



Streamtek Corp. brings you solutions for a new economy.

Adjustable Air Amplifier

Technical Guide

Streamtek brings to you an air amplifier range that makes all your big air handling jobs a breeze. Using a small amount of compressed air, our amplifiers are economical solutions compared to other air amplifiers available in the market.



Version 1.0



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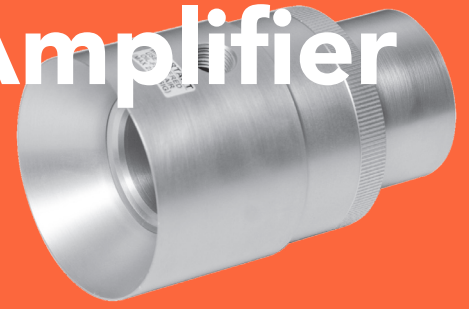
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1 Adjustable Air Amplifier Specifications



Performance Data

Diameter	Model #	Material	Throat Diameter	Amplification Ratio
3/4"	SAM034A	Aluminum 275°F (135°C)	0.40" (10 mm)	10:1
1"	SAM001A	Aluminum 275°F (135°C)	0.84" (21 mm)	13:1
1¼"	SAM114A	Aluminum 275°F (135°C)	1.01" (26 mm)	16:1
2"	SAM200A	Aluminum 275°F (135°C)	1.67" (42 mm)	20:1
2½"	SAM212A	Aluminum 275°F (135°C)	2.03" (52 mm)	23:1
4"	SAM400A	Aluminum 275°F (135°C)	3.02" (77 mm)	30:1
–	–	–	–	–
3/4"	SAM034S	303 Stainless – 400°F (204°C)	0.40" (10 mm)	10:1
1"	SAM001S	303 Stainless – 400°F (204°C)	0.84" (21 mm)	13:1
1¼"	SAM114S	303 Stainless – 400°F (204°C)	1.01" (26 mm)	16:1
2"	SAM200S	303 Stainless – 400°F (204°C)	1.67" (42 mm)	20:1
2½"	SAM212S	303 Stainless – 400°F (204°C)	2.03" (52 mm)	23:1
4"	SAM400S	303 Stainless – 400°F (204°C)	3.02" (77 mm)	30:1

How to Determine Air Consumption & Total Output Flow for any Hi-Temp Adjustable Air Amplifier?

Total Airflow:

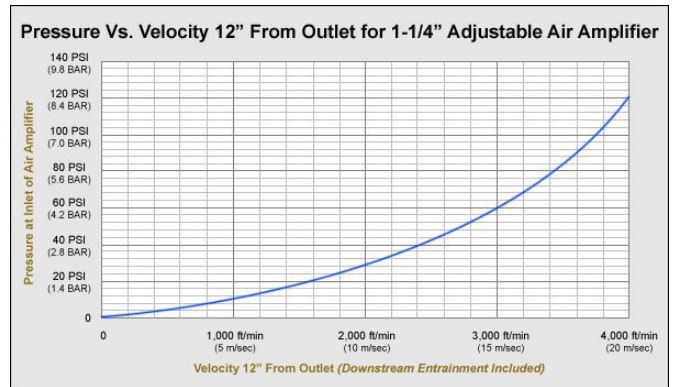
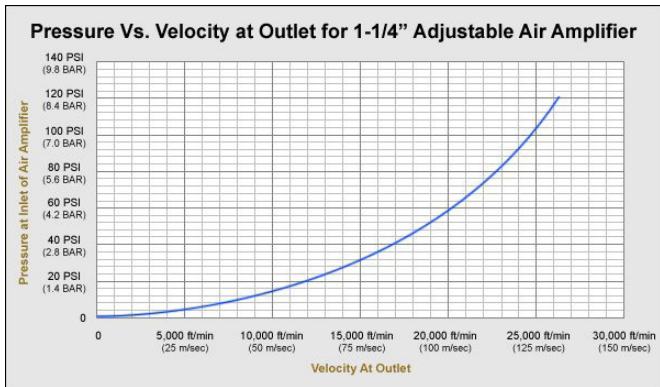
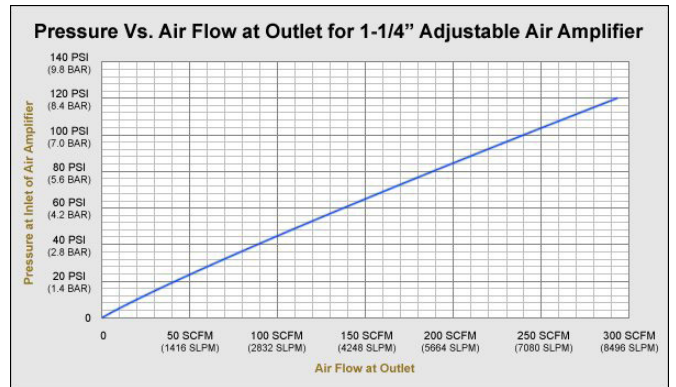
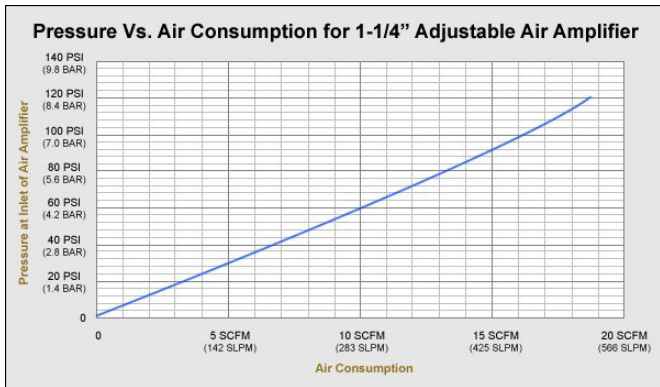
From the performance graphs (below), determine the total output flow for the Hi-Temp Adjustable Air Amplifier at any pressure.

Air Consumption:

(Tested with factory pre-set .002" Gap). See chart below for quick reference OR divide Total Output Flow by Amplification Ratio, using performance graphs below.

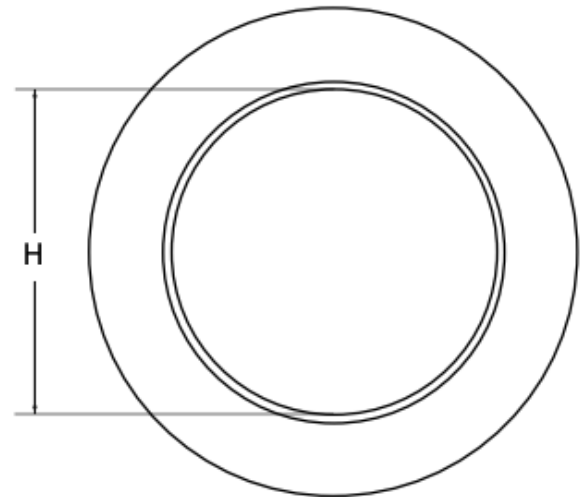
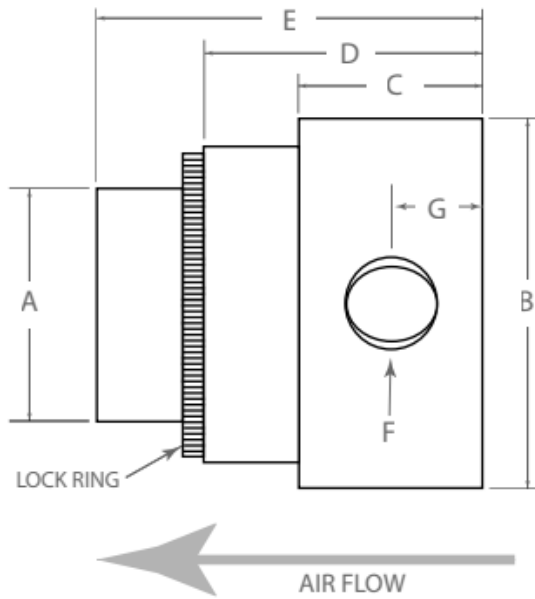
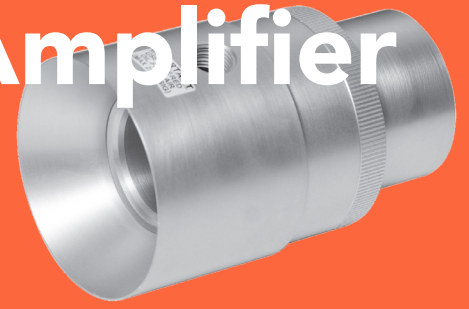
	1-1/4"		2"		2-1/2"		4"	
PRESSURE SUPPLY	SCFM	SLPM	SCFM	SLPM	SCFM	SLPM	SCFM	SLPM
20 PSIG (1.4 Bar)	4.5	127	8.0	226	12.0	340	18.0	509
40 PSIG (2.8 Bar)	7.0	198	12.0	340	19.5	552	28.0	792
60 PSIG (4.1 Bar)	10.0	283	16.0	453	24.5	693	37.0	1047
80 PSIG (5.5 Bar)	13.0	367	22.0	623	29.0	821	52.0	1472
100 PSIG (6.4 Bar)	14.5	410	25.5	722	35.0	991	60.0	1698
120 PSIG (8.4 Bar)	17.0	481	30.5	863	42.0	1189	66.5	1882

1-1/4" Adjustable Air Amplifier – Performance Graphs.



2 Adjustable Air Amplifier

Dimensions

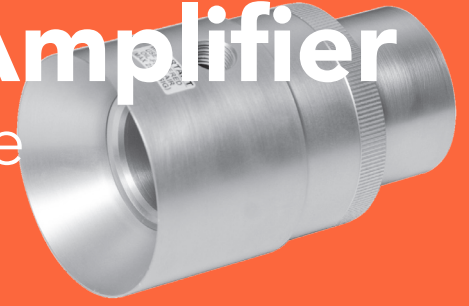


DIMENSIONS: Adjustable Air Amplifier

	A (O.D.)	B	C	D	E	F	G	H (I.D.)
3/4"	3/4" (19 mm)	1" (26 mm)	—	1.35" (34 mm)	2.10" (53 mm)	1/8" (3 mm)	0.45" (11 mm)	0.40" (10 mm)
1"	1" (26 mm)	1.75" (44 mm)	1.25" (32 mm)	1.65" (42 mm)	2.54" (65 mm)	1/4" (6 mm)	0.80" (20 mm)	0.84" (21 mm)
1 1/4"	1.25" (32 mm)	2.00" (51 mm)	1.37" (35 mm)	1.85" (47 mm)	2.85" (73 mm)	1/4" (6 mm)	1.00" (25 mm)	1.01" (26 mm)
2"	2.00" (51 mm)	3.00" (76 mm)	1.50" (38 mm)	2.25" (57 mm)	3.25" (83 mm)	3/8" (10 mm)	1.05" (26 mm)	1.67" (42 mm)
2 1/2"	2.50" (64 mm)	3.50" (89 mm)	2.50" (41 mm)	3.50" (61 mm)	5.50" (92 mm)	3/8" (10 mm)	7.78" (30 mm)	2.03" (51 mm)
4"	4.00" (102 mm)	5.00" (127 mm)	3.20" (81 mm)	2.85" (72 mm)	5.00" (127 mm)	1/2" (13 mm)	1.50" (38 mm)	3.02" (77 mm)

3 Adjustable Air Amplifier

Installation & Maintenance



01 Recommended Hose Runs

LENGTH OF RUN	SIZE OF PIPE/HOSE
1 - 25ft	Use 1/4" pipe or 3/8" air hose
26 - 50ft	Use 3/8" pipe or 1/2" air hose
51ft and above	Use 1/2" pipe or larger

NOTE: For larger Streamtek Adjustable Air Amplifier (Model SAM004A / SAM004S), use a supply pipe size equal or greater than the connection size on the amplifier.

02 Compressed Air Supply

With the proper filtration and separation of oil, dirt, and moisture from the compressed air supply, your Air Amplifier will operate maintenance free for many years.

**All filters should be installed within 10-15ft of the Air Conveyor. It's important to use supplied fittings to minimize possibility of air restriction.

Water removal

Minimum 10 micron filter, with an automatic (float type) drain.

Oil removal

Use an Oil filter installed downstream from the water filter if oil is a concern. Again this should be fitted with an automatic (float type) drain.

03 General Operation / Installation

In most cases, the Streamtek Adjustable Air Amplifier will be supported by the compressed air supply piping or, by clamping to the unit. A hose can be attached to either or both ends of the Air Amplifier to remove smoke, fumes, or dust.

For optimal performance, keep the Air Amplifier within 12" of the target. The velocity/force begins to decrease after 12" away, although it may still be sufficient for most applications up to 24" away.

Adjusting the Air Amplifier

If vacuum or force is too low; the air gap can be opened. To increase the force, simply turn the lock ring counter clockwise and back out the inner sleeve. This will increase the velocity, mass flow, and force but also increase the compressed air consumption. A shim stock may be used to obtain a more accurate setting. Be sure the locking ring is tightened back in place to secure the inner sleeve!

04 Troubleshooting

With no moving parts, there is little that can go wrong with your Air Amplifier. However, there are many factors that can cause the reduction in Flow or Force. Undersized airlines, restrictive fittings, or clogged filter elements are common areas to check. If you suspect below average performance, install a pressure gage at the inlet of the Air Amplifier.

05 Cleaning

Simply disassemble the unit, and clean all surfaces using a mild solvent and rag. At times a build-up can occur on the throat of the Air Amplifier as a result of vapors in the atmosphere. Prior to reassembly it is recommended to apply an anti-seize compound on the threads.

