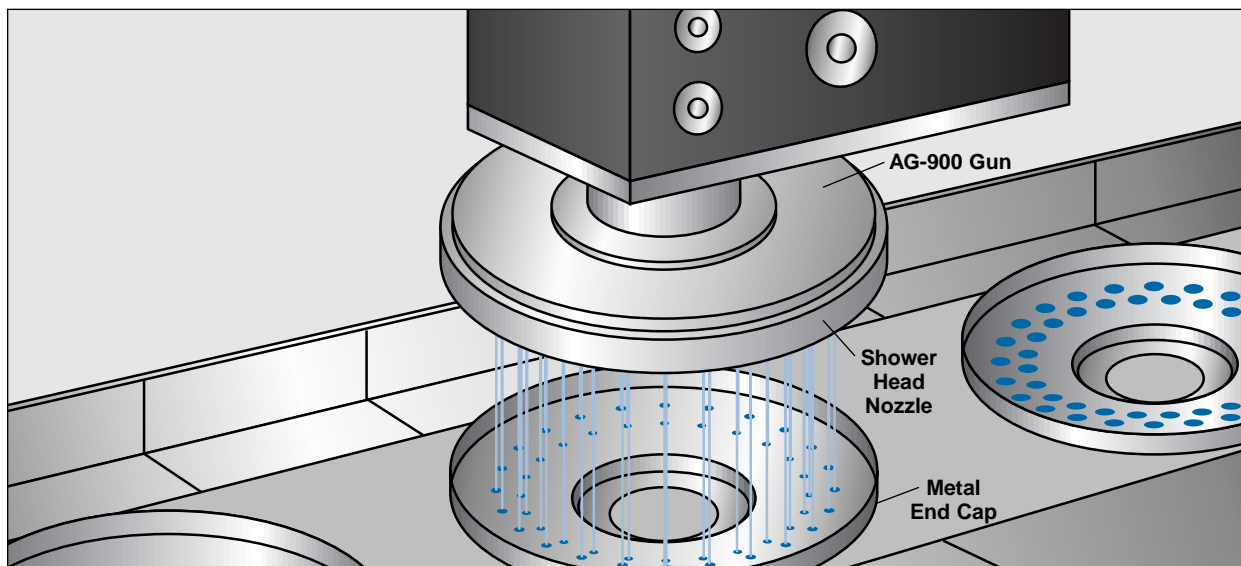


# FILTER MANUFACTURING SOLUTIONS

## SHOWER HEAD DISPENSING OF PLASTISOL FOR OIL FILTER END CAPS



### Situation

Oil filters are used to filter dirt and contaminants out of lubricating oil in automobile, heavy-duty vehicle, tractor and other gasoline engines. Engine oil, drawn from the oil pan and forced under pressure through the moving parts of an automotive engine, is designed to clean, cool, lubricate and seal the metal surfaces of the engine. However, the success of today's lubricating oil is dependent on the oil filter's effectiveness to remove dirt from engine oil.

The core of the oil filter media is constructed of chemically-treated paper that catches and holds dirt and contaminants while allowing maximum oil flow. The metal end cap is usually bonded to the paper media/wire mesh frame with an adhesive plastisol or other potting material. This material bonds the two surfaces together and also serves as a sealant.

Traditionally, the plastisol or potting material is dispensed in one of two ways: by using a fixed gun mounted above a spinning end cap,

or by moving a gun around the end cap. Because both methods require spinning or moving motions, these dispensing systems must have motion control for either the gun or the end cap to provide an equal distribution of plastisol about the inside of the metal end cap.

Considering the motion control and flexibility issues, current dispensing systems add to the complexity of the application and increase the likelihood of equipment breakdown or failure.

### Nordson Solution

The new Nordson system for dispensing adhesive plastisols simplifies the application process, and significantly reduces equipment maintenance. By using a specially-designed shower head gun, the system precisely dispenses material in a more uniform fashion, without the use of motion control to enhance substrate coverage time.

The Nordson dispensing system consists of a pump that siphons plastisol directly from bulk containers and pumps this material through

two hoses to two AG-900 guns equipped with a newly-designed shower head nozzle. In less than 3/4 of a second, this unique nozzle, which consists of 48 nozzle tips arranged in inner and outer rows, allows material to be dispensed to specific locations on small and large end caps. These material droplets flow together quickly to form a consistent layer of plastisol.

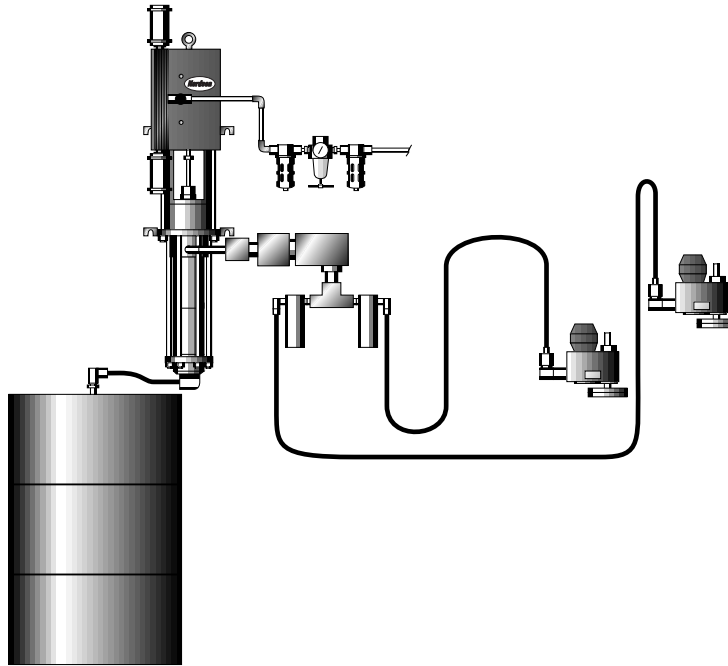
The AG-900 gun is configured with a threaded nipple-type shut-off valve, allowing attachment of any of three different sized shower head nozzles, that provide quick coverage of various-sized end caps.

This dispensing method simplifies the application process, provides for precision dispensing, reduces maintenance costs, and allows filter manufacturers to double production capability. These combined benefits result in systems that pay for themselves in one year or less in most cases.

(continued on reverse side)



# FILTER MANUFACTURING SOLUTIONS



The Nordson® Shower Head Dispensing System For Plastisols

## Benefits

- Shower head gun precisely dispenses material in a more uniform fashion, without the use of motion control to enhance substrate coverage time.
- Production capability is doubled.
- New process reduces maintenance costs and downtime associated with traditional dispensing methods involving spinners, robots or other automation options.
- Material leakage on the center flange or on the outer edge of the metal end cap is eliminated.

## Backup That Keeps You Productive

Nordson offers a broad range of application equipment to tailor a system that is right for you.

Our promise of customer satisfaction is backed by a team of application engineers, sales specialists and service technicians. The Nordson Package of Values™ helps keep you productive and profitable with local sales and service support, readily available parts, comprehensive product manuals and customer training programs.

Nordson reserves the right to make design changes to products to improve their function. These changes may occur between printings.



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