MonsterFans DD Series

Submittal
Gearless Direct-Drive HVLS Fan
**MonsterFans DD Series Fan Components Diagram**

**Structural Support of the building**

- [4] Bolt ½” x 2½” UNC FT
- [8] Washer Flat ½”
- [4] Nylock ½” UNC

**Safety Cable**

- [1] Cable ¾” SS
- [6] Thimbles ⅛”
- [16] Cable Clamps ⅛”

**Typical Guy Wire:**

- [4] Cable 1/8” SS
- [60] ft length provided to equal 4 @ 15 ft
- [8] Thimbles ¼” SS
- [16] Cable Clamps 1/8”

**Note:** All bolts are “Grade 5 UNO” FT = Fully Threaded # = Quantity Supplied

**Control Options**

**MonsterFans Smart Control**

- Automated Fan Control for Single or Multiple Fans
- Continually Measures Temperature and Humidity, Adjusting Fan Speed Accordingly
- Integrated Light Operation to Control On/Off
- Plug-and-Play Installation
- Monitor Performance of Motor and Drive

**MonsterFans Touch Control**

- Single Point Fan Control
- Controls up to 247 Fans
- Uses BACnet Signal
- Works in Conjunction with Building Automation Controls
- Individual Fan and Group Controlling
- Over 500m [1640’] of Wire Distance

**MonsterFans Link Control**

- One MonsterFans Simple Control Per Fan Required
- Provides Remote Operation for Fan Mounted VFD
- User Friendly, Simplified Installation and Operation

**MonsterFans Simple Control**

- Single Point Fan Control
- Controls up to 65 Fans
- CAT-5 Daisy Chain Connections
- Intuitive Operation
- Individual and Group Controlling
- Remote Diagnostics
- Over 500m [1640’] of Wire Distance
## MonsterFans DD Series Fan Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>8 ft [2.4 m]</th>
<th>12 ft [3.7 m]</th>
<th>16 ft [4.9 m]</th>
<th>20 ft [6.1 m]</th>
<th>24 ft [7.3 m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model #</td>
<td>MF-DD08-XX</td>
<td>MF-DD12-XX</td>
<td>MF-DD16-XX</td>
<td>MF-DD20-XX</td>
<td>MF-DD24-XX</td>
</tr>
<tr>
<td>Input power</td>
<td>208–240 VAC, 50/60 Hz, 1 Φ; 208–240 VAC/400–480 VAC, 50/60 Hz, 3 Φ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diameter</td>
<td>8 ft [2.4 m]</td>
<td>12 ft [3.7 m]</td>
<td>16 ft [4.9 m]</td>
<td>20 ft [6.1 m]</td>
<td>24 ft [7.3 m]</td>
</tr>
<tr>
<td>Airflow</td>
<td>59,494 CFM</td>
<td>70,424 CFM</td>
<td>127,033 CFM</td>
<td>176,200 CFM</td>
<td>315,026 CFM</td>
</tr>
<tr>
<td>Max. rotational speed</td>
<td>105 RPM</td>
<td>105 RPM</td>
<td>80 RPM</td>
<td>63 RPM</td>
<td>53 RPM</td>
</tr>
<tr>
<td>Max. affected area</td>
<td>60 ft [18 m]</td>
<td>80 ft [24 m]</td>
<td>140 ft [43 m]</td>
<td>200 ft [61 m]</td>
<td>230 ft [70 m]</td>
</tr>
<tr>
<td>Motor power</td>
<td>2 HP [1.5 kW]</td>
<td>2 HP [1.5 kW]</td>
<td>2 HP [1.5 kW]</td>
<td>2 HP [1.5 kW]</td>
<td>2 HP [1.5 kW]</td>
</tr>
<tr>
<td>Motor</td>
<td>Gearless direct-drive Nidec motor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hub</td>
<td>713 Cast Aluminum Alloy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise level</td>
<td>45 dBA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. ceiling slope</td>
<td>18.5°</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blades</td>
<td>6063 Extruded Anodized Aluminum with High Impact Polystyrene blade end caps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airfoil clearance</td>
<td>1.5 ft [0.46 m] on sides</td>
<td>5 ft [1.5 m] below the ceiling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Versatile universal mounting system included with fan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety components</td>
<td>• Safety cables - 3/16&quot; Stainless Steel</td>
<td>• Guy wires - 1/8&quot; Stainless Steel</td>
<td>• Safety clips - Zinc Plated Steel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>• Includes standard Schneider VFD</td>
<td>• Optional controls include Simple fan control, Smart fan control and/or Touch fan control</td>
<td>• Building automation systems integrations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warranty</td>
<td>• Lifetime warranty on blades, hub &amp; mounting system</td>
<td>• 5-year Limited Warranty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certification</td>
<td>UL Standard, CSA Standard &amp; CE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Options</td>
<td>• Optional wind sensor</td>
<td>• Optional mounting extension kits</td>
<td>• Fire-relay</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Please see MonsterFans DD Series Installation Guide for more information regarding mounting hardware.
**Velocity Map**

12’ [3.7m] diameter

- **Center of Fan**
  - 512 tpm
  - 4x7 tpm
  - 1x7 tpm
  - 53 tpm

**Conditions:**

Test results are based on a blade mounting height of 16’ (4.9m) from the floor. Results were measured 1’ (0.3m) off the floor. Average air speeds were used as actual air velocity. Individual testing results will vary depending on testing conditions.
8 ft [2.4 m] MonsterFans DD Series Fan Spec Drawing

DO NOT SCALE DRAWING

SHEET 1 OF 1

UNLESS OTHERWISE SPECIFIED:

SCALE: 1:50 WEIGHT: 297.85 lbs

RevdWg. No. Size

Title:

Checked Date:

Q.A. Mfg Appr. Eng Appr.

Checked By:

B. Marks Drawn:

As Specified

Finish Material

Tolerances:

Fractional: 1/16

Angular: Mach 0.1 Bend

Two Place Decimal: 0.060 [1.5mm]

Three Place Decimal: 0.030 [0.76mm]

Revisions:

Last Revision Date:

Eng Appr. Date:

Last Saved Date:

January 28, 2020 4:14:27 PM

Schwank

16 ft 16' MonsterFans DD Series Fan SF5-2HP-230/460V WITH 100-277V LIGHT FAN

MF-DD16-XX

B.

Item No. Description Qty.

1 Gearless SF5 - 2 HP - WITH LIGHT 1

2 16' MonsterFans DD Series Fan BLADE SET [5 BLADES] 1 SET

Schwank

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Velocity Map
16' [4.9m] diameter

Condition:
Test results are based on a blade mounting height of 16' [4.9 m] from the floor. Results were measured 1' [0.3m] off the floor. Average air speeds were utilized as actual air velocity from fan is gusting. Results will vary depending on testing conditions.

<table>
<thead>
<tr>
<th>Condition</th>
<th>0 rpm</th>
<th>2.5 rpm</th>
<th>4.0 rpm</th>
<th>5.5 rpm</th>
<th>7.0 rpm</th>
</tr>
</thead>
</table>

Condition 1: 0 rpm
Condition 2: 2.5 rpm
Condition 3: 4.0 rpm
Condition 4: 5.5 rpm
Condition 5: 7.0 rpm

- 420 rpm
- 215 rpm
- 154 rpm
- 114 rpm
- 89 rpm
- 40 rpm
20 ft [6.1 m] MonsterFans DD Series Fan Spec Drawing

Velocity Map
20' [6.1m] diameter

Conditions:
Test results are based on a blade mounting height of 18' [5.4 m] from the floor. Results were measured 1' [0.3 m] off the floor. Average air speeds were utilized to calculate air velocity from fan tip gaging. Results will vary depending on testing conditions.
MonsterFans DD Series Fan Packaging Details

Packaged Fan
30" x 31" x 32" [76.2 cm x 78.74 cm x 81.28 cm]
255 lbs [115.6 kgs]

Packaged Blades

Mounts & Extensions Packaging Details
These items can be placed inside the packaged fan when ordering with a fan.
[Excluding 4 ft [1.22 m] items] Please add the additional weight to the fan packages above.

1 ft [0.31 m] Packaged UMH Mount
9” x 9” x 15” [22.9 cm x 22.9 cm x 38.1 cm]
22 lbs [9.98 kgs]

2 ft [0.61 m] Packaged UMH Mount
9” x 9” x 28” [22.9 cm x 22.9 cm x 71.1 cm]
33 lbs [14.97 kgs]

4 ft [1.22 m] Packaged UMH Mount
9” x 9” x 51” [22.9 cm x 22.9 cm x 129.5 cm]
47 lbs [21.32 kgs]

2 ft [0.61 m] UMH Extension
9” x 9” x 28” [22.9 cm x 22.9 cm x 71.1 cm]
21 lbs [9.53 kgs]

4 ft [1.22 m] UMH Extension
9” x 9” x 49” [22.9 cm x 22.9 cm x 124.5 cm]
31 lbs [14.06 kgs]