

1600 UniTrol® Non Handed Door Closer Standard Frame Deep Reveal Flush Transom

Non Hold Open (UL Listed) Hold Open (H) (Not UL Listed)

Sized
(Sizes 3,4)
UNI-1603BC (H)
UNI-1604BC (H)

Adjustable
(Sizes 1-6)
UNI-1601 (H)



Norton®

ASSA ABLOY

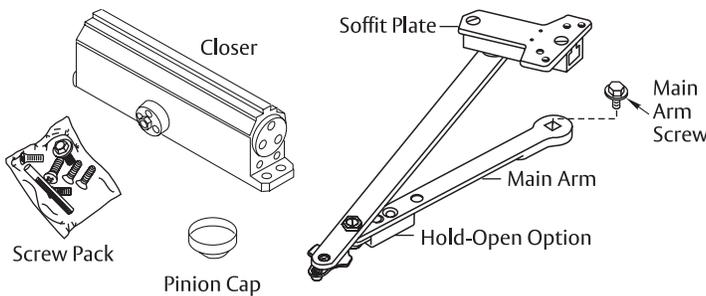
⚠ WARNING

This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.

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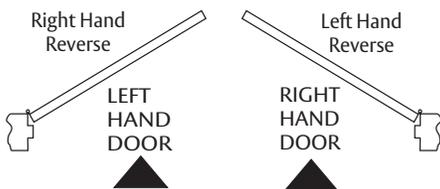
| Standard Frame (Reveals 1-7/8" to 4-5/8" - Uses 6190 Bracket) | Deep Reveal (Reveals Over 4-5/8" - Uses 6191 Reinforcing Kit) | Flush Transom (Uses 2022 Bracket) |
|---|---|---|
| <p>Right Hand Door - RH Left Hand Reverse - LHR</p> <p>Left Hand Door - LH Right Hand Reverse - RHR</p> | <p>Right Hand Door - RH Left Hand Reverse - LHR</p> <p>Left Hand Door - LH Right Hand Reverse - RHR</p> | <p>Right Hand Door - RH Left Hand Reverse - LHR</p> <p>Left Hand Door - LH Right Hand Reverse - RHR</p> |

Included Components (See page 2 for mounting hardware and optional components)

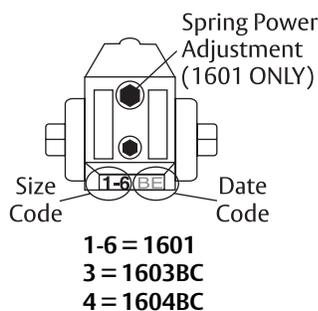


| Arm Identification (Stamped on Arm) | | | |
|-------------------------------------|--------------------|----------------|---------------|
| Door Width | Main Arm | Non Hold Open | Hold Open |
| 28" - 32" (0.70 - 0.80m) | 9-1/2" (241mm) | 6100-11 | 6100-1 |
| 33" - 41" (0.85 - 1.00m) | 11" (279mm) | 6100-13 | 6100-3 |
| 42" - 48" (1.05 - 1.20m) | 12-1/2" (318mm) | 6100-14 | 6100-4 |

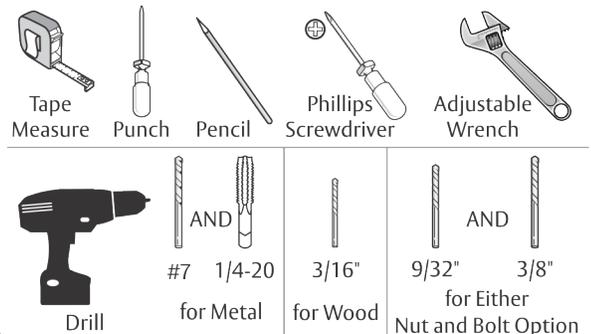
To Determine Your Hand of Door:



To Identify Your Model:



Tools Needed



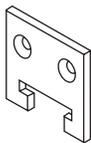
ATTENTION:

An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These installation instructions should be followed to avoid the possibility of misapplication or misadjustment.

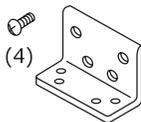
- For special applications, a separate door and frame preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustments only.
- Doors should be hung on ball bearing or anti-friction hinges.
- Door and frame must be properly reinforced.
- Always consult door/frame manufacturer for fastener compatibility.
- Adjust closing time speed between 4 and 7 seconds from 90° to 0°. Use of door by handicapped, elderly or small children may require greater closing time.
- These door closers should NOT be installed on exposed side (weather side) of exterior doors.
- Dimensions are given in inches (millimeters).

| Mounting Hardware | | Door or Frame | Drill |
|---|---|------------------|--|
|  | Closer, Soffit Plate: 1/4-14 x 1-1/2 Oval Flat Head Mach. Screw | Wood | 3/16" (4.76mm) |
|  | Closer, Soffit Plate: 1/4-20 x 3/4 Oval Flat Head Mach. Screw | Metal | Drill #7 (.201 dia. or 5.10mm) Tap 1/4-20 |
|  | Closer: Sleeve Nut and Bolt (SNB) (optional) | Hollow Metal | 9/32" (7.00mm) thru 3/8" (9.50mm) door face opposite to closer |
| | | Aluminum or Wood | 3/8" (9.50mm) thru |
|  | Closer: Thru Bolt and Grommet Nut (TBGN) (optional) | All | 9/32" (7.00mm) thru 3/8" (9.50mm) dia. x 3/8" (9.500mm) deep, door face opposite to closer |

Brackets

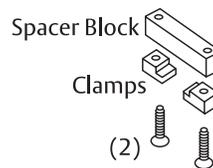


6190
Option for Standard Frame



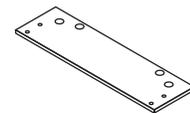
2022
Option for Flush Transom

Reinforcing Kit

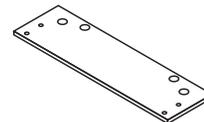


6191
Option for Deep Reveal

Drop Plates

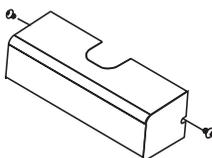


1688 Drop Plate
For narrow top rail



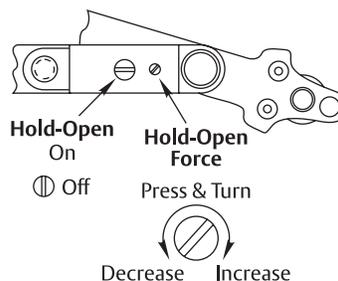
1688C Drop Plate
For use with optional cover

Cover



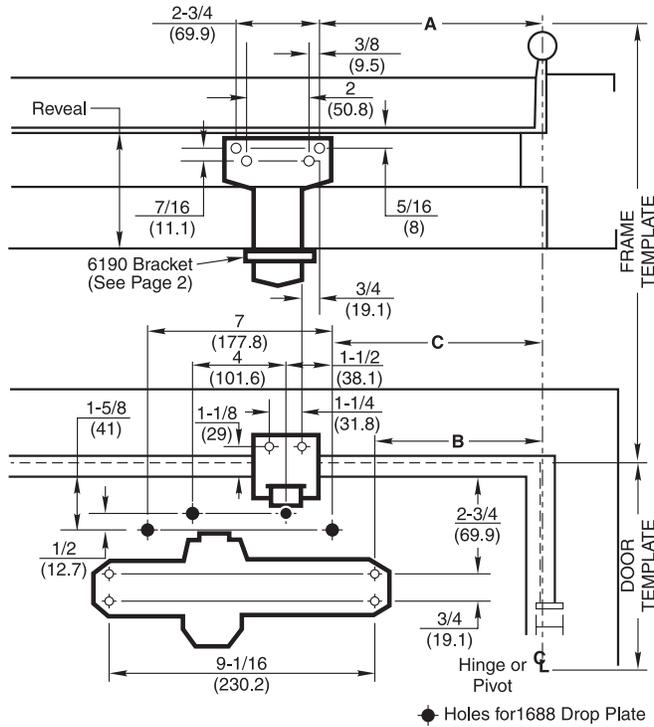
1600P

Door Holder



1600 UniTrol Arm - Templates (Right Hand Shown)

1-7/8" - 4-5/8" Standard Frame Reveal (With Door Template)



Notes:

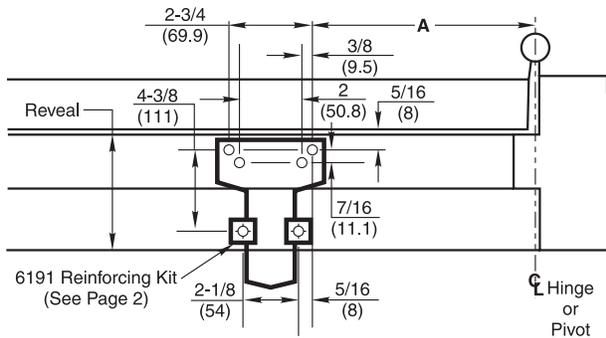


IMPORTANT: Door template is typical for all installations. Frame template must be selected according to frame reveal.

- If top rail is as narrow as 2-5/8" (67mm) and prevents closer from being mounted directly to door surface, use 1688 Drop Plate. Prepare door and frame accordingly.

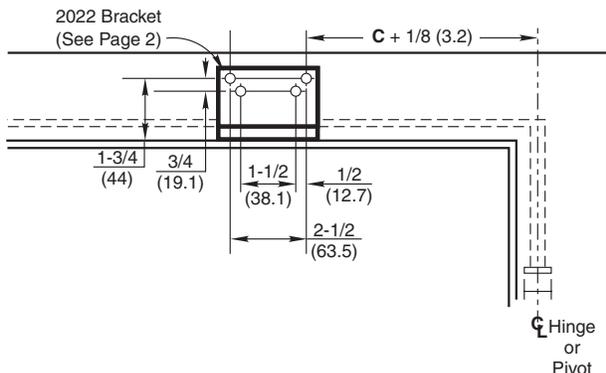
| 28" - 32" Wide Doors | | | | |
|----------------------|------|------------------|-----------------|-----------------|
| Opening | | A | B | C |
| Hold Open | Stop | | | |
| 85° | 90° | 10-1/2" (267) | 8-5/8" (219) | 9-5/8" (244) |
| 90° | 95° | 9-3/4" (248) | 8" (203) | 9" (229) |
| 95° | 100° | 9-1/4" (235) | 7-1/2" (191) | 8-1/2" (216) |
| 100° | 105° | 8-7/8" (225) | 7-1/8" (181) | 8-1/8" (206) |
| 105° | 110° | 8-1/2" (216) | 6-3/4" (171) | 7-3/4" (197) |
| 110° | 115° | 8-1/8" (206) | 6-3/8" (162) | 7-3/8" (187) |

Over 4-5/8" Deep Frame Reveal Template



| 23" - 41" Wide Doors | | | | |
|----------------------|------|------------------|------------------|------------------|
| Opening | | A | B | C |
| Hold Open | Stop | | | |
| 85° | 90° | 12-5/8" (321) | 11" (279) | 12" (305) |
| 90° | 95° | 12" (305) | 10-3/8" (264) | 11-3/8" (289) |
| 95° | 100° | 11-3/8" (289) | 9-3/4" (248) | 10-3/4" (273) |
| 100° | 105° | 10-7/8" (276) | 9-1/4" (235) | 10-1/4" (260) |
| 105° | 110° | 10-3/8" (264) | 8-3/4" (222) | 9-3/4" (248) |
| 110° | 115° | 10" (254) | 8-3/8" (213) | 9-3/8" (238) |

Flush Transom Template



| 42" - 48" Wide Doors | | | | |
|----------------------|------|------------------|------------------|------------------|
| Opening | | A | B | C |
| Hold Open | Stop | | | |
| 85° | 90° | 15" (381) | 13-1/4" (337) | 14-1/4" (362) |
| 90° | 95° | 14-1/4" (362) | 12-1/2" (318) | 13-1/2" (343) |
| 95° | 100° | 13-5/8" (346) | 11-7/8" (302) | 12-7/8" (327) |
| 100° | 105° | 13" (330) | 11-1/4" (286) | 12-1/4" (311) |
| 105° | 110° | 12-1/2" (318) | 10-3/4" (273) | 11-3/4" (298) |
| 110° | 115° | 12" (305) | 10-1/4" (260) | 11-1/4" (286) |

1. Prepare door and frame.

1. Be sure that arm is correct for door width. See "Components" on page 1.
2. Be sure that correct frame and door template combination is used to prepare for installation. See "Templates" on page 3.
3. Using dimensions for hold-open or door stop angle desired, mark and drill
 - Four (4) holes on door for closer (or drop plate)
 - Six (6) holes on frame for soffit plate and 6190 bracket (See Figure 1) or
 - Four (4) holes on frame for soffit plate and 6191 reinforcing kit (See Figure 2) or
 - Four (4) holes on frame for 2022 angle bracket (See Figure 3)
4. UNI1601 ONLY: Set approximate closing power using "Spring Power Adjustment" chart on page 5.

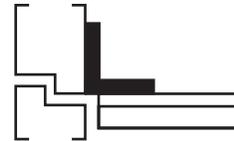
Figure 1. 1-7/8" - 4-5/8" Standard Frame With 6190 Bracket



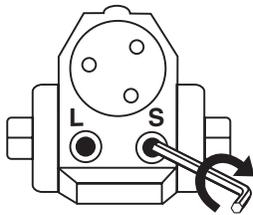
Figure 2. Over 4-5/8" Deep Reveal With 6191 Reinforcing Kit



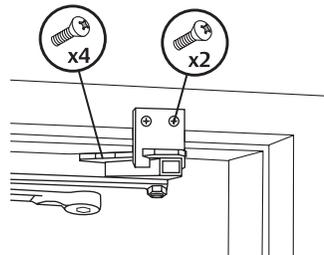
Figure 3. Flush Transom With 2022 Bracket



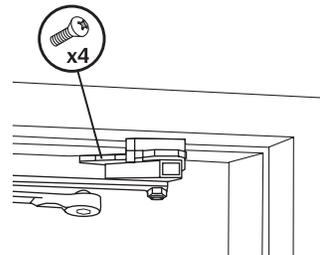
2. Close latch and sweep valves.



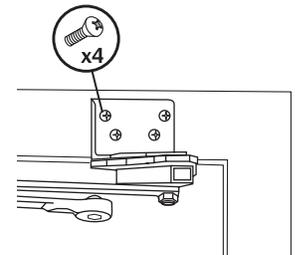
3. Install arm to frame.



Standard Frame - 6190 Bracket

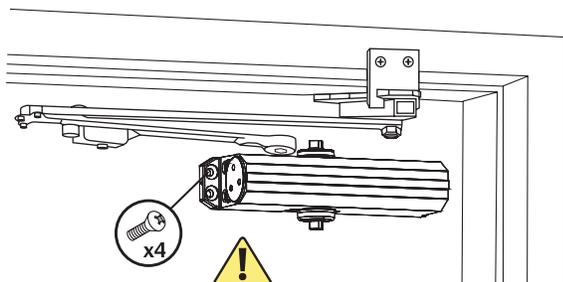


Deep Reveal - 6191 Kit



Flush Transom - 2022 Bracket

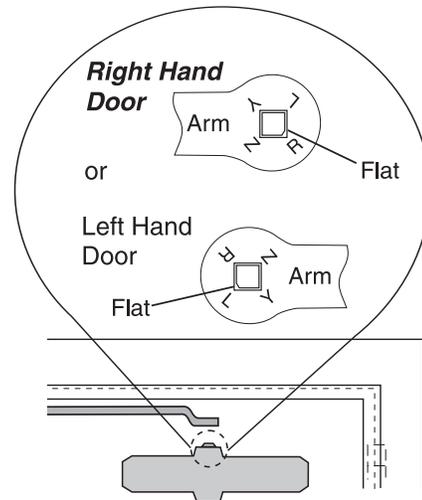
4. Mount drop plate (if used) and closer.



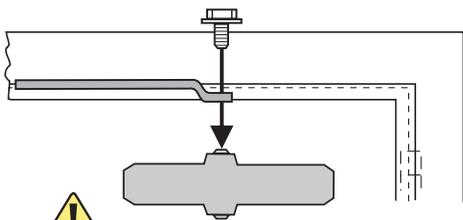
S and L valves
AWAY from hinge

i
To ease optional cover installation, insert cover screws onto closer (leaving a slight gap) before mounting closer.

5. Rotate closer pinion to align flat as shown.

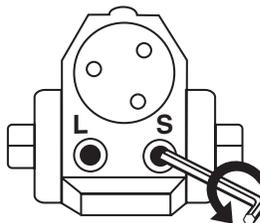


6. Attach arm to closer.



!
RH: Position flat at R
LH: Position flat at L

7. Open latch and sweep valves.



!
Do not completely open valves. Valves will leak.

You've now installed the **1600 UniTrol Arm Closer**.

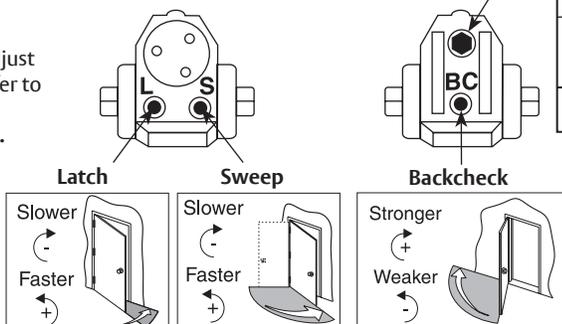
● Continue with closer adjustments and decorative cap or cover installation.

Closer Adjustments



Use provided 1/8" hex wrench to turn valves.
NEVER force valves out of closer.
NEVER completely close backcheck valve. Backcheck is not a positive stop.

Door must be open to adjust spring closing power. Refer to chart.
Do not use a power drill.
Warranty will be void.



| | | Power Adjustment Chart | | | | | |
|------|--------------|---|-------------------|----------------|--------------|----------------|----------------|
| DOOR | Parallel Arm | * | MAXIMUM DOOR SIZE | | | | |
| | | | 34" (0.85 m) | 36" (0.9 m) | 40" (1 m) | 44" (1.1 m) | 48" (1.2 m) |
| INT | 1601 | FULL 360° TURNS OF POWER ADJUSTMENT SHAFT | 3 | 5 | 8 | 11 | 14 |
| EXT | | | 5 | 8 | 11 | 16 | 19 |

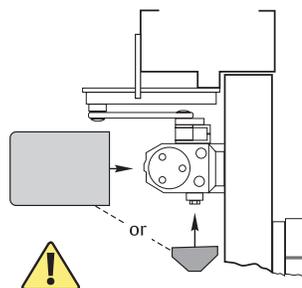
*30 FULL (360°) TURNS MAXIMUM AVAILABLE = 8 TURNS AS SHIPPED

Pinion Cap or Cover

Screw pinion cap onto pinion shaft by hand or with a Phillips screwdriver.

OR

Slide cover over closer and secure mounting screws after installation is complete.



!
Do not over tighten cap or cover screws

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Norton Technical Product Support:
Monroe, NC 28112 USA
Phone: 800.438.1951 ext: 6030
TechSupport.Norton@assaabloy.com
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80-9316-2533-020 Rev 2 02/20