

# Product Catalogue

KCT GmbH & Co.KG  
Robert-Bosch-Str. 30  
D-72348 Rosenfeld

Tel.: +49 (0) 7428 - 945 2885  
Mail: [info@kcttechnik.de](mailto:info@kcttechnik.de)

[www.kcttechnik.de](http://www.kcttechnik.de)



## 1 Contents

2	The KCT - HartGlas <sup>®</sup> window .....	3
2.1	The performance overview .....	4
2.2	Sizes, dimensions, weights of the windows .....	8
2.3	The KCT locking plate .....	9
3	The KCT – insects and sun protection roller blinds (ISR) .....	10
4	The KCT – HartGlas <sup>®</sup> LUKE .....	14
4.1	Technical dimensions and weights .....	15
4.2	The advantages summarized .....	16
4.3	The KCT safety insert for the large roof hatch: .....	16
5	The KCT – Porthole .....	17
5.1	The key points: .....	17
5.2	Porthole cover .....	18
6	The KCT - locking technology for vehicle construction .....	19
6.1	The KCT Syslock <sup>®</sup> locking system .....	19
6.1.1	<i>The recessed grip</i> .....	19
6.1.2	<i>The door handle</i> .....	19
6.1.3	<i>The Castle</i> .....	20
6.1.4	<i>The locking plates</i> .....	22
6.1.5	<i>The lock cylinder cover</i> .....	23
6.2	The KCT – installation gauge .....	23
6.3	The KCT – door seal .....	24
6.4	The KCT – flange handle .....	24
7	Care and cleaning .....	25

## 2 The KCT - HartGlas® window

Traveling around the world in expedition vehicles from leading manufacturers and individualists.

The key points:

- Flush with external wall
- Tempered safety glaz
- insulating glazing
- Burglary-resistant
- High air flow
- Allows ventilation even during rain
- One-handed operation
- Double sealed
- Welded corners
- Paintable frame
- Reinforced steel frame
- multiple steel locking
- Carbon hinges integrated into the frame
- Lockable ventilation position
- Any opening angle
- Easy cleaning
- Elegant finish
- Seawater resistant. No-Ox®
- Durable
- Easy to maintain
- International spare parts service



Our proven KCT® locking plate offers you additional protection. More detailed information on page 9.

## 2.1 The performance overview

### *Open and ventilate*

When opening the KCT<sup>®</sup> – HartGlas<sup>®</sup> window, the window sash slides open smoothly without being tied to a rigid hinge. The ventilation positions achieved in this way enable a particularly effective air flow, as the used internal air does not accumulate on the window, but escapes freely upwards.

With the KCT<sup>®</sup> - HartGlas<sup>®</sup> window you can ventilate even when it rains! This is ensured by a seal on the upper edge of the window, which seals the window sash up to an opening angle of 20°. Only when it is opened further does the window sash slide off the seal and reveal the full ventilation cross-section. The window sash infiltrates the outer frame and dripping water is drained outwards.



*Stepless ventilation positions*

### *Ventilate and lock*

The window sash of the KCT<sup>®</sup> - HartGlas<sup>®</sup> window can be securely locked in the second locking slots of its outer frame for ventilation during storms or during the night's rest. In order not to subject the unlocked hinges to vibrations and for legal reasons, the window must be closed completely while driving.



*Locked in ventilation position*

In order to achieve a high level of security and ease of use, the double lock was made of metal and equipped with a central handle. The handle is located at a large distance from the window so that it is not smeared by the operating hand when opening and closing.

The gears are made of stainless steel and are therefore protected from tarnishing and rust.

### *The structure*

The hinges with carbon arms integrated into the frame allow the window to be opened at any angle up to the stop. In addition, their integrated design reduces the cleaning of the KCT<sup>®</sup> - HartGlas<sup>®</sup> window to a minimum. Enjoy a brilliant and undisturbed field of vision.



*Hinges with carbon arms*

The windows are manufactured using a combination of the latest CNC technology and expert craftsmanship. In addition to high quality and technical precision, this gives them their special look.

A big advantage that you will feel is the frame, which is free of cold bridges. Gone are dripping condensation and hoarfrost on aluminum frames. The KCT<sup>®</sup> – HartGlas<sup>®</sup> window achieves the best insulation values thanks to its frame constructed in several heat protection chambers. High-quality UV light-stabilized plastic is used for the frame.

The corner connections of the window profiles are welded, which means that different window sizes can be achieved with high strength. So does your individual desired size.

All attachments are also designed for a long life. Galvanized steel, aluminum and chrome-plated brass are used here. High-quality silicone and EPDM seals are used for the seals.

Profiles made of galvanized steel are incorporated into the plastic frame. All attachments are screwed to these steel profiles. This increases stability and burglary protection.

In addition, the steel profiles support the absorption of tensile and compressive stresses in the cabin and thus serve to stiffen it



*Steel profiles reinforce the plastic frame of the window*

## The glazing

Burglar-inhibiting ESG safety glass is used. These glasses are further processed to form double-pane insulating glazing and are equipped with a gas filling and thermal protection coating. This corresponds to the insulating effect of a modern window pane.

Instead of the usual spacer made of aluminum, a special plastic spacer that is free of cold bridges is used. This further increases the insulation performance of the glazing.

The lenses are equipped with a high-quality metallic sun and heat protection coating.

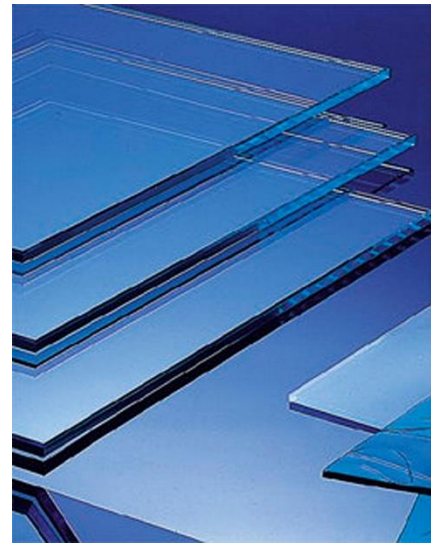
Our coatings do not darken the living area, as is the case with tinted windows. The coating used is also color-neutral.

By the way, our glasses, together with the frame composite, are designed so that heights above 4,000m can be easily reached without the windows bursting. Our own vacuum chamber tests have influenced the design in this direction and today give us the security to assure you that it is suitable for all skiable high-altitude slopes in the world.

## Window cleaning

The swing sash construction of the window makes it possible to easily clean the outer pane from the inside.

Furthermore, edges and corners that attract dirt and are difficult to clean were avoided. The smooth, antistatic coated surface of the plastic can be easily cleaned with water and detergent or our special cleaner.



*Sicherheitsglas*



*Cross-section of the thermal insulation glazing*



*„It's easier from the inside“*

## 2.2 Sizes, dimensions, weights of the windows

Width x Height	Free pane surface	Window weight	Weight window including roller blind
<b>440x600mm</b>	220x380mm	11.2kg	14.7kg
<b>600x440mm</b>	380x220mm	11.2kg	14.7kg
<b>820x500mm</b>	600x280mm	15.8kg	20.8kg
<b>940x500mm</b>	720x280mm	18.0kg	23.5kg
<b>800x600mm</b>	580x380mm	17.8kg	23.1kg
<b>1000x600mm</b>	780x380mm	21.7kg	27.7kg
<b>1200x600mm</b>	980x380mm	25.6kg	32.7kg
<b>1400x600mm</b>	1180x380mm	29.0kg	36.6kg

In addition to these standard sizes, individual sizes are possible.  
Minimum dimensions: WxH or HxW 420 mm x 540 mm.



## 2.3 The KCT – armor plate

For additional protection, KCT offers a unique window cover plate – the armor plate.

It serves to provide the vehicle with additional security against break-ins, vandalism and to camouflage the motorhome as a commercial truck. The sheet metal is used in particular for shipping and unattended parking of the vehicle, as well as for operations in large cities or crisis regions.

The locking plate can be placed from the vehicle interior onto the open window sash and locks automatically when the window is closed.

Opening the window unlocks the armor plate and can be removed by lifting it off. Of course, the plate can also be attached from the outside of the vehicle. Attaching the plate to the window sash takes less than a minute. No tools are needed!

The armor plate does not extend to the outer wall of the vehicle, but rather sits flush with the vehicle wall without any protrusion.

It provides high strength and corrosion resistance. The embossed linen structure makes the surface less sensitive. Furthermore, the sheet metal can also be painted in the vehicle color.



*Installation of the armor plate*

### 3 The KCT – insect screen and roller blind (ISR)

#### *The key points:*

- Absolutely insect proof
- Blackfly - fabric available
- Infinitely adjustable sun protection
- Metal construction
- Housing sealing
- Custom made according to your wishes
- stability
- Lightproof also from the outside
- Attractive appearance
- Sun protection fabric from above or below
- Fabric can also be installed on the sides



*Das ISR im Standardaufbau*

#### *Particularities:*

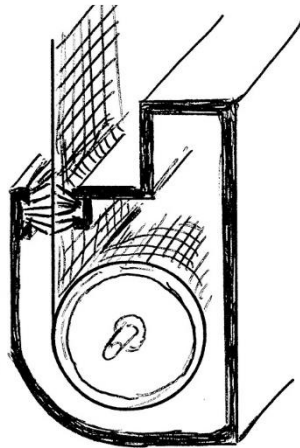
- Insect screen is black coated fiberglass net, washable
- Reflective coated sun protection fabric, tear-resistant, can be rolled up even in the cold
- Wear-free magnetic locking of the roller blinds, keeps them tight even with large nets
- Complete blackout
- Can also be mounted over roof hatches and doors
- Easy to clean
- Can be dismantled
- One-handed operation even with long blinds
- No moving locking parts
- Slide shoes and shaft bearings made of POM plastic
- Easiest operation
- Durable and easy to maintain

### *The construction*

Malaria and yellow fever are probably the two best-known, but unfortunately not the only, diseases that are transmitted through insect bites while traveling.

In order to protect you from these diseases and their annoying vectors in your mobile, the KCT roller blind has an elaborate brush construction that flushes the insect protection net with the frame all around and reliably blocks the insects' path.

We offer a close-meshed glass fibre net, which we install at your request in exchange for the mosquito or sun protection fabric, protects against particularly small pests .



### *Retrofitting conventional windows*

The KCT<sup>®</sup> – ISR is designed as a self-supporting frame. It can also be retrofitted over conventional caravan windows , roof hatches or doors.

This retrofitting makes sense because animals have access to the windows and insect protection nets usually installed in mobile homes via the unsealed roller blind shafts, pleated blinds and ventilation slots.

## *The materials*

The frame is made of powder-coated aluminum and is detachably screwed together using two sturdy stainless steel brackets in each corner.

The corner connectors are angles made of stainless steel. With a total of eight installed angles per ISR, a construction that is so stable is achieved that even large ISRs up to 2 meters can be implemented.

The handrails are aluminum profiles made of silver anodize. In addition to your fingers, they also hold the double magnetic tapes, a sealing lip, two screw channels, the covering fabric and the plastic gliders.

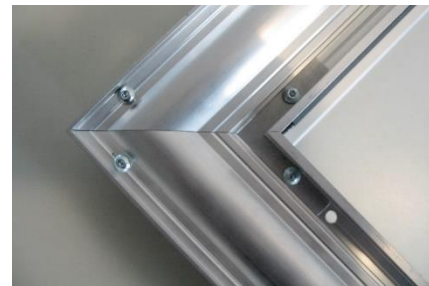
The sun protection fabric is a tear-resistant and light-tight fabric that, in contrast to commercially available films, can be rolled up even in the cold. Its outside is coated in silver for better heat reflection.

If desired, a translucent fabric "transparent fabric" can also be installed. A combination of sun protection fabric and transparent fabric makes sense on fixed glazing.

The insect protection net is woven from black-coated glass fiber threads and is therefore also extremely tear-resistant. Its black color makes it appear almost invisible. The smooth coating of the threads is water and dirt repellent and easy to clean. Two variants are offered: a mosquito net optimized for air permeability and a fine-mesh net against particularly small insects.

The placement of the individual fabrics in the frame can be freely chosen.

The bearings and sliders of the moving parts are made of POM and guarantee the best sliding properties for a lifetime without becoming brittle. This plastic is used in industry, for example in the production of gears and jack joints.



*frame with corner connection*



*corner from the outside*



*Moscito and blackfly mesh*

The sealing strip attached to the lower hand bar ensures that no dirt gets into the roller blind housing. This keeps the covering clean and intact.



*Sealing strip*

### *Operation and function*

The sun protection roller blind installed at the top can be moved to any desired position without using the latch and remains aligned there. If necessary, for example when driving on the slopes, it can be pushed over a notch in its final position where it locks. You can attach the insect protection fabric installed below to the sun protection roller blind using magnetic strips and use it to position it continuously. To easily separate the blinds with one hand, you can lock the upper hand strip on its catch and then easily pull the lower one off. The locked bar can be released from the catch by tilting the control bar.

### *Areas of application*

On windows, doors and under roof hatches and hatches. The "Moskito" and "Blackfly" fabrics are installed on the side of the door ISR. In addition, a handle system is installed for operation from the outside.



*Fitting on a KCT hatch*

### *The assembly*

The ISR is delivered fully assembled and is simply hung into the holders prepared on the window and fixed with four screws. If no KCT – HartGlas® windows are combined, the holders can be purchased separately and, for example, screwed or riveted to the side wall.

When installing on doors or roof hatches, the roller blind frames are screwed to the side wall or ceiling using prepared holes.



*Fitting on a customer built hatch*

## 4 The KCT – HartGlas® HATCH

The design of the HartGlas® hatch is even and easy to keep clean. There are no drops in the glazing, which is why no water remains in puddles and no salt or dirt crusts can remain on the glazing when it evaporates.



### *Two sizes*

The KCT® – HartGlas®LUKE is available in two sizes. Hinges and latches are made of high-quality polished stainless steel (V4a). The powder-coated attachments are also made of stainless steel (V2a). The gas pressure spring is painted black. We build the frames as fiberglass insulating frames. The glazing consists of safety glass joined together to form an insulating glass composite with a high-quality sun and heat protection coating, which effectively prevents the vehicle from heating up.

### *Burglary protection/longevity:*

This was one of the main focuses of the design, which resulted in the neat frames, latches and hinges, and ultimately a compromise was made in terms of overall weight.

### *Insect repellent:*

The insect and blackout roller blind is the tried and tested "ISR" from KCT. The hatch can also be ordered with a fine mesh fabric in the "Blackfly" version.

### *Our long hand:*

A little helper to close the wide open hatch covers if the handle is not accessible. It also helps with opening.



#### **4.1 Technical dimensions and weights**

- External dimensions above roof:
  - Large hatch: 1020 x 710mm
  - Small hatch: 560 x 560mm
- External dimensions under roof:
  - Large hatch: 976 x 670mm
  - Small hatch: 515 x 515mm
- Free access:
  - Large hatch: 780 x 480mm
  - Small hatch: 320 x 340mm
- Possible roof thickness: 40 – 80mm \_
- Roof cutout dimension:
  - Large hatch: 655 x 960mm
  - Small hatch: 500 x 500mm
- Weight:
  - Large hatch: 29kg
  - Small hatch: 16kg
- Order under roof with roof thickness:
  - 40mm = 45mm
  - 50mm = 35mm
  - 60mm = 25mm
  - 70mm = 15mm
  - 80mm = 5mm

## 4.2 The advantages summarized

- Fully insulating
- Solid
- Almost scratch-proof because of real glass
- No standing water on the glazing
- Suitable for heights
- Continuously opening
- Metal latch
- Burglary-resistant
- Stainless steel fittings
- Solar protection glazing
- Fiberglass insulating frame
- Rot proof
- Double sealing level
- Insects and blackout blinds
- Can be inserted into the roof cut-out of a Dometic® HEKI 1/2/3 with little reworking
- Patent pending

## 4.3 The KCT security insert for the large roof hatch:

A security insert is also available for the large roof hatch to provide increased protection against burglary. The sheet metal is used in particular when shipping and leaving the vehicle unattended.

The security insert is doubled for extra stability. A simple version is also available as a compromise between stability and the space required for storage.

The surface is powder-coated white.

hatch frames from inside the vehicle when the hatch is open and fixes itself when the hatch is closed.

This means that the hatch's high level of burglary protection can be further increased if necessary. Burglars are deterred by just the sight of the security deposit.



## 5 The KCT – porthole

### 5.1 The key points:

- Safety glass
- Traffic approval
- Thermally separated frame
- Suitable for the slopes
- Stainless steel frame
- Sun protection coating
- Thermal protection coating
- Fixed glazing
- Easy assembly

The porthole is designed as fixed glazing and cannot be opened. The frame is made of brushed stainless steel.

The glazing consists of two safety glasses, which are further processed into an insulating glass composite using a spacer.

In order to increase the insulation performance of the glazing, the pane is equipped with a sun and heat protection coating. In order to achieve a further increase in insulation performance, an insulating noble gas filling is inserted into the space between the panes.

All coatings are protected in the space between the glazing and only influence long-wave heat radiation; short-wave light can continue to pass through unhindered.

#### *Dimensions:*

Diameter of glass surface 300 mm

Diameter cutout 355 mm

Diameter frame 383 mm

Suitable for wall thickness 60 mm

Weight 3.3kg

To darken the porthole, you can choose an ISR measuring 522x522 mm with sun protection and transparent fabric or the porthole cover described below.



*exterior view*



*Interior view*

## **5.2 Porthole cover**

round cover to darken the porthole .  
This is powder-coated white.

The cover plate is held in place by powerful bar magnets that are invisibly located in the frame of the porthole. The magnets can be retrofitted.

## 6 The KCT - locking technology for vehicle construction

### 6.1 The KCT Syslock<sup>®</sup> locking system

The KCT locking system SysLock<sup>®</sup> is made up of the assemblies described below:

- Recessed grip with door handle
- Lock
- locking plate
- Lock cylinder cover



#### 6.1.1 The recessed grip

The recessed grip is made of fiberglass plastic. It is hand-laminated in Germany, using only aviation-approved materials. The high quality of the material results in a very thin wall thickness with maximum strength. This not only benefits the stability but also the visual appearance of your door, as the recessed grip is a maximum of 2mm and therefore does not form a large dirt edge. The pan is colored white and can be painted.



#### 6.1.2 The door handle

The door handle is made of stainless steel and is connected to the recess via an O-ring seal. For example, for maintenance, disassembly is very easy. After loosening the handle screw connection, the drive square can be pulled with the handle blade. Free riding can also be prevented by removing the handle and using it like a key.



### 6.1.3 The lock

The KCT<sup>®</sup> lock is a mortise lock that was designed for special vehicle construction and in particular for motorhome construction.

#### *Handle operated latches*

Here the locking bolts are operated with the door handle instead of a key. This has the advantage that you can exert greater force on the bolts and the door leaf presses firmly onto the door seal via the bevel of the bolts. The key only serves to lock the locking mechanism and is stress-free.

#### *Three-point locking*

The lock is available as a single-point lock or as a three-point lock in various lengths tailored to the vehicle design. All bolts run into the opposite front profile, eliminating dirty blind holes in the bottom profile of doors.

Depending on the situation, the trap alone may not be able to cope with the stresses of the journey in the long term. The bolts must therefore be locked while driving.

#### *Corrosion protection*

The lock cover (see arrow) is made of stainless steel, the housing is galvanized.

#### *Adjustable from right to left closing*

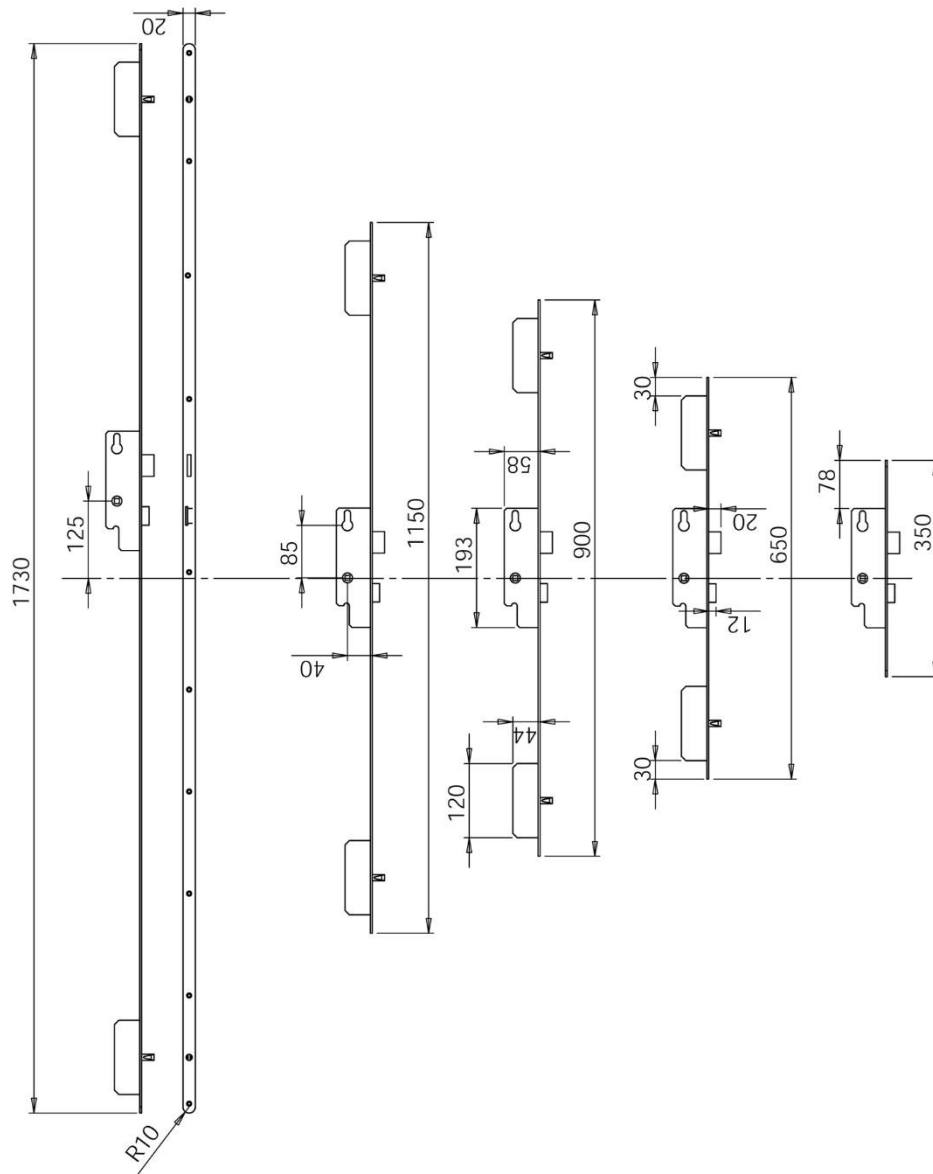
By moving the handle to the upper end position and then moving the adjustment pin, the trap jumps out of its guide and can be rotated through 180 degrees. When the handle is returned to the neutral position, the latch automatically engages again.

#### *Steel construction*

There are no wear-prone brass parts used. The cover can be installed surface-mounted or recessed.



*Dimensions of KCT locks*



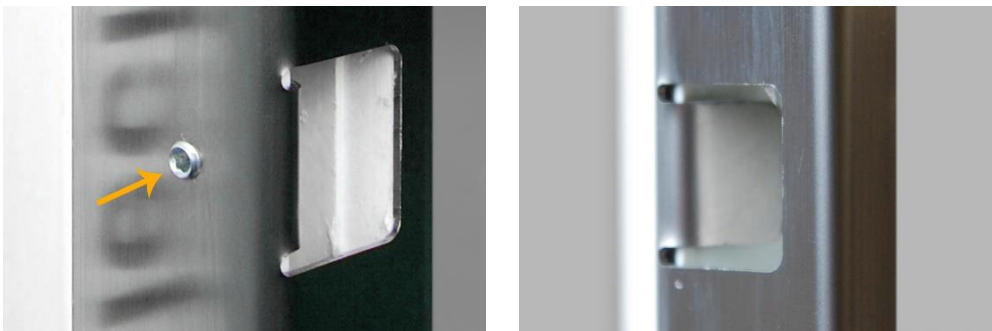
#### ***6.1.4 The locking plates***

The finely brushed stainless steel sheets are available to match the lock lengths. They are used to securely anchor the locking bolts and to protect the edges of flaps.

Assembly is easy:

The locking plate is attached to the frame profile and glued.

The cut out flaps are bent round inwards. The bearing gap can be adjusted using adjusting screws.



### 6.1.5 The lock cylinder cover

The cylinder cover is specially tailored to the design of the KCT recessed grip and is made of all-metal. It can also be mounted on all DIN locking cylinders independently of the KCT recessed grip.

The material used is anodized aluminum, which has a non-stick coating.

The tumbler is implemented using four special magnets that pull the ground surfaces of the sliding pair so close together that a capillary gap is created between them. This gap is so small that water penetrates into it but is unable to flow through due to its surface tension. In other words, the water seals itself.

Available in left and right versions.

Furthermore, 2 mm thick pads are available to compensate for the height of longer locking cylinders.



*Lock cylinder cover (right) with screws*

## 6.2 The KCT – installation gauge

We offer an installation gauge for easy installation of the KCT<sup>®</sup> recessed grip. It can be used to mark the trough cutout and all the required holes for the door handle and lock cylinder in precise positions.

The gauge is made of stainless steel and is pushed onto the door leaf. Now all positions can be marked on the outside and inside.

You can return the gauges to us after use and we will provide you with a refund.

Available in left and right versions.



*KCT installation gauge for recessed grip*

### 6.3 The KCT – door sealing

This seal is specially designed for doors with GRP step profiles, such as those used in expedition mobile construction.

The KCT<sup>®</sup> door seal has an adhesive backing with such strong adhesion that it bonds permanently and inseparably to the surface. Mechanical tools are required to subsequently remove the seal.

Leaky old seals, which are usually still screwed on, can also be easily replaced. This is easy to do thanks to the adhesive backing of the KCT seal.



#### *The assembly:*

- Remove old gasket
- Degrease the surface with e.g. acetone
- Place the seal on the door leaf
- Pull the foil protection out from under the seal
- Press on the seal

The seal sticks to GRP and also to almost all other smooth surfaces such as automotive paint. The prerequisite is a dust- and grease-free surface.

Samples can be provided for gluing tests.

### 6.4 The KCT – flange handle

For flaps and doors where no external handle is attached - e.g. panoramic flaps - we offer a sturdy handle with a flange.

The stainless steel handle, which is also used in the recessed grip, can be mounted on the wall using the flange and thus operate the lock.



## 7 Care and cleaning

### **Stainless steel:**

Fingerprints, water marks, salt crusts and similar dirt can be easily removed from stainless steel surfaces with silicone spray, simply spray and rub with a dry cloth. As a side effect, the surface is sealed against new dirt and all moving parts receive an additional lubricating film. Of course, you can also use special stainless steel cleaners such as those available in stores.

### **Plastic frame:**

It is best to use warm water with dishwashing liquid to remove dirt. We offer a special polish for more stubborn dirt. You should not use solvents such as nitro thinner or acetone as these agents can attack the plastic surface.

### **Powder-coated surfaces:**

E.g. the frame of the insect screen roller blind, these can be cleaned like the plastic surfaces. Do not use solvents such as nitro thinner or acetone.

### **Anodized aluminum surfaces:**

Clean like stainless steel surfaces with silicone spray, warm water with dishwashing liquid or plastic polish.

We wish you much success in planning and implementing your project and lots of fun using it afterwards

Your KCT<sup>®</sup> team

KCT GmbH & Co. KG, Robert-Bosch-Str. 30, D-72348 Rosenfeld  
Office: +49 (0) 7428-9452885, Fax: +49 (0) 7428-9452886  
www.kctechnik.de, info@kctechnik.de

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info@bauer-naturfoto.de