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April 2009

Briton

Overhead Door Controls
2100 Series

Ingersoll Rand
Security Technologies

Briton Security & Safety with Style

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

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 proximity readers.

Briton 2100 Series

The Briton overhead door closer range provides a multi-level approach to door closing solutions to suit all projects, door applications and budgets. From the simplicity of a mechanical non-fire door closer for basic functionality, to a microprocessor controlled low energy operator for special applications e.g. for doors required to satisfy Part M of the Building Regulations, there are Briton products to meet your needs.

Level 5 - Electromagnetic Hold-Open Devices & Low Energy Door Operators
Refer to the Briton 2130B.TE on page 5 of this brochure
Refer also to Briton 996 and Briton 2500 Series product information

Level 4 - Extra Heavy Duty Mechanical Door Controls
Refer to Briton 2100 Series in this brochure
Refer also to LCN 4000 Series product information

Level 3 - Heavy Duty Mechanical Door Controls
Refer to the Briton 2000 Series product information

Level 2 - Medium Duty Mechanical Door Controls - with options
Refer to the Briton 1100 Series product information

Level 1 - Low-Medium Duty Mechanical Door Controls - no options
Refer to the Briton 121 Series product information

The Briton 2100 Series of door controls has been created to offer a comprehensive package of solutions to suit any door closing application.

Developed in conjunction with installers, the 2100 Series builds on the engineering excellence of previous Briton door controls by incorporating one of the simplest, quickest and most accurate installation systems available.

This combination of engineering quality and good looks - with three body cover options and over 20 finishes - creates a truly versatile architectural solution for any 'Extra Heavy Duty' application.

'S' cover in polished brass

'L' cover in polished chrome

'C' cover in satin stainless steel

Level 4 - Briton 2100 Series

At the heart of all Briton 2100 Series door controls is a high precision 'engine' which has undergone extensive development and testing to ensure it functions efficiently and effectively for extended periods of time.

The Briton 2100 Series comprises:

- Fully certified to EN 1154, EN 1634, CE Marked and Certifire Approved CF111
- Heavy duty and extra heavy duty options
- Adjustable power sizes 1 to 6
- Regular, Parallel, Track and Electromagnetic Track arm variants
- Unique Accufit installation system for all models
- Choice of 3 cover designs - with colour matched armsets and track
- Range of over 20 finishes

Ingersoll Rand
Security Technologies

Briton 2100 Series Features

Designed for, and fully compliant with, EN 1154 and 'best practice' codes for performance, reliability and safety (see page 10 for information on EN 1154)

CF111

10 YEAR GUARANTEE

The highly versatile 2100 Series was developed with installers to combat the practical and economic concerns with conventional door closer installation. As a result, the Briton 2100 Series can demonstrate an average 30 - 35% labour saving on installation.

But the benefits are much deeper than this. The increased degree of accuracy achieved when installing a Briton 2100 Series closer dramatically improves its efficiency and longevity.

Quick release arm assembly allows the closer to be disconnected and reconnected quickly without the need to alter the arm arrangement. This speeds up the installation process and enables the closer body and bracket to be fixed independently allowing for much greater accuracy.

Pre-assembled arm and bracket simplifies assembly, increasing speed and accuracy

Optional hold open armset is adjustable from 80° to 180° opening angle
Note: Not to be used on fire door applications

All-over cover conceals all fixings and adjustment screws to prevent tampering.
Choice of cover options in a range of architectural finishes with matching arms (see fold out page 11)

Cast aluminium body (2110/2120) or cast iron body (2130) giving rugged durability

Hardened steel rack and pinion mechanism with needle roller bearings for exceptionally smooth and efficient operation and high levels of durability

Coil springs manufactured in silicon chrome alloy steel for superior strength and reliability

High quality hydraulic fluid with in-built temperature compensation ensures reliable operation in temperatures from -15°C to +40°C

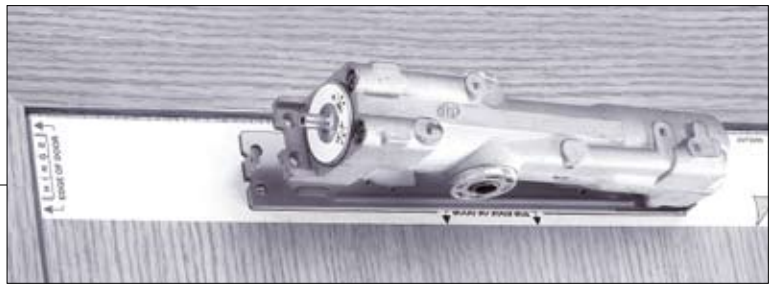
Pinion design (2110/2120) maintains the slim profile enabling a continuous under-surface to the cover

Separate latch action and closing speed adjustment provides total control of the full closing cycle

Adjustable backcheck minimises the risk of personal injury and damage to adjacent walls, door, frame and other door hardware

Adjustable delayed action delays the closing cycle to allow slow moving pedestrians to pass through unhindered by the closing door

Adjustable closing strength avoids the need to predetermine the door details at the point of specification and allows for site variations



Unique ***Accufit*** backplate system reduces installation time and dramatically improves accuracy of fitting

Briton 2100 Series *Accufit* System

***Accufit* by name .... *Accufit* by nature**

The cost associated with inaccurate fixing of a door closer can be of significant proportions, particularly when it has a 'knock-on' effect on the other hardware on the door, the door itself and the surrounding structure.

At Ingersoll Rand Security Technologies we identified that 95% of all problems associated with door closers were due to incorrect installation rather than a fault in the closer itself.

The ***Accufit*** System is designed to address this deficiency and provides real term benefits far beyond the simple savings in installation time.

The life of the product is greatly enhanced by being fitted accurately and has a beneficial effect on the operation of the whole door.

The Briton *Accufit* System in action

The essence of the ***Accufit*** System is a unique low-tac self adhesive template, mounting backplate and pre-assembled arm. These enable the closer to be fitted quickly and accurately.

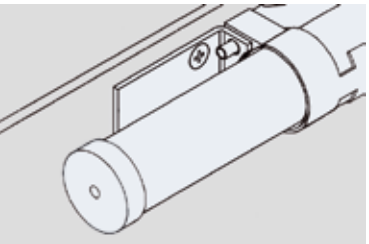
1. Line up the low-tac self adhesive template with the edge and top of the door and smooth down in place.

2. Place the mounting backplate on top of the template and screw it to the door. Fit the pre-assembled secondary arm and bracket to the frame.

3. Slot the mechanism onto the mounting backplate and secure it in place.

4. Slot the pre-assembled main arm through the pinion and secure in place. Slide the main arm over the secondary arm and secure the fixing bolt.

2130 models incorporate a **Qwik-Fit** fixing bracket that enables the installer to hold the cast iron closer body to the door prior to final installation (see below).



5. Peel away the template from the door and frame and adjust the closer.

6. Push on the cover and secure it in place to complete the installation.

Briton 2100 Series

Attention to detail in every aspect of the design, engineering and manufacture of the 2100 Series door control extends to the 3 body cover options and the hand finished quality of the finishes.

above, **Briton 2130** closer with Classic cover in polished stainless steel

left, **Briton 2110** closers with **S** cover in satin stainless steel (below) and **L** cover in polished stainless steel (above).

Specification Helper

EN 1154 states "... where the opening angle is limited by the device, provision of a separate door stop should always be fitted".

Applications

2100 Series closers are supplied with an armset and bracketry as standard. Suitable for fixing to the pull or the push side of the door or to the frame - traditionally known as Application 1, Application 66 and Application 61 respectively, as shown below.

For dimensional details of these and other applications refer to pages 8 & 9.

Briton 2100 Series Track Closers

above; 2130B.T with Classic cover in Satin Stainless Steel finish
below; 2130B.T with S cover and L cover in SE finish

The Briton 2110B.T and Briton 2130B.T are track closers. The single arm arrangement utilises a shallow slide track which avoids the need for projecting arms. With the closer fixed to the door and the track fitted to the head frame they are particularly suited to narrow transoms. The exclusion of projecting arms makes slide track closers particularly appropriate in applications which may be susceptible to vandalism and misuse and they are often specified for higher quality installations because of the improved aesthetics provided by the neat, uncomplicated track.

Features of the Briton Slide Track Closers

- Designed to, and fully compliant with, EN1154, the most recent legislation for performance, reliability and safety
- Fixed power size 3 (2110B.T) and adjustable power size 2 - 4 (2130B.T)
- Opening angle up to 180°
- Improved aesthetic of slim track arrangement
- Matching body & track finishes

The Briton 2130B.T (in addition to the 2130B and 2130BD closers) gives the installer the benefit of the ***Accufit*** System with **Qwik-Fit** fixing bracket. The bracket enables the closer body to be held in position on the door prior to final fixing.

Briton 2130B.TE Closer

Features of the Briton 2130B.TE Closer

- Designed to, and fully compliant with, EN1155, the most recent legislation for performance, reliability and safety
- Satisfies the requirements of Building Regulations Approved Document M:2004
- Fail safe electronics guarantee door release in the event of a fire or power failure
- Track mounted 24v DC solenoid with an effective and reliable holding force
- Manual override allows the door to be pulled closed at any time
- On-board test switch simulates fire condition to check operation
- Fully adjustable hold open angle from 85° to 110°
- 24v transformer/rectifier available
- Integrated design

The electromechanical Briton 2130B.TE (above) houses an electromagnet in the slide track. It is designed to hold the door open during normal use and is connected to the building fire alarm system. On sounding the fire alarm, or in the event of power failure, the electromagnet is deactivated and releases the door closer mechanism which, in turn, closes the door in the normal controlled manner to maintain the fire door status.

It is particularly suited for use in areas where a standard door closer could be inconvenient or would impede the flow of people in medium or high traffic applications such as a cinema foyer or hospital corridor. The use of electromagnetic hold open door controls are recommended in applications which are designed to meet the levels of accessibility called for in the Disability Discrimination Act and to satisfy the requirements of Approved Document M:2004 of the Building Regulations.

As an integrated unit the Briton 2130B.TE offers many benefits when compared with the practice of using a standard mechanical door control with separate electromagnetic holding units. Installation time and overall costs are reduced and it is less susceptible to accidental or malicious damage. An integrated unit also ensures that the door itself will not be subjected to the twisting forces which can render a fire resisting doorset invalid if a closer and separate electromagnet are poorly installed. Aesthetically pleasing, it avoids the need for the intrusive, ugly bracketry associated with the installation of separate electromagnets - especially in applications where there is no reveal wall.

Power requirements

For the operation of the closer the power requirements are 24V DC, 90mA nominal. Transformers and relay interfaced to the fire alarm system can also be supplied to link the electricity supply and the fire alarm system (see chart below).

FSR Transformer/Rectifier

For use with fire/smoke check electromagnetic door control units where 24V DC is not available for the continuous rating required. A socket is provided to accept a plug-in relay.

Product ref:	max. no of units
FSR4B	3
FSR20B	15
FSR50B	38

Accessibility

In relation to meeting the aims of The Disability Discrimination Act (DDA), satisfying the requirements of the 2004 edition of Approved Document M of the Building Regulations and following 'best practice' indicated in BS 8300, electromagnetic door controls and low energy operators are an essential aid in providing accessibility.

For a copy of the Ingersoll Rand Security Technologies Design Guide to the DDA, please contact Technical Services on **0800 834 102**

Briton 2100 Series Selector

Fire Testing

The Briton 2100 Series has been subjected to a comprehensive programme of fire testing to the new European standard EN 1634.

Briton 2100 Series door closers have Certifire approval which validates a product's suitability and defines the limits of its performance. The Certifire certificate provides independant verification and reassurance that the product supplied and installed will exhibit the same level of performance as that used in testing.

Product Selector

product features		product references						
closer size	max. door size width - weight	**2110**	**2120B**	**2130B**	**2130BD**	**2110B.T**	**2130B.T**	**2130B.TE**
1	750mm - 20kg		●					
2	850mm - 40kg	●	●	●	●		●	
3	950mm - 60kg	●	●	●	●	●	●	●
4	1100mm - 80kg	●	●	●	●		●	●
5	1250mm - 100kg			●	●			
6	1400mm - 120kg			●	●			
main features		**2110**	**2120B**	**2130B**	**2130BD**	**2110B.T**	**2130B.T**	**2130B.TE**
Low-tac self adhesive template		●	●	●	●	●	●	●
Mounting backplate		●	●	●	●	●	●	●
Fixed strength or adjustable		adj.	adj.	adj.	adj.	fixed	adj.	adj.
Power adjustment method		template	wind thru	wind thru	wind thru	n/a	wind thru	wind thru
Angle of opening/controlled closing		180°	180°	180°	180°	180°	180°	110°
Separate latch action/closing speed		●	●	●	●	●	●	●
Adjustable backcheck			●	●	●	●	●	●
Adjustable delayed action					●			
In-built temperature compensation		●	●	●	●	●	●	●
Manual hold open option		●	●	●	●			
Electromagnetic hold open								●
Non projecting slide track arm						●	●	●
Matching track and/or arm finish		●	●	●	●	●	●	●
Quick release arm set		●	●	●	●			
Slimline body with hollow pinion		●	●			●		
Tri-pack for applications 1, 66 & 61		●	●	●	●			
Non handed for LH or RH applications		●	●	●	●	●	●	●
Cover options (Classic, S and L)		S/L	S/L	C/S/L	C/S/L	S/L	C/S/L	C/S/L

CE The Briton 2100 Series door closers are successfully type tested and independently certified for conformity to all the requirements of EN 1154. They are CE marked and classified as shown below (figures in brackets indicate the range of codings where the higher numbers indicate a higher rating).

For further information on EN 1154 and CE please see page 10.

For details on specific applications please call our Technical Services Department on **0800 834 102**

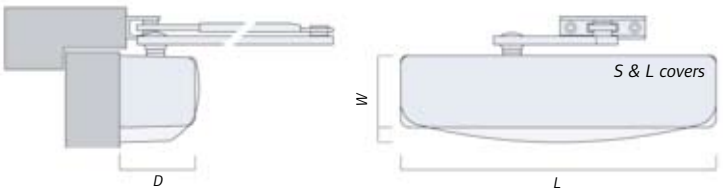
EN classifications (range shown in brackets)

	(3/4)	(8)	(1-7)	(0/1)	(1)	(0/4)
2110B.T	4	8	3	1	1	3
2110, 2130B.T	4	8	2-4	1	1	3
2120B	4	8	1-4	1	1	3
2130B	4	8	2-6	1	1	3
2130B.TE	3	8	3-4	1	1	3
2130BD	4	8	2-6	0	1	3

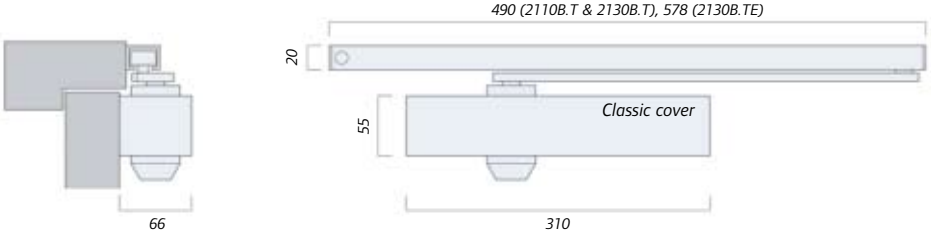
PLEASE NOTE:

The following are NOT CE marked:

Briton 2130BD Hold-Open armsets



	Cover style	Classic	L	S
2110, 2120B 2110B.T	length (L)	-	258	258
	width (W)	-	59	71
	depth (D)	-	62	65
2130B, 2130BD 2130B.T 2130B.TE*	length (L)	310	318	318
	width (W)	55	74	76
	depth (D)	66	62	71

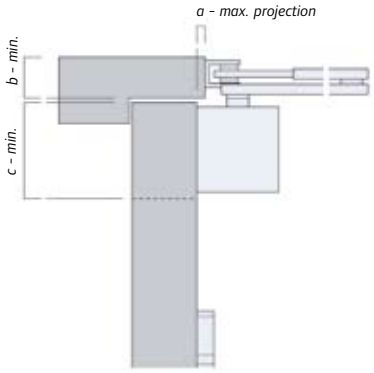


Briton Generic Applications

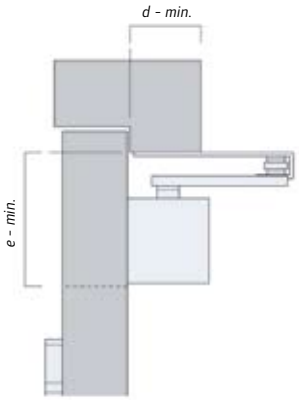
Applicable to Briton 2100 Series

The following illustrations show the dimensional requirements for each individual door closer in the standard applications, track arm applications and for alternative types of bracket.

All dimensions are in mm.

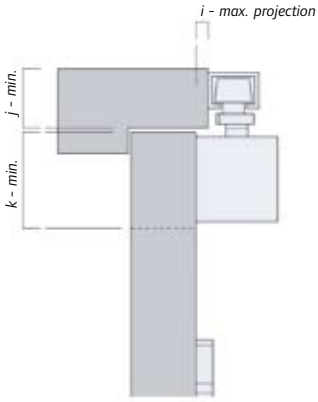


Application 1
closer fixed to 'pull' side of door

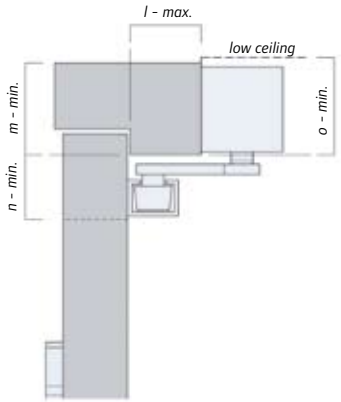


Application 66
closer fixed to 'push' side of door

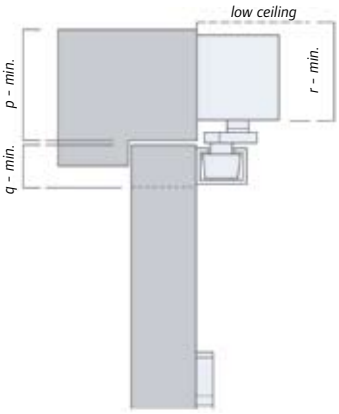
Track Arm Applications



Application 30 (A)
closer fixed to 'pull' side of door

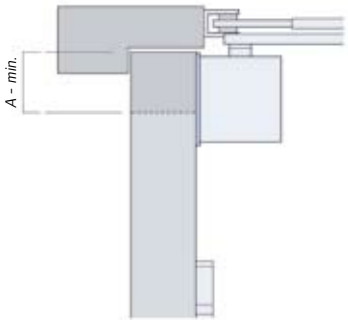


Application 30 (B)
transom mounted on 'push' side of door

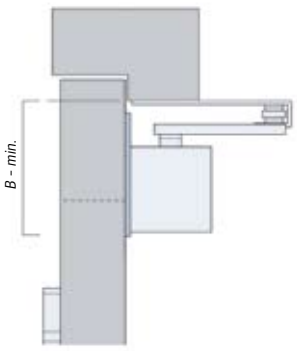


Application 30 (C)
transom mounted on 'pull' side of door

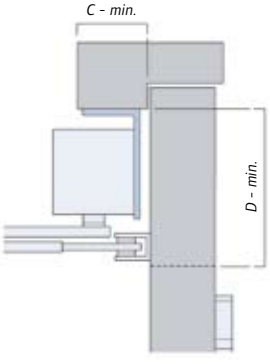
Alternative Brackets (to suit specific door and frame configurations or constructions)



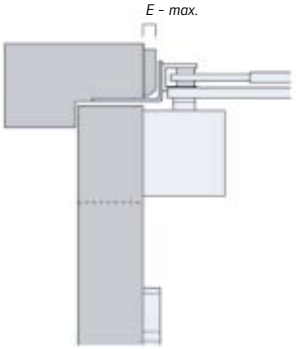
Application 1 (drop plate)
for use on doors with narrow top rails



Application 66 (drop plate)
for use on doors with narrow top rails



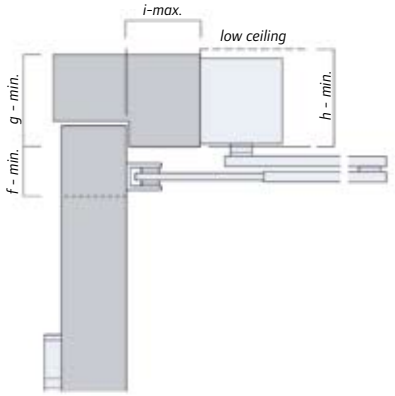
Application 2 (drop plate)
for transom mounting on push side



Application 70 (soffit bracket)
where architraves interfere with the regular application 1 bracket

Briton Generic Applications

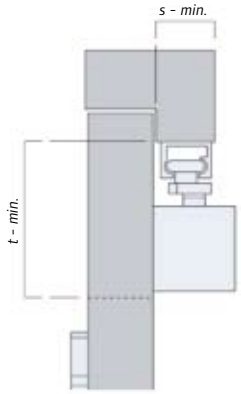
Applicable to Briton 2100 Series



closer reference	cover style	application 1			application 66		application 61			
		a	b	c	d	e	f	g	h	i
Briton 2110, 2120B	L	10	26(39)	62	44	99(112)	28(39)	52	62	75
	S	10	26(39)	74	44	112(124)	28(39)	52	74	75
Briton 2130B, 2130BD	classic	7	28(41)	78	44	94(107)	28(42)	50	68	70
	L	7	28(41)	78	44	117(130)	30(43)	55	78	70
	S	7	28(41)	78	44	117(130)	30(43)	55	78	70

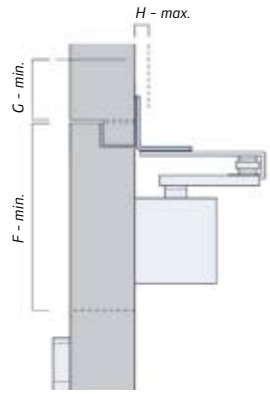
note: figures in brackets are dimensional variations when used with hold open armsets

Application 61
closer fixed to transom on 'push side'



closer reference	cover style	application 30 (A)			application 30 (B)				application 30 (C)			app'n 30 (D)	
		i	j	k	l	m	n	o	p	q	r	s	t
Briton 2110B.T	L	12	41	48	76	48	45	62	68	22	79	-	-
	S	12	41	48	76	48	45	74	68	22	92	-	-
Briton 2130B.T	classic	12	41	57	76	55	45	75	75	22	100	-	-
	L	12	41	78	76	55	45	78	75	22	95	-	-
	S	12	41	78	76	55	45	78	75	22	95	-	-
Briton 2130B.TE	classic	3	51	57	-	-	-	-	-	-	-	32	102
	L	3	51	78	-	-	-	-	-	-	-	32	127
	S	3	51	78	-	-	-	-	-	-	-	32	127

Application 30 (D)
closer mounted on 'push' side of door



closer reference	cover style	alternative brackets - applications 2, 38, 39, 70							
		A	B	C	D	E	F	G	H
Briton 2110, 2120B	L	32	57	54	120(133)	19	99(112)	40	40
	S	32	57	54	120(133)	19	112(124)	40	40
Briton 2130B, 2130BD	L	32	57	54	120(133)	19	117(130)	40	40
	S	32	57	54	120(133)	19	117(130)	40	40
	classic	32	57	54	120(133)	19	117(130)	40	40

note: figures in brackets are dimensional variations when used with hold open armsets

Application 39
for use with application 66 closer on flush rebated overpanel or head frame

Application 38 (dotted)
for use with application 66 closer on flush overpanel or head frame

Ingersoll Rand
Security Technologies

Briton EN 1154 Explained

EN 1154 is the European standard for "controlled door closing devices" and, as such, tests mechanical door closer performance. Adopted by EU member states, it becomes a mandatory requirement for CE marking in 2004. It prescribes the test methodology and subsequent classification of randomly selected production line products. The test data, together with supporting technical evaluation, results in a classification code. This coding allows comparison across a range of closers according to their compliance with the standard.

Door closers for fire doors are covered by a Construction Products Directive mandate. Compliance with EN 1154, supported by suitable evidence, therefore allows the application of the CE mark. All conforming door closers consequently will be marked with their EN 1154 coding and details of the notified certification body.

Door controls with electrical components, such as electromagnetic hold open devices, must satisfy the requirements of both EN 1154 and the supplementary standard, EN 1155 for electrically controlled door operators.

4 (3/4)

Category of use

Defines the angle from which the closer will close the door in a controlled manner. Grade 3 will control the door from 105˚. Most Briton 2100 closers will operate from 180˚ - Grade 4.

8 (8)

Test Cycles

Included in a 500,000 cycle test as defined by Grade 8 the only grade available. However, Briton 2130B Series closers have been tested up to and beyond 2,000,000 cycles indicating superior durability and extended product life

3 (1 - 7)

Door size/mass

The number identifies the power size of the closer as defined by the door size and mass. Adjustable power closers are defined by the upper and lower power sizes.

closer size	max. door size width - weight
1	750mm - 20kg
2	850mm - 40kg
3	950mm - 60kg
4	1100mm - 80kg
5	1250mm - 100kg
6	1400mm - 120kg
7	1600mm - 160kg

1 (0/1)

Fire Behaviour

Based on the results of fire testing to EN 1634 ensuring the door remains closed under temperatures which can exceed 1000˚C. Grade 1 is for closers which are deemed suitable for use on fire doors. Grade 0 are not suitable for use on fire doors.

1 (1)

Safety

The part of the Standard which ensures the operation and suitability of the closer is hazard free. It provides peace of mind that the closer operates without risk to the user. Only Grade 1 is identified.

3 (0 - 4)

Corrosion Resistance

A salt spray test to ascertain corrosion resistance thereby establishing suitability for use in varying environmental conditions. Five grades are identified from O (no identified resistance) to 4 (very high resistance). All Briton door closers achieve at least Grade 3 and are suitable for use in wet, polluted environments and most exterior applications

Briton certification matrix

● certified performance

	2110	2110B.T	2120B	2130B	2130BD	2130B.T	2130B.TE
EN 1154 (500,000 cycles)	●	●	●	●	●	●	●
EN 1155*							●
CE Marked	●	●	●	●		●	●
Certifire Approved	●	●	●	●		●	●
EN 1634 fire test (up to 2 hours)	●	●	●	●		●	●

* EN 1155 standard for electrically controlled door operators

Briton Finishes

Briton 2100 Series door closers are available in a wide selection of:

- Electroplated metallic finishes
- Powder coated coloured finishes

The powder coated colours are specially formulated to provide a close match to the coloured nylon finishes of our Normbau range of door hardware.
Please note: All door controls, whether projecting, parallel or track arm variants, are supplied with arms, brackets and/or tracks finished to match the body cover. Projecting arm variants with hold-open are normally supplied with black arms.

Due to the limitations of the printing process it is advisable to check your choice of finish against actual product.

electroplated metallic finishes

satin stainless steel
(SS)

polished stainless steel
(PS)

polished aluminium
(ESA)

polished brass
(PB)

powder coated finishes

silver
(SE)

gold
(GE)

brown
(BE)

matt black
(MB)

powder coated finishes to match Normbau nylon colours

white 19
NWH
RAL-DS 000 95 00
RAL 9016
NCS S 0500-N

manhattan 67
NMG
RAL-DS 080 70 05
-
NCS S 2502-Y

dark grey 18
NDG
RAL-DS 000 35 00
RAL 7043
NCS S 7500-N

black 16
NBL
RAL-DS 000 15 00
RAL 9005
NCS S 900-N

yellow 22
NYE
RAL-DS 080 80 90
-
NCS S 1080-Y10R

green 13
NGR
RAL-DS 160 30 38
-
NCS S 5540-G

red 12
NRE
RAL-DS 030 30 45
RAL 3003
NCS S 2570-R

slate blue 63
NSB
RAL-DS 240 50 15
-
NCS S 4020-B

dark blue 37
NDB
RAL-DS 270 20 25
RAL 5003
NCS S 7020-R80B

blue 11
NBU
RAL-DS 270 30 40
-
NCS S 3560-R80B

Ingersoll Rand
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Ingersoll Rand Security Technologies is a leading global provider of products and services that make environments safe, secure and productive. The sector's market-leading products include electronic and biometric access control systems; time & attendance and personnel scheduling systems; mechanical locks and portable security; door controls, exit devices and architectural hardware; performance steel doorsets and automated openings; and other technologies and services for global security markets.

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