cincinnati fan

OEM and Industrial Air Handling Specialist

# SERIES LM & LMF

# CAST ALUMINUM VOLUME BLOWERS


7697 Snider Road, Mason, OH 45040-9135

Telephone: 513-573-0600


Visit us at www.cincinnatifan.com for more information.


Cat. No. LM-308

Supersedes LM-702

# FEATURES

A. Round inlets and outlets for convenient slip fit of duct work or hose.

B. Commercial grade 319 cast aluminum housing for increased strength and AMCA Type C spark-resisitance.

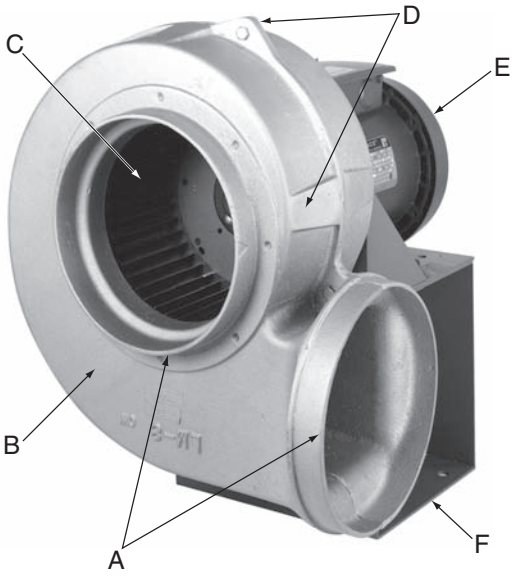
C. Steel multivane wheels for high volume and low noise levels. Aluminum wheels available for AMCA Type B spark-resistance on all models except LM-6 or LMF-6 above 1800 RPM.

D. Tapered housing lugs and stiffener pads for additional strength.

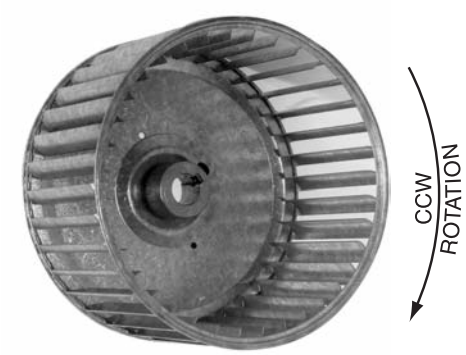
E. Continuous duty, ball bearing, industrial motors are standard.

F. All fan bases are minimum 12 gauge steel.

G. All model LMF blowers (not shown here) have a discharge flange cast as an integral part of the housing for rigid support by the flange only. See pages 3 and 10.

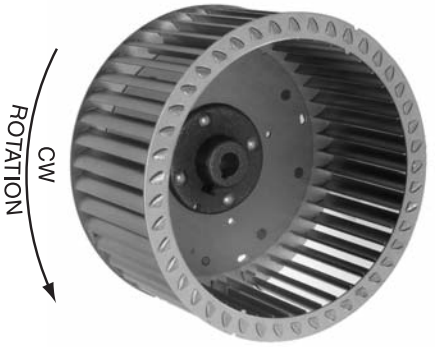



# BLOWER WHEELS




Standard steel wheel for LMF-3, LM-4, LMF-4, LM-6 and LMF-6. All LMF models are clockwise rotation only.

Standard wheels are steel. Some have internal hubs and some have external hubs. Aluminum wheels available on most sizes, but extended deliveries may occur. **For limitations, see chart on page 7.**




Standard steel wheel for LM-8 and LMF-8.

# SPARK-RESISTANT CONSTRUCTION

**AMCA Type A:** All parts in contact with airstream are of nonferrous material. Please select a PB model.

**AMCA Type B:** With the addition of an aluminum wheel, the fan will be AMCA type “B” spark-resistant. **Maximum Temperature 150°F (66°C).** Not available on LM-6 or LMF-6 above 1800 RPM.

## ⚠ WARNING

The use of aluminum or aluminum alloys in the presence of steel which has been allowed to rust requires special consideration. Research by the U.S. Bureau of Mines and others has shown that aluminum impellers rubbing on rusty steel may cause high intensity sparking.

The use of the above Standard in no way implies a guarantee of safety for any level of spark resistance. Spark-resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in a system.

# 9 STANDARD ARRANGEMENTS OF LM MODELS

**Arrangement 4**
(Foot & flange motor)

**Arrangement 4**
(Flange mount-footless motor)

**Arrangement 4**
(Foot mounted motor)

**Arrangement 4HM**
(Horizontal mount)
(See page 8)

**Arrangement 4D**
(Double blower unit)

**Arrangement 8**
(shown with optional discharge flange)

**Arrangement 2**

**Arrangement 1**

**Arrangement 9**

# 4 SIZES OF LMF MODELS

NOTE: All LMF models are available in clockwise (CW) rotation, arrangement 4HM only.


**LMF-3**

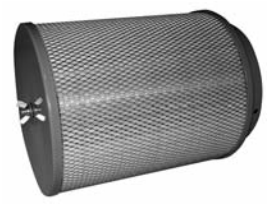
**LMF-6**


**LMF-4**

**LMF-8**

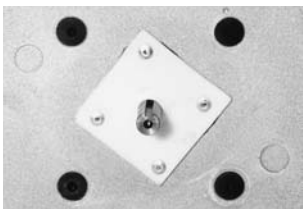
All LMF models include an integral cast discharge flange for mounting and a neoprene flange gasket. For discharge flange dimensions, see page 10.

# OPTIONAL ACCESSORIES



**Inlet Filters**
Many layered fine wire mesh. Pleated, paper media available on all sizes for LM and LMF fans.

**Shaft and/or Heat Slinger Guard**
Available on arrangement 1 and 9. Covers bearings and shaft between fan housing and belt guard. Has extended lube lines. Meets OSHA standards. **Painted safety yellow.**



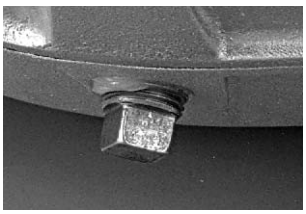
**Teflon Shaft Seal**
1/8" thick teflon shaft seal good to 300°F.

**Inlet/Outlet Flange**
Cast aluminum drilled to ANSI-125 pound flange bolt circle dimensions if requested. Dimensions on page 11. **Outlet flange not available in Down Blast configuration.**

**Slide Gate Damper**
Available for 4, 5, 6 and 8 inch inlets or outlets. Cast aluminum frame, galvanized steel gate. Suitable for duct work. Dimensions on page 11. **Add inlet/outlet guard if not ducted. Not available on outlet for Down Blast discharge position.**

**Inlet/Outlet Guard**
Spiral guard with nickel/chrome/lacquer finish. OSHA type. Available on 4, 5, 6 and 8 inch inlets or outlets. **Required by OSHA on non-ducted inlet and/or discharge.**

**Belt Guard – Standard Arr. 9**
Bearing side is enclosed. Not available unless Cincinnati Fan mounts motor. **Painted safety yellow.**



**Drain**
1/2" drain with plug. Not required on bottom horizontal discharges.

# HIGH TEMPERATURE CONSTRUCTION

**Standard Construction:** All arrangements suitable to 150°F (66°C).

**151°-300°F. Construction:** Standard fan with heat slinger and slinger guard on all arrangements. Arrangements 4, 4HM and 4D also includes a shaft extension.

Fan performance tables are developed using standard air which is 70°F., 29.92" barometric pressure and .075 lbs. per cubic foot. Density changes resulting from temperature or barometric pressure variations (such as higher altitudes) must be corrected to standard conditions before selecting a fan based on standard performance data.

Temperature and/or altitude conversion factors are used in making corrections to standard conditions.

## TEMPERATURE - ALTITUDE CONVERSIONS

| AIR TEMP. F° | ALTITUDE IN FEET ABOVE SEA LEVEL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| 0° | .87 | .91 | .94 | .98 | 1.01 | 1.05 | 1.09 | 1.13 | 1.17 | 1.22 | 1.26 |
| 40° | .94 | .98 | 1.02 | 1.06 | 1.10 | 1.14 | 1.19 | 1 23 | 1.28 | 1.32 | 1.36 |
| 70° | 1.00 | 1.04 | 1.08 | 1.12 | 1.16 | 1.20 | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 |
| 80° | 1.02 | 1.06 | 1.10 | 1.14 | 1.19 | 1.23 | 1.28 | 1.33 | 1.38 | 1.43 | 1.48 |
| 100° | 1.06 | 1.10 | 1.14 | 1.19 | 1.23 | 1.28 | 1.33 | 1.38 | 1.43 | 1.48 | 1.54 |
| 120° | 1.09 | 1.14 | 1.18 | 1.23 | 1.28 | 1.32 | 1.38 | 1.43 | 1.48 | 1.53 | 1.58 |
| 140° | 1.13 | 1.18 | 1.22 | 1.27 | 1.32 | 1.37 | 1.42 | 1.48 | 1.54 | 1.58 | 1.65 |
| 160° | 1.17 | 1.22 | 1.26 | 1.31 | 1.36 | 1.42 | 1.47 | 1.53 | 1.59 | 1.64 | 1.70 |
| 180° | 1.21 | 1.26 | 1.30 | 1.36 | 1.41 | 1.46 | 1.52 | 1.58 | 1.64 | 1.70 | 1.75 |
| 200° | 1.25 | 1.29 | 1.34 | 1.40 | 1.45 | 1.51 | 1.57 | 1.63 | 1.69 | 1.75 | 1.81 |
| 250° | 1.34 | 1.39 | 1.45 | 1.50 | 1.56 | 1.62 | 1.68 | 1.74 | 1.82 | 1.88 | 1.94 |
| 300° | 1.43 | 1.49 | 1.55 | 1.61 | 1.67 | 1.74 | 1.80 | 1.87 | 1.94 | 2.00 | 2.08 |

## EXAMPLE:

Required fan performance is 800 CFM at 1" SP at 250°F., and 7000' altitude.

**STEP 1.** From the table, the conversion factor for 250° and 7000' is 1.74.

**STEP 2.** Correct static pressure is: 1.74 x 1" SP = 1.74" SP at standard conditions.

**STEP 3.** Make fan selection from table on page 5. We select an LM-6, 6.3 x 2.5 wheel at 3450 RPM to provide 815 CFM at 1.75" SP and 1.16 BHP.

**STEP 4.** Correct the BHP for the lighter air: 1.16 ÷ 1.74 = .67 BHP. A 3/4 HP motor will suffice at 250°F., and 7000' altitude but not at standard conditions. Special motor insulation may be required above 3500' altitude. Also, BHP correction might need to be modified if blower will be subject to “cold starts”, ie: starting at 70°F. at 7000 feet altitude.

# LM & LMF SERIES DIRECT DRIVE RATING TABLES

**CFM and BHP at Static Pressure Shown** **Ratings at 70°F., .075 Density, Sea Level**

| MODEL NO. | NOMINAL WHEEL SIZE | FAN RPM | 1/4" SP | | 1/2" SP | | 3/4" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | | 2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP |
| LMF-3 | 4.7 x 2.4 | 3450 | 230 | .08 | 214 | .07 | 196 | .07 | 175 | .06 | 150 | .05 | 118 | .03 | | | | |
| LM-4 & LMF-4 | 4.3 x 2.9 | 1750 | 119 | .02 | | | | | | | | | | | | | | |
| | 4.7 x 2.9 | 1750 | 163 | .04 | | | | | | | | | | | | | | |
| | 4.3 x 2.9 | 3450 | 293 | .16 | 273 | .15 | 253 | .15 | 232 | .15 | 209 | .14 | | | | | | |
| | 4.7 x 2.9 | 3450 | 377 | .34 | 356 | .32 | 337 | .31 | 319 | .30 | 300 | .29 | 280 | .27 | 256 | .26 | | |
| LM-6 & LMF-6 (See Note 1.) | 6.3 x 2.5 | 1150 | 256 | .04 | | | | | | | | | | | | | | |
| | 6.3 x 3.5 | 1150 | 284 | .04 | | | | | | | | | | | | | | |
| | 6.3 x 2.5 | 1750 | 439 | .16 | 405 | .15 | 344 | .12 | | | | | | | | | | |
| | 6.3 x 3.5 | 1750 | 507 | .18 | 452 | .16 | 388 | .14 | | | | | | | | | | |
| | 6.3 x 2.5 | 3450 | 901 | 1.29 | 890 | 1.28 | 878 | 1.26 | 865 | 1.24 | 850 | 1.22 | 834 | 1.19 | 815 | 1.16 | 794 | 1.13 |
| | 6.3 x 3.5 | 3450 | 1072 | 1.50 | 1048 | 1.46 | 1023 | 1.42 | 996 | 1.38 | 970 | 1.34 | 942 | 1.30 | 913 | 1.25 | 884 | 1.21 |
| LM-8 & LMF-8 | 8.3 x 1.5 | 1150 | 351 | .10 | 209 | .08 | | | | | | | | | | | | |
| | 8.3 x 3.0 | 1150 | 534 | .14 | 427 | .12 | | | | | | | | | | | | |
| | 8.3 x 4.1 | 1150 | 1044 | .35 | 894 | .25 | 688 | .17 | | | | | | | | | | |
| | 8.3 x 1.5 | 1750 | 611 | .39 | 552 | .37 | 490 | .35 | 407 | .32 | 203 | .25 | | | | | | |
| | 8.3 x 3.0 | 1750 | 913 | .53 | 835 | .49 | 766 | .47 | 697 | .44 | 620 | .40 | 512 | .35 | | | | |
| | 8.3 x 4.1 | 1750 | 1704 | 1.44 | 1617 | 1.28 | 1525 | 1.12 | 1427 | .97 | 1319 | .84 | 1194 | .71 | 1037 | .59 | | |

| MODEL NO. | NOMINAL WHEEL SIZE | FAN RPM | 2 1/4" SP | | 2 1/2" SP | | 2 3/4" SP | | 3" SP | | 3 1/4" SP | | 3 1/2" SP | | 3 3/4" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP |
| LM-6 & LMF-6 (See Note 1.) | 6.3 x 2.5 | 3450 | 769 | 1.09 | 740 | 1.04 | 705 | .99 | 664 | .93 | | | | | | |
| | 6.3 x 3.5 | 3450 | 853 | 1.17 | 821 | 1.13 | 788 | 1.09 | 753 | 1.05 | 714 | 1.01 | 672 | .96 | 623 | .91 |

NOTE 1: Aluminum wheels not available at 3450 RPM. See chart on page 7.

## ROTATION & DISCHARGE POSITIONS

8 STANDARD POSITIONS AVAILABLE.* 45° DISCHARGE POSITIONS AT ADDITIONAL CHARGE.
Discharges shown are determined by viewing fan from motor or drive side.

**CW-TH**

Clockwise Top Horizontal Discharge

**CW-DB**

Clockwise Down Blast Discharge

**CW-BH**

Clockwise Bottom Horizontal Discharge

**CW-UB**

Clockwise Up Blast Discharge

**CCW-TH**

* Counter-Clockwise Top Horizontal Discharge

**CCW-DB**

* Counter-Clockwise Down Blast Discharge

**CCW-BH**

* Counter-Clockwise Bottom Horizontal Discharge

**CCW-UB**

* Counter-Clockwise Up Blast Discharge

*** All LMF Models are available in clockwise (CW) rotation only.**

# LM SERIES BELT DRIVE RATING TABLES

**CFM and BHP at Static Pressure Shown** — **Ratings at 70°F., .075 Density, Sea Level**

## LM-4 Wheel Size: 4.7 x 2.9

Outlet Area: .077 Sq. Ft. — **Steel Wheel Max. Speed: 4000 RPM**

| CFM | 1/4" SP | | 1/2" SP | | 3/4" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | | 2" SP | | 2 1/4" SP | | 2 1/2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 100 | 1322 | .01 | 1685 | .03 | | | | | | | | | | | | | | | | |
| 150 | 1656 | .03 | 1921 | .05 | 2168 | .06 | 2409 | .08 | 2645 | .11 | 2877 | .13 | | | | | | | | |
| 200 | 2033 | .06 | 2255 | .08 | 2454 | .10 | 2644 | .12 | 2830 | .14 | 3012 | .17 | 3192 | .20 | 3370 | .23 | 3547 | .26 | 3721 | .29 |
| 250 | 2426 | .11 | 2624 | .13 | 2797 | .15 | 2960 | .18 | 3116 | .20 | 3268 | .23 | ***3417*** | ***.25*** | 3565 | .28 | 3711 | .32 | 3855 | .35 |
| 300 | 2827 | .18 | 3009 | .21 | 3166 | .23 | 3312 | .26 | ***3450*** | ***.29*** | 3584 | .31 | 3714 | .34 | 3841 | .37 | 3967 | .40 | | |
| 350 | 3233 | .28 | ***3403*** | ***.31*** | 3549 | .34 | 3683 | .37 | 3810 | .40 | 3931 | .43 | | | | | | | | |
| 400 | 3642 | .41 | 3802 | .44 | 3940 | .48 | | | | | | | | | | | | | | |

Max. speed for aluminum wheel is 3500 RPM

*For ratings in bold italics, a direct drive fan is recommended.*

## LM-6 Wheel Size : 6.3 x 3.5

Outlet Area: .173 Sq. Ft. — **Steel Wheel Max. Speed: 3500 RPM**

| CFM | 1/2" SP | | 3/4" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 2" SP | | 2 1/2" SP | | 3" SP | | 3 1/2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 150 | 1182 | .03 | | | | | | | | | | | | | | | | |
| 200 | 1221 | .04 | 1455 | .06 | | | | | | | | | | | | | | |
| 250 | 1297 | .05 | 1502 | .07 | 1693 | .09 | 1873 | .12 | 2044 | .15 | | | | | | | | |
| 300 | 1393 | .07 | 1578 | .09 | ***1749*** | ***.11*** | 1913 | .14 | 2069 | .17 | 2363 | .23 | | | | | | |
| 350 | 1503 | .09 | 1671 | .12 | 1828 | .14 | 1977 | .17 | 2120 | .20 | 2392 | .26 | 2648 | .34 | | | | |
| 400 | 1621 | .12 | ***1776*** | ***.15*** | 1921 | .17 | 2059 | .20 | 2191 | .24 | 2443 | .30 | 2681 | .38 | 2909 | .46 | 3127 | .54 |
| 450 | ***1746*** | ***.16*** | 1890 | .19 | 2025 | .22 | 2153 | .25 | 2277 | .28 | 2511 | .35 | 2734 | .43 | 2948 | .51 | 3154 | .60 |
| 500 | 1875 | .20 | 2010 | .23 | 2137 | .27 | 2257 | .30 | 2373 | .33 | 2594 | .41 | 2803 | .49 | 3004 | .57 | 3198 | .66 |
| 550 | 2009 | .26 | 2135 | .29 | 2255 | .32 | 2368 | .36 | 2478 | .39 | 2686 | .47 | 2884 | .55 | 3074 | .64 | 3258 | .73 |
| 600 | 2146 | .32 | 2264 | .36 | 2377 | .39 | 2485 | .43 | 2589 | .47 | 2787 | .55 | 2975 | .63 | 3155 | .72 | 3330 | .82 |
| 650 | 2285 | .39 | 2397 | .43 | 2504 | .47 | 2606 | .51 | 2705 | .55 | 2894 | .64 | 3073 | .72 | 3245 | .82 | ***3411*** | ***.92*** |
| 700 | 2427 | .48 | 2532 | .52 | 2633 | .56 | 2731 | .60 | 2825 | .65 | 3006 | .73 | 3177 | .83 | 3342 | .92 | | |
| 750 | 2570 | .58 | 2670 | .62 | 2766 | .66 | 2859 | .71 | 2949 | .75 | 3122 | .85 | 3287 | .94 | ***3445*** | ***1.04*** | | |
| 800 | 2715 | .69 | 2809 | .73 | 2901 | .78 | 2990 | .83 | 3076 | .87 | 3242 | .97 | 3400 | 1.07 | | | | |
| 850 | 2861 | .81 | 2951 | .86 | 3038 | .91 | 3123 | .96 | 3206 | 1.01 | 3365 | 1.11 | | | | | | |
| 900 | 3009 | .95 | 3094 | 1.00 | 3177 | 1.05 | 3259 | 1.11 | 3338 | 1.16 | ***3491*** | ***1.27*** | | | | | | |
| 950 | 3157 | 1.11 | 3238 | 1.16 | 3318 | 1.21 | 3396 | 1.27 | ***3472*** | ***1.32*** | | | | | | | | |
| 1000 | 3306 | 1.28 | 3384 | 1.33 | ***3460*** | ***1.39*** | | | | | | | | | | | | |
| 1050 | ***3456*** | ***1.47*** | | | | | | | | | | | | | | | | |

*For ratings in bold italics, a direct drive fan is recommended.*

Max. speed for aluminum wheel is 1800 RPM

## LM-8 Wheel Size: 8.3 x 4.1

Outlet Area: .317 Sq. Ft. — **Steel Wheel Max. Speed: 1800 RPM**

| CFM | 1/4" SP | | 1/2" SP | | 3/4" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | | 2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 400 | 665 | .03 | 881 | .06 | 1067 | .09 | | | | | | | | | | |
| 500 | 722 | .05 | 912 | .08 | 1081 | .11 | 1235 | .14 | 1376 | .18 | | | | | | |
| 600 | 790 | .08 | 959 | .10 | 1112 | .14 | 1254 | .17 | 1387 | .22 | 1512 | .26 | 1629 | .31 | | |
| 700 | 865 | .12 | 1017 | .14 | ***1156*** | ***.17*** | 1287 | .21 | 1410 | .26 | 1528 | .30 | 1640 | .35 | ***1746*** | ***.40*** |
| 800 | 944 | .17 | 1083 | .19 | 1211 | .22 | 1331 | .26 | 1445 | .31 | 1555 | .35 | 1661 | .41 | ***1762*** | ***.46*** |
| 900 | 1027 | .23 | ***1155*** | ***.26*** | 1273 | .29 | 1384 | .33 | 1491 | .37 | 1593 | .42 | 1692 | .47 | 1788 | .53 |
| 1000 | 1112 | .31 | 1231 | .34 | 1340 | .37 | 1444 | .41 | 1544 | .45 | 1640 | .50 | ***1733*** | ***.55*** | | |
| 1100 | 1119 | .40 | 1310 | .43 | 1413 | .47 | 1510 | .51 | 1604 | .55 | 1694 | .60 | ***1781*** | ***.65*** | | |
| 1200 | 1288 | .52 | 1391 | .55 | 1488 | .59 | 1580 | .63 | 1668 | .67 | ***1753*** | ***.72*** | | | | |
| 1300 | 1378 | .66 | 1475 | .69 | 1566 | .73 | 1653 | .77 | ***1737*** | ***.81*** | | | | | | |
| 1400 | 1469 | .81 | 1560 | .85 | 1647 | .89 | ***1729*** | ***.93*** | | | | | | | | |
| 1500 | 1560 | .99 | 1647 | 1.03 | ***1729*** | ***1.07*** | | | | | | | | | | |
| 1600 | 1653 | 1.20 | ***1735*** | ***1.24*** | | | | | | | | | | | | |
| 1700 | ***1746*** | ***1.43*** | | | | | | | | | | | | | | |

Max. speed for aluminum wheel is 1800 RPM

*For ratings in bold italics, a direct drive fan is recommended.*

NOTE: Drive losses are not included in BHP. For RPMs in italics, Direct Drive Blowers should be considered.

**APPROXIMATE SHIPPING WEIGHT IN POUNDS ★**

| MODEL | ARR.1 (No motor) | ARR.2 (No motor) | ARR.4 | ARR.4HM | ARR.8 | ARR.9 | Nominal Motor HP - WT | |
|---|---|---|---|---|---|---|---|---|
| LMF-3 | – | – | – | 20 | – | – | 1/12 | 14 |
| LM-4 | 59 | 37 | 33 | 29 | 92 | 90 | 1/3 | 20 |
| LMF-4 | – | – | – | 29 | – | – | 1/3 | 20 |
| LM-6 | 73 | 39 | 43 | 39 | 116 | 112 | 1 1/2 | 28 |
| LMF-6 | – | – | – | 39 | – | – | 1 1/2 | 28 |
| LM-8 | 82 | 54 | 59 | 51 | 127 | 117 | 1 | 30 |
| LMF-8 | – | – | – | 51 | – | – | 1 | 30 |

★ ARRANGEMENT 4, 4HM, 8 AND 9 WEIGHTS INCLUDE NOMINAL HP AND CORRESPONDING MOTOR WEIGHT INDICATED IN COLUMN EIGHT. MAKE CORRECTIONS AS NECESSARY BY DEDUCTING NOMINAL WEIGHT AND ADDING WEIGHT OF ACTUAL MOTOR TO BE USED.

**⚠ DANGER**

All fans & blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

Read operating instructions.

# LM & LMF SERIES DIRECT DRIVE RATING TABLES

**NOTE: THESE RATINGS ARE FOR 50 CYCLE MOTORS ONLY.**

**CFM and BHP at Static Pressure Shown** — **Ratings at 70°F., .075 Density, Sea Level**

| MODEL NO. | NOMINAL WHEEL SIZE | FAN RPM | 1/4" SP | | 1/2" SP | | 3/4" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | | 2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP | CFM | BHP |
| **LMF-3** | 4.7 x 2.4 | 2850 | 184 | .08 | 163 | .08 | 137 | .07 | 101 | .06 | | | | | | | | |
| **LM-4 &** | 4.3 x 2.9 | 2850 | 234 | .09 | 210 | .08 | 185 | .08 | | | | | | | | | | |
| **LMF-4** | 4.7 x 2.9 | 2850 | 303 | .19 | 280 | .18 | 257 | .16 | 233 | .16 | | | | | | | | |
| **LM-6 &** | 6.3 x 3.5 | 950 | 195 | .02 | | | | | | | | | | | | | | |
| **LMF-6** | 6.3 x 2.5 | 1425 | 345 | .08 | 279 | .07 | | | | | | | | | | | | |
| (See Note 1.) | 6.3 x 3.5 | 1425 | 391 | .09 | 315 | .07 | | | | | | | | | | | | |
| | 6.3 x 2.5 | 2850 | 740 | .72 | 726 | .71 | 710 | .69 | 691 | .67 | 668 | .65 | 640 | .62 | 604 | .58 | 559 | .53 |
| | 6.3 x 3.5 | 2850 | 877 | .83 | 846 | .80 | 814 | .77 | 781 | .73 | 746 | .70 | 710 | .67 | 672 | .63 | 630 | .60 |
| | 8.3 x 1.5 | 950 | 250 | .05 | | | | | | | | | | | | | | |
| **LM-8 &** | 8.3 x 3.0 | 950 | 401 | .07 | | | | | | | | | | | | | | |
| **LMF-8** | 8.3 x 4.1 | 950 | 807 | .17 | 584 | .10 | | | | | | | | | | | | |
| | 8.3 x 1.5 | 1425 | 473 | .21 | 398 | .19 | 275 | .16 | | | | | | | | | | |
| | 8.3 x 3.0 | 1425 | 709 | .27 | 623 | .25 | 536 | .23 | 413 | .19 | | | | | | | | |
| | 8.3 x 4.1 | 1425 | 1352 | .73 | 1241 | .60 | 1117 | .49 | 969 | .38 | 746 | .28 | | | | | | |

NOTE 1: Aluminum wheels not available at 2850 RPM. See wheel specification chart below.

# DIMENSIONS and SPECIFICATIONS

NOTE: The table below contains blower housing dimensions common to all arrangements on pages 8 & 9.

**DIMENSIONS IN INCHES** ± 1/8" — DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

| MODEL NO. | C | D | J | M | N | O | P | R | S | T | ③ AA | ③④ DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LM-4 | 1 | 3 7/8 | 2 15/16 | 2 13/16 | 1 3/4 | 3 5/8 | 4 1/2 | 5 | 4 1/16 | 1 | 5 | 4 |
| LM-6 | 1 | 4 13/16 | 3 3/8 | 4 1/4 | 1 3/4 | 4 3/16 | 6 1/4 | 6 1/2 | 5 9/16 | 1 | 6 | 6 |
| LM-8 | 1 | 6 1/16 | 4 | 5 9/16 | 1 5/8 | 5 1/4 | 7 13/16 | 8 11/16 | 6 7/8 | 1 | 8 | 8 |

③ LM-4 ONLY; INLET AND DISCHARGE FLANGE NOT AVAILABLE DUE TO INTERFERENCE.
④ ALL MODELS, DISCHARGE FLANGE NOT AVAILABLE FOR DOWN BLAST POSITION.

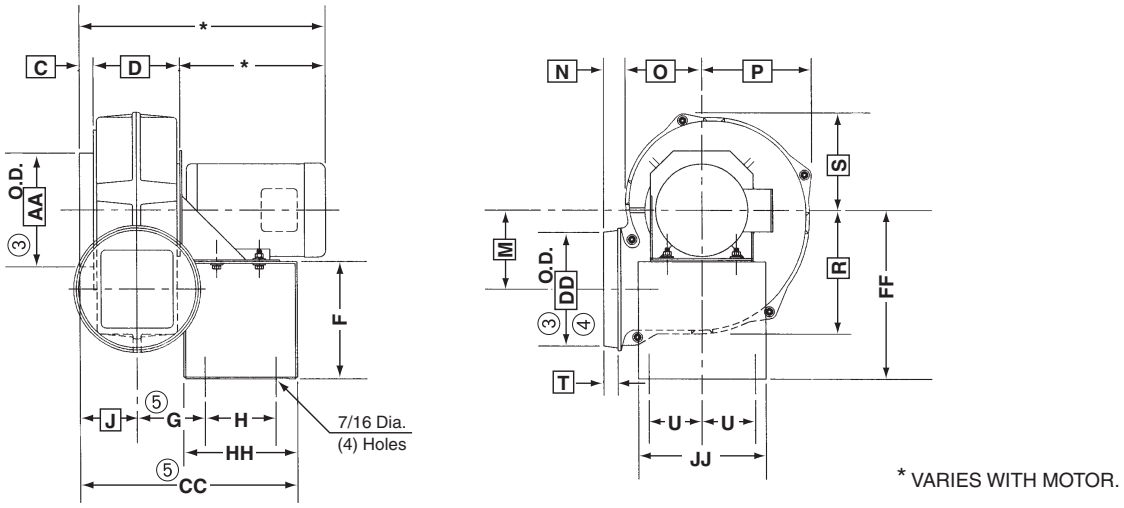
# WHEEL SPECIFICATIONS

| FAN MODEL | NOMINAL WHEEL SIZE | ACTUAL WHEEL DIAMETER & WIDTH | STANDARD STEEL | | OPTIONAL ALUMINUM | |
|---|---|---|---|---|---|---|
| | | | Max. RPM | HUB | Max. RPM | HUB |
| **LMF-3** ★ | 4.7 x 2.4 ● | 4 11/16 x 2 7/16 ● | 4000 | INT. | 4000 | INT. |
| **LM-4 &** | 4.3 x 2.1 | 4 1/4 x 2 15/16 | 4000 | INT. | 3500 ■ | INT. |
| **LMF-4** | 4.7 x 2.9 ● | 4 11/16 x 2 7/8 ● | 4000 | INT. | 3500 | INT. |
| **LM-6 &** | 6.3 x 2.5 | 6 5/16 x 2 1/2 | 3500 | EXT. | 1800 ■ | EXT. |
| **LMF-6** | 6.3 x 3.5 ● | 6 1/4 x 3 1/2 ● | 3500 | INT. | 1800 | INT. |
| **LM-8 &** | 8.3 x 1.5 | 8 1/4 x 1 1/2 | 1800 | EXT. | 1800 ■ | EXT. |
| **LMF-8** | 8.3 x 3.0 | 8 1/4 x 3 | 1800 | INT. | 1800 ■ | INT. |
| | 8.3 x 4.1 ● | 8 1/4 x 4 1/8 ● | 1800 | INT. | 1800 | INT. |

● These wheel sizes are the original wheel sizes for LM blowers prior to September, 1998.
■ Aluminum wheels in these sizes will extend delivery. Contact your local CF sales office for assistance.
INT. = Internal hub EXT. = External hub
★ Available in CW rotation only.

# DIMENSIONS and SPECIFICATIONS

## Arrangement #4, Direct Drive




**Note: For common boxed blower housing dimensions, see Page 7.**

**DIMENSIONS IN INCHES** ± 1/8" DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

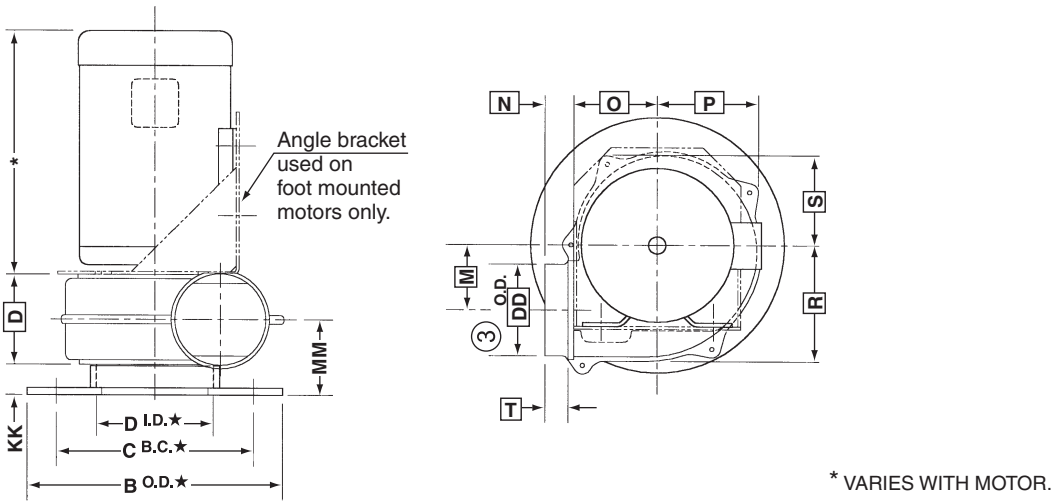
| MODEL NO. | MOTOR FRAME | F | G | ⑤ G▲ | H | U | ⑤ CC | CC▲ | FF | HH | JJ | ⑥ KK | ⑥ MM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LM-4 | 56 | 5 | 3 1/4 | — | 5 | 2 3/4 | 12 1/4 | — | 8 9/16 | 7 1/8 | 7 | 1 5/16 | 3 1/4 |
| LM-6 | 56 | 5 | 3 3/4 | 4 3/16 | 5 | 2 3/4 | 13 3/16 | 13 5/8 | 8 9/16 | 7 1/8 | 7 | 1 5/16 | 3 11/16 |
| LM-8 | 56 | 8 1/4 | 4 13/16 | 5 7/8 | 5 | 3 3/4 | 15 5/16 | 16 3/8 | 11 13/16 | 8 | 9 | 1 5/16 | 4 5/16 |

③ LM-4 ONLY; INLET *AND* DISCHARGE FLANGE NOT AVAILABLE DUE TO INTERFERENCE.
④ ALL MODELS, DISCHARGE FLANGE NOT AVAILABLE FOR DOWN BLAST POSITION.
⑤ FOR DOWN BLAST DISCHARGE LM-6 & LM-8, SEE SPECIAL "G▲" AND "CC▲" DIMENSIONS.
⑥ DIMENSIONS KK AND MM REFER TO ARRANGEMENT 4 HM BELOW.

# DIMENSIONS and SPECIFICATIONS

## Arrangement #4 HM, (Horizontal Mount) Direct Drive

NOTE: Inlet flange is optional on arrangement #4HM.



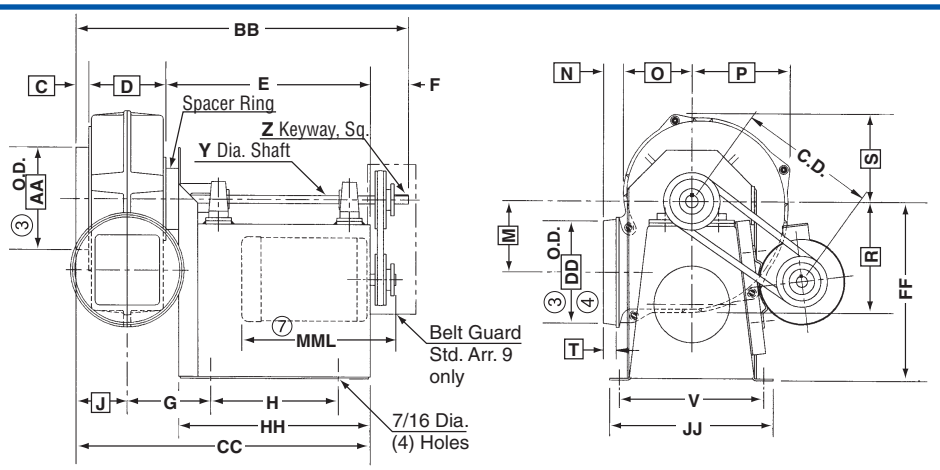

**Note: For common boxed blower housing dimensions, see Page 7.**

★ For inlet flange dimensions B, C and D above, see flange dimensions table on page 11 for corresponding A dimension. For KK and MM dimensions, see arrangement 4 dimension table above.

# DIMENSIONS and SPECIFICATIONS

## Arrangement #1 and #9, Belt Drive

NOTE: Arrangement 9 dimensions are the same as arrangement 1 with exception of dimensions C.D. and MML which are for arrangement 9 only.



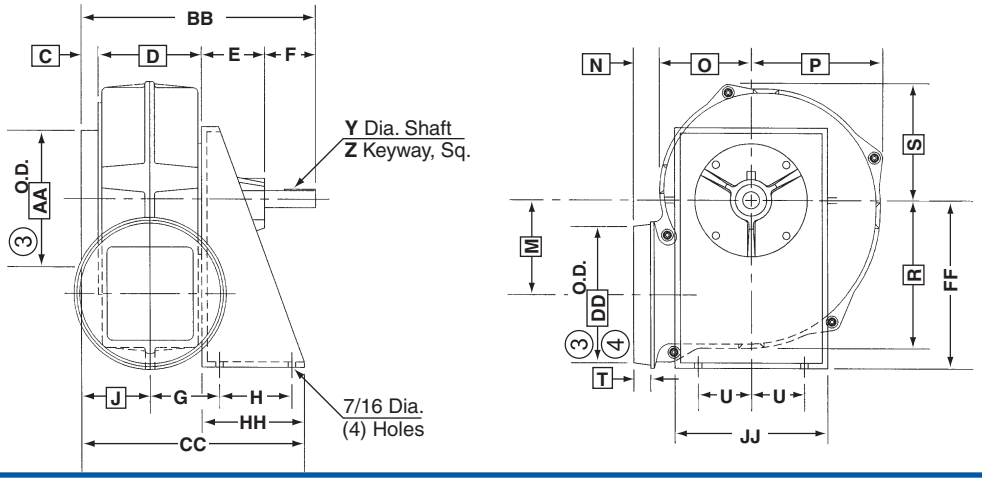

**Note: For common boxed blower housing dimensions, see Page 7.**

**DIMENSIONS IN INCHES** ± 1/8" DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

| MODEL NO. | MOTOR FRAME | E | F | G | H | V | Y | Z | BB | CC | FF | HH | JJ | ⑦ MML | C.D. MIN. | C.D. MAX. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LM-4 | 56-145T | 16 1/4 | 3 | 5 11/16 | 10 | 11 3/8 | 3/4 | 3/16 | 24 1/8 | 21 1/8 | 14 | 15 | 12 7/8 | 15 | 10 1/4 | 11 1/4 |
| LM-6 | 56-145T | 16 1/4 | 3 | 6 3/16 | 10 | 11 3/8 | 3/4 | 3/16 | 25 1/16 | 22 1/16 | 14 | 15 | 12 7/8 | 15 | 10 1/4 | 11 1/4 |
| LM-8 | 56-145T | 16 1/4 | 3 | 6 13/16 | 10 | 11 3/8 | 3/4 | 3/16 | 26 5/16 | 23 5/16 | 14 | 15 | 12 7/8 | 15 | 10 1/4 | 11 1/4 |

③ LM-4 ONLY; INLET *AND* DISCHARGE FLANGE NOT AVAILABLE DUE TO INTERFERENCE.
④ ALL MODELS, DISCHARGE FLANGE NOT AVAILABLE FOR DOWN BLAST POSITION.
⑦ MML IS MAXIMUM MOTOR LENGTH ON CUSTOMER-SUPPLIED MOTOR. MOTOR MANUFACTURER "C" DIMENSION CANNOT EXCEED MML.

## Arrangement #2, Belt Drive




**Note: For common boxed blower housing dimensions, see Page 7.**

**DIMENSIONS IN INCHES** ± 1/8" DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

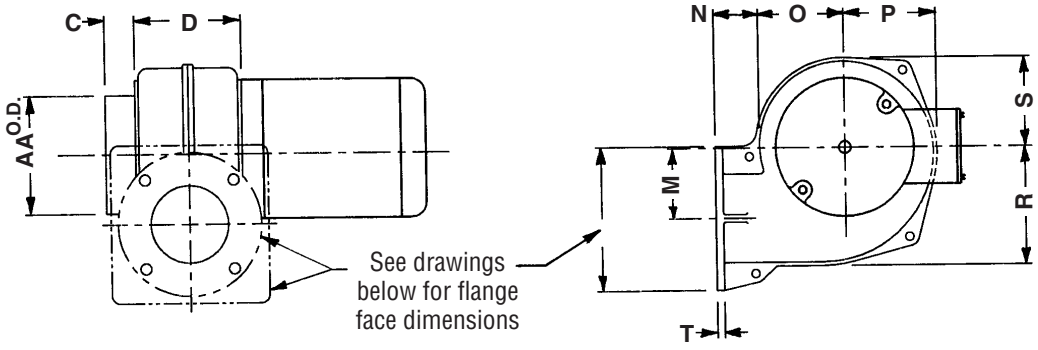
| MODEL NO. | E | F | G | H | U | Y | Z | BB | CC | FF | HH | JJ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LM-4 | 3 9/16 | 3 | 2 15/16 | 3 1/4 | 2 7/8 | 5/8 | 3/16 | 11 7/16 | 10 | 7 13/16 | 5 1/8 | 7 3/4 |
| LM-6 | 3 5/8 | 3 | 3 7/16 | 3 1/4 | 2 7/8 | 5/8 | 3/16 | 12 7/16 | 10 15/16 | 7 13/16 | 5 1/8 | 7 3/4 |
| LM-8 | 3 11/16 | 3 | 4 1/16 | 4 1/4 | 2 7/8 | 5/8 | 3/16 | 13 3/4 | 13 1/16 | 9 7/8 | 6 | 7 3/4 |

③ LM-4 ONLY; INLET *AND* DISCHARGE FLANGE NOT AVAILABLE DUE TO INTERFERENCE.
④ ALL MODELS, DISCHARGE FLANGE NOT AVAILABLE FOR DOWN BLAST POSITION.

# DIMENSIONS and SPECIFICATIONS

## Model LMF, Arrangement #4 HM, (Horizontal Mount) Direct Drive

## All LMF models are available in clockwise (CW) rotation only.



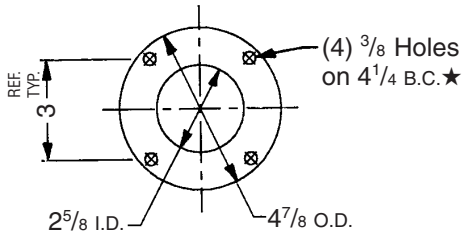

**DIMENSIONS IN INCHES** ± 1/8" DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

| MODEL NO. | MOTOR FRAME | C | D | M | N | O | P | R | S | T | AA |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LMF-3 | 42CZ | 1 | 3 5/8 | 2 3/8 | 1 1/2 | 2 7/8 | 3 1/8 | 4 | 3 | 1/4 | 4 |
| LMF-4 | 56C | 1 | 4 | 2 13/16 | 1 7/16 | 3 7/16 | 4 5/8 | 5 | 4 1/16 | 3/8 | 5 |
| LMF-6 | 56C | 1 | 4 13/16 | 4 1/4 | 1 3/4 | 4 3/16 | 6 1/4 | 6 1/2 | 5 9/16 | 3/8 | 6 |
| LMF-8 | 56C | 1 | 6 1/16 | 5 9/16 | 1 3/4 | 5 1/4 | 7 13/16 | 8 11/16 | 6 7/8 | 3/8 | 8 |

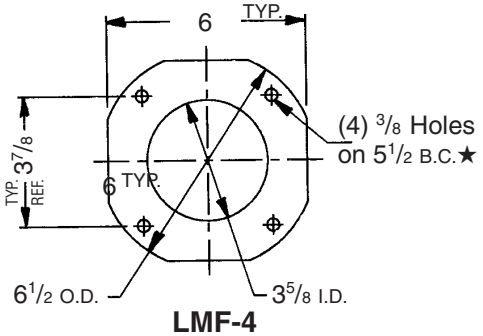
## Model LMF, Flange Face Dimensions for Above

**DIMENSIONS IN INCHES ± 1/8"** DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

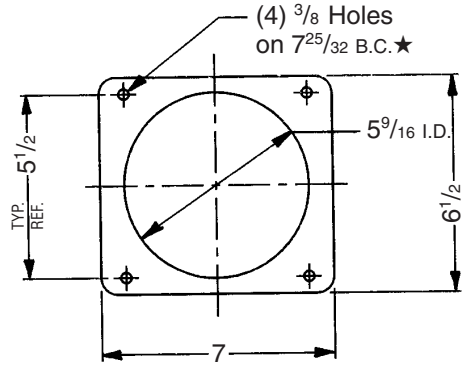
★ All bolt holes are cast into flanges so bolt circle cannot be changed.



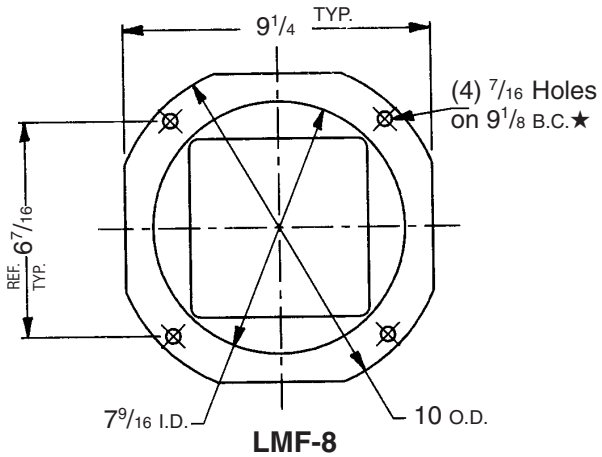

**LMF-3**




**LMF-4**



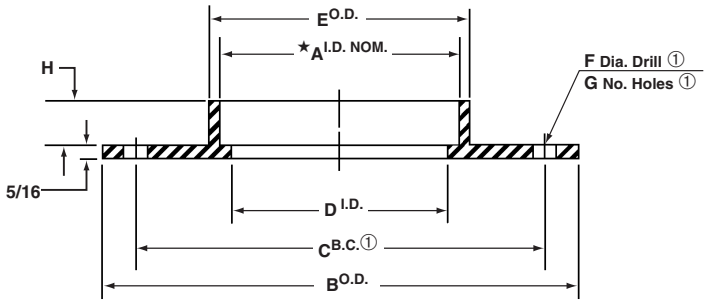

**LMF-6**




**LMF-8**

# DIMENSIONS and SPECIFICATIONS

## INLET AND DISCHARGE FLANGE DIMENSIONS ♦




Dimensions in inches

| A★ | B* | C* | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
| 4 1/16 | 9 | 7 1/2 | 3 11/16 | 4 9/16 | 7/16 | 4 | 15/16 |
| 5 1/16 | 11 | 8 1/2 | 4 9/16 | 5 9/16 | 7/16 | 4 | 15/16 |
| 6 1/16 | 11 | 9 1/2 | 5 1/2 | 6 9/16 | 7/16 | 4 | 1 1/16 |
| 8 1/16 | 13 1/2 | 11 3/4 | 7 1/2 | 8 5/8 | 7/16 | 8 | 1 |

★ "A" fits over inlet or outlet of blower, "AA" or "DD" dimension.

* Meet ANSI-125 pound flange dimensions.

① Holes will not be drilled unless customer specifies. If drilled per our standard, holes will be drilled on centerlines unless specified otherwise on order. Dimensions "C, F & G" can be made to customer specifications; at an additional charge.

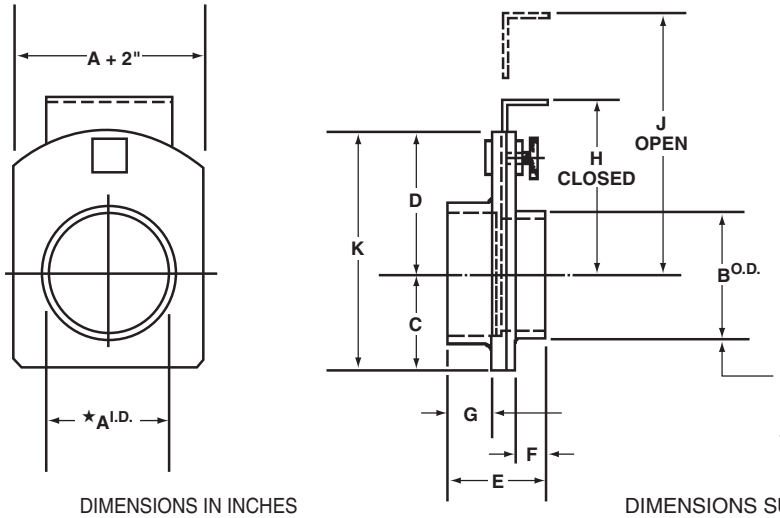
② All dimensions are ±1/8" except C & F.

③ All flanges are 319 cast aluminum.

♦ THESE DISCHARGE FLANGES ARE NOT AVAILABLE ON DOWN BLAST DISCHARGE POSITION OR ANY LMF DISCHARGES.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

## INLET AND DISCHARGE SLIDE GATE DIMENSIONS ❖




❖ NOT AVAILABLE ON DOWN BLAST DISCHARGE POSITION OR ANY LMF DISCHARGES.

① Gate halves are 319 cast aluminum. Slide gate is 12 gauge galvanized steel. Aluminum slide gate available at additional charge.

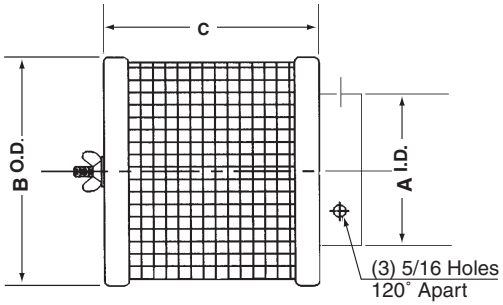
DIMENSIONS IN INCHES

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

| MODEL | A★ | B | C | D | E | F | G | H | J | K |
|---|---|---|---|---|---|---|---|---|---|---|
| FG-4 | 4 1/16 | 3 15/16 | 3 1/4 | 4 1/2 | 2 11/16 | 1 | 1 1/16 | 5 5/8 | 9 | 7 3/4 |
| FG-5 | 5 1/16 | 4 15/16 | 3 1/2 | 5 1/2 | 2 9/16 | 1 1/8 | 7/8 | 6 1/8 | 10 1/2 | 9 |
| FG-6 | 6 1/16 | 5 15/16 | 4 | 5 1/2 | 2 11/16 | 1 1/16 | 1 | 6 1/4 | 11 1/2 | 9 1/2 |
| FG-8 | 8 1/16 | 7 15/16 | 5 | 6 3/4 | 2 13/16 | 1 | 1 3/16 | 7 3/4 | 15 | 11 3/4 |

★ "A" FITS OVER INLET OR OUTLET OF BLOWER, "AA" OR "DD" DIMENSION

## INLET FILTER DIMENSIONS FOR LM & LMF MODEL FANS




| Filter Model Number | | For Use on Fan Models | Dimensions | | | Filter Efficiency with Paper Media ① | | |
|---|---|---|---|---|---|---|---|---|
| With Wire Media | With Paper Media | | Nom. Fan Inlet Size A | B | C | 1 Micron | 2 Micron | 10 Micron |
| F55SW | F55SP | LMF-3 | 4 | 5 1/2 | 5 7/16 | 90% | 99% | 99.99% |
| F884SW | F884SP | LMF-3 | 4 | 8 1/8 | 8 11/32 | 90% | 99% | 99.99% |
| F885SW | F885SP | LM-4, LMF-4 | 5 | | | | | |
| F10106SW | F10106SP | LM-6, LMF-6 | 6 | 9 13/16 | 11 5/8 | 90% | 99% | 99.99% |
| F10108SW | F10108SP | LM-8, LMF-8 | 8 | | | | | |

① No efficiency is quoted with wire media. Wire media is for above micron sizes such as leaves.