

Automotive Valve Supplier Saves US\$16,000 in Operating Costs with Air Knife Package



Problem:

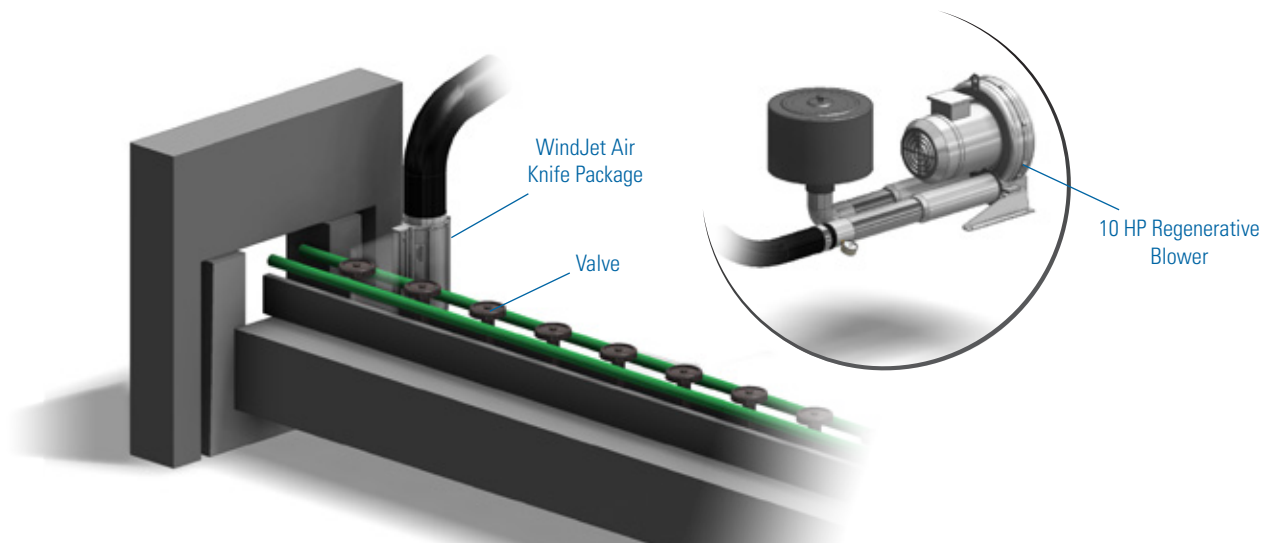
A supplier of intake and exhaust valves for the global automotive industry needed to blow dry its parts after they were machined and washed. The previous method of using compressed air through hydraulic spray nozzles in a blowoff box failed to completely dry the valves. It also proved to be costly to operate as machining lube blown out of the production area required cleanup.

The company required an air spray system that would improve the effectiveness of its valve-drying process, while reducing operating costs, most notably compressed air and manual labor.

Solution:

Spraying Systems Co. installed a 5 inch (127 mm) WindJet® air knife package in each of the valve supplier's eight production lines. The packages included a pressure relief valve, pressure gauge, air inlet filter, filter monitoring gauge, fittings and mounting accessories. Made with a corrosion-resistant finish for long wear life, the low-noise knives produced a uniform, high-volume and high-impact air stream along their entire lengths, eliminating any spotting or blotting. The leading edge of the air knives provided a visual guide for positioning the air stream for maximum impact.

Constructed of rugged cast aluminum, the lightweight, 10HP regenerative blower was reliable and required infrequent maintenance. It provided performance comparable to many multi-stage or positive displacement blowers and generated heated air through operation rather than a heating element. Using a dynamic operating principle that recycles a certain amount of air, the blower powered all eight of the air knives with continuous, non-pulsating and oil-free air flow.





Automotive Valve Supplier Saves US\$16,000 in Operating Costs with Air Knife Package – Continued

Results:

In addition to optimizing the overall valve-drying process, the energy efficiency of the WindJet® air knives eliminated the use of compressed air, thereby reducing the cost of operating the drying system by roughly US\$16,000 annually. This savings, coupled with the elimination of manual labor, helped the valve supplier achieve a payback period of less than nine months on the air knife package.

A CLOSER LOOK AT THE SYSTEM



The WindJet air knife package is powered by blower air, eliminating the use of compressed air and reducing operating costs



Spraying Systems Co.®
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