

Energy Saving

Safety Nozzle



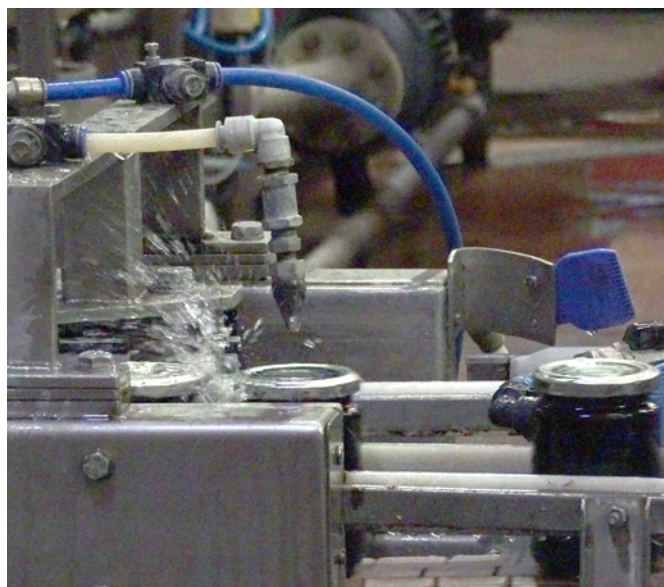
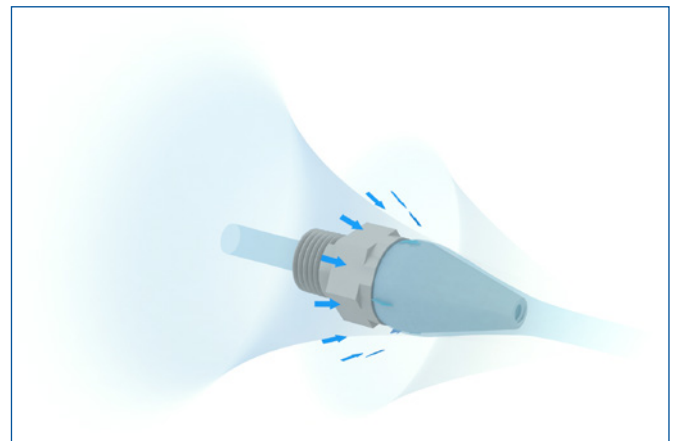
The Energy Saving Safety Nozzles from Meech directs compressed air over a curved surface, this action entrains ambient air and amplifies the total air flow. Meech Nozzles can save up to 70% of compressed air demand and significantly reduce noise levels. Energy Saving Safety Nozzles have hundreds of applications that will significantly reduce compressed demand and running costs.

How they work

Compressed air is released through an adjustable annular slot at the base of the nozzle cone. The compressed air flows at high velocity over the outside of the cone. This high velocity air flow entrains the surrounding ambient air at a ratio of 25:1. As a result the total air flow exiting the nozzle is increased. This means both the air pressure and air consumption can be reduced.

Features and Benefits

- Energy Saving – Air Nozzles can cut compressed air demand by up to 70% and reduce running costs.
- Noise Reduction – Up to 30 dBA noise reduction.
- Innovative design – offers Air Amplification at a ratio of 25:1.
- No moving parts – Virtually no maintenance.
- Health and Safety compliant – Nozzle design prevents dead-ending.
- Easy to install – Unique nozzle design allows connection to either a 1/8" or 1/4" BSP fitting.
- Adjustable – Allows for application specific set-up.
- Aluminium or Stainless Steel – Can be used in most environments.
- Excellent performance - Thrust levels in excess of 250 grams, whilst air consumption is only 15cfm (425l/min)

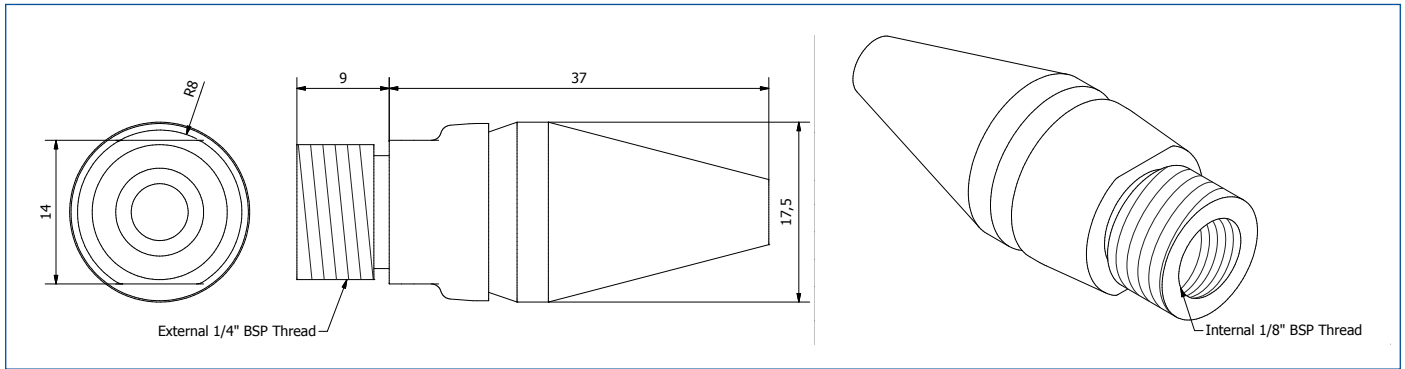


Nozzle being used to dry jars before being date stamped

Applications

- **Replacement of Open Pipes**
Meech Nozzles can be fitted to virtually any existing open pipe
- **Product cleaning/Swarf removal**
The 25:1 air amplification makes the Nozzles ideal for blow cleaning machinery or components.
- **Part Ejection**
Meech Nozzles can be used to remove items from a conveyor line or, in conjunction with a solenoid, to remove selected items from a production run.
- **Liquid Blow off**
The column of air can be used to blow liquid from a product or component
- **Product Pushing**
Meech Nozzles can be used on a production line to assist with conveying – for example a Meech nozzle will effectively help to push cans.

Dimensions



Energy Saving Example - Nozzle

Company A use 5 x 6mm ID open air pipes running at 80psi (5.4 Bar) inlet air pressure. The open pipes are used to move items along a production line. They are running constantly for 16 hours a day, 5 days a week, and 48 weeks a year. Company A has electricity costs of 8p per kW/hr.

Each open air pipe has an air consumption of 34 cfm (963 l/min) giving a total air consumption of 170cfm (4,814 l/min). Each of the open pipes has a noise level of 90 dBA.

By fitting 5 x Meech Energy Saving Safety Nozzles to the existing 6mm pipe a dramatic reduction can be seen in both air consumption and noise level.

When running at 80psi (5.4 Bar) each Nozzle has an air consumption of 15cfm, giving a total air consumption of 75cfm (2,125 l/min). Each Nozzle has a noise level of 79

dBA, a drop of 11 dBA per Nozzle when compared to the 6mm open pipe.

This shows a massive 95cfm (2,690 l/min) saving in compressed air or an overall saving of 56% in air consumption. Equally running costs are also reduced from £9,792 per year to £4,320 per year, which is a saving of £5,472 per year. Finally, the low cost of the Energy Saving Air Nozzles means the payback period could be as little as 2 days.

Running Cost Comparison

Duration	1x Energy Saving Nozzle (£)	1x 6mm Open Pipes (£)	5x Energy Saving Nozzle (£)	5x 6mm Open Pipes (£)
Per Day	3.60	8.16	18.00	40.80
Per Week	18.00	40.80	90.00	204
Per Year	864	1,958	4,320	9,792

Technical Information

Product Code	Product	Total Weight (grams)	Air Amplification	Thread Type	Factory Setting*
A48009	Aluminium Nozzle	16.2	25:1	1/8" BSP Male and 1/8" BSP Female	15 cfm (425 l/min)
A40009	Stainless Steel Nozzle	45.0			

Note: Nozzles are sold in bags of 5

*Factory set to – 80psi to use 15 cfm (425 l/min) of air

Air Consumption and Noise Comparison

Inlet Air Pressure	Air Consumption										Sound Level*				
	cfm					l/min					dBA				
psi	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
Bar	1.4	2.7	4.1	5.4	6.8	1.4	2.7	4.1	5.4	6.8	1.4	2.7	4.1	5.4	6.8
All Meech Nozzles	5	9	12	15	18	142	255	340	425	510	65	71	76	79	81
Ø6mm Pipe	11	17	27	34	40	311	481	765	963	1133	70	80	87	90	95
Ø8mm Pipe	26	40	60	75	82	736	1133	1699	2124	2322	77	88	95	97	98

* Sound level taken 1m from target
Measured at factory setting