**Alfa Laval SaniMidget Retractor**

**Does not interfere with production**

**Application**
The Toftejorg SaniMidget Retractor is installed where fully automated and validated cleaning can assure higher productivity due to less cleaning time in e.g. spray drying applications within the food, ingredients and pharmaceutical industry. Larger ducts, channels, cyclones, chambers, complexed reactors, vent lines etc. can therefore be cleaned to the highest standards with no manual or semi automated interference, and avoiding any product carry over or hazardous incidents.

**Working principle**
The Toftejorg SaniMidget Retractor is available with two styles of retracting mechanisms: Pneumatic Driven, which uses air pressure to extend and retract the cleaning head, and Media Driven, which uses the pressure of the cleaning media to extend the cleaning head and an integrated spring to retract it. The Rotary Spray Head creates a fan of fluid in a swirling pattern. The distribution pattern of the cleaner head generates a vibrating impact as well as cascading flow coverage of all internal surfaces of the tank.

**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

**Certificates**
2.2 material certificate/Q-doc product contacted parts only, ATEX

* product contact parts only

**PHYSICAL DATA**

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

* 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**
- A. Hastelloy C22 product contact part only!
- B. Alternative sealing component material, FPM*, FFKM*
- C. Positioning sensors, which generate digital signals at the fully retracted or fully extended positions
- D. 3.1. certificate for metallic parts available upon request

* 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
Air supply pressure: . . . . . . 2-5 bar
Purging possible: . . . . . . . . . . Not supported - contact Alfa Laval

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

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

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

Spray Pattern

270° up

Qualification Documentation (Q-doc)

<table>
<thead>
<tr>
<th>Documentation specification</th>
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<tr>
<td>Q-doc</td>
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<tr>
<td>Equipment Documentation includes:</td>
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<tr>
<td>- EN 10204 type 3.1 Material Inspection certificate</td>
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<tr>
<td>- USP Class VI certificate</td>
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<tr>
<td>- FDA Declaration of Conformity</td>
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<tr>
<td>- TSE Declaration</td>
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<tr>
<td>- QC Declaration of Conformity</td>
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ATEX approved machine for use in explosive atmospheres.
Media driven version:
Catagory 1 for installation in zone 0/20 in accordance to Ex II 1 GD c T 140°C, 284°F
Air driven version:
Catagory 1 for installation in zone 0/20 in accordance to Ex II 1 GD c T140°C, 284°F
Air driven unit:
Catagory 2 for installation in zone 1/21 in accordance to Ex II 2 GD c IIC T4 Tamb -20°C-4°F to +40°C 104°F
Flow Rate

A/S + A/A

Cleaning Radius

A/S + A/A

A: Wetting - B: Impact cleaning

A/S = Air/spring version
A/A = Air/air version
M/S = Media/spring version
### Dimensions (mm)

#### M/S & A/S

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<th>Stroke</th>
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<th>B</th>
<th>C</th>
<th>D</th>
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#### A/A

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### 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

<table>
<thead>
<tr>
<th>3&quot; Clamp ISO 2852</th>
<th>3&quot; ISO 2037/US</th>
<th>DN80 DIN 11.850</th>
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<tr>
<td>Clamp</td>
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Alfa Laval reserves the right to change specifications without prior notification.

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.