Automotive, Marine and Planes









NextGen Industrial Polishing

Existing Challenges

Industrial polishing is used across a wide variety of market applications, including, most commonly, the production of cars, boats and planes. Polishing methods adopted today involve a person using a squeeze polish bottle in combination with a handheld polishing gun. Manufacturing plants deal with issues such as operator safety, finish quality, repeatability, and material waste as part of their normal procedures. These factors all impact a plant's overall productivity, and its ability to produce high quality goods in a predictable manner to maximize its output capabilities.



How the Project Started

Greer approached Acro to discuss their desires and insights in developing a new industrial polishing system that addressed the challenges described above. In collaborative consultation, we determined that an integrated Versagrip™ solenoid pinch valve and disposable tubing would offer significant benefits alongside Greer's new polishing system design. Using a pinch valve meant that dispensing of disposable polish material could be controlled, and change out could be done quickly and easily when needed. With this approach, Greer's new Thumbgun™ TG-DS Polishing System would directly address and offer significant improvements in:

- User safety from repetitive movement injuries
- Quality and reproducibility
- Cost savings from labor and polish material
- · Precision dispensing, reducing clean up and splatter
- Extension of use on polishing pads
- Employee morale by having a better tool

Benefits

- Improves user safety
- Predictable and reproducible quality
- Reduces labor, material and waste costs
- Simple and easy system to use
- Quick change-out of disposable materials

Markets

- Automobiles Cars, Motorcycles, RVs
- Marine Boats, Watercrafts
- Planes



Background

Polishing is a labor-intensive step of the refinishing process; the operator must stop to apply polish with one hand, put the bottle down, and start again in a production line environment. This is time consuming, cumbersome and has repetitive squeezing hand motions when the bottle is routinely dispensed in conjunction with a pneumatically-driven power tool. Being able to control the polish has many benefits in a production setting. Having the ability to press a trigger that is mounted to the polisher allows polish to be applied in an exact area with no need to carry a bottle.



The Solution

The TG-DS system has a prefilled cartridge system that can be recycled. To connect the cartridge, simply screw a prefilled cartridge onto the manifold. The polish in the cartridge is water-based and body shop safe; it has been formulated as a one-step polish, so there is no need to have three different polishes (coarse/ medium/ fine). A technician can change pads to meet the needs of the surface imperfections.

The TG-DS system is designed to work with regulated air pressure. Using industrial flex line, the polish is delivered by an electronic solenoid that is controlled by a microprocessor that can be set at any open and close interval, thus being able to control the amount of media needed for any application. All feed lines have quick disconnected couplers so there is no leakage of polish media if lines need to be changed or moved to another unit. The wire harness also has quick disconnect couplers. The trigger system attaches to the polisher and is captured by the existing handle mounting threads. When the trigger is pulled, it activates a switch that opens and closes the solenoid at precise timing, allowing media to flow onto the surface in a smooth and controlled manner.

As a result of these design improvements, the new TG-DS system now delivers improved safety, quality, predicability of material use, and simplicity of use. The system is also quickly setup and can be easily moved to other locations whenever necessary by a single operator.



The Thumbgun™ TG-DS System is proudly manufactured in California, USA. For further details on the TG-DS system, please visit the Greer website listed below.

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