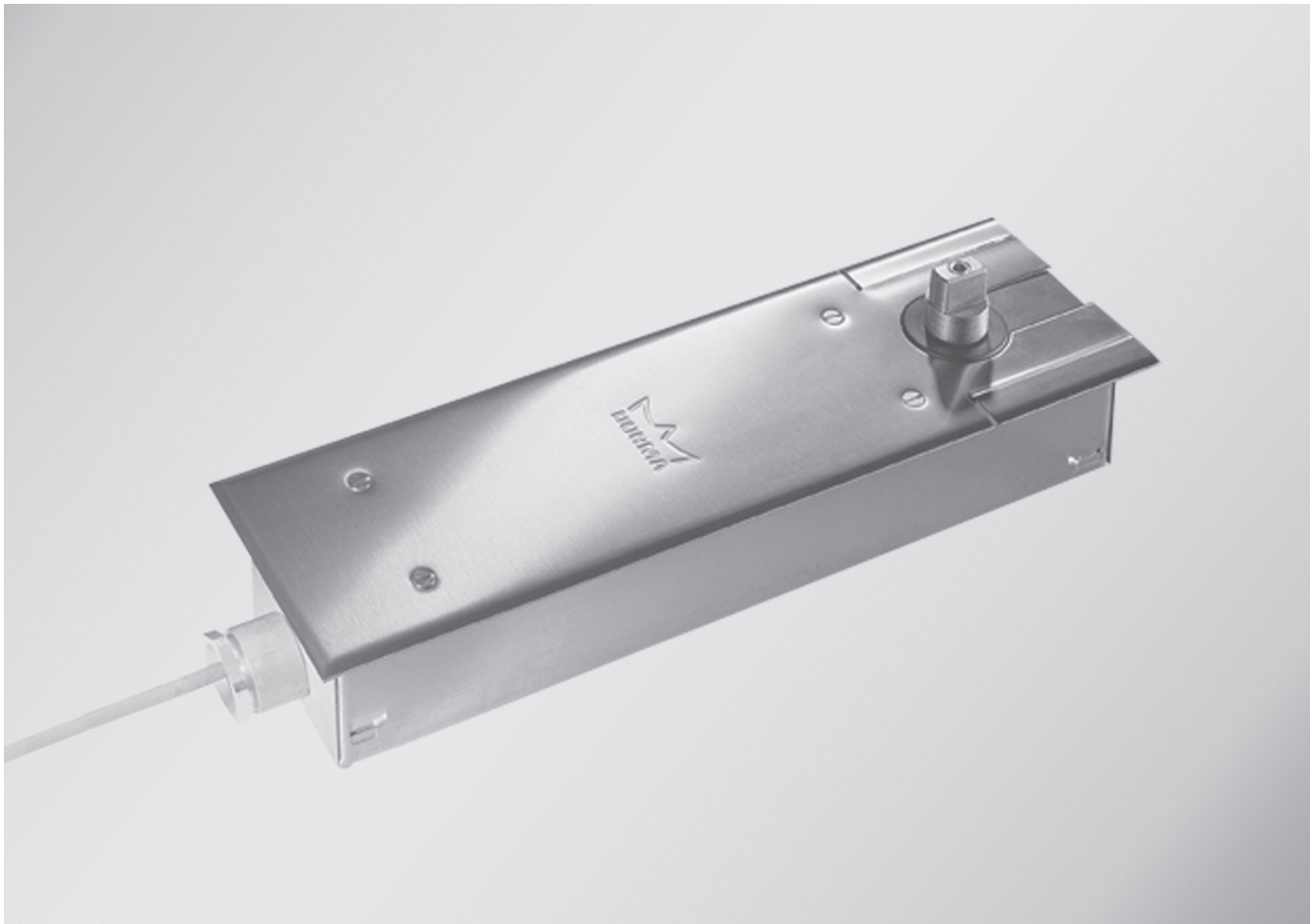


# BTS80 EMB

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Floor Concealed Door Closers with Electromagnetic Hydraulic Hold Open



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DORMA USA quality and environmental management systems in Reamstown, PA and Steeleville, IL are certified to ISO 9001:2008 and ISO 14001:2004.



**Intertek**



**Intertek**

# BTS80 EMB SERIES FLOOR-CONCEALED CLOSER

## Aesthetically Pleasing Floor Closer with Electromagnetic Hydraulic Hold Open for Fire/Life Safety, Remote Release & Control, or Tempered Glass Door Applications.

The BTS80 EMB Series of floor-concealed door closers provides an electromagnetic hydraulic hold open feature, allowing doors to self-close upon the interruption of electrical current, yet remain functional in noncritical situations.

The BTS80 EMB includes a selective type hold open with a range of approximately 65° to 175°. This closer is an ideal solution in applications where surface applied life safety products cannot be installed or are objectionable due to aesthetics.

The BTS80 EMB is specifically designed to be used in fire/life safety applications where the hold open is electrically controlled by a fire alarm contact. The closer is typically placed into the hold open position until a fire alarm condition.

When installed in conjunction with a maintained control switch, the BTS80 EMB can be used as a hold open/privacy function. The switch controls the power on (hold open) or off (privacy) to the closer, giving two functional characteristics to an application—in a classroom, for example. Use the hold open feature during setup of the room or as occupants enter and exit between sessions. Use the privacy feature during class. Power is out when using the privacy feature, preventing doors from being accidentally caught in the hold open position as occupants exit and re-enter.

In an office setting, the BTS80 EMB can be used to maintain the hold open position of a door until interrupted by a momentary switch located near or on the occupant's desk when privacy is desired. This office function can be set up as a hard-wired or wireless connection.

The BTS80 EMB can also be used with tempered glass door applications, using the same guidelines as for the other functions described previously.

**NOTE: Since they are not typically fire-rated, tempered glass door applications are not used for life safety installations.**

### Technical Details

- Door can be manually removed from hold open when current is applied to the unit.
- When no current is applied to unit, it will act as standard hydraulic floor closer.
- Loss of electrical current due to a signal from a smoke detector or other signaling device will open an electromagnetically controlled valve in the closer and close the door under full hydraulic control.
- Operating voltage 24 VDC at 125 mA +10% -15%.
- Compact closer body and cement case 2-3/8" deep suited for thin slab concrete construction.
- Closer body is handed.
- Accommodates doors weighing up to 660 lb and measuring up to 3'-6" wide exterior and 4'-0" interior.
- Mechanical backcheck at approximately 70°.
- Dual thermostatic control valves combined with special hydraulic fluid provide controlled closing from 180°.
- Multipoint hold open between approximately 65° and 175° when current is applied.
- A secondary regulation system protects closer from damage caused by forced closing.
- Closer adjustment in cement case provides lateral and longitudinal adjustment of 1/4" and height adjustment of 5/32".
- Optional sealing compound SC2 prevents water or cleaning solvent from entering the cement case.
- When considering hold open angle, allow approximately 4° of fall away.
- Unit is provided with approximately 10 feet of power cable.
- Fire door applications require power to be supplied through a U.L. listed fire alarm control panel.

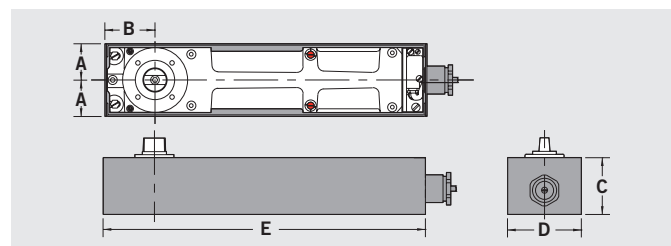
**If door hardware or adjacent structures interfere with maximum opening, or maximum opening is greater than 180°, an auxiliary stop is required.**

Features	
Spring Size	ANSI Size 5
Controlled closing with two hydraulic valves	180°-0° 7°-0°
Mechanical backcheck	Approx. 70°
Multipoint hold open	65°-175°

### Door Ranges

Size	Door Width	
	Exterior	Interior
ANSI Size 5	2'6"-3'6"	2'6"-4'0"

	A	B	C	D	E
Inches	1-13/32-1-21/32	2-2-1/4	2-3/8	3-1/8	13-7/16
Millimeters	36-42	51-57	60	78	341



**Certification**

- The BTS80 EMB Series is listed by U.L. and C.U.L. under their continuing reinspection programs.
- CSFM approved.



and vertical height adjustment of 5/32". Field interchangeable spindles will be available to provide bottom door clearances ranging from 5/16" to 2-5/16". Operating voltage shall be 24 VDC.

**Specifications**

All floor-concealed door closers shall be DORMA BTS80 EMB Series employing a cam and roller mechanism. The closers shall have electromagnetic hydraulic multipoint hold open between 65° and 175°. The closers shall be capable of controlling interior or exterior doors weighing up to 660 lb and measuring up to 3'-6" wide exterior and 4'-0" interior. The closers have mechanical backcheck at approximately 70°. Dual valve adjustment will provide controlled closing speed from approximately 180° opening range, even in cold temperature conditions. The closer will provide adjustment within the cement case to allow lateral and longitudinal adjustment of 1/4"

**Optional Specifications**

A sealing compound should be used with the closers to prevent water or cleaning solvent from entering the cement case. Specify SC2.

**Operation**

24 VDC at 125 mA +10% -15%

**Finishes**

**Optional Plated Finishes**

- Brass: 605 (Bright) or 606 (Satin)
- Bronze: 611 (Bright), 612 (Satin), or 613 (Oxidized Satin Oil Rubbed)
- Nickel: 618 (Bright) or 619 (Satin)
- Chrome: 625 (Bright) or 626 (Satin)

**Standard Sprayed Finishes**

- Aluminum: 689
- Bronze: 691 (Dull), 690 (Statuary), or 695 (Dark Duranodic)
- Gold: 696
- Black: 693

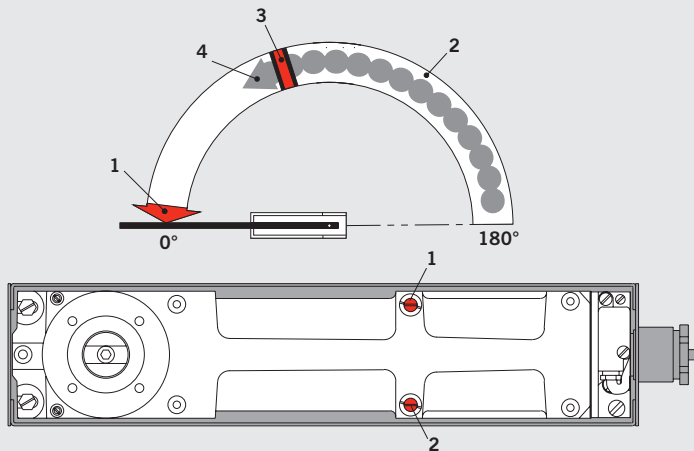
**Optional DORMA Custom Color or Designer Color Finishes**

Contact Customer Service.

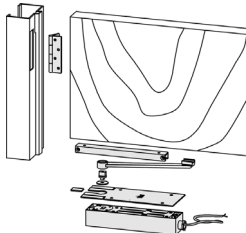
**Warranty**

For details, refer to **DORMA Limited Warranty** on our website at [go.dorma.com/terms](http://go.dorma.com/terms).

- 1 Valve adjustment 7°-0°
- 2 Valve adjustment 180°-0°
- 3 Mechanical backcheck at approximately 70°
- 4 Multipoint hold open between 65° and 175°



# HOW TO ORDER BTS80 EMB SERIES



### Spindle

1-1/2" Pre-Loaded Spindle	80030
1-5/16" Pre-Loaded Spindle	80025
1-1/8" Pre-Loaded Spindle	80020
7/8" Pre-Loaded Spindle	80015
3/4" Pre-Loaded Spindle	80010
1/2" Pre-Loaded Spindle	80005
5/16" Pre-Loaded Spindle	80003
2-5/16" Spindle	74050
2-1/16" Spindle	74045
1-7/8" Spindle	74040
1-11/16" Spindle	74035
1-1/2" Spindle	74030
1-5/16" Spindle	74025
1-1/8" Spindle	74020
7/8" Spindle	74015
13/16" Spindle	74012
3/4" Spindle	74010
5/8" Spindle	74007
1/2" Spindle	74005
5/16" Spindle	74003

### Optional Accessories

E80624	Through Wire CH Top Pivot (4 wire)
E80622	Through Wire CH Top Pivot (2 wire)
HD8062	Heavy Duty CH Top Pivot
75200	Through Wire Intermediate Pivot for 3/4" Offset
15233	3 h Intermediate Pivot for 1-1/2" Offset
15222	20 min Intermediate Pivot for 1-1/2" Offset
15220	Intermediate Pivot for 1-1/2" Offset
75243	3 h Intermediate Pivot for Lead Lined 3/4" Offset (see note*)
75242	20 min Intermediate Pivot for Lead Lined 3/4" Offset (see note*)
75240	Intermediate Pivot for Lead Lined 3/4" Offset (see note*)
75233	3 h Intermediate Pivot for 3/4" Offset
75222	20 min Intermediate Pivot for 3/4" Offset
75220	Intermediate Pivot for 3/4" Offset
SC2	Sealing Compound
TP80 CH	Terrazo Pan CH and 1-1/2" Offset
TP80	Terrazo Pan for 3/4" Offset

### Hand

LH	Specify for Left Handed Units
RH	Specify for Right Handed Units

### Deducts

LBX	Less Cement Box
LFP	Less Floor Plate
LTP	Less Top Pivot

### Series

BTS80EMB
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### Ordering Example

<b>BTS80EMB</b>	<b>D</b>	<b>5</b>	<b>74010</b>	<b>RH</b>	<b>AMS</b>	<b>626</b>
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1-1/2" Offset, Handed 1-1/2" Offset, 20 min Rated Handed 1-1/2" Offset, 3 h Rated Handed 3/4" Offset, Handed 3/4" Offset, 20 min Rated Handed 3/4" Offset, 3 h Rated Handed CH Single Acting, Aluminum Door and Frame CH Single Acting, Wood or Steel Door and Frame Independent Hung, Non-Handed Independent Hung, Up to 3 h Rated, Non-Handed 3/4" Offset Lead Lined, Handed* 3/4" Offset Lead Lined, 20 min Rated Handed* 3/4" Offset Lead Lined, 3 h Rated Handed*	<b>C</b> <b>C-E</b> <b>C-F</b> <b>D</b> <b>E</b> <b>F</b> <b>G</b> <b>H</b> <b>I</b> <b>IF</b> <b>L</b> <b>L-E</b> <b>L-F</b>	<b>5</b> — ANSI Size 5  <b>Spring Size</b>	<b>AMS</b> — All Metal Screws <b>W2</b> — All Wood Screws <b>W1</b> — 1/2 Wood Screws <b>AMSAWS</b> — All Metal Screws All Wood Screws	<b>600</b> — Primed <b>689</b> — Aluminum <b>690</b> — Statuary Bronze <b>691</b> — Dull Bronze <b>693</b> — Black <b>695</b> — Dark Duraodic Bronze <b>696</b> — Gold <b>PNT</b> — Special Sprayed Finish (must specify)
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### Fastener Packs

Bright Brass	605
Satin Brass	606
Bright Bronze	611
Satin Bronze	612
Oxidized Satin Oil Rubbed	613
Bright Nickel	618
Satin Nickel	619
Bright Chrome	625
Satin Chrome	626

### Painted

### Plated

### Package

**\* "L" Package Door Thickness Note:**  
 The standard door thickness is 1-3/4", and is the default unless otherwise specified.

Other alternative sizes are  $\left\{ \begin{array}{l} -2 \\ -2-1/4 \\ -2-1/2 \\ -3 \end{array} \right.$

Examples: L-E-2-1/2....75242-2-1/2

Example above 20 min. lead lined package for 2-1/2" thick door.

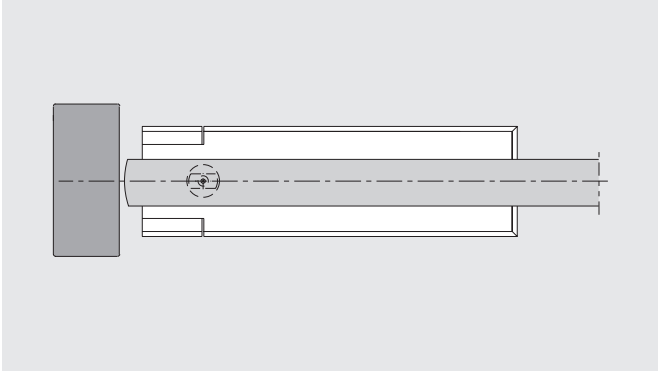
**NOTE:** All combinations of features and options are not available for all models.

# APPLICATIONS

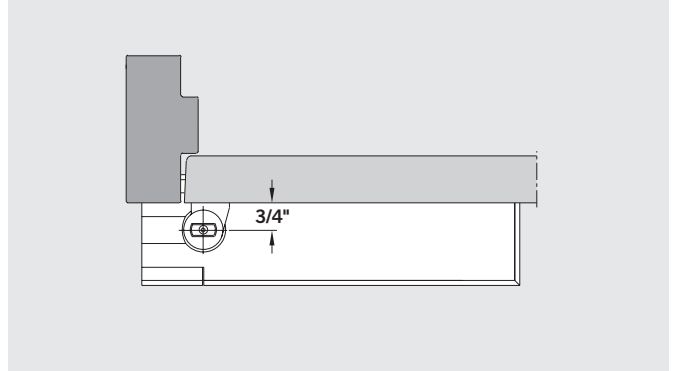
Accessory packages for the following applications are designated with an alpha suffix— "G" or "H," for example.

For application details and accessory illustrations, see **BTS Applications and Accessories** brochure.

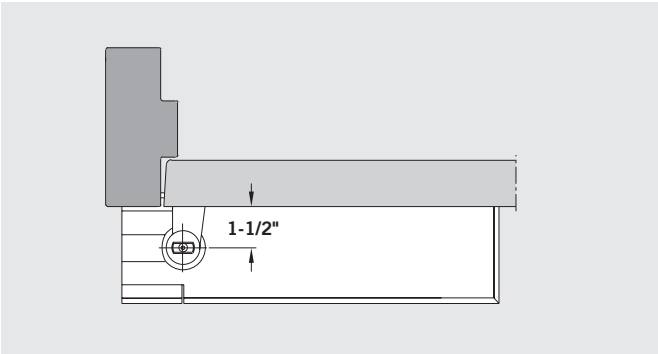
## Center Hung Packages (G, H)



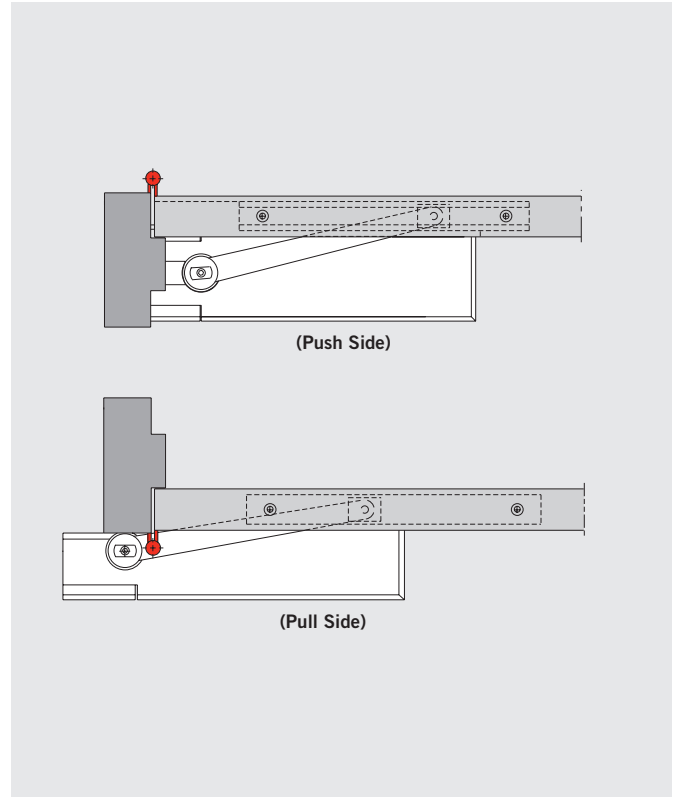
## 3/4" Offset Packages (D, E, F, L, L-E, L-F)



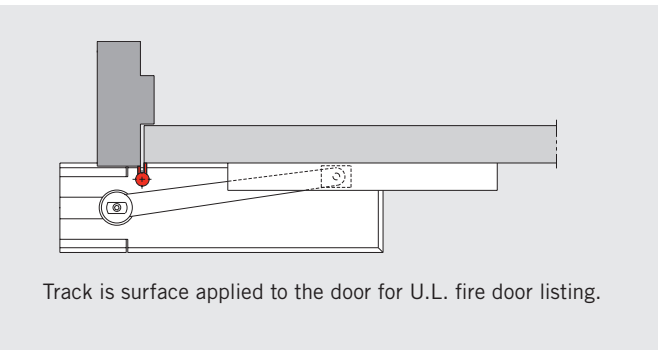
## 1-1/2" Offset Packages (C, C-E, C-F)



## Independent Hung Packages ( I )



## Independent Hung Fire Door Packages (IF)

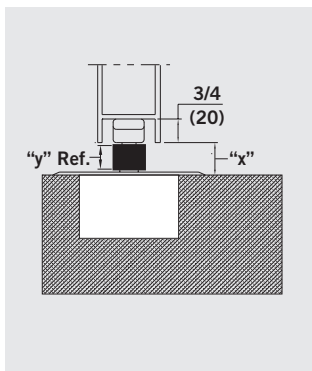


Track is surface applied to the door for U.L. fire door listing.

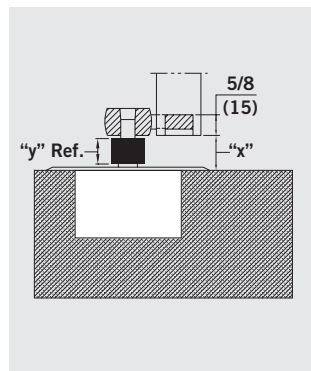
# SPINDLES

Spindle #	Dimension "x" (Door Clearance)	3° Offset Spindle #	Dimension "y"
74003	5/16"	80003	1/8"
74005	1/2"	80005	5/16"
74007	5/8"	—	7/16"
(STD) 74010	3/4"	80010	1/2"
74012	13/16"	—	5/8"
74015	7/8"	80015	11/16"
74020	1-1/8"	80020	7/8"
74025	1-5/16"	80025	1"
74030	1-1/2"	80030	1-5/16"
74035	1-11/16"	—	1-1/2"
74040	1-7/8"	—	1-11/16"
74045	2-1/16"	—	1-7/8"
74050	2-5/16"	—	2-1/16"

## Center Hung Applications



## Offset Hung Applications



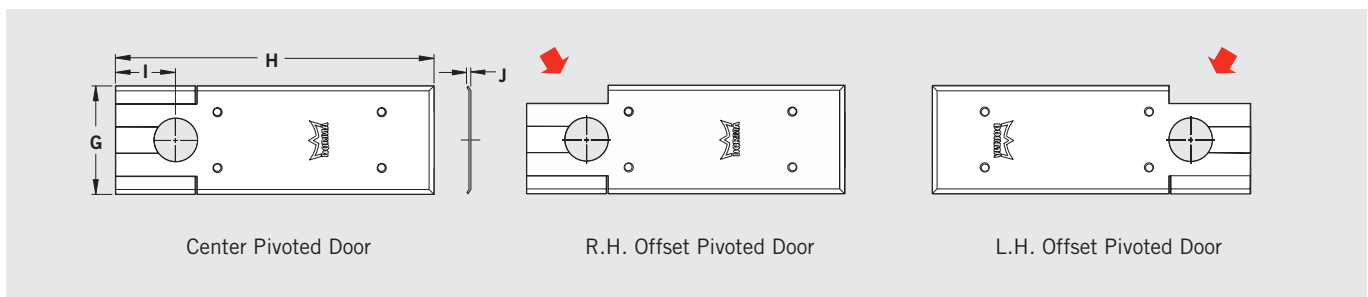
### Offset Spindles

Spindles are available with a 3° offset for additional pressure to hold door in the closed position. Normally, this is only necessary for center-pivoted single acting applications. However, they can also be used with other applications to compensate for templating errors. Specify hand of offset spindle when ordering.

### Extended Spindle Insert

Closers with extended spindle inserts are used with thresholds, carpeted floors, or terrazzo pans, or in cases where more clearance between door and floor is required. All spindles are zinc plated.

**NOTE: Closer and arm must be installed per template for door clearances shown to be valid.**



### Cover Plate

Universal cover plate **7410**, suitable for left hand/right hand, 3/4" offset, 1-1/2" offset, and center pivoted doors.

Material is stainless steel or brass depending on the plated finish specified.

	G	H	I	J
<b>Inches</b>	4-1/8"	14-3/32"	2-9/32"	3/32"
<b>Millimeters</b>	105	358	58	2



[www.dorma.com](http://www.dorma.com)



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