





Jet Nozzle Diffusers JA

GMCAIR HVAC SYSTEM&EQUIPMENT LLC www.gmcairgrille.com - sales@gmcairgrille.com





DESCRIPTION:

Available in a variety of sizes and with multiple mounting options, the Nozzle Diffuser (JA) is well suited to industrial and commercial applications that require long throws and accurate directional control for full mixing or spot cooling and heating.

MATERIAL :

Aluminum

FUNCTION:

The architectural styling of the JA provides a modern alternative to traditional diffusers while providing superior performance characteristics. Ideal applications include: convention centers, meeting halls, airports, shopping malls, and auditoriums.

FINISHING :

• Powder coated in RAL9010 colour as standard. Other colours on request

INSTALLATION :

- Screw
- No Fixing

ACCESSORIES:

Plenum box

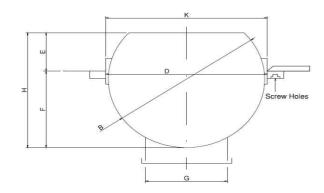


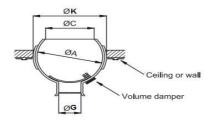
STANDARD SIZES (mm):

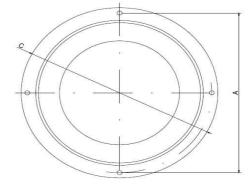
| TYPE JA - AVAILABLE SIZES (mm) | | | | | | | | |
|--------------------------------|------|------|------|------|------|------|--|--|
| NECK DIAMETER | | | | | | | | |
| Ø80 | Ø120 | Ø150 | Ø200 | Ø250 | Ø315 | Ø400 | | |
| Х | X | X | X | X | X | X | | |

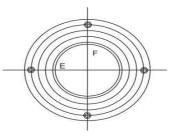
JA DIMENSIONS

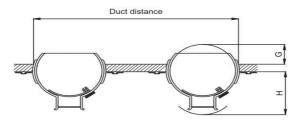
| MEASURE | Α | В | С | D | E | F | G | н | к | Screw holes |
|---------|-----|-----|-----|-----|----|-----|-----|-----|-----|----------------|
| JA 3 | 97 | 75 | 115 | 82 | 17 | 53 | 38 | 70 | 85 | 3 |
| JA 4 | 122 | 100 | 140 | 107 | 24 | 65 | 50 | 89 | 111 | 4 |
| JA 5 | 152 | 130 | 170 | 137 | 33 | 82 | 65 | 115 | 140 | 5 |
| JA 6 | 172 | 150 | 190 | 158 | 38 | 94 | 75 | 132 | 161 | 5 |
| JA 7 | 213 | 178 | 231 | 185 | 38 | 111 | 90 | 149 | 190 | 5 |
| JA 8 | 232 | 200 | 250 | 204 | 44 | 120 | 100 | 164 | 208 | 5 |
| JA 10 | 304 | 267 | 324 | 276 | 50 | 174 | 140 | 224 | 280 | 5 |
| JA 12 | 342 | 305 | 363 | 314 | 63 | 200 | 165 | 263 | 318 | 5 |

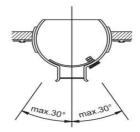








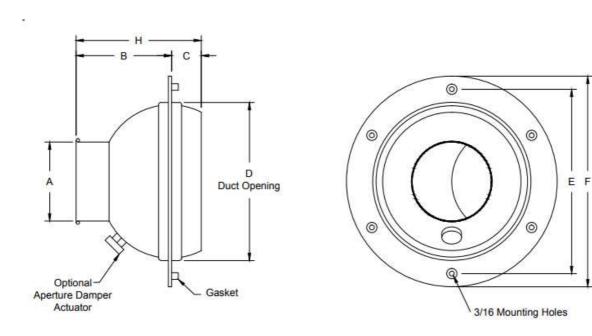




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MPK DIMENSIONS (Only U.S.)



| SIZE | A | В | C | D | E | F | H | No. of Mtg Holes |
|------|-------|-------|-------|----|----|----|--------|------------------|
| 6 | 3 | 3-5/8 | 1-1/8 | 6 | 7 | 8 | 4-3/4 | 4 |
| 8 | 4-3/8 | 4-5/8 | 1-3/4 | 8 | 9 | 10 | 6-1/8 | 4 |
| 10 | 5-3/4 | 6-1/4 | 2-1/2 | 10 | 11 | 12 | 8-3/4 | 6 |
| 12 | 7-3/8 | 6-1/2 | 3 | 12 | 13 | 14 | 9-1/2 | 6 |
| 14 | 8-5/8 | 7-3/8 | 4-1/8 | 14 | 15 | 16 | 11-1/2 | 6 |
| 16 | 9-3/4 | 8-1/2 | 4-5/8 | 16 | 17 | 18 | 13-1/8 | 6 |



JA SELECTION TABLE

| $\begin{tabular}{ c c c c c c } \hline Ak (m^2) & 0,0034 & 0,0068 & 0,0080 & 0,0170 & 0,0215 \\ \hline 100 & $L_t(m) & 9,0 & $$\\ \hline NR & 17 & $$\\ \hline Pt (Pa) & 40,0 & $$\\ \hline Vk (m/s) & 8,4 & $$\\ \hline Vk (m/s) & 8,4 & $$\\ \hline Vk (m/s) & 8,4 & $$\\ \hline Vt=0,25 m/s & $\\ \hline Vt=0,25 m/s & $\\$ | 0,0430 |
|--|-------------|
| $ \begin{array}{ c c c c c c } \hline 100 & \hline NR & 17 \\ \hline Pt (Pa) & 40,0 & & & \\ \hline Pt (Pa) & 40,0 & & & \\ \hline Vk (m/s) & 8,4 & & & & \\ \hline Ut (m) & 13,0 & 9,0 & & & \\ \hline Ut (m) & 13,0 & 9,0 & & & \\ \hline NR & 31 & 15 & & & \\ \hline Pt (Pa) & 84,0 & 28,0 & & & \\ \hline Pt (Pa) & 84,0 & 28,0 & & & \\ \hline Vk (m/s) & 13,0 & 6,8 & & & \\ \hline Ut (m) & 18,0 & 14,0 & 12,0 & & \\ \hline 100 & NR & 40 & 25 & 17 & & \\ \hline \end{array} $ | |
| Pt (Pa) 40,0 Selections table criterias Vk (m/s) 8,4 Selections table criterias Lt (m) 13,0 9,0 Vt=0,25 m/s NR 31 15 Vt=0,25 m/s Pt (Pa) 84,0 28,0 Vt=0,25 m/s Vk (m/s) 13,0 6,8 Lt (m) 18,0 14,0 12,0 NR 40 25 17 | |
| Vk (m/s) 8,4 Selections table criterias L _t (m) 13,0 9,0 Vt=0,25 m/s NR 31 15 Vt=0,25 m/s Pt (Pa) 84,0 28,0 Vt=0,25 m/s Vk (m/s) 13,0 6,8 Vt=0,25 m/s L _t (m) 18,0 14,0 12,0 NR 40 25 17 | |
| Lt (m) 13,0 9,0 oriterias Vt=0,25 m/s 150 NR 31 15 Vt=0,25 m/s Pt (Pa) 84,0 28,0 Vt=0,25 m/s Vk (m/s) 13,0 6,8 | |
| NR 31 15 Pt (Pa) 84,0 28,0 Vk (m/s) 13,0 6,8 Lt (m) 18,0 14,0 12,0 NR 40 25 17 | |
| 150 Pt (Pa) 84,0 28,0 Vk (m/s) 13,0 6,8 Lt (m) 18,0 14,0 12,0 NR 40 25 17 | |
| Vk (m/s) 13,0 6,8 L _t (m) 18,0 14,0 12,0 200 NR 40 25 17 | |
| Lt (m) 18,0 14,0 12,0 200 NR 40 25 17 | |
| 200 NR 40 25 17 | |
| 200 | |
| | |
| 175 04 70 | |
| VK (IIVS) | |
| L _t (m) 20,0 17,0 NR 37 29 | |
| 300 Pt (Pa) 120,0 68,0 | |
| Vk (m/s) 14,0 11,0 | |
| L ₁ (m) 27,0 23,0 16,0 | |
| NR 46 38 20 | |
| 400 Pt (Pa) 200,0 120,0 30,0 | |
| Vk (m/s) 19,0 14,0 7,0 | |
| L ₁ (m) 28,0 20,0 17,0 | |
| 500 NR 45 27 18 | |
| Pt (Pa) 180,0 50,0 25,0 | |
| Vk (m/s) 17,0 9,0 6,6 | |
| L _t (m) 25,0 21,0 | |
| 600 NR 32 25 | |
| Pt (Pa) 68,0 38,0 | |
| Vk (m/s) 11,0 8,0 | |
| L _t (m) 33,0 28,0 | 20,0 |
| 800 NR 42 34 | 16 |
| Pt (Pa) 120,0 64,0 | 17,0 |
| Vk (m/s) 14,0 10,5 | 5,6 |
| L _(m) 40,0 35,0 | 25,0 |
| NR 48 40 | 23 |
| 1000 Pt (Pa) 180,0 100,0 Vk (m/s) 18,0 13,5 | 28,0 6,8 |
| L (m) 51,0 | 38,0 |
| | 35 |
| 1500 NR 53 Pt (Pa) 220,0 | 60,0 |
| Vk (m/s) 19,5 | 10,0 |
| L _t (m) | 50,0 |
| NR | 44 |
| 2000 Pt (Pa) | 100,0 |
| Vk (m/s) | 13,5 |
| | |
| 3000 NR | 63,0 56 |
| Pt (Pa) | 230,0 |
| Vk (m/s) | 20,0 |



MPK SELECTION TABLE (Only U.S.)

| Model | Nozzle Velocity (fpm) | 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 |
|--------|-----------------------|----------|----------|----------|----------|-----------|-----------|-----------|
| MPK-04 | CFM | 22 | 33 | 44 | 55 | 66 | 77 | 88 |
| | Projection | 3-6-12 | 4-8-17 | 6-12-23 | 8-16-24 | 9-18-27 | 10-21-30 | 12-22-32 |
| | Total Pressure | 0.03 | 0.07 | 0.13 | 0.20 | 0.28 | 0.39 | 0.50 |
| | NC | <15 | <15 | <15 | 19 | 23 | 26 | 30 |
| | CFM | 49 | 74 | 98 | 123 | 147 | 172 | 196 |
| | Projection | 4-8-16 | 6-12-23 | 8-16-27 | 10-20-30 | 12-21-32 | 14-25-36 | 16-26-38 |
| MPK-06 | Total Pressure | 0.05 | 0.12 | 0.22 | 0.34 | 0.49 | 0.66 | 0.86 |
| | NC | <15 | <15 | 15 | 21 | 25 | 29 | 33 |
| | CFM | 104 | 157 | 209 | 261 | 313 | 365 | 418 |
| MPK-08 | Projection | 6-11-23 | 8-17-34 | 11-23-39 | 14-28-44 | 17-31-46 | 20-35-52 | 23-38-55 |
| MPR-00 | Total Pressure | 0.06 | 0.14 | 0.24 | 0.38 | 0.53 | 0.70 | 0.92 |
| | NC | <15 | <15 | 17 | 24 | 30 | 35 | 38 |
| | CFM | 180 | 270 | 261 | 451 | 541 | 631 | 721 |
| MKD 10 | Projection | 7-15-30 | 11-22-45 | 15-30-51 | 19-37-57 | 22-41-61 | 26-47-69 | 30-50-72 |
| MKP-10 | Total Pressure | 0.07 | 0.15 | 0.25 | 0.39 | 0.56 | 0.74 | 0.96 |
| | NC | <15 | <15 | 21 | 29 | 35 | 40 | 45 |
| | CFM | 297 | 445 | 593 | 742 | 890 | 1038 | 1187 |
| MPK-12 | Projection | 10-19-38 | 14-29-57 | 19-38-65 | 24-48-74 | 29-52-78 | 33-60-88 | 38-64-93 |
| MPR-12 | Total Pressure | 0.07 | 0.15 | 0.26 | 0.40 | 0.58 | 0.78 | 1.01 |
| | NC | <15 | 15 | 24 | 32 | 38 | 44 | 47 |
| | CFM | 406 | 609 | 811 | 1014 | 1217 | 1420 | 1623 |
| MPK-14 | Projection | 11-22-45 | 17-33-67 | 22-44-76 | 28-56-86 | 33-61-91 | 39-70-103 | 45-75-108 |
| MPR-14 | Total Pressure | 0.07 | 0.15 | 0.26 | 0.41 | 0.58 | 0.79 | 1.02 |
| | NC | <15 | 15 | 25 | 33 | 39 | 44 | 48 |
| | CFM | 518 | 778 | 1036 | 1296 | 1555 | 1815 | 2074 |
| MPK-16 | Projection | 13-25-50 | 19-38-76 | 25-50-86 | 32-63-97 | 38-69-103 | 44-79117 | 50-84-122 |
| MLU-10 | Total Pressure | 0.07 | 0.14 | 0.26 | 0.41 | 0.58 | 0.80 | 1.03 |
| | NC | <15 | 16 | 26 | 33 | 39 | 44 | 49 |

All data is tested in accordance with ANSI/ASHRAE 70-2006.

DEFINITION OF UNITS CFM : Air

: Airflow / Standard air density and isothermal conditions.

: Noise Criteria [NC] curve which is not exceeded with a Room Attenuation of 10dB and based on Sound Power Level RE: 10-12 watts

: Inches of water gauge required.

Total Pressure Projection

NC

- red
- Projection distance {Throw} in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].
 Nozzle Discharge Velocity in feet per minute [fpm].

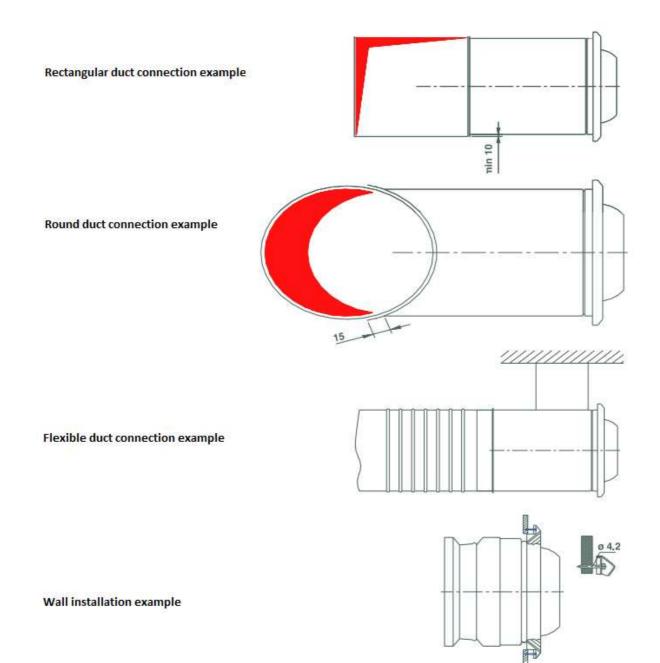
Nozzle Velocity Terminal Velocity

: Maximum velocity [Vt] in feet per minute [fpm] at the specified distance from the outlet face [Throw] 400 fpm, 200 fpm and 100 fpm respectively



INSTALLATION:

Jet nozzles are suitable for mounting on rectangular or circular ducts. For both connection types, there is a circullar drilled flange appropriate to be fixed with screws or rivets.





ORDER CODES

