

Alfa Laval TZ-89

Rotary jet heads

Introduction

The Alfa Laval TZ-89 is a rotary jet head tank cleaning machine for hygienic environments. Built to clean tanks with capacities from 5-20 m³, it combines pressure and flow to create high-impact cleaning jets that rotate in a repeatable and reliable 360-degree cleaning pattern.

The TZ-89 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.

Applications

The Alfa Laval TZ-89 is designed for the removal of the toughest residues from hygienic tanks across a broad range of industries, such as the dairy, food, beverage, brewery, and personal care 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. Due to its slim design, it is ideal to retrofit spray balls, thereby reducing Cleaning-in-Place (CIP) costs and cleaning time.

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 TZ-89 is the Alfa Laval SaniJet 20 for applications that require 3.1. material certification, ATEX certification, and the Alfa Laval Q-doc documentation package.

Certificates

2.1 material certificate





Working principle

The high-impact jet stream from the rotary jet head covers the entire surface 360° 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.



TECHNICAL DATA

Lubricant:	Self-lubricating with the cleaning fluid
Standard Surface finish	
Product contact parts:	Ra 1.0 µm
Throw length	
Max. throw length:	4 - 7 m
Impact throw length:	2.5 - 4 m
Pressure	
Working pressure:	2 - 7 bar
Becommended pressure:	5 - 6.5 bar
PHYSICAL DATA	
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PHYSICAL DATA Materials:	316L (UNS S61603), Duplex steel (UNS N31803), PTFE, PEEK, FEP/silicone
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PHYSICAL DATA Materials: Temperature Max. working temperature: Max. ambient temperature:	316L (UNS S61603), Duplex steel (UNS N31803), PTFE, PEEK, FEP/silicone 95 °C 140 °C
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PHYSICAL DATA Materials: Temperature Max. working temperature: Max. ambient temperature: Weight	316L (UNS S61603), Duplex steel (UNS N31803), PTFE, PEEK, FEP/silicone 95 °C 140 °C
PHYSICAL DATA Materials: Temperature Max. working temperature: Max. ambient temperature: Weight Weight	316L (UNS S61603), Duplex steel (UNS N31803), PTFE, PEEK, FEP/silicone 95 °C 140 °C 5.5 - 8.5 kg
PHYSICAL DATA Materials: Temperature Max. working temperature: Max. ambient temperature: Weight Weight:	316L (UNS S61603), Duplex steel (UNS N31803), PTFE, PEEK, FEP/silicone 95 °C 140 °C 5.5 - 8.5 kg
PHYSICAL DATA Materials: Temperature Max. working temperature: Max. ambient temperature: Weight Weight Weight: Connections	316L (UNS S61603), Duplex steel (UNS N31803), PTFE, PEEK, FEP/silicone 95 °C 140 °C 5.5 - 8.5 kg
PHYSICAL DATA Materials: Temperature Max. working temperature: Max. ambient temperature: Weight Weight Unlet connections Inlet connections:	316L (UNS S61603), Duplex steel (UNS N31803), PTFE, PEEK, FEP/silicone 95 °C 140 °C 5.5 - 8.5 kg Thread: 3/4" Rp (BSP) or NPT, male or Clamp: 1" ISO 2852

Caution

Avoid hard and abrasive particles in the cleaning liquid, as this can cause increased wear and/or damage of internal mechanisms. In general, it is recommended to place a filter in the supply line.



Nozzles mm A = 4 x \emptyset 4 B = 2 x \emptyset 2 5



Cleaning Time, Complete Pattern PTM (Pattern time minutes) 16 14 12 10 А 8 6 4 в 2 2 4 5 Inlet pressure 3 5 6 7 bar

Nozzles mm $A = 4 \times \emptyset 4$ $B = 2 \times \emptyset 2.5$

Impact Throw Length



Nozzles mm A = $4 \times \emptyset 4$ B = $2 \times \emptyset 2.5$

Dimensions (mm)



A: Clamp 1" ISO, B: Thread 3/4" Rp (BSP) / NPT, C: Clamp 3" ISO

F	G-DPL	н	J	К	L	М
350	Min. 62	Max. 288	—190	Ø69	Ø72	Ø79.5
	Max. 96	Min. 254				
500	Min. 62	Max. 438	—190	Ø69	Ø72	Ø79.5
	Max. 246	Min. 254				
750	Min. 62	Max. 688	—190	Ø69	Ø72	Ø79.5
	Max. 496	Min. 254				
1020	Min. 62	Max. 958	—190	Ø69	Ø72	Ø79.5
	Max. 766	Min. 254				
1270	Min. 62	Max. 1208	—190	Ø69	Ø72	Ø79.5
	Max. 1016	Min. 254				
1500	Min. 62	Max. 1438	—190	Ø69	Ø72	Ø79.5
	Max. 1246	Min. 254				

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200006236-2-EN-GB