UPBLAST EXHAUSTERS

JETMASTER.

Model UD

ACME ENGINEERING & MANUFACTURING CORP.

MUSKOGEE, OKLAHOMA

DIRECT DRIVEN UPBLAST PROPELLER EXHAUSTERS

FORM C161A

SECTION 4
WINDBANDS
Windbands are made of heavy gauge steel with a curled flange at the top to provide extra strength and protection from driving crosswinds. A channel type cross tie member provides additional lateral rigidity for the windband and serves as an open position stop for butterfly dampers.

BUTTERFLY DAMPERS
Butterfly dampers automatically swing up to full open position to permit free passage of exhaust air and fumes. They automatically close when the fan is turned off. Dampers constructed of heavy gauge aluminum and reinforced with two full length hinge brackets for extra durability.

STAINLESS HINGE PINS
Positive damper action is insured by stainless steel hinge pins in nylon bearings for quieter, low friction operation. No lubrication required.

RUBBER BUMPERS
Dampers open and close against rubber bumpers for quieter operation.

PROPELLERS
Propellers utilize the high efficiency circular arc airfoil blade design. Constructed of all welded heavy gauge aluminum. Precision balanced.

HOUSING
Heavy gauge base housing has a deep drawn streamlined orifice. A special steel structural frame under the base of the exhauster extends out over the roof curb to carry the weight of the motor, fan and drive assembly on sizes 42 and 48. This provides a rugged support for the entire exhauster.

MAGNETIC LATCHES/DRAINAGE TROUGH
Weather protection is provided by magnetic latches that hold dampers closed when the exhauster is not in use. A water trough is positioned under the butterfly damper hinge to provide drainage for rain, melting ice, and snow.

Acme Engineering & Manufacturing Corp. certifies that the JETMASTER® Upblast Roof Exhauster Model UD shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type A: Free Inlet fan sone levels.

Most Acme JETMASTER® fans are listed by the Canadian Standards Association Testing Laboratory as approved. Most Acme JETMASTER® fans bear the U.L. listing mark. Consult the Acme representative for availability.
### DIMENSIONAL DATA

#### FAN SIZES

<table>
<thead>
<tr>
<th>Size</th>
<th>A (In)</th>
<th>B (In)</th>
<th>C (In)</th>
<th>E (In)</th>
<th>Fmax (In)</th>
<th>G (In)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>31</td>
<td>787</td>
<td>16 1/2</td>
<td>419</td>
<td>22 1/2</td>
<td>572</td>
</tr>
<tr>
<td>21</td>
<td>34</td>
<td>694</td>
<td>19 1/2</td>
<td>460</td>
<td>26 1/2</td>
<td>667</td>
</tr>
<tr>
<td>24</td>
<td>38</td>
<td>696</td>
<td>21 1/2</td>
<td>533</td>
<td>28 1/2</td>
<td>762</td>
</tr>
<tr>
<td>30</td>
<td>46</td>
<td>1168</td>
<td>26 1/2</td>
<td>667</td>
<td>37 1/2</td>
<td>953</td>
</tr>
<tr>
<td>36</td>
<td>52</td>
<td>1334</td>
<td>31 1/2</td>
<td>800</td>
<td>44 1/2</td>
<td>1143</td>
</tr>
<tr>
<td>42</td>
<td>60</td>
<td>1524</td>
<td>36</td>
<td>914</td>
<td>34 1/2</td>
<td>1334</td>
</tr>
<tr>
<td>48</td>
<td>64</td>
<td>1626</td>
<td>38</td>
<td>965</td>
<td>36 1/2</td>
<td>1524</td>
</tr>
</tbody>
</table>

#### PERCENT PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Speed (RPM) shown is nominal. Performance is based on actual speed of test.</th>
<th>Performance ratings do not include the effects of appurtenances in the airstream.</th>
</tr>
</thead>
</table>

#### MAX PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Type</th>
<th>Model</th>
<th>J (In)</th>
<th>K (In)</th>
<th>L (In)</th>
<th>M (In)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF</td>
<td>C58.5</td>
<td>66</td>
<td>40</td>
<td>44</td>
<td>48</td>
</tr>
<tr>
<td>SF</td>
<td>C58.5</td>
<td>66</td>
<td>58</td>
<td>48</td>
<td>62</td>
</tr>
</tbody>
</table>

### CURB DIMENSIONS

<table>
<thead>
<tr>
<th>Type</th>
<th>Model</th>
<th>J (In)</th>
<th>K (In)</th>
<th>L (In)</th>
<th>M (In)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF</td>
<td>C58.5</td>
<td>66</td>
<td>40</td>
<td>44</td>
<td>48</td>
</tr>
<tr>
<td>SF</td>
<td>C58.5</td>
<td>66</td>
<td>58</td>
<td>48</td>
<td>62</td>
</tr>
</tbody>
</table>

### PERFORMANCE DATA

#### PERFORMANCE TABLE

<table>
<thead>
<tr>
<th>Fan Size</th>
<th>Model No.</th>
<th>HP</th>
<th>RPM</th>
<th>Tip Speed</th>
<th>Max. Sones</th>
<th>CFM vs. Static Pressure</th>
<th>Max. BHP</th>
<th>Ship Wts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>18&quot;</td>
<td>UD18-6</td>
<td>1/8</td>
<td>1160</td>
<td>5460</td>
<td>14</td>
<td>2730</td>
<td>.11</td>
<td>50</td>
</tr>
<tr>
<td>18&quot;</td>
<td>UD18-6</td>
<td>1/6</td>
<td>1160</td>
<td>5460</td>
<td>14</td>
<td>3020</td>
<td>.19</td>
<td>56</td>
</tr>
<tr>
<td>21&quot;</td>
<td>UD21-6</td>
<td>1/3</td>
<td>1760</td>
<td>8290</td>
<td>27</td>
<td>4200</td>
<td>.55</td>
<td>50</td>
</tr>
<tr>
<td>24&quot;</td>
<td>UD24-6</td>
<td>3/4</td>
<td>1760</td>
<td>7280</td>
<td>23</td>
<td>7180</td>
<td>.9</td>
<td>55</td>
</tr>
<tr>
<td>30&quot;</td>
<td>UD30-8</td>
<td>3/4</td>
<td>860</td>
<td>6750</td>
<td>20</td>
<td>9500</td>
<td>1.14</td>
<td>150</td>
</tr>
<tr>
<td>36&quot;</td>
<td>UD36-8</td>
<td>1/2</td>
<td>860</td>
<td>8100</td>
<td>32</td>
<td>13980</td>
<td>1.15</td>
<td>245</td>
</tr>
<tr>
<td>42&quot;</td>
<td>UD42-8</td>
<td>1/2</td>
<td>860</td>
<td>9460</td>
<td>35</td>
<td>17000</td>
<td>1.72</td>
<td>279</td>
</tr>
<tr>
<td>48&quot;</td>
<td>UD48-8</td>
<td>1/2</td>
<td>860</td>
<td>10810</td>
<td>36</td>
<td>19860</td>
<td>2.02</td>
<td>301</td>
</tr>
</tbody>
</table>

Note: Typical drawings for dimensional purposes only, which are correct within limits suitable for normal installation requirements, and does not necessarily show actual construction.

Performance shown is for Installation Type A: Free Inlet, Free Outlet.
Performance ratings do not include the effects of appurtenances in the airstream.
Speed (RPM) shown is nominal. Performance is based on actual speed of test.
optional accessories

prefabricated curbs
Heavy gauge galvanized steel curbs for easy installation of exhauster over roof openings. Replaces conventional field constructed curbs for steel, concrete or wood roofs.

Acoustically lined and thermally insulated with 1 1/2" thick, rigid fire resistant glass fiber to reduce heat transfer.

Available in two types, SF and RF. Also available with galvanized steel liner.

self-flashing type (SF)
Features continuous welded and mitered corner seams with wide base flange for easy flashing to roof. Eliminates need for extending roofing material up over top of curb. Curb top has foam rubber gasket for better weather seal. Self-flashing type curbs are also available in a single pitch roof style for installation on sloped roofs, or in a double pitch roof style for installation on the ridge. Specify roof pitch when ordered.

roof-over type (RF)
Features cant strip to accommodate roofing material for flashing up over top of curb. Wood nailer is standard. Also available in single or double pitched roof styles.

fuseble heat release trip
Automatically opens both butterfly dampers to provide venting heat and smoke in case of fire when inside temperature exceeds predetermined temperature setting. Strong torsion spring actuated by melting type fusible link, completely independent of fan operation with no motors, switches or electrical power required.

disconnect switches:
Switch, when provided, is factory mounted on bottom side of exhauster base housing through 1 ½ horsepower single phase and 2 horsepower three phase. Switch extends through base and is operated from outside of exhauster for maximum safety when servicing. For 3 horsepower and above Nema 3R rainlight switches mounted above curb cap.

Outlet Screen
Outlet Screens available to protect dampers and fan from debris.

optional coatings

protective coating (optional)
Products receiving protective coatings have each component part painted before assembly, thereby being painted on the interior as well as the exterior. Fasteners are not coated.

carboline sanitile (eisenheiss)
This air dry synthetic polyester forms a black coating that offers greater resistance to most organic and inorganic acids.

Heresite (Air Dry)
A phenolic coating with greater resistance to most organic and inorganic acids.

NOTE: For any coating selected the user assumes the responsibility for the corrosive agent, its concentration, temperature, moisture content and the ultimate effect on the coating.

typical specifications

Low silhouette roof exhaust fan shall be direct drive propeller type.

The precision balanced propeller shall be all aluminum with die-formed circular-arc airfoil blades attached to special die-formed spherical hub for high airflow capacity.

The fan housing shall consist of a windband, curb base/orifice assembly and motor frame. The windband shall have a rolled flange for strength and have an integral channel cross member with rubber bumpers for damper stops. The deep drawn orifice shall be die-formed and include a rubber bumper strip for quiet butterfly damper closing. The heavy duty motor frame shall transmit the weight of the motor and propeller directly to the curb to prevent orifice distortion.

Butterfly dampers shall be constructed of aluminum and have stainless steel hingepins which rotate freely in nylon bearings requiring no lubrication. Shall be constructed with an internal double outlet drainage trough and magnetic latches to provide weather protection.

Sealed ball bearing motors shall be adjustable on motor base.

All fans shall bear the AMCA Certified Ratings Seal for Sound and Air performance.

Fans with totally enclosed motors shall be listed by Underwriters Laboratories (UL705).

Each fan shall have a permanently affixed manufacturer’s nameplate containing the model number and serial number for future identification.

Thermal overload protectors shall be available on single phase motors (1/2 thru ¾ HP).

Fans shall be Model UD as manufactured by Acme Engineering and Manufacturing Corporation of Muskogee, Oklahoma.

warranty information

limited warranty
Acme Engineering and Manufacturing Corporation warrants the products manufactured by Acme to be free from original defects in workmanship and material for two years subject to the terms and conditions of its published limited warranty. Warranties on purchased products are subject to the vendor’s warranty. Refer to Form MS149 for complete limited warranty terms and conditions.

WARNING Acme products are designed and manufactured to provide reliable performance but they are not guaranteed to be 100% free of defects. Even reliable products will experience occasional failures and this possibility should be recognized by the User. If these products are used in a life support ventilation system where failure could result in loss or injury, the User should provide adequate back-up ventilation, supplementary natural ventilation or failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

WARNING DO NOT use in HAZARDOUS ENVIRONMENTS where fan’s electrical system could provide ignition to combustible or flammable materials unless unit is specifically built for hazardous environments.

CAUTION Guards must be installed when fan is within reach of personnel or within seven (7) feet (2.134 m) of working level or when deemed advisable for safety.

Disclaimer The Company has made a diligent effort to illustrate and describe the products in this literature accurately; however, such illustrations and descriptions are for the sole purpose of identification, and do not express or imply a warranty that the products are merchantable, or fit for a particular purpose, or that the products will necessarily conform to the illustrations or descriptions or dimension.