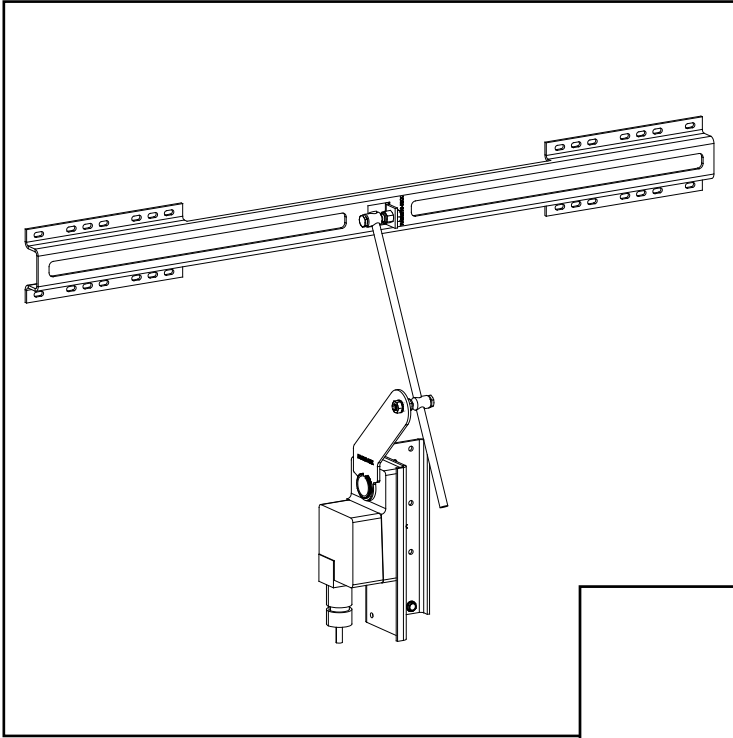
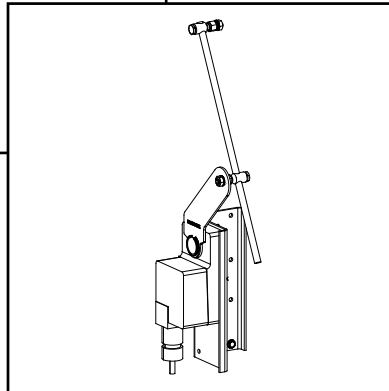


# Instruction Manual

## Motor Kit for "SW" Shutters



*Motor Kit for 2-Panel SW Shutter*



*Motor Kit for 1-Panel SW Shutter*

## Motor Kit for "SW" Shutter

Models: FA2686

# FA2686 Motor Kit for “SW” Shutters

## Manual for use and Maintenance

### Thank You:

Thank you for purchasing a Motor Kit for “SW” Shutter. Munters equipment is designed to be the highest performing, highest quality equipment you can buy. With the proper installation and maintenance it will provide many years of service.

### Please Note:

To achieve maximum performance and insure long life from your Munters product it is essential that it be installed and maintained properly. Please read all instructions carefully before beginning installation.

### Warranty:

For Warranty claims information see the “Warranty Claims and Return Policy” form QM1021 available from the [Munters Corporation office at 1-800-227-2376](#) or by e-mail at [aghort.info@munters.com](mailto:aghort.info@munters.com).

### Conditions and Limitations:

- Products and Systems involved in a warranty claim under the “Warranty Claims and Return Policy” shall have been properly installed, maintained and operated under competent supervision, according to the instructions provided by Munters Corporation.
- Malfunction or failure resulting from misuse, abuse, negligence, alteration, accident or lack of proper installation or maintenance shall not be considered a defect under the Warranty.

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# Unpacking the Equipment

# 1.

Before beginning installation, check the overall condition of the equipment. Remove packing materials, and examine all components for signs of shipping damage. Any shipping damage is the customer's responsibility and should be reported immediately to your freight carrier.

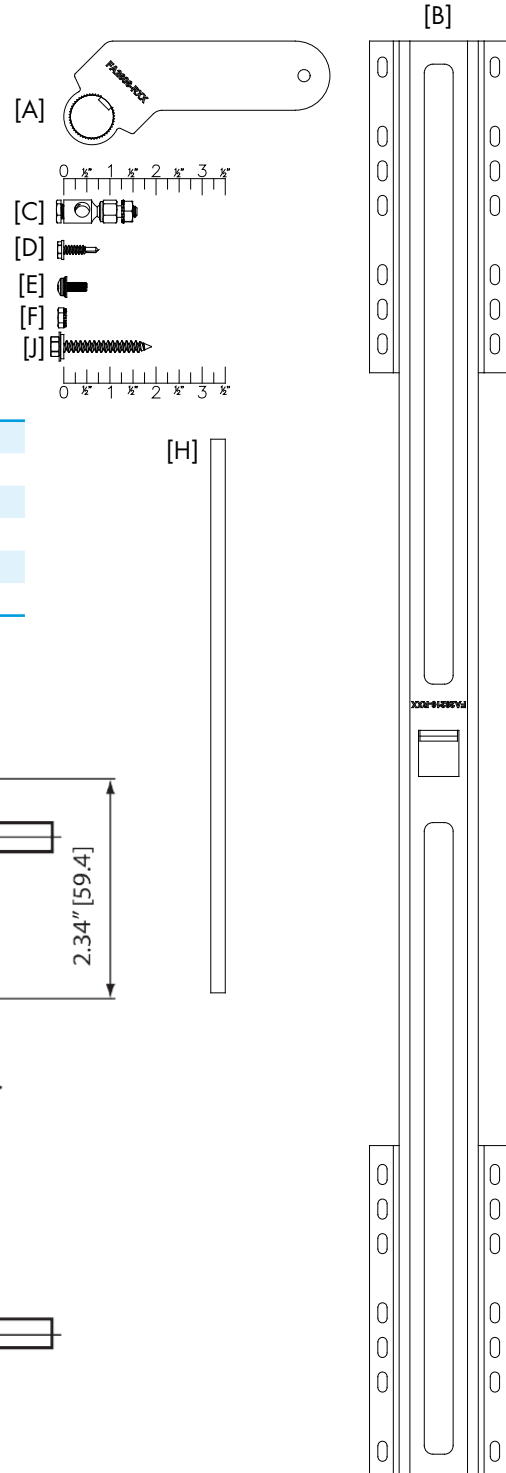
## 1.1 Parts List

### Each FA2686 Motor Kit includes:

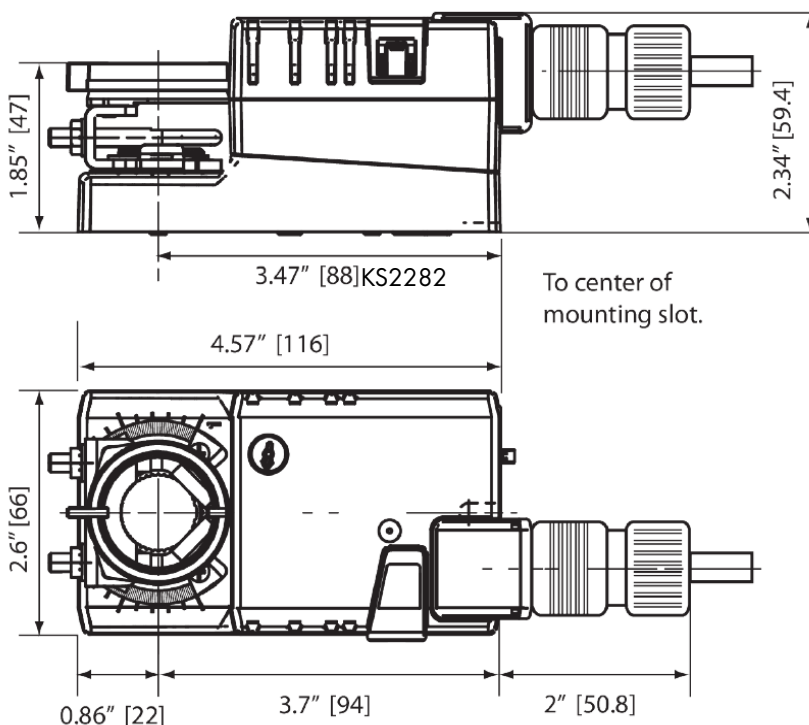
- 1 - Motor (FA2636), 120/240 VAC, 60Hz
- 1 - Motor Mount Bracket (FA2626), GZ
- 1 - [A] - Crank Arm (FA2606), SS
- 1 - [B] - 2-Panel Bracket (FA2616), GZ
- 1 - [H] - 1/4"D. x 12"L. Push Rod (FA2646), STL
- 1 - Hardware package (HP1211)

### HP1211 - Hardware Package

ID	Qty.	Cat. No.	Description
[C]	2	KX2656	1/4"-20 Ball Joint, Swivel, Dmpr Cntrl, ZP
[D]	10	KS2282	#10-16 x 3/4" TEK Screw, HXWSR, SS
[E]	1	KS0954	#10-32 x 1/2" SEMS Screw, PHL-PN, SS
[F]	1	KN1560	#10-32 KEPS Nut, SS
[G]	2	-	Screws Provided with Motor
[J]	3	KS1403	#9-15 x 2" Seal Washer Polebarn Screw, ZP



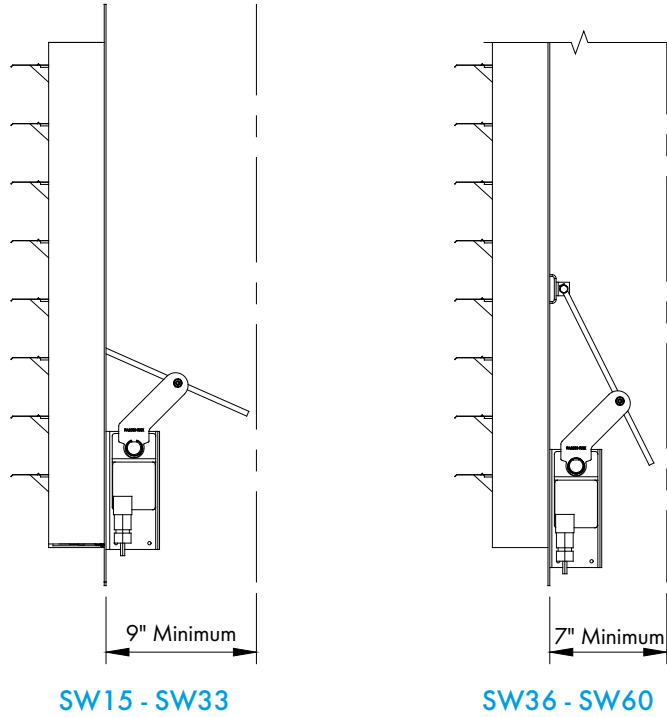
## 1.2 Dimensions



# Installation Instructions

# 2.

When installing the Shutter Motor Kits, Single Panel Shutters (SW15 - SW33) require 9" minimum clearance and Double Panel Shutters (SW36 - SW60) require 7" minimum clearance, from the back of the shutter to allow movement of the Crank Arm and Push Rod.



## 2.1 Motor Preparation

### Step 1

On the Motor, remove the Universal Clamp from the Motor by removing the C-Clip, so all that is left is a Geared Drive. Save C-Clip for use in [Step 2](#). See [Figure 1](#).

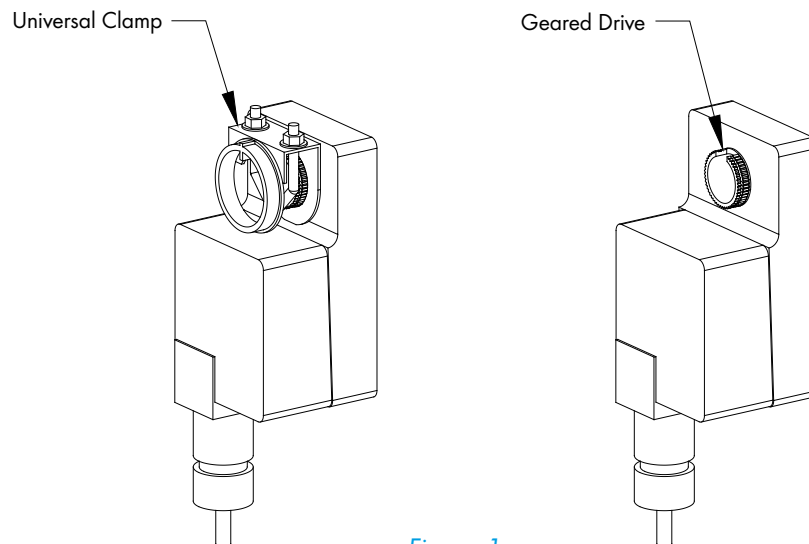


Figure 1

Step 2

Install Crank Arm [A] over the Geared Drive of the Motor and secure with the included C-Clip. See Figures 2.

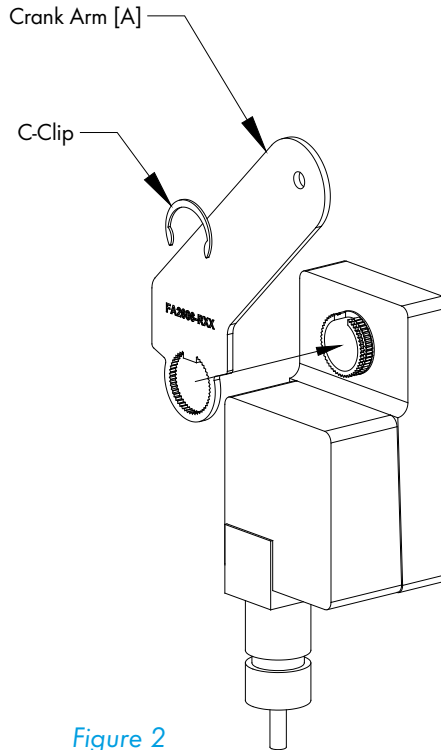


Figure 2

Step 3

Locate the Motor Mount Bracket and install Screw [E] and Nut [F] in the lower middle hole on the side with (6) holes. Leave the Screw and Nut loose, so that the end of the screw is flush with the end of the nut. See Figures 3.

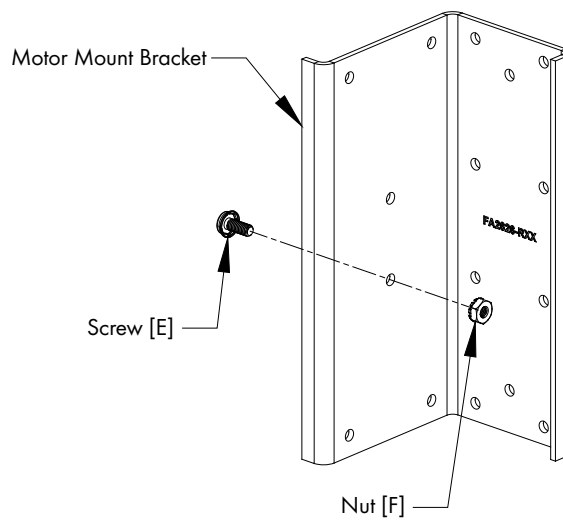


Figure 3

**Step 4**

Install Motor onto Motor Mount by sliding the slot in the back of Motor over the Screw installed in last step. Also secure Motor to Mount using (2) Screws [G] provided with the motor. Tighten Nut [F]. See Figure 4.

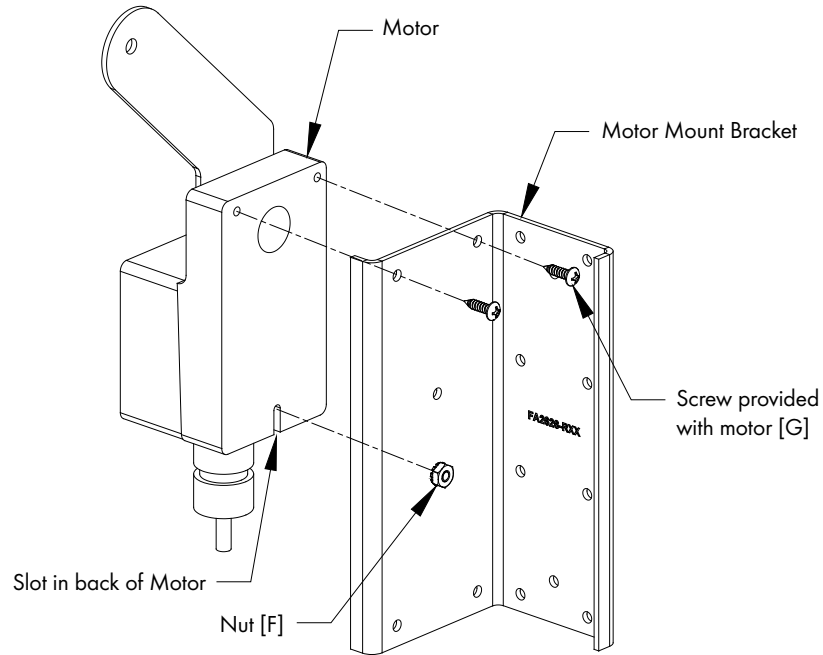


Figure 4

**Step 5**

Install Swivel Ball Joint and Nut [C] in the hole on the end of Crank Arm. See Figure 5.

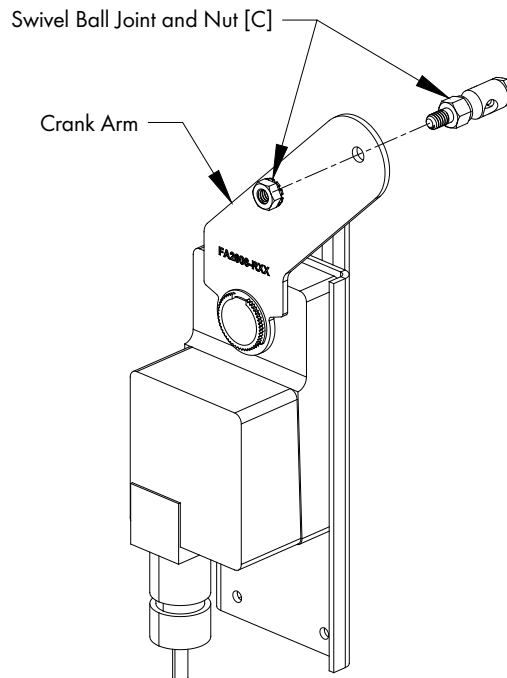


Figure 5

If installing a Single Panel Shutter proceed to [Step 6](#). If installing a Double Panel Shutter go to [Page 10, Step 10](#).

## 2.2 Installation for Single Panel Shutter

### Step 6

Working from the inlet side of the shutter, drill an  $\frac{3}{32}$ " dia. hole in Connecting Bar 12" above top edge of lower shutter frame. Adjust the hole up or down to avoid existing holes and center in widest part of Connecting Bar. See [Figure 6](#).

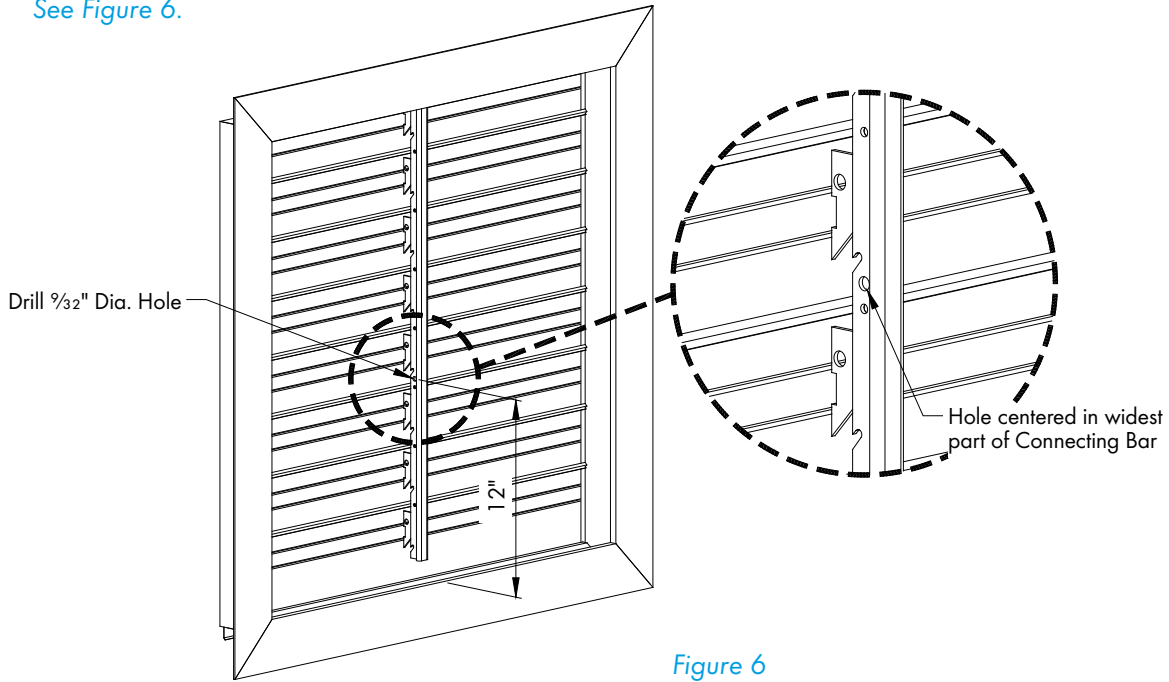


Figure 6

### Step 7

Install (1) Swivel Ball Joint [C] to the Connecting Bar in the new hole with the Nut on the right side of Connecting Bar and the main body of the Swivel Ball Joint on the left. See [Figure 7](#).

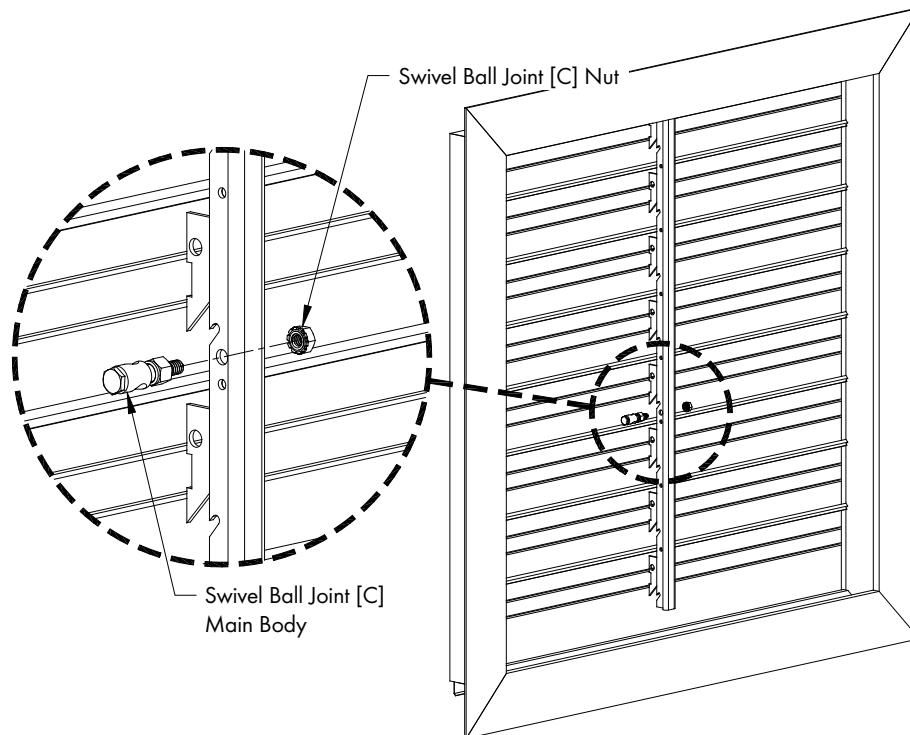


Figure 7



**Step 8**

If shutter is installed with framing on the blade side of shutter, then install Motor/Bracket Assembly to shutter so that the bottom of the bracket is flush to the bottom frame ( $2\frac{1}{4}$ " below top of bottom frame) using (3) Barn Screws [J]. See Figure 8A. If shutter is installed with framing opposite of the blade side of shutter, then install Motor/Bracket Assembly to shutter so that the bottom of the bracket is 1" below top of bottom frame using (3) Screws [D]. See Figure 8B. The right side of the bracket should be 2" right of the center of the shutter. When in place the bracket should be parallel to the Connecting Bar and the holes in each of the Swivel Ball Joints should line up, adjust placement if needed. Secure bracket in place using (3) Barn Screws [J] or (3) Screws [D]. See Figure 8C and 8D.

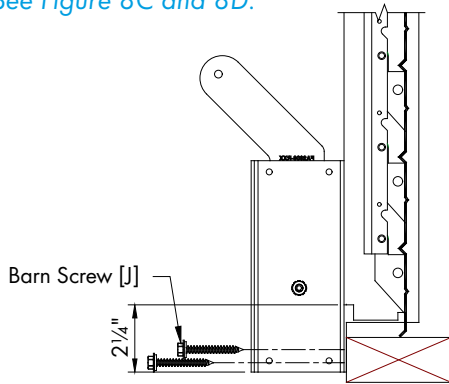


Figure 8A

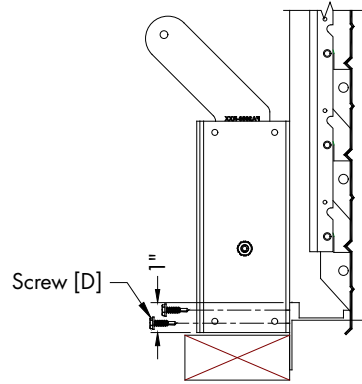


Figure 8B

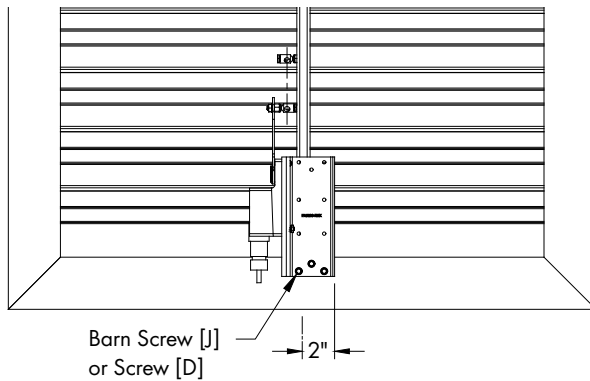


Figure 8C

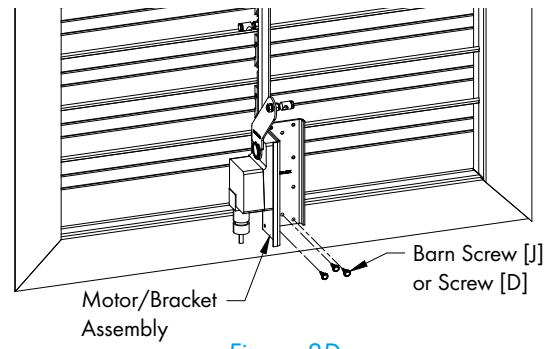


Figure 8D

**Step 9**

Insert Push Rod [H] up through lower Swivel Ball Joint and up through upper Swivel Ball Joint. When Push Rod is protruding about  $\frac{1}{8}$ " through the upper Swivel Ball Joint and the Push Rod should be parallel to the Connecting Bar, secure it in place with the clamping nuts on each Ball Joint. See Figure 9.

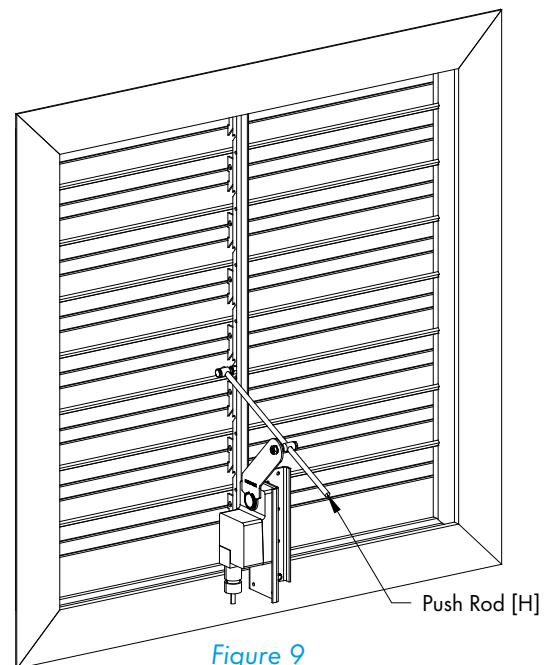


Figure 9

### 2.3 Installation for Double Panel Shutter

#### Step 10

Place the 2-Panel Bracket [B] up to the 2 Connecting Bars  $1\frac{1}{4}$ " above the bottom frame of the shutter and mark the 2 slots on each Connecting Bar and pre-drill these marks using a  $\frac{5}{64}$ " drill bit. Then holding the Bracket up to the Connecting Bars secure it in place using (4) Screws [D]. *See Figure 10.*

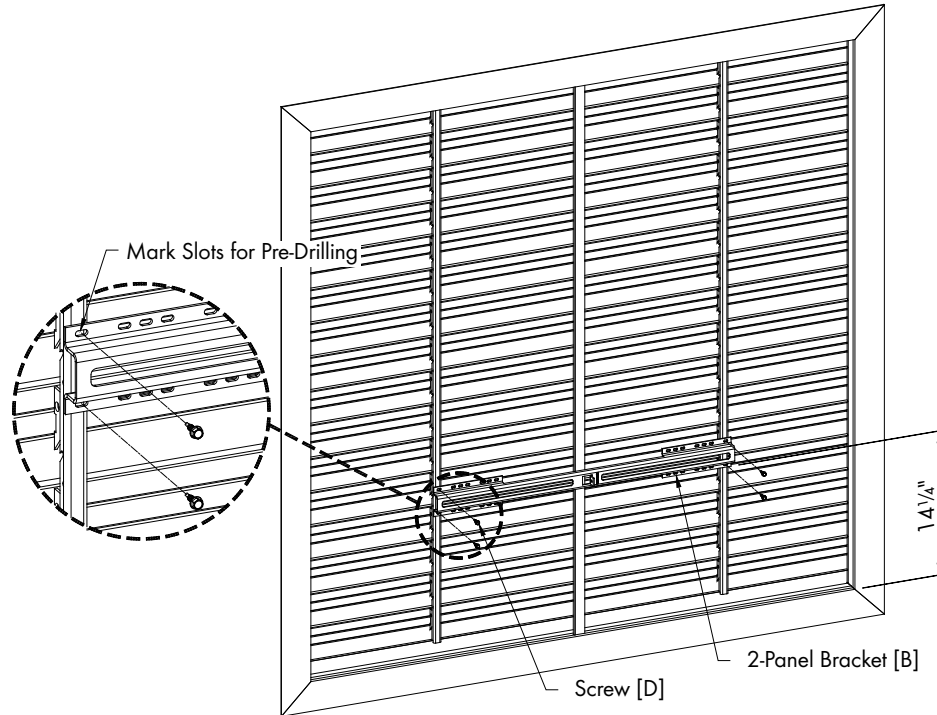


Figure 10

#### Step 11

Install (1) Swivel Ball Joint [C] to the Connecting Bar in hole in the tab with the Nut on the right side of Tab and the main body of the Swivel Ball Joint on the left. *See Figure 11.*

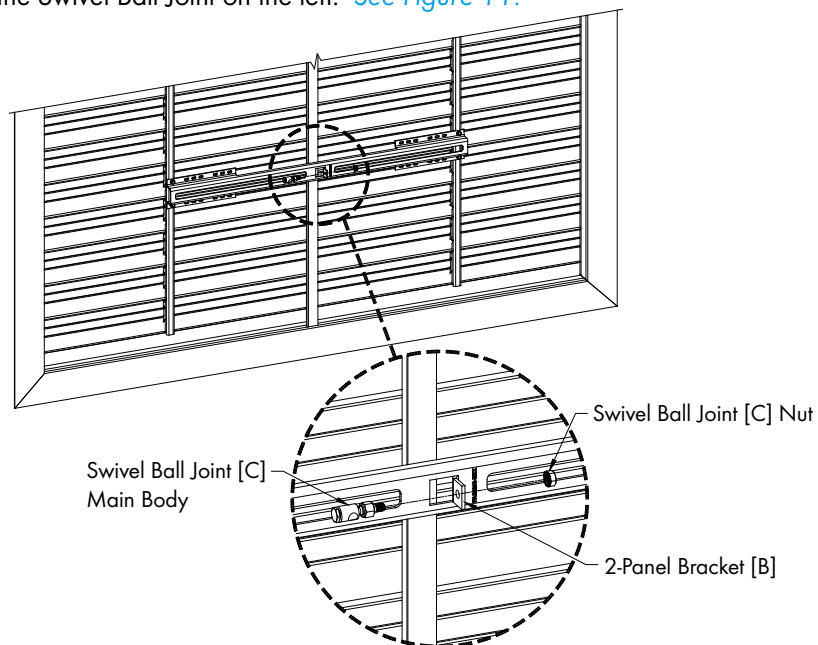


Figure 11

**Step 12**

If shutter is installed with framing on the blade side of shutter, then install Motor/Bracket Assembly to shutter so that the bottom of the bracket is flush to the bottom frame ( $2\frac{1}{4}$ " below top of bottom frame) using (3) Barn Screws [J]. See Figure 12A. If shutter is installed with framing opposite of the blade side of shutter, then install Motor/Bracket Assembly to shutter so that the bottom of the bracket is 1" below top of bottom frame using (3) Screws [D]. See Figure 12B. The right side of the bracket should be  $2\frac{3}{4}$ " right of the center of the shutter. When in place the bracket should be parallel to the T-Bar and the holes in each of the Swivel Ball Joints should line up, adjust placement if needed. Secure bracket in place using (3) Barn Screws [J] or (3) Screws [D]. See Figure 12C.

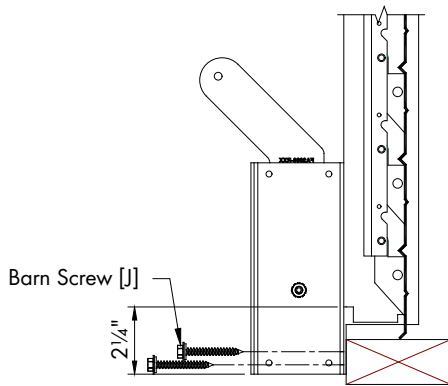


Figure 12A

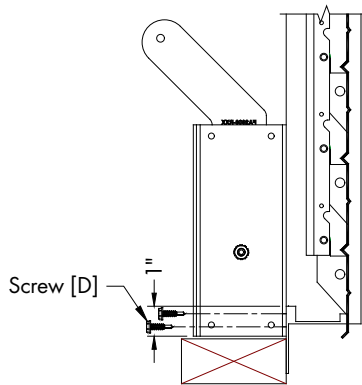


Figure 12B

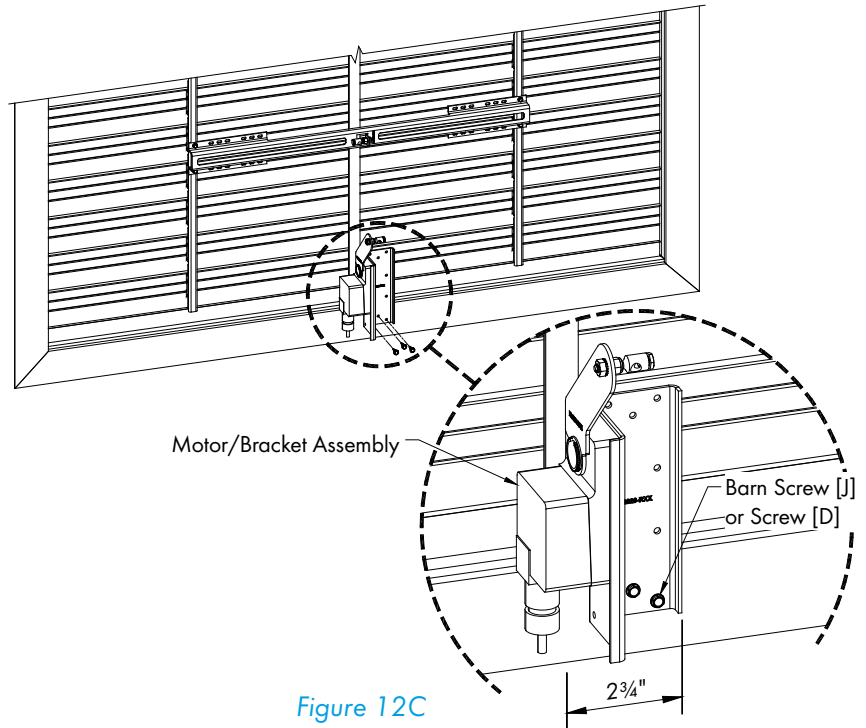


Figure 12C

**Step 13**

Insert Push Rod [H] up through lower Swivel Ball Joint and up through upper Swivel Ball Joint. When Push Rod is protruding about  $\frac{1}{8}$ " through the upper Swivel Ball Joint and the Push Rod should be parallel to the Connecting Bar, secure it in place with the clamping nuts on each Ball Joint. See Figure 13.

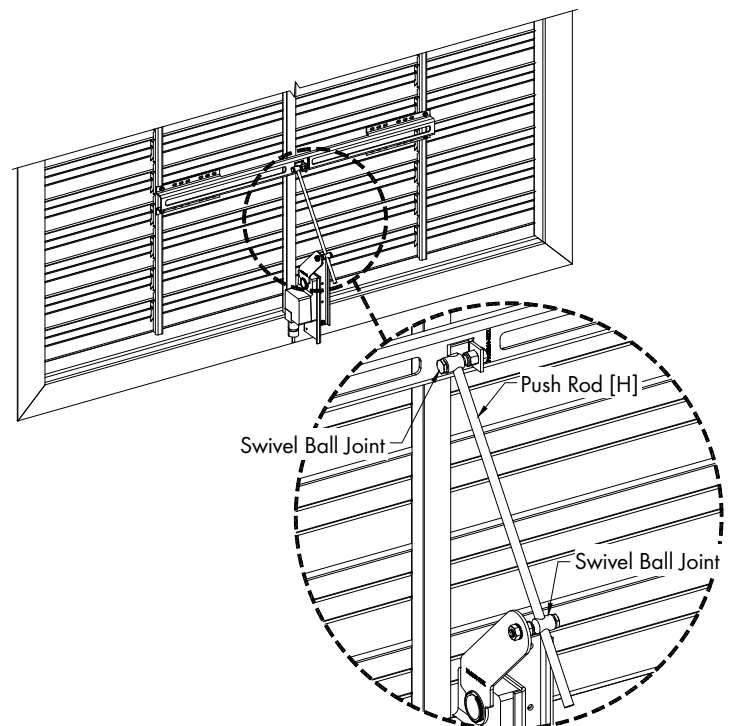


Figure 13

## 3.1 Electrical Wiring

### Step 14

All wiring should be in accordance with National, State and Local electrical codes.

### Step 15A

Provide overload protection and disconnect as required.

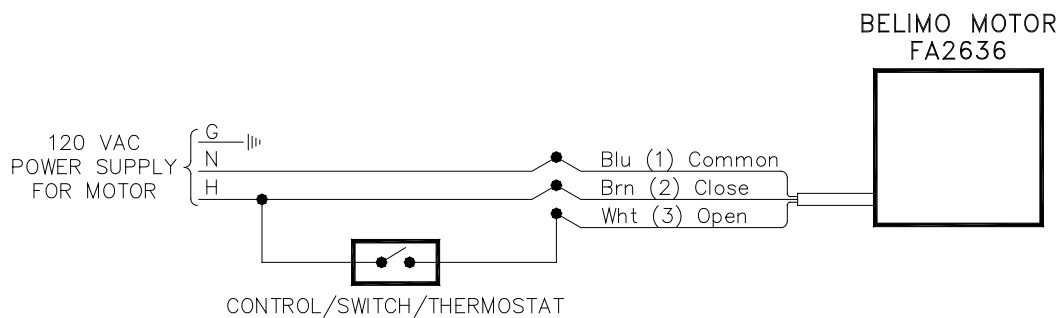
Motors may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

For On/Off operation make electrical connection as shown. [See Figure 15A.](#)

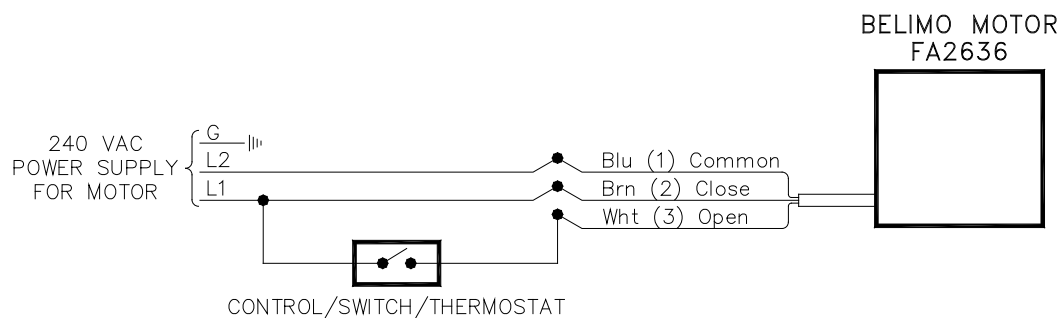
For 120V attach the Neutral wire to the Blu (1) "Common" wire. Connect the Hot wire to the Brn (2) "Close" wire. Tap off the same Hot wire and connect it to a Control/Switch/Thermostat, then from there connect the Hot wire to the Wht (3) "Open" wire.

For 240V attach the Hot wire "L2" to the Blu (1) "Common" wire. Connect the Hot wire "L1" to the Brn (2) "Close" wire. Tap off the same Hot wire "L1" and connect it to a Control/Switch/Thermostat, then from there connect the Hot wire to the Wht (3) "Open" wire.

In this configuration, the motor will always be in a "Close" state until the Control/Switch/Thermostat, allows power through to the Wht (3) "Open" wire, then the motor will "Open". If after wiring is complete, the Motor runs in the wrong direction turn the selector switch on the front of the motor to the opposite position. [See Figure 15C.](#)



120V Wiring



240V Wiring

Figure 15A

**Step 15B**

Provide overload protection and disconnect as required.

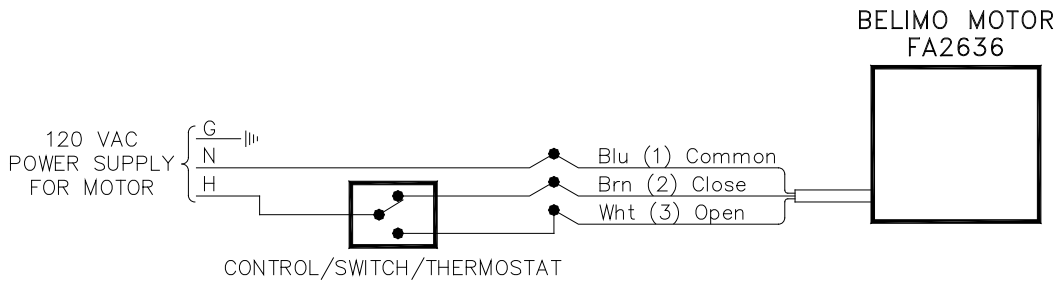
Motors may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

For Floating Point operation make electrical connection as shown. *See Figure 15B.*

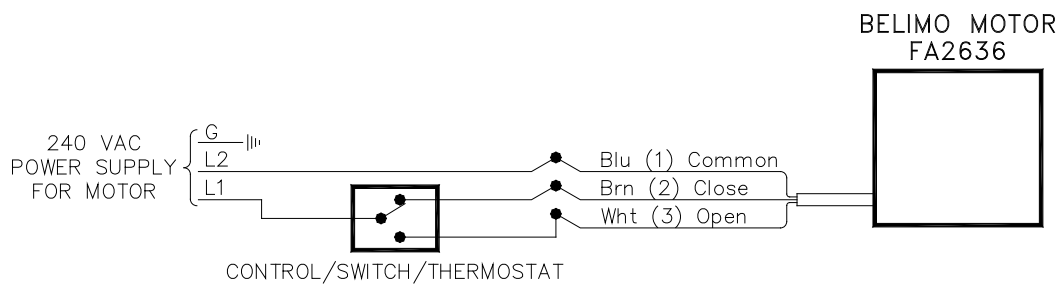
For 120V attach the Neutral wire to the Blu (1) "Common" wire. Connect the Hot wire to the Control/Switch/Thermostat, then from the Control connect a "Close" wire to Brn (2) "Close" wire and connect a "Open" wire to the Wht (3) "Open" wire.

For 240V attach the Hot wire "L2" to the Blu (1) "Common" wire. Connect the Hot wire "L1" to the Control/Switch/Thermostat, then from the Control connect a "Close" wire to Brn (2) "Close" wire and connect a "Open" wire to the Wht (3) "Open" wire.

In this configuration, when called for the Control/Switch/Thermostat will send a "Close" signal to the motor and then when called for the Control will send a "Open" signal to the motor. If after wiring is complete, the Motor runs in the wrong direction turn the selector switch on the front of the motor to the opposite position. *See Figure 15C.*



**120V Wiring**



**240V Wiring**

*Figure 15B*



*Figure 15C*

# Operation

# 4.

## 4.1 Operation

### Step 1

Loosen lower Ball Joint on the Push Rod. [See Figure 16.](#)

### Step 2

Run the Motor to its open limit, so that the Crank Arm is furthest out from the shutter. [See Figure 17.](#)

### Step 3

Pull the Push Rod through the lower Ball Joint so the shutter is fully open and tighten the lower Ball Joint Nut.

### Step 4

Run the Motor towards its closed limit, stopping it just after the shutter is fully closed. [See Figure 17.](#)

### Step 5

Loosen and adjust the closed limit so that it is touching the crank arm and retighten. [See Figure 17.](#)

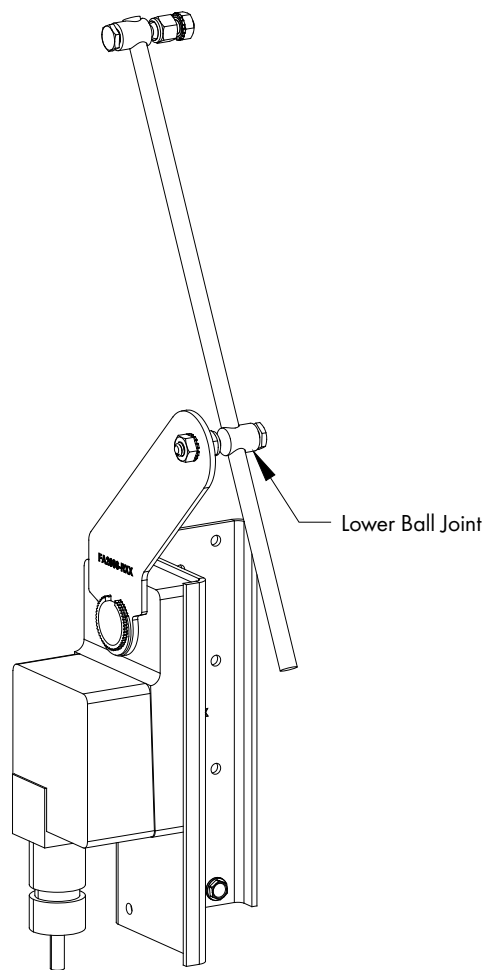


Figure 16

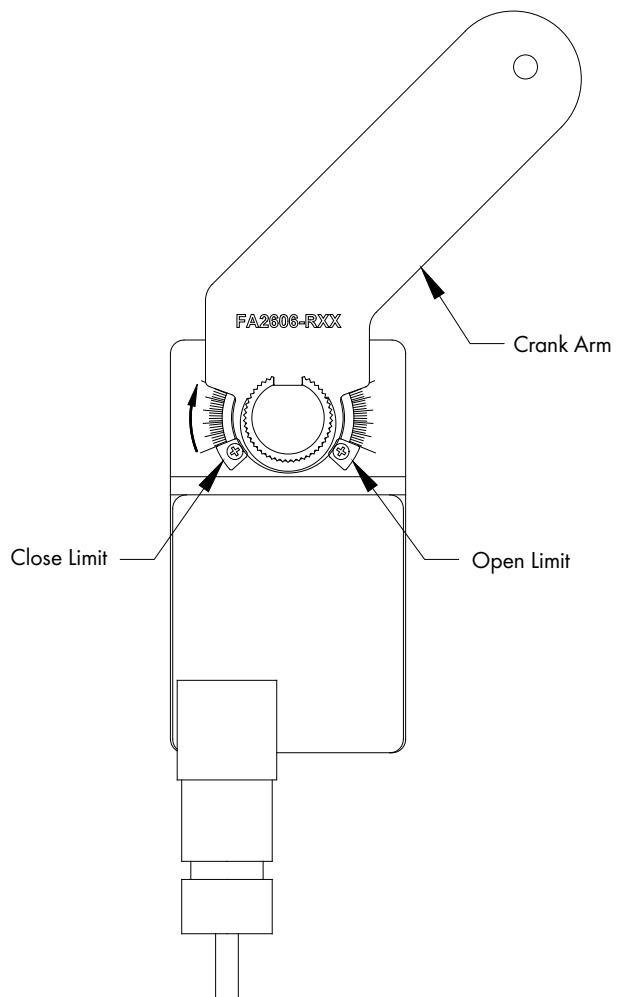
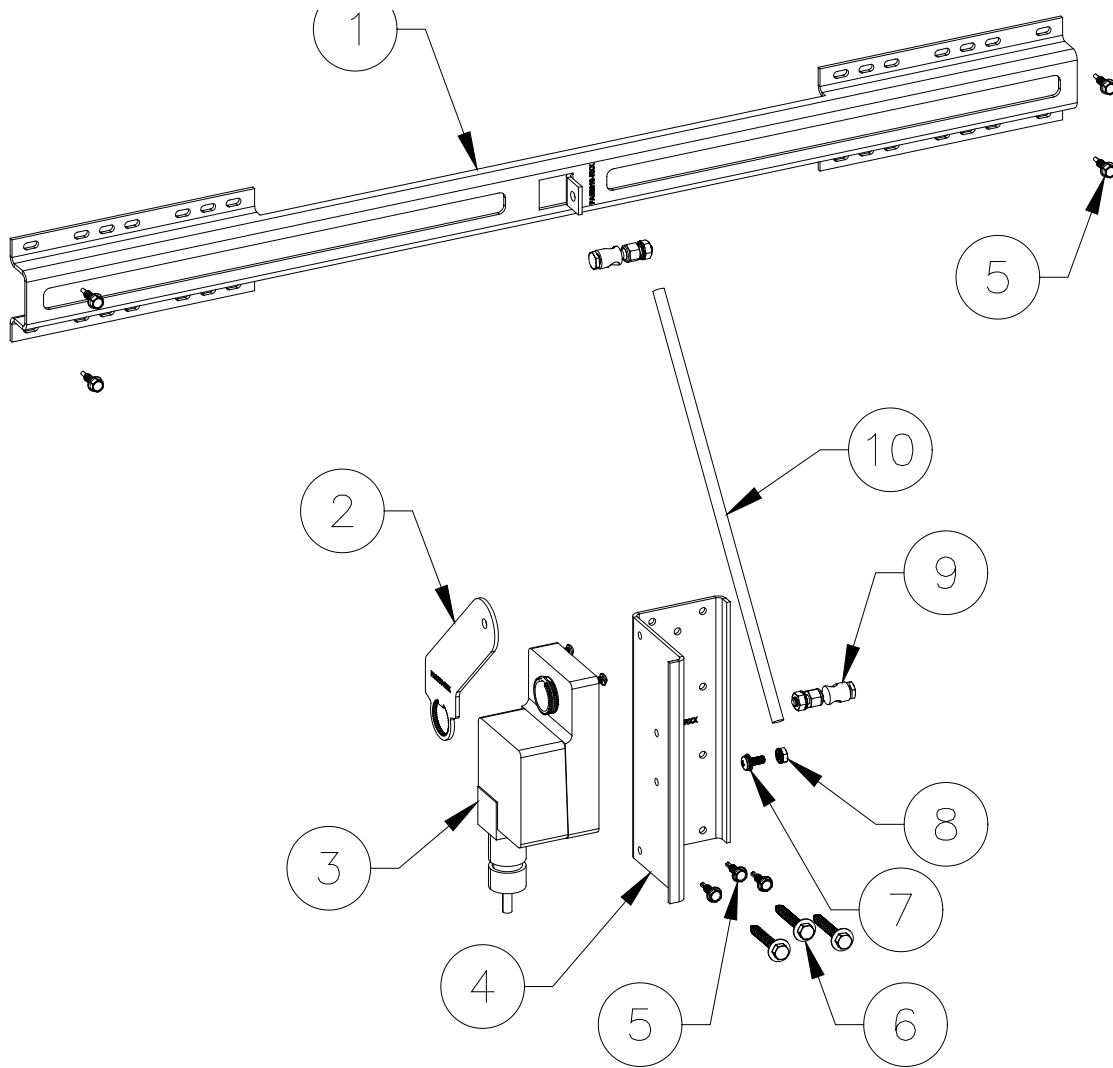


Figure 17

# Exploded View and Parts List

# 5.



Item	Catalog No.	Part Name/Description	Qty.
1	FA2616	2-Panel Bracket,SW Shutter,Belimo,GZ	1
2	FA2606	Crankarm,SW Shutter,Belimo,SS	1
3	FA2636	Motor Only,SW Shutter,12/240V,Belimo	1
4	FA2626	Actuator Mount,SW Shutter,Belimo, GZ	1
5	KS2282	#10-16 x 3/4" TEK Screw,HXWSR,#2Point,SS	10
6	KS1403	#9-15 x 2" Seal Washer Polebarn Screw, ZP	3
7	KS0954	#10-32 x 1/2" SEMS Screw,PHL-PN,SS	1
8	KN1560	#10-32 Keps Nut,SS	1
9	KX2656	1/4"-20 Ball Joint,Swivel,Damper Control,ZP	2
10	FA2646	1/4"Dia. x 12"L. Push Rod,SW Shutter,STL	1

Motor Kit for "SW" Shutter is developed and produced by Munters Corporation, Lansing, Michigan U.S.A. 1-800-227-2376



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