Installation Instructions
UniTrol®
UNI-J1600BC Series Sized Closers
UNI-J1601(BF) Series Multi-Sized Closers

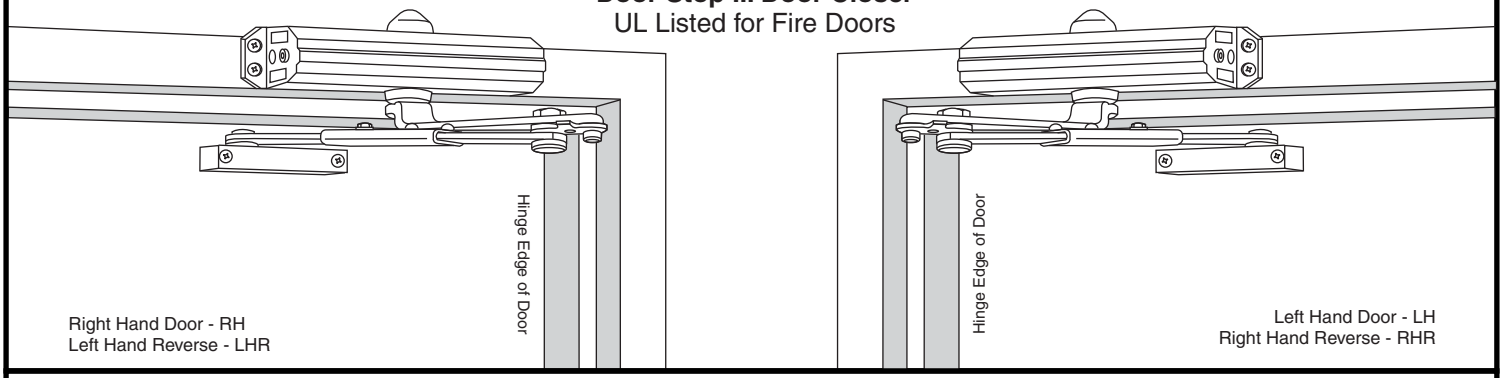
Non Hold Open (UL Listed)
Hold Open (H) (Not UL Listed):

Models	
Sized (Sizes 2, 3, 4, 5, 6)	Multi-Sized (Sizes 3 thru 6)
UNI-J1602BC(H)	UNI-J1601(H)
UNI-J1603BC(H)	
UNI-J1604BC(H)	(Sizes 1 thru 4)
UNI-J1605BC(H)	UNI-J1601BF(H)
UNI-J1606BC(H)	

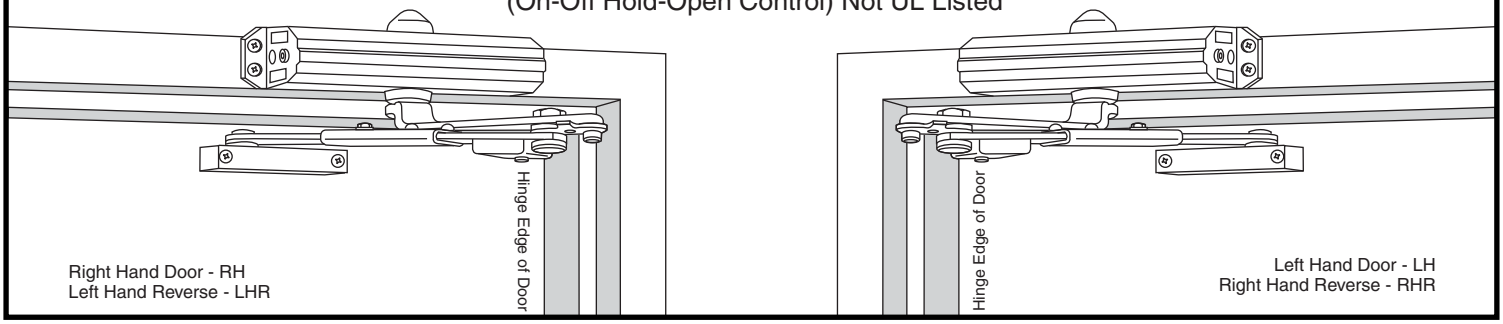
CAUTION An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These instructions should be followed to avoid the possibility of misapplication or misadjustment. CAUTION

"DA" Suffix (Delayed Action) is an optional feature. A separate instruction will be packed with these instructions showing valve locations and adjustment porcedures.

Series UNI-J1600
Door Stop ... Door Closer
UL Listed for Fire Doors



Series UNI-J1600H
Door Stop ... Door Holder ... Door Closer
(On-Off Hold-Open Control) Not UL Listed

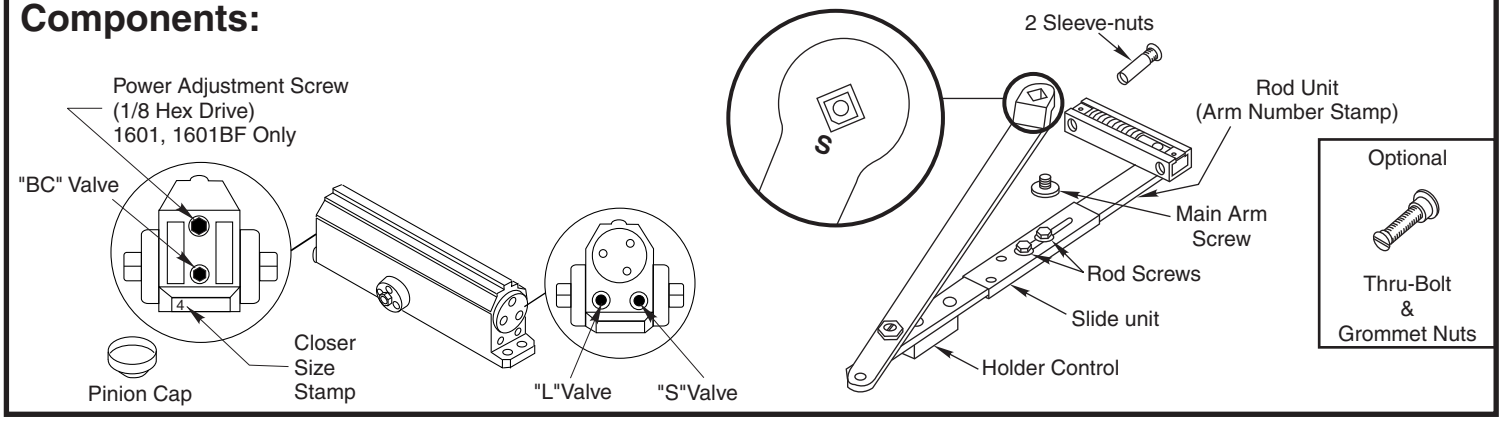


NOTE: For special applications a separate door and frame preparation template is packed with these instructions

Use this instruction sheet for installation sequence and closer adjustments only

- 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 screws from pulling out.
- All dimensions are given in inches with corresponding metric dimensions (mm) in parenthesis.

Components:



These installation instructions cover either of the models illustrated.

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Hollow-Metal or Wood Openings

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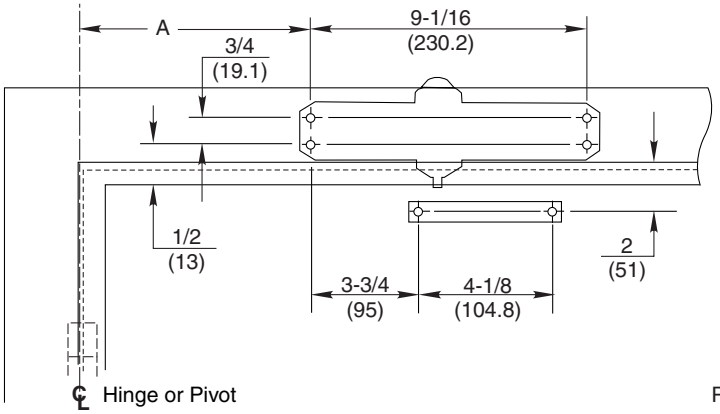
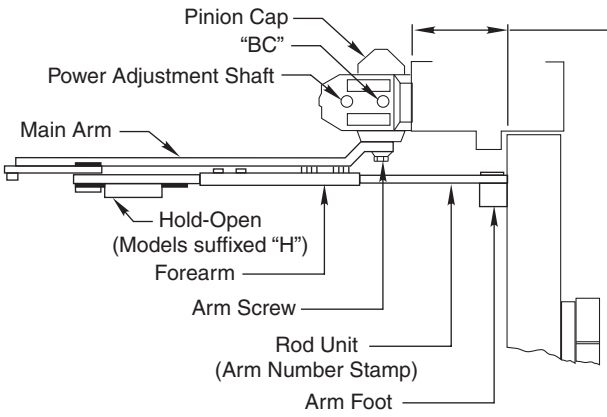
Template



Opening		Dimension A	
Hold Open	Stop	inches	mm
85°	90°	9-1/8	232
90°	95°	8-3/8	213
95°	100°	7-3/4	197
100°	105°	7-3/8	187
105°	110°	6-3/4	171
110°	115°	6-1/2	165

Installation Sequence

- This page for installation on hollow-metal or wood. For aluminum doors and frame use Page 3.
- Select door opening angle using template above. Mark 4 holes on frame face for closer and 2 holes on door for arm foot.
- Prepare door and frame for fasteners. See “Preparation for Fasteners” below.
- **1601 or 1601BF Models Only. Set approximate closing power using “Power Adjustment Chart” at bottom of Page 3.**
- Install closer to frame face with 2 regulating valves toward hinge edge of door.
- Remove rod unit from arm assembly.
- Install main arm onto closer pinion shaft, indexing main arm mark “S” with pinion flat as shown at right. Fasten with arm screw.
- Mount arm foot to door. Position foot with rod on top and spring toward hinge.
- Reassemble arm. Adjust forearm perpendicular (at a 90° angle) to the door. Install and tighten rod screws.
- Screw pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.
- Adjust closer.

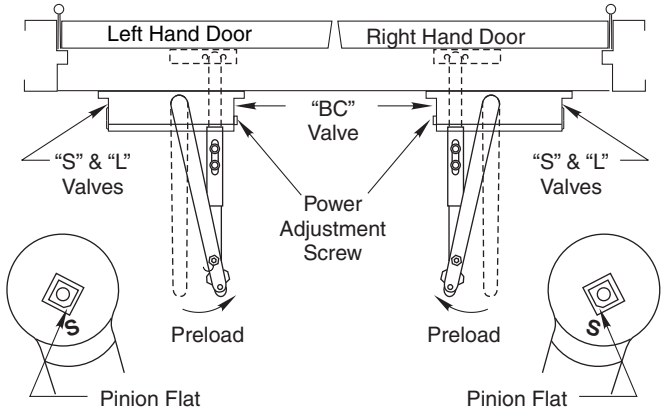


Side Elevation

Reveal inches/(mm)	Arm Number Stamp
0 to 3/8 (0 to 10)	J6600-*
1/2 to 2 (13 to 50)	J6200-*
2-1/8 to 3-1/4 (55 to 83)	J6100-*
3-3/8 to 4-1/4 (85 to 108)	J6400-*
4-3/8 to 5-3/8 (111 to 137)	J6500-*1
5-1/2 to 6-3/8 (140 to 162)	J6500-*2
6-1/2 to 7-3/8 (165 to 187)	J6500-*3

* “4” Non-Holder Models
“7” Hold-Open Models

Typical Installation



Preparation for Fasteners		
Fasteners	**Door or Frame**	**Drill-Sizes**
Self-Drilling Screw	Aluminum or Metal	No drill required
	Wood	3/16” (4.30 mm) Pilot hole required
1/4” - 20 machine screw	Metal	Drill: #7 (0.201” dia.) Tap: 1/4” - 20
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

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Aluminum Openings

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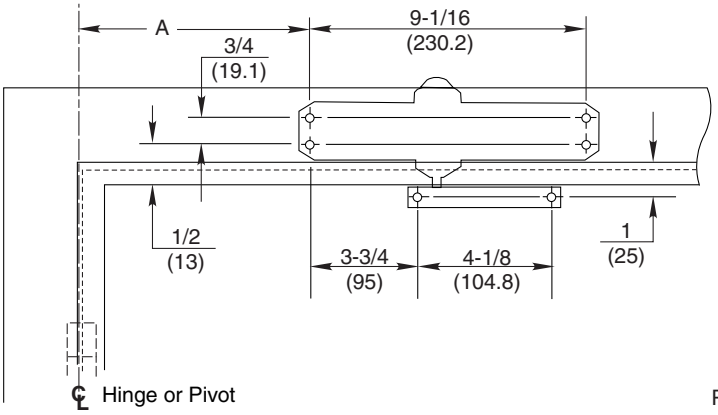
Template



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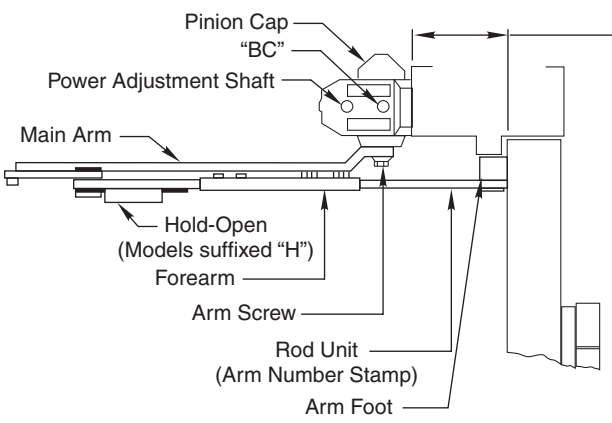
90°	95°	8-3/8	213
95°	100°	7-3/4	197
100°	105°	7-3/8	187
105°	110°	6-3/4	171
110°	115°	6-1/2	165

Installation Sequence

- This page for installation on aluminum doors and frames only.
- Select door opening angle using template above. Mark 4 holes on frame face for closer and 2 holes on door for arm foot.
- Prepare door and frame for fasteners. See “Preparation for Fasteners” at bottom of Page 2.
- **1601 or 1601BF Models Only. Set approximate closing power using “Power Adjustment Chart” below.**
- Install closer to frame face with 2 regulating valves toward hinge edge of door.
- Remove rod unit from arm assembly.
- Install main arm onto closer pinion shaft, indexing main arm mark “S” with pinion flat as shown at right. Fasten with arm screw.
- Mount arm foot to door. Position foot with rod on bottom and spring toward hinge.
- Reassemble arm. Adjust forearm perpendicular (at a 90° angle) to the door. Install and tighten rod screws.
- Screw pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.
- Adjust closer.

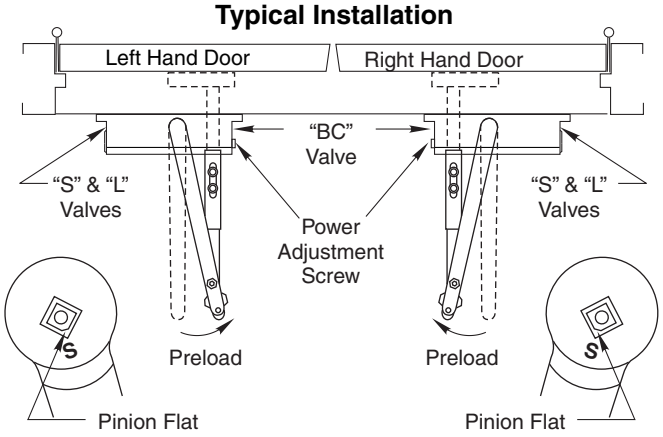


Reveal inches/(mm)	Arm Number Stamp
1/2 to 2 (13 to 50)	J6200-*
2-1/8 to 3-1/4 (55 to 83)	J6100-*
3-3/8 to 4-1/4 (85 to 108)	J6400-*
4-3/8 to 5-3/8 (111 to 137)	J6500-*1
5-1/2 to 6-3/8 (140 to 162)	J6500-*2
6-1/2 to 7-3/8 (165 to 187)	J6500-*3

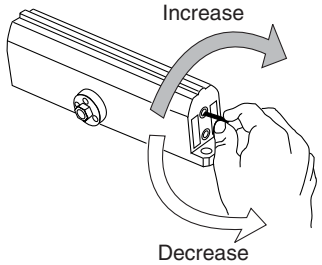
* “4” Non-Holder Models
“7” Hold-Open Models

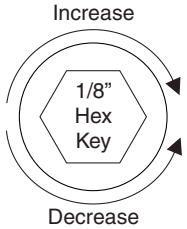
Side Elevation

Typical Installation



Power Adjustment Chart							
DOOR	TOP JAMB INSTALLATION	*	MAXIMUM DOOR SIZE				
			34” (0.85 m)	36” (0.9 m)	40” (1 m)	44” (1.1 m)	48” (1.2 m)
INT	**1601BF**	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	1	1	2	3	3
EXT			5	6	NOT RECOMMENDED USE 1601		
INT	**1601**		2	4	6	9	11
EXT			3	5	7	10	13
*18 -360° TURNS MAXIMUM AVAILABLE							





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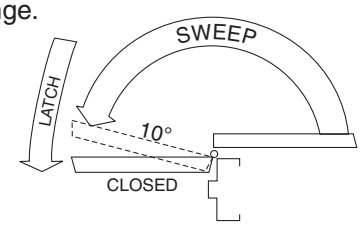
Unit Adjustment

Closing Speed Control

Figure 1

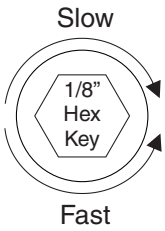
- Valve “S” controls Sweep Range.
- Valve “L” controls Latch Range.

Attention: Adjust Closing Speed Time to between 4 to 7 seconds from 90°. Use of the door by handicapped, elderly or small children may require greater closing time. ADA code requires that door take at least 3 seconds to close from 70° of door opening to within 3” (75mm) of the closed position.

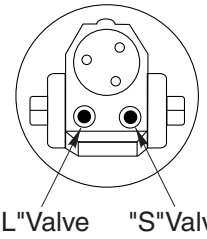


Closing Cycle

NOTE: By law the Americans with Disabilities Act (ADA) may require that door closer installation comply with accessability guidelines.



CAUTION:
DO NOT BACK VALVES OUT OF CLOSER OR A LEAK WILL RESULT

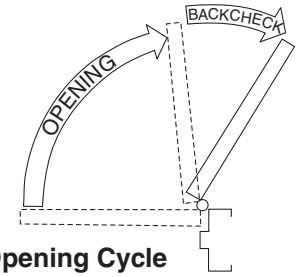


Opening Door Control

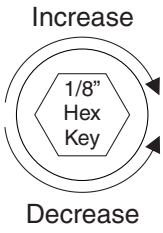
Figure 2

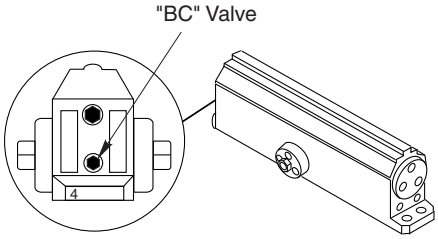
- Backcheck (”BC”) valve controls the hydraulic resistance to door opening in backcheck range. NEVER close this valve completely – it is not to provide a positive stop.

CAUTION:
DO NOT BACK VALVES OUT OF CLOSER OR A LEAK WILL RESULT



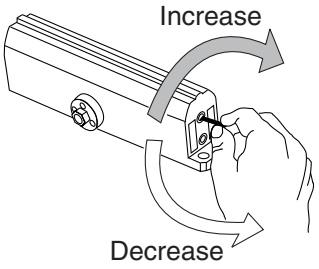
Opening Cycle

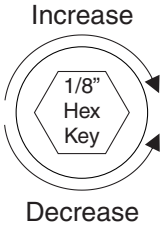




Closing Power Control

Figure 3





Adjust as required. Product is shipped at mid range power setting.

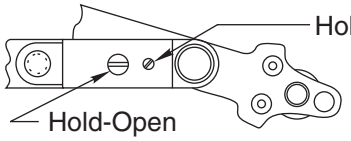
Power Adjustment Chart

DOOR	PARALLEL ARM INSTALLATION	*	MAXIMUM DOOR SIZE 34” (0.85 m)	36” (0.9 m)	40” (1 m)	44” (1.1 m)	48” (1.2 m)
INT	J1601BF	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	2	2	3	4	5
EXT	J1601BF	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	8	9	12	NOT RECOMMENDED USE J1601	
INT	J1601	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	3	5	7	10	13
EXT	J1601	FULL 360° TURNS OF POWER ADJUSTMENT SHAFT	5	7	10	14	16

*18 -360° TURNS MAXIMUM AVAILABLE

Door Holder Option

Figure 4



Turn 90°
To “Off”

Press & Turn

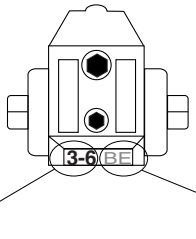
To Decrease Force

To Increase Force

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.

To identify your model:

2=1602BC
3=1603BC
4=1604BC
5=1605BC
6=1606BC
3 - 6=1601
1 - 4=1601BF



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