

Alfa Laval GJ 8

Rotary jet heads

Introduction

The Alfa Laval GJ 8 is a rotary jet head tank cleaning machine for industrial environments. Built to clean tanks from 250-1250 m³ in size, it combines pressure and flow to create high-impact cleaning jets that rotate in a repeatable and reliable 360-degree cleaning pattern.

Durable and reliable, the GJ 8 minimizes the consumption of water and cleaning media yet provides with proven cleaning efficiency. The gear train, which uses food-grade lubricants, reduces the risk of particle damage to the machine during operation. Easy to customize to meet customer requirements, it allows companies to spend less time cleaning and more time producing.

Application

The Alfa Laval GJ 8 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, transportation, oil industries.

Benefits

- Sustainable cleaning solution using less water and chemicals compared to manual cleaning or cleaning using traditional spray balls
- Eliminates the need for confined space entry for manual tank cleaning
- Reliable and repeatable cleaning performance
- Cleaning process can be validated using Alfa Laval Rotacheck
- Slim design, making it possible to insert through small tank inlet openings

Standard design

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

Working principle

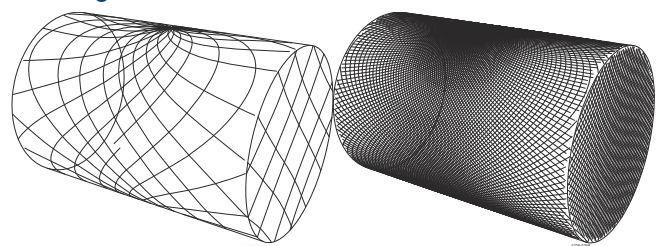
The high-impact jet stream from the Alfa Laval GJ 8 rotary jet head covers the entire surface of the tank interior in a successively denser pattern. This achieves a powerful mechanical impact with a low volume of water and cleaning media.

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.

TECHNICAL DATA

Lubricant:	Food grade
Max. throw length	14 - 26 m

Pressure

Working pressure:	3 - 28+ bar
Recommended pressure:	4 - 20 bar

PHYSICAL DATA

Materials

1.4404 (316L), PPS, PTFE, FKM (EPDM and FFKM available)

Temperature

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

Weight

Weight:	6.5 kg
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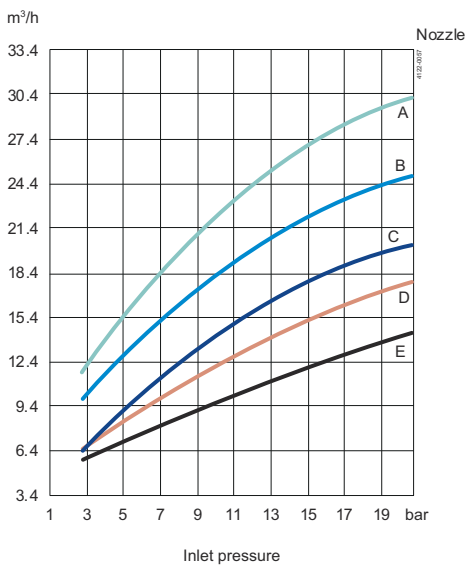
Connections

Standard thread:	1½" Rp (BSP) or NPT, female
Available option:	2" Rp (BSP) or NPT, female

Caution

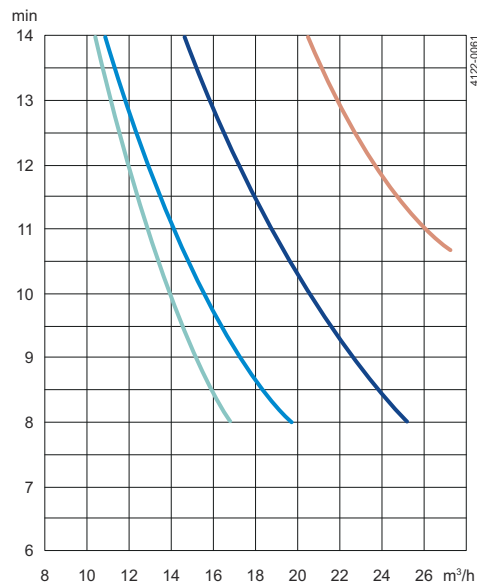
Avoid hydraulic shock, hard and abrasive particles in the cleaning liquid, as this can cause increased wear and/or damage of internal mechanisms. In general, a filter in the supply line is recommended. Do not use for gas evacuation or air dispersion. For steaming we refer to the manual.

Flow Rate



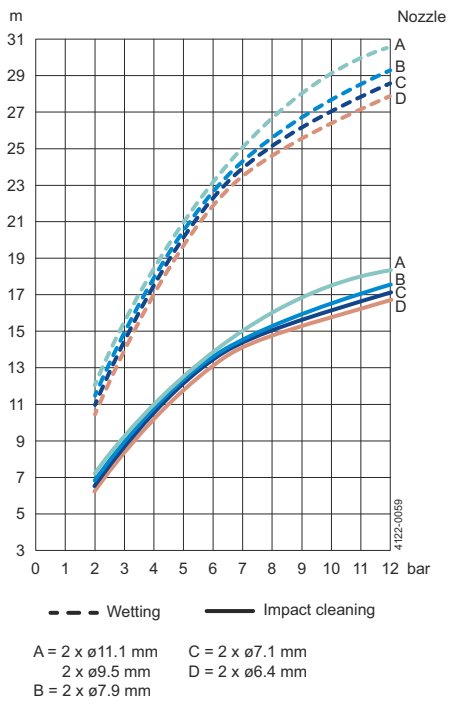
A = 11.1 mm D = 7.1 mm
 B = 9.5 mm E = 6.4 mm
 C = 7.9 mm

Cleaning Time

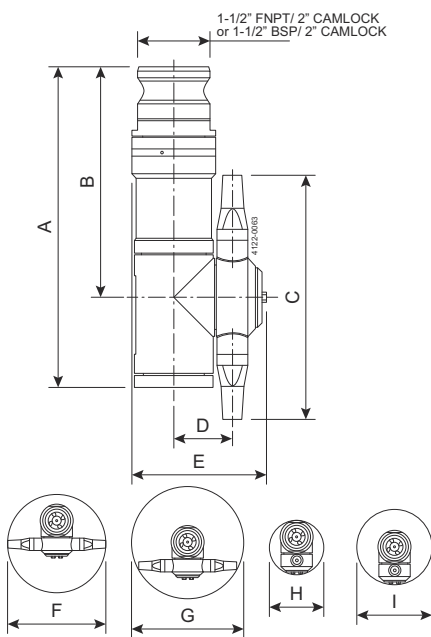


A = LV D = LM
 B = SML
 C = LRG

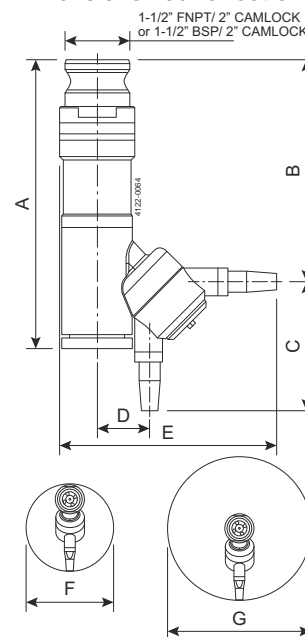
Impact Throw Length



Dimensions



Dimensions 180° directional version



	A	B	C	D	E	F	G	H	I
(mm)	281	202	215	51	118	216	248	121	165

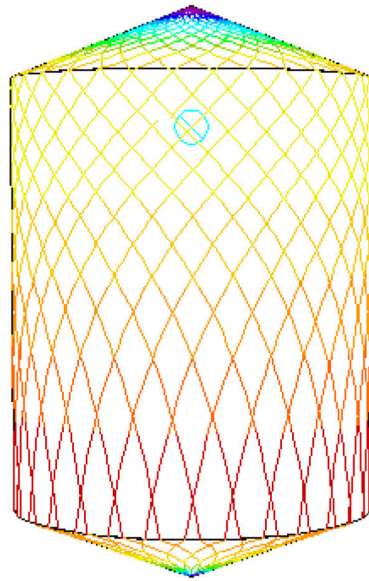
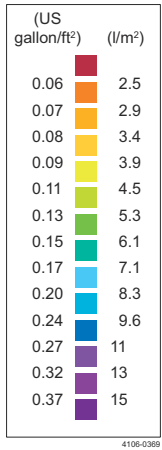
Dimensions 180° directional version

	A	B	C	D	E	F	G
(mm)	281	217	126	51	211	350	248

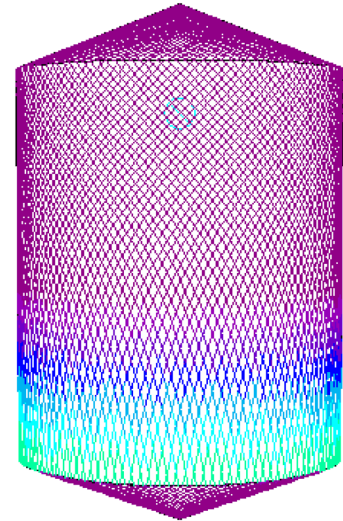
TRAX simulation tool

TRAX is a unique software that simulates how the Alfa Laval GJ 8 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 device 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 a reference and documentation for tank cleaning applications. The TRAX demo is free and available upon request.

Wetting Intensity



D 12.2 m, H 19.6 m, 2 x Ø7.94 mm, Time = 3.1 min.



D 12.2 m, H 19.6 m, 2 x Ø7.94 mm, Time = 12.5 min.

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