KCC GROUP

Architectural Hardware

A Guide to Care & Maintenance
Warranty Terms

INTRODUCTION TO MAINTENANCE

Where possible our products are designed to require minimal levels of routine maintenance.

However, the working life of nearly all door hardware items can be significantly improved if basic maintenance procedures are carried out, especially on items subject to relatively heavy useage.

Warranty

KCC products are supplied with a warranty. The terms of our warranty are included at the back of this document, covering mechanical products assuming normal wear and tear.

For warranty periods please refer to KCC's technical submittal which includes technical and performance characteristics for the products that we provided.

KCC MAINTENANCE & INSPECTION

The purpose of this guide is to provide a framework for maintaining the hardware that we have provided for your building. It will assist Facility Managers in devising their inspection and maintenance programmes.

We realise that your building may not have a Facility Management professional and/or maintenance crews. KCC's Maintenance Division have engineers based in and around our Dublin, Belfast and Cork locations providing a comprehensive range of inspections, planned preventative maintenance as well as emergency call out support. This service can incorporate everything from automatic doors to your manual door hardware or access control.

Our Maintenance team support many KCC installations in this way and you can contact our Service professionals on:

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E: maintenance@thekccgroup.com

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T: +44 (0)28 9046 9914
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T: +353 (0)21 435 1200
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GENERAL GUIDANCE

Current health/fire legislation mandates that any system capable of developing dangerous faults are subject to a suitable system of maintenance. This implies among other things that maintenance is carried out regularly, that defects are remedied and suitable records kept.

Doors designated as being on a fire route exit or fire or smoke resistant doors have to be periodically inspected to make sure that they meet the same standards as when they were originally installed.

Power operated pedestrian doors are covered by EN 16005. This mandates that the door shall be inspected and that the correct operation of safety systems shall be tested at least once per year.

General guidance

These recommendations are for general guidance. The type and application of doors is numerous and vary accordingly so each door will need to be treated as the case dictates. Much will depend on how the door is utilised and where it is installed. For example:

- External doors will need to be checked for any seasonal changes.
- Applications in severe atmospheric conditions will need additional consideration e.g coastal locations or swimming pool applications.
- Whilst many final emergency exit doors may be used very infrequently, those used for example as staff 'smoke break' exits may be subject to high usage.
- Internal fire resisting doors are equally important as final exit doors but may well have completely different hardware fitted to them.
- Vandalism and abuse will cause the majority of problems and may require more frequent checks.

The onus is on the building owner/employer/occupier to ensure that maintenance routines are carried out and that:

- The work is carried out by suitably proficient individuals.
- Any remedial work is carried out immediately, especially on doors which form part of the fire safety or security of the building.
- Only parts of equal or better standard should be fitted as anything else could compromise the performance of the door or invalidate fire certificates.
- To comply with the requirements of BS EN179 and BS EN1125, emergency and panic exit devices should be checked at intervals of not more than one month by the owner or occupier or his approved representative.

Types of maintenance

Look for the icons below which provide a 'quick check' reminder of the type of maintenance required.

Visual checks

Primarily making a visual check on the product and surrounding door/frame looking for wear, damage and general condition.

Mechanical checks

Check that the product functions properly without binding or undue force required and that seals or weatherstripping do not inhibit correct operation of the door.

Check fixings

Fixings need to be checked and tightened when necessary. Check that no projection of fixings prevents the door from swinging freely.

Lubricating

Some products will benefit from periodic lubrication using a light machine oil or as instructed.

Cleaning

Build up of grease, dust and harmful chemicals (e.g from floor cleaning) should be removed to prevent corrosion and maintain the product finish.

Accessiblity

Electromagnetic door controls and door automation are an essential part of providing accessibility. Routine checks are mandatory.

WHAT ITEMS TO CHECK

Door furniture

Lever handles require very little general maintenance.

Check for smooth operation and that the lever returns readily to the horizontal position. Drooping levers may indicate a worn lock case which may need to be replaced.

Check pull handles, bolts, door stops, signs and indicators for general condition, fixings and operation.

General cleaning procedures should be followed in accordance with the “Caring for Finishes” recommendations on page 6.

Lockcases

Check the correct operation of the lockcase and the cylinder in conjunction with checks on door closers and lever furniture.

Locks should not require lubrication during their lifetime. However, a light oil or WD40 can help in dusty environments.

Cylinders

Cylinders require very little, if any, routine maintenance. Their operation should be checked as part of the mortice lock operation.

Use silicone based lubricants for cylinder lubrication (see page 10).

Routine care of finishes should be carried out as necessary.

Door controls

When installed as part of a fire precaution system the door closing mechanism, including the door selector (on a rebated double door), should be checked in accordance with standing periodic fire testing procedures.

Routine care of finishes should be carried out as necessary.

Electromagnetic door controls

Units should be tested weekly and routine care of finishes should be carried out as necessary.

Panic and emergency exit hardware

BS EN1125 (Panic Exit Devices) and BS EN179 (Emergency Exit Devices) require specific maintenance checks to be carried out as specified in the relevant fixing instructions. Failure to carry out these checks will invalidate the certification.

At monthly intervals check correct functioning of the unit as part of the standing periodic fire test procedures. This should include the outside access unit if fitted and the door selector if used on a pair of rebated double doors.

Routine care of finishes should be carried out as necessary.

CARING FOR FINISHES

KCC products have a high quality finish, including those with a plated, PVD or powder coated finish. A simple regime of cleaning will help to maintain the finish. Cleaners which have a scouring or abrasive action should never be used as this will damage the surface finish.

For applications in harsh environments such as swimming pools and industrial facilities, more substantial maintenance may be required to prevent deterioration of the finished surface which could lead to corrosion. Please refer to Stainless Steel in Harsh Environments opposite.

Satin & Polished Stainless Steel

Regular dusting and periodic washing with a mild solution of washing detergent and warm water, then dry and polish with a soft cloth. No additional treatment is required.

PVD Finishes

Regular dusting and periodic washing with a mild solution of washing detergent and warm water, then dry and polish with a soft cloth. No additional treatment is required.

Anodised Aluminium

Regular dusting and periodic washing with a mild solution of washing detergent and warm water, then dry and polish with a soft cloth.

Silicone wax furniture cream may be applied with a soft cloth after cleaning for protection.

Polished & Lacquered Brass/Bronze

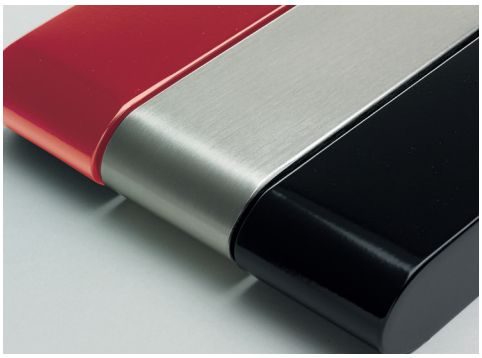
Wash regularly with a mild solution of washing detergent and warm water using a soft cloth, then dry and polish.

Silicone wax furniture cream may be applied with a soft cloth after cleaning for protection.

Under no circumstances should lacquered coatings be subjected to cleaning with abrasive cleaning preparations.

Nylon

Nylon material should be washed regularly with a mild washing detergent and warm water and dried with a clean soft cloth, then wiped over with an anti-static application.



Powder Coated Finishes

Regular dusting and periodic washing with a mild solution of washing detergent and warm water, then dry and polish with a soft cloth. No additional treatment is required.

If you are in any doubt about the finish of your hardware, please contact your local KCC Sales Office.

STAINLESS STEEL IN HARSH ENVIRONMENTS

Contrary to popular belief Stainless steel is “Stain-Less” not “Stain free”. It is not rustproof, particularly when placed in a harsh environment such as a swimming pool, factory or coastal application. Chlorine and bromine used in a swimming pool for sanitization are highly caustic chemicals which are boosted by the heat and humidity.

The corrosion resistance of stainless steel is effected by a passive film of chromium-rich oxide on the surface of the metal. To retain the highest corrosion resistance and aesthetic appeal it is necessary to keep the surface clean to allow the passivation process to take place.

Stainless steel - Which Grade 304 or 316?

When products are to be used in a harsh environment such as a polluted, coastal or chloride rich environment Grade 316 stainless steel should be used, due primarly to the addition of molybdenum up to a maximum of 3%. This increases the corrosion resistance of this chromium-nickel alloy to withstand attack by many industrial chemicals and solvents and, in particular, inhibits pitting caused by chlorides.

Corrosion prevention

To prevent corrosion, a coating of wax (such as automotive wax) provides a physical barrier and may last up to 6 months. Allow the wax to dry to a haze and buff with a soft clean dry cloth.

General maintenance advice

To clean and maintain the naturally occurring oxide layer you should avoid the following:

Never use cleaning products containing chlorine.

Never use steel brushes or carbon steel wool as they leave deposits which will rust on the surface.

Stainless steel should be cleaned at least once a month to attain the best corrosion resistance. Wash with a mild solution of washing detergent and warm water, then dry and polish with a soft cloth. No additional treatment is required.

Maintaining stainless steel in harsh environments

In a harsh environment the cleaning routine should be increased to at least once a week.

Where there are more stubborn spots or staining, a mild, non-abrasive cream or polish can be used (check it is compatible with stainless steel), applied with a soft cloth or sponge and cleaned off with warm water and dried with a towel or soft cloth.

Advanced cleaning for stainless steel

Check equipment regularly and remove any rust spots as soon as possible. Stubborn stains may be removed with a magnesium oxide, ammonia and water paste.

The first stage of corrosion (discolouration and spotting) is easily removed by most commercial metal polishes.

Light rusting without pitting can be removed using strong cleaning agents such s Simichrome Polish.

For advanced corrosion, naval jelly is recommended.

To remove or repair pitting caused by corrosion, mechanical polishing is preferred to chemical cleaning. Scotchbrite works well for this purpose. Work in the direction of the existing grain.

Modus lever handles are manufactured in Grade 316 stainless steel.

DOOR FURNITURE

Lever furniture

Provided it has been installed correctly and is used in conjunction with a suitable lockcase your lever furniture should require only occassional checking and cleaning. Items which are regularly handled should be checked more frequently and kept clean.

The operation of the lever handles should be checked in association with the lockcase as a complete assembly.

MONTHLY	
Check the lever furniture for dirt and grease and wipe clean as directed by the 'Care of Finishes' section on page 6.	

QUARTERLY	
Check that all the fixings are tight (this may mean removing the press on covers of roses or plates) and that the levers are properly aligned each side of the door. Make sure the levers are firmly seated in the rose/backplate and tighten the grub screw fixing of the lever to the spindle.	

ANNUALLY	
Check the operation of the lever handles ensuring that they operate smoothly and return to the horizontal position at all times. Check the operation of thumbturns and indicator/ emergency release on bathroom locks ensuring they operate the deadbolt smoothly.	

Pull handles

MONTHLY	
Check pull handles and push plates for dirt and grease and wipe clean as directed by the "Care of Finishes" section on page 6.	

QUARTERLY	
Check that the fixings are tight on bolt through and back to back pull handles (this may mean removing the push plate on single sided applications, or removing the inside handle on back to back assemblies in order to tighten the fixings). Make sure the grub screw or pin fixings on back to back assemblies are tight	

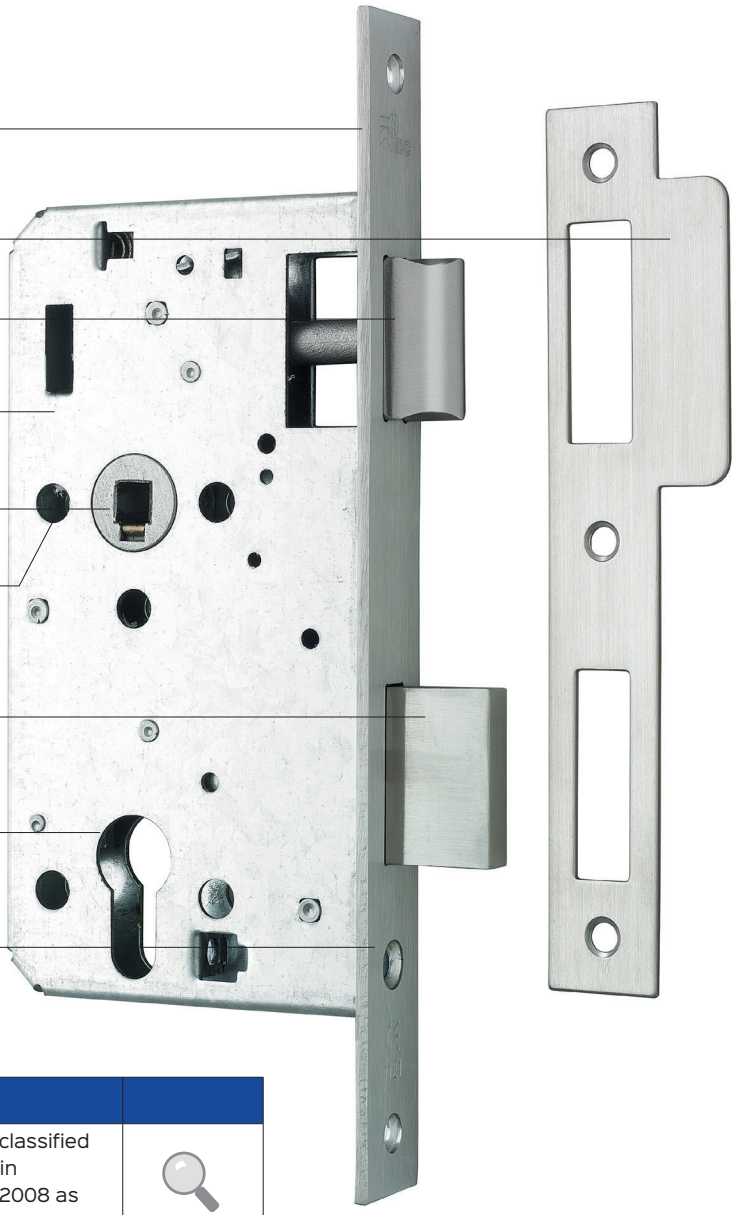
Accessories

QUARTERLY	
Check all other items for dirt and grease and wipe clean as directed by the 'Care of Finishes' section on page 6. Check that fixings are tight.	

MORTICE LOCKS

There are two principal types of mortice lock; cylinder locks and lever locks. The cylinder lock is a two part lock, having a separate locking cylinder which fits into the lockcase. The cylinder protrudes from the face of the door and accepts the key which operates the locking function (see overleaf).

Provided the lock and its hardware have been correctly installed and the door has not been subject to any distortion, the lock and hardware should not need to be adjusted or lubricated.



Lock forend (one or two piece - one piece forend shown)

Strike plate

Latchbolt operated by the lever handles

Lock case. Note, the cover should not be removed

Lock “follower”

Access holes through the lockcase to allow lever handles to be fixed back to back through the lock case

Deadbolt

Cylinder piercing (only on cylinder locks)

Cylinder fixing screw (concealed beneath the forend cover plate on locks with two part forend)

MONTHLY	
Mortice escape or anti-panic lockcases that are classified as Emergency Exit Devices must be maintained in accordance with the requirements of BS EN 178:2008 as detailed on page 16. Check the lock forend and the lever furniture for dirt and grease and wipe clean as directed by the ‘Care of Finishes’ on page 6.	

QUARTERLY	
Check latch and deadbolt operate smoothly and that levers return to the horizontal position. Check latch and/or deadbolt locate fully into their respective strike plate(s). Any misalignment of the lock and strike should be rectified. Check the key enters the cylinder smoothly and the key (and thumbturn if fitted) operates the lock smoothly. Check fixings are tight on the lock and the lever furniture, including the grub screw fixing of the lever handles. If necessary a small amount of light machine oil (e.g. 3 in 1) can be used around the shank of the levers.	

CYLINDERS

Masterkeyed systems

The term Master Keying refers to any organisation of a keyed locking system where there is a hierarchy of access, or where one key is required to operate several individual locks, each of which has its own operating key.

The Master Key system can vary in complexity depending on its application and can involve many levels of Sub Master Keys or just a single Master.

To enable the construction of the Master Key system KCC use a Lockchart which establishes the precise relationship of the cylinders to the access required, linked to the architects building plans. The Lockchart should be kept safely by the building owners/ occupiers.

Cylinder replacement

One of the primary advantages of the cylinder lock is that security can be quickly and easily reinstated if keys are lost or stolen.

The cylinder can be replaced within seconds by removing the cylinder fixing screw (marked A opposite) and inserting a new cylinder. (The cylinder screw may be concealed beneath the face plate on locks with a 2 piece forend).

ANNUALLY	
This maintenance should be carried out at least once a year or every 5000 cycles. Check the key-way is clear of any foreign bodies Use silicone based lubricants for key-way lubrication. We recommend Triflow Lubricant. We do not recommend WD40 or graphite.	

ELECTROMECHANICAL DIGITAL LOCKS

Provided the lockcase or latch and the internal and external elements of the digital lock have been correctly installed and the door has not been subject to any distortion, the assembly should not need to be adjusted or lubricated.

Electronic digital locks which are battery operated need to be checked periodically to ensure the batteries are in good condition and that the unit operates correctly.

For other electronic and hardwired access control please refer to page 19.

WEEKLY	
Most battery powered digital locks have a warning light which indicates when the battery power is low. It is advisable to change the batteries as soon as the light is illuminated. Always change the batteries in accordance with the instructions provided with the product and ensure that all the batteries are changed. When changing batteries, check the battery terminals are free from any corrosion and that the battery compartment is clean and dry.	

MONTHLY	
Check the lock forend and the operating hardware for dirt and grease and wipe clean as directed by the 'Care of Finishes' on page 6. Make sure digital keypads are kept free from grease and dirt which could cause push buttons to stick.	 

ANNUALLY	
On digital locks which operate a mortice lock or latch check for smooth operation. Check that the latch and/or deadbolt locate fully into the strike plate(s). Any misalignment of the lock and strike should be rectified. If the unit has a key override feature check that the key enters the cylinder smoothly and that the key (and thumbturn if fitted) operates the lock smoothly. Check that fixings are tight on the lock/latch and any operating furniture, including the grub screw fixing of lever handles. If necessary a small amount of light machine oil (e.g. 3 in 1) can be used around any mechanical elements.	  

DOOR CLOSERS

In research it is recognised that 95% of all problems associated with overhead door closers can be attributed directly to errors in installation rather than problems with the door closer itself. If the door is not closing properly into the frame you should first disconnect the door closer (disconnect the arms) and determine that there is not an underlying problem with the door, frame or any smoke/draft seals that might be fitted.
The power of the door closer should not be used to overcome problems associated with the door or other items of hardware fitted to it.

Depending on the application the armset may be projecting (as illustrated), lie parallel to the door or be a single arm with a slide track.

The closer cover can be secured to the closer body in various ways; by screw fixings from the end or top face, push or clip on.

Closer body, usually of aluminium or cast iron. Adjustment screws are located on the closer body (concealed by cover). Under no circumstances should the closer body be dismantled or the adjustment screws removed.

WEEKLY	
Release the door from the fully open position and ensure that it closes fully into the frame and that the latch (if fitted) engages fully into the strike plate. Repeat the process a few times from different opening angles to ensure the door closes fully each time. Check and adjust the closing and latching speeds if necessary. Check that the backcheck (if fitted) comes into operation at the desired angle and readjust if necessary. Check the delayed action (if fitted) and adjust the time delay if necessary. Check that the door or hardware does not come into contact with the door frame or the surrounding structure.	

QUARTERLY	
The fixings of the closer body and the bracket (or track in the case of slide track closers) are subject to stress and should be carefully checked to make sure they are tight. Periodically apply a little light machine oil to the moving joints of the arm and bracket or arm and slide track. Check any fire and smoke seals to ensure they do not foul the action of the door. Check for any loss of liquid from the closer body which would indicate a failing device. Clean the closer body, arms and/or track if necessary following the guidance on 'Care of Finishes' on page 6. If for whatever reason, the door closer fails to operate properly, contact your local KCC Sales Office.	   

ELECTROMAGNETIC DOOR CLOSERS

In situations where a fire door in a high traffic area is fitted with a door closer an electromagnetic hold open device may also be fitted which allows the door to be held open or allowed to swing free during normal use. However, in the event of fire the electromagnetic hold open facility will be deactivated and the door will close under the action of the door closer.

- The system is powered by a 24V DC supply which is normally located close to the door either in a ceiling void or convenient cupboard.
- The system must be connected into a separate smoke detection system and/or the building's fire alarm system.
- There are several types of KCC devices including integral hold open closers, hold open floor springs or separate hold open devices which must be used in conjunction with conventional overhead door closers or floor springs.

WEEKLY	
It is vitally important that the integrity of the fire door is maintained in the event of a fire. All electromagnetic hold open devices and the ancillary equipment, including the transformer/rectifier (power supply), must be tested weekly in accordance with the procedures set out in the fire precautions regulations. It is recommended that the following procedure be followed: • With the door in the hold-open position simulate the fire alarm activation and check that the door is released immediately and closes fully into the frame, fully engaging the latch if fitted. The fire alarm may be simulated in a number of ways including activation of a break glass unit or by a built-in test switch on the hold open unit. • With the door in the hold-open position switch off the power to the hold open device to simulate power failure. The door should be released and close fully into the door frame, fully engaging the latch if fitted. • With the door in the hold-open position check that the door can be pulled manually off the hold open and will close fully into the frame. **ANY FAILURE OF THE DOOR TO CLOSE MUST BE RECTIFIED IMMEDIATELY** • Check whether the failure is due to the power supply or the relay not operating in the alarm system • Electronic failure should be checked by a qualified technician to determine the fault. • If the closer fails to close the door please refer to the door closer section of this manual.	

PANIC EXIT HARDWARE

Top shoot (only on panic bolts) to connect active bar with top latch or bolt

Main casing contains the operating mechanism and latch. The cover is removable for maintenance

Latchbolt (rim latch versions)

Strike plate

Operating arm drives the mechanism when the push bar is depressed in an emergency

Active 'push bar'. The latch or bolts must be released when this bar is pushed at any position along its length

Bottom shoot (only on panic bolts) to connect active bar with bottom latch or bolt

MONTHLY	
1. Inspect and operate the panic exit device to ensure that all components are in a satisfactory working condition; using a force guage, measure and record the operating forces to release the exit device. (a) After being pushed , the 'pushbar' or 'touchbar' should return automatically to its initial position. (b) When pushed from the 'end casing' side (hinge side), the side latchbolt and any additional latchbolt/s (if fitted) should completely withdraw from their strikers as if it were pushed from the main casing side. Immediate exit must be permitted. (c) With the door closed, the latchbolts should be fully engaged into their strikers. They should not withdraw if pushed but should only withdraw if operated by the 'pushbar' or 'touchbar' (the only exception to this is the additonal side Pullman latch). (d) Check that latch keeps are securely fixed where Pullman latches are used.	
2. Ensure that the striker(s) is (are) free from obstruction.	
3. Check that the panic exit device is lubricated in accordance with the details contained within the fixing instructions.	
4. Check that no additional locking devices have been added to the door since its original installation.	
5. Check periodically that all components of the system are still correct in accordance with the list of approved components originally supplied with the system.	
6. Check periodically that the operating element is correctly tightened and, using a force guage, measure the operating forces to release the exit device. Check that the operating forces have not changed significantly from the operating forces recorded when originally installed.	
7. Ensure the door closes fully into the frame and there are no obstructions.	
8. Check that the door has not become distorted in some way. If the door does not meet the frame stops and cannot be pulled in by the door closer, the door may need to be replaced.	
9. Check that the hinges are operating smoothly and lubricate if necessary.	
10. Check that the latches are operating freely. If necessary, remove the end box covers and/or pullman covers and lubricate if necessary.	
11. Check that all fixings are tight.	

IMPORTANT

If for some reason the panic device does not operate properly, contact your local KCC sales office.

PANIC EXIT HARDWARE

For panic and emergency exit devices which are fitted with an outside access device, the following routine maintenance must be carried out in addition to the instructions on the previous page.

These devices may also be used with Emergency Exit hardware.

When carrying out the checks and inspections shown on the previous page, the complete assembly, including the outside access device must be assessed.

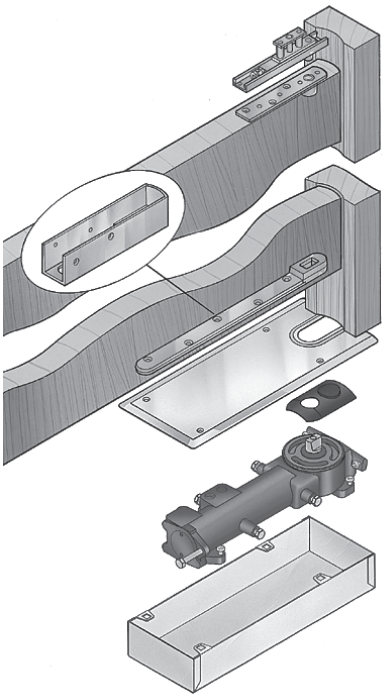
MONTHLY	
1. Inspect and operate the outside access device to ensure that all components are in a satisfactory working condition (a) After being operated, the lever or knob should return automatically to its initial position. (b) When operated by the lever or knob, the latch or bolts of the exit device must be fully withdrawn and the door can be freely opened. (c) Ensure that the cylinder disables the knob or lever handle. For instructions on maintaining the cylinder please refer to page 10. (d) For units fitted with a cylinder only on the outside, check periodically that the cylinder withdraws the latch or bolts from their keeps and allows the door to be opened from the outside. 2. Check that the lever or knob operates smoothly and if necessary apply a little light machine oil around the shank of the lever or knob. 3. Check that all fixings are tight.	   

EMERGENCY EXIT HARDWARE

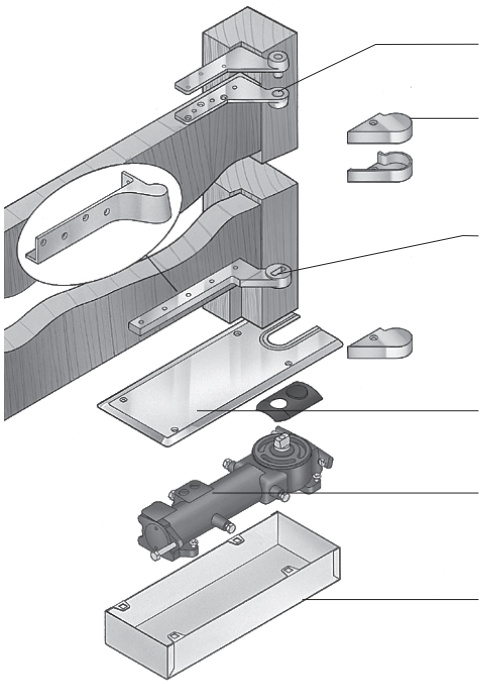
Emergency exit devices are operated by a lever handle or push pad, for use on escape routes to give safe and effective escape through a doorway with one single operation to release the emergency exit device, although this might require prior knowledge of the door situation (eg. inwardly opening).
To comply with the requirements of BS EN179:2008, the following routine maintenance checks should be undertaken at intervals of not more than one month by the building owner or their approved representative, to ensure performance in accordance with the standard.

MONTHLY	
1. Inspect and operate the exit device to ensure that all components are in a satisfactory working condition; using a force guage, measure and record the operating forces to release the exit device. 2. Ensure that the striker(s) is (are) free from obstruction. 3. Check that the panic exit device is lubricated in accordance with the details contained within the fixing instructions. 4. Check that no additional locking devices have been added to the door since its original installation 5. Check periodically that all components of the system are still correct in accordance with the list of approved components originally supplied with the system. 6. Check periodically that the operating element is correctly tightened and, using a force guage, measure the operating forces to release the exit device. Check that the operating forces have not changed significantly from the operating forces recorded when originally installed. 7. Ensure the door closes fully into the frame and there are no obstructions. 8. Check that the door has not become distorted in some way. If the door does not meet the frame stops and cannot be pulled in by the door closer, the door may need to be replaced. 9. Check that the hinges are operating smoothly and lubricate if necessary. 10. Check that all fixings are tight. If for some reason the exit device does not operate properly, contact your local KCC Sales Office.	

FLOOR SPRINGS



Double action floor spring



Single action floor spring

Single action top centre provides an off-centre pivot point for the door

Optional covers fixed to the upper & lower section of the top centre or bottom strap

Single action bottom strap (and alternative shoe) supports and connects the door to the floor spring spindle

Floor spring cover plate is fixed to the loose box and provides a neat finish to the floor

Floor spring mechanism

Loose box built into the floor provides a firm location for the floor spring mechanism

Floor springs require very little general maintenance if fitted correctly.
Doors designated as being on a fire route exit have to be periodically inspected to make sure that they meet the same standards as when they were originally installed. The tests and inspections detailed below should be carried out to ensure the door and floor spring are operating correctly.

Adjustment screws on the unit allow the door to be accurately aligned and adjusted within the frame.
Removal of the cover plate (doors in situ) provides access to the adjustment screws for power, closing speed and other features of the floor spring. Please follow the instructions provided with each unit.

WEEKLY	
Carefully inspect the pivots for signs of wear and remove any debris and corrosive liquids which may have been deposited. Failure to replace any worn pivots could result in the door jamming at critical times. Test the operation of the door by releasing it from the fully open position and ensure that it closes fully into the frame and that the latch (if fitted) engages fully into the strike plate. Repeat the process a few times from different opening angles to ensure the door closes fully each time. Backcheck (if fitted) - Check that the backcheck comes into operation at the desired angle and that the door or hardware does not come into contact with the surrounding structure. Readjust if necessary. Delayed action (if fitted) - Check the delayed action and adjust the time delay if necessary. If the door fails to close properly under the power of the floor- spring you must first determine whether this is attributable to problems with the door and/or frame checking for any obstructions in the frame, on the door or on the floor which might be preventing full closure. Check that the door is not warped and that any seals (if fitted) are not preventing the door from closing properly.	 
QUARTERLY	
Poorly aligned or misaligned doors, particularly in double door configurations are a primary cause of failure. Check that the floor spring mechanism is firmly fixed within the loose box and that there is no movement of the mechanism. Make any necessary fine adjustments of the alignment screws to ensure the doors are perfectly aligned within the frame and with each other in a double door configuration. Check the pivot fixings are tight and apply a little light machine oil to the top and bottom pivots. Make sure the pivot covers and the floor spring cover is clean and free from dirt and grease as directed by the 'Care of Finishes' on page 6.	 

AUTOMATIC DOORS

Automatic Door Checks - Your Responsibility

As a requirement of EN16005 the end user must carry out checks on the door - **"To ensure continued safe operation of a powered door installation, the installation and its environment should be subjected to systematic operational checks as often as is appropriate to the type of installation and its traffic flow."**
For example, in high traffic areas such as shops and hospitals, an appropriate rate would be at least once a week. The results of the test should be recorded and retained by the building owner for at least 1 year.

Automatic Doors and Operators

Automatic doors, including low energy operators, must be maintained under a specialist maintenance agreement by approved technicians certified to EN16005 Code of Practice.
Some simple, regular checks can help to reduce the need for remedial maintenance.
1. Ensure the door(s) remains free from obstructions which might impede the normal opening or closing cycle of the door.
2. Keep the door(s) and operator free from contamination by cleaning regularly. Make sure the operator is dry.
3. Ensure that any floor guides are free from dirt and obstructions which might cause the door(s) to stick.
4. Wipe the surface of any activation and safety sensors with a soft damp cloth and wipe dry.
5. Check the operation of the door(s) is smooth at all points in the opening and closing cycle. The doors should not 'clash' at any point. Make sure any operational problems are rectified immediately.
7. Check the condition of any seals fitted to the doors to ensure they are still functioning correctly and are not distorted.

ELECTRONIC ACCESS CONTROL

Electronic Access Control

Access control systems should require little or no maintenance with the exception of keeping the components clean from time to time. A wipe with a soft damp cloth is generally all that is required. **Do not use abrasive cleaners or solvents.**

For devices which incorporate a mechanical element such as a lever or knob unit and mortice lock, please refer to page 8 for further information.

Electromagnetic locks should be checked from time to time and wiped clean with a damp soft cloth to ensure the meeting surfaces have a clean contact.

For shear magnets, also ensure the locating element of the magnet marries up with the corresponding slot in the armature and is clear of obstruction.

For electric strikes, a little light machine oil may be used from time to time around the pivot point of the strike jaw to maintain a smooth operation.

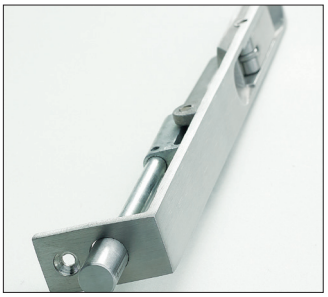
Access Control Troubleshooting

Any operational problems with your access control system should be tested and rectified by a qualified technician. However, beforehand you should first establish that the problems are not related to any of the following:

- Interrupted power supply (mains supply or battery). Please note, a blown fuse or breaker might be easily remedied but it may be indicative of an underlying electrical problem which should be checked by a qualified technician.
- Misalignment of electromagnetic lock, solenoid lock, electric strike etc which might be preventing the lock from releasing or locking up (may be caused by misalignment in the door which must be rectified).
- Computer hardware (if relevant) operating correctly and software correctly installed.

If you are still experiencing problems with your system you should contact your installer or your local KCC sales office.

MISCELLANEOUS HARDWARE ITEMS

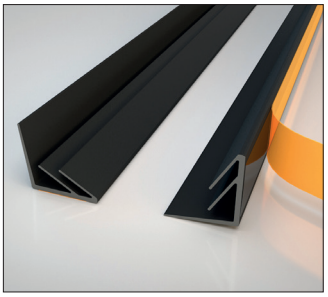


Bolts

Flush bolts and barrel bolts should require very little maintenance. However, it is advisable to check their operation from time to time to ensure they are operating correctly.
Check periodically that sockets, particularly floor sockets, are free from dirt and dust which may have accumulated and can prevent the bolt from being fully thrown.
Check fixings remain tight and keep bolts free from dirt, wiping occasionally with a damp cloth.

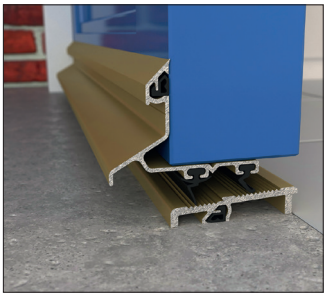
Hinges

Some KCC hinges are self lubricating and require little or no regular maintenance. It is advisable to check their operation from time to time to ensure they rotate freely as this can have an effect on the operation of door controls. A little light machine oil can be applied to the bearing surfaces occassionally, making sure to wipe off any lubricant from the surface of the hinge.
Check fixings remain tight and keep hinges clean and free from build up of dirt.



Door seals

From time to time check door seals to make sure they are functioning correctly. Distorted, split or over compressed seals should be replaced as they will have become ineffective or may even prevent proper closure of the door. Make sure fixings are tight and that self adhesive seals are not coming away.

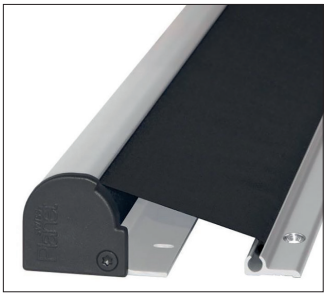


Thresholds

Removable thresholds, including thresholds for wheelchair access, should not require any maintenance but regular inspection of the condition of the threshold, its seals and fixings is recommended to ensure they are functioning correctly. Clean off any accumulated dirt or obstructions. Distorted or damaged thresholds or damaged seals may impede the proper closing of the door and must be replaced.

Acoustic drop seals

Check seals as for Thresholds above. In addition check the operation of the drop seal and the alignment of the strike to ensure that the seal is triggered and continues to drop across the entire length of the seal. Any defective, distorted or damaged seals should be replaced.



Finger protection

Provided the finger protection has been correctly fitted it should continue to function safely without the need for any regular maintenance. However, as with all safety products, it should be checked from time to time to ensure it is in good working condition. Check the PVC finger protection on each side of the door has no splits and that when the door is opened the carrier strips remain flat to the door and the frame along the entire length.
Any marks can be wiped away from the PVC surface using mild soapy water. Wipe clean and dry.

WARRANTY TERMS

a) The Seller warrants the Goods against defects in design, materials and workmanship which become apparent within the warranty period applicable to the Goods (hereinafter called "the Warranty Period") which shall be a period of twelve months (or such period as may be stipulated in the Technical Submittal / Datasheet) stipulated from the date of issue of the Sellers invoice.

b) The Seller's liability for defective Goods under this warranty is limited to repairing or, at its option, replacing on an exchange basis, such Goods (or parts thereof) or crediting the Purchaser's account to the invoice value and the Purchaser shall accept such of the aforementioned remedies as the Seller shall proffer as being fulfilment of the Seller's obligation under the Agreement for Sale.

c) In the event of the Purchaser becoming aware of a defect in the Goods during the Warranty Period, the Purchaser shall within 14 days of discovering such defect supply the Seller with written particulars of such defect and at the Seller's sole option either return the Goods to the Seller at the Purchaser's expense and risk or permit the Seller to inspect the same at the Purchaser's premises and use its best endeavours to provide to the Seller all necessary access and other reasonable facilities and all information, particulars and assistance required to enable the Seller to ascertain or verify the nature and cause of the defect claimed and to carry out its warranty obligations.

d) The above warranty shall not apply to any defect discoverable on inspection at time of receipt or caused in whole (or in part) by any alteration or addition to the Goods (other than by the Seller) or by use or storage of the Goods in a manner contrary to any written instructions of the Seller, or for purposes for which the Goods were not designed, or by faulty installation, maintenance or repair by the Purchaser or any third party.

e) The Seller shall be under no liability whatsoever to repair, replace or make good any loss, damage or defect which results from insufficient care & maintenance, wear and tear, accident, neglect, misuse occurring after the physical delivery of the Goods to the Purchaser (or its agent). For the avoidance of doubt warranty cover for surface finish deterioration caused by lack of maintenance, chemical or abrasives actions or by damage caused by metallic objects such as jewellery, keys etc. are excluded.

f) When any defective Goods are replaced, the provisions of this Condition shall apply to the replacement Goods for the unexpired balance of the Warranty Period, or one-half of the applicable Warranty Period referred to in sub-clause (a) above, calculated from the date of replacement whichever is the longer.

g) The Purchaser shall accept the Seller's liability under the above in lieu of all and every condition, warranty or representation whatsoever whether express or implied by statute, common law, trade usage, custom or otherwise as to the quality or fitness for any particular purpose of the Goods. The Purchaser acknowledges that all specifications and details in catalogues, quotations and the Order Acknowledgement or any similar documents or by word of mouth and all forecasts of performances, however given, are approximate only and do not form part of the Agreement for Sale and that in respect of such specifications details and forecasts the Seller shall be under no liability nor shall the Purchaser be entitled to any remedy under the provisions of the Misrepresentation Act 1967.

YOUR NOTES

YOUR NOTES

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