



"INNOVATION • QUALITY • RELIABILITY"

SARVESHA ASSOCIATES INDIA PVT LTD.

DESCALING & UNLOADING VALVES (40-50NB)

Overview:

Valves are mechanical devices used to control, regulate, and direct the flow of fluids (liquids or gases) by opening, closing, or partially obstructing passages. They help maintain pressure, flow rate, and system safety, and are essential in industrial, hydraulic, and process applications.

Valve Specifications

- Valve Size: 40–150NB
- Working Pressure: Up to 315 Bar
- Water Flow Rate: 600–6000 LPM
- Pressure Capability: High Pressure
- Inlet & Outlet Connection: 1½" to 6" SAE 6000 PSI /DIN Flange
- Operation Type: Pneumatic Operated
- Air Pressure Required: 4–7Bar
- Body Material: Forged Steel
- Seat Type: Soft Seat
- Actuator Design: Balanced or pilot-operated

Cylinder Specifications

- Cylinder Bore: 100mm – 300 mm
- Stroke Length: 25 mm–125mm
- Material: SS304



Industries

- Steel & Metal Processing Industry

Applications

- Slab & billet descaling – used as an on/off valve for descaling headers in High capacity steel mills.
- Unloading valve – diverts pump flow to tank when descaling is not active, protecting high-pressure pumps from dead-heading.
- Test benches – cyclic testing of components under high pressure.

Application

- Cleaning of large tanks
- Chemical Tanks
- Pharmaceutical Tanks
- Food Processing Tanks

ROTARY JET HEAD FOR TANK CLEANING NOZZLE (FOUR JETS)

Specifications

Nozzle Type: Rotary Spraying
Thread Size: Upto 1" BSP
Connection type: Female Thread
Material: Stainless Steel
Spray Angle: 360° Rotary Jet
Operating Pressure: 3 – 20 Bar
Temperature: Up to 100°C

Spray Characteristics:

Spray Pattern: Dual Opposing Rotary Jets
Rotation: 360° Horizontal Rotation
Cleaning Pattern: Spiral Rotary Cleaning
Mounting Position: Vertical
Number of Nozzles: 2 Opposing Jets



Application

- Food & Beverage Tanks
- Dairy Industry

ADJUSTABLE AIR ATOMIZING NOZZLE

Specifications

Thread Size: 1/4" BSP

Spray Angle: 15° - 110 °

Connection type: Female Thread

Material: Stainless Steel

Air Pressure

- Operating Pressure: 1 – 6 bar

Water Pressure

- Operating Pressure: 0.2 – 3 bar

Spray Characteristics:

Spray Pattern: Mist type.

Spray Shape: Circular/Wide Rectangular

Droplet Size: 20 µm to 100 µm

Distribution: Uniform / Even Distribution



FULL LIFT RELIEF VALVE

Valve Specifications

- Valve Type: Full Lift Relief Valve
- Connection Size: G 1 ½"
- Relief Valve Set Pressure: 260–270 Bar
- Set Pressure: 250–270Bar
- Working Temperature: Up to 80°C
- Body Material: SS304
- Seat Type: Soft Seat/Hard Seat
- Function: Over-pressure Protection / Pressure Relief
- Operation: Spring Loaded / Pressure Operated



Industries

- Steel & Metal Processing Industry
- Power Plants & Energy Sector
- Oil & Gas Industry
- Hydraulic Equipment Manufacturing
- Water Jet & High-Pressure Cleaning Systems

Applications

- High Pressure Pumps – Primary overpressure protection
- Storage tanks – API tank pressure/vacuum relief
- High Pressure Pumps – Primary overpressure protection
- Storage tanks – API tank pressure/vacuum relief

CARTRIDGE ASSEMBLY

Valve Specifications

- Product Type: Cartridge Assembly
- Size Range: 50–150 NB
- Pressure Range: Up to 350 / 400 Bar
- Working Temperature: Up to 80°C
- Body Material: SS304
- Seat Type: Soft Seat
- Function: Pressure Control, Unloading & Descaling Operation
- Operating Media: Water



Industries

- Steel & Metal Processing

Applications

- Steel Plants & Rolling Mills
- Descaling Systems
- High Pressure Pump Systems
- Hydraulic Power Units
- Industrial Water Jet Systems

NOZZLES

Overview:

Nozzles are devices used to control, direct, and modify the flow of fluids (liquids or gases) by shaping the discharge into a specific pattern or velocity. They help achieve efficient distribution, pressure control, and spray performance, and are widely used in industrial, automotive, and process applications.

Full Cone Nozzle

The jet imprint of full cone spray nozzles is a solid, circular pattern with uniform distribution across the entire spray area.

There are also many types of full cone nozzles: spiral, with or without swirl, narrow spray, cluster, small, large or high flow, tangential, Cleanable.

Flat Cone Nozzle

The jet imprint of flat cone spray nozzles is a uniform, flat fan-shaped pattern, providing even distribution across a defined width for effective surface coverage.

CLEANING TANK FULL CONE SPRAY NOZZLE

Specifications

Thread size: 1/4", 1/2", 3/8" BSP

Connection type: Male Thread

Spray angle: 45° – 90°

Material: SS / Brass

Operating Pressure: 2-5 bar

Temperature: 80-100°C



Application:

- High Impact Washing and Cleaning
- Surface treatment
- Dust suppression

NARROW FULL CONE SPRAY NOZZLE

Specifications

Thread Size: 1/8" to 1" BSP

Spray Angle: 15° – 30°

Connection type: Male Thread

Material: Stainless Steel /Brass Operating

Pressure: 2-10 bar

Temperature: Up to 100°C



Spray Characteristics:

Spray Pattern: Full Cone

Spray Shape: Circular Distribution: Uniform

Droplet Size: Medium to Coarse

Application

- Inside tubes spray.
- Injection of Chemical Compounds



INDUSTRIAL SPRAY HEADER SYSTEMS

Descaling | Roll Cooling | Laminar Cooling

Precision Flow: Powerful Performance
Engineered for steel

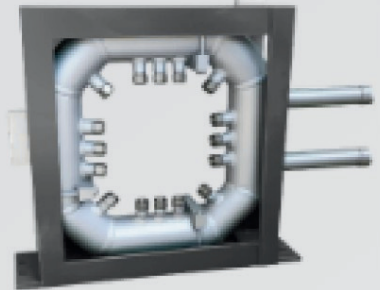


Built for extreme Pressure,
Temperature &
Continuous operation

ROLL COOLING HEADER



DESCALING HEADER



Technical Specifications

Header size : 1" NB – 12" NB (Customizable)

Pressure Range : 2-250BAR

Material : SS304 / S316 / S3116L

Nozzle Types : Full Cone / Flat spray / Solid jet

Connections : Flanged / Threaded / Welded

Standards : ASME / ANSI / DIN / IS

- Precision CNC Machining
- Uniform Spray Distribution
- Leak-Proof Design
- High Durability
- Low Maintenance

Application

Descaling

- Bar Mill
- Hot Strip Mill
- Plate Mill

Roll Cooling

- Wire Rod Mill
- Hot Roll Mill
- Cold Roll Mill

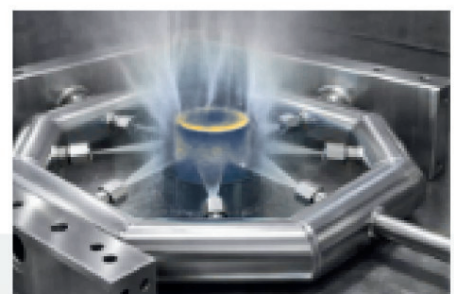
Laminar Cooling

- Hot Strip Mill

DESCALING HEADER



DESCALING OPERATION



Application

- Cooling system
- Humidifying
- Lubricating

WIND JET AIR BLOWING NOZZLE

Specifications

Thread Size: 1/4" BSP Thread

Spray Angle: 15° to 120

Connection type: Male Thread

Material: Plastic ABS, Aluminium ally, Stainless steel

Operating Pressure: 2 to 8 Bar

Temperature: Up to 77°C



Spray Characteristics:

Spray Pattern: Flat Air Jet / Flat Fan

Distribution: Uniform Flat Air Distribution

Air Flow Type: High Velocity Laminar Air Flow

Application

- Plastic component drying
- Conveyor cleaning
- Bottle drying
- Dust removal
- Dry Fog Nozzle CP-120 Humidifier



WIDE ANGLE HALLOW CONE SPRAY NOZZLE

Specifications

Thread Size: 1/4" BSP

Spray Angle: 90-110°

Connection type: Male Thread

Material: Stainless Steel 304

Operating Pressure: 2 to 4 bar Temperature: Up to 100°C



Application

FULL CONE SQUARE PATTERN SPRAY NOZZLE

Specifications

Thread Size: 1/8" - 1" BSP

Spray Angle: 15° to 60°

Connection type: Male / Female

Thread Material: Stainless Steel/Brass

Operating Pressure: 2 to 10 bar

Temperature: Up to 100°C



Spray Characteristics

- Spray Pattern: Full Cone Square
- Droplet Size: Medium
- Spray Shape: Square
- Distribution: Uniform

Applications

- Cleaning
- Cooling

SPIRAL FULL CONE SPRAY NOZZLE

Specifications

Thread Size: 1/8" to 1"
BSP Spray Angle: 60° / 90° / 120°
Connection type: Male Thread
Material: Stainless Steel 304
Operating Pressure: 1 to 5 bar
Temperature: Up to 100°C

Spray Characteristics:

- Spray Pattern: Full Cone
- Droplet Size: Medium to High
- Spray Shape: Circular
- Distribution: Uniform



Application

- Gas Scrubbing
- Fume Scrubbing
- Chemical Processing

TANGENTIAL-FLOW FULL CONE NOZZLE

Specifications

Thread Size: 1/8" to 1" BSP
Spray Angle: 30°/45°/ 60° / 90° / 110°
Connection type: Male Thread
Material: Stainless Steel /Bras
Operating Pressure: 1 to 5bar
Temperature: Up to 100°C



Spray Characteristics:

- Spray Pattern: Full Cone
- Droplet Size: Medium
- Spray Shape: Circular
- Distribution: Uniform

Application

- Gas Scrubbing
- Chemical Spray
- Dust Suppression



HIGH EFFECT FLAT FAN SPRAY NOZZLE

Specifications

Thread Size: 1/8", 1/4", 3/8", 1/2", 3/4", 1" BSP

Spray Angle: 30°/45°/ 60° / 90°

Connection type: Male Thread

Material: Stainless Steel / Brass / PP Operating

Pressure: 2 bar – 40 bar Temperature: Up to 100°C



Spray Characteristics:

Spray Pattern: Flat Fan / Spray

Droplet Size: Medium to Coarse

Spray Shape: Flat

Application

- High Pressure Washing
- Conveyor Cleaning
- Industrial Washing

AIR ATOMIZING NOZZLE (TWO-FLUID NOZZLE)

- Atomization Method: Compressed Air + Liquid
- Atomization Quality: Fine to Ultra-Fine Mist
- Material: Stainless Steel
- Temperature: Up to 100°C

Connection Details

- Air Inlet: 1/8", 1/4", 3/8" BSP
- Liquid Inlet: 1/8", 1/4", 3/8" BSP
- Mounting Type: Threaded / Manifold Mount / Header Mount
- Connection Type: Female Thread

Air Pressure

- Operating Pressure: 1 – 6 bar

Liquid Pressure

- Operating Pressure: 0.2 – 3 bar

Spray Angle: 15° – 120°

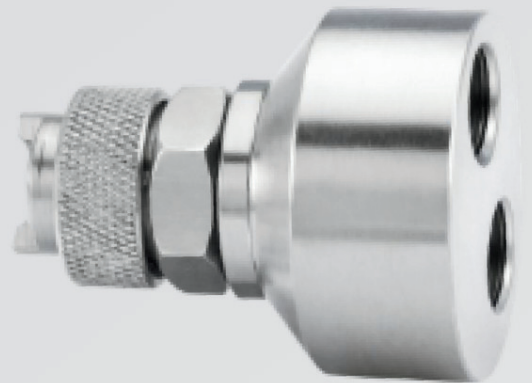
Spray Characteristics

Spray Pattern: Mist type.

Droplet Size: 10 – 100 microns

Spray Shape: Circular/Wide Rectangular

Distribution: Uniform



Application

- Chemical Spraying
- Disinfection
- Steel Industry Cooling
- Dust control / suppression

TANGENTIAL-FLOW FULL CONE NOZZLE

Specifications

Nozzle Type: Rotary Spraying
Thread Size : Upto 1" BSP
Connection type: Female Thread
Material: Stainless Steel
Spray Angle: 360° Rotary Jet
Operating Pressure: 2-30 Bar
Temperature: Up to 100°C



Spray Characteristics:

Spray Pattern: Dual Opposing Rotary Jets
Rotation: 360° Horizontal Rotation
Cleaning Pattern: Spiral Rotary Cleaning
Mounting Position: Vertical
Number of Nozzles: 2 Opposing Jets

Application

- Cleaning of large tanks
- Chemical Tanks
- Pharmaceutical Tanks
- Food Processing Tanks

ROTARY JET HEAD FOR TANK CLEANING NOZZLE (FOUR JETS)

Specifications

Nozzle Type: Rotary Spraying
Thread Size: Upto 1" BSP
Connection type: Female Thread
Material: Stainless Steel
Spray Angle: 360° Rotary Jet
Operating Pressure: 3 – 20 Bar
Temperature: Up to 100°C

Spray Characteristics:

Spray Pattern: Dual Opposing Rotary Jets
Rotation: 360° Horizontal Rotation
Cleaning Pattern: Spiral Rotary Cleaning
Mounting Position: Vertical
Number of Nozzles: 2 Opposing Jets



Application

- Cleaning of large tanks
- Chemical Tanks
- Pharmaceutical Tanks
- Food Processing Tanks

ROTARY JET HEAD FOR TANK CLEANING NOZZLE (FOUR JETS)

Specifications

Nozzle Type: Rotary Spraying
Thread Size: Upto 1" BSP
Connection type: Female Thread
Material: Stainless Steel
Spray Angle: 360° Rotary Jet
Operating Pressure: 3 – 20 Bar
Temperature: Up to 100°C

Spray Characteristics:

Spray Pattern: 4 Opposing Rotary Jets
Rotation: 360° Horizontal Rotation
Cleaning Pattern: Spiral Rotary Cleaning
Mounting Position: Vertical
Number of Nozzles: 4 Opposing Jets



Application

- Cleaning of large tanks with efficient time
- High impact cleaning performance

BALLCLEANING EQUIPMENT PARTS TANK CLEANING SPRAY NOZZLE

Specifications

Thread Size: Upto 1" BSP

Spray Angle: 360° Full Coverage

Nozzle Type : fixed.

Connection type: Female Thread

Material: Stainless Steel.

Operating Pressure: 1 to 5 Bar

Temperature: Up to 100°C



Spray Characteristics:

Spray Pattern: 360° Full Spray Ball (Custom hole pattern available)

Droplet Size: Medium to High

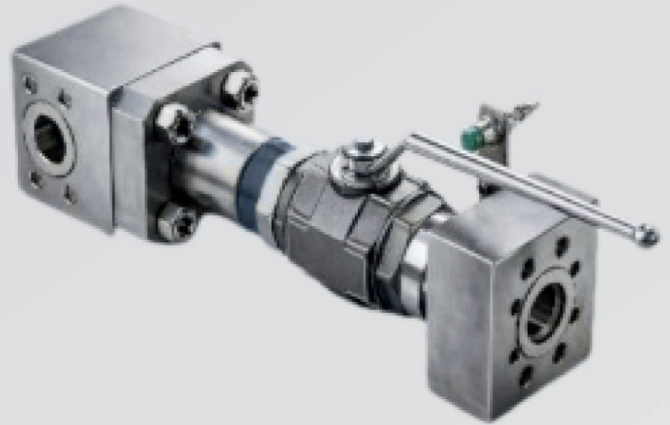
Spray Shape: Multi-Jet

Distribution: Even

HIGH PRESSURE AUTOSHUTOFF VALVES

Valve Specifications

- Valve Type: High Pressure Shutoff Valve/ combination of check valve and ball valve
- Size Range: 40–50 NB
- Working Pressure : Up to 250 Bar
- Flow Rate: 600 LPM
- Cracking Pressure: 0.5 – 5 Bar
- Working Temperature: Up to 80°C
- End Connection: SAE Flanged End Connection
- Body Material: SS304
- Seat Type: Soft Seat
- Flow Direction: Unidirectional
- Function: Shutoff / Prevent Backflow
- Operation: Automatic / Pressure Based



Applications

Industries

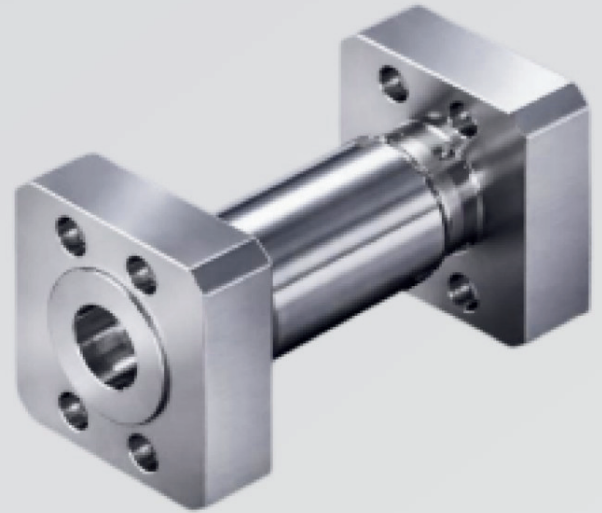
- Steel Rolling Mills
- Water Treatment Plants
- Oil & Gas Industry
- Power Plants
- Chemical & Process Industry

- Descaling systems – Isolates descaling headers, pumps, or high-pressure piping for maintenance.
- High-pressure water jetting – Emergency shut-off or section isolation in cutting, cleaning, and demolition.
- Plunger pump discharge – Allows safe pump isolation without depressurizing entire system.
- Hydraulic power units – Blocks flow to actuators during maintenance or circuit switching.
- Test benches – Isolates test circuits for component changeover at high pressure.

HIGH PRESSURE CHECK VALVES

Valve Specifications

- Valve Size: 40–150NB
- Working Pressure: Up to 315 Bar
- Water Flow Rate: 600–6000 LPM
- Pressure Capability: High Pressure
- Inlet & Outlet Connection: 1½" to 6" SAE 6000 PSI / DIN Flange
- Operation Type: Pneumatic Operated
- Air Pressure Required: 4–7Bar
- Body Material: Forged Steel
- Seat Type: Soft Seat
- Actuator Design: Balanced or pilot-operated



Industries

- Steel Rolling Mills
- Oil & Gas Industry
- Power Plants
- Chemical & Petrochemical Industry
- Water Treatment Plants

Applications

- High-pressure descaling systems – Prevents reverse flow from descaling headers back to pump during valve switching.
- Plunger pump discharge – Protects pumps from backflow when multiple pumps operate in parallel.
- Unloading valve circuits – Isolates unloading line from main discharge line.
- Hydraulic systems – Prevents reverse flow in high-pressure hydraulic circuits.
- Water jet cutting – Ensures unidirectional flow to cutting head.
- Test benches – Maintains pressure during high-pressure component testing