Back Draft Dampers and Shutters

AIR CONDITIONING PRODUCTS COMPANY

Air Conditioning Products Company
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Additional performance data available at www.acpshutters.com
SUBMITTAL
DRAWINGS
Horizontal mount backdraft dampers designed to allow airflow in one direction and to prevent reverse airflow. Models are available for exhaust and supply (intake). (also available for vertical mount applications). Designed for use in roof curbs, duct work, wall collars when using a fan or power roof exhauster. (Do not use with any kitchen exhaust applications)

- 411 Model – exhaust and vertical mount. Sizes range from 08” to 30” square or rectangular. Standard construction or available with 1” flange.
- 413 Model – supply (intake). Sizes range from 08” to 30” square or rectangular. Standard construction or available with 1” flange.

Features:
- Frame
  - Frame is galvanized steel.
  - Conduit knockout provided for ease of electrical hook up.
  - Easy to motorize. (order MTR-611 motor pack)
  - 2” deep frame.
- Blades
  - Blades are 26 gauge mill finish aluminum.
  - Blades open freely to allow full opening and closing.
  - Felt seal on leading edge of blades for quiet closing and better protection from the weather.
  - Nylon bushing and stainless steel pivot pins.
  - Tie rod attached to all blades for simultaneous opening.
  - Spring assist to allow blades to open quickly.
  - For vertical mount applications, blades pivot at top and open against gravity.

Size limitations – Single Panel Only
- Minimum panel size 8” W x 8” H
- Maximum panel size 30” W x 30” H

Ratings
- Maximum recommended velocity is 2,000 FPM
- Pressure – 1.0 in. w.g. – differential pressure (see page 2)
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Flanged frame – exhaust or supply (intake)
- Aluminum flanged frame for exhaust only
- Motor Packs (24V, 115/230V, 208V, 277V and 460V)
- Motor Pack available with end switch (115/230V)
- Motor Pack available in 50 Hz (not UL rated)
- Transformer 460V
- Manual pull chain operated
MOTOR PACKS

MTR-611 Motor pack Optional.

Model MTR-611 Motor Packs are equipped with motor bracket, linkage and mounting hardware, installation instructions and parts list.

Model MTR 611 Motor Packs are designed to be used with Model 411 Backdraft dampers. Field installation required to convert Model 411 backdraft Damper horizontal/vertical mount to motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor Pack</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
<th>Installed Unit Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-611</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41 in.lbs/47 in.lbs</td>
<td>6” 8 1/2” 4 1/2” 7.375”</td>
<td></td>
</tr>
<tr>
<td>MTR-611 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6” 8 1/2” 4 1/2” 7.375”</td>
<td></td>
</tr>
<tr>
<td>MTR-611 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6” 8 1/2” 4 1/2” 7.375”</td>
<td></td>
</tr>
<tr>
<td>MTR-611 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs</td>
<td>6” 8 1/2” 4 1/2” 7.375”</td>
<td></td>
</tr>
<tr>
<td>MTR-611 460V</td>
<td>460V, 60Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6” 8 1/2” 4 1/2” 7.375”</td>
<td></td>
</tr>
<tr>
<td>MTR-611-E</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41 in.lbs/47 in.lbs</td>
<td>6” 8 1/2” 4 1/2” 7.375”</td>
<td></td>
</tr>
</tbody>
</table>

Note: (MTR-611-E includes end switch; 50 Hz versions of above motor packs available but not UL rated).

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.

STANDARD SIZES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Free Area Dimension (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Free Area (Sq. Ft.)</th>
<th>Shipping Weight Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>411-STD 08’</td>
<td>7.75’ x 7.75’</td>
<td>6.125’ x 7.25’</td>
<td>0.42</td>
<td>0.31</td>
<td>2.00</td>
</tr>
<tr>
<td>411-STD 10’</td>
<td>9.75’ x 9.75’</td>
<td>7.125’ x 8.25’</td>
<td>0.66</td>
<td>0.41</td>
<td>2.50</td>
</tr>
<tr>
<td>411-STD 11’</td>
<td>10.75’ x 10.75’</td>
<td>8.50’ x 9.25’</td>
<td>0.80</td>
<td>0.55</td>
<td>3.00</td>
</tr>
<tr>
<td>411-STD 12’</td>
<td>11.75’ x 11.75’</td>
<td>9.125’ x 10.25’</td>
<td>0.96</td>
<td>0.65</td>
<td>3.50</td>
</tr>
<tr>
<td>411-STD 13’</td>
<td>12.75’ x 12.75’</td>
<td>10.125’ x 11.25’</td>
<td>1.13</td>
<td>0.79</td>
<td>4.00</td>
</tr>
<tr>
<td>411-STD 14’</td>
<td>13.75’ x 13.75’</td>
<td>11.125’ x 12.25’</td>
<td>1.31</td>
<td>0.95</td>
<td>4.00</td>
</tr>
<tr>
<td>411-STD 15’</td>
<td>14.75’ x 14.75’</td>
<td>12.125’ x 13.25’</td>
<td>1.51</td>
<td>1.12</td>
<td>4.00</td>
</tr>
<tr>
<td>411-STD 16’</td>
<td>15.75’ x 15.75’</td>
<td>13.125’ x 14.25’</td>
<td>1.72</td>
<td>1.30</td>
<td>4.00</td>
</tr>
<tr>
<td>411-STD 18’</td>
<td>17.75’ x 17.75’</td>
<td>15.125’ x 16.25’</td>
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<td>1.71</td>
<td>4.50</td>
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<tr>
<td>411-STD 19’</td>
<td>18.75’ x 18.75’</td>
<td>16.125’ x 17.25’</td>
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<td>1.93</td>
<td>4.50</td>
</tr>
<tr>
<td>411-STD 20’</td>
<td>19.75’ x 19.75’</td>
<td>17.125’ x 18.25’</td>
<td>2.71</td>
<td>2.17</td>
<td>5.00</td>
</tr>
<tr>
<td>411-STD 22’</td>
<td>21.75’ x 21.75’</td>
<td>19.125’ x 20.25’</td>
<td>3.29</td>
<td>2.69</td>
<td>5.00</td>
</tr>
<tr>
<td>411-STD 23’</td>
<td>22.75’ x 22.75’</td>
<td>20.125’ x 21.25’</td>
<td>3.59</td>
<td>2.97</td>
<td>5.50</td>
</tr>
<tr>
<td>411-STD 24’</td>
<td>23.75’ x 23.75’</td>
<td>21.125’ x 22.25’</td>
<td>3.92</td>
<td>3.26</td>
<td>6.00</td>
</tr>
<tr>
<td>411-STD 26’</td>
<td>25.75’ x 25.75’</td>
<td>23.125’ x 24.25’</td>
<td>4.60</td>
<td>3.89</td>
<td>7.00</td>
</tr>
<tr>
<td>411-STD 28’</td>
<td>27.75’ x 27.75’</td>
<td>25.125’ x 26.25’</td>
<td>5.35</td>
<td>4.58</td>
<td>7.50</td>
</tr>
<tr>
<td>411-STD 30’</td>
<td>29.75’ x 29.75’</td>
<td>27.125’ x 28.25’</td>
<td>6.15</td>
<td>5.32</td>
<td>8.00</td>
</tr>
</tbody>
</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144.

Free Area x FPM = CFM; actual performance may vary.
Horizontal mount backdraft dampers designed to allow airflow in one direction and to prevent reverse airflow. Models are available for exhaust and supply (intake). (also available for vertical mount applications). Designed for use in roof curbs, duct work, wall collars when using a fan or power roof exhauster. (Do not use with any kitchen exhaust applications)

- **611 Model** - exhaust and vertical mount. (Field modifications are necessary for vertical mount via a conversion kit). See chart for standard square sizes. Rectangular sizes are also available upon request. Standard construction or available with a 1” flange.

- **613 Model** - supply (intake). See chart for standard square sizes. Rectangular sizes are available upon request. Standard construction or available with a 1” flange.

**Features:**

- **Frame**
  - Frame is Galvanized Steel.
  - Conduit knockout provided for ease of electrical hook up.
  - Easy to motorize. (order MTR-611 motor pack)
  - 2” deep frame.

- **Blades**
  - Blades are 26 gauge Mill Finish Aluminum with galvanized reinforcement strip.
  - Blades open freely to allow full opening and closing.
  - Felt seal on leading edge of blades for quiet closing and better protection from the weather.
  - Nylon bushings and stainless steel pivot pins
  - Tie rod attached to all blades for simultaneous opening.
  - For vertical mount applications, blades pivot at bottom and fall with gravity.

**Size limitations**

- Minimum panel size 31" W x 31" H
- Maximum panel size 48" W x 60" H
- Multiple panels for sizes over 48" x 60".

**Ratings**

- Maximum recommended velocity is 2,250 FPM
- Pressure - 1.0 in. w.g. - differential pressure
- Temperature - -40 F to 180 F

**Options and Accessories (at additional cost)**

- Flanged frame – exhaust or supply (intake)
- Aluminum flanged frame for exhaust only
- Motor Packs (24V, 115/230V, 208V, 277V and 460V)
- Motor Pack available with end switch (115/230V)
- Motor Pack available in 50 Hz (not UL rated)
- Transformer 460V
- Manual pull chain operated
- Vertical mount conversion kit
MOTOR PACKS

MTR-611 Motor pack Optional. One Motor Pack is required for each panel.

Model MTR-611 Motor Packs are equipped with motor bracket, linkage and mounting hardware, installation instructions and parts list.

Model MTR-611 Motor Packs are designed to be used with Model 611 Backdraft Dampers. Field installation required to convert Model 611 backdraft Damper horizontal/vertical mount to motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor Pack Part Number</th>
<th>Power Supply Required</th>
<th>Running Amps</th>
<th>Stall Torque</th>
<th>Lead Length</th>
<th>Installed Unit Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-611 115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41 in.lbs/47 in.lbs.</td>
<td>6”</td>
<td>8 1/2”</td>
<td>4 1/2”</td>
</tr>
<tr>
<td>MTR-611 24V</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6”</td>
<td>8 1/2”</td>
<td>4 1/2”</td>
</tr>
<tr>
<td>MTR-611 208V</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6”</td>
<td>8 1/2”</td>
<td>4 1/2”</td>
</tr>
<tr>
<td>MTR-611 277V</td>
<td>0.12</td>
<td>50 in.lbs.</td>
<td>6”</td>
<td>8 1/2”</td>
<td>4 1/2”</td>
</tr>
<tr>
<td>MTR-611 460V</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6”</td>
<td>8 1/2”</td>
<td>4 1/2”</td>
</tr>
<tr>
<td>MTR-611-E 115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41 in.lbs/47 in.lbs.</td>
<td>6”</td>
<td>8 1/2”</td>
<td>4 1/2”</td>
</tr>
</tbody>
</table>

Note: (MTR-611-E includes end switch; 50 Hz versions of above motor packs available but not UL rated).

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.

STANDARD SIZES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Free Area Dimension (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Free Area (Sq. Ft.)</th>
<th>Number of Panels</th>
<th>Shipping Weight Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>611-STD 31'</td>
<td>30.75” x 30.75”</td>
<td>27.125” x 29.25”</td>
<td>6.57</td>
<td>5.51</td>
<td>1</td>
<td>9.00</td>
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<tr>
<td>611-STD 32'</td>
<td>31.75” x 31.75”</td>
<td>29.125” x 30.25”</td>
<td>7.00</td>
<td>6.12</td>
<td>1</td>
<td>9.50</td>
</tr>
<tr>
<td>611-STD 33'</td>
<td>32.75” x 32.75”</td>
<td>29.125” x 31.25”</td>
<td>7.45</td>
<td>6.32</td>
<td>1</td>
<td>13.00</td>
</tr>
<tr>
<td>611-STD 34'</td>
<td>33.75” x 33.75”</td>
<td>31.125” x 32.25”</td>
<td>7.91</td>
<td>6.97</td>
<td>1</td>
<td>15.00</td>
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<tr>
<td>611-STD 35'</td>
<td>34.75” x 34.75”</td>
<td>31.125” x 33.25”</td>
<td>8.39</td>
<td>7.19</td>
<td>1</td>
<td>16.00</td>
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<tr>
<td>611-STD 36'</td>
<td>35.75” x 35.75”</td>
<td>33.125” x 34.25”</td>
<td>8.88</td>
<td>7.88</td>
<td>1</td>
<td>17.00</td>
</tr>
<tr>
<td>611-STD 37'</td>
<td>36.75” x 36.75”</td>
<td>33.125” x 35.25”</td>
<td>9.38</td>
<td>8.11</td>
<td>1</td>
<td>18.00</td>
</tr>
<tr>
<td>611-STD 38'</td>
<td>37.75” x 37.75”</td>
<td>35.125” x 36.25”</td>
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<td>8.84</td>
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<td>19.00</td>
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<td>611-STD 40'</td>
<td>39.75” x 39.75”</td>
<td>37.125” x 38.25”</td>
<td>10.97</td>
<td>9.86</td>
<td>1</td>
<td>19.50</td>
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<tr>
<td>611-STD 42'</td>
<td>41.75” x 41.75”</td>
<td>39.125” x 40.25”</td>
<td>12.10</td>
<td>10.94</td>
<td>1</td>
<td>21.00</td>
</tr>
<tr>
<td>611-STD 44'</td>
<td>43.75” x 43.75”</td>
<td>41.125” x 42.25”</td>
<td>13.29</td>
<td>12.07</td>
<td>1</td>
<td>23.00</td>
</tr>
<tr>
<td>611-STD 46'</td>
<td>45.75” x 45.75”</td>
<td>43.125” x 44.25”</td>
<td>14.54</td>
<td>13.25</td>
<td>1</td>
<td>24.50</td>
</tr>
<tr>
<td>611-STD 48'</td>
<td>47.75” x 47.75”</td>
<td>45.125” x 46.25”</td>
<td>15.83</td>
<td>14.49</td>
<td>1</td>
<td>26.00</td>
</tr>
<tr>
<td>611-STD 50'</td>
<td>51.50” x 51.75”</td>
<td>46.25” x 50.25”</td>
<td>18.50</td>
<td>16.14</td>
<td>2</td>
<td>30.00</td>
</tr>
<tr>
<td>611-STD 54'</td>
<td>53.50” x 53.75”</td>
<td>48.25” x 52.25”</td>
<td>19.97</td>
<td>17.51</td>
<td>2</td>
<td>32.00</td>
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<tr>
<td>611-STD 58'</td>
<td>57.50” x 57.75”</td>
<td>52.25” x 56.25”</td>
<td>23.46</td>
<td>20.41</td>
<td>2</td>
<td>33.00</td>
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<td>611-STD 60'</td>
<td>59.50” x 59.75”</td>
<td>54.25” x 58.25”</td>
<td>24.69</td>
<td>21.94</td>
<td>2</td>
<td>34.00</td>
</tr>
</tbody>
</table>

Note: Dimensions are approximate due to normal tolerances in the manufacturing process.
Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144.
Free Area x FPM = CFM; actual performance may vary.

LIMITED WARRANTY

All products manufactured are warranted by Air Conditioning Products Company (ACP) to be free from original defects in workmanship for a period of one year from date of shipment, under conditions of normal use and service. ACP will replace or repair any defective parts upon return to our plant, freight prepaid. This limited warranty will, in no way, include the payment of labor charges for field replacement of defective parts, installation, repairs of adjustments, or any other work done. Back charges will not be accepted for any reason unless ACP has given prior written permission, nor will ACP be responsible for consequential damages of any character, no limited warranty expressed or implied will supersede the foregoing.
Rear flanged vertical mount gravity supply (intake) shutter uses counter balanced blades to minimize wear load on electric fan motor. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Counter balanced blades open with airflow and close by spring-assist when airflow stops. Ideal for belt-driven centrifugal wall ventilators. Recommended for vertical mount supply (intake) applications only.

Features:
Frame
- .062 mill finish 6063T5 or T6 extruded aluminum.
- Staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched 3/16” diameter mounting holes.
- Frame depth is 1-5/8”.
- Flange is 1-3/8”.

Blades
- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength and counter balancing and efficiency.
- Felt seal on leading edge of blades for quiet closing and better protection from the weather.
- Blades will pivot at the bottom and fall with gravity to open. Spring-assist to close.
- Galvanized steel tie-rods connect blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets, and bushings.
- Opens freely to allow full 90 degree opening and closing.

Size limitations
- Minimum size 8” W x 8” H
- Maximum size 50” W x 50” H

Ratings
- Maximum recommended velocity is 2250 FPM of free area.
- Pressure – 1.0 in. w.g. – differential pressure.
- Temperature - -40 F to 180 F.

Options and Accessories (at additional cost)
- Motor Pack (model MTR-611)
- Frame and Blades – polar white finish.
- Custom sizes available in whole inch increments for width and height.

Note: Above dimensions + or - normal tolerance of .0625”
**MOTOR PACKS**

*MTR-611* Motor pack Optional. One Motor Pack is required for each panel.

**Model MTR-611** Motor Packs are equipped with motor bracket, linkage and mounting hardware, installation instructions and parts list.

**Model MTR-611** Motor Packs are designed to be used with Model CWV Automatic Supply (Intake) Wall-Mount Shutters. Field installation is required to convert Model CWV to motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor Pack Part Number</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
<th>Installed Unit Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-611 115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41 in.lbs/47 in.lbs.</td>
<td>6&quot;</td>
<td>8 1/2&quot;</td>
<td>4 1/2&quot;</td>
</tr>
<tr>
<td>MTR-611 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
<td>8 1/2&quot;</td>
</tr>
<tr>
<td>MTR-611 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
<td>8 1/2&quot;</td>
</tr>
<tr>
<td>MTR-611 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs</td>
<td>6&quot;</td>
<td>8 1/2&quot;</td>
</tr>
<tr>
<td>MTR-611 460V</td>
<td>460V, 60Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6&quot;</td>
<td>8 1/2&quot;</td>
</tr>
<tr>
<td>MTR-611-E 115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41 in.lbs/47 in.lbs.</td>
<td>6&quot;</td>
<td>8 1/2&quot;</td>
<td>4 1/2&quot;</td>
</tr>
</tbody>
</table>

Note: (MTR-611-E includes end switch; 50 Hz versions of above motor packs available but not UL rated).

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.

### STANDARD SIZES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width X height)</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Recommend Hole Opening (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Free Area (Sq. Ft.)</th>
<th>Estimated Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWV 08&quot;</td>
<td>8&quot; x 8&quot;</td>
<td>10 3/4&quot; x 10 3/4&quot;</td>
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<td>11&quot; x 11&quot;</td>
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<tr>
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<td>14 3/4&quot; x 14 3/4&quot;</td>
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<td>15 3/4&quot; x 15 3/4&quot;</td>
<td>14&quot; x 14&quot;</td>
<td>1.174</td>
<td>0.877</td>
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<td>21&quot; x 21&quot;</td>
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<td>2.637</td>
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</table>

Note: Dimensions are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144.

Free Area x FPM = CFM; actual performance may vary.
Rear flanged vertical mount gravity exhaust shutter. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial, industrial, agricultural and residential. (Do not use with vane axial or tube axial fans).

Features:

Frame
- 20 gauge galvanized steel.
- Tog-L-Loc and tabbed corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunch oblong mounting holes.

Blades
- 26 gauge 3105 mill finish aluminum.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins and rivets.
- Nylon bushings.

Size limitations – Single Panel Only
- Minimum panel size 8” W x 8” H (see “A” & “B” dimension)
- Maximum panel size 24” W x 24” H (see “A” & “B” dimension)

Ratings
- Maximum recommended velocity is 2,000 FPM
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Custom sizes available in whole inch increments for width and height.
- Stainless steel bushings.
- Gusset plate attached to back of shutter.

LIMITED WARRANTY
All products manufactured are warranted by Air Conditioning Products Company (ACP) to be free from original defects in workmanship for a period of one year from date of shipment, under conditions of normal use and service. ACP will replace or repair any defective parts upon return to our plant, freight prepaid. This limited warranty will, in no way, include the payment of labor charges for field replacement of defective parts, installation, repairs of adjustments, or any other work done. Back charges will not be accepted for any reason unless ACP has given prior written permission, nor will ACP be responsible for consequential damages of any character, no limited warranty expressed or implied will supersede the foregoing.

Manufactured for Air Conditioning Products Co.
30350 Ecorse Road • Romulus, MI 48174
acpshutters.com

Note: Above dimensions + or - normal tolerance of .0625"
Rear flanged vertical mount gravity exhaust shutter uses counter balanced blades to minimize wear load on electric fan motor. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Counter balanced blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial, industrial, agricultural and residential. (Do not use with vane axial or tube axial fans).

Features:
- **Frame**
  - .037 gauge galvanized steel.
  - Tog-L-Loc and tabbed corners provide rigidity and durability.
  - Integrated weather stripping incorporated into frame for additional strength and weather protection.
  - Prepunch oblong mounting holes.
  - Easy to motorize (optional motor pack model MTR-556 SP).

- **Blades**
  - 26 gauge 3105 mill finish aluminum.
  - Galvanized reinforcement strip across top of blade for added strength and counter balancing and efficiency.
  - Felt seal on leading edge of blade for tight closure and quiet operation.
  - Flanged ends of blades provide additional weather seal protection.
  - Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
  - 304 stainless steel pivot pins, rivets and bushings.
  - Opens freely to allow full 90 degree opening and closing.
  - Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

Size limitations – Single Panel Only
- Minimum panel size 10” W x 10” H (See A & B Dimensions)
- Maximum panel size 36” W x 36” H (See A & B Dimensions)
- Frame depth up to 24” is 2.5”

Ratings
- Maximum recommended velocity is 2,500 FPM of free area
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Motor pack (model MTR-556 SP) – refer to voltage options
- Manual pull chain
- Blades - polar white finish
- Custom sizes available in whole inch increments for width and height.
MOTOR PACKS

MTR-556 SP Motor pack Optional.

Model MTR-556 SP Motor Packs are equipped with motor bracket, linkage and mounting hardware, installation instructions and parts list.

Model MTR-556 SP Motor Packs are designed to be used with Model 556-SP EAS-SP, EASR-SP & FGS-SP Exhaust Shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor Pack</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-556 SP</td>
<td>115V/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41/47 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C (104°F) maximum ambient temperature.

Standard Sizes

<table>
<thead>
<tr>
<th>Part No.</th>
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<th>Overall Frame Dimension (width X height)</th>
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<th>Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>556-10”</td>
<td>10” x 10”</td>
<td>13” x 13”</td>
<td>10 1/2” x 10 1/2”</td>
<td>0.69</td>
<td>0.57</td>
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<td>12” x 12”</td>
<td>15” x 15”</td>
<td>12 1/2” x 12 1/2”</td>
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<td>0.79</td>
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<td>16” x 16”</td>
<td>19” x 19”</td>
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<td>1.44</td>
<td>6.50</td>
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<td>556-18”</td>
<td>18” x 18”</td>
<td>21” x 21”</td>
<td>18 1/2” x 18 1/2”</td>
<td>2.25</td>
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<td>556-20”</td>
<td>20” x 20”</td>
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<td>556-24”</td>
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<td>556-30”</td>
<td>30” x 30”</td>
<td>33” x 33”</td>
<td>30 1/2” x 30 1/2”</td>
<td>6.25</td>
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<td>556-36”</td>
<td>36” x 36”</td>
<td>39” x 39”</td>
<td>36 1/2” x 36 1/2”</td>
<td>9.00</td>
<td>7.44</td>
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<tr>
<td>556-39”</td>
<td>39” x 39”</td>
<td>42” x 42”</td>
<td>39 1/2” x 39 1/2”</td>
<td>10.56</td>
<td>8.45</td>
<td>25.00</td>
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</tbody>
</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144. Free Area x FPM = CFM; actual performance may vary.

LIMITED WARRANTY

All products manufactured are warranted by Air Conditioning Products Company (ACP) to be free from original defects in workmanship for a period of one year from date of shipment, under conditions of normal use and service. ACP will replace or repair any defective parts upon return to our plant, freight prepaid. This limited warranty will, in no way, include the payment of labor charges for field replacement of defective parts, installation, repairs of adjustments, or any other work done. Back charges will not be accepted for any reason unless ACP has given prior written permission, nor will ACP be responsible for consequential damages of any character, no limited warranty expressed or implied will supersede the foregoing.

Manufactured for Air Conditioning Products Co.
30350 Ecorse Road • Romulus, MI 48174
acpshutters.com
Rear flanged vertical mount gravity exhaust shutter uses counter balanced blades to minimize wear load on electric fan motor. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Countered balanced blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial, industrial, agricultural and residential. (Do not use with vane axial or tube axial fans).

Features:
Frame
- .037 min. gauge galvanized steel.
- Tog-L-Loc and tabbed corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunch oblong mounting holes.
- Easy to motorize (optional motor pack model MTR-556 DP or MTR-885 DP).

Blades
- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength, counter balancing and efficiency.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Flanged ends of blades provide additional weather seal protection.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.
- Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

Size limitations – Double Panel Only
- Minimum panel size 36” W x 36” H (see “A” & “B” dimension)
- Maximum panel size 60” W x 60” H (see “A” & “B” dimension)

Ratings
- Maximum recommended velocity is 2,500 FPM
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Motor pack (model MTR-556 DP) up to 48” – refer to voltage options
- Motor pack (model MTR-885 DP) over to 48” – refer to voltage options
- Manual pull chain
- Blades - polar white finish
- Custom sizes available in whole inch increments for width and height.
- Face tie rods for additional stability.
**Limited Warranty**

All products manufactured are warranted by Air Conditioning Products company (ACP) to be free from original defects in workmanship for a period of one year from date of shipment, under conditions of normal use and service. ACP will replace or repair any defective parts upon return to our plant, freight prepaid. This limited warranty will, in no way, include the payment of labor charges for field replacement of defective parts, installation, repairs of adjustments, or any other work done. Back charges will not be accepted for any reason unless ACP has given prior written permission, nor will ACP be responsible for consequential damages of any character. No limited warranty expressed or implied will supersede the foregoing.

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**STANDARD SIZES**

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<thead>
<tr>
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<th>Inside Frame Dimension (width X height)</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Recommend Hole Opening (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Est. Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>556 36” DP</td>
<td>36” x 36”</td>
<td>39” x 39”</td>
<td>36 1/2” x 36 1/2”</td>
<td>9.00</td>
<td>7.07</td>
<td>23.00</td>
</tr>
<tr>
<td>556 42” DP</td>
<td>42” x 42”</td>
<td>45” x 45”</td>
<td>42 1/2” x 42 1/2”</td>
<td>12.25</td>
<td>10.25</td>
<td>29.00</td>
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<td>48” x 48”</td>
<td>51” x 51”</td>
<td>48 1/2” x 48 1/2”</td>
<td>16.00</td>
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<td>54” x 54”</td>
<td>57” x 57”</td>
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<td>20.25</td>
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<td>63” x 63”</td>
<td>60 1/2” x 60 1/2”</td>
<td>25.00</td>
<td>20.40</td>
<td>55.00</td>
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</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144. Free Area x FPM = CFM; actual performance may vary.

**MOTOR PACKS**

MTR-556 DP optional motor pack designed for double panel shutter sizes 36” to 48” (Figure 2).

MTR-885 DP optional motor pack designed for double panel shutter sizes 54” and 60” (Figure 1).

Motor packs are equipped with motor, motor bracket, linkage and mounting hardware, installation instructions and parts list. Motor packs are designed to be used with Model 556-DP, EAS-DP, EASR-DP & FGS-DP exhaust shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Motor Pack Part Number</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
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<td>115/230V, 60 Hz</td>
<td>.26/.15</td>
<td>70/79 in.lbs</td>
<td>6”</td>
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<tr>
<td>MTR-556 DP 115/230V, 60 Hz</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41/47 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 24V</td>
<td>24V, 60HZ</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs.</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6”</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.
Rear flanged vertical mount gravity exhaust shutter uses counter balanced blades to minimize wear load on electric fan motor. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Counter balanced blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial, industrial, agricultural and residential. (Do not use with vane axial or tube axial fans).

Features:
Frame
- .062 mill finish 6063T5 or T6 extruded aluminum.
- Welded and/or staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.
- Easy to motorize (optional motor pack model MTR-556 SP).

Blades
- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength and counter balancing and efficiency.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Flanged ends of blades provide additional weather seal protection.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.
- Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

Size limitations – Single Panel Only
- Minimum panel size 10" W x 10" H (See A & B Dimensions)
- Maximum panel size 36" W x 36" H (See A & B Dimensions)
- Frame depth up to 24" is 2.5"

Ratings
- Maximum recommended velocity is 2,500 FPM of free area
- Temperature -40 F to 180 F

Options and Accessories (at additional cost)
- Motor pack (model MTR-556 SP) – refer to voltage options
- Manual pull chain
- Blades - polar white finish
- Custom sizes available in whole inch increments for width and height.

Note: Above dimensions + or - normal tolerance of .0625"
MOTOR PACKS

MTR-556 SP Motor pack Optional.

Model MTR-556 SP Motor Packs are equipped with motor bracket, linkage and mounting hardware, installation instructions and parts list.

Model MTR-556 SP Motor Packs are designed to be used with Model 556-SP, EAS-SP, EASR-SP & FGS-SP Exhaust Shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

SPECIFICATIONS

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<td>41/47 in.lbs</td>
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</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

* Side view of shutter frame and installed motor pack

CLOSED POSITION

OPEN POSITION

*Maximum Operating Dimensions

Standard Sizes

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<th>Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAS-10&quot;</td>
<td>10&quot; x 10&quot;</td>
<td>13&quot; x 13&quot;</td>
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<td>0.57</td>
<td>4.00</td>
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<td>EAS-12&quot;</td>
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<td>15&quot; x 15&quot;</td>
<td>12 1/2&quot; x 12 1/2&quot;</td>
<td>1.00</td>
<td>0.79</td>
<td>4.50</td>
</tr>
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<td>EAS-16&quot;</td>
<td>16&quot; x 16&quot;</td>
<td>19&quot; x 19&quot;</td>
<td>16 1/2&quot; x 16 1/2&quot;</td>
<td>1.78</td>
<td>1.44</td>
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<td>18&quot; x 18&quot;</td>
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<td>18 1/2&quot; x 18 1/2&quot;</td>
<td>2.25</td>
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<td>2.78</td>
<td>2.28</td>
<td>8.50</td>
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<td>EAS-24&quot;</td>
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<td>27&quot; x 27&quot;</td>
<td>24 1/2&quot; x 24 1/2&quot;</td>
<td>4.00</td>
<td>3.32</td>
<td>11.00</td>
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<td>6.25</td>
<td>5.16</td>
<td>15.00</td>
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<td>36&quot; x 36&quot;</td>
<td>39&quot; x 39&quot;</td>
<td>36 1/2&quot; x 36 1/2&quot;</td>
<td>9.00</td>
<td>7.44</td>
<td>19.00</td>
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<tr>
<td>EAS-39&quot;</td>
<td>39&quot; x 39&quot;</td>
<td>42&quot; x 42&quot;</td>
<td>39 1/2&quot; x 39 1/2&quot;</td>
<td>10.56</td>
<td>8.45</td>
<td>25.00</td>
</tr>
</tbody>
</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula:

\[ MD(A+B+(N \times C))/144 \]

Free Area x FPM = CFM; actual performance may vary.

LIMITED WARRANTY

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Manufactured for Air Conditioning Products Co.
30350 Ecorse Road • Romulus, MI 48174
acpshutters.com
Rear flanged vertical mount gravity exhaust shutter uses counter balanced blades to minimize wear load on electric fan motor. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Countered balanced blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial, industrial, agricultural and residential. (Do not use with vane axial or tube axial fans).

Features:

Frame
- .062 mill finish 6063T5 or T6 extruded aluminum.
- Welded and/or staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.
- Easy to motorize (optional motor pack model MTR-556 DP or MTR-885 DP).

Blades
- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength, counter balancing and efficiency.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Flanged ends of blades provide additional weather seal protection.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.
- Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

Size limitations – Double Panel Only
- Minimum panel size 36” W x 36” H (see “A” & “B” dimension)
- Maximum panel size 60” W x 60” H (see “A” & “B” dimension)

Ratings
- Maximum recommended velocity is 2,500 FPM
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Motor pack (model MTR-556 DP) up to 48” – refer to voltage options
- Motor pack (model MTR-885 DP) over to 48” – refer to voltage options
- Manual pull chain
- Blades - polar white finish
- Custom sizes available in whole inch increments for width and height.
- Face tie rods for additional stability.
**MOTOR PACKS**

**MTR-556 DP** optional motor pack designed for double panel shutter sizes 36" to 48" (Figure 2).

**MTR-885 DP** optional motor pack designed for double panel shutter sizes 54" and 60" (Figure 1).

Motor packs are equipped with motor, motor bracket, linkage and mounting hardware, installation instructions and parts list. Motor packs are designed to be used with Model 556-DP, EAS-DP, EASR-DP & FGS-DP exhaust shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-885 DP</td>
<td>115/230V, 60 Hz</td>
<td>.26/.15</td>
<td>70/79 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41/47 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs.</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs.</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

*(Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.)*

**STANDARD SIZES**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width X height)</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Recommend Hole Opening (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Est. Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAS 36&quot; DP</td>
<td>36&quot; x 36&quot;</td>
<td>39&quot; x 39&quot;</td>
<td>36 1/2&quot; x 36 1/2&quot;</td>
<td>9.00</td>
<td>7.07</td>
<td>18.00</td>
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<tr>
<td>EAS 42&quot; DP</td>
<td>42&quot; x 42&quot;</td>
<td>45&quot; x 45&quot;</td>
<td>42 1/2&quot; x 42 1/2&quot;</td>
<td>12.25</td>
<td>10.25</td>
<td>23.00</td>
</tr>
<tr>
<td>EAS 48&quot; DP</td>
<td>48&quot; x 48&quot;</td>
<td>51&quot; x 51&quot;</td>
<td>48 1/2&quot; x 48 1/2&quot;</td>
<td>16.00</td>
<td>12.92</td>
<td>27.50</td>
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<td>EAS 54&quot; DP</td>
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<td>57&quot; x 57&quot;</td>
<td>54 1/2&quot; x 54 1/2&quot;</td>
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<tr>
<td>EAS 60&quot; DP</td>
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<td>60 1/2&quot; x 60 1/2&quot;</td>
<td>25.00</td>
<td>20.40</td>
<td>47.00</td>
</tr>
</tbody>
</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144. Free Area x FPM = CFM; actual performance may vary.

---

**LIMITED WARRANTY**

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Manufactured for Air Conditioning Products Co.
30350 Ecorse Road • Romulus, MI 48174
acpshutters.com
Front flanged vertical mount gravity exhaust shutter uses counter balanced blades to minimize wear load on electric fan motor. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Counter balanced blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount applications only. Application uses includes commercial, industrial, agricultural and residential. (Do not use with vane axial or tube axial fans).

Features:
Frame
- .062 mill finish 6063T5 or T6 extruded aluminum.
- Welded corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.
- Easy to motorize (optional motor pack model MTR-556 SP).

Blades
- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength and counter balancing and efficiency.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Flanged ends of blades provide additional weather seal protection.
- Center mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.
- Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

Size limitations – Single Panel Only
- Minimum panel size 10" W x 10" H (See A & B Dimensions)
- Maximum panel size 36" W x 36" H (See A & B Dimensions)

Ratings
- Maximum recommended velocity is 2,500 FPM of free area
- Temperature -40 F to 180 F

Options and Accessories (at additional cost)
- Motor pack (model MTR-556 SP) – see various voltage offerings
- Manual pull chain
- Blades - polar white finish
- Custom sizes available in whole inch increments for width and height.
MOTOR PACKS

MTR-556 SP Motor pack Optional.

Model MTR-556 SP Motor Packs are equipped with motor bracket, linkage and mounting hardware, installation instructions and parts list.

Model MTR-556 SP Motor Packs are designed to be used with Model 556-SP, EAS-SP, EASR-SP & FGS-SP Exhaust Shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor Pack Part Number</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-556 SP</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41/47 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs.</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 SP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated. (*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.

Standard Sizes

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width X height)</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Recommend Hole Opening (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
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<td>21&quot; x 21&quot;</td>
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<td>2.25</td>
<td>1.82</td>
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<td>23&quot; x 23&quot;</td>
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<td>2.78</td>
<td>2.28</td>
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<td>39 1/2&quot; x 39 1/2&quot;</td>
<td>10.56</td>
<td>8.45</td>
<td>25.00</td>
</tr>
</tbody>
</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144. Free Area x FPM = CFM; actual performance may vary.

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Features:
Frame
- .062 mill finish 6063T5 or T6 extruded aluminum.
- Welded and/or staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.
- Easy to motorize (optional motor pack model MTR-556 DP or MTR-885 DP).

Blades
- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength, counter balancing and efficiency.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Flanged ends of blades provide additional weather seal protection.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.
- Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

Size limitations – Double Panel Only
- Minimum panel size 36” W x 36” H (see “A” & “B” dimension)
- Maximum panel size 60” W x 60” H (see “A” & “B” dimension)

Ratings
- Maximum recommended velocity is 2,500 FPM
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Motor pack (model MTR-556 DP) up to 48” – refer to voltage options
- Motor pack (model MTR-885 DP) over to 48” – refer to voltage options
- Manual pull chain
- Blades - polar white finish
- Custom sizes available in whole inch increments for width and height.
- Face tie rods for additional stability.
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---

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</thead>
<tbody>
<tr>
<td>EASR 36&quot; DP</td>
<td>36&quot; x 36&quot;</td>
<td>39&quot; x 39&quot;</td>
<td>36 1/2&quot; x 36 1/2&quot;</td>
<td>9.00</td>
<td>7.07</td>
<td>18.00</td>
</tr>
<tr>
<td>EASR 42&quot; DP</td>
<td>42&quot; x 42&quot;</td>
<td>45&quot; x 45&quot;</td>
<td>42 1/2&quot; x 42 1/2&quot;</td>
<td>12.25</td>
<td>10.25</td>
<td>23.00</td>
</tr>
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<td>EASR 48&quot; DP</td>
<td>48&quot; x 48&quot;</td>
<td>51&quot; x 51&quot;</td>
<td>48 1/2&quot; x 48 1/2&quot;</td>
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<td>12.92</td>
<td>27.50</td>
</tr>
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<td>EASR 54&quot; DP</td>
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<td>57&quot; x 57&quot;</td>
<td>54 1/2&quot; x 54 1/2&quot;</td>
<td>20.25</td>
<td>17.01</td>
<td>39.00</td>
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<td>EASR 60&quot; DP</td>
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<td>63&quot; x 63&quot;</td>
<td>60 1/2&quot; x 60 1/2&quot;</td>
<td>25.00</td>
<td>20.40</td>
<td>47.00</td>
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</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144. Free Area x FPM = CFM; actual performance may vary.

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**Specifications**

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<th>Motor Pack</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-885 DP</td>
<td>115/230V, 60 Hz</td>
<td>.26/.15</td>
<td>70/79 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41/47 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs.</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.

---

**Motor Packs**

**MTR-556 DP** optional motor pack designed for double panel shutter sizes 36" to 48" (Figure 2).

**MTR-885 DP** optional motor pack designed for double panel shutter sizes 54" and 60" (Figure 1).

Motor packs are equipped with motor, motor bracket, linkage and mounting hardware, installation instructions and parts list. Motor packs are designed to be used with Model 556-DP, EAS-DR, EAS-DR & FGS-DR exhaust shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

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**Model EASR-DP**

*Side view of shutter frame and installed motor pack*

---

**Closed Position**

**Open Position**

*Maximum Operating Dimensions*

---

**Figure 1**

---

**Figure 2**

*Maximum Operating Dimensions*

---

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144. Free Area x FPM = CFM; actual performance may vary.
Rear flanged vertical mounted gravity exhaust shutter uses extruded aluminum blades for high velocity air flow requirements. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Blades open with airflow and close by gravity when airflow stops. Ideal for direct- or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial and industrial. (Do not use with vane axial or tube axial fans).

Features:
Frame
- .062 mill finish 6063T5/6 extruded aluminum.
- Staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.

Blades
- .080 mill finish 6063T5/6 extruded aluminum.
- Stainless steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot screws, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.

Size limitations – Single Panel Only
- Minimum panel size 12” W x 12” H (See A & B Dimensions)
- Maximum panel size 36” W x 36” H (See A & B Dimensions)

Ratings
- Maximum recommended velocity is 3,250 FPM of free area
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Custom sizes available in whole inch increments for width and height.

Standard Sizes

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width x height)</th>
<th>Overall Frame Dimension (width x height)</th>
<th>Recommend Hole Opening (width x height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAS-HDGS 12’</td>
<td>12” x 12”</td>
<td>15” x 15”</td>
<td>12 1/2” x 12 1/2”</td>
<td>1.00</td>
<td>0.79</td>
<td>6.00</td>
</tr>
<tr>
<td>EAS-HDGS 16’</td>
<td>16” x 16”</td>
<td>19” x 19”</td>
<td>16 1/2” x 16 1/2”</td>
<td>1.78</td>
<td>1.44</td>
<td>8.00</td>
</tr>
<tr>
<td>EAS-HDGS 18’</td>
<td>18” x 18”</td>
<td>21” x 21”</td>
<td>18 1/2” x 18 1/2”</td>
<td>2.25</td>
<td>1.82</td>
<td>10.00</td>
</tr>
<tr>
<td>EAS-HDGS 20’</td>
<td>20” x 20”</td>
<td>23” x 23”</td>
<td>20 1/2” x 20 1/2”</td>
<td>2.78</td>
<td>2.28</td>
<td>12.00</td>
</tr>
<tr>
<td>EAS-HDGS 24’</td>
<td>24” x 24”</td>
<td>27” x 27”</td>
<td>24 1/2” x 24 1/2”</td>
<td>4.00</td>
<td>3.32</td>
<td>15.00</td>
</tr>
<tr>
<td>EAS-HDGS 30’</td>
<td>30” x 30”</td>
<td>33” x 33”</td>
<td>30 1/2” x 30 1/2”</td>
<td>6.25</td>
<td>5.16</td>
<td>20.00</td>
</tr>
<tr>
<td>EAS-HDGS 36’</td>
<td>36” x 36”</td>
<td>39” x 39”</td>
<td>36 1/2” x 36 1/2”</td>
<td>9.00</td>
<td>7.07</td>
<td>26.00</td>
</tr>
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</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process.
Estimated Free Area calculation is based upon the following formula: MD(2A+B+ (N X C))/144. Free Area x FPM = CFM; actual performance may vary.

LIMITED WARRANTY
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Rear flanged vertical mounted gravity exhaust shutter uses extruded aluminum blades for high velocity air flow requirements. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Blades open with airflow and close by gravity when airflow stops. Ideal for direct- or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial and industrial. (Do not use with vane axial or tube axial fans).

Features:
- **Frame**
  - .062 mill finish 6063T5/6 extruded aluminum.
  - Staked corners provide rigidity and durability.
  - Integrated weather stripping incorporated into frame for additional strength and weather protection.
  - Prepunched oblong mounting holes.

- **Blades**
  - .080 mill finish 6063T5/6 extruded aluminum.
  - Stainless steel tie-rod connects blades for uniform opening and closing.
  - 304 stainless steel pivot screws, rivets and bushings.
  - Opens freely to allow full 90 degree opening and closing.

Size limitations – Double Panel Only
- Minimum panel size 42" W x 42" H (see “A” & “B” dimension)
- Maximum panel size 48" W x 48" H (see “A” & “B” dimension)

Ratings
- Maximum recommended velocity is 3,250 FPM of free area
- Temperature -40 F to 180 F

Options and Accessories (at additional cost)
- Custom sizes available in whole inch increments for width and height.

### STANDARD SIZES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width X height)</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Recommend Hole Opening (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Est. Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAS-HDGS 42&quot; DP</td>
<td>42&quot; x 42&quot;</td>
<td>45&quot; x 45&quot;</td>
<td>42 1/2&quot; x 42 1/2&quot;</td>
<td>12.25</td>
<td>10.25</td>
<td>31.00</td>
</tr>
<tr>
<td>EAS-HDGS 48&quot; DP</td>
<td>48&quot; x 48&quot;</td>
<td>51&quot; x 51&quot;</td>
<td>48 1/2&quot; x 48 1/2&quot;</td>
<td>16.00</td>
<td>12.92</td>
<td>40.00</td>
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</tbody>
</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144. Free Area x FPM = CFM; actual performance may vary.

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Manufactured for Air Conditioning Products Co.
30350 Ecorse Road • Romulus, MI 48174
acpsutters.com
Fiberglass rear flanged vertical mount gravity exhaust shutter is designed for areas where corrosion is a known problem. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial, industrial, and agricultural. *(Do not use with vane axial or tube axial fans).*

**Features:**

**Frame**
- Fiberglass pultrusion.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.
- Easy to motorize (optional motor pack model MTR-556 SP).

**Blades**
- Fiberglass pultrusion.
- Center-mounted stainless steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel screws, pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.

**Size limitations – Single Panel Only**
- Minimum panel size 10” W x 10” H (See A & B Dimensions)
- Maximum panel size 36” W x 36” H (See A & B Dimensions)

**Ratings**
- Maximum recommended velocity is 2,500 FPM
- Temperature - -40 F to 180 F

**Options and Accessories (at additional cost)**
- Motor pack (model MTR-556 SP) – refer to voltage options
- Manual pull chain
- Custom sizes available in whole inch increments for width and height.

Note: Above dimensions + or - normal tolerance of .0625”
MOTOR PACKS

MTR-556 SP Motor pack Optional.

Model MTR-556 SP Motor Packs are equipped with motor bracket, linkage and mounting hardware, installation instructions and parts list.

Model MTR-556 SP Motor Packs are designed to be used with Model 556-SP, EAS-SP, EASR-SP & FGS-SP Exhaust Shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

Model MTR-556 SP required modification for use with Model FGS-SP. Refer to Fiberglass Wall Shutter modification instruction sheet.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor Pack</th>
<th>Power Supply</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-556 SP</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41/47 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 SP 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 SP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 SP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 SP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6”</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C (104°F) maximum ambient temperature.

Standard Sizes

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width X height)</th>
<th>Overall Frame Dimension (width X height)</th>
<th>Recommend Hole Opening (width X height)</th>
<th>Face Area (Sq. Ft.)</th>
<th>Est. Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGS 10’</td>
<td>10” x 10”</td>
<td>13” x 13”</td>
<td>10 1/2” x 10 1/2”</td>
<td>0.69</td>
<td>0.57</td>
<td>3.50</td>
</tr>
<tr>
<td>FGS 12’</td>
<td>12” x 12”</td>
<td>15” x 15”</td>
<td>12 1/2” x 12 1/2”</td>
<td>1.00</td>
<td>0.79</td>
<td>5.50</td>
</tr>
<tr>
<td>FGS 16’</td>
<td>16” x 16”</td>
<td>19” x 19”</td>
<td>16 1/2” x 16 1/2”</td>
<td>1.78</td>
<td>1.44</td>
<td>6.00</td>
</tr>
<tr>
<td>FGS 18’</td>
<td>18” x 18”</td>
<td>21” x 21”</td>
<td>18 1/2” x 18 1/2”</td>
<td>2.25</td>
<td>1.82</td>
<td>7.50</td>
</tr>
<tr>
<td>FGS 20’</td>
<td>20” x 20”</td>
<td>23” x 23”</td>
<td>20 1/2” x 20 1/2”</td>
<td>2.78</td>
<td>2.28</td>
<td>8.50</td>
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<tr>
<td>FGS 24’</td>
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<td>24 1/2” x 24 1/2”</td>
<td>4.00</td>
<td>3.32</td>
<td>11.00</td>
</tr>
<tr>
<td>FGS 30’</td>
<td>30” x 30”</td>
<td>33” x 33”</td>
<td>30 1/2” x 30 1/2”</td>
<td>6.25</td>
<td>5.16</td>
<td>15.00</td>
</tr>
<tr>
<td>FGS 36’</td>
<td>36” x 36”</td>
<td>39” x 39”</td>
<td>36 1/2” x 36 1/2”</td>
<td>9.00</td>
<td>7.44</td>
<td>20.00</td>
</tr>
</tbody>
</table>

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

Estimated Free Area calculation is based upon the following formula: MD(A+B+ (N x C))/144.

Free Area x FPM = CFM; actual performance may vary.

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Features:

Frame
- Fiberglass pultrusion.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.
- Easy to motorize (optional motor pack model MTR-556 DP or MTR-885 DP).

Blades
- Fiberglass pultrusion.
- Center-mounted stainless steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel screws, pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.

Size limitations – Double Panel Only
- Minimum panel size 36" W x 36" H (See A & B Dimensions)
- Maximum panel size 60" W x 60" H (See A & B Dimensions)

Ratings
- Maximum recommended velocity is 2,500 FPM
- Temperature - -40 F to 180 F

Options and Accessories (at additional cost)
- Motor pack (model MTR-556 DP) up to 48” – refer to voltage options
- Motor pack (model MTR-885 DP) over 48” – refer to voltage options
- Manual pull chain
- Custom sizes available in whole inch increments for width and height.
MOTOR PACKS

**MTR-556 DP** optional motor pack designed for double panel shutter sizes 36” to 48” (Figure 1).

**MTR-885 DP** optional motor pack designed for double panel shutter sizes 54” and 60” (Figure 2).

Motor packs are equipped with motor, motor bracket, linkage and mounting hardware, installation instructions and parts list. Motor packs are designed to be used with Model 556-DP, EAS-DP, EASR-DP & FGS-DP exhaust shutters. Field installation required to convert motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure.

Motor pack modification required for use with Model FGS-DP. Refer to Fiberglass Wall Shutter modification instruction sheet.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Motor Pack Part Number</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-885 DP</td>
<td>115/230V, 60 Hz</td>
<td>.26/.15</td>
<td>70/79 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP</td>
<td>115/230V, 60 Hz</td>
<td>.20/.14</td>
<td>41/47 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 24V</td>
<td>24V, 60Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs.</td>
<td>6”</td>
</tr>
<tr>
<td>MTR-556 DP 460V</td>
<td>460V, 60Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6”</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.

**STANDARD SIZES**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width X height)</th>
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<th>Est. Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGS 36” DP</td>
<td>36” x 36”</td>
<td>39” x 39”</td>
<td>36 1/2” x 36 1/2”</td>
<td>9.00</td>
<td>7.07</td>
<td>23.00</td>
</tr>
<tr>
<td>FGS 42” DP</td>
<td>42” x 42”</td>
<td>45” x 45”</td>
<td>42 1/2” x 42 1/2”</td>
<td>12.25</td>
<td>10.25</td>
<td>28.00</td>
</tr>
<tr>
<td>FGS 48” DP</td>
<td>48” x 48”</td>
<td>51” x 51”</td>
<td>48 1/2” x 48 1/2”</td>
<td>16.00</td>
<td>12.92</td>
<td>35.00</td>
</tr>
<tr>
<td>FGS 54” DP</td>
<td>54” x 54”</td>
<td>57” x 57”</td>
<td>54 1/2” x 54 1/2”</td>
<td>20.25</td>
<td>17.01</td>
<td>42.00</td>
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<tr>
<td>FGS 60” DP</td>
<td>60” x 60”</td>
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<td>25.00</td>
<td>20.40</td>
<td>50.00</td>
</tr>
</tbody>
</table>

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All stainless steel rear flanged vertical mount gravity exhaust shutter. Shutter is designed to allow horizontal airflow in one direction and to prevent reverse airflow and provide protection from environmental elements when airflow stops. Blades open with airflow and close by gravity when airflow stops. Ideal for direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only. Application uses includes commercial, industrial, and agricultural. (Do not use with vane axial or tube axial fans).

Features:
- **Frame**
  - .039 min. gauge 304 stainless steel.
  - Welded frame provide rigidity and durability.
  - Integrated weather stripping incorporated into frame for additional strength and weather protection.
  - Prepunch oblong mounting holes.
- **Blades**
  - .016 gauge 304 stainless steel.
  - Stainless steel reinforcement rod fasten blades to frame for added strength.
  - Center-mounted stainless steel tie-rod connects blades for uniform opening and closing on face of the unit.
  - 304 stainless steel rods, rivets and bushings.
  - Opens freely to allow full 90 degree opening and closing.

**Size limitations – Single/Double Panel Only**
- Minimum panel size 10” W x 10” H (See A & B Dimensions)
- Maximum panel size 36” W x 36” H (See A & B Dimensions)

**Ratings**
- Maximum recommended velocity is 2,500 FPM
- Temperature - -40 F to 180 F

**Standard Sizes**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inside Frame Dimension (width X height)</th>
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<th>Free Area (Sq. Ft.)</th>
<th>Est. Shipping Weight</th>
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</thead>
<tbody>
<tr>
<td>304S10”</td>
<td>10” x 10”</td>
<td>13” x 13”</td>
<td>10 1/2” x 10 1/2”</td>
<td>0.69</td>
<td>0.49</td>
<td>3.50</td>
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<td>304S12”</td>
<td>12” x 12”</td>
<td>15” x 15”</td>
<td>12 1/2” x 12 1/2”</td>
<td>1.00</td>
<td>0.82</td>
<td>4.50</td>
</tr>
<tr>
<td>304S16”</td>
<td>16” x 16”</td>
<td>19” x 19”</td>
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<td>1.78</td>
<td>1.51</td>
<td>6.00</td>
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<td>18” x 18”</td>
<td>21” x 21”</td>
<td>18 1/2” x 18 1/2”</td>
<td>2.25</td>
<td>1.91</td>
<td>7.00</td>
</tr>
<tr>
<td>304S20”</td>
<td>20” x 20”</td>
<td>23” x 23”</td>
<td>20 1/2” x 20 1/2”</td>
<td>2.78</td>
<td>2.41</td>
<td>8.50</td>
</tr>
<tr>
<td>304S24”</td>
<td>24” x 24”</td>
<td>27” x 27”</td>
<td>24 1/2” x 24 1/2”</td>
<td>4.00</td>
<td>3.25</td>
<td>11.50</td>
</tr>
<tr>
<td>304S30”</td>
<td>30” x 30”</td>
<td>33” x 33”</td>
<td>30 1/2” x 30 1/2”</td>
<td>6.25</td>
<td>5.44</td>
<td>16.00</td>
</tr>
<tr>
<td>304S36”</td>
<td>36” x 36”</td>
<td>39” x 39”</td>
<td>36 1/2” x 36 1/2”</td>
<td>9.00</td>
<td>7.69</td>
<td>21.00</td>
</tr>
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Manufactured for Air Conditioning Products Co.
30350 Ecorshe Road • Romulus, MI 48174
acpsshutters.com
Installation Instructions for Dampers for Roof Exhausters - Horizontal Mounted

Model 411 Automatic
Model 411 with Motor Kit for motor operated
(Not pictured)

Model 611 Automatic
Model 611 with Motor Kit for motor operated
(Not pictured)

**EXHAUST ONLY**

**DO NOT FORCE DAMPER IN OPENING**

We recommend damper not be mounted closer to the fan than 1/3 the diameter of the fan blade.

1. Do not put your hand or arm through the damper blades when installing damper in opening.

2. Blades must operate freely when installed.

3. Mount damper in level position, avoid twisting damper frame.

4. In case of uneven mounting surface or binding of blades, leave mounting screws slightly loose.

**IMPORTANT:** When wiring motor be sure line voltage is same as motor voltage.

---

**Model 411 Backdraft Damper**

**HORIZONTAL MOUNTING**

**VERTICAL MOUNTING**

REMOVE THIS SPRING AND DISCARD FOR VERTICAL MOUNT DAMPER AS SHOWN IN FIGURE 3

MOUNT DAMPER IN VERTICAL POSITION AS SHOWN

AIR FLOW

Figure 2

Figure 3

Figure 1 - Roof Mount

Figure 2

Figure 3

Ventilator (Not Supplied)

Curb (Not Supplied)

Damper is Optional Flanged Model

Air Flow

HD002 0594
Rev 0208
Installation Instructions for Dampers for Roof Ventilators
Horizontal Mounted Air Intake Shutter

Model 613 Automatic
Model 613-M Manual (Not Pictured)
Model 413 Automatic (Not Pictured)
Model 413-M Manual (Not Pictured)

DO NOT FORCE SHUTTER IN OPENING

We recommend shutter not be mounted closer to the fan than $\frac{1}{3}$ the diameter of the fan blade.

1. Do not put your hand or arm through the damper blades when installing shutter in opening.
2. Blades must operate freely when installed.
3. Mount shutter in level position, avoid twisting shutter frame.
4. In case of uneven mounting surface or binding of blades, leave mounting screws slightly loose.

IMPORTANT: When wiring motor be sure line voltage is same as motor voltage.
Description

Instruction sheet to install backdraft damper Model 611 over 50” square when multiple panels are used. FIELD ASSEMBLY REQUIRED.

Note: Backdraft dampers are designed to provide an effective seal against undesired backdraft while also minimizing the load on the fan. As such, proper care is required in the unpacking, handling, and installation of the product.

Installation

1. Carefully lift dampers from packaging by the frame. DO NOT lift using louvers or tie rods.
2. Identify inner frame sides by locating pre-punched and aligned mounting holes. Louvers will operate in the same direction for each panel.
3. Align pre-punched mounting holes. Install screws (not provided) into holes, making sure screws do not obstruct the movement of the louvers.
   Note: 8-32 x 5/16 screws and locknuts are recommended.
4. Place the dampers into the opening making sure the units are square, level, and free of obstruction or binding.
5. Dampers may require structural supports (by others).
6. If motorizing, one motor pack is required for each panel (MTR-611).

CRITICAL: Make sure assembly is free of obstruction, binding, twisting, stretching, squeezing, etc, as these anomalies will prevent the proper operation of the installed and assembled damper.

LIMITED WARRANTY

All products manufactured are warranted by Air Conditioning Products Company (ACP) to be free from original defects in workmanship for a period of one year from date of shipment, under conditions of normal use and service. ACP will replace or repair any defective parts upon return to our plant, freight prepaid. This limited warranty will, in no way, include the payment of labor charges for field replacement of defective parts, installation, repairs of adjustments, or any other work done. Back charges will not be accepted for any reason unless ACP has given prior written permission, nor will ACP be responsible for consequential damages of any character; no limited warranty expressed or implied will supersede the foregoing.

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1. Upon receiving shutter/dampers, check for both obvious and hidden damage. If damage is found, record all necessary information on the bill of lading and file a claim with the freight carrier. Check to make sure all parts of the shipments are accounted for.

2. Proper handling of shutter/damper during installation is essential to ensure normal operation.
   • Lift or handle the damper by the frame, do not lift using the blades or linkage. When lifting multiple sections assembled, use sufficient support evenly distributed. Do not drag, apply excessive bending, racking or twisting.
   • Do not install shutter/damper leaning forward or backward.
   • Do not install screws or any other mounting hardware into the shutter/damper frame that will interfere with the shutter/damper blades and prevent them from opening and/or closing properly.
   • Mounting hardware, caulking and other necessary installation materials are not included.
   • Installed shutter/damper must be free of misalignment, such as squeezing, stretching, out of square, racking, twisting, etc... These conditions will prevent the damper from operating properly.

3. When installing a shutter/damper:
   • We recommend the shutter/damper not be mounted closer to the fan than 1/3 the diameter of fan blade.
   • We generally recommend the hole opening to be ½” larger than the inside dimension (ID) of the width and height of the shutter/damper.
   • The shutter/damper frame should be mounted level and squarely on the outside wall. Care should be taken not to twist the shutter/damper frame. Never cover shutter/damper with siding or masonry work. Shutter should be mounted so it can be removed any time in case of damage.
   • Shutter/damper should operate as freely after installation as it did before.
   • Caulking compound is recommended between shutter/damper frame edges and the wall.
   • We recommend cleaning and lubrication shutter/damper at the same time that the fan is lubricated and cleaned.

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READ CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE YOUR CEILING SHUTTER MOTOR! RETAIN INSTRUCTIONS FOR FUTURE REFERENCE!

DESCRIPTION
Your Ceiling Shutter Motor is designed for use with ceiling shutters. Unit automatically opens and closes ceiling shutters when fan motor is activated. The ceiling shutter motor is a single phase motor equipped with motor plate, linkage and mounting hardware (fasteners).

INSTALLATION
Model 610-A, see figures 1, 3 & 4 for reference.
Model 611, see figures 2, 3 & 4 for reference.
1. Using bolt, nut and lock washer provided, fasten motor plate to shutter frame and tighten.
2. Attach motor arm linkage to second hole as show. (Shutter must be in closed position when mounting motor).
3. Make proper wiring connections.
   NOTE: UNIT IS NOT FIELD SERVICABLE AND SHOULD BE REPLACED AS AN ASSEMBLY.

SPECIFICATIONS:

<table>
<thead>
<tr>
<th>MODEL</th>
<th>POWER SUPPLY REQUIRED</th>
<th>RUNNING AMPS</th>
<th>STALL TORQUE</th>
<th>LEAD LENGTH</th>
<th>UNIT DIMENSIONS (+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>610-A</td>
<td>115/230v, 60 Hz</td>
<td>0.26/0.15</td>
<td>35 Inch-lbs.</td>
<td>6'</td>
<td>6 1/8’ 3 1/2’ 2 3/4’</td>
</tr>
<tr>
<td>611</td>
<td>115/230v, 60 Hz</td>
<td>0.26/0.15</td>
<td>35 Inch-lbs.</td>
<td>6'</td>
<td>6 1/8’ 3 1/2’ 2 3/4’</td>
</tr>
</tbody>
</table>

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature. (+) See Figure 1 for Operating Dimensions.
GENERAL SAFETY INFORMATION

1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

2. Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system, by using a separate ground wire connected to the bare metal of the motor frame, or other suitable means.

3. Always disconnect power source before working on or near a motor or its connected load. If the power disconnect point is out-of-sight, lock it in the open position and tag to prevent unexpected application of power.

4. Protect the power cable from coming in contact with sharp objects.

5. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.

6. Make certain that the power source conforms to the requirements of your equipment.

REPLACEMENT PARTS LIST

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60 Hz Motor 120/240V</td>
<td>UL-18-3050</td>
<td>1 ea.</td>
</tr>
<tr>
<td>2</td>
<td>Motor Bracket</td>
<td>50003</td>
<td>1 ea.</td>
</tr>
<tr>
<td>3</td>
<td>Motor Crankarm</td>
<td>50015-A</td>
<td>1 ea.</td>
</tr>
<tr>
<td>4</td>
<td>Return Spring</td>
<td>FPR 556-104</td>
<td>1 ea.</td>
</tr>
<tr>
<td>5</td>
<td>Spring Post With Screw</td>
<td>611-116</td>
<td>1 ea.</td>
</tr>
</tbody>
</table>

LIMITED WARRANTY

All products manufactured are warranted by Air Conditioning Products Company (ACPC) to be free from original defects in workmanship for a period of one year from date of shipment, under conditions of normal use and service. ACPC will replace or repair any defective parts upon return to our plant, freight prepaid. This limited warranty will, in no way, include the payment of labor charges for field replacement of defective parts, installation, repairs of adjustments, or any other work done. Back charges will not be accepted for any reason unless ACPC has given prior written permission, nor will ACPC be responsible for consequential damages of any character, no limited warranty expressed or implied will supersede the foregoing.

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30350 Ecorse Road • Romulus, MI 48174
The single panel exhaust shutter motor pack, model MTR-556 SP is designed to be used with shutter models 556-SP, EAS-SP, EASR-SP, and FGS-SP. Field installation is required to convert gravity exhaust shutter to motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure. This motor pack is equipped with motor, motor bracket, linkage and mounting hardware.

**Installation instructions:**

1. Fasten motor plate loosely to shutter frame. Mounting hole(s) located on frame bottom, except for FGS-SP which is located at frame top. For model EAS-SP and EASR-SP, use “B” hole only. Refer to figure 2.

2. With shutter blades closed and motor arm in closed position, loosen adjustable extension arm connected to motor crankarm.

3. Connect adjustable extension arm to the shutter tie rod and tighten securely. (Note, the extension arm must be on the right side of the tie rod.)

4. Tighten adjustable extension arm that was loosened in step (2) above.

5. Slide the motor bracket plate right or left to align linkage and motor crankarm along side of tie rod. Tighten motor bracket plate securely to frame.

6. Determine power supply voltage and wire motor per appropriate wiring diagram included on instruction sheet.

For the following shutter sizes – 11”, 15”, 19”, 23”, 27” and 31” – discard the adjustable extension arm and use the slotted linkage arm only.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Motor Pack Part Number</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
<th>Installed Unit Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-556 SP</td>
<td>115/230V, 60 Hz</td>
<td>0.20/.14</td>
<td>41/47 in.lbs</td>
<td>6”</td>
<td>7” 5” 3 1/2”</td>
</tr>
<tr>
<td>MTR-556 SP 24V</td>
<td>24V, 60HZ</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6”</td>
<td>7” 5” 3 1/2”</td>
</tr>
<tr>
<td>MTR-556 SP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6”</td>
<td>7” 5” 3 1/2”</td>
</tr>
<tr>
<td>MTR-556 SP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs.</td>
<td>6”</td>
<td>7” 5” 3 1/2”</td>
</tr>
<tr>
<td>MTR-556 SP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6”</td>
<td>7” 5” 3 1/2”</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C, (104°F) maximum ambient temperature.
GENERAL SAFETY INFORMATION
1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
2. Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system, by using a separate ground wire connected to the green wire in the motor junction box.
3. Always disconnect power source before working on or near a motor or its connected load. If the power disconnect point is out-of-sight, lock it in the open position and tag to prevent unexpected application of power.
4. Protect the power cable from coming in contact with sharp objects.
5. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.
6. Make certain that the power source conforms to the requirements of your equipment.

REPLACEMENT PARTS LIST

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60Hz Motor 120/240V</td>
<td>UL-193050</td>
<td>1 ea.</td>
</tr>
<tr>
<td>2</td>
<td>Motor Crankarm Linkage</td>
<td>Linkage</td>
<td>1 ea.</td>
</tr>
<tr>
<td>3</td>
<td>Motor Bracket, Nut &amp; Bolts</td>
<td>3239</td>
<td>1 ea.</td>
</tr>
<tr>
<td>4</td>
<td>Motor Arm Stop</td>
<td>50010</td>
<td>1 ea.</td>
</tr>
<tr>
<td>5</td>
<td>Return Spring FRP556-104</td>
<td>1 ea.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Motor Arm Rubber Stop</td>
<td>26067</td>
<td>1 ea.</td>
</tr>
<tr>
<td>7</td>
<td>Spring Bracket</td>
<td>50011</td>
<td>1 ea.</td>
</tr>
</tbody>
</table>

FIGURE 2– Attaching Motor Plate

FIGURE 3 – Wiring Diagram – 120V, 60 Hz

FIGURE 4 – Wiring Diagram – 240V, 60 Hz

FIGURE 5 – Wiring Diagram – 24V; 480V, 60 Hz; 277V, 60 Hz; 208V, 60 Hz

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READ INSTRUCTIONS BELOW CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE SHUTTER MOTOR. RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

The double panel exhaust shutter motor pack, model MTR-556 DP is designed to be used with shutter models 556-DP, EAS-DP, EASR-DP and FGS-DP. Field installation is required to convert gravity exhaust shutter to motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure. This motor pack is equipped with motor, motor bracket, linkage and mounting hardware.

**Installation instructions:**

1. Fasten the motor bracket to the center mullion bar. Be sure that the motor is at the bottom of the frame as far as possible. Tighten the motor bracket using motor bracket screws provided.

2. Loosen the slide adjustment nuts on the yoke and spread the slide adjustment bars out equally to reach the tie rods so that the threaded rod is in the center of the mullion bar. (Refer to Figure 2 for parts breakdown)

3. Fasten the yoke clips to the outside of the tie rods and tighten the yoke clips and the slide adjustment nuts to the yoke on both sides.

4. With the motor arm up against the rubber stop and the shutter closed tight, adjust the nuts on the threaded rod to yoke bracket and tighten.

5. Determine power supply voltage and wire motor per appropriate wiring diagram included on instruction sheet.

---

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor Pack Part Number</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-556 DP 115/230V, 60 Hz</td>
<td>0.20/0.14</td>
<td>41/47 in.lbs</td>
<td>6&quot;</td>
<td></td>
</tr>
<tr>
<td>MTR-556 DP 24V</td>
<td>24V, 60 Hz</td>
<td>1.02</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 208V</td>
<td>208V, 60Hz</td>
<td>0.10</td>
<td>42 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 277V</td>
<td>277V, 60Hz</td>
<td>0.12</td>
<td>50 in.lbs</td>
<td>6&quot;</td>
</tr>
<tr>
<td>MTR-556 DP 460V</td>
<td>460V, 60 Hz</td>
<td>0.11</td>
<td>48 in.lbs</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C (104°F) maximum ambient temperature.
GENERAL SAFETY INFORMATION

1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

2. Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system, by using a separate ground wire connected to the green wire in the motor junction box.

3. Always disconnect power source before working on or near a motor or its connected load. If the power disconnect point is out-of-sight, lock it in the open position and tag to prevent unexpected application of power.

4. Protect the power cable from coming in contact with sharp objects.

5. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.

6. Make certain that the power source conforms to the requirements of your equipment.

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Figure 2 – Replacement Parts Diagram

Figure 3 – Wiring Diagram – 120V, 60 Hz

Figure 4 – Wiring Diagram – 240V, 60 Hz

Figure 5 – Wiring Diagram – 24V; 480V, 60 Hz; 277V, 60 Hz; 208V, 60 Hz

REPLACEMENT PARTS LIST

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60Hz Motor, 120/240V</td>
<td>UL-19-3050</td>
<td>1 ea.</td>
</tr>
<tr>
<td>2</td>
<td>Motor Crankarm</td>
<td>72SK-004D</td>
<td>1 ea.</td>
</tr>
<tr>
<td>3</td>
<td>Threaded Rod 5/16-18</td>
<td>3237</td>
<td>1 ea.</td>
</tr>
<tr>
<td>4</td>
<td>Motor Bracket</td>
<td>50002</td>
<td>1 ea.</td>
</tr>
<tr>
<td>5</td>
<td>Motor Arm Stop</td>
<td>50010</td>
<td>1 ea.</td>
</tr>
<tr>
<td>6</td>
<td>Return Spring</td>
<td>FPR556-104</td>
<td>1 ea.</td>
</tr>
<tr>
<td>7</td>
<td>Motor Arm Rubber Stop</td>
<td>26067</td>
<td>1 ea.</td>
</tr>
<tr>
<td>8</td>
<td>Spring Bracket</td>
<td>50011</td>
<td>1 ea.</td>
</tr>
<tr>
<td>9</td>
<td>Yoke (only)</td>
<td>3235</td>
<td>1 ea.</td>
</tr>
<tr>
<td>10</td>
<td>Slide Adjustment Bars (2)</td>
<td>3238</td>
<td>1 ea.</td>
</tr>
</tbody>
</table>
READ INSTRUCTIONS BELOW CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE SHUTTER MOTOR. RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

The double panel exhaust shutter motor pack, model MTR-885 DP is designed to be used with shutter models 556-DP, EAS-DP, EASR-DP and FGS-DP. Field installation is required to convert gravity exhaust shutter to motorized operation. This motor pack features power open spring close, which provides closure in the event of electrical failure. This motor pack is equipped with motor, motor bracket, linkage and mounting hardware.

Installation instructions:

1. Fasten the motor bracket to the center mullion bar as shown in Figure 2. Tighten the motor bracket using motor bracket screws provided.

2. Remove bolts and nuts from yoke and adjust the slide adjustment bars to reach the tie rods and fasten to yoke using the correct hole for your size (refer to Figure 3 for parts breakdown.)

3. Fasten the slide adjustment bars to the tie rods at the sixth blade from the bottom using 10-32 nuts and lock washers to secure. (Note: The left slide adj. bar fastens to the stud on the outside of the left tie rod and the right slide adj. bar fastens to the stud on the inside of the right tie rod.)


5. Determine power supply voltage and wire motor per appropriate wiring diagram included on instruction sheet.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Motor Pack</th>
<th>Power Supply Required</th>
<th>Running AMPS</th>
<th>Stall Torque</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR-885 DP</td>
<td>115/230V, 60 Hz</td>
<td>.26/.15</td>
<td>70/79 in.lbs</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

Note: 50 Hz versions of above motor packs available but not UL rated.

(*) Motor is single-phase, continuous duty with a 40°C (104°F) maximum ambient temperature.
GENERAL SAFETY INFORMATION

1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

2. Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system, by using a separate ground wire connected to the green wire in the motor junction box.

3. Always disconnect power source before working on or near a motor or its connected load. If the power disconnect point is out-of-sight, lock it in the open position and tag to prevent unexpected application of power.

4. Protect the power cable from coming in contact with sharp objects.

5. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.

6. Make certain that the power source conforms to the requirements of your equipment.

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Motor Bracket</td>
<td>5460</td>
<td>1 ea</td>
</tr>
<tr>
<td>2</td>
<td>115/230v 60Hz Motor</td>
<td>1630</td>
<td>1 ea</td>
</tr>
<tr>
<td>3</td>
<td>Spring Bracket</td>
<td>885</td>
<td>1 ea</td>
</tr>
<tr>
<td>4</td>
<td>Superior Motor Arm</td>
<td>CAS437</td>
<td>1 ea</td>
</tr>
<tr>
<td>5</td>
<td>Closing Spring</td>
<td>588</td>
<td>1 ea</td>
</tr>
<tr>
<td>6</td>
<td>Threaded Rod</td>
<td>3237</td>
<td>1 ea</td>
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<tr>
<td>7</td>
<td>Yoke</td>
<td>884</td>
<td>1 ea</td>
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<tr>
<td>8</td>
<td>Left Slide Adjustment Bar</td>
<td>4C8L</td>
<td>1 ea</td>
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<tr>
<td>9</td>
<td>Right Slide Adjustment Bar</td>
<td>4C8R</td>
<td>1 ea</td>
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<tr>
<td>10</td>
<td>Nuts (4)</td>
<td>5/16-18</td>
<td>4 ea</td>
</tr>
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**LIMITED WARRANTY**

All products manufactured are warranted by Air Conditioning Products Company (ACP) to be free from original defects in workmanship for a period of one year from date of shipment, under conditions of normal use and service. ACP will replace or repair any defective parts upon return to our plant, freight prepaid. This limited warranty will, in no way, include the payment of labor charges for field replacement of defective parts, installation, repairs of adjustments, or any other work done. Back charges will not be accepted for any reason unless ACP has given prior written permission, nor will ACP be responsible for consequential damages of any character, no limited warranty expressed or implied will supersede the foregoing.

Manufactured for Air Conditioning Products Co.
30350 Ecorse Road • Romulus, MI 48174
acpshutters.com

**Figure 3 – Replacement Parts Diagram**

**Figure 4 – Wiring Diagram – 120V, 60 Hz**

**Figure 5 – Wiring Diagram – 240V, 60 Hz**
Air Conditioning Products Company (ACP) has been family owned and operated for three generations. We are a world class manufacturer of shutters, dampers and louvers for air moving equipment and have been in continuous operation since 1947.

ACP is based in Romulus, Michigan, USA. We proudly manufacture our products with union labor in our 100,000 square foot state of the art facility. We specialize in fulfilling strict requirements for quality and reliability while combining short lead times with the flexibility to handle orders of all sizes and quantities.

We specialize in wall shutters, ceiling shutters, gable shutters, backdraft dampers, motorized dampers, fixed louvers and contract manufacturing. Our products are used in industrial, commercial, residential and agricultural applications. Our broad customer base includes leading HVAC manufacturers, OEM’s, national and regional distributors, manufacturer representatives, as well as industry-specific companies.

At Air Conditioning Products Company we are more than just a manufacturing supplier, we offer solutions for the HVAC industry.

For more information or questions please contact us at (734) 326-0050 or visit our website at www.acpshutters.com.