### Powerful tank cleaning at a range of pressures and flows

### Alfa Laval GJ PF

### Application

The field-proven Alfa Laval GJ PF is part of the world-renowned range of Gamajet high impact tank cleaning devices. It has been proven to provide companies with up to 85% in water, time, energy, and resource savings compared to static spray balls. This device is capable of cleaning tanks with capacities between 18.9 m<sup>3</sup> - 94.6 m<sup>3</sup>. The Alfa Laval GJ PF fits through openings as small as 10 cm and operates at low pressures and flows, cleaning tanks in the ethanol, paper, pulp, chemical, steel, industrial fermentation industry, and many other applications that require high impact cleaning. By implementing this device into their tank cleaning process, companies spend less time cleaning and more time producing.

### Working principle

The Gamajet range of high impact tank cleaning devices combine pressure and flow to create high impact cleaning jets. Cleaning occurs at the point at which the concentrated stream impacts the surface. It is this impact and the tangential force that radiates from that point which blasts contaminants from the surface, scouring the tank interior. In conjunction with this impact, the device is engineered to rotate in a precise, repeatable and reliable, 360° pattern. This full-coverage, global indexing pattern ensures the entire tank interior is cleaned, every time.

### TECHNICAL DATA

Lubricant											Food grade
Max. throw	len	gi	th								14 - 20 m

### Pressure

### **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.

### Certificate

2.1 material certificate





### PHYSICAL DATA

### Materials

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

### Temperature

Max working temperature	90°C
Max ambient temperature	140°C
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weight	4.5 ку
Surface finish	0.8 um

### Connections

Standard thread	1½" Rp (BSP) or NPT, female
Available option	1.5" weld, 1.5" tri-clamp, 1.5"
	ISO 2037 slip fit, 1.5" DIN R1
	slip fit, 1.5" DIN R2 slip fit

### Options

Electronic rotation sensor to verify 3D coverage.

### Caution

Disclaimer: Information in this product data leaflet is intended for general guidance purposes. Specific data for device selection and sizing is available upon request.

### Flow Rate 2-nozzle







Custom inlets available. Contact your local Alfa Laval representative for details.



Impact 4-nozzle

Flow Rate 4-nozzle





#### В С D Ε F G Н Α 1 272 204 175 44 94 176 202 98 129

NOTE 1: 1-1/2" FNPT/2" CAMLOCK OR 1-1/2" BSP/2" CAMLOCK (option shown above)

### Dimensions 4-nozzle (mm)

Α	В	С	D	E	F	G	Н	I
272	204	175	44	94	176	202	134.47	160.35

NOTE 1: 1-1/2" FNPT/2" CAMLOCK OR 1-1/2" BSP/2" CAMLOCK (option shown above)

### Dimensions low-profile version (mm)

A	В	С	D	Е	F	G	Н	I
272	204	76	42	94	97	129	97	129

NOTE 1: 1-1/2" FNPT/ 2" CAMLOCK OR 1-1/2" BSP/2" CAMLOCK (option shown above)

### Standard Design

The choice of nozzle diameters can optimize jet impact length and flow rate at the desired pressure. As standard documentation, the Alfa Laval GJ PF can be supplied with a "Declaration of Conformity" for material specifications.

### TRAX simulation tool

TRAX is a unique software that simulates how the Alfa Laval GJ PF 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





D9.1m, H14.7m, 2xØ7.94mm Time = 4.25 min.



D9.1m, H14.7m, 2xØ7.94mmTime = 17 min.

## The device that transformed the tank cleaning industry

### Alfa Laval GJ 8

### Application

Designed with ergonomics in mind, the Alfa Laval GJ 8 provides the same high impact clean as traditional, larger tank cleaners but is lighter, shorter, and narrower. This device is part of the world-renowned Gamajet range of high impact tank cleaning devices, and is the perfect alternative to heavy impingement cleaners, time-intensive spray balls, and costly manual tank cleaning. Compact and efficient, the Alfa Laval GJ 8 allows for space saving while maintaining the impact, durability, and range required for optimal impingement tank cleaning. This device is fluid-driven, eliminating the need for power assistance and is ideal for cleaning stubborn residues in large tanks in a variety of industries such as ethanol, paper, pulp, chemical, steel, industrial fermentation and many more applications requiring high impact cleaning.

### Working principle

The Gamajet range of high impact tank cleaning devices combine pressure and flow to create high impact cleaning jets. Cleaning occurs at the point at which the concentrated stream impacts the surface. It is this impact and the tangential force that radiates from that point which blasts contaminants from the surface, scouring the tank interior. In conjunction with this impact, the device is engineered to rotate in a precise, repeatable and reliable, 360° pattern. This full-coverage, global indexing pattern ensures the entire tank interior is cleaned, every time.

### TECHNICAL DATA

Lubric	ant											Food grade
Max.	throw	len	ıa.	th								14 - 26 m

### Pressure

### **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.

### Certificate

2.1 material certificate





### 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	 6.5 kg

### Connections

Standard thread	11/2" Rp (BSP) or NPT, female
Available option	2" Rp (BSP) or NPT, female

### Options

Electronic rotation sensor to verify 3D coverage.

### Caution

Disclaimer: Information in this product data leaflet is intended for general guidance purposes. Specific data for device selection and sizing is available upon request.

Impact Throw Length

### Flow Rate







- - - Wetting, - Impact cleaning

### **Cleaning Time**





### Dimensions 180° directional version

A	В	С	D	Е	F	G
281	217	126	51	211	350	248

### Standard Design

The choice of nozzle diameters can optimize jet impact length and flow rate at the desired pressure. As standard documentation, the Alfa Laval GJ 8 can be supplied with a "Declaration of Conformity" for material specifications.

### 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





D12.2m, H19.6m, 2xØ7.94mmTime = 3.1 min.



D12.2m, H19.6m, 2xØ7.94mm Time = 12.5 min.

## Superior tank cleaning for industrial environments

### Alfa Laval GJ 4

### Application

The Alfa Laval GJ 4 is part of the world-renowned Gamajet range of high impact tank cleaning devices. The device provides high-impact cleaning for large-sized tanks with diameters over 4.6 m. This device is fully capable of high-concentration chemical recirculation cleaning and high-pressure, low-volume water jet scrubbing in fixed, automated CIP systems. The Alfa Laval GJ 4 is designed to remove the toughest residues from large tanks in numerous industries and is customizable in a wide variety of ways. The Alfa Laval GJ 4 allows companies to spend less time cleaning and more time producing.

### Working principle

The Gamajet range of high impact tank cleaning devices combine pressure and flow to create high impact cleaning jets. Cleaning occurs at the point at which the concentrated stream impacts the surface. It is this impact and the tangential force that radiates from that point which blasts contaminants from the surface, scouring the tank interior. In conjunction with this impact, the device is engineered to rotate in a precise, repeatable and reliable, 360° pattern. This full-coverage, global indexing pattern ensures the entire tank interior is cleaned, every time.

### **TECHNICAL DATA**

Lubricant											Food grade
Max. throw	len	g	th								30.5 m

### Pressure

Working pressure ..... 3 - 21 bar Recommended pressure ..... 3.5 - 14 bar

### **Cleaning Pattern**





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.

### Certificate

2.1 material certificate

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### PHYSICAL DATA

### Materials

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

### Temperature

Max. ambient temperature ..... 140°C

Weight ..... 12.7 - 13.2kg

### Standard thread ..... 2" NPT, 2" BSP

Connections

Options

Electronic rotation sensor to verify 3D coverage. 180° and 105° directional version available.

### Caution

Disclaimer: Information in this product data leaflet is intended for general guidance purposes. Specific data for device selection and sizing is available upon request.

### Flow Rate



#### Inlet pressure





Dimensions (mm)



A	В	С	D	E	F	G	Н	
308	131	331	76	155	331	372	168	219

NOTE 1: 2" NPT FEMALE/ 2-1/2" CAMLOCK. 2" NPT FEMALE/ 2-1/2" NST

### Standard Design

The choice of nozzle diameters can optimize jet impact length and flow rate at the desired pressure. As standard documentation, the Alfa Laval GJ 4 can be supplied with a "Declaration of Conformity" for material specifications.

### TRAX simulation tool

TRAX is a unique software that simulates how the Alfa Laval GJ 4 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





D21.3m, H34m, 2xØ11.11mm Time = 6 min.



D21.3m, H34m, 2xØ11.11mm Time = 24 min.

# First choice in fuel storage tank cleaning

Alfa Laval GJ 10

### Application

The Alfa Laval GJ 10 tank cleaning device fits through a 10.16 cm (4") opening and is capable of cleaning a 113.56 liter (30,000 gal) underground fuel storage tank with one insertion. This device blasts away contaminants and breaks up dirt and sludge in minutes. The Alfa Laval GJ 10 easily converts the contaminant-laden sludge into a solution which allows for complete liquid extraction and thorough tank cleaning. The device is part of the world-renowned Gamajet range of tank cleaning devices.

### Working principle

The Gamajet range of high impact tank cleaning devices combine pressure and flow to create high impact cleaning jets. Cleaning occurs at the point at which the concentrated stream impacts the surface. It is this impact and the tangential force that radiates from that point which blasts contaminants from the surface, scouring the tank interior. In conjunction with this impact, the device is engineered to rotate in a precise, repeatable and reliable, 360° pattern. This full-coverage, global indexing pattern ensures the entire tank interior is cleaned, every time.

### TECHNICAL DATA

Lubricant											Food grade
Max. throw	ler	ŋġ	th								10.5 m (35 ft.)

### Pressure

 Working pressure
 2.75 - 20 bar (40 - 300 PSI)

 Recommended pressure
 3.5 - 18.5 bar (50 - 270 PSI)

### **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.

### Certificate

2.1 material certificate



### PHYSICAL DATA

### Materials

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

### Temperature

Woight	13 kg (95 lbs)
Max. ambient temperature	140°C (284°F)
Max. working temperature	

Options

Electronic rotation sensor to verify 3D coverage.

### Caution

Disclaimer: Information in this product data leaflet is intended for general guidance purposes. Specific data for device selection and sizing is available upon request.

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### Flow Rate



### Inlet pressure



#### Dimensions

	А	В	С	D	Е	F	G
mm	272	204	93	42	98	100	138
in	10.7	8	3.7	1.7	3.9	3.9	5.4



Dimensions



### Standard Design

The choice of nozzle diameters can optimize jet impact length and flow rate at the desired pressure. As standard documentation, the Alfa Laval GJ 10 can be supplied with a "Declaration of Conformity" for material specifications.

### TRAX simulation tool

TRAX is a unique software that simulates how the Alfa Laval GJ 10 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







D6.1m (240"), H9.7m (380"), 2xØ7.94mm (2xØ5/16") Time = D6.1m (240"), H9.7m (380"), 2xØ7.94mm (2xØ5/16") Time 3.75 min. = 15 min.