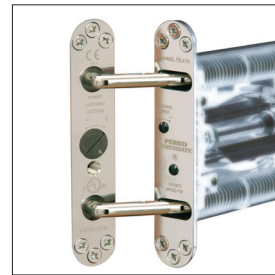


# Door Controls

Door Closers | Floor Springs | Operators



# BS EN1154:1997

## BS EN 1154: 1997 Controlled Door Closing Devices

Products tested to British and European standards provide greater durability, longer warranty periods, peace of mind and evidence of professional specification.

Under the standard each product is tested and classified accordingly to show its compliance. The identification of a 6-digit code is visible on the individual product. Each digit represents a category and how it measured against the standard to which it was tested.

The standard covers all controlled surface mounted, concealed or transom mounted closers as well as both single and double action floor springs.

### Digit 1: Category of use

For all internal and external doors for use by the public (and others), with little incentive to care i.e. where there is some chance of misuse of the door.

3 = for closing doors from at least 105° open.

4 = for closing doors from 180° open.

N.B. Grade 4 classification assumes standard installation according to the manufacturers' instructions.

For applications subject to extremes of abuse, or particular limitations of opening angle, door closers incorporating a backcheck function or provision of a separate door stop should be considered.

### Digit 2: Number of test cycles

8 = 500,000 test cycles.

### Digit 3: Test door mass

Seven test door mass grades and related door closer power sizes are identified. Where a door closer provides a range of power sizes both the minimum and maximum sizes shall be identified.

Test Door Mass & Recommended Door Widths		
Power size of closer	Maximum mass of hinged leaf	Width of test door leaf
1	20kg	<750mm
2	40kg	850mm
3	60kg	950mm
4	80kg	1100mm
5	100kg	1250mm
6	120kg	1400mm
7	160kg	1600mm

### Digit 4: Fire resistance

0 = not approved for use on fire/smoke door assemblies.

1 = suitable for use on fire/smoke door assemblies, subject to satisfactory assessment of the contribution of the door closer to the fire resistance of specified fire/smoke door assemblies.

### Digit 5: Safety

1 = safe.

### Digit 6: Corrosion resistance

0 = no defined corrosion resistance.

1 = mild resistance.

2 = moderate resistance.

3 = high resistance.

4 = very high resistance.

### Example:

3 8 2-5 0 1 0

The above code signifies a door closer capable of opening to at least 105°, and with a range of power size from 2 to 5. The closer would not be suitable for use on a fire door.

### Marking:

This standard requires that each door closer and separately supplied accessory manufactured to the standard be marked with the following:

a: manufacturer's name or trademark, or other means of identification.

b: product model identification.

c: the 6 digit classification listed above.

d: number of this European standard.

e: the year and week of manufacture (may be coded).

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# Technical Details

## BS EN 1155:1997 Electrically Powered Hold Open Devices for Swing Doors

Products tested to British and European standards provide greater durability, longer warranty periods, peace of mind and evidence of professional specification.

Under the standard each product is tested and classified accordingly to show its compliance. The identification of a 6-digit code is visible on the individual product. Each digit represents a category and how it measured against the standard to which it was tested.

The standard specifies requirements for separate electrically powered hold-open devices and also for hold-open mechanisms incorporated in a door closer. Whilst these devices may incorporate smoke or fire detection elements, the performance of these elements is outside the scope of BS EN1155.

### Digit 1: Category of use

Only one category is identified.

3 = for all internal and external doors for use by the public (and others), with little incentive to care, i.e. where there is some chance of misuse of the door.

### Digit 2: Number of test cycles

5 = 50,000 test cycles. For stand alone electrically powered hold open devices.

8 = 500,000 test cycles. For all electrically powered hold-open and free-swing door closers and devices that contain operating arms.

### Digit 3: Test door mass

Five test door mass grades and related door closer power sizes are identified. Where an electrically powered hold-open device provides a range of power sizes both the minimum and maximum sizes shall be identified.

Test Door Mass & Recommended Door Widths		
Power size of closer	Maximum mass of hinged leaf	Width of test door leaf
3	60kg	950mm
4	80kg	1100mm
5	100kg	1250mm
6	120kg	1400mm
7	160kg	1600mm

### Digit 4: Fire resistance

Only one grade is identified.

1 = suitable for use on fire/smoke door assemblies, subject to satisfactory assessment of the contribution of the door closer to the fire resistance of specified fire/smoke door assemblies.

### Digit 5: Safety

Only one grade is identified.

1 = safe.

### Digit 6: Corrosion resistance

0 = no defined corrosion resistance.

1 = mild resistance.

2 = moderate resistance.

3 = high resistance.

4 = very high resistance.

Example:

3 5 3-6 1 1 0

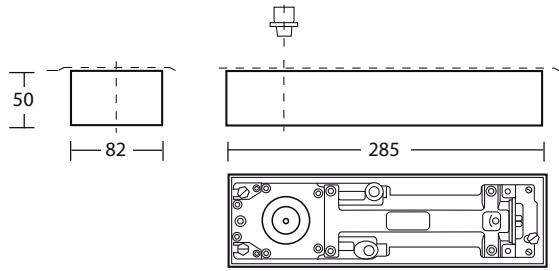
The above code signifies an electrically powered hold-open device suitable for a range from power size 3 to 6.

Marking:

This standard requires that each electrically powered hold-open device manufactured to the standard be marked with the following:

- a: manufacturer's name or trademark, or other means of identification.
- b: product model identification.
- c: the 6 digit classification listed above.
- d: number of this European standard.
- e: the year and week of manufacture (may be coded).

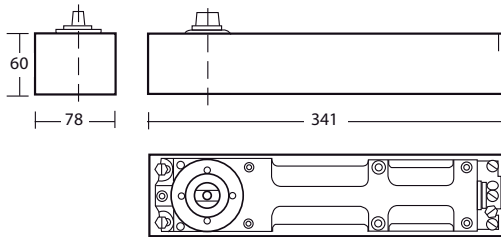
# Hydraulic Floor Springs



**IC005** EN size 1 to 4 power adjustable floor spring with backcheck. For doors up to 1100mm (1000mm External). Universal for single or double swing doors.

Adjustable closing speed and latch action. Optional hold open (non fire doors), suitable for doors up to 120kg.

**IC005-C** Cover plate in stainless steel or brass.



**IC006** A universal unit comes in three strengths, EN3, EN4, EN6. Suitable for doors 800, 1200 and 1400mm wide respectively. With backcheck, delayed action and disengageable hold open function (non fire doors). Carrying capacity of 300kg.

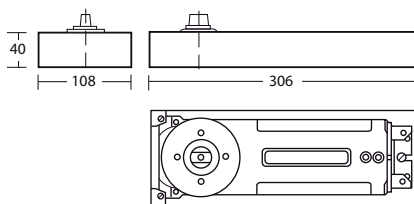
**IC006-C** Cover plate stainless steel or brass.

**IC007** Without hold open and delayed action. Suitable for fire doors, EN4, EN5, EN6.

**IC008** Electro magnetic hold open floor spring EN4, EN5, EN6 with adjustable end latch action.

**IC009** As 31.0040 with free swing facility.

**IC010** Electro magnetic hold open floor spring for double doors EN4, EN5, EN6.



**IC011** EN size 4. Most suitable for double action doors. The biggest advantage is a greatly reduced depth of only 40mm.

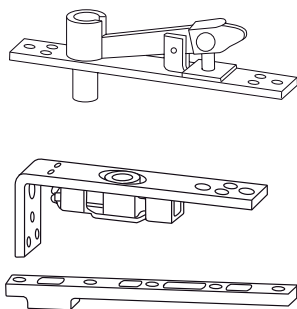
For doors up to 1000mm wide and 100kg in weight.

Offers an economic solution for a double swing door. Ideally suited for aluminium and glass entrance doors.

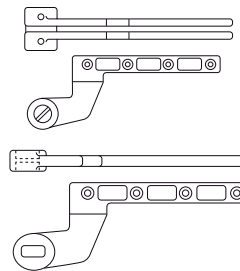
**IC011-C** Cover plate in stainless steel.

## DOUBLE ACTION ACCESSORY

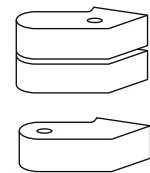
## SINGLE ACTION ACCESSORY



IC-DA



IC-SA



Cover caps

IC-C-LH  
IC-C-RH



### OPTIONS

Please seek technical assistance when specifying electro hold open floor springs. Intumescent sealant compound available.

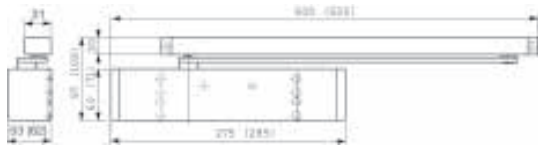


### STANDARDS

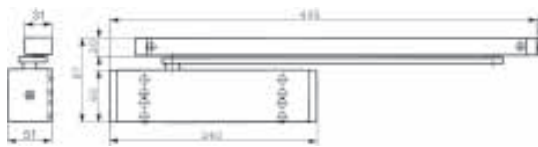
BS EN 1154. BS EN 1155.  
CE Marked.  
Certifire Approved.

# Cam Action Door Controls (surface mounted)

WITH GREATLY REDUCED OPENING FORCE



- IC002-A Cam action overhead closer. BS EN 2-5 with adjustable closing speed, latch action, backcheck and delayed action, for internal or external doors up to 1250mm.
- IC002-B As detailed above with BS EN 5-7 for doors up to 1600mm.
- IC002-MHO Mechanical hold open device (not for fire doors).
- IC002-EMF Additional code for electro mechanical hold open
- IC002-EMR Additional code for electro mechanical hold open and integral smoke detection.

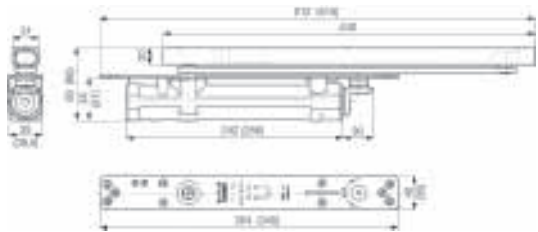


- IC002-C Cam action overhead closer. BS EN 1-4 with adjustable closing speed and latch action for internal doors up to 1100mm.
- IC002-C-MHO Mechanical hold open device (not for fire doors).
- IC002-C-EMF Additional code for electro mechanical hold open unit.



- IC002-D Cam action overhead closer. BS EN 4 with adjustable closing speed and latch action for doors up to 1100mm. Internal only.
- IC002-D-MHO Mechanical hold open device (not for fire doors).

CAM ACTION - CONCEALED



- IC001-A Concealed cam action door closer EN 2-4 minimum door thickness of 40mm required. Adjustable closing force, latch action. For doors up to 1100mm internal only.
- IC001-B Concealed cam action door closer EN 3-6 minimum door thickness of 50mm required. As detailed above for doors up to 1400mm internal only.
- IC001-C Concealed cam action door closer EN2-4 for double action applications.
- IC001-MHO Mechanical hold open device (not for fire doors).
- IC001-EMF Electro mechanical hold open arm assembly.
- Size 1 FD30 Intumescent Fire Seal pack for EN 2-4.
- Size 2 FD60 Intumescent Fire Seal pack for EN 2-4.
- Size 3 FD30 Intumescent Fire Seal pack for EN 3-6.
- Size 4 FD60 Intumescent Fire Seal pack for EN 3-6.



## FINISHES

Silver, stainless steel, polished brass and polished chrome.  
Any RAL Colour.



## OPTIONS

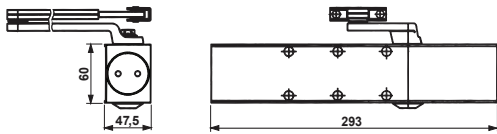


## STANDARDS

BS EN 1154.  
BS EN 1155.  
Certifire.  
CE Marked.

These door controls form part of a full system covering many applications. For more specific detail please contact us.

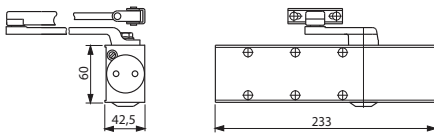
# Rack and Pinion Door Controls



IC003-A

Universal overhead door closer, size EN 2 to 6 with self adjusting backcheck, delayed action, variable closing speed and latch action for doors up to 1400mm wide (1200mm wide with parallel arm installation). For mechanical hold open arm specify IC003-A-MHO separately.

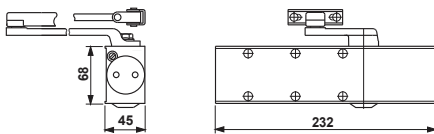
Flat form plated arms IC003-P



IC003-B

Universal overhead door closer, size EN 2 to 4 with self adjusting backcheck, adjustable closing speed and latch action suitable for doors up to 1100mm wide (950mm wide with parallel arm installation). For mechanical hold open arm specify 32.0081 separately.

Flat form plated arms IC003-P

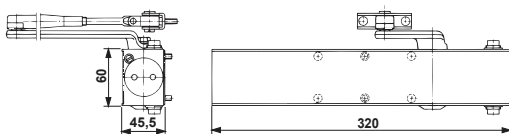


IC003-C

Universal overhead door closer, size EN 2 to 4 adjustable closing speed and latch action. For internal doors up to 1100mm.

IC003-D

Universal overhead door closer EN 2 to 4, adjustable closing speed and latch action, with backcheck. For internal doors up to 1100mm.



IC003-E-EHO

Electro-hydraulic hold open door control with standard arm. Variable between 75° and 180° opening angle.

IC003-E-EMR

As detailed above with integral smoke detection.

IC003-E-SF

Electro-hydraulic hold open door closer with swing free arm 24v DC EN 3-4.



## Finishes

Silver, gold, satin stainless steel, polished stainless steel, polished brass. Standard RAL Colours.



## Standards

BS EN 1154.  
BS EN 1155.  
Certifire Approved.  
CE Marked.



## Options

Suffix FC for full metal cover square ended, DC for full cover radius ends, (not available in silver or gold).



## Fixings

Full fixings supplied for timber or metal doors.

# Low Energy Door Operator

## The Equality Act 2010

From 1 October 2010, the Equality Act replaced most of the Disability Discrimination Act (DDA) 2005.

The DDA required that all less-abled people were able to use a building and have access to the services provided within the building.

Employers and service providers were under a duty to make reasonable adjustments to their workplaces to overcome barriers experienced by less-abled people. In this regard, the Equality Act 2010 did not change the disability law.

Part III of the DDA Act concerns itself with the duties imposed on those providing goods, facilities and services ('service providers') not to discriminate against disabled people.

A service provider is defined as any entity which offers a service to the public, regardless of whether that service is free or paid for. The Act applies to access to and use of any place which members of the public are permitted to enter.

Where a physical feature (for example, one arising from the design or construction of a building or the approach or access to the premises) makes it impossible or unreasonably difficult for disabled people to make use of such service, it is the duty of the provider of that service to take such steps as it is reasonable, in all the circumstances of the case, to:

- remove the feature.
- alter it so that it no longer has the effect.
- provide a reasonable means of avoiding the feature.
- provide a reasonable alternative method of making the service in question available to disabled persons.



## Functions

### Low Energy Mode

In low energy mode the door operator works as a standard manual door closer. Assistance can be obtained via push button, elbow pad or other actuator options. The unit opens the door at a precisely controlled speed. After the pre-set hold-open time, the door will slowly close.

### Power Assist Mode

This assists the user as he or she opens the door. The door is effectively lighter in operation.

### Push and Go Facility

With this facility when the door is pushed open the intelligent unit determines whether the user requires assistance by monitoring the initial opening speed of the door.

If no assistance is required, the unit operates as a conventional manual closer.

If the unit deduces that the user does require assistance, the unit enters either low energy or power assist mode according to which has been selected.

## Features

- Reliably, controls doors from 45kg – 90kg.
- A wide range of activation options including wall switch, push-pads, remote control, etc.
- Quick, uncomplicated installation.
- Suitable for retrofit or new installations.
- Can operate doors opening to the right or left, pushing or pulling, operating doors from 750mm – 1200mm wide.
- Hold-open time, adjustable from 5 to 65 seconds.
- Minimum frame face for mounting unit is 44mm, 51mm for pull side.

IC007-A Operator body only

IC007-B Arm, 76mm reveal, push side

IC007-C Arm, 76-178mm reveal, push side

IC007-D Slide channel arm, pull side

Dimensions 540mm wide, 108mm high, 152mm projection.



## OPTIONS

Available supply only or with installation. Can be used in conjunction with access control products. For a full specification please contact your technical representative.



## FINISHES

Silver.  
Standard RAL colours.

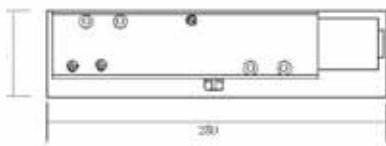
# Rack and Pinion Door Controls



A versatile heavy duty variable power overhead door closer range, suitable for most heavy duty applications.

Successfully tested to EN1154. CE Marked. Certifire Approved.

Included in successful fire test to EN 1634, Certifire approved for use on fire doors 20, 30, 60 and 120 minutes.



**IC005-A-EHO** Universal electro-magnetic door control. Suitable as hold-open or swing free. 80kg door up to 1100mm wide. 24 v DC 85mA.



**IC005-B** Universal overhead variable power door closer. EN2-5 with backcheck.

**IC005-C** Universal overhead variable power door closer. EN2-5 with backcheck and delayed action.



**IC005-D** Universal overhead variable power door closer. EN2-4 with backcheck and delayed action.



## FINISHES

Satin stainless steel, polished stainless steel, polished brass, polished chrome. Any Ral Colour.



## STANDARDS

BS EN 1154, BS EN 1155. Certifire.



## OPTIONS

Suffix F for matching arm.



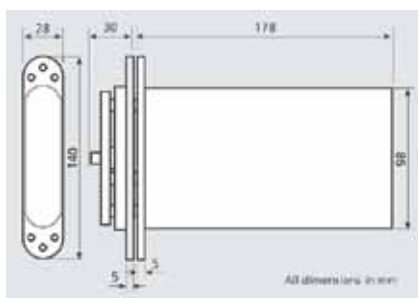
## FIXINGS

Supplied to suit timber or metal doors.

# Jamb concealed door closers

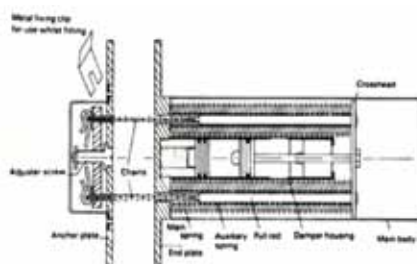


Fully controlled and uncontrolled concealed door closers. All are precision manufactured to the highest standards and meet the required standards and technical performance. Being fully concealed when the door is closed they offer enhanced aesthetics when designing for interior projects and opportunities for reduced vandalism and maintenance costs.



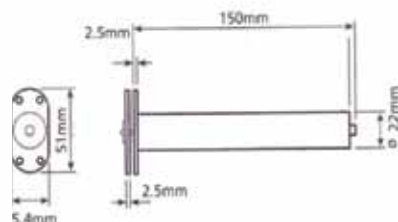
IC004-A

Tested to BS EN1154, power size 3 for doors up to 80kg and up to 950mm wide.  
CE Marked.  
BS EN1634 approved for use on 30 and 60 minute fire doors.  
Certifire Approved.  
Endurance tested to 500,000 closing cycles.  
Suitable for latched and unlatched installations.  
Adjustable closing speed and power latching action.



IC004-B

Light to medium use applications on internal doors up to 75kg.  
Fire tested - incorporated in doors successfully tested to BS 476.  
Tested to withstand 500,000 closing cycles.



IC004-C

Economic means of providing automatic closing for internal doors up to 50kg.  
Light and medium use applications.



## FINISHES

Satin stainless steel, polished stainless steel, polished brass, polished chrome.



## FIXINGS

Supplied to suit timber or metal doors.

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MK3 7QT  
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E: bury@lloydworrall.co.uk

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F: 0114 244 4219  
E: sheffield@lloydworrall.co.uk

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E: manchester@lloydworrall.co.uk

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