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**Where you can**
- Chat live with our problem solving, technical expert Application Engineers
- Watch product videos to learn more about the features and benefits of our engineered products
- Quickly order online with a purchase order or credit card (US & Canada)
- Access product presentation slides you can use to educate others
- Find International Distributors all across the world

**Access our Knowledge Base to**
- Download 3D models and CAD drawings in multiple formats to place into your drawings
- Calculate air savings and ROI to see how quickly EXAIR products will pay off
- Search our Case Study Library & Applications database and become familiar with how our products solve problems
- Use our product FAQ’s for quick access to our most common questions
- Learn about our free Efficiency Lab service and use it to determine air and money savings you can achieve when installing EXAIR engineered solutions
- Collect compressed air data and pipe sizing recommendations
- Find Flow, Force and Heat conversions

**Visit our PDF library and download**
- Electronic files of the entire catalog or individual sections
- Installation and Maintenance Guides on every EXAIR product
- Our current price list to have all product prices in one convenient location
- EXAIR’s Air Nozzle Blowoff Guide to see the details on our enormous selection of sizes, materials and performance options

**Follow our blog for 5 new entries a week and learn**
- Details and installations of widely varied applications
- The methodology and results of critical mathematical formulas which help determine money savings, air savings, performance benefits and more
- New product releases before they reach our catalog or website
- More about EXAIR, our team and community involvement
- Go to blog.exair.com

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- Follow our Company on Twitter @EXAIR or our Application Engineers and learn more about promotions, updates on manufacturing, engineering and international industry perspective.
- Connect with us on Facebook at facebook.com/exair or follow us on Google+

**Not on a PC? Our website is mobile friendly**
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Reduce noise levels and air costs on blowoff operations

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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, 8268179, and 9156045, and others may be U.S. Patent Pending.

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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.

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

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!

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 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.
Air Nozzles and Jets

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.

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

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” 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” open pipe at 80 PSIG (5.5 BAR) supply. Air consumption, from the table above, is 70 SCFM (1,981 SLPM).
2. 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 52, 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).
5. 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.)
6. 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!

OSHA Maximum Allowable Noise Exposure

<table>
<thead>
<tr>
<th>Hours per day (constant noise)</th>
<th>8</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound level dBA</td>
<td>90</td>
<td>91</td>
<td>95</td>
<td>100</td>
<td>105</td>
<td>110</td>
<td></td>
</tr>
</tbody>
</table>

OSHA Standard 29 CFR - 1910.95 (a)

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” 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.

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   = 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!
**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.

- **Type 303 Stainless Steel** - high temperatures and corrosive environments. Max temp 800°F (426°C)
- **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)
- **Zinc aluminum alloy** - general purpose applications. Max temp 250°F (121°C)
- **PEEK** - replaces metals in harsh environments. Offers chemical resistance, non-marring. Max temp 320°F (160°C)

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

<table>
<thead>
<tr>
<th>Model</th>
<th>Material</th>
<th>Description</th>
<th>Inlet</th>
<th>Air Consumption</th>
<th>Force</th>
<th>Sound Level dB(A)</th>
<th>More Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1108SS</td>
<td>Stainless Steel - Type 316</td>
<td>Atto Super Air Nozzle</td>
<td>M4 x 0.5</td>
<td>2.5</td>
<td>71</td>
<td>2.0*</td>
<td>56.7</td>
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<tr>
<td>1108-PEEK</td>
<td>PEEK (Plastic)</td>
<td>Atto Super Air Nozzle</td>
<td>M4 x 0.5</td>
<td>2.5</td>
<td>71</td>
<td>2.0*</td>
<td>56.7</td>
</tr>
<tr>
<td>1108SS-NPT</td>
<td>Stainless Steel - Type 316</td>
<td>Atto Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>2.5</td>
<td>71</td>
<td>2.0*</td>
<td>56.7</td>
</tr>
<tr>
<td>1108-PEEK-NPT</td>
<td>PEEK (Plastic)</td>
<td>Atto Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>2.5</td>
<td>71</td>
<td>2.0*</td>
<td>56.7</td>
</tr>
<tr>
<td>1109SS</td>
<td>Stainless Steel - Type 316</td>
<td>Pico Super Air Nozzle</td>
<td>M5 x 0.5</td>
<td>4.9</td>
<td>139</td>
<td>5.0*</td>
<td>141.7</td>
</tr>
<tr>
<td>1109-PEEK</td>
<td>PEEK (Plastic)</td>
<td>Pico Super Air Nozzle</td>
<td>M5 x 0.5</td>
<td>4.9</td>
<td>139</td>
<td>5.0*</td>
<td>141.7</td>
</tr>
<tr>
<td>1109SS-NPT</td>
<td>Stainless Steel - Type 316</td>
<td>Pico Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>4.9</td>
<td>139</td>
<td>5.0*</td>
<td>141.7</td>
</tr>
<tr>
<td>1109-PEEK-NPT</td>
<td>PEEK (Plastic)</td>
<td>Pico Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>4.9</td>
<td>139</td>
<td>5.0*</td>
<td>141.7</td>
</tr>
<tr>
<td>1110SS</td>
<td>Stainless Steel - Type 316</td>
<td>Nano Super Air Nozzle</td>
<td>M6 x 0.75</td>
<td>8.3</td>
<td>235</td>
<td>8.1*</td>
<td>230</td>
</tr>
<tr>
<td>1110-PEEK</td>
<td>PEEK (Plastic)</td>
<td>Nano Super Air Nozzle</td>
<td>M6 x 0.75</td>
<td>8.3</td>
<td>235</td>
<td>8.1*</td>
<td>230</td>
</tr>
<tr>
<td>1110SS-NPT</td>
<td>Stainless Steel - Type 316</td>
<td>Nano Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>8.3</td>
<td>235</td>
<td>8.1*</td>
<td>230</td>
</tr>
<tr>
<td>1110-PEEK-NPT</td>
<td>PEEK (Plastic)</td>
<td>Nano Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>8.3</td>
<td>235</td>
<td>8.1*</td>
<td>230</td>
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<tr>
<td>1001</td>
<td>Brass</td>
<td>Safety Air Nozzle</td>
<td>1/8 FNPT</td>
<td>10</td>
<td>283</td>
<td>9*</td>
<td>255</td>
</tr>
<tr>
<td>1102</td>
<td>Zinc Aluminum alloy</td>
<td>Mini Super Air Nozzle</td>
<td>1/8 FNPT</td>
<td>10</td>
<td>283</td>
<td>9*</td>
<td>255</td>
</tr>
<tr>
<td>1102-PEEK</td>
<td>PEEK (Plastic)</td>
<td>Mini Super Air Nozzle</td>
<td>1/8 FNPT</td>
<td>10</td>
<td>283</td>
<td>9*</td>
<td>255</td>
</tr>
<tr>
<td>1102SS</td>
<td>Stainless Steel - Type 316</td>
<td>Mini Super Air Nozzle</td>
<td>1/8 FNPT</td>
<td>10</td>
<td>283</td>
<td>9*</td>
<td>255</td>
</tr>
<tr>
<td>111</td>
<td>Zinc Aluminum alloy</td>
<td>Mini Super Air Nozzle</td>
<td>1/8 FNPT</td>
<td>10</td>
<td>283</td>
<td>9*</td>
<td>255</td>
</tr>
<tr>
<td>1103</td>
<td>Zinc Aluminum alloy</td>
<td>Mini Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>10</td>
<td>283</td>
<td>9*</td>
<td>255</td>
</tr>
<tr>
<td>1103SS</td>
<td>Stainless Steel - Type 316</td>
<td>Mini Super Air Nozzle</td>
<td>1/8 MNPT</td>
<td>10</td>
<td>283</td>
<td>9*</td>
<td>255</td>
</tr>
<tr>
<td>1126</td>
<td>Zinc Aluminum alloy</td>
<td>1&quot; Flat Super Air Nozzle</td>
<td>1/4 FNPT</td>
<td>10.5</td>
<td>297</td>
<td>9.8*</td>
<td>278</td>
</tr>
<tr>
<td>1126SS</td>
<td>Stainless Steel - Type 316</td>
<td>1&quot; Flat Super Air Nozzle</td>
<td>1/4 FNPT</td>
<td>10.5</td>
<td>297</td>
<td>9.8*</td>
<td>278</td>
</tr>
<tr>
<td>1010SS</td>
<td>Stainless Steel - Type 303</td>
<td>Micro Air Nozzle</td>
<td>1/8 MNPT</td>
<td>13</td>
<td>368</td>
<td>12*</td>
<td>340</td>
</tr>
<tr>
<td>1009</td>
<td>Aluminum</td>
<td>Adjustable Air Nozzle</td>
<td>1/8 MNPT</td>
<td>13</td>
<td>368</td>
<td>12**</td>
<td>340</td>
</tr>
<tr>
<td>1009SS</td>
<td>Stainless Steel - Type 303</td>
<td>Adjustable Air Nozzle</td>
<td>1/8 MNPT</td>
<td>13</td>
<td>368</td>
<td>12**</td>
<td>340</td>
</tr>
<tr>
<td>1100</td>
<td>Zinc Aluminum alloy</td>
<td>Super Air Nozzle</td>
<td>1/4 FNPT</td>
<td>14</td>
<td>396</td>
<td>13*</td>
<td>368</td>
</tr>
<tr>
<td>1100-PEEK</td>
<td>PEEK (Plastic)</td>
<td>Super Air Nozzle</td>
<td>1/4 FNPT</td>
<td>14</td>
<td>396</td>
<td>13*</td>
<td>368</td>
</tr>
<tr>
<td>1100SS</td>
<td>Stainless Steel - Type 316</td>
<td>Super Air Nozzle</td>
<td>1/4 FNPT</td>
<td>14</td>
<td>396</td>
<td>13*</td>
<td>368</td>
</tr>
<tr>
<td>1101</td>
<td>Zinc Aluminum alloy</td>
<td>Super Air Nozzle</td>
<td>1/4 FNPT</td>
<td>14</td>
<td>396</td>
<td>13*</td>
<td>368</td>
</tr>
<tr>
<td>1101SS</td>
<td>Stainless Steel - Type 316</td>
<td>Super Air Nozzle</td>
<td>1/4 FNPT</td>
<td>14</td>
<td>396</td>
<td>13*</td>
<td>368</td>
</tr>
<tr>
<td>1002</td>
<td>Brass</td>
<td>Safety Air Nozzle</td>
<td>1/4 FNPT</td>
<td>17</td>
<td>481</td>
<td>16*</td>
<td>454</td>
</tr>
<tr>
<td>1002SS</td>
<td>Stainless Steel - Type 303</td>
<td>Safety Air Nozzle</td>
<td>1/4 FNPT</td>
<td>17</td>
<td>481</td>
<td>16*</td>
<td>454</td>
</tr>
<tr>
<td>1003</td>
<td>Brass</td>
<td>Safety Air Nozzle</td>
<td>3/8 FNPT</td>
<td>18</td>
<td>509</td>
<td>18*</td>
<td>510</td>
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<tr>
<td>6019SS</td>
<td>Stainless Steel – Type 303</td>
<td>Adjustable Air Jet</td>
<td>1/8 MNPT</td>
<td>18</td>
<td>509</td>
<td>16***</td>
<td>454</td>
</tr>
<tr>
<td>6013</td>
<td>Brass</td>
<td>High Velocity Air Jet</td>
<td>1/8 MNPT</td>
<td>22</td>
<td>622</td>
<td>20*</td>
<td>567</td>
</tr>
<tr>
<td>6013SS</td>
<td>Stainless Steel – Type 303</td>
<td>High Velocity Air Jet</td>
<td>1/8 MNPT</td>
<td>22</td>
<td>622</td>
<td>20*</td>
<td>567</td>
</tr>
<tr>
<td>1122</td>
<td>Zinc Aluminum alloy</td>
<td>2&quot; Flat Super Air Jet</td>
<td>1/4 FNPT</td>
<td>22</td>
<td>622</td>
<td>22*</td>
<td>624</td>
</tr>
<tr>
<td>1144</td>
<td>Zinc Aluminum/Steel</td>
<td>2&quot; Super Air Scraper</td>
<td>1/4 FNPT</td>
<td>22</td>
<td>622</td>
<td>22*</td>
<td>624</td>
</tr>
<tr>
<td>1004SS</td>
<td>Stainless Steel - Type 316</td>
<td>Back Blow Air Nozzle</td>
<td>M4 x 0.5</td>
<td>4.5</td>
<td>127</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>1006SS</td>
<td>Stainless Steel - Type 316</td>
<td>Back Blow Air Nozzle</td>
<td>1/4 FNPT</td>
<td>22</td>
<td>622</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**For Technical Assistance, Call An EXAIR Application Engineer 1-800-903-9247**

- For High Force Air Nozzles, see page 61.
- Force measured at 12" (305mm) from target
- Force measured at 12" (305mm) from target with a 0.008" (0.20mm) factory setting
- Force measured at 12" (305mm) from target with a 0.015" (0.38mm) shim installed
Air Nozzles

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.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPM</td>
<td>Ozs</td>
</tr>
<tr>
<td>2.5</td>
<td>71</td>
<td>2.0</td>
</tr>
</tbody>
</table>

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

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.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPM</td>
<td>Ozs</td>
</tr>
<tr>
<td>4.9</td>
<td>139</td>
<td>5.0</td>
</tr>
</tbody>
</table>

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

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”.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPM</td>
<td>Ozs</td>
</tr>
<tr>
<td>8.3</td>
<td>235</td>
<td>8.1</td>
</tr>
</tbody>
</table>

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

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.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPM</td>
<td>Ozs</td>
</tr>
<tr>
<td>13</td>
<td>368</td>
<td>12</td>
</tr>
</tbody>
</table>

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

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, 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.
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.

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.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPm</td>
<td>Ozs</td>
</tr>
<tr>
<td>10</td>
<td>283</td>
<td>9</td>
</tr>
</tbody>
</table>

*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 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.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPm</td>
<td>Ozs</td>
</tr>
<tr>
<td>14</td>
<td>396</td>
<td>13</td>
</tr>
</tbody>
</table>

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

Dimensions and Airflow Pattern

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

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.
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.

† Patent #5402938

### Air Consumption, Force, Sound Level

<table>
<thead>
<tr>
<th>Model</th>
<th>SCFM</th>
<th>SLPM</th>
<th>Ozs</th>
<th>Grams</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1126/1126SS</td>
<td>10.5</td>
<td>297</td>
<td>9.8</td>
<td>278</td>
<td>75</td>
</tr>
</tbody>
</table>

* 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.

### Air Consumption, Force, Sound Level

<table>
<thead>
<tr>
<th>Model</th>
<th>SCFM</th>
<th>SLPM</th>
<th>Ozs</th>
<th>Grams</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1122/1122SS</td>
<td>21.8</td>
<td>622</td>
<td>22</td>
<td>624</td>
<td>77</td>
</tr>
</tbody>
</table>

* 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.

EXAIR’s 2” Super Air Scraper is a patent pending nozzle used to eliminate stubborn debris from work or machine surfaces. This 2” flat nozzle utilizes a corrosion resistant scraper blade to provide the needed leverage to get underneath and scrape away fixed debris before the air can remove it from a surface. Applications include removal of tape, gaskets, adhesive, labels and stickers, grease, paint and sealant. A scraper nozzle can assist in cleaning sub plates, machining tables and difficult to sweep metal chips, flakes or discs. They are ideal when used upon a Soft Grip Super Air Scraper (see page 103).
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.

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.

<table>
<thead>
<tr>
<th>EXAIR’s 2” Flat Super Air Nozzle</th>
<th>Theirs (Old Technology)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 2004 Product Of The Year Winner</td>
<td>• Can consume over 30 SCFM</td>
</tr>
<tr>
<td>• Your choice of zinc/aluminum or Type 316 stainless steel</td>
<td>• Expensive – metal or plastic</td>
</tr>
<tr>
<td>• Flexible Stay Set Hoses™, swivel fittings and magnetic bases are available</td>
<td>• No easy adjustment – wasted compressed air</td>
</tr>
<tr>
<td>• Meets or exceeds OSHA standards</td>
<td>• May not be OSHA safe</td>
</tr>
<tr>
<td>• Quietest flat nozzle available</td>
<td>• Significantly louder</td>
</tr>
<tr>
<td>• Easy to change the force and flow</td>
<td>• Plastic is easily broken</td>
</tr>
</tbody>
</table>

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!

- 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.

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!
Back Blow Air Nozzles

M4 Back Blow Air Nozzle

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, or channel are available.

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
<th>Air Consumption</th>
<th>Sound Level</th>
<th>Use With</th>
</tr>
</thead>
<tbody>
<tr>
<td>1004SS</td>
<td>1/4” - 1” (6.3-25.4mm)</td>
<td>4.5 SCFM</td>
<td>127 SLP</td>
<td>Inside Diameters</td>
</tr>
</tbody>
</table>

1/4 NPT Back Blow Air Nozzle

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, or channel are available.

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
<th>Air Consumption</th>
<th>Sound Level</th>
<th>Use With</th>
</tr>
</thead>
<tbody>
<tr>
<td>1006SS</td>
<td>7/8”-4” (22-102mm)</td>
<td>22 SCFM</td>
<td>622 SLP</td>
<td>Inside Diameters</td>
</tr>
</tbody>
</table>

1 NPT Back Blow Air Nozzle

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.

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
<th>Air Consumption</th>
<th>Sound Level</th>
<th>Use With</th>
</tr>
</thead>
<tbody>
<tr>
<td>1008SS</td>
<td>2”-16” (51-406mm)</td>
<td>57 SCFM</td>
<td>1,614 SLP</td>
<td>Inside Diameters</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>990353</td>
<td>12” (305mm) Aluminum, 1 NPT</td>
</tr>
<tr>
<td>901254</td>
<td>36” (914mm) Aluminum, 1 NPT</td>
</tr>
<tr>
<td>901255</td>
<td>72” (1829mm) Aluminum, 1 NPT</td>
</tr>
</tbody>
</table>

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.

A Back Blow Air Nozzle cleans chips and coolant from inside a machined pipe.
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, Force* and Sound Level

<table>
<thead>
<tr>
<th>Model</th>
<th>SCFM</th>
<th>SLPM</th>
<th>Ozs</th>
<th>Grams</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>10</td>
<td>283</td>
<td>9</td>
<td>255</td>
<td>78</td>
</tr>
<tr>
<td>1002</td>
<td>17</td>
<td>481</td>
<td>16</td>
<td>454</td>
<td>80</td>
</tr>
<tr>
<td>1002SS</td>
<td>17</td>
<td>481</td>
<td>16</td>
<td>454</td>
<td>80</td>
</tr>
<tr>
<td>1003</td>
<td>18</td>
<td>509</td>
<td>18</td>
<td>510</td>
<td>83</td>
</tr>
</tbody>
</table>

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

### Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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</thead>
<tbody>
<tr>
<td>1001</td>
<td>1.9</td>
<td>0.38</td>
<td>1/2</td>
<td>Inlet</td>
</tr>
<tr>
<td>1002SS</td>
<td>1.44</td>
<td>0.50</td>
<td>5/8</td>
<td>1/4 NPT</td>
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<tr>
<td>1003</td>
<td>1.65</td>
<td>0.63</td>
<td>3/4</td>
<td>3/8 NPT</td>
</tr>
</tbody>
</table>

### Adjustable Air Nozzles

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, Force* and Sound Level

<table>
<thead>
<tr>
<th>Model</th>
<th>SCFM</th>
<th>SLPM</th>
<th>Ozs</th>
<th>Grams</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1009</td>
<td>13</td>
<td>368</td>
<td>12</td>
<td>340</td>
<td>79</td>
</tr>
</tbody>
</table>

*Force measured at 12” (305mm) from target with a .008” (0.20mm) factory setting
Sound level measured at 3’ (914mm)
All measurements taken at 80 PSIG (5.5 BAR)
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 end pressure requirements.

Air Nozzles & Jets

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 Jet Shim Set.

Model 6013
1/8 NPT male
Material: Brass
Max Temp: 275°F (135°C)

Model 6013SS
1/8 NPT male
Material: Type 303 Stainless Steel
Max Temp: 400°F (204°C)

Air Consumption | Force* | Sound Level
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPMM</td>
<td>Ozs</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

* 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 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.

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)

Air Consumption | Force* | Sound Level
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPMM</td>
<td>Ozs</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

* Force measured at 12” (305mm) from target with a .006” (0.15mm) 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 dry this chainsaw cylinder head.
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 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 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 (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 (1,699 SLPM) when the Super Air Nozzles were installed.

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.
High Force Air Nozzles "Quick Pick" Comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>Material</th>
<th>Description</th>
<th>Inlet</th>
<th>Air Consumption at 80 PSIG (5.5 BAR)</th>
<th>Force</th>
<th>Sound Level</th>
<th>More Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SCFM</td>
<td>SLPM</td>
<td>Lbs</td>
<td>Grams</td>
</tr>
<tr>
<td>HP1126</td>
<td>Zinc Aluminum alloy</td>
<td>1&quot; High Power Flat Super Air Nozzle</td>
<td>1/8 FNPT</td>
<td>17.5</td>
<td>495</td>
<td>1</td>
<td>454</td>
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<tr>
<td>HP1126SS</td>
<td>Stainless Steel - Type 316</td>
<td>1&quot; High Power Flat Super Air Nozzle</td>
<td>1/8 FNPT</td>
<td>17.5</td>
<td>495</td>
<td>1</td>
<td>454</td>
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<tr>
<td>HP1002</td>
<td>Brass</td>
<td>High Power Safety Air Nozzle</td>
<td>1/4 FNPT</td>
<td>32</td>
<td>906</td>
<td>1.8</td>
<td>816</td>
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<tr>
<td>HP1002SS</td>
<td>Stainless Steel - Type 303</td>
<td>High Power Safety Air Nozzle</td>
<td>1/4 FNPT</td>
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<td>906</td>
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<td>816</td>
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<tr>
<td>1104</td>
<td>Zinc Aluminum alloy</td>
<td>Super Air Nozzle</td>
<td>3/8 FNPT</td>
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<td>991</td>
<td>1.9</td>
<td>862</td>
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<td>1104S5</td>
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<td>Super Air Nozzle</td>
<td>3/8 FNPT</td>
<td>35</td>
<td>991</td>
<td>1.9</td>
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<td>1104-PEEK</td>
<td>PEEK (Plastic)</td>
<td>Super Air Nozzle</td>
<td>3/8 FNPT</td>
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<td>991</td>
<td>1.9</td>
<td>862</td>
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<td>991</td>
<td>1.9</td>
<td>862</td>
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<td>Super Air Nozzle</td>
<td>3/8 FNPT</td>
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<td>991</td>
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<td>862</td>
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<td>HP1125</td>
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<td>998</td>
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<td>1,497</td>
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<td>Super Air Nozzle</td>
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<td>2,577</td>
<td>4.5</td>
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<td>2,577</td>
<td>4.5</td>
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<td>Super Air Nozzle</td>
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<td>2,577</td>
<td>4.5</td>
<td>2,041</td>
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<td>Super Air Nozzle</td>
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<td>3,823</td>
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<td>3,005</td>
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<td>4,252</td>
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<td>15</td>
<td>6,804</td>
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<tr>
<td>1120</td>
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<td>1-1/4 MNPT</td>
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<td>13,026</td>
<td>23*</td>
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<td>460</td>
<td>13,026</td>
<td>23*</td>
<td>10,433</td>
</tr>
</tbody>
</table>

For Air Nozzles with lower force, see page 52.

* Force measured at 12" (305mm) from target
† Force measured at 12" (305mm) from target with a .025" (0.64mm) shim installed

---

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

Model HP1126 and HP1126SS

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.

---

**Dimensions and Airflow Pattern**

The Model HP1165S 5in. 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.

---

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

High Power Safety Air Nozzles™

Model HP1002 and HP1002SS
High Power Safety Air Nozzles
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 Consumption Force* Sound Level
SCFM SLPM Lbs Grams dBA
32 906 1.8 816 87

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

Model HP1002 1/4 NPT female
Material: Brass

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

2” High Power Flat Super Air Nozzles™

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 air-stream with a strong blowing force of 2.2 pounds (998 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 Consumption Force* 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).

† Patent #5402938

Model HP1125 1/4 NPT female
Material: Zinc Aluminum alloy

Model HP1125SS 1/4 NPT female
Material: Type 316 Stainless Steel

Large Super Air Nozzles™

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 (862 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 Force* 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)

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

Dimensions and Airflow Pattern

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.

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
**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 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 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 1115SS 1 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 Consumption

<table>
<thead>
<tr>
<th>SCFM</th>
<th>Lbs</th>
<th>Kg</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>1,699</td>
<td>3.3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

* Force measured at 12” (305mm) from target
* Sound level measured at 3’ (914mm)

---

**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 lbs (2.04 kg) of blowing force – over 5 times that of ordinary nozzles.

### Air Consumption

<table>
<thead>
<tr>
<th>SCFM</th>
<th>Lbs</th>
<th>Kg</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>91</td>
<td>2,577</td>
<td>4.5</td>
<td>2.04</td>
</tr>
</tbody>
</table>

* Force measured at 12’ (305mm) from target
* Sound level measured at 3’ (914mm)

---

**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 Consumption

<table>
<thead>
<tr>
<th>SCFM</th>
<th>Lbs</th>
<th>Kg</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>135</td>
<td>3,823</td>
<td>6.6</td>
<td>3.01</td>
</tr>
</tbody>
</table>

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

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OSHA allows 2 hours of exposure per day without hearing protection.
High Force Air Nozzles

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

EXAIR’s 1-1/4 NPT Super Air Nozzles provide exceptionally strong blowing force. They produce 9.4 lbs (4.25 kg) of blowing force – almost 12 times that of the standard Super Air Nozzle.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPM</td>
<td>Lbs</td>
</tr>
<tr>
<td>188</td>
<td>5,324</td>
<td>9.4</td>
</tr>
</tbody>
</table>

* 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 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.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPM</td>
<td>Lbs</td>
</tr>
<tr>
<td>300</td>
<td>8,495</td>
<td>15</td>
</tr>
</tbody>
</table>

* 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.

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 (10.43 kg) of blowing force – almost 28 times that of the standard Super Air Nozzle.

<table>
<thead>
<tr>
<th>Air Consumption</th>
<th>Force*</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCFM</td>
<td>SLPM</td>
<td>Lbs</td>
</tr>
<tr>
<td>460</td>
<td>13,026</td>
<td>23</td>
</tr>
</tbody>
</table>

* 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

Model 1111-4 Super Air Nozzle Cluster

Air Consumption | Force* | Sound Level
--- | --- | ---
SCFM | SLPM | Lbs | Kg | dBA
56 | 1,585 | 3.2 | 1.45 | 82

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

Model 1111-7 Super Air Nozzle Cluster

Air Consumption | Force* | Sound Level
--- | --- | ---
SCFM | SLPM | Lbs | Kg | dBA
98 | 2,773 | 5.7 | 2.59 | 85

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

Model 1111-12 Super Air Nozzle Cluster

Air Consumption | Force* | Sound Level
--- | --- | ---
SCFM | SLPM | Lbs | Kg | dBA
168 | 4,754 | 9.8 | 4.45 | 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 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.
Nozzle Accessories

Flexible Stay Set Hoses™ continued

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

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
<th>Model #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9206</td>
<td>6” (152mm) 1/4 MNPT x 1/4 MNPT</td>
<td>9224</td>
<td>24” (610mm) 1/4 MNPT x 1/4 MNPT</td>
</tr>
<tr>
<td>9212</td>
<td>12” (305mm) 1/4 MNPT x 1/4 MNPT</td>
<td>9230</td>
<td>30” (762mm) 1/4 MNPT x 1/4 MNPT</td>
</tr>
<tr>
<td>9218</td>
<td>18” (457mm) 1/4 MNPT x 1/4 MNPT</td>
<td>9236</td>
<td>36” (914mm) 1/4 MNPT x 1/4 MNPT</td>
</tr>
</tbody>
</table>

The Air Nozzles and Jets shown below can be used with the following Stay Set Hoses (1/4 NPT male fitting on one end, 1/8 NPT female on the other):

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
<th>Model #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9256</td>
<td>6” (152mm) 1/4 MNPT x 1/8 FNPT</td>
<td>9274</td>
<td>24” (610mm) 1/4 MNPT x 1/8 FNPT</td>
</tr>
<tr>
<td>9262</td>
<td>12” (305mm) 1/4 MNPT x 1/8 FNPT</td>
<td>9280</td>
<td>30” (762mm) 1/4 MNPT x 1/8 FNPT</td>
</tr>
<tr>
<td>9268</td>
<td>18” (457mm) 1/4 MNPT x 1/8 FNPT</td>
<td>9286</td>
<td>36” (914mm) 1/4 MNPT x 1/8 FNPT</td>
</tr>
</tbody>
</table>

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

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.

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.
**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 Hose (shown on previous page) 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:** Two Model 1100 Super Air Nozzles with two 12” (305mm) Stay Set Hoses and Two Outlet Magnetic Base is a Model 1100-9412.

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**Blowoff Kits**

**Model # 1100-9312**
Blowoff Kit includes:
- (1) 1100 Super Air Nozzle
- (1) 9212 12” (305mm) Stay Set Hose
- (1) 9042 Magnetic Base

**Model # 1100-9412**
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

**Model # 1103-9462**
Blowoff Kit includes:
- (2) 1103 Mini Super Air Nozzles
- (2) 9262 12” (305mm) Stay Set Hose
- (1) 9043 Magnetic Base

**Model # 1122-9312**
Blowoff Kit includes:
- (1) 1122 2” Flat Super Air Nozzle
- (1) 9212 12” (305mm) Stay Set Hose
- (1) 9042 Magnetic Base

**Model # 1122-9412**
Blowoff Kit includes:
- (2) 1122 2” Flat Super Air Nozzles
- (2) 9212 12” (305mm) Stay Set Hose
- (1) 9043 Magnetic Base

**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

**Model # 1909SS**
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’ (3m) Compressed Air Hose

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**A Model 1100-9412 includes two Model 1100 Super Air Nozzles with two 12” (305mm) Stay Set Hose and Two Outlet Magnetic Base.**
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.

OSHA and CE Compliance:
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.

RoHS:
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.

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.