



CONSERVE

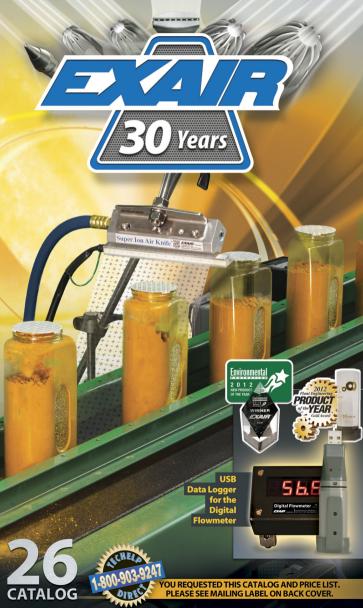




CONVEY



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**Cold Gun Aircoolant Systems** Cool Machining Operations with Clean, Cold Air

Convey Parts, Materials and Waste - with No Moving Parts Industrial Housekeeping



**Cabinet Cooler® Systems** Cool and Purge NEMA 12, 4 and 4X Electrical Control Panels



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Reach: Per Regulation (EC) No 1907/2006 Title I, Article 3, paragraph 3, the European Union has recently enacted legislation to register chemicals and substances imported into the EU to ensure a high level of protection of human health and the environment.

Per Title II, Article 7, paragraph 1, articles (products) must be registered when a substance is intended to be released under normal or reasonably foreseeable conditions of use and it is present in those articles in quantities totaling over 1 metric ton per producer or importer per year. Registration of EXAIR products is not required since they do not contain substances that are intentionally released.

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Intelligent Compressed Air® products are identified throughout this catalog that can help your plant save tens of thousands of dollars over the course of a single year. The Best Practices for Compressed Air Systems manual published

by the Compressed Air Challenge® recommends products like the Super Air Knife™, Super Air Amplifier™, and the family of Super Air Nozzles™ for energy conservation. Many of the products shown offer unique ways to solve common industrial problems using compressed air. Compressed Air Challenge is a registered trademark of Compressed Air Challenge, Inc.



EXAIR has partnered with Energy Star, a voluntary program of the U.S. Department of Energy and the Environmental Protection Agency. Energy Star offers energy efficient solutions to help save money while protecting the environment for future generations. EXAIR has implemented improved energy management practices and technologies throughout our facility, including energy efficient lighting, HVAC systems, and electronic thermostats. EXAIR's participation in this program underscores our commitment to conserving energy.

EXAIR products are subject to ongoing development. Specifications are subject to change without notice. Some products in this catalog are covered by U.S. Patent #5402938, #8153001 and #8268179 and others may be U.S. Patent Pending. Copyright @2013 EXAIR Corporation. All Rights Reserved.







## **Air Nozzles and Jets**

Engineered Air Nozzles and Jets reduce noise levels and air costs.

"Go Green" by upgrading your blowoff, cooling, and drying operation to the award winning Super Air Nozzles!



A simple solution to reduce excessive air consumption and noise levels on compressed air blowoff operations. EXAIR Air Nozzles and Jets produce outlet flows up to 25 times compressed air consumption using a small amount of compressed air as the power source. Many power companies now provide attractive rebates to plants who switch to engineered Super Air Nozzles!

### Why Air Nozzles and Jets?

Air savings, compared to open copper tubes or pipes commonly used for blowoff, can be as high as 80%. Less compressed air means less noise. The typical noise level reduction is 10 dBA. All EXAIR Air Nozzles and Jets meet Occupational Safety and Health Administration (OSHA) maximum dead ended pressure and sound level exposure requirements and carry the CE mark.

An open 1/4" (6mm) copper tube, by contrast, ejects pure compressed air at up to 40 standard cubic feet per minute (1,133 SLPM), the entire output of a 10 horsepower compressor. Annual energy cost can exceed \$1,000 per year. Noise levels in excess of 100 dBA are commonly produced. When supply pressure exceeds 30 PSIG (2 BAR), an open pipe, tube or drilled holes violates OSHA static pressure requirements.

### **Applications**

- Part cleaning
- Chip removal
- Part drying
- · Liquid blowoff
- · Part cooling
- Material conveying
- Part ejection
- Fiber conveying
- Air assist

### Advantages

- Reduced compressed air cost
- 10 dBA average noise reduction
- · Conserve compressed air
- · Improved blowoff performance
- Compact
- Improved safety
- Meets OSHA noise level requirements
- Meets OSHA pressure requirements
- Improved production



WARRANTY



Flexible Stay Set Hoses™ are ideal where frequent repositioning of air nozzles is required.



PEEK Super Air Nozzles deliver strong blowing force while providing nonmarring protection.



### Safe And Efficient Use Of Compressed Air

The inefficient use of compressed air for blowoff applications may create problems due to the energy costs, noise level and potential danger to personnel who are exposed to high pressure air. Open air pipes, copper tubes and drilled pipes are a few of the common abusers. They consume tremendous amounts of energy and often produce noise levels over 100 dBA.

### **Open Air Pipe or Copper Tube**



Turbulent compressed air blasts straight out of the pipe or tube. It not only wastes huge amounts of compressed air but also violates OSHA noise and dead ended pressure requirements.

### **Reduce Energy Costs**

The best way to cut energy costs is through proper maintenance and use of the compressed air system. Leaks and dirty filters require maintenance on a regular basis. Energy savings can also be realized when replacing outdated compressor motors and controls with high efficiency models that often pay for themselves in a short period of time.

The most important factor to dramatically boost efficiency is proper use. Using engineered products like EXAIR's Super Air Nozzles can cut operating costs since they use only a fraction of the compressed air of typical blowoffs. In addition, all of the Air Nozzles and Jets shown in this catalog can be cycled on and off with instantaneous response. EXAIR's EFC (shown on page 4) is an electronic flow control that limits compressed air use by turning on the air only when a part is present.

### **Reduce Noise Levels**

High noise levels are a common problem for many plants. Compressed air noise often exceeds OSHA noise level exposure requirements, resulting in hearing loss to those working in close proximity. Noisy blowoffs at 80 PSIG (5.5 BAR) that produce noise levels of 100 dBA can be reduced to only 74 dBA when using a Super Air Nozzle. At that pressure, it is still possible to obtain hard-hitting force without the high noise.

OSHA Maximum Allowable Noise Exposure							
Hours per day (constant noise)	8	7	4	3	2	1	0.5
Sound level dBA	90	91	95	97	100	105	110

OSHA Standard 29 CFR - 1910.95 (a)

### **Eliminate Harmful Dead Ended Pressures**

Air can be dangerous when the outlet pressure of a hole, hose or copper tube is higher than 30 PSIG (2 BAR). In the event the opening is blocked by a hand or other body part, air may enter the bloodstream through the skin, resulting in a serious injury. All of the Air Nozzles and Jets manufactured by EXAIR have been designed for safety. All are safe to be supplied with higher pressure compressed air and meet OSHA standard CFR 1910.242(b).

### **Air Consumption of Open Tube And Pipe**

Pressure Supply			Air Consumption of Homemade Blowoffs					
			Copper Tube		C	pen Pip	e	
PSIG	BAR		1/4"	5/16"	3/8"	1/8"	1/4"	3/8"
80	5.5	SCFM	33	58	87	70	140	240
80	5.5	SLPM	934	1,641	2,462	1,981	3,962	6,792

### Saving Money and Compressed Air

The table above shows the air consumption for typical homemade blowoffs.

The pages that follow give the air consumption and other data on EXAIR's

Air Nozzles and Jets.

Consider the following example where a Model 1102 Mini Super Air Nozzle replaces a 1/8" (3.2mm) open pipe. The compressed air savings is easy to calculate and proves to be dramatic. Payout for Air Nozzles and Jets, including filter and installation cost is measured in weeks – not years, as is the case for other cost reduction equipment. Based on a 40 hour work week, 52 weeks a year.

### Example:

- Existing blowoff is 1/8" (3.2mm) open pipe at 80 PSIG (5.5 BAR) supply. Air consumption, from the table above, is 70 SCFM (1,981 SLPM).
- Use a 1/8 FNPT Model 1102 Mini Super Air Nozzle also at 80 PSIG (5.5 BAR) supply. Air consumption, from the table on page 45, is 10 SCFM (283 SLPM).
- 3. Compressed air saved = 70 10 = 60 SCFM (1,981 283 = 1,698 SLPM)
- 4. For this example, the blowoff is continuous. If the duty cycle was 20%, then air saved would be 60 x.2 = 12 SCFM (1.698 x.2 = 340 SLPM).
- Most large plants know their cost per 1,000 standard cubic feet of compressed air (10,000 standard liters). If you don't know your actual cost per 1,000 SCF, \$0.25 is a reasonable average to use. (Cost per 10,000 standard liters is approximately \$0.089.)
- Dollars saved per hour = SCFM saved x 60 minutes x cost/1,000 SCF (SLPM saved x 60 min x cost/10,000 SL) = 60 x 60 x \$0.25/1,000 (= 1,698 x 60 x \$0.089/10,000)
  - = \$0.90/hour
  - = \$0.90/hr. is \$36.00/week and
  - = \$1,872.00/year savings for One nozzle!







### **How Air Nozzles Work**

Air Nozzles use the coanda effect to amplify compressed airflow up to 25 times or more. As illustrated on the left, compressed air (black arrows) is ejected through a series of nozzles on the outer perimeter. As the air travels along the outer wall of the nozzle, surrounding air (blue arrows) is entrained into the stream. The airstream that results is a high volume, high velocity blast of air at minimal consumption. The air is always ejected so it can vent safely, well below OSHA dead ended pressure requirements, should the nozzle end be blocked.

### **Selecting The Right Air Nozzle**

EXAIR manufactures a wide selection of Air Nozzles and Jets, which are divided into two groups. The first group includes Air Nozzles and Jets that deliver force up to 22 ounces (624 grams) and are suitable for most applications. The second group includes Air Nozzles that produce high force up to 23 lbs (10,433 grams) where additional reach and force are required.

Air Nozzles And Jets Comparison (sorted by compressed air consumption at 80 PSIG (5.5 BAR)

- Type 303 Stainless Steel- high temperatures and corrosive environments.
- Type 316 Stainless Steel- high temperatures, corrosive environments, and mechanical wear.
- · Brass- general purpose applications.
- · Zinc aluminum alloy- general purpose applications.
- PEEK- replaces metals in harsh environments.
   Offers chemical resistance and is non-marring.

	Air Nozzies And Jets Comparison (sorted by compressed a								
	Managed Co. 1 of		Air		umption	Fo	rce	Sound	More
Model	Material	Description	Inlet	SCFM	SLPM	Ozs	Grams	Level dBA	Detail
110855	Stainless Steel - Type 316	Atto Super Air Nozzle	M4 x 0.5	2.5	71	2.0*	56.7	58	p. 46
1108-PEEK	PEEK (Plastic)	Atto Super Air Nozzle	M4 x 0.5	2.5	71	2.0*	56.7	58	p. 46
1108SS-NPT	Stainless Steel - Type 316	Atto Super Air Nozzle	1/8 MNPT	2.5	71	2.0*	56.7	58	p. 46
1108-PEEK-NPT	PEEK (Plastic)	Atto Super Air Nozzle	1/8 MNPT	2.5	71	2.0*	56.7	58	p. 46
1109SS	Stainless Steel - Type 316	Pico Super Air Nozzle	M5 x 0.5	4.9	139	5.0*	141.7	68	p. 46
1109-PEEK	PEEK (Plastic)	Pico Super Air Nozzle	M5 x 0.5	4.9	139	5.0*	141.7	68	p. 46
1109SS-NPT	Stainless Steel - Type 316	Pico Super Air Nozzle	1/8 MNPT	4.9	139	5.0*	141.7	68	p. 46
1109-PEEK-NPT	PEEK (Plastic)	Pico Super Air Nozzle	1/8 MNPT	4.9	139	5.0*	141.7	68	p. 46
1110SS	Stainless Steel - Type 316	Nano Super Air Nozzle	M6 x 0.75	8.3	235	8.1*	230	75	p. 46
1110-PEEK	PEEK (Plastic)	Nano Super Air Nozzle	M6 x 0.75	8.3	235	8.1*	230	75	p. 46
1110SS-NPT	Stainless Steel - Type 316	Nano Super Air Nozzle	1/8 MNPT	8.3	235	8.1*	230	75	p. 46
1110-PEEK-NPT	PEEK (Plastic)	Nano Super Air Nozzle	1/8 MNPT	8.3	235	8.1*	230	75	p. 46
1001	Brass	Safety Air Nozzle	1/8 FNPT	10	283	9*	255	78	p. 48
1102	Zinc Aluminum alloy	Mini Super Air Nozzle	1/8 FNPT	10	283	9*	255	71	p. 47
1102-PEEK	PEEK (Plastic)	Mini Super Air Nozzle	1/8 FNPT	10	283	9*	255	71	p. 47
110255	Stainless Steel - Type 316	Mini Super Air Nozzle	1/8 FNPT	10	283	9*	255	71	p. 47
1103	Zinc Aluminum alloy	Mini Super Air Nozzle	1/8 MNPT	10	283	9*	255	71	p. 47
110355	Stainless Steel - Type 316	Mini Super Air Nozzle	1/8 MNPT	10	283	9*	255	71	p. 47
1126	Zinc Aluminum alloy	1" Flat Super Air Nozzle	1/8 FNPT	10.5	297	9.8 <sup>†</sup>	278	75	p. 49
1126SS	Stainless Steel - Type 316	1" Flat Super Air Nozzle	1/8 FNPT	10.5	297	9.8 <sup>†</sup>	278	75	p. 49
1010SS	Stainless Steel - Type 303	Micro Air Nozzle	1/8 MNPT	13	368	12*	340	80	p. 46
1009	Aluminum	Adjustable Air Nozzle	1/8 MNPT	13	368	12**	340	79	p. 48
1009SS	Stainless Steel - Type 303	Adjustable Air Nozzle	1/8 MNPT	13	368	12**	340	79	p. 48
1100	Zinc Aluminum alloy	Super Air Nozzle	1/4 FNPT	14	396	13*	368	74	p. 47
1100-PEEK	PEEK (Plastic)	Super Air Nozzle	1/4 FNPT	14	396	13*	368	74	p. 47
1100SS	Stainless Steel - Type 316	Super Air Nozzle	1/4 FNPT	14	396	13*	368	74	p. 47
1101	Zinc Aluminum alloy	Super Air Nozzle	1/4 MNPT	14	396	13*	368	74	p. 47
1101SS	Stainless Steel - Type 316	Super Air Nozzle	1/4 MNPT	14	396	13*	368	74	p. 47
1002	Brass	Safety Air Nozzle	1/4 FNPT	17	481	16*	453	80	p. 48
1002SS	Stainless Steel - Type 303	Safety Air Nozzle	1/4 FNPT	17	481	16*	453	80	p. 48
1003	Brass	Safety Air Nozzle	3/8 FNPT	18	509	18*	510	83	p. 48
6019	Brass	Adjustable Air Jet	1/8 MNPT	18	509	16***	453	83	p. 50
6013	Brass	High Velocity Air Jet	1/8 MNPT	22	622	20 <sup>†</sup>	567	82	p. 50
1122	Zinc Aluminum alloy	2" Flat Super Air Nozzle	1/4 FNPT	22	622	22 <sup>†</sup>	624	77	p. 49
112255	Stainless Steel - Type 316	2" Flat Super Air Nozzle	1/4 FNPT	22	622	22 <sup>†</sup>	624	77	p. 49

For High Force Air Nozzles, see page 52.

Force measured at 12" (305mm) from target
Force measured at 12" (305mm) from target with a .008" (0.20mm) factory setting
Force measured at 12" (305mm) from target with a .006" (0.15mm) factory setting

All sound levels measured at 3 feet (914mm)
All measurements taken at 80 PSIG (5.5 BAR)
† Force measured at 12" (305mm) from target with a .015" (0.38mm) shim i





ENPT = NPT Female

### **Air Nozzles**

### Atto Super Air Nozzles™

(actual size)

Model: 1108SS M4 x 0.5 Material: Type 316 Stainless Steel

Model: 1108-PEEK M4 x 0.5 Material: PEEK (plastic)



Model: 1108SS-NPT 1/8 NPT male \*Force measured at 12" (305mm) from target Material: Type 316 Stainless Steel Model: 1108-PEEK-NPT 1/8 NPT male Material: PEEK (plastic)

### Model 1108SS, 1108-PEEK, 1108SS-NPT, 1108-PFFK-NPT Atto Super Air Nozzle

EXAIR's Atto Super Air Nozzle delivers the smallest, most precise blowoff. The air pattern for this tiny nozzle is forceful, measuring 1.0" in diameter when positioned 6" away from the surface. The 58 dBA noise level is a fraction of ordinary air nozzles.

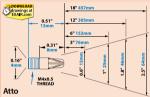
Air Consumption		For	Sound Level	
SCFM	SLPM	Ozs	Grams	dBA
2.5	71	2.0	56.7	58

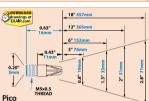
Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BA

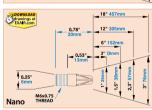


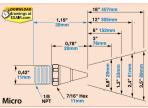
The Air Nozzles and Jets shown on pages 46 - 50 deliver up to 22 ounces (624 grams) of force, making them suitable for most blowoff, drying and cooling applications. All models shown use a small amount of compressed air to entrain large volumes of surrounding room air. The award winning Super Air Nozzles have been engineered to provide the best performance with low sound levels and high efficiency.

### **Dimensions and Airflow Patterns**









### Pico Super Air Nozzles



Model: 1109SS M5 x 0.5 Material: Type 316 Stainless Steel Model: 1109-PEEK M5 x 0.5 Material: PEEK (plastic)



Model: 1109SS-NPT 1/8 NPT male Material: Type 316 Stainless Steel Model: 1109-PEEK-NPT 1/8 NPT male Material: PEEK (plastic)

### Model 1109SS, 1109-PEEK, 1109SS-NPT, 1109-PEEK-NPT Pico Super Air Nozzle

EXAIR's Pico Super Air Nozzle delivers a precise blowoff with a highly focused, forceful blast of airflow. The narrowly focused air pattern measures 1.3" in diameter at 6" away from the surface. The noise level is only 68 dBA.

Air Consumption		For	Sound Level		
	SCFM	SLPM	Ozs	Grams	dBA
	4.9	139	5.0	141.7	68

\*Force measured at 12" (305mm) from target. ound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)

### Nano Super Air Nozzles™



Model: 1110SS M6 x 0.75 Material: Type 316 Stainless Steel Model: 1110-PEEK M6 x 0.75 Material: PFFK (plastic)



Model 1110SS-NPT 1/8 NPT male Material: Type 316 Stainless Steel

Model: 1110-PEEK-NPT 1/8 NPT male Material: PEEK (plastic)

### Model 1110SS, 1110-PEEK, 1110SS-NPT, 1110-PEEK-NPT Nano Super Air Nozzle

EXAIR's Nano Super Air Nozzle delivers a highly focused, forceful blast of airflow. The air pattern for this small nozzle measures 1.5" in diameter at 6" away from the surface. The noise level is a low 75 dBA. Overall length measures only 0.78".

Air Consumption		For	Sound Level	
SCFM	SLPM	Ozs	Grams	dBA
8.3	235	8.1	230	75

\*Enroe measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BA



### Micro Air Nozzle™



Model 1010SS 1/8 NPT male Material: Type 303 Stainless Steel

### Model 1010SS Micro Air Nozzle

EXAIR's Micro Air Nozzle optimizes entrainment for a directed, high volume, high velocity airflow. The compact size permits mounting where space is limited. Sound level and air consumption are low.

Air Consumption		For	Sound Level		
	SCFM	SLPM	Ozs	Grams	dBA
	13	368	12	340	80

"Force measured at 12" (305mm) from target. Sound level measured at 3' (014mm) All measurements taken at 80 PSIG (5.5 BAR)

### An INTELLIGENT Product

### Mini Super Air Nozzles™



Model 1102 1/8 NPT female Material: Zinc Aluminum allov Model 1102-PEEK 1/8 NPT female Material: PEEK (plastic) Model 1102SS 1/8 NPT female Material: Type 316 Stainless Steel

### Model 1102, 1102-PEEK, 1102SS, 1103, and 1103SS Mini Super Air Nozzles

The 1/8 NPT Mini Super Air Nozzles provide a forceful, concentrated stream of high velocity airflow. It has fewer holes than the larger Super Air Nozzles, resulting in lower sound levels, air consumption and force.

Air Consumption		For	ce*	Sound Level
SCFM	SLPM	Ozs	Grams	dBA
10	283	9	255	71

"Force measured at 12" (305mm) from target. Sound level measured at 3' (914mm)
All measurements taken at 80 PSIG (5.5 BAR)



Model 1100, 1100SS, 1100-PEEK, 1101,

EXAIR's award winning Super Air Nozzles

wide range of blowoff, drying and cooling

applications. The aerodynamic design of

this engineered Super Air Nozzle directs the air to a single point of convergence,

reduces air consumption and, in many cases, can cut the noise level in half. All Super Air Nozzles eject the compressed air through holes located in recessed grooves that can not be blocked or dead ended.

deliver high performance suitable for a

and 1101SS Super Air Nozzles



## Dimensions and Airflow Pattern 18" 457mm 1.66' 12" 305mm 1.19 1/2" He

### Material: Type 316 Stainless Steel Super Air Nozzles<sup>1</sup>

Model 1103 1/8 NPT male Material: Zinc Aluminum allov

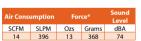
Model 1103SS 1/8 NPT male



Model 1100 1/4 NPT female Material: Zinc Aluminum allov Model 1100SS 1/4 NPT female Material: Type 316 Stainless Steel



Model 1100-PEEK 1/4 NPT female Material: PEEK (plastic)

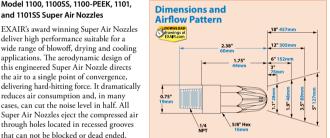


<sup>\*</sup> Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)











Most EXAIR Air Nozzles have a standard hex base making them easy to install with a socket wrench.

Model 1101 1/4 NPT male Material: Zinc Aluminum allov Model 1101SS 1/4 NPT male Material: Type 316 Stainless Steel



### **Build Your Own System**

EXAIR's Swivel Fittings make it easy to adjust the aim of the Air Nozzles and Jets. Correct placement of the blowing angle can help optimize performance, reduce noise levels and improve efficiency. See page 58 for details.

Swivel Fittings can be added to most EXAIR Nozzles by adding a "W" to the Model#.

1122 (2" Flat Super Air Nozzle) W (Swivel Fitting)

1122W





### Safety Air Nozzles



Model 1001 1/8 NPT female Material: Brass

Model 1002 1/4 NPT female Material: Brass

Model 1002SS 1/4 NPT female Material: Type 303 Stainless Steel

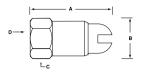
Model 1003 3/8 NPT female Material: Brass

### Model 1001, 1002, 1002SS, and 1003 Safety Air Nozzles

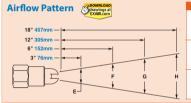
Safety Air Nozzles eject a small amount of compressed air 360° around the outer ring that combines with the air ejected from the center hole to produce a high volume, high velocity blast of air. The slotted end allows air to vent safely should the nozzle end he blocked

Air C	onsump	tion	For	ce*	Sound Level
Model	SCFM	SLPM	Ozs	Grams	dBA
1001	10	283	9	255	78
1002	17	481	16	453	80
1002SS	17	481	16	453	80
1003	18	509	18	510	83

<sup>\*</sup> Force measured at 12\* (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)



Dimens	Dimensions				
Model				Hex	Inlet
1001	in	1.19	0.38	1/2	1/8
1001	mm	30	10	13	NPT
1002	in	1.44	0.50	5/8	1/4
100255	mm	37	13	16	NPT
1003	in	1.65	0.63	3/4	3/8
	mm	42	16	19	NPT



Model		E	F	G	Н
1001	in	1.1	2.1	4.1	6.0
1001	mm	28	53	104	152
1002	in	1.3	2.3	4.4	6.5
100255	mm	33	58	112	165
1003	in	1.3	2.4	4.7	7.0
1003	mm	33	61	119	178

### Adjustable Air Nozzles



Model 1009 1/8 NPT male Material: Aluminum

Model 1009SS 1/8 NPT male Material: Type 303 Stainless Steel

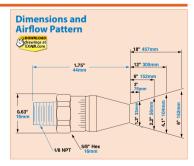
### Model 1009 and 1009SS Adjustable Air Nozzles

Adjustable Air Nozzles are suitable for a wide variety of blowoff applications. The design allows you to "tune in" the force and flow to the application requirements, thereby minimizing air consumption. A micrometer-like dial indicates the gap setting. A set screw in the end can be tightened so the air nozzle holds the setting.

Air Consumption		For	Force*			
SCFM	SLPM	Ozs	Grams	dBA		
13	368	12	340	79		

<sup>(0.20</sup>mm) factory setting Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)









### Flat Super Air Nozzles™



### 1" Flat Super Air Nozzle Airflow Pattern



Dimensions



Model 1126 1/8 NPT female Material: Zinc Aluminum alloy Model 1126SS 1/8 NPT female Material: Type 316 Stainless Steel

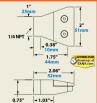
5/8" Hex



### 2" Flat Super Air Nozzle Airflow Pattern



### Dimensions



Model 1122 1/4 NPT female Material: Zinc Aluminum alloy Model 1122SS 1/4 NPT female Material: Type 316 Stainless Steel

### Model 1126, 1126SS, 1122, and 1122SS 1" and 2" Flat Super Air Nozzles

EXAIR's 1" and 2" Flat Super Air Nozzles are highly efficient, unique flat air nozzles. Their patented† design uses a special shim to maintain the critical position of the component parts. A precise amount of air is released through the thin slot, across a flat surface. The result is a wide, forceful stream of high velocity, laminar airflow with minimal air consumption and noise.

	Air Cons	rce *	Sound Level		
Model	SCFM	SLPM	Ozs	Grams	dBA
1126/112655	10.5	297	9.8	278	75
1122/112255	21.8	622	22	624	77

\* Force measured at 12" (305mm) from target Sound level measured at 3" (914mm) All measurements taken at 80 PSIG (5.5 BAR) .015" (0.38mm) shim installed.

The 1" and 2" Flat Super Air Nozzles are shipped with a .015" (0.38mm) air gap opening that is set with a stainless steel shim positioned between the cap and the body. Force and flow may be easily increased or decreased by installing a different shim.

Shim sets for the 1" and 2" Flat Super Air Nozzles include a .005" (0.13mm), .010" (0.25mm), and .020" (0.51mm) thick shim.

113655 Stainless Steel 1" Flat Super Air Nozzle Shim Set
113255 Stainless Steel 2" Flat Super Air Nozzle Shim Set



The unique design of EXAIR's new super-efficient 1" Flat Super Air Nozzle makes it an ideal fit for both tight spaces and tight budgets.



2" Super Air Nozzles blow off metal parts as they are lifted through a vacuum chamber.

# Save Over \$1,200 Per Year By Replacing One Outdated Air Nozzle!



Flat air nozzles by other manufacturers use a series of holes and consume enormous amounts of compressed air. Many break off, are loud and can get you an OSHA fine due to dangerous dead end pressures. Theirs aren't adjustable, making it likely you'll waste compressed air. Replacing one of theirs with the EXAIR 2" Flat Super Air Nozzle can save over \$1.200 ner year.

### Here's how:

- One popular flat nozzle consumes 31 SCFM @ 80 PSIG.
- EXAIR's 2" Flat Super Air Nozzle with .015" shim consumes 21.8 SCFM @ 80 PSIG.
- 31 SCFM (theirs) 21.8 SCFM (EXAIR's) =
   9.2 SCFM compressed air saved/min.

Most large plants know their cost per 1,000 standard cubic feet of compressed air. If you don't know your actual cost per 1,000 SCF, \$0.25 is a reasonable average to use.

- SCFM saved x 60 minutes x cost/1,000 SCF = dollars saved per hour.
- In this case, 9.2 SCFM x 60 x \$0.25/1,000
   SCF = 13.8 cents per hour.
- 13.8 cents per hour x 24 hours = \$3.31 per day.
- \$3.31 per day x 365 days =
   \$1,208.88 saved in one year (in this 24/7 operation).

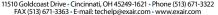
### And, This Savings Is For One Nozzle!

Air Consumption @ 80 PSIG	Noise Level dBA	lbs. of Force @ 80 PSIG
29 SCFM	83	1.7
28 SCFM	82	1.7
26 SCFM	78	1.5
29 SCFM	82	1.7
31 SCFM	80	1.9
*7.3 - 30 SCFM	62-81	0.5 - 1.9
	Consumption @ 80 PSIG  29 SCFM  28 SCFM  26 SCFM  29 SCFM  31 SCFM	Consumption @ 80 PSIG         Level dBA           29 SCFM         83           28 SCFM         82           26 SCFM         78           29 SCFM         82           31 SCFM         80

\*Air consumption dependent upon shim size.

EXAIR's 2" Flat Super Air Nozzle can pay for itself in less than 18 days.

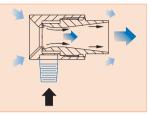






### **How Air Jets Work**

Air Jets utilize the coanda effect (wall attachment of a high velocity fluid) to produce air motion in their surroundings. As illustrated on the right, a small amount of compressed air (black arrows) is throttled through an internal ring nozzle above sonic velocity. A vacuum is produced, pulling large volumes of surrounding, or "free" air, through the jet (blue arrows). Both the outlet and inlet can be ducted for remote positioning. If the end is blocked, flow simply reverses at well below OSHA dead ended pressure requirements.



### **High Velocity Air Jet**



Model 6013 1/8 NPT male Material: Brass

Model 6013 High Velocity Air Jet

Provides maximum thrust with a confined, directed airstream. It is the best choice for part ejection, chip removal, and part drying.

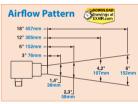
Shim Sets: Shims can be used to change the gap on the Model 6013 High Velocity Air Jet. Changing shims will alter air consumption, force, flow and vacuum capability. Order Model 6313 Air Jet Shim Set.

Air Cons	umption	Force*		Sound Level
SCFM	SLPM	Ozs	Grams	dBA
22	622	20	567	82

<sup>\*</sup>Force measured at 12" (305mm) from target with a .015' (0.38mm) shim installed

Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)





The Model 6313 Air Jet Shim Set for the High Velocity Air Jet includes a .006" (0.15mm) and a .009" (0.23mm) thick shim, A .015" (0.38mm) shim comes installed with the Model 6013 Air Jet.

### Adiustable Air Jet



Model 6019 1/8 NPT male Material: Brass



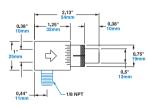
A combination of Model 6013 High Velocity Air Jets and Model 6042 Adjustable Air Amplifiers dry this engine casting.

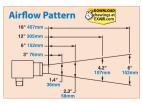
### Model 6019 Adjustable Air Jet

This is an adjustable version of the Model 6013 High Velocity Air Iet, Airflow and thrust are easily adjusted using the micrometer gap indicator.

Air Consumption		For	Sound Level	
SCFM	SLPM	Ozs	Grams	dBA
18	509	16	453	83

Force measured at 12" (305mm) from target with a 006" (0.15mm) factory setting Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)







EXAIR's Digital Sound Level

Meter detects

the source of

high noise.

### **How Much Air Does It Really Use?**

The amount of compressed air wasted by copper tubes, drilled pipe and other compressed air blowoffs can easily cost thousands of dollars per year. To quantify it, air consumption can be translated into electrical energy use. One horsepower of compressor (746 watts) generates 4 to 5 SCFM (113 to 142 SLPM). The SCFM (SLPM) output depends on the efficiency of the compressor. Wasteful blowoffs can drain the compressed air system where a plant will experience frequent and sizeable pressure drops. The lack of air can be eliminated when the inefficient blowoffs are replaced.

Efficient products like EXAIR's engineered Super Air Nozzles are quiet while being capable of pulling in 25 parts of room air using one part compressed air. Companies who want to "Go Green" and minimize compressed air use should listen for the loud compressed air noise in their plant. Once the noisy blowoff is located, EXAIR's Digital Sound Level Meter (shown on page 6) can isolate the source and measure the sound level. Replacing one drilled pipe or other homemade blowoff with one Super Air Nozzle can amount to a large air savings. Here's a typical example:



### Digital Flowmeter with USB Data Logger included. See page 9 for full details.

Compressed air products should not be used at pressures higher than indicated by the manufacturer since this wastes air. When looking for places to conserve air, it is important to measure the air consumption of everything connected to the compressed air supply rather than relying on the numbers printed in a manufacturer's literature. Some manufacturers of compressed air products understate the air consumption of their products. It is hard to say if it is done intentionally or in error. One possibility is that their flow meter has not been regularly calibrated. Another reason could be a failure to properly use their flow meter.

Most flow meter manufacturers require that any measurement made on their meter be multiplied by a correction factor in order to get the exact air consumption measurement. This takes into account the conditions under which the flow meter was calibrated. If a company using one of these flow meters simply takes the reading but fails to multiply it by the appropriate correction factor, it would appear their product uses a lot less compressed air — easily half what it actually consumes. EXAIR's Digital Flowmeter (shown on page 9) is an easy to use meter that does not require regular calibration and provides the actual reading without having to use a correction factor.

### A Steel Plant Reduces Air Use by 59%

A steel plant was using open ended pipes on their cold rolled process to blow away a dense fog of oil vapor so the operator could see the process. Each pipe consumed 195 SCFM of compressed air. With only a 3:1 air amplification ratio, the open ended pipe did a poor job of clearing the fog. The pipes were dangerous since they could potentially be dead ended (an OSHA violation). Even with hearing protection, workers complained that it was loud.

They installed (2) Model 1106 1/2 NPT Stainless Steel Super Air Nozzles with Model 9069 Swivel Fittings (to aim them) that blew the fog across the 6' (1.8m) width. The Super Air Nozzles completely cleared the fog and the workers complimented the significant noise drop. Each open pipe that used to consume 195 SCFM was reduced to only 60 SCFM when the Super Air Nozzles were installed.





Some applications require extremely high force with extensive reach. EXAIR's High Power Safety Air Nozzles, 1" and 2" High Power Flat Super Air Nozzles, Large Super Air Nozzles and Super Air Nozzle Clusters provide incredibly strong blowing force. They are ideal for part ejection as well as blowoff, cooling and drying applications. EXAIR has engineered Large Super Air Nozzles that put the blowing capability of multiple nozzles into one single air nozzle. Hard-hitting force is measured in pounds, not ounces. All meet OSHA noise level and pressure requirements.

### **High Force Air Nozzles "Quick Pick" Comparison**

	High Force Air Nozzles Comparison (sorted by compressed air consumption)								
Model	Material	Description	Inlet	Air Consui 80 PSIG (		Fe	orce	Sound Level	More Details
				SCFM	SLPM	Lbs	Grams	dBA	Details
HP1126	Zinc Aluminum alloy	1" High Power Flat Super Air Nozzle	1/8 FNPT	17.5	495	1 <sup>†</sup>	462	82	p. 52
MP1126SS	Stainless Steel - Type 316	1" High Power Flat Super Air Nozzle	1/8 FNPT	17.5	495	1 <sup>†</sup>	462	82	p. 52
HP1002	Brass	High Power Safety Air Nozzle	1/4 FNPT	32	906	1.8*	792	87	p. 53
HP1002SS	Stainless Steel - Type 303	High Power Safety Air Nozzle	1/4 FNPT	32	906	1.8*	792	87	p. 53
1104	ZInc Aluminum alloy	Super Air Nozzle	3/8 FNPT	35	991	1.9*	850	82	p. 53
1104SS	Stainless Steel - Type 316	Super Air Nozzle	3/8 FNPT	35	991	1.9*	850	82	p. 53
1105	ZInc Aluminum alloy	Super Air Nozzle	3/8 MNPT	35	991	1.9*	850	82	p. 53
1105SS	Stainless Steel - Type 316	Super Air Nozzle	3/8 MNPT	35	991	1.9*	850	82	p. 53
HP1125	Zinc Aluminum alloy	2" High Power Flat Super Air Nozzle	1/4 FNPT	37	1,039	2.2 <sup>†</sup>	1,134	83	p. 53
HP1125SS	Stainless Steel - Type 316	2" High Power Flat Super Air Nozzle	1/4 FNPT	37	1,039	2.2 <sup>†</sup>	1,134	83	p. 53
1111-4	Zinc Aluminum alloy	Super Air Nozzle Cluster	3/8 FNPT	56	1,585	3.2*	1,451	82	p. 56
1106	Zinc Aluminum alloy	Super Air Nozzle	1/2 FNPT	60	1,699	3.3*	1,497	87	p. 54
1106SS	Stainless Steel - Type 316	Super Air Nozzle	1/2 FNPT	60	1,699	3.3*	1,497	87	p. 54
1107	Zinc Aluminum alloy	Super Air Nozzle	1/2 MNPT	60	1,699	3.3*	1,497	87	p. 54
1107SS	Stainless Steel - Type 316	Super Air Nozzle	1/2 MNPT	60	1,699	3.3*	1,497	87	p. 54
1112	Zinc Aluminum alloy	Super Air Nozzle	3/4 FNPT	91	2,577	4.5*	2,041	96	p. 54
1112SS	Stainless Steel - Type 316	Super Air Nozzle	3/4 FNPT	91	2,577	4.5*	2,041	96	p. 54
1113	Zinc Aluminum alloy	Super Air Nozzle	3/4 MNPT	91	2,577	4.5*	2,041	96	p. 54
1113SS	Stainless Steel - Type 316	Super Air Nozzle	3/4 MNPT	91	2,577	4.5*	2,041	96	p. 54
1111-7	Zinc Aluminum alloy	Super Air Nozzle Cluster	1/2 FNPT	98	2,773	5.7*	2,585	85	p. 56
1114	Zinc Aluminum alloy	Super Air Nozzle	1 FNPT	135	3,823	6.6*	3,005	99	p. 54
1114SS	Stainless Steel - Type 316	Super Air Nozzle	1 FNPT	135	3,823	6.6*	3,005	99	p. 54
1115	Zinc Aluminum alloy	Super Air Nozzle	1 MNPT	135	3,823	6.6*	3,005	99	p. 54
1115SS	Stainless Steel - Type 316	Super Air Nozzle	1 MNPT	135	3,823	6.6*	3,005	99	p. 54
1111-12	Zinc Aluminum alloy	Super Air Nozzle Cluster	1 FNPT	168	4,754	9.8*	4,445	89	p. 56
1116	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 FNPT	188	5,324	9.4*	4,252	102	p. 55
1117	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 MNPT	188	5,324	9.4*	4,252	102	p. 55
1118	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 FNPT	300	8,495	15*	6,804	106	p. 55
1119	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 MNPT	300	8,495	15*	6,804	106	p. 55
1120	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 FNPT	460	13,026	23*	10,433	109	p. 55
1121	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 MNPT	460	13,026	23*	10,433	109	p. 55

For Air Nozzles with lower force, see page 45.

 Force measured at 12" (305mm) from target All sound levels measured at 3 feet (914mm)
 All measurements taken at 80 PSIG (5.5 RAR) † Force measured at 12" (305mm) from target with a .025" (0.64mm) shim installed. FNPT = NPT Female

### 1" High Power Flat Super Air Nozzles™



Model HP1126 1/8 NPT female Material: Zinc Aluminum allov

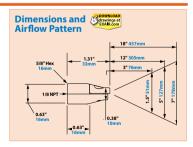
Model HP1126SS 1/8 NPT female Material: Type 316 Stainless Steel

## Model HP1126 and HP1126SS 1" High Power Flat Super Air Nozzles

EXAIR's new 1" High Power Flat Super Air Nozzles produce a flat 1" (25mm) wide airstream with a blowing force of 1 pound. The unique design of this super-efficient nozzle makes it an ideal fit for both tight spaces and tight budgets. It uses EXAIR's patented technology to maximize entrained airflow while reducing noise levels.

Air Cons	umption	Fo	orce*	Sound Level
SCFM	SLPM	Lbs	Grams	dBA
17.5	495	1	462	82

<sup>\*</sup> Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR) .025" (0.64mm) shim installed.







### **High Power** Safety Air Nozzles"



Model HP1002 1/4 NPT female Material: Brass

Model HP1002SS 1/4 NPT female Material: Type 303 Stainless Steel

### Model HP1002 and HP1002SS High Power Safety Air Nozzles

Provides strong blowing force for applications requiring high thrust and velocity. It uses more compressed air than other air nozzles but is low when compared to typical blowoffs delivering the same force.

Air Cons	umption	Fo	orce*	Sound Level		
SCFM	SLPM	Lbs Grams		dBA		
32	87					
Force measured at 12" (305mm) from target						

Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)

## Dimensions and Grawings as Airflow Pattern 18" 457mm 12" 305mm 1.44" 5/8" Hex

### 2" High Power Flat Super Air Nozzles



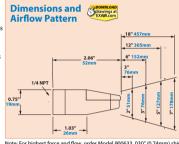
Model HP1125 1/4 NPT female Material: Zinc Aluminum alloy Model HP1125SS 1/4 NPT female Material: Type 316 Stainless Steel

### Model HP1125 and HP1125SS 2" High Power Flat Super Air Nozzles

EXAIR's 2" High Power Flat Super Air Nozzles produce a flat 2" (51mm) wide airstream with a strong blowing force of 2.2 pounds. The adjustable force is more than three times that of ordinary air nozzles. It uses EXAIR's patented technology to maximize entrained airflow while reducing noise levels.

Air Cons	umption	For	Sound Level	
SCFM	SLPM	Lbs	Grams	dBA
37	1,039	2.2	1,134	83

\* Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR). 025" (0.64mm) shim installed



Note: For highest force and flow, order Model 900633 .030" (0.74mm) shim.

### Large Super Air Nozzles



Model 1104 3/8 NPT female Material: Zinc Aluminum alloy

Model 1104SS 3/8 NPT female Material: Type 316 Stainless Steel



Model 1105 3/8 NPT male Material: Zinc Aluminum alloy

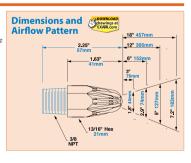
Model 1105SS 3/8 NPT male Material: Type 316 Stainless Steel

### Model 1104, 1104SS, 1105 and 1105SS 3/8 NPT Super Air Nozzles

EXAIR's 3/8 NPT Super Air Nozzles produce 1.9 lbs of strong blowing force that is 2.3 times that of the standard Super Air Nozzle. The protective aerodynamic slots guide the airflow to a single point of convergence for hard-hitting force and dramatic noise reduction over typical blowoffs.

Air Cons	umption	Force*		Level	
SCFM	SLPM	Lbs	Grams	dBA	
35	991	1.9 850		82	
33 991 1.9 830 82					

Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)





### Large Super Air Nozzles"



Model 1106 1/2 NPT female Material: Zinc Aluminum allov

Model 1106SS 1/2 NPT female Material: Type 316 Stainless Steel



Model 1107 1/2 NPT male Material: Zinc Aluminum alloy

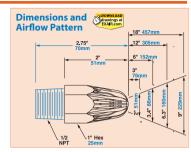
Model 1107SS 1/2 NPT male Material: Type 316 Stainless Steel

## Model 1106, 1106SS, 1107 and 1107SS 1/2 NPT Super Air Nozzles

EXAIR's 1/2 NPT Super Air Nozzles produce 3.3 lbs of blowing force – 4 times that of ordinary nozzles. Air consumption and noise are extremely low compared to that of open pipe or copper tubes.

Air Consumption		Force*		Sound Level
SCFM	SLPM	Lbs	Grams	dBA
60	1,699	3.3	1,497	87

<sup>\*</sup> Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)





Model 1112 3/4 NPT female Material: Zinc Aluminum alloy

Model 1112SS 3/4 NPT female Material: Type 316 Stainless Steel



Model 1113 3/4 NPT male Material: Zinc Aluminum alloy

Model 1113SS 3/4 NPT male Material: Type 316 Stainless Steel

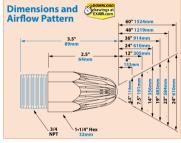
## Model 1112, 1112SS, 1113 and 1113SS 3/4 NPT Super Air Nozzles

EXAIR's Super Air Nozzles are now available in larger sizes where extreme force is required. The 3/4 NPT Super Air Nozzles produce 4.5 lbs of blowing force – over 5 times that of ordinary nozzles.

Air Cons	umption	Force*		Sound Level
SCFM	SLPM	Lbs	Grams	dBA
91	2,577	4.5	2,041	96

\* Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)

OSHA allows 3 hours of exposure per day without hearing protection.





Model 1114 1 NPT female Material: Zinc Aluminum alloy

Model 1114SS 1 NPT female Material: Type 316 Stainless Steel



Model 1115 1 NPT male Material: Zinc Aluminum alloy Model 11155S 1 NPT male Material: Type 316 Stainless Steel

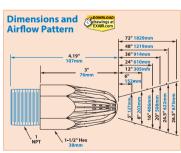
### Model 1114, 1114SS, 1115 and 1115SS 1 NPT Super Air Nozzles

EXAIR's 1 NPT Super Air Nozzles optimize entrained airflow across the nozzle surface to minimize the noise level while providing extremely strong blowing force. They produce 6.6 lbs of blowing force – over 8 times that of ordinary nozzles.

Air Cons	Air Consumption		Force*	
SCFM	SLPM	Lbs	Grams	dBA
135	3,823	6.6	3,005	99

\* Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR) OSHA allows 2 hours of exposure per day without hearing protection.







### Large Super Air Nozzles™ |



Model 1116 1-1/4 NPT female Material: Zinc Aluminum alloy

## Model 1116 and 1117 1-1/4 NPT Super Air Nozzles

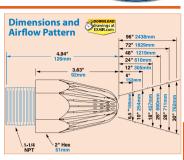
standard Super Air Nozzle.

EXAIR's 1-1/4 NPT Super Air Nozzles provide exceptionally strong blowing force. They produce 9.4 lbs of blowing force – almost 12 times that of the

Air Cons	Air Consumption		Force*	
SCFM	SLPM	Lbs	Grams	dBA
188	5.324	9.4	4.252	102

Force measured at 12" (305mm) from target Sound level measured at 3" (914mm) All measurements taken at 80 PSIG (5.5 BAR) OSHA allows 1 hour of exposure per day without hearing protection.





### Model 1117 1-1/4 NPT male Material: Zinc Aluminum allov



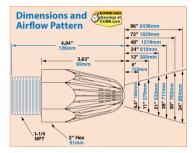
Model 1118 1-1/4 NPT female Material: Zinc Aluminum allov

### Model 1118 and 1119 1-1/4 NPT Super Air Nozzles

These 1-1/4 NPT Super Air Nozzles have larger orifices than the Model 1116 / 1117 that provide additional air velocity. They generate 15 lbs of blowing force – almost 18 times that of the standard Super Air Nozzle.

Air Cons	ir Consumption		Force*	
SCFM	SLPM	Lbs	Grams	dBA
300	8,495	15 6,804		106

Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR) OSHA allows 1/2 hour of exposure per day without hearing protection.



## EXAIR. COM

Model 1119 1-1/4 NPT male Material: Zinc Aluminum alloy

### Model 1120 and 1121 1-1/4 NPT Super Air Nozzles

These 1-1/4 NPT Super Air Nozzles have the largest orifices that provide additional air velocity, and generate the strongest blowing force of any single air nozzle. They produce 23 lbs of blowing force – almost 28 times that of the standard Super Air Nozzle.

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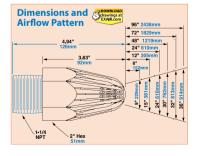
Model 1120 1-1/4 NPT female

Material: Zinc Aluminum allov

Model 1121 1-1/4 NPT male Material: Zinc Aluminum alloy

Air Cons	umption	Force*		Sound Level	
SCFM	SLPM	Lbs	Grams	dBA	
460	13,026	23 10,433		109	
Force measured at 12" (305mm) from target					

Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR) OSHA allows 1/2 hour of exposure per day without hearing protection.





### **Super Air Nozzle Clusters**

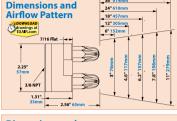
## Super Air Nozzle Clusters Model 1111-4 Super Air Nozzle Cluster



Air Cons	umption	For	Sound Level		
SCFM	SLPM	Lbs Grams		dBA	
56	1,585	3.2	82		
* Force measured at 12" (305mm) from target					

Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)

Model 1111-4 3/8 NPT female Material: Nozzles - Zinc Aluminum allov Body - Aluminum

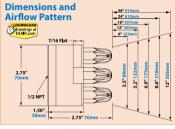


### Model 1111-7 Super Air Nozzle Cluster

Air Cons	umption	Force*		Sound Level
SCFM	SLPM	Lbs	Grams	dBA
98	2,773	5.7	2,585	85

Force measured at 12" (305mm) from target Sound level measured at 3' (914mm All measurements taken at 80 PSIG (5.5 BAR)

Model 1111-7 1/2 NPT female Material: Nozzles - Zinc Aluminum allov Body - Aluminum



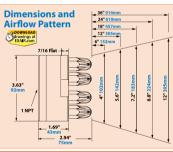


Material: Nozzles - Zinc Aluminum allov Body - Aluminum

### Model 1111-12 Super Air Nozzle Cluster

Air Cons	ir Consumption		Force*	
SCFM	SLPM	Lbs	Grams	dBA
168	4,754	9.8	4,445	89

\* Force measured at 12" (305mm) from target Sound level measured at 3' (914mm) All measurements taken at 80 PSIG (5.5 BAR)



### Flexible Stay Set Hoses™

### **Adding Flexibility**

For applications where frequent repositioning of the Air Nozzle or Jet is required, the Flexible Stay Set Hoses™ are ideal. Simply mount the hose in close proximity to the application and bend it to aim the airstream at the target. Since the hose has "memory", it will not creep or bend. It always keeps the aim until physically moved to the next position.

Two versions of the Stay Set Hoses are available in a variety of lengths. The 1/4 MNPT x 1/4 MNPT has a 1/4 NPT male fitting on each end and the 1/4 MNPT x 1/8 FNPT has a 1/4 NPT male fitting on one end and 1/8 NPT female fitting on the other.



Flexible Stay Set Hoses bend and keep their aim until physically moved.





### Flexible Stay Set Hoses™ continued



Model 1002 Safety Air Nozzle Model 1002SS SS Safety Air Nozzle

Model HP1002 High Power Safety Air Nozzle Model HP1002SS SS High Power Safety Air Nozzle

2" (51mm) Flat Super Air Nozzle

Model 1122SS

2" (51mm) SS Flat Super Air Nozzle Model HP1125

2" (51mm) High Power Flat Super Air Nozzle

Model HP1125SS

Model 1122

2" (51mm) SS High Power Flat Super Air Nozzle



Model 1100 Super Air Nozzle Model 1100SS SS Super Air Nozzle Model 1100-PEEK PEEK Super Air Nozzle

The Air Nozzles shown above can be used with the following Stay Set Hoses (1/4 NPT male fitting on each end):

Model #	Description	Model #	Description
9206	6" (152mm) 1/4 MNPT x 1/4 MNPT	9224	24" (610mm) 1/4 MNPT x 1/4 MNPT
9212	12" (305mm) 1/4 MNPT x 1/4 MNPT	9230	30" (762mm) 1/4 MNPT x 1/4 MNPT
9218	18" (457mm) 1/4 MNPT x 1/4 MNPT	9236	36" (914mm) 1/4 MNPT x 1/4 MNPT



Model

Model

Model

Atto Super Air Nozzle

Atto PEEK Super Air Nozzle \*\*Model 1109SS-NPT

1108-PEEK-NPT

Pico Super Air Nozzle

1109-PEEK-NPT

1110-PFFK-NPT

Pico PEEK Super Air Nozzle \*\*\*Model 1110SS-NPT Nano Super Air Nozzle



\*Model 1108SS-NPT Model 1010SS



Model 1126 1" (25mm) SS Micro Air Nozzle Flat Super Air Nozzle

Model 1126SS 1" (25mm) SS Flat Super Air Nozzle

Model HP1126 1" (25mm) High Power Flat Super Air Nozzle Model HP1126SS 1" (25mm) SS High Power Flat Super Air Nozzle



Model 1103 Model 1009 Mini Super Air Nozzle

Model 1103SS

SS Mini Super Air Nozzle

Adjustable Air Nozzle Model 1009SS SS Adjustable Air Nozzle

Model 6013 High Velocity Air Jet

Model 6019 Adjustable Air Jet

Flexible Stay Set Hoses bend to fit your application and will maintain their orientation until the position needs to be re-adjusted. The airstream can be aimed at precisely the correct spot.

The Air Nozzles and Jets shown above can be used with the following Stav Set Hoses

(1/4 NPT male fitting on one end, 1/8 NPT female on the other):

Widuei #	Description	WIOGEI #	Description
9256	6" (152mm) 1/4 MNPT x 1/8 FNPT	9274	24" (610mm) 1/4 MNPT x 1/8 FNPT
9262	12" (305mm) 1/4 MNPT x 1/8 FNPT	9280	30" (762mm) 1/4 MNPT x 1/8 FNPT
9268	18" (457mm) 1/4 MNPT x 1/8 FNPT	9286	36" (914mm) 1/4 MNPT x 1/8 FNPT

### **Magnetic Bases**

Magnetic bases are suited to applications where frequent movement of the Air Nozzle or Jet is required. The powerful magnet permits horizontal or vertical mounting that will hold the blowing position of the Stay Set Hose. A shutoff valve is provided that can be used to infinitely vary the force and flow.



9042 One Outlet Magnetic Base 9043 Two Outlet Magnetic Base

### **Build Your Own System**

Now you can put together the best combination that suits your blowoff, cooling, drying or cleaning application. Select the model number that includes your choice of Air Nozzle or Jet, a length of Stay Set Hose, and a one or two outlet magnetic base. Here's how:

- 1. Choose the Air Nozzle or Jet model, Example: Model 1100 Super Air Nozzle
- 2. You have the option to include a length of Stay Set Hose. Simply list the model of the Stay Set Hose (shown above) as a dash number after the Air Nozzle or Jet model number.

Example: A Model 1100 Super Air Nozzle with a Model 9212 12" (305mm) Stay Set Hose is a Model 1100-9212.

3. You have the option to include a magnetic base. If you want a One Outlet Magnetic Base, change the second digit of the "added on" dash number to a "3". If you would like the Two Outlet Magnetic Base, change the second digit to a "4". By using a "4", you will receive (2) Air Nozzles or Jets and (2) Stay Set Hoses to attach to the Two Outlet Magnetic Base.

Example: A Model 1100 Super Air Nozzle with a 12" (305mm) Stay Set Hose and One Outlet Magnetic Base is a Model 1100-9312.







### **Blowoff Kits**



### Model # 1909

Blowoff Kit includes

- (1) 1102 Mini Super Air Nozzle
- (1) 1009 Adjustable Air Nozzle
- (1) 1100 1/4 NPT Super Air Nozzle
- (1) 1104 3/8 NPT Super Air Nozzle
- (1) 1106 1/2 NPT Super Air Nozzle
- (1) 1122 2" Flat Super Air Nozzle
- (1) 6013 High Velocity Air Jet
- (1) 6019 Adjustable Air Jet



### Stainless Steel Blowoff Kit includes

- (1) 1102SS 1/8 NPT Mini Super Air Nozzle
- (1) 1009SS Adjustable Air Nozzle
- (1) 1100SS 1/4 NPT Super Air Nozzle
- (1) 1104SS 3/8 NPT Super Air Nozzle
- (1) 1106SS 1/2 NPT Super Air Nozzle
- (1) 1010SS 1/8 NPT Micro Air Nozzle
- (1) 1122SS 2" Flat Super Air Nozzle



Model # 1910

### Instant Blowoff Station includes

- (1) 1100 Super Air Nozzle
- (1) 9212 12" (305mm) Stay Set Hose
- (1) 9042 Magnetic Base
- (1) 9040 Foot Pedal
- (2) 900061 10' Compressed Air Hose



### Model # 1100-9312

### Blowoff Kit includes

- (1) 1100 Super Air Nozzle (1) 9212 12" (305mm) Stay Set Hose
- (1) 9042 Magnetic Base



### Blowoff Kit includes

- (2) 1100 Super Air Nozzles
- (2) 9212 12" (305mm) Stay Set Hose
- (1) 9043 Magnetic Base



### Model # 1103-9362

### Blowoff Kit includes

- (1) 1103 Mini Super Air Nozzle
- (1) 9262 12" (305mm) Stay Set Hose
- (1) 9042 Magnetic Base



### Blowoff Kit includes

- (2) 1103 Mini Super Air Nozzles
- (2) 9262 12" (305mm) Stay Set Hose
- (1) 9043 Magnetic Base



- Blowoff Kit includes
- (1) 1122 2" Flat Super Air Nozzle (1) 9212 12" (305mm) Stay Set Hose
- (1) 9042 Magnetic Base



- (2) 1122 2" Flat Super Air Nozzles (2) 9212 12" (305mm) Stay Set Hose
- (1) 9043 Magnetic Base

### Swivel Fittings

Swivel Fittings can be added to most EXAIR Nozzles by adding a "W" to the Model#. Example:



1122 (2" Flat Super Air Nozzle)

W (Swivel Fitting)

1122W

EXAIR's Swivel Fittings make it easy to adjust the aim of the Air Nozzles and Jets. Correct placement of the blowing angle can help optimize performance, reduce noise levels and improve efficiency. Swivel Fittings permit a movement of 25 degrees from the center axis for a total movement of 50 degrees. Type 303 or 316 Stainless Steel.

Swivel Fittings						
Model # Description						
9201	M4 x 0.5mm female x 1/8 MNPT					
9202	M5 x 0.5mm female x 1/8 MNPT					
9203	M6 x 0.75mm female x 1/8 MNPT					
9052	1/8 MNPT x 1/8 FNPT					
9053	1/4 MNPT x 1/4 FNPT					
9068	3/8 MNPT x 3/8 FNPT					
9069	1/2 MNPT x 1/2 FNPT					
9023	3/4 MNPT x 3/4 FNPT					





## Digital Sound Level Meter™

### Prevent worker-related hearing loss!

### What Is The Digital Sound Level Meter?

EXAIR's Model 9104 Digital Sound Level Meter is an easy to use instrument that can measure and monitor the sound level pressure in a wide variety of industrial environments. The source of loud noises can be quickly identified and isolated so corrective measures can be taken to reduce or eliminate the problem. For compressed air noise, it is often as simple as replacing the existing inefficient blowoffs with EXAIR's engineered compressed air products such as the Super Air Knife, Super Air Amplifier or Super Air Nozzles. In many cases, the EXAIR products can reduce noise levels by 10 dBA which is perceived as cutting the sound volume in half.

### Why The Digital Sound Level Meter?

Hearing loss induced by high noise in the workplace is a common problem. Exposure to high noise levels for an extended period of time can lead to permanent hearing loss for workers not wearing proper hearing protection. The Digital Sound Level Meter can help employers protect workers by monitoring noise levels so they don't exceed the limits shown in OSHA Standard 29 CFR - 1910.95(a). Failure to comply can result in hefty fines.

OSHA Maximum Allowable Noise Exposure									
Hours per day (constant noise)	8	7	4	3	2	1	0.5		
Sound level dBA	90	91	95	97	100	105	110		

OSHA Standard 29 CFR - 1910.95 (a)

Accurate and responsive, the Digital Sound Level Meter measures the decibels of the sound and displays the reading on the large LCD display that has a backlight button for easier viewing. An "F/S" response time button provides a choice of slow response measurements for comparatively stable noise measurement or fast for varying noise. The "Max Hold" setting will measure the maximum noise level of sounds and updates continuously if a louder sound is detected. Certification of accuracy and calibration traceable to NIST (National Institute of Standards and Technology) is included.





The Sound Level Meter identifies a potential source of hearing loss.



Model 9104 Digital Sound Level Meter comes complete with removable wind screen, battery, and a protective case.

### **Advantages**

- Measures sound level range from 35 dBA 130 dBA (Low: 35 to 100; High: 65 to 130 dBA)
- Frequency range 31.5Hz 8kHz
- A and C weightings (check compliance with safety regulations and acoustic analysis)
- Slow (1 sec) and fast (125ms) response settings to check peak and average noise levels
- Maximum hold feature to measure peak sound levels
- Accuracy is ± 1.5 dBA
- NIST Certification included

- Four digit LCD display in 0.1 dBA steps with backlight
- Battery life is 50 hours (typical) with low battery alert
- Automatic power off after 15 minutes of non-use
- Meets CE, ANSI and IEC Type 2 SLM standards
- Tripod mounting ideal for taking long term measurements (tripod not included)
- · Removable windscreen for use in windy conditions to reduce misreads
- Includes protective carrying case, 9V battery, instruction manual, and removable windscreen





# Digital Flowmeter™

# Monitor compressed air usage and waste!

### What Is The Digital Flowmeter?

EXAIR's Digital Flowmeter is the easy way to monitor compressed air consumption and waste! The digital display shows the exact amount of compressed air being used, making it easy to identify costly leaks or inefficient air products. Many companies install the Digital Flowmeter on each major leg of their air distribution system to constantly monitor and benchmark compressed air usage.

### Why The Digital Flowmeter?

The Digital Flowmeter has an LED display that directly indicates the SCFM or m³/hr volume of airflow through that pipe (other flowmeters require the reading to be multiplied by a specific conversion factor to be accurate). Models are available for sizes ½" - 6" in iron or copper pipe. Models from ½" to 4" iron pipe are in stock. Each Digital Flowmeter is calibrated for the pipe size to which it is mounted.

The Digital Flowmeter is designed for permanent or temporary mounting to the pipe. It requires the user to drill two small holes through the pipe using the included drill bit and locating fixture. The two flow sensing probes of the flowmeter are inserted in these holes. The unit seals to the pipe once the two clamps are tightened. No cutting, welding, adjustments or calibration are ever required. If the unit needs to be removed, blocking rings are available.

### What is the Summing Remote Display?

EXAIR's Summing Remote Display for the Digital Flowmeter has a four digit LED display that makes it easy to monitor compressed air consumption from a convenient location. With the push of a button, the display cycles to show the current air consumption, usage for the previous 24 hours, and total cumulative usage. It is pre-wired with 50' (15.2m) of cable and is powered by the Digital Flowmeter. Mounting hardware is included.

### What is the USB Data Logger?

EXAIR's award-winning USB Data Logger Model 9147 connects directly to your Digital Flowmeter and is simple to use. Use the included software to configure the Data Logger to record your flow rate from once a second (about nine hours of data) up to once every 12 hours (over 2 years!).

When the Data Logger is removed from the Digital Flowmeter and plugged into a computer, the data can be viewed in the included software or exported directly into Microsoft Excel\*. The Data Logger is available pre-installed on the Digital Flowmeter.



### Advantages

- Easy to install No moving parts
- Summing Remote Display and Data Logger available
- Sensitive at low flows
- No calibration or setup required
- Includes all components for installation
- Models from ½" to 4" Schedule 40 iron pipe in stock
- Models are available for sizes ½" to 6" in iron or copper pipe



Summing Remote Display



**USB Data Logger for the Digital Flowmeter** 



