



Floor-Concealed  
Door Closers with  
Electromagnetic  
Hydraulic Hold Open

# **DORMA** **BTS80** **EMB**



## Aesthetically Pleasing Floor Closer for Fire/Life Safety, Remote Release and Control, or Tempered Glass Door Applications

The BTS80 EMB Series of floor-concealed door closers provide 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 an application, such as in a classroom, two functional characteristics. 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 as needed.

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.

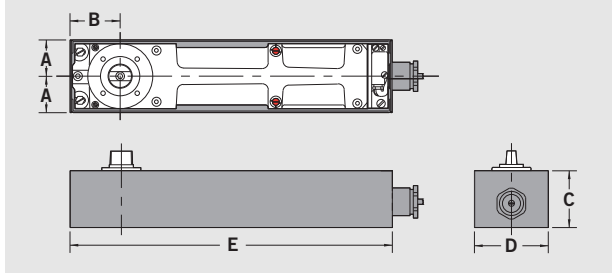
The BTS80 EMB can also be used with tempered glass door applications, using the same guidelines as for the other functions described previously.

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

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 DORMA BTS80 EMB Series is listed by U.L. and C.U.L. under their continuing reinspection programs. California State Fire Marshall (CSFM) approved.

**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 pounds 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" 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.

**Optional Specifications:**

A sealing compound should be used with the closers to prevent water or cleaning solvent from entering the cement case. Specify SC-1.

**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:**

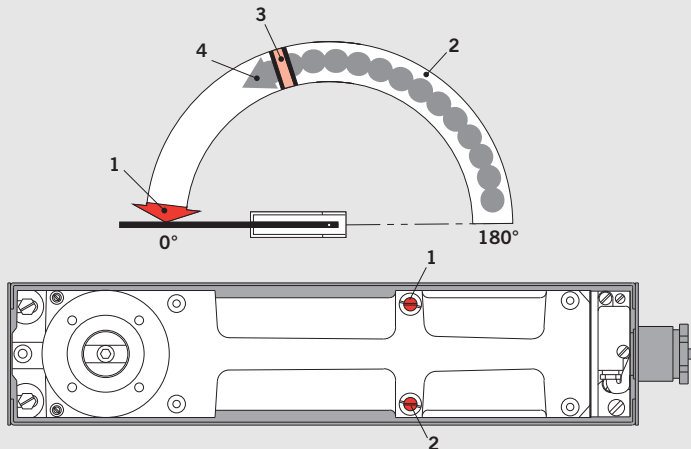
Aluminum: 689.  
 Bronze: 691 (Dull), 690 (Statuary), or 695 (Dark Duranodic).  
 Gold: 696.  
 Black: 693.

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

Contact Customer Service.

**Warranty:** For details, refer to **Limited Warranty Policy** in the current DORMA Price List.

- 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

E8062	Through Wire CH Top Pivot
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
SC1	Sealing Compound
TP80 CH	Terrazo Pan CH and 1-1/2" Offset
TP80	Terrazo Pan for 3/4" Offset

Deducts

LFP	Less Floor Plate
LTP	Less Top Pivot

Series

BTS80EMB

<b>BTS80EMB</b>	<b>D</b>	<b>5</b>	<b>74010</b>	<b>R</b>			<b>626</b>	
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1-1/2" Offset, Handed	<b>C</b>
1-1/2" Offset, 20 min Rated Handed	<b>C-E</b>
1-1/2" Offset, 3 h Rated Handed	<b>C-F</b>
3/4" Offset, 20 min Rated Handed	<b>E</b>
3/4" Offset, 3 h Rated Handed	<b>F</b>
CH Single Acting, Wood or Steel Door and Frame	<b>G</b>
Independent Hung, Non-Handed	<b>H</b>
Independent Hung, Up to 3 h Rated, Non-Handed	<b>IF</b>
3/4" Offset Lead Lined, Handed*	<b>L</b>
3/4" Offset Lead Lined, 20 min Rated Handed*	<b>L-E</b>
3/4" Offset Lead Lined, 3 h Rated Handed*	<b>L-F</b>

**Spring Size**  
5 — ANSI Size 5  
Specify for Right Handed Units

**Hand**  
R — Right Handed Units  
L — Left Handed Units

**Fastener Packs**  
W2 — All Wood Screws  
W1 — 1/2 Wood Screws

**Package**  
3/4" Offset, Handed  
CH Single Acting, Aluminum Door and Frame

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

Other alternative sizes are

- 2
- 2-1/4
- 2-1/2
- 3

Examples: L-E-2-1/2....75242-2-1/2  
Example above 20 min. lead lined package for 2-1/2" thick door.

600	Primed
689	Aluminum
690	Statuary Bronze
691	Dull Bronze
693	Black
695	Dark Duranodic Bronze
696	Gold
PNT	Special Sprayed Finish (must specify)
605	Bright Brass
606	Satin Brass
611	Bright Bronze
612	Satin Bronze
613	Oxidized Satin Oil Rubbed
618	Bright Nickel
619	Satin Nickel
625	Bright Chrome
626	Satin Chrome

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

**Technical Details:**

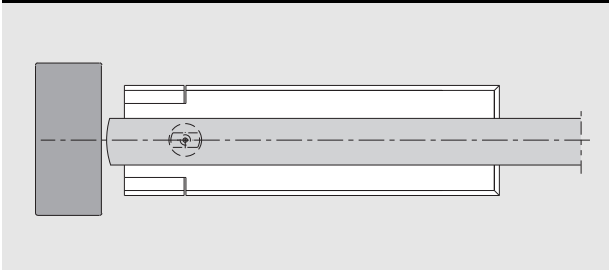
- Door can be manually removed from hold open when current is applied to the unit.
- When no current is applied to unit, it will act as standard hydraulic floor closer.
- Loss of electrical current due to a signal from a smoke detector or other signaling device will open an electromagnetically controlled 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 pounds 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 SC-1 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.**

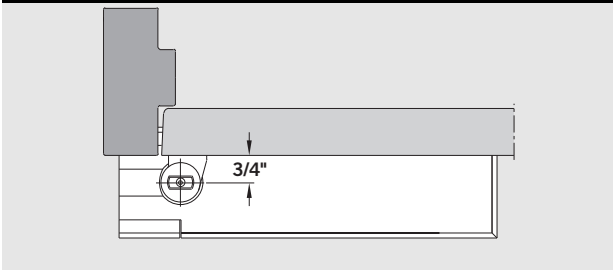
**Applications**

Accessory packages for the following applications are designated with an alpha suffix, i.e. "G," "H." For application details and accessory illustrations, see **BTS Applications and Accessories** brochure.

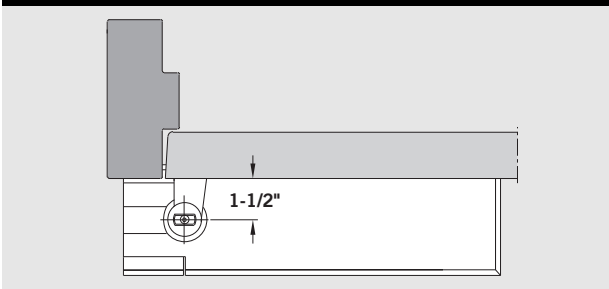
**Center Hung Packages (G,H)**



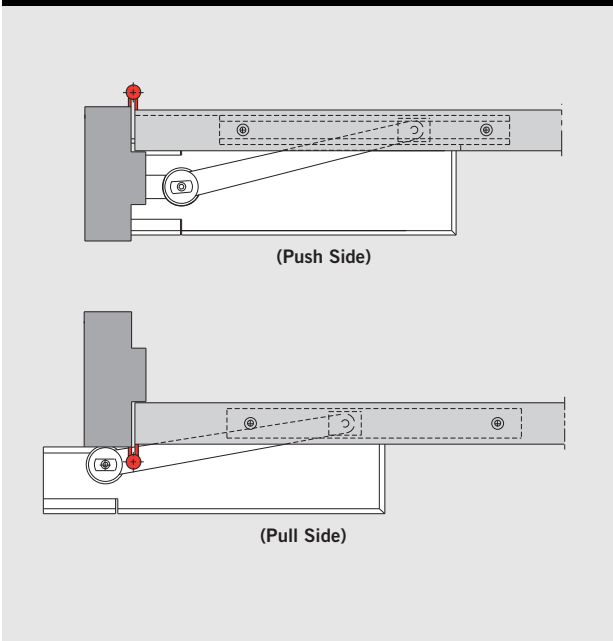
**3/4" Offset Packages (D,E,F,L,L-E,L-F)**



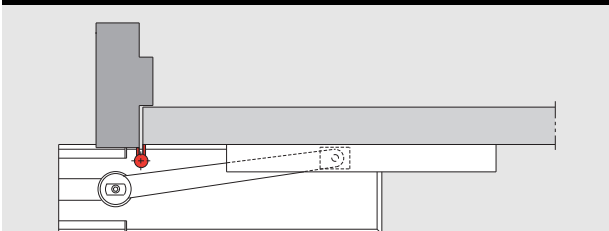
**1-1/2" Offset Packages (C,C-E,C-F)**



**Independent Hung Packages ( I )**



**Independent Hung Fire Door Packages (IF)**



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

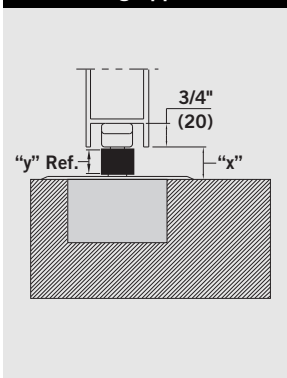
**Spindles**

Spindle No.	Dimension "x" (Door Clearance)	3° Offset Spindle No.	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"

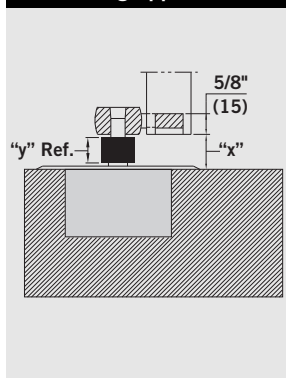
**Offset Spindles**

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.

**Center Hung Applications**



**Offset Hung Applications**



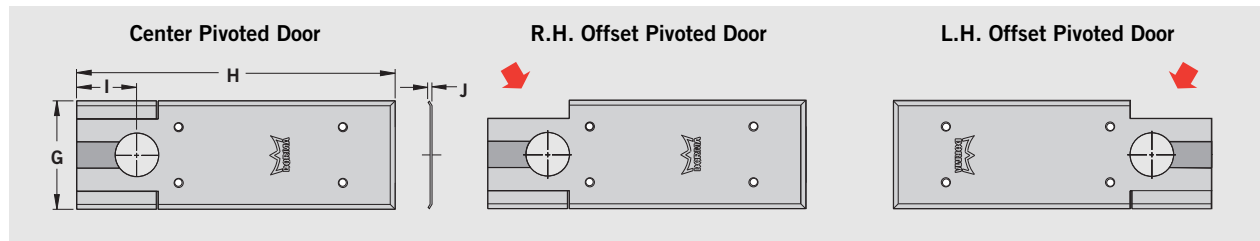
**Extended Spindle Insert**

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

**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
Inches	4-1/8	14-3/32	2-9/32	3/32
Millimeters	105	358	58	2



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