# Sanitary, 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 sanitary applications, can be used in tanks ranging from 1,300 to 13,000 US gallons.

### 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.

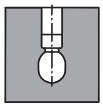
### TECHNICAL DATA

| | |
|---|---|
| Lubricant: | Self-lubricating with the cleaning fluid |
| Wetting radius: | Max. 10 ft |
| Impact cleaning radius: | Max. effective 6 ft |

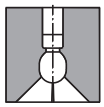
### Pressure

| | |
|---|---|
| Working pressure: | 14.5-44 PSI |
| Recommended pressure: | 29 PSI |

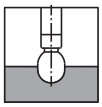
### Spray Pattern



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 directive 94/9/EC 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 32µin |
| internal: | Ra 32µin |

#### Improved Surface finish:

| | |
|---|---|
| exterior + Electro polished: | Ra 20µin |
| internal + Electro polished: | Ra 32µin |

#### Temperature

| | |
|---|---|
| Max. working temperature: | 203°F |
| Max. ambient temperature: | 284°F |

#### Weight

| | |
|---|---|
| Thread and clip-on: | 1.48 lbs |
| On pipe: | 2.14/3.35 lbs |

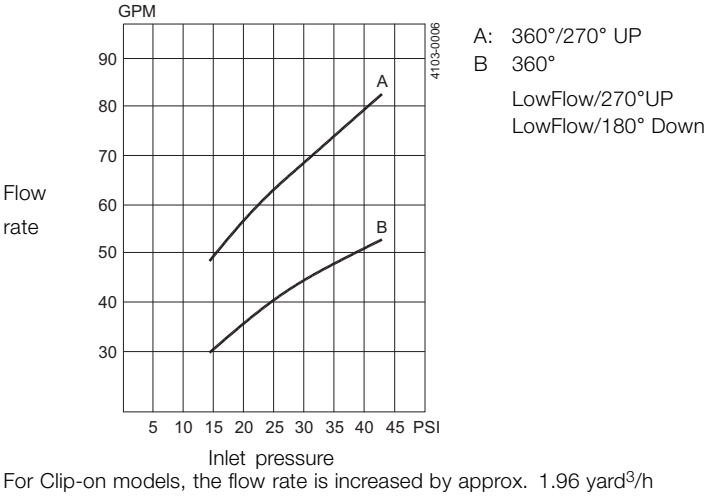
#### Connections
- Thread: 1 1/4" or 1 1/2" Rp (BSP) or NPT
- Weld-on: 1 1/2" or 2" ISO 2037, or DN40 DIN11850-R2, or 1 1/2" or 2" BPE US
- Clip-on: 1 1/2" or 2" ISO 2037, or DN40 DIN11850-R1 or R2, or 1 1/2" or 2" BPE US

### Qualification Documentation (Q-doc)

Designed for the BioPharm and Personal Care industry for qualification of hygienic Tank Cleaning Machines. Developed in according 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.

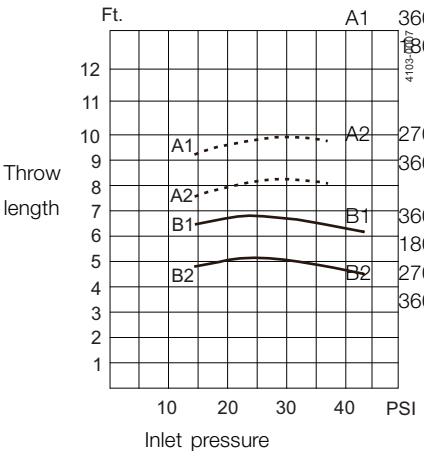
### Flow Rate




A: 360°/270° UP
B 360°
LowFlow/270°UP
LowFlow/180° Down

For Clip-on models, the flow rate is increased by approx. 1.96 yard$^3$/h

### Cleaning radius




| | | |
|---|---|---|
| A1 | 360°/270° UP<br>180° Down | Wetting |
| A2 | 270° UP LowFlow<br>360° LowFlow | Wetting |
| B1 | 360°/270° UP<br>180° Down | Impact cleaning |
| B2 | 270° UP LowFlow<br>360° LowFlow | Impact cleaning |

### Dimensions (inch)

| TH | ID | | OD x t | |
|---|---|---|---|---|
| 1 1/4" BSP | 1½" | ø1.51 inch | ISO | ø1.50 x 0.047 inch |
| 1 1/4" NPT | 2" | ø2.02 inch | BPE US | ø1.5 x 0.065 inch |
| 1½" BSP | DIN Range 1 | ø1.59 inch | BPE US | ø2 x 0.065 inch |
| 1½" NPT | DIN Range 2 | ø1.63 inch | DIN Range 1 | ø1.57 x 0.039 inch |
| | | | DIN Range 2 | ø1.61 x 0.059 inch |

| Type | A | B | C | E | F | G |
|---|---|---|---|---|---|---|
| Tread | 5.12 | ø2.56 | 1.73 | x | | |
| Clip-on | 6.18 | ø2.56 | | 0.39 | 0.59 | ø0.165 |
| Weld-on | 6.18 / 19.68 / 39.37 | ø2.56 | | | | |

ESE00332ENUS 1507



**How to contact Alfa Laval**
Contact details for all countries are continually updated on our website. Please visit www.alfalaval.us to access the information direct.