



AIR KNIFE PACKAGES AND AIR NOZZLES

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OVERVIEW: WINDJET AIR KNIFE PACKAGES AND COMPRESSED AIR PRODUCTS

Ideal for: sheet control, dust blow-down, CIP air control system, drying and sheet cooling

WindJet Air Knife Packages

- Powered by regenerative blowers and eliminate the need for costly compressed air
- Regenerative blower performance advantages over other blower types:
 - Lower noise
 - Lower maintenance
 - Longer life
 - Lower operating costs
 - Warm air can improve drying
 - Fully customized solution
- Packages include air knives that produce a uniform, high volume, constant air stream along the entire knife length
- Air cannons providing high velocity air directed into holes and crevices for complete drying or blow-off are also available
- Air knife packages are commonly used when extremely clean air is required (HEPA filtration an option), no existing air source is available or energy reduction is desirable

WindJet Compressed Air Nozzles

- Convert low-pressure volumes of air into a targeted, high-velocity stream or flat fan air pattern and provide many benefits, including:
 - Improve drying or blow-off by increasing impact on the target
 - Use 25% to 35% less air compared to open holes or slits in pipes
 - Reduce perceived noise by 28% to 60% compared open pipe



FOR DETAILED PERFORMANCE DATA, SEE
WINDJET® AIR PRODUCTS, CAT. 20

BLOWER AIR PRODUCT OPTIONS

WindJet® Air Knives

- Superior performance – straight, controlled air stream
- Standard knife lengths of 6", 12", 18", 24", 30" and 36" (152, 305, 457, 610, 762 and 914 mm)
- Custom lengths available
- Dual inlet knives available (suggested for lengths greater than 60" [1524 mm])
- Air slot sizes of .040" and .060" (1 and 1.5 mm)
- Leak-proof end cap gaskets to prevent leakage on aluminum air knives
- Corrosion-resistant finish
- 3" (76.2 mm) flanged air inlet



Regenerative Blower Assemblies

- 5.5, 10, 20, 25 and 30 Hp. (4.0, 7.5, 15, 18.5, 22.3 kW)
- Assemblies include pressure relief valve, pressure gauge, air inlet filter, filter monitoring gauge, fittings, mounting adapter for flexible or rigid tubing
- Low maintenance, direct drive operation
- Fan cooling dissipates heat around the bearings to extend wear life
- Continuous, non-pulsating, oil-free air flow
- Low noise
- Rugged cast aluminum construction
- Lightweight
- Tropicalized for corrosion protection
- No heating element; air is warmed by heat generated during operation
- TEFC motors; CE and cURus certified
- Mountable in any position (except F30 which requires vertical mounting)
- Three-phase, dual frequency and multi-voltage motor versions
- Filter monitoring gauge alerts operator when service is required
- Wash down units available



WindJet® Air Cannons

- Complete drying by providing a high velocity air stream into holes and indentations in irregularly shaped parts
- Built-in mount spacer simplifies positioning in a mount bracket
- Corrosion-resistant finishes
- Three orifice sizes: .5", .75" and 1" (12.7, 19 and 25.4 mm)

For complete specifications, performance data and accessories, see WindJet® Air Products, Cat. 20F.



BLOWER AIR PRODUCT ACCESSORIES

Mounting Brackets

- These 100% stainless steel adjustable brackets are used for conveniently mounting air knives. Two specialized mounting plates connect to each end cap on the air knife

Note: Request data sheets 50040 and 55158 for dimensions



Flexible Tubing

- High-temperature, steel-reinforced flexible tubing available in 3" and 6" (76.2 and 152.4 mm) diameters and comes in lengths of 10' (3 m). High-torque, worm-gear clamps are available to attach the flexible tubing



Couplings

- Unique, easy to use 3" and 6" (76.2 and 152.4 mm) couplings – stainless steel outside, high temperature silicon rubber inside. The couplings compress for use between any rigid connections to prevent air leakage and to add support for the connections. A single built-in clamp is tightened by hand; no special tools are necessary



Noise Reduction Options

- Sound Enclosure (shown): Insulating hoods reduce noise by 10 dBa. Metal construction for easy washdown. (Not available for Model F30)

Note: Request data sheet 50218



Manifolds

Constructed from high-strength, high-temperature thermoplastic, manifolds allow a single air outlet on the blower to be divided for multiple knives in various ways. Other materials available.

- **Y-divider:** Allows for single inlet to be divided into two outlets. Available in both 3" and 6" (76.2 and 152.4 mm) inlet OD, with 3" (76.2 mm) outlet OD
- **3-port:** Allows for single inlet to be divided into three outlets. Available in both 3" and 6" (76.2 and 152.4 mm) inlet OD, with 3" (76.2 mm) outlet OD. Designed with mounting holes for support
- **4-port (shown):** Allows for single inlet to be divided into four outlets. Available in both 3" and 6" (76.2 and 152.4 mm) inlet OD, with 3" (76.2 mm) outlet OD. Designed with mounting holes for support

Note: Request data sheets 50773 and 50774 for additional dimensions of manifolds.



**FOR DETAILED PERFORMANCE DATA, SEE
WINDJET® AIR PRODUCTS, CAT. 20**

All necessary accessories for mounting and implementing the product into your applications are included in the air knife package. Accessories vary by package.

WINDJET® AIR NOZZLES, LOW FLOW AIR KNIVES AND AMPLIFIER OPTIONS

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
- Compact version available; Y767 is less than half the height of the AA727

AA707 WindJet Nozzles

- Produce tightly directed round spray pattern
- Low noise levels
- Color-coded aluminum caps for easy identification of flow rates
- Recessed orifices
- Common uses: debris removal from optical scanners, stock blow-off from rolls, cleaning production areas, sheet control for paper breaks, tissue sheet control, CIP air control system on dry end of tissue machine, air knock-off shower in broke pit and boundary layer air barriers



WindJet Low Flow Air Knives

- 3" (8 cm) air knife uses 92% less air than same size pipe with three drilled holes
- Ideal for applications using 1 or 2 air knives
- Deliver a high velocity, constant air stream for fast drying and blow-off
- Reduce energy use
- Lower noise levels, 69 dBa for most applications
- Compact and designed for small areas
- Common uses: sheet control for paper breaks, sheet edge blow-off/knock-off where water is not a viable option, converting plants, bag plants and box plants



WindJet Variable Air Amplifiers

- Produce high volume air stream using free air for targeted drying or blow-off
- Allows for adjustability in performance
- Common uses: dust blow-off, broke blow-off in calendar dryer stacks and ventilation



UNIJET® AIR NOZZLE OPTIONS

UniJet Nozzles

- Deliver a wide, uniform flat spray pattern
- Common uses:
 - Blow-off stock from rolls
 - Sheet control for paper breaks
 - Air knock-off shower in broke pit
 - Boundary layer air barriers for coating applications



QUICK REFERENCE GUIDE

Tip Type	Connection/Type	Connection Size in.	Capacity scfm (Nlpm) at 25 psi (2 bar)
L	M or F	1/8, 1/4, 3/8	1.3 (41)
P			2.0 (63)
Q			3.9 (123)
R			6.4 (207)
U			11.0 (354)
V			23 (724)

QUICK REFERENCE GUIDE

Model	Usage Tips/Typical Applications	Connection/Type	Conn. Size in.	Max. Operating Temperature psi (bar)	Materials
AA727 WindJet® Air Nozzle	Narrow flat patterns to create air curtains with multiple tips side-by-side for knockdown or protecting areas	M or F	1/4	At 100 (7)	
				170°F (77°C)	ABS plastic
		M	1/4	At 150 (10.3)	
				500°F (260°C)	Stainless steel
		M	1/4	At 100 (7)	
				180°F (82°C)	Polyphenylene sulfide
450°F (230°C)	Aluminum				
AA707 WindJet Air Nozzle	Round pattern with farther throw distance for keeping sensors clean or spot protection	M	1/4	At 125 (8.6)	
				400°F (204°C)	Polyphenylene sulfide
				220°F (104°C)	PVDF
				450°F (230°C)	Aluminum, stainless steel
				180°F (82°C)	ABS plastic
Y767 WindJet Air Nozzle	Compact version of AA727, can also used to create air curtains with multiple tips side-by-side	M	1/4	At 100 (7)	
				180°F (82°C)	ABS plastic
WindJet Low Flow Air Knives Lengths: 3, 6, 12, 18 and 24 in. (8, 15, 30, 46, and 61 cm)	Provide low consumption air curtains for compact areas	F	1/4	At 200 (13.8)	
				140°F (60°C)	Aluminum with plastic shim
200°F (93°C)	316 stainless steel body and shim				
Air Amplifiers	High volume air stream in focused area for blow-off or sensor protection	F	1/8, 1/4, 3/8, 1/2	–	Aluminum, 316 stainless steel
UniJet Nozzles	Wider flat fan patterns for spacing across spray booms with lower impact force	M	1/8, 1/4, 3/8	–	Brass, Stainless steel

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WINDJET® AIR PRODUCTS, CAT. 20**

