

Alfa Laval SaniMidget Retractor

Rotary Spray Head

Introduction

The Alfa Laval SaniMidget Retractor is a retractable cleaning device that contributes to safe production and non-intrusive tank cleaning in hygienic applications. It is designed to achieve fast and effective cleaning of process equipment, especially where access is difficult or where intrusive cleaning equipment interferes with production.

From cleaning simple tanks and duct work to complex process applications with agitators where built-in dynamic cleaning heads are impractical to use, the SaniMidget Retractor is up to the challenge. It is ideal for hygienic tank cleaning of storage tanks, reactors, mixers, spray dryers as well as surrounding duct work and vent lines.

Application

The SaniMidget Retractor is designed for cleaning application, where the process cannot be disturbed by any internal components, including fixed cleaning equipment. It is ideal for use across the dairy, food, beverage, personal care, biotechnology and pharmaceutical industries.

It is installed where fully automated and validated cleaning can assure higher productivity due to less cleaning time, such as spray drying applications. Larger ducts, channels, cyclones, chambers, complexed reactors, vent lines and other critical areas in process lines can therefore be cleaned to the highest standards with no manual or semi-automated interference, and preventing any product carry over or hazardous incidents.

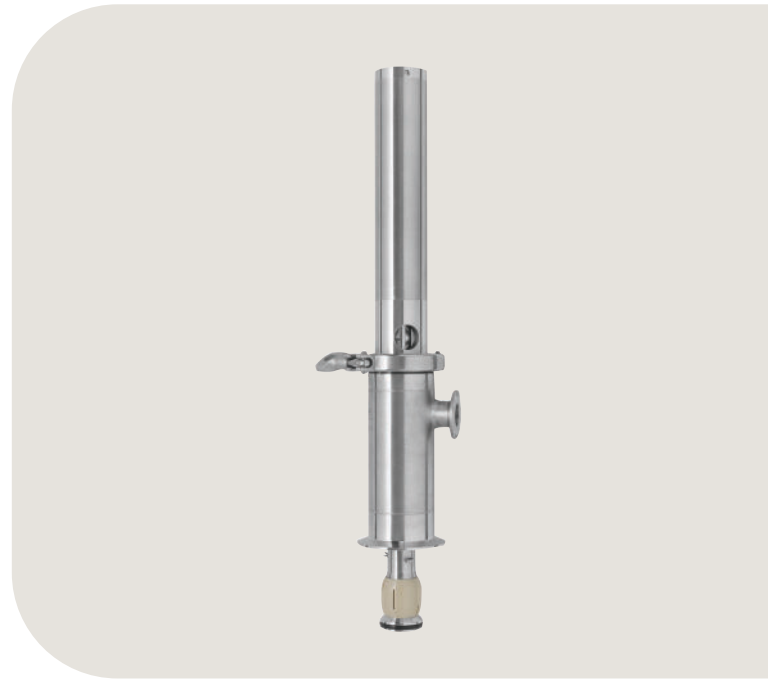
Benefits

- More uptime due to 40% faster cleaning than static spray balls
- Dynamic cleaning performance
- Cost-effective cleaning with up 40% savings in water and cleaning media costs

Standard design

The Alfa Laval SaniMidget Retractor is available with two styles of retracting mechanisms:

- Pneumatic-driven mechanism using air pressure to extend and retract the cleaning head
- Media-driven mechanism using the pressure of the cleaning media to extend the cleaning head and an integrated spring to retract it

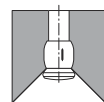


An optional ATEX version for use in potentially explosive areas is available.

Working principle

The flow of the cleaning media causes the head of the Alfa Laval SaniMidget Retractor to rotate, and the fan-shaped jets lay out a swirling pattern throughout the tank or reactor. This generates the wetting/impact needed for the efficient removal of the residual product; the cascading flow covers all internal surface of the vessel, duct or air vent.

Spray Pattern



270° up

Certificates

Q-doc and ATEX



TECHNICAL DATA

Flow rate:	7.3 m³/h at 3 bar
Standard strokes:	100, 150 or 250 mm

Lubricant:	Self lubricating with cleaning media
Wetting radius:	Max. 3.5 m
Impact cleaning radius:	Max. effective 1.7 m

Air quality

Clean, filtered:	Max. 40 µm
Dry, dew point:	Max. 10 °C
Installation:	Please contact Alfa Laval for installation of tank cleaning machine

PHYSICAL DATA

Materials

Product area:	316L (UNS S31603), PEEK ¹
Non-product area:	304 (UNS S30400), POM
Sealing:	EPDM ¹

¹ FDA compliance 21CFR§177

Surface finish

Product contact surfaces:	Ra 0.8 µm
Non product contact parts:	Ra 1.6 µm

Temperature

Max. working temperature:	95 °C
Max. ambient temperature:	150 °C

Weight:	See reverse page
---------	------------------

Options - Materials

- Alternative sealing component material, FFKM¹
- Positioning sensors, which generate digital signals at the fully retracted or fully extended positions
- 3.1. certificate for metallic parts available upon request. Product contact parts only

¹ FDA compliance 21CFR§177

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.

Pressure

Recommended operating cleaning fluid pressure:	3 bar
Cleaning fluid pressure when retracted:	Pressureless
Air supply pressure:	2 - 5 bar

Pressure: Air to Air (AA)

Cleaning fluid pressure:	1 - 5 bar
Tank pressure:	No Pressure ¹
Air supply pressure:	2 - 5 bar
Purging possible:	Not supported - contact Alfa Laval

¹ For applications with other pressure, please contact Alfa Laval for support

Pressure: Air to Spring (AS)	
Cleaning fluid pressure:	1 - 5 bar
Tank pressure:	No Pressure ¹
Air supply pressure:	2 - 5 bar
Purging possible:	Not supported - contact Alfa Laval

¹ For applications with other pressure, please contact Alfa Laval for support

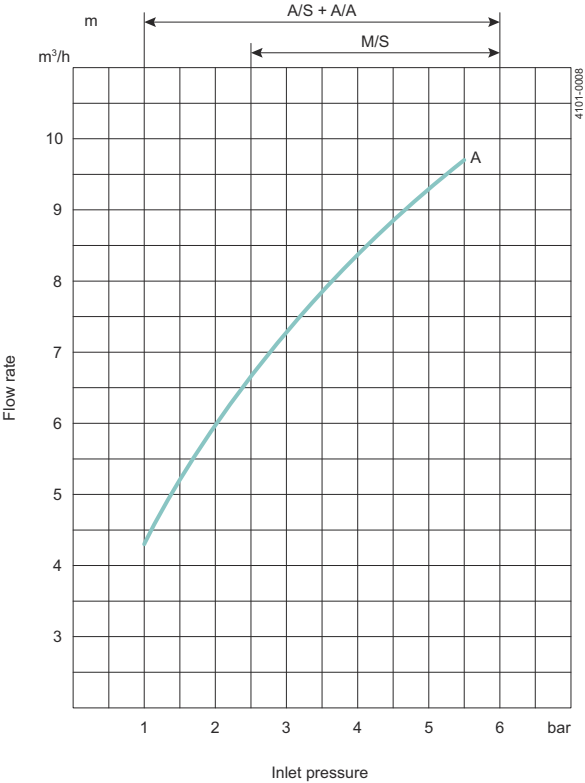
Pressure: Media to Spring (MS)	
Cleaning fluid pressure:	2½ - 5 bar
Tank pressure:	No Pressure ¹
Purging possible:	Not supported - contact Alfa Laval

¹ For applications with other pressure, please contact Alfa Laval for support

Qualification Documentation

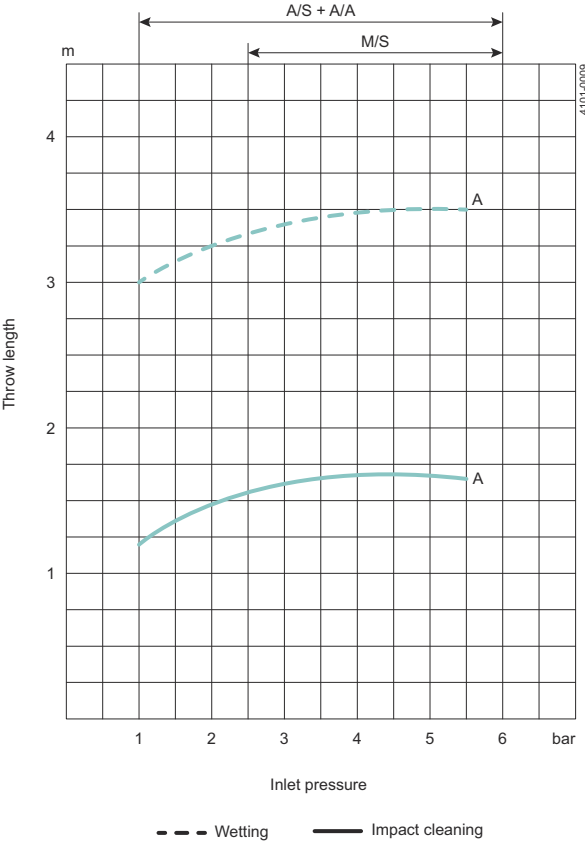
Documentation specification	
Q-doc	Equipment Documentation includes:
	• EN 1935/2004 DoC • EN 10204 type 3.1 inspection Certificate and DoC • FDA DoC
	• GMP EC 2023/2006 DoC • EU 10/2011 DoC • ADI DoC • QC DoC
ATEX	ATEX approved machine for use in explosive atmospheres
	Category 1 for installation in zone 0/20 in accordance with Directive 2014/34/EU
	ATEX marking for the equipment SaniMidget Retractor:
	II 1G Ex h IIC 85 °C ...188 °C Ga II 1D Ex h IIIC T85 °C ...T150 °C Da

Flow Rate



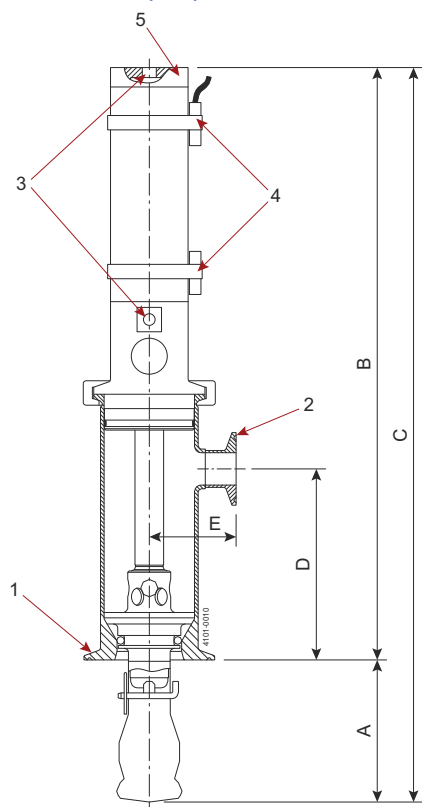
A = 270° U
 A/S = Air/spring version
 A/A = Air/air version
 M/S = Media/spring version

Cleaning Radius



--- Wetting — Impact cleaning

Dimensions (mm)



Pneumatic driven

Stroke	A	B	C	D	E	F	G	H	Weight
100	100	409	509	133	58.5	Ø76.1	Ø85	7	5.6 kg
150	150	509	659	183	58.5	Ø76.1	Ø85	7	6.3 kg
250	250	709	959	283	58.5	Ø76.1	Ø85	7	7.4 kg

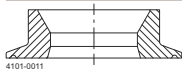
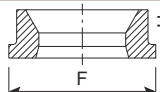
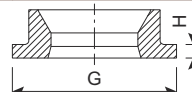
Media driven version + Pneumatic driven version with Spring return

Stroke	A	B	C	D	E	F	G	H	Weight
100	100	479	579	133	58.5	Ø76.1	Ø85	7	5.6 kg
150	150	609	759	183	58.5	Ø76.1	Ø85	7	6.3 kg
250	250	869	1119	283	58.5	Ø76.1	Ø85	7	7.4 kg

Connections

1. Tank connections
2. Cleaning media 1" Clamp ISO 2852
3. Air supply - pneumatic driven only ISO 228-G 1/8
4. Option Magnetic sensor
5. Adjustable valve - media driven only

Tank Connection

Clamp	Welded	Welded
		
3" Clamp ISO 2852	3" ISO 2037/US	DN80 DIN 11.850

This document and its contents are subject to copyrights and other intellectual property rights owned by Alfa Laval Corporate AB. No part of this document may be copied, re-produced or transmitted in any form or by any means, or for any purpose, without Alfa Laval Corporate AB's prior express written permission. Information and services provided in this document are made as a benefit and service to the user, and no representations or warranties are made about the accuracy or suitability of this information and these services for any purpose. All rights are reserved.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com