
- Depth = depth of the component without vertical struts

**Note**

You will find on the following pages a selection of already realized customized solutions. Please contact us for your specific requirements!

**Accessories**

- For accessories, see pages 28 – 34
Technical Information

Load:
- Static
- Dynamic
  \( x(A; C) = \ldots N; Y(B; D) = \ldots N; Z = \ldots N \)

With castors, available upon request
- With adjustable support feet
**X-frame**

### häwa

**Vertical Struts**

#### Vertical struts  Page 24 – 25

**Material:**
- Sheet steel
- Stainless steel

**Body color:**
- RAL 9003
- Other: RAL _______

**Door color:**
- RAL 5010
- Other: RAL _______

**Option:**
- Without cut-outs for light curtain and door systems
- With cut-outs for light curtain and door systems
- Pro-X design

---

### häwa

**Level 1**

#### Horizontal struts  Page 26

**Material:**
- Sheet steel
- Stainless steel

**Height:**
- 210 mm
- Other: _______

**Color:**
- RAL 9003
- Other: RAL _______

**Cut-outs:**
- Standard
- Cut-outs according to your drawing

**Position:**
- Side A
- Side B
- Side C
- Side D

**Option:**
- Pro-X design

---

#### Enclosures  Page 28

**Design:**
- Single door version
- Double door version

**Height:**
- 778 mm (from level 1 to 2)
- 1,878 mm (from level 1 to 3)

**Material:**
- Sheet steel
- Stainless steel

**Cut-outs:**
- Standard
- Cut-outs according to your drawing

**Color:**
- RAL 9003
- Other: RAL _______

**Position:**
- Side A
- Side B
- Side C
- Side D
häwa
Level 2

**Horizontal struts**  ➔ Page 26

- **Material:**
  - Sheet steel
  - Stainless steel
- **Height:**
  - 210 mm
- **Color:**
  - RAL 9003
  - Other: RAL _______
- **Cut-outs:**
  - Standard
  - Cut-outs according to your drawing
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
- **Option:**
  - Pro-X design

**Control panel Touch**  ➔ Page 27

- **Material:**
  - Sheet steel
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL _______
- **Cut-outs:**
  - 9 cut-outs, 22.5 mm + 1 x control panel (Siemens TP)
  - Other: _______
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
- **Option:**
  - Pro-X design

**Control panel Push**  ➔ Page 27

- **Material:**
  - Sheet steel
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL _______
- **Cut-outs:**
  - 10 cut-outs, 22.5 mm
  - Other: _______
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
- **Option:**
  - Pro-X design

---

häwa
Level 3

**Horizontal struts**  ➔ Page 26

- **Material:**
  - Sheet steel
  - Stainless steel
- **Height:**
  - 300 mm
- **Color:**
  - RAL 9003
  - Other: RAL _______
- **Cut-outs:**
  - Standard
  - Cut-outs according to your drawing
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
- **Option:**
  - Pro-X design

**LCD monitor covers**  ➔ Page 33

- **Material:**
  - Sheet steel
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL _______
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D

---

**Door systems and light curtains**  ➔ Page 31 – 32

<table>
<thead>
<tr>
<th>Version</th>
<th>Side</th>
<th>Intermediate levels</th>
<th>Safety switches</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Manual sliding door system</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Light curtain</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Cover plate</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>
Key Features
- Low-cost standard solutions
- Easily expandable
- Full re-usability for expansions

Product Description
With just a few optimized components, it is possible to create customized solutions for your individual applications. All X-frame components are based on function modules, as each component is a supporting element, a cable duct and a pneumatic channel. Each function module includes optimized features and can be adapted to your wishes.

- Select your width, height and depth from the drawing supplied with the standard values or insert individual dimensions required for your application.

- You can draft your individual applications on pages 12 and 13. Select the appropriate modules for level 1 to 3.

- Select for each component color, material and position. If you select in level 2 the Control panel Touch for side B, this module will be on the left front side, as shown in the drawing on the right side (see marking X). Each side per level can only be occupied once.

Technical Data
- Width = width of the component without vertical struts
- Height = height of the vertical struts without feet
- Depth = depth of the component without vertical struts

Further Technical Information
» Page 11

Note
You will find on the following pages a selection of already realized customized solutions. Linear applications consisting of more than 3 cells or L-forms are also possible. Please contact us for your specific requirements!

Accessories
- For accessories, see pages 28 – 34
Technical Information

Load:

- Static
- Dynamic

\[ x \text{ (A; C)} = \_\_\_ N; \quad Y \text{ (B; D)} = \_\_\_ N; \quad Z = \_\_\_ N \]

- With castors, available upon request
- With adjustable support feet

Load:

- Static
- Dynamic

\[ x \text{ (A; C)} = \_\_\_ N; \quad Y \text{ (B; D)} = \_\_\_ N; \quad Z = \_\_\_ N \]

- With castors, available upon request
- With adjustable support feet
**Vertical Struts**

Material:  
- Sheet steel  
- Stainless steel

Body color:  
- RAL 9003  
- Other: RAL _______

Door color:  
- RAL 5010  
- Other: RAL _______

Option:  
- Without cut-outs for light curtain and door systems  
- With cut-outs for light curtain and door systems  
- Pro-X design

---

**Horizontal Struts**

Material:  
- Sheet steel  
- Stainless steel

Height:  
- 210 mm  
- Other: _______

Color:  
- RAL 9003  
- Other: RAL _______

Position:  
- Side A  
- Side B  
- Side C  
- Side E  
- Side G  
- Side I  
- Side D  
- Side F  
- Side H  
- Side K

Option:  
- Pro-X design

---

**Enclosures**

Design:  
- Single door version  
- Double door version

Height:  
- 778 mm (from level 1 to 2)  
- 1,878 mm (from level 1 to 3)

Material:  
- Sheet steel  
- Stainless steel

Cut-outs:  
- Standard  
- Cut-outs according to your drawing

Color:  
- RAL 9003  
- Other: RAL _______

Position:  
- Side A  
- Side B  
- Side C  
- Side D  
- Side E  
- Side F  
- Side G  
- Side H

---

**Level 1**

Material:  
- Sheet steel  
- Stainless steel

Height:  
- 210 mm

Color:  
- RAL 9003  
- Other: RAL _______

Cut-outs:  
- Standard  
- Cut-outs according to your drawing
häwa
Level 2

Horizontal struts » Page 26
Material: □ Sheet steel □ Stainless steel
Height: □ 300 mm □ Other: ________
Color: □ RAL 9003 □ Other: RAL ________
Cut-outs: □ Standard □ Cut-outs according to your drawing
Position: □ Side A □ Side B □ Side C □ Side D □ Side E □ Side F □ Side G □ Side H □ Side I □ Side K
Option: □ Pro-X design

Control panel Touch » Page 27
Material: □ Sheet steel □ Stainless steel
Color: □ RAL 9003 □ Other: RAL ______
Cut-outs: □ 9 cut-outs, 22.5 mm + 1 x control panel (Siemens TP) □ Other: ______
Position: □ Side A □ Side B □ Side C □ Side D □ Side E □ Side F □ Side G □ Side H
Option: □ Pro-X design

Control panel Push » Page 27
Material: □ Sheet steel □ Stainless steel
Color: □ RAL 9003 □ Other: RAL ______
Cut-outs: □ 10 cut-outs, 22.5 mm □ Other: ______
Position: □ Side A □ Side B □ Side C □ Side D □ Side E □ Side F □ Side G □ Side H □ Other: Pro-X design

häwa
Level 3

Horizontal struts » Page 26
Material: □ Sheet steel □ Stainless steel
Height: □ 300 mm □ Other: ________
Color: □ RAL 9003 □ Other: RAL ________
Cut-outs: □ Standard □ Cut-outs according to your drawing
Position: □ Side A □ Side B □ Side C □ Side D □ Side E □ Side F □ Side G □ Side H □ Side I □ Side K
Option: □ Pro-X design

LCD monitor covers » Page 33
Material: □ Sheet steel □ Stainless steel
Color: □ RAL 9003 □ Other: RAL ______
Position: □ Side A □ Side B □ Side C □ Side D □ Side E □ Side F □ Side G □ Side H

Door systems and light curtains » Page 31 – 32

<table>
<thead>
<tr>
<th>Version</th>
<th>Side</th>
<th>Intermediate levels 1 and 2</th>
<th>Safety switches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual sliding door system</td>
<td></td>
<td>1 and 2</td>
<td></td>
</tr>
<tr>
<td>Light curtain</td>
<td></td>
<td>2 and 3</td>
<td></td>
</tr>
<tr>
<td>Cover plate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Key Features
- Low-cost standard solutions
- Easily expandable
- Full re-usability for expansions

Product Description
With just a few optimized components, it is possible to create customized solutions for your individual applications. All X-frame components are based on function modules, as each component is a supporting element, a cable duct and a pneumatic channel. Each function module includes optimized features and can be adapted to your wishes.

- Select your width and height from the drawing supplied with the standard values or insert individual dimensions required for your application.
- You can draft your individual applications on pages 16 and 17. Select the appropriate modules for level 1 to 3.
- Select for each component color, material and position. If you select in level 2 the Control panel Touch for side A, this module will be on the front side, as shown in the drawing on the right side (see marking X). Each side per level can only be occupied once.

Technical Data
- Width = width of the component, without vertical struts
- Height = height of the vertical struts without feet

Note
You will find on the following pages a selection of realized customized solutions. Please contact us for your specific requirements!

Accessories
- For accessories, see pages 28 – 34
Technical Information

**Load:**

- Static
- Dynamic

\[ x (A; C) = _____N; Y (B; D) = _____N; Z = _____N \]

- With castors, available upon request
- With adjustable support feet
**Vertical Struts**

- **Material:**
  - Sheet steel
  - Stainless steel

- **Body color:**
  - RAL 9003
  - Other: RAL _______

- **Door color:**
  - RAL 5010
  - Other: RAL _______

- **Option:**
  - Without cut-outs for light curtain and door systems
  - With cut-outs for light curtain and door systems
  - Pro-X design

---

**Horizontal struts**

- **Material:**
  - Sheet steel
  - Stainless steel

- **Height:**
  - 210 mm
  - Other: _______

- **Color:**
  - RAL 9003
  - Other: RAL _______

- **Cut-outs:**
  - Standard
  - Cut-outs according to your drawing

- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
  - Side E
  - Side F

- **Option:**
  - Pro-X design

---

**Enclosures**

- **Design:**
  - Single door version
  - Double door version

- **Height:**
  - 778 mm (from level 1 to 2)
  - 1,878 mm (from level 1 to 3)

- **Material:**
  - Sheet steel
  - Stainless steel

- **Cut-outs:**
  - Standard
  - Cut-outs according to your drawing

- **Color:**
  - RAL 9003
  - Other: RAL _______

- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
  - Side E
  - Side F
Rotary Applications

häwa Level 2

**Horizontal struts** » Page 26
Material:  
- Sheet steel
- Stainless steel
Height:  
- 210 mm
  - Other: _______
Color:  
- RAL 9003
  - Other: RAL _______
Cut-outs:  
- Standard
  - Cut-outs according to your drawing
Position:  
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F
Option:  
- Pro-X design

**Control panel Touch** » Page 27
Material:  
- Sheet steel
- Stainless steel
Color:  
- RAL 9003
  - Other: RAL _______
Cut-outs:  
- 9 cut-outs, 22.5 mm + 1 x control panel (Siemens TP)
  - Other: _______
Position:  
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F
Option:  
- Pro-X design

**Control panel Push** » Page 27
Material:  
- Sheet steel
- Stainless steel
Color:  
- RAL 9003
  - Other: RAL _______
Cut-outs:  
- 10 cut-outs, 22.5 mm
  - Other: _______
Position:  
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F
Other:  
- Pro-X design

**LCD monitor covers** » Page 33
Material:  
- Sheet steel
- Stainless steel
Color:  
- RAL 9003
  - Other: RAL _______
Position:  
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

**Door systems and light curtains** » Page 31 – 32

<table>
<thead>
<tr>
<th>Version</th>
<th>Side</th>
<th>Intermediate levels</th>
<th>Safety switches</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Manual sliding door system</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Light curtain</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
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<td>Cover plate</td>
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<td>☐</td>
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- Low-cost standard solutions
- Easily expandable
- Full re-usability for expansions

**Product Description**

With just a few optimized components, it is possible to create customized solutions for your individual applications. All X-frame components are based on function modules, as each component is a supporting element, a cable duct and a pneumatic channel. Each function module includes optimized features and can be adapted to your wishes.

- Select your width and height from the drawing supplied with the standard values or insert individual dimensions required for your application.
- You can draft your individual applications on pages 20 and 21. Select the appropriate modules for level 1 to 3.
- Select for each component color, material and position. If you select in level 2 the Control panel Touch for side A, this module will be on the front side, as shown in the drawing on the right side (see marking X). Each side per level can only be occupied once.

**Technical Data**

- Width = width of the components, without vertical struts
- Height = height of the vertical struts, without feet

**Further Technical Information**

› Page 19

**Note**

You will find on the following pages a selection of already realized customized solutions. Please contact us for your specific requirements!

**Accessories**

- For accessories see pages 28 – 34
Technical Information

Load:
- Static
- Dynamic

Load: $x (A; C) = _____N; Y (B; D) = _____N; Z = _____N$

With castors, available upon request
With adjustable support feet
häwa
Vertical Struts

**Vertical struts**  Page 24 – 25

- **Material:**
  - Sheet steel
  - Stainless steel

- **Body color:**
  - RAL 9003
  - Other: RAL _______

- **Door color:**
  - RAL 5010
  - Other: RAL _______

- **Option:**
  - Without cut-outs for light curtain and door systems
  - With cut-outs for light curtain and door systems
  - Pro-X design

häwa
Level 1

**Horizontal struts**  Page 26

- **Material:**
  - Sheet steel
  - Stainless steel

- **Height:**
  - 210 mm
  - Other: _______

- **Color:**
  - RAL 9003
  - Other: RAL _______

- **Cut-outs:**
  - Standard
  - Cut-outs according to your drawing

- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
  - Side E
  - Side F
  - Side G
  - Side H

- **Option:**
  - Pro-X design

**Enclosures**  Page 28

- **Design:**
  - Single door version
  - Double door version

- **Height:**
  - 778 mm (from level 1 to 2)
  - 1,878 mm (from level 1 to 3)

- **Material:**
  - Sheet steel
  - Stainless steel

- **Cut-outs:**
  - Standard
  - Cut-outs according to your drawing

- **Color:**
  - RAL 9003
  - Other: RAL _______

- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
  - Side E
  - Side F
  - Side G
  - Side H
**häwa Level 2**

**Horizontal struts**  Page 26

- **Material:**  Sheet steel  Stainless steel
- **Height:**  210 mm  Other: __________
- **Color:**  RAL 9003  Other: RAL ________
- **Cut-outs:**  Standard  Cut-outs according to your drawing
- **Position:**  Side A  Side B  Side C  Side D  Side E  Side F  Side G  Side H
- **Option:**  Pro-X design

**Control panel Touch**  Page 27

- **Material:**  Sheet steel  Stainless steel
- **Color:**  RAL 9003  Other: RAL ________
- **Cut-outs:**  9 cut-outs, 22.5 mm + 1 x control panel (Siemens TP)  Other: ________
- **Position:**  Side A  Side B  Side C  Side D  Side E  Side F  Side G  Side H
- **Option:**  Pro-X design

**Control panel Push**  Page 27

- **Material:**  Sheet steel  Stainless steel
- **Color:**  RAL 9003  Other: RAL ________
- **Cut-outs:**  10 cut-outs, 22.5 mm  Other: ________
- **Position:**  Side A  Side B  Side C  Side D  Side E  Side F  Side G  Side H
- **Option:**  Pro-X design

**häwa Level 3**

**Horizontal struts**  Page 26

- **Material:**  Sheet steel  Stainless steel
- **Height:**  300 mm  Other: __________
- **Color:**  RAL 9003  Other: RAL ________
- **Cut-outs:**  Standard  Cut-outs according to your drawing
- **Position:**  Side A  Side B  Side C  Side D  Side E  Side F  Side G  Side H
- **Option:**  Pro-X design

**LCD monitor covers**  Page 33

- **Material:**  Sheet steel  Stainless steel
- **Color:**  RAL 9003  Other: RAL ________
- **Position:**  Side A  Side B  Side C  Side D  Side E  Side F  Side G  Side H

**Door systems and light curtains**  Page 31 – 32

<table>
<thead>
<tr>
<th>Version</th>
<th>Side</th>
<th>Intermediate levels</th>
<th>Safety switches</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Manual sliding door system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light curtain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover plate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Your Favorite, X-frame

Due to the modular, object-oriented design and the variability within the X-frame system, it can easily be expanded in all directions. Based on the X-frame components, it allows the design of customized solutions at optimized costs.

The result is a solution to your specific requirements.

häwa will gladly assist in designing your solution!

Vertical Struts

For the construction of applications, vertical struts are required. Please note, that the struts are available in different designs and finishes. We distinguish between struts with and without cut-outs for light curtains and door systems.

Horizontal Struts

Horizontal struts serve to connect the vertical struts. All struts are equipped with a lid and quick release fastener. We distinguish two different types: Horizontal struts with a height of 210 mm to be used on level 1 and 2 and horizontal struts with a height of 300 mm to be used on level 3.

Control Elements

häwa offers several different X-frame operating systems. The use of the different operating systems is dependent on the design and the requirements of the application. In this catalog, we feature control panels with 2 or 3 components. The horizontal strut, the front panel and depending on the application, also an enclosure. Your design options here are endless – häwa will gladly make the cut-outs fo your specifications.

Cabinets / Enclosures

häwa enclosures fit seamlessly into the system. Cables can enter through 4 or 5 different cut-outs per side. The cut-outs are positioned in the way that on each side always 2 of them are exactly in line with the mounting plate, ensuring thereby that the cables can be routed directly into the cable duct inside the enclosure.
Enclosure Accessories

Different accessories for the heat dissipation and locking types for häwa cabinets.

For further thermal components and additional accessories, see häwa catalogs “Enclosures” and “Thermal Components”.

Pendant Arm Systems

Pendant arms for mounting to the X-frame systems

For additional pendant arm systems, see häwa catalog “Pendant Arm Systems”.

Non-Stock Accessories

In this catalog you will find non-stock accessories such as various manual sliding door systems and light curtain systems.

We can also deliver completely assembled systems to your requirements.

Accessories

Here you will find additional accessories, like e.g. mounting systems for monitors, feet for the X-frame system and dummy panels.

Your X-frame System

- X-frame offers customized color solutions.
- X-frame standard surface finish: Powder coated RAL 9003 and 5010, but customizations with the colors of your choice are possible.
- X-frame is also offered in stainless steel.
häwa
Vertical Angle Struts 90°

Key Features
■ For the construction of rectangular applications
■ Made of sturdy sheet steel or stainless steel
■ Cut-outs for castors, support feet and lifting eyes already integrated

Product Description
90° vertical strut. Short strut (778 mm height) is suitable for hand and table applications.

Options:
■ With cut-outs for light curtain and integrated door systems on left side (see picture)
■ With cut-outs for light curtain and integrated door systems on right side (see picture)
■ Without cut-outs for light curtain and integrated door systems

Note
Support feet and castors are to be ordered separately.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical angle struts 90°</td>
<td>5.28 x 73.94 x 5.28</td>
<td>without cut-out</td>
<td>201002</td>
</tr>
<tr>
<td></td>
<td>5.28 x 73.94 x 5.28</td>
<td>with cut-out left</td>
<td>201012</td>
</tr>
<tr>
<td></td>
<td>5.28 x 73.94 x 5.28</td>
<td>with cut-out right</td>
<td>201013</td>
</tr>
<tr>
<td></td>
<td>5.28 x 30.36 x 5.28</td>
<td>without cut-out</td>
<td>201018</td>
</tr>
</tbody>
</table>

häwa
Vertical Struts 90°/180° (for Linear Applications)

Key Features
■ For extending linear applications
■ Made of sturdy sheet steel or stainless steel
■ Cut-outs for castors, support feet and lifting eyes already integrated

Product Description
90° and 180° vertical strut; light-proof design. Used as connection between modules.

Options:
■ With 2 cut-outs for light curtain and integrated door systems
■ Without cut-outs for light curtain and integrated door systems (see picture)

Note
Support feet and castors are to be ordered separately.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical struts 90° and 180°</td>
<td>7.72 x 73.94 x 5.43</td>
<td>without cut-out</td>
<td>201005</td>
</tr>
<tr>
<td></td>
<td>7.72 x 73.94 x 5.43</td>
<td>with 2 cut-outs</td>
<td>201017</td>
</tr>
</tbody>
</table>
Key Features
- For construction of octagonal systems
- Made of sturdy sheet steel or stainless steel
- Cut-outs for castors, support feet and lifting eyes already integrated

Product Description
45° vertical strut; light-proof design. Suitable for octagonal applications.

Options:
- With 2 cut-outs for light curtain and integrated door systems (see picture)
- Without cut-outs for light curtain and integrated door systems (see picture)

Note
Support feet and castors are to be ordered separately.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical angle struts 45°</td>
<td>5.43 x 73.94 x 5.43</td>
<td>without cut-out</td>
<td>201003</td>
</tr>
<tr>
<td></td>
<td>5.43 x 73.94 x 5.43</td>
<td>with 2 cut-outs</td>
<td>201015</td>
</tr>
</tbody>
</table>

häwa
Vertical Angle Struts 60°
(for Rotary Applications)

Key Features
- For construction of hexagonal systems
- Made of sturdy sheet steel or stainless steel
- Cut-outs for castors, support feet and lifting eyes already integrated

Product Description
60° vertical strut; light-proof design. Suitable for hexagonal applications.

Options:
- With 2 cut-outs for light curtain and integrated door systems
- Without cut-outs for light curtain and integrated door systems (see picture)

Note
Support feet and castors are to be ordered separately.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical angle struts 60°</td>
<td>7.72 x 73.94 x 5.43</td>
<td>without cut-out</td>
<td>201004</td>
</tr>
<tr>
<td></td>
<td>7.72 x 73.94 x 5.43</td>
<td>with 2 cut-outs</td>
<td>201016</td>
</tr>
</tbody>
</table>
häwa
Horizontal Struts
Level 1 and 2

Key Features
■ For connecting vertical struts
■ With lid and quick release fastener
■ Made of sturdy sheet steel or stainless steel
■ To be used for bottom and middle levels

Product Description
This strut can be incorporated in the lower and middle levels.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal struts level 1 and 2</td>
<td>23.62 x 8.27 x 4.72</td>
<td>201021</td>
</tr>
<tr>
<td></td>
<td>27.56 x 8.27 x 4.72</td>
<td>201025</td>
</tr>
<tr>
<td></td>
<td>39.37 x 8.27 x 4.72</td>
<td>201031</td>
</tr>
</tbody>
</table>

häwa
Horizontal Struts
Level 3

Key Features
■ For connecting vertical struts
■ Additional cut-outs for positioning additional components
■ Made of sturdy sheet steel or stainless steel
■ To be used for the upper level

Product Description
This strut is designed for the upper level. Large cut-outs on rear side allow for ample access to upper level.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal struts level 3</td>
<td>23.62 x 11.81 x 4.72</td>
<td>2 cut-outs</td>
<td>201020</td>
</tr>
<tr>
<td></td>
<td>27.56 x 11.81 x 4.72</td>
<td>1 cut-out</td>
<td>201028</td>
</tr>
<tr>
<td></td>
<td>39.37 x 11.81 x 4.72</td>
<td>3 cut-outs</td>
<td>201030</td>
</tr>
</tbody>
</table>

Options:
■ With one cut-out
■ With two cut-outs
■ With three cut-outs

Accessories
■ Dummy panels » page 37
Key Features

- Consists of a horizontal strut, an enclosure and a front panel
- Front panel with 9 x 22.5 mm cut-outs for push buttons and one cut-out for control panel (Siemens TP)
- Enclosure with cut-out for API
- Made of sturdy sheet steel or stainless steel
- To be used for the middle level

Product Description

Control panel with integrated horizontal strut. Panel with 9 x 22.5 mm cut-outs for push buttons and a touch panel (type Siemens TP). API externally accessible.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control panel-Touch</td>
<td>23.62 x 8.27 x 12.17</td>
<td>201023</td>
</tr>
<tr>
<td></td>
<td>39.37 x 8.27 x 12.17</td>
<td>201033</td>
</tr>
</tbody>
</table>

Key Features

- Consists of a horizontal strut and a front panel
- Front panel with 10 x 22.5 mm cut-outs for push buttons
- Made of sturdy sheet steel or stainless steel
- To be used for the middle level

Product Description

Control panel with integrated horizontal strut. Panel with 10 x 22.5 mm cut-outs for push buttons.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control panel-Push</td>
<td>23.62 x 8.27 x 4.72</td>
<td>201029</td>
</tr>
<tr>
<td></td>
<td>39.37 x 8.27 x 4.72</td>
<td>201032</td>
</tr>
</tbody>
</table>
**häwa Enclosures**

**Key Features**
- Cable insertion through 4 or 5 cut-outs per side
- Made of sturdy sheet steel or stainless steel

**Product Description**
Enclosure with 4 or 5 cut-outs per side. Single or double door design; with mounting plate and cut-out for filter fan. Door with integrated diagram pocket (A4).

**Note**
For further cabinets and enclosures, see häwa catalogs “Cabinets” and “Enclosures”.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (W x H x D)</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosures</td>
<td>23.62 x 30.63 x 11.81</td>
<td>4 cut-outs; 1 door</td>
<td>201102</td>
</tr>
<tr>
<td></td>
<td>30.37 x 30.63 x 11.81</td>
<td>4 cut-outs; 2 doors</td>
<td>201103</td>
</tr>
<tr>
<td></td>
<td>39.37 x 73.94 x 11.81</td>
<td>5 cut-outs; 2 doors</td>
<td>201104</td>
</tr>
</tbody>
</table>

**häwa Quarter Turn Latch Locks, Completely Pre-Assembled**

**Key Features**
- Quarter turn latch lock completely pre-assembled with gaskets, latch and bolt. Nut loosely delivered.

**Product Description**
- Locking height 18 mm
- Closing path: 90°, 12 – 9 clock position
- Latch length L = 45 mm
- For right-hinged doors, but easily convertible for left-hinged doors

**Scope of Delivery**
- 1 latch lock with fastening nut

**Note**
By turning the latch and the complete lock by 90°, you can use them for left-hinged doors.

<table>
<thead>
<tr>
<th>Lock</th>
<th>Chrome plated GDZn L = 45 mm</th>
<th>GDZn, black L = 45 mm</th>
<th>Stainless steel L = 45 mm</th>
<th>Plastic, black L = 45 mm</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 mm square</td>
<td>3070-7504-11-00</td>
<td>3070-7504-11-01</td>
<td>3070-7504-11-05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 mm square</td>
<td>3070-7504-12-00</td>
<td>3070-7504-12-01</td>
<td>3070-7504-12-05</td>
<td>3070-7504-12-03</td>
<td></td>
</tr>
<tr>
<td>8 mm square</td>
<td>3070-7504-13-00</td>
<td>3070-7504-13-01</td>
<td>3070-7504-13-05</td>
<td>3070-7504-13-03</td>
<td></td>
</tr>
<tr>
<td>3 mm double-mandrel</td>
<td>3070-7504-14-00</td>
<td>3070-7504-14-01</td>
<td>3070-7504-14-05</td>
<td>3070-7504-14-03</td>
<td></td>
</tr>
<tr>
<td>5 mm double-mandrel</td>
<td>3070-7504-18-00</td>
<td>3070-7504-18-01</td>
<td>3070-7504-18-05</td>
<td>3070-7504-18-03</td>
<td></td>
</tr>
<tr>
<td>Daimler-Benz</td>
<td>3070-7504-16-00</td>
<td>3070-7504-16-01</td>
<td>3070-7504-16-05</td>
<td>3070-7504-16-03</td>
<td></td>
</tr>
<tr>
<td>7 mm triangular</td>
<td>3070-7504-17-00</td>
<td>3070-7504-17-01</td>
<td>3070-7504-17-05</td>
<td>3070-7504-17-03</td>
<td></td>
</tr>
<tr>
<td>8 mm triangular</td>
<td>3070-7504-15-00</td>
<td>3070-7504-15-01</td>
<td>3070-7504-15-05</td>
<td>3070-7504-15-03</td>
<td></td>
</tr>
<tr>
<td>Slot 2 mm</td>
<td>3070-7504-19-00</td>
<td>3070-7504-19-01</td>
<td>3070-7504-19-05</td>
<td>3070-7504-19-03</td>
<td></td>
</tr>
<tr>
<td>T-handle</td>
<td>3070-7504-73-03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Star grip</td>
<td>3070-7504-84-03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
häwa Compact Handle

Key Features
- For safe locking of enclosures – installation without additional drilling
- Easy installation in existing cut-out of quarter turn latch lock

Product Description
Compact handle prepared for elongated barrel
- Lateral key insertion – minimizes risk of breakage
- Vandalism-proof
- Protection class: IP65

Technical Data
The compact häwa handle accommodates the following elongated barrels: All per DIN 18252:2006-12 with:
- Dimension A = 30 mm – corresponds to the total length 40 mm +/- 1, R15

Scope of Delivery
- 1 compact handle

Note
Maximum achievable protection class after installation: IP65.

Accessories
- Elongated barrel » see below

häwa Elongated Barrel

Description Order number
Compact handle 3070-0908-00-01

Product Description
Elongated barrel from die-cast zinc, chrome-plated, alternatively with nickel-plated brass, suitable for compact handle. Lock key 1333, only removable in locked position.

Scope of Delivery
- 1 elongated barrel

Suitable for
häwa compact handle

Note
Fixing screws included in scope of delivery of the compact handle.

<table>
<thead>
<tr>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongated barrel</td>
<td>3070-0900-12-00</td>
</tr>
<tr>
<td>7 mm square</td>
<td>3070-0900-13-00</td>
</tr>
<tr>
<td>8 mm square</td>
<td>3070-0900-14-00</td>
</tr>
<tr>
<td>3 mm double-mandrel</td>
<td>3070-0900-18-00</td>
</tr>
<tr>
<td>5 mm double-mandrel</td>
<td>3070-0900-16-00</td>
</tr>
<tr>
<td>Daimler-Benz 1333</td>
<td>3070-0933-30-00</td>
</tr>
</tbody>
</table>

Enclosure Accessories
Pendant Arm Systems

häuser
Pendant Arm System Mini

Product Description
Pendant arm to incorporate control unit, LCD monitor and keyboard.

<table>
<thead>
<tr>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pendant arm system with control panel</td>
<td>201051</td>
</tr>
</tbody>
</table>

häuser
Pendant Arm System for Control Enclosures

Product Description
Articulated arm for incorporating control enclosures.

<table>
<thead>
<tr>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pendant arm for control enclosures</td>
<td>201053</td>
</tr>
</tbody>
</table>

Note
For further pendant arm systems, see häwa catalog "Pendant Arm System."
häwa
Manual Sliding Door Systems

Product Description
Manual horizontal 2-part sliding door system. Prepared for limit switch systems. Standard maximum door width 2,000 mm.

Note
Pay attention when selecting the appropriate vertical struts.

<table>
<thead>
<tr>
<th>Description</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual sliding door systems</td>
<td>electrical lock</td>
<td>202082</td>
</tr>
<tr>
<td></td>
<td>mechanical latch</td>
<td>202084</td>
</tr>
<tr>
<td></td>
<td>contact-free</td>
<td>202083</td>
</tr>
</tbody>
</table>

häwa
Light Curtain Mounting Kit

Product Description
Mounting kit for mounting a light curtain, including all required mounting hardware.

Note
Pay attention when selecting the appropriate vertical struts. The struts are designed for mounting kits, for example from “Sick” and “Wenglor”. We are happy to assist you in selecting a suitable light curtain.

<table>
<thead>
<tr>
<th>Description</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light curtain mounting kit</td>
<td>to attach a Sick light curtain</td>
<td>202121</td>
</tr>
<tr>
<td></td>
<td>to attach a Wenglor light curtain</td>
<td>202131</td>
</tr>
</tbody>
</table>
### Product Description
Corner mirror to redirect a 90° light curtain, including all mounting hardware.

### Note
Pay attention when selecting the appropriate vertical struts. The struts are designed for mounting kits, for example from “Sick” and “Wenglor”.

### Description
<table>
<thead>
<tr>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corner mirror for light curtain</td>
<td>202141</td>
</tr>
</tbody>
</table>
häwa LCD Monitor Cover

**Key Features**
- To incorporate monitors, test systems, lighting and accessories

**Product Description**
Cover made of sheet steel for level 3 with mounting kit for LCD monitors.

<table>
<thead>
<tr>
<th>Description</th>
<th>Width</th>
<th>Design</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD monitor cover</td>
<td>23.62</td>
<td>for one LCD monitor</td>
<td>211112</td>
</tr>
<tr>
<td></td>
<td>39.37</td>
<td>for two LCD monitors</td>
<td>201113</td>
</tr>
</tbody>
</table>

**häwa Leveling Foot M24**

**Key Features**
- Leveling foot with anti-slip and cushioning base
- Load per leveling foot approx. 8,000 N

<table>
<thead>
<tr>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveling foot M16</td>
<td>5706-1104-24-150</td>
</tr>
</tbody>
</table>
häwa
Dummy Panel

Key Features

- Cover for cut-outs of the horizontal struts

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy panels</td>
<td>for horizontal strut 1 and 2</td>
<td>211754-02</td>
</tr>
<tr>
<td></td>
<td>for horizontal strut 3</td>
<td>211755-02</td>
</tr>
</tbody>
</table>
In every area as individual as your requirements: The häwa range of products

häwa – definitely the best solution

We are your reliable partner for well-conceived cabinet and enclosure systems, smart IT-solutions, effective thermal components, modular machine racks, functional cable ducts and practical tools. In particular when individual and flexible solutions are needed.

From the conceptual and structural design to manufacture and logistics including a fast delivery and maintenance service, we at häwa are your one-stop shop – your personal häwa consultant will always be there to assist you.

More than 400 committed staff members are available to find the best solution for your challenges and your budget. The result: high-quality products which will meet or even exceed your expectations – today and tomorrow.
Customer-oriented
We listen to you, we make your issues part of our planning, we consult and support you: as your partner, we work closely together with you – this is how we find solutions tailored to your needs.

Personally
We at häwa, rely on personal contact – your personal häwa consultant is always there for you, brings your ideas to life and is dedicated to accompanying you on your way to your optimal solution.

Reliable
Go for a trustworthy partner, on which you can rely in any situation – especially when the safety of components is at stake, i.e. when functional reliability is key. Our motto at häwa is: We keep our promises. This is what it’s all about.

High-quality
We at häwa, have very high standards to provide excellent quality as proven by the DIN EN ISO 9001 2008 certification. The same applies to our consultancy and the service we provide. We do not rely on what we have already achieved – we are always striving for more for your benefit.

Thinking ahead
We come up with surprising ideas tailored to your individual requirements and smart solutions that always meet or even exceed your expectations – today and tomorrow. There is only one goal to pursue for us: Finding the best possible solution for your challenges.

Our way to develop unique solutions for you:

- THERMAL COMPONENTS
- CUSTOMIZED SOLUTIONS
- CABLE DUCTS
- TOOLS