

Uniclass
L4181

EPIC
D181

CI/SfB
(32) Xt7

March 2002

Briton®

2000E series door closer



Briton 2000E

The Briton brand name has always been synonymous with high quality and precision engineered products including door closers, floor springs, panic exit hardware and fire door controls.

Briton is a name that combines every aspect of excellence in door controls, and as part of a continuing programme to provide products manufactured to the highest standards, the Briton 2000E series has been developed specifically to meet and exceed the exacting requirements of the latest European standards, BS EN 1154: 1997 for door closers.

Quality control manufacturing

The Briton 2000E undergoes something more demanding than the traditional quality control procedure.

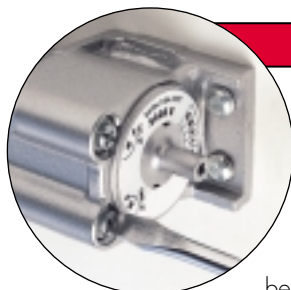
Quality is built in at every stage of manufacture by the people behind the product. From design to machine operation, assembly and through to inspection every individual takes responsibility for their part in the manufacture of products and contributes to a continuous quality control ethic.

An uncompromising approach that has founded a reputation for reliability and durability which equates to a Briton door closer that can be specified with total confidence anywhere in the world.

They do more than close doors

The door closer you specify is an important link in the control of fire and smoke, and in practice it could help save lives.

To be effective in this situation the door must close firmly and securely into the frame and remain there until the intumescent seal is activated, leaving no escape route for flames or deadly smoke.



Concealed adjustment

Unauthorised adjustment to a door closer could seriously affect the effectiveness of the unit, which is why the Briton 2000E series is designed to have fully concealed adjustment regulators, a requirement being insisted upon by Fire Officers the world over.



Tested for lives not just life

All Briton products are independently and regularly tested by a NAMAS accredited test laboratory, APT Laboratories Ltd, to maintain total confidence in the quality of our products.

The Briton 2000E series has been included in successful fire tests of up to 2 hours (see selection chart for details).

Series...



...the brand name to trust!

What is BS EN 1154?

The Briton 2000E series has been designed and developed to exceed the door closing device standard BS EN 1154: 1997, the minimum requirement for any door control manufacturer.

To Briton the BS EN 1154 standard is just a formality, we're no strangers to performance standards and our closers are not fazed by rigorous and punishing tests. To conform to each part of the classification a closer from the production line must undergo a series of abusive cycle operations and still operate at the end.



Category of use

All Briton 2000E closers are identified as grade 4 in this section which means the closer will operate from up to 180°. Grade 3 closers suitable for closing from 105°.

Test Door Mass/Size

Each number in this category identifies the new BS EN 1154 closer sizes, suitable for use on specific doors. Adjustable strength closers are defined by showing both the minimum and maximum strength.

Closer size	Door width	Door weight
1	750mm	20kg
2	850mm	40kg
3	950mm	60kg
4	1100mm	80kg
5	1250mm	100kg
6	1400mm	120kg

Safety

The compulsory part of the standard which ensures the operation and suitability of the closer is hazard free. Only grade 1 is identified.

Test Cycles

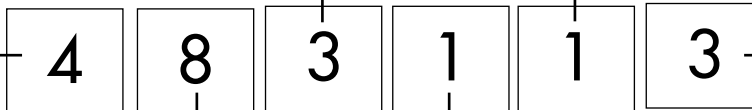
Included in 500,000 cycle tests - 8 is the only grade that can be obtained, however the 2000E closers have been tested in-house up to 2,000,000 cycles which exceed the standards requirement.

Fire Behaviour

Based on the results of fire tests to BS 476 Part 22 1987. 1 is the grade given to closers that are suitable for use on fire or smoke doors - Most Briton 2000E closers are deemed suitable for use on fire doors (see page 10 for details). 0 is the grade given to closers that are not suitable for use on fire doors.

Corrosion Resistance

Five grades are identified within this category from 0 which is no identified resistance to 4 which is very high resistance. Grades are obtained after closers have been included in salt spray tests and had their performance re-confirmed after the test.



What does **BS EN 1154** mean to you?

Our commitment to, and the importance we place on product and performance testing, ensures we know the life expectancy of a Briton 2000E from test results before the closer even reaches the door.



This standard provides details on product types, classifications of use, cycle testing, corrosion resistance, performance requirements test methodology and product marking, but what does that mean to you?

Category of use

The **Briton 2000E** will close the door from 180° as if you were to close it yourself - in a controlled and careful manner.

- Preventing the door and its furniture from unnecessary damage.

Test Cycles

Tested in-house to 2,000,000 cycles the **Briton 2000E** series has exceeded the performance requirements of BS EN 1154. A durable closer to surpass the demands of any building.

- Giving ultimate product confidence.

Test Door Mass/Size

The **Briton 2000E** has the power to close doors from 20kg/750mm to 120kg/1400mm without you having to strain to open the door.

- Making the Briton 2000E series suitable for any application.

Fire Behaviour

Most units in the **Briton 2000E** series have been successful in fire tests with temperatures exceeding 1000°C, that's way over the melting point of brass. - Ensuring the door remains closed to prevent the spread of fire and smoke.

Safety

As an essential safety product the **Briton 2000E** operates without risk to the end user. - Peace of mind and safety all round.

Corrosion Resistance

A new classification to door controls which measures how suitable the closer is for varying environmental conditions. All **Briton 2000E** closers achieve at least grade 3 (High Resistance) - Suitable for wet, polluted environments and most exterior conditions.

Why choose the

Easy to fit steel cover with clean geometric lines

Variable or fixed strength models available covering BS EN sizes 2 to 6

Adjustable strength closers are easier to specify and allow on site adjustment to the strength of the closer – customising the closer to suit any application. Any adjustable model will suit doors from 850mm wide to 1400mm wide.

Fixed strength closers are economical and easier to fix – very little on site adjustment is required.

NB. Prior knowledge of door size and closer application will be required to select the right unit. (See page 9 for details)

All weather fluid and temperature compensating regulators from -15°C to +40°C

Seasonal adjustment is no longer required. Door closers will remain operational over a wide temperature variation.

Low friction bearings Rack and pinion

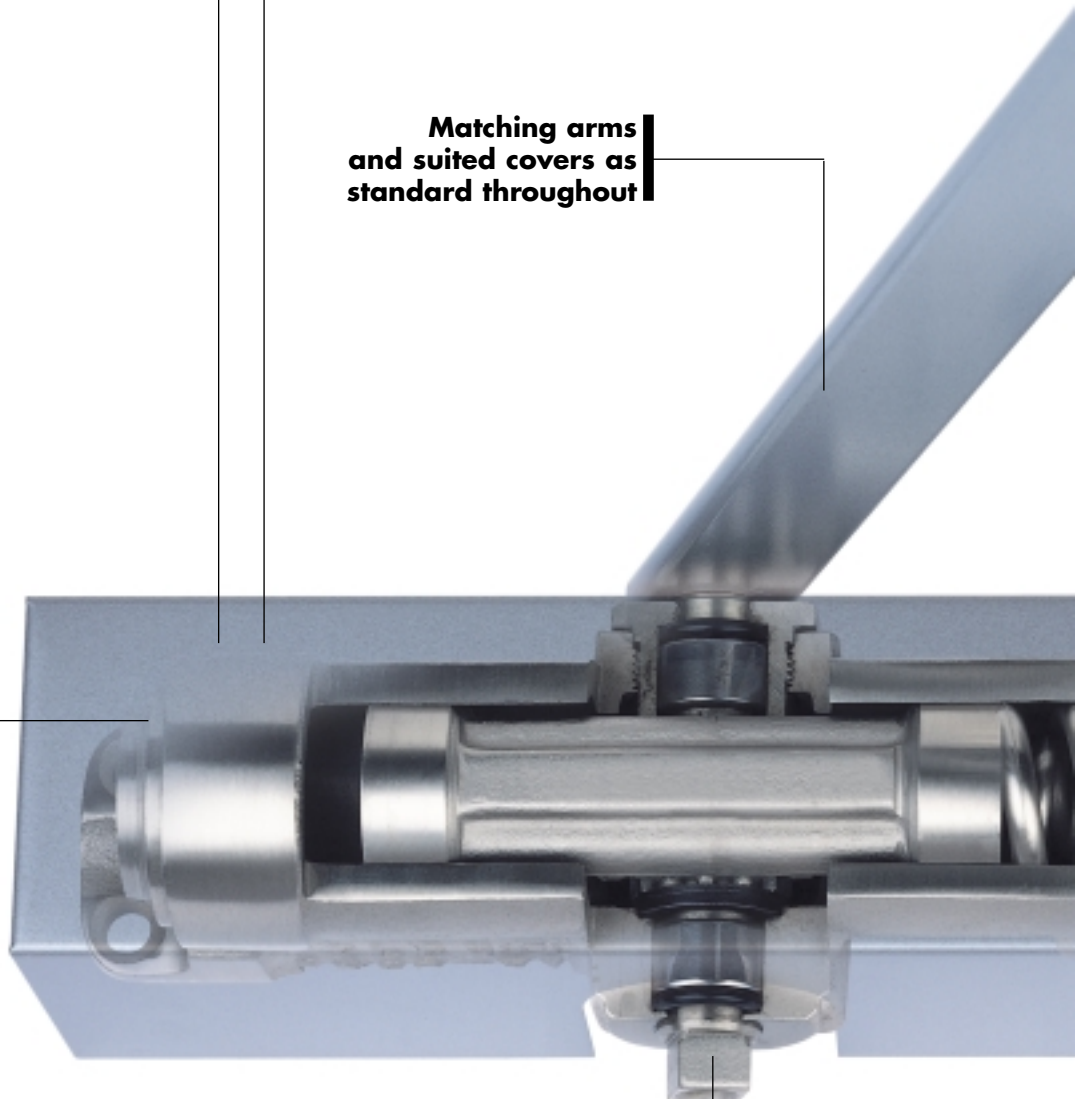
Improved efficiency for smooth operation and longer life.



Optional stand open facility

Suitable for use on *NON-FIRE DOORS* only, to allow free movement of traffic.

Matching arms and suited covers as standard throughout



Briton 2000E?



Power shoe as standard for extra closing power

The power shoe can be reversed to give an extra 15% power to boost the latch action - especially suitable for applications that may be affected by slight variations in wind pressure.

Universal fixing

Suitable for use on all common door types.

Casting

Fixed strength units have die cast aluminium bodies.
Variable strength units have cast iron bodies for increased durability.

Fixed strength closers are safety valve protected

Prolonging the life of the closer against abuse and misuse.

Separate latch action and hydraulic check regulators as standard

Overall door closing speed can be altered by adjusting the hydraulic check action.

Stubborn latches can be overcome by adjusting latch action.

Optional delayed action on the adjustable strength unit

The closer can be set to close over a delayed period – allowing slow moving traffic to pass through the doorway.

Backcheck as standard on adjustable strength unit

Acts as a defence mechanism when the door is forcibly thrown open to reduce the risk of damage to the door and its surround.

Ideal applications for the Briton 2000E?

A universal specification closer – for all common door types.

Door types include: timber, aluminium, steel – hollow or solid, providing they are single action hinge or pivot hung doors.

The slimline dimensions of the Briton 2000E allow installation to door top rails of only 55mm deep without the use of adaptor plates.



Application 1- Sprayed silver finish



Application 61- Bright chrome finish with matching arm



Application 66 - Polished brass finish with matching arm

Hints and tips

When selecting a door closer not only is the size and the weight of the door important but careful consideration has to be made to the surrounding environment and the people who will be using the door.

External applications. Can be subject to wide variations in wind pressure. For these applications adjustable strength closers should be specified.

Schools and prisons. Areas renowned for misuse and abuse where the door closer arm can either be a great breaktime game or the ideal instrument for use as a weapon or self infliction – for these situations a non-projecting arm with a track would be ideal, for example a Briton 2514TE.

Children, the elderly and the infirm. For areas used by these people care should be taken not to over specify the power of closers, as the extra strength will increase the resistance and therefore make the door more difficult to open. Adjustable strength door closers allow you to adjust the power to suit the surrounding environment.

Busy Thoroughfares. ie Hospital/Hotel corridors. Internal doors that require a self closing device can impede the steady flow of traffic in busy areas. By using the Briton 2934TE electromagnetic hold open device user convenience can be improved without affecting fire safety. See page 14 for details.

Fire doors. For fire door applications ensure that the door fits firmly and securely into the frame and that any smoke or draught seals are the type that give minimum resistance. For advice please contact our technical service department on 0800 834 102



Briton 2514TE in Application 30 (track) - Bright chrome finish

Typical Applications	2002E	2003E	2004E	2515E	2715	2002TE	2003TE	2514TE	2934TE
Standard office door		●		●	●				
Classroom door		●	●	●	●			●	
Toilet door		●							
1/2 leaf door	●					●			
Disabled toilet				●				●	
Kindergarten door		●		●	●			●	
Hospital internal door		●	●				●		●
External door			●	●					
Hotel bedroom door		●		●					
Main entrance door		●	●	●					
1/2 hour fire door		●	●	●			●	●	
Reception door		●	●	●					
Store room door		●	●	●	●				
Single action corridor		●	●	●	●				●

Please note that the above table should only be used as a guide. When specifying a door closer the weight and width of the door are the main considerations but also the surrounding environment must be taken into account. For further details please see page 8 or contact technical services on 0800 834102.

Door Sizes (application 1)	2002E	2003E	2004E	2515E	2715	2002TE	2003TE	2514TE	2934TE
Suitable for doors up to 850mm	●			●	●	●		●	
Suitable for doors up to 950mm		●		●	●		●	●	●
Suitable for doors up to 1100mm			●	●	●			●	●
Suitable for doors up to 1250mm				●	●				
Suitable for doors up to 1400mm				●	●				

To compensate for power loss incurred by different product applications it is recommended that stronger closers are used. For application 61 increase by one strength size, for application 66 increase by two strength sizes. For external applications it is also recommended an adjustable strength closer is used to cope with changes in wind pressure.

Fixing Applications	2002E	2003E	2004E	2515E	2715	2002TE	2003TE	2514TE	2934TE
Application 1	● [†]	●	●	●	●				
Application 61	● [†]	● [†]	●	●	●				
Application 66	● [†]	● [†]	● [†]	●	●				
Application 30 (track)						● [†]	●	●	●

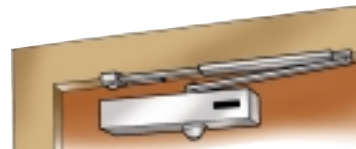
[†] Not suitable for fire doors in this application.



Mounted on the pull face of the door (Application 1)



Mounted on the transom on the push side of the door (Application 61)



Mounted on the push face of the door (Application 66)



Mounted on the pull face of the door (Application 30)



Mounted on the transom on the pull side of the door (Application 30)



Mounted on the transom on the push side of the door (Application 30)

Briton 2002E, 2003E & 2004E**Briton 2515E****Briton 2715****Briton 2002TE & 2003TE****Briton 2514TE***Fixed strength twin arm closers**Adjustable strength closer with backcheck**Adjustable strength closer with backcheck and delayed action**Fixed strength non-projecting arm closers**Adjustable strength, non-projecting arm closer with backcheck*

Features	2002E	2003E	2004E	2515E	2715	2002TE	2003TE	2514TE	2934TE
Fixed strength	●	●	●			●	●		
Adjustable strength 2-6 (BS EN 1154)				●	●				
Adjustable strength 2-4 (BS EN 1154)								●	
Adjustable strength 3-4 (BS EN 1155)									●
Tripacked for App 1, 61 and 66	●	●	●	●	●				
Non projecting arm						●	●	●	●
Backcheck				●	●			●	●
Delayed action					●				
180° opening/controlled closing	●	●	●	●	●	●	●	●	
110° opening/controlled closing				●	●				
Easy to fit metal cover	●	●	●	●	●	●	●	●	●
Matching arms available	●	●	●	●	●	●	●	●	●
Separate adjustment of latch action and closing speed	●	●	●	●	●	●	●	●	●
Temperature compensation regulators -15°C to +40°	●	●	●	●	●	●	●	●	●
Thermo constant fluid	●	●	●	●	●	●	●	●	●
Fully adjustable steel arm	●	●	●	●	●	●	●	●	●
Forged steel piston	●	●	●	●	●	●	●	●	●
Easy to follow fitting instructions	●	●	●	●	●	●	●	●	●
Non handed	●	●	●	●	●	●	●	●	●
Power shoe	●	●	●	●	●				
Optional stand open facility	●	●	●	●	●				
Electro-magnetic hold open									●

Standards	2002E	2003E	2004E	2515E	2715	2002TE	2003TE	2514TE	2934TE
BS EN 1154 (500,000 cycles)	●	●	●	●		●	●	●	●
Briton test (2,000,000 cycles)	●	●	●	●	●	●	●	●	
BS EN 1155 compliant									●
Fire BS 476 part 22 1987 (½ hr)		●	●	●	●		●	●	
Fire BS 476 part 22 1987 (1 hr)		●	●	●	●		●	●	
Fire BS 476 part 22 1987 (2 hrs)			●	●	●			●	●

Finishes

Powder coated finishes include Silver (SE), Gold (GE) or Brown bronze (BE), plus the wide range of colours to match the Normbau range of coloured nylon architectural ironmongery.

Alternative metal finishes include Chrome plated (PCP); Polished and lacquered brass (PB); Polished stainless steel (PS) and Satin stainless steel (SS).

Twin arm closer arms are supplied with matching arms and covers as standard.

Non-projecting closer with a track can be supplied with track and arm in black as standard, available to match on request.



Silver sprayed
with matching arms
(SES)



Brown sprayed
with matching arms
(BES)



Gold sprayed
with matching arms
(GES)



Polished and lacquered brass
with matching arms
(PBS)



Chrome plated
with matching arms
(PCPS)



Polished stainless steel
with matching arms
(PSS)



Satin stainless steel
with matching arms
(SSS)

Powder Coated



Silver (SE)



Matt Black
16 (BM)



Gold (GE)



White
19 (NWH)



Sandstone
61 (NST)



Brown
74 (NBR)



Violet
73 (NVT)



Red
12 (NRE)



Dark Red
35 (NDR)



Slate Blue 63
(NSB)



Blue
11 (NBU)



Dark Blue
37 (NDB)



Light Green
76 (NLN)



Green
13 (NGR)



Dark Green
36 (NDN)



Yellow
22 (NVE)



Manhattan
67 (NMG)



Dark Grey
18 (NDG)



Ivory
65 (NIV)

Metallic



Polished
Stainless Steel
(PS)



Satin Stainless
Steel (SS)



Polished Brass
(PB)

Due to the limitation of the printing process, we suggest you check your final choice of finish against the actual products or a sample swatch

Dimensions and Applications

The following illustrations give the minimum and maximum dimensions required for fixing the closers to varying door applications.

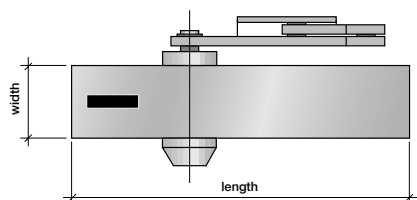


fig.1.2

Application 1 (regular)

Body Sizes (length x width x depth)

Fixed strength – 249 x 48 x 59mm
(Briton 2002E, 2003E, 2004E)

Adjustable strength – 310 x 55 x 66mm
(Briton 2515E, 2715)

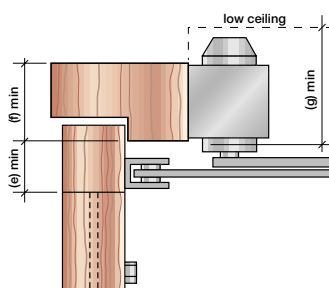
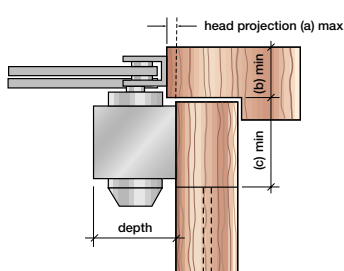


fig.1.4

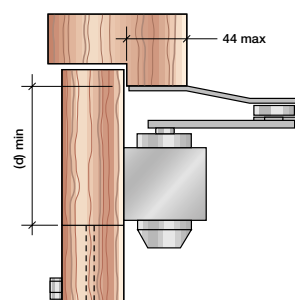


fig.1.3

Application 1 (regular)

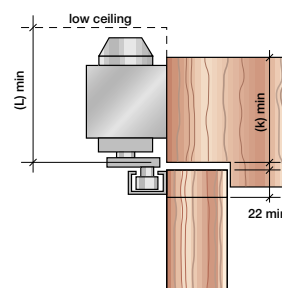
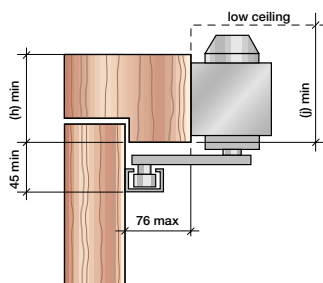
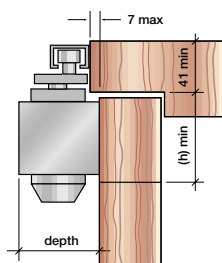
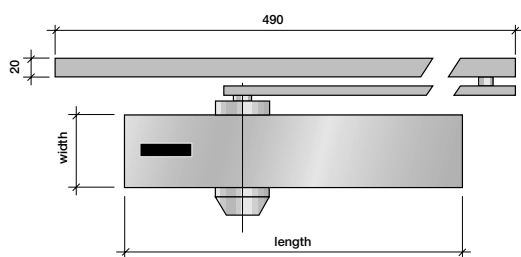
Closer is fixed to the pull (hinge knuckle) face of the door.

Application 61 (transom mounted)

Closer is fixed to the transom on push face of the door. Bracket fixed to the door face.

Application 66 (parallel arm)

Closer is fixed to the push (opposite to hinge knuckle) face of the door. Bracket is fixed to underside of head frame.



Application 30 (Slide arm)

Body Sizes (length x width x depth)

Fixed strength – 249 x 48 x 59mm
(Briton 2002TE, 2003TE)

Adjustable strength – 310 x 55 x 66mm
(Briton 2514TE, 2714T)

Door mounted (Pull side)

Closer is fixed to the pull (hinge knuckle) face of the door.

Transom mounted (push side)

Closer is fixed to the transom on the push face of the door.

Transom mounted (pull side)

Closer is fixed to the transom on pull face of the door.

Standard Arm	Closer body size (mm)	
	<i>Fixed strength</i>	<i>Adjustable strength</i>
Dim (a)	10	7
Dim (b)	25	28
Dim (c)	50	55
Dim (d)	88	94
Dim (e)	28	30
Dim (f)	50	55
Dim (g)	68	75

Stand Open Arm	Closer body size (mm)	
	<i>Fixed strength</i>	<i>Adjustable strength</i>
Dim (a)	10	7
Dim (b)	38	41
Dim (c)	50	55
Dim (d)	100	107
Dim (e)	42	43
Dim (f)	50	55
Dim (g)	68	75

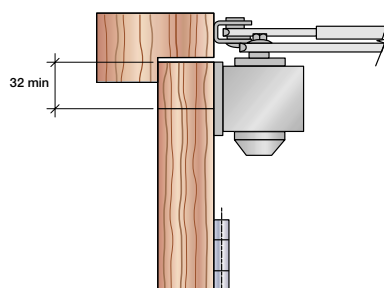
Slide Arm application 30	Closer body size (mm)	
	<i>Fixed strength</i>	<i>Adjustable strength</i>
Dim (h)	50	55
Dim (i)	68	75
Dim (k)	68	75
Dim (l)	93	100

Application 38 & 39	Closer body size (mm)	
	<i>Fixed strength</i>	<i>Adjustable strength</i>
Dim 1	88	94
Dim 2	100	107
Dim 3	88	94
Dim 4	100	107

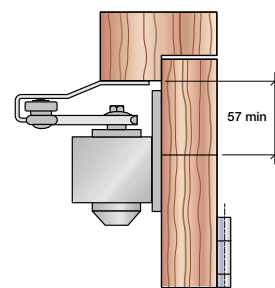
Special Applications

Other brackets are also available for fixing closers to doors with cover panels or ornamental architraves. Our technical support department will be able to provide further details.

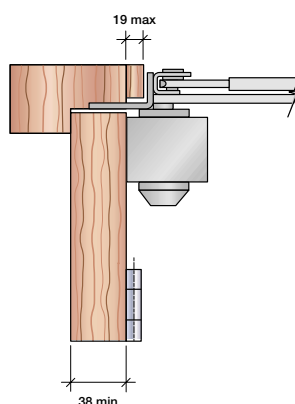
Drop Plate For use on doors with narrow top rails.



Application 1

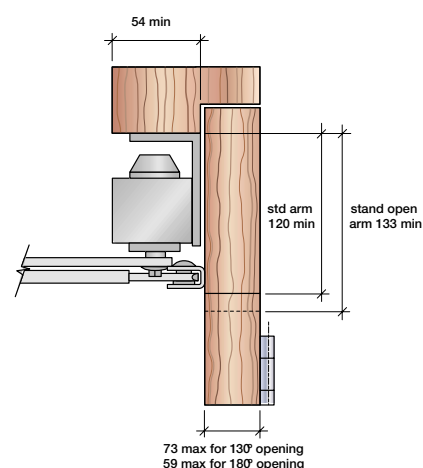


Application 66



Application 70 (soffit bracket)

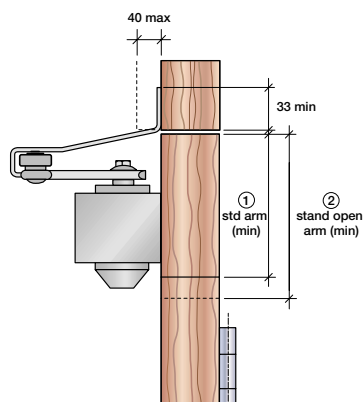
Where architrave conditions do not permit the fixing of the regular application 1 arm bracket, application to soffit arm brackets can be supplied upon request as an extra.



Application 2 (bracket)

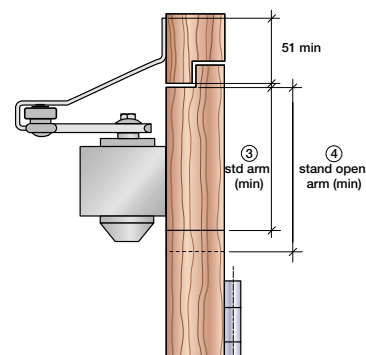
Closer is fixed to transom on push (opposite to hinge) side of the door.

Alternative arm brackets For use with application 66.



Application 38

Fixing application for use where headframes only protect up to 40mm.



Application 39

Fixing application for use on flush rebated headframe.

What is the Briton 2934TE?



The Briton 2934TE is an electromagnetic door holder/closer designed to provide single point hold-open of fire and smoke barrier doors. In the case of a fire, activation of the building's fire alarm system will automatically release the door to maintain the fire integrity of the doorset.

When should it be specified

Recommended for doors in medium-to-high traffic areas, such as corridors, halls, foyers, inner entrance doors and other busy thoroughfares, where the flow of traffic would otherwise be impeded by a self closing device.
Can be mounted on either the push or pull side of the door.
The Briton 2934TE is non-handed.

Activating the closer

Release can be effected in three ways:

- automatically, upon activation of the building's fire alarm system via smoke detectors and/or fire call points;
- manually, by pulling the door closed to override the solenoid holding tension; or
- locally, via the on-board 'test' switch.

The circuitry is inherently 'fail-safe' and will **always** release when required. The device will close the door smoothly, quietly and effectively to maintain the fire integrity of the doorset.

Power Supply

Track mounted electromagnetic holding solenoid with 'override test switch'. Rated at 24V AC/DC: +10% - 15% @ 90mA max. Connections to the Mains power supply and Fire Alarm System to be made with no less than 1.5m² stranded cable.

Angle of hold open

Angle of opening is adjustable from approximately 85° to 110°.

Performance

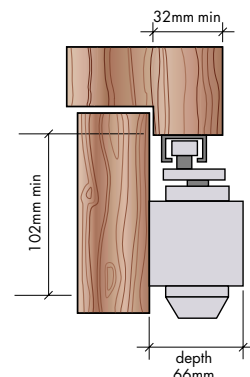
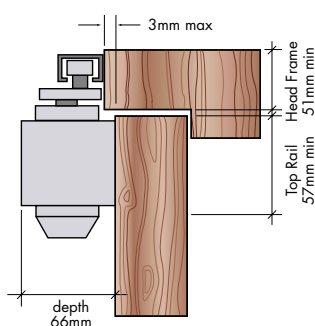
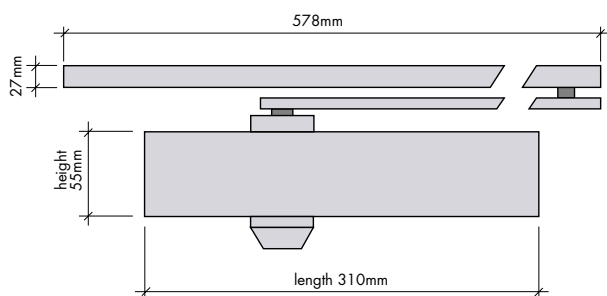
The Briton 2934TE has been designed and developed to exceed the requirements of standard BS EN 1155: 1997, the minimum requirement for any door control manufacturer. BS EN 1155 is an extension to BS EN 1154, but specifically applies to door closers with electrically powered hold open devices.

Please note

Door Stops: Section 4.2 of BS EN 1155: 1997 states "...where the opening angle is limited by the device, provision of a separate door stop should be considered".

Hinges and Pivots: The Briton 2934TE is suitable for use on doors hung on hinges up to 125 x 125mm or pivots with up to 19mm offset. It can also be templated for use with projection hinges – consult our technical department for details.

Power Supplies: Briton's FSR range of continuously rated, boxed power supplies will provide transformation/rectification of the mains supply for the 2934TE device.



Technical Data

Construction

Fixed strength closers have a die cast aluminium body with a steel rack and pinion incorporating needle roller bearings, housed beneath a metal cover.

Adjustable strength closers have a cast iron body with a steel rack and pinion incorporating needle roller bearings, housed beneath a metal cover.

Arms of the twin arm closers are manufactured from steel strip.

The non projecting arm is also manufactured from steel strip and the channel is manufactured from extruded aluminium with a nylatron roller.

Fixings

Each unit is supplied with a template, detailed fixing instructions and installation packs for timber doorsets. Installation packs are also available for metal doorsets.

Stand open arm

For applications where the door may need to be left in a hold open position to allow for frequent slow moving traffic to pass through. Sturdily constructed with a cam action knuckle joint and are suitable for either hand of the door.

Stand open knuckle when set will hold the door open up to 130° on regular and transom applications and up to 110° maximum on parallel arm applications.

STAND OPEN ARMS MUST NOT BE USED ON FIRE DOORS

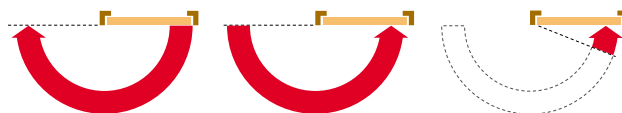
Maintenance

All internal parts of the Briton 2000E series closers are completely immersed in oil to ensure long working life. When used as part of a fire precaution system, check correct functioning of unit during the periodic fire safety test procedure.

Check quarterly to ensure correct setting of door closing and latching speeds and that fixing screws are tight. A small quantity of light machine oil applied to the door hinges will ensure optimum performance.

NB A door stop should always be used to prevent the door opening beyond the limit of the closer or opening back too far and striking the door frame surround.

To be effective the door stop should be fitted not less than $\frac{2}{3}$ of the door width away from the hinge.



Angle of opening

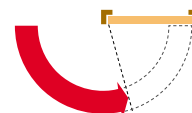
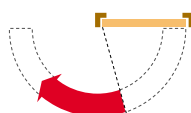
Maximum angle of opening 180° subject to hinge projection and surrounding structure.

Door speed

Can be adjusted to either increase or decrease the closing speed of the door from approx. 180° to 0°.

Latch action

To accelerate the door in the final stages of closing cycle to assist in overcoming stubborn latch bolts, or air pressure conditions.



Backcheck

Acts as a defence mechanism when the door is forcibly thrown open preventing damage to the door and its surround. This control can be adjusted from approximately 60° opening to allow the level of resistance to be set to suit specific environments, ie schools. Available on adjustable strength models **Briton 2515E, 2715, 2514TE.**

Delayed action

Provides prolonged closing time for slow moving traffic. This enables the door's closing to be adjusted so that when it is opened further than 75°, the closing action can be delayed for specific periods of time providing a delay in the closing cycle for slow moving users such as the elderly, hospital porters or the disabled to pass through the doorway. Available on adjustable strength model **Briton 2715.**

Technical support

If you have any queries regarding Briton door closers and product selection please call our technical support department who will be pleased to offer any assistance on all aspects of our products including queries on:

- Installation
- Operational performance
- Ancillary products and spare parts

For further details call the Technical Services team on
Freephone Tel: 0800 834102

IR Security & Safety Ltd**Architectural Hardware**

Bescot Crescent
Walsall
West Midlands
WS1 4DL

01922 707400
01922 646303 General Fax
08706 012012 Customer Contact Centre (orders)
0800 834103 Customer Contact Centre Fax (orders)
0800 834102 Technical Support

Email info@irarchitecturalhardware.co.uk
Web www.irarchitecturalhardware.co.uk

Calls to our customer contact centre may be recorded for training purposes.
Whilst IR Architectural Hardware have taken every care to ensure the accuracy of information, data or advice contained in this literature, no liability in respect of such information or advice, whether given negligently or not can be accepted by the company.

IR Architectural Hardware retains the right to amend the technical specification of any range of equipment shown, without prior notice.