

Installation Instructions

FlexLouver™ Rack Arm Systems by Draper

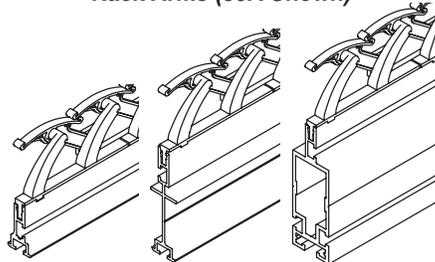
⚠ Caution

- ① Inspect all boxes to make sure you have received the proper parts.
- ② This document is meant to be a general guideline. Please refer to project-specific documentation and drawings for details.
- ③ FlexLouver Rack Arm Systems must be level and square.
- ④ Do not wire motors in parallel without written permission from Draper.
- ⑤ It is the installer's responsibility to make sure appropriate fasteners are used for mounting surface.
- ⑥ Take account of the standard spacing (pitch) between slats. There will be gaps at the top and bottom of the system.
- ⑦ The system is sent to site as a series of components, not as a finished system. It is then assembled on site.
- ⑧ **Do not operate when snow and/or ice may be present on the system. Operating in snow and ice conditions will cause damage to the system.**
- ⑨ **Please read the following installation guidelines thoroughly and follow them carefully. Failure to do so may cause product to fall or otherwise fail, and invalidates warranty.**

Key Components

- Assembled rack arms, including one with motor pre-installed
- Fixing brackets
- Cross supports (if required)
- Drive shaft and coupler
- Louvers

Rack Arms (50A Shown)

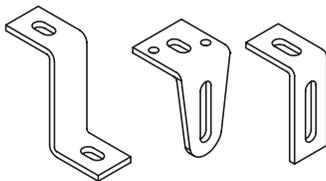


Standard

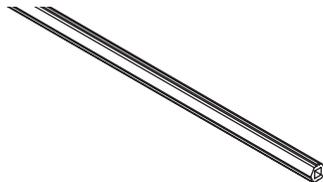
Heavy Duty

Box

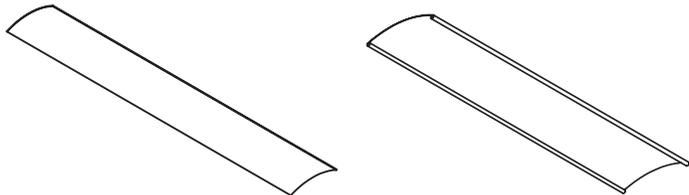
Brackets



Drive Shaft

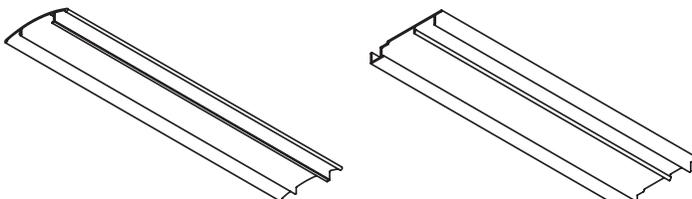


Louvers



50A

80R



75E

88E

Basic Steps

These are some basic steps. More details will be found in the various sections, and in documents provided with your individual order.

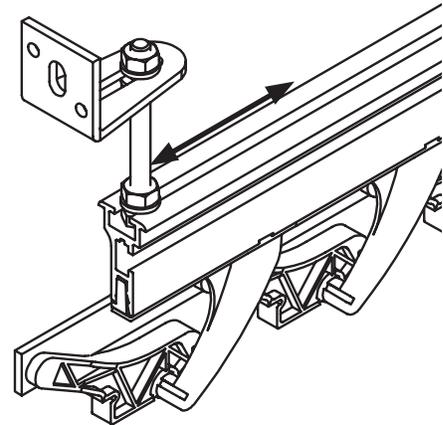
- ① Install Fixing Brackets. **It is the installer's responsibility to make sure appropriate fasteners are used for mounting surface**
- ② Mount the Rack Arms onto the Fixing Brackets.
Please Note: The operating strip will extend beyond the rack arm when the Louvers are in the closed position.
- ③ Install one Louver to ensure that all of the Slat Clips are in the same position when the Drive Shaft is installed. See "Louver Attachment" section for details on how to attach different Louvers to the Rack Arms.
- ④ Install the Drive Shaft.
- ⑤ Attach the rest of the Louvers.

Mounting the Fixing Brackets

- ① It is the installer's responsibility to make sure appropriate fasteners are used for mounting surface.
- ② Mount all Fixing Brackets before beginning to install the rest of your FlexLouver system.
- ③ When installing brackets, remember that it is imperative that FlexLouver Rack Arm Systems must be level and square. If the brackets are not properly aligned, the system may be twisted slightly, interfering with operation of the louvers. Consider using a laser level to check for level and square bracket placement.

Attaching Rack Arm Assemblies to the Fixing Brackets

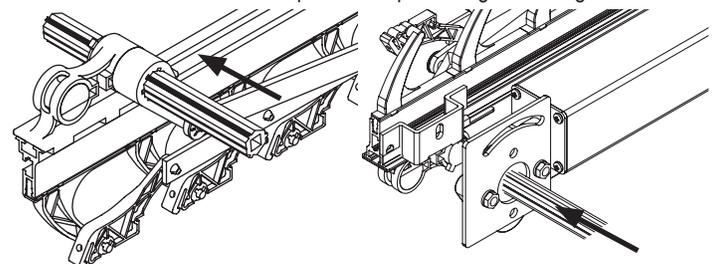
- ① Rack Arm assemblies (which include the operator and Bearing Brackets pre-mounted) mount to the Fixing Brackets with provided bolts and nuts. The nuts slide along the grooves in the bottom of the Rack Arm assemblies. Install with the operator on the inside of the assembly.
- ② Loosen or tighten the nuts as necessary to make sure the Rack Arm assemblies are installed level and square.



Installing the Drive Shaft

Please Note: Before this step, install one Louver to ensure that all of the Slat Clips are held in the same position when the Drive Shaft is installed.

- ① Insert Drive Shaft into Bearing Bracket on non-operator Rack Arm Assembly. The outer profile of the Drive Shaft is ridged, and can be inserted into the Bearing Bracket in several positions. Check to make sure that the orientation is correct to allow the Drive Shaft to be fitted to the gearbox.
- ② Slide Drive Shaft through the bracket and through the Bearing Brackets on the other Rack Arm assemblies. Please note: This step may require more than one person.
- ③ Install Drive Shaft onto the square shaft protruding from the gearbox.



Continued on next page

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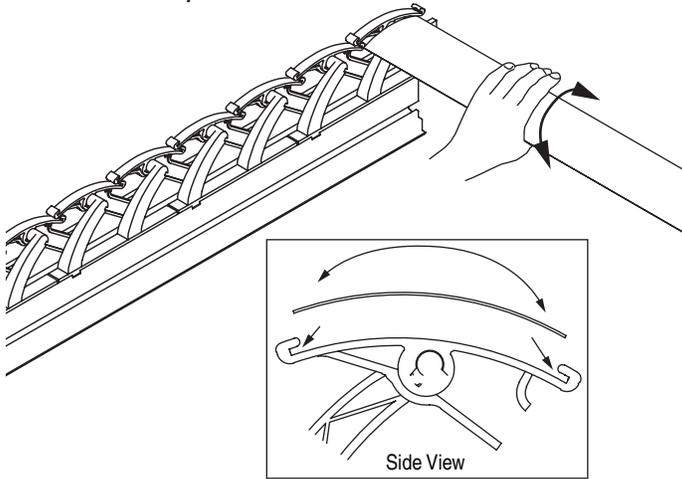
If you encounter any difficulties installing or servicing your FlexLouver Rack Arm Systems, call your dealer or Draper, Inc. in Spiceland, Indiana, 765-987-7999, or fax 765-987-7142.

Louvers Attachment

50A

Please Note: Install one Louver to ensure that all of the Rack Arms are held in the same position when the Drive Shaft is installed. After Drive Shaft installation is complete, finish attaching the remainder of the Louvers.

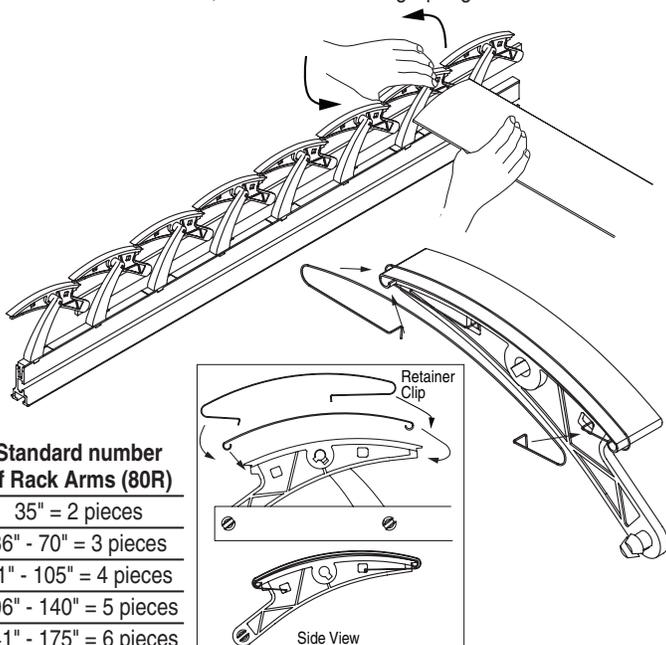
- ① Grasp Louver with both hands. Depending on length of Louver, this may require more than one person.
- ② Carefully squeeze Louver to increase the arc.
- ③ Place Louver in Rack Arm attachment points and release pressure to allow it to expand back into shape, and into place on the Rack Arm.
- ④ Carefully slide back and forth, if necessary, to correct position.
- ⑤ Repeat at all Slat Clip positions. **Please Note: This assumes that there are only two rack arms. Often there will be more. This is applicable to all of the louver options.**



80R

Please Note: Install one Louver to ensure that all of the Rack Arms are held in the same position when the Drive Shaft is installed. After Drive Shaft installation is complete, finish attaching the remainder of the Louvers.

- ① Carefully grasp Louver with both hands. Depending on length of Louver, this may require more than one person. It is important not to allow the Louver to flex along its length; once a roller edge Louver has been damaged, it cannot be repaired and must be replaced.
- ② Insert one side of the Slat clip into the rolled edge of the Louver.
- ③ Rotate the Slat Clip far enough to allow the other side of the Slat Clip to go into the rolled edge on the other side of the Louver.
- ④ The Slat Clip is then rotated back until it is perpendicular to the edges of the slat.
- ⑤ For exterior installations, install Slat Retaining Spring.



Standard number of Rack Arms (80R)

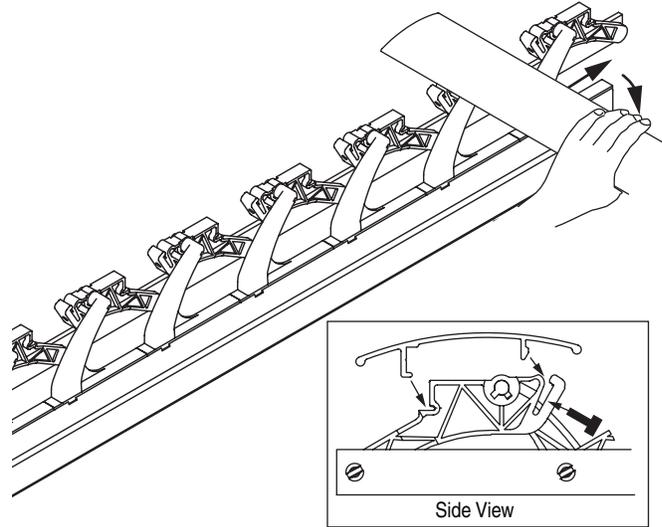
35" = 2 pieces
36" - 70" = 3 pieces
71" - 105" = 4 pieces
106" - 140" = 5 pieces
141" - 175" = 6 pieces

Please Note: Install one Louver to ensure that all of the Rack Arms are held in the same position when the Drive Shaft is installed. After Drive Shaft installation is complete, finish attaching the remainder of the Louvers.

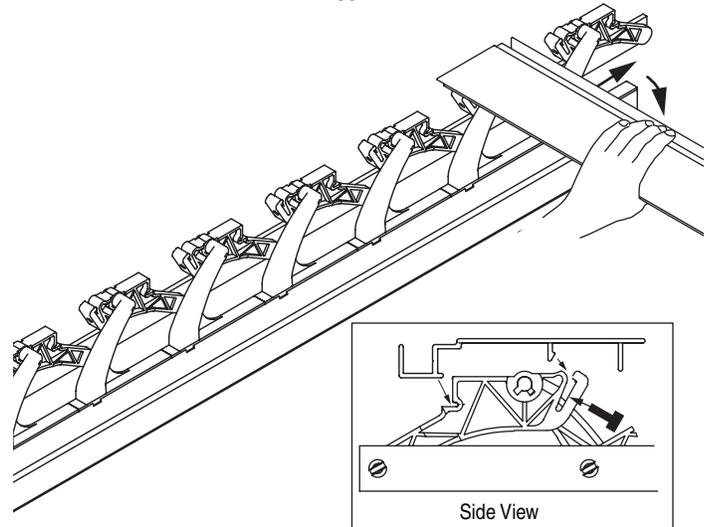
75E/88E

- ① Grasp Louver with both hands. Depending on length of Louver, this may require more than one person.
- ② Place Louver's extrusion "foot" into Rack Arm groove.
- ③ Snap the other Louver extrusion into place on the other edge of the Rack Arm.
- ④ Carefully slide back and forth, if necessary, to correct position.
- ⑤ Repeat with other end of Louver.
- ⑥ For exterior installations, tighten screw to lock the Louver onto the Slat Clip.

75E



88E



Cleaning and Maintenance

Under normal circumstances, the FlexLouver Rack Arm System requires no special maintenance or adjustments other than occasional cleaning by the end user.

For general cleaning, use a sponge and water with a mild detergent to wipe down the louvers when in a closed position. Following cleaning, move the louvers to the open position to allow them to dry.

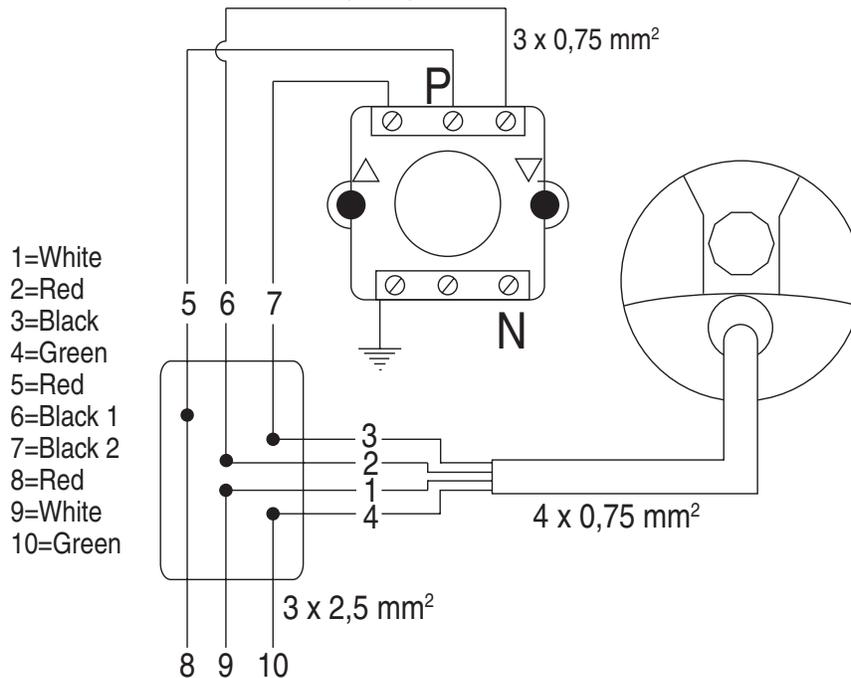
Do not use acidic or abrasive cleaning agents as they could damage the surface of the louvers.

Caution: Do not operate when snow and/or ice may be present on the system. Operating in snow and ice conditions will cause damage to the system.

Electrical Connections

System operates on 110-120V, 60 Hz. current. Connections should be made in accordance with attached wiring diagram, and wiring should comply with national and local electrical codes. **DO NOT wire motors in parallel without written permission from Draper.**
All operating switches should be "off" before power is connected.

Wiring Diagram—Standard Motor

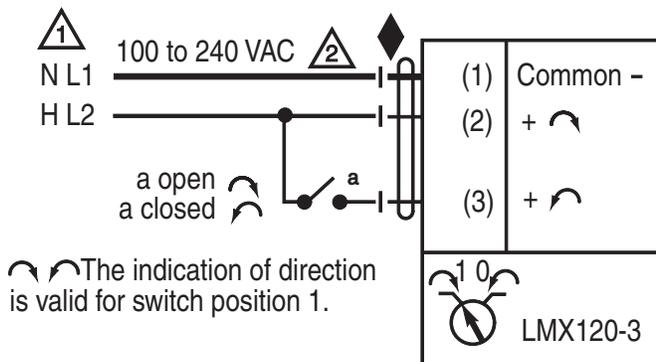


Limit Switch Adjustments—Standard Motor

CAUTION: The limits on your FlexLouver Rack Arm System should be shipped pre-set. If, however, the limits do require adjustment, be sure all switches are in "off" position before adjusting limit switches. Always be prepared to shut off manually when new adjustment is being tested. **Do not allow the motor to continue running once the Louvers are fully open or closed. This might lead to damage to your system.**

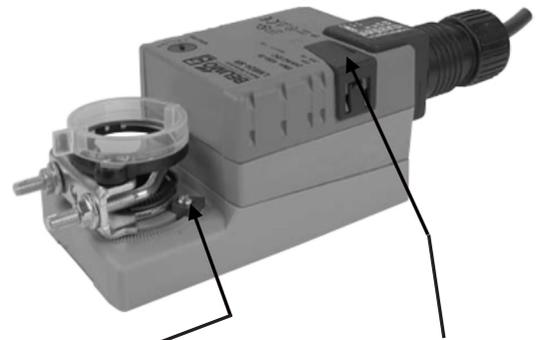
- ① Determine which direction of Louver movement corresponds with arrows on motor.
- ② Operate to "open" stop position. Adjust limit by turning the proper socket to add or subtract travel.
- ③ Operate to "closed" position. Adjust limit by turning the proper socket to fine tune the "closed" position.

Wiring Diagram—Belimo Motor



On/Off Control

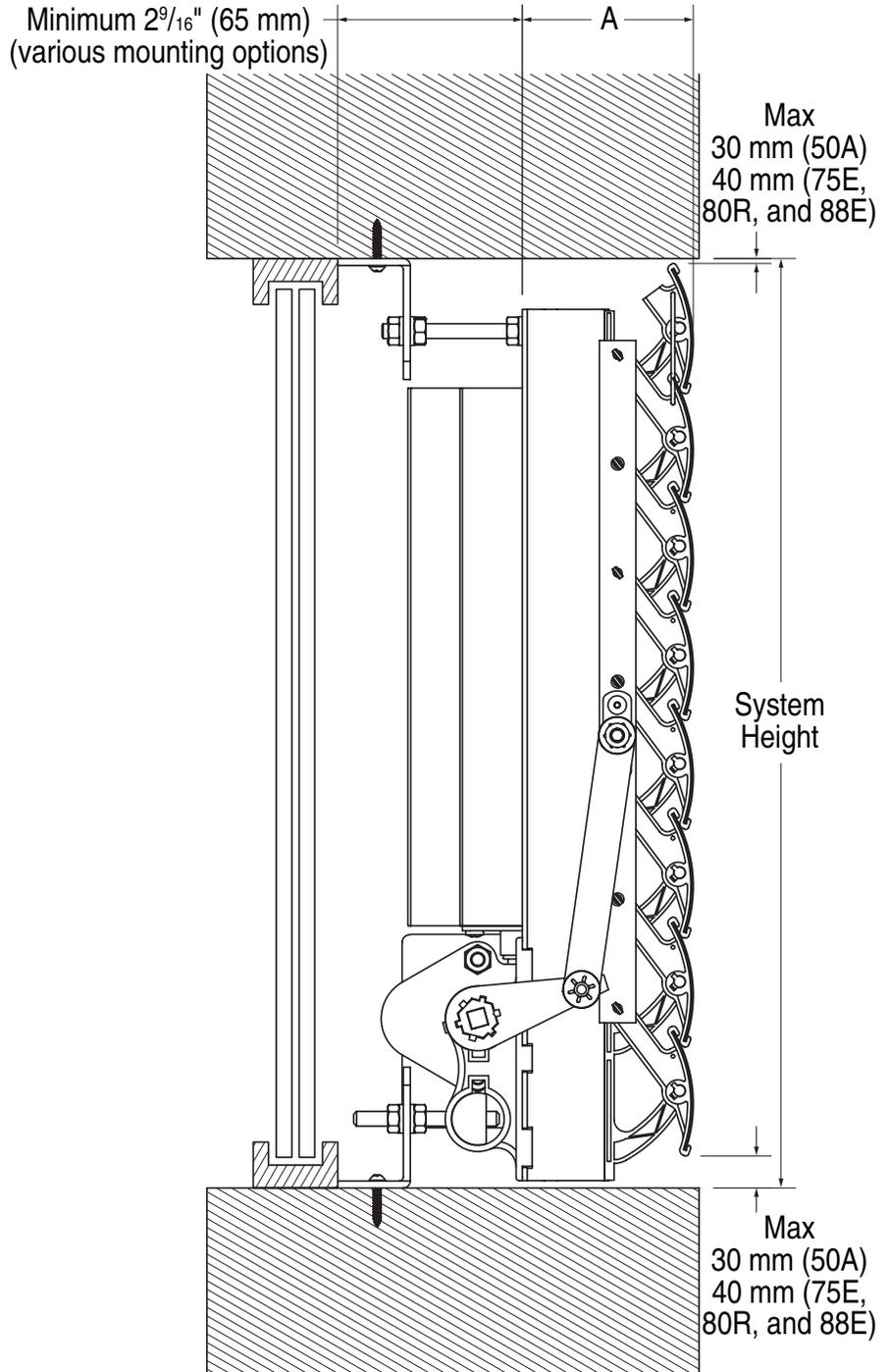
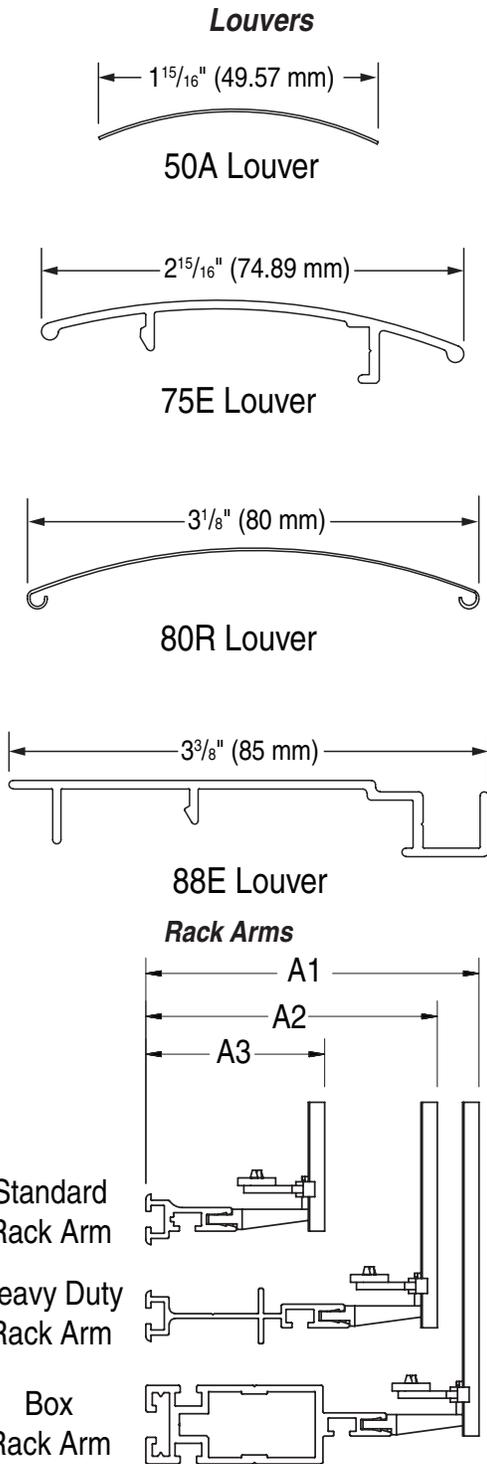
Limit Switch Adjustments—Belimo Motor



Loosen screw, slide block until the required amount of rotation is set and then tighten to lock block into position.

- When connecting the motor to the system:
- ① Rotate the drive shaft until the louvers are in the fully open position.
 - ② Press the indicated button on the motor and rotate the drive until it is against the fully open block. When in the correct position, release the button.
 - ③ Clamp the drive shaft in place.

Dimensions



"A" (Closed)	50A	75E	80R	88E
A1	$5\frac{3}{16}$ " (131 mm)	$5\frac{7}{8}$ " (149 mm)	$5\frac{11}{16}$ " (145 mm)	$5\frac{13}{16}$ " (145 mm)
A2	$4\frac{1}{2}$ " (115 mm)	$5\frac{1}{4}$ " (133 mm)	$5\frac{1}{16}$ " (129 mm)	$5\frac{3}{16}$ " (145 mm)
A3	$2\frac{3}{4}$ " (70 mm)	$3\frac{1}{2}$ " (88 mm)	$3\frac{5}{16}$ " (84 mm)	$3\frac{7}{16}$ " (145 mm)
"A" (Open)	50A	75E	80R	88E
A1	6" (152 mm)	$6\frac{15}{16}$ " (177 mm)	$7\frac{3}{16}$ " (183 mm)	$7\frac{1}{2}$ " (190 mm)
A2	$5\frac{5}{16}$ " (136 mm)	$6\frac{5}{16}$ " (160 mm)	$6\frac{9}{16}$ " (166 mm)	$6\frac{7}{8}$ " (174 mm)
A3	$3\frac{5}{8}$ " (91 mm)	$4\frac{9}{16}$ " (116 mm)	$4\frac{13}{16}$ " (122 mm)	$5\frac{1}{8}$ " (130 mm)