



Fast Facts

Company:

Autobell Car Wash in Charlotte, North Carolina.

Challenge:

Autobell's "Wheel Blaster" system was inefficient because it was difficult to adjust speed and settings.

Solution:

Livingston & Haven Automation Specialists used I/P to control speed by varying the delta P.

Results:

Although savings cannot be calculated in hard dollars, the system is expected to save Autobell a significant amount of money at each location.



Autobell "Wheel Blaster" System

Company

Autobell Car Wash is an automobile washing company that utilizes an automated vehicle washing system. Founded by Charles Howard, Autobell was established in Charlotte, N.C. in 1969 and has grown tremendously since that time. Autobell now has over 60 locations in Georgia, South Carolina, North Carolina and Virginia. Each site employs 20 to 30 people and can wash up to 120 automobiles per hour.

Challenge

Autobell employed a cylinder-driven, laterally-rotated pressure-washer, called a "Wheel Blaster." After an initial application of chemicals on the wheels and rims, a Photo Eye tracked the wheels of the car. Once the car was in position, the Wheel Blaster oscillated, washing and rinsing the rims and tires. The Wheel Blaster system was imperfect because the speed of the system was not easily adjustable to accommodate the quantity of vehicles washed per hour. Therefore, the settings were often inaccurate or ignored.

Solution

Autobell brought in Automation specialists from Livingston & Haven to improve the Wheel Blaster system. The specialists improved the function of the system by controlling the exhaust flow of the extension side of the cylinder by varying the pressure drop across and meter out-flow control, set for the lowest speed. The specialists knew that an I/P was neither a linear flow device, nor a real time flow monitor, but could be used effectively to control speed by varying the delta P. over an orifice.

System Benefits

- ◆ Simple electronic solution
- ◆ Low cost
- ◆ Accurate control from an HMI
- ◆ Not dependent on an attendant
- ◆ Can be set for select speeds or variables

About Livingston & Haven

Established in 1947, Livingston & Haven is the leading industrial technology provider in the Southeast. The company specializes in providing solutions in the automation, hydraulic, pneumatic, lubrication and connector industries. Headquartered in Charlotte NC, L&H utilizes a collaboration of engineers and industry-focused specialists to provide innovative productivity solutions for manufacturers.