MASTER CATALOGUE

Industrial Dust Solutions

REDSHIFT ENVIRONMENTAL SYSTEMS (I) PVT. LTD.

Quality Engineering in Most Economic Ways
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SOLUTION FOR POLUTION
R E S
REDSHIFT
ENVIRONMENTAL
SYSTEMS (I) PVT. LTD.

Company Overview & Solution Portfolio

Redshift Environmental Systems (I) Pvt. Ltd. supplies industrial air-pollution-control and dust-suppression solutions. This concise catalogue brings the supplied catalogue and presentation content together, with product photographs placed beside the relevant topics.

- **Dust extraction and filtration systems**
- **Automated plant roadline dust suppression**
- **Nozzle-based mist and dry fog systems**
- **Fixed, mobile and truck-mounted fog cannons**
- **Headers, manifolds, spray assemblies and filtration**
- All Types of Sprinklers and Rainguns
- All Types of Nozzles
- Dust Suppression System
- Solar Panel Cleaning System
- Irrigation System
- Air Pollution Control System
- Water and Wastewater Treatment System
- Haul Road Sprinkling System
- Industrial & Vehicle Washing System
- Pipe Fittings & Accessories
- Environmental Monitoring System
- Dairy Fogger System
- Humidifier System
- Pumps – Complete Range
- Valves – Complete Range
- Control Panels & Automation
- Spare Parts & Consumables
- Chemicals & Treatment Media
- AMC & Maintenance Services
- Environmental Consultancy

NOZZLE CATALOGUE

Compact product guide • Mist, spray and dust-suppression nozzles

RS/PJ/01



- Pressure: 3-4Kg/Cm2
- Coverage: 0.5 m
- Area: 0.6m2
- Flow: 0.5LPM

RS/TZ/01



- Pressure: 3-5Kg/Cm2
- Coverage: 0.6 m
- Area: 0.8m2
- Flow: 1.5LPM

RS/PJ/02



- Pressure: 3-5Kg/Cm2
- Coverage: 0.5 m
- Area: 0.6m2
- Flow: 0.5LPM

RS/ZT/02

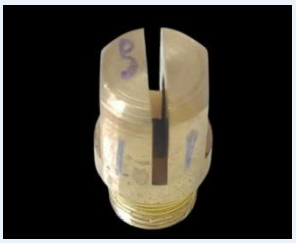


- Pressure: 3-5Kg/Cm2
- Coverage: 0.2 m
- Area: 4m2
- Flow: 5LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles

RS/UT/01



- Pressure: 3-5Kg/Cm2
- Coverage: 4mX6m
- Area: 24m2
- Flow: 12.5LPM



- Pressure: 2-5Kg/Cm2
- Coverage: 1mX.6m
- Area: 1m2
- Flow: 0.5LPM

RS/DS/01



- Pressure: 2-5Kg/Cm2
- Coverage: 1mX.6m
- Area: 1m2
- Flow: 0.5LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles

RS/ZT/01



- Pressure: 2-5Kg/Cm2
- Coverage: 3.5mX1.2m
- Area: 4.2m2
- Flow: 8LPM

RS/ZT/03



- Pressure: 2-5Kg/Cm2
- Coverage: 3mX1.5m
- Area: 4.5m2
- Flow: 1.5LPM

RS/YT/04



- Pressure: 2-5Kg/Cm2
- Coverage: 2mX4m
- Area: 8m2
- Flow: 14LPM

RS/HL/01



- Pressure: 2-5Kg/Cm2
- Coverage: 2.2 m
- Area: 2m2
- Flow: 6LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles

RS/OL/03



- Pressure: 2-5Kg/Cm2
- Coverage: 1.5 m
- Area: 2m2
- Flow: 4LPM

RS/OL/01



- Pressure: 2-5Kg/Cm2
- Coverage: 1.8 m
- Area: 2m2
- Flow: 3.5LPM

RS/OL/08



- Pressure: 2-5Kg/Cm2
- Coverage: 3 m
- Area: 3.2m2
- Flow: 6LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles

RS/OL/07



- Pressure: 2-5Kg/Cm2
- Coverage: 2 m
- Area: 2.2m2
- Flow: 6.5LPM

RS/OL/05



- Pressure: 2-5Kg/Cm2
- Coverage: 2 m
- Area: 2.2mn2
- Flow: 3.5LPM

RS/OL/06



- Pressure: 2-5Kg/Cm2
- Coverage: 2.5 m
- Area: 3m2
- Flow: 4LPM

RS/OL/09



- Pressure: 2-5Kg/Cm2
- Coverage: 2.8 m
- Area: 3.1m2
- Flow: 10LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles

RS/OL/10



- Pressure: 2-5Kg/Cm2
- Coverage: 2.0 m
- Area: 2.2m2
- Flow: 8LPM

RS/FS/02



- Pressure: 2-5Kg/Cm2
- Coverage: 2.9 m
- Area: 3.3m2
- Flow: 25LPM

RS/FS/03



- Pressure: 2-5Kg/Cm2
- Coverage: 2.8 m
- Area: 3.2m2
- Flow: 25LPM

Nozzle Model 24



- Pressure: 2-5Kg/Cm2
- Coverage: 4 m
- Area: 4m2
- Flow: 7LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles

RS/SP/01



- Pressure: 2-5Kg/Cm2
- Coverage: 2.8mX3m
- Area: 6m2
- Flow: 25LPM

RS/FN/01



- Pressure: 2-5Kg/Cm2
- Coverage: 10m
- Area: 12m2
- Flow: 10LPM

RS/SN/01



- Pressure: 2-5Kg/cm2
- Coverage: 3 m
- Area: 3.5m2
- Flow: 0.5LPM

RS/SN/02



- Pressure: 2-5Kg/Cm2
- Coverage: 3 m
- Area: 3.2m2
- Flow: 3LPM

NOZZLE CATALOGUE — CONTINUED

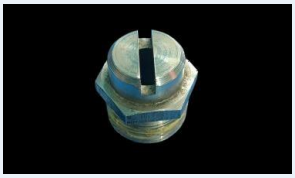
Compact product guide • Mist, spray and dust-suppression nozzles

RS/YT/03



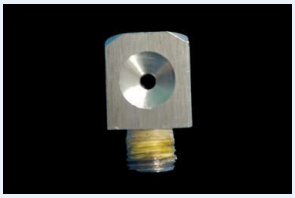
- Pressure: 2-5Kg/Cm2
- Coverage: 3mX5m
- Area: 15m2
- Flow: 17LPM

RS/YT/05



- Pressure: 2-5Kg/Cm2
- Coverage: 3mX4m
- Area: 12m2
- Flow: 15LPM

RS/TZ/04



- Pressure: 2-5Kg/Cm2
- Coverage: 1.5 m
- Area: 3m2
- Flow: 5LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles



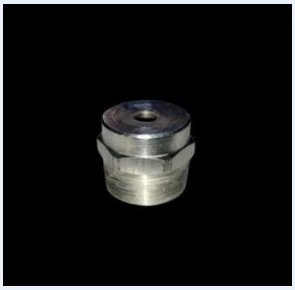
• Pressure: 2-5Kg/Cm2
• Coverage: 1.5 m
• Area: 3m2
• Flow: 5LPM

RS/SB/01



• Pressure: 5-6 Kg/Cm2
• Coverage: 5.8 m
• Area: 3 m2
• Flow: 4.1 LPM

RS/SS/02



• Pressure: 5-6 Kg/Cm2
• Coverage: 2.8 m
• Area: 4.2 m2
• Flow: 4.4 LPM

RS/OL/10



• Pressure: 5-6 Kg/Cm2
• Coverage: 3.4 m
• Area: 9 m2
• Flow: 5 .1 LPM

NOZZLE CATALOGUE — CONTINUED

Compact product guide • Mist, spray and dust-suppression nozzles

RS/SS/03



- Pressure: 5-6 Kg/Cm2
- Coverage: 2.5 m
- Area: 3 m2
- Flow: 4.6 LPM

RS/TC/02



- Pressure: 5-6 Kg/Cm2
- Coverage: 2.8 m
- Area: 2.9 m2
- Flow: 6 LPM

RS/OL/11



- Pressure: 5-6 Kg/Cm2
- Coverage: 4.8 m
- Area: 2 m2
- Flow: 1.7 LPM



- Pressure: 5-6 Kg/Cm2
- Coverage: 4.8 m
- Area: 2 m2
- Flow: 3 LPM

Specifications are summarised from the supplied product catalogue. Confirm final model data and operating conditions before selection.

SPRINKLER CATALOGUE

Compact product guide • Irrigation sprinklers

RS/SPB/05



- Connection: 3/4” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 10m for higher
- Rotation: 360 deg

RS/SPB/02



- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 9 m for higher
- Rotation: 180 deg

RS/SPB/04



- Connection: 3/4” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 8 m for higher
- Rotation: 180 deg

RS/SPB/06



- Connection: 3/4” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 9 m for higher
- Rotation: 360 deg

SPRINKLER CATALOGUE — CONTINUED

Compact product guide • Irrigation sprinklers

RS/SPB/03



- Connection: 3/4” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 8 m for higher
- Rotation: 360 deg

RS/SPP/03



- Connection: 3/4” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 9 m for higher
- Rotation: 360 deg

RS/SPP/04



- Connection: 3/4” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 9 m for higher
- Rotation: 180 deg

RS/SPB/01



- Connection: 1/2” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 10 m for
- Rotation: 360 deg

SPRINKLER CATALOGUE — CONTINUED

Compact product guide • Irrigation sprinklers

RS/SPP/01



- Connection: 1/2” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 9 m for higher
- Rotation: 360 deg

RS/SPP/02



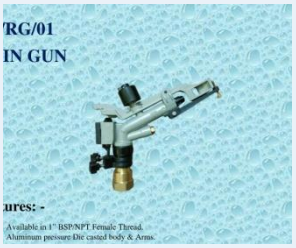
- Connection: 1/2” BSP/NPT male threaded
- Pressure: 2.0 - 4.0 kg/cm* or
- Spacing: 5 m for higher
- Rotation: 180 deg

Specifications are summarised from the supplied product catalogue. Confirm final model data and operating conditions before s election.

RAINGUN CATALOGUE

Compact product guide • Field irrigation and plant dust suppression

RS/RG/01



- Connection: 1” BSP/NPT Female Thread.
- Pressure: 2-5 Kg/cm2.
- Spacing: 20 m for higher distributor uniformly.
- Full/part-circle options

RS/RG/02



- Connection: 1.25” BSP/NPT Female Thread.
- Pressure: 2-5 Kg/cm2.
- Spacing: 30 m for higher distributor uniformly.
- Full/part-circle options

RS/RG/03



- Connection: 1.5” BSP/NPT Female Thread.
- Pressure: 2-5 Kg/cm2.
- Spacing: 36 m for higher distributor uniformly.
- Full/part-circle options

RS/RG/04



- Connection: 2” BSP/NPT Female Thread.
- Pressure: 2-5 Kg/cm2.
- Spacing: 36 m for higher distributor uniformly.
- Full/part-circle options

RAINGUN CATALOGUE — CONTINUED

Compact product guide • Field irrigation and plant dust suppression

RS/RG/05



- Connection: 2.5” BSP/NPT Female Thread.
- Pressure: 2-5 Kg/cm2.
- Spacing: 36 m for higher distributor uniformly.
- Full/part-circle options

RS/RG/06



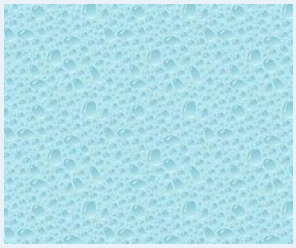
- Connection: 1.5” BSP/NPT Female Thread.
- Pressure: 2-5 Kg/cm2.
- Spacing: 30 m for higher distributor uniformly.
- Full/part-circle options

RS/RG/08



- Connection: 2.5” BSP/NPT Female Thread.
- Pressure: 2-5 Kg/cm2.
- Spacing: 36 m for higher distributor uniformly.
- Full/part-circle options

RS/RG/08



- Recommended pressure: 2–5 kg/cm²
- Full/part-circle options

Specifications are summarised from the supplied product catalogue. Confirm final model data and operating conditions before selection.

Dust extraction equipment and ducting

1. ID FAN



PENUMATIC CYLINDER



SOLONOID BOX



ROTARY VALVE







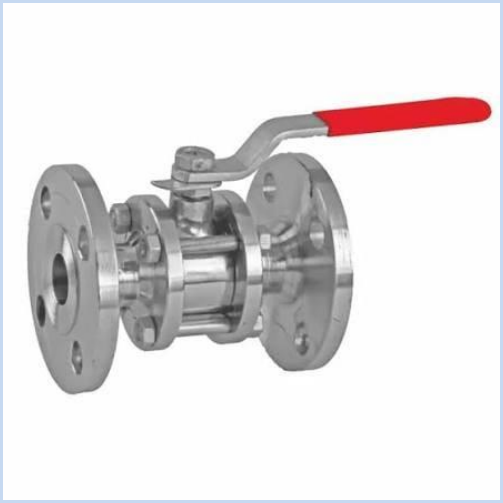
AIR RECIVER



VALVES









Dust Extraction Systems

Dust extraction captures dust-laden air close to the process and conveys it through ductwork to a collector. The system is selected according to the process, dust characteristics, airflow, layout and operating conditions.

Typical equipment

- Capture hoods and pickup points
- Main and branch ducts, elbows, transitions and supports
- Balancing dampers for airflow adjustment
- Bag filter / baghouse or cartridge dust collector; cyclone pre-separator where suitable
- Filter-cleaning system, hopper and dust discharge equipment
- Exhaust fan, motor, control panel and operating instruments



Dust collector with connected ductwork







Industrial hoods and duct network

Applications

Cement and minerals, metal fabrication, woodworking, grain and feed handling, foundries, powder processing, silos, hoppers and conveyor transfer points.

Engineering inputs: dust type and loading, pickup-point locations, airflow, temperature, humidity, available space, discharge requirements, electrical supply and safety requirements. Combustible, toxic, hot or reactive dust requires a dedicated hazard assessment.

2. Plant Roadline Dust Suppression — Automated Rainguns

A pressurised raingun network sprays water over haul roads, plant roads and material yards. The layout is divided into zones so that the pump, piping and control system can be selected for the required coverage.



Roadside dust suppression with water spray



Raingun spray coverage on an industrial road

Main components

- High-head / multistage centrifugal pump skid
- Sand media filter and flanged twin-disc filter
- GI mainline, sub-mainline and manifold
- Pressure gauges, NRVs, bypass and zone-control valves
- Rainguns, PLC/control panel and manual override

Pump and manifold arrangement

Control panel for automated operation

Coal yerd sprinkling system



3. Nozzle-Based Mist & Dry Fog Systems

Mist and dry-fog systems place nozzle headers near dust-generating points to help airborne particles combine and settle. They are suited to transfer points and process equipment where targeted control is preferred.

Fine spray from a nozzle header

Industrial mist application at a material handling point

Technology options

- Ultrasonic / dual-fluid dry fog: source-stated air pressure about 5 bar, water pressure about 1 bar and droplet size 1–10 µm.
- High-pressure hydraulic mist: source-stated pressure about 80–100+ bar and droplet size about 30–60 µm.

System components

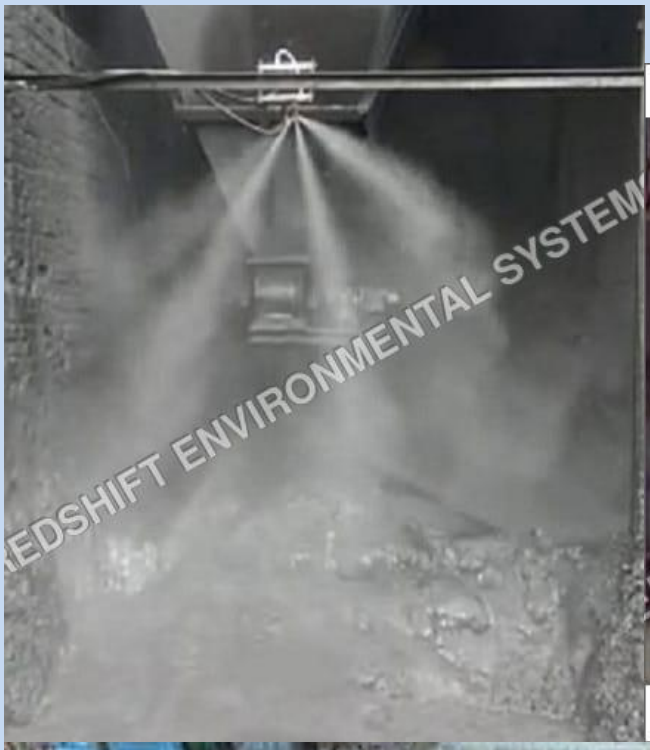
- Nozzle headers or nozzle frames installed near emission points
- Water filtration cabinet, with source describing filtration down to 5 microns
- Air and water supply, regulators and control valves
- PLC controls and optional sensors / proportional control

Nozzle/header assembly

Typical applications

Conveyor transfer points, crushers and screens, wagon tipplers, hoppers, coal handling, cement, steel and port operations.

The source presentation states very low moisture addition and high particulate reduction. Results depend on dust properties, enclosure, nozzle selection, water/air quality and commissioning; validate performance for each application.







4. Fog Cannon Dust Suppression Systems

Fog cannons project a fine water mist over open areas and material stockpiles. They may be supplied as fixed units, mobile trailer-mounted units or truck-mounted systems.



Mobile fog cannon unit



Fog cannon for open-area dust control

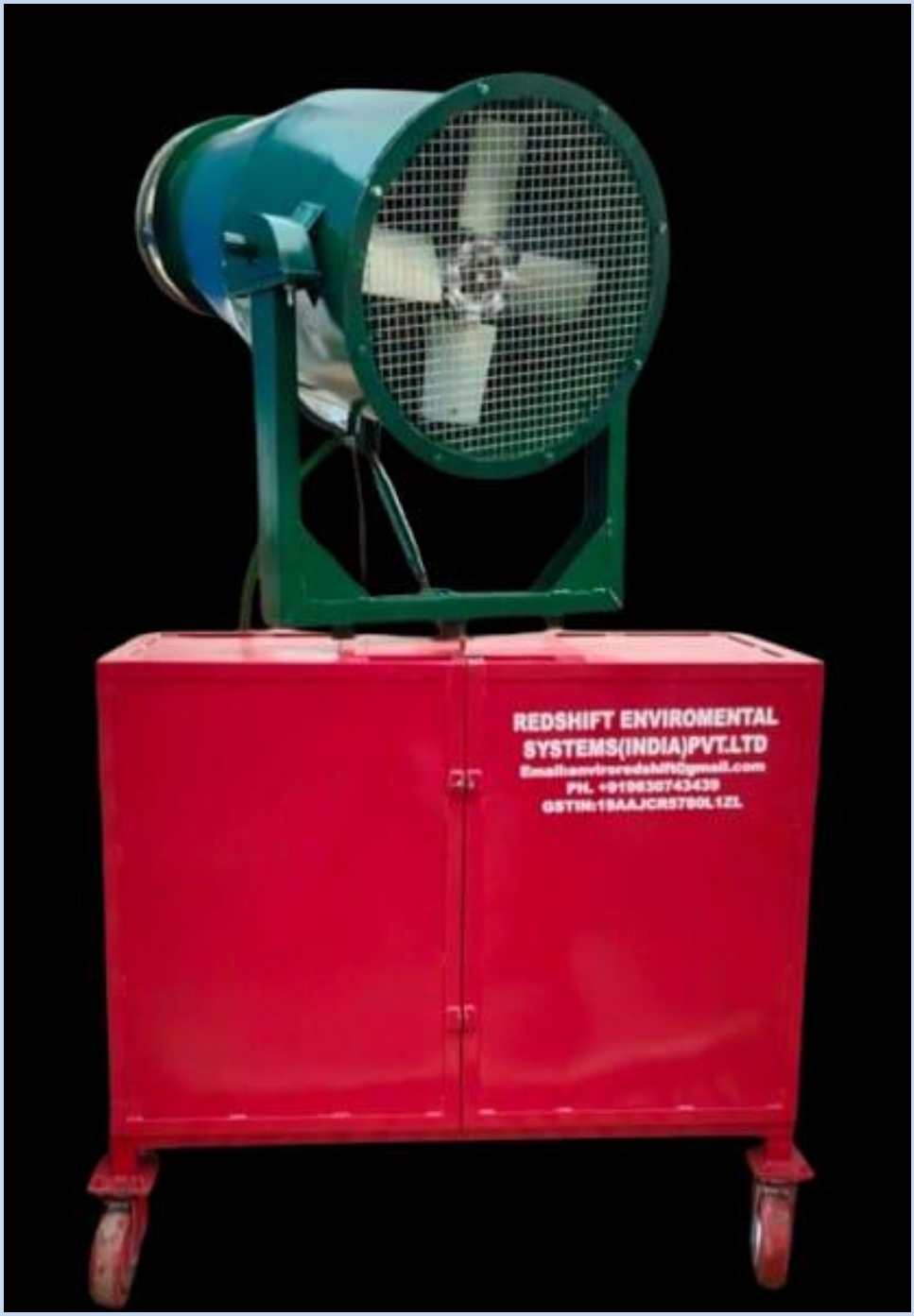
Main components & features

- Fan and nozzle ring / high-pressure spray nozzles
- Water pump; source-stated nozzle pressure range 10–30 bar
- Turret rotation up to 360° and pitch range stated as −10° to +45°
- Fixed, mobile or truck-mounted configuration
- PLC / SCADA options, remote control and optional weather sensors

The source presentation states a throw range of 20–150+ m and optional RF remote operation up to 500 m. These are configuration-dependent figures; confirm the actual model, site conditions and performance requirements.



Fog cannon installation



Compact fog cannon unit

The presentation mentions a one-year warranty and AMC. Final warranty coverage and service conditions should be confirmed in the commercial offer.

5. Headers, Manifolds & Mist Spray Assemblies

Redshift's supplied header catalogue shows configurable spray and distribution assemblies for mist, dry fog and water-spray applications. Selection depends on nozzle type, number of outlets, material compatibility, pressure and installation arrangement.





Header assemb



lies prepared for installation

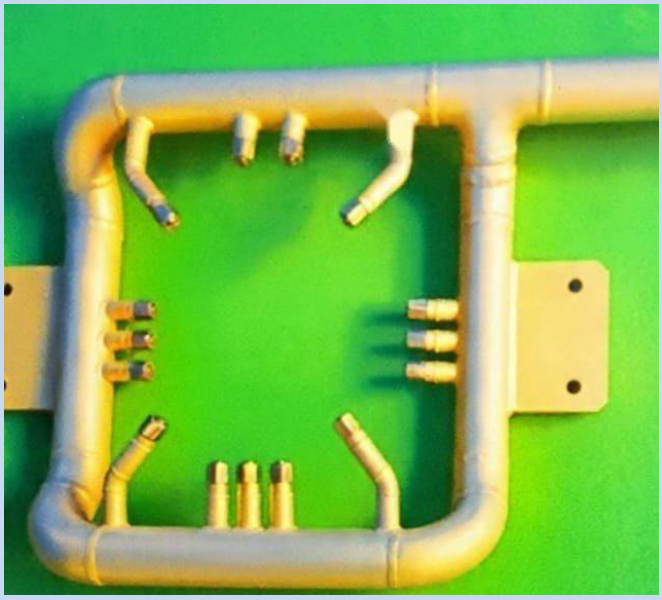




Multiple header and pipe assemblies

Configurations shown in the supplied catalogue

- Stainless-steel dry-fog headers
- Nozzle-frame headers and GI multi-outlet headers
- Stainless-steel headers with hose assemblies
- Headers with control valves and mist-spray assemblies
- Inline / duplex filtration options, where required



Spray manifold / header arrangement



ABC WATER SPRAY GUN





6. Filtration, Controls & Project Support

Filtration protects nozzles and helps maintain consistent operation. The supplied materials refer to sand media filters, twin-disc filters, inline filters and duplex filters. Filter grade and arrangement should be selected from the water-quality analysis and nozzle requirements.







Industrial filtration equipment

Typical project scope

- Application review and system layout
- Equipment and component selection
- Pump, piping, header and nozzle supply as quoted
- Control panel / PLC integration where specified
- Installation, commissioning and operator handover where included
- Service support and AMC according to agreed terms

Information needed for a proposal

- Plant layout and dust-source locations

- Dust / material type and operating conditions
- Required coverage area or airflow
- Water and compressed-air availability and quality
- Electrical supply, automation preferences and access constraints
- Applicable site safety and environmental requirements

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"Quality Engineering in Most Economic Ways"