

COAT







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- Calculate air savings and ROI to see how quickly EXAIR products will pay off
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valuable liquide

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Intelligent Compressed Air<sup>®</sup> 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.



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### EXAIR's Intelligent Compressed Air® products vs Your current installation

### How does the Efficiency Lab work?

Our Efficiency Lab service begins with receiving a sample of the product(s) you currently use for your application. One of our qualified Application Engineers will use calibrated testing equipment to compare the performance of your existing product(s) to an EXAIR engineered solution. These tests will determine air consumption, noise levels and force. The test results will then be published in a comprehensive report, which includes a cost savings analysis, and be provided to you. For most applications, EXAIR products can help you improve application efficiency AND typically pay for themselves in a matter of weeks.

### How can I get a product tested for free?

### To participate in our FREE Efficiency Lab please contact one of our Application Engineers and get the details about sending us your product(s).

You may reach an Application Engineer by phone at (800) 903-9247 or (513) 671-3322. You can send an email to lab@exair.com or visit our website and take advantage of our live help at www.exair.com.

EXAIR's FREE Efficiency Lab service determines how much air and dollar savings you will achieve by installing one of our Intelligent Compressed Air products.

### Unable to send your product to EXAIR's Efficiency Lab?

If it is not possible to send us your product, we have a one page Product Efficiency Survey on our website (*www.exair.com/labdoc.htm*) where you can provide us the details about a current inefficient compressed air application. Fill in the information and click submit. You will hear from one of our Application Engineers within 3 business days.

### Okay, so what is the fine print?

This service is available to all customers in the U.S. and Canada only. Some restrictions may apply.

### What about confidentiality?

Yes, EXAIR will keep the results of our Efficiency Lab test and report confidential unless given permission to share that information with others.

Products must be shipped to EXAIR freight prepaid. EXAIR will pay the return shipping via UPS ground.



### Air Nozzles and Jets



### **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!

### What Are Air Nozzles and Jets?

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!





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 end 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 SCFM (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



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



This PEEK material Atto Super Air Nozzle was chosen because of its non-marring quality for a blow off application on a sensitive lens.



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### 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 end 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 an instantaneous response. EXAIR's EFC (shown on page 7) 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)							
ound level dBA 90 91 95 97 100 105 110							
OSHA Standard 29 CFR - 1910.95 (a)							

### **Eliminate Harmful Dead End 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 29 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 an 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:

- 1. 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 49, is 10 SCFM (283 SLPM).
- 3. Compressed air saved = 70 10 = 60 SCFM (1,981 283 = 1,698 SLPM)
- 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!

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### How Air Nozzles Work

**An INTELLIGENT** 

**COMPRESSED AIR** Product

Air Nozzles use the Coanda effect to amplify compressed airflow up to 25 times or more. As illustrated on the right, 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 end 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 (10.43 kg) where additional reach and force are required.

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

Inlet

M4 x 0 5

Description

Type 303 Stainless Steel- high temperatures and corrosive environments. Max temp 800°F (426°C)

Materia

· Zinc aluminum alloy- general purpose applications. Max temp 250°F (121°C)

resistance, non-marring. Max temp 320°F (160°C)

SI PM

Air Consumption

SCEM

25

PEEK- replaces metals in harsh environments. Offers chemical

Force

Ozs Grams dBA

2.0\* 567 58

Sound

I evel

More

Details

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p. 57 FNPT = NPT Female MNPT = NPT Male

- Type 316 Stainless Steel- high temperatures, corrosive environments, and mechanical wear. Max temp 1000°F (538°C)
  - Brass- general purpose applications. Max temp 400°F (204°C)

**Air Nozzles** 

- Stainless Steel Type 316 Atto Super Air Nozzle PEEK (Plastic) 1108-PFFK Atto Super Air Nozzle M4 x 0.5 2.5 71 2.0 56.7 58 1108SS-NPT Stainless Steel - Type 316 Atto Super Air Nozzle 1/8 MNPT 2.5 71 2.0\* 56.7 58 1108-PEEK-NPT PEEK (Plastic) Atto Super Air Nozzle 1/8 MNPT 25 71 2.0\* 567 58 Pico Super Air Nozzle 110955 Stainless Steel - Type 316 M5 x 0.5 4.9 139 5.0\* 141.7 68 1109-PEEK PEEK (Plastic) Pico Super Air Nozzle M5 x 0 5 49 139 5.0\* 1417 68 1109SS-NPT Stainless Steel - Type 316 Pico Super Air Nozzle 1/8 MNPT 49 139 5.0\* 1417 68 141.7 1109-PEEK-NPT PFFK (Plastic) Pico Super Air Nozzle 1/8 MNPT 4.9 139 5.0\* 68 1110SS Stainless Steel - Type 316 Nano Super Air Nozzle M6 x 0.75 8.3 8.1\* 230 75 1110-PFFk PFFK (Plastic) Nano Super Air Nozzle M6 x 0.75 8.3 235 8.1\* 230 75 1110SS-NPT Stainless Steel - Type 316 Nano Super Air Nozzle 1/8 MNPT 8.3 235 8.1\* 230 75 1110-PEEK-NPT PEEK (Plastic) Nano Super Air Nozzle 1/8 MNPT 83 235 8 1\* 230 75 Safety Air Nozzle 1001 Brass 1/8 FNPT 10 283 9\* 255 78 1102 Zinc Aluminum allow Mini Super Air Nozzle 1/8 ENPT 10 283 9\* 255 1102-PEEK PEEK (Plastic) Mini Super Air Nozzle 1/8 ENPT 10 283 9\* 255 110255 Stainless Steel - Type 316 Mini Super Air Nozzle 1/8 FNPT 10 283 9\* 255 71 1103 Zinc Aluminum alloy Mini Super Air Nozzle 1/8 MNPT 10 283 9\* 255 Stainless Steel - Type 316 9\* 110355 Mini Super Air Nozzle 1/8 MNPT 10 283 255 1126 Zinc Aluminum allov 1" Flat Super Air Nozzle 1/8 FNPT 10 5 297 9.8 278 75 112655 Stainless Steel - Type 316 1" Flat Super Air Nozzle 1/8 ENPT 10 5 297 9.8 278 75 101055 Stainless Steel - Type 303 Micro Air Nozzle 1/8 MNPT 13 368 12, 340 80 1009 Aluminum Adjustable Air Nozzle 1/8 MNPT 13 368 340 79 12\*\* 100955 Stainless Steel - Type 303 Adjustable Air Nozzle 1/8 MNPT 13 368 340 79 1100 Zinc Aluminum alloy 1/4 ENPT Super Air Nozzle 14 396 13' 368 74 1100-PEEK PEEK (Plastic) Super Air Nozzle 1/4 ENPT 14 396 13\* 368 74 110055 Stainless Steel - Type 316 Super Air Nozzle 1/4 FNPT 14 396 13\* 368 74 1101 Zinc Aluminum alloy Super Air Nozzle 1/4 MNPT 14 396 13\* 368 74 Stainless Steel - Type 316 110155 Super Air Nozzle 1/4 MNPT 14 396 139 368 74 Brass Safety Air Nozzle 1002 1/4 FNPT 481 163 454 80 100255 Stainless Steel - Type 303 Safety Air Nozzle 1/4 ENP1 481 163 454 80 1003 Brass Safety Air Nozzle 3/8 FNPT 18 509 18' 510 83 6019 Brass Adjustable Air Jet 1/8 MNPT 18 509 16\*\*\* 454 83 1/8 MNPT 16\*\*\* 6019S Stainless Steel - Type 303 Adjustable Air Jet 18 509 454 83 High Velocity Air Jet 1/8 MNPT 6013 Brass 622 201 567 82 6013SS Stainless Steel - Type 303 High Velocity Air Jet 1/8 MNPT 622 201 567 82 Zinc Aluminum alloy 2" Flat Super Air Nozzle 1/4 ENPT 622 624

Model

110855

Stainless Steel - Type 316 Stainless Steel - Type 316 For High Force Air Nozzles, see page 61. Force measured at 12" (305mm) from target

Stainless Steel - Type 316

100455

1006SS

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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 measurements taken at 80 PSIG (5.5 BAR) † Force measured at 12" (305mm) from target with a .015" (0.38mm) shim installed For Technical Assistance, Call An EXAIR Application Engineer 1-800-903-9247

All sound levels measured at 3 feet (914mm

1/4 FNPT

M4 x 0 5

1/4 ENPT

22

45

22

622

622

221 624 77

NA NA 75

NA NA 80

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2" Flat Super Air Nozzle

Back Blow Air Nozzle

Back Blow Air Nozzle

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### Atto Super Air Nozzles™

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 Material: Type 316 Stainless Steel Model 1108-PEEK-NPT 1/8 NPT male Material: PEEK (plastic)

### Model 1108SS, 1108-PEEK, 1108SS-NPT, 1108-PEEK-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 Cons	umption	For	ce*	Sound Level	
SCFM	SLPM	Ozs	Grams	dBA	
2.5	71	2.0	56.7	58	

EXAIR's Pico Super Air Nozzle delivers a precise

airflow. The narrowly focused air pattern measures

blowoff with a highly focused, forceful blast of

1.3" in diameter at 6" away from the surface.

Ozs

5.0

Grams

142

MOUSETRAF

68

Model 1109SS, 1109-PEEK, 1109SS-NPT,

1109-PEEK-NPT Pico Super Air Nozzle

The noise level is only 68 dBA.

nption

SI PM

139

\*Force measured at 12" (305mm) from target

All measurements taken at 80 PSIG (5.5 BAR)

Sound level measured at 3' (914mm)

Air Cons

SCFM

4.9

\*Force measured at 12" (305mm) from target Sound level measured at 3' (914mm)



### Pico Super Air Nozzles"

(actual size)

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

### Nano Super Air Nozzles™



Model 1110SS M6 x 0.75 Material: Type 316 Stainless Steel Model 1110-PEEK M6 x 0.75 Material: PEEK (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 Cons	umption	For	ce*	Sound Level
SCFM	SLPM	Ozs	Grams	dBA
8.3	235	8.1	230	75
	ed at 12" (305m easured at 3' (9	- 20	DesignNews	

All measurements taken at 80 PSIG (5.5 BAR)



### Micro Air Nozzle



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

### Model 1010SS Micro Air Nozzle

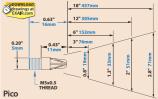
EXAIR's Micro Air Nozzle optimizes entrainment for a directed, high volume, high velocity airflow. The compact size permits mounting where space is limited. Sound level and air consumption are low.

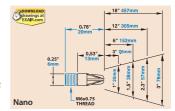
Air Cons	Air Consumption		Force*		
SCFM	SLPM	Ozs	Grams	dBA	
13	368	12	340	80	

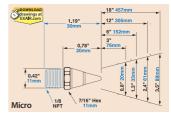
\*Force measured at 12" (305mm) from target Sound level measured at 3' (914mn All measurements taken at 80 PSIG (5.5 BAR) sound levels and high efficiency.

### **Dimensions and Airflow Patterns**



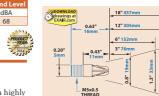






Air Nozzles Product

The Air Nozzles and Jets shown on pages 53 - 59 deliver up to 22 ounces (624 grams) of force, making them suitable for most blowoff, drving 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







<sup>(</sup>actual size)



### **Air Nozzles**

### Mini Super Air Nozzles™



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



Model 1103 1/8 NPT male Material: Zinc Aluminum alloy Model 1103SS 1/8 NPT male Material: Type 316 Stainless Steel

### Super Air Nozzles™



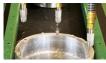
Model 1100 1/4 NPT female Material: Zinc Aluminum alloy Model 1100SS 1/4 NPT female Material: Type 316 Stainless Steel



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



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



Super Air Nozzles with Stay Set Hoses provide adjustability and precision.



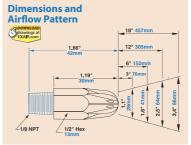
54

### 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.



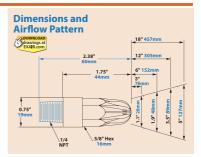




### Model 1100, 1100SS, 1100-PEEK, 1101 and 1101SS Super Air Nozzles

EXAIR's award winning Super Air Nozzles deliver high performance suitable for a 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, delivering hard-hitting force. It dramatically 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.







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

### **Build Your Own System**

EXAIR's Swivel Fittings, available for all our nozzles up to 1 NPT, 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 66 for details. Swivel Fittings can be added to most EXAIR Nozzles by adding a "W" to the Model#.



For Technical Assistance, Call An EXAIR Application Engineer 1-800-903-9247 Toll Free FAX (866) 329-3924 · E-mail: techelp@exair.com · www.exair.com





1" Flat Super Air Nozzle

**Airflow Pattern** 

1.5 3

Dimensions

18" 457mm -

12" 305mm -

3" 76mm -

### Flat Super Air Nozzles™



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

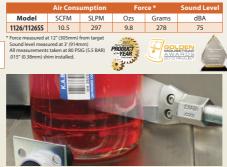
Shim sets for the 1" Flat Super Air Nozzles include a .005" (0.13mm), .010" (0.25mm), and .020" (0.51mm) thick shim.

Stainless Steel 1" 1136SS Flat Super Air Nozzle Shim Set

### 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<sup>+</sup> 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.

†Patent #5402938



A stainless steel 1" Flat Super Air Nozzle removes condensation from a label prior to scanning.



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

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

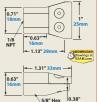
112266	Stainless Steel 2" Flat Super Air Nozzle Shim Set
115255	Super Air Nozzle Shim Set

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.

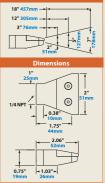
	Air Cons	umption	Force *		Sound Level
Model	SCFM	SLPM	Ozs	Grams	dBA
1122/112255	21.8	622	22	624	77
* Force measured a Sound level meas All measurements .015" (0.38mm) sh	ured at 3' (914r taken at 80 PS	nm)			PRODUCT



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







2" Flat Super Air Nozzle

w Pattern







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

**-**/.//:

We've all seen flat air nozzles. Some are yellow. Others are orange. The oldest ones are blue or metal. Those other manufacturers want you to believe you'll save money by conserving compressed air while protecting your workers from harmful noise levels. In reality, those colorful air nozzles that blow the air out of holes consume enormous amounts of air. The plastic ones often break off. Some might even get you an OSHA fine due to the dangerous dead ended pressures that exist if someone blocks the air exhaust

the Competition!

EXAIR's award winning 2" Flat Super Air Nozzle™ has been engineered to replace those outdated flat nozzles. There are no dangerous holes that can be blocked. EXAIR's patented, award winning design is efficient, maintaining a precise amount of airflow through a thin slot. The result is a forceful stream of high velocity, laminar airflow with minimal air consumption and noise. You can increase or decrease the force of each flat air nozzle - using shims to tune it to the application

so you'll never waste compressed air. EXAIR also offers a 1" Flat Super Air Nozzle™ with the same laminar airflow to fit in tighter spaces.



Flat nozzles from other manufacturers can consume over 30 SCFM (a refrigerator sized compressor) and aren't adjustable. Some manufacturers offer different flow rates but you need to guess at which one will do the job since you can't adjust them once you've made the purchase. By default, most users feel bigger is better and go with the highest flow rate, wasting compressed air. See page 55 for more details.

### EXAIR's 2" Flat Super Air Nozzle Theirs (Old Technology)

- 2004 Product Of The Year Winner Your choice of zinc/aluminum or Type 316 stainless steel Flexible Stay Set Hoses<sup>™</sup>, swivel fittings and magnetic bases
- are available Meets or exceeds OSHA standards
- Oujetest flat nozzle available · Easy to change the force and flow
- Can consume over 30 SCFM
- Expensive metal or plastic
- No easy adjustment wasted compressed air
- May not be OSHA safe
- Significantly louder
- Plastic is easily broken

### Herefshows

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

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, 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 .25/1,000 SCF= 13.8 cents saved per hour.
- 13.8 cents per hour x 24 hours = \$3.31 saved 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 Nozzle	Air Consumption @ 80 PSIG	Noise Level dBA	lbs. of Force @ 80 PSIG	
Yellow	29 SCFM	83	1.7	
Orange	28 SCFM	82	1.7	
Blue	26 SCFM	78	1.5	
Metal (machined)	29 SCFM	82	1.7	
Metal (cast)	31 SCFM	80	1.9	
EXAIR 2" Flat Super Air Nozzle	*7.3- 30 SCFM	62-81	0.5 – 1.9	
*Air consumption dependent upon s	him size.			

### EXAIR's 2" Flat Super Air Nozzle can pay for itself in less than 19 days.

Put the 2" Flat Super Air Nozzle to work in your blowoff, cooling or drying application. We're sure you'll agree that it blows away the competition!

EXAIR Corporation

PRODUCT

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YEAR

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### M4 Back Blow Air Nozzle



Model 1004SS M4 x 0.5 Material: Type 316 Stainless Steel

### Model 1004SS Air Nozzle

EXAIR's M4 Back Blow Air Nozzle delivers the smallest, most effective airflow for cleaning out small diameter tubes, pipes, channels or holes. Its forceful airflow can be used on diameters as small as 1/4" (6.3mm) and up to 1" (25.4mm). Extensions for reaching farther into a pipe, tube, hose, channel or hole are available.

	Air Consumption		Consumption Level*			Use With:
Model		SLPM	dBA	Inside Diameters		
1004SS			75	1/4" - 1" (6.3-25.4mm)		

### 1/4 NPT Back Blow Air Nozzle



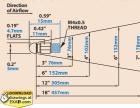
Model 1006SS 1/4 NPT female Material: Type 316 Stainless Steel

### Model 1006SS Air Nozzle

The 1/4 NPT Back Blow Air Nozzle delivers high performance suitable for a wide range of diameters. Recommended diameter range is 7/8"-4" (22-102mm). A large variety of extensions for reaching farther into a pipe, tube, hose, channel or hole are available.

	Air Consumption		Sound Level*	Use With:		
Model SCFM SLPM		Model SCFM SLPM dBA	dBA	Inside Diameters		
1006SS	22 622		80	7/8"-4" (22-102mm)		
* Sound level measured at 3' (914mm)						
				PRODUCT		

### **Dimensions and Airflow Pattern**



Direction of Airflow

0 75

5/8 16mm FLATS



### **1 NPT Back Blow Air Nozzle**



Model 1008SS 1 NPT female Material: Type 316 Stainless Steel

### Model 1008SS Air Nozzle

EXAIR's largest Back Blow Air Nozzle produces the greatest force for stubborn, sticky materials which may be inside of pipes, tubes, channels or holes. It is capable of reaching into diameters from 2"-16" (51-406mm) so it can handle small and large diameters. Extensions are available.

	Air Consumption		Sound Level*	Use With:		
Model	SCFM SLPM		dBA	Inside Diameters		
1008SS	008SS 57 1,614		89	2" - 16" (51-406mm)		
* Sound level measured at 3' (914mm)						

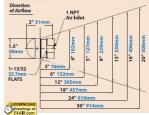
A Back Blow Air Nozzle cleans chips and coolant from inside a machined pipe.



Chip Shields should be used to protect operators from debris. A Model 901650 Chip Shield is for M4 x 0.5 extensions and a Model 901222 is available for 1/4 NPT extensions.

### **Dimensions and Airflow Pattern**

18" 457mm





Extensions provide the necessary reach to clean out your pipe, tube, hose or channel. Available up to 72" (1829mm) long.

	· = (······, ·····j·
Model #	Description
9492	6" (152mm) Aluminum, M4 x 0.5
9493	12" (305mm) Aluminum, M4 x 0.5
9495	24" (610mm) Aluminum, M4 x 0.5
9497	36" (914mm) Aluminum, M4 x 0.5
9188	12" (305mm) Aluminum, 1/4 NPT
9189	18" (457mm) Aluminum, 1/4 NPT
9190	24" (610mm) Aluminum, 1/4 NPT
9191	36" (914mm) Aluminum, 1/4 NPT
9192	48" (1219mm) Aluminum, 1/4 NPT
9193	60" (1524mm) Aluminum, 1/4 NPT
9194	72" (1829mm) Aluminum, 1/4 NPT
900353	12" (305mm) Aluminum, 1 NPT
901254	36" (914mm) Aluminum, 1 NPT
901259	72" (1829mm) Aluminum, 1 NPT







### **Safety Air Nozzles**

### 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

### Send in your air nozzle

for the Award Winning



We will test your existing product for air use, noise and force. We'll compare it to our Intelligent Compressed Air® products and provide a full report to help improve your process

Contact an **Application Engineer** at 1-800-903-9247.

### 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 be blocked.

Air Consumption			For	Sound Level	
Model	SCFM	SLPM	Ozs	Grams	dBA
1001	10	283	9	255	78
1002	17	481	16	454	80
1002SS	17	481	16	454	80
1003	18	509	18	510	83

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

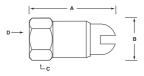
**Airflow Pattern** 

18" 457mm -

12" 305mm

6" 152mm

3" 76mm



Dimens	Dimensions		В	с	D	
Model	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 NPT	
100255	mm	37	13	16		
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
		in	1.3	2.3	4.4	6.5
1002	112	165				
н́,		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 Stee

EXA/R<sup>®</sup>Corporation

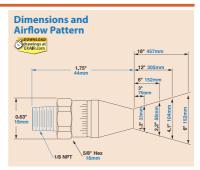
### Model 1009 and 100955 Adjustable Air Nozzles

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		Force*		
SLPM	Ozs	Grams	dBA	
368	12	340	79	
	SLPM	SLPM Ozs	SLPM Ozs Grams	

\* Force measured at 12" (305mm) from target with a .008" (0.20mm) factory setting Sound level measured at 3' (914mm)







G

### Material: Type 303 Stainless Steel Max Temp: 400°F (204°C)

How Air Jets Work

High Velocity Air Jets

Model 6013 1/8 NPT male

Max Temp: 275°F (135°C)

Material: Brass



Model 6013SS 1/8 NPT male



Model 6019 1/8 NPT male Material: Brass Max Temp: 275°F (135°C)



Model 6019SS 1/8 NPT male Material: Type 303 Stainless Steel Max Temp: 400°F (204°C)

EXAIR<sup>®</sup> Corporation

Model 6013 and 6013SS High Velocity Air Jets

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 and 6013SS High Velocity Air Jets. Changing shims will alter air consumption, force, flow and vacuum capability. Order Model 6313 Air Iet Shim Set.

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

\* 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)

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 end pressure requirements.

> 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 and 6013SS Air Jet.

### Model 6019 and 6019SS Adjustable Air Jets

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

Air Consumption		For	ce*	Sound Level	
SCFM	SLPM	LPM Ozs Grams		dBA	
18	509	16	454	83	

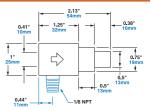
\* Force measured at 12" (305mm) from target with a 006" (0.15mm) factory setting

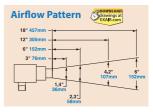
Sound level measured at 3' (914mm All measurements taken at 80 PSIG (5.5 BAR)

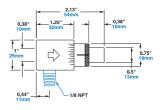


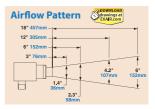
A combination of Model 6013 High Velocity Air Jets and Model 6042 Adjustable Air Amplifiers dry this engine casting.

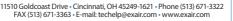














### How Much Air Does It Really Use?

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 warts) 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 for every 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 15) 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:

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 (5,521 SLPM) 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) to blow 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 (5,521 SLPM) was reduced to only 60 SCFM (1,669 SLPM) when the Super Air Nozzles were installed.





Digital Flowmeter with USB Data Logger and new wireless models are now available. See pages 10-14 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 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 of what it actually consumes. EXAIR's Digital Flowmeter and new wireless models (starting on page 10) are an easy to use solution that does not require regular calibration and provides the actual reading without having to use a correction factor.



EXAIR's Digital Sound Level Meter detects the source of high noise. (See page 15)





EXAIR<sup>®</sup> Corporation



Some applications require extremely high force with extensive reach. EXAIR offers most standard nozzles in a high force version. With incredibly high blowing forces these nozzles 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 dead end pressure requirements.

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

High Force Air Nozzles Comparison (sorted by compressed air consumption)									
Model	Material	Description	Inlet	Air Consumption at 80 PSIG (5.5 BAR)		Force		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†	454	82	p. 61
HP1126SS	Stainless Steel - Type 316	1" High Power Flat Super Air Nozzle	1/8 FNPT	17.5	495	1†	454	82	p. 61
HP1002	Brass	High Power Safety Air Nozzle	1/4 FNPT	32	906	1.8*	816	87	p. 62
HP1002SS	Stainless Steel - Type 303	High Power Safety Air Nozzle	1/4 FNPT	32	906	1.8*	816	87	p. 62
1104	Zinc Aluminum alloy	Super Air Nozzle	3/8 FNPT	35	991	1.9*	862	82	p. 62
1104SS	Stainless Steel - Type 316	Super Air Nozzle	3/8 FNPT	35	991	1.9*	862	82	p. 62
1104-PEEK	PEEK (Plastic)	Super Air Nozzle	3/8 FNPT	35	991	1.9*	862	82	p. 62
1105	Zinc Aluminum alloy	Super Air Nozzle	3/8 MNPT	35	991	1.9*	862	82	p. 62
1105SS	Stainless Steel - Type 316	Super Air Nozzle	3/8 MNPT	35	991	1.9*	862	82	p. 62
HP1125	Zinc Aluminum alloy	2" High Power Flat Super Air Nozzle	1/4 FNPT	37	1,039	2.2 <sup>†</sup>	998	83	p. 62
HP1125SS	Stainless Steel - Type 316	2" High Power Flat Super Air Nozzle	1/4 FNPT	37	1,039	2.2 <sup>†</sup>	998	83	p. 62
1111-4	Zinc Aluminum alloy	Super Air Nozzle Cluster	3/8 FNPT	56	1,585	3.2*	1,451	82	p. 65
1008SS	Stainless Steel - Type 316	Back Blow Air Nozzle	1 FNPT	57	1,614	NA	NA	89	p. 57
1106	Zinc Aluminum alloy	Super Air Nozzle	1/2 FNPT	60	1,699	3.3*	1,497	87	p. 63
1106SS	Stainless Steel - Type 316	Super Air Nozzle	1/2 FNPT	60	1,699	3.3*	1,497	87	p. 63
1107	Zinc Aluminum alloy	Super Air Nozzle	1/2 MNPT	60	1,699	3.3*	1,497	87	p. 63
1107SS	Stainless Steel - Type 316	Super Air Nozzle	1/2 MNPT	60	1,699	3.3*	1,497	87	p. 63
1112	Zinc Aluminum alloy	Super Air Nozzle	3/4 FNPT	91	2,577	4.5*	2,041	96	p. 63
1112SS	Stainless Steel - Type 316	Super Air Nozzle	3/4 FNPT	91	2,577	4.5*	2,041	96	p. 63
1113	Zinc Aluminum alloy	Super Air Nozzle	3/4 MNPT	91	2,577	4.5*	2,041	96	p. 63
1113SS	Stainless Steel - Type 316	Super Air Nozzle	3/4 MNPT	91	2,577	4.5*	2,041	96	p. 63
1111-7	Zinc Aluminum alloy	Super Air Nozzle Cluster	1/2 FNPT	98	2,773	5.7*	2,585	85	p. 65
1114	Zinc Aluminum alloy	Super Air Nozzle	1 FNPT	135	3,823	6.6*	3,005	99	p. 63
1114SS	Stainless Steel - Type 316	Super Air Nozzle	1 FNPT	135	3,823	6.6*	3,005	99	p. 63
1115	Zinc Aluminum alloy	Super Air Nozzle	1 MNPT	135	3,823	6.6*	3,005	99	p. 63
1115SS	Stainless Steel - Type 316	Super Air Nozzle	1 MNPT	135	3,823	6.6*	3,005	99	p. 63
1111-12	Zinc Aluminum alloy	Super Air Nozzle Cluster	1 FNPT	168	4,754	9.8*	4,445	89	p. 65
1116	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 FNPT	188	5,324	9.4*	4,252	102	p. 64
1117	Zinc Aluminum allov	Super Air Nozzle	1-1/4 MNPT	188	5,324	9.4*	4,252	102	p. 64
1118	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 FNPT	300	8,495	15*	6,804	106	p. 64
1119	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 MNPT	300	8,495	15*	6,804	106	p. 64
1120	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 FNPT	460	13,026	23*	10,433	109	p. 64
1121	Zinc Aluminum alloy	Super Air Nozzle	1-1/4 MNPT	460	13,026	23*	10,433	109	p. 64
or Air Nozzle	es with lower force, see page	52. Force measured at 12" (305mm) from All sound levels measured at 3 feet (9		e measured at 1 a .025" (0.64mr				= NPT Female = NPT Male	2

Product

All sound levels measured at 3 feet (914mm) All measurements taken at 80 PSIG (5.5 BAR) with a 025" (0.64mm) shim installed

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



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

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



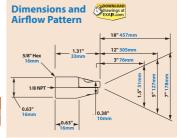
A 1" High Power Flat Super Air Nozzle is used to tip a part from a chute and on to a conveyor.

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

EXAIR's 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
I	SCFM	SLPM	Lbs	Grams	dBA
ſ	17.5	495	1	454	82
13	-				

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



The Model HP1136SS Shim Set for the 1" High Power Flat Super Air Nozzle includes a .020" (0.51mm) and .030" (0.76mm) thick shim. A .025" (0.64mm) shim is installed.







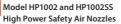
### **High Force Air Nozzles**

### High Power Safety Air Nozzles™



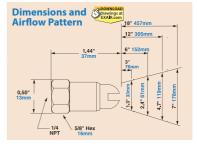
Model HP1002 1/4 NPT female Material: Brass

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



Provide 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	Fo	rce*	Sound Level		
SCFM	SLPM	Lbs	Grams	dBA	
32 906		1.8 816		87	
* Force measu Sound level i All measurer	measured at 3	3' (914m	m) -		



## & Jets

### 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

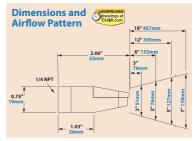


### Model HP1125 and HP1125SS 2" High Power Flat Super Air Nozzles

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 (1,134 grams). 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	998	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. †Patent #5402938



Note: For highest force and flow, order Model 900633 .030" (0.76mm) shim.



The Model HP1132SS Shim Set for the 2" High Power Flat Super Air Nozzle includes a .020" (0.51mm) and .030" (0.76mm) thick shim. A .025" (0.64mm) shim is installed.

### 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 1104-PEEK 3/8 NPT female Material: PEEK (plastic)



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

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

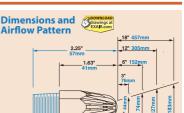
### Model 1104, 1104SS, 1104-PEEK, 1105 and 1105SS 3/8 NPT Super Air Nozzles

EXAIR's 3/8 NPT Super Air Nozzles produce 1.9 lbs (850 grams) 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 Consumption		For	Sound Level	
SCFM	SLPM	Lbs	Grams	dBA
35	991	1.9	862	82

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





13/16" Hex

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7.2"

62 EXAMP<sup>®</sup> Corporation

Air Nozzle:



### Large Super Air Nozzles"



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

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



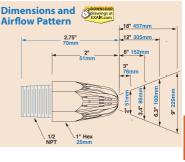
Model 1107 1/2 NPT male Material: Zinc Aluminum alloy

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 (1.5 kg) 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 Consu	umption	For	ce*	Sound Level
SCFM	SLPM	Lbs	Kg	dBA
60	1,699	3.3	1.5	87
	rred at 12" (30 measured at ments taken a	3' (914mm)	-	PRODUCT YEAR







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 allov

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

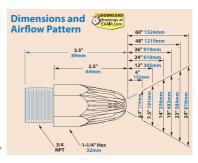
### Model 1112, 1112SS, 1113 and 1113SS 3/4 NPT Super Air Nozzles

EXAIR's Super Air Nozzles are available in larger sizes where extreme force is required. The 3/4 NPT Super Air Nozzles produce 4.5 Ibs (2.04 kg) of blowing force – over 5 times that of ordinary nozzles.

Air Cons	umption	For	Force*		
SCFM	SLPM	Lbs	Kg	dBA	
91	2,577	4.5	2.04	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

	_	
COLUMN TWO IS NOT		
PT PROPERTY AND		

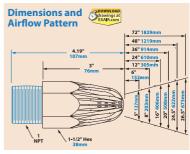
Model 1115 1 NPT male Material: Zinc Aluminum alloy

Model 1115SS 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 (3.01 kg) of blowing force – over 8 times that of ordinary nozzles.

	Air Cons	umption	For	ce*	Sound Level
Į	SCFM	SLPM	Lbs	Kg	dBA
	135	3,823	6.6	3.01	99
	Sound level All measurer OSHA allow	rred at 12" (3) measured at nents taken a s 2 hours of e rring protecti	3' (914mm) it 80 PSIG (5 xposure per	5 BAR)	PRODUCT









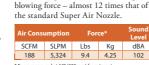
#### Large Super Air Nozzles' Model 1116 and 1117



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



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



1-1/4 NPT Super Air Nozzles

EXAIR's 1-1/4 NPT Super Air Nozzles

force. They produce 9.4 lbs (4.25 kg) of

provide exceptionally strong blowing

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.

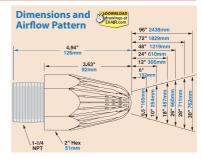


Sound

Level

dBA

102





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



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

Model 1120 1-1/4 NPT female Material: Zinc Aluminum allov

	EXAIR.		Air Cons	umption	For	ce*	S L
PRODUCTS I STORE	COM		SCFM	SLPM	Lbs	Kg	
CONTRACTOR AND			460	13,026	23	10.43	
		-	* Force meas Sound level	ured at 12" (3 measured at		target	

Air Nozzle

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

EXA/R<sup>®</sup> Corporation

### 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 (6.80 kg) of blowing force - almost 18 times that of the standard Super Air Nozzle.

onsu	nption	For	ce*	Level
FM	SLPM	Lbs	Kg	dBA
00	8,495	15	6.80	106
		FM SLPM	FM SLPM Lbs	FM SLPM Lbs Kg

All measurements taken at 80 PSIG (5.5 BAR) OSHA allows 1/2 hour of exposure per day without hearing protection.

1-1/4 NPT Super Air Nozzles

All measurements taken at 80 PSIG (5.5 BAR)

OSHA allows 1/2 hour of exposure per day

without hearing protection

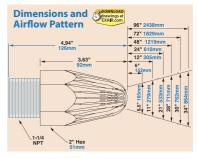
These 1-1/4 NPT Super Air Nozzles have

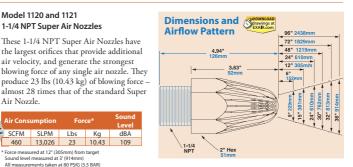
the largest orifices that provide additional

air velocity, and generate the strongest

Model 1120 and 1121

# Sound level measured at 3' (914mm)







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dBA 109



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

**Dimensions and** 

1/2 NPT

1.50" 20



5.2" 157mn 7.8" 198mn

1.6"

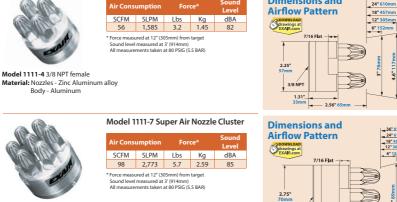
24" 610mm

18" 457mm 12" 305mm

6" 152n

5.2" 132mm 8.6" 218mm 305mm 5.9" 175mr 3.5" 89mr

\_ 36" 914mm



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

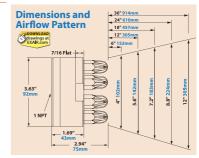


Model 1111-12 1 NPT female Material: Nozzles - Zinc Aluminum alloy Body - Aluminum

### Model 1111-12 Super Air Nozzle Cluster

Air Consumption		For	Sound Level	
SCFM	SLPM	Lbs	Kg	dBA
168	4,754	9.8	4.45	89

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



2.75" 70mm

### Flexible Stay Set Hoses™

### **Adding Flexibility**

For applications where frequent repositioning of the standard force Air Nozzles or Jets 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 hose has a 1/4 NPT male fitting on each end and the 1/4 MNPT x 1/8 FNPT hose 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.

1

2"





### **Nozzle Accessories**

### Flexible Stay Set Hoses<sup>™</sup> continued

**An INTELLIGENT** OMPRESSED AIR Product

The Air No Model # 9206 9212 9218	<b>Descriptio</b> 6" (152m 12" (305m	m) 1/4 MNP m) 1/4 MNP	n be used with t F x 1/4 MNPT F x 1/4 MNPT F x 1/4 MNPT	the followin <b>Model</b> 9224 9230 9236	# Descripti 24" (610m 30" (762m	on 1m) 1/ 1m) 1/	/4 NPT male fit 4 MNPT x 1/4 MN 4 MNPT x 1/4 MN 4 MNPT x 1/4 MN	VPT VPT	nd):
	Model H High Pow Model H	Nozzle 002SS Air Nozzle		2" M 2" M 2"	odel 1122 (51mm) Flat Super A odel 1122SS (51mm) SS Flat Supe odel HP1125 (51mm) High Power odel HP1125SS (51mm) SS High Pow	r Air No Flat Sup	zzle ver Air Nozzle		Nodel 1100 uper Air Nozzle Nodel 1100SS S Super Air Nozzle Nodel 1100-PEEK EEK Super Air Nozzle Nodel 1006SS S Back Blow Air Nozzle
			below can be u			Stay	Set Hoses		
			nd, 1/8 NPT fe	emale on t					
Model #	Descriptio				Model #		cription		
9256		,	T x 1/8 FNPT		9274		(610mm) 1/4 MNI		
9262 9268		,	Г x 1/8 FNPT Г x 1/8 FNPT		9280 9286		(762mm) 1/4 MNI (914mm) 1/4 MNI		
Model 1108		odel 1010SS	Model 1126 1" (25)	mm)	Model 1103		Model 1009	Model 6013	Model 6019
Atto Super Air Model 1108-PEEK-I Atto PEEK Supe	NPT	Micro Air Nozzle	Flat Super Air Nozzle Model 1126SS 1" ( SS Flat Super Air Nozz		Mini Super Air No. Model 1103SS SS Mini Super Air N		Adjustable Air Nozzle <b>Model 1009SS</b> SS Adjustable Air Nozzl	Model 6013S	Jet Adjustable Air Jet <b>Model 6019SS</b> SS Adjustable Air Jet
Model 1109 Pico Super Air			Model HP1126 1" High Power Flat Supe			-			
Model 1109-PEEK- Pico PEEK Super			Model HP1126SS SS High Power Flat Su			-	an Caracteria ( ) Car	-	
Model 1110 Nano Super Ai	SS-NPT						tant ingenantin hermali, ki da		-
Model 1110-PEEK-I Nano PEEK Supe					their orienta	tion u	oses bend to fit yo intil the position r imed at precisely	needs to be re-	
Swiv	vel Fitting	js		EXAIR'	's Swivel Fitti	n <i>as</i> 1	nake it easy		l Fittings
Contract Fit		و م او داداد .					r Nozzles and	Nodel # Desc	
		be added to a "W" to the							mm female x 1/8 MNPT, 316SS
NOZZIESL	y auting a	v to the	model#.	Jets. Co	rrect placeme	nt of	the blowing	9202 M5x0.5	mm female x 1/8 MNPT, 316SS

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

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	
/lodel #	Description
9201	M4 x 0.5mm female x 1/8 MNPT, 316SS
9202	M5 x 0.5mm female x 1/8 MNPT, 316SS
9203	M6 x 0.75mm female x 1/8 MNPT, 316SS
9052	1/8 MNPT x 1/8 FNPT, 303SS
9053	1/4 MNPT x 1/4 FNPT, 303SS
9068	3/8 MNPT x 3/8 FNPT, 30355
9069	1/2 MNPT x 1/2 FNPT, 30355
9023	3/4 MNPT x 3/4 FNPT, 303SS
9204	1 MNPT x 1 FNPT, 303SS

### **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 vary the force and flow.

### Model # Description 9042 9043

One Outlet Magnetic Base Two Outlet Magnetic Base



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**Blowoff Systems** 

#### APRESSED AIR Product **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 A Model 1100-9412 (shown on previous page) as a dash number after the Air Nozzle or Jet model number. includes two Model Example: A Model 1100 Super Air Nozzle with a Model 9212 12" (305mm) Stay Set Hose is a Model 1100-9212. 1100 Super Air Nozzles with two 12" 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" (305mm) Stay Set 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 Hose and Two Outlet receive (2) Air Nozzles or Jets and (2) Stay Set Hoses to attach to the Two Outlet Magnetic Base. Magnetic Base. Example: Two Model 1100 Super Air Nozzles with two 12" (305mm) Stay Set Hoses and Two Outlet Magnetic Base is a Model 1100-9412. **Blowoff Kits** ...... Model # Model # Model # 1100-9312 1100-9412 1103-9362 Blowoff Kit Blowoff Kit Blowoff Kit includes: includes: includes: (1) 1100 Super Air Nozzle (2) 1100 Super Air Nozzles (1) 1103 Mini Super Air Nozzle (1) 9212 12" (305mm) Stay Set Hose (2) 9212 12" (305mm) Stay Set Hose (1) 9262 12" (305mm) Stay Set Hose (1) 9042 Magnetic Base (1) 9043 Magnetic Base (1) 9042 Magnetic Base Model # Model # Model # 1103-9462 1122-9312 1122-9412 Blowoff Kit Blowoff Kit Blowoff Kit includes includes includes (2) 1103 Mini Super Air Nozzles (1) 1122 2" Flat Super Air Nozzle (2) 1122 2" Flat Super Air Nozzles (2) 9212 12" (305mm) Stay Set Hose (2) 9262 12" (305mm) Stay Set Hose (1) 9212 12" (305mm) Stay Set Hose (1) 9043 Magnetic Base (1) 9042 Magnetic Base (1) 9043 Magnetic Base Model # Model # Model # 1909 190955 1910 Blowoff Kit Instant Blowoff Station Stainless Steel Blowoff Kit includes includes includes (1) 1102 Mini Super Air Nozzle (1) 1102SS 1/8 NPT Mini Super Air Nozzle (1) 1100 Super Air Nozzle (1) 1009 Adjustable Air Nozzle (1) 1009SS Adjustable Air Nozzle (1) 9212 12" (305mm) Stay Set Hose (1) 1100 1/4 NPT Super Air Nozzle (1) 1100SS 1/4 NPT Super Air Nozzle (1) 9042 Magnetic Base (1) 1104 3/8 NPT Super Air Nozzle (1) 1104SS 3/8 NPT Super Air Nozzle (1) 9040 Foot Pedal (1) 1106 1/2 NPT Super Air Nozzle (1) 1106SS 1/2 NPT Super Air Nozzle (2) 900061 10' (3m) Compressed Air Hose (1) 1122 2" Flat Super Air Nozzle (1) 1010SS 1/8 NPT Micro Air Nozzle (1) 6013 High Velocity Air Jet (1) 1122SS 2" Flat Super Air Nozzle (1) 6019 Adjustable Air Jet

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**An INTELLIGENT** 

### **EXAIR**<sup>®</sup> Standards Compliance

As the leader in standards compliance, EXAIR's products come with more than engineered performance, peak efficiency, the best technical knowledge and unmatched customer service....

EXAIR is dedicated to providing products that have been manufactured to meet the strict requirements of the following standards. These standards provide confidence that you are receiving reliable, high quality products which will perform as stated within the performance charts provided.

Our products meet or exceed the strict safety standards of OSHA and the European Union to ensure the safety of your personnel. Many of these standards will allow your products a smoother transaction when selling your products into international markets.



EXAIR compressed air products comply with OSHA's Safety Requirements (29 CFR 1910.242(b)), the EU General Product Safety Directive (2001/95/EC) and meet the noise limitation requirements (29 CFR-1910.95(a)), of the EU Machinery Directive (2006/42/EC). EXAIR's Electronic Flow Control and Electronic Temperature Control meet the low voltage standards of the EU Low Voltage Directive (2006/95/EC). Some EXAIR products display the CE mark where there are applicable directives. All sound level measurements are taken at 3 feet from product.



Electrical portions of EXAIR's Static Eliminators, EFC, ETC, Digital Flowmeter solenoid valves, and thermostats comply with the RoHS (Restriction of Hazardous Substances) Directive 2011/65/EU, including the amendment outlined in the European Commission decision L 214/65.

**Conflict Mineral Free:** 



Look for this symbol to designate conflict mineral free products throughout our catalog. EXAIR supports Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. We are committed to compliance with the conflict minerals rule in order to curb the illicit trade of tin, tantalum, tungsten and gold in the DRC region. EXAIR is using the CMRT 4.20 template to document our supply chain and commitment to conflict free products.



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.