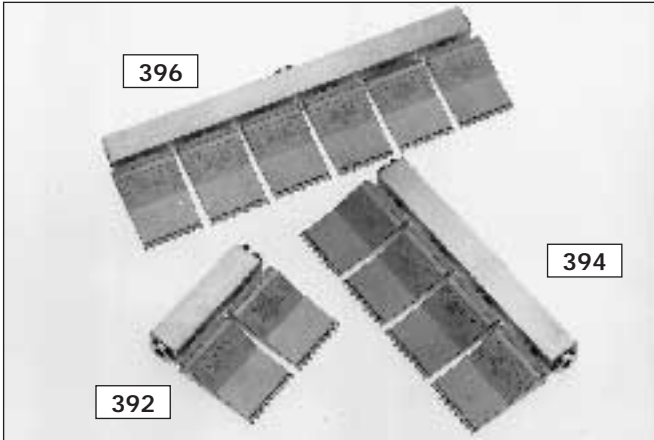


# AIR KNIVES



## REPLACE OPEN PIPE OF DIAMETERS:



6 - 12 mm

1/4" - 1/2"

## BENEFITS

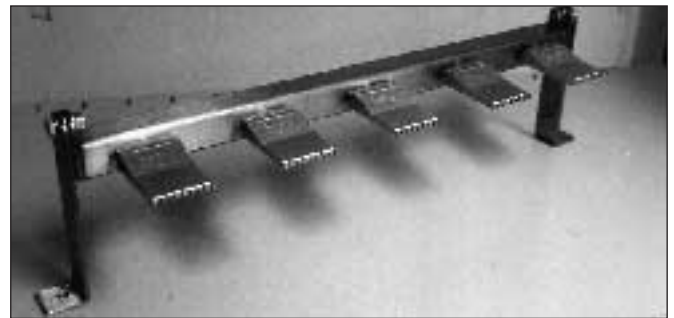
Reduces the noise level 20 - 23 dB(A)

Decreases air consumption 15 - 33 %

Safety nozzle Meets OSHA standards

Silvent's 920 nozzle and a specially designed aluminum manifold are used to build air knives. The length of the manifold and the number of nozzles can be tailored to each customer's specific needs. Air knives have been installed in a wide range of industrial applications. Cooling rollers, drying tobacco, dispersion of powdered paint, blow-off of emulsions, etc. are but a few.

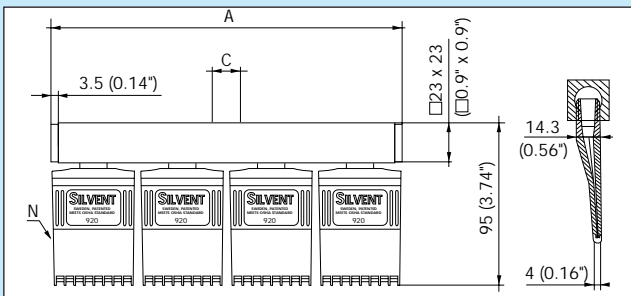
Three standard lengths are available from stock with 2, 4, or 6 nozzles. Meets OSHA safety requirements. Patented.



Above, a custom built air knife Silvent will quote you a price on an air knife especially designed for your application upon request.

For mounting brackets for air knives, see: Accessories.

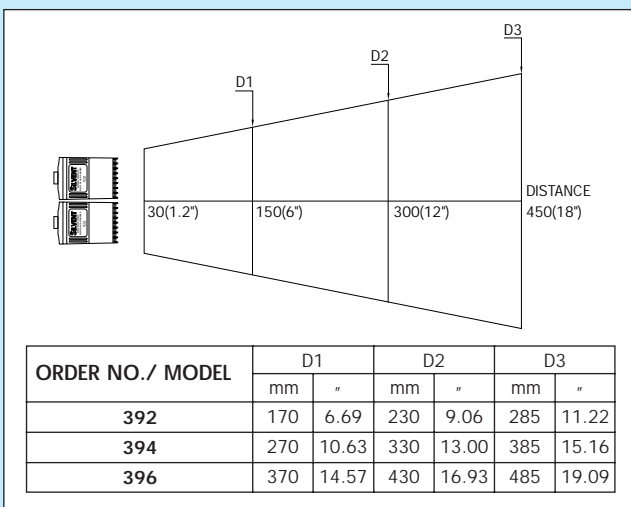
## DIMENSIONS



## PRODUCT INFORMATION

ORDER NO./ MODEL		392	394	396
A	mm	97	197	297
	"	3.82	7.76	11.69
C	BSP	3/8"	3/8"	3/8"
	NPT	3/8"-18	3/8"-18	3/8"-18
Nozzles = N	pcs.	2	4	6

## AIR CONE PATTERN



Replaces open pipe	mm	7	10	12
	"	9/32	3/8	1/2
Air consumption	Nm <sup>3</sup> /h	60	120	180
	scfm	35.3	70.7	106.0
Sound level	dB(A)	84	87	89
Blowing force	N	11.0	22.0	33.0
	oz	38.8	77.7	116.5
Max. temp.	°C	-20/+70	-20/+70	-20/+70
	°F	-4/+158	-4/+158	-4/+158
Weight	g	360	695	1005
	lbs	0.79	1.53	2.21
Nozzle material	Zinc			

Further information in: Technical specifications.

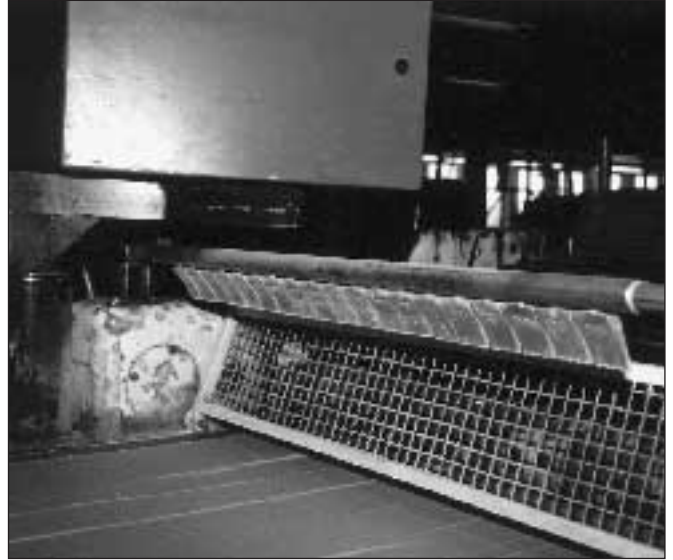
Max. operating pressure: 1.0 MPa (143 psi).

# APPLICATIONS



The picture shows an air knife blowing clean at a CNC machine used for machining the side piece of a camera housing at Hasselblad. The operation is accomplished with two flat nozzles mounted side by side in order to create a more uniform air jet.

Previously, the side piece was blown clean manually, but today this is performed with built-in automatic control - a true plus for the working environment.



Here, an air knife with twenty 920s installed at BELIN, France's leading biscuit maker. All together the company has seven lines equipped with Silvent air knives to blow away biscuit crumbs. The noise level in their production prior to the installation measured 90-94 dB(A). After Silvent air knives were installed, the noise level was halved, dropping to less than 82 dB(A).

## DESIGN YOUR OWN AIR KNIFE

An air knife for blow-off of dirt, debris, wood chips, or small metal chips is easy to design using the instructions below.

These calculations apply to air knives built with 920 flat nozzles.

### Air knives using 920 flat nozzles

- Determine the width (L) that must be covered and at what distance (A) the nozzles may be placed. Fig. 1.
- Calculate:  $B=0.35A + 52$  (when using mm)  
 $B=0.35A + 2.1$  (when using inches)
- Determine the number of nozzles required (n) using the formula:  $n = L / B$   
Round off the n value upwards to a whole number.
- The distance between the nozzles  $(c/c) = L / n$   
The first nozzle should be placed at one half the c/c value from the edge of the nozzle array.
- Use table 1 to find the recommended pipe diameter ( $\varnothing$ ).

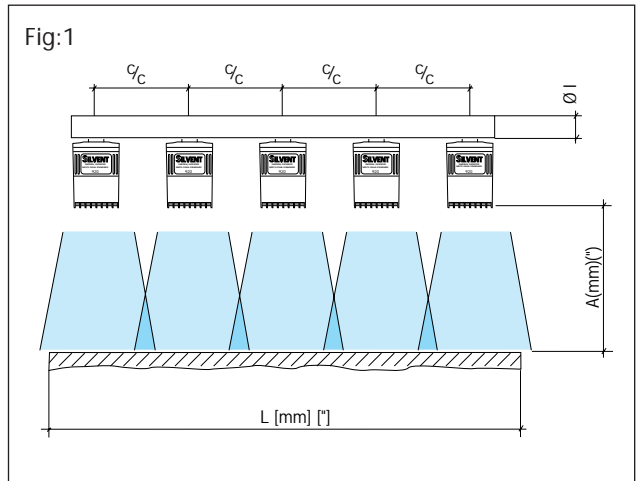


Table 1

Pipe inside diam. $\varnothing$	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"
Number of nozzles	1	3	6	14	25	57	101

**NB! Valid for feed from one side only.**