

Finite Filters Greatly Reduce Automotive Plant's Maintenance and Energy Costs



Case Study

An automotive plant in the metro Detroit area turned to their compressed air filtration system to save energy costs. Filters that were downstream of the compressor were being changed twice a year. The cost to change the filters was \$36,000. Finite Filter recommended using a pleated coalescer in place of the competitive borosilicate microglass coalescing element. The Finite pleated coalescer, 7CVP media, had approximately four times the surface area of the competitive coalescer and was

estimated to last twice as long so that the plant only had to change elements once a year instead of twice a year. The initial pressure drop across the Finite 7CVP element was 0.04 psid dry, versus a pressure drop of 0.12 psid dry across the competitive element at the customer's flow rate. Such a difference in pressure drop helped aid in the plant being able to change the element out once a year, which amounted to estimated total costs of \$13,000, based on this change.

Background

With the rising costs of energy, automotive plants must stay focused on their expenditures on various types of maintenance for their central powerhouse. Two of the primary parts of the powerhouse are the compressor and dryer, and the company was specifically looking at maintenance costs that were being incurred during both the December

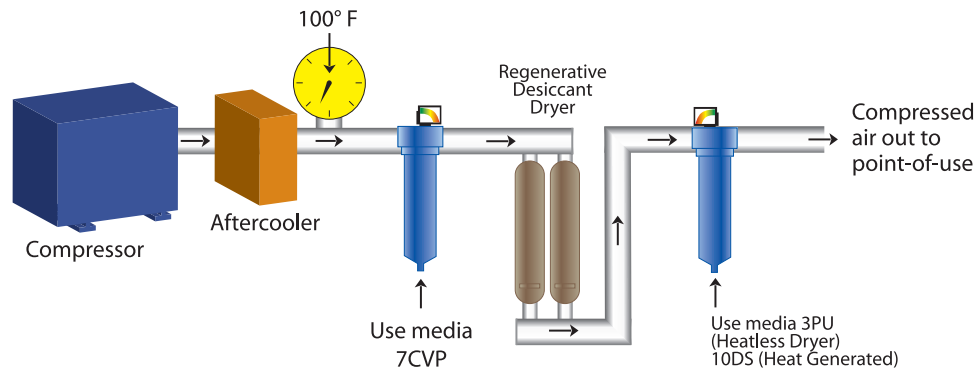
and July plant shutdowns. The compressor and desiccant dryer set up in the plant used a well-known manufacturer's coalescing filter element between the compressor and dryer and an after filter downstream of the desiccant dryer. The plant changed out the filter elements during both scheduled shutdowns every year.

Application

Located downstream of the compressor, coalescing filters are put in place to protect the desiccant dryer. Oil, water, and particulate from a compressed air line can compromise the life of the desiccant. Another filter is used after the dryer to capture any dust that could've been generated during operation. Any contamination that goes downstream could compromise compressed air point-of-use processes.

Changing to Finite's
pleated 7CVP
media filter element
reduced filter costs
from \$36,000/yr to
\$13,000/yr.





Parker Solution: Finite's Compressed Air and Gas Filters

The auto manufacturer saved over half of the annual filtration costs by installing Finite's 7CVP media into the competitor's housing. This coalescing media was installed after the compressor to protect the desiccant dryer from contamination. Finite's 3P media was placed downstream of the dryer to catch any desiccant dust that may have been generated during the drying operation.

Finite's Compressed Air and Gas Filters: H-Series

Finite's H-Series Specifications

Pressure	Up to 500 PSIG
Port Sizes	1¼" to 3" NPT
Flows	10 to 1600 SCFM at 100 PSIG
Max. Temp.	175° F (450° F option available)
Elements Available	Coalescing, Particulate, and Adsorption Media
Accessories	Optional indicators, gauges, and drains

For more information on this product, please see Finite's Bulletin 1300-993C/USA.



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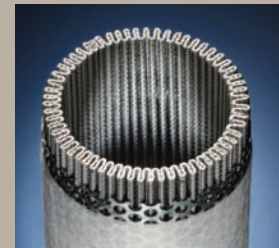
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 Bulletin 1300-MAP-0023

Filter Element Types Used in this Application

Media type 7CVP

Only available in 1 1/4" NPT port size housings and larger

Finite's 7CVP media consists of two filter layers between metal retainers. The outer layer removes aerosols while the inner layer traps solid particles, protecting and extending the life of the outer layer. This coalescing element is 99.5% efficient at 0.5 micron.



7CVP elements are used in bulk liquid coalescing applications or when relatively high efficiency and low pressure drop are required. A special 7DVP media is constructed the same way; however, it allows for higher temperature applications.

Media type 3P

Finite's 3P pleated cellulose element removes solid contaminants, with a 3 micron absolute rating. Because this element is designed to flow from outside to inside, it has a strong inner retainer that gives this element added strength.

