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DC85 Cutaway View

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Exploded Diagram
Grade 1 Heavy Duty Door Closer

INOX® DC8516 Door Closer
CROSS REFERENCES

<table>
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<tr>
<th>LCN</th>
<th>NORTON</th>
<th>DORMA</th>
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ANSI CODE REFERENCES

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<td>C02041/C32041</td>
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<tr>
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<td>Regular Mounting Hold Open</td>
<td>DC8516HO</td>
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<td>C02221/C32221</td>
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PT 4 Options A, B, C, D, E, F, H
How to Order

Product Identification

DC85 16 DA -AL

**Door closer Series:**
DC85 Series

**Finish:**
- AL = US28 (689) Aluminum Painted
- DU = US20 (690) Duro/Dark Bronze Painted
- GD = Gold Painted
- 3 = (632) Bright Brass
- 4 = (633) Satin Brass
- 26 = (651) Bright Chrome
- 15 = (646) Satin Nickel
- 32D = (630) Satin Stainless Steel - Cover Only

**Power size 1-6**

**Cover:**
- Blank = Plastic Full Cover
- SLC = Plastic Slim Cover
- FSS = Stainless Steel Full Cover
- LCV = Less Cover

**Function:**
- Blank = Door closer with sleeve arm, plastic full cover (standard)
- DA = Door closer with delayed action
- HO = Door closer with friction hold open arm
- CUSH = Door closer with cushion arm
- HCUSH = Door closer with hold open cushion arm
- ST = Door closer with slide track arm*
- STH = Door closer with slide track hold open arm*

* Slide track arm is only available for AL finish

Accessory Product Identification

<table>
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<th>Item No.</th>
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<tbody>
<tr>
<td>DCCV85F</td>
<td>Plastic Full Cover for DC85 Series Door Closer</td>
</tr>
<tr>
<td>DCCV85SLC</td>
<td>Plastic Slim Cover for DC85 Series Door Closer</td>
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<td>DCCV85FSS</td>
<td>Stainless Steel Cover for DC85 Series Door Closer</td>
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<tr>
<td>DCAMHO</td>
<td>Friction Hold Open Arm for DC85 Series Door Closer</td>
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<td>DCAMCUSH</td>
<td>Cush Arm for DC85 Series Door Closer</td>
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<tr>
<td>DCAMHCUSH</td>
<td>Hold Open Cush Arm for DC85 Series Door Closer</td>
</tr>
<tr>
<td>DCAMST</td>
<td>Slide Track Arm for DC85 Series Door Closer</td>
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<tr>
<td>DCAMSTH</td>
<td>Slide Track Hold Open Arm for DC85 Series Door Closer</td>
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<tr>
<td>DCDP85P1</td>
<td>Drop Plate for DC85 Series Door Closer w/Full Cover, Pull Side Mount</td>
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<tr>
<td>DCDP85P2</td>
<td>Drop Plate for DC85 Series Door Closer w/Full Cover, Push Side Mount</td>
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<tr>
<td>DCDP85P3</td>
<td>Drop Plate for DC85 Series Door Closer w/Slim Cover, Pull Side Door Mount or Push Side Jamb Mount</td>
</tr>
<tr>
<td>DCDP85P4</td>
<td>Drop Plate for DC85 Series Door Closer w/Slim Cover, Push Side Door or Jamb Mount</td>
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</table>
**DC85 SERIES DOOR CLOSER**

**DC8516 Grade 1 Heavy Duty Door Closer**

### Specifications

- **DC8516**: Adjustable Power Size 1 Thru 6 meets ADA Barrier-Free requirements
- One piece Aluminum Alloy Body
- Rack-and-Pinion design
- Separate and independent, latch, sweep and back-check pressure valves
- Non-Handed
- Plastic full cover standard
- Tri-packed
- SRT fasteners furnished standard
- 32mm (1-17/64") diameter piston
- 16mm (5/8") diameter pinion shaft
- 53mm (2-3/32") projection, w/o cover
- All standard arm applications with covers will allow doors to swing 180°, conditions permitting

### Options

- Delayed Action (DC8516DA)
- Hold Open Arm (DCAMHO), Cush Arm (DCAMCUSH), Hold Open Cush Arm (HCUSH)
- Slide Track (DCAMST): push or pull side mounting
- Slide Track Hold Open Arm (DCAMSTH)
- Plastic Slim Cover (DCCV85SLC) and Stainless Steel Cover (DCCV85FSS)
- Drop Plates for Narrow Top Rail and Glass Doors (DCDP85P)

### Finishes

Stocking: AL - US28 (689) Aluminum Painted
Special Order:
DU - US20 (690) Duro/Dark Bronze Painted
GD - Gold Painted
US3 (632) Bright Brass
US4 (633) Satin Brass
US26 (651) Bright Chrome
US15 (646) Satin Nickel
US32D (630) Satin Stainless Steel - Cover Only

### Code Compliance

- ANSI/BHMA A156.4 Grade 1 Closers
- ANSI A117.1 ADA Accessibility
- UL Listed for ANSI/UL10B and UL10C, CAN/ULC S104 up to 3 Hours
- UL 228 UBC Standard 7-2 (1997) NFPA 252
- NFPA 80 National Fire Protection - Fire Door Assembly
- ANSI/BHMA A156.18 Finishes

### Features

- **Aluminum Alloy Body**
  Closer bodies are cast of special aluminum alloy and machined to accommodate interactive steel components under operation conditions

- **Rack & Pinion Operation**
  Provides a smooth constant control of the door through its full opening and closing cycle. 180° door swing, closer on (hinge side) can be achieved when door, frame, and arm do not interfere

- **Non-Handed**
  DC8516 door closer is non-handed and can be installed on either right or left hand swing doors

- **Sweep Speed Control Valve**
  Allows adjustment of door speed from the doors 90° open position down to approximately 10° from the closed position

- **Latch Speed Control Valve**
  Allows adjustment of door latch speed from approximately 10° down to the door's fully closed position

- **Tri-Packed**
  DC85 Series come with self-tapping (SRT), sex nuts & bolts (SNB) and parallel arm (PA) bracket to allow for regular, top jamb, and parallel arm installations

- **Adjustable Back-Check Valve**
  Provides control of the door in the opening cycle, beginning at approximately 75° of door opening. The valve cushions the door opening when the door is forcibly opened beyond its preadjusted setting

- **Standard Molded Cover**
  Molded from high impact material
  Covers are non-handed for all applications

- **Multi-Sized Door Closer**
  Adjustable through the power range of 1 through 6, (shipped as size 3). DC8516 door closer also confirms to the opening force requirements of the ADA and ANSI/BHMA standard A117.1 for interior doors

### Warranty

Lifetime Warranty
Optional Functions

- **Delayed Action Closing**
  An optional hydraulic adjustable feature that adds a third speed (DA) range to the closing cycle. This feature becomes effective when the door is opened and released at any point beyond 70°. The amount of time delay depends upon the angle of door release and valve adjustment. The valve can be adjusted with 4mm hex key (provided) from no delay time up to maximum delay times of:

<table>
<thead>
<tr>
<th>Door opened</th>
<th>Approximate Time of Delay Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>180°</td>
<td>4~5 minutes</td>
</tr>
<tr>
<td>120°</td>
<td>2~3 minutes</td>
</tr>
<tr>
<td>90°</td>
<td>25~30 seconds</td>
</tr>
</tbody>
</table>

- **Pressure Relief Safety Valve**
  The (DA) hydraulic system contains a pressure relief valve. Any time the door is forced toward the closed direction while it is in the closing cycle, the valve will open and allow the door to close. This prevents damage to Closer, Arm, Frame and Door.

- **Suggested Applications**
  Delayed Action Closing allows slow-moving traffic to clear the opening before the door closer’s “normal” closing cycle begins. Health Care, Hospitals and Nursing Homes facilities all use this feature. It gives sufficient time for persons in beds, wheelchairs or on crutches to pass through an opening without concern of the door closing on them. Delayed Action closers can also accommodate openings with movement of food service carts, hand trucks, and pallet jacks.

Application Chart

<table>
<thead>
<tr>
<th>Door Closer Size</th>
<th>Full Turns of Power Adjusting Screw</th>
<th>Applicable Door Leaf Width</th>
<th>Applicable Door Weight</th>
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<tbody>
<tr>
<td>1</td>
<td>-6</td>
<td>32” (0.81m)</td>
<td>33<del>66LBS (15</del>30kg)</td>
</tr>
<tr>
<td>2</td>
<td>-4</td>
<td>36” (0.91m)</td>
<td>66<del>99LBS (30</del>45kg)</td>
</tr>
<tr>
<td>3 (PRE SET)</td>
<td>0</td>
<td>42” (1.07m)</td>
<td>99<del>143LB (45</del>55kg)</td>
</tr>
<tr>
<td>4</td>
<td>+5</td>
<td>48” (1.22m)</td>
<td>143<del>187LBS (65</del>85kg)</td>
</tr>
<tr>
<td>5</td>
<td>+9</td>
<td>54” (1.37m)</td>
<td>187<del>264LBS (85</del>120kg)</td>
</tr>
<tr>
<td>6</td>
<td>+12</td>
<td>58” (1.47m)</td>
<td>264<del>330LBS (120</del>150kg)</td>
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The closing force for DC85 series door closers is adjustable from size 1 to size 6, as outlined in ANSI Standard A156.4. When this series of door closers are installed and adjusted to confirm to ADA reduced opening force requirements (5 lbs max.) for Interior door, they may not have adequate closing force to reliably close and latch door. Power adjustments charted on this page are recommended where possible, to ensure proper door control.

⚠️ **CAUTION!!**
Do not turn speed adjusting valve more than two (2) full turns counter-clockwise from its order; do not back the valves out of closer or a leak will result.
**DC85 SERIES DOOR CLOSER**

**Standard Arms**

- **Regular / Parallel Arm with Bracket**
  - Regular Non-handed arm with adjustable slider can be used for a wide range of frame conditions, can be mounted to hinge (pull) side, top jamb.
  - For Parallel arm, use parallel arm bracket to mount on stop of frame on (push) side of the door. Frame should be reinforced for parallel arm bracket.

**Optional Drop Plates – Narrow Top Rail**

- For use on doors with glass where the drop plates cover the back of the closer for a pleasing view from the front.
- Also used when the top rail is narrow preventing closer to be mounted to surface of wood or metal.
- Correct installations will permit 180° maximum opening. Please see drop plate installation guide for detail applications.
- Drop plates available for DC85 closer with full cover or slim covers

- **DCDP85P1:**
  - Drop Plate for DC8516 w/Full Cover
  - For Pull Side Mounting

- **DCDP85P2:**
  - Drop Plate for DC8516 w/Full Cover
  - For Push Side Mounting

- **DCDP85P3:**
  - Drop Plate for DC8516 w/Slim Cover
  - Pull Side Door Mount or Push Side Jamb Mount

- **DCDP85P4:**
  - Drop Plate for DC8516 w/Slim Cover
  - Push Side Door Mount or Jamb Mount

**Optional Arms**

- **Hold Open Arm (DCAMHO)**
  - Non-handed arm with adjustable round slide arm for a wide range of frame conditions. Open to desired range then tighten screw & lock nut and door will hold in that position every time until changed. For parallel mount use parallel arm bracket.

- **Cush Arm (DCAMCUSH)**
  - Non-handed heavy duty forged arm with cushion stop, parallel arm mount. Must use frame reinforcement in stop to mount.

- **Hold Open Cush Arm (DCAMCUSH)**
  - (Optional) Non-handed heavy duty forged arm with cushion stop and hold open parallel arm mount. Handle controls the hold open function. Must use frame reinforcement in stop to mount.

- **Sliding Track (DCAMST)**
  - Single lever (track) arm with a surface mounted closer designed for interior use on narrow head frames and top rails. Offers three mounting positions: Pull Side, Push Side and Top Jamb.

**Sliding Track Hold Open Arm (DCAMSTH)**

The Hold-Open options allows for hold-open points at 85°, 90°, 95°, 100°, 105° or 110° depending on clip location in track.
**Optional Covers**

- Plastic Full Cover (DCCV85F)
- Plastic Slim Cover (DCCV85SLC)
- Stainless Steel Cover (DCCV85FSS)

**Parallel Arm Bracket**

- Parallel Arm Bracket

**Fixing Packs**

- Standard self-tapping screws (SRT) for closer body
- Standard fixing pack for parallel arm bracket
- Standard sex nuts and bolts (SNB) fixing pack
**Mounting Diagrams**

- **Regular Mounting (Pull Side)**
  - Regular arm is the most common and strongest mounting option. Usually the closer is mounted on the door and the arm is mounted on the frame.

- **Top Jamb Mounting (Push Side)**
  - Closer body is mounted to the frame with the arm straight out. Ideal for exterior door installations. You must consider frame depth reveal. Extended arm may be required.

- **Parallel Arm Mounting (Push Side)**
  - Closer body on door with parallel bracket on stop of frame. Arm is parallel to the door and does not stick out. Parallel arm installations have 25% less power than regular pull side mounting.
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