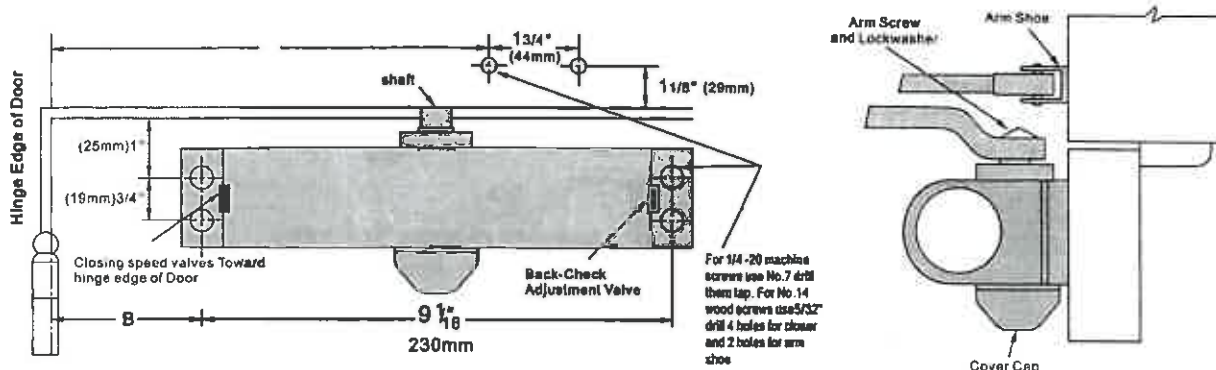


SURFACE DOOR CLOSER

Installation Instructions for the 500 Series Closer

STANDARD INSTALLATION CLOSER MOUNTED ON DOOR ON PULL SIDE

THIS TEMPLATE COVERS REGULAR ARM INSTALLATIONS TO 180° OPENINGS.



RIGHT HAND DOOR ILLUSTRATED
Same dimensions apply for left Hand Door measured from the hinge edge.

FOR OPENING TO 120°		FOR OPENING TO 120° - 180°	
B	C	B	C
5 1/2" 140mm	12" 305mm	4 1/16" 103mm	10" 254mm

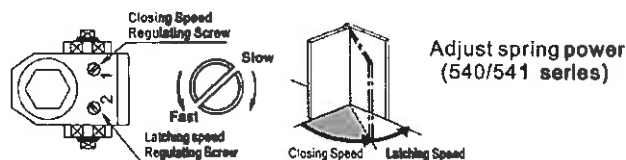
INSTALLATION INSTRUCTIONS

- Select degree of opening and use dimensions shown in above template to mark four holes on door for closer and two holes on frame for arm shoe.
- Drill pilot holes in door and frame for #14 wood screws or drill and lap for 1/4-20 machine screws.
- Mount closer on door WITH CLOSING SPEED VALVES TOWARD HINGE EDGE.
- Place main arm on shaft on top of closer at proper index mark as illustrated. FOR RIGHT HAND DOOR No.4 (illustration "A"). FOR LEFT HAND DOOR No.1 (illustration "B"). Tighten arm screw with lockwasher securely.
- Attach the arm shoe of the forearm to the frame.
- Adjust length of forearm so when it is attached to main arm it will be at a right angle (90°) to door when door is closed and assemble at elbow then tighten locknut.
- Place cover cap over shaft at bottom of closer and turn slightly to secure.

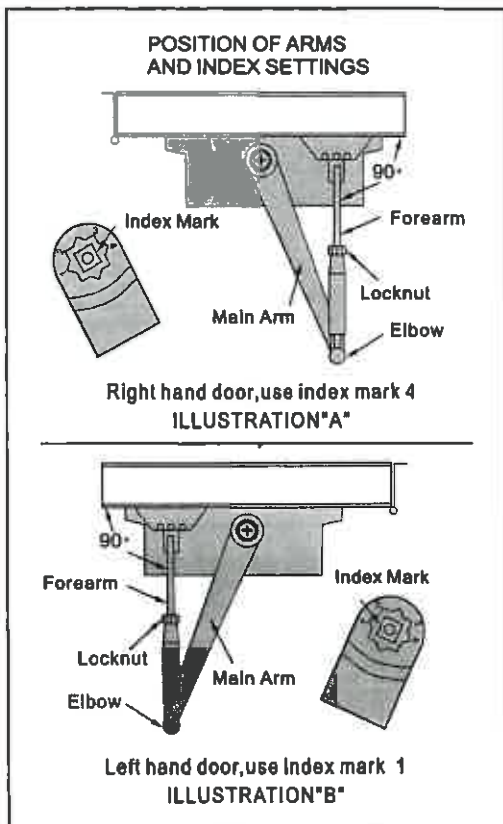
ADJUSTMENT INSTRUCTIONS

POWER - Closing power has been set at factory for average conditions. If more closing power is required, move forearm from center hole in arm shoe to hole closest main arm. If less closing power is required, move forearm to hole farthest from main arm.

SPEED ADJUSTMENTS -

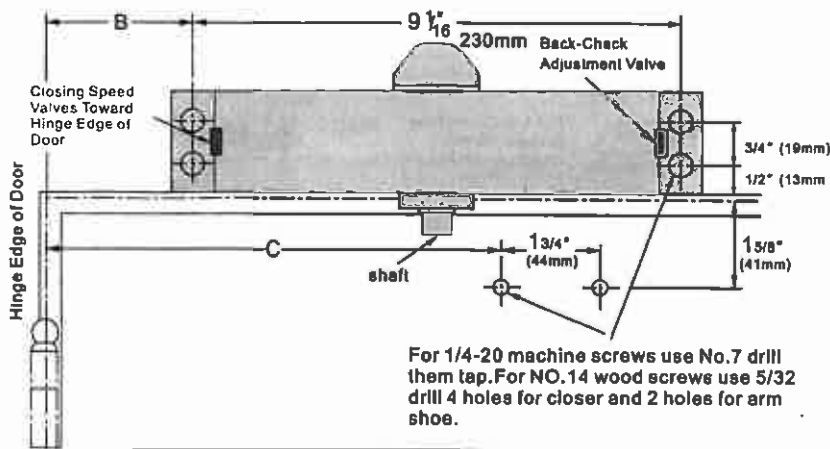


BACK - CHECK ADJUSTMENT - (with B.C.) - is controlled by the adjustment valve (marked BC on the closer). BACK-CHECK is now set for a soft action. To INCREASE Back-check action turn valve CLOCKWISE. To DECREASE, or to TURN OFF Back-check action turn valve COUNTER CLOCKWISE.



TOP JAMB INSTALLATION CLOSER MOUNTED ON TOP JAMB ON PUSH SIDE OF DOOR

THIS TEMPLATE COVERS REGULAR ARM INSTALLATIONS TO 180° OPENINGS.
Reveals of 23/4" to 6" (70mm-152mm) require Long Top Jamb Forearms.



FOR OPENING TO 120°		FOR OPENING TO 120° -180°	
B	C	B	C
55/8" 143mm	113/4" 298mm	37/16" 87mm	83/4" 222mm

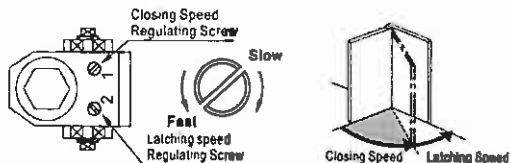
INSTALLATION INSTRUCTIONS

1. Select degree of opening and use dimensions shown in above template to mark four holes on frame for closer and two holes on door for arm shoe.
2. Drill pilot holes in door and frame for #14 wood screws or drill and tap for 1/4-20 machine screws.
3. Mount closer on frame WITH CLOSING SPEED VALVES TOWARD HINGE EDGE.
4. Place main arm on shaft on bottom of closer at proper index mark as illustrated. FOR LEFT HAND DOOR No.1 (illustration "A"). FOR RIGHT HAND DOOR No.4 (illustration "B"). Tighten arm screw with lockwasher securely.
5. Attach the arm shoe of the forearm to the door.
6. Adjust length of forearm so when it is attached to main arm it will be at a right angle (90°) to door when door is closed and assemble at elbow then tighten locknut.
7. Place cover cap over shaft at top of closer and turn slightly to secure.

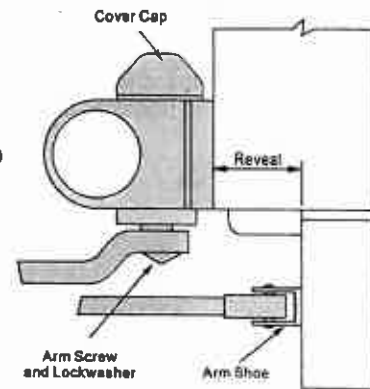
ADJUSTMENT INSTRUCTIONS

POWER - Closing power has been set at factory for average conditions. If more closing power is required, move forearm from center hole in arm shoe to hole closest main arm. If less closing power is required, move forearm to hole farthest from main arm.

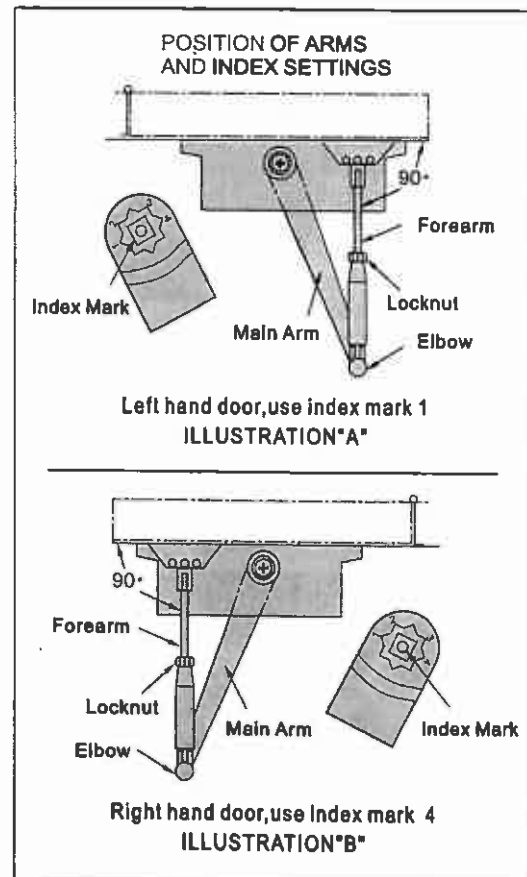
SPEED ADJUSTMENTS-



BACK - CHECK ADJUSTMENT - (with B.C.) - is controlled by the adjustment valve (marked BC on the closer). **BACK-CHECK** is now set for a soft action. To **INCREASE** Back-check action turn valve **CLOCKWISE**. To **DECREASE**, or to **TURN OFF** Back-check action turn valve **COUNTER CLOCKWISE**.

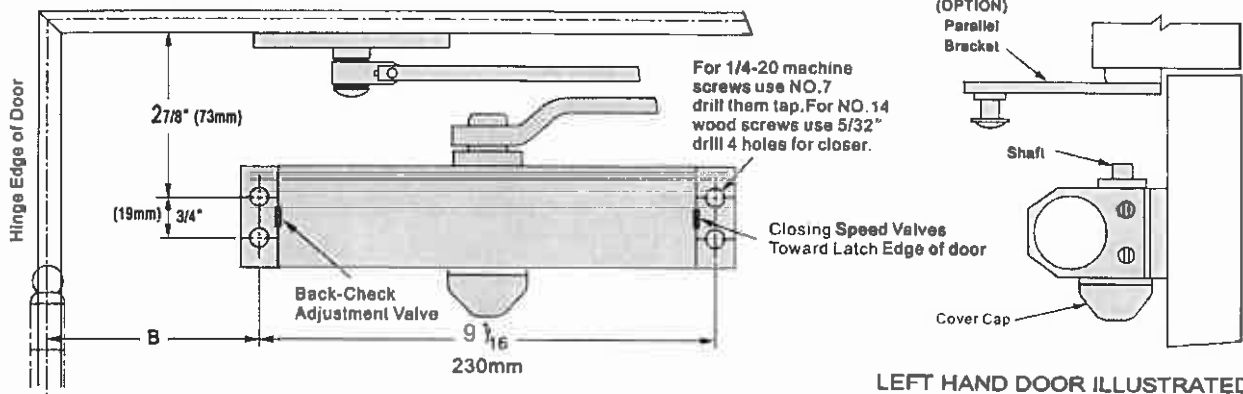


LEFT HAND DOOR ILLUSTRATED
Same dimensions apply for Right Hand Door measured from the hinge edge.



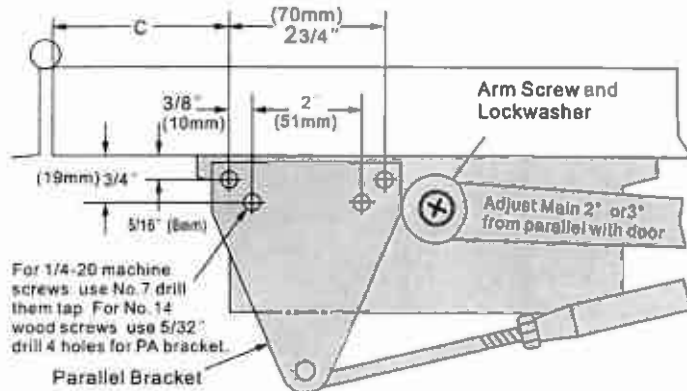
PARALLEL ARM INSTALLATION CLOSER MOUNTED ON DOOR ON PUSH SIDE

THIS TEMPLATE COVERS REGULAR PARALLEL ARM INSTALLATIONS TO 180° OPENINGS.



LEFT HAND DOOR ILLUSTRATED
Some dimensions apply for Right Hand Door measured from the hinge edge.

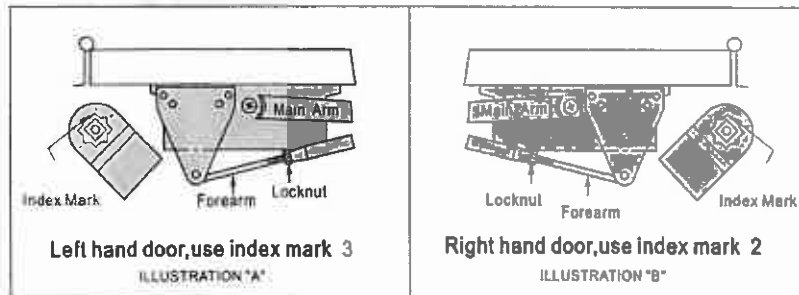
FOR OPENING TO 120°		FOR OPENING TO 120° -180°	
B	C	B	C
7 15/16" 202mm	9 1/16" 230mm	6 9/16" 167mm	7 11/16" 195mm



INSTALLATION INSTRUCTIONS

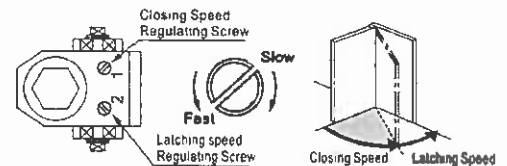
1. Select degree of opening and use dimensions shown in above template to mark four holes on door for closer and four holes on frame for parallel bracket.
2. Drill pilot holes in door and frame for #14 wood screws or drill and tap for 1/4-20 machine screws.
3. Mount closer on door WITH CLOSING SPEED VALVES AWAY FROM HINGE EDGE.
4. Attach parallel bracket to door stop as illustrated.
5. Using a wrench on square shaft on bottom of closer, rotate shaft approximately 45° toward hinge edge of door. Hold and place main arm on shaft on top of closer at proper index mark as illustrated. FOR LEFT HAND DOOR No.3 (illustration "A"). FOR RIGHT HAND DOOR No.2 (illustration "B"). Tighten arm screw with lockwasher securely.
6. Remove the arm shoe from the forearm (arm shoe is not used in this application) and place forearm on parallel bracket stud and tighten screw securely.
7. Adjust length of forearm so when it is attached to main arm, the main arm will be slightly away from parallel with closed door, and assemble at elbow then tighten locknut.
8. Place cover cap over shaft at bottom of closer and turn slightly to secure.

POSITION OF ARMS AND INDEX SETTINGS



ADJUSTMENT INSTRUCTIONS

SPEED ADJUSTMENTS-

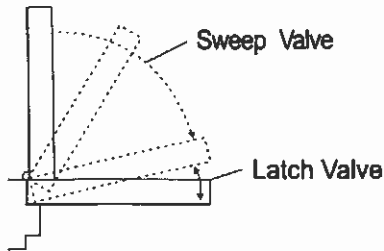


BACK-CHECK ADJUSTMENT - (with B.C.) - is controlled by the adjustment valve (marked BC on the closer). **BACK-CHECK** is now set for a soft action. To **INCREASE** Back-check action turn valve **CLOCKWISE**. To **DECREASE** or to **TURN OFF** Back check action turn valve **COUNTER CLOCKWISE**.

IN-DC-250DV-N

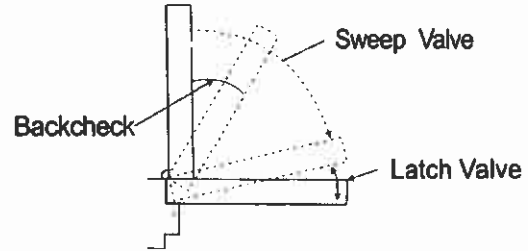
CRITICAL ADJUSTMENTS

Closing Speed Control



Adjust closing speed time to between 4 to 6 seconds from 90°
Barrier free access may require longer closing time.

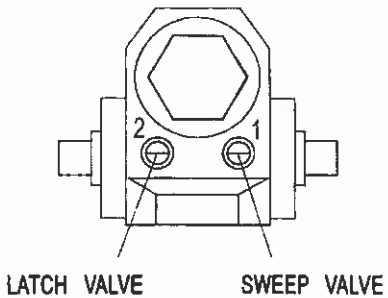
Opening Door Control



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

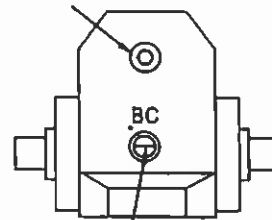
REGULATING DOOR SPEED AND LATCHING SPEED

Turn valves clockwise to slow down or counter clockwise to speed up door movement.



REGULATING SPRING POWER (500 Series closer) REGULATING BACKCHECK POWER

Adjust only if more spring tension is required to positively close and latch door. Turn clockwise. DO NOT exceed the maximum turns. "18-360° turn available from minimum setting."

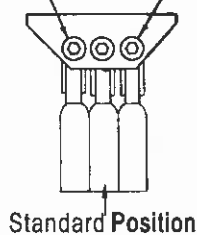


Turn backcheck regulating valve clockwise to increase or counter clockwise to decrease intensity. NEVER close this valve completely.

ADJUSTING FOOT FOR CLOSING POWER

Move foot pivot as illustrated below.

Less Power More Power



caution: Do not back any valves out of closer or a leak will result.