The machine frame that combines design and functionality
The häwa group has established itself as an innovative and highly competent supplier to machinery and facility equipment companies in the electrical and electronic industries, far beyond the borders of Europe.

We develop, manufacture, and deliver standard and custom solutions – economically & reliably – for a great variety of applications. Many decades of experience in the enclosure business and close cooperation with end customers, guarantee optimal benefits for our customers.

Our comprehensive services range from initial discussions to concept development, to design, construction, assembly and, finally to detailed logistical support.

We create value-added solutions for our customers through problem solving, and develop reliable, trusted partnerships.

'Made in Germany’ is - for us - the yardstick in quality.

We are a highly motivated and qualified team of over 400 associates who together with our exclusive business partners serve an ever increasing range of international customers.

<table>
<thead>
<tr>
<th>Cabinets Systems</th>
<th>Free Standing and Modular Cabinets in Steel and Stainless Steel, PC Cabinets</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Solutions</td>
<td>Server and Distribution Racks, Cabinets and Enclosures</td>
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<td>Enclosures</td>
<td>Wall Mount Enclosures, Junction Boxes and Small Housings in Steel, Stainless Steel, Plastic and Aluminum</td>
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<td>Fire Protection</td>
<td>Safety in Steel: Maintaining Function and Escape Safety</td>
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<td>Thermal Components</td>
<td>Heating, Ventilating and Cooling</td>
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<td>Cable Ducts, Accessories</td>
<td>Enclosed Cable Ducts, Complete Cabinet Accessories</td>
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<td>fleX-frame</td>
<td>Machine enclosures, machine frames</td>
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<tr>
<td>Tools</td>
<td>Portable Tools, Shop Equipment and Factory Automation</td>
</tr>
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</table>

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### Linear applications
- Linear applications
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### Components
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The fleX-frame system

ENDLESS POSSIBILITIES

Many manufacturers of machines and applications today use aluminum profile technology for their products.

All these different profile based systems are designed around the extreme flexibility of these profiles. But at the same time, this advantage is also the biggest downside of these systems. The reason being is that you can imagine them equal to a skeleton – it carries the strain of mounted components, but doesn't add any further functionality to the system in itself. All components such as wiring or pneumatic ducts, etc. have to have mounting plates or additional attachment support.

häwa designed the fleX-frame system completely differently. It combines the flexibility of aluminum profiles with the advantages of standardized modules. The cabinet design modules are manufactured out of rugged steel, and allow the optimal implementation of your application paired with its own professional appearance – even for quantity ONE.

fleX-frame is not a fixed design, but rather a variable construction concept that continuously expands and evolves. The advantage is obvious: Maximum flexibility and perfect adaptation within a very short time period at the best price.

SYMBIOSIS

fleX-frame is designed to allow the combination with aluminum profiles. Many fleX-frame components provide direct mounting ability with different profiles. Furthermore the design allows for the accessories from many different profile manufacturers to be combined with the fleX-frame components. This widens the flexibility to use many different accessories for a diverse group of applications.

THE WELL-THOUGHT-OUT MACHINE FRAME

The fleX-frame concept is based on the principles: Standardized and flexible! Complex machine frames can be built out of very few components in a very short time period.

BENEFITS

• No stockpiling of materials
• No further machining of frames necessary
• Much shorter assembly times
• Installation can start parallel to the construction process
• Professional design and quality even with customized solutions
• Extensive range of accessories available

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MODULAR SINGLE CELLS

The design and manufacturing of single cells for e.g. test systems, assembly stations, or laser cells is very simple with fleX-frame. Within a very short time frame these cells are assembled and can be expanded and upgraded at any time.

Through additions of further fleX-frame components, widths from 600 to 3000 mm can be achieved. With the usage of additional vertical struts, the width can basically be expanded indefinitely. Multiple cells can be extended and combined to create complete facilities.

LINEAR APPLICATIONS

For the construction of linear applications, fleX-frame components are lined-up. This can be achieved with single and double elements.

ROTARY APPLICATIONS

Several options are available within fleX-frame for the design of rotary applications. 6- and 8-octagonal systems can be built.

PRO-X FOR HEAVY DUTY APPLICATIONS

For extreme dynamic and static loads, the PRO-X version of fleX-frame will be used.

Each component...

.... is a supporting element

... is a duct channel

... is a pneumatic channel

... includes optimized properties

... is customizable to your wishes

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Modular single cells

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 usability with extensions

Product Description
With just a few optimized components, customized solutions for your individual applications will be created.
All flex-frame components are based on function modules, as each component is a supporting element, a wire way, 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 standard drawing supplied with values, or insert individual dimensions required for your application.
• On pages 8 and 9, individual applications can be drafted. Select the appropriate modules for level 1 to 3.
• For every component select color, material, and position. If, in level 2, the Control Panel Touch is selected for side A, this module will be on the front side, as shown in the drawing to your right (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 ➔ on Page 7

Note
On the following pages you will find a selection of customer solutions that already have been designed. Talk to us about your specific requirements!

Accessories
• Accessories can be found on pages 28-35.
Modular single cells

Technical information

Load:
- Static
- Dynamic

\[ x \text{ (A,C)} = \_\_\_N; \ y \text{ (B,D)} = \_\_\_N; \ z = \_\_\_N \]

With rollers on request.
With adjustable feet.

Your working height:_____
Your height:_____
Your width:_____

Level 1
Level 2
Level 3

Side A
Side B
Side C
Side D

97 mm

1878 mm / 760 mm / 1000 mm / Your depth:

580 mm / 760 mm / 1000 mm / Your height:

778 mm / Your working height:

1878 mm / Your height:

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Modular single cells

**Vertical strut**

- Material: □ Sheet steel  □ Stainless steel
- Body color: □ RAL 9003  □ Other: RAL ________
- Door color: □ RAL 5010  □ Other: RAL ________
- Other: □ Without cut-out for light curtain. □ With cut-out for light curtain. □ Pro-X design

**Level 1**

**Horizontal strut** → Page 26
- Material: □ Sheet steel  □ Stainless steel
- Color: □ RAL 9003  □ Other: RAL ________
- Ausbrüche: □ Standard  □ Cutouts according to your drawing.
- Position: □ Side A  □ Side B  □ Side C  □ Side D
- Other: □ Pro-X design

**Enclosure** → Page 28
- Design: □ 1 wing door  □ 2 wing doors
- Height: □ 778 mm (from level 1 to 2)  □ 1878 mm (from level 1 to 3)
- Material: □ Sheet steel  □ Stainless steel
- Cut-outs: □ Standard  □ Cutouts according to your drawing.
- Color: □ RAL 9003  □ Other: RAL ________
- Position: □ Side A  □ Side B  □ Side C  □ Side D
- Other: □ Pro-X design

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Modular single cells

Level 2

Horizontal strut ➔ Page 26
- Material:  
  - Sheet steel
  - Stainless steel
- Color:  
  - RAL 9003
  - Other: RAL ______
- Cut-outs:  
  - Standard
  - Cutouts according to your drawing.
- Position:  
  - Side A  Side B
  - Side C  Side D
- Other:  
  - Pro-X design

Touch control panel ➔ Page 27
- Material:  
  - Sheet steel
  - Stainless steel
- Color:  
  - RAL 9003
  - Other: RAL ______
- Cut-out:  
  - 9 holes, 22, 5 mm each + 1 x control panel (Siemens TP).
  - Other ______
- Position:  
  - Side A  Side B
  - Side C  Side D
- Other:  
  - Pro-X design

Keypad control panel ➔ 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
- Other:  
  - Pro-X design

Level 3

Horizontal strut ➔ Page 26
- Material:  
  - Steel sheet
  - Stainless steel
- Color:  
  - RAL 9003
  - Other: RAL ______
- Cut-outs:  
  - Standard
  - Cutouts according to your drawing.
- Position:  
  - Side A  Side B
  - Side C  Side D
- Other:  
  - Pro-X design

LCD monitor cover ➔ Page 35
- Material:  
  - Steel sheet
  - Stainless steel
- Color:  
  - RAL 9003
  - Other: RAL ______
- Position:  
  - Side A  Side B
  - Side C  Side D
- Other:  
  - Pro-X design

Door systems ➔ Page 32-34

<table>
<thead>
<tr>
<th>Finish</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>1 &amp; 2</th>
<th>2 &amp; 3</th>
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<th>mechanical</th>
<th>contact-free</th>
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<tr>
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<td>Manual vertical swing door system</td>
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<td>Manual sliding door system</td>
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<td>Light curtain</td>
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<td>Cover plate</td>
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</tbody>
</table>

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Linear applications

Key Features
• Low-cost standard solutions
• Easily expandable
• Full usability with extensions

Product Description
With just a few optimized components, customized solutions for your individual applications will be created. All flex-frame components are based on function modules, as each component is a supporting element, a wire way, 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 standard drawing supplied with values, or insert individual dimensions required for your application.
• On pages 12 and 13, individual applications can be drafted. Select the appropriate modules for level 1 to 3.
• For every component select color, material, and position. If, in level 2, the Control Panel Touch is selected for side B, this module will be on the front side, as shown in the drawing to your right (see marking \(\times\)). Each side per level can only be occupied once.

Technical data
• Width = width of the component without vertical struts.
• Height = height of the vertical strut without feet.
• Depth = depth of the component without vertical struts.

Further technical information
⇒ Page 11

Note
On the following pages you will find a selection of customer solutions that already have been designed. Linear applications consisting of more than 3 cells or L-forms are possible. Talk to us about your specific requirements!

Accessories
• Accessories can be found on pages 28-35
Linear applications

Technical information

Load:
- Static
- Dynamic
  \[ x \text{ (A:C)} = ____ N; \ Y \text{ (B:D)} = ____ N; \ Z = ____ N \]

- With rollers on request.
- With adjustable feet.

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**Linear applications**

**Vertical strut**

- **Material:**
  - Sheet steel
  - Stainless steel
- **Body color:**
  - RAL 9003
  - Other: RAL ________
- **Door color:**
  - RAL 5010
  - Other: RAL ________
- **Other:**
  - Without cut-out for light curtain
  - With cut-out for light curtain
  - Pro-X design

---

**Level 1**

**Horizontal strut**

- **Material:**
  - Sheet steel
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL ________
- **Cut-outs:**
  - Standard
  - Cutouts 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
- **Other:**
  - Pro-X design

**Enclosure**

- **Design:**
  - 1 wing door
  - 2 wing doors
- **Height:**
  - 778 mm (from level 1 to 2)
  - 1878 mm (from level 1 to 3)
- **Material:**
  - Sheet steel
  - Stainless steel
- **Cut-outs:**
  - Standard
  - Cutouts 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
  - Side I
  - Side K
- **Other:**
  - Pro-X design

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### Level 2

**Horizontal struts** → Page 26
- **Material:**
  - Sheet steel
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL ________
- **Cut-outs:**
  - Standard
  - Cutouts 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
- **Other:**
  - Pro-X design

**Touch control panel** → Page 27
- **Material:**
  - Sheet steel
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL ________
- **Cut-outs:**
  - Standard
  - Cutouts according to your drawing.
  - Holes, 22, 5 mm + 1 control panel (Siemens TP).
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
  - Side E
  - Side F
  - Side G
  - Side H
- **Other:**
  - Pro-X design

**Keypad control panel** → Page 27
- **Material:**
  - Sheet steel
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL ________
- **Cut-outs:**
  - Standard
  - Cutouts according to your drawing.
  - 10 holes, 22,5 mm
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
  - Side E
  - Side F
  - Side G
  - Side H
- **Other:**
  - Pro-X design

### Level 3

**Horizontal strut** → Page 26
- **Material:**
  - Steel sheet
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL ________
- **Cut-outs:**
  - Standard
  - Cutouts 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
- **Other:**
  - Pro-X design

**LCD monitor cover** → Page 35
- **Material:**
  - Steel sheet
  - Stainless steel
- **Color:**
  - RAL 9003
  - Other: RAL ________
- **Position:**
  - Side A
  - Side B
  - Side C
  - Side D
  - Side E
  - Side F
  - Side G
  - Side H
- **Other:**
  - Pro-X design

### Door Systems & light curtain → Page 32-34

<table>
<thead>
<tr>
<th>Finish</th>
<th>Sides</th>
<th>Between levels</th>
<th>Electrical</th>
<th>Mechanical</th>
<th>Contact-free</th>
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<td>Pneumatic door system</td>
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<td>Manual vertical door system</td>
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<td>Manual horizontal swing door system</td>
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<tr>
<td>Manual vertical swing door system</td>
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<td>Manual sliding door system</td>
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<tr>
<td>Light curtain</td>
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<tr>
<td>Cover plate</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Hexagonal rotary applications

Key features
- Low-cost standard solutions
- Easily expandable
- Full usability with extensions

Product Description
With just a few optimized components, customized solutions for your individual applications will be created.
All flexX-frame components are based on function modules, as each component is a supporting element, a wire way, 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 standard drawing supplied with values, or insert individual dimensions required for your application.
- On pages 16 and 17, individual applications can be drafted. Select the appropriate modules for level 1 to 3.
- For every component select color, material, and position. If, in level 2, the Control Panel Touch is selected for side A, this module will be on the front side, as shown in the drawing to your right (see marking X). Each side per level can only be occupied once.

Technical data
- Width = width of the component, without vertical strut.
- Height = height of the vertical strut, without feet.

Further technical information
⇒ Page 15

Note
On the following pages you will find a selection of customer solutions that already have been designed. Talk to us about your specific requirements!

Accessories
- Accessories can be found on pages 28-35.
Rotary applications

Technical information

Load:
- Static
- Dynamic

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

- With rollers on request.
- With adjustable feet.

1878 mm / Your height: ______

778 mm / Your working height: ______

97 mm

600 mm / 700 mm / 1000 mm / Your width: ______

Level 1

Level 3

Level 2

Level 1

Side A

Side B

Side C

Side D

Side E

Side F

X

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### Vertical struts

<table>
<thead>
<tr>
<th>Material:</th>
<th>☐ Sheet steel.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Stainless steel.</td>
</tr>
<tr>
<td>Body color:</td>
<td>☐ RAL 9003</td>
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<tr>
<td></td>
<td>☐ Other: RAL ________</td>
</tr>
<tr>
<td>Door colors:</td>
<td>☐ RAL 5010</td>
</tr>
<tr>
<td></td>
<td>☐ Other: RAL ________</td>
</tr>
<tr>
<td>Other:</td>
<td>☐ Without cut-outs for light curtain.</td>
</tr>
<tr>
<td></td>
<td>☐ With cut-outs for light curtain.</td>
</tr>
<tr>
<td></td>
<td>☐ Pro-X design.</td>
</tr>
</tbody>
</table>

### Horizontal strut ➜ Page 26

<table>
<thead>
<tr>
<th>Material:</th>
<th>☐ Sheet steel.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Stainless steel.</td>
</tr>
<tr>
<td>Color:</td>
<td>☐ RAL 9003</td>
</tr>
<tr>
<td></td>
<td>☐ Other: RAL ________</td>
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<tr>
<td>Cut-outs:</td>
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<tr>
<td></td>
<td>☐ Cutouts according to your drawing.</td>
</tr>
<tr>
<td>Position:</td>
<td>☐ Side A</td>
</tr>
<tr>
<td></td>
<td>☐ Side B</td>
</tr>
<tr>
<td></td>
<td>☐ Side C</td>
</tr>
<tr>
<td></td>
<td>☐ Side D</td>
</tr>
<tr>
<td></td>
<td>☐ Side E</td>
</tr>
<tr>
<td></td>
<td>☐ Side F</td>
</tr>
<tr>
<td>Other:</td>
<td>☐ Pro-X design.</td>
</tr>
</tbody>
</table>

### Enclosure ➜ Page 28

<table>
<thead>
<tr>
<th>Design:</th>
<th>☐ 1 wing door</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ 2 wing door</td>
</tr>
<tr>
<td>Height:</td>
<td>☐ 778 mm</td>
</tr>
<tr>
<td></td>
<td>(from level 1 to 2)</td>
</tr>
<tr>
<td></td>
<td>☐ 1878 mm</td>
</tr>
<tr>
<td></td>
<td>(from level 1 to 3)</td>
</tr>
<tr>
<td>Material:</td>
<td>☐ Steel sheet</td>
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<td>☐ Stainless steel</td>
</tr>
<tr>
<td>Cut-outs:</td>
<td>☐ Standard</td>
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<td>☐ Other: RAL ________</td>
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<tr>
<td>Position:</td>
<td>☐ Side A</td>
</tr>
<tr>
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<td>☐ Side B</td>
</tr>
<tr>
<td></td>
<td>☐ Side C</td>
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<td>☐ Side D</td>
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<td>☐ Side E</td>
</tr>
<tr>
<td></td>
<td>☐ Side F</td>
</tr>
<tr>
<td>Other:</td>
<td>☐ Pro-X design</td>
</tr>
</tbody>
</table>

---

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Rotary applications

Level 2

Horizontal strut ➜ Page 26
Material:
- Sheet steel
- Stainless steel

Color:
- RAL 9003
- andere: RAL ________

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

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

Other:
- Pro-X design

Touch control panel ➜ Page 27
Material:
- Sheet steel
- Stainless steel

Color:
- RAL 9003
- andere: RAL ________

Cut-outs:
- 9 Holes, 22.5 mm
  + 1 control panel (Siemens TP)
- Other ________

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

Other:
- Pro-X design

Keypad control panel ➜ Page 27
Material:
- Sheet steel
- Stainless steel

Color:
- RAL 9003
- andere: RAL ________

Cut-outs:
- 10 holes, 22.5 mm
- Other ________

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

Other:
- Pro-X design

Ebene 3

Horizontal strut ➜ Page 26
Material:
- Sheet steel
- Stainless steel

Color:
- RAL 9003
- andere: RAL ________

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

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

Other:
- Pro-X design

LCD monitor cover ➜ Page 35
Material:
- Sheet steel
- Stainless steel

Color:
- RAL 9003
- andere: RAL ________

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

Other:
- Pro-X design

Door Systems & light curtains ➜ Page 32-34

Finish | Side | Between levels 1 & 2 | Between levels 2 & 3 | electrical | mechanical | contact free
-------|------|----------------------|----------------------|-----------|-----------|-------------
A       | B    | C                    | D                    | E         | F         |             |

Pneumatic door system
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

Manual vertical door system
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

Manual horizontal swing door system
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

Manual vertical swing door system
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

Manual sliding door system
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

Light curtain
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

Cover plate
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F

www.comoso.com
Rotary applications

Octagonal rotary applications

Key features
• Low-cost standard solutions
• Easily expandable
• Full usability with extensions

Product Description
With just a few optimized components, customized solutions for your individual applications will be created. All flexX-frame components are based on function modules, as each component is a supporting element, a wire way, 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 standard drawing supplied with values, or insert individual dimensions required for your application.
• On pages 20 and 21, individual applications can be drafted. Select the appropriate modules for level 1 to 3.
• For every component select color, material, and position. If, in level 2, the Control Panel Touch is selected for side A, this module will be on the front side, as shown in the drawing to your right (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.

Other technical information
→ Page 19

Note
On the following pages you will find a selection of customer solutions that already have been designed. Talk to us about your specific requirements!

Accessories
• Accessories can be found on pages 28-35.
Technical information

Load:
☐ Static
☐ Dynamic

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

☐ With rollers on request.
☐ With adjustable feet.

Load:

- Static
- Dynamic

\[ x (A;C) = \_\_\_N; Y (B;D) = \_\_\_N; Z = \_\_\_N \]
Vertical struts

Material:
- Sheet steel
- Stainless steel

Body color:
- RAL 9003
- Other: RAL ___________

Door color:
- RAL 5010
- Other: RAL ___________

Other:
- Without cut-out for light curtain and door systems.
- With cut-out for light curtain and door systems.
- Pro-X design.

Level 1

Horizontal struts ➔ Page 26

Material:
- Steel sheet
- Stainless steel

Color:
- RAL 9003
- Other: RAL ___________

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

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

Other:
- Pro-X design.

Enclosure ➔ Page 28

Design:
- 1 wing door
- 1 wing door

Height:
- 778 mm (from level 1 to 2)
- 1878 mm (from level 1 to 3)

Material:
- Sheet steel
- Stainless steel

Cut-outs:
- Standard
- Cutouts 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

Other:
- Pro-X design.
Rotary applications

Level 2

Horizontal strut → Page 26
Material:  
- Sheet steel
- Stainless steel
Color:  
- RAL 9003
- Other: RAL _________
Cut-outs:  
- Standard
- Cutouts according to your drawing.
Position:  
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F
- Side G
- Side H
Other:  
- Pro-X design

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

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

Level 3

Horizontal strut → Page 26
Material:  
- Sheet steel
- Stainless steel
Color:  
- RAL 9003
- Other: RAL _________
Cut-outs:  
- Standard
- Cutouts according to your drawing.
Position:  
- Side A
- Side B
- Side C
- Side D
- Side E
- Side F
- Side G
- Side H
Other:  
- Pro-X design

LCD monitor cover → Page 35
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
Other:  
- Pro-X design

Door Systems & light curtains → Page 32-34

| Finish | Side | Between levels | |  | | | |  | |  | |  | |
|--------|-----|----------------|---|---|---|---|---|---|---|---|---|
| Pneumatic door system | A | B | C | D | E | F | G | H | 1 & 2 | 2 & 3 | electric | mechanical | contact-free |
| Manual vertical door system | | | | | | | | | | | | | |
| Manual horizontal swing door system | | | | | | | | | | | | | |
| Manual vertical swing door system | | | | | | | | | | | | | |
| Manual sliding door system | | | | | | | | | | | | | |
| Light curtain | | | | | | | | | | | | | |
| Cover plate | | | | | | | | | | | | | |
Components

YOUR FAVORITE X-FRAME

Due to the modular, object-oriented design and the variability within the fleX-frame system, it can easily be expanded in all directions. Based on the fleX-frame components, it allows the design of customized solutions at the very best price point. The result is a solutions tailored to your needs. Corporate identity – even with quantity ONE.

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 or door systems.

HORIZONTAL STRUTS

Horizontal struts serve to connect the vertical struts. All struts are constructed with a lid and quick release. Two different types are distinguished: Horizontal struts with a height of 210 mm are 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 fleX-frame operating systems. These control systems follow the design and 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, an enclosure. Your design options here are endless – häwa will gladly make the cut-outs to your specifications.

SWITCH CABINETS / ENCLOSURES

häwa enclosures blend seamlessly into the system. Cables can enter through 4 or 5 different openings per side. Special attention was paid to position 2 of these openings per side exactly in line with the mounting plate, so that the cables can run directly into the wire duct channel inside the enclosure.
ENCLOSURE ACCESSORIES

Different accessories for excess heat removal and locking options.

Additional climate control options and enclosure accessories can be found in the catalogs “Enclosures” and “Climate Control”.

PENDENT ARM SYSTEMS

Pendant arm systems for the fleX-frame system.

Additional pendant arm systems can be found in the häwa catalog “Pendant arm systems & control enclosures”.

EXTERNAL ACCESSORIES

The this catalog you will find a selection of external accessories like different door systems and light curtains. We will gladly deliver your solutions fully assembled with your selected accessories.

ACCESSORIES

Here you will find additional accessories, like e.g. mounting systems for monitors.

CHOICES OF COLOR

fleX-frame offers customized color solutions
fleX-frame powder-coating is standard in the RAL colors 9003 and 5010, but customizations with the colors of your choice are possible.
fleX-frame is also offered in stainless steel.
Vertical struts

Vertical angle strut 90°

Key features
- For rectangular applications
- In sturdy sheet steel or stainless steel
- Cut-outs for casters, support feet, and lifting lugs already integrated

Product Description
90° vertical strut with or without cut-out for light curtain and integrated door system. Short strut (776 mm height) is suitable for hand- and table applications.

Options:
- With cut-outs for light curtain and integrated door system left (see picture)
- With cut-outs for light curtain and integrated door system right (see picture)
- Without cut-outs for light curtain and integrated door system

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical angle strut 90°</td>
<td>mm</td>
<td>Design</td>
<td>Art. No.</td>
</tr>
<tr>
<td>134 x 1878 x 134</td>
<td>5.28 x 73.94 x 5.28</td>
<td>without cut-out</td>
<td>201002</td>
</tr>
<tr>
<td>134 x 1878 x 134</td>
<td>5.28 x 73.94 x 5.28</td>
<td>with cut-out left</td>
<td>201012</td>
</tr>
<tr>
<td>134 x 1878 x 134</td>
<td>5.28 x 73.94 x 5.28</td>
<td>with cut-out right</td>
<td>201013</td>
</tr>
<tr>
<td>134 x 778 x 134</td>
<td>5.28 x 30.36 x 5.28</td>
<td>without cut-out</td>
<td>201018</td>
</tr>
</tbody>
</table>

Vertical strut 90° and 180° (for linear applications)

Key features
- For extending linear applications
- In sturdy sheet steel or stainless steel
- Cut-outs for casters, support feet, and lifting lugs already integrated

Product Description
90° and 180° vertical strut; light-proof design. With or without cut-out for light curtain and integrated door system. Used as connection between modules.

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

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical strut 90° and 180°</td>
<td>mm</td>
<td>Design</td>
<td>Art. No.</td>
</tr>
<tr>
<td>196 x 1878 x 138</td>
<td>7.72 x 73.94 x 5.43</td>
<td>without cut-out</td>
<td>201005</td>
</tr>
<tr>
<td>196 x 1878 x 138</td>
<td>7.72 x 73.94 x 5.43</td>
<td>with 2 cut-outs</td>
<td>201017</td>
</tr>
</tbody>
</table>
Vertical struts

Vertical angle strut 45° (for rotary applications)

Key features
- For construction of octagonal systems
- In sturdy sheet steel or stainless steel
- Cut-outs for casters, support feet, and lifting lugs already integrated

Product Description
45° vertical strut; light-proof design. Strut with or without cut-out for light curtain and integrated door system. Suitable for octagonal applications.

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

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Vertical angle strut 45°</td>
<td>138 x 1878 x 138</td>
<td>5.43 x 73.94 x 5.43</td>
<td>without cut-out</td>
</tr>
<tr>
<td></td>
<td>138 x 1878 x 138</td>
<td>5.43 x 73.94 x 5.43</td>
<td>with 2 cut-outs</td>
</tr>
</tbody>
</table>

Vertical struts

Vertical angle strut 60° (for rotary applications)

Key features
- For construction of hexagonal systems
- In sturdy sheet steel or stainless steel
- Cut-outs for casters, support feet, and lifting lugs already integrated

Product Description
60° vertical strut; light-proof design. Strut with or without cut-out for light curtain and integrated door system. Suitable for hexagonal applications.

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

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Vertical angle strut 60°</td>
<td>196 x 1878 x 138</td>
<td>5.43 x 73.94 x 5.43</td>
<td>without cut-out</td>
</tr>
<tr>
<td></td>
<td>196 x 1878 x 138</td>
<td>5.43 x 73.94 x 5.43</td>
<td>with 2 cut-outs</td>
</tr>
</tbody>
</table>
Horizontal struts

Horizontal strut level 1 & 2

Key Features
• For connecting the vertical struts
• With cover and snap-in locking
• In 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. The strut can be turned to accommodate cover opening position upwards or downwards. With two cut-outs in back side.

Accessories
• Dummy panels ➜ page 35

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm</td>
<td>inch</td>
</tr>
<tr>
<td>Horizontal strut level 1 &amp; 2</td>
<td>600 x 210 x 120</td>
<td>23.62 x 8.27 x 4.72</td>
</tr>
<tr>
<td></td>
<td>700 x 210 x 120</td>
<td>27.56 x 8.27 x 4.72</td>
</tr>
<tr>
<td></td>
<td>1,000 x 210 x 120</td>
<td>39.37 x 8.27 x 4.72</td>
</tr>
</tbody>
</table>

Horizontal strut level 3

Key features
• For connecting the vertical struts
• Additional cut-outs for positioning additional components
• In sturdy sheet steel or stainless steel
• To be used for upper level

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

Options
• With one cut-out
• With two cut-outs
• With three cut-outs

Accessories
• Dummy panels ➜ page 35

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Horizontal strut level 3</td>
<td>600 x 300 x 120</td>
<td>23.62 x 11.81 x 4.72</td>
<td>2 cut-outs</td>
</tr>
<tr>
<td></td>
<td>700 x 300 x 120</td>
<td>27.56 x 11.81 x 4.72</td>
<td>1 cut-out</td>
</tr>
<tr>
<td></td>
<td>1,000 x 300 x 120</td>
<td>39.37 x 11.81 x 4.72</td>
<td>3 cut-outs</td>
</tr>
</tbody>
</table>
## Control Panel Touch

**Key features**
- Consists of a horizontal strut, a case, and a front panel.
- Front panel with 9 x 22.5 mm cut-outs for push buttons and one cut-out for HMI (Siemens TP)
- Case with cut-out for API
- In sturdy sheet steel or stainless steel
- To be used in 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). Programming gateway externally accessible.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Panel Touch</td>
<td>mm</td>
<td>inch</td>
</tr>
<tr>
<td>Control Panel Touch</td>
<td>600 x 210 x 309</td>
<td>23.62 x 8.27 x 12.17</td>
</tr>
<tr>
<td>Control Panel Touch</td>
<td>1.000 x 210 x 309</td>
<td>39.37 x 8.27 x 12.17</td>
</tr>
</tbody>
</table>

## Control Panel Push

**Key features**
- Consists of a horizontal strut and a front panel.
- Front panel with 10 x 22.5 mm cut-outs for push buttons
- In sturdy sheet steel or stainless steel
- To be used in middle level

**Product Description**
Control panel with integrated horizontal strut. Panel with 10 x 22.5 mm cut-outs for push buttons. With integrated opening to exchange defective parts.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Panel Push</td>
<td>mm</td>
<td>inch</td>
</tr>
<tr>
<td>Control Panel Push</td>
<td>600 x 210 x 120</td>
<td>23.62 x 8.27 x 4.72</td>
</tr>
<tr>
<td>Control Panel Push</td>
<td>1.000 x 210 x 120</td>
<td>39.37 x 8.27 x 4.72</td>
</tr>
</tbody>
</table>
**Enclosures**

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

**Product Description**
Control panel with 4 or 5 per side. Single- or double-door design; with cut-out for filter fan and diagram pocket. With integrated mounting plate.

**Reference**
More cabinets and enclosures can be found in the häwa cabinet and enclosure catalogs.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Dimensions (WxHxD)</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>600 x 778 x 300</td>
<td>4 Cut-outs; 1 door</td>
<td>201102</td>
</tr>
<tr>
<td></td>
<td>1.000 x 778 x 300</td>
<td>4 Cut-outs; double doors</td>
<td>201103</td>
</tr>
<tr>
<td></td>
<td>1.000 x 1.878 x 300</td>
<td>5 Cut-outs; double doors</td>
<td>201104</td>
</tr>
</tbody>
</table>

**Latch locks, completely pre-mounted**

**Key Features**
- Latch lock complete with gasketing, not installed

**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
- Easy installation without disassembly

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

**Note**
By rotating the latch 90° it is suitable for left-hinged doors

<table>
<thead>
<tr>
<th>Lock</th>
<th>Chrome plated die L = 45 mm</th>
<th>Zinc die, black L = 45 mm</th>
<th>Stainless steel sheer L = 45 mm</th>
<th>Synthetic, black L = 45 mm</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>3070-7504-12-03</td>
</tr>
<tr>
<td>7mm square</td>
<td>3070-7504-12-00</td>
<td>3070-7504-12-01</td>
<td>3070-7504-12-05</td>
<td>3070-7504-13-03</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>3070-7504-14-03</td>
</tr>
<tr>
<td>3mm double-bit</td>
<td>3070-7504-14-00</td>
<td>3070-7504-14-01</td>
<td>3070-7504-14-05</td>
<td>3070-7504-15-03</td>
</tr>
<tr>
<td>5 mm double-bit</td>
<td>3070-7504-18-00</td>
<td>3070-7504-18-01</td>
<td>3070-7504-18-05</td>
<td>3070-7504-19-03</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>3070-7504-17-03</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>3070-7504-18-03</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>3070-7504-19-03</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>3070-7504-20-03</td>
</tr>
<tr>
<td>T- handle</td>
<td></td>
<td></td>
<td></td>
<td>3070-7504-40-03</td>
</tr>
<tr>
<td>Star grip</td>
<td></td>
<td></td>
<td></td>
<td>3070-7504-84-03</td>
</tr>
</tbody>
</table>
Enclosure accessories

Compact handle

Key features
• For safe locking of enclosure – installation without additional drilling
• Easy installation in existing cut-out of latch lock

Product Description
Compact handle equipped for key lock insert
• Side-ward key insertion – minimizes risk of breakage
• Vandalism-proof
• Protection class: IP55 / NEMA 12

Technical Data
The häwa compact handle accommodates the following key lock inserts:
• all per DIN 18252:2006-12 with dimension A = 30 mm – equivalent to overall length of 40 mm +/- 1, R15
• 8-way adjustable locking thumb.

• fixed locking thumb, between 3 and 5 clock looking position
• Various models from leading manufacturers. Locking systems examples: VW E1 E17; Ronis ACE and special lock EDF; Southco standard lock for example CH 751; Siemens E012; Lowe Locks 92 series; Spain special lock 220 and 221; No. Japan. 0200; standard locks from Emka and DIRAK.

Scope of delivery
• 1 compact handle.

Reference
Maximum achievable protection after installation: IP65.

Accessories
• Key lock insert ➜ below

Designation | Art. No.
--- | ---
Compact handle | 3070-0908-00-01

Key Lock Insert

Product Description
Key lock insert from die-cast zinc, chrome-plated, alternatively with nickel-plated brass, suitable for compact handle. Lock key 1333, only removable in locked position.
• Fixation with only one screw
• Self-locking

Scope of delivery
• 1 key lock insert

Suitable for
häwa compact handle

Note
Fixing screws included in delivery of the compact handle

Designation | Lock | Art. No.
--- | --- | ---
Key Lock Insert
7 mm square | 3070-0900-12-00
8 mm square | 3070-0900-13-00
3 mm double-bit | 3070-0900-14-00
5 mm double-bit | 3070-0900-18-00
Daimler-Benz | 3070-0900-16-00
1333 | 3070-0933-30-00

More accessories can be found in the häwa Enclosures catalog.
Enclosure accessories

Fix-Filter Fan FL1

Key features
• Low profile: grill on outside is only 4-6 mm
• Easy installation & maintenance

Product Description
Foamed gasket ensures rating of IP44 / IP54 (with G4 filter mat). Easy changing of mats from outside
• Snap-in assembly with safe stop through integrated V2A springs
• No additional screw-fixing necessary

Technical Data
• Airflow:
  • Unimpeded flow (50/60Hz): 160/180 m³/h / 94/105 cfm
  • with filter pad G3 (50/60Hz): 40/43 m³/h / 24/27 cfm
  • with filter pad G4 (50/60Hz): 26/30 m³/h / 16/18 cfm
  • G3 w/o F (50/60Hz): 42/47 m³/h / 25/28 cfm (refers to exhaust filter without pad)
• Motor connection: flat pin 2.8 x 0.5 (24VDC: 300 mm wires)
• Material: PC/ABS; RAL 7035; self-extinguishing UL94 V-0
• Protection Class: IP44 / IP54
• Certification: CE, UL
• Noise level: 50Hz – 46 dB(A); 60Hz – 50 dB(A)
• Temperature range: -10 to 55 °C / 14 to 131 °F

More technical information is available in the häwa climate control catalog.

Scope of delivery
• 1 piece.
• filter pad G3

Note
Airflow data applies to filter fan and exhaust filters of equal size and with same filter pad.

Accessories
• Exhaust filter AF1 ➜ See below
• Connection cable for motor ➜ See below

<table>
<thead>
<tr>
<th>Designation</th>
<th>Color</th>
<th>Weight</th>
<th>Voltage</th>
<th>Frequency</th>
<th>Power consumption</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fix-Filter Fan FL1</td>
<td>RAL 7035</td>
<td>0,72 kg 1,59 lbs</td>
<td>230 AC</td>
<td>50/60</td>
<td>19 W 230 V/AC/60 Hz 15 W 230 V/AC/50 Hz</td>
<td>3159-0128-23-71</td>
</tr>
<tr>
<td></td>
<td>RAL 7035</td>
<td>0,72 kg 1,59 lbs</td>
<td>115 AC</td>
<td>50/60</td>
<td>19 W 115 V/AC/50 Hz 15 W 115 V/AC/60 Hz</td>
<td>3159-0128-11-71</td>
</tr>
<tr>
<td></td>
<td>RAL 7035</td>
<td>0,72 kg 1,59 lbs</td>
<td>24 DC</td>
<td>74 W 24 V/DC</td>
<td></td>
<td>3159-0128-24-71</td>
</tr>
</tbody>
</table>

Accessories

Exhaust filter AF1

<table>
<thead>
<tr>
<th></th>
<th>Weight</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kg</td>
<td>lbs</td>
</tr>
<tr>
<td></td>
<td>0,12</td>
<td>0,26</td>
</tr>
<tr>
<td></td>
<td>RAL 7035</td>
<td></td>
</tr>
</tbody>
</table>

Art. No. 3159-0128-00-71

Connection cable for motor

<table>
<thead>
<tr>
<th>Description</th>
<th>Design</th>
<th>Length</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>With molded connectors, PVC, black.</td>
<td>2-pole</td>
<td>1</td>
<td>3140-0000-01-00</td>
</tr>
<tr>
<td>Customized cable with completely insulated faston connectors 2.8 x 0.5 and earthing wire, with ring cable lug.</td>
<td>3-pole</td>
<td>3</td>
<td>3140-0000-03-00</td>
</tr>
</tbody>
</table>

More thermo components, such as heaters, heat exchangers, cooling devices, thermostats etc. can be found in the häwa Thermo components catalog.
Mounting arm system

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

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting arm system</td>
<td>201051</td>
</tr>
</tbody>
</table>

Mounting arm for control enclosures

Product Description
Articulated arm for incorporating control enclosures.

Note
More mounting arm systems can be found in the häwa Mounting arm systems- and Control enclosures catalog.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting arm for control enclosures</td>
<td>201053</td>
</tr>
</tbody>
</table>

More mounting arms systems can be found in the häwa Mounting arms systems- and Control enclosures catalog.
External accessories

Pneumatic door systems

Key features
• Pneumatic door systems automatically lift and lower the operating doors

Product Description
Pneumatic door system available with different locks. Pneumatic actuation is carried out via ISO cylinders. The assembly includes the complete door system with cylinders, but not the control and the door switch. Suitable for door systems for up to 2000 mm / 79” width.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumatic door systems</td>
<td>electrical lock</td>
<td>202002</td>
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<tr>
<td></td>
<td>mechanical latch</td>
<td>202004</td>
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<td></td>
<td>contact-free</td>
<td>202003</td>
</tr>
</tbody>
</table>

Note
Pay attention when selecting the appropriate vertical struts. Struts are designed to work with door systems from the Cirris Solutions GmbH.

Manuel vertical door systems

Key features
• In contrast to the pneumatic door systems, the manual door system uses springs instead of pneumatic cylinders.

Product description

<table>
<thead>
<tr>
<th>Designation</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manuel vertical door systems</td>
<td>electrical lock</td>
<td>202022</td>
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<tr>
<td></td>
<td>mechanical latch</td>
<td>202024</td>
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<tr>
<td></td>
<td>contact-free</td>
<td>202023</td>
</tr>
</tbody>
</table>

Note
Pay attention when selecting the appropriate vertical struts. Struts are designed to work with door systems from the Cirris Solutions GmbH.
Manuel horizontal swing door systems

Key features
- Highly suitable as service doors.
- For occasional activity.
- 3 massive metal hinges included.

Product description
Manual swing door system. Equipped for limit switch systems. Magnet included. Standard maximum door width 1000 mm.

Note
This door system can be mounted on any vertical strut at any stage.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual horizontal swing door systems</td>
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<td></td>
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<tr>
<td>electrical lock</td>
<td></td>
<td>202062</td>
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<tr>
<td>mechanical latch</td>
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<td>202064</td>
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<tr>
<td>contact-free</td>
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<td>202063</td>
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</tbody>
</table>

Manuel vertical swing door systems

Key features
- Door opening angle rests outside application workspace.

Product description
Manual vertical swing door system. Equipped for limit switch systems. Standard maximum door width 1000 mm.

Note
Door opens to half of the size of the body outwards. Pay attention to select appropriate vertical struts. The struts are constructed for Cirris Solutions GmbH door systems.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Design</th>
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<td></td>
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<td>mechanical latch</td>
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<td>contact-free</td>
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<td>202103</td>
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</table>

Manuel sliding door systems

Product description
Manual horizontal sliding door system consisting of 2 pieces. Equipped for limit switch systems. Standard maximum door width 2000 mm.

Note
Pay attention when selecting the appropriate vertical struts. Struts are designed to work with door systems from the Cirris Solutions GmbH.

<table>
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<th>Designation</th>
<th>Design</th>
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<tr>
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<tr>
<td>mechanical latch</td>
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<td>202084</td>
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<tr>
<td>contact-free</td>
<td></td>
<td>202083</td>
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</tbody>
</table>
External accessories

Light curtain mounting

Product description
Mounting kit for mounting a light curtain, consisting of the required angles and bolts.

Note
Pay attention to select the appropriate vertical struts! The struts are constructed for mounting kits, like example some of „Sick“ and „Wenglor“. We are happy to assist you in selecting a suitable light curtain.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Design</th>
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</thead>
<tbody>
<tr>
<td>Light curtain mounting</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>

Corner mirror for light curtain

Product description
Corner mirror to redirect a light curtain 90°, including all fasteners and screws.

Note
Pay attention to select the appropriate vertical struts! The struts are constructed for corner mirrors, like some of „Sick“ and „Wenglor“.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corner mirror for light curtain</td>
<td>202141</td>
</tr>
</tbody>
</table>
**Accessories**

### LCD monitor cover

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

**Product description**
Cover made from steel sheet for level 3 with mounting kit for LCD monitors.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Width</th>
<th>Design</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD monitor cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>600</td>
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<td>[211112]</td>
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<tr>
<td></td>
<td>1000</td>
<td>39.37</td>
<td>[201113]</td>
</tr>
</tbody>
</table>

### Casters with locking brake

**Key features**
- Caster with locking brake; load per caster approx. 160 kg / 353 lbs.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casters with locking brake</td>
<td>5706-1200-00-000</td>
</tr>
</tbody>
</table>

### Leveling feet M16

**Key features**
- Leveling foot with anti-slip and cushioning base; load per leveling foot approx. 1600 kg / 3527 lbs.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveling feet M16</td>
<td>5706-1104-16-125</td>
</tr>
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</table>

### Dummy panel

**Key features**
- Cover for cut-outs of the horizontal struts

<table>
<thead>
<tr>
<th>Designation</th>
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</thead>
<tbody>
<tr>
<td>Dummy panel</td>
<td>for horizontal strut 1 &amp; 2</td>
<td>[211754-02]</td>
</tr>
<tr>
<td></td>
<td>for horizontal strut level 3</td>
<td>[211755-02]</td>
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Customer solutions
## Alphabetic Table of Contents

### Alphabetical Table of Contents

### C/D

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<tbody>
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<td>Casters with locking brake</td>
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<tr>
<td>Compact handle</td>
<td>29</td>
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<tr>
<td>Connection cable for motor</td>
<td>30</td>
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<tr>
<td>Control Panel Push</td>
<td>27</td>
</tr>
<tr>
<td>Control Panel Touch</td>
<td>27</td>
</tr>
<tr>
<td>Corner mirror for light curtain</td>
<td>34</td>
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<td>Dummy panel</td>
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<td>Enclosures</td>
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<td>Exhaust filter AF1</td>
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### F

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<td>Fix-Filter Fan FL1</td>
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<td>Hexagonal rotary applications</td>
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<tr>
<td>Horizontal strut level 1 &amp; 2</td>
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<tr>
<td>Horizontal strut level 3</td>
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<td>Key Lock Insert</td>
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<td>Latch locks, completely pre-mounted</td>
<td>28</td>
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<tr>
<td>LCD monitor cover</td>
<td>35</td>
</tr>
<tr>
<td>Leveling feet M16</td>
<td>35</td>
</tr>
<tr>
<td>Light curtain mounting</td>
<td>34</td>
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<td>Linear applications</td>
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### M

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<td>Manuel horizontal swing door systems</td>
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<tr>
<td>Manuel sliding door systems</td>
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<tr>
<td>Manuel vertical door systems</td>
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<tr>
<td>Manuel vertical swing door systems</td>
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<tr>
<td>Modular single cells</td>
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<tr>
<td>Mounting arm for control enclosures</td>
<td>31</td>
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<td>Mounting arm system</td>
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### O

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<td>Vertical angle strut 45°</td>
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<tr>
<td>Vertical angle strut 60°</td>
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</tr>
<tr>
<td>Vertical strut 90° and 180°</td>
<td>24</td>
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