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30 Years



**USB
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Flowmeter**



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OSHA and CE Compliance: EXAIR compressed air products comply with OSHA's Safety Requirements, the EU General Product Safety Directive (2001/95/EC) and meet the noise limitation requirements 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). They help companies comply with the Noise Directive (2003/10/EC) along with pending changes to the workplace noise requirements due to the implementation of the Physical Agents Directive (2003/10/EC). These directives are non-marking directives and do not allow display of the CE mark. Some EXAIR products display the CE mark where there are applicable directives. All sound level measurements are taken at 3 feet away.

RoHS: Electrical portions of EXAIR's static eliminators, EFC, ETC, solenoid valves, and thermostats comply with the RoHS (Restriction of Hazardous Substances) Directive 2002/95/EC, including the amendment outlined in the European Commission decision L 214/65.

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

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

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

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

EXAIR products are subject to ongoing development. Specifications are subject to change without notice.

Some products in this catalog are covered by U.S. Patent #5402938, #8153001 and #8268179 and others may be U.S. Patent Pending.

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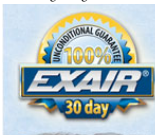
Warranty: 5 Year "Built To Last" Warranty against defects in workmanship and materials on all compressed air products*. Defective products must be returned freight prepaid for repair or replacement at our option. This warranty applies under conditions of normal use, but does not apply to defects that result from intentional damage, negligence, unreasonable use, wear or exposure.



*5 Year Warranty applies to compressed air products only.

A 1 Year Warranty applies to all accessories and electrically powered products.

EXAIR's Unconditional Guarantee: Extends to all U.S. and Canadian customers and includes invoiced U.S. Ground Service shipping charges. Products returned after the 30 day guarantee period are subject to a 15% restocking charge. Products must be returned freight prepaid.



EXAIR unconditionally guarantees its catalog products for 30 days.

If you are not satisfied for any reason within that time, you may return the product for full credit with no restocking charge.

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Web Site: www.exair.com

Air Amplifiers

**Vent, exhaust, cool, dry,
clean – with no moving
parts!**

What Are Air Amplifiers?

A simple, low cost way to move air, smoke, fumes, and light materials. Air Amplifiers utilize the coanda effect, a basic principle of fluidics, to create air motion in their surroundings. Using a small amount of compressed air as their power source, Air Amplifiers pull in large volumes of surrounding air to produce high volume, high velocity outlet flows. Quiet, efficient Air Amplifiers will create output flows up to 25 times their consumption rate.

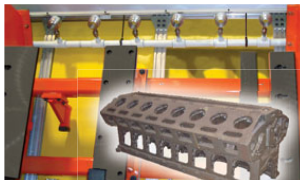
Why Air Amplifiers?

Air Amplifiers have no moving parts, assuring maintenance-free operation. No electricity is required. Flow, vacuum and velocity are easy to control. Outlet flows are easily increased by opening the air gap. Supply air pressure can be regulated to decrease outlet flow.

Both the vacuum and discharge ends of the Air Amplifier can be ducted, making them ideal for drawing fresh air from another location, or moving smoke and fumes away.



Built to Last
5 yr.
WARRANTY
See page 2 for complete details.



A series of Model 6042 Adjustable Air Amplifiers blows coolant off 16 cylinder diesel engines.



Adjustable Air Amplifiers are ducted to draw clean air for drying.



A Model 120024 4" (102mm) Super Air Amplifier cools an engine during dynamometer testing.

Applications

- Vent welding smoke
- Cool hot parts
- Dry wet parts
- Clean machined parts
- Distribute heat in molds/ovens
- Ventilate confined areas
- Dust collection
- Exhaust tank fumes

Advantages

Compared to Fans:

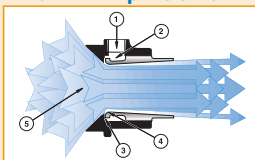
- Compact, lightweight, portable
- No electricity
- No moving parts – no maintenance
- Ends are easily ducted
- Instant on/off
- Variable force and flow
- No RF interference

Compared to Venturis and Ejectors:

- More air with lower compressed air consumption
- Higher flow amplification
- No internal obstructions
- Meets OSHA pressure and noise requirements
- Quiet

Air Amplifiers

How Air Amplifiers Work



Compressed air flows through the air inlet (1) into an annular chamber (2). It is then throttled through a small ring nozzle (3) at high velocity. This primary airstream adheres to the coanda profile (4), which directs it toward the outlet. A low pressure area is created at the center (5), inducing a high volume flow of surrounding air into the primary airstream. The combined flow of primary and surrounding air exhausts from the Air Amplifier in a high volume, high velocity flow.



This special air amplifier is used to draw polluted air through an activated charcoal filter.

Air Amplifier Model Selection Guide

Air Amplifier Comparison

| | Efficiency | Sound Level | Mounting Flange | Flow Adjustment | Temp. Rating | Corrosive Applications |
|--|------------|-------------|-----------------|---------------------|---------------|------------------------|
| Super Air Amplifier | High | Low | Yes | With Shims | 275°F (135°C) | No |
| Aluminum Adjustable Air Amplifier | Medium | Variable | No | Infinite (No shims) | 275°F (135°C) | No |
| Stainless Steel Adjustable Air Amplifier | Medium | Variable | No | Infinite (No shims) | 400°F (204°C) | Yes |
| High Temperature Air Amplifier | High | Low | No | With Shims | 700°F (374°C) | Yes |

Special Air Amplifiers

EXAIR manufactures special Air Amplifiers suited to specific application requirements. A company that specializes in decontaminating and deodorizing industrial environments normally uses an electric blower to pull the offending smells through an activated charcoal filter. When the electric blowers proved to be unreliable, they called EXAIR for a more durable compressed air solution. A special air amplifier (*shown top right*) was mounted to the drum and quickly proved to be more effective than the previous electric units.

The Model 121021 High Temperature Air Amplifier (*shown middle right*) was developed for moving hot air to surfaces requiring uniform heating while in a furnace or oven. Modeled after our Super Air Amplifier, the High Temperature Air Amplifier is the most efficient for pushing high volumes of hot air to points that typically remain cool. This special design is rated for environments up to 700°F (374°C) and its surface is protected from heat stress by a mil-spec. coating process (developed for the aircraft industry), allowing easy disassembly for changing shims or cleaning.

Another stainless steel version for flange mounting was developed as a fan back-up for exhausting flue gases from a furnace (*shown bottom right*). In the event of a power failure, this special Air Amplifier can quickly evacuate the fumes that could be harmful to workers close by.

If you have special requirements, please contact an Application Engineer to discuss your application.



A Model 121021 1-1/4" (32mm) High Temperature Air Amplifier directs hot air to a rotational mold cavity for uniform wall thickness of the plastic part.



This special stainless steel flange-mount Air Amplifier was designed for exhausting hot flue gases from a furnace.

Super Air Amplifier™

Powerful, efficient and quiet air mover for blowoff, cooling, and ventilation.



What Is The Super Air Amplifier?

EXAIR's Super Air Amplifier has a patented* design that uses a special shim to maintain critical position of the component parts. As a result, a precise amount of compressed air is released at exact intervals toward the center of the Super Air Amplifier. These jets of air create a constant, high velocity outlet flow across the entire cross sectional area. Additional free air is pulled through the unit, resulting in higher amplification ratios. The balanced outlet airflow minimizes wind shear to produce sound levels that are typically three times quieter than other air movers.

Super Air Amplifiers are supplied with a .003" (0.08mm) slotted air gap which is ideal for most applications. Flow and force can be increased by replacing the shim with a thicker .006" (0.15mm) or .009" (0.23mm) shim. Model 120028 is supplied with a .009" (0.23mm) air gap. A .015" (0.39mm) shim is available for Model 120028.

Super Air Amplifier Performance at 80 PSIG (5.5 BAR)

| MODEL | Air Consumption | | Amplification | Air Volume at Outlet | | Air Volume at 6" (152mm) | | Sound Level |
|--------|-----------------|-------|---------------|----------------------|--------|--------------------------|---------|-------------|
| | SCFM | SLPM | | SCFM | SLPM | SCFM | SLPM | |
| 120020 | 6.1 | 173 | 12 | 73 | 2,066 | 219 | 6,198 | 69 |
| 120021 | 8.1 | 229 | 18 | 146 | 4,132 | 436 | 12,339 | 72 |
| 120022 | 15.5 | 439 | 22 | 341 | 9,650 | 1,023 | 28,951 | 72 |
| 120024 | 29.2 | 826 | 25 | 730 | 20,659 | 2,190 | 61,977 | 73 |
| 120028 | 120 | 3,396 | 25 | 3,000 | 84,900 | 9,000 | 254,700 | 88 |

Model 120028 tested with .009" (0.23mm) shim. All other models tested with .003" (0.08mm) shim.



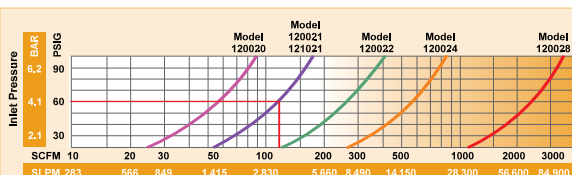
Model 120022 2" (51mm) Super Air Amplifiers and Model 1122 2" Flat Super Air Nozzles blow off transmissions after they are machined.



(2) Model 120022 2" (51mm) Super Air Amplifiers dry small parts as they move down along a parts conveyor.



(5) Model 120022 2" (51mm) Super Air Amplifiers cool truck pistons.



Total Output Flow with .003" (0.08mm) thick shim installed. Excludes downstream entrainment. Model 120028 tested with a .009" (0.23mm) shim.

How To Determine Super Air Amplifier Total Output Flow And Air Consumption

Total Airflow: From the performance curves (above), determine total output flow for any Super Air Amplifier at any pressure.

Example: A Model 120021 at 60 PSIG (4.1 BAR) supply air pressure has a total output flow of 120 SCFM (3,398 SLPM).

Air Consumption: Divide the total output flow by the amplification ratio (shown in the chart)

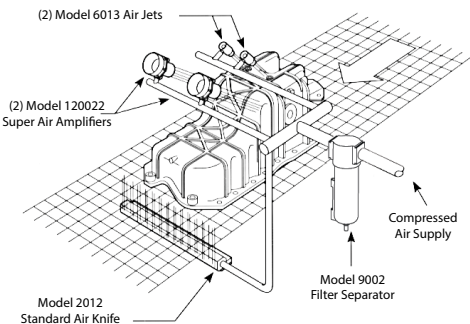
to determine air consumption for any Super Air Amplifier at any air pressure.

In the example above, the Model 120021 at 60 PSIG (4.1 BAR) supply air pressure has a total output flow of 120 SCFM (3,398 SLPM). Dividing this total output flow by its amplification ratio of 18 gives an air consumption of 6.7 SCFM (189 SLPM).

*Patent #5402938

Super Air Amplifiers

Blowoff On A Transmission Pan



The Problem: A newly designed transmission pan presented a myriad of cleaning problems for the die-caster. Because the configuration included channels and blind holes as well as smooth surfaces, a “shaped” air pattern was required for proper cleaning. No single blowoff product would fit the need. An assortment of open copper tubes and drilled pipes was considered, but was rejected as too noisy and expensive

to operate. A blower was not an option due to the high purchase price, expensive maintenance costs and frequent downtime.

The Solution: With help from our Application Engineers, the company created a cleaning system incorporating a variety of EXAIR blowoff products. (2) Model 6013 High Velocity Air Jets, with their confined airstream, cleared the blind holes, while (2) Model 120022 2” (51mm) Super Air Amplifiers cleaned the channels. A Model 2012 12” (305mm) Standard Air Knife was positioned to blow out the casting’s underside.

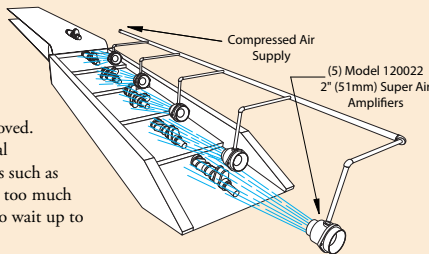
Comment: There’s no doubt that the casting could have been cleaned just as well by hooking up a bunch of open copper tubes and throwing a ton of air at it. But, at what cost? EXAIR makes a variety of blowoff products because parts come in a variety of shapes and sizes. **And, our products operate at a fraction of the air consumption and noise levels associated with open air jets.** When you need to clean, cool, or dry with air, and you’d like to minimize dollars and decibels, EXAIR can help.

Super Air Amplifier Cools Iron Castings

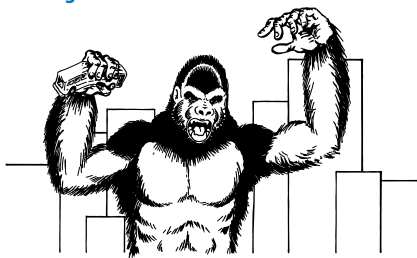
The Problem: A foundry that produces iron castings for the automotive industry had a problem with certain hot parts that slowed their production. After pouring, the castings gradually cool by traveling along a 200 foot long conveyor. At the end, a shake-out conveyor breaks the sand mold so the casting can be removed. Normally, the operator could pick up the part with special gloves and grind the rough edges. However, some castings such as crankshafts, differential housings, and shift parts retained too much heat, making them too hot to handle. The operator had to wait up to ten minutes for them to cool.

The Solution: They installed (5) Model 120022 2” (51mm) Super Air Amplifiers over the shake-out conveyor. The high output airflow from each Super Air Amplifier rapidly cooled the parts without shocking them (no cracks or imperfections from cooling too rapidly). **When the part reached the end of the conveyor, the operator could proceed immediately.** The backlog was completely eliminated.

Editor’s Comment: This manufacturer had almost given up on finding a cooling solution since the fans and blowers that were tried in the past showed little improvement. Our Super Air Amplifier dramatically reduced the cooling time. As a result, they installed them on their second line. The low cost Super Air Amplifiers are compact, portable and have no moving parts to wear out (which is ideal in a dusty foundry). **And, the patented design assures the highest output air volumes possible with the lowest air consumption.**



Roaring Banana Breath



The Problem: A company that designs major attractions for theme parks created a huge gorilla to startle the patrons. The animators wanted the oversized ape to appear as “life-like” as possible. To accomplish this, they used a series of motors and cylinders to make the movement of the eyes, hands, arms and torso appear realistic. They also installed a large speaker system to play an audio sample of a loud roar that matched his mammoth size. The finishing touch was to find a way to create a powerful blast of air that smelled like bananas each time the big ape’s mouth opened. Attempts using an electrically powered blower

proved unsuccessful due to the noise and the inability to obtain an “instant on” blast of air.

The Solution: They installed a tank of banana extract in his tummy and connected it to his mouth with a **Model 120028 8” (203mm) Super Air Amplifier**. As the spectators moved into position, a sensor activated the electronics, setting “Old Banana Breath” (name given by the designers) into motion. With a swift movement toward the crowd, his mouth opens and the **Super Air Amplifier provides an instantaneous blast of high velocity air (filled with banana fumes) at them.**

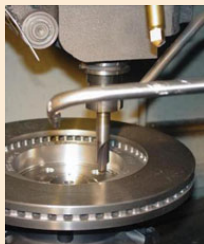
Comment: Why did the engineers select the Super Air Amplifier? First, simplicity. There are no moving parts to wear out or require maintenance. It uses only filtered compressed air as the power source. Second is the big instantaneous blast of high volume, high velocity airflow that couldn’t be obtained using a blower or air nozzles. When it comes to special effects, Super Air Amplifiers are the way to go. When you watch the movies or visit the theme parks and see fast moving fog, smoke effects, or objects flying through the air, chances are a Super Air Amplifier is in use.

Cleaning Brake Rotors

The Problem: An automotive machine shop that manufactures brake rotors was having problems with chip build-up inside the part. They tried compressed air tubing flattened on their ends with little success. This resulted in high compressed air usage, high sound levels, and danger to their employees.

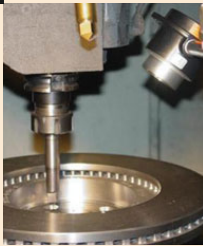
The Solution: A **Model 120021 1-1/4” (32mm) Super Air Amplifier** was substituted for the tubing. It provided a larger pattern of air, used less compressed air, the sound level was substantially lower, and it couldn’t be dead-ended.

Comment: Bent tubing or drilled pipe are inexpensive and easy to make. However, the initial cost is overshadowed by its high energy use; holes can be blocked and noise level is excessive – both of which are OSHA violations. EXAIR’s Super Air Amplifiers are compact and dependable since there are no parts to wear out. Our patented design moves the most airflow possible while using the smallest amount of compressed air. The lower sound level was another bonus!



The Problem:

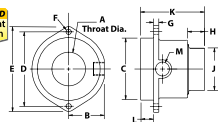
1-1/4” (32mm) Super Air Amplifier blows off parts and lowers sound levels.



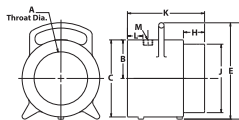
The Solution:

Super Air Amplifiers

Super Air Amplifier Dimensions



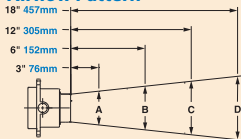
Model 120020-120024



Model 120028

| Super Air Amplifier Dimensions | | | | | | | | | | | | | |
|--------------------------------|----|------|------|------|------|-------|------|------|------|------|------|------|-----|
| MODEL # | | A | B | C | D | E | F | G | H | J | K | L | M |
| 120020 | in | 0.45 | 0.75 | 0.98 | 1.77 | 2.28 | 0.20 | 0.18 | 0.53 | 0.73 | 2.50 | 0.59 | 1/8 |
| | mm | 11 | 19 | 25 | 45 | 58 | 5 | 5 | 13 | 19 | 64 | 15 | NPT |
| 120021 | in | 0.84 | 0.94 | 1.50 | 2.40 | 3.03 | 0.27 | 0.21 | 0.75 | 1.22 | 2.88 | 0.59 | 1/4 |
| | mm | 21 | 24 | 38 | 61 | 77 | 7 | 5 | 19 | 31 | 73 | 15 | NPT |
| 120022 | in | 1.64 | 1.69 | 2.95 | 3.58 | 4.14 | 0.27 | 0.25 | 0.75 | 2 | 3 | 0.62 | 3/8 |
| | mm | 42 | 43 | 75 | 91 | 105 | 7 | 6 | 19 | 51 | 76 | 16 | NPT |
| 120024 | in | 3.02 | 2.81 | 4.91 | 6.89 | 8.42 | 0.55 | 0.55 | 1.75 | 3.97 | 4.75 | 0.94 | 1/2 |
| | mm | 77 | 71 | 125 | 175 | 214 | 14 | 14 | 44 | 101 | 121 | 24 | NPT |
| 120028 | in | 6.20 | 4.50 | 9 | --- | 11.25 | --- | --- | 2.44 | 8 | 8.94 | 2.38 | 3/4 |
| | mm | 157 | 114 | 229 | --- | 286 | --- | --- | 62 | 203 | 227 | 60 | NPT |

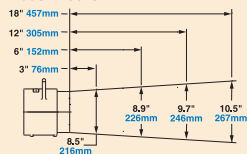
Airflow Pattern



| MODEL # | | A | B | C | D |
|---------|----|------|------|------|------|
| 120020 | in | 1.25 | 2.2 | 4.1 | 6 |
| | mm | 32 | 56 | 104 | 152 |
| 120021 | in | 2 | 2.9 | 4.7 | 6.5 |
| | mm | 51 | 74 | 119 | 165 |
| 120022 | in | 2.75 | 3.55 | 5.15 | 6.75 |
| | mm | 70 | 90 | 131 | 171 |
| 120024 | in | 4.5 | 5.3 | 6.9 | 8.5 |
| | mm | 114 | 135 | 175 | 216 |

Airflow Pattern

Model 120028



Super Air Amplifier Models

Super Air Amplifier Only

Super Air Amplifier Kits - Includes a Super Air Amplifier, shim set, filter separator and pressure regulator (with coupler).

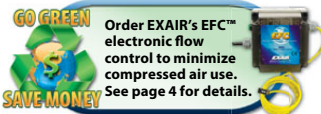
Deluxe Super Air Amplifier Kits - Includes a Super Air Amplifier, EFC, shim set, filter separator and pressure regulator (with coupler).

Super Air Amplifier Shim Sets - Includes (1) .006" (0.15mm) and (1) .009" (0.23mm) stainless steel shims (except 8" which includes (1) .015" (0.39mm) stainless steel shim).

| Outlet Diameter | Super Air Amplifier Only Model | Super Air Amplifier Kit Model | Deluxe Super Air Amplifier Kit Model | High Temperature Air Amplifier Only Model | High Temperature Air Amplifier Kit Model | Super Air Amplifier Shim Set Model |
|-----------------|--------------------------------|-------------------------------|--------------------------------------|---|--|------------------------------------|
| 3/4" (19mm) | 120020 | 120220 | 120220DX | N/A | N/A | 120320 |
| 1-1/4" (32mm) | 120021 | 120221 | 120221DX | 121021 | 121221 | 120321 |
| 2" (51mm) | 120022 | 120222 | 120222DX | N/A | N/A | 120322 |
| 4" (102mm) | 120024 | 120224 | 120224DX | N/A | N/A | 120324 |
| 8" (203mm) | 120028 | 120228 | 120228DX | N/A | N/A | 120328 |



Kits include a Super Air Amplifier, shim set, filter separator and pressure regulator (with coupler).



Accessories

| Model # | Description |
|---------|---|
| 9001 | Auto Drain Filter Separator, 3/8 NPT, 65 SCFM (1,841 SLPM) |
| 9032 | Auto Drain Filter Separator, 1/2 NPT, 90 SCFM (2,547 SLPM) |
| 9002 | Auto Drain Filter Separator, 3/4 NPT, 220 SCFM (6,230 SLPM) |
| 9005 | Oil Removal Filter, 3/8 NPT, 15-37 SCFM (425-1,048 SLPM) |
| 9006 | Oil Removal Filter, 3/4 NPT, 50-150 SCFM (1,415-4,248 SLPM) |
| 9008 | Pressure Regulator with Gauge, 1/4 NPT, 50 SCFM (1,415 SLPM) |
| 9033 | Pressure Regulator with Gauge, 1/2 NPT, 100 SCFM (2,830 SLPM) |
| 9009 | Pressure Regulator with Gauge, 3/4 NPT, 220 SCFM (6,230 SLPM) |



Adjustable Air Amplifier™

Highly effective air mover that easily adjusts to your application!

What Is The Adjustable Air Amplifier?

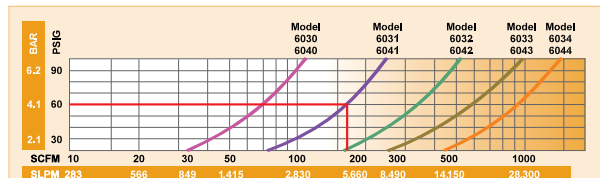
The air gap is infinitely adjustable which regulates the consumption and outlet flow from a "breeze" to a "blast". They are available in aluminum or in stainless steel for food service, higher temperatures (400°F/204°C), and corrosive applications. High Temperature Stainless Steel Air Amplifiers for temperatures up to 700°F (374°C) are also available. Please contact an Application Engineer.

Force and flow for the Adjustable Air Amplifier is changed by turning the exhaust end (with the knurled ring loose) to open or close the continuous air gap. When desired performance is obtained, the knurled ring can be tightened to lock the flow at that setting. In most cases, a .002" to .004" (0.05mm to 0.10mm) air gap is ideal.

Adjustable Air Amplifier Performance at 80 PSIG (5.5 BAR)

| MODEL | Air Consumption | | Amplification RATIO | Air Volume at Outlet | | Air Volume at 6" (152mm) | | Sound Level dBA |
|------------|-----------------|-------|---------------------|----------------------|--------|--------------------------|---------|-----------------|
| | SCFM | SLPM | | SCFM | SLPM | SCFM | SLPM | |
| 6030, 6040 | 8.9 | 252 | 10 | 89 | 2,430 | 267 | 7,556 | 78 |
| 6031, 6041 | 12.9 | 365 | 16 | 206 | 5,635 | 618 | 17,489 | 81 |
| 6032, 6042 | 21.5 | 608 | 20 | 430 | 11,739 | 1,290 | 36,507 | 82 |
| 6033, 6043 | 35.2 | 997 | 22 | 774 | 21,928 | 2,323 | 65,784 | 83 |
| 6034, 6044 | 50 | 1,415 | 24 | 1,200 | 33,960 | 3,600 | 101,880 | 84 |

Tested with .002" (0.05mm) gap.



Total Output Flow with .002" (0.05mm) thick shim installed. Excludes downstream entrainment.

How To Determine Adjustable Air Amplifier Total Output Flow And Air Consumption

Total Airflow: From the performance curves (above), determine total output flow for any Adjustable Air Amplifier at any pressure.

Example: A Model 6031 at 60 PSIG (4.1 BAR) supply air pressure has a total output flow of 165 SCFM (4,672 SLPM).

Air Consumption: Divide total output flow by the amplification ratio (shown in the chart) to determine air consumption for any Adjustable Air Amplifier at any air pressure.

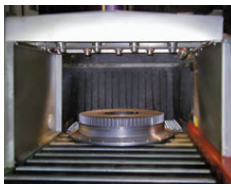
In the example above, the Model 6031 at 60 PSIG (4.1 BAR) supply air pressure has a total output flow of 165 SCFM (4,672 SLPM). Dividing this total flow by its amplification ratio of 16 gives an air consumption of 10.3 SCFM (292 SLPM).



Model 6042 2" (51mm) Adjustable Air Amplifiers with swivel fittings cool inductively heated axles prior to installing the hubs.



Metal parts are dried using a series of Model 6042 2" (51mm) Adjustable Air Amplifiers.



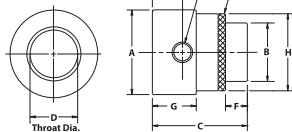
A series of Adjustable Air Amplifiers dry and cool a large machined casting as it exits a high temperature wash.

Adjustable Air Amplifiers

Adjustable Air Amplifier Dimensions

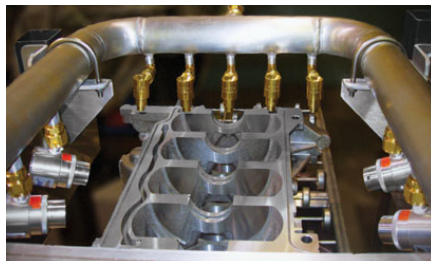
DOWNLOAD
Drawings at
EXAIR.COM

Built to Last
5 Yr.
WARRANTY



Adjustable Air Amplifier Dimensions

| MODEL # | A | B | C | D | E | F | G | H | J | |
|---------|----|------|------|------|------|------|------|------|------|-----|
| 6030 | in | 1.50 | 0.75 | 2.22 | 0.45 | 0.72 | 0.56 | 1.06 | 1.25 | 1/8 |
| | mm | 38 | 19 | 57 | 11 | 18 | 14 | 27 | 32 | NPT |
| 6031 | in | 2 | 1.25 | 2.88 | 0.84 | 1 | 0.75 | 1.38 | 1.75 | 1/4 |
| | mm | 51 | 32 | 73 | 21 | 25 | 19 | 35 | 44 | NPT |
| 6032 | in | 3.13 | 2 | 3.25 | 1.64 | 1.06 | 0.75 | 1.50 | 2.75 | 3/8 |
| | mm | 79 | 51 | 83 | 42 | 27 | 19 | 38 | 70 | NPT |
| 6033 | in | 4 | 3 | 4.06 | 2.20 | 1.22 | 1.25 | 1.83 | 3.50 | 1/2 |
| | mm | 102 | 76 | 103 | 56 | 31 | 32 | 46 | 89 | NPT |
| 6034 | in | 5 | 4 | 5 | 3.02 | 1.50 | 1.75 | 2.13 | 4.50 | 1/2 |
| | mm | 127 | 102 | 127 | 77 | 38 | 44 | 54 | 114 | NPT |



Adjustable Air Amplifiers and High Velocity Air Jets dry an engine block prior to assembly.



Need Swivels?

EXAIR's Swivel Fittings make it easy to adjust the aim of Air Amplifiers.

See page 58 for details.

Adjustable Air Amplifier Systems

Adjustable Air Amplifier Models

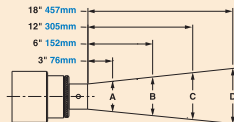
Adjustable Air Amplifier Only

Adjustable Air Amplifier Kits - includes an Adjustable Air Amplifier, filter separator and pressure regulator (with coupler).

Deluxe Adjustable Air Amplifier Kits - includes an Adjustable Air Amplifier, EFC, filter separator and pressure regulator (with coupler).

| Outlet Diameter | Aluminum Adjustable Air Amplifier Only Model | Aluminum Adjustable Air Amplifier Kit Model | Deluxe Aluminum Adjustable Air Amplifier Kit Model | Stainless Steel Adjustable Air Amplifier Only Model | Stainless Steel Adjustable Air Amplifier Kit Model | Deluxe Stainless Steel Adjustable Air Amplifier Kit Model |
|-----------------|--|---|--|---|--|---|
| 3/4" (19mm) | 6040 | 6240 | 6240DX | 6030 | 6230 | 6230DX |
| 1-1/4" (32mm) | 6041 | 6241 | 6241DX | 6031 | 6231 | 6231DX |
| 2" (51mm) | 6042 | 6242 | 6242DX | 6032 | 6232 | 6232DX |
| 3" (76mm) | 6043 | 6243 | 6243DX | 6033 | 6233 | 6233DX |
| 4" (102mm) | 6044 | 6244 | 6244DX | 6034 | 6234 | 6234DX |

Airflow Pattern



| MODEL # | A | B | C | D | |
|---------|----|-----|-----|-----|-----|
| 6030 | in | 1.5 | 2.4 | 4.2 | 6 |
| | mm | 38 | 61 | 107 | 152 |
| 6031 | in | 2 | 2.9 | 4.7 | 6.5 |
| | mm | 51 | 74 | 119 | 165 |
| 6032 | in | 2.5 | 3.4 | 5.2 | 7 |
| | mm | 64 | 86 | 132 | 178 |
| 6033 | in | 3.5 | 4.6 | 6.5 | 8 |
| | mm | 89 | 117 | 165 | 203 |
| 6034 | in | 5 | 5.8 | 7.4 | 9 |
| | mm | 127 | 147 | 188 | 229 |

Accessories

| Model # | Description |
|---------|---|
| 9001 | Auto Drain Filter Separator, 3/8 NPT, 65 SCFM (1,841 SLPM) |
| 9032 | Auto Drain Filter Separator, 1/2 NPT, 90 SCFM (2,547 SLPM) |
| 9002 | Auto Drain Filter Separator, 3/4 NPT, 220 SCFM (6,230 SLPM) |
| 9005 | Oil Removal Filter, 3/8 NPT, 15-37 SCFM (425-1,048 SLPM) |
| 9006 | Oil Removal Filter, 3/4 NPT, 50-150 SCFM (1,415-4,248 SLPM) |
| 9008 | Pressure Regulator with Gauge, 1/4 NPT, 50 SCFM (1,415 SLPM) |
| 9033 | Pressure Regulator with Gauge, 1/2 NPT, 100 SCFM (2,830 SLPM) |
| 9009 | Pressure Regulator with Gauge, 3/4 NPT, 220 SCFM (6,230 SLPM) |



Kits include an Adjustable Air Amplifier, filter separator and pressure regulator (with coupler).

EFC™

Electronic flow control minimizes compressed air use for blow off, drying, cooling, conveying and static elimination operations!

Dramatically reduces compressed air costs by turning off the air when no part is present!

What Is The EFC?

EXAIR's EFC™ is a user-friendly electronic flow control for compressed air that is designed to minimize compressed air use on blow off, drying, cooling, conveying and static elimination operations. The EFC combines a photoelectric sensor with a timing control that limits compressed air use by turning it off when no part is present. The timing control permits easy tuning to the application requirements while providing flexibility in sensing distance. The EFC also has eight programmable on and off modes.

Why The EFC?

For most companies, the air compressor uses more electricity than any other type of equipment. One simple operation that uses compressed air can easily waste thousands of those electricity dollars per year if not properly controlled. The EFC has been designed to improve efficiency by minimizing compressed air use and, as a result, reduce compressed air costs. It turns on the air only when a part is present and provides just enough air to complete a specific task or operation.

The EFC has an easy electrical connection for voltages from 100 to 240VAC, 50/60Hz making it suitable for applications throughout the world. The compact photoelectric sensor has a sensitivity adjustment and detects objects up to 3' (1m) away. The sensor has superior immunity to noise and inductive loads that are common to industrial environments and installs easily in tight spaces with the supplied mounting bracket. The control system provides flexibility with numerous valve operating modes and timing delays. The polycarbonate enclosure is suitable for use in a wide range of applications including those located in wet environments.

**Applications**

- Auto body blowoff
- Package cleaning
- Part drying after wash
- Dust removal
- Scrap removal
- Filling operations
- Cooling hot parts
- Neutralizing static
- Cleaning molded parts

Advantages

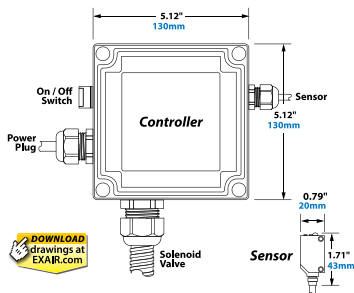
- Easy electrical hook-up; 100-240VAC, 50/60Hz
- NEMA 4/IP66 environments
- Compact sensor for mounting in tight spaces
- Eight function analog timer for on/off, pulsing and delay control
- Timer setting from 0.10 sec. to 120 hrs.
- Sensor withstands water and dust for accurate readings
- Sensor has superior immunity to noise and inductive loads
- Sensor has long distance sensing up to 3 feet (1m)



Photoelectric sensor withstands water and dust.

Electronic Flow Control

| Model # | Description |
|---------|---|
| 9055 | EFC Electronic Flow Control, 40 SCFM (1,133 SLPM), solenoid valve, 1/4 NPT |
| 9056 | EFC Electronic Flow Control, 100 SCFM (2,832 SLPM), solenoid valve, 1/2 NPT |
| 9057 | EFC Electronic Flow Control, 200 SCFM (5,664 SLPM), solenoid valve, 3/4 NPT |
| 9064 | EFC Electronic Flow Control, 350 SCFM (9,911 SLPM), solenoid valve, 1 NPT |



The timing control unit and the photoelectric sensor are equipped with a 9' (2.74m) power cord. The timing control unit is housed in a polycarbonate NEMA 4 / IP66 water tight enclosure.

There are four models of the EFC. Each includes the timing control unit and photoelectric sensor with a choice of solenoid valve sizes of 40, 100, 200 and 350 SCFM (1,133, 2,832, 5,664 and 9,911 SLPM).

Specifications

| | |
|---------------------------------|-----------------------------------|
| Power Supply Input | 100-240VAC, 50/60Hz, 0.25 - 0.45A |
| Power Supply Output (To Sensor) | 24VDC at .65A |
| Sensor | 12-24VDC input, consumes 30mA |
| Sensing Range | Diffuse reflective to 3' (1m) |
| Enclosure Rating | NEMA 4 / IP66 |
| Temperature Rating | -13°F to 131°F (-25°C to 55°C) |
| RoHS Compliant | Yes |
| CE Compliant | Yes |

\$5,012.28 Annual Air Savings For Pre-Paint Bumper Cleaning

A manufacturer of car bumpers installed a 60" (1524mm) Super Ion Air Knife in the down draft cleaning area prior to their paint booth. The bumpers enter that area in the same orientation as they would when mounted to the automobile, moving at 10' (3m) per minute with a 12" (305mm) space between bumpers. The bumpers are under the blow off for 10 seconds. 6 seconds pass with no bumper in the ionized airflow. The operation runs around the clock with three shifts.

Old Method

EXAIR's 60" (1524mm) Super Ion Air Knife was supplied at 40 PSIG to clean the bumper.

At 40 PSIG, EXAIR's 60" (1524mm) Super Ion Air Knife consumes 102 SCFM (2,887 SLPM).

Non-stop blowing of 1,440 minutes (24 hours) per day x 102 SCFM = 146,880 SCF (4,156,704 SL) air usage per day.

EFC Solution

The EFC was installed to shut off the compressed air for the 6 seconds where no bumper was present - an on cycle reduction of 37.5%. 1,440 minutes x 37.5% = 540 minutes of off time per day

Cost Difference

Most large plants know their air cost. If the actual cost is unknown, \$0.25 per 1,000 SCF (28,329 SL) is reasonable.

Before the EFC installation:

146,880 SCF/1,000 = 146.88 x \$0.25 = \$36.72 air cost per day.

With EFC installed: 146,880 SCF x 62.5% on cycle = 91,800 SCF/1,000 = 91.8 x \$0.25 = \$22.95 air cost per day.

\$36.72 (old air cost) - \$22.95 (new air cost) =

\$13.77 savings per day x 7 days per week =

\$96.39 savings per week x 52 weeks per year =

\$5,012.28 savings per year.



The timer was set to "interval" and the sensor mounted next to the

Super Ion Air Knives. When it detected a bumper, it immediately turned on the air for 10 seconds. If the conveyor stopped, it would not turn the air on again until it detected the next bumper.

\$3,393 Annual Air Savings On A Tank Blowoff Operation

A company that refurbishes large tanks runs the tanks through an oven on a conveyor line to burn off old paint. Only one tank at a time can be processed and each takes 6 minutes to complete the journey. Super Air Knives are used for blowoff at the exit of the oven.

However, the tank travels through the oven for 5 minutes before it reaches the knives for blowoff. At 80 PSIG, the four knives consume 348 SCFM. Once the tanks have been blown off, the conveyor stops, the air is shut off, and a new tank is loaded at the other end. The operation runs 30 tanks per day, 5 days a week.



The timer was set to "on/off delay". The sensor was mounted at the oven exit (1 minute away from the blowoff station). When the sensor detected a tank, the timer turned the air on for one minute, just as the next tank reached the blowoff station.

Old Method

It takes 6 minutes to complete the process.

6 minutes x 348 SCF M =

2,088 SCF (59,090 SL)

2,088 SCF x 30 tanks =

62,640 SCF (1,772,712 SL)

EFC Solution

The EFC was installed to shut off the compressed air for the 5 minutes where no tank was present (one minute of air on).

1 minute x 348 SCFM =

348 SCF x 30 tanks =

10,440 SCF (295,452 SL)

Cost Difference

Most large plants know their air cost. If the actual cost is unknown, \$0.25 per 1,000 SCF (28,329 SL) is reasonable.

Before the EFC installation:

62,640 SCF/1,000 = 62.64 x \$0.25 = \$15.66 air cost per day.

With the EFC installed:

10,440 SCF/1,000 = 10.44 x \$0.25 =

\$2.61 air cost per day.

\$15.66 (old air cost) - \$2.61 (new air cost) =

\$13.05 savings per day x 5 days per week =

\$65.25 savings per week x 52 weeks per year =

\$3,393 savings per year.

Blowoff Kits

Model # 1909



Blowoff Kit includes

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

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' Compressed Air Hose

Model # 1100-9312



Blowoff Kit includes

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

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

Swivel Fittings

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

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



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

Swivel Fittings

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