

- Care Notes

# Care notes

High-grade stainless steel



The term high-grade stainless steel is used to describe certain particularly corrosion-resistant and hygienic steels. Their surface is non-porous and requires no additional sealing. It cannot flake and micro-organisms and dirt do not adhere to it. Despite all of this, it still requires care! High-grade stainless steel has properties which make it the ideal material in endless areas of application:

- High corrosion resistance
- Heatproof
- Completely recyclable
- Suitable for use with foodstuffs
- High stability

### Care Notes, high-grade stainless steel

General care: Stainless steel is an easy-care material, but it is not completely maintenance-free. Rinsing with clear, preferably luke-warm water at regular intervals and subsequent wiping with a soft cloth are indispensable.

As a fundamental rule, never use any abrasive cleaning agents. The milder the cleaning agent the better. They should contain no hydrochloric acid, chlorine etc! Sticky food residue is best removed with aqueous cleaners, grease and oil with alkaline cleaners containing surfactants and/or special acidic cleaners. Grease and grease-bonded pigment dirt can normally be removed easily with neutral detergents or all-purpose cleaners.

### Mechanical Cleaning

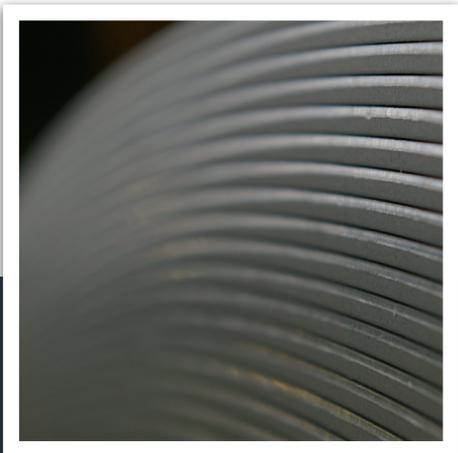
Stainless steel surfaces can be easily washed with a wet cloth, brushed or moist wiped. Please make sure that you choose the right mechanical cleaning product, however. Microfibre cloths are recommended. Allow the stainless steel cleaning agent, e.g. spray, to soak in briefly, then wipe the surface with the cloth in the direction of polishing. If you are dealing with coarser dirt on large surfaces, it is best to use a brush with natural bristles or special high-grade stainless steel brushes. Some nylon brushes contain abrasive objects and are unsuitable.

### Finger marks and handprints on stainless steel surfaces

All stainless steel surfaces that are touched often should be cleaned regularly and disinfected before applying a stainless steel care product. The cleaning agent and disinfectant should be added to preferably warm water.

Stainless steel - identification table						
European Norm	European Norm	Germany	USA	Unified Numbering System	Japan	China
Material no.	DIN / EN identification	Colloquial speech	ASTM * (AISI)	UNS**	JIS	China
1.4301	X 5 CrNi18-10	V2A	304	S30400	SUS 304	18 / 10
1.4404	X 5 CrNiMo17-12-2	V4A	316	S31600	SUS 316	17 / 12

\* **ASTM** formerly known as the American Society for Testing and Materials (ASTM)  
 \*\* The **UNS** number (short for "Unified Numbering System for Metals and Alloys")



# Care notes

Aluminium



Because it very quickly forms a thin oxide layer when it comes in contact with air, aluminium has a dull, silver-grey appearance. This oxide layer makes aluminium very corrosion resistant. It is a very soft and malleable metal which can be rolled into a thin film. Aluminium is the third most common element in the earth's crust and only occurs in a chemically bonded condition. It is a good electric conductor.

- High corrosion resistance
- Heat resistance
- Completely recyclable
- Suitable for use with foodstuffs

## Care Notes, aluminium

Aluminium is a non-ferrous metal and can corrode in the same way as steel. When this happens, however, unlike steel and iron, an oxide layer is formed which protects the surface below from further corrosion. When the oxide forms, however other substances (salts, acids) also have a disintegrating effect on the material which make a coating of corroded aluminium surfaces necessary.

Although aluminium has a very smooth surface, grease and oil can adhere easily to it. For this reason, aluminium parts must always be degreased very thoroughly. Wear gloves so as not to leave any finger marks after cleaning!

## Mechanical Cleaning

Dust, stains and light dirt can be removed easily with lukewarm water. Tougher stains, such as plaster and cement residue, can be removed easily by adding a few drops of a conventional cleaning agent to the water. Avoid dry cleaning at all costs as this can scratch the surface. We rECOMMEND an anodized aluminium cleaner for all anodized surfaces.

## Finger marks and handprints on aluminium surfaces

All aluminium surfaces that are touched often should be cleaned regularly and disinfected before applying an aluminium care product. The cleaning agent and disinfectant should be added to preferably warm water.

# Care notes

Nylon



ECO fittings made of high-quality nylon are the latest trend, particularly with the young generation and in modern buildings. Available in numerous dECORative colours, nylon fittings offer the opportunity to set contrasting accents in the home. The material polyamide combines a number of positive properties which help to withstand the high wear and tear to which the fittings are subjected. With distinct shapes and the wide variety of accessory articles in the nylon range, ECO can offer the suitable accoutrements for every door.

- High corrosion resistance
- Particularly high stability
- Highest possible light fastness
- High wear and tear resistance
- Hygienic and harmless to health
- Resistant to electrostatic charging in hot and cold temperatures

## Care notes, nylon

One special advantage of nylon is the minimal level of care and cleaning it requires. Dirt can be removed quickly and easily with a little bit of mild soapy water. Special nylon cleaners are recommended for more severe dirt, but the amount of time required here is relatively low too.

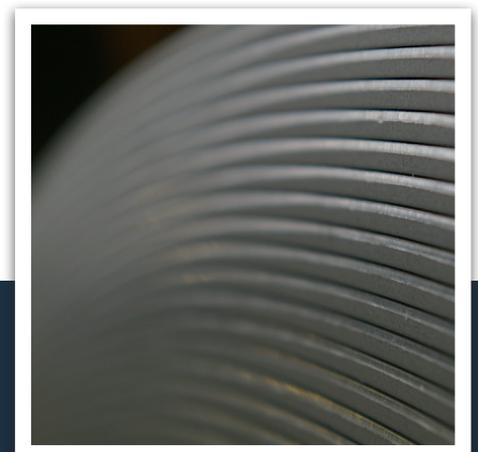
To protect or clean plastic, it is best to use warm water and a standard commercial cleaner such as "green soap". Only small amounts of this get the surface clean again and ready for treatment with a care product. There are a whole lot of these on the market, so you can't help but find the right one in a specialized dealership. In most cases, all you have to do is rub them on and polish them off, thereby freshening up the nylon and increasing its resistance.

## Mechanical Cleaning

Simply remove normal dirt with water and a gentle household detergent. Never wipe away dry dirt as this can scratch the surface. It can also cause an electrostatic charge in the nylon which attracts even more dirt. Special cleaning agents help to remove tough stains.

## Finger marks and handprints on plastic

All nylon surfaces that are touched often should be cleaned regularly and disinfected before applying a nylon care product. The cleaning agent and disinfectant should be added to preferably warm water.



# Care notes

## General Information

Just to be on the safe side, try out your preferred cleaning agent at a non-visible place (e.g. the inside) before using it for the first time.

**The fundamental rule for all materials is to clean off dust with a wet cloth – never rub it off dry!**

### Care tips for powder-coated metal surfaces

Powder-coated surfaces are affected by environmental and atmospheric conditions. Regular cleaning maintains the dECOrative appearance and provides better protection against environmental influences. Warm water with some standard commercial washing up liquid added is recommended for keeping surfaces clean. Please do not use cleaners with scouring agents or any abrasive cloths or pads as these can destroy the coated surface.

### How to take proper care of your ECO lock

Profile cylinders and other moving parts should be treated with resin-free oil once or twice a year. Please do not use graphite! If need be, moving parts can also be greased.

### How to take proper care of your ECO hinge plate

OBX door hinges from ECO are maintenance-free, so please do not apply any oil or grease! In this way, your doors and fittings will maintain their value and attractive appearance for a long time with a minimum of effort.

# Product information and use of ECO Handle technology

## § 1 Product information and designated use

1. The mounting systems manufactured by ECO are operating aids with which opening and closing and / or blocking actions can be carried out on doors, glazed doors and window elements.
2. It is essential that the fixing material supplied with these products is used and that mounting is carried out in accordance with the mounting instructions / specifications.

## § 2 Improper use of the products

In particular the following constitute improper use of the hardware systems for doors and windows, i.e. undesigned use of the products:

- The incorporation or attachment of external or non-designated objects in the hardware system
- The use of auxiliary tools for operating
- Using the hardware as replacement for missing wall stoppers
- Misuse of the hardware as suspension devices for heavy loads
- If, contrary to the rECOMmendation of the lock and hardware industry, hardware with panic locks are in constant operation and used for permanent operations instead of only in emergencies
- If the surface of the hardware system is damaged due to the use of sharp or hard objects
- The use of fixing material of other manufacturers

Sooner or later, this type of misuse will lead to a damage and the products will no longer possess the characteristic features defined by the manufacturer.

## § 3 Product services

1. Product services are only partially regulated by standards. Many performance ratings have developed through long experience and are viewed as the joint property of the building hardware industry. The content of standards and these experimental values can also be used by analogy for any door hardware which there are no express regulations.
2. In particular following standards apply:
  - EN 1906: General basic value for door hardware and accessory
  - DIN 18273: Special rules for fire- and smoke control doors
  - DIN 18257: Minimum safety requirements of security hardware
3. The door hardware should be replaced whenever the proper function is no longer guaranteed in spite of maintenance and care, or if it presents any risk of injury.
4. Further development of the products is carried out on an ongoing basis and production is subject to quality assurance. We reserve the right to make technical changes.

## § 4 Product maintenance

1. The user must observe the correct position of the hardware and fixing devices.
2. The products are subject to natural wear which depends on the material and place of installation. All moving parts should therefore be subject to annual maintenance, i.e. the snug fit, tightness of screwed connections, etc. should be checked at regular intervals. Only water and gentle cleaning agents containing no corrosives as well as soft cleaning cloths should be used to care for the hardware systems.
3. Aluminium, plastics, stainless steel and brass are the main materials used in production. Specific reference is made to the various care and maintenance requirements for these different materials.

## § 5 Liability to inform and instruct

1. The following literature is available for your information and instruction:
  - Catalogues and brochures
  - Tendering texts
  - Purchasing information
  - Quotation rECOrds
  - Mounting and operating instructions
  - DIN standards
2. To ensure the functional efficiency of hardware systems:
  - Architects, planners and other persons involved are advised to request all required product information from us and to observe the same
  - Specialist dealers are advised to observe the product information and references in the price lists and catalogues and in particular to request all necessary instructions from us and pass these on to the person handling the mounting systems
  - Persons installing the hardware are advised to obtain and observe all information relating to the product and in particular to request instructions for operating and caring for the same from us and to pass these on to the customer / end user

All persons involved should take care that the hardware systems are properly mounted and installed and that the respective end user receives appropriate directions.

# Product information and use of ECO Lock technology

## § 1 Product information and designated use

1. The locks manufactured by ECO are intended for locking and bolting of doors.
2. The correct configuration with approved door hardware, fastenings and accessories is essential to ensure the designated use of the locks. Installation must be carried out in accordance with mounting instructions, or with due regard to the DIN standards, including maintenance. Locks for doors with special functions must be selected according to regulations and should be duly identified, if necessary.

## § 2 Improper use of the products

In particular the following constitute improper use of the locks, i.e. undesigned use of the products:

- Misusing the locked bolt to keep the door open
- Adjusting the hinges or lowering the door if this results in an increase or reduction of the required door clearance
- Any assembly or later adjustment of the locking elements which would prevent normal functions
- The incorporation or attachment of external or non-designated objects in the lock or the striking plate
- The application to the lock assembly of loads exceeding normal manual force
- Opening a double-leaf door using the passive leaf, unless this is duly authorized
- The use of inappropriate fastening materials (deviating measurements or incorrect adjustments)
- Interfering or tampering with the lock or striking plate which results in any change of the structure, operation or function
- Simultaneous operation of the door handle and lock system
- Closing the door while reaching between door leaf and door frame

Sooner or later, this type of misuse will lead to a damage and the products will no longer possess the characteristic features defined by the manufacturer.

## § 3 Product services

1. Product services are only partially regulated by standards. Many performance ratings have developed through long experience and are viewed as the joint property of the building hardware industry. The content of standards and these experimental values can also be used by analogy for any locks which there are no express regulations.
2. In particular standards **DIN 18250, DIN 18251, DIN 18252, DIN 18254, DIN 18255, DIN 18257, DIN 18273** and the standards for door mountings are applicable in which both the basic and the supplementary requirements of locks are specified.
3. The locks should be replaced whenever the proper function is no longer guaranteed in spite of maintenance and care, or if it presents any risk of injury.
4. Further development of the products is carried out on an ongoing basis and production is subject to quality assurance. We reserve the right to make technical changes.

## § 4 Product maintenance

1. The user must observe the correct function of the locks.
2. The products are subject to natural wear which depends on the material and place of installation. Subject to the amount of use, maintenance of the locks should be carried out once a year, i.e. greased at regular intervals using suitable lubricants. Only non-corroding cleaning agents should be used to care for the locks.
3. A variety of different materials are used in the lock production. Specific reference is made to the various care and maintenance requirements for these different materials.

## § 5 Liability to inform and instruct

1. The following literature is available for your information and instruction:
  - Catalogues and brochures
  - Quotation rECOrds
  - Tendering texts
  - Mounting and operating instructions
  - Purchasing information
  - DIN standards
2. To ensure the functional efficiency of the locks:
  - Architects, planners and other persons involved are advised to request all required product information from us and to observe the same
  - Specialist dealers are advised to observe the product information and references in the price lists and catalogues and in particular to request all necessary instructions from us and pass these on to the person handling the mounting systems
  - Persons installing the locks are advised to obtain and observe all information relating to the product and in particular to request instructions for operating and caring for the same from us and to pass these on to the customer / end use.

All persons involved should take care that the locks are properly mounted and installed and that the respective end user receives appropriate directions.



# Product information and use of ECO Door closer technology

Attention should be paid to the following information about door closers for revolving doors, following the liability of the manufacturer for its own products defined in product liability law (§ 4 ProdHaftG). Failure to observe it will release the manufacturer from liability obligation.

Door closers serve to close revolving doors again after the manual opening procedure. The closing process takes place adjustably and hydraulically cushioned. The necessary closing force in relation to the leaf widths is established in **EN 1154**. The information of the manufacturer will be decisive in the case of different areas of use. Door closers are used in installed revolving doors made of metal, wood or plastic and their appropriate combinations of materials. The type of installation and the position is precisely stipulated in the case of fire protection doors, fire break and smoke protection doors or other standardized, self-closing doors. Differences from this will not correspond to use in accordance with regulations. The use of door closers in accordance with regulations presupposes vertical, easy-running doors with properly attached door closers. Installation and setting must be carried out expertly in accordance with the information of the manufacturer.

Door closers with large closing moments must be used in the case of unfavourable local conditions (e.g. the effect of wind). Door closers with back-check must be used, particularly in the case of revolving doors that open outwards and are subject to wind. The back-check contributes to the protection of people, door elements, adjoining walls and objects, without restricting the door opening angle. If it is not possible to rule out the possibility of the door leaf striking the frame near to the door rotation axis, because of the structural conditions of the door, a stopper that will restrict the maximum opening angle of the door must be set. A fixed open position of revolving doors can only be achieved with additional special metal fittings or integrated construction elements. The fittings must be permitted in relation to building supervision by the Institut für Bautechnik in the case of fire protection doors, fire break and smoke protection doors (attention must be paid to evidence of the suitability of the door).

Door closers on revolving doors for damp rooms, unprotected external installation and use in environments with aggressive, corrosion-promoting air content or surroundings and those that are subject to high or extremely low temperatures will require special versions. Installation housing for floor springs must be sealed against dirt after installation.

If floor springs are subject to penetrating water, e.g. in damp rooms, or without rain protection in the case of external doors, the space between the cement casing and the door closer housing must be filled with a suitable sealing compound.

If necessary, attention must be paid to binding legal regulations before installing door closers and bringing them into operation.

## Incorrect use

Incorrect use of door closers for revolving doors - will say the use of the product not in accordance with regulations - will be present in particular if

- Obstructions in the doors sliding into the closing area, jamming seals wooden wedges etc constrain the closing process
- Incorrect or improper installation and / or setting is present
- There is an intervention in the area between the door frame and the door leaf (danger of injury!)
- Function in accordance with regulations is expected, beyond the promised characteristics, in the case of unusual low-pressure or overpressure effecting the door, e.g. storm
- Door closers are used for other reasons than closing the door or
- The chosen door closer size does not match the rECOMmendation of the manufacturer

## Product services

Special requirements must be discussed with the manufacturer and agreed by the manufacturer, provided that the product services are not described in catalogues, brochures, instructions etc in correct terms. The norm **EN 1154** will be decisive. All basic and additional requirements are established to a great extent in this norm. The suitability of door closers for use is dependent of the frequency of operation, the mode of operation, the environmental influences and care, among other factors. Door closers must be replaced as soon as a perfect, safely functioning closing process is no longer guaranteed.

ECO recommends:

- For handle sets without spring we recommend to use locks according to **DIN 18251** – class 3 or higher.
- In order to keep tolerances between handle and lock as small as possible we recommend to use locks according to **DIN 18251** with a special spring hub.
- The colour application of ECO fittings will withstand daily use if mounting and use are done properly. Excessive use with hard or edged items (keys, rings etc) might scratch the finishes. The function is, however, not affected. A warranty claim cannot be filed in this case

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