

Instruction Manual

Alfa Laval Marine Pressure Gauge

TE67Pxxxxxxxxx

1. General information

1.1 Information on the Instruction manual

This Instruction manual contains important information on proper usage of the device. Read this instruction manual carefully before installing and starting up the pressure measuring device.

Adhere to the safety notes and operating instructions which are given in the instruction manual. Additionally applicable regulations regarding occupational safety, accident prevention as well as national installation standards and engineering rules must be complied with!

This instruction manual is part of the device, must be kept nearest its location, always accessible to all employees.

This instruction manual is copyrighted. The contents of this instruction manual reflect the version available at the time of printing. It has been issued to our best knowledge. However, errors may have occurred. Alfa Laval Kolding A/S is not liable for any incorrect statements and their effects.

- Technical modifications reserved –

1.2 Target group

WARNING! To avoid operator hazards and damages of the device, the following instructions have to be worked out by qualified technical personnel.

1.3 Limitation of liability

By non-observance of the instruction manual, inappropriate use, modification or damage, no liability is assumed and warranty claims will be excluded.

1.4 Intended use

The Alfa Laval Pressure Gauges TE67Pxxxxxxxxx have, according to the type, been developed for applications in overpressure and vacuum measurement. It is the operator's responsibility to check and verify the suitability of the device for the intended application. If any doubts remain, please contact our local Alfa Laval Company in order to ensure proper usage. Alfa Laval Kolding A/S is not liable for any incorrect selections and their effects.

Permissible media are gases or liquids, specified in the data sheet. In addition it has to be ensured, that this medium is compatible with the media wetted parts.

- The technical data listed in the current data sheet are engaging and must be complied with. If the data sheet is not available, please order or download it from our homepage (<http://www.alfalaval.com>)

* **WARNING!** Danger through improper usage

1.5 Package contents

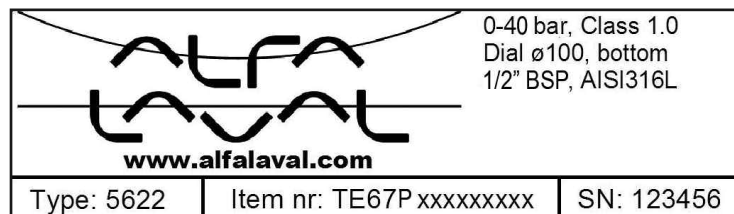
Please verify that all listed parts are undamaged included in the delivery and check for consistency specified in our order:

- pressure gauge
- mounting instructions

2. Product identification

The device can be identified by its manufacturing label. It provides the most important data. By the ordering code the product can be clearly identified.

Fig. 1 manufacturing label, example



The manufacturing label must not be removed from the device.

3. Mechanical Installation

3.1 Mounting and safety instructions

- * **WARNING!** Install the device only when depressurized.
- * **WARNING!** This device may only be installed by qualified technical personnel who has read and understood the instruction manual!

Handle this high-sensitive precision measuring device with care, both in packed and unpacked condition!
There are no modification/changes to be made on the device.
Do not throw the package/device!

To avoid damaging the instrument, remove packaging and protective cap directly before starting assembly. The delivered protective cap has to be stored!

Place the protective cap on the pressure post again immediately after disassembling.

Do not use any force when installing the device to prevent damage of the device and the plant!

3.2 General installation steps

Carefully remove the pressure measuring device from the package and dispose of the package properly.

4. Initial start-up

- * **WARNING!** Before start-up, the user has to check for proper installation and for any visible defects.
- * **WARNING!** The device can be started and operated by authorized personnel only, who have read and understood the instruction manual.
- * **WARNING!** The device has to be used within the technical specifications only! (Compare the data in the data sheet)

5. Placing out of service

- * **WARNING!** Disassemble the device only in pressure less condition!
- * **WARNING!** Depending on the medium, it may cause danger for the user. Comply therefore with adequate precautions for purification.

6. Maintenance

In principle, this device is maintenance-free. If desired, the housing of the device can be cleaned using a damp cloth and non-aggressive cleaning solutions.

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7. Service / Repair

7.1 Return

Upon every return of the device, no matter if for recalibration, decalcification, modifications or repair, it is necessary to contact your local Alfa Laval office to guarantee a quick execution of your request.

Please inform us by sending an email to:

Alteq.PartsandService@alfalaval.com.

Include the number of devices sent and request a Return Number. Afterwards clean the device, pack it shatterproof and send it to Alfa Laval Kolding A/S indicating the Return Number.

8. Warranty conditions

The warranty conditions are subject to the legal warranty period of 12 months from the date of delivery. In case of improper use, modifications of or damages to the device, we do not accept warranty claims. Damaged diaphragms will also not be accepted. Furthermore, defects due to normal wear are not subject to warranty services.

How to contact Alfa Laval Kolding A/S

For further information please feel free to contact:

Alfa Laval Kolding A/S

PO Box 802

6000 Kolding

Denmark

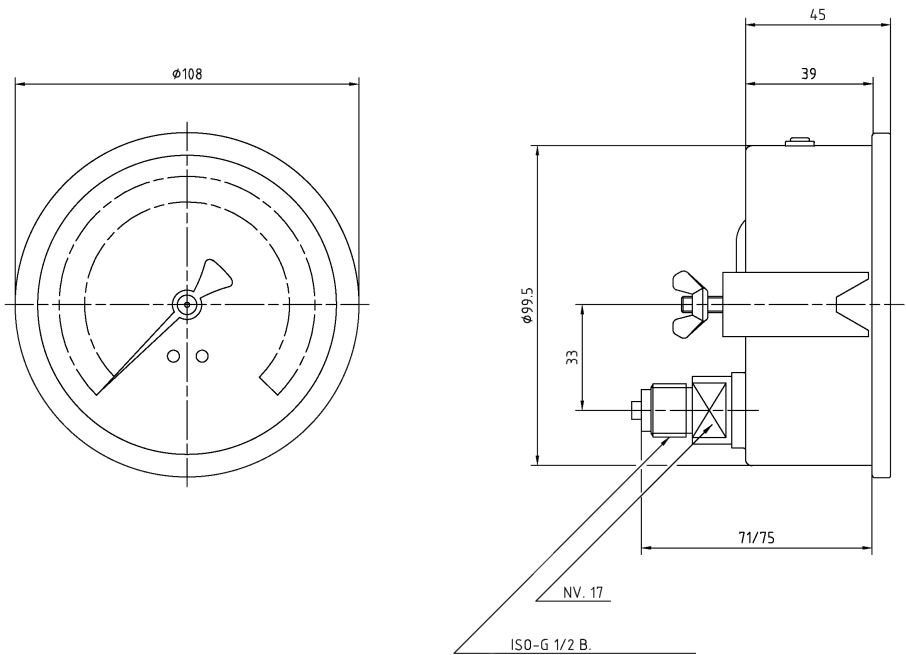
Phone no.: +45 79 322200, Fax no.: +45 79 322580

www.alfalaval.com

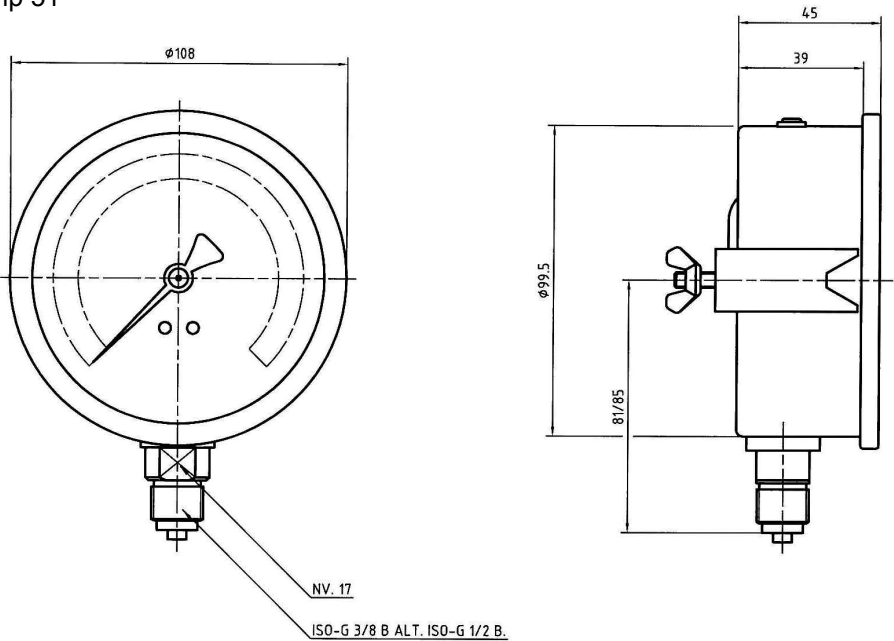
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Dial 100 mm, Clamp 38



Dial 100 mm, Clamp 51



Specification

| | |
|---------------------|---|
| Case size | DN 100 |
| Case material | AISI 304 |
| Window | PC (unbreakable) |
| Bezel | AISI 304 |
| Liquid filling | Glycerine |
| Connection | 1/2" BSP |
| Connection material | AISI 316 L |
| Surface finish | Ra < 0.8 |
| Transmission fluid | Silicone oil |
| Overload pressure | 130% of full span |
| Accuracy | Class 1 (at 20°C) acc. to EN 13190:2001 |
| Thermal drift | +/- 0.4% per +/- 10°C |
| Approvals | Conforms to EN 837-1 and PED 97-23 CE |

| Measuring range (bar/kPa or bar/psi) |
|--------------------------------------|
| -1/+1.5 bar |
| -1/+3 bar |
| 0 – 2.5 bar |
| 0 – 4 bar |
| 0 – 6 bar |
| 0 – 10 bar |
| 0 – 16 bar |
| 0 – 25 bar |
| 0 – 40 bar |
| |
| |
| |

| Ordering key table | | |
|-------------------------------|--|--|
| Description | Option | Item no. code |
| Measuring range | 0-4 bar (0-58 psi) 0-10 bar (0-145 psi) 0-16 bar (0-232 psi) -1 to 1.5 bar (-14.5 to 21.76 psi) | TE67P2x0x000xx TE67P3x0x000xx TE67P4x0x000xx TE67P6x0x000xx |
| Process connection | 3/8" BSP 1/2" BSP 1" ANSI PN 10/40 flange steel | TE67Px10x000xx TE67Px40x000xx TE67Px50x000xx |
| Surface finished wetted parts | N/A | TE67Pxx0x000xx |
| Wetted part material | ANSI 316L | TE67Pxx01000xx |
| Power supply | N/A | TE67Pxx0x000xx |
| Scale | Bar/Kpa | TE67Pxx0x000xx |
| Accuracy | N/A | TE67Pxx0x000xx |
| Connection | Dial 100 front connection Dial 100 bottom connection | TE67Pxx0x0001x TE67Pxx0x0004x |
| Certificates | See table 1 | TE67Pxx0x000xx |

| Table 1: Certificate options | | |
|------------------------------|--------------|-----------------|
| 3.1 | Calib. Cert. | Item no. code |
| | | TE67Pxx0xx000x0 |
| | X | TE67Pxx0xx000x1 |
| X | | TE67Pxx0xx000x2 |
| X | X | TE67Pxx0xx000x6 |

Alfa Laval Kolding A/S
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6000 Kolding
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SILFAR® 350

DIMETHICONE / SILICONE FLUID

Product description

Structural formula:



SILFAR® 350 is a polydimethylsiloxane obtained by hydrolysis and polycondensation of dichlorodimethylsilane and chlorotrimethylsilane. The degree of polymerization (n) is such that the mean kinematic viscosity is 350mm²/s at 25°C.

Properties

SILFAR® 350 complies with the requirements set down in the monographs "Dimeticone" (EP) and "Dimethicone" (USP / NF). Wacker explicitly rules out the use of SILFAR® 350 for parenteral applications.

SILFAR® 350 conforms with FDA 21 CFR § 173.340 "Defoaming Agents" as a "Secondary Direct Food Additive Permitted in Food for Human Consumption."

SILFAR® 350 is listed in the Directive 95/2/EC and amendments under E 900 polydimethylsiloxane and is therefore approved as direct food additive within the EC under observance of the restrictions in force for polydimethylsiloxane (E 900).

SILFAR® 350 complies with the Recommendation "XV Silicones" of the BfR concerning the manufacture of essential commodities that have contact with food.

SILFAR® 350 meets the criteria for an exemption from the requirements of a tolerance when used as an additive in pesticide formulations to be applied to growing crops or raw agricultural commodities after harvest as specified in 40 CR 180.960.

National regulations applicable in the countries concerned must be observed.

Application

SILFAR® 350 is used both in the pharmaceutical and food sectors. In the pharmaceutical sector it is used in antifatulence and antacid preparations. It acts as an

antifoam agent to prevent or relieve flatulence in the alimentary canal and forms a protective lining on e.g. the gastric mucous membrane.

SILFAR® 350 may be used to make tablets and coated tablets. It is often combined with fermentation preparations.

SILFAR® 350 is also used to control foam in fermentation and downstream processes, such as active-ingredient extraction and solvent recovery, especially when USP/EP compliant products are mandatory.

In the food sector, SILFAR® 350 is used predominantly to control foam in lipophilic systems (foods rich in oil or fat, e.g. deep-frying oil) or for surface treatment. SILFAR® 350 also serves as the base material in the production of antifoams compliant with the regulations pertaining to food for human consumption.

Storage

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Additional information

Produced according ISO 9001, ISO 14001

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

Product data

| Typical general characteristics | Inspection Method | Value |
|---------------------------------|-------------------|---------------------------------|
| Appearance | | clear, colorless and odorless |
| Density at 25 °C | DIN 51757 | 0,965 - 0,973 g/cm ³ |
| Viscosity, kinematic at 25 °C | DIN 53018 | 333 - 363 mm ² /s |
| Refractive index at 25°C | | 1,402 - 1,404 |
| Volatility | USP | max. 0,3 % |
| Acidity (direct titration) | | max. 5 mg/kg |
| Solidifying point | | -50 °C |
| Flash point | ISO 2592 | > 300 °C |
| Ignition temperature (liquids) | DIN 51794 | approx. 450 °C |

These figures are only intended as a guide and should not be used in preparing specifications.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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For technical, quality, or product safety questions, please contact:

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