INSTALLATION INSTRUCTIONS FOR 90R/F90R MULLION

Drawing: 106080

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For device installation videos, scan code below or go to detex.com
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<tr>
<th>Item</th>
<th>Part No</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>106732</td>
<td>Top fitting, Mullion, 90R</td>
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<td>2</td>
<td>106074</td>
<td>Frame spacer block</td>
</tr>
<tr>
<td>3</td>
<td>106087</td>
<td>Set screw, 1/4-20 x 5/16, SS</td>
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<tr>
<td>4</td>
<td>106730-1</td>
<td>Mullion Channel, 90R, 7 foot</td>
</tr>
<tr>
<td></td>
<td>106730-2</td>
<td>Mullion Channel, 90R, 8 foot</td>
</tr>
<tr>
<td>5</td>
<td>106731</td>
<td>Base fitting, Mullion, 90R</td>
</tr>
<tr>
<td>6</td>
<td>100217</td>
<td>Anchor, Wedge</td>
</tr>
</tbody>
</table>
# Hardware List

<table>
<thead>
<tr>
<th>Screw style</th>
<th>Description</th>
<th>Used on</th>
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<tbody>
<tr>
<td><img src="image" alt="Screw" /></td>
<td>5/16-18 X 1&quot; PFHMS P/N 106096</td>
<td>Top fitting</td>
</tr>
<tr>
<td><img src="image" alt="Screw" /></td>
<td>5/16-18 X 1-1/2&quot; PFHMS P/N 101147</td>
<td>Top fitting and frame spacer block</td>
</tr>
<tr>
<td><img src="image" alt="Screw" /></td>
<td>1/4-20 X 1&quot; PPHMS P/N 100980</td>
<td>Frame spacer block</td>
</tr>
<tr>
<td><img src="image" alt="Screw" /></td>
<td>10-24 X 5/8&quot; PFHUMS P/N 100112</td>
<td>Strike hook (If ordered)</td>
</tr>
<tr>
<td><img src="image" alt="Screw" /></td>
<td>3/8&quot; x 3&quot; Wedge Anchor P/N 100217</td>
<td>Base Fitting</td>
</tr>
</tbody>
</table>

## Tools Required:

- Power Drill
- Safety Glasses
- Allen Wrench (1/8"
- Level
- Pencil
- Phillips Screw Drivers (#2 and #3)
- Hammer
- Combination Square
- Tap Wrenches (1/4-20 & 5/16-18)
- Tape Measure
- Center Punch
 Doors and frames with walls having a structural thickness (metal skin plus reinforcement, or solid wood) to engage less than (3) full screw threads, are considered unreinforced for hardware.

Unreinforced Doors: Use Sex Nuts and Bolts.
Unreinforced Frames: Use Blind Rivet Nuts (see sketch).
Fasteners for unreinforced openings are not supplied by Detex.

**NOTE:** 750mm MAXIMUM DOOR WIDTH OPENING FOR EUROPE FOR 36" DEVICE
1000mm MAXIMUM DOOR WIDTH OPENING FOR EUROPE FOR 48" DEVICE
THE SAFETY FEATURES OF THIS PRODUCT ARE ESSENTIAL TO IT’S COMPLIANCE WITH EN 1125.
NO MODIFICATION OF ANY KIND, OTHER THAN THOSE DESCRIBED IN THESE INSTRUCTIONS ARE PERMITTED.
**STEP 1: REMOVE FITTINGS - FIND HARDWARE KIT**

**REMOVE TOP AND BASE FITTINGS**

Loosen set-screws with 1/8 inch allen wrench.

**Base fitting**

**Hardware kit**

Inside tube

P/Ns:

106085-5 (90R kit)
106085-6 (F90R kit)

**TOP FITTING**

**STEP 2: MARK CENTER OF DOOR OPENING**

**MARK CENTER OF THE DOOR OPENING AT THE SOFFIT AND AT THE FLOOR**

**Door**

**Soffit**

**Floor**

**STEP 3: TRIAL FIT MULLION & CUT (IF NECESSARY)**

If mullion requires cutting, position cut end to the bottom.

**CAUTION!**

Ensure mullion channel is stable.

**Top fitting**

**Base fitting**

**Finished Floor**

1/8 GAP

Close doors firmly and trial fit the mullion.

1. Place the top fitting into mullion channel; place the mullion channel into the base fitting, then pivot the top upward into place.

2. **If mullion channel is too long,** measure the distance from the soffit to the floor. Subtract 7/8" from this measurement. Mark and cut the mullion channel to new length.

   \[ H \text{ (Distance from soffit to floor)} - 7/8" = C \text{ (Cut length of Mullion)} \]

**NOTE:** If there is a threshold, be sure to CUT the threshold so that the base fitting is resting on the secured non-flammable flooring.
**STEP 4: MARK FITTING PERIMETER LOCATIONS**

4a Position mullion firmly against closed door.
   Align the top fitting with MARK made on soffit.
   Align base fitting and base plate with MARK made on floor.
   TRIAL fit mullion to achieve desired mullion location.

4b Tighten top & bottom set-screws snug.

4c DRAW a line around perimeter of base fitting and top fitting.

4d REMOVE mullion.
   Set mullion safely down.
   Be sure to loosen set-screws before removing fittings.

**CAUTION!**
Ensure mullion channel is stable

**STEP 5: INSTALL BASE FITTING**

PREP FLOOR FOR BASE FITTING

5a POSITION base fitting over drawn perimeter.
   Align notches on fitting with center mark on floor.

5b MARK and DRILL floor at two locations.
   DRILL (2) holes for anchors:
   3/8" hole x 1-1/2 to 2" deep
**5c INSTALL ANCHORS**

Remove any debris from the holes (dust etc). Back off the nuts of the anchors (p/n 100217) until they are just past flush with the ends of the bolts and tap anchors into the holes drilled in previous step.

With the anchors tapped in place, remove the nuts & washers.

**5d INSTALL BASE FITTING**

Place the base fitting over the anchor bolts. Install the washers & nuts. Tighten nuts to engage the wedge anchors into the floor.

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**STEP 6: INSTALL TOP FITTING**

**PREP FRAME FOR TOP FITTING**

**6a POSITION** top fitting over drawn perimeter. Align notches on fitting with center mark on soffit.

**6b MARK, DRILL, and TAP** the soffit at six (6) hole locations. Tap holes with 5/16"-18 tap (#F - 0.257 drill).

**INSTALL TOP FITTING**

**6c Assemble top fitting and mullion channel to soffit with screws provided.**

**If top fitting over hangs stop, USE FRAME SPACER BLOCK**

Add a 1/4-20 Tapped hole (#7 - 0.201 drill) for installing frame spacer block.

**Frame Spacer Block**

*Block designed for 5/8 stops only*

Screws

**Screws**

QTY: 4

5/16-18 x 1"

Screws

QTY: 2

5/16-18 x 1-1/2"

Screws

QTY: 4

5/16-18 x 1"

Screws

QTY: 2

5/16-18 x 1-1/2"
STEP 7: SECURE MULLION

**CAUTION!** Ensure mullion channel is appropriately secured.

- **TIGHTEN** set-screws to eliminate mullion channel rattle or looseness.
- **1/8 allen wrench**
- **TIGHTEN BASE FITTING SET-SCREW**

STEP 8: INSTALL STRIKE HOOKS (FIRE RATED ONLY, IF REQUIRED)

- **STRIKE HOOK** P/N 100091
- **INSTALL** with (2) screws
- **EXIT DEVICE STRIKE** (NOT included with 90R/F90R mullions)
- **MULLION CHANNEL**

**NOTE:** Strike hook is intended for use with Detex Fire Rated exit devices. For all other Fire Rated locking hardware, please reference the manufacturer's instructions to determine installation requirements.

1. Attach the strikes to the side of the mullion according to the template provided with the locking device to be used.
2. Attach one strike hook per door leaf according to the template provided with the locking device to be used.
3. Ensure that the strike hook engages the strike without interference to the latching mechanism.
4. Open and close the door. The strike hook should not cause friction or bind during the opening and closing cycles of the door.
REMOVING THE MULLION CHANNEL

CAUTION!
Ensure mullion channel is appropriately supported during & after loosening/removing the top fitting screws

The top fitting must be removed before removing mullion channel

CAUTION!
Ensure mullion channel is appropriately secured

TROUBLE SHOOTING

1. If Mullion channel is too long:
   a) See Step 3 for cutting the mullion channel to correct length.
2. Mullion channel rattles after door is closed:
   a) Tighten set-screws in top and base fittings (See Step 7).
   b) Verify base and top fittings are secured. Tighten screws as needed.