FHC 900 Series Floor Mounted Door Closers

Center Hung & Offset | Installation Instructions

Introduction

FHC 900 Series floor springs consist of a comprehensive range of closer units, accessories and cover plates. **FHC 900 Series** floor springs are shallow depth 23/a" (60 mm) for thin slab constructions and are suitable for center hung and offset hung installations with openings up to 180° (non-handed). Spring power adjustment is a standard feature, sizes 1 thru 6.

FHC 900 Series has micro center adjustment which is particularly suitable for use on glass door installations and has interchangeable spindles and spirit levels to ease on-site installation.

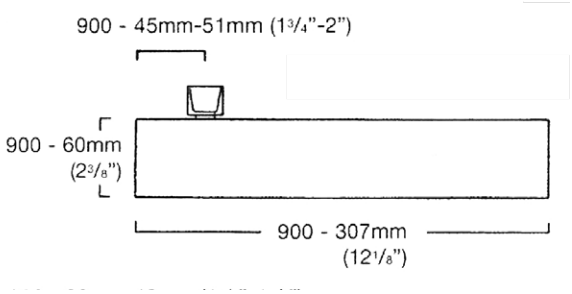
Offset hung accessories are available with either 3/4" (16 mm) or 1" (25 mm) offset and have lateral adjustment ± 3mm.

Centre hung accessories have a heavy duty ball bearing top pivot with lateral adjustment and cover plate.
The accessories are suitable for use with all 900 series floor springs. A full range of extension spindles and accessories for wood, metal and glass doors is available. Consult factory.

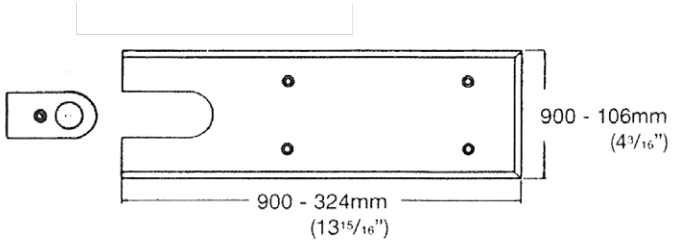
WARNING: Failure to comply with the installation procedures renders the warranty void.

Dimensions

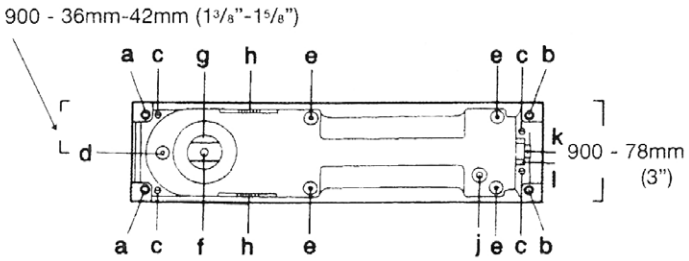
Case Cement



Cover Plates



a	Fixed Clamp Screw (2)
b	Removable Clamp Screws (2)
c	Height Adjustment Screws (4)
d	Spindle Cover Fixing Screw (1)
e	Cover Plate Fixing Screws
f	Spindle Insert Fixing Pin
g	Spindle Insert
h	Center Adjustment Gears
j	Spirit Level
k	Speed Control Valve
l	Power and Backcheck Adjustment Control



WARNING:
Special precautions are required for both center and offset hung installations for doors over 8961 bs (S00 kgs). Consult factory.

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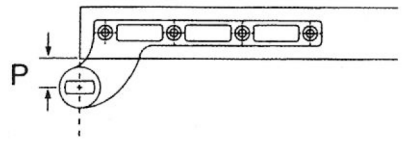
For Offset Hung Doors

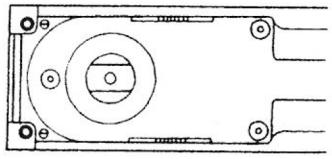
1. Note the position of the pivot center relative to the door. Offset arms and pivots can be 16mm or 25mm offset.



p = 16mm (3/4") or 25mm (1")

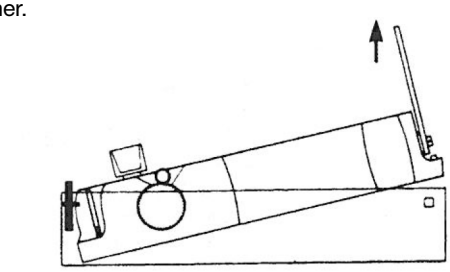
The offset is measured from the face of the door to the pivot center.

2. Note the minimum to maximum spindle position of the mechanism.

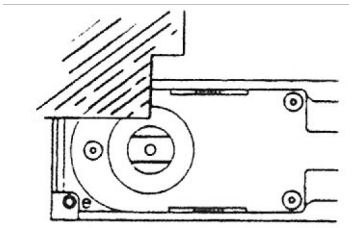


45mm-51mm (1 3/4" - 2") 900 Series

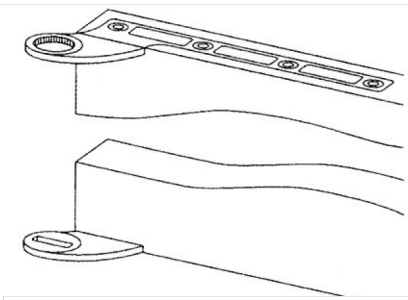
3. Remove the mechanism from the cement case. The screws for the removable clamps (b) should be unscrewed 10 turns each. Tap the clamps down to improve them from the sockets in the cement case. Lift the front of the mechanism using the adjustment spanner.



4. Set the cement case in the floor with the fixed clamps (a) nearest the frame taking care to align the spindle position with the pivot center of the door. Allow a 3mm (1/a") gap behind the door.



5. Mortice into the door on the pivot center line the offset arm and the bearing half of the offset pivot assembly. Mortice into the top jamb the pivot half of the offset pivot assembly.

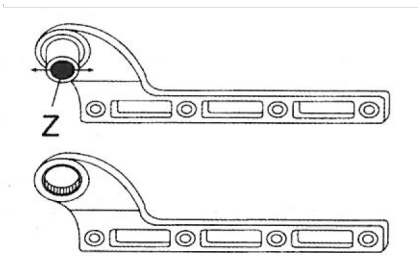


6. Replace the mechanism in the cement case. Ensure the removable clamps are engaged in their sockets and tighten the clamp screws (a and b). Screw on the spindle cover.

7. Position the door over the floor closer and locate the arm over the spindle. Try to keep the door as close as possible to vertical to avoid excessive loading on the spindle.

8. Locate the top pivot and loosely bolt in place.

9. Adjust the vertical gaps to 3mm (1/a") between the door and frame using the top center lateral adjustment and by sliding the mechanism within the cement case. Fully tighten the top center pivot retaining screw (z).



10. Adjust the gap at the top of the door to 3mm (1/a") using the height adjustment screws (c). Ensure the mechanism is level. Longer spindle inserts are available if necessary.

11. Fully tighten each clamp screw (a and b). For 16mm (¼") offset pivots it may be possible to gain access to all four screws. Tighten down the height adjustment screws (c) for a firm fixing.

12. Adjust the speed control (k) to give a smooth closing speed of approximately 5 to 7 seconds closing from 90° open.

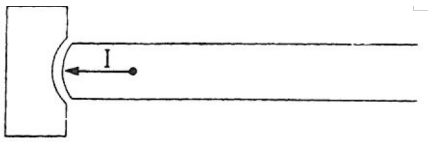
13. If the door is particularly heavy and/or wide, increase the backcheck resistance of the mechanism by increasing the power of the spring (l). The floor closer is set in the factory on power size 3. Keep any power increase to a minimum since the lower the power, the easier it is to use the door. (Turn clockwise to increase or anti-clockwise to decrease the power).

14. Screw on the cover plate for the mechanism. Fix on the arm pivot cover.

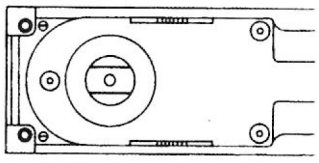
EN 1154 DOOR WEIGHT & RECOMMENDED WIDTHS		
Power Size of Closer	**Maximum Weight of Leaf**	**Width of Test Leaf**
1	20 kg	750 mm
2	40 kg	850 mm
3	60 kg	950 mm
4	80 kg	1100 mm
5	100 kg	1250 mm
6	120 kg	1400 mm

For Center Hung Doors

1. Determine the heel radius of the door (dimension I).

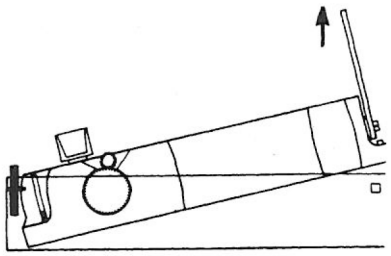


2. Note the minimum to maximum spindle position of the mechanism.

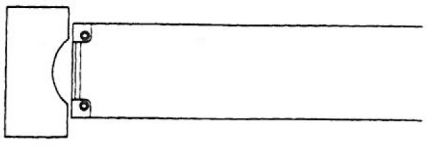


45 - 51mm 900 Series
(1¾" - 2")

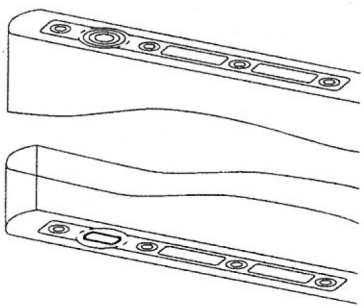
3. Remove the mechanism from the cement case. The screws for the removable clamps (b) should be unscrewed 10 turns each. Tap the clamps down to remove them from the sockets in the cement case. Lift the front of the mechanism using the adjustment spanner.



4. Set the cement case in the floor with the fixed clamps (a) nearest to the frame taking care to align the spindle position with the center of the heel radius of the door. Allow 3mm (1/a") gap behind the door.



5. Mortice into the door on the pivot center line the door arm and the bearing half of the top pivot assembly. Mortice into the top jamb the walking beam pivot.

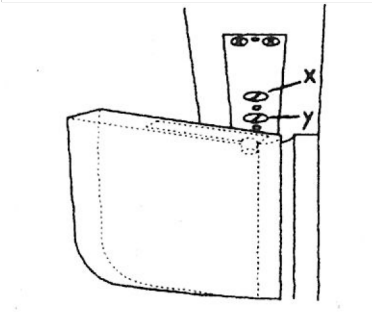


6. Replace the mechanism in the cement case. Ensure the removable clamps are engaged in their sockets and tighten the clamp screws (a and b). Screw on the spindle cover.

7. Position the door over the floor closer and locate the arm over the spindle. Try to keep the door as close as possible to vertical to avoid excessive loading on the spindle.

8. Locate the top pivot and loosely bolt in place.

9. Adjust the vertical gaps to 3mm (1/a") between the door and frame using the top center lateral adjustment and by sliding the mechanism within the cement case. Fully tighten the top center pivot retaining screw (z).



10. Check that the door returns to the correct center position.

11. Adjust the gap at the top of the door to 3mm (1/a") using the height adjustment screws (c), slackening the clamp screws (a and b) as the mechanism rises. Ensure the mechanism is level. Longer spindle inserts are available if necessary.

12. Fully tighten each clamp screw (a and b) and tighten the height adjustment screws (c) for a firm fixing.

13. Adjust the center position of the door using the centering adjuster {h).

14. Adjust the speed control (k) to give a smooth closing speed of approximately 5 to 7 seconds closing from 90° open.

15. If the door is particularly heavy and/or wide, increase the backcheck resistance of the mechanism by increasing the power of the spring (l). The floor closer is set in the factory on power size 3. Keep any power increase to a minimum since the lower the power, the easier it is to use the door. (Turn clockwise to increae or anti-clockwise to decrease the power).

16. Screw on the cover plate of the mechanism and top pivot.

17. Power Adjustments

TURNS	POWER
4	1
6	2
8	3
11	4
16	5
23	6

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Maintenance

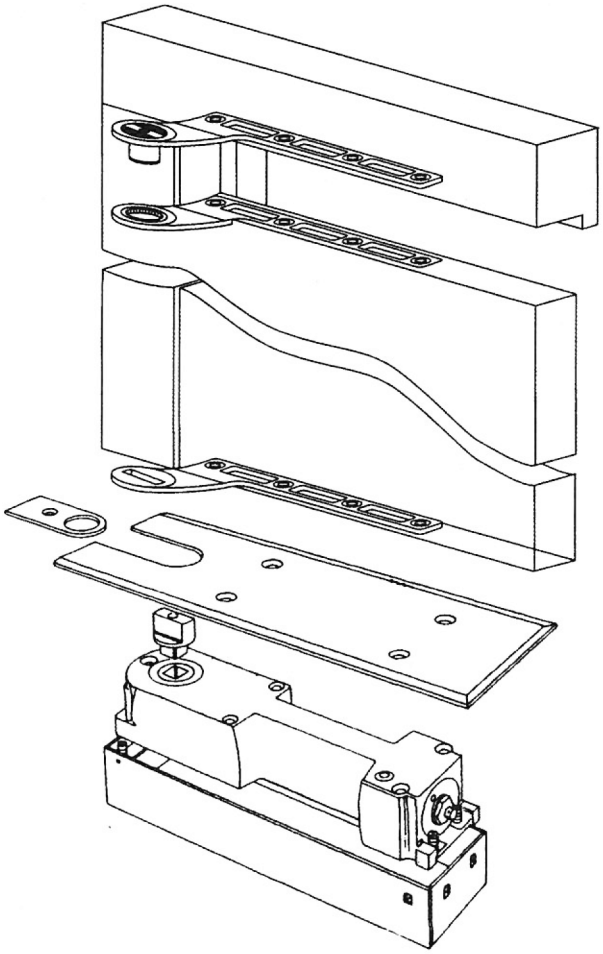
The internal mechanism of the floor closer is immersed in oil and has been designed so that it requires no maintenance. It is protected from misuse by an overload safety feature. **On no account should any attempt be made to dismantle a floor closer since it contains a pre-stressed spring.**

Once the floor closer has been installed and adjusted to suit local conditions no further maintenance should be necessary. However, an annual check should ensure that:

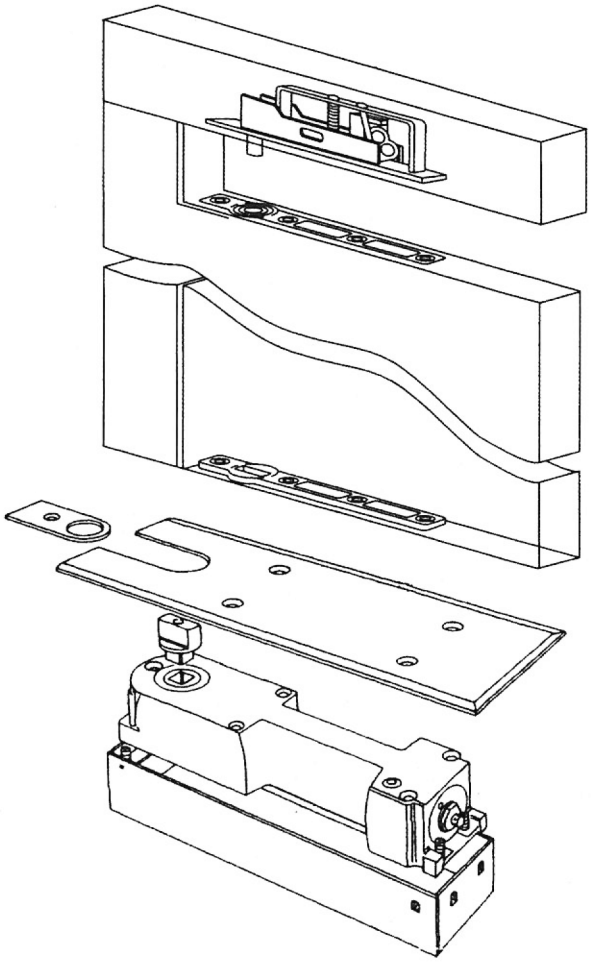
- The door closes freely and positively into its frame from any angle without slamming.
- All fixing screws to the unit and accessories are tight.

Any failure to close the door should be investigated. It may indicate that the power of the floor closer requires adjustment or that excessive force is required to close the door due to distortion or mis-alignment.

Offset Hung Floor Closer Exploded View



Center Hung Floor Closer Exploded View



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