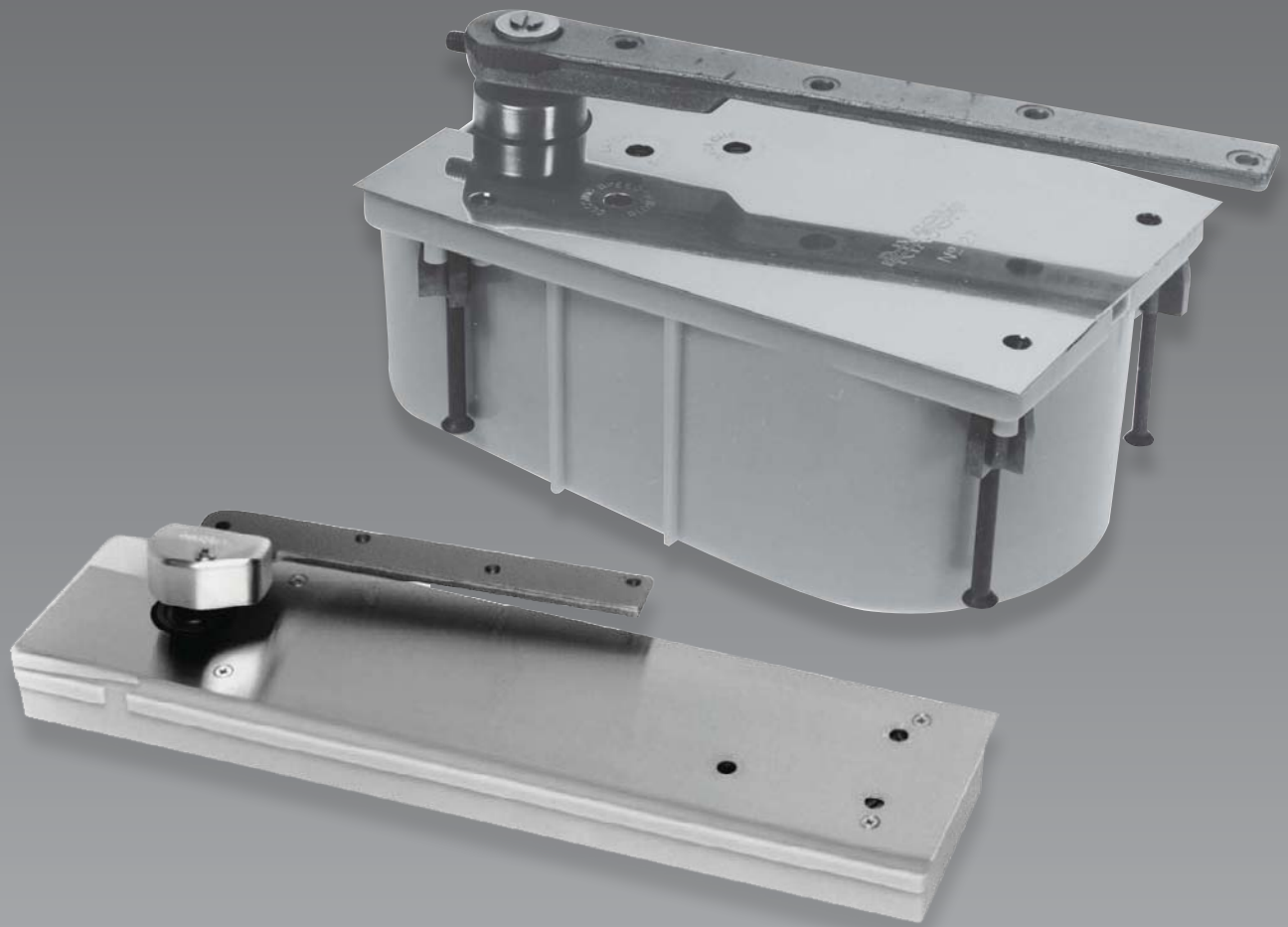


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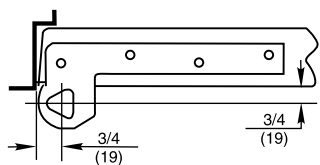


## HEAVY-DUTY FLOOR CLOSERS

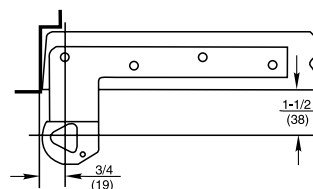
Complete Door Control for Exterior and  
Interior Doors, Where Concealment is Desired

HOW TO SELECT A PRODUCT

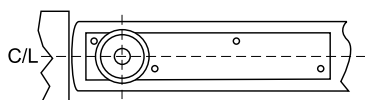
1. Offset Vs. Center Hung Application



**3/4" Offset**  
Pivot point located 3/4" from the heel edge of the door and 3/4" from face of door



**1-1/2" Offset**  
Pivot point located 3/4" from the heel edge of the door and 1-1/2" from face of door. Used on doors with cladding on face or trim on frame



**Center Hung**  
Pivot point centered in thickness of door. Distance from heel edge can vary 2-3/4" and up. **Not for use on fire rated doors.**

2. Size of Door (Width, Height, Thickness)

Door Material	Door Thickness		
	1-3/4"	2-1/4"	3"
Hollow Metal	6.5	7	—
Solid Core Wood	7	9	11.5
Aluminum/Glass Storefront	3.5	4	—
Bullet Resistant	20	21	
MDF	7	9	11.5
	Glass Thickness		
Tempered Glass	3/8"	1/2"	3/4"
	5	7	9.75
	Lead Thickness		
Lead Lining (add to door material weight)	1/16"	1/8"	1/4"
	5	8	9.75
	Cladding Material		
3/4" Cladding (add to door material weight)	Wood	Stone	Bronze
	3	10.5	28

Example: 3' x 7' x 1-3/4" WD x 1/4" Lead lining

Door: 21sq ft x 7lb./sq ft = 147lbs  
 Lead Lining: 21sq ft x 9.75lb./sq ft = 204.75lbs  
 Total Door weight 351.75lbs

Example: 3'6" x 8' x 1/2" Tempered Glass Door

Door: 28sq ft x 7lb./sq ft = 196lbs

For doors of other sizes consult factory



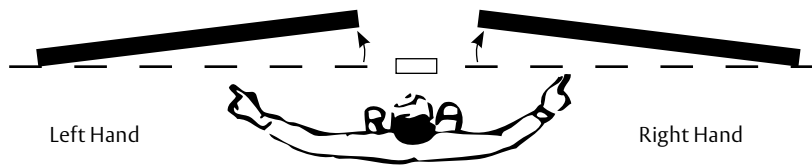
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HOW TO SELECT A PRODUCT

3. Expected Frequency of Door Opening

Application	Daily	Yearly	
Large department store entrance	5,000	1,500,000	
Large office building entrance	4,000	1,200,000	
Theater entrance	1,000	365,000	
School entrance	1,250	225,000	High
School restroom door	1,250	225,000	
Store or bank entrance	500	150,000	
Office building restroom door	400	118,000	
School corridor door	80	15,000	
Office building corridor door	75	22,000	Average
Store restroom door	60	18,000	
Residential entrance door	40	15,000	
Residential restroom door	25	9,000	
Residential hallway door	10	3,600	Low
Residential closet door	6	2,200	

How to Determine Hand of Door



Face a door swinging open away from you. If it opens to the right, it is right handed. If it opens to the left, it is left handed.

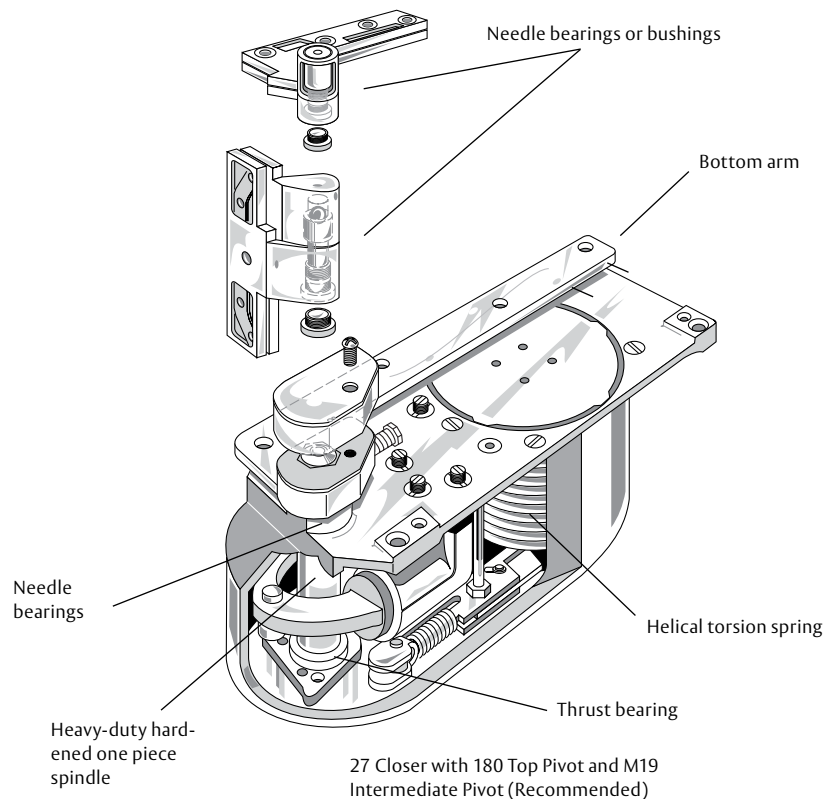


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Norton Rixson heavy-duty floor closers are ideal for supporting and controlling doors. Floor closers provide long-lasting performance and dependability. Heavy-duty closers are used on exterior or interior, medium to high traffic openings or for applications where the doors are very heavy.

### Features and Benefits

- Weight of the door is supported by the bottom arm and floor
  - Door swings with less resistance
  - Reduces stress on the frame
  - Fasteners are in shear, not tension
  - Eliminates door sag
  - Doors can be adjusted vertically
- Bottom arm attaches directly to the closer spindle
  - A mechanical advantage that increases efficiency insuring that ICC/ANSI A117.1 compliant, lower opening forces will still close the door
  - One to one ratio of door swing to spindle rotation makes control more precise
- Closer is concealed in the floor
  - Aesthetics -the beauty of the opening is the focal point, not the closer
  - Vandal resistance -the mechanism is not exposed
  - Solution for arch top doors (offset models)
- Heavy-duty, hardened, one piece steel spindles
  - Designed to provide positive dead stop
  - Thrust bearings support vertical load
  - Needle bearings for lateral loads
  - L models have applied thrust bearings to handle extra heavy doors or doors with high traffic
- Helical torsion springs
  - Operates in the same direction as door movement – contributes to higher closer efficiency
  - Torsion spring has a longer life than compression springs



**Automatic Hold Open – Suffix A**

These closers hold the door open. This feature cannot be changed in the field. Models 27-180, 30 & 40 only.

**Cold Weather Fluid – Suffix CWF**

Cold weather fluid should be specified for exterior doors in consistently cold climates under 32° F for weeks at a time. The hydraulic fluid is of a lower viscosity to prevent sluggish closing. Cannot be used with the delayed action feature.

**Cover Pan (Terrazzo) – Suffix Part Number**

Closers should always be accessible. They should never be buried beneath flooring materials. A cover pan sits on top of the closer and has the flooring material set in it. This way the sight line for the floor is consistent. Cover pans may require closers with longer spindles. See cover pan template to determine spindle length needed.

**Degree of Swing – Follows Model Number**

Single acting heavy-duty floor closers have a deadstop. This means that the door cannot go past a certain point. If ordered as a hold open closer, the hold open position is exactly the same as the deadstop. The degrees available are 85°, 90°, 95° or 105° (180° for model 27 only). It is recommended that the maximum degree of swing be ordered.

Double acting closers have a deadstop at 103° and are available with hold open options at 90° or 100°.

**Delayed Action – Prefix DA**

After full open, permits door to remain ajar (at 70 degrees) for up to 40 seconds. Operates by separate valve and can be shut off if not needed. Not available on closers with hold open feature.

**Door Thickness – Suffix 1-3/4, 2, 2-1/4, 2-1/2 or 3**

When ordering L product for lead lined doors, the thickness of the door must be given. The purpose of the L product is to have screws spaced so that they straddle the lead in the center of the door. Also used when lead lining is under the skins of the door. Recommended for use on extra heavy or high traffic doors.

**Extended Spindle – Suffix Extra Length**

Any special floor coverings, or severe door undercuts, will affect the spindle height. In these applications an extended spindle may be required. See product template to determine if an extended spindle is needed. Extended spindles available in 1/2" increments up to 2" longer than standard.

**Fire Rated – Prefix F **

Closer packages for fire rated doors (up to 3 hours) include a steel top pivot and must have additional steel intermediate pivots. These closers are non-hold open.

**Hand- Suffix RH or LH**

All single acting floor closers are handed. All double acting floor closers (30, 40, H40) are non-handed.

**Less All Parts – Suffix LAP**

If a closer is needed for replacement, the arm, cover, cement case, top pivot and floor plate are omitted.

**Less Cement Case – Suffix LCC**

For existing installations or when cement case has been sent earlier in construction. Closer will be packaged without the cement case.

**Less Floor Plate – Suffix LFP**

When thresholds or cover pans are being used, the closer doesn't need the decorative floor plate.

**Less Top Pivot – Suffix LTP**

For unusual head conditions, where the top pivot cannot be used, the closer is shipped without the top pivot. For offset installations, an additional load bearing intermediate (side jamb) M190 pivot is required. All intermediate pivots for that opening should be M190's, not M19's.

**Non Hold Open – Suffix N**

These closers do not hold the door open. This feature cannot be changed in the field.

**1-1/2" Offset – Suffix 1-1/2**

Offset is the distance from the face of the door to the pivot point. Extended offsets should not be used unless there is cladding on the face of the door or there is trim to clear on the frame. 1-1/2" offset arms and pivots are for doors with cladding or trim that project 3/4" from the face of the door.

**Physically Handicapped – Prefix PH **

To comply with ICC/ANSI A117.1 established by the Americans with Disabilities Act. PH prefix indicates 5 pounds of opening force, based at 30" from centerline of pivot. PH closers may not be used on labeled fire doors or exterior doors. Norton Rixson accepts no responsibility for PH closers and door latching. Also, be advised that ADA guidelines DO NOT apply to fire rated openings or exterior doors.

**8-1/2 Lbs. Opening Force – Prefix PH Suffix 8-1/2**

This is a lighter than normal opening force. Be aware that this may not be strong enough to close fire rated or exterior doors. Norton Rixson accepts no responsibility for PH closers and door latching. Also, be advised that ADA guidelines DO NOT apply to fire rated openings or exterior doors.

**Sealed Closer – Prefix SC**

This option for exterior doors or interior doors, with heavy exposure to water or cleaning solvents, protects the body. The closer body is placed in the cement case. A stainless steel cover plate is then gasketed and fastened to the cement case. This must be ordered with closer and cannot be ordered less the cement case.


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**Selective Hold Open – Suffix S**

These closers can be set to hold open or non-hold open. This is done via a screw control on the top of the closer. Available on Models 27 and 28 only.

**Special Layouts – Suffix SPLO #**

Unique installations or specially engineered products are called special layouts. These numbers must be assigned by the technical support department and they must be called out specifically, by their number, when ordered.

**Twenty Minute Label – Suffix -20 **

This UL rating is for 20 minute doors. Pivots are brass base material and include a visible label.

**Wood Door – Prefix W**

When using a center hung product with the centering arm (e.g. 28, 30 or 40) a special plate and less obtrusive adjusting screws are needed for wood doors. This plate is reinforcement to the deep mortise required for that arm, protecting veneer.

**CERTIFICATIONS **

See individual sections for compliance with ANSI A156.4 standards.

**LIMITED WARRANTY**

Norton Rixson heavy-duty floor closers models 27, 28, 30 and 40 are warranted for 10 years against defect. The model 20 closer carries a 2 year warranty. See Price Book for specific details of the limited warranty.

**SPECIFICATION**

Floor closers shall be heavy-duty model 27 (offset) or model 28 (center hung). All closers shall be handed. Choose appropriate functions and strengths to accommodate lead lining, extra high traffic, fire rating, independently hung or quick install models. These closers shall have separate and independent checking valves, to control latch speed, closing speed and adjustable hydraulic backcheck. All single acting closers shall have a built in dead stop feature. All closers shall have one piece spindle assembly. Extra heavy-duty closers shall have minimum of two thrust bearings and one needle bearing. Closers shall not have compression spring.



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Application

- Single Acting, Handed
- Exterior or Interior Doors
- Weight to 350 lbs.
- Centering Arm
- Sizes up to 4'0" x 8'6"\* (1219 x 2591mm)

Product Description & Features

- 340 top pivot included
- Available non-hold open (N) or selective hold open (S) at same degree as dead stop
- Built-in positive dead stop prevents door from swinging beyond the desired opening degree (specify 85°, 90°, 95° or 105°)
- Centering arm with adjusting screws in face of door
- Separate and independent valves for closing speed, latch speed and backcheck
- Available with floor plate or threshold installation (floor plate shown)
- Cylolac, rustproof cement case
- Not allowed for fire rated doors
- Frame stop required on the header at the lock side. If not supplied by frame manufacturer, recommend use of 60131 (see Door Control Accessories catalog).
- Furnished with wood and machine screws

Optional Features

- Delayed action option – prefix “DA” (non-hold open closers only)
- Cold weather fluid option – specify “CWF” (not available for closers with “DA”)
- Sealed closer option – specify “SC”
- Arm reinforcement bracket for wood doors - prefix W
- Extended spindles available in 1/2" increments up to 2" longer than standard

Compliance

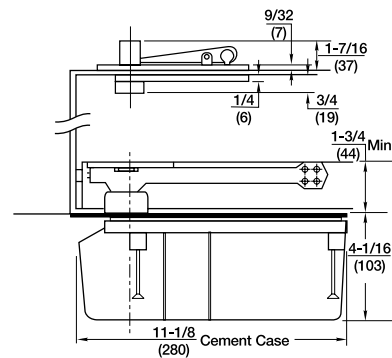
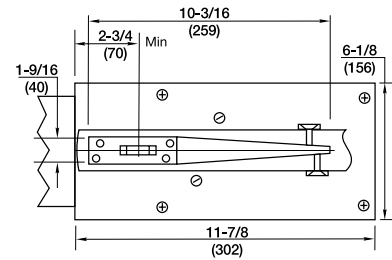
- Models available to meet ICC/ANSI A117.1 low opening force requirements, prefix “PH”. (For 8-1/2 lbs. of opening force prefix “PH” and suffix 8-1/2 lbs.)
- ANSI/C06021

\*For doors taller than 8'6" use top pivot # 345 in lieu of 340



Technical Information

(Frame stop required at lock edge)



Pivot edge of door must be radiused.



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