

Compressed Air Case Study:

AIR BLOW WASTE



ENERGY REDUCTION

ANNUAL COST SAVINGS
\$42,619

Challenge

Customer was using a large amount of air blow in various processes. Air blow is a one of the most common forms of waste in a large number of production facilities. Often an easy way to cut back on compressed air use is to analyze air blow applications to seek out more efficient alternatives.

Analysis

Air blow applications operating without nozzles have the potential to become much more efficient.

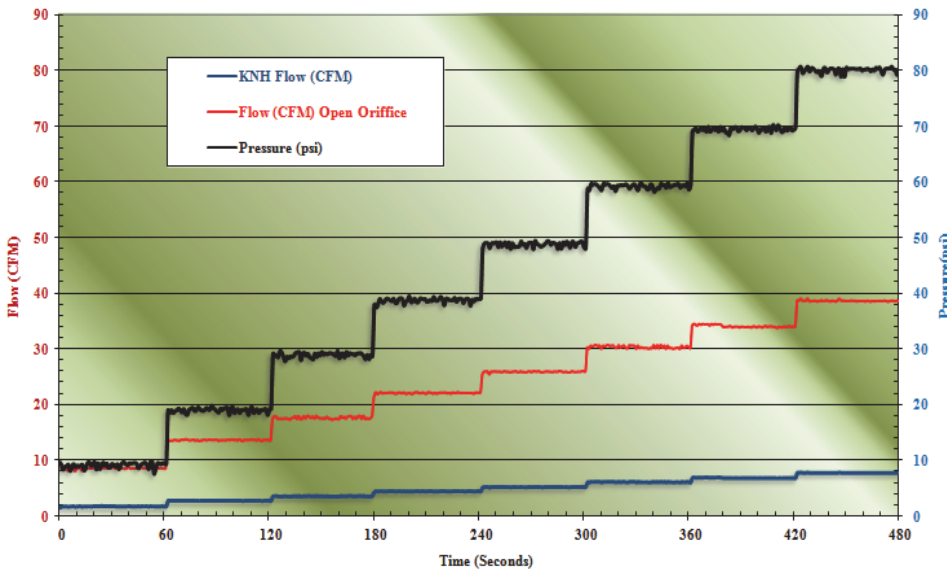
Recommendation

Replace existing open orifices with SMC's KNH high efficiency nozzle. 30-90% of air required for current air blow operation can be saved by replacing open orifices with high efficiency nozzles.

Implementation

As illustrated in the study below the KNH nozzle demonstrates considerable savings in comparison to the previous applications that were in place. Outfitting all 10 production lines with KNH nozzles resulted in \$42,619 annual energy savings.

Air Blow Test
SMC KNH High Efficiency Nozzle



Flow and Pressure Study		
Pressure	Open Orifice	KNH
10 psi	8 CFM	2.5 CFM
20 psi	14 CFM	3 CFM
30 psi	22 CFM	4.5 CFM
40 psi	25 CFM	5 CFM
50 psi	30 CFM	6 CFM
60 psi	34 CFM	7 CFM
70 psi	36 CFM	8 CFM
80 psi	38 CFM	9 CFM