Safe production – non intrusive cleaning equipment

Alfa Laval SSB Retractor – A Retractable Targeted Static Spray Ball

Applications

The SSB Retractor is used for cleaning different types of installations from simple tanks and duct work, to complex process applications with agitators where built-in dynamic cleaning heads are impractical to use. Storage tanks, reactors, mixers and spray dryers etc. including surrounding duct work and vent lines are cleaned by SSB Retractor units. The SSB Retractor is widely used in applications within the biopharma, cosmetic, dairy, food and beverage industries.

Working Principle

The unit can be installed in ducts and small tanks, where the process is disturbed by any internal components including fixed cleaning equipment. Three versions available:

- "Air to Spring" where the extension is activated by pneumatic and retraction is spring-activated
- "Air to Air" where both the extension and the retraction are activated by pneumatic
- Alternatively as "media to spring" operated

The Retractor unit is designed with inlet and cleaner head in a telescopic system, which allows for easy installation and ensures effective self draining. Self cleaning is easily done due to the simple design and minimum wetted surface area. After cleaning it is possible to keep the Retractor extended to purge the cleaning system dry.
By targeted drilling of the spray ball, the unit can be customized to improve the cleaning efficiency for specific applications.

TECHNICAL DATA

Flow rate: . . . . . 2.9 m^3/h at 3 bar
Standard strokes: . . . . . 60 or 120 mm

Pressure

Cleaning fluid pressure: . . . . . 2-4 bar
Recommended operating pressure: . . 3 bar
Cleaning fluid pressure when retracted: Pressureless

Standard Design

The units are available with two stroke length: 60 mm or 120 mm.
The SSB Retractor is available as standard with all wetted stainless steel components manufactured from AISI 316L. Seals are made from EPDM and PTFE / Viton envelope gaskets; both in compliance with FDA regulation and USP Class VI.
As standard documentation, the SSB Retractor can be supplied with "Declaration of Conformity" for material specification or Q-doc.

Note: Q-doc product contacted parts only

PHYSICAL DATA

Materials

Components: . . . . . .Stainless steel 316L
Spring: . . . . . .Stainless steel 301S81
Seals: . . . . . .EPDM, carbon filled PTFE
Gaskets: . . . . . .Carbon filled PTFE
Surface finish: . . . . . .Product contact surface: Ra = 0.5µm

Temperature

Max. cleaning fluid temp.: . . . .95°C
Max. process temp.: . . . . . .140°C - standard seals

Connections

Air connections: . . . . . .⅛" BSP parallel - internal thread fitted as standard, including a push fit connector for 6 mm air tube
Cleaning media connection: . . .Flanged/clamped to 1½" ISO 2852, (DIN 32676 DIN 40)
Vessel mounting: . . . . . .Flanged/clamped to 2", ISO 2852, (Always use special Alfa Laval weld adapter)

Options - Materials

Wetted components: . . . . . .Hastelloy C22*
Wetted seals: . . . . . .FFKM (perfluoroelastomer)*
Max. process temp.: . . . . . .180°C - special seals*
* Product contact parts only
Proximity sensor: . . . . . .For position indication

Pressure: Air to Air (AA)

Tank/duct pressure:	Vaccum to 10 bar
Air supply pressure:	3-4 bar
Purging possible:	Yes

Pressure: Air to Spring (AS)

Tank/duct pressure:	Atm. to 10 bar
Air supply pressure:	3-4 bar
Purging possible:	Yes

Pressure: Media to Spring (MS)

Tank/duct pressure:	Atm. to 10 bar
Purging possible:	No

Special weld in pads

Weld in pads can be delivered tailor-made to the actual duct / vessel shape and size, ensuring a very smooth and hygienic surface internally.

Blanking plugs

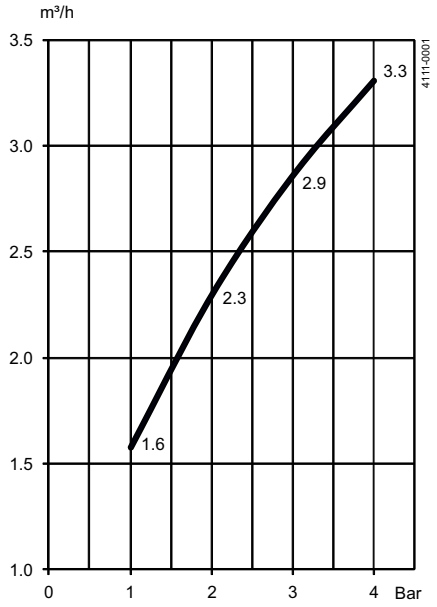
Blanking plugs are used when the unit is taken out for maintenance.

Benefits

- Air operated to allow full draining and purging
- Sealed cleaning house and telescopic air cylinder ensures minimum wetted area and achieves compact length
- Available with different stroke lengths ensuring optimum positioning of the spray ball
- Air cylinder joints fitted with safety clamps
- Air closing versions ensures no leakage in closed position
- Minimum consumption of cleaning media and energy.

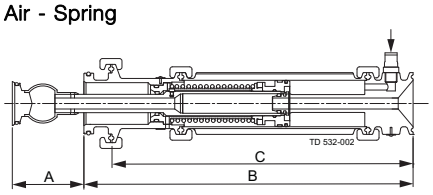
The Static Spray Ball Retractor (SSB Retractor) is a pneumatically operated retractable and targeted spray ball that is non-intrusive during production. It is designed in accordance to best practice in order to achieve fast and effective cleaning of equipment used in the production process, especially where access is difficult or where intrusive cleaning equipment interferes with production.

Flow rate

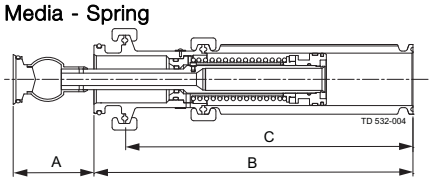


Dimensions

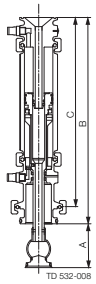
Air - Spring



Media - Spring



Air - Air



	Dimension (mm)		
	A	B	C
Media/spring	60	231	208
Air/Spring	60	269	246
Air/Air	60	276	253
Media/Spring	120	351	328
Air/Spring	120	389	366
Air/Air	120	396	373

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