

OPERATING MANUAL

CHEMFIT 340
PROCESS HOLDER

SI Analytics
a **xylem** brand

Table of contents

1	Security and safety measures	5
1.1	General safety instructions.....	5
1.2	Intended use.....	5
1.3	Danger zones and residual dangers	6
1.4	Equipment	6
1.5	Staff	6
1.6	Disposal.....	7
1.7	Symbols and pictographs	7
2	Product description	8
2.1	CHEMFIT 340 holder	8
2.2	Process integration	8
3	Delivery	10
3.1	Scope of delivery.....	10
3.2	Inspection of delivery	10
4	Installation	11
4.1	Preparing the Holder	11
4.2	Installing the holder	11
4.3	Installing the sensor	11
5	Maintenance	13
5.1	Important maintenance instructions	13
5.2	Removing the sensor	13
5.3	Replacing the wetted sealings	14
5.4	Servicing plan	15
5.5	Disposal.....	15
6	Technical specifications	16
6.1	Standards	16
6.2	Material properties	16
6.3	Dimensions	16
6.4	Ambient conditions	17
6.5	Process conditions CHEMFIT 340	17
7	Parts and accessories	18

Status at time of printing

Advanced technology and the high quality of our products are guaranteed by a continuous development. This may result in differences between this operating manual and your product. We cannot exclude mistakes. We are sure you understand that no legal claims can be derived from the information, illustrations and descriptions.

A potentially more recent version of this manual is available on our internet website at www.si-analytics.com. The German version is the original version and binding in all specifications.

Guarantee

We provide guarantee for our process holders of one year from the date of purchase. This guarantee covers manufacturing faults being discovered within the mentioned period of one year. Claim under guarantee covers only the sensor itself, not any further claim for damages or financial loss. Warranty claims shall not include minor deviation from the agreed quality, of only minor impairment of usefulness, of usual wear and any damage that occurs after the transfer of risk from faulty handling, excessive strain, unsuitable equipment or due to special external influences.

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Printed in Germany.

1 Security and safety measures

1.1 General safety instructions

The CHEMFIT 340 holder is designed in a way that when the operation manual is observed the product does not present any hazards.

- ▶ Read the operation manual before use.
- ▶ Do only install and operate the holder after having read and understood all notes on the safe and proper use.
- ▶ Keep the operation manual for future reference.
- ▶ Do operate the holder only in trouble-free condition.
- ▶ In addition, observe laws, regulations, guidelines and standards applicable in the operator's country and at the site of use.

1.2 Intended use

The CHEMFIT 340 holder is attached to tanks or tubing. A sensor is inserted in the process liquid in order to measure chemical or physical properties.

The choice of material properties of holder and equipment depends on the process properties.

The holder should be serviced on a regular basis.

- ▶ Establish a service plan adapted to your process.
- ▶ Do only perform the service works described in the operation manual!
- ▶ Modifications to the holder must be agreed with the manufacturer.



The manufacturer is not liable for damages arising from improper or unintended use.

1.3 Danger zones and residual dangers

Holders are connected to tanks and tubing that may be under pressure. Leaking of process liquid only occurs in case of negligence and improper operation.

- ▶ Prior to commissioning and after every servicing, ensure that all seals and connections are complete and in working order.
- ▶ Never remove the Sensor during operation of the process.
- ▶ Take applicable protection measures prior to touching the holder as parts of the holder may adopt the process temperature.

1.4 Equipment

Do only use certified and approved accessories and equipment.

- | | |
|---------------|--|
| Seals | <ul style="list-style-type: none">▶ Choose material properties of process seals and O rings according to process medium and cleaning liquid.▶ Observe swelling ability and acid and alkaline resistance of seal material. |
| Sensor | <ul style="list-style-type: none">▶ Choose a suitable sensor and observe information in chapter 6 "technical specifications".▶ |

1.5 Staff

- | | |
|--|--|
| Qualifications | Leave installation and servicing of holder to trained staff! |
| Protective clothing | The operation staff must wear goggles and applicable protective clothing during commissioning and servicing works. |
| Accident prevention regulations | Observe work safety laws and regulations applicable in the operator's country and at the site of use! |

1.6 Disposal

Observe the regulations and rules concerning waste disposal applicable at the place and site of operation.

1.7 Symbols and pictographs

In the operating manual, pictographs and symbols are used for better orientation.

DANGER!



The **DANGER!** symbol refers to dangers to life and limb as well as substantial damages to property when the instructions given are ignored.

WARNING!



The **WARNING!** symbol refers to damages to property when the instructions given are ignored.



Important notes are given!



This sign means performing procedures in the given order.

2 Product description

2.1 CHEMFIT 340 holder

Components

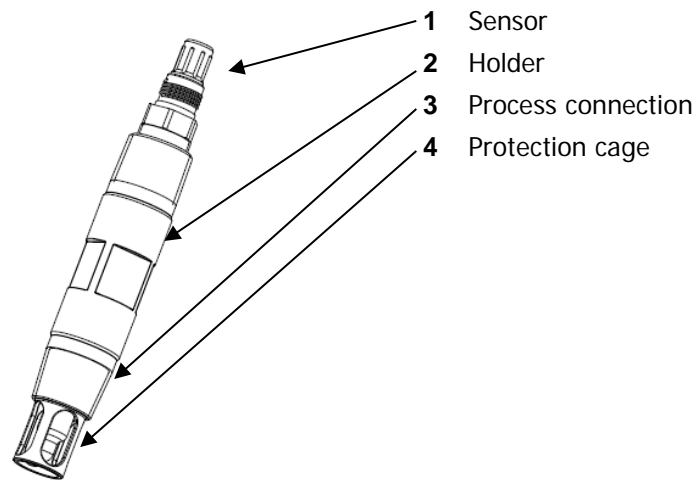


Fig. 1 Armatur

Variations Holders are attached to tanks or tubing by an applicable thread connection. In order to comply with the various process properties the CHEMFIT 340 holder is fabricated of stainless steel or plastic. You can further choose between different sealing materials

2.2 Process integration

Holder The CHEMFIT 340 holder can be fixed on a Process tank or pipeline by the process connection. The protection cage protect the sensor against damage.

Transmitter The holder inserts a sensor in the process liquid transmitting its measuring results to a transmitter.

Process control The transmitter can be connected to a process control. The measuring is then controlled automatically according to the measuring results.

Process connection The choice of the applicable holder is subject to the process and available connection, as well as pressure and temperature conditions. The holder of stainless steel can be used for a pressure of up to 10 bar and temperature between -10° and 140°C.

Pressure

Temperature



Observe pressure and temperature charts in chapter 6!

Installation position The operation of the holder is generally possible in any position. The reliability of the measuring results depends on the properties of the selected sensor

3 Delivery

3.1 Scope of delivery

The holder is inspected at the factory and delivered ready for installation in a packaging providing optimal protection for the holder.

Package contents:

- CHEMfit 340 holder
- operation manual
- material certificate



Store the holder in the packaging. This ensures optimal protection until the installation.

3.2 Inspection of delivery



Before approving the holder for installation the following should be ensured:

- packaging and device are in apparent good order.
- the data plate of the holder corresponds to the specifications on the order.

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D-82362 Weilheim

CHEMfit 310	CE
310-448-E-120-IN25-070-1	
SN-Nr: 3162331901 Pmax:10 bar Tmax:140°C	

Fig. 2 Data plate (example)

In case of further inquiries please directly contact your dealer.

4 Installation

4.1 Preparing the Holder



Ensure that

- Sufficient working space for operation of the holder is available.
- The process is shut off.
- Tank and tubing are pressure-free, empty and clean.
- Connection thread and process thread of the holder fit together.
- Ensure that there is no potentially explosive atmosphere

4.2 Installing the holder



Prior to installation, ensure the following:

- The holder is prepared (chapter 4.1).

How to install the holder:

1. Tighten process connection.

4.3 Installing the sensor

Sensors with a diameter of 12mm, a length of 120mm and a connection thread PG 13.5 must be used in the CHEMFIT 340 holder.



Observe information in chapter 6 “technical specifications”!



Fig. 3 Sensor filled with gel

Sensor			
CHEMFIT 340	l [mm]	d [mm]	PG
3XX	120	12	13.5

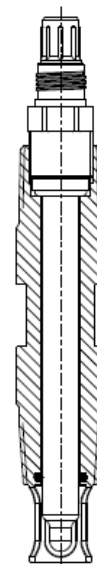


Ensure that

- all seals connected to the sensor are available.

How to install the sensor:

1. Insert and tighten the sensor
2. Attach sensor cable



The holder is now ready for operation.

5 Maintenance

5.1 Important maintenance instructions

- Establish a service plan adapted to your process!
- Leave servicing works to qualified staff.
- Always wear applicable protective clothes when performing servicing works.
- Do only perform the service works described in the operation manual!
- Constructional modifications must be agreed with the manufacturer!
- Tubing and tanks must be pressure-free, empty and clean before disconnecting the holder from the process
- Ensure that there is no potentially explosive atmosphere

5.2 Removing the sensor

DANGER!



System is under pressure.

Process liquid will leak when sensor is disconnected from process in an inappropriate way.

- ▶ Ensure that system is pressure-free before replacing the sensor.
- ▶ Drain and clean tubing or tanks.
- ▶ Ensure that there is no potentially explosive atmosphere



How to remove the sensor:

1. Process Tubing and tanks must be pressure-free, empty and clean before removing the sensor from the holder
2. Remove Protection cap
3. Remove sensor cable
4. Untighten sensor.
5. Remove sensor.

DANGER!**Broken glass sensor!**

Broken glass may damage the wetted sealings.

- ▶ Check wetted sealings and replace if necessary.
- ▶ Observe instructions in chapter 5.3!

5.3 Replacing the wetted sealings

DANGER!**System is under pressure.**

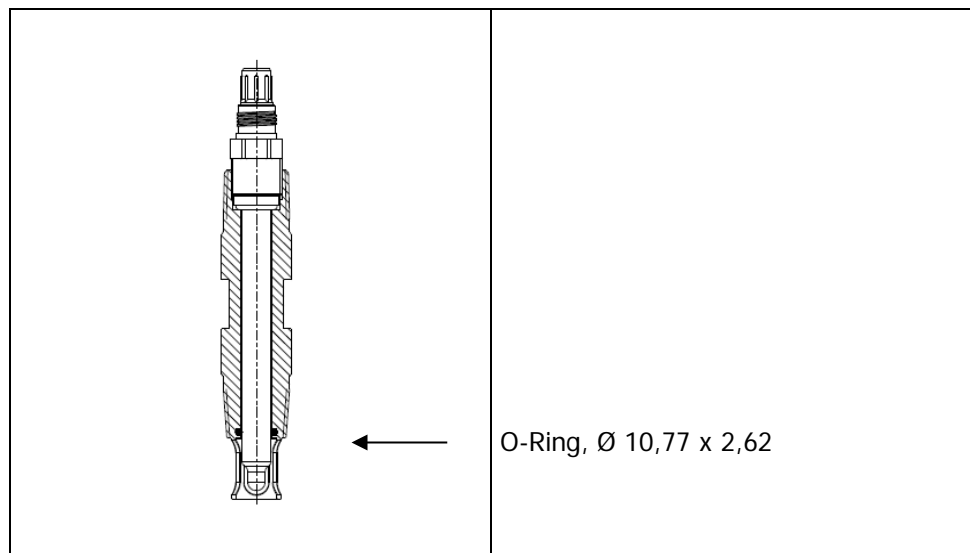
Process liquid will leak when holder is disconnected from process in an inappropriate way.

- ▶ Ensure that system is pressure-free before replacing the sealings.
- ▶ Drain and clean tubing or tanks.
- ▶ Ensure that there is no potentially explosive atmosphere



Install the seals chosen according to the holder and the process!

- Do only use original parts!

**How to replace the seals:**

1. Remove sensor from the holder (chap. 5.2).
2. Remove holder from the process connection
3. Remove and replace O-ring seals on the holder

5.4 Servicing plan

Carry out the servicing works in the recommended intervals!

- | | |
|--------------------|--|
| quarterly | ▶ Check process connection |
| once a year | ▶ Replace wetted sealings (chap. 5.3). |

5.5 Disposal

Holder Ensure that the holder is free from hazardous and toxic substances. Depending on your material the individual components must be disposed off separately.

Observe regulations and rules for waste disposal applicable in the operator's country and at the site of use.

Packaging The packaging is made of card board and can be disposed off with the waste paper.

6 Technical specifications

6.1 Standards

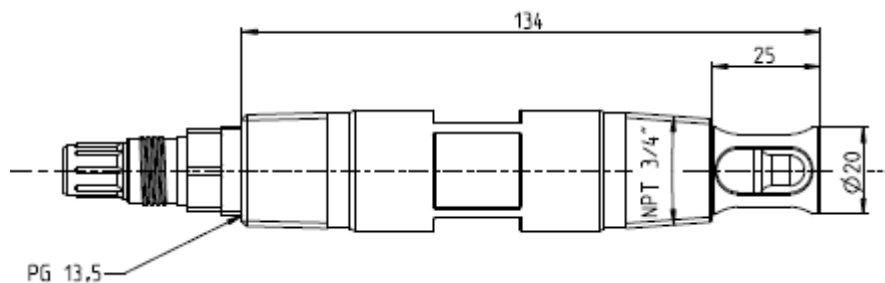
Pressure equipment directive

6.2 Material properties

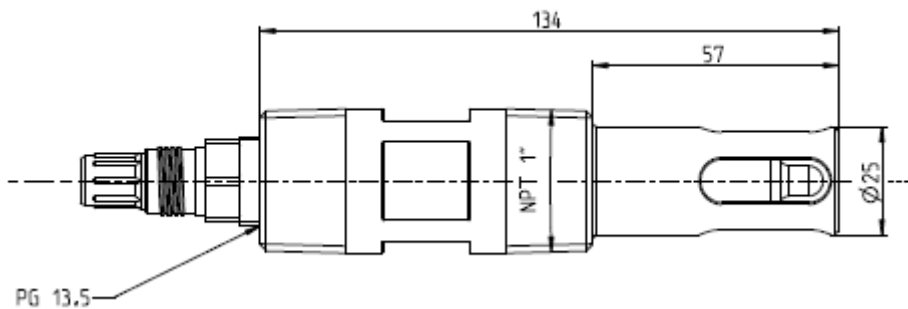
Wetted components		
CHEMFIT 340	Material	seals
O4	1.4404/316L	EPDM FDA USP VI FPM
PP	PP Polypropylen	
PV	PVDF	

6.3 Dimensions

CHEMfit 340 NPT 3/4"



CHEMfit 340 NPT 1"



6.4 Ambient conditions

Ambient temperature	- 10 - 70 °C
Transport and storage temperature	- 20 - 80 °C

6.5 Process conditions CHEMFIT 340

max. allowed pressure PS:	10 bar
max. allowed temperature TS:	140 °C

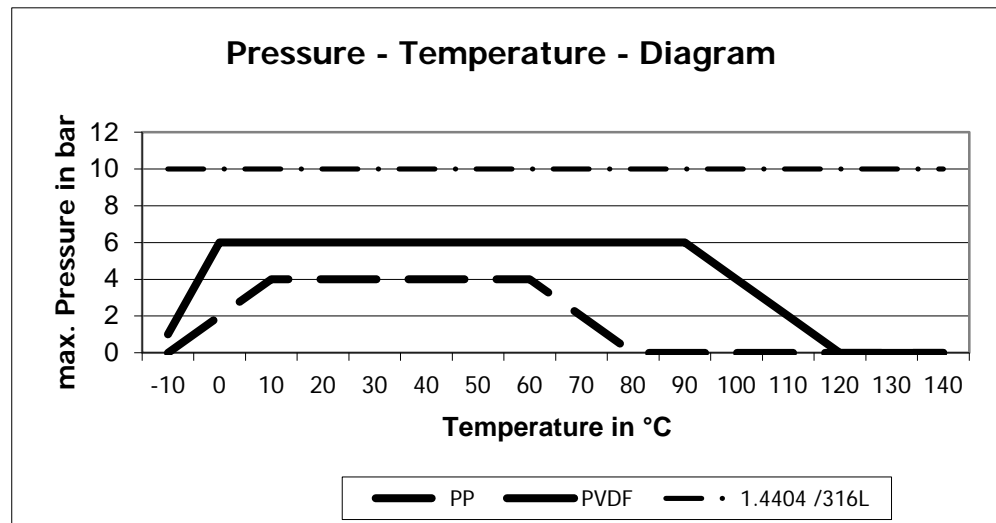


Fig. 4 CHEMFIT 340 pressure-temperature diagram

7 Parts and accessories

Certifikates		
CHEMFIT 340	Part	Order number
340-04	EN10204-31B for material	285063630

Seals		
CHEMFIT 340	Part	Order number
	Sealingset EPDM / FDA USP V	285063760
	Sealingset FPM	285063770
	Sealingset FFKM	285063780



Please state serial number of your holder when ordering parts and accessories

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