

Alfa Laval MultiJet 50

Rotary jet heads

Introduction

The Alfa Laval MultiJet 50 is a rotary jet head tank cleaning machine for use in industrial environments. Built to clean tanks with capacities of 250-1250 m³ it combines pressure and flow to create high-impact cleaning jets that rotate in a repeatable and reliable 360-degree cleaning pattern.

The MultiJet 50 minimizes the consumption of water and cleaning media. Easy to customize to meet customer requirements, it allows companies to spend less time cleaning and more time producing.

Application

The Alfa Laval MultiJet 50 is designed for the removal of the toughest residues from industrial tanks across a broad range of industries, such as the chemical, pulp and paper, ethanol, starch, oil, and transportation industries.

Benefits

- 60% faster cleaning = more time for production
- Saves up to 70% of your cleaning cost
- Eliminates the need for confined space entry for manual tank cleaning
- High-impact cleaning in a 360° repeatable cleaning pattern
- Cleaning process can be validated using Alfa Laval Rotacheck

Standard design

The choice of nozzle diameters can optimize jet impact length and flow rate at the desired pressure.

Alfa Laval offers a wide range of tank cleaning machines suitable for different duties and industries. An alternative that offers performance similar to the Alfa Laval MultiJet 50 is the Alfa Laval GJ 4 for applications that require a small tank inlet opening.

Working principle

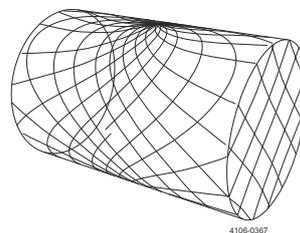
The high-impact jet stream from the Alfa Laval MultiJet 50 rotary jet head covers the entire surface of the tank interior in a successively denser pattern. This achieves a powerful mechanical impact with a low volume of water and cleaning media.

The flow of the cleaning fluid makes the nozzles perform a geared rotation around the vertical and horizontal axes. In the

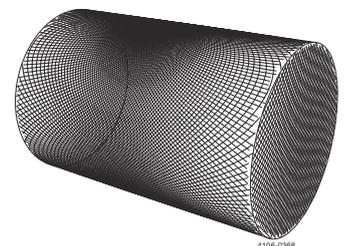


first cycle, the nozzles lay out a course pattern on the tank surface. The subsequent cycles gradually make the pattern denser until at full cleaning pattern is reached. Once the full cleaning pattern is reached, the machine will start over again and continue to perform the next full cleaning pattern.

Cleaning Pattern



First cycle



Full pattern

The above drawings show the cleaning pattern achieved on a cylindrical horizontal vessel. The difference between the first cycle and the full pattern represents the number of additional cycles available to increase the density of the cleaning.

Certificates

2.1 material certificate, ATEX



TECHNICAL DATA

Lubricant:	Self-lubricating with the cleaning fluid
Max. throw length:	9 - 26 m
Impact throw length:	5 - 14 m

Pressure

Working pressure:	3 - 12 bar
Recommended pressure:	5 - 6.5 bar

PHYSICAL DATA

Materials:	1.4404 (316L), PTFE, PVDF, PEEK, Carbon, ETFE, TFM
Surface finish:	Mat

Temperature

Max. working temperature:	95 °C
Max. ambient temperature:	140 °C

Weight:	12.2 kg
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Connections

Standard female thread:	2" Rp (BSP) NPT, female
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Caution

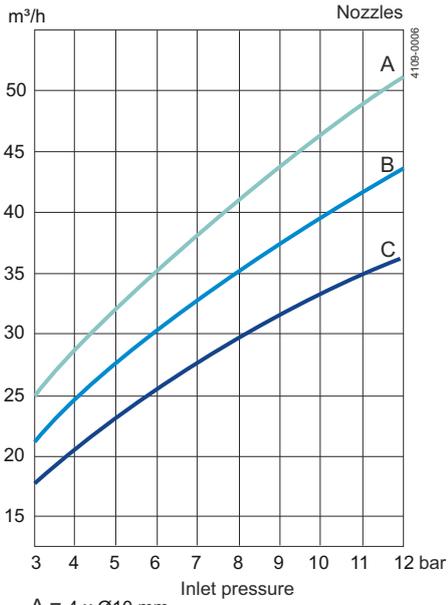
Avoid hydraulic shock, hard and abrasive particles in the cleaning liquid, as this can cause increased wear and/or damage of internal mechanisms. In general, a filter in the supply line is recommended. Do not use for gas evacuation or air dispersion. For steaming we refer to the manual.

Qualification Documentation

Documentation specification

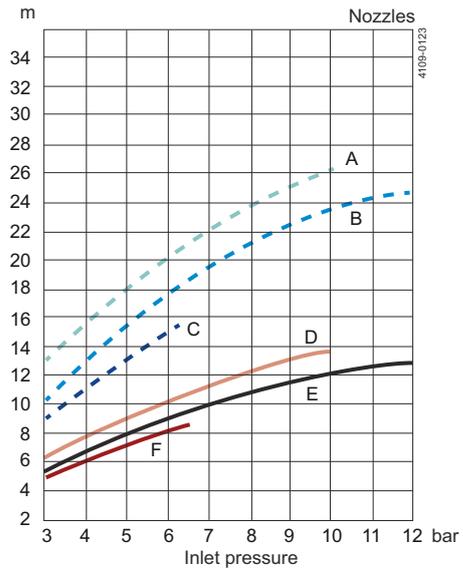
ATEX	ATEX approved machine for use in explosive atmospheres Category 1 for installation in zone 0/20 in accordance with Directive 2014/34/EU II 1G Ex h IIC 85 °C ...175 °C Ga II 1D Ex h IIIC T85 °C ...T140 °C Da
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Flow Rate



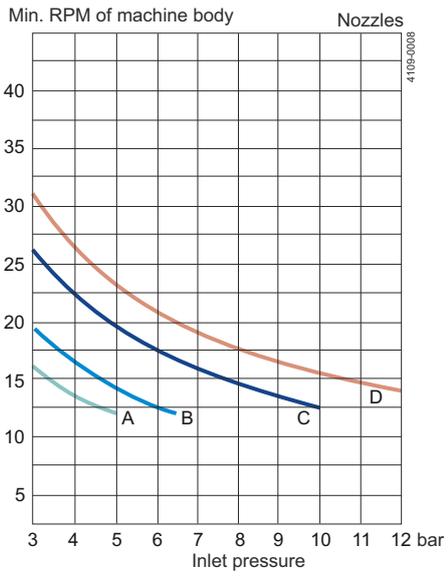
- A = 4 x Ø10 mm
- B = 4 x Ø9 mm
- C = 4 x Ø8 mm

Max Throw Length



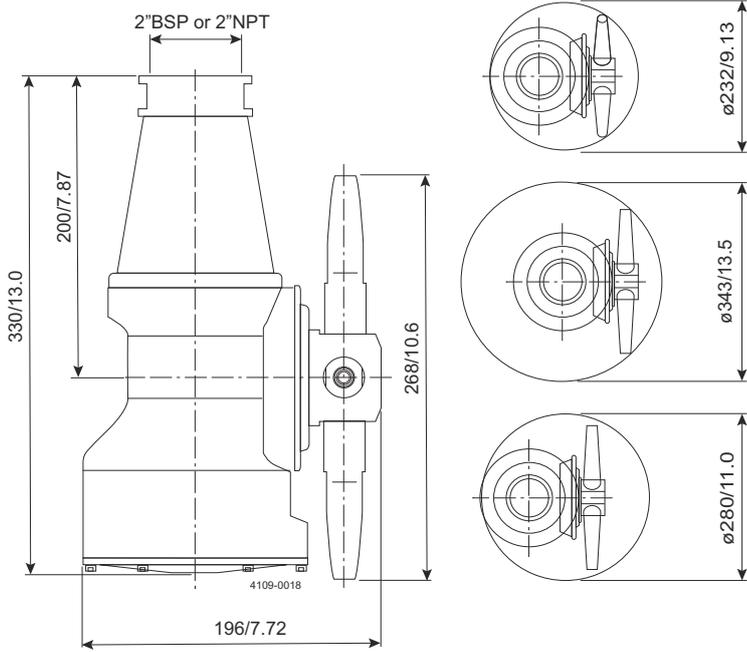
- - Wetting
- Impact cleaning
- A = 4 x Ø10 mm
- B = 4 x Ø9 mm
- C = 4 x Ø8 mm
- D = 4 x Ø10 mm
- E = 4 x Ø9 mm
- F = 4 x 8Ø mm

Cleaning Time, Complete Pattern



- A = 4 x Ø9 mm
- B = 4 x Ø8 mm
- C = 4 x Ø10 mm
- D = 4 x Ø9 mm

Dimensions (mm/inch)



Ordering

Please specify nozzle size, inlet/guide configuration and connections and confirm application suitability sizing/selection and installation drawings are available in Alfa Laval’s Selection Tools for Tank Cleaning Equipment.

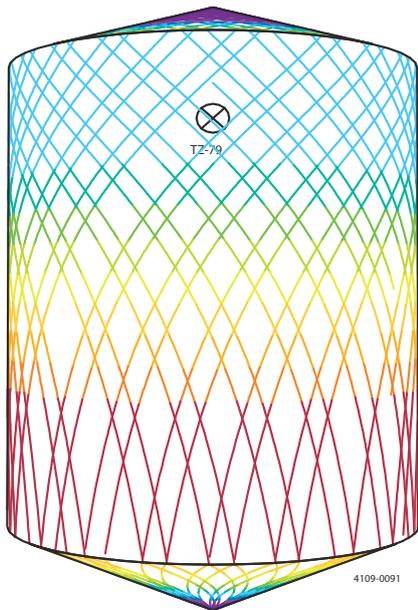
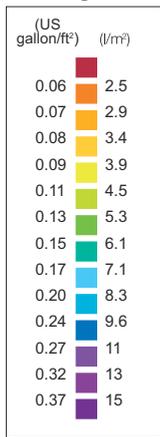
TRAX simulation tool

TRAX is a unique software that simulates how the Toftejorg MJ50 performs in a specific tank or vessel.

The simulation gives information on wetting intensity, pattern mesh width and cleaning jet velocity. This information is used to determine the best location of the tank cleaning machine and the correct combination of flow, time and pressure to implement.

A TRAX demo containing different cleaning simulations covering a variety of applications can be used as reference and documentation for tank cleaning applications. A TRAX simulation is free and available upon request.

Wetting Intensity



D8 m H10 m, Toftejorg MultiJet 50, 4 x Ø10 mm
0 % Time = 5.5 min, Water consumption = 2565 l



D8m H10 m, Toftejorg MultiJet 50, 4 x Ø10 mm, 0 %
Time = 23.3 min, Water consumption = 10868 l

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