Y Series
Door Closer
Introduction 3
Door Closer Selection Guide 4
Features and Specifications 5
YDC - 3025 Surface Mounted Door Closer Series 7
YDC - 3013SA Slide Arm Door Closer Series 8
YDC - 2000 Surface Mounted Door Closer Series 9
2000E Surface Mounted Door Closer Series 12
2500E Concealed Door Closer Series 13
IC1000E Concealed Door Closers 14
Specification Service 15
The Yale Hydraulic Door Closer Series has been designed and manufactured to exacting world standards. These world recognised standards ensure the highest possible quality, efficiency and reliable performance.

The Yale YDC - 3025 and YDC - 2000 series door closers are tested and approved on Fire Doors for 2 hours in accordance with the BS EN 1634.1:2000 fire door test.

Effective door installation requires that the door and frame be of sufficient strength or reinforced to ensure secure anchorage of the door closer unit.

A door fitted with a door closer must be hung on good quality aligned hinges so that the door swings freely without bias in both directions.

The closed door must be clear in the door frame and when a lock is fitted the latch bolt must engage freely within the strike.

When specifying manually operated door closers the following should be considered: door size (in particular width of door), door weight, type of installation, environmental conditions, location of door, operation frequency of door and the people using the door.

Door size and the pressure exerted on the surface area of the door due to wind gusts or air conditioning and the spring strength required to hold or close the door against this pressure must be considered along with the ability of the user to exert the force necessary to push or pull the door open. The location of door furniture will influence the leverage available to the person opening the door.
Door Closer

**Selection of door closer size is judged in two ways.**

1. Does the door closer have the strength to effectively close the door against unexpected air pressures?
2. Is the door closer oversized for the application and therefore affecting the ease of operation?

Efficiency of the door closer also has a major bearing on ease of operation.

For optimum performance it is essential that a highly efficient door closer of a correct size is selected.

The use of spring strength adjustability, which allows fine tuning of strength on site, has simplified this task but not removed all of the guesswork. With more architects and engineers becoming conscious of the problems caused by incorrect selection of door closer strength, it has become the responsibility of manufacturers to provide better technical information, such as closing torque and efficiency of their products.

Fire doors and pressurised stairwells pose significant challenges in ensuring closing and latching of fire doors. The problems are created by differential air pressures resulting from airconditioning systems, either on one or the other side of the door. To achieve complete fire safety, fire doors must latch securely at all times. If this performance is not achieved, the stairwell may be unsafe, and in the event of fire, loss of life and property may occur. Correct selection of door hardware is of paramount importance in ensuring that the appropriate operating standards are met.

**Fire doors which open into a pressurised stairwell must meet the following criteria:**

- the door must close against a pressure differential between the airconditioned floor area and non-airconditioned stairwell;
- the door must latch securely every time it closes;
- the door must be able to be opened with a force not exceeding 110N when the stairwell is pressurised; and
- the door must be protected from damage when it is opened by means of a backcheck action which is built into the door closer.

**Notes**

Always round up to the next door width (ie for 870 mm door use 950 mm).

If parallel arm installation, then use next door width door line (ie, for 830 mm door use 950 mm).

For internal doors deduct 200 mm from actual door width (ie for 1250 mm internal door use 1050 mm).

If more severe conditions are expected then use the next door width or consult the office in your location (refer back page).

When specifying parallel arm and slide rail functions, allowance should be made for the following power loss:

**Parallel Arm Mounting**
Approximately 20 per cent loss

**Slide Rail Mounting**
Approximately 30 per cent loss

**Power Selection Chart**

This chart below will be most useful in selecting the correct door closer. Simply identify the dimensions of the appropriate door and select the recommended door closer.

The chart is intended as a guide only and as such the following variations should be taken into account when making your selection:

- Environmental factors such as the effect of wind or airconditioning pressures.
- An unsheltered external door is a door on which prevailing wind gusts will directly produce a “sail area” affect.
- A sheltered external door is a door way which is protected by a wind break or wall, which acts as a barrier against direct wind gusts.

<table>
<thead>
<tr>
<th>Door Width</th>
<th>Max Door Weight</th>
<th>Closer Size</th>
<th>Closing Torque (min)</th>
<th>Closing Torque (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>750</td>
<td>20kg</td>
<td>1</td>
<td>9Nm</td>
<td>13Nm</td>
</tr>
<tr>
<td>850</td>
<td>40kg</td>
<td>2</td>
<td>13Nm</td>
<td>18Nm</td>
</tr>
<tr>
<td>950</td>
<td>60kg</td>
<td>3</td>
<td>18Nm</td>
<td>26Nm</td>
</tr>
<tr>
<td>1100</td>
<td>80kg</td>
<td>4</td>
<td>26Nm</td>
<td>37Nm</td>
</tr>
<tr>
<td>1250</td>
<td>100kg</td>
<td>5</td>
<td>37Nm</td>
<td>54Nm</td>
</tr>
<tr>
<td>1400</td>
<td>120kg</td>
<td>6</td>
<td>54Nm</td>
<td>87Nm</td>
</tr>
</tbody>
</table>

* All dimensions are in millimetres
Features

Fire Test
• The Yale YDC - 3025 and YDC - 2000 series door closers are tested and approved on Fire Doors for 2 hours in accordance with the BS EN 1634:1:2000 fire door test.

Materials
• Extruded aluminium body with hard anodised coating.
• Alloy steel rack and pinion mechanism operated by silicon chrome alloy steel springs and forged steel arms.

Handing
• Yale door closers are non-handed.
• Suitable for clockwise or anticlockwise opening door.

Backcheck
• Backcheck cushions or slows the opening movement of the door prior to reaching final open position.
• Backcheck intensity is adjustable to allow for door size, door weight and closing power.

Door Stops
• Floor or wall mounted door stops should be fitted.
• To prevent possible damage to the door unit or surrounds where a door may be subject to violent opening.
• To stop a door from being forced past the position where the arms are fully extended.
• To stop a door at a specific position to clear feature walls, glass panels, furniture, etc.

Sequence Selectors
• When a pair of rebated doors are fitted with door closers it is essential that the doors close in their correct sequence.
• The closing sequence is achieved by the installation of a sequence selector.

Slide Rail Hold Open
• Hold-open is a standard feature for all slide arm door closers. Can be adjusted or disabled at any angle of the open arc.

Delayed Action
• The Delayed Action is an independent valve and can either be adjusted as part of the closing sequence or independently adjusted for delayed action.
• Such doors are particularly suitable for use by the disabled, the aged and people with prams or trolleys.

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YDC - 3025 Door Closer Series

A range of adjustable power door closer units suitable for architectural and commercial applications.

Standard Features

- EN2 - EN5 power adjustable
- Door weight range of 20kg - 100kg
- Standard arm and parallel bracket included
- Adjustable backcheck.
- Speed controls.
- Overload protection.
- Non-handed.
- Regular, parallel & over door mounting.

Standard Arm

- Closer installed on pull side of door. This mounting position permits opening of 135°.

Parallel Arm

- Closer installed on push side of door. This mounting position permits opening of 160°.

Over Door Mounting

- Closer installed on push side of door and top rail where conditions do not allow parallel mounting. This mounting position permits opening of 135°.

Standards

- Complied with CE standard with Size EN2 - EN5
- EN 1634.1:2000: 2 hour fire doors

Standard Finishes

- Silver enamel - SIL

Applications - Mounting Details

Regular Arm installation closer is fixed to the pull (speed regulating valve towards the hinge) side of the door.

Parallel Arm installation closer is fixed to the push (speed regulating valve opposite to hinge) opposite to hinge side of the door.

Top jamb installation closer is fixed to the top jamb on the push (speed regulating valve towards the hinge) side of the door.

How to order

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>YDC - 3025</td>
<td>Yale Surface Mounted Door Closer Power Adjustable 2 - 5</td>
<td>20kg - 100kg</td>
</tr>
</tbody>
</table>

Technical Data - Limiting Dimensions Regular Arm
Door Closer

YDC - 3013SA Slide Arm Door Closer Series

The Slide Arm Series permits smoother opening by way of reducing power as the door opens. Ideally suited for schools, hospitals or doors where children, disabled or the aged may enter.

Standard Features
• EN1 - EN3 power adjustable
• Door weight range of 15kg - 65kg
• Adjustable hold open (inclusive).
• Adjustable backcheck.
• Speed controls.
• Overload protection.
• Non-handed.
• Over door mounting

Hold Open
• Hold open angle is the same as opening angle.

Standards
• It is designed to meet EN1154 performance.

Standard Finishes
• Silver enamel - SIL

Slide Arm Pull Side
• Closer installed on pull side of door. This mounting position permits opening of 160°.

Slide Arm Push Side
• Closer installed on push side of door. This mounting position permits opening of 130°.

Slide Arm Over Door Mounting
• Closer installed on push side of door and top rail where conditions do not allow parallel mounting. This mounting position permits opening of 130°.

Applications - Mounting Details

Technical Data - Limiting Dimensions Slide Arm

How to order

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>YDC - 3013SA</td>
<td>Yale Slide Arm Mounted Door Closer Power Adjustable EN1 - EN3</td>
<td>15kg - 65kg</td>
</tr>
</tbody>
</table>

YDC - 3013SA Slide Arm Mounted Door Closer Power Adjustable EN1 - EN3

Application - Mounting Details

Regular track arm installation closer is fixed to the pull (speed regulating valve towards the hinge) side of the door.

Top jamb track arm installation closer is fixed to the top jamb on the pull (speed regulating valve towards the hinge) side of the door.
YDC - 2000 Door Closer Series

A range of adjustable power door closer units suitable for architectural and commercial applications.

Standard Features
- EN3 and EN2 - EN4 Size Closers
- Door weight range
  - YDC - 2003  40kg - 65kg
  - YDC - 2004  60kg - 85kg
- Standard arm and parallel bracket included
- Adjustable backcheck.
- Speed controls.
- Overload protection.
- Non-handed.
- Regular, parallel & over door mounting.

Standards
- EN 1634.1:2000: 2 hour fire doors

Standard Finishes
- Silver enamel - SIL

Standard Arm
- Closer installed on pull side of door. This mounting position permits opening of 150°.

Parallel Arm
- Closer installed on push side of door. This mounting position permits opening of 180°.

Over Door Mounting
- Closer installed on push side of door and top rail where conditions do not allow parallel mounting. This mounting position permits opening of 150°.

Applications - Mounting Details

How to order

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>YDC - 2003</td>
<td>Yale Surface Mounted Door</td>
<td>40kg - 65kg</td>
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<tr>
<td></td>
<td>Closer size 3</td>
<td></td>
</tr>
<tr>
<td>YDC - 2004</td>
<td>Yale Surface Mounted Door</td>
<td>60kg - 80kg</td>
</tr>
<tr>
<td></td>
<td>Closer size 2 - 4</td>
<td></td>
</tr>
</tbody>
</table>

Technical Data - Limiting Dimensions Regular Arm

Legend - A. Power Adjustment  B. Backcheck  C. Closing Speed  D. Latching Speed
2000E Door Closer Series
A range of power sized door closer units suitable for architectural and commercial applications.

Standard Features
- Size EN2,3,4 fixed power strength
- Max Door weight
  - 2022E  40kg
  - 2032E  60kg
- Standard arm and parallel bracket included
- Non-handed
- Regular, parallel & over door mounting.

Standards
- EC Certificate. Conform to EN 1154
- Certified with SS332 by PSB Corporation.
- Tested to 500,000 operation cycles.

Standard Finishes
- Silver - SB
- Gold - GB

Body Dimension
- Length:  210mm
- Height:  48mm
- Width:  62mm

How to order

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Product Description</th>
<th>Arm type</th>
<th>Closing Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022E</td>
<td>Surface Mounted Door Closer</td>
<td>Adjustable Arm (Standard)</td>
<td>EN size 2, 3 &amp; 4</td>
</tr>
<tr>
<td>2032E</td>
<td>Surface Mounted Door Closer</td>
<td>Parallel Arm</td>
<td>EN size 2, 3 &amp; 4</td>
</tr>
</tbody>
</table>

Technical Data - Limiting Dimensions
2500E Door Closer Series

The benefit of the Yale 2500E Series door closer is that it stays virtually invisible when the door is closed. Featuring a non-handed fixed power EN3 door closer making it perfect for almost every new door design.

Standard Features

- EN3 fixed power strength.
- Max. Door weight 60kg.
- Adjustable backcheck.
- Speed controls.
- Overload protection.
- Non-handed.
- Concealed mounting

Standards

- EC Certificate. Conform to EN 1154
- Tested to 500,000 operation cycles.

Standard Operation

- Closer installed on push side of door. This mounting position permits opening of 180°.

Standard Finishes

- Silver - SB
- Gold - GB

Body Dimension

- Length: 210mm
- Height: 48mm
- Width: 62mm

Applications - Mounting Details

How to order

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Product Description</th>
<th>Max. Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2500E</td>
<td>Yale Door Closer</td>
<td>60kg</td>
</tr>
</tbody>
</table>

Technical Data - Limiting Dimensions
IC1000E Concealed Door Closer Series

The benefit of the Yale IC1000E Series concealed door closer is that it stays virtually invisible when the door is closed. Featuring a non handed cast aluminium body which is non handed and is designed to meet E1154 performance.

Standard Features

- Size EN2 & 3 fixed power strength.
- Door weight.
  - IC1020E 40kg
  - IC1030E 60kg
- Adjustable backcheck.
- Speed controls.
- Non-handed.
- Concealed mounting

Standards

- EN 1154 performance standard.
- Tested to 500,000 operation cycles.

Standard Finishes

- Silver - SB
- Gold - GB

Standard Concealed Operation

- Closer installed inside of door. This mounting position permits opening of 120°.

Technical Data - Limiting Dimensions

| Sliding Arm installation closer is concealed into the door. |

<table>
<thead>
<tr>
<th>Application</th>
<th>Limiting Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Door</td>
<td>35mm</td>
</tr>
<tr>
<td>Wooden Door</td>
<td>40mm</td>
</tr>
</tbody>
</table>

How to order

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Product Description</th>
<th>Max. Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC1020E</td>
<td>Yale Concealed Door Closer size 2</td>
<td>40kg</td>
</tr>
<tr>
<td>IC1030E</td>
<td>Yale Concealed Door Closer size 3</td>
<td>60kg</td>
</tr>
</tbody>
</table>

Applications - Mounting Details

- Sliding Arm installation closer is concealed into the door.
**Specification Service**

For all Architectural hardware specification assistance refer to your local ASSA ABLOY Sales Office.

A fully comprehensive, obligation free, Architectural Door Hardware specification can be prepared by Architectural Hardware Representatives.

**Cleaning**

Care should be taken during construction/renovation to ensure that paint, thinners, mortar or cement splashes are carefully removed from locks, furniture and hardware. Removal of these splashes with strong cleaning agents or scourers should be avoided.

Dirt and grime should be regularly removed with a soft damp cloth. A solution of mild soap and water may be required. During cleaning, care should be taken to prevent cleaning solution from entering the cylinder keyway. Surfaces should be dried and possibly lubricated.

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**Disclaimer**

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