



ASSA ABLOY

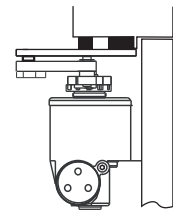
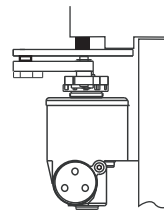
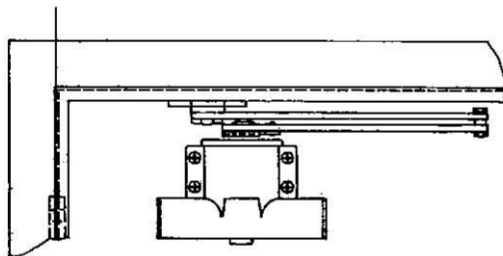
Series 78-B/F-PRA  
Series 78-B/F-PRHA  
Non-Hold Open or Hold Open

With 2019S, 2019L, 6890, or 6891 Soffit Plate Accessories  
No. 88 Drop Plate Optional

- Read these instructions before proceeding with the installation.
- Make sure that the door opens the full angle desired and latches without any binding action or interference.
- For special applications, a separate preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustment only.
- Select the type of installation from the following illustrations:

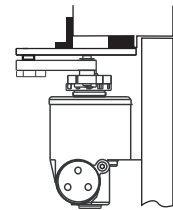
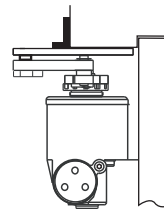
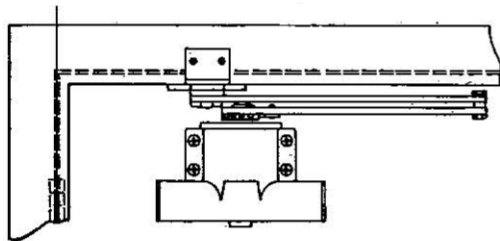
**Standard Frame Mount - See Page 3**

With 2019S Block or 2019S and 6891 Blocks



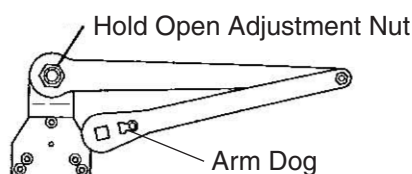
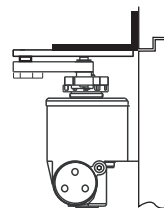
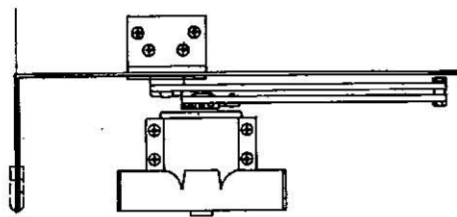
**Narrow Frame Mount - See Page 4**

With 6890 Bracket or 6890 Bracket and 6891 Block



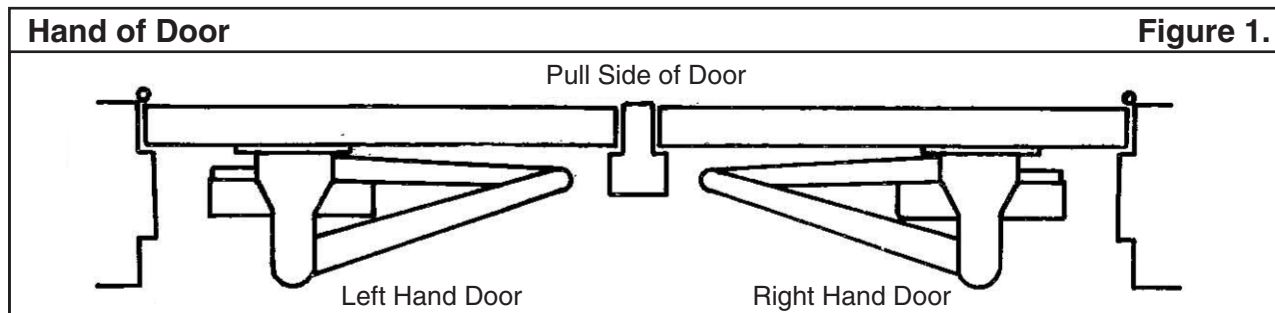
**Flush Frame Mount - See Page 5**

With 2019L Bracket



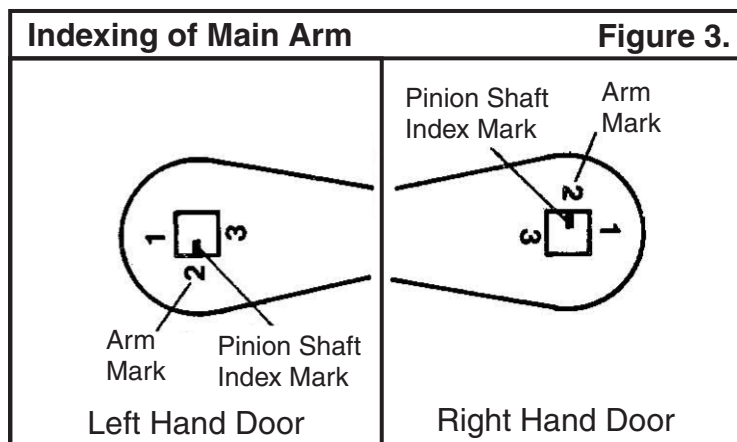
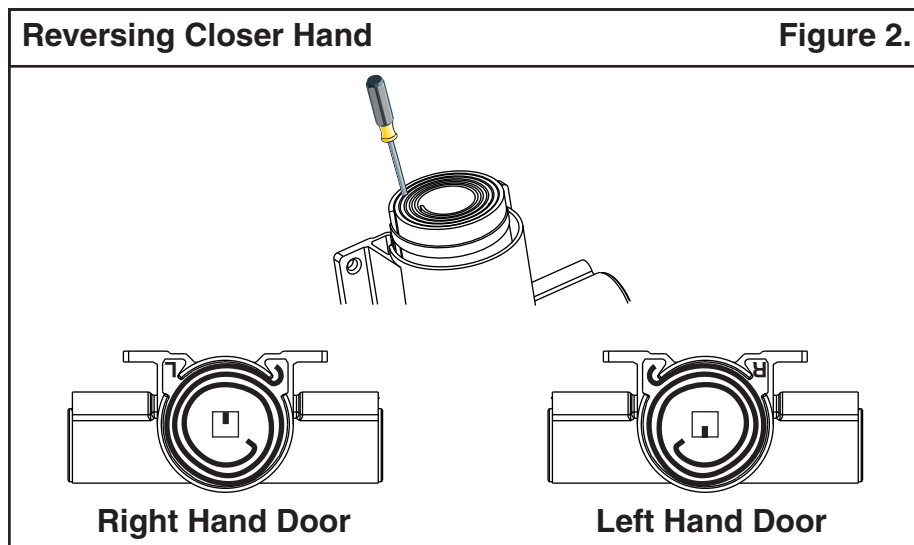
**Hold Open Arm**

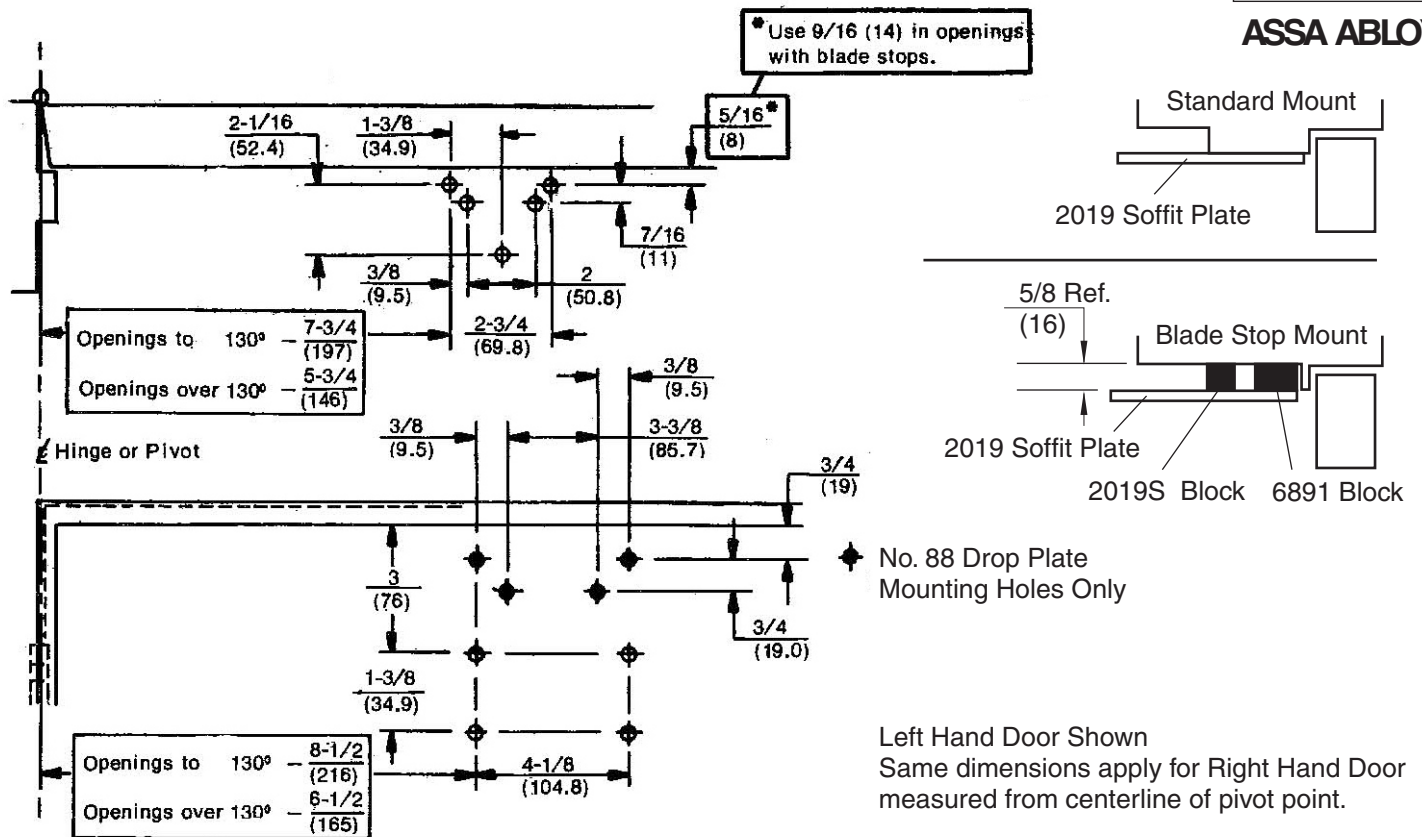
- Check hand of door. Hand of door closer must be the same as hand of door. Door closer is handed but can be easily reversed. SEE BELOW FOR INSTRUCTIONS FOR REVERSING HAND OF CLOSER.
- Hold open arms are handed and cannot be reversed.



### To Reverse Closer Hand

1. Remove main arm screw, arm assembly, ratchet, and top cover.
2. Lift out spring using screwdriver wedged between coils.
3. Reverse spring and re-assemble to required hand. (See figure 2)
4. Rotate shaft to required hand. (See figure 2)
5. Replace cover and insert ratchet, lining up slot with inner hook on spring.





Left Hand Door Shown  
Same dimensions apply for Right Hand Door measured from centerline of pivot point.

Dimensions are in inches (mm).

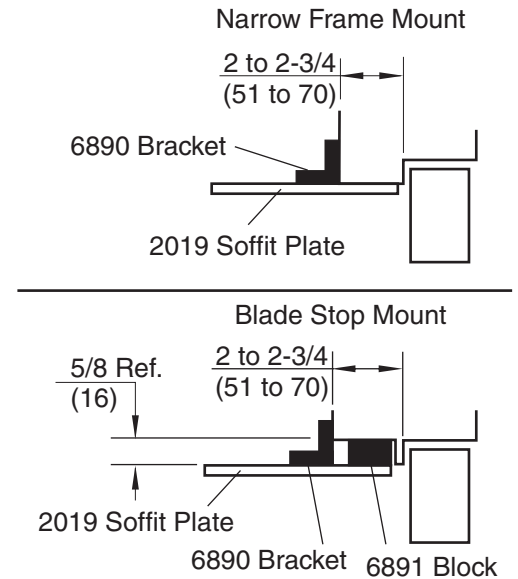
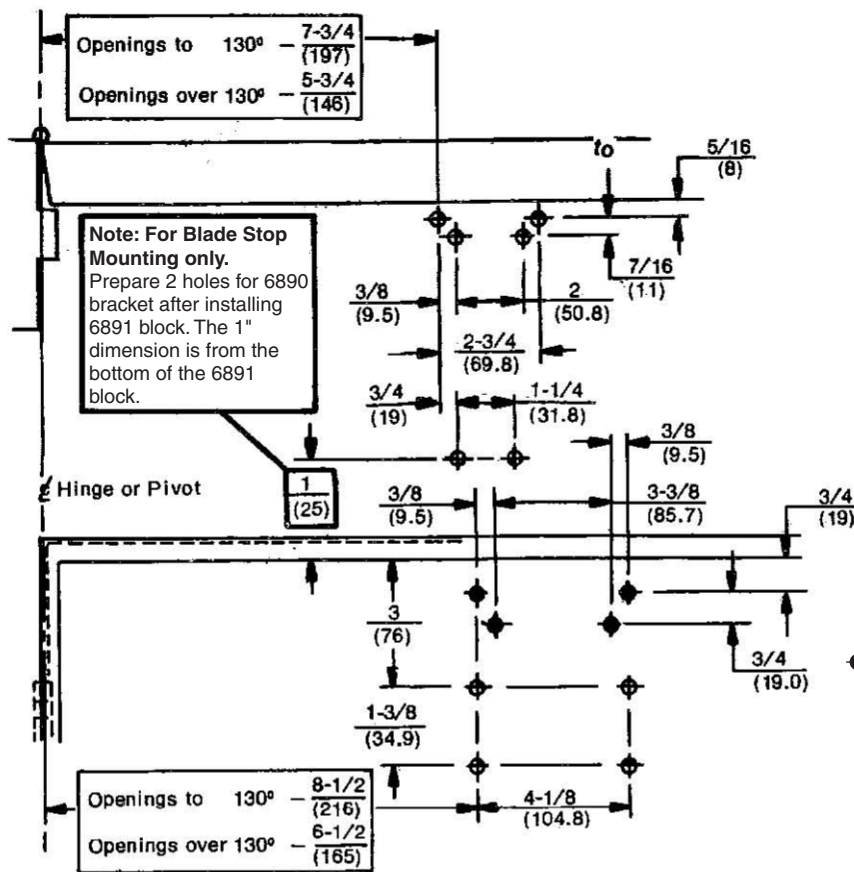
Do not scale drawing

Preparation for Fasteners			
Fasteners	Application	Door or Frame	Drill Sizes
Sex-nuts and bolts	Closer, drop plate	Hollow Metal	9/32" (7.00mm.) through 3/8" (9.50mm.) door-face opposite to closer
		Aluminum or Wood	3/8" (9.50mm.) through
#14 x 1-1/4" (32mm.) type "A" S.M. screws	Soffit plate-6190 bracket	Wood	3/16" (4.30mm.)
		Aluminum	7/32" (5.50mm.)
1/4-20 machine screws		Metal	drill: #7 (.201") tap: 1/4-20

### Installation Sequence

- From the template above, select the angle of opening desired. Locate and mark for 4 holes on the door for the closer body or No. 88 drop plate, if used. Locate and mark for 5 holes on frame header for mounting soffit plate.
- Prepare the door and frame for fasteners (see chart above).
- Install closer body to door. If drop plate is used, mount it first, then fasten the closer body to the drop plate.
- Following the main arm indexing illustrations in figure 3 on page 2, place main arm onto the closer pinion shaft. Install and tighten main arm screw with a 1/2" wrench. NOTE: Do not engage arm dog into closer ratchet at this time.
- Open door and attach soffit plate to frame header. NOTE: Depending on type of application, use shim blocks as required.

See last page for instructions for loading closer spring and closer adjustments.



◆ No. 88 Drop Plate Mounting Holes Only  
 Left Hand Door Shown  
 Same dimensions apply for Right Hand Door measured from centerline of pivot point.

Dimensions are in inches (mm).

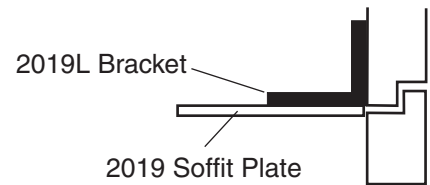
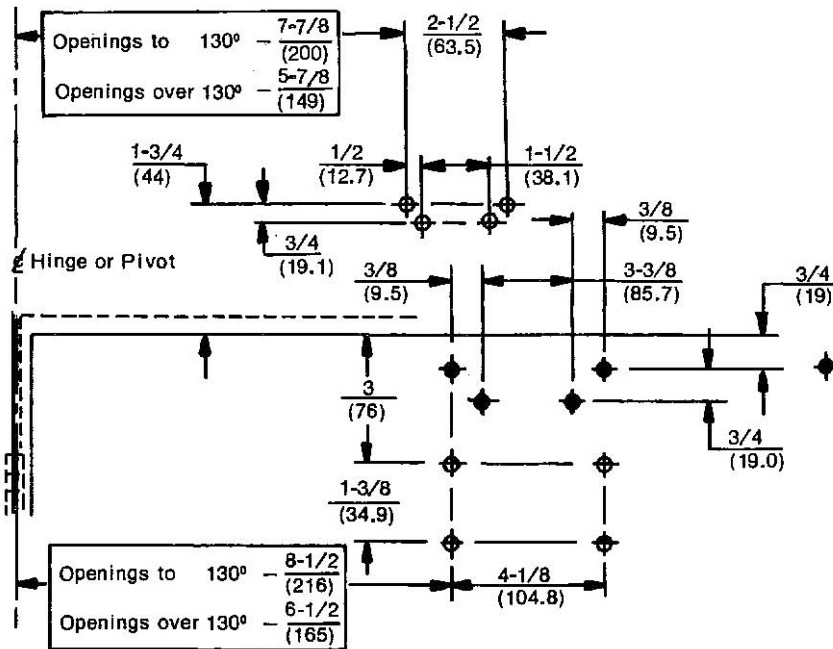
Do not scale drawing

Preparation for Fasteners			
Fasteners	Application	Door or Frame	Drill Sizes
Sex-nuts and bolts	Closer, drop plate	Hollow Metal	9/32" (7.00mm.) through 3/8" (9.50mm.) door-face opposite to closer
		Aluminum or Wood	3/8" (9.50mm.) through
#14 x 1-1/4" (32mm.) type "A" S.M. screws	Soffit plate 6190 bracket	Wood	3/16" (4.30mm.)
		Aluminum	7/32" (5.50mm.)
1/4-20 machine screws		Metal	drill: #7 (.201") tap: 1/4-20

Installation Sequence

- From the template above, select the angle of opening desired. Locate and mark for 4 holes on the door for the closer body or No. 88 drop plate, if used. Locate and mark for 6 holes on frame face and header for arm mounting. Measurements on header taken from the frame face.
- Prepare the door and frame for fasteners (see chart above).
- Install closer body to door. If drop plate is used, mount it first, then fasten the closer body to the drop plate.
- Following the main arm indexing illustrations in figure 3 on page 2, place main arm onto the closer pinion shaft. Install and tighten main arm screw with a 1/2" wrench. NOTE: Do not engage arm dog into closer ratchet at this time.
- Open door and attach soffit plate and bracket to frame header. NOTE: Depending on type of application, use shim blocks as required.

See last page for instructions for loading closer spring and closer adjustments.



No. 88 Drop Plate Mounting Holes Only

Left Hand Door Shown  
Same dimensions apply for Right Hand Door measured from centerline of pivot point.

Dimensions are in inches (mm).

Do not scale drawing

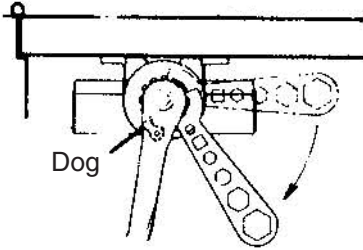
Preparation for Fasteners			
Fasteners	Application	Door or Frame	Drill Sizes
Sex-nuts and bolts	Closer, drop plate	Hollow Metal	9/32" (7.00mm.) through 3/8" (9.50mm.) door-face opposite to closer
		Aluminum or Wood	3/8" (9.50mm.) through
#14 x 1-1/4" (32mm.) type "A" S.M. screws	Soffit plate 6190 bracket	Wood	3/16" (4.30mm.)
		Aluminum	7/32" (5.50mm.)
		Metal	drill: #7 (.201") tap: 1/4-20
1/4-20 machine screws			

**Installation Sequence**

- From the template above, select the angle of opening desired. Locate and mark for 4 holes on the door for the closer body or No. 88 drop plate, if used. Locate and mark for 4 holes on frame face for "L" bracket.
- Prepare the door and frame for fasteners (see chart above).
- Install closer body to door. If drop plate is used, mount it first, then fasten the closer body to the drop plate.
- Following the main arm indexing illustrations in figure 3 on page 2, place main arm onto the closer pinion shaft. Install and tighten main arm screw with a 1/2" wrench. NOTE: Do not engage arm dog into closer ratchet at this time.
- Open door and attach "L" bracket to frame header. Fasten soffit plate to "L" bracket.

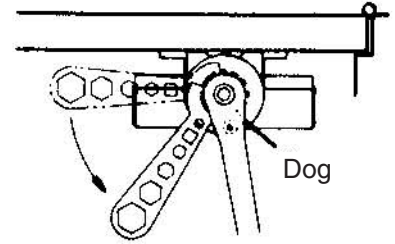
See last page for instructions for loading closer spring and closer adjustments.

6. Closing Tension - Place wrench (packed with door closer) on ratchet as shown. Swing wrench toward hinge to wind spring between 3 to 10 notches, engage arm dog in ratchet, increase or decrease spring power to suit conditions.



Left Hand Door

Caution - Underwound spring (less than 3 notches) or overwound spring (more than 10 notches) will cause spring breakage.



Right Hand Door

## 7. Hold Open Adjustment -

Open door to angle of hold open desired and tighten holder adjustment nut with wrench supplied.

## Closer Adjustment -

**Closing Speed** ... Controlled by the regulating valve on the end of the closer **farthest** from the hinge.

**Sweep Speed** ... Controls the door's speed in the sweep speed range, see illustration. Full 360° **clockwise** turns **decrease** the sweep speed. Full 360° **counter-clockwise** turns **increase** the sweep speed.

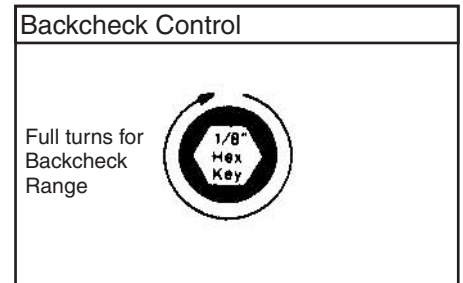
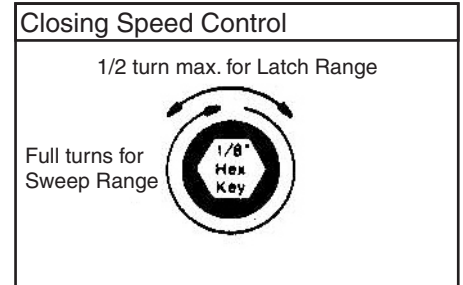
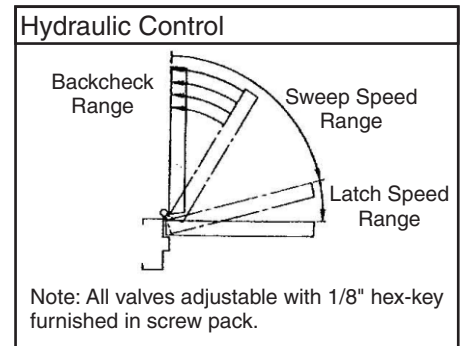
**Latch Speed** ... Controls the door's speed in the latch speed range, see illustration. A partial turn, up to a maximum of 1/2 turn (180°) in either direction determines the latch speed.


**Backcheck** ... Controlled by the regulating valve on the end of the closer **closest** from the hinge.

Backcheck cushions or slows the door opening speed near the end of the opening cycle. Full 360° **clockwise** turns **increases** resistance to opening. Full 360° **counter-clockwise** turns **decreases** resistance to opening.

**Note:** If backcheck is encountered extremely early in the opening cycle, rotate the valve 1/2 turn (180°) to eliminate early opening resistance.

**Caution** ... To avoid damage to closer, never fully close the backcheck regulating valve.





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