

INSTALLATION AND MAINTENANCE MANUAL

Spray Nozzle Selection and Maintenance Manual



This manual covers the selection, installation, filtration and cleaning of Belvanta spray nozzles for process, cooling, washing and tank cleaning duty.

DOCUMENT Installation manual

DOCUMENT	MANUAL-SPRAY-NOZZLE-MAINTENANCE
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SCOPE AND SAFETY

Spray Nozzle Selection and Maintenance Manual

This manual covers the selection, installation, filtration and cleaning of Belvanta spray nozzles for process, cooling, washing and tank cleaning duty.

SAFETY

- Isolate and depressurize the spray header before removing a nozzle.
- Confirm the fluid is not hazardous before opening the system.
- Use eye and skin protection when handling chemicals or cleaning agents.

BEFORE YOU BEGIN

- Confirm the correct manual, drawing and product revision for the equipment.
- Check that the required tools, lifting equipment and personal protective equipment are available.
- Record the product identification, serial or heat number and installation date.

Ordering and technical support

sales@belvantaglobal.com · +1 (713) 555-0140 · www.belvantaglobal.com

1200 Industrial Parkway, Houston, TX 77032, United States

Quotations are prepared against the released specification. Certified drawings are issued with the order.

01 · PATTERN AND FLOW SELECTION

Select the spray pattern first, then the flow rate and spray angle. Confirm the operating pressure and the performance curve for the selected series.

Flow rate changes with the square root of pressure. Do not assume that a higher pressure will solve a coverage or impact problem without checking the pattern and droplet size.

02 · INSTALLATION

Install the nozzle in the orientation shown on the header drawing. Use the specified thread sealant and do not over-tighten the body.

For multiple-nozzle headers, confirm that the nozzle spacing and spray angle provide the required overlap.

03 · FILTRATION

Use a filter upstream of the nozzle with a mesh size appropriate to the smallest flow passage. A blocked or partially blocked nozzle changes the pattern and flow.

Inspect and clean the filter at the recommended interval, and more frequently in dirty or fibrous service.

04 · FLOW VERIFICATION

Measure the flow from a representative nozzle and compare it with the performance curve. A reduced flow may indicate a partial blockage; an increased flow may indicate wear of the orifice.

Check the pattern visually against a reference surface. Streaks, heavy edges or an asymmetric pattern indicate wear or blockage.

05 · CLEANING AND REPLACEMENT

Clean the nozzle with a soft brush and compatible cleaning solution. Do not use a hard tool that could scratch the orifice or the internal surfaces.

Replace the nozzle if the flow is outside the acceptable band or the pattern cannot be restored by cleaning.

Inspection and records

Maintain an installation and inspection record for each joint or nozzle. Record the product identification, installation date, torque or pre-compression setting, test result and any replacement parts.

INSPECTION CHECKLIST

ITEM	RESULT	INITIALS
Product identification and revision confirmed		
Installation alignment and supports checked		
Fasteners and torque or pre-compression recorded		
Leak or pressure test completed		
Inspection record filed with order documentation		

MAINTENANCE INTERVAL

Inspect at the interval defined by the site procedure. In severe service, inspect more frequently during the first operating cycle and after any abnormal event.

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