

AIR NOZZLES AND JETS

Superior designed Air Nozzle and Jets reduce compressed air consumption and noise levels while maintaining Laminar Flow for Strong Blowoff

WHAT ARE THEY - REASONS TO USE

Air Nozzles are the smallest air amplifiers for point applications. There are two types: and aspirator or coned shaped type and so-called star-shaped profiles. The aspirator types provide greater flow amplification, ideal for cooling but have a lower force/air consumption ratio than star-shaped versions. So when higher force is more important, the star profile versions are the best choice.

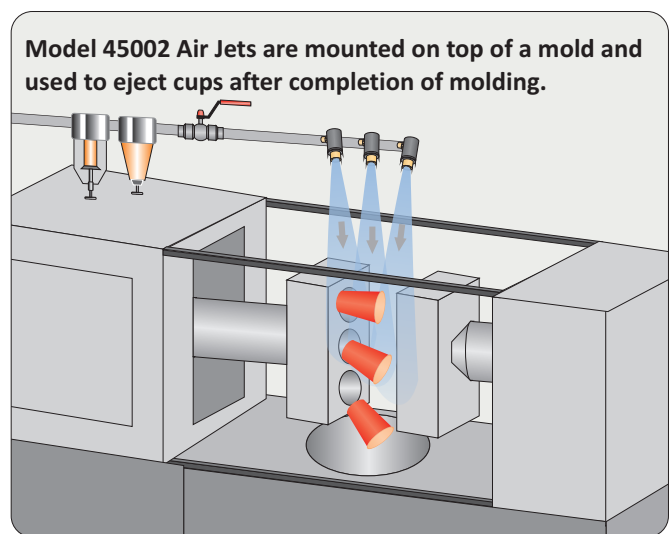
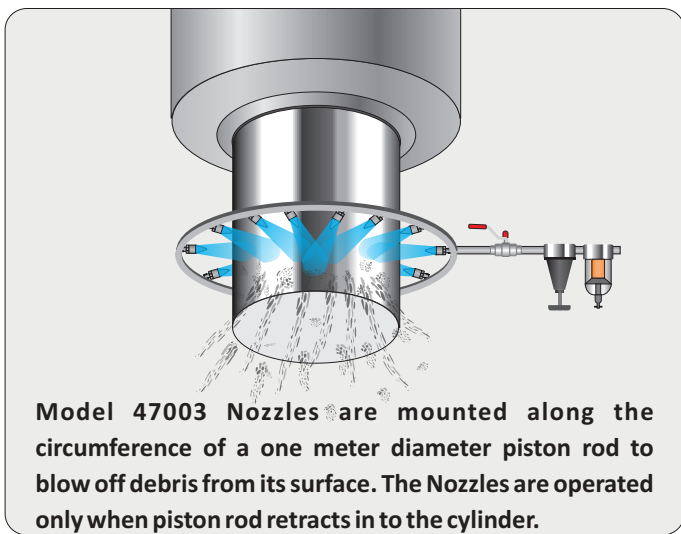
Air Jets entrain large volumes of surrounding air through the Jet (similar to air amplifiers) and are more efficient than Air Nozzles because of their larger size. The larger the “air amplification nozzle or jet” the greater the efficiency for flow amplification although larger star profile nozzles can give a higher force/air consumption ratio.

The most important reasons to use Air Amplification Nozzles and Jets apart from energy reduction is safety and reduced noise levels. All Nex Flow™ Air Nozzles and Jets meet OSHA standard CFR 1910.242 (b) for dead end pressure. Noise levels are dramatically reduced up to 10dBA along with lower energy consumption.



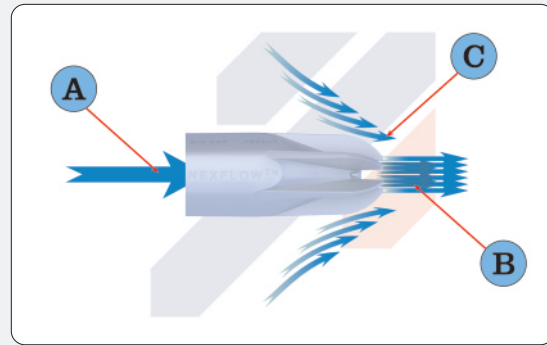
The Nex Flow™ Air Mag™ “patent pending” star profile air amplifying nozzle has the best force/air consumption ratio known. Ideal when higher force required in blowoff applications.

Nex Flow™ Nozzles and Jets: Our range of nozzles can address most valid applications for blowoff and cooling.



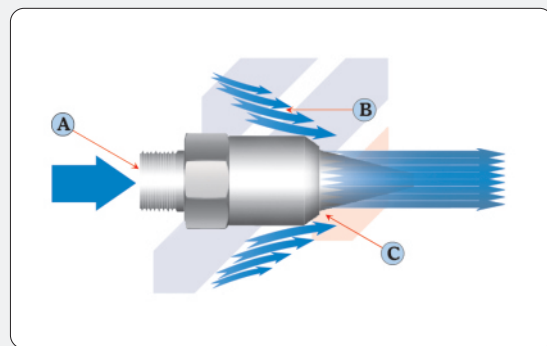
HOW IT WORKS

Air Mag™ Nozzle Model 47004AMF – Compressed air enters at point (A). Surrounding air (B) is entrained over the specially designed surface profile as the small amount of compressed air exits the specially designed holes drilled in the nozzle and combines at (C) to form a concentrated high velocity, laminar flow stream of amplified air flow and concentrated force with very high ratio of force/cfm.



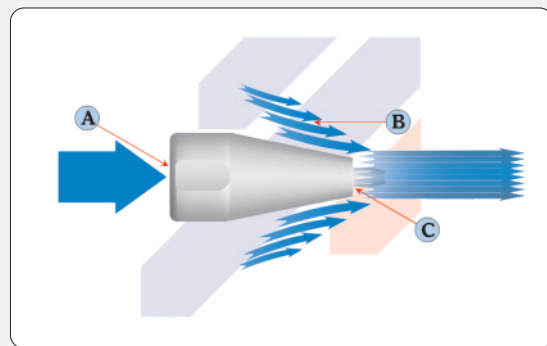
HOW IT WORKS

Air Nozzle - Models 47001, 47002, 47003, 47003S, 47003S-316L, 47004, 47004S, 47004S-316L, 47009, 47009S, 47009S-316L Compressed air enters at point (A). Surrounding air (B) is entrained over a specially designed profile surface by the action of the small amount of compressed air leaving the ring gap at point (C). This results in a concentrated high velocity, laminar flow stream of amplified air with maximized force.



HOW IT WORKS

X-stream™ Air Nozzle - Model 47010 - Compressed air enters at point (A). Surrounding air (B) is entrained over a specially designed profile surface by the action of the small amount of compressed air leaving the small drilled holes at point (C). This results in a concentrated high velocity, laminar flow stream of amplified air with maximized force.



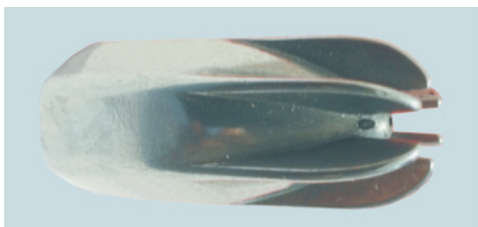
AIR NOZZLES

PART NO.	DESCRIPTION
47004AMF	Cast Zinc high force/air consumption efficiency Air Mag™ nozzle - 1/4" female NPT or BSP
47001	Brass Mini Nozzle with 10/32 fitting or metric equivalent
47002	Brass Mini Nozzle with copper tube - male
47003	Standard Aluminum 1/8" NPT or BPS male fitting
47003S	Standard 303/304 Stainless Steel 1/8" NPT or BPS male fitting
47003S-316L	Standard 316L Stainless Steel 1/8" NPT or BPS male fitting
47004	Extra Strong Aluminum 1/4" NPT or BPS male fitting
47004S	Standard 303/304 Stainless Steel 1/4" NPT or BPS male fitting
47004S-316L	Standard 316L Stainless Steel 1/4" NPT or BPS male fitting
47009	Adjustable Aluminum Nozzle with 1/8" male NPT or BPS fitting
47009S	Standard 303/304 Stainless Steel 1/8" NPT or BPS male fitting
47009S-316L	Standard 316L Stainless Steel 1/8" NPT or BPS male fitting
47010	X-Stream™ Anodized Aluminum Strong Force Nozzle with 1/4" female NPT or BPS fitting

THE NEX FLOW™ AIR MAG™ NOZZLES



The “Patent Pending” **NEX FLOW™ AIR MAG™ NOZZLE** is extremely efficient in producing a higher force/unit of air consumption because of its unique design utilizing small diameter air exit holes to concentrate the air flow from the other holes, along with entrained air to produce a high force at the target. This design also extends the distance for laminar flow allowing greater flexibility in use at a distance. It even out performed so-called laval type nozzles and does not have the annoying whistling sound that might occur with such designs.



Model 47004AMF – is the first product of the **The Nex Flow™ Air Mag™** “patent pending” star profile air amplifying nozzle and has the best force/air consumption ratio known. Ideal when higher force required in blowoff applications.

Sound Level 74 dBA at 3 ft. (0,91m) at 80 psig (5.5 bar)

HOW TO PROVE FOR YOURSELF HOW GOOD A NOZZLE IS?

The Nex Flow™ Air Mag™ nozzle is designed so that the force at a particular pressure will be approximately the same as competitive nozzle of star type profile design. To compare and prove the superiority of the Nex Flow™ Air Mag™ nozzle this makes it easy by simply replacing the other nozzle and seeing what happens. To do this, have a pressure regulator and gauge upstream. And if possible a flow meter upstream. Either have a scale to blow against or just apply it your particular application. For each nozzle, adjust the pressure upstream to that it is the same for all nozzles tested. This is what you can expect....

If you replace any competitive nozzle, you will probably have to cut back the pressure as you will get more force from the Nex Flow™ Air Mag™ nozzle. This is because the air consumption is “less” at any given pressure which also means less pressure drop in the line as the air flows out through the nozzle. So you will actually be getting a bit more pressure and force as a result. You can then cut back the pressure if not needed thereby reducing compressed air use even more.

If you have a flow meter, all nozzles can be tested comparatively.

Alternatively, you can just try the various nozzles and you will find the Nex Flow™ Air Mag™ nozzle to perform better simply because there is less pressure drop since it uses less compressed air, indicating its greater efficiency.

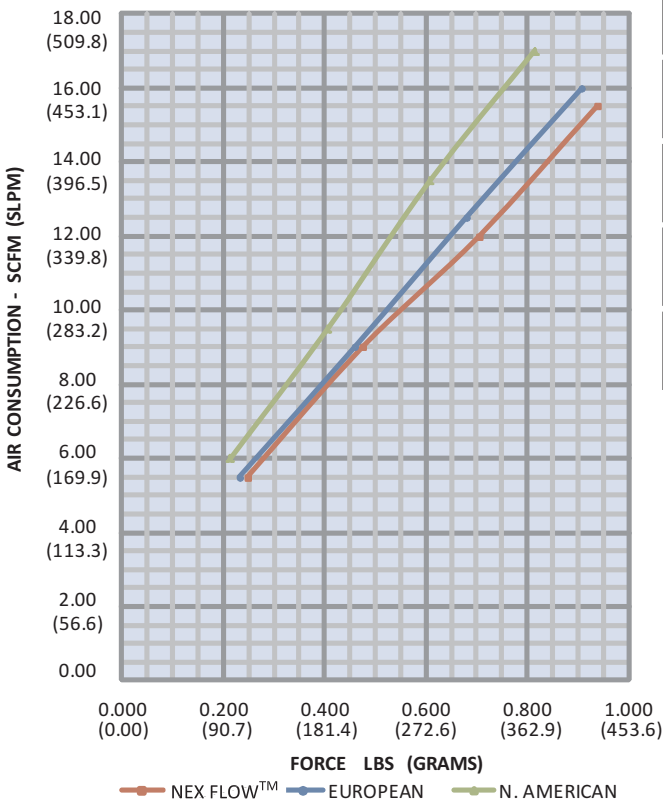


PERFORMANCE OF THE NEX FLOW™ MODEL 47004AMF AIR MAG™ NOZZLE

AIR MAG NOZZLE - 1/4" - MODEL: 47004AMF						
INLET PRESSURE PSIG (BAR)	20 (1.4)	40 (2.8)	60 (4.1)	80 (5.5)	100 (6.9)	120 (8.3)
FORCE LBS (GRAMS)	0.247 (112)	0.474 (215)	0.705 (320)	0.937 (425)	1.172 (532)	1.143 (519)
AIR CONSUMPTION SCFM (SLPM)	5.5 (156)	9.0 (255)	12.0 (340)	15.5 (439)	19.7 (558)	23.4 (663)

Note: Data for Force measured at 6"

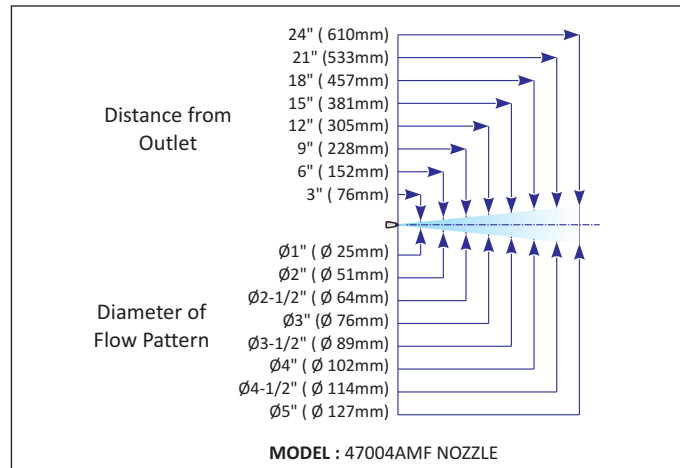
**FORCE EFFICIENCY OF THE NEX FLOW™
MODEL 47004AMF AIR MAG™ NOZZLE
TO COMPETITIVE VERSIONS**



Note: Data for Force measured at 6". Data measurement was done at a college test laboratory utilizing accurate force and flow measurement equipment. All nozzles tested under the same conditions. Published data was not used – only actual measurements made in the lab.

INPUT LINE PRESSURE PSIG (BAR)	NEX FLOW™ AIR MAG™ NOZZLE		EUROPEAN STAR TYPE DESIGN		NORTH AMERICAN STAR TYPE DESIGN	
	Force-Lbs (Force-gms)	SCFM (SLPM)	Force-Lbs (Force-gms)	SCFM (SLPM)	Force-Lbs (Force-gms)	SCFM (SLPM)
40 (2.8)	.474 (215)	9.0 (255)	.421 (191)	9.0 (255)	.421 (191)	9.5 (269)
60 (4.1)	.705 (320)	12.0 (340)	.637 (289)	12.5 (354)	.633 (287)	13.5 (382)
80 (5.5)	.937 (425)	15.5 (439)	.840 (381)	16.0 (453)	.840 (381)	17.0 (481)

Note: Data for Force measured at 6"



ADVANTAGES OF THE AIR MAG™ DESIGN

- . Lowest air consumption for force produced
- . lower noise levels
- . no whistling sound
- . single piece design for extra strength

