Hydraulic
Door
Closers
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The Lockwood 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 Lockwood DC3025 and DC2010 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.
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.

The chart below has been produced to cover most conditions.

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).

This chart is based on normal climatic conditions (ie pressure differential of 30Pa or wind of 15 knots).
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.

Closer Selection Chart

<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 and Specifications

Handing
Lockwood door closers are non-handed, therefore final assemblies are 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; or to stop a door at a specific position to clear feature walls, glass panels, furniture, etc.

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.

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

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.

Fire Test
The Lockwood DC3025 and DC2010 series door closers are tested and approved on Fire Doors for 2 hours in accordance with the BS EN 1634.1:2000 fire test.

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.

Overload Protection
Pressure relief valves are fitted to all units to prevent closer damage in the event of excessive force.

Power Adjustment Screw
The spring strength of the unit can be adjusted to the requirements of a specific door simply by turning the adjustment screw with the hex key supplied.

Independent Delayed Action Valve
The Delayed Action is an independent valve and can be adjusted as part of the closing sequence or independently adjusted for delayed action.

Radex Pinion
High grade alloy steel rack and pinion delivers a smooth and reliable action for the life of the door closer.

Pinion Needle Bearings
High grade pinion with precision needle bearings increases efficiency and minimises wear ensuring a prolonged operational life.

Independent Adjustable Hydraulic Valves
Backcheck, Latching speed, Closing speed.

Spring
Highest grade silicon chrome steel springs provide smooth action and long life.
Hydraulic Door Closers

DC3025 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.

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 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°.

3025 Door Closer Applications

<table>
<thead>
<tr>
<th>Mounting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Arm installation closer is fixed to the (speed regulating valve towards the hinge) side of the door.</td>
</tr>
<tr>
<td>Parallel Arm installation closer is fixed to the push (speed regulating valve opposite to hinge) opposite to hinge side of the door.</td>
</tr>
</tbody>
</table>

3025 Technical Data - Limiting Dimensions
Regular Arm

Legend - A. Power Adjustment B. Backcheck C. Closing Speed D. Latching Speed

DC3025 Door Closer Series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Article Number</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC3025</td>
<td>131100-30250-689</td>
<td>Lockwood Surface Mounted Door Closer Power Adjustable 2 - 5</td>
<td>20kg - 100kg</td>
</tr>
</tbody>
</table>

www.lockwoodasia.com
DC3025SR 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.
- Push side, pull side & 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°.

3025 Slide Arm Door Closer Applications

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.

3025 Slide Arm Technical Data - Limiting Dimensions
Slide Arm

<table>
<thead>
<tr>
<th>Head Projection</th>
<th>Min</th>
<th>Max</th>
<th>12mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>35mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min</td>
<td>71mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low Ceiling</th>
<th>92 Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>20mm</td>
</tr>
<tr>
<td>20mm</td>
<td>468mm</td>
</tr>
</tbody>
</table>

| 60.5mm          | 233mm  |

DC3025SR Slide Arm Door Closer Series

<table>
<thead>
<tr>
<th>Model No</th>
<th>Article Number</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC3025SR</td>
<td>131100-30251-689</td>
<td>Lockwood Slide Arm Mounted Door Closer Power Adjustable EN1 - EN3</td>
<td>15kg-65kg</td>
</tr>
</tbody>
</table>

www.lockwoodasia.com.au
**DC2010 Door Closer Series**

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

**Standard Features**
- EN 3 and EN 4 Size Closers
  - Door weight range
    - DC2013: 40kg - 65kg
    - DC2014: 60kg - 85kg
- Standard arm and parallel bracket included
- Adjustable backcheck.
- Speed controls.
- Overload protection.
- Non-handed.
- Regular, parallel & over door mounting.

**Standards**
DC2010 Series complies with CE standard.
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°.

**DC2010 Door Closer Series**

<table>
<thead>
<tr>
<th>Model No</th>
<th>Article Number</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC2013</td>
<td>131110-20140-689</td>
<td>Lockwood Surface Mounted Door Closer Size 3</td>
<td>40kg - 65kg</td>
</tr>
<tr>
<td>DC2014</td>
<td>131110-20141-689</td>
<td>Lockwood Surface Mounted Door Closer Size 4</td>
<td>60kg - 85kg</td>
</tr>
</tbody>
</table>

[www.lockwoodasia.com](http://www.lockwoodasia.com)
DC1000 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
- Door weight range
  - DC1002 20kg - 45kg
  - DC1003 40kg - 65kg
  - DC1004 60kg - 85kg
- Standard arm and parallel bracket included
- Non-handed.
- Regular, parallel & over door mounting

**Standard Finishes**
Silver SIL

**Standard Arm**
Closer installed on pull side of door. This mounting position permits opening of 120°.

**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°.

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**DC1000 Series Door Closer 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) side of the door. Parallel arm application, using a cranked arm assembly overcomes the requirement for a drop plate in most cases. (refer above dimensions)
- Top jamb installation closer is fixed to the top jamb on pull (speed regulating valve towards the hinge) side of the door.

**DC1000 Series Technical Data – Limiting Dimensions**

**Legend**
- A. Closing speed
- B. Latching speed

A. Closing speed - captive valve is conveniently located on the end of the door closer to control the closing speed.

B. Latching speed - a separate adjustment valve to accelerate or decelerate the door to ensure positive latching.

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**DC1000 Series Door Closer Size Chart**

<table>
<thead>
<tr>
<th>Millimetres</th>
<th>DC1002</th>
<th>DC1003</th>
<th>DC1004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (L)</td>
<td>144</td>
<td>178</td>
<td>184</td>
</tr>
<tr>
<td>Width (W)</td>
<td>36</td>
<td>51</td>
<td>53.6</td>
</tr>
<tr>
<td>Height (H)</td>
<td>56</td>
<td>59.3</td>
<td>66.5</td>
</tr>
</tbody>
</table>

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**Lockwood Catalogue**

**DC1002**
Lockwood Surface Mounted Door Closer Size 2 20kg - 45kg

**DC1003**
Lockwood Surface Mounted Door Closer Size 3 40kg - 65kg

**DC1004**
Lockwood Surface Mounted Door Closer Size 4 60kg - 85kg

www.lockwoodasia.com
IC5025 Concealed Door Closer Series

The benefit of the Lockwood IC5025 Series concealed door closer is that it stays virtually invisible when the door is closed.

Featuring a non handed power adjustable EN3 - EN5 door closer making it perfect for almost every new door design.

Standard Features

- EN 3 - 5 power adjustable.
  - Door weight range 60kg - 100kg.
- Adjustable backcheck.
- Speed controls.
- Overload protection.
- Non-handed.
- Concealed mounting

Standard Finishes

Silver enamel SIL

Standards

Conforms to the following:

UL228: Door closers-holders, with or without integral smoke detectors

EN 1154 performance standard.

Standard Concealed Operation

EN3 - EN4 - permits opening of 180°
EN5 - permits opening of 105°

Body Dimension

Length: 230mm
Height: 81.5mm
Width: 36.5mm

Door Thickness

Minimum door thickness of 45mm - timber door and 40mm metal door is necessary to use this concealed door closer.

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IC5025 Concealed Door Closer Series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Article Number</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC5025</td>
<td>131130-05026-689</td>
<td>Lockwood Concealed Door Closer</td>
<td>60kg - 100kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Power Adjustable 3 - 5</td>
<td></td>
</tr>
</tbody>
</table>

www.lockwoodasia.com
Hydraulic Door Closers

IC5003 Concealed Door Closer Series

The benefit of the Lockwood IC5003 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 EN 1154 performance.

**Standard Features**
- EN 3 fixed power size.
  - Door weight range 40kg - 65kg.
- Hold Open device in Door Closer track.
- Speed controls.
- Non-handed.
- Concealed mounting

**Standard Finishes**
- Silver enamel

**Standards**
- EN 1154 performance standard.

**Standard Concealed Operation**
Closer installed inside of door. This mounting position permits opening of 120°.

**Body Dimension**
- Length: 248mm
- Height: 62mm
- Width: 32mm

**Door Thickness**
Minimum door thickness of 45mm - timber door and 40mm metal door is necessary to use this concealed door closer.

IC5003 Concealed Door Closer Series

<table>
<thead>
<tr>
<th>Model No</th>
<th>Article Number</th>
<th>Product Description</th>
<th>Door Weight Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC5003</td>
<td>131130-05003-689</td>
<td>Lockwood Concealed Door Closer Size 3</td>
<td>40kg - 65kg</td>
</tr>
</tbody>
</table>
**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/refurbishment 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. Surfaces should be dried.

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