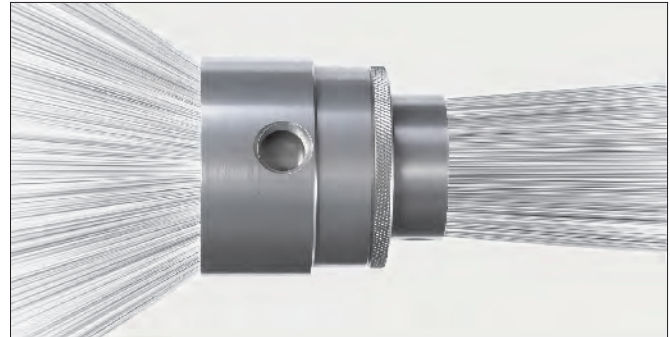


AIR AMPLIFIERS

Blowoff, clean, cool and dry as well as vent and exhaust with no moving parts

WHAT ARE THEY - REASONS TO USE

Air Amplifiers or “Air Movers” are a simple, inexpensive device with virtually no maintenance that can convey fumes, smoke, light weight materials, and move a high volume of air for cooling, blowoff and drying applications. They use the “coanda effect” which entrains a large amount of surrounding air using only a small amount of compressed air. The effect is an amplification of up to 17 times the airflow or more (depending on the size) with reduced noise levels. Using only compressed air, the output flow and vacuum is easily controlled by adjusting or opening the air gap and/or inlet pressure. Either end of the amplifier may be ducted to address all kinds of applications from bringing in fresh air into an area to removing nasty fumes. Be wary of extremely high unrealistic or unsubstantiated amplification ratios claimed by some companies.



AIR AMPLIFIER FEATURES:

- ▶ No moving parts.
- ▶ Compact design, simple, lightweight and portable.
- ▶ Driven by air not electricity.
- ▶ Replaces fans used for blowoff, cleaning, drying, cooling and conveying.
- ▶ High airflow amplification.
- ▶ Instant on-off, no electricity or explosion hazard.

AIR AMPLIFIER BENEFITS:

- ▶ Longer life in difficult environments than competitive models.
- ▶ Lower compressed air consumption than ejectors and venturi.
- ▶ Maintenance free with output easily controlled, safe to use.

AIR AMPLIFIER ADVANTAGES OVER FANS:

- ▶ Compact design, simple, lightweight and portable.
- ▶ Driven by air, not electricity for safety.
- ▶ No moving parts hence safer and maintenance free.
- ▶ Each end can be dusted for light conveying applications.

SELECTION

The fixed unit being made of heavy duty zinc die cast is more ideal in rough environments where corrosion is not an issue. The aluminum Adjustable Air Amplifiers are light-weight and flexible because of being adjustable. Stainless steel adjustable units are meant for corrosive environments and for food/pharmaceutical applications.

TYPES OF AIR AMPLIFIERS



STANDARD “FIXED” AIR AMPLIFIER: made of zinc die cast system is solid and perform as well or better than many supposedly patented designs when used in similar applications. The gap can be adjusted by adding shims. Five sizes are available.



ADJUSTABLE AIR AMPLIFIER: made of anodized aluminum or stainless steel for high temperature or food applications. The customer can set the gap and lock it in place using a lock ring. Three sizes are available.

SPECIAL DESIGNS

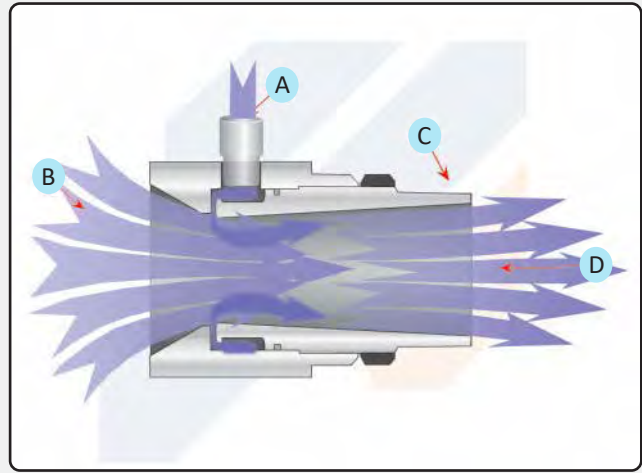
Special designs are available to meet unique customer specifications. Specially treated stainless steel units have been made for a specific medical application and threaded adjustable versions have been made for a machine builder. Different materials can be provided as well as special sizes to fit any specific application.



Mounting and holding systems are available for the Air Amplifiers. Fully flexible positioning. See Accessories

ADJUSTABLE AIR AMPLIFIER - HOW IT WORKS:

A large volume of surrounding air is induced into the Amplifier at point (A) by the action of a small amount of compressed air which enters the annular chamber at point (B) that is then throttled through a small ring Nozzle at high velocity and into the inside of the Amplifier over a coanda profile. The compressed air stream clings to the coanda profile as it enters the inside walls of the Amplifier and thereby creating a vacuum that induces the outside air converting the pressure into amplified airflow. The amplified airflow leaves at the exit at point (C). Airflow is further amplified downstream at point (D) by entraining additional air from the surroundings at the exit.



ADJUSTABLE AIR AMPLIFIER SPECIFICATIONS:

Normally set to .002" (.05mm) gap if greater air force is required, the gap is adjustable. The first two sizes of adjustable air amplifiers come in two versions – unmarked regular versions and marked to gauge the gap setting from 0 to 1.5 mm.

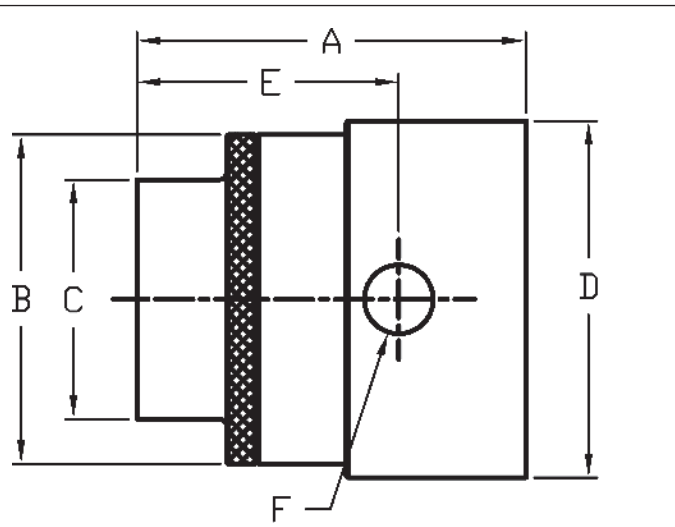
ADJUSTABLE AIR AMPLIFIER RATIOS (APPROX.)

| |
|---------------------------------------|
| Models 40000 and 40000S: 10:1 |
| Models 40001, 40001G and 40001S: 15:1 |
| Models 40002, 40002G and 40001S: 16:1 |
| Models 40003 and 40003S: 17:1 |

| Model | A Inches (MM) | B Inches (MM) | C Inches (MM) | D Inches (MM) | E Inches (MM) | F INLET |
|-----------------------|------------------|------------------|------------------|------------------|------------------|------------|
| 40000 / 40000S | 2.22" (57) | 1.25" (32) | .75" (19) | 1.5" (38) | 1.5" (38) | 1/8" NPT |
| 40001 / 40001S | 2.875" (73) | 1.74" (44.2) | 1.25" (31.75) | 1.98" (50.3) | 1.91" (48.4) | 1/4" NPT |
| 40002 / 40002S | 3.25" (82.6) | 2.75" (69.85) | 2" (50.80) | 2.98" (75.7) | 2.19" (55.6) | 3/8" NPT |
| 40003 / 40003S | 5.1" (130) | 5.2" (132.6) | 4" (101.6) | 5.5" (139.7) | 3.37" (85.5) | 1/2" NPT |

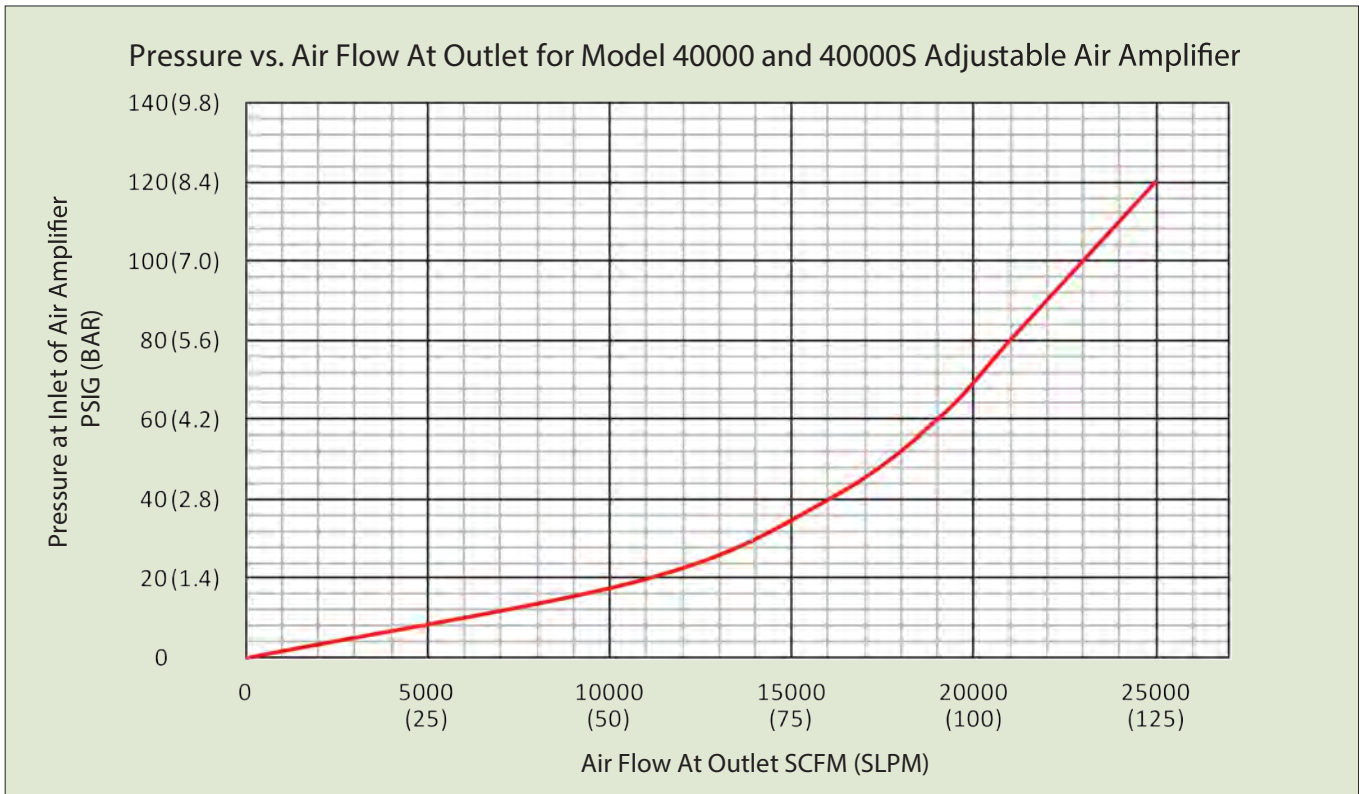
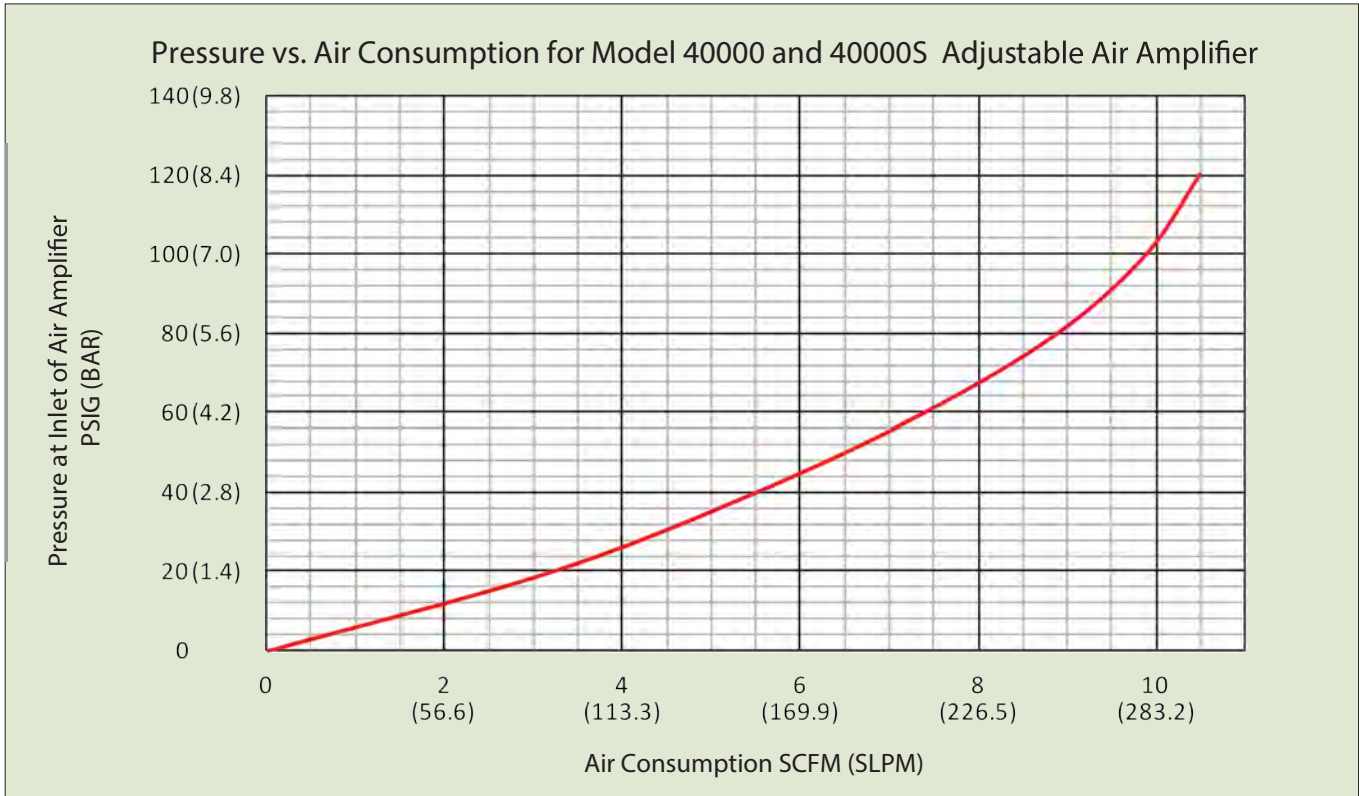
*BSP Threads or Adaptors can be supplied depending on country location.

ADJUSTABLE AIR AMPLIFIER



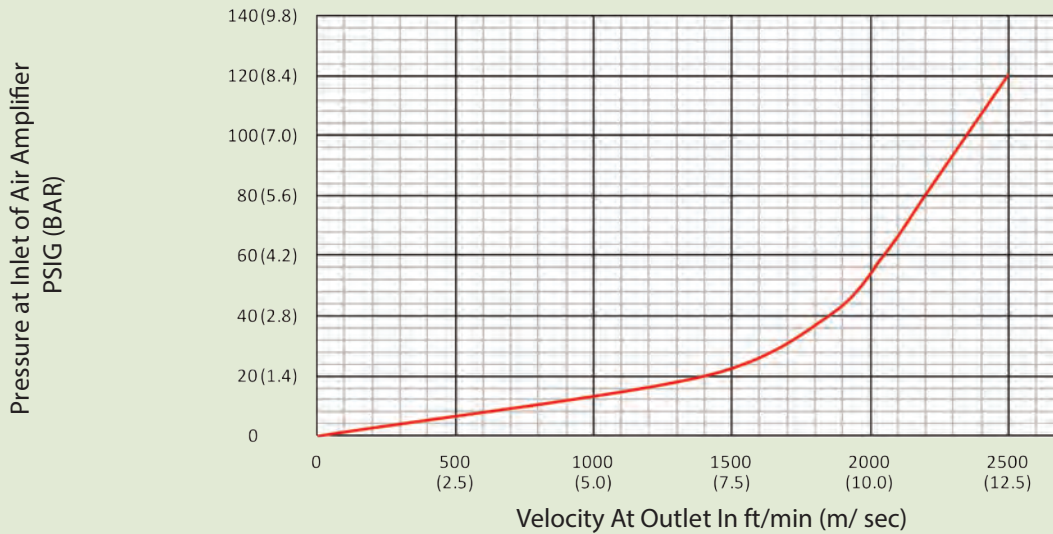
40000 and 40000S

AMPLIFICATION RATIO = 10:1 (SEE ADDENDUM - I)

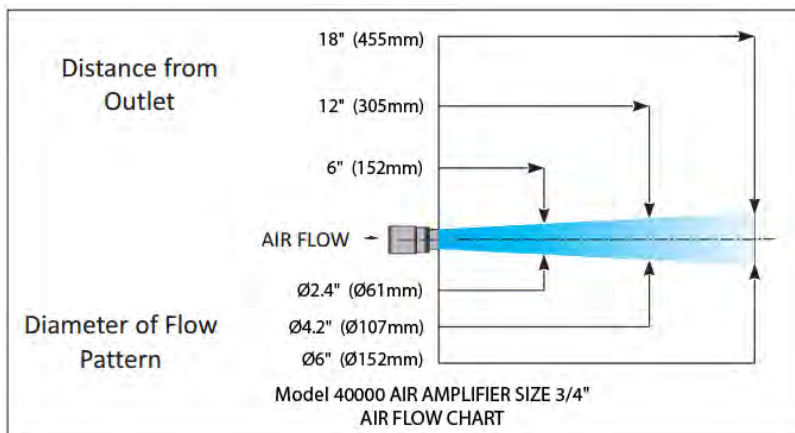
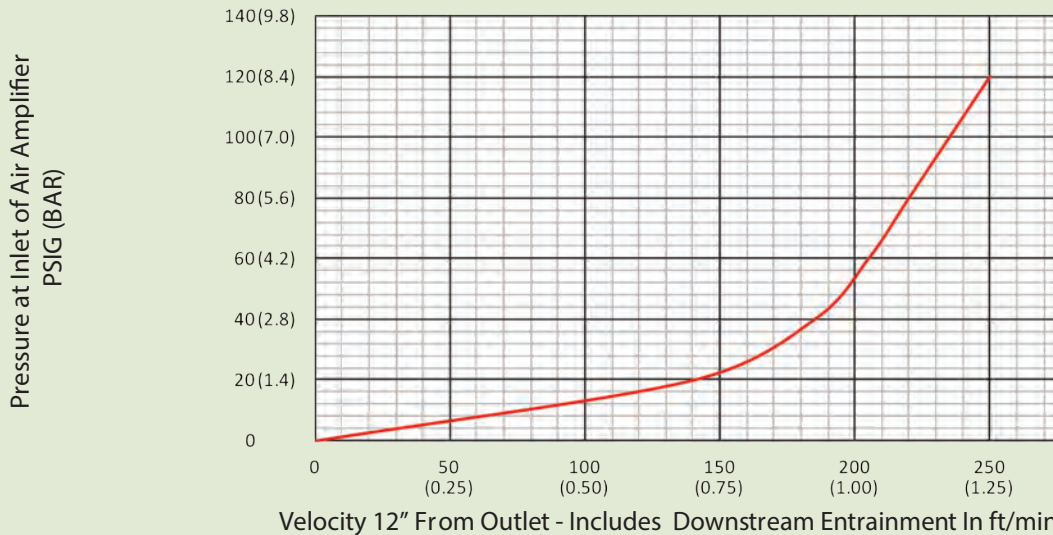


40000 and 40000S

Pressure vs. Velocity At Outlet for Model 40000 and 40000S Adjustable Air Amplifier

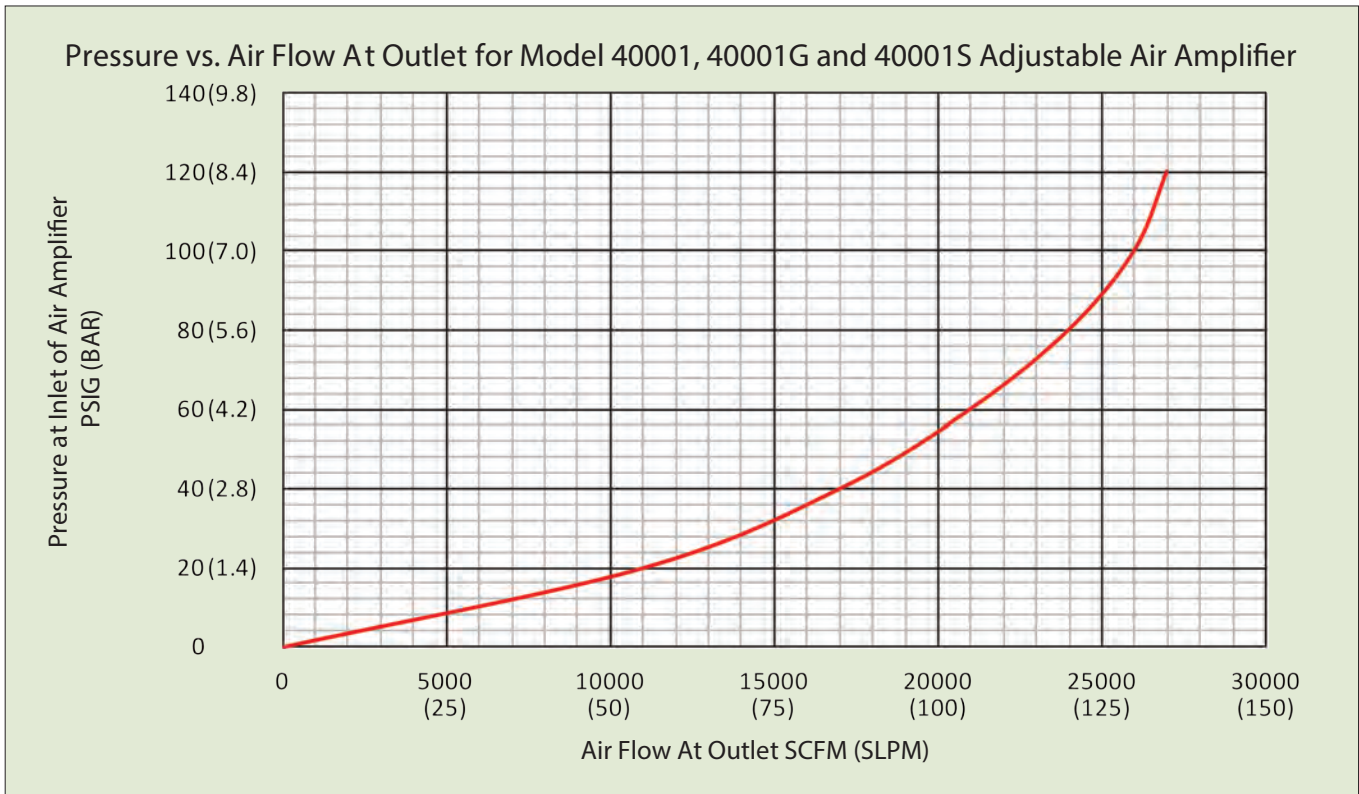
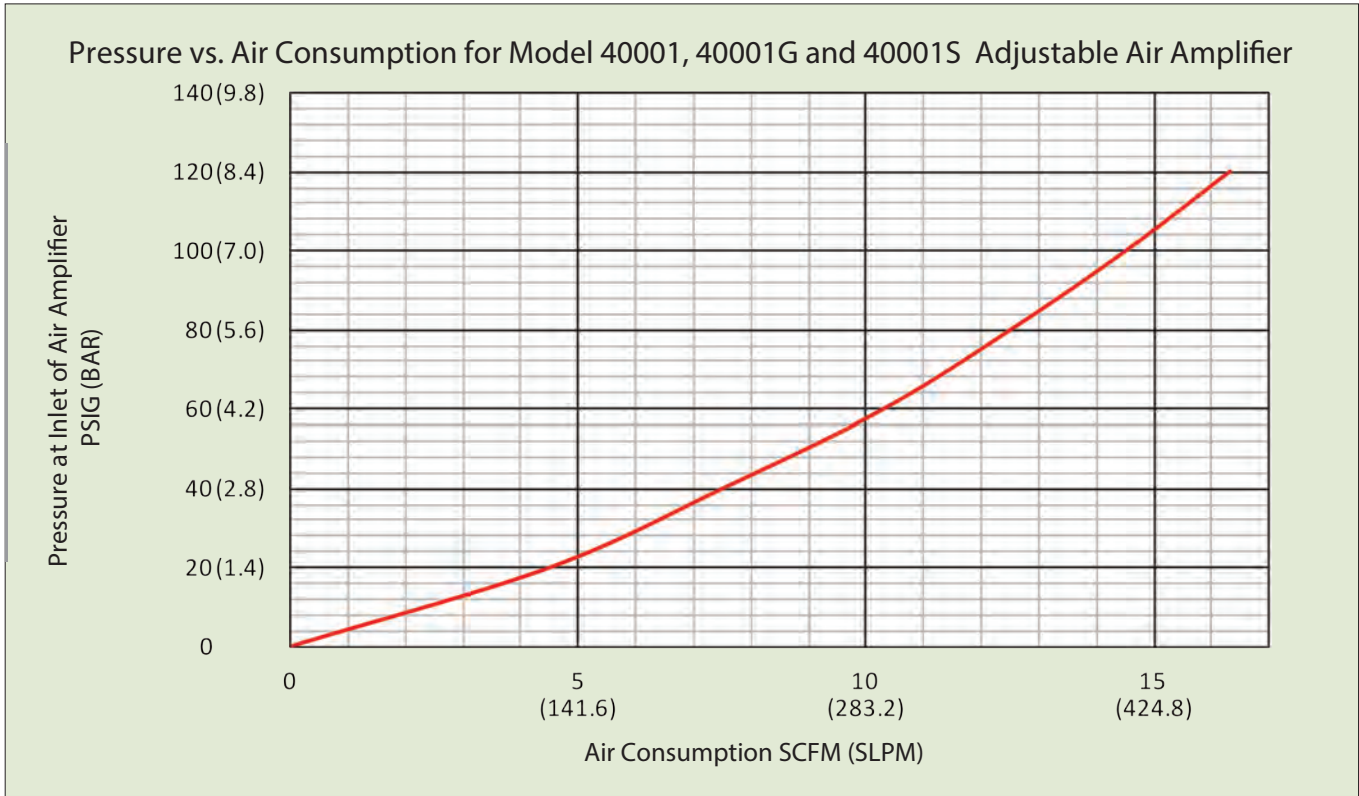


Pressure vs. Velocity 12" From Outlet for Model 40000 and 40000S Adjustable Air Amplifier



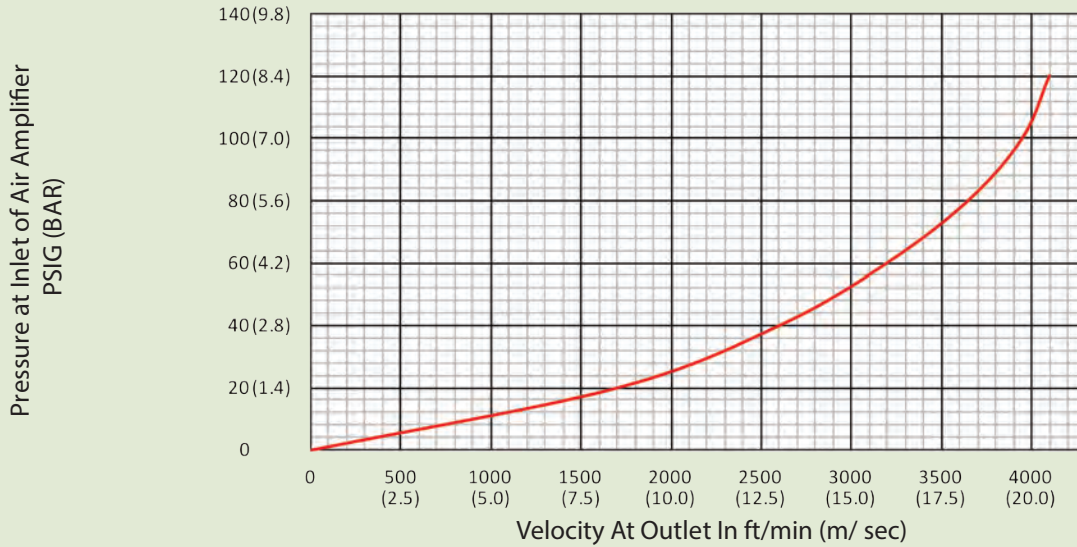
40001, 40001G and 40001S

AMPLIFICATION RATIO = 15:1 (SEE ADDENDUM - I)

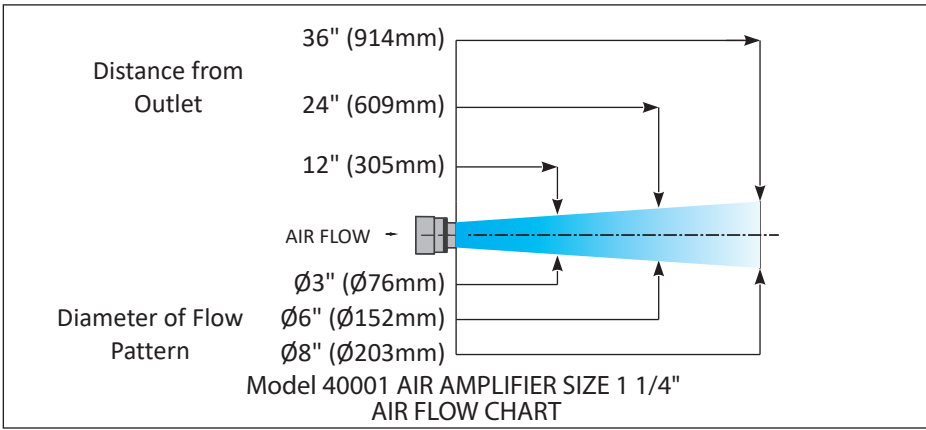
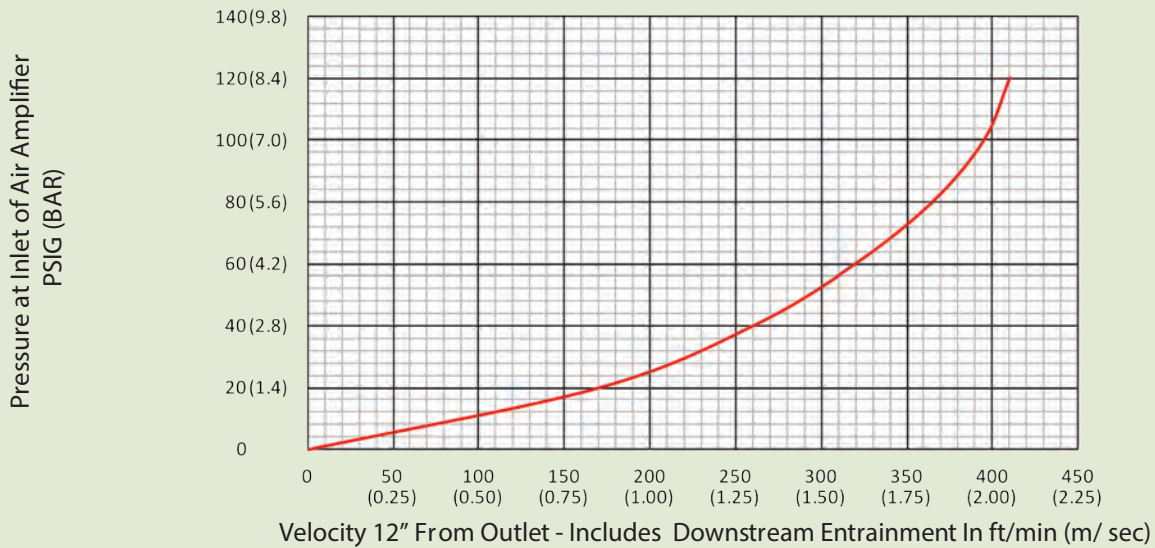


40001, 40001G and 40001S

Pressure vs. Velocity At Outlet for Model 40001, 40001G and 40001S Adjustable Air Amplifier



Pressure vs. Velocity 12" From Outlet for Model 40001, 40001G and 40001S Adjustable Air Amplifier

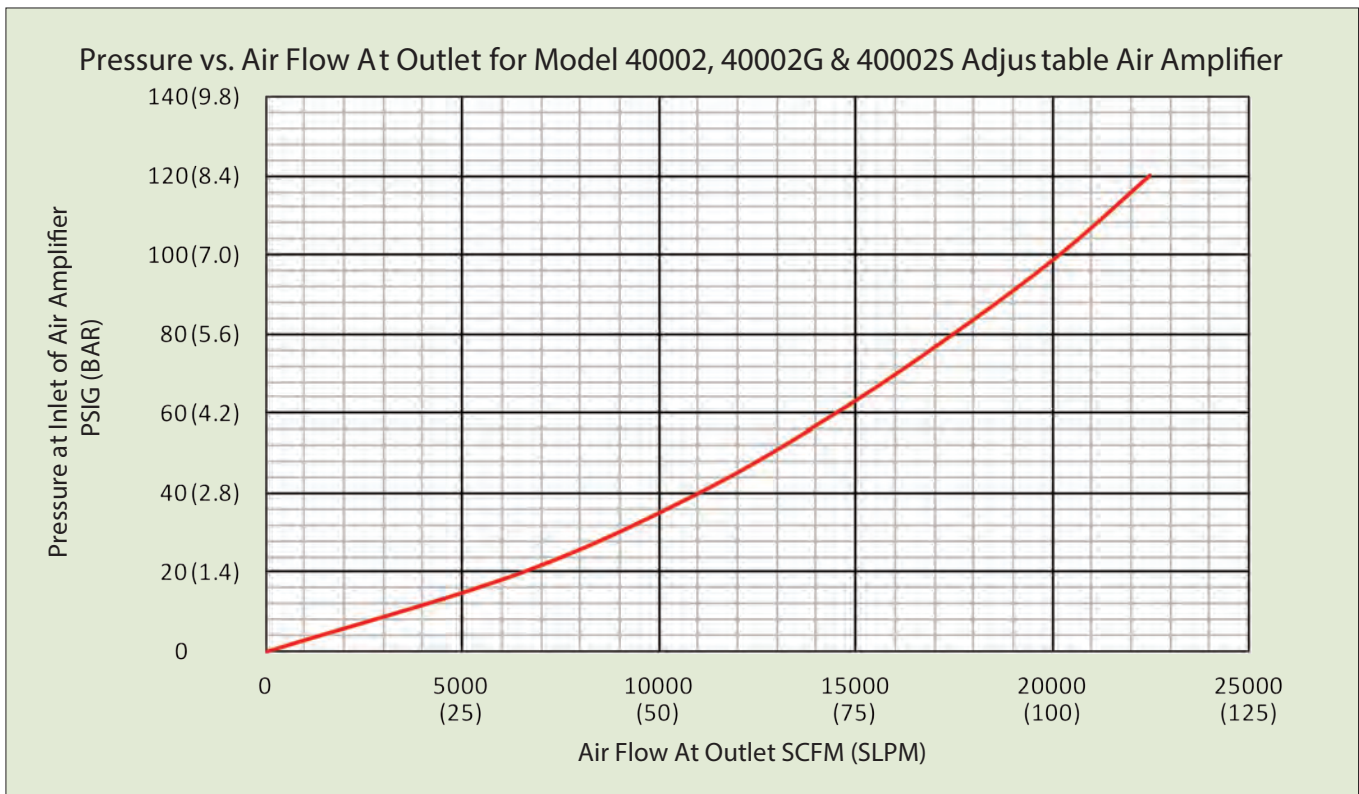
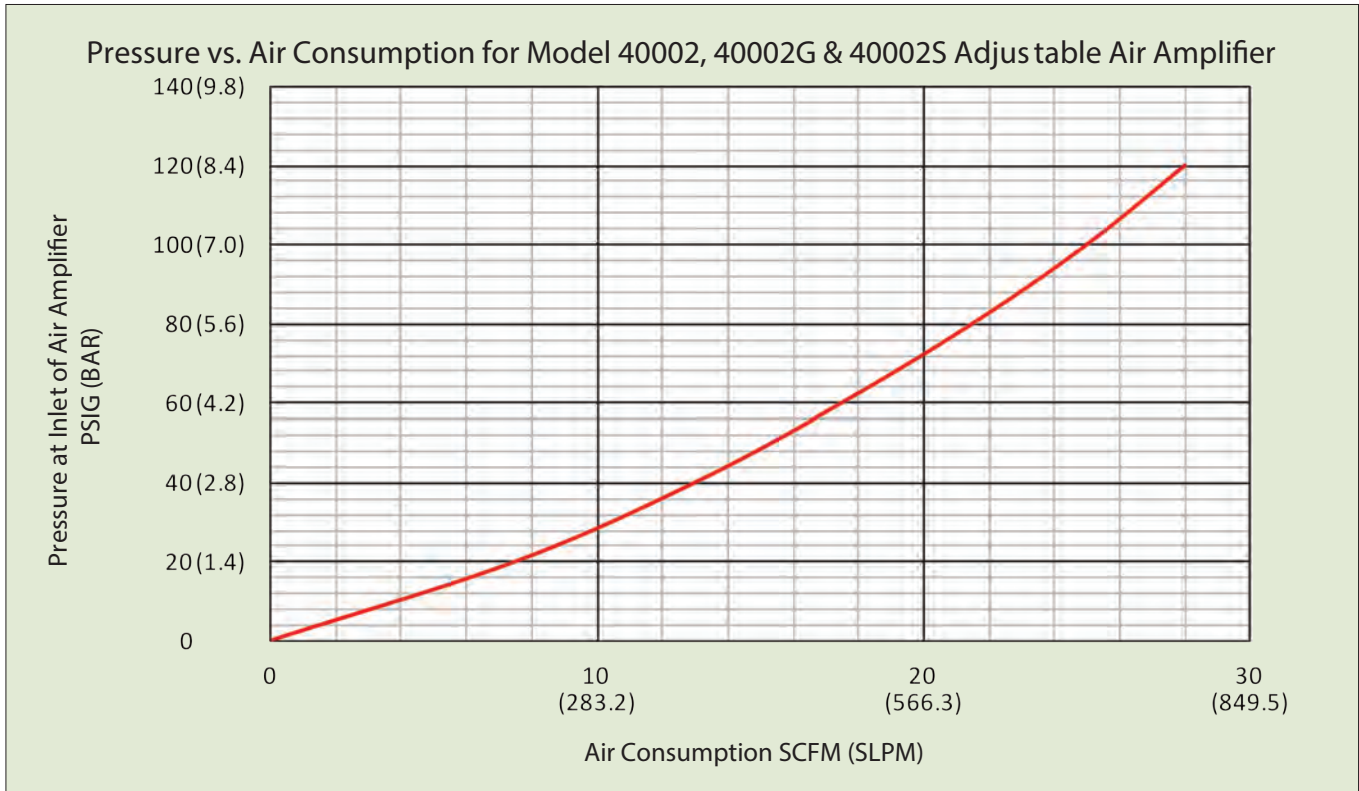


AIR AMPLIFIERS



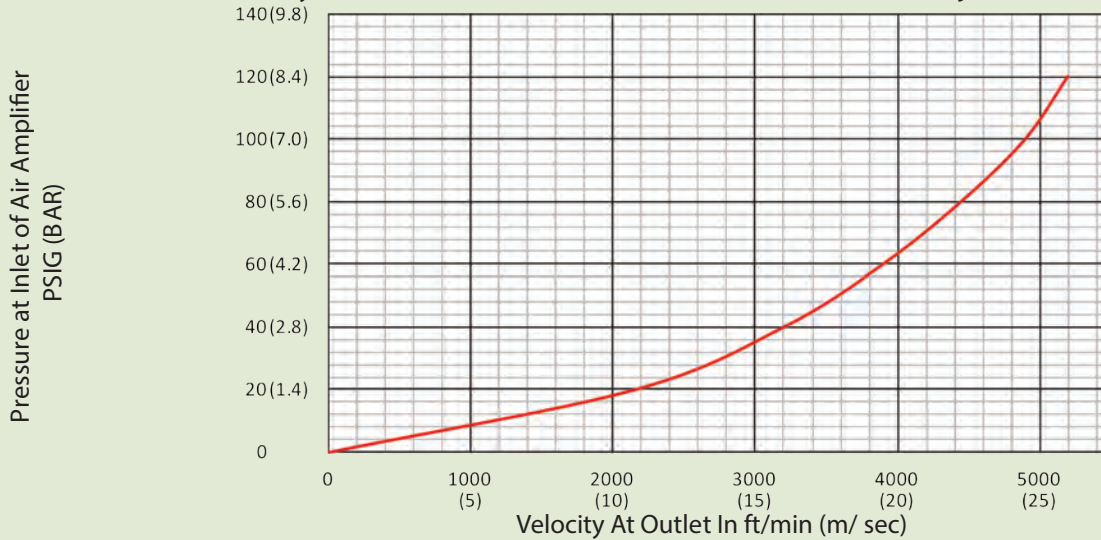
40002, 40002G & 40002S

AMPLIFICATION RATIO = 16:1 (SEE ADDENDUM - I)

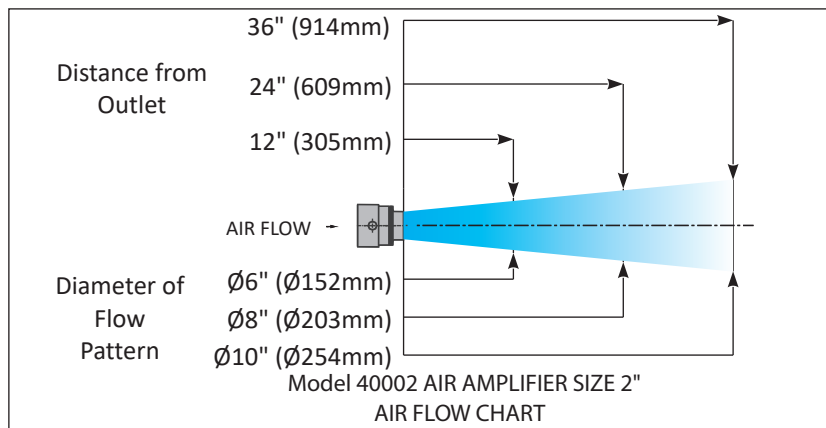
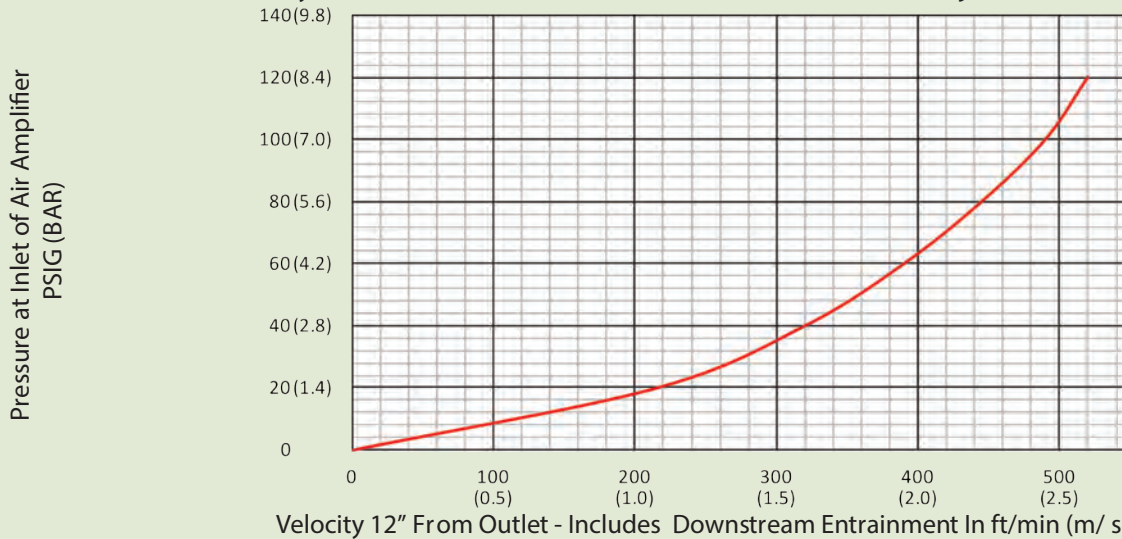


40002, 40002G & 40002S

Pressure vs. Velocity At Outlet for Model 40002, 40002G & 40002S Adjustable Air Amplifier



Pressure vs. Velocity 12" From Outlet for 40002, 40002G & 40002S Adjustable Air Amplifier

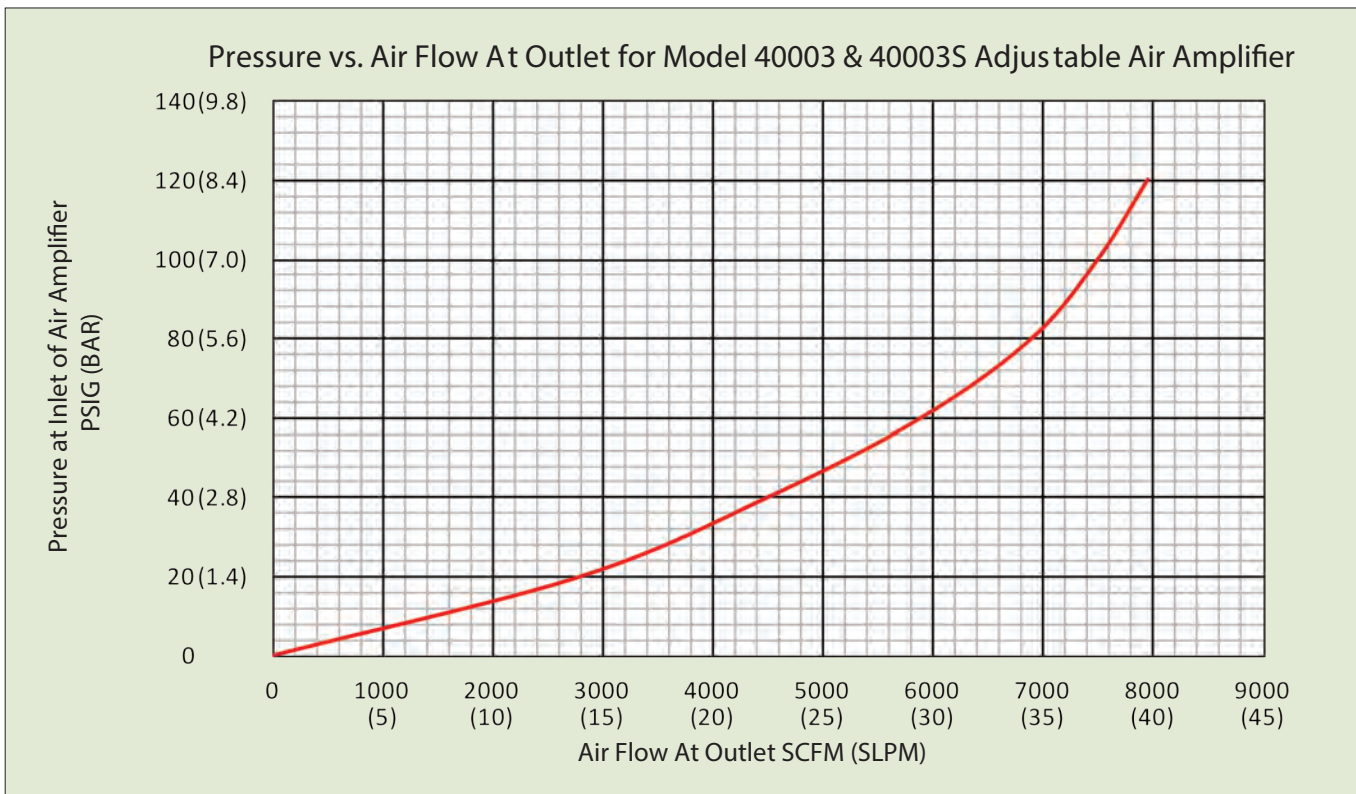
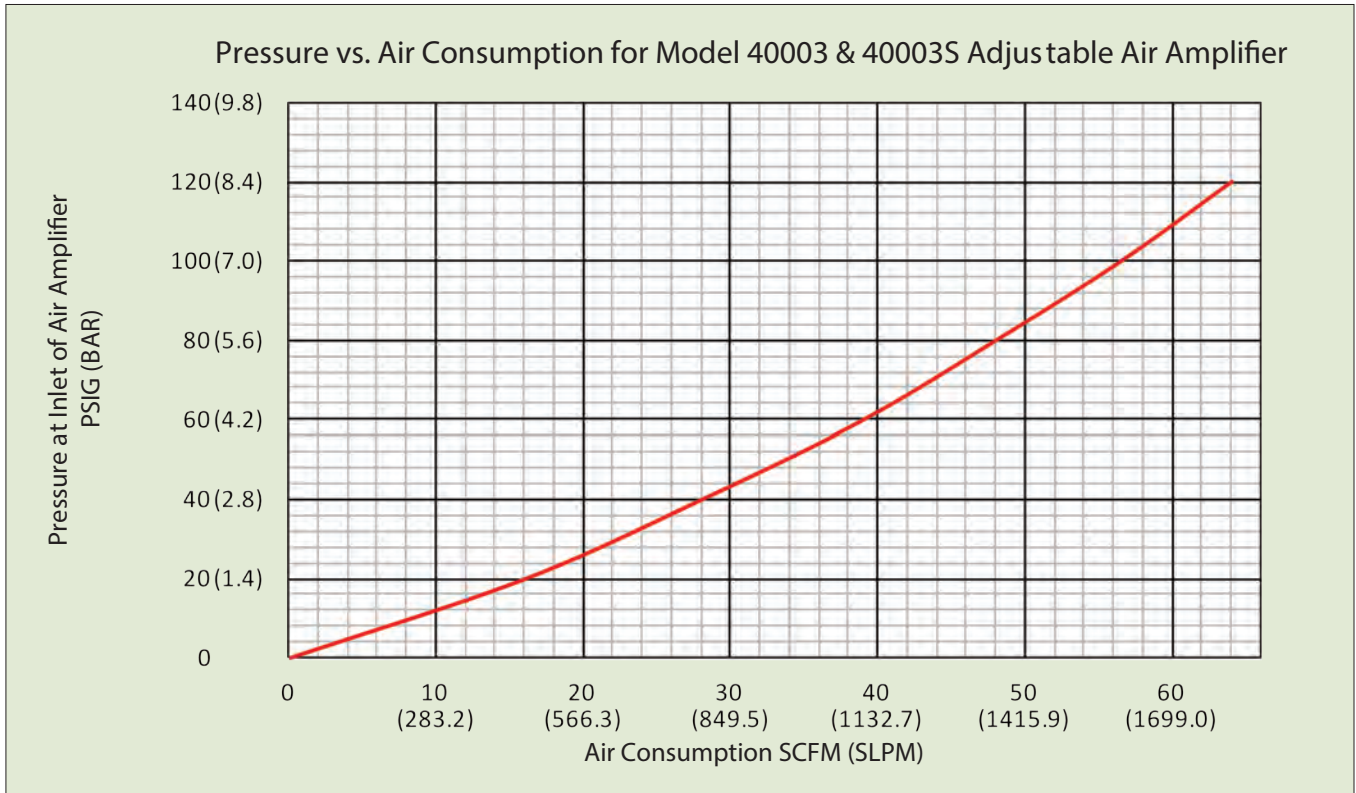


AIR AMPLIFIERS



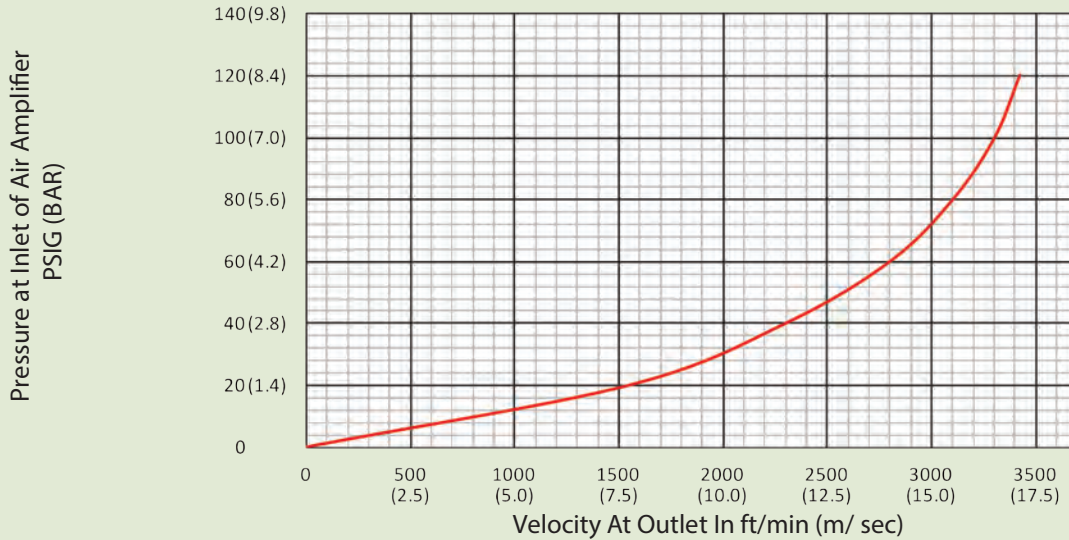
40003 & 40003S

AMPLIFICATION RATIO = 17:1 (SEE ADDENDUM - I)

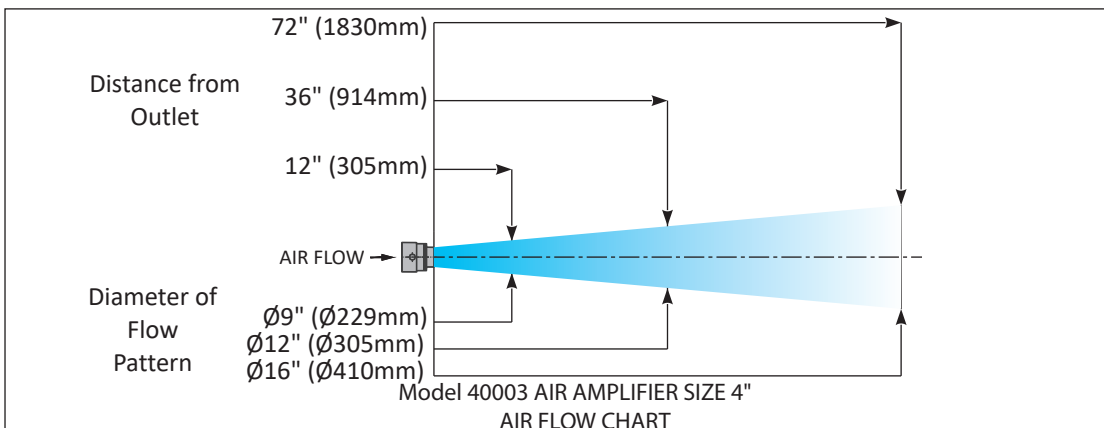
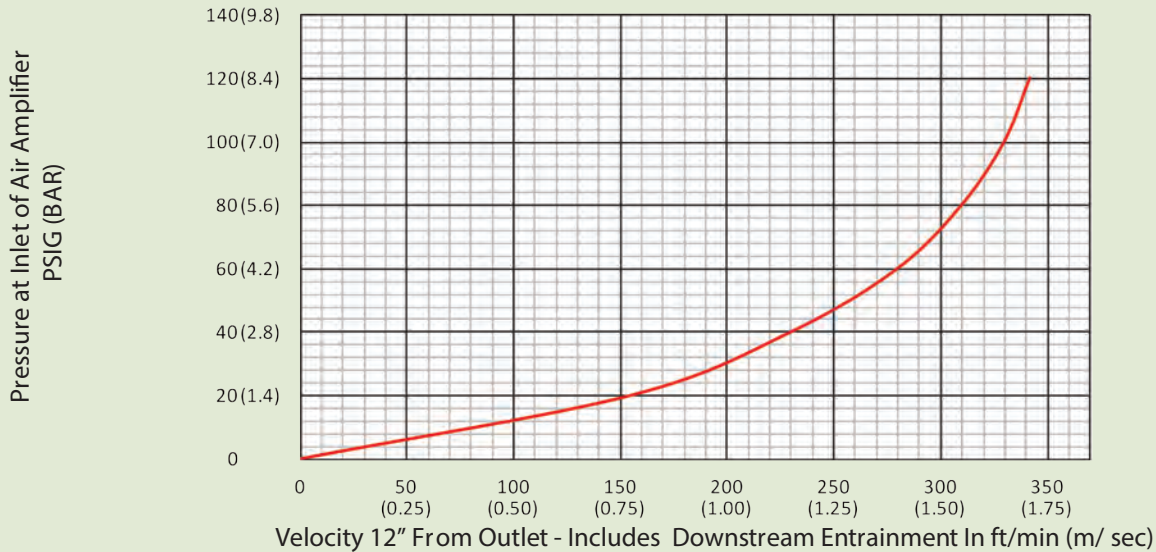


40003 & 40003S

Pressure vs. Velocity At Outlet for Model 40003 & 40003S Adjustable Air Amplifier

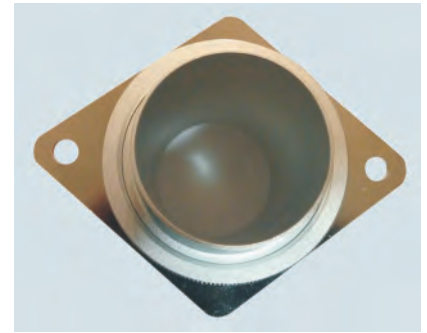
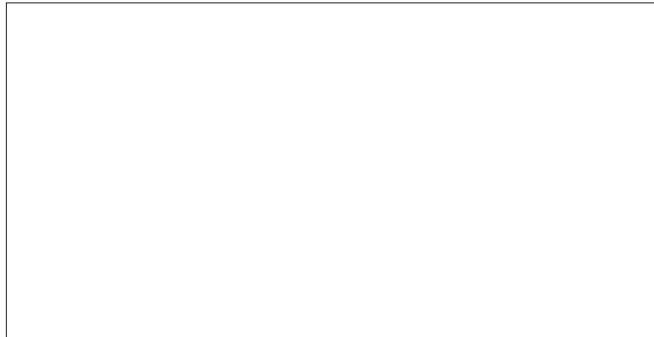
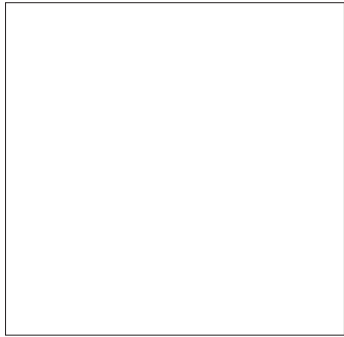


Pressure vs. Velocity 12" From Outlet for Model 40003 & 40003S Adjustable Air Amplifier

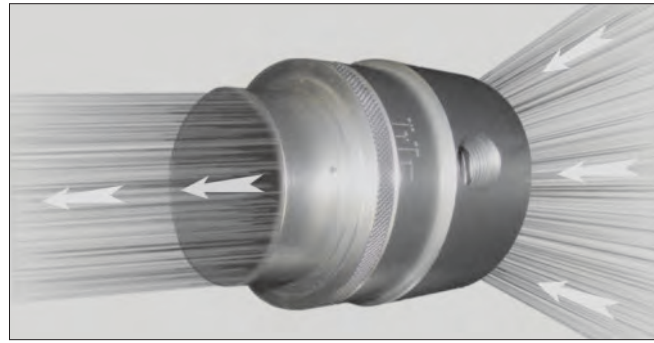
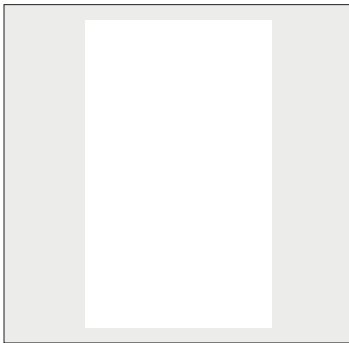


AIR AMPLIFIERS



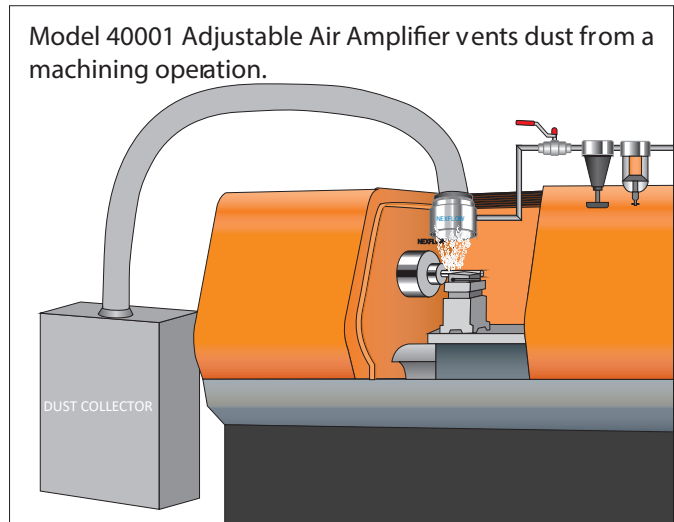
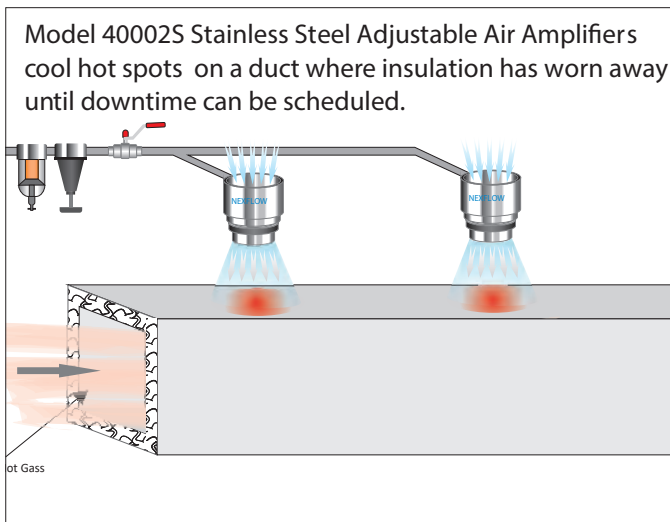


The Adjustable Air Amplifier can be adjusted to provide the blow-off force and/or vacuum required for any particular application. Made of anodized aluminum or stainless steel for corrosive and high temperature applications the unit offers flexibility in applications.



Adjustable Air Amplifier mounting brackets allow for easy mounting. Available for the 1-1/4" and 2" sizes. Made in Stainless Steel.

The Gauged Adjustable Air Amplifier with marking to indicate the settings from 0 to 1.5 mm comes in anodized aluminum for applications where accurate gap control is required. As with the regular adjustable unit the gap is locked into place with a lock ring.



ADJUSTABLE AIR AMPLIFIERS - ALUMINUM

| PART NO. | DESCRIPTION |
|----------|--|
| 40000 | 3/4" Adjustable Aluminum Air Amplifier |
| 40001 | 1-1/4" Adjustable Aluminum Air Amplifier |
| 40002 | 2" Adjustable Aluminum Air Amplifier |
| 40003 | 4" Adjustable Aluminum Air Amplifier |
| 41001 | 1-1/4" Adjustable Aluminum Amplifier plus Filter with Auto Drain |
| 41002 | 2" Adjustable Aluminum Amplifier plus Filter with Auto Drain |
| 41003 | 4" Adjustable Aluminum Amplifier plus Filter with Auto drain |
| 42001 | 1-1/4" Adjustable Aluminum Amplifier plus Filter with Auto Drain plus Regulator with Gauge |
| 42002 | 2" Adjustable Aluminum Amplifier plus Filter with Auto Drain plus Regulator with Gauge |
| 42003 | 4" Adjustable Aluminum Amplifier plus Filter with Auto Drain plus Regulator with Gauge |

ADJUSTABLE AIR AMPLIFIERS - GAUGED SETTINGS

| PART NO. | DESCRIPTION |
|----------|--|
| 40001G | 1-1/4" Adjustable Aluminum Air Amplifier with Gauged Set ngs |
| 40002G | 2" Adjustable Aluminum Air Amplifier with Gauged Set ngs |
| 41001G | 1-1/4" Adjustable Aluminum Air Amplifier with Gauged Set ngs plus Filter with Auto Drain |
| 41002G | 2" Adjustable Aluminum Air Amplifier with Gauged Set ngs plus Filter with Auto Drain |
| 42001G | 1-1/4" Adj. Aluminum Air Amplifier with Gauged Set ngs plus Filter with Auto Drain plus Regulator with Gauge |
| 42002G | 2" Adj. Aluminum Air Amplifier with Gauged Set ngs plus Filter with Auto Drain plus Regulator with Gauge |

ADJUSTABLE AIR AMPLIFIERS - STAINLESS STEEL

| PART NO. | DESCRIPTION |
|-----------|---|
| 40001S | 1-1/4" Adjustable Stainless Steel Air Amplifier |
| 40002S | 2" Adjustable Stainless Steel Air Amplifier |
| 40003S | 4" Adjustable Stainless Steel Air Amplifier |
| 41001S | 1-1/4" Adjustable Stainless Steel Amplifier plus Filter with Auto Drain |
| 41002S | 2" Adjustable Stainless Steel Amplifier plus Filter with Auto Drain |
| 41003S | 4" Adjustable Stainless Steel Amplifier plus Filter with Auto Drain |
| 42001S | 1-1/4" Adjustable Stainless Steel Amplifier plus Filter with Auto Drain plus Regulator with Gauge |
| 42002S | 2" Adjustable Stainless Steel Amplifier plus Filter with Auto Drain plus Regulator with Gauge |
| 42003S | 4" Adjustable Aluminum Steel Amplifier plus Filter with Auto Drain plus Regulator with Gauge |
| 40001 MTS | Moun ng bracket for 40001, 40001G and 40001S |
| 40002MTS | Moun ng bracket for 40002, 40002G and 40002S |

AIR AMPLIFIERS

