

INDUSTRY FOCUS

# HVACR TECHNOLOGY

LATCHES | HINGES | GASKETS



WORLD MARKET LEADER SINCE 2018





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*"You can negotiate  
on prices, but not  
on **quality!**"*

† **Friedhelm Runge**

Founder of the EMKA Group

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# QUALITY

## FROM THE WORLD MARKET LEADER

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92%

In-house production rate



36,000 customers worldwide



Own production at 11 international locations



Represented in 60 countries worldwide



In-house mould making



More than 50 years of production experience



Own technology center



20 million € insurance per product



Identical production possibilities  
at different locations



2,100 employees worldwide



Accredited test laboratory



30,000 catalogue and special products

# LOCKING SYSTEMS FOR HVACR UNITS

Latches, hinges and gaskets are a central part of HVACR systems (heating, ventilation, air conditioning, refrigeration) to ensure functionality, safety and energy efficiency.

EMKA locking systems guarantee a secure and tight closure, while hinges provide robust connections that remain reliable even with frequent opening and closing. The range is complemented by flexible gaskets that ensure an optimal seal and contribute to the energy efficiency of the systems.

The modular system design enables customized solutions that can be flexibly adapted to individual requirements. In addition, EMKA provides individual special solutions which are developed in dialogue with the customer. EMKA solutions meet the special requirements of the industry and are aligned with relevant standards such as VDI 6022 and DIN EN ISO 846.

With durable materials and well-thought-out designs, EMKA makes a decisive contribution to the operational reliability and efficiency of modern HVACR systems.

As a long-standing system partner of the HVACR industry, EMKA stands for innovative solutions and the highest quality standards. Whether it's a latch, hinge, gasket or special solution you need, EMKA has the right solution for you!



# EVERYTHING AT A GLANCE

You can find a large proportion of EMKA products in our **interactive EMKA main catalogue** and in our **online product database**.

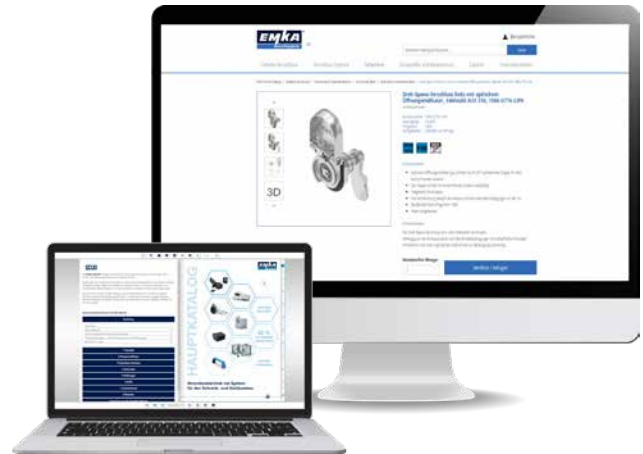
There you also have the possibility to download CAD data in the international exchange formats STEP and IGES as well as detailed product data sheets.



View interactive EMKA main catalogue



View online product database



# MOULD + SERIES

## PRODUCTION TO CUSTOMER ORDER

EMKA is one of the three largest mould makers in Europe.

One reason for this is that all of EMKA's 30,000 catalogue and special products are tool-related. In its own production sites, EMKA produces these products from the materials polyamide, zinc, steel, stainless steel and aluminum. EMKA customers can take advantage of this manufacturing excellence that has been developed over decades.

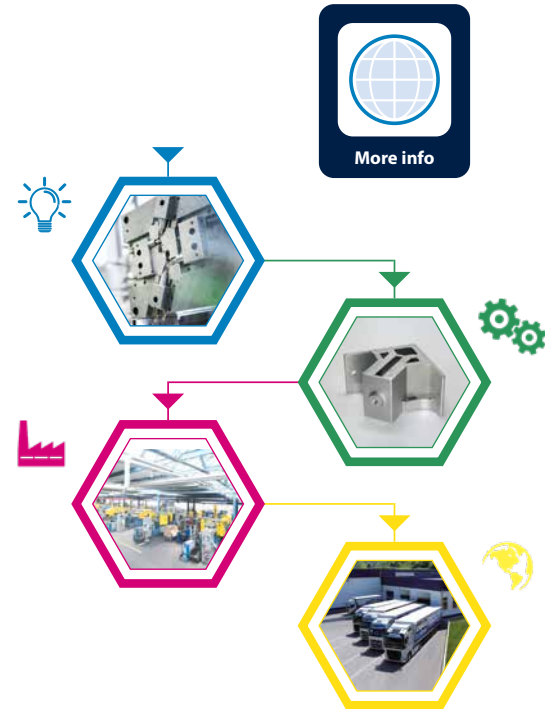
With the business model "Mould + Series", EMKA offers a unique service package:

Based on the customer's drawing, the mould is designed. The production of the initial sample with this mould takes place directly at EMKA on site on factory-owned machines from series production. In this way, the mould making and initial sample production stages are directly coupled with each other. Time and quality losses due to transport and coordination loops are eliminated.

After tool and initial sample approval, the customer receives the complete test documentation as well as all relevant production parameters. If the customer does not want to manufacture his product himself, but wants to outsource it, EMKA can also take over the series production - if necessary with assembly work and worldwide logistics.

"Mould + Series" is mould making and initial sample production from a single source - with optional series production.

In short: Production with a system.



# PRODUCTION OPTIONS (EXTRACT)

## Plastic injection moulding

Production in Germany,  
Bosnia and Herzegovina, India and Indonesia

All production sites are certified  
according to ISO 9001:2015

69 machines, thereof 4 2K machines

Machine manufacturer: Arburg

Clamping forces: 20 - 500 t

Max. tool clamping area: 1,100 x 600 mm

Parts weights: 3 - 3,000 g

Granular types:

Thermoplastic / PA 6 / PA 6 V0 / PA 6 GF  
transparent, rubbery to high strength  
and chrome platable, others on request

69 machines, thereof 4 2K machines

## Zinc die casting

Production in Germany,  
Bosnia and Herzegovina, France,  
India and Indonesia

All production sites are certified  
according to ISO 9001:2015

42 machines

Machine manufacturer: Frech

Clamping forces: 20 - 315 t

Max. tool clamping area: 900 x 550 mm

Parts weights: 3 - 3,000 g

3 automated special machines for  
the thread production

Zinc alloys:

- Z410 acc. to DIN1743
- Z430 acc. to DIN1743
- more on request

## Aluminium die casting

Production in Germany

Certified according to ISO 9001:2015  
and ISO 50001:2011

9 machines

Machine manufacturers: Frech, Bühler, Italpresse

Clamping forces: 220 - 1,250 t

Max. tool clamping area: 1,500 x 1,500 mm

Part weight: 50 - 12,500 g

11 machining centres

3 Melting furnaces  
(2 tilting furnaces and 1 shaft furnace)

Fully automatic robot removal  
with deburring press

Own water treatment

VDI guideline 6022 is a German technical guideline issued by the Association of German Engineers (Verein Deutscher Ingenieure, VDI) that deals with hygiene in ventilation and air-conditioning systems. It sets standards and requirements to ensure indoor air quality and minimise health risks.

All EMKA products developed for HVACR technology have been developed in accordance with VDI guideline 6022.



## Objectives of the guideline

### Health protection

Ensuring that the air transported by air handling systems is harmless to health.

### Hygiene standards

Definition of minimum requirements for the planning, construction, operation and maintenance of HVACR systems.

### Prevention

Prevention of contamination, mould and microbial contamination in ventilation systems.

## Important contents of VDI 6022

### Hygiene requirements

Use of suitable materials and components that allow for easy cleaning and protection of the systems from contamination by dust, moisture and microorganisms.

### Regular inspections and maintenance

Hygiene inspections by trained personnel (e.g. hygiene inspectors in accordance with VDI 6022) as well as cleaning and maintenance at specified intervals.

### Training and qualifications

Persons responsible for the hygiene of HVACR systems must be trained accordingly.

### Relevant areas

The guideline applies in particular to buildings where people spend long periods of time, such as offices, hospitals, schools and public buildings.

### Legal connection

VDI 6022 supplements the requirements of occupational safety and the workplace directive with regard to air quality.



DIN EN ISO 846 is an international standard that describes the testing of the biological resistance of materials. It defines procedures for evaluating how plastics and elastomers react to the influence of microorganisms (such as bacteria and fungi).

This standard is particularly important for materials used in environments where they may be exposed to biological influences, e.g. in humid, warm or organically contaminated areas such as air conditioning technology.

The majority of EMKA products used in HVACR industry are made of materials that are certified according to DIN EN ISO 846.



## Key content of DIN EN ISO 846

### Evaluation of visual condition

Examines whether discolouration, stains or other visible changes caused by microorganisms occur.

### Evaluation of loss in mass

Determines whether and to what extent microorganisms can degrade the material.

### Evaluation of physical properties

Measures changes in the mechanical or physical properties of the material after exposure.

### Determination of the resistance class

Materials are categorized into classes based on how resistant they are to microbial attack.

## Application areas of DIN EN ISO 846

HVACR

Building industry

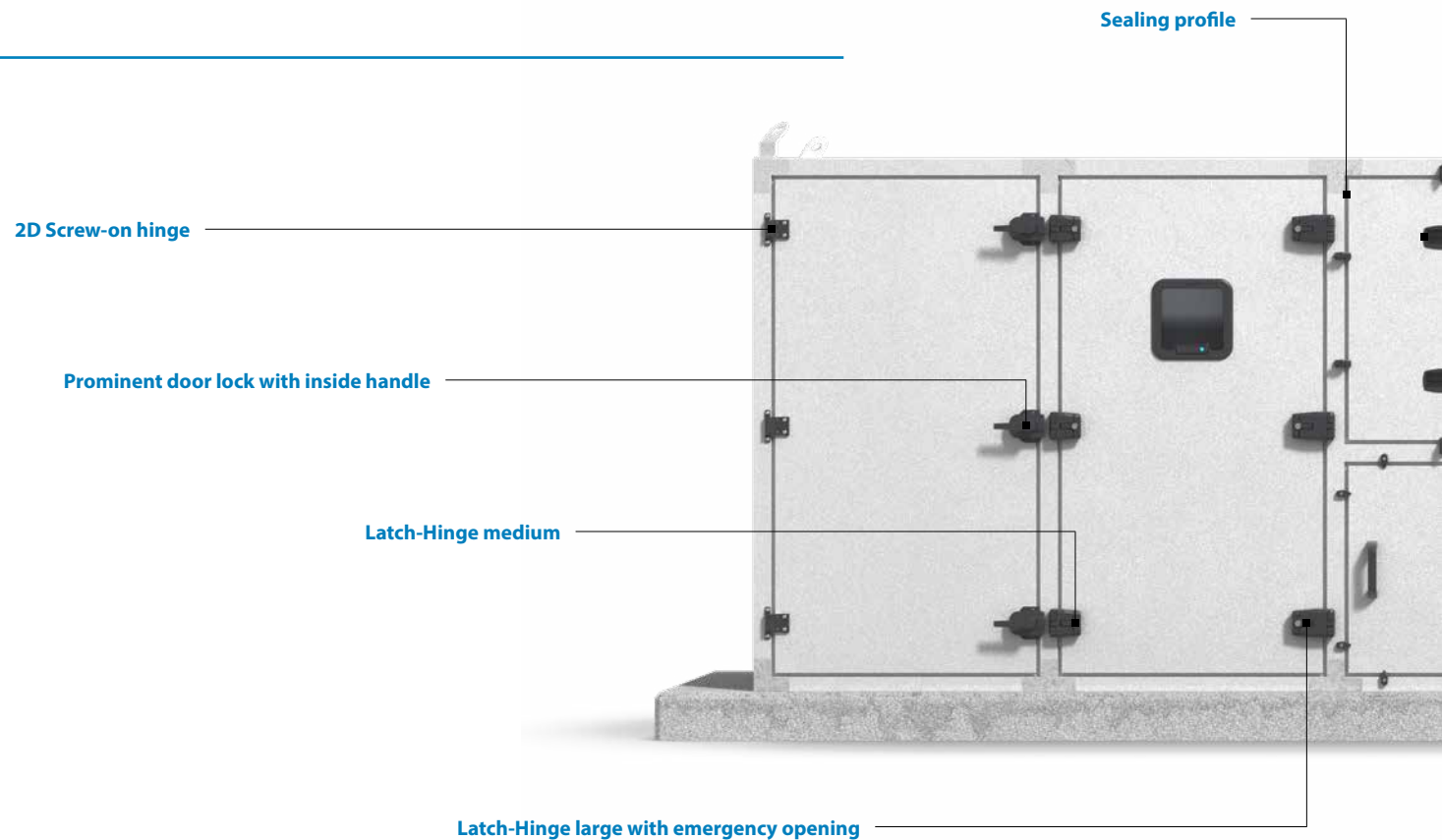
Packaging technology

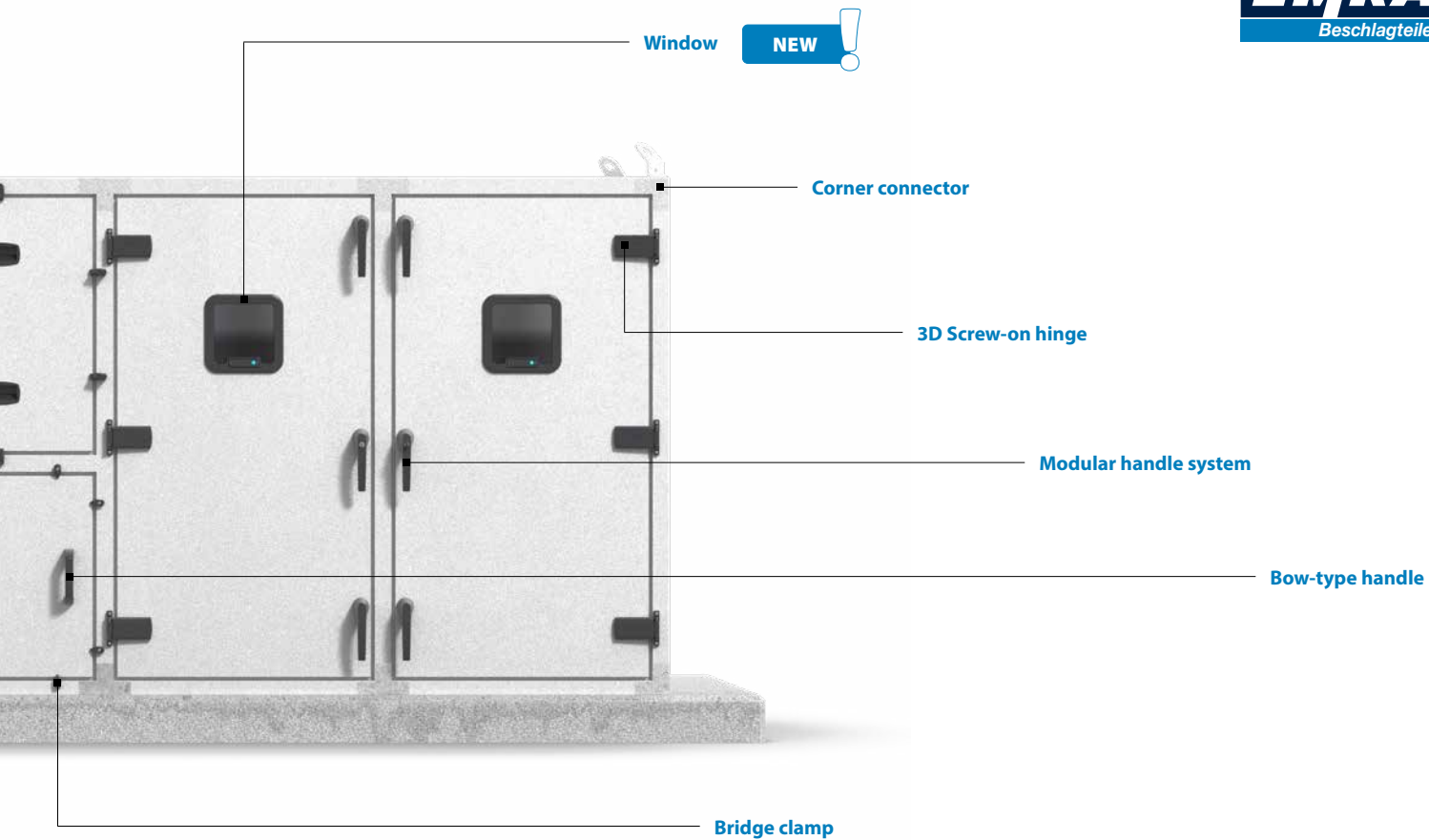
Electronics

Automotive industry

# APPLICATION EXAMPLES

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# MODULAR HANDLE SYSTEM

## Product description

Modular handle system consisting of the following components:

- Outside handle
- Shaft unit
- Roller cam or eccentric roller cam
- Inside handle (optional)
- Pressure relief (optional)
- Rod control (optional)

Outside handle made of polyamide with glass fibre

VDI 6022 / ISO 846 compliant materials

Suitable for doors opening inwards and outwards

Suitable for various door thicknesses (25 -110 mm)

Fits 2 standard cut outs (13 mm, 19 mm)

Protected design

## Product benefits

Modular handle system with innovative design

Exchangeable locking sets for outside or inside locking:

- Blind plug
- Round cylinder
- Square
- Further inserts on request

Adjustable roller cam and eccentric roller

Removable handle during transport

Meets the industry-specific national and international standards

Conforms with the entire EMKA program

Air Tightness class L1-L3 possible



# INSTALLATION EXAMPLES

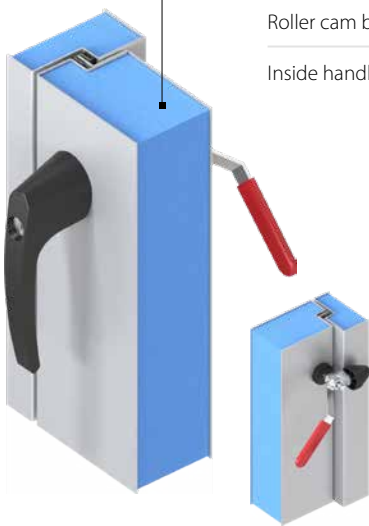
## For doors opening outwards (Out-Swing)

Outside handle with round cylinder

Shaft unit

Roller cam big

Inside handle with grip



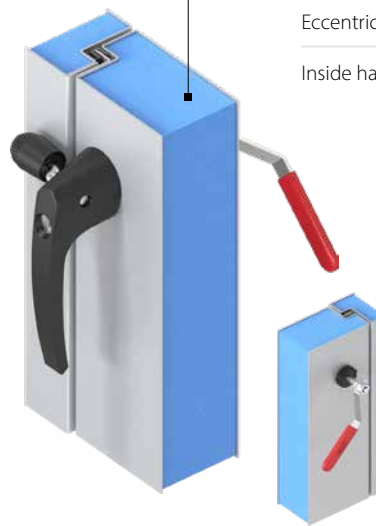
## For doors opening inwards (In-Swing)

Outside handle with round cylinder

Shaft unit

Eccentric roller cam

Inside handle with grip



**PROGRAM 1000** (e.g. 1000-U779)

# PROMINENT DOOR LOCK

## Product description

Locking system for locking from the outside

Materials:

- Housing: Zinc die black powder-coated or polyamide with glass fibre
- Stepped cam with catch, zinc die raw
- Insert zinc die, surface chrome-plated or black powder-coated
- Catch zinc die black powder-coated

Fixing with rivets from the outside

VDI 6022 / ISO 846 compliant materials

## Product benefits

Low installation height (33 mm)

No locking elements in the interior  
→ thermal decoupling

Right or left hinged

Various inserts or handle options available

- Square 6, 7 or 8
- Triangular 7 or 8
- Double bit 3 or 5
- Hexagon female SW 10
- Slot 2 x 4 or 2 x 4 coinproof

Also available as a variant with standard cam and L-handle (optionally with round cylinder)



**PROGRAM 1000** (e.g. 1000-U937)

# PROMINENT DOOR LOCK WITH INSIDE HANDLE

## Product description

Particularly suitable for use on large flaps and walk-in doors

Materials:

- Housing, L-handle, bezel, bridge and coupling piece made of polyamide with glass fibre
- Adapter plate POM
- Gear wheels zinc die zinc-plated
- Square axis, cam, pin, inside handle, washer and nut steel zinc-plated
- Including gasket

VDI 6022 / ISO 846 compliant materials

Suitable for various door thicknesses  
(30 - 60 mm)

## Product benefits

Various inserts or handle options available

- L-handle
- Insert square 7
- Further inserts on request

Also available as variant with square insert with stepped cam or pressure relief

Also available as variant without inside handle



More info



**PROGRAM 1091** (e.g. 1091-U168)

# LATCH-HINGE SMALL

## Product description

Combination of latch and hinge  
for door surfaces < 0.8 m<sup>2</sup>

Materials:

- Housing, handle, bracket and covers  
made of polyamide with glass fibre

VDI 6022 / ISO 846 compliant materials

Hinge 180° opening angle

Available with or without pressure relief

Insert types:

- Insert hexagon female SW 4
- Round cylinder key system 9081
- Round cylinder keyed different
- Further inserts on request

Patented

## Product benefits

40% reduced size enables a significant  
price advantage

No locking elements in the interior  
→ thermal decoupling

5 mm seal compression with  
low actuation forces

Door or panel can be removed by  
unlatching the handles on both sides

Right or left hinged

2D adjustable (tolerance compensation)

Quick and user-friendly assembly

ATEX compliant explosion protection version  
available on request





**PROGRAM 1091** (e.g. 1091-U147)

# LATCH-HINGE MEDIUM

## Product description

Combination of latch and hinge  
for door surfaces > 0.8 m<sup>2</sup>

Materials:

- Housing, handle and covers made of polyamide with glass fibre
- Bracket top and bottom part zinc die black powder-coated

VDI 6022 / ISO 846 compliant materials

Hinge 180° opening angle

Available with or without pressure relief

Insert types:

- Insert hexagon female SW 4
- Round cylinder key system 9081
- Round cylinder keyed different
- Further inserts on request

Patented

## Product benefits

No locking elements in the interior  
→ thermal decoupling

5 mm seal compression with  
low actuation forces

Door or panel can be removed by  
unlatching the handles on both sides

Contact pressure can be adjusted by 3 mm with  
the door closed during operation

Right or left hinged

3D adjustable (tolerance compensation)

Quick and user-friendly assembly

ATEX compliant explosion protection version  
available on request



# LATCH-HINGE LARGE WITH EMERGENCY OPENING

## Product description

Combination of latch and hinge, suitable for use on large flaps and walk-in doors

Materials:

- Housing, handle, covers and emergency opening made of polyamide with glass fibre
- Bracket top and bottom part zinc die black powder-coated

VDI 6022 / ISO 846 compliant materials

Hinge 180° opening angle

Available with or without pressure relief

Insert types:

- Insert hexagon female SW 4
- Round cylinder key system 9081
- Round cylinder keyed different
- Further inserts on request

Patented

## Product benefits

5 mm seal compression with low actuation forces

Minimal installation height of the emergency opening in the interior

Door or panel can be removed by unlatching the handles on both sides

Contact pressure can be adjusted by 3 mm with the door closed during operation

Right or left hinged

3D adjustable (tolerance compensation)

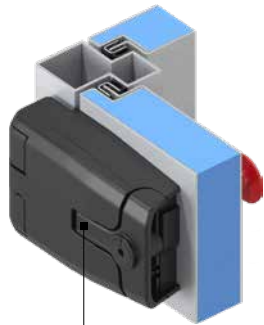
Quick and user-friendly assembly

ATEX compliant explosion protection version available on request

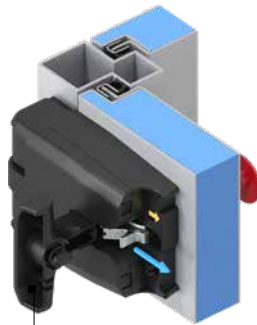


## LATCH-HINGE

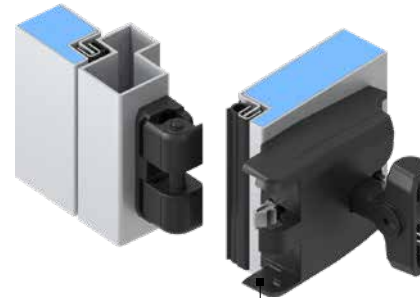
# FUNCTIONALITY

**Locked**

By pressing the emergency opening, the latch-hinge is opened safely from the interior, even when the handle is locked.

**Unlocked**

By opening the handle, the latch-hinge moves to the unlocked condition. When using the version with pressure relief, the latch must also be operated from the side before opening.

**Open**

The door/flap can be opened in the unlocked condition. Once the latch-hinges are unlocked on both sides, the entire door/flap can be removed.



**Info:** The "medium" and "small" latch-hinges work in exactly the same way – but without the emergency release function.

**PROGRAM 1054** (e.g. 1054-U36-RE)

## 3D SCREW-ON HINGES

### Product description

Available in different sizes for flexible use

Material:

- Zinc die black powder-coated, stainless steel and steel zinc-plated for maximum corrosion protection

3D adjustability (horizontal, vertical, depth)

Screw-on from the outside for flush doors

Opening angle 180°

Captive pin

### Product benefits

Right or left hinged

3D adjustability for optimal alignment

Optimal alignment promotes energy efficiency

High corrosion resistance

High maintainability

Easy installation

Quiet operation

Modern and attractive design



**PROGRAM 1054** (e.g. 1054-U44-01)

## 2D SCREW-ON HINGES

### Product description

Available in different sizes for flexible use

Material:

- Zinc die black powder-coated, stainless steel and steel zinc-plated for maximum corrosion protection

2D adjustability (horizontal, vertical)

Screw-on from the outside for flush doors

Opening angle 180°

Captive pin

### Product benefits

Right or left hinged

2D adjustability for precise alignment

High corrosion resistance

High maintainability

Easy installation

Quiet operation

Modern and attractive design



**PROGRAM 1076** (e.g. 1076-U15)

## 3D UNIT CONNECTOR

### Product description

Material:

- Unit connector made of polyamide with glass fibre or aluminium
- Safety nut M8 and cylinder screw M8 x 35 steel zinc-plated

Fixing with M6 cylinder screws or blind rivets possible

Covering cap made of polyamide optionally available

### Product benefits

3D positioning through spherical design with max.

- X-axis 7 mm
- Y-axis 3 mm
- Z-axis 5 mm

VDI 6022 / ISO 846 compliant materials

Cylinder screw included

Available in polyamide and aluminum



More info



**PROGRAM 1076** (e.g. 1076-U13)

# BRIDGE CLAMP

## Product description

Material:

- Bridge clamp made of polyamide with glass fibre
- Cylinder screw steel zinc-plated
- Spring made of spring steel zinc-plated

Simple flap closure  
for all-round fastening

Locking solution for low-maintenance flaps

## Product benefits

Cost-effective solution for areas  
with a low security level

Easy installation

High maintainability

Time saving due to quick opening and closing



**PROGRAM 1095** (e.g. 1095-35)

## BOW-TYPE HANDLES

### Product description

Material:

- Handle and cover made of polyamide with glass fibre

Colour variant black available as standard

Mounting of the bow-type handle by choice:

- Cylinder screw M6 acc. to DIN 4017/1207
- Hexagon head screw M6 acc. to DIN 4017/1207
- Countersunk screw small head M5
- Blind rivet Ø 4.8 mm

Also available as a known variant without a cover

### Product benefits

Ergonomic design

Bow-type handle also usable without cover

The handle and cover can be individually coloured

Antibacterial version available on request

Protected design





**PROGRAM 1087** (e.g. 1087-U1)

# DOOR STOPPER

## Product description

Available in different materials:

- Steel zinc-plated
- Stainless steel AISI 304

Available in two versions:

- Standard angular rail with 3 mounting holes (version A)
- Lower height angular rail with 9 mounting holes (version B)

2D nut possible

Opening angle 90° - 135°

## Product benefits

Locking device required for weatherproof installations

Prevents the door from closing unexpectedly during maintenance, repair or inspection work

Simple and intuitive handling with little effort

High-quality and durable materials for optimal sustainability

Different versions available to ensure the best possible fit on the door



**PROGRAM 1091** (e.g. 1091-U240)

# HVACR WINDOW

## (OPTIONALLY WITH LIGHTING)

**NEW**



### Product description

Material:

- Window: Polycarbonate
- Spacer frame: ABS black
- Cover frame: ASA black
- Screws: V2A

VDI 6022 / ISO 846 compliant materials

Industry-typical cut out: □ 200 mm

Optionally with customer logo on the edge of the pane or cover frame

Optional: Spacer frame halves with PUR foamed gasket

Optionally with lighting, no impairment of the field of vision

Patented

### Product benefits

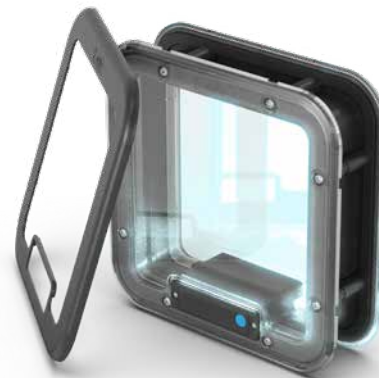
Modular design for different door thicknesses:  
30, 35, 40, 45, 50, 60 mm (tolerance  $\pm 2$  mm)

Spacer frames equipped with PUR foam gasket fulfill IP-Rating 54 and prevent the ingress of moisture from the insulation material

Outer and inner panes fulfill IP-Rating 65

Strong brightness (200 lumens)

Lighting with on/off switch and automatic shut-off function available



**PROGRAM 1120** (e.g. 1120-S30)

# CORNER CONNECTOR

## Product description

Customized corner connectors  
for HVACR systems

Suitable for stable connections  
of the frame profiles

Available in zinc die, polyamide, stainless steel  
and aluminum

90° angles, T-pieces and other customized  
special shapes possible

VDI 6022 / ISO 846 compliant materials

## Product benefits

Customized production for optimal adaptation  
to customer needs

Different materials for every application

Optimization of the desired characteristics:

- Strength
- Weight
- Surface
- Avoidance of thermal bridges

Quick and easy installation

Robust materials ensure an optimal longevity





# SEALING PROFILES

## ACCORDING TO DIN EN ISO 846

Also available  
as customized  
frames or rings!



### Facts

In-house production in Spain and UK

Both production sites are certified to ISO 9001:2015, the plant in Spain is also certified to ISO 14001:2015 and IATF 16949:2016

7 lines for EPDM  
2 lines for PVC  
1 line for TPE

5 injection moulding machines (50 - 100 t)  
for the production of corners

Manufacturers: Gerlach, Itaigum

### Your benefits

Certified materials according to **DIN EN ISO 846**  
for maximum safety in HVACR technology

Conformity with the guideline **VDI 6022**

Individual profile geometry according to  
customer requirements

Sealing profiles with and without metal  
reinforcement, as mono and bi profiles

Production of rings and frames,  
as well as ready-made lengths

Profiles with bonded coating, flock, adhesive  
tapes and EMC foil

Reliable top quality from in-house production  
in Spain and UK



# NOTES

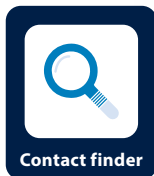


## OUR SERVICE

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Do you have any questions or an idea for a customized special product? Contact us!

We look forward to receiving your inquiry and are by your side as a strong partner with our expertise!



# A STRONG PARTNER BY YOUR SIDE

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