

OVERVIEW: WINDJET AIR NOZZLES

Air nozzles convert a low-pressure volume of compressed air into a targeted high-velocity concentrated air stream, flat fan or curtain of high-impact air. Ideal for use in many applications, WindJet air nozzles come in a variety of types, capacities, sizes and materials.

WindJet nozzles are widely used for moving materials and cleaning, drying and cooling parts. The high impact provided by these nozzles ensures effective drying and blow-off even for round or oddly shaped products.



The benefits WindJet air nozzles provide:

- A significant reduction in compressed air consumption compared to open pipes. (See Figure 1.)
- Up to 60% reduction in perceived noise level, depending on the initial air pressure. At 100 psig (7 bar), for example, an open pipe would produce a noise level of 98 dBa while an air nozzle would produce 85 dBa, a reduction of 13 dBa and a perceived noise reduction of 60% (See Figure 2.)
- Improved safety. The design of WindJet air nozzles prevents dead-ending should the nozzle accidentally be placed against a flat surface
- The targeted air stream delivered by the nozzles can improve the effectiveness and efficiency of drying and blow-off. More complete drying, even in cracks and crevices is commonly achieved

FIGURE 1.

Air Consumption: Open Pipe vs. Air Nozzles

| Open Pipe | | Equivalent Impact Using Flat Fan or Round Spray Pattern Air Nozzles | Air Consumption Reduction % | Annual Air Cost Savings* (USD) |
|---------------|-----------------------------|---|-----------------------------|--------------------------------|
| Size in. (mm) | Air Consumption SCFM (Nlpm) | | | |
| 5/32 (4) | 19 (538) | 1 | 25% | \$593 |
| 1/4 (6) | 41 (1161) | 2 | 28% | \$1,432 |
| 5/16 (8) | 94 (2662) | 4 | 33% | \$3,872 |
| 1/2 (12) | 177 (5012) | 7 | 35% | \$7,731 |
| 5/8 (16) | 309 (8750) | 12 | 36% | \$13,833 |

*Data is based on AA727 and AA707 WindJet air nozzles. Assumes a 16 hour work day, 5 days a week and an operating cost of \$0.50 per 1000 cubic feet of air.

FIGURE 2.

Noise Comparison: Open Pipe vs. Air Nozzles

| Air Pressure psig (bar) | Noise Level | | Noise Reduction | Perceived Noise Reduction |
|-------------------------|---|---|-----------------|---------------------------|
| | 5/32" (4 mm) open pipe at a distance of 5 ft. (1.5 m) | Flat Fan or Round Spray Pattern Air Nozzles | | |
| 15 (1) | 70 dBa | 63 dBa | 7 dBa | 38% |
| 30 (2) | 80 dBa | 70 dBa | 10 dBa | 50% |
| 60 (4) | 88 dBa | 76 dBa | 12 dBa | 56% |
| 70 (5) | 92 dBa | 80 dBa | 12 dBa | 56% |
| 100 (7) | 98 dBa | 85 dBa | 13 dBa | 60% |

Note: Data is based on AA727 and AA707 WindJet air nozzles.

FEATURES AND BENEFITS

AA727 WINDJET NOZZLES

- Generate efficient, controlled flat fan air pattern for a uniform spray distribution
- Designed to maintain spray pattern integrity
- Available in materials that withstand high temperatures
- Recessed orifices protect against external damage and offer air escape should the nozzles accidentally be placed against a flat surface
- Low noise levels
- Can be mounted side-by-side for air curtain applications



AA707 WINDJET NOZZLES

- Produce tightly directed round spray pattern
- Low noise levels
- Color-coded aluminum caps for easy identification of flow rates
- Recessed orifices



Y767 COMPACT WINDJET NOZZLES

- Short profile – less than half the height of the AA727
- When installing multiple nozzles on a header, a uniform impact air stream is provided without lowering pressure
- Low noise levels



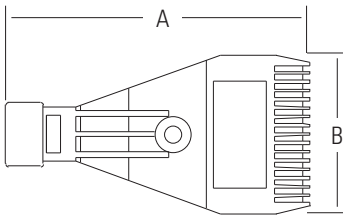
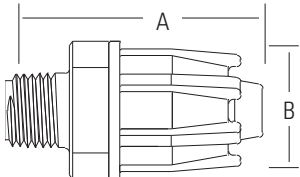
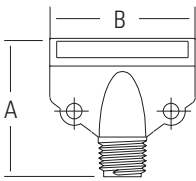
QUICK REFERENCE GUIDE

| Model | Connection | Connection Size (in.) | Materials | Max. Operating Temperature |
|-------|------------|-----------------------|---|---|
| AA727 | M | 1/4 | Polyphenylene sulfide (RY) Aluminum (AL) | At 100 psi (7 bar) 180°F (82°C) 450°F (230°C) |
| AA727 | M or F | 1/4 | ABS plastic | At 100 psi (7 bar) 170°F (77°C) |
| AA727 | M | 1/4 | Stainless steel (SS) | At 150 psi (10.3 bar) 500°F (260°C) |
| AA707 | M | 1/4 | Polyphenylene sulfide (RY) PVDF (KY) Aluminum (AL) Stainless steel (SS) ABS plastic | At 125 psi (8.6 bar) 400°F (204°C) 220°F (104°C) 450°F (230°C) 450°F (230°C) 180°F (82°C) |
| Y767 | M | 1/4 | ABS plastic | At 100 psi (7 bar) 180°F (82°C) |

PERFORMANCE DATA

| Inlet Conn. (in.) | Model | Capacity Size | Cap Color (Aluminum Only) | Capacity – scfm (NIpm) | | | |
|-------------------|------------------|---------------|---------------------------|------------------------|----------------|----------------|----------------|
| | | | | 10 psi (.7 bar) | 30 psi (2 bar) | 60 psi (4 bar) | 90 psi (6 bar) |
| 1/4 (M, F) | AA727 AA727-F | 11 | — | 5.0 (142) | 8.9 (246) | 14.4 (396) | 19.8 (549) |
| | | 15 | — | 6.8 (193) | 12.8 (357) | 21.3 (586) | 29.6 (816) |
| | | 23 | — | 9.9 (280) | 18.4 (510) | 30.9 (852) | 43.4 (1198) |
| 1/4 (M) | AA707 | 11 | green | 5.2 (147) | 9.6 (266) | 16.0 (442) | 22.3 (612) |
| | | 15 | yellow | 6.4 (181) | 12.4 (345) | 21.0 (578) | 29.4 (810) |
| | | 23 | red | 10.4 (294) | 19.2 (530) | 32.3 (889) | 45.0 (1237) |
| 1/4 (M) | Y767 | 15 | — | 6.8 (193) | 12.8 (357) | 21.3 (586) | 29.6 (816) |

DIMENSIONS AND WEIGHTS

|  | Model | A in. (mm) | B in. (mm) | Net Weight oz. (kg.) |
|---|-------------|-------------|--------------|----------------------|
| | AA727 (M) | 3-9/16 (91) | 2 (51) | 4.1 (.12) |
| | AA727-F (F) | 3-9/16 (91) | 2 (51) | 0.7 (.02) |
|  | AA707 (M) | 1-7/8 (48) | 1 (25) | 1.6 (.05) |
|  | Y767 (M) | 1-5/8 (43) | 1-11/16 (41) | .25 (.01) |

Based on largest/heaviest version of each type.

ORDERING INFORMATION

WINDJET AIR NOZZLES

| | | | | | | |
|--|---|------------------|---|----------|---|---------------|
| Nozzle Type | – | Inlet Connection | – | Material | – | Capacity Size |
| Example: AA707 – 1/4 – SS – 11 | | | | | | |

BSPT connections require the addition of a "B". Example: AAB707.

| Material Code | |
|----------------------------|------------------------|
| None = ABS plastic | SS = Stainless steel |
| AL = Aluminum | KY = PVDF (AA707 only) |
| RY = Polyphenylene sulfide | |

