



Installation Instructions

80-9303-2208-010 (09-08)

Series UNI 3300/3310 (DL)
Series UNI 3500/3510 (DL)

Parallel Arm Door Controls

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



DOOR WIDTH determines the location of the closer. Use **ONLY** the template chart corresponding to your door width.

Use **ONLY** the dimensions given in each template chart for the door total **OPENING** angle or the **HOLD-OPEN** angel desired.

| | | |
|---|---|---|
| <p>Standard Frame Installation 1-7/8 to 4-5/8 Frame Reveals (Uses 6190 Bracket). Bracket illustration page 4. Door and frame preparation See Page 2</p> | <p>Right Hand Door - RH Left Hand Reverse - LHR</p> | <p>Left Hand Door - LH Right Hand Reverse - RHR</p> |
| <p>Deep Frame Installation Frame Reveals Over 4-5/8 (Uses 6191 Clamp Kit). Bracket illustration page 4. Door preparation page 2 Frame preparation page 3</p> | <p>Right Hand Door - RH Left Hand Reverse - LHR</p> | <p>Left Hand Door - LH Right Hand Reverse - RHR</p> |
| <p>Flush Transom Installation Flush Partitions (Uses 589L Bracket). Bracket illustration page 4. Door preparation page 2 Frame preparation page 3</p> | <p>Right Hand Door - RH Left Hand Reverse - LHR</p> | <p>Left Hand Door - LH Right Hand Reverse - RHR</p> |

NOTE: Use this instruction sheet for installation sequence and closer adjustments only

- It is recommended that the door on which the door closer will be installed be hung on ball bearing hinges. Door must swing freely
- Door and Frame must be properly reinforced, or use of special fasteners employed, to prevent the mounting screw from pulling out.
- All dimensions are given in inches with corresponding metric dimensions (mm) in parenthesis.

Components:

Optional Architectural Metal Cover

| Arm Identification | Arm Stamping | |
|---|--------------------------------|-------------------------------|
| | Non Hold Open | Hold Open |
| Door Width 28" - 32" (0.70 - 0.80m) | 6100-11 11-6100-0235 | 6100-1 11-6100-0232 |
| 33" - 41" (0.85 - 1.00m) | 6100-13 11-6100-0236 | 6100-3 11-6100-0233 |
| 42" - 48" (1.05 - 1.20m) | 6100-14 11-6100-0237 | 6100-4 11-6100-0234 |

Optional Metal Cover

Template Information

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

Frame Template at right

Frame Reveals 1-7/8 (48) to 4-5/8 (117).
(Uses 6190 Bracket) Bracket Illustration – Page 4.

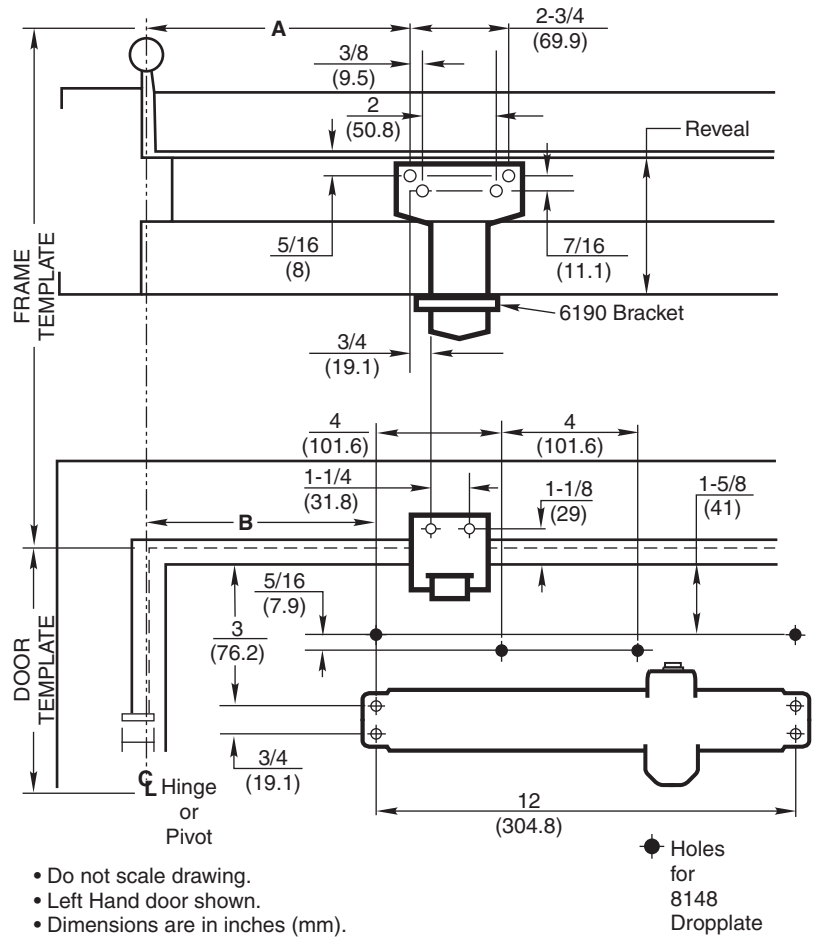
Frame Template: Page 2

Frame Reveals Over 4-5/8 (117).
(Uses 6191 Clamp Kit) Bracket Illustration – Page 4.

Frame Template: Page 3

Frame Reveals 0 to 1/8 (0 to 3).
Flush Partitions (Uses 589L Bracket).

Door Template Typical for All Installations Frame Template for 1-7/8 to 4-5/8 Reveals



| Inches | mm | Inches | mm | Inches | mm |
|--------|------|--------|-------|--------|-----|
| 5/16 | 7.9 | 3-1/4 | 83 | 8-7/8 | 225 |
| 3/8 | 9.5 | 3-5/8 | 90 | 9-1/4 | 235 |
| 7/16 | 11.1 | 4 | 101.6 | 9-3/4 | 248 |
| 1/2 | 12.7 | 4-3/8 | 111 | 10-1/8 | 257 |
| 3/4 | 19.1 | 4-1/2 | 114 | 10-3/8 | 264 |
| 1-1/8 | 29 | 4-7/8 | 124 | 10-1/2 | 267 |
| 1-1/4 | 31.8 | 5-1/8 | 130 | 11 | 279 |
| 1-1/2 | 38.1 | 5-1/4 | 133 | 11-1/2 | 292 |
| 1-5/8 | 41 | 5-3/4 | 146 | 12 | 305 |
| 1-3/4 | 44 | 6-1/4 | 159 | 12-1/8 | 308 |
| 1-7/8 | 48 | 6-3/4 | 171 | 12-1/2 | 318 |
| 2 | 50.8 | 7-1/8 | 181 | 12-3/4 | 324 |
| 2-1/8 | 54 | 7-1/2 | 191 | 13-5/8 | 346 |
| 2-1/2 | 63.5 | 7-5/8 | 194 | 14-1/4 | 362 |
| 2-3/4 | 69.9 | 8-1/8 | 206 | 15-1/8 | 384 |
| 2-7/8 | 73 | 8-1/4 | 210 | | |
| 3 | 76 | 8-1/2 | 216 | | |

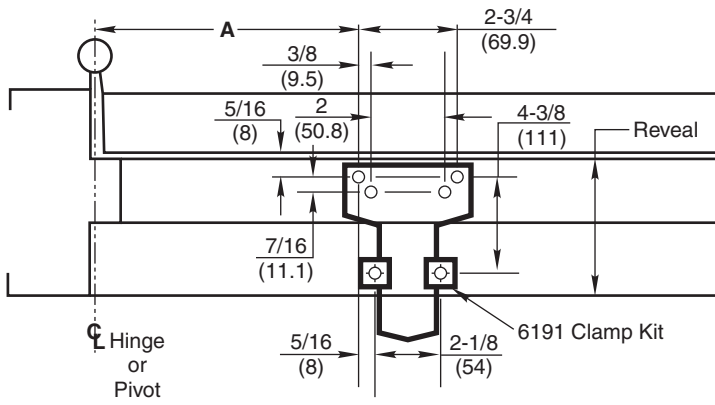
| Preparation for Fasteners | | | |
|---------------------------|--------------------------------|-------------------|--|
| | Fasteners | Door or Frame | Drill-Sizes |
| Standard | Self-Drilling Screw | Aluminum or Metal | No drill required |
| | | Wood | 3/16" (4.30 mm) |
| | 1/4" - 20 machine screw | Metal | Drill: #7 (0.201" dia.) Tap: 1/4" - 20 |
| Optional | Sleeve nuts and bolts | Hollow Metal | 9/32" (7 mm) through; 3/8" (9.5 mm) door face opposite to closer |
| | | Aluminum or Wood | 3/8" (9.5 mm) through |
| | Through-bolts and grommet-nuts | All | 9/32" (7 mm); 3/8" (9.5 mm) dia. x 3/8" (9.5 mm) deep on door opposite to closer |

| Dimensions for Doors 28" to 32" Wide | | | | | |
|--------------------------------------|------|-------------|-----|-------------|-----|
| Opening | | Dimension A | | Dimension B | |
| Hold Open | Stop | Inches | mm. | Inches | mm. |
| 85° | 90° | 10-3/8 | 264 | 5-1/8 | 130 |
| 90° | 95° | 9-3/4 | 248 | 4-1/2 | 114 |
| 95° | 100° | 9-1/4 | 235 | 4 | 102 |
| 100° | 105° | 8-7/8 | 225 | 3-5/8 | 92 |
| 105° | 110° | 8-1/2 | 216 | 3-1/4 | 83 |
| 110° | 115° | 8-1/8 | 206 | 2-7/8 | 73 |

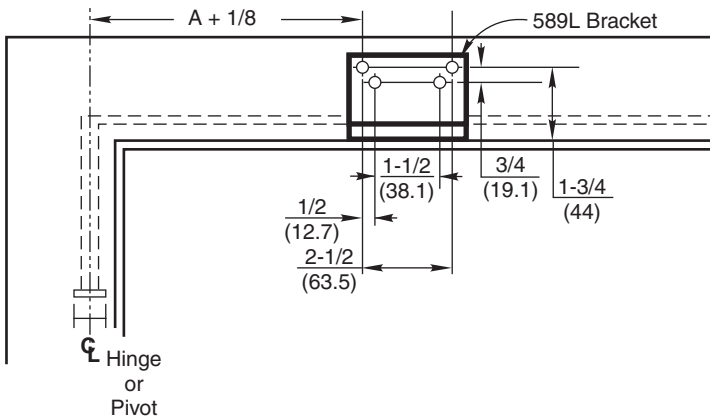
| Dimensions for Doors 33" to 41" Wide | | | | | |
|--------------------------------------|------|-------------|-----|-------------|-----|
| Opening | | Dimension A | | Dimension B | |
| Hold Open | Stop | Inches | mm. | Inches | mm. |
| 85° | 90° | 12-3/4 | 324 | 7-1/2 | 191 |
| 90° | 95° | 12 | 305 | 6-3/4 | 171 |
| 95° | 100° | 11-1/2 | 292 | 6-1/4 | 159 |
| 100° | 105° | 11 | 279 | 5-3/4 | 146 |
| 105° | 110° | 10-1/2 | 267 | 5-1/4 | 133 |
| 110° | 115° | 10-1/8 | 257 | 4-7/8 | 124 |

| Dimensions for Doors 42" to 48" Wide | | | | | |
|--------------------------------------|------|-------------|-----|-------------|-----|
| Opening | | Dimension A | | Dimension B | |
| Hold Open | Stop | Inches | mm. | Inches | mm. |
| 85° | 90° | 15-1/8 | 384 | 9-3/4 | 248 |
| 90° | 95° | 14-1/4 | 362 | 8-7/8 | 225 |
| 95° | 100° | 13-5/8 | 346 | 8-1/4 | 210 |
| 100° | 105° | 13 | 330 | 7-5/8 | 194 |
| 105° | 110° | 12-1/2 | 318 | 7-1/8 | 181 |
| 110° | 115° | 12-1/8 | 308 | 6-3/4 | 171 |

Frame Template for Reveals Over 4-5/8 Door Template on Page 2



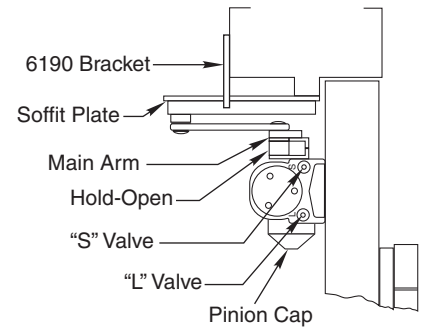
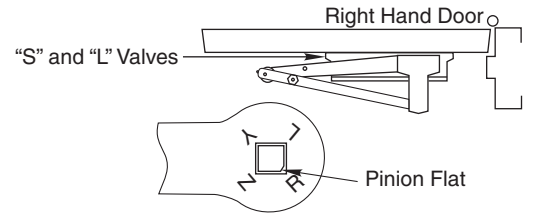
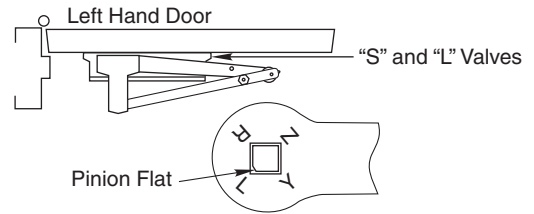
Frame Template for Flush Partitions Door Template on Page 2



Installation Sequence

- Read Front Page.**
 Installations and component identification are on this page. Arm assembly must be correct for width of door, see chart.
- Select Correct Door and Frame Template Combination.**
 Follow "Template Information" on Page 2 or Pages 2 and 3.
- Mark Location of Mounting Holes.**
 Use dimensions for hold-open or door stop angle desired. Mark position of 4 holes on door for closer (or drop plate) and 6 holes on frame for soffit plate (or 4 for 589L angle bracket).
- Prepare Holes for Fasteners.**
 See chart on Page 2.
- Set closer average power.**
 For multi-size closers only, use "Power Setting-Multisize Closers" chart on page 4.
- Mount Closer to Door.**
 Dropplate first, if used. Place end with "S" and "L" valves toward the lock edge of the door. (Slip clips for optional full metal cover under closer feet.)
- Mount Arm to Frame.**
 Fasten soffit plate (or 589L angle bracket if flush partition) to frame. Mount 6190 bracket or 6191 clamps to reinforce soffit plate. Or fasten 589L bracket to frame and then soffit plate to 589L.
- Install Arm on Pinion Shaft.**
 Close valves "S" and "L". Rotate pinion over 45° to align main arm letter "R" (right hand) or "L" (left hand) with pinion flat. Fasten with arm screw. See "Typical Installation" figure above right. Re-open valves "S" and "L".

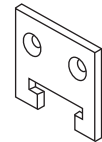
Typical Installation



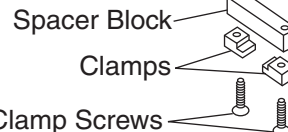
- Adjust Closer.**
 See "Unit Adjustment" on Page 4.
- Install Cover and Pinion Cap (if required).**
Full Cover: Slide cover insert into the un-used cutout in cover. Install cover using screws provided.
Narrow Cover: Install cover using screws provided. Screw pinion cap onto shaft by hand or with a phillips screwdriver - DO NOT OVER TIGHTEN.
Full Metal Cover: Fasten cover to mounting clips with screws provided.
Metal Architectural Cover: Remove cover insert where pinion is located. Install standoffs in ends of closer. Install cover using screws provided.
Plastic Architectural Cover: Slide cover insert into the un-used cutout in cover. Install standoffs in ends of closer. Snap cover over standoffs.

Bracket Illustrations

Standard 6190 Bracket



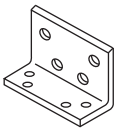
Deep Reveal Option



No. 6191 Reinforcing Kit

Flush Partition Option

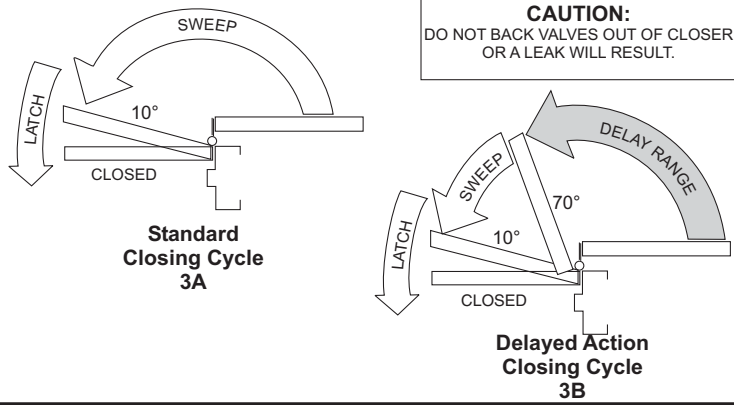
4 Bracket
Screws



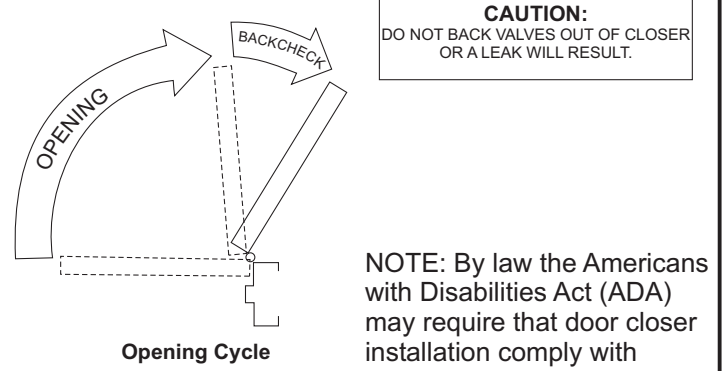
No. 589L Bracket

Unit Adjustment

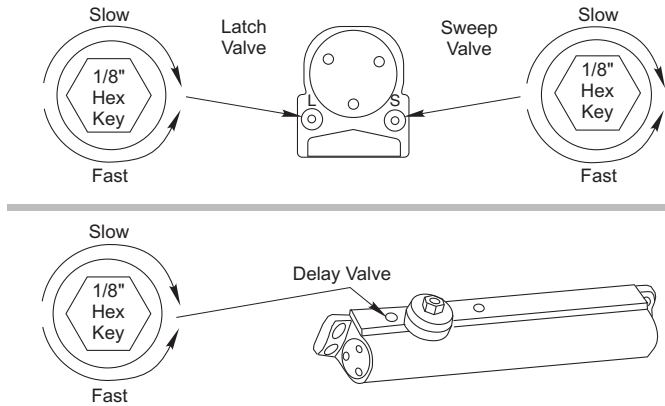
Closing Speed Controls



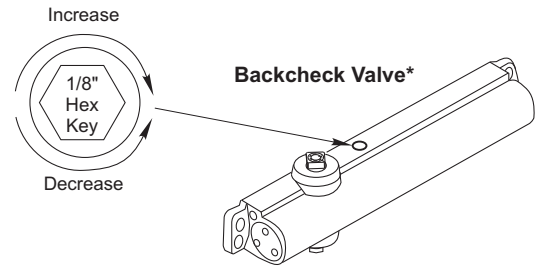
Opening Door Control



Closing Speed Controls

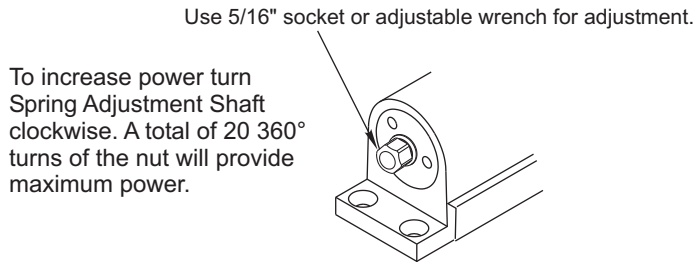


Backcheck Control



* NEVER close this valve completely.

Closing Power Control



Power Adjustment Chart (for Mult-Size Closers)

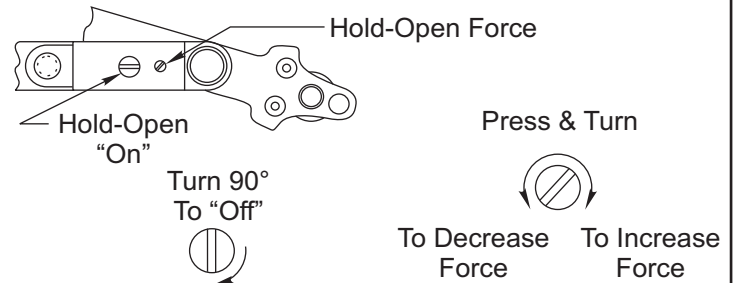
| DOOR | PARALLEL ARM INSTALLATION | * | MAXIMUM DOOR SIZE | | | |
|------|-------------------------------|---|-------------------------|-------------------------|-------------------------|-------------------|
| | | | 28-32" (0.70-0.80 m) | 33-41" (0.85-1.00 m) | 42-48" (1.05-1.20 m) | Max # of turns |
| INT | UNI-3301/ UNI-3501 | FULL 360° TURNS OF POWER ADJUSTMENT SHAFT | 7 | 10 | 16 | 20 |
| EXT | | | 9 | 12 | 18 | 20 |

*20 -360° TURNS MAXIMUM AVAILABLE

Power Adjustment

- Spring Power** is controlled by the power adjustment nut at the end of the closer.
- UNI-3300 or UNI-3500 Unitrol only** is available in power sizes 2-3-4-5 or 6. Each power size can be increased 50%.
- UNI-3301 or UNI-3501 Unitrol only** is adjustable through a range of power sizes 2 through 6. See "Power Adjustment" chart to set average power of closer before installation.

Door Holder Option



Hold-Open option is found at the arm elbow. To select hold-open "on" or hold-open "off" and to adjust the hold-open force ... use screwdriver as illustrated.