WASHER NOZZLES
FOR AUTOMOTIVE CLEANING SYSTEMS
END-TO-END SOLUTION
One partner for every step of your project

1
CONCEPT & DEVELOPMENT

Simulation systems
Installation space verification

CAD analysis
Spray angle analysis
Cross section investigation

2
PROTOTYPE & PRE-SERIES

Prototype creation
Prototype tests on real vehicles

WET ARM NOZZLE
CHMSL NOZZLE
UNDER HOOD NOZZLE ASSEMBLY
At ARaymond we are equipped with the tools and capabilities necessary to develop and deliver end-to-end cleaning system solutions. From the initial design analysis to the industrialization of the product, all steps are managed in-house. Our start-to-finish approach allows us to develop complete cleaning system solutions adapted to each customer’s specific needs.
APPLICATION POSSIBILITIES

Mounted on or under the hood of the car, on the cowl, in the stop lamp, or on the arms, our nozzles can accommodate all front and rear windshield applications, as well as cleaning solutions for cameras and sensors.

Optimized cleaning results
Windshield, sensors and cameras always cleaned and operational
Efficient water management
Integrated functions: heating, non-return valves, ...

OPTIMIZED SAFETY WHEN SCREEN WASHING

Wet wiper arm nozzle
The nozzle is directly integrated in the wiper arm to allow a better and more secure cleaning of the windshield mirror cameras
- Optimized aerodynamics and design thanks to the nozzle’s integration into the wiper arm and the integration of the wiper blade holder onto the nozzle
- Secure cleaning with spray jet with different water outlets, no vision obstruction for the car driver
- Efficient water consumption
- Easy serviceability of the wiper blade

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The rapid evolution of smart, connected and autonomous cars require more sensors and cameras to ensure proper functionality of the Advanced Driver Assistance Systems (ADAS). These sensors and cameras must always be clean to function properly. At ARaymond, we are developing a combination bracket solution that incorporates the camera or sensor, the cleaning system for the lens, and high-speed data connection all into one module. This complete system reduces tolerance stack-up to provide an efficient package and optimized cleaning performance. With different attachment options, the system is easily removable for service. The lightweight bracket can provide adjustment settings to allow for fine-tuning the system to meet OEM specific interfaces. Our goal is to provide innovative solutions adapted for future customer challenges.

ARaymond supports you from project definition through to the start of production and beyond.

CAMERA CLEANING SYSTEM

Hook fastening system that is easy to assemble, optimized water consumption, and an integrated check valve.

- Individual attachment to OEM interface
- Integrated cleaning system and accessories
- Safe data connection
CUSTOM DEVELOPMENT FOR NOZZLES

All ARaymond™ nozzles and cleaning systems are designed, developed, and manufactured in-house to respond to specific customer requests.

WASHER NOZZLE ASSEMBLIES

Together, our spray nozzles, couplings, connectors, integrated hose check valves, and hose fastening solutions cover the entire nozzle assembly according to our customers’ requests.

POINT SPRAY

- Front nozzle
- Rear nozzle
- Wet arm nozzle
- Camera sensor nozzle

- Better cleaning at high speed

FAN SPRAY

- High and low speed spray pattern

COMBINATION SPRAY

- Low water consumption

INTEGRATED FUNCTIONS

- With non-return valve
- Ball adjustment to orientate the spray pattern
- Heating and seal

- With hose, seal and non-return valve
- With hose, quick connector, grommet and non-return valve

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MODULAR CONNECTING SOLUTIONS

Our modular system enables us to offer you any connecting profiles of nozzles, connectors and valves common in the market.

**UNIONS**

What does a union do?
Unions are needed to joint two or more tubes together.

**QUICK CONNECTORS**

What does a quick connector do?
Quick Connectors allow quick and consistent joining of components. They also allow disassembly by releasing the mechanical locking feature of the QC.

**NON-RETURN VALVES**

What does a non-return valve do?
Non-return valves allow fluid flow in one direction only, and prevent the tubes from draining after activation.

**STANDARD TUBE INTERFACE BARBS**

- Nylon corrugated
- EPDM
- Quick Connector (male)