



Installation Instructions

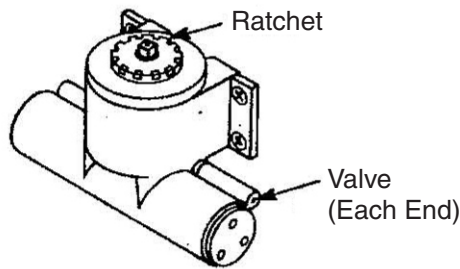
Unitrol® Parallel Arm Door Controls Series UNI-78B/F Series UNI-78B/FH Non-Hold Open or Hold Open

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- Use these instructions for installing all models of these series on 1-3/4" (45mm) doors hung on 4-1/2" (114mm) wide hinges or 3/4" (19mm) offset pivots.
- 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 angle desired.
- Unitrol® parallel arms are supplied in one of three lengths, according to door width specified on order. To verify that the ARM you have is CORRECT FOR THE DOOR WIDTH, check the number stamped on the arm against the chart below.

Door Width	Non-Holder Arm	Hold Open Arm
28" - 32" (0.70 - 0.80 m)	6130-17	6130-7
33" - 41" (0.85 - 1.00 m)	6130-18	6130-8
42" - 48" (1.05 - 1.20 m)	6130-19	6130-9

Components



Closer Assembly

Deep Reveal Option

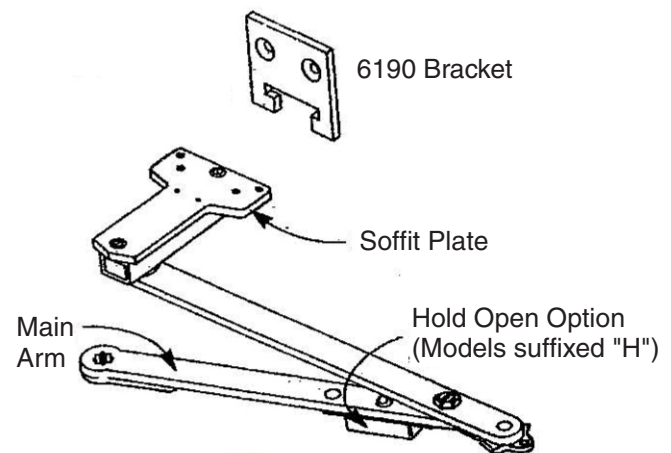
Spacer Block
Clamp
2 Clamp Screws

No. 6191 Reinforcing Kit

Flush Partition Option

4 Bracket Screws

No. 2019L Bracket



Unitrol® Parallel Arm Assembly



1/4-20 Sex Nut and Bolt

4 each, to mount closer or drop plate to door



1-4-20 Machine Screw



#14 Type "A" Screw

6 each, to mount soffit plate and 6190 bracket

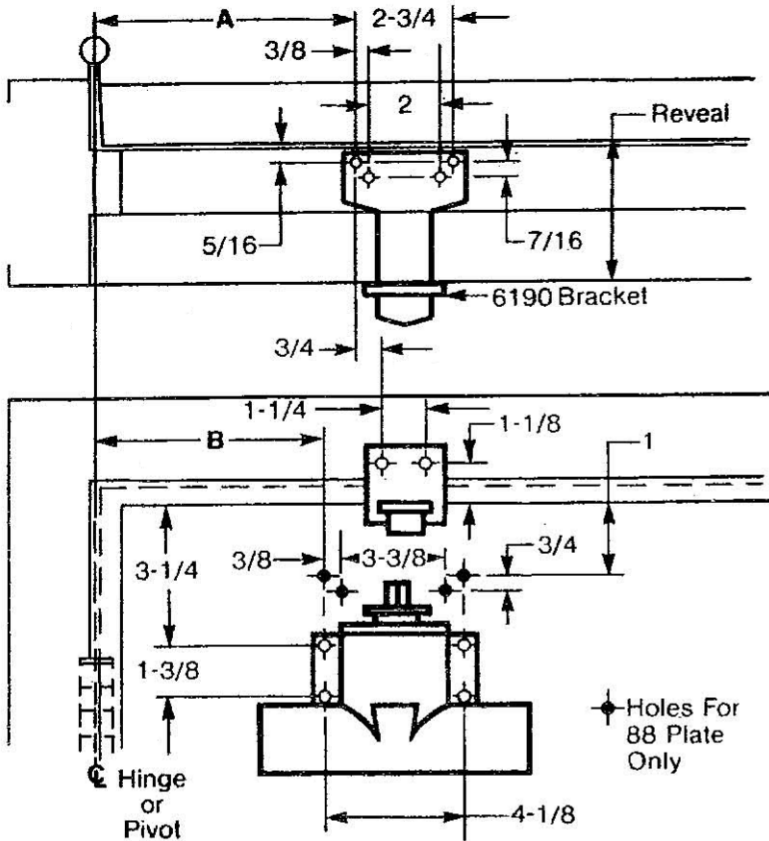
Frame Template for 1-7/8" to 4-5/8" Reveals
Door Template Typical for All Installations



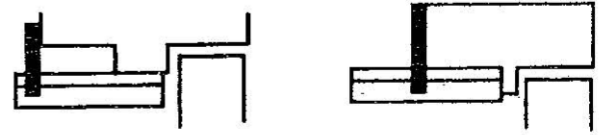
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Template Information

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

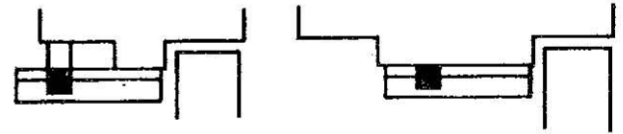


1-7/8" to 4-5/8" Frame Reveals
 Uses 6190 Bracket



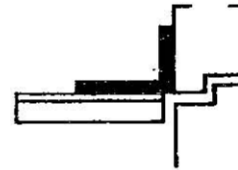
Frame Template at left

Frame Reveals Over 4-5/8"
 Uses 6191 Clamp Kit



Frame Template: Page 3

Flush Partitions
 Uses 2019L Bracket



Frame Template: Page 3

DIMENSIONS FOR DOORS 28" TO 32" WIDE			
Opening		Dimension A	Dimension B
Hold-Open	Stop		
85°	90°	10-3/8	11-5/8
90°	95°	9-3/4	11
95°	100°	9-3/8	10-1/2
100°	105°	8-3/4	10
105°	110°	8-1/4	9-1/2
110°	115°	7-7/8	9-1/8

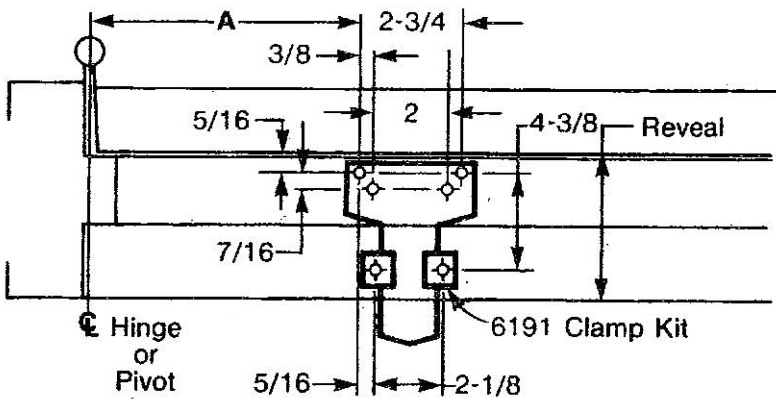
DIMENSIONS FOR DOORS 33" TO 41" WIDE			
Opening		Dimension A	Dimension B
Hold-Open	Stop		
85°	90°	12-7/8	14
90°	95°	12-1/4	13-3/8
95°	100°	11-5/8	12-3/4
100°	105°	11	12-1/8
105°	110°	10-1/2	11-5/8
110°	115°	10-1/8	11-1/4

DIMENSIONS FOR DOORS 42" TO 48" WIDE			
Opening		Dimension A	Dimension B
Hold-Open	Stop		
85°	90°	15-3/8	16-3/8
90°	95°	14-1/2	15-1/2
95°	100°	13-3/4	14-3/4
100°	105°	13-1/8	14-1/8
105°	110°	12-5/8	13-5/8
110°	115°	12-1/8	13-1/8

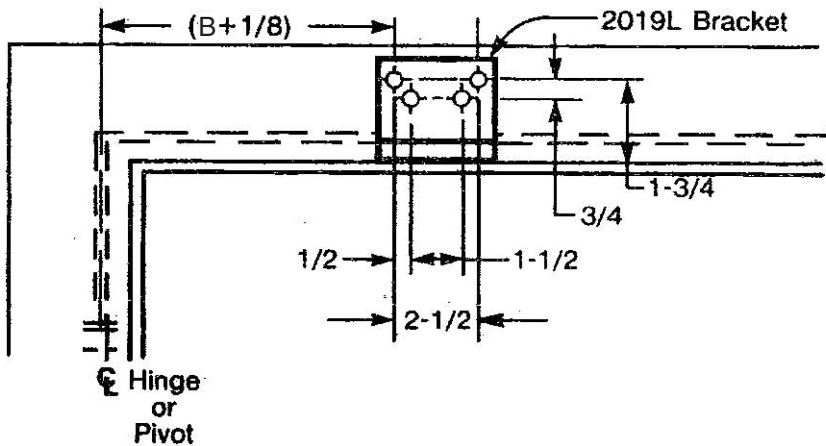
- Dimension Charts on this page are typical for all templates.
- Do not scale drawing.
- Left hand door shown.
- Dimensions are in inches.
- Metric conversion chart below.
- Fastener specifications on Page 3

inches	mm	inches	mm	inches	mm	inches	mm
5/16	8.0	2	50.8	9-3/4	248	12-7/8	327
3/8	9.5	2-3/4	69.9	10	254	13-1/8	333
7/16	11.1	3-1/4	83	10-1/8	257	13-3/8	340
1/2	12.7	3-3/8	85.7	10-3/8	263	13-5/8	346
3/4	19.1	4-1/8	104.8	10-1/2	267	13-3/4	349
1	25	4-5/8	117	11	279	14	356
1-1/8	29	7-7/8	200	11-1/4	288	14-1/8	359
1-1/4	31.8	8-1/4	209	11-5/8	295	14-1/2	368
1-3/8	34.9	8-3/4	222	12-1/8	308	14-3/4	375
1-1/2	38.1	9-1/8	231	12-1/4	311	15-3/8	391
1-5/8	41	9-3/8	238	12-5/8	321	15-1/2	394
1-7/8	48	9-1/2	241	12-3/4	324	16-3/8	416

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

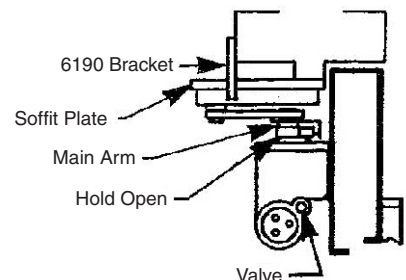
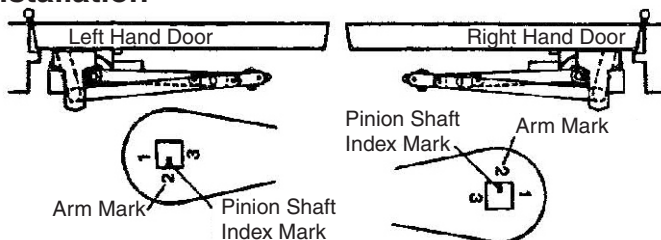


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1. **Read Front Page.**
 Installation ground rules and components identification are on this page.
2. **Match closer to door hand.**
 See "Typical Installation" figure below and verify that you have a closer of the same hand as the door (ratchet should wind spring clockwise for LH, counterclockwise for RH closers). To change hand of closer, see Page 4.
3. **Match hardware to opening.**
 Follow "Template Information" on Page 2.
4. **Mark mounting holes location.**
 Use dimensions for hold open or door stop angle desired. Mark position for 4 holes on door for closer (or drop plate) and 6 holes on frame for soffit plate (or 4 for 2019L angle bracket).
5. **Prepare holes for fasteners.** See chart below.
6. **Mount closer to door.**
 Drop plate first, if used.
7. **Install arm on pinion top.**
 Align main arm number "2" with index mark on pinion shaft. Fasten with arm screw. See "Typical Installation" figure below. Do not engage dog to ratchet.
8. **Mount arm to frame.**
 Fasten soffit plate (or angle bracket if flush partition) to frame. Mount 6190 bracket or 6191 clamps to hold soffit plate flat.
9. **Set closing tension.**
 Wind spring 3 to 10 notches from rest position (wrench supplied) and engage arm dog in ratchet notch to hold spring preload. Spring winds clockwise for left hand doors, counterclockwise for right hand doors.
10. **Adjust closer.**
 See "Unit Adjustment" on Page 4.

Fastener	Frame	Door	Drill
1/4-20 machine screw	metal	none	#7 (.201" dia.) or 5.10mm. drill ... 1/4-20 tap
#14 type "A" sheet metal screw	wood	none	3/16" (4.30mm)
SNB	none	hollow metal	9/32" (7.00 mm.) thru ... 3/8" (9.50mm.) door face opposite to closer
		aluminum or wood	3/8" (9.5mm.) thru

Typical Installation



Unit Adjustment

Power Adjustment

The closer clock-type spring is wound by turning the ratchet with the spanner wrench provided. The dog under the closer main arm engages into a ratchet notch to automatically wind the spring whenever the door is open. For proper closer action the ratchet has to be driven from 3 to 10 notches from the rest position to preload the spring before engaging the arm dog. How much (between 3 and 10 ratchet notches) should the spring be preloaded depends on the door closing power desired. Do not preload spring less than 3 ratchet notches, nor more than 10.

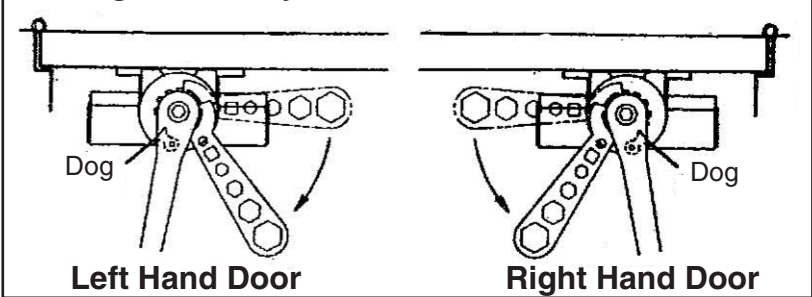
All Valves adjustable by 1/8" (3.18 min) hex key (supplied).

Backcheck controlled by valve on closer and closest to the hinge edge of the door. (Never close BC valve completely). Should backcheck be found extremely early in the opening cycle, rotate the valve 1/2 turn (180°) to correct backcheck position.

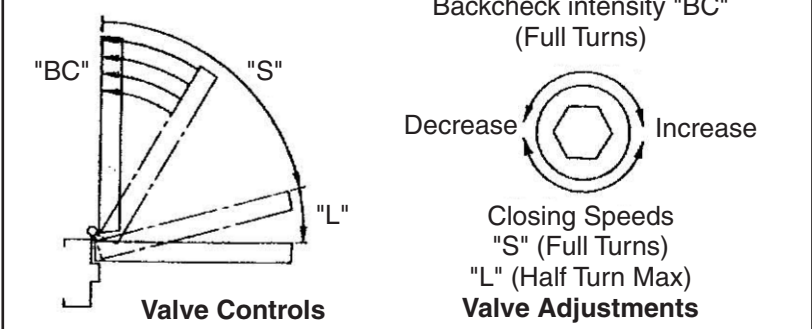
Closing Speed controlled by valve on closer end closest to the lock edge of the door. Full turns control the sweep speed. After sweep speed is set, up to 1/2 turn (180°) in either direction adjusts the latch speed.

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.

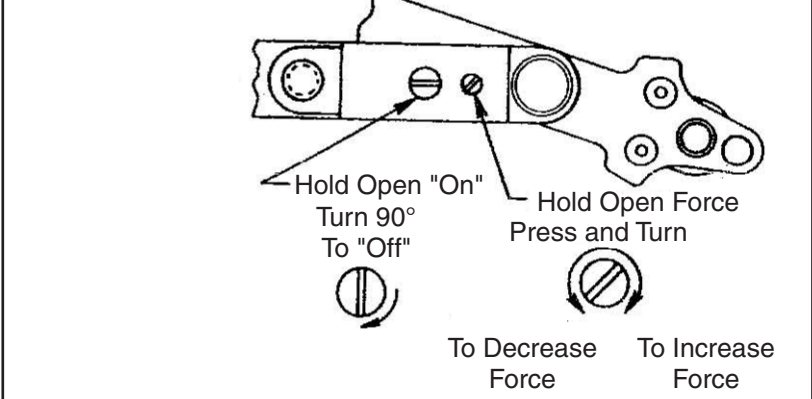
Closing Power Adjustment



Hydraulic Adjustment

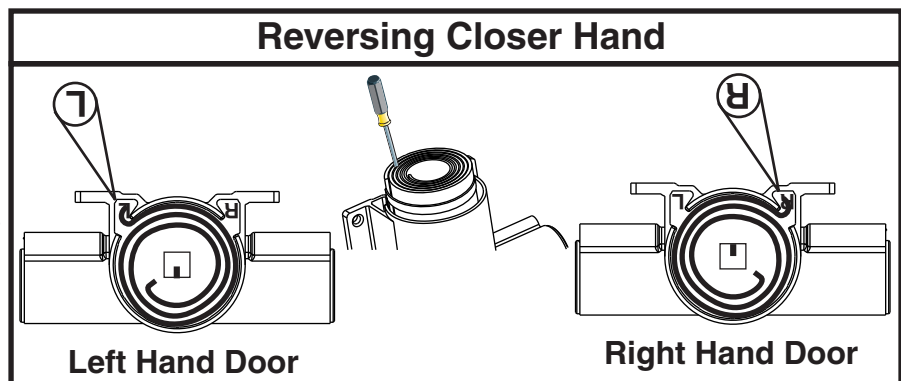


Hold Open Controls



To Reverse Closer Hand

1. Remove ratchet and top cover.
2. Lift out spring using screwdriver wedged between coils.
3. Reverse spring and reassemble to desired hand, as illustrated.
4. Rotate shaft 180°, as illustrated.
5. Replace top cover and ratchet so that spring inner hook engages into ratchet slot.



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80-9349-1040-020 (07-14)