



Engine Block Blow-off System

Customer:

Durr Automation (Div of Durr A.G. Germany) - Detroit, Michigan www.durrautomation.com

Sonic Sales Partner:

Jim Freers - Axxo Sales axxo@comcast.net

Application:

Durr Automation had a multi-million dollar contract to build two complete automated machining, cleaning and handling systems for a new General Motors aluminum engine block. This turnkey system indexes the blocks between several stations with 15 to 30 second cycles where machining, coolant flushing and blow-off occur. At one location, the blocks are oscillated back and forth through the Sonic air knife zone. At another point, the blocks are rotated for maximum blow-off effectiveness and efficiency.

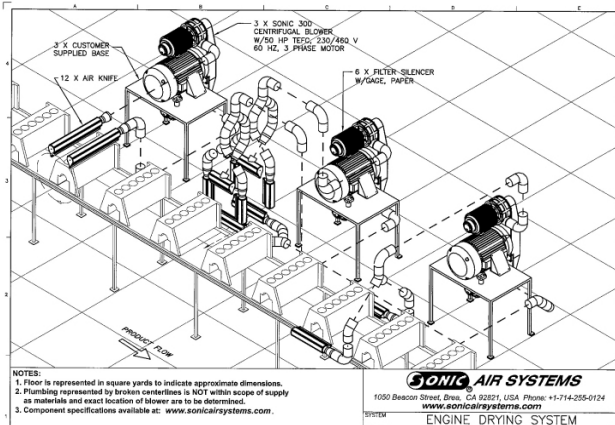
Previous method and associated problems:

Durr had routinely utilized large direct drive, single stage centrifugal "turbo" blowers with gear box step up for many years, but General Motors had recently reported to Durr that the size, weight, noise and service requirements of these types of blowers had become unacceptable. In addition to these blowers taking up valuable floor space, the frequent blower overhauls required several man hours of labor, and even more costly production down time. With these priorities, Durr then researched every blower and air knife manufacturer in North America and Europe to find the best product for G.M.'s needs.

The Sonic Engineered Solution:

(3) SONIC 300 50 HP BLOWERS & AIR KNIVES

Once Durr's investigation indicated that Sonic was the blower & air knife of choice for many other OEM's in the parts cleaning industry, and they discovered that Axxo Sales was also the same



The Sonic Engineered Solution: (cont)

company that was providing all of their spray nozzle products and engineering. Sonic was given the challenge of meeting this complex blow-off requirement. Sonic conducted sample testing on engine blocks in order to precisely select the optimum blower air knife combinations that were needed in order to provide Durr and G.M. with an Sonic Engineered Blower & Air Knife Solution. Durr also requested, and were provided with, a video disk of Sonic's testing to be certain that they were satisfied with the results. Upon qualifying Sonic's test results, Durr purchased the (3) complete SONIC 300 w/50 Hp motors, multiple Sonic SS XE air knives and all piping and manifolds to suit each of the two lines.



The quote drawing and photo shows (3) SONIC 300 w/50 Hp premium efficiency G.E. motors mounted side by side in a purpose built enclosure by Durr. The two blower heads of each unit are piped together in parallel at the outlet with (3) 6" headers delivering air to each Sonic manifold about 25' away. Sonic also consulted with Durr on the design of the enclosed blower cabinet which Durr built and, with the access doors closed, it operates at <85 dBA at 3 feet away. As a result of Durr's appeal for the smallest possible cabinet footprint, you can clearly see in the photo that Sonic was able to rotate each of the SONIC 300 bracket assemblies 90 degrees to the vertical position. This reduced the blower cabinet foot print to nearly 1/2 of the approximately 50 square feet of what (3) horizontally mounted SONIC 300's would require. Durr then constructed a heavy-duty horizontal shelf within the enclosure to support each 50 Hp motor without interfering with either the blower heads or inlet filters.

As a result of Durr Automation selecting a Sonic Blower/Air Knife system they delivered to G.M. a Sonic guaranteed blow-off and drying package that met all of G.M.'s low noise, low maintenance and minimum floor space requirements.