

AIR KNIVES MODEL # series 80000



The Air Research Technology Company

6320 Wiehe Road, Cincinnati, Ohio 45237

Phone: 1-513-631-0660 / www.airtx.com

1. COMPRESSED AIR SUPPLY

Air supplies are plagued with condensed water vapor in the air lines. This condensation leads to rust and dirt in the air lines. Also some compressors will allow oil or oil vapor to enter the line. Small orifices in the AiRTX Air Saver products may become clogged with rust, dirt, and water droplets. A 5-micron filter will separate 99% of the foreign material from the air supply allowing virtually maintenance free operation. The use of an oil filter will remove the oil droplets with an effective filtration of 0.01 ppm for an even cleaner air supply. Air Filter Model 90175 can be used with all AiRTX products up to the Air Knives not longer than 12". Model 90180 can be used for the Air Knife 12" and longer. The Oil Filter Model 91175 can be used along with the 90175 air filter for the same AiRTX products. Keep in mind that the current line or air might contain dirt or oil and should be blown out before installation. Also pipe thread sealant or tape must be carefully applied to avoid clogging product orifices.

2. AiRTX PRODUCT PERFORMANCE/COMPRESSED AIR SUPPLY LINE SIZE.

To obtain maximum performance from the AiRTX products, accurate measurements of air pressure (psi) and air volume (cfm) must be obtained. Line pressure of 70-90 psi can be present without sufficient volume (scfm) of air. To ensure that both pressure and volume are present to efficiently operate the AiRTX products, a line size of 1/4" pipe or 1/2" hose should be used for applications up to 10 ft. from the main header. Use 3/8" pipe or 3/4" hose up to 20 ft. and 3/4" pipe and 1" hose up to 50 feet. For the AiRTX Air Knives above 12", use 1/2" pipe up to 10 ft. from the main header, 3/4" pipe up to 20 ft. and 1" pipe up to 50 feet. Do not use coiled hose as the very small inside diameter of the hose limits air flow. Pipe air into both ends of Air Knife 18" or more to insure even air flow.

3. USE AND INSTALLATION OF AiRTX AIR KNIVES.

All of the AiRTX products are easily adjusted for increased or decreased air flow, depending on your particular need. Each setting of the product will produce amplified air flows. The Air Knife produce air flow 25 times that of the compressed air input. The Air Knife require shims placed under the top cap to increase air flow. The standard shim in the unit provides a 0.003" gap for the exit air. Shims are available in 0.003" thickness and can be stacked up to 0.008" to increase flow. (Knives 18" & lower). The compressed air usage is from 2.3 scfm per inch at 40 psi to 4.3 scfm per inch at 80 psi for each shim. Compressed air should be supplied from both ends of the Air Knives 18" or longer.

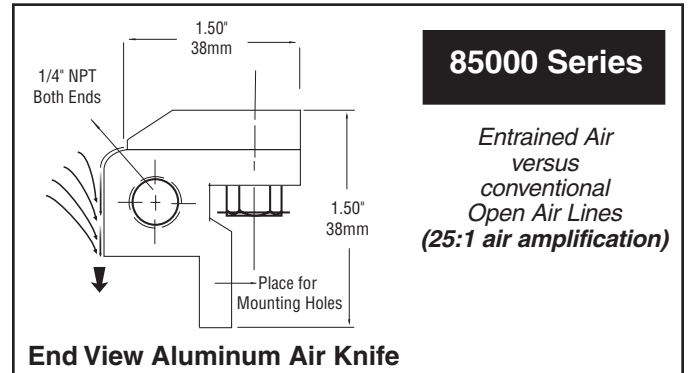
4. MAINTENANCE AND CLEANING

Without moving parts, the AiRTX Air Knives do not wear. Fluctuation in flow could occur in air lines or orifices that are clogged or if the supply air line is under sized. All of the AiRTX products are easily disassembled for easy cleaning and removal of dirt, rust or contaminants with a solvent and clean rag.

Part Number Series 80000 Air Knives

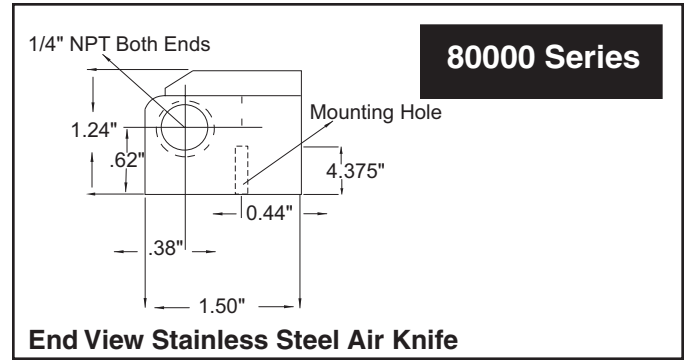
- 1st digit 8 represents Air Knives Series
- 2nd digit 5 is aluminum
2nd digit 0 is stainless steel
- 2nd digit 6 is aluminum hurricane
- 2nd digit 2 is SlimLine
- 3rd digit 1 with filter
3rd digit 2 with filter and regulator
- Last 2 digits is effective length

ALL Air Knives Available with effective air lengths of
3" (75mm), 6" (150mm), 12" (300mm), 18" (450mm),
24" (600mm), 30" (750mm), 36" (900mm)

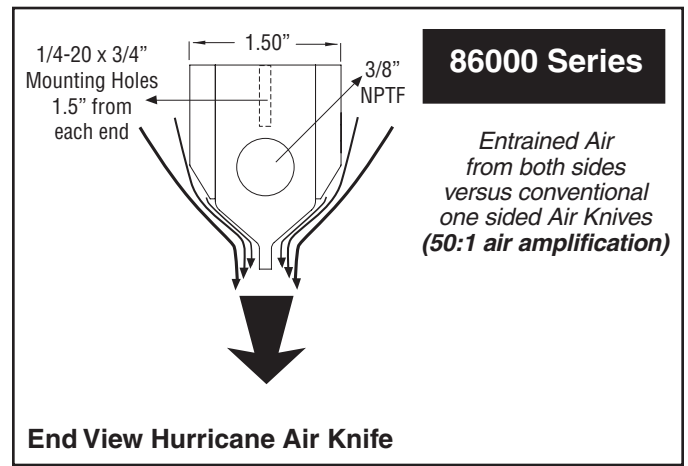


85000 Series

Entrained Air versus conventional Open Air Lines (25:1 air amplification)

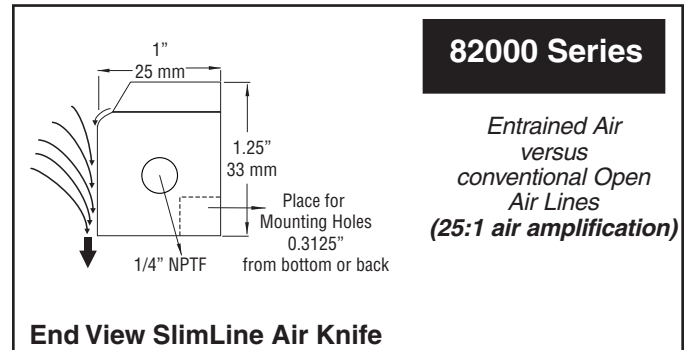


80000 Series



86000 Series

Entrained Air from both sides versus conventional one sided Air Knives (50:1 air amplification)



82000 Series

Entrained Air versus conventional Open Air Lines (25:1 air amplification)

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HURRICANE AIR SAVER WEDGE



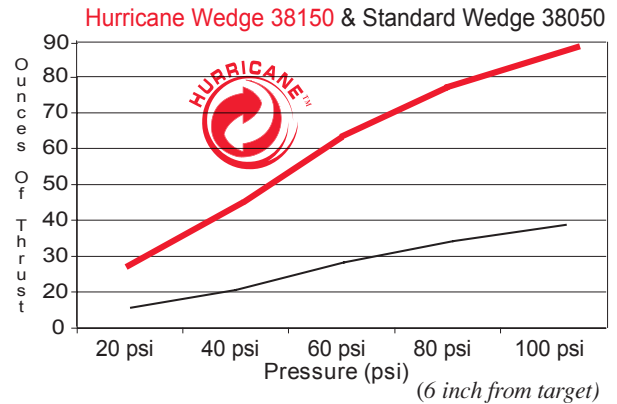
HURRICANE AIR SAVER WEDGE - MODEL 38154

ADVANTAGES - HURRICANE AIR SAVER WEDGE

- NO SHIMS • Highest thrust of any blow-off nozzle
- 25:1 Air Amplification
- Low initial and operating costs
- Reduce compressed air costs by 30% to 50%
- Easy to control flow/force, instant on/off
- Meets OSHA noise and dead-end pressure requirements
- No maintenance, no moving parts, no vibration
- No electricity or explosion hazard
- No RF/EMI interference
- Reduces noise levels of open air lines by 30 dBA
- Provides wide blow-off for stamping, sand blasting, drying, and parts ejection
- Manifolds available for Model 38050 in series

More POWER!

Highest Thrust Of Any Blow-Off Nozzle! No Shims



Hurricane Wedge Blow-Off Force in Ounces of Thrust

Distance from Target	Pressure (psi)			
	40 psi	60 psi	80 psi	100 psi
6"	46	64	78	90
12"	32	51	67	81
18"	23	39	55	69
Compressed Air CFM Consumption	29	40	50	58
LPM	820	1132	1415	1641

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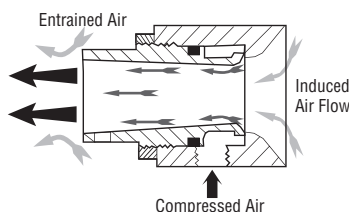
HURRICANE ADJUSTABLE AIR AMPLIFIERS



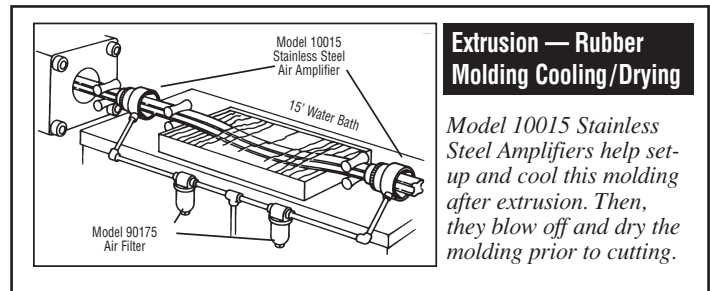
HURRICANE ADJUSTABLE AIR AMPLIFIERS 5 Sizes Available In Stainless/Aluminum

ADVANTAGES - HURRICANE AIR AMPLIFIERS

- No electricity or explosion hazard
- Adjustable output without tools or shims
- No blades, guards or clumsy duct
- No maintenance, no moving parts
- Easy to control flow/force
- Greatly reduced noise
- Low cost
- Instant on/off



Adjustable, Compact, Versatile, No-Maintenance, 3000 CFM Without Motors or Dangerous Fans, No Shims Needed to Adjust Air Flow



Extrusion — Rubber Molding Cooling/Drying

Model 10015 Stainless Steel Amplifiers help set-up and cool this molding after extrusion. Then, they blow off and dry the molding prior to cutting.

Air Amplifier Flow Specs at Factory (Adjustable) Setting

SS Model#	Aluminum Model #	Throat Diameter	AMP Ratio	Adj. Factory Setting
10004	15004	0.38	12:1	15 cfm
10008	15008	0.88"	12:1	15 cfm
10015	15015	1.65"	20:1	25 cfm
10025	15025	2.25"	25:1	45 cfm
10030	15030	3.00"	30:1	60 cfm