



# Hygienic, Low-Flow Cleaning

## Alfa Laval TJ SaniMagnum Rotary Spray Head

### Application

The Toftejorg SaniMagnum is an efficient replacement for traditional static spray balls as it uses low volumes of liquid at low pressure. The device, particularly well-suited to hygienic applications, can be used in tanks ranging from 5 m<sup>3</sup> to 50 m<sup>3</sup>.

### Working principle

The flow of the cleaning media causes the head of the Toftejorg SaniMagnum to rotate, with fan jets laying out a swirling pattern throughout the vessel. This generates a vibrating impact and cascading flow that covers all internal surfaces of the tank or reactor. The device's self-cleaning feature is achieved by directing the cleaning media through the rotating bearing track and onto the neck of the elongated head.



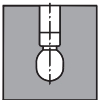
### TECHNICAL DATA

Lubricant: . . . . . Self-lubricating with the cleaning fluid  
 Wetting radius: . . . . . Max. 3 m  
 Impact cleaning radius: . . . . . Max. effective 2 m

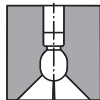
### Pressure

Working pressure: . . . . . 1-3 bar  
 Recommended pressure: . . . . . 2 bar

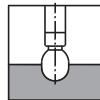
### Spray Pattern



360°



270° up



180° down

### Standard Design

As standard documentation, the Toftejorg SaniMagnum can be supplied with a "Declaration of Conformity" for material specifications or 3.1 certification for metallic parts. Conformity of Declaration ATEX available on request. The device is available in hastelloy C22 (balls in hastelloy C276) with 3.1 certification for metallic parts. ATEX approved, Category 1 for installation in zone 0/20.

### Certificates

2.2 material certificate, Q-doc, Q-doc incl. FAT & SAT and ATEX.

### PHYSICAL DATA

#### Materials

Inlet connections/Head: . . . . . 316L (UNS S31603)  
 Bearing race parts: . . . . . Duplex steel (UNS S31803)  
 Balls: . . . . . 316L (UNS S31603) /PTFE\*  
 Clip parts . . . . . 316  
 \* FDA compliance 21CFR§177

#### Standard Surface finish:

exterior: . . . . . Ra 0.8µm  
 internal: . . . . . Ra 0.8µm

#### Improved Surface finish:

exterior + Electro polished: . . . . . Ra 0.5µm  
 internal + Electro polished: . . . . . Ra 0.5µm

#### Temperature

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

#### Weight

Thread and clip-on: . . . . . 0.76 kg  
 On pipe: . . . . . 0.97/1.52 kg

#### Connections

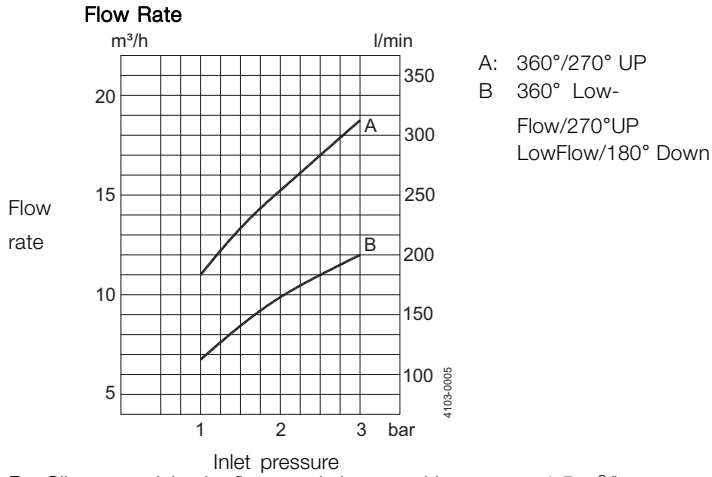
- Thread: 1 1/4" or 1 1/2" Rp (BSP) or NPT
- Weld-on: 1 1/2" or 2" ISO 2037, or DN40 DIN11850-R2, or 1 1/2" or 2" BPE US
- Clip-on: 1 1/2" or 2" ISO 2037, or DN40 DIN11850-R1 or R2, or 1 1/2" or 2" BPE US



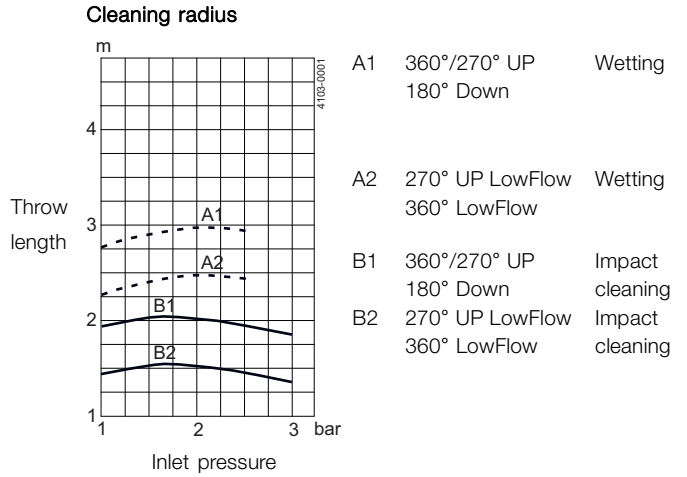
**Qualification Documentation (Q-doc)**

Designed for the BioPharm and Personal Care industry for qualification of hygienic Tank Cleaning Machines. Developed in accordance to the ISPE V-model and GDP, Good Documentation Practice, and includes:

RS (Requirement Specification); DS (Design Specification incl. Traceability Matrix); FAT (Factory Acceptance Test incl. IQ & OQ); 3.1 and USP Class VI Certificates; FDA Declaration of Conformity; TSE Declaration; QC Declaration of Conformity; SAT (Site Acceptance Test Protocol incl. IQ & OQ) for End-User Execution.

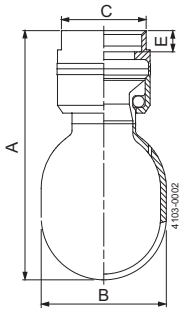


For Clip-on models, the flow rate is increased by approx. 1.5 m<sup>3</sup>/h

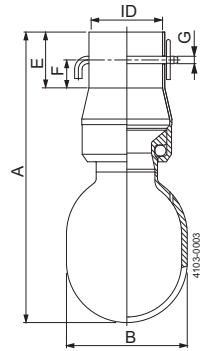


**Dimensions (mm)**

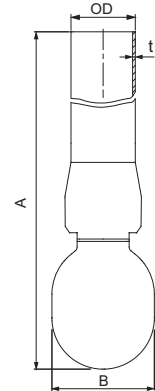
**Thread**



**Clip-on**



**Weld-on**



- TH**
- 1 1/4" (BSP)
  - 1 1/4" NPT
  - 1 1/2" (BSP)
  - 1 1/2" NPT

- ID**
- ID 1: 1 1/2"  $\varnothing 38.4$  mm
  - ID 2: 2"  $\varnothing 51.3$  mm
  - DIN Range 1  $\varnothing 40.4$  mm
  - DIN Range 2  $\varnothing 41.4$  mm

- OD x t**
- ISO  $\varnothing 38 \times 1.2$  mm
  - BPE US  $\varnothing 38.1 \times 1.65$  mm
  - BPE US  $\varnothing 50.8 \times 1.65$  mm
  - DIN Range 1  $\varnothing 40 \times 1$  mm
  - DIN Range 2  $\varnothing 41 \times 1.5$  mm

| Type    | A              | B                | C  | E  | F  | G                 |
|---------|----------------|------------------|----|----|----|-------------------|
| Thread  | 130            | $\varnothing 65$ | 44 | 10 |    |                   |
| Clip-on | 157            | $\varnothing 65$ |    | 30 | 15 | $\varnothing 4.2$ |
| Weld-on | 157, 500, 1000 | $\varnothing 65$ |    |    |    |                   |

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**How to contact Alfa Laval**

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