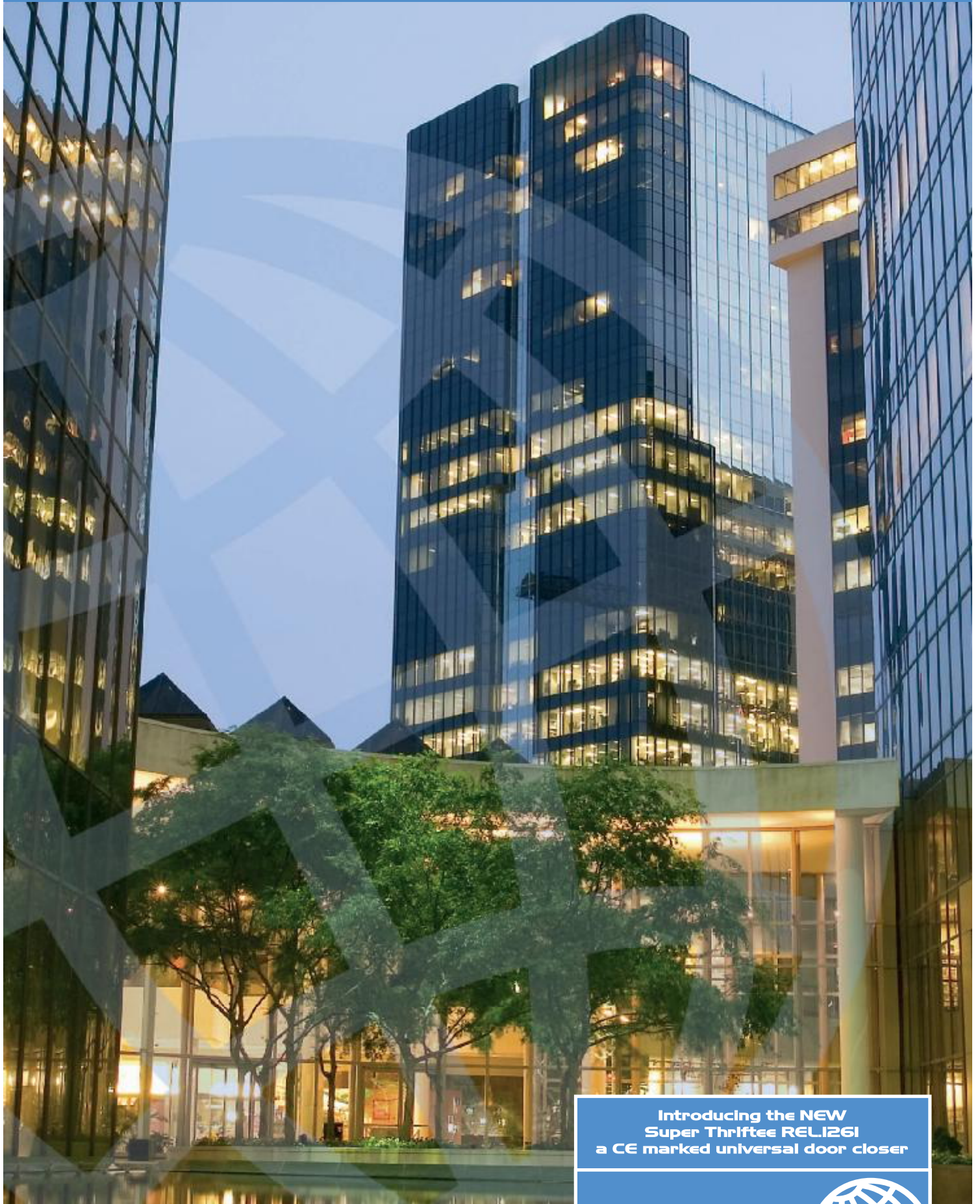


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Door Controls

for Specifiers, Architectural Ironmongers & Door Hardware Specialists



**Introducing the NEW
Super Thriftee RELI261
a CE marked universal door closer**



Type C - Heavy Duty Mechanical Door Controls

An Introduction to Overhead Door Holders & Stops

We believe that the best application for a 'door holder' or 'auxiliary stop' is one that operates overhead, with an arm functioning from the header frame to the door top rail. This type of device performs best when the maximum stop or hold open angle does not exceed 110°.

Overhead holders and stops are 'out of the way' in contrast with floor or wall-mounted stops which can be a hazard to pedestrian traffic and may be vulnerable to damage, either by accident or maliciously. Auxiliary holders or stops should be used on all doors furnished with overhead door closers. Door closers are not door stops and a back-check function should not be expected to perform the function of a stop.

Definition of 'Door Opening'

The term 'door opening' is defined as the dimension of the door opening from jamb to jamb. This should not be confused with the width of the door. Refer to the chart below and you will find, for example, that a 1143mm opening requires a size 5 holder if the door is hung on butts (conventional full mortice hinges) or offset pivots.

You will note also that, regardless of the style or series of holder, we have standardized the size of holders and stops for all openings, combining the size in the model number. The third digit in all models designates the size. If any further information is required on sizing a holder or stop, please contact the sales office for assistance.

Concealed Series			Surface Series		
Size	Door Opening	410 Series	70 Series	79 Series	450 Series
1	457 - 584mm	411	-	-	451
2	585 - 686mm	412	702	792	452
3	687 - 838mm	413	703	793	453
4	839 - 991mm	414	704	794	454
5	992 - 1143mm	415	705	795	455
6	1144 - 1372mm	-	706	796	-

Selecting the Degree of Hold Open or Stop

Our overhead holders and stops are designed to function effectively from 85° to 110°. Where conditions permit, we recommend the minimum degree of hold open be set at 95° - placing any projecting door hardware (fitted to the push side face of the door) beyond the flow of traffic.

When selecting maximum opening angles for overhead holders and stops on doors opening back-to-back or against a wall, please note all our holders have shock absorbers allowing approximately 5° - 7° movement beyond the hold open or initial stop point. The concept of dead stop templating means that the degree of opening must be set at 5° - 7° less than the point of the required dead stop to accommodate the compression of the shock absorber.

Exposed Applications

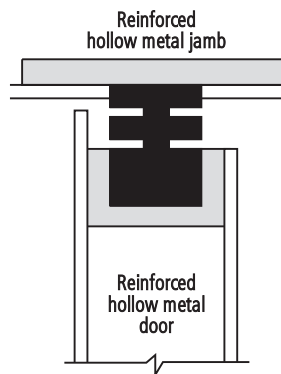
A heavy duty holder or stop should be considered (See page 35) where doors and frames are subject to heavy, frequent use or where external doors open out to exposed situations and high winds are a factor.

Environmental Considerations

Environmental factors should be considered always when specifying overhead holders and stops. Exterior (perimeter) doors or doors subject to corrosive conditions should be equipped with a stop or holder constructed primarily of stainless steel, brass or bronze materials. For interior applications, steel is acceptable, although brass and bronze substrates generally provide a more attractive architectural grade finish.

Door and Frame Reinforcement

Our overhead holders and stops are fabricated from quality brass, steel and stainless steel materials, and are designed to function even under constant heavy duty abuse. Therefore, it is essential that all doors and frames are reinforced adequately to provide proper anchorage for the overhead stop. It is important that timber doors and frames are strong enough to provide proper anchorage for the door holders. For reinforcement details, refer to individual templates for each overhead stop (contact the sales office).



Typical reinforcement points for a concealed installation on hollow metal doors and frames.

Closer Applications - Surface Overhead Door Holders/Stops

Surface mounted models require minimal door and frame preparation. They may be used in conjunction with most surface mounted Relcross door closers. In some cases, optional drop plates are required with the closer (consult sales office for more details).

Suffix .SOC - Hex-pin Socket Security Screw Package

An optional screw package with hex-pin socket screws for mounting the jamb bracket to the frame is provided instead of the standard screw package.

Available with all overhead door holders/stops.

DOOR CONTROLS STANDARD DUTY

doorholdersandstops

Type D - Standard Duty Mechanical Door Controls

REL.410 Series Standard Duty - Concealed Overhead Door Holders/Stops

The REL.410 series offers the industry's widest variety of functions, base materials and finishes to fit all standard (medium) to light duty applications. The perfect combination of form and function, REL.410 series holders and stops offer effective door control and a low-profile design. Each model is constructed so that the channel is concealed in the top rail of the door with the jamb bracket morticed into the frame. When the door is closed the entire holder is concealed.



REL.410

These versatile models can be used with almost all Relcross surface overhead door closers. Templates provide variable mounting positions allowing hold open and stop positions between 85° and 100°. REL.410 series holders and stops accommodate doors hung with conventional full mortice hinges, offset and centre hung pivot sets (consult sales office for more details).

Three distinct versions offer solutions as follows:

REL.410H Series Hold Open Model – Standard Duty

Holding the door open at a pre-determined position for long or short periods. The hold open function is an automatic mechanism that 'kicks-in' when the door is opened to a preset angle. Tension is adjusted using an Allen key.

REL.410S Series Stop Only Model – Standard Duty

Providing an effective 'out of the way' auxiliary stop when the hold open function is not a requirement.

REL.410F Series Friction Hold Open Model – Standard Duty

Used in situations where multiple hold open points are desirable. Friction tension is adjusted using an Allen key.

Each model is available in five sizes as shown in the table on page 34.

Dead Stop Templating - REL.410 & REL.450 Series

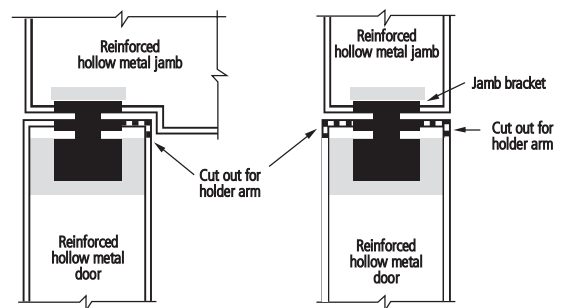
For situations where a wall or a similar obstruction is in place at an opening angle of 110° or less (e.g. doors opening back-to-back), **dead stop** templating should be used. This includes all hold open, stop only and friction models. The **dead stop** position is reached when the shock-absorbing spring is fully compressed, allowing an initial degree of opening of 5° to 7° less than the dead stop opening.

For example: If the holder is templated for 100° dead stop, the door will hold open somewhere between 93° and 95°, and open no further than 100°.

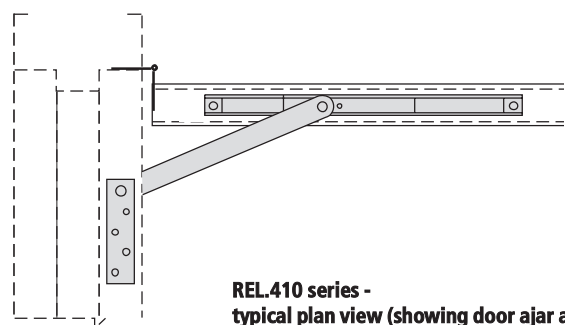
Concealed Installation

Concealed overhead door holder and stop installation requires that the 'jamb bracket' is installed flush with the underside of the head frame. The arm and channel must be installed in the door's top rail with the arm flush with top of the door. A cut-out must be made for the arm on the stop side of single acting doors. Double action or 'swing-through' doors require a cut-out for the arm on both sides of the door - see the illustrations below.

Typical layout for single and double action doors



Accurate template drawings for each holder give complete reinforcement and morticing specifications. They are readily available from the sales office.



REL.410 series - typical plan view (showing door ajar at 90°)

Materials and Finishes

All models are available in 300 series Stainless Steel, Brass and Steel substrates. Stock finishes include US32D satin stainless steel and SP28 powder coated silver.

How to Specify or Order

Example	41	—	3	—	F	—	SP28	—	SOC
REL.410 Series	↑		↑		↑		↑		↑
Size (from table on page 34)			↑				↑		
Function (hold open, stop or friction)					↑				
Finish (SP28 = powder coated silver)							↑		
SOC (Hex-pin security screws)									↑

Type D - Standard Duty Mechanical Door Controls

REL.450 Series Standard Duty - Surface Overhead Door Holders/Stops

The REL.450 series offers the industry's widest variety of functions, base materials and finishes to fit all standard (medium) to light duty applications. The perfect combination of form and function, REL.450 series holders and stops offer effective door control and a low-profile design. The visible components are available in a wide variety of architectural finishes to complement any design.



REL.450

These versatile models can be used with almost all Relcross surface overhead door closers. Templates provide variable mounting positions allowing hold open and stop positions between 85° and 100°. REL.450 series holders and stops accommodate doors hung with conventional full mortice hinges, offset and centre hung pivot sets (consult sales office for more details).

Three distinct versions offer solutions as follows:

■ REL.450H Series Hold Open Model – Standard Duty

Holding the door open at a pre-determined position for long or short periods. The hold open function is an automatic mechanism that 'kicks-in' when the door is opened to a preset angle. Tension is adjusted using an Allen key.

■ REL.450S Series Stop Only Model – Standard Duty

Providing an effective 'out of the way' auxiliary stop when the hold open function is not a requirement.

■ REL.450F Series Friction Hold Open Model – Standard Duty

Used in situations where multiple hold open points are desirable. Friction tension is adjusted using an Allen key.

Each model is available in five sizes as shown in the table on page 34.

Materials and Finishes

All models are available in 300 series Stainless Steel, Brass and Steel substrates. Stock finishes include US32D satin stainless steel and SP28 powder coated silver.

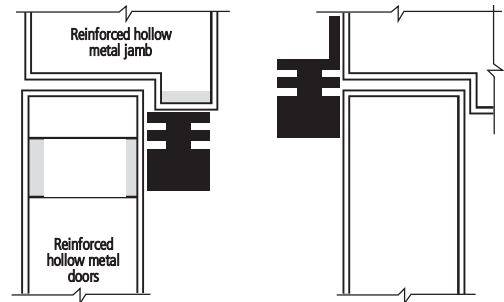
Suffix .J - (Angle Jamb Bracket)

An additional option on the REL.450 series is the Angle Jamb Bracket for hinge side or flush transom mounting. The angle jamb bracket affixes to the standard jamb bracket. If ordered with the overhead stop or holder add suffix J. If needed separately order REL.450 Angle Jamb Bracket.

Surface Installation

Surface mounted overhead door holder and stop installation does not require morticing of either the jamb or the door. The jamb bracket is mounted normally to the underside of the stop. The channel is surface mounted to the face of the door. Hollow metal frames must be reinforced in the jamb to provide strength for the jamb bracket. For timber doors and frames the available timber must be adequate for the holder specified.

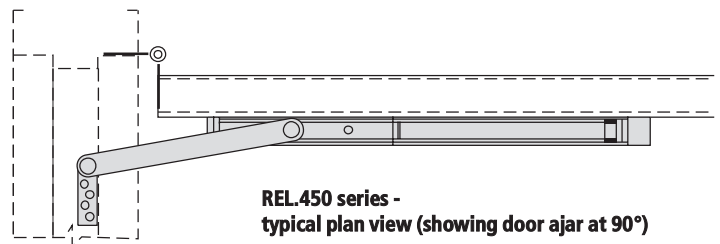
Typical layout for single action doors showing push side and hinge side applications



A typical surface mounted installation is shown above (left) where the jamb bracket is fastened to the stop.

Angle jamb brackets are available for hinge side mounting and for use with rebated doors or flush transom installations.

Jamb brackets with special shims for use on jambs with blade stops are also available. Advise the stop height and the appropriate shim kit will be provided.



REL.450 series - typical plan view (showing door ajar at 90°)

How to Specify or Order

Example	45 — 4 — H — US32D — J
REL.450 Series	↑
Size (from table on page 34)	↑
Function (hold open, stop or friction)	↑
Finish (US32D = satin stainless steel)	↑
J (Angle Jamb Bracket)	↑