Fast, Effective Impact Cleaning

Alfa Laval TJ TZ-79 Rotary Jet Head

Application
The Toftejorg TZ-79 rotary jet head provides 3D indexed impact cleaning over a defined time period. It is automatic and represents a guaranteed means of achieving quality assurance in tank cleaning. The device is suitable for processing, storage and transportation tanks and vessels between 250 and 1.250 m^3. Used in breweries, food and dairy processes and many other industries.

Working principle
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 coarse pattern on the tank surface. The subsequent cycles gradually make the pattern more dense, until a full pattern is reached after 8 cycles.

TECHNICAL DATA

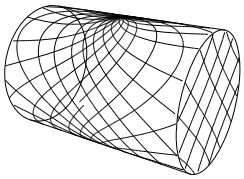
Lubricant:	Self-lubricating with the cleaning fluid
Standard Surface finish:	Ra 0.5µm exterior
Max. throw length:	9 - 26 m
Impact throw length:	5 - 14 m

Pressure

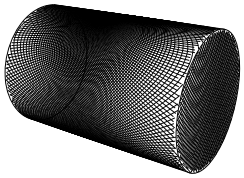
Working pressure:	3 - 12 bar
Recommended pressure:	5 - 6.5 bar*

* Does not apply for 4 x ø9 mm (0.16 x ø0.35 inch) 100%

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 and ATEX.

PHYSICAL DATA

Materials
316L (UNS S31603), PTFE, PVDF, PEEK, Carbon, ETFE, TFM.

Temperature

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

Weight: 12.2 kg

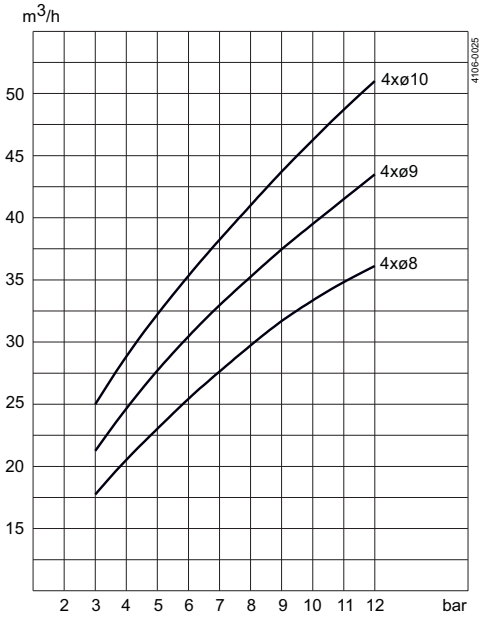
Connections
Standard thread: 2” Rp (BSP) or NPT, female

Options
Electronic rotation sensor to verify 3D coverage.

Caution
Do not use for gas evacuation or air dispersion.

Flow Rate

Nozzles mm

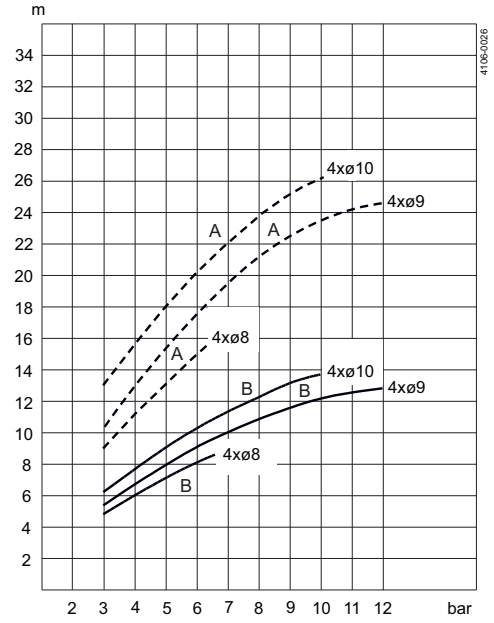


Flow rate

Inlet pressure

Impact Throw Length

Nozzles mm

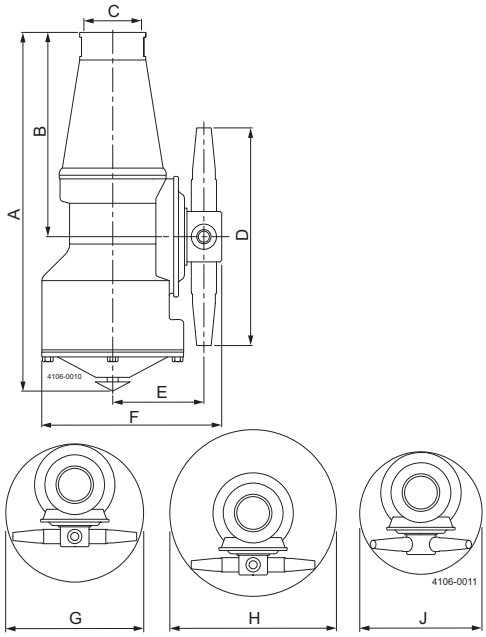


Throw length

Inlet pressure

A: Wetting - B: Impact cleaning

Dimensions (mm)

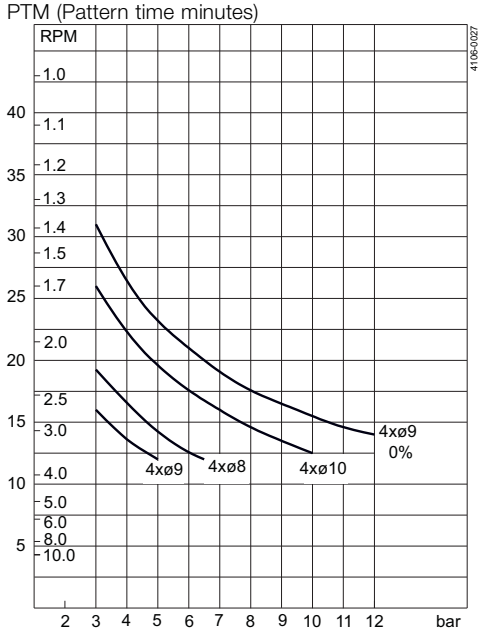


Cleaning Time, Complete Pattern

Min. RPM of machine body

Nozzles mm

PTM (Pattern time minutes)



Inlet pressure

A	B	C	D	E	F	G	H	J
356	220	2” BSP / 2” NPT	268	98	195	ø280	ø343	ø232

Standard Design

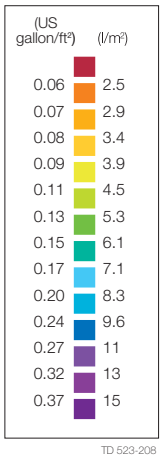
The choice of nozzle diameters can optimise jet impact length and flow rate at the desired pressure. Selfcleaning arm available. As standard documentation, the Toftejorg TZ-79 can be supplied with a “Declaration of Conformity” for material specifications.

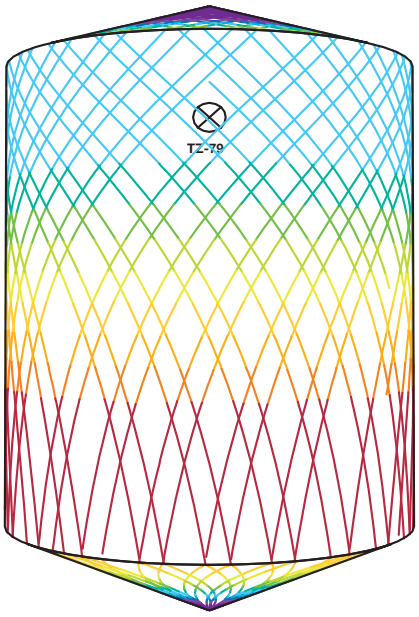
TRAX simulation tool

TRAX is a unique software that simulates how the Toftejorg TZ-79 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.

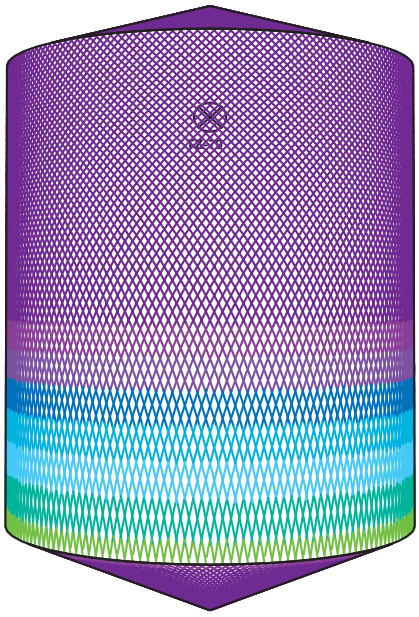
A TRAX demo containing different cleaning simulations covering a variety of applications can be used as reference and documentation for tank cleaning applications. A TRAX simulation is free and available upon request.

Wetting Intensity





D8m H10m, Toftejorg TZ-79, 4 x ø10 mm, 0 % Time = 5.5 min., Water consumption = 2565 l



D8m H10m, Toftejorg TZ-79, 4 x ø10 mm, 0 % Time = 23.3 min., Water consumption = 10868 l

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How to contact Alfa Laval
Contact details for all countries
are continually updated on our website.
Please visit www.alfalaval.com to
access the information direct.