



# Instruction Manual

Toftejorg SaniMidget Retractor

IM-TE91A750-EN1  
August 2004

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## Introduction

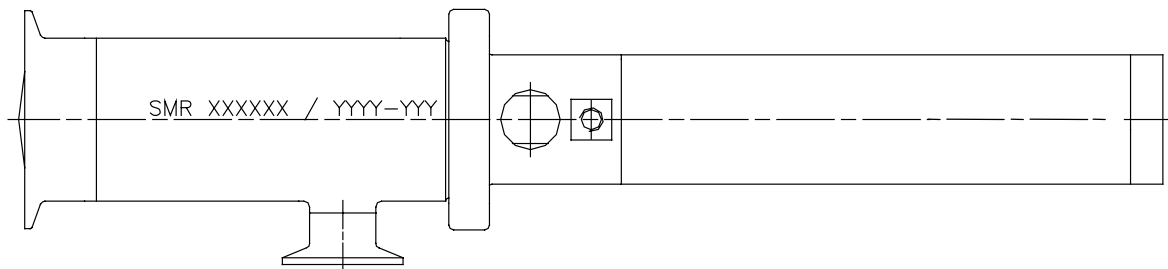
This manual has been prepared as a guide for installation and for the persons who will be operating and maintaining your tank cleaning machine.

The key to long life for your tank cleaning machine is a carefully planned system for preventive maintenance; you must appreciate that a tank cleaning machine which has a rough and dirty job to do will need more frequent attention than one working under ideal conditions.

**Note:** Get the best and most economical performance from your tank cleaning machine. Insufficient preventive maintenance means poor performance, unscheduled stops, shorter lifetime and extra costs. Good preventive maintenance on the contrary means good performance, no unscheduled stops and superior total economy.

The information in this manual is simple to follow, but should you require further assistance, our Customer Service department and worldwide net of distributors will be pleased to help you. Please quote the type, article and serial numbers with all of your enquiries; this will help us to help you.

The article number and serial number are placed on the front of the tank cleaning machine, SMR XXXXXX / YYYY-YYY (article number/serial number).



**Warning:** Before installing the machine and setting it into operation carefully read the General Installation Instructions (page 10) and the Safety Precautions (page 11) and take all necessary precautions according to your application and local regulations.



**Note:** The illustrations and specifications contained in this manual were effective at the date of printing. However, as continuous improvements are our policy, we reserve the right to alter or modify any unit specification on any product without prior notice or any obligation.

## General Description

The Toftejorg SaniMidget Retractor is a tank cleaning machine intended for industrial use in closed tanks for processing storage. There is a broad range of application area within pharmaceutical, food and chemical industries.

The Toftejorg SaniMidget Retractor is a sanitary cleaning device of the rotating fan jets type for permanent installation that provides a 270° Up cleaning pattern. During the process, the cleaner head is not extended into the process but completely sealed off from the product area and is therefore not in contact with the product. The cleaner head is automatically extended when cleaning starts and is automatically retracted when cleaning is completed. The machine is designed in such a way that it is completely self-cleaning. If Installed according to drawing on page 10, the SaniMidget Retractor is completely self-draining in the shown positions. All products contacts surfaces are AISI 316L stainless steel or FDA approved polymer materials.

No open thread or screws in the product areas.

The cleaning device is lubricated by the cleaning media. No oil, grease or other lubricants are used.

The Toftejorg SaniMidget Retractor is available in media driven or pneumatic driven versions which means extended by media or pneumatic.

The Toftejorg SaniMidget Retractor is designed for use in pharmaceutical, biotechnological, food and dairy processing applications. Process equipment with moving internals, and in processes where permanently installed cleaner heads may have an undesired influence on the process or product. It may be used in storage tanks, reactors, mixing tanks, spray dryers and other process equipment with a volume ranging from 0.1-10m<sup>3</sup> (27-2,700 US gallons). For larger volumes, multiple Toftejorg SaniMidget Retractors may be applied.

Application assistance and optimal position recommendation is available

For use in explosive hazard zones both types can be used, provided they are installed according to the safety instructions in local regulations.

## Quality system

The Toftejorg SaniMidget Retractor is designed in accordance with the 3A Sanitary Standards No. 78-00 as well as the guidelines of the European Hygienic Design Group (EHEDG) and thus complies with requirements to design, materials, finish and documentation. It is produced according to Alfa Laval Tank Equipment's ISO 9001 international Standard certified quality system. All parts are made from certified material and all non-metal parts are made from FDA-approved materials, 21 CFR § 177

## General Description (continued)

### Functioning

The Toftejorg SaniMidget Retractor consists of 2 main parts: The drive unit and the base housing. The base housing includes the piston with the cleaner head.

#### Media driven

In the cleaning media operated version the cleaner head extends from the pressure of the cleaning media and is retracted by a spring.

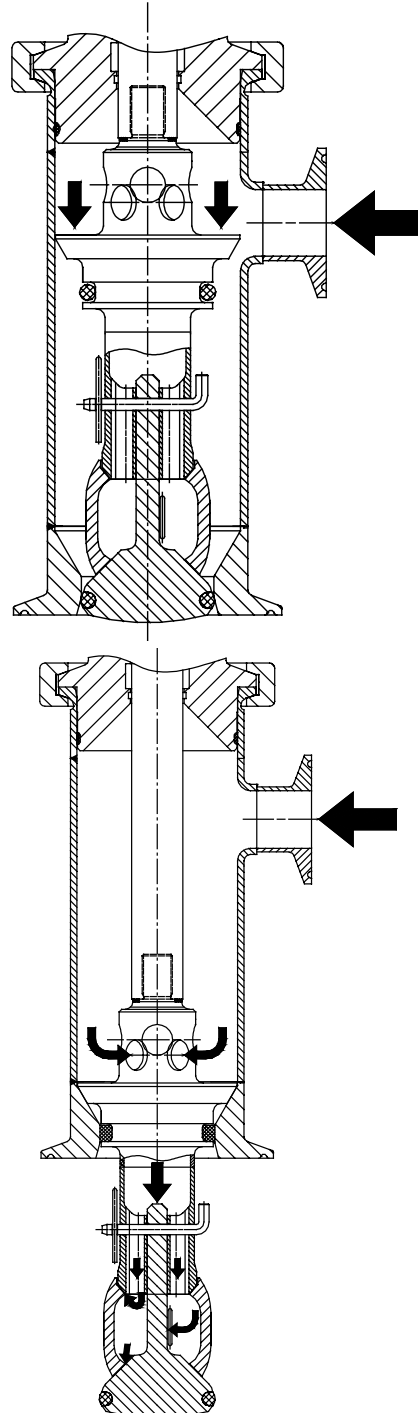
The cleaning media is directed through the 1" tri-clamp inlet connection into the housing. The liquid pressures the piston, which moves forward to extended position. At the same time the liquid passes through drillings in the piston to the cleaner head and out through the slots.

When cleaning is completed the machine is automatically retracted by an integrated spring system.

For total drain of the machine the retraction of the cleaner head can be delayed by adjusting the evacuation of air behind the piston. Use a screwdriver and adjust the needle valve on the rear part of the machine to correct position.

#### Pneumatic driven

In the pneumatic operated version, the cleaner head is extended and retracted by an integrated pneumatic cylinder. The cleaner head is extended when air is applied to the pneumatic cylinder, which must be done before cleaning media supply has started. It is retracted to its initial position when cleaning is completed by diverting the air pressure from the pneumatic cylinder. The pneumatic cylinder can remain extended during a draining phase without media supply.



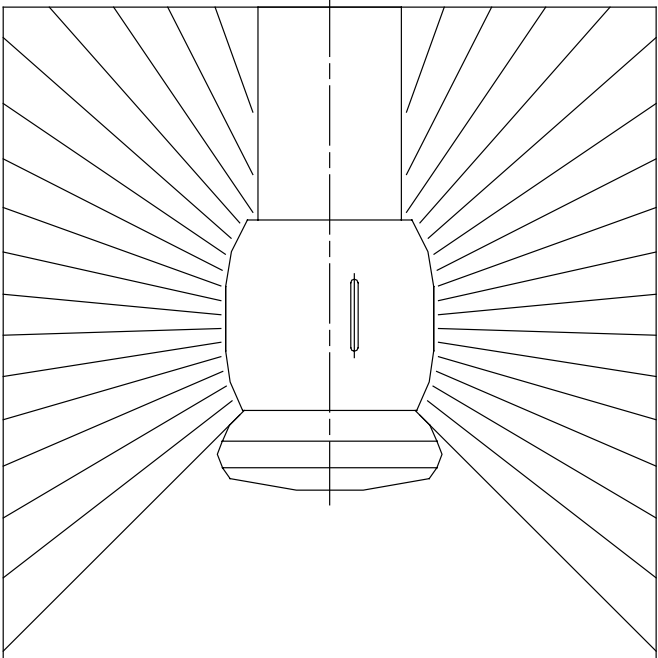
# General Description (continued)

## Functioning

In both media and pneumatic driven Toftejorg SaniMidget Retractor versions, the cleaner head starts rotating with fan jets due to the flow of the cleaning fluid. It projects a swirling pattern of media through the tank or vessel which generates a vibrating impact and cascading flow coverage of the total internal surface of the tank or vessel.

When the cleaning media pressure is shut off, the cleaning media is completely drained through the cleaner head or the 1" tri clamp connection depending on the mounting position of the Toftejorg SaniMidget Retractor

**Spray Pattern**  
**270°**

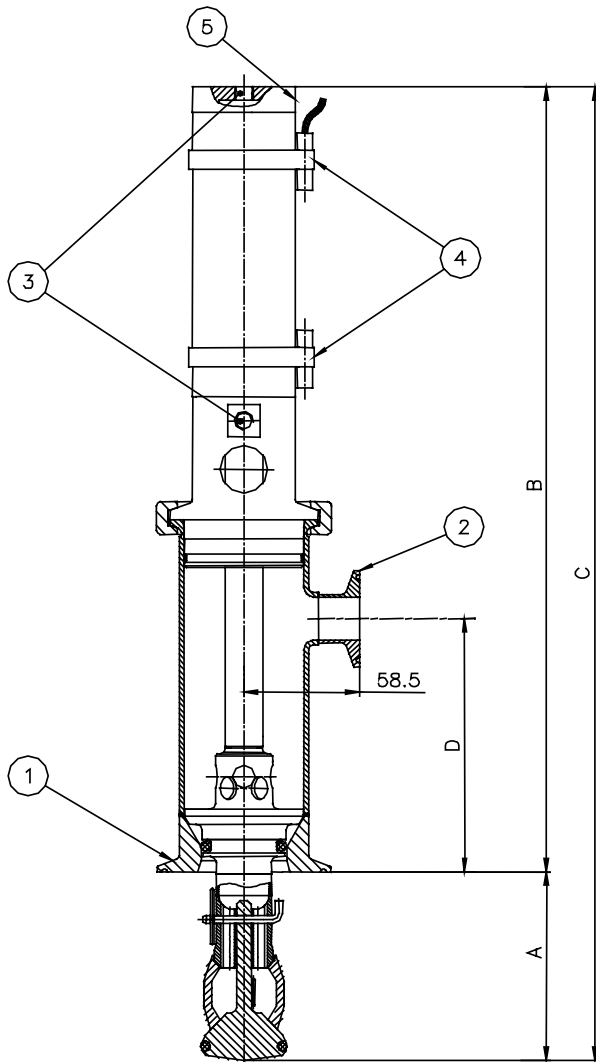


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## Technical Data

Weight of machine	: See table below
Working pressure	: 2-5 bar (29 – 73 psi)
Recommended pressure	: 2-4 bar (29 –58 psi)
Max. working temperature	: 95° C (203° F )
Max. sterilisation temperature	: 121° C ( 250° F)
Max. tank temperature	: 150° C (304° F)
Effective cleaning radius	:
Materials, products area	: AISI 316L, PEEK, Sealing: EPDM
Materials, non products area	: AISI 304, POM, Sealing: NBR Polymers FDA-approved 21 CFR § 177
Surface finish	: Product contacts surfaces: Ra=0.8 µm – except weldings Self-lubricant with the cleaning media

### Principal Dimensions in mm



### Connections

#### ① Tank connection

TANK CONNECTION			
Clamp	Welded	Welded	2" Union
3" Clamp ISO 2852	3" ISO 2037/US	DN80 DIN 11.850	1. DIN 11.851 2. ISO 2852 3. BS 4825 4. SMS

#### ② Inlet connection, 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

#### Pneumatic version

Dimensions (mm)

Stroke	A	B	C	D	Weight
100	100	410	510	133	5.0 kg (11.0 lbs)
150	150	510	660	183	5.5 kg (12.1 lbs)
250	250	710	960	283	6.4 kg (14.1 lbs)

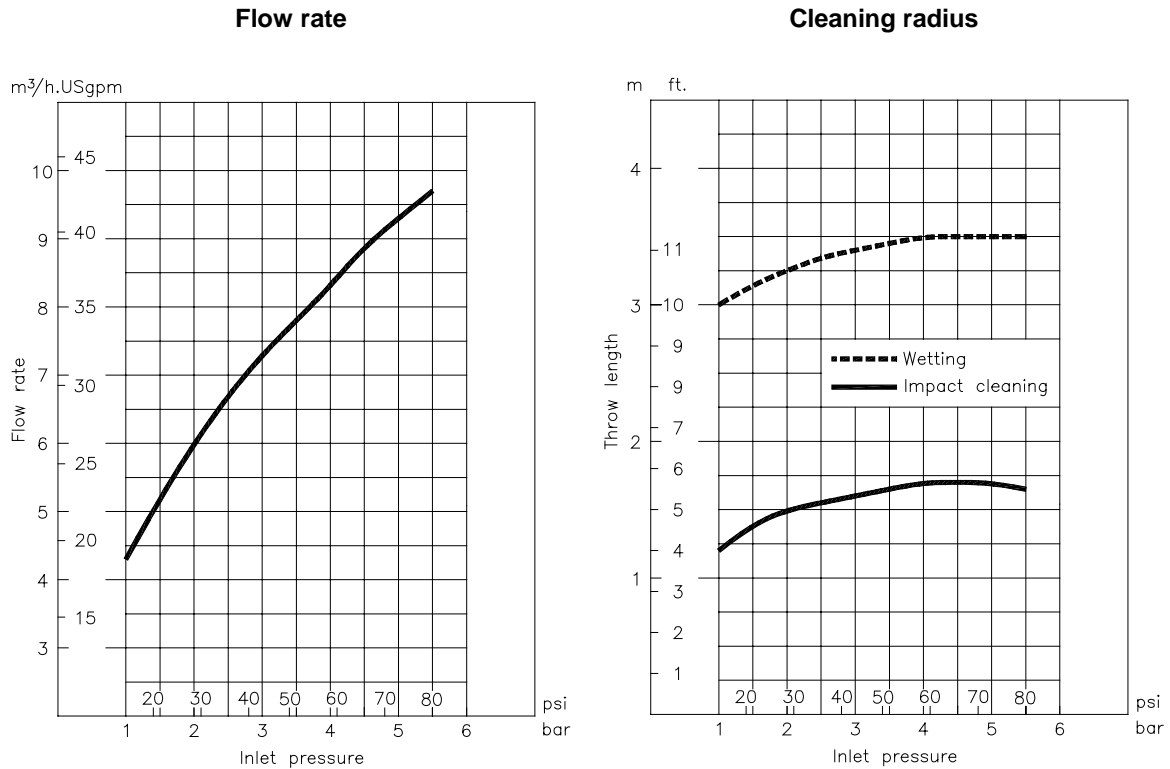
#### Media driven

Dimensions (mm)

Stroke	A	B	C	D	Weight
100	100	491	591	133	5.6 kg (12.4 lbs)
150	150	621	771	183	6.3 kg (13.9 lbs)
250	250	869	1119	283	7.4 kg (16.3 lbs)

## Technical Data (continued)

### Performance Data for Toftejorg SaniMidget Retractor



**Note:** The inlet pressure has been taken immediately before the machine inlet. In order to achieve the performance indicated in the curves, the pressure drop in the supply lines between pump and machine must be taken in consideration.

### Performance Data for Toftejorg SaniMidget Retractor Pneumatic driven

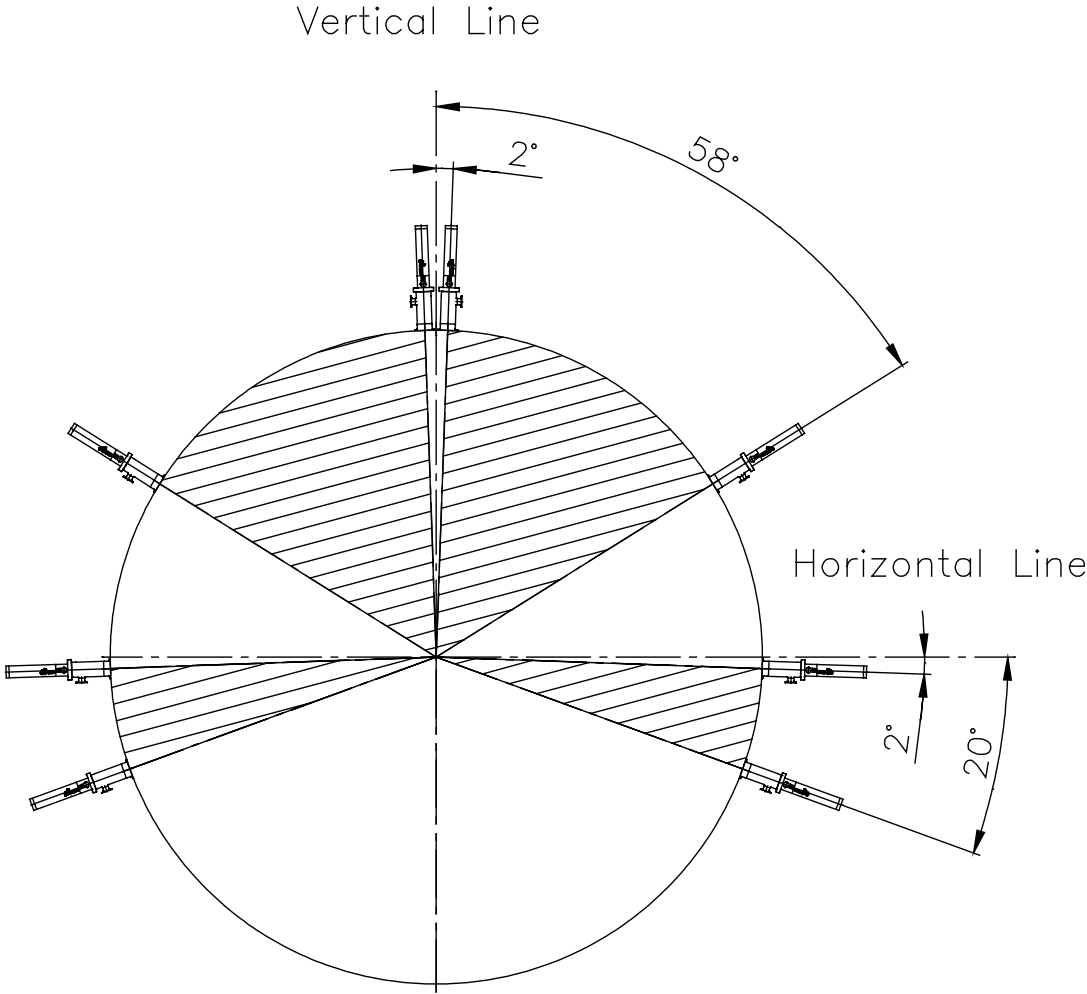
Air supply pressure	:	2-5 bar (29-75 psi)
Air quality	:	Clean filtered max. 40 µm
		Dry, dew point max. 5°C
		Non-lubricated possible

# Installation and Normal Operation

## General Installation Instructions

The Toftejorg SaniMidget Retractor is designed for installation according to the orientations shown below.

The Toftejorg SaniMidget Retractor is self-cleaning and self-draining when positioned in recommended positions, which is from 2 degrees to 58 degrees below vertical line and from 2 degrees to 20 degrees below horizontal line.



Hatched area = selfdraining positions

## Installation and Normal Operation (continued)

It is recommended to install a filter with mesh size 250 µm (0.01”) in the supply line in order to avoid particles, scale etc. from clogging the inside of the cleaner. It is essential to avoid fine solid particles, such as fine sand, in the cleaning fluid as they will increase wear considerably, and may cause slower rotation speed or stoppage. This is particular important in case of recirculation.

Before installation, all supply lines and valves must be thoroughly flushed to remove remains of welding electrodes, grinding dust, scale and other foreign matter.

During handling and installation handle the machine with care in order not to damage the fine surface of the machine.

The Toftejorg SaniMidget Retractor machine has been tested at the factory before shipping, in accordance with the Test Specifications.

**Note:** The machine shall be installed in accordance with national regulations for safety and other relevant regulations and standards. In EU-countries the complete system must fulfil the EU-Machine Directive and depending of application, the EU-Pressure Equipment Directive, the EU-ATEX Directive and other relevant Directives.

## Safety Precautions

The Toftejorg SaniMidget Retractor is intended for use inside a tank only, and must not be operated in open air or when the tank is open.

**Warning:** Precautions shall be made to prevent starting of the cleaning operation, while personnel are inside the tank or otherwise can be hit by jets from the cleaner head



**Warning:** If the machine is used in potential explosive atmospheres, tapes or joint sealing compounds, which are electrical insulators, must not be used on joints, if this may violate the grounding of the machine to the tank. Resistance between nozzles and tank must not exceed 20.000 Ω. The intended installation with standard clamp connections will ensure this. In addition, connecting pipe work, must be electrically conductive and earthed to the tank structure.



This is essential to avoid the build-up of static electricity on the nozzles and the machine. For further information see CENELEC R044-001 Safety of Machinery, guidance and recommendations for the avoidance of hazards due to static electricity.

Electrical equipment such as magnetic valves and electric actuators must not be installed in Ex-zones without type approval and marking, corresponding to the EX-class in question. Magnetic cylinder sensors shall be EX-approved.

## Installation and Normal Operation (continued)

### Normal Operation

#### Cleaning Media

Use only media compatible with Stainless Steel AISI 316L, PEEK and EPDM. Please note that PEEK is not resistant to concentrated sulfuric acid. Normal detergents, moderate solutions of acids and alkalis are acceptable. Aggressive chemicals, excessive concentrations of chemicals at elevated temperatures, as well as certain solvents hydrochlorides should be avoided. If you are in doubt, contact your local Alfa Laval Tank Equipment sales office.

#### Temperature

The machine is designed to operate with cleaning media at temperatures up to 95°C (203°F). However, it stands temperatures up to 150 °C (304 °F) inside the tank, and it is possible to steam the tank through the machines, 121°C (250°F) at steam sterilisation.

**Warning:** Tanks with capacities greater than 100 m<sup>3</sup> that could contain a flammable atmosphere should not be steam cleaned, as steam issuing from a nozzle could contain charged droplets.



Tanks smaller than this may be steam cleaned providing that: the steam nozzles and other metal parts of the system are reliably earthed and grounded to the tank structure.

**Warning:** In potentially explosive atmospheres, the temperature must not exceed the maximum surface temperature according to the temperature class for the combustible gas or liquid.



#### Pressure

Please make sure that the connections are correctly mounted before opening of the washing valve. Put on pressure gradually in order to avoid hydraulic shocks, which might stress mechanical parts in the Toftejorg SaniMidget Retractor cleaner. Max. pressure is 5.0 bar.

#### After-Use Cleaning

After use flush the machine with fresh water. Cleaning media should never be allowed to dry or set-up in the system due to possible "salting out" or "scaling" of the cleaning media. If cleaning media contains volatile chloride solvents, it is recommended not to flush with water after use, as this might create hydrochloric acid.

**Warning:** Hot chemicals and steam under pressure may be used for cleaning and sterilising. Protect against scalding and burning. Never tamper with or try to open clamps or other connections while system is in operation. Make sure that system is de-pressurised and drained before disassembly.



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## Maintenance and repair

### Preventive Maintenance

In order to keep your tank cleaning machine servicing you as an efficient tool in your tank cleaning operations, it is essential that you maintain its high performance by following a simple preventive maintenance programme, which will help keep your tank cleaning machine in good condition.

Good maintenance is careful and regular attention!

The following recommended preventive maintenance is based on tank cleaning machines working in average conditions. However, you will appreciate that a tank cleaning machine, which has a rough and dirty job to do, will need more frequent attention than one working in ideal conditions. We trust that you will adjust your maintenance programme to suit.

**Caution:**



Handle machine with care. Take proper action to protect fine surfaces from being damaged.

Always use only proper tools. Use Alfa Laval Tank Equipment A/S standard tool kit. Never force or hammer components together or apart. Always perform all assembly/disassembly steps in the order described in this manual.

Never assemble components without previous cleaning. This is especially important at all mating surfaces.

Work in a clear well-lighted work area.

### Every 100 working hours

Inspect the piston, cleaner head and o-rings:

#### Disassembly

Disassemble machine as described on the following pages.

1. Clean material build-up and deposits from internal parts with water or suitable chemical cleaner, possibly Scotch-brite, S-Ultrafine.
2. Dismount the 1"Clamp ring, inlet connection and Gasket.
3. Dismount the 2 1/2"Clamp ring.
4. Lift up the part.
5. Remove the rear part with the piston and cleaner head.
6. Remove the clip and take off the pin from the valve and piston. The cleaner head is free from the piston.

## **Maintenance and repair (continued)**

### **Check/Inspection**

1. Check the cleaner head for wear and remove possible particles. Look for any damage of the slide bearings of the cleaner head and on the valve and piston. Replace new parts and cleaner head if necessary.
2. Check o-ring on valve and piston for wear and replace if necessary.

### **Reassembly**

Reassembly is carried out in the opposite order.

### **Rear part Media driven**

Alfa Laval Tank Equipment A/S do not recommend or support disassembly of the rear part in the field. Please return the machine to us for disassembly.

### **Rear Part Pneumatic driven**

Alfa Laval Tank Equipment A/S do not recommend or support disassembly of the rear part in the field. Please return the machine to us for disassembly.

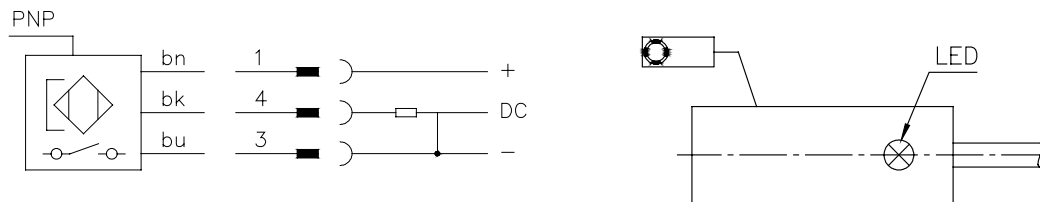
# Magnetic Cylinder Sensor

## Electrical and Mechanical Data

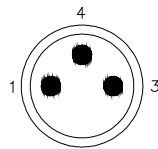
Operating voltage $U_b$	: 10 - 30 V DC	Wire-break protection	: Yes
Ripple $U_{pp}$	: $\leq 10\%$ of $U_b$	Reverse polarity protection	: Yes
Voltage drop $U_d$ (at $I_a$ max.)	: $\leq 1,5$ V	Enclosure rating to EN 60529	: IP 67
Continuous current $I_a$	: $\leq 300$ mA	Ambient temperature $T_a$	: $-25 - + 75^\circ\text{C}$
Hysteresis H	: $\leq 1.0$ mm	Housing material	: Aluminium, plastic
Power consumption (without load)	: $\leq 10$ mA	Connection table	: PUR-PVC, $3 \times 0.25$ mm <sup>2</sup>
Time delay before availability $t_v$	: $\leq 2$ ms	Power-up pulse suppression	: Yes
Repeatability R ( $U_b$ and $T_a$ constant)	: $\leq 0.1$ mm	Short-circuit protection (pulsed)	: Yes
EMC	: to EN 60 947-5-2	Shock and vibration stress	: 30 g. 11 ms 10 to 55 Hz. 1 mm

- High response sensitivity  $\geq 3$  mT
- Frontal sensing face
- No secondary switching ranges
- High repeat accuracy
- Actuating speed  $\leq 5$  m/s
- Short-circuit protection (pulsed)
- Solid aluminium housing
- Enclosure rating IP 67
- LED status indicator

## Connection diagram

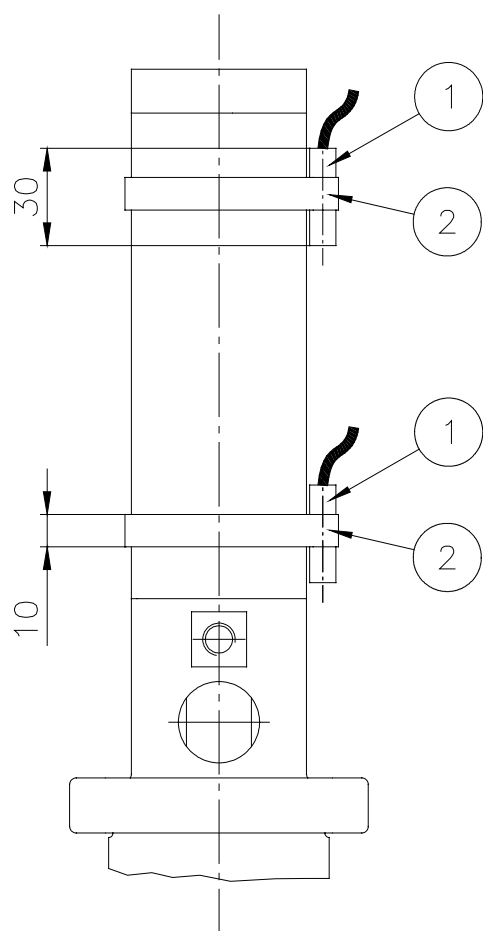


Wire colour	Contact	Assignment
bn brown	1	+ V DC
bk black	4	NO
bu blue	3	- V DC



## Magnetic Cylinder Sensor (continued)

### Dimensional drawing



#### Reference List of Parts, Magnetic Cylinder Sensor, with 2 m Cable

Pos.	Ref. no.	No/ Unit	Description	Material
1	TE51V556	2	Sensor	Aluminium, plastic
2	TE51V558	2	Mounting ring f. sensor	Plastic

#### Reference List of Parts, Magnetic Cylinder Sensor, with 10 m Cable

Pos.	Ref. no.	No/ Unit	Description	Material
1	TE51V557	2	Sensor	Aluminium, plastic
2	TE51V558	2	Mounting ring f. sensor	Plastic

# Midget Retractor, Media Driven

## Reference List of Parts

Art. no. TE75M000/077

Pos	Ref. no.	No/ Unit	Description	Material	Remarks
1	TE75M502	1	Valve	Stainless steel	Spare part
2	TE75M533	1	Cleaner head	Plastic material	Wear part
3	TE52D549	1	Spring pin	Stainless steel	Spare part
4	TE75M529	1	Lock-pin	Stainless steel	Spare part
5	<input type="checkbox"/> See table*	1	Front tube, complete	Assy	
6	<input type="checkbox"/> TE75M310	1	Piston, complete, stroke length = 100	Assy	Spare part
	<input type="checkbox"/> TE75M310-15	1	Piston, complete, stroke length = 150	Assy	Spare part
	<input type="checkbox"/> TE75M310-25	1	Piston, complete, stroke length = 250	Assy	Spare part
7	TE51S126	1	Clamp ring	Stainless steel	Spare part
8	<input type="checkbox"/> TE75M300	1	Media drive unit, compl., stroke length = 100	Assy	Spare part
	<input type="checkbox"/> TE75M300-15	1	Media drive unit, compl., stroke length = 150	Assy	Spare part
	<input type="checkbox"/> TE75M300-25	1	Media drive unit, compl., stroke length = 250	Assy	Spare part
9	<input type="checkbox"/> TE51T166	2	O-ring	EPDM	Wear part
	<input type="checkbox"/> TE51T167	2	O-ring	Viton	Wear part
	<input type="checkbox"/> TE51T168	2	O-ring	Chemical resistant	Wear part
10	<input type="checkbox"/> TE51T169	1	O-ring	EPDM	Wear part
	<input type="checkbox"/> TE51T170	1	O-ring	Viton	Wear part
	<input type="checkbox"/> TE51T171	1	O-ring	Chemical resistant	Wear part
11	TE75M508	1	Gasket	Plastic material	Spare part

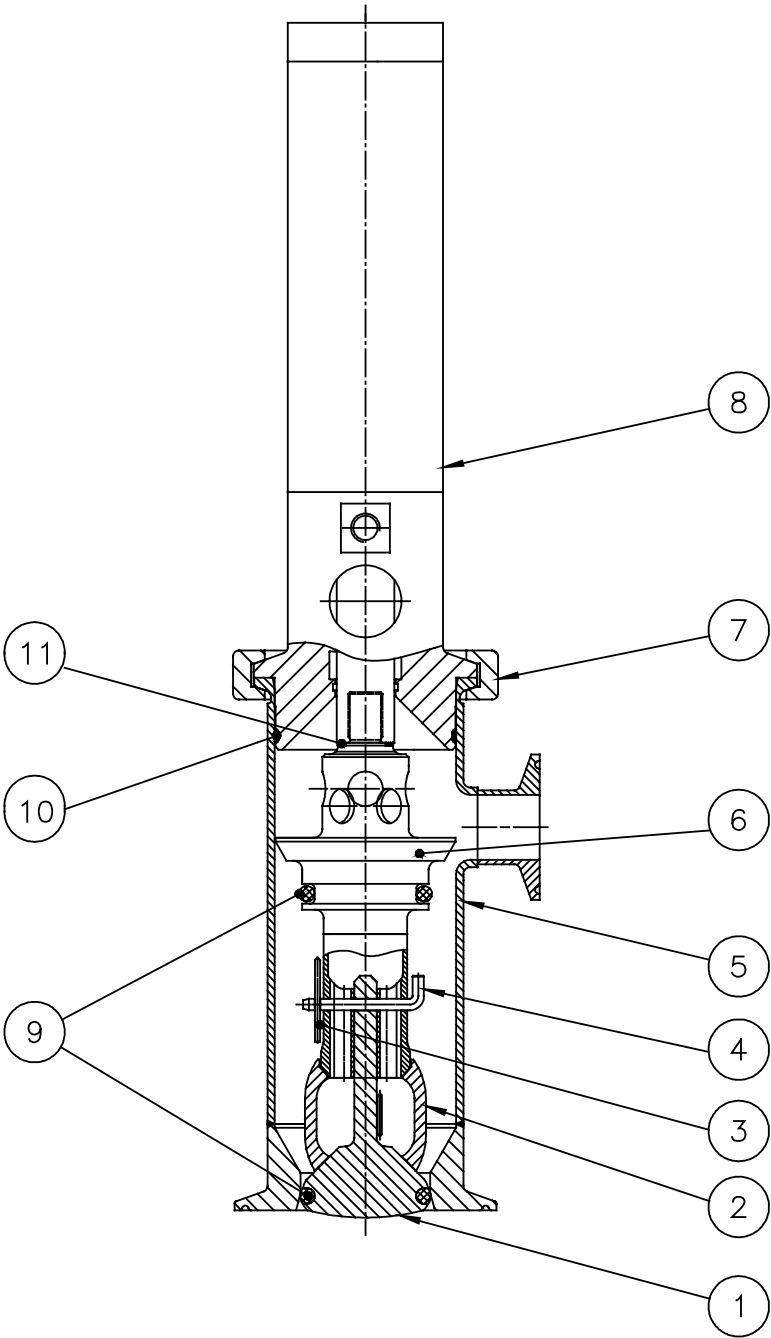
\*) Pos. 5, Front tube, complete  
Tank connection

Stroke length	Welding		Clamp 3"	2" Union			
	DIN 11.850	3" ISO/US		DIN 11.851	DS 722	BS 4825	SMS 1145
100	TE75M315	TE75M316	TE75M318	TE75M319	TE75M320	TE75M321	TE75M322
150	-15	-15	-15	-15	-15	-15	-15
250	-25	-25	-25	-25	-25	-25	-25

# Midget Retractor, Media Driven (continued)

## Cross Sectional Drawing

Art. no. TE75M000/077



# Midget Retractor, Pneumatic Driven

## Reference List of Parts

### Art. nos. TE75M100/177

Pos	Ref. no.	No/ Unit	Description	Material	Remarks
1	TE75M502	1	Valve	Stainless steel	Spare part
2	TE75M533	1	Cleaner head	Plastic material	Wear part
3	TE52D549	1	Spring pin	Stainless steel	Spare part
4	TE75M529	1	Lock-pin	Stainless steel	Spare part
5	<input type="checkbox"/> See table*	1	Front tube, complete	Assy	
6	<input type="checkbox"/> TE75M310	1	Piston, complete, stroke length = 100	Assy	Spare part
	<input type="checkbox"/> TE75M310-15	1	Piston, complete, stroke length = 150	Assy	Spare part
	<input type="checkbox"/> TE75M310-25	1	Piston, complete, stroke length = 250	Assy	Spare part
7	TE51S126	1	Clamp ring	Stainless steel	Spare part
8	<input type="checkbox"/> TE75M302	1	Pneumatic drive unit, compl., stroke length = 100	Assy	Spare part
	<input type="checkbox"/> TE75M302-15	1	Pneumatic drive unit, compl., stroke length = 150	Assy	Spare part
	<input type="checkbox"/> TE75M302-25	1	Pneumatic drive unit, compl., stroke length = 250	Assy	Spare part
9	<input type="checkbox"/> TE51T166	2	O-ring	EPDM	Wear part
	<input type="checkbox"/> TE51T167	2	O-ring	Viton	Wear part
	<input type="checkbox"/> TE51T168	2	O-ring	Chemical resistant	Wear part
10	<input type="checkbox"/> TE51T169	1	O-ring	EPDM	Wear part
	<input type="checkbox"/> TE51T170	1	O-ring	Viton	Wear part
	<input type="checkbox"/> TE51T171	1	O-ring	Chemical resistant	Wear part
11	TE75M508	1	Gasket	Plastic material	Spare part

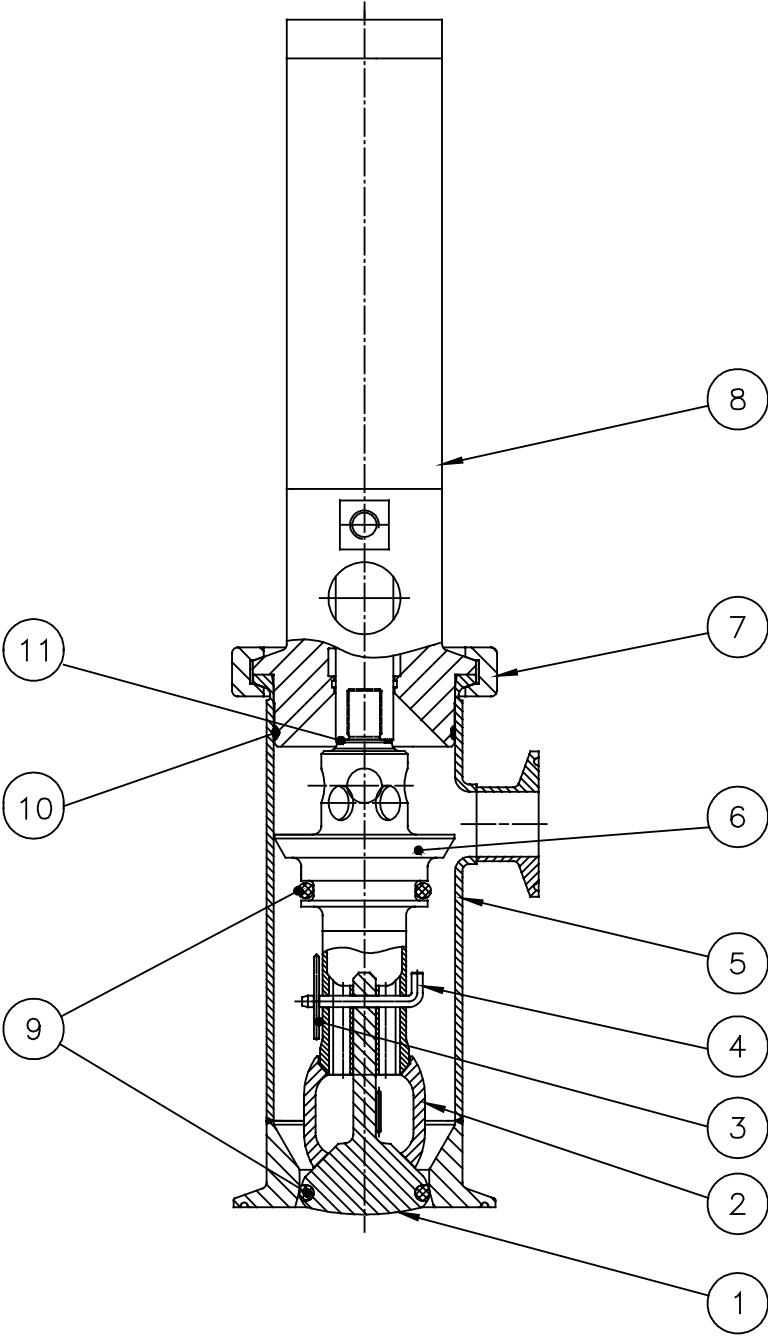
\*) Pos. 5, Front tube, complete  
Tank connection

Stroke length	Welding		Clamp 3"	2" Union			
	DIN 11.850	3" ISO/US		DIN 11.851	DS 722	BS 4825	SMS 1145
100	TE75M315	TE75M316	TE75M318	TE75M319	TE75M320	TE75M321	TE75M322
150	-15	-15	-15	-15	-15	-15	-15
250	-25	-25	-25	-25	-25	-25	-25

**Midget Retractor, Pneumatic Driven (continued)**

**Cross Sectional Drawing**

Art. no. TE75M100/177



## Midget Retractor, Media Drive unit

### Reference List of Parts

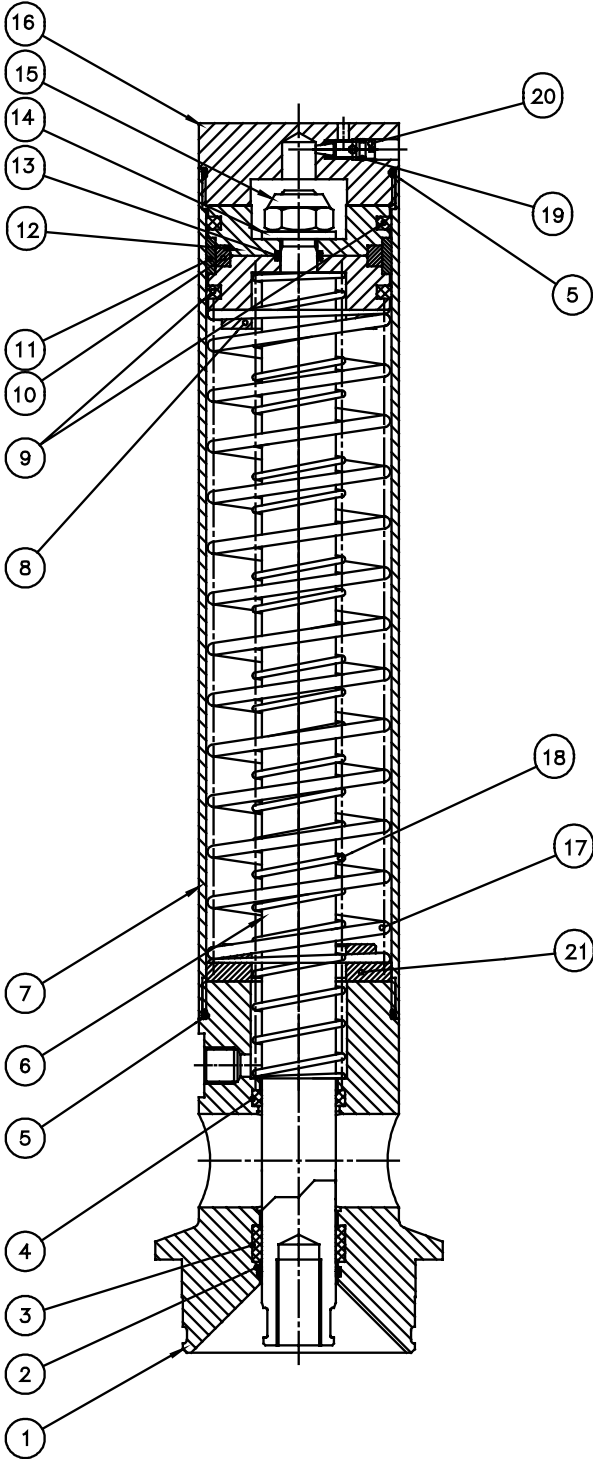
Art. nos. TE75M300, TE73M300-15, TE73M300-25

Pos.	Ref. no.	No/ Unit	Description	Material
1	TE75M500	1	Adapter	Stainless steel
2	TE51T131	1	O-ring	EPDM
3	TE51L076	1	Guide tape	
4	TE51T085	1	Wiper	
5	TE51T063	2	O-ring	NBR
6	<input type="checkbox"/> TE75M520	1	Shaft, stroke length = 100	Stainless steel
	<input type="checkbox"/> TE75M521	1	Shaft, stroke length = 150	Stainless steel
	<input type="checkbox"/> TE75M522	1	Shaft, stroke length = 250	Stainless steel
7	<input type="checkbox"/> TE75M551	1	Cylinder, stroke length = 100	Stainless steel
	<input type="checkbox"/> TE75M551-15	1	Cylinder, stroke length = 150	Stainless steel
	<input type="checkbox"/> TE75M551-25	1	Cylinder, stroke length = 250	Stainless steel
8	TE75M528	1	Piston	Plastic material
9	TE51U500	2	Gasket for Piston	Rubber
10	TE51M010	1	Magnet ring	
11	TE51L077	1	Guide tape	
12	TE75M509	1	Piston	Plastic material
13	TE51T064	1	O-ring	NBR
14	TE51B054	1	Washer	Stainless steel
15	TE51A524	1	Locking nut	Stainless steel
16	TE75M527	1	End cover	Stainless steel
17	<input type="checkbox"/> TE75M605	1	Spring, stroke length = 100	
	<input type="checkbox"/> TE75M606	1	Spring, stroke length = 150	
	<input type="checkbox"/> TE75M607	1	Spring, stroke length = 250	
18	<input type="checkbox"/> TE75M610	1	Spring, stroke length = 100	
	<input type="checkbox"/> TE75M611	1	Spring, stroke length = 150	
	<input type="checkbox"/> TE75M612	1	Spring, stroke length = 250	
19	TE51T172	1	O-ring	NBR
20	TE75M553	1	Air screw	Stainless steel
21	TE75M530	1	Spring connection	Plastic material

# Midget Retractor, Media Drive unit (continued)

## Cross sectional drawing

Art. nos. TE75M300, TE73M300-15, TE73M300-25



## Midget Retractor, Pneumatic Drive unit

### Reference List of Parts

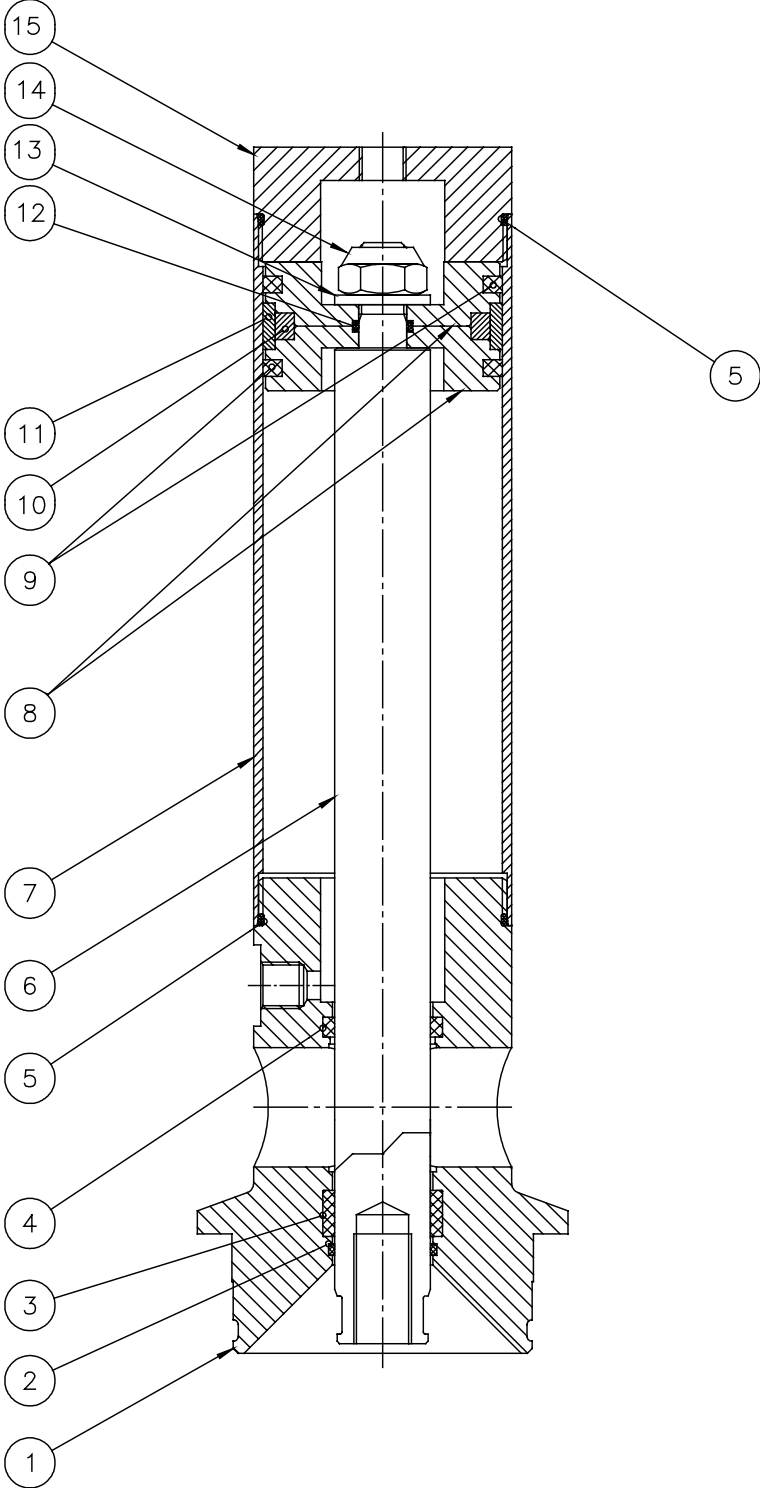
Art. nos. TE75M302, TE73M302-15, TE73M302-25

Pos.	Ref. no.	No/ Unit	Description	Material
1	TE75M500	1	Adapter	Stainless steel
2	TE51T131	1	O-ring	EPDM
3	TE51L076	1	Guide tape	
4	TE51T085	1	Wiper	
5	TE51T063	2	O-ring	NBR
6	<input type="checkbox"/> TE75M590	1	Shaft, stroke length = 100	Stainless steel
	<input type="checkbox"/> TE75M591	1	Shaft, stroke length = 150	Stainless steel
	<input type="checkbox"/> TE75M592	1	Shaft, stroke length = 250	Stainless steel
7	<input type="checkbox"/> TE75M552	1	Cylinder, stroke length = 100	Stainless steel
	<input type="checkbox"/> TE75M552-15	1	Cylinder, stroke length = 150	Stainless steel
	<input type="checkbox"/> TE75M552-25	1	Cylinder, stroke length = 250	Stainless steel
8	TE75M509	2	Piston	Plastic material
9	TE51U500	2	Gasket for Piston	Rubber
10	TE51M010	1	Magnet ring	
11	TE51L077	1	Guide tape	
12	TE51T064	1	O-ring	NBR
13	TE51B054	1	Washer	Stainless steel
14	TE51A524	1	Locking nut	Stainless steel
15	TE75M538	1	End cover	Stainless steel

# Midget Retractor, Pneumatic Drive unit (continued)

## Cross sectional drawing

Art. nos. TE75M302, TE73M302-15, TE73M302-25



# How to Order Spare Parts and Claim Procedure

## How to Order Spare Parts

The cross sectional drawings on page 19, 21, 23 and 25 show that the individual parts have a position number. From the Position number the part is easily identified in the Reference Lists of Parts, page 18, 20, 22, 24. For the magnetic sensor system the individual parts have a position number, and all are listed in the Reference list of Parts page 17.

Individual parts should always be ordered from the Reference Lists of Parts, page 18, 20, 22, 24. Ref. number and description should be clearly stated. Please also quote the type of machine and serial number. This will help us to help you.

The article number and serial number are placed on the front of the tank cleaning machine, SMR XXXXXX/YYYY-YYY (article number/serial number).

## Spare part kit

### Standard Spare Part Kit for Toftejorg SaniMidget Retractor, Article No. TE75M299

Part No.	Description	No.
TE75M533	Cleaner head	1 pc.
TE52D549	Spring pin	1 pc.
TE75M529	Lock-pin	1 pc.
TE51T166	O-ring	2 pcs.
TE51T169	O-ring	1 pc.

## Claim Procedure

In case of failure that needs assistance from Alfa Laval Tank Equipment A/S, it is essential for our evaluation that the problem, as well as the working conditions of the machine, is described as detailed as possible.

For description of the working conditions, fill in the form "Claim Report - Working Conditions", which you will find at the back of this manual.

## **How to contact Alfa Laval Tank Equipment A/S**

For further information please feel free to contact:

Alfa Laval Tank Equipment A/S  
Baldershoej 19  
P.O. Box 1149  
2635 Ishoej  
Denmark

Phone no.: +45 43 55 86 00  
Fax no.: +45 43 55 86 01  
[www.alfalaval.com](http://www.alfalaval.com)  
[www.toftejorg.com](http://www.toftejorg.com)

Contact details for all countries are continually updated on our websites.



# Claim Report Working Conditions

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Ref. Claim Case : \_\_\_\_\_

Machine/Cleaner Type : \_\_\_\_\_ Serial No.: \_\_\_\_\_

Configuration

- Nozzles : \_\_\_\_\_ x  $\varnothing$  \_\_\_\_\_ mm

- Turbine/Inlet Guide : \_\_\_\_\_ %

Working Conditions

Inlet pressure at machine/cleaner : \_\_\_\_\_

Type of Valve in inlet line : \_\_\_\_\_

Can hydraulic shock be disregarded: :  Yes  No

Inlet line flushed before installation of tank cleaner? :  Yes  No

Working hours before failure : \_\_\_\_\_ hours

Cleaning Programme

Cleaning media and conc.	Temperature	Time	Recirculation?

Is sterilising being used? :  Yes  No

Procedure (media/temp.)? : \_\_\_\_\_

Is steam injection being used for heating? :  Yes  No

Time: \_\_\_\_\_

Temperature: \_\_\_\_\_

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## Claim Report Working Conditions (continued)

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Condition of Cleaning Media

- |   |   |
|---|---|
| <input type="checkbox"/> Clean                                      |   |
| <input type="checkbox"/> Contaminated with (nature and description) |   |
| <input type="checkbox"/> Chemicals/Solvents _____                   | <input type="checkbox"/> High viscous     |
| <input type="checkbox"/> Soluble                                    | <input type="checkbox"/> Sticky/tenacious |
| <input type="checkbox"/> Low viscous                                | <input type="checkbox"/> Solidifying      |
| <input type="checkbox"/> Hard particles/size _____                  | <input type="checkbox"/> Crystallising    |
| <input type="checkbox"/> Soft particles/size _____                  |   |

Has filter been installed in inlet line?

- |                              |    |
|------------------------------|----|
| <input type="checkbox"/> Yes |    |
| Mesh size: _____             | mm |
| <input type="checkbox"/> No  |    |

Is tank cleaner flushed with clean water after tank cleaning?

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

Type of Soilage/Tank Contents to be removed

Name, formula/concentration of material to be removed from tank : \_\_\_\_\_

What is material soluble in : \_\_\_\_\_

Nature of material:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Volatile/explosive | <input type="checkbox"/> Sticky/tenacious | <input type="checkbox"/> Contains soft particles        |
| <input type="checkbox"/> Low viscous        | <input type="checkbox"/> Solidifying      | <input type="checkbox"/> Contains hard particles/fibres |
| <input type="checkbox"/> High viscous       | <input type="checkbox"/> Crystallising    |   |

Is tank cleaner submerged in material?

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

Other information/Remarks

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_ Sign.: \_\_\_\_\_