



SEALED DOOR SOLUTIONS





Surelock McGill is a leading designer and manufacturer of high-performance locking solutions and ancillary door furniture with over 60 years of experience. Our products have achieved a multitude of international security accreditations to provide certified resistance against forced entry, blast and ballistic threats, as well as fire containment and life safety egress.

Our focus has always been to design high-quality, robust door and gate locking solutions built for challenging environments, including industries such as oil, gas, power generation, national infrastructure, defence, healthcare, and more.

We manufacture an expansive range of locking systems and ancillary products to meet as many global operational and performance requirements as possible.

Our Solutions Include:

Multi-point locking

To assist with optimised sealing of the door and provide resistance against challenging threats of flood and gas suppression. Our multi-point locks offer forced entry, blast, ballistic and fire protection. Manufactured from Grade 316 stainless steel to suit even the most hazardous environments.

Cylinders and cylinder guards

Our high-security cylinders protect against unwanted intruders and resist forced entry attempts using picking, bumping and snapping methods. Project-specific cylinder suiting minimises inconveniently large key bunches.

Door and window components

Our high-performance hinges, handles, barrel bolts, vision panels and automatic door operators ensure doorsets continue to meet their functionality, accreditation, and end-user operational requirements.

APPLICATIONS & ENVIRONMENTS

High-risk locations where people and assets are at risk of harm by pressure build up, blasts, noise pollution and hazardous weather require a specific solution that combines environmental control, life safety, and operational reliability.

Over the years, Surelock McGill has worked closely with customers to develop locking systems and ancillaries for these exact environments. Our expertise extends to securing gas-tight doors, combining sealing requirements with security to satisfy performance expectations, suit various applications, and meet international accreditations.

These solutions only scratch the surface of the knowledge and assistance we can provide to meet your special requirements. You can see several installation examples below; however, please do not hesitate to contact us for unique applications. We may have already found the most suitable solution in one of our projects.

Flood Risks

Controlling and preventing water leaks is mandatory for locations where natural disasters such as typhoons are common or a rising threat due to global warming. Sealing solutions must provide airtight closure to keep people and assets safe from damage caused by flooding. Using our products will help to save lives and protect properties from repetitive incidents.

Acoustic Insulation

Modern health and safety legislation requires heavy manufacturing, oil, gas, power generation, and other industrial businesses to provide suitable sound attenuation measures to protect staff, equipment/assets, residents, and wildlife. Our solutions help reduce sound transfer and enhance privacy in areas where sensitive matters might be discussed.

Positive and Negative Pressure Control

Certain industries, such as healthcare, chemical processing and data centres have positive and negative pressures within different rooms. Positive pressure essentially means pressure is higher inside the containment than outside and will not be balanced until air flows out. Negative pressure is created when air volume is displaced, and new air needs to flow in to balance the environment. These locations require airtight seals to control air pressure and prevent the exchange of gases.

Harsh Environments and Weathering

Whether the challenge is coastal, offshore, polar, desert, or any other hazardous weather, businesses world wide require solutions that protect assets and people against their local elements. Our sealed door range helps to maintain a clean and safe environment against extreme conditions, including storms, heavy rain, freezing temperatures and more. The stainless steel material ensures long-lasting protection even in the harshest environments.

Tunnel Networks

Rail and transportation tunnels present a unique challenge, as doors here must resist continuous, dynamic pressure while allowing staff and passengers to swiftly escape in an emergency. These applications can also require bidirectional escape, fire protection, and security features that help prevent trespassing and resist vandalism and terrorist attacks.

MULTI-POINT SYSTEMS

Providing Continuous Perimeter Door Seal

Our Slimline systems are modular multi-point bolting and/or locking solutions with additional bolts and keeps available for improved sealing performance. If required, bolts can be installed across the central, top and bottom positions or the hinge side of the door to assist in spreading the seal compression more evenly across the whole door. This will help to stop flood, fire, gas and acoustic leakage.



3-Point (3A)



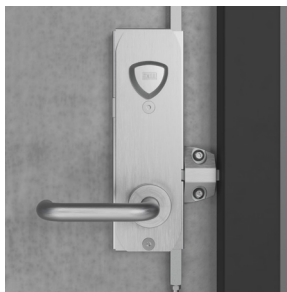
3-Point (3C)



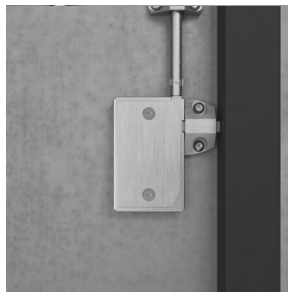
5-Point (5A)



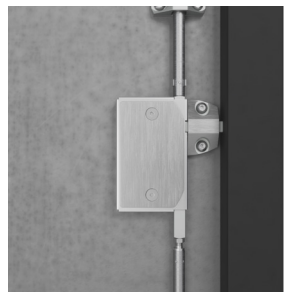
7-Point (7A)



Center Module



Auxiliary Unit with
Horizontal Bolt

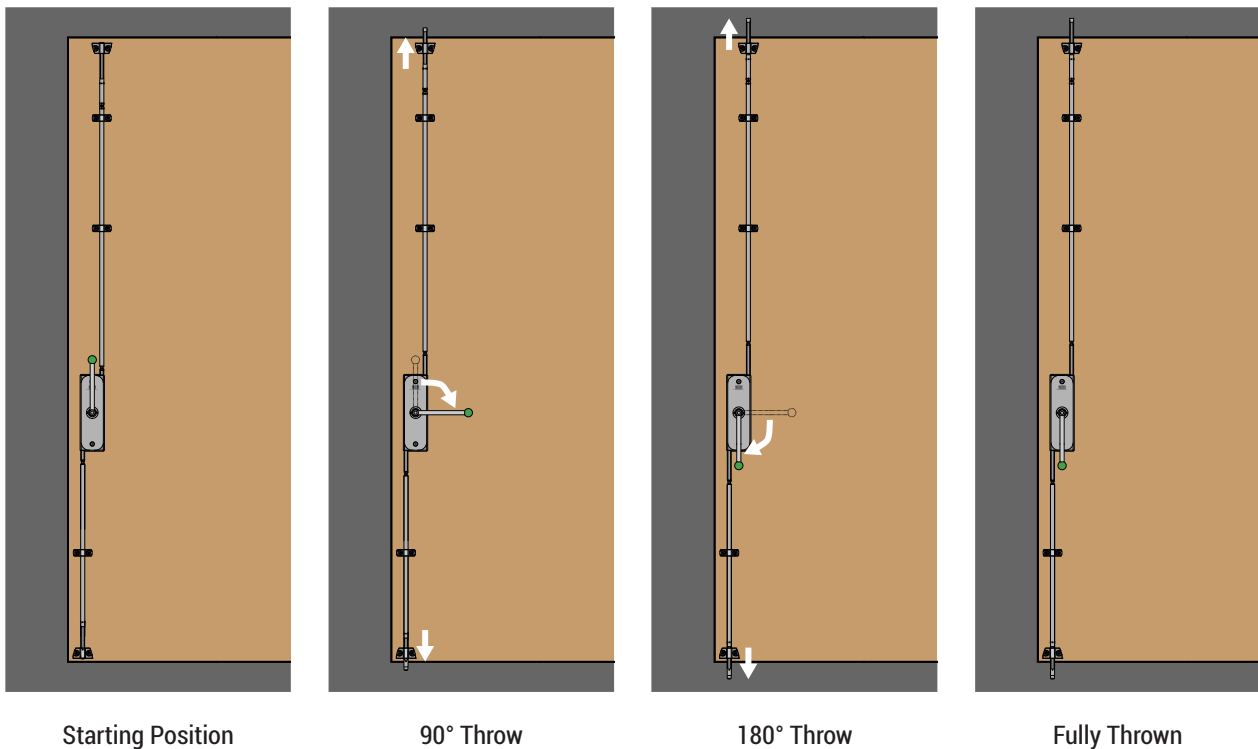


Auxiliary Unit with Horizontal
and Vertical Bolts

Extending the Perimeter Door Seal

Heavy-duty solutions with enhanced security performance, such as the Coniston, provide a robust and reliable solution for oversized and sliding doors at locations where blasts, acoustic threats, floods and uneven pressure put daily procedures at risk.

The Coniston's variable bolt throw offers versatility and resistance to withstand extreme blast pressures. The standard bolt engagement at 90° throw protects against unauthorised entry and hazardous conditions. Turning the handle to the 180° throw will increase the bolt engagement to its maximum to resist higher blast threats and keep occupants safe from the pressure of larger explosions. To further support this, the Coniston's bolts can be enhanced with tapers for improved sealing performance.



Starting Position

90° Throw

180° Throw

Fully Thrown



Center Module



D25 Bolt Ends

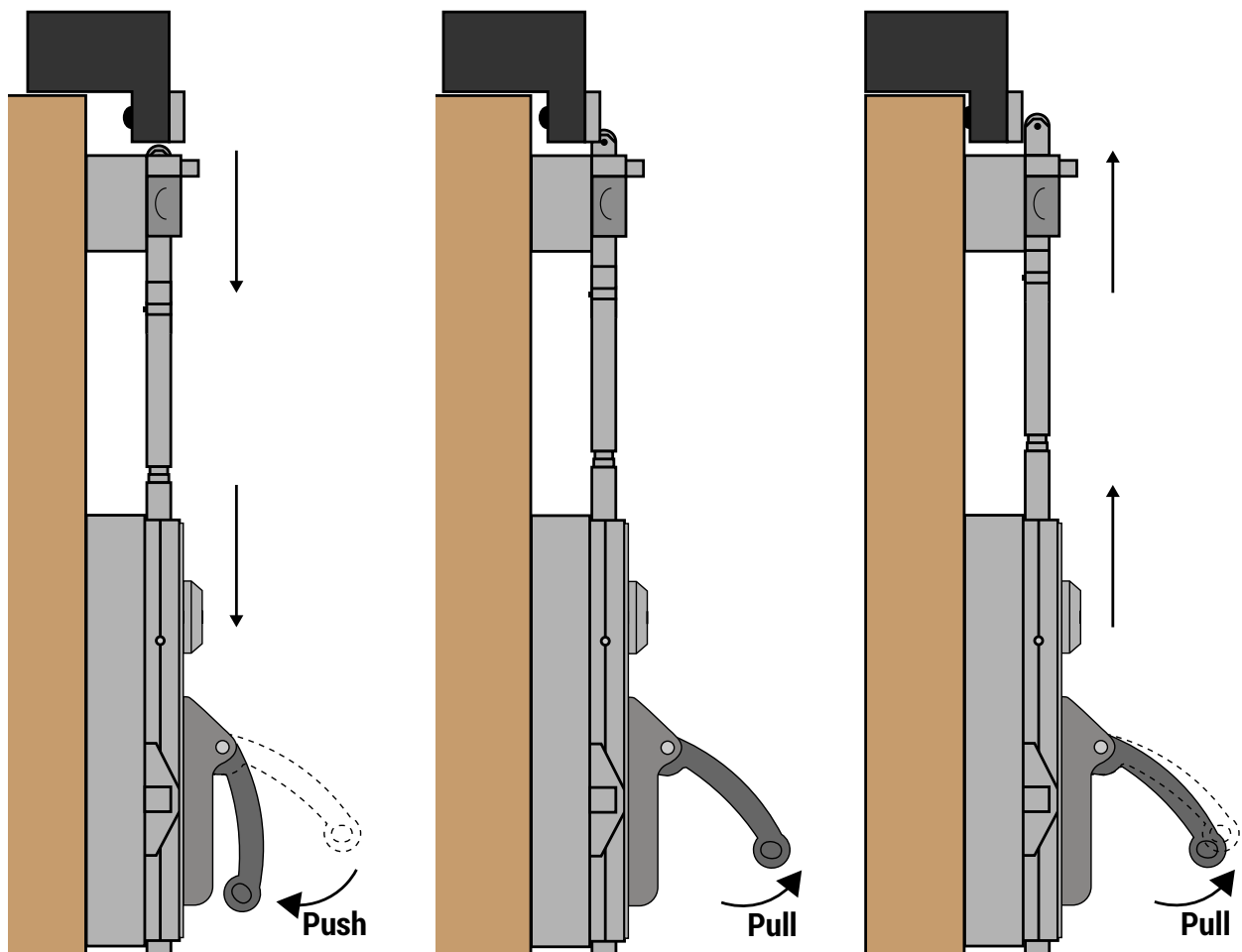


D50 Bolt Ends

ADDITIONAL MANUAL LEVERAGE

Heavier seals can often cause the door to be misaligned, poorly installed or undermaintained, resulting in the bolting system not being able to fully engage. Selective Surelock McGill panic bars with an upward lift facility or lever handle can help to increase seal compression for these installations.

Manual lifting of the panic bar or lever handle assists the bolts in engaging into their fully thrown position to provide positive compression all around the door seals. Life safety panic and emergency exit will always be maintained as the panic bar meets EN 1125 and the lever handles meet EN 179.



Full Retraction

Auto-Bolting

Sealed Door (Final pull)



SAFE ENTRY INTO PRESSURISED ROOMS

In industries such as manufacturing, healthcare, energy and technology, pressurised rooms are necessary to protect against contamination and the impact of environmental factors, including product deterioration. However, entering a room with lower or higher pressure without a safe method of entry can cause physical injuries, minor or large explosions and damage to valuable equipment.

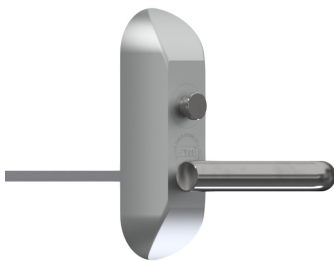
Our two-step entry system is designed with life safety in mind. It allows the user to release a door within a room with high internal pressure (positive pressure) by providing a controlled and safe method of entry.

First Movement

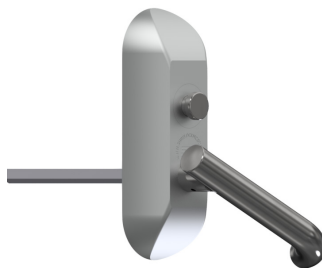
Pulling the lever handle down halfway retracts the bolts, allowing the door to partially open and excess pressure to escape. The bolts are held at this rest position on the pressure relief keeps, preventing the door from opening further.

Second Movement

This is a two-handed operation. The first step is to press the button above the lever handle, which then allows the handle to be further rotated. When fully rotated, the bolts will retract from the keeps, and the door can be opened. This design reduces the risk of opening the door whilst it is under pressure and causing potential harm to the people entering.



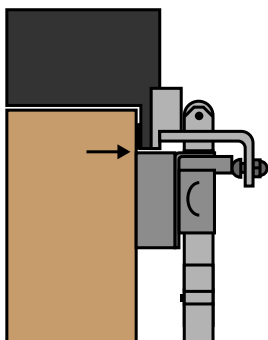
2-Stage Handle At Rest
(Sealed securely)



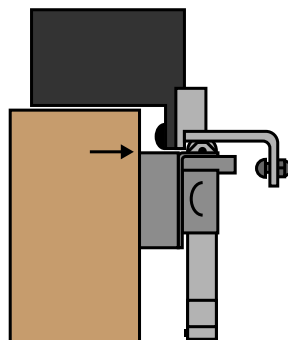
First Movement
(Pressure released)



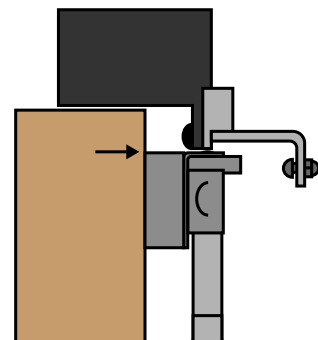
Second Movement
(Free to open)



Bolt Fully Thrown
(Sealed securely)



Bolts Partially Retracted
(Pressure released)



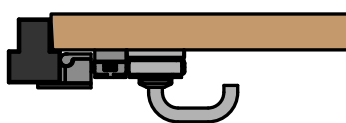
Bolts Fully Retracted
(Free to open)



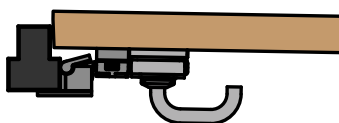
Pressure Relief Keeps

Our pressure relief keeps serve a dual purpose. On the one hand, they securely lock doors that contain positive pressure to prevent accidents. However, if the positive pressure in the room builds up too high, the keeps will fail in a controlled method to allow the door to swing open. This functionality will help to minimise explosions and the risk of higher-scale blasts by venting the room when a threshold is reached. This could be very advantageous for applications involving hydrogen, for example.

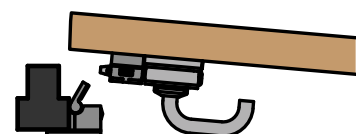
The pressure relief keeps are individually manufactured to suit the pressure requirements of each application.



Door Closed
(Door secured)



Initial Release of Pressure
(Controlled failure)

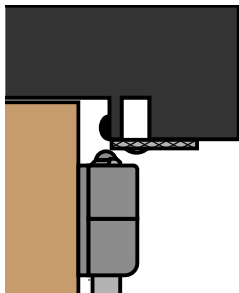


Pressure Released
(Door swings open)

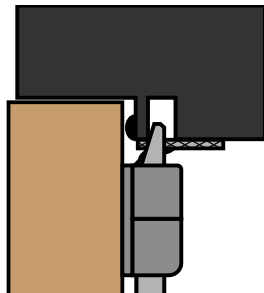
OUR SEALED DOOR ANCILLARY RANGE

Tapered Bolt Ends

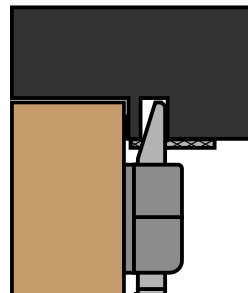
Our tapered bolt ends assist in pulling the door into the frame in a high-pressure environment. They also evenly apply compression to the seals around the door edge. The bolt ends are typically used on outward-opening doors, where the frame is deep enough for the bolts to engage into a keep within.



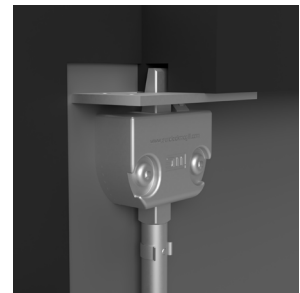
Open



Partially Closed



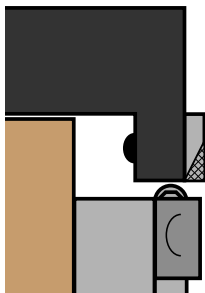
Closed



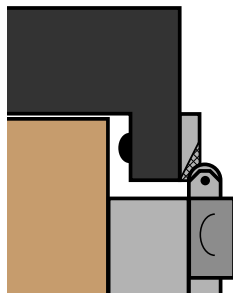
Tapered Bolt Ends

Tapered Keeps

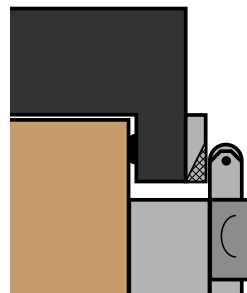
As an alternative, we also offer tapered keeps to provide the same assistance.



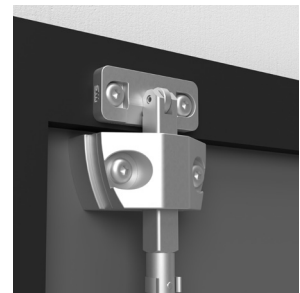
Open



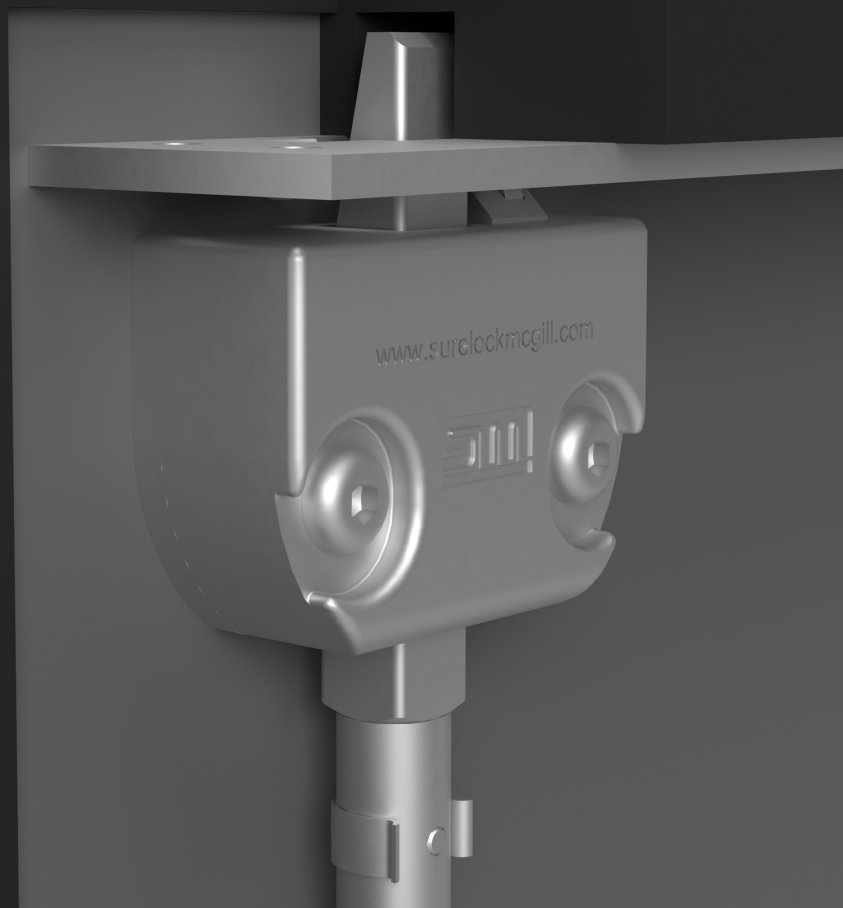
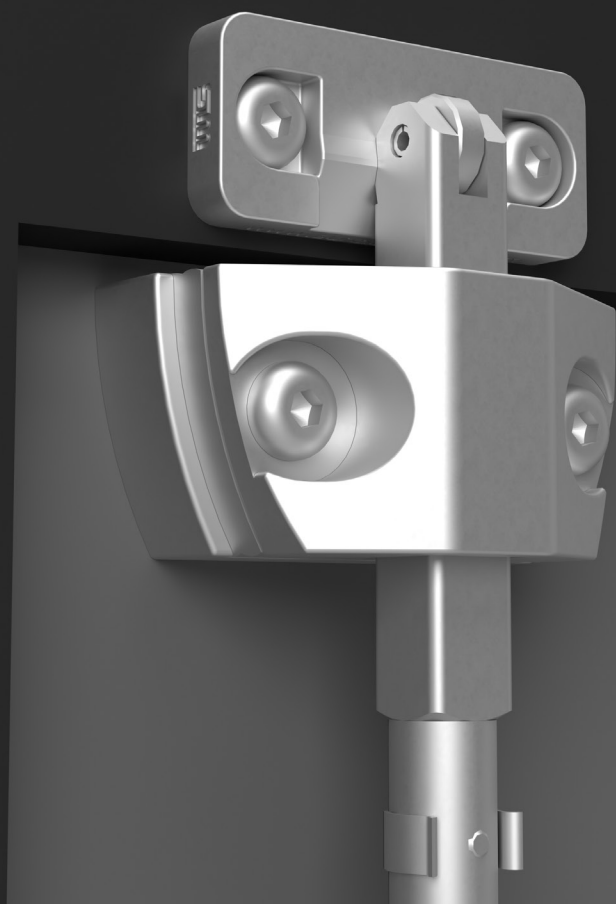
Partially Closed



Closed

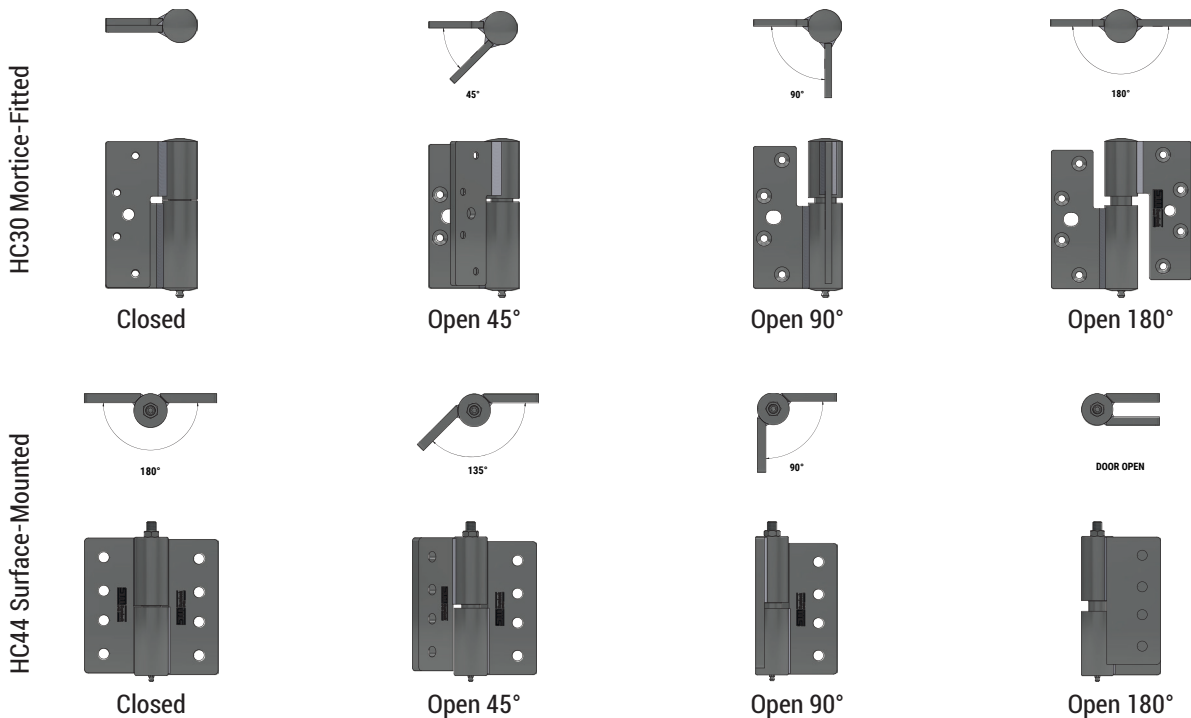


Tapered Keeps



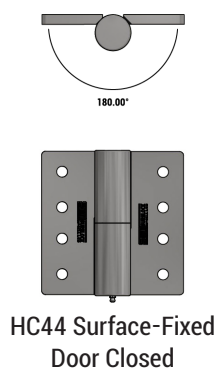
1. HINGES

Doors need enough pressure from momentum to close without leaving a gap. Our range includes both cam lift and lift-off hinges to ensure a solution for every request. Fitted tightly to the door leaf, our cam lift hinges allow doors to lift up and lower down to shut fully, reducing the risk of leakage and early wear and tear of the seal. Designed to recess into the door and frame, our lift-off hinges support heavy doors up to 350 kg (770 lbs). Engineered for high-pressure environments, they enable effortless installation in challenging or confined spaces.

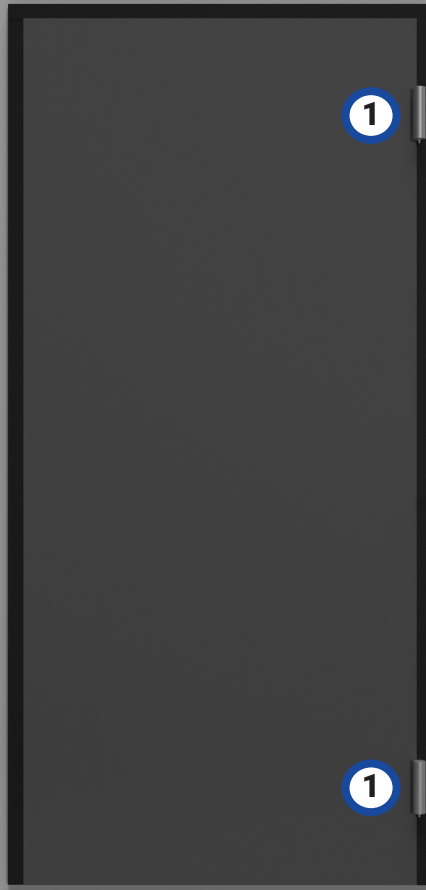


2. SUPPORT HINGES

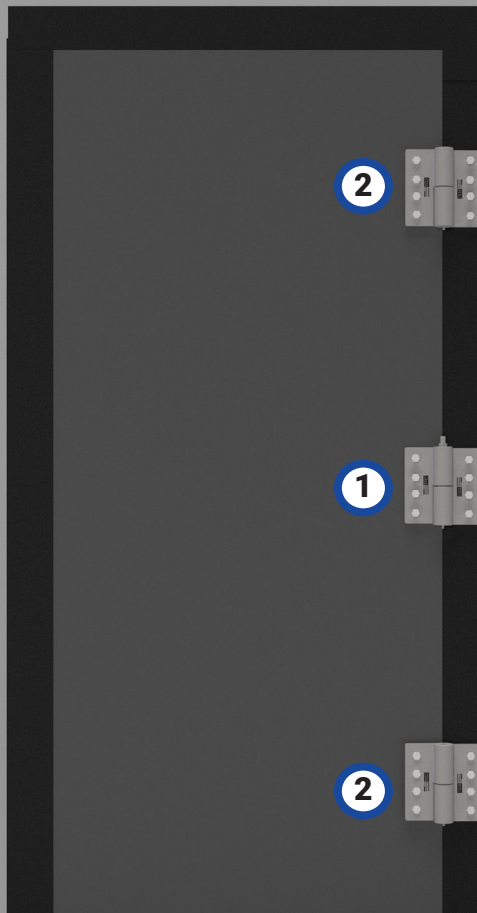
Fitted at the top and bottom of the door, our support hinges are designed to be combined with our HC44 Cam Lift Hinges to provide lateral support during the rise and fall momentum.



HC30 HINGES



HC44 HINGES



OTHER CONSIDERATIONS

Panic and Emergency Actuators

Our life safety devices are tested and certified to EN 1125, EN 179 and UL 305 to provide safe escape routes and keep the premises secure in the event of a panic or an emergency situation. The Surelock McGill range is available with several single and multi-point options to provide easy-to-use egress for any location:



Panic Bar (Blade)



Panic Bar (Tube)



Push Pad



Emergency Lever

Cylinder Guards

Our cylinder guards further enhance security for locations where uncompromised entry and exit are non-negotiable. The range has been developed and continuously improved to protect against multiple threats, including manipulation, bumping, physical attack, ballistic, blast and fire. Tested and certified to a range of standards, including LPS 1175, EN 1627, FEBR, EN 1522/1523, UL 752, ASTM F2927 and EN 1634-1.



GSS2/GSS3



GSS4



GSS5



GSS7

Corrosive Environments

Damage from corrosion lowers the efficiency of locking systems and risks operational failure. This is particularly dangerous for life safety solutions. All of our products are manufactured using Grade 316 stainless steel as standard to withstand the harshest of hostile and hazardous environments. Each locking system is salt spray tested to EN 1670 Grade 5 corrosion resistance up to 480 hours and tested to over one million cycles for longevity.



Functionality and Operational Requirements

Our flagship Slimline multi-point locking system is a fully customisable, highly accredited unit suitable for any application. Its various features help to enhance door sealing strength, security performance and traceability for audit trails. The range caters to virtually all operational requirements for both entry and egress, including:

12V DC or 24V DC Access Control	Motorised Locking and Bolt Retraction	Bolt and Lock Status Monitoring	Visual Indicators	Fail Safe and Fail Secure During Power Failure

Through-Bolt Kits

These provide the ideal retrofit solution for installing Slimline multi-point systems to any doorsets.

No Entry Provision	Handle Only Entry	Handle and Rim / Euro Cylinder Entry	Handle and Cylinder Guard Entry



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