

Electromagnetic Locks



FM 00401



EMS 66705

When specifying a product from Ingersoll Rand Security Technologies you can be assured that an uncompromising attention to detail has been given to every stage of design and manufacture. This ensures that its products and systems meet the highest possible quality and conformity certifications and exceed the requirements of all applicable European Standards.

A global leader in every sense of the word, Ingersoll Rand Security Technologies has an unrivalled track record in satisfying the demands of architects, designers, specifiers and building contractors throughout the world.

Ingersoll Rand Security Technologies manufactures a portfolio of market leading products, including Briton, the UK's number one brand of door controls. The Briton name is synonymous with high quality design, reliability and durability and is at the forefront of supplying products that meet the new European CPD requirements, such as one of the first ranges of CE marked fire exit hardware and door controls.



Briton

Door hardware and security products

Normbau

Coloured nylon design systems

Randi

Scandinavian stainless steel design systems

Schlage

Commercial and domestic security systems

CISA

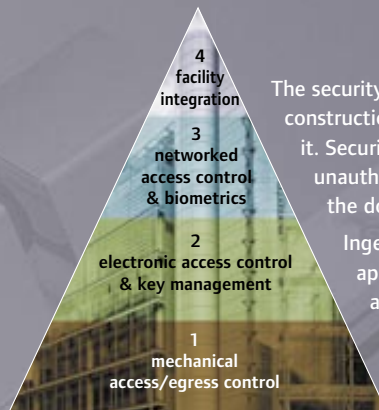
Hotel locking and security systems

In addition, Ingersoll Rand Security Technologies produces a wide selection of contemporary door hardware, including Randi, an architect-designed suite of stainless steel door furniture and bathroom fittings, manufactured at its factory in Denmark.

An extensive series of coloured nylon and stainless steel products are manufactured in the company's German facility under the Normbau brand. The range incorporates lever and pull handles as well as complementary accessories, a comprehensive railing system and products for people with special needs.

Manufactured in Italy and designed to suit even the most demanding professional requirements in the security sector, Ingersoll Rand Security Technologies' CISA range incorporates traditional hardware products, hotel locks and advanced access control systems with 'smart card'.

Briton Electromagnetic Locks

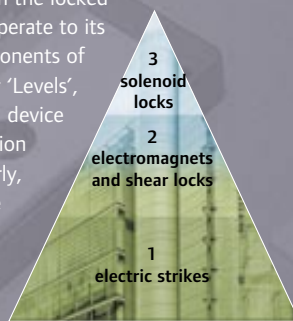


The security of any particular door is a complex combination of the door construction, its application and the door operating hardware used with it. Security is not merely a matter of presenting a physical barrier to unauthorised entry, but ultimately concerns not only who has access to the door but how well this authorisation is controlled.

Ingersoll Rand Security Technologies is able to provide a multi-level approach to access and egress solutions to suit different door applications. Briton Electromagnetic locks can be used as an integral part of an electronic access security system providing solutions from Level 2 up to Level 3.

Electronic Access Control (EAC)

As part of an electronic access control system, the selection of the most appropriate means of holding the door in the locked position is essential if the system is to operate to its optimum level. Wherever possible, components of a system should be selected from similar 'Levels', i.e. as a 'rule of thumb' an access control device from Level 2 should be used in conjunction with a locking device from Level 2. Clearly, a high security solenoid lock will provide a high level of physical security but this would be compromised if it were used in conjunction with a simple digital PIN reader.



Briton 9300 Series



Briton 9500 Series

Briton 9300 Series

The highest levels of security, features and quality were paramount in the production of the Briton 9300 Series. The Briton 9300 Series is a range of high specification surface mounted 'face to face' electromagnetic locks developed by Ingersoll Rand Security Technologies. Each of the products in the range is designed on a common platform making specification, installation and operation very simple.

Briton 9500 Series

The Briton 9500 Series are surface mounted 'face to face' electromagnetic locks. The Briton 9500 Series is designed for use in projects where budget is a prime factor.

Briton Shear Locks

The Briton range of electromagnetic locks includes a wide range of mortice mounted and surface mounted shear locks offering high levels of security coupled with the discreet sophisticated aesthetic of concealed fixing. Briton Shear Locks are ideally suited to applications which require high levels of security or where surface mounted hardware must be avoided.



Briton Shear Locks

Extruded aluminium housing with adjustable mounting bracket makes installation quick and accurate

Electromagnet with holding force of 320kg (Briton 9320) and 750kg (Briton 9390)

Standardised modular circuit board with easy-to-install connectors makes the installation process simple.

Optional operating features include:

Adjustable time delay (ATD) controls the magnet relock time between 1 and 30 seconds

Door status monitor (DSM) indicates that the door is open or closed when monitored remotely

Magnetic bond sense (MBS) indicates that a bond exists between the magnet and armature which, when monitored remotely, provides assurance that the door is locked. Also available with LED visual indicator (MBS/L1)

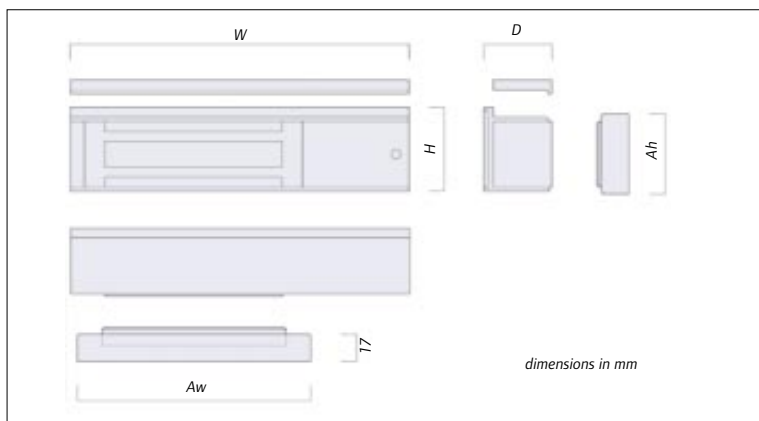
Anti-tamper switch (ATS) indicates that the cover is securely fastened and that the on-board circuitry is secure

Powermiser (PWM) lowers the power consumption to 160mA @ 12v DC (Briton 9390 only) enabling a higher number of magnets to be managed by a single power supply

Signal module time delay (SMTD) provides an audible and visual signal at the lock that it is unsecured

Unique armature housing eliminates twisting and misalignment. Too many times magnet armatures are fitted incorrectly. Rubber mounting washers fitted behind the armature which are essential to provide a positive contact are often discarded during installation. The armature of the Briton 9300 Series sits on built-in cushioned feet within the armature housing ensuring a positive contact is always made between the magnet and the armature

Slide in cover plate is available in a range of architectural finishes to suite with other door hardware (see Product Selector on page 10 for further details)



dimension (mm)	Briton 9390.xx	Briton 9320.xx
W	266	217
D	41	41
H	70	54
Ah	65	51
Aw	220	150

Briton 9300 Series



The Briton 9300 Series Electromagnets

The Briton 9300 Series is a top quality 'face to face' electromagnetic lock for high specification applications. A wide range of accessories makes the 9300 Series suitable for inward or outward opening, single or double doors in timber, metal or glass constructions.

In addition to the functional characteristics, the 9300 Series features a slide in cover plate, available in a number of architectural finishes and a unique armature housing which increases the product's reliability and appearance on the door.

9300 Series Specification

- Extruded aluminium housing with slide in finishing plate
- Holding force - 320kg (Briton 9320)
- 750kg (Briton 9390)
- Voltage - 12v or 24v DC (all models)
- Current Draw - 750mA @ 12v DC
- 380mA @ 24v DC

product ref	description
9320.xx	magnet for single door
9322.xx	magnet for double door
9390.xx	high security magnet for single door
9392.xx	high security magnet for double door
9391.xx	magnet with split armature for double door*
9390.PIR.xx	magnet for single door with PIR activation

* when used with split armature the holding force of the single magnet is divided between the 2 door leaves

For complete product selector please refer to page 10.

9300 Series Specification Options

- Magnetic Bond Sense (MBS)
- Door Status Monitor (DSM)
- Time Delay function
- Anti-Tamper switch
- Powermiser option
- Signal module time delay
- Full range of accessories including:
 - Top jamb bracket for inswing doors
 - Herculite door bracket for glass doors (shims suitable for 12mm or 19mm glass)
 - Angle brackets and filler plates for varying frame dimensions
 - Horizontal and vertical architectural housings



Extruded aluminium housing with adjustable mounting bracket makes installation quick and accurate

Electromagnet with holding forces from 270kg (Briton 9551) to 545kg (Briton 9501).

All units are 'fail unlocked' providing safe exit in the event of power failure if interfaced to fire alarm outputs

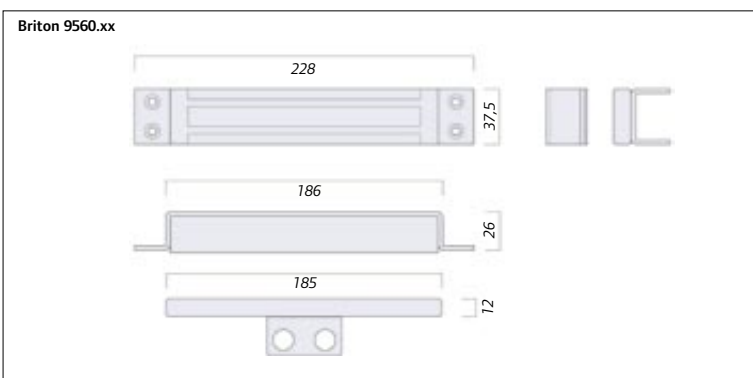
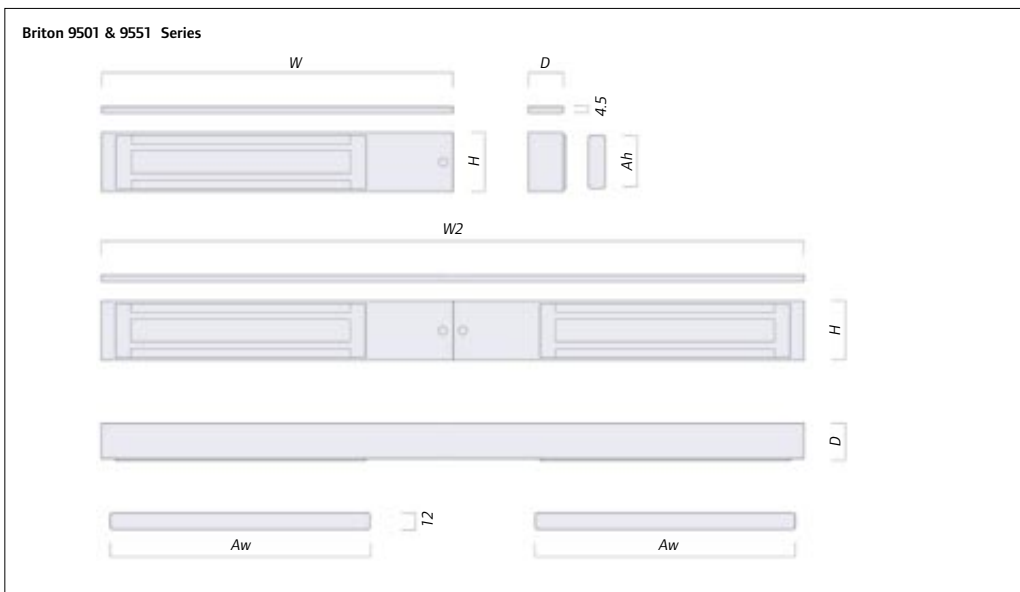
On-board circuitry makes installation simple. Standard units are unmonitored.

Optional operating features include:

Door status monitor (DSM) indicates that the door is open or closed when monitored remotely

LED indicator on underside of monitored versions

Steel armature is fixed through the door providing a secure mounting



Dimensions (all dimensions are in mm)

dimension (mm)	Briton 9501	Briton 9551	Briton 9502	Briton 9552
W	266	250	-	-
W2	-	-	532	500
D	40	25	40	25
H	73	42	73	42
Ah	60	38	60	38
Aw	185	185	185	185

Briton 9500 Series

The Briton 9500 Series Electromagnets

The Briton 9500 Series is a high quality range of 'face to face' locking devices offering up to 545kg holding force. The range includes small footprint 'mini-mags' for lower security applications and a mortice mounted version for use with custom made architectural housings for single or double door applications. As standard 9500 Series electromagnets are suitable for outswing doors but can be converted for use with inswing doors using a series of Z and L brackets.

9500 Series Specification

- Extruded aluminium housing (except 9560 die cast aluminium)
- Holding forces - 270kg (Briton 9551 & 9560); 545kg (Briton 9501)
- Voltage - 12v or 24v DC (all models)
- Current Draw - 500mA @ 12v DC (9501/9502/9551/9552)
- 250mA @ 24v DC (9501/9502/9551/9552)
- 480mA @ 12v DC (9560); 240mA @ 24v DC (9560)
- All units are 'fail unlocked'
- 3 year guarantee (for full details of the guarantee please contact our Customer Care Centre on 0191 430 2500)



product ref	description
9551.xx	mini magnet for single door
9552.xx	mini magnet for double door
9501.xx	magnet for single door
9502.xx	magnet for double door
9560.xx	mortice mounted single magnet

9500 Series Specification Options

- Flush mounting armature housing
- Z and L brackets for inswing doors
- Custom horizontal and vertical housings for 9560 magnets



Briton GF3000 Shear Lock

The **GF3000** is a mortice mounted shear lock which is mounted in the underside of the head frame, with the armature mounted in the top edge of the door. It may also be mounted in the vertical edge of the door and frame. It offers the advantage of a totally concealed mechanism when the door is closed, suitable for both metal and timber door and frame constructions.

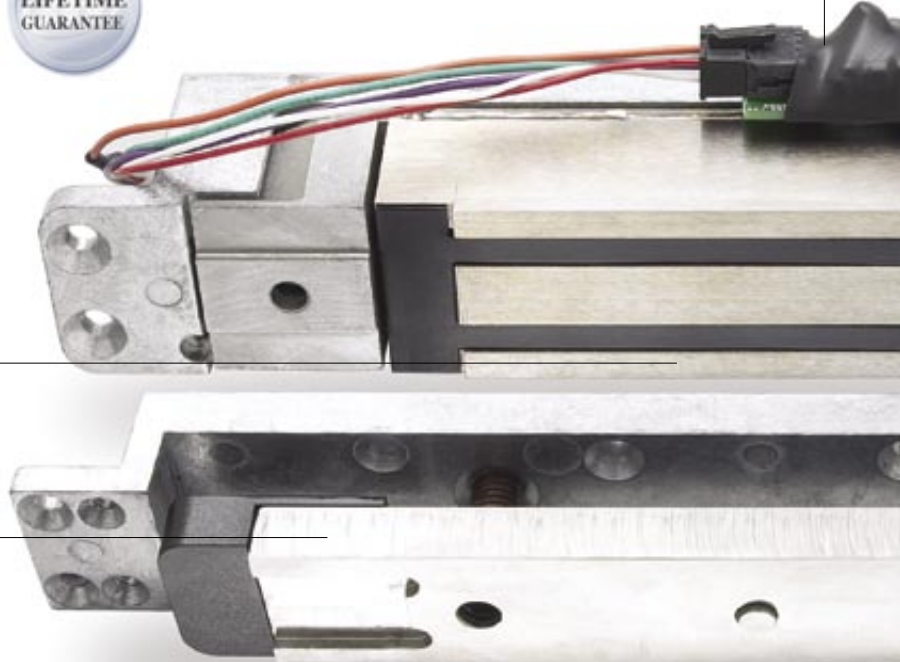
Patented Floating Action

Correct alignment of swing through (double swing) doors has always presented potential problems for shearmagnets but not for the **GF3000**. Due to its unique floating armature and magnet body the **GF3000** can lock up even if the door is as much as 4mm either side of its centre line. The magnet body drops down to engage the armature and secure the door, even across gaps of up to 6mm. Unlike some shearmagnets that pull the armature out of the top of the door whilst it swings through, the **GF3000** waits for the door to rest before engaging its reliable lock up cycle. This not only reduces wear and tear on the magnet but also eliminates any unnecessary forces and stresses being placed upon the door and associated furniture.

Microprocessor control module provides advanced electronic features including automatic voltage sensing which allows operation from 12v or 24v DC power sources.

Built in automatic re-lock switch ensures the door is fully closed before the locking process is activated
Time delay or re-lock is fully adjustable from 0 to 30 seconds to suit the application or user profile

Optional functions of Magnetic Bond Sense (MBS) to remotely monitor the locked/unlocked state of the magnet and Door Status Monitor to remotely monitor the open/closed status of the door

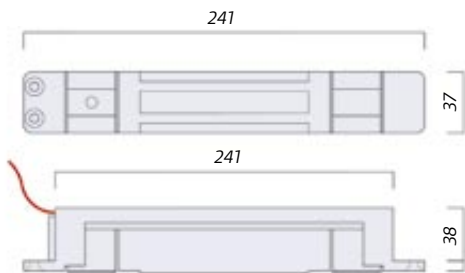


The low current draw produces a low operating temperature as opposed to the high operating temperature associated with other shear locks

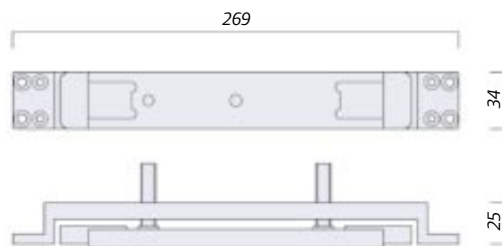
Innovative Gravity Force design provides for movement of both the magnet and the armature in order to accommodate normal door and frame movement and will work effectively over gaps of up to 6mm between door and frame

Interlocking tabs and grooves produce a mechanical locking action to give a holding force of 1360kg

dimensions in mm



magnet (mounted in u/side of head frame)



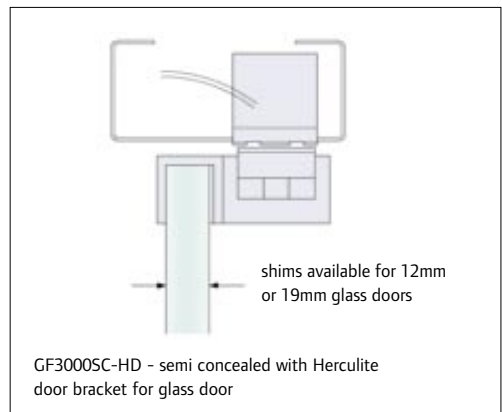
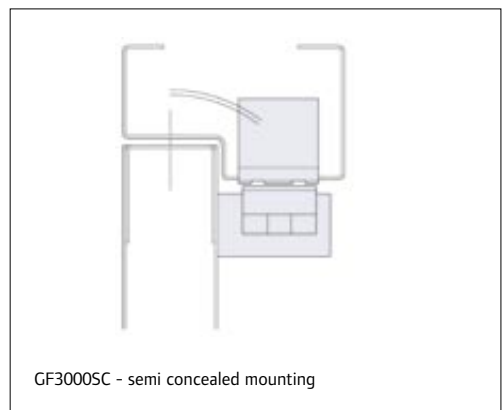
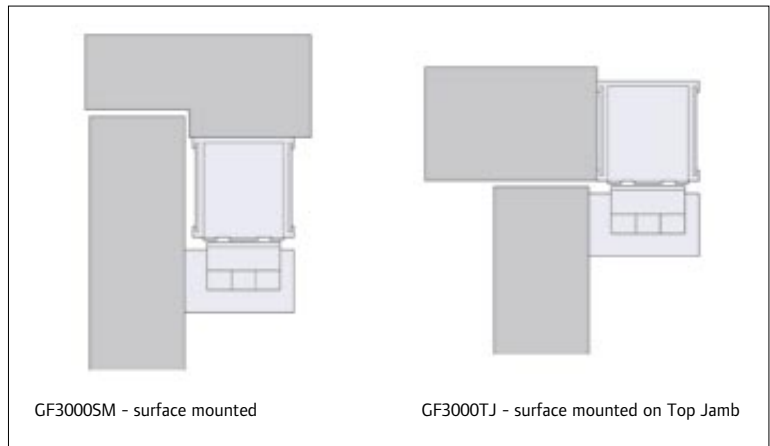
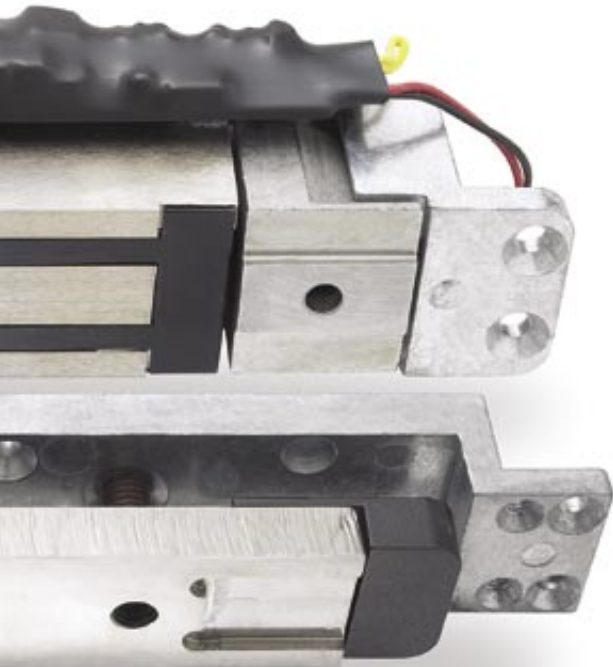
armature (mounted in top edge of door)

Briton GF3000 Shear Lock

Ingersoll Rand Security Technologies Limited Lifetime Guarantee

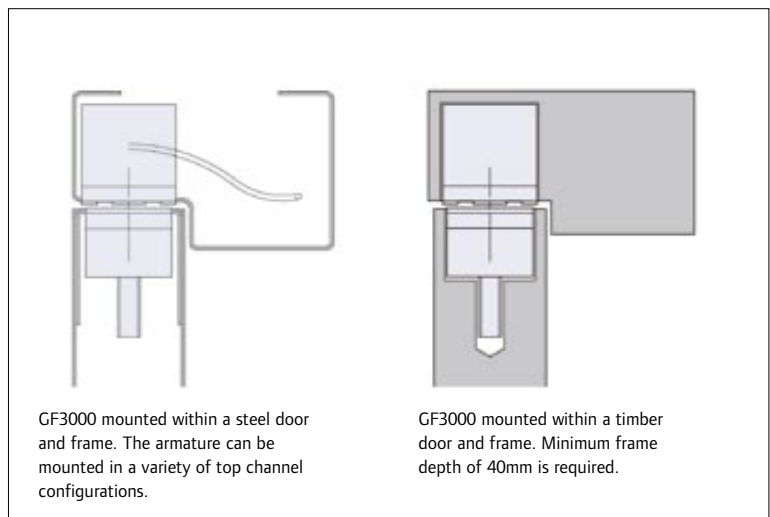
Limited lifetime guarantee on magnetic coil assembly.
12 month guarantee on electronic module. For full details of the guarantee please contact our Customer Care Centre on 0191 430 2500

A number of variations are available including surface mounted and semi concealed options, including semi concealed options with Herculite door bracket for use with glass doors.



GF3000 Specification

- 'Gravity Force' movement of lock and armature
- Holding force - 1360kg
- Magnetic Bond Sense (MBS)
- Door Status Monitor (DSM)
- Built-in Automatic Time Delay function 0 - 30 sec
- Automatic voltage selection (12v or 24v DC)
- Low current - 900mA @ 12v DC
- 450mA @ 24v DC
with no 'high lock-up current'
- Full range of accessories including one piece 'Z' bracket for top jamb applications (see below)
- Successfully included in a 1 hour fire test to EN 1634 for concealed and surface mounted applications. Please contact our Technical Services Department on 0191 430 2500 for further information on fire door applications.



Briton Shear Locks

The Briton range of electromagnetic locks includes a selection of surface and mortice mounted shear locks. The combination of magnetic and mechanical holding power of the shear lock makes it an ideal choice for applications requiring a higher level of security than a 'face to face' magnet. In the form of mortice magnets they can also provide the high quality appearance called for in many high specification applications.

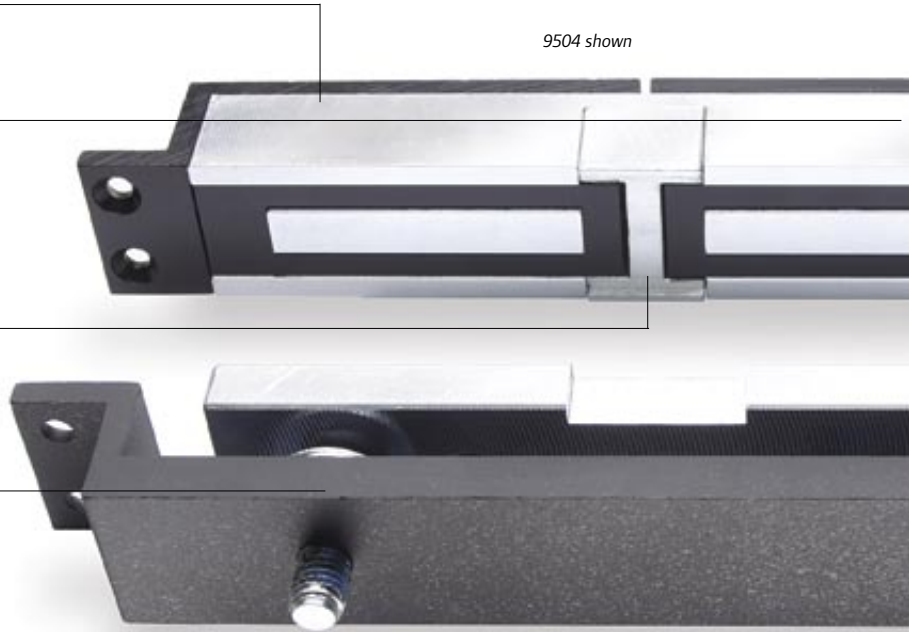
Shear locks may be used on inswing, outswing or double action doors and are suitable for use on single doors or in pairs on double door applications.

Steel outer chassis provides a rugged construction which is durable.

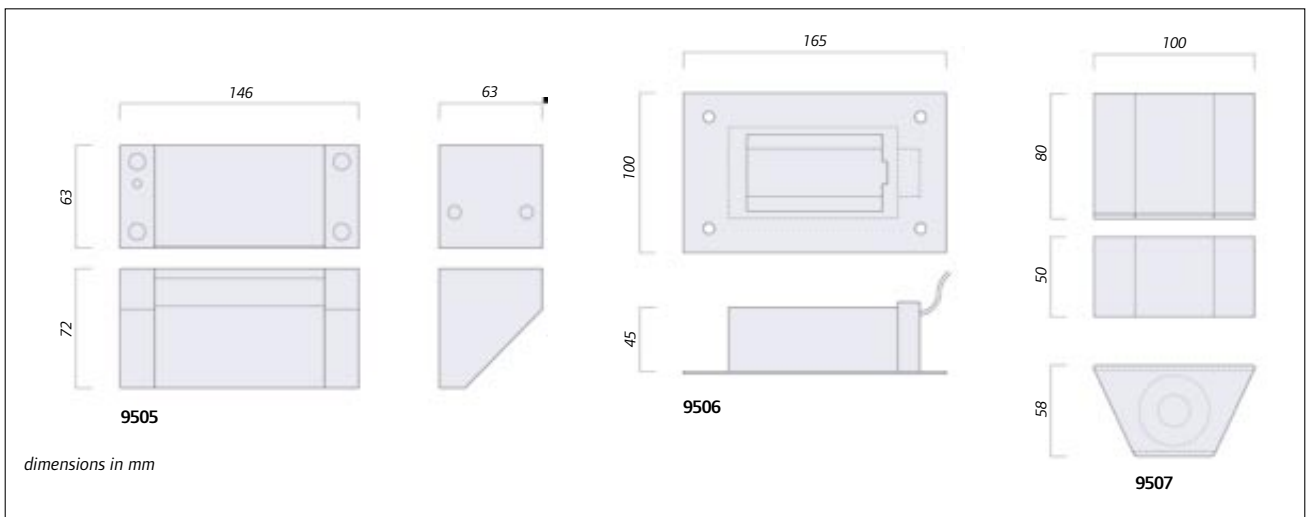
On-board electronics make installation simpler
Optional functions of Magnetic Bond Sense (MBS) to remotely monitor the locked/unlocked state of the magnet and Door Status Monitor to remotely monitor the open/closed status of the door

Shear locks have interlocking tabs and grooves on the magnet and armature which provide a mechanical locking mechanism when held together electromagnetically

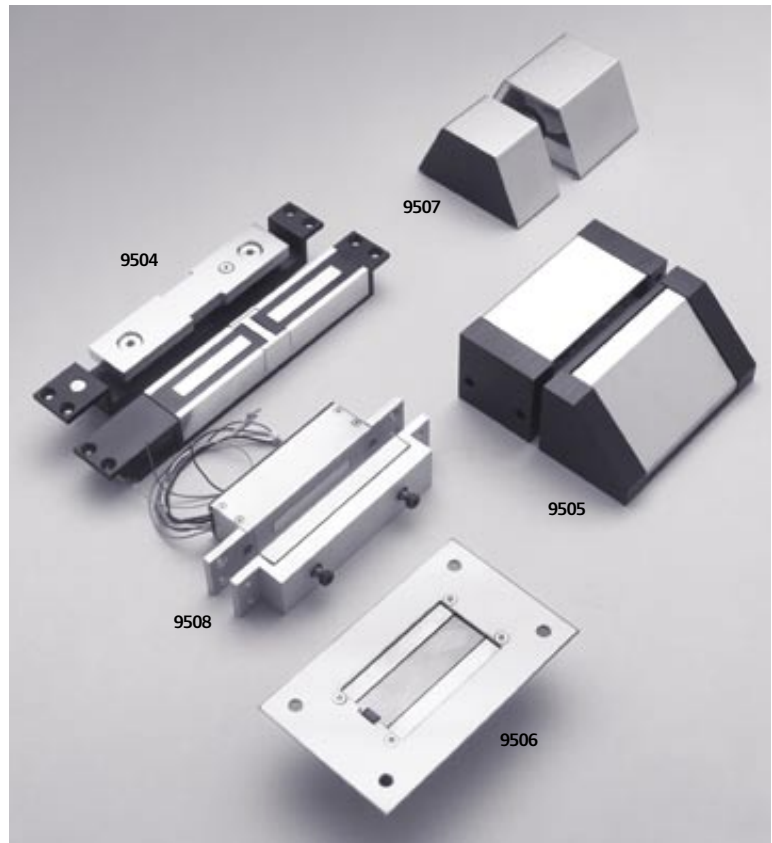
Floating mechanism (usually in the armature) allows the magnet to pick up across the gap between the door and frame. Normal operating conditions accommodate gaps between door and frame of up to 3mm



product ref	mounting type	holding force (kg)	options	door types		door and frame construction
				single action	double action	
9505	surface	910	-	●	●	timber/metal
9506	mortice	525	-	●	●	100mm aluminium frame
9507	surface	545	-	●	●	timber/metal
9508	mortice	725	MBS	●	●	timber/metal
9508.SK	surface	725	MBS	●	●	timber/metal
9508.MBS	mortice	725	MBS	●	●	timber/metal
9504	mortice	1360	-	●	●	timber/metal

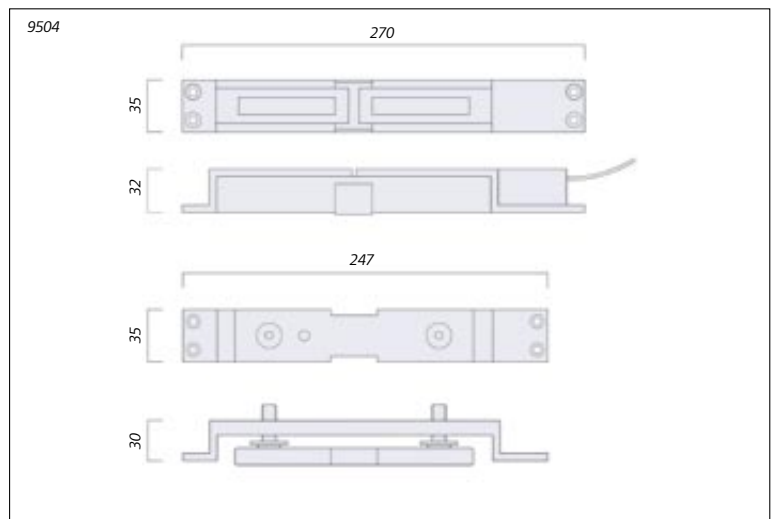
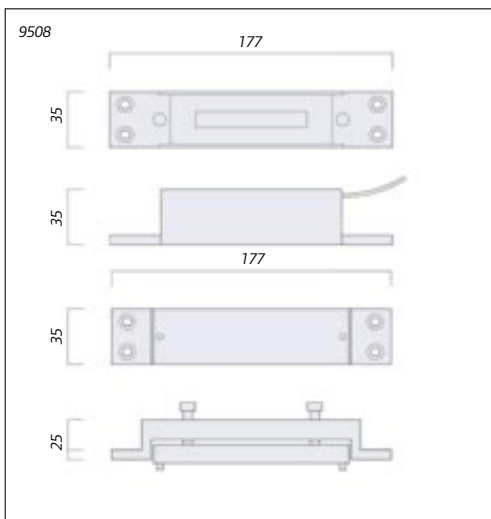


Briton 9500 Series Shear Locks



9500 Series Shear Lock Specification

- Surface and mortice mounted versions
- Holding forces up to 1360 kg
- All models 12v or 24v DC site selectable (except 9506 - 12v DC)
- Current - 500mA @ 12v (all models)
- 250mA @ 24v (all models)
- All units are 'fail unlocked'
- Suitable for single or double swing doors (see product selector overleaf)
- 3 year guarantee (for full details of the guarantee please contact our Customer Care Centre on 0191 430 2500)



Briton Product Selector - Comparison

- Standard feature
- Available as an option

The following table can be used to compare each of the magnets in the Briton range. Fold out this page to view alongside each of the individual range pages.

9300 Series	product ref	magnet type	mounting type	holding force per leaf (kg)	door types		door swing		features		additional comments	
					single	double	single	double	MBS	DSM		
	9320.xx	face to face	surface	320	●		●		○	○		All available with optional features: Adjustable time delay, anti-tamper switch, signal module time delay and Powermiser
	9322.xx	face to face	surface	320		●	●		○	○		
	9390.xx	face to face	surface	750	●		●		○	○		
	9392.xx	face to face	surface	750		●	●		○	○		
9391.xx	face to face	surface	320		●	●		○	○	single magnet with split armature		
9390.PIR	face to face	surface	750	●		●		○	○	built in PIR activator		

9500 Series	product ref	magnet type	mounting type	holding force per leaf (kg)	door types		door swing		features		additional comments	
					single	double	single	double	MBS	DSM		
	9551.xx	face to face	surface	270	●		●		○			
	9552.xx	face to face	surface	270		●	●		○			
	9501.xx	face to face	surface	545	●		●		○			
	9502.xx	face to face	surface	545		●	●		○			
9560.xx	face to face	mortice	270	●		●		○		horizontal and vertical housings available		

Shear locks	product ref	magnet type	mounting type	holding force per leaf (kg)	door types		door swing		features		additional comments	
					single	double	single	double	MBS	DSM		
	GF3000	shear	mortice	1360	●	●	●	●	○	○		unique 'gravity force' floating mechanism
	GF3000HD	shear	semi concealed	1360	●	●	●	●	○	○		semi concealed mounting for glass doors
	GF3000SC	shear	semi concealed	1360	●	●	●	●	○	○		semi concealed for in/outward opening doors
	GF3000SM	shear	surface	1360	●	●	●	●	○	○		surface mounted for outward opening doors
	GF3000TJ	shear	surface	1360	●	●	●	●	○	○		surface mounted for inward opening doors
	9505.xx	shear	surface	910	●		●	●				stainless steel finish
	9506.xx	shear	mortice	525	●	●	●	●				stainless steel finish
	9507.xx	shear	surface	545	●	●	●	●				stainless steel finish
	9508.xx	shear	mortice	725	●	●	●	●				
	9508.SK.xx	shear	surface	725	●	●	●	●	○			stainless steel surface mounting kit
	9508.MBS.xx	shear	mortice	725	●	●	●	●	●			
9504.xx	shear	mortice	1360	●	●	●	●	○				



Accessories

A range of items used in conjunction with access control systems including exit buttons, break glass units, power supplies, door loops and keyswitches.



Ingersoll Rand Security Technologies is uniquely positioned to supply a complete security and safety package from cutting edge biometric solutions, through networked and stand-alone electronic access control systems, down to mechanical locks and cylinders. All complemented by automatic door solutions and fire safety products, including Briton electromagnetic door closers and exit devices.

Below are details of some of the products that make up the Ingersoll Rand Security Technologies' range:



Biometrics

Ingersoll Rand Security Technologies is a global leader in Biometric access control, time and attendance and personal identification products. Its patented hand geometry technology verifies identity by the size and shape of the hand. Fast, easy to use and reliable, over 70000 HandKey and HandPunch readers have been installed world-wide. Ingersoll Rand Security Technologies is also able to supply FingerKey, a fingerprint reader for low traffic, high security applications.

Digital Locks & Mechanical Locks

The Cobra range of battery powered electronic locksets is ideal for new construction or retrofit applications where aesthetics are important and programming flexibility at the lock is critical. The range includes King Cobra, King Cobra Narrow Stile and standard Cobra units.

To complement their EAC range we also supply a complete range of mechanical locks and cylinders, including a range of 72mm centred lockcases.



Electronic Locking

Brink electromechanical locks are ideally suited to situations where a high degree of secure access control is required. Having a holding force of 15000 Newtons and integrated monitoring as standard, the Brink lock offers the highest levels of security.

Pegasys electronic trim is as easy to install as normal door furniture and requires no wires. With its aesthetic design it is suitable for use on interior doors and is designed for use with DIN standard, 72mm centred locks. Available in either PIN or card versions it is ideal for upgrading existing key operated locks to access control units quickly and easily.

Readers

A range of card readers to provide activation for access control systems. Compatible with a full range of technology options such as biometrics, digital code, swipe card, smart card, including Mifare, Legic and Prox as well as combined PIN and card units.



Electric Strikes

A complete range of electric strikes to suit any application and any budget. From high security variants with a side load pressure resistance of up to 8500 Newtons to general purpose electric strikes.



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