

SCHOTT® Instruments
Process holders and accessories

CHEMTRAC-M

Manual retractable process holder
Operation manual

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1 Safety and protection measures

1.1 General safety instructions

The CHEMTRAC retractable 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 retractable holder after having read and understood all notes on the safe and proper use.
- ▶ Keep the operation manual for future reference.
- ▶ Do operate the retractable 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 Proper use

The CHEMTRAC retractable holder is attached to tanks or tubing. A sensor is inserted in the process liquid by the drive unit in order to measure chemical or physical properties. The procedure is done manually.

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

The retractable 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 any damages resulting from improper or inappropriate use.

1.3 Hazard areas and residual hazards

Retractable 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 lower and top housing clamp screws during operation of the holder.
- ▶ Take applicable protection measures prior to touching the holder as parts of the retractable 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 8 "technical specifications". |
| Cleaning liquid/detergent | <ul style="list-style-type: none">▶ Choose cleaning liquid and detergent according to process, holder, and seal material and dispose off in an appropriate way. |

1.5 Safety equipment

- Position "service"** The retract protection prevents the insertion rod from insertion into the process without manual unlocking because this could cause a leakage of process liquid if no sensor is installed.
- ▶ The sensor can only be installed/removed when the holder is in the "service" position.
 - ▶ Driving the holder into measuring position without having a sensor installed is considered as negligence.
- Position "measuring"** In the "measuring" position the sensor is immersed in the drive unit.
- ▶ You cannot remove the sensor.
 - ▶ Trying to remove the sensor in the "measuring" position is considered as negligence!
- Protection cage** You may adjust the protection cage at the end of the insertion rod in order to protect the sensor from mechanical impacts.

1.6 Staff

- Qualifications** Leave installation and servicing of retractable 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!

1.7 Disposal

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

1.8 Symbols and pictograms

Pictograms and symbols are used in the operation manual to provide better orientation.

DANGER!



The safety note with the **DANGER!** signal indicates the risk of personal danger and high material damage in case of failure to observe the instructions.

CAUTION!



The safety note with the **CAUTION!** signal indicates the risk of material damage in case of failure to observe the instructions.



Indicates an important note!



This sign indicates that the operations should be carried out in the specified order.

2 Product description

2.1 CHEMTRAC manual retractable holder

Components

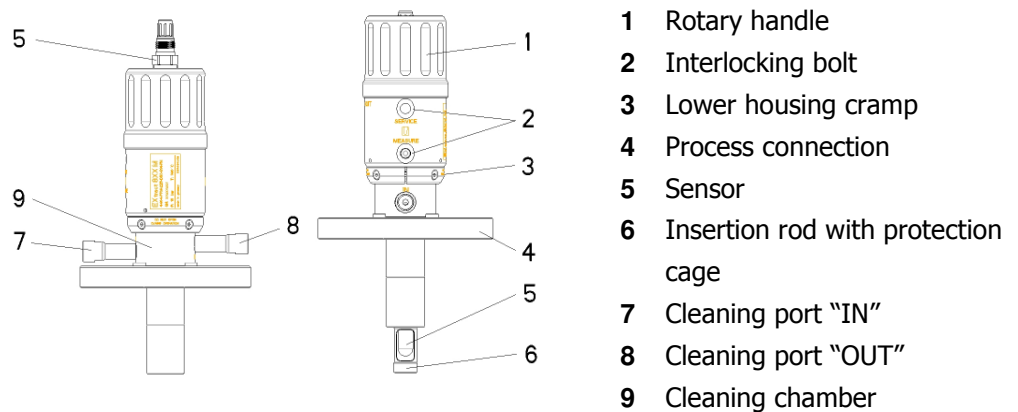


Fig. 1: Retractable holder

Variations

Retractable holders are attached to tanks or tubing by an applicable process connection. In order to comply with the various process properties the CHEMTRAC retractable holder is fabricated of stainless steel or plastic. You can further choose between different process and cleaning ports, sealing materials, and sensors.

CHEMtrac 810M /820M

CHEMtrac 810M / 820M is a manual retractable holder made of stainless steel (810) or plastic (820) for installation of Ø12mm sensors on tanks or pipelines.

- For all kind of Ø12/225mm or Ø12/280mm sensors with thread PG13.5 (pH-glass- and ISFET sensors, conductivity- or temperature sensors, turbidity and other optical sensors)
- Chemicals
- Water treatment
- Rough processes

CHEMtrac 811M /821M

CHEMtrac 811M / 821M is a manual retractable holder made of stainless steel (811) or plastic (821) for installation of Ø12mm sensors on tanks or pipelines, with an extended immersion length up to 207mm.

CHEMtrac 830M CHEMtrac 830M is a manual retractable holder made of stainless steel for hygienic installation of Ø12 sensors on tanks or pipelines

- For all kind of Ø12/225mm or Ø12/280mm sensors with thread PG13.5 (pH-glass- and ISFET sensors, conductivity- or temperature sensors, turbidity and other optical sensors)
- Food
- Pharmaceuticals

Drive The manual drive of the holder is a mechanical rotary drive that dissipates rotating motion into a stroke of the insertion rod. So the sensor can be moved from the cleaning chamber into the process liquid and back again. Because of the smart construction of the drive the sensor can be moved against high process pressure easily.

Measuring When reaching the final position of the "measuring" position, a bolt interlocks the position certainly. In this position the sensor head is immersed in the drive unit and cannot be removed. The sensor measures the chemical or physical properties of the process liquid.

Service Cleaning and rinsing of the sensor is possible while the process is running. For this purpose the holder must be moved to the "service" position. When the final position is reached, a bolt interlocks the position certainly. In the "service" position the insertion rod seals the cleaning chamber against the process to prevent leakage of process liquid. The cleaning liquid is introduced into the cleaning chamber via the cleaning port "IN" and subsequently drained via the cleaning port "OUT".

2.2 Process integration

Transmitter The retractable 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. According to the measuring signals a cleaning flag can be set. The cleaning has to be done manually.

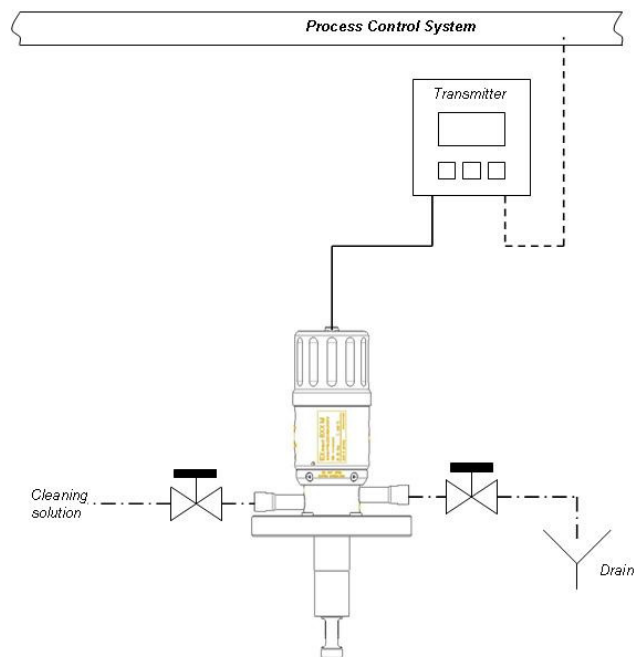


Fig. 2: Process flow

Pressure The choice of the applicable holder is subject to the pressure and
Temperature temperature conditions of the process. The retractable holder of stainless steel can be used for a pressure of up to 16 bar and the plastic model up to 10 bar according to the temperature. The process temperature should be between -10° and 140°C .



Observe pressure and temperature charts in chapter 8!

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 Package contents

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

Package contents:

- CHEMTRAC holder
- hexagon key 2.5mm
- 4 spare screws M 4 x 8 (DIN 912)
- 2 spacer for sensors
- operation manual

For the CHEMTRAC 810M/811M and 830M holder you will additionally receive a

- material certificate (option)



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

3.2 Checking the delivery



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

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

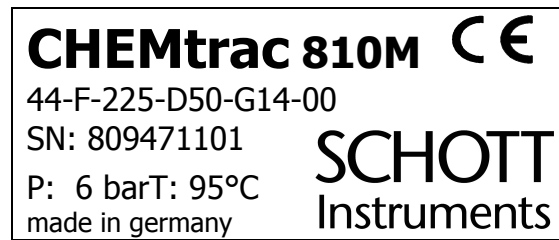


Fig. 3: Data plate

In case of further inquiries please directly contact your dealer.

4 Installation

4.1 Preparing the system



Ensure that

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

4.2 Preparing the holder



The holder must be in the "service" position!

- The insertion rod is completely inserted in the cleaning chamber.



Fig. 4: "service" position

4.3 Installing the holder



Prior to installation, ensure the following:

- The system is prepared (chapter 4.1).
- The holder is prepared (chapter 4.2).

How to install the holder:

1. Position retractable holder on process seal.
2. Tighten process connection.

4.4 Adjusting the protection cage

A protection cage is fitted to the lower end of the insertion rod and can be adjusted with the flow direction. The symbol on the drive unit cylinder indicates the position of the opening in the insertion rod. If the symbol is parallel to the flow direction the insertion rod is fully flown through. If the symbols are vertical to the flow the sensor is fully protected from direct flow. The insertion rod can be adjusted in any intermediate position.



- A** Sensor maximally streamed
- B** Sensor minimally streamed

Fig. 5: Protection cage



Fig. 6: Symbol



Ensure that:

- The process is shut off.
- Tank and tubing are pressure-free, empty and clean.
- There is no potentially explosive atmosphere

DANGER!**Leakage of process liquid when housing cramp is opened during running process!**

Burns or cauterization depending on process liquid property.

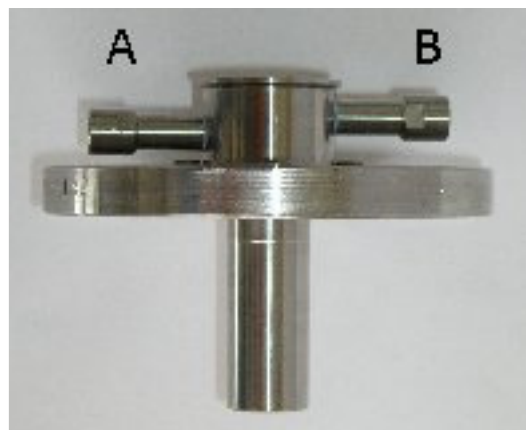
- ▶ Stop process!
- ▶ Tanks and tubing must be pressure-free!

How to adjust the protection cage:

1. Loosen screws of lower housing cramp.
2. Rotate drive unit and adjust symbol in flow direction.
3. Tighten screws of lower housing cramp.

4.5 Installing the cleaning pipes

Cleaning of the sensor is possible while the process is running. This requires supply and draining of cleaning liquid to the cleaning chamber. If cleaning of the sensor is not desired the cleaning ports must be sealed by pegs.



A Cleaning port "IN"

B Cleaning port "OUT"

Fig. 7: Cleaning ports

DANGER!



Leakage of process liquid through the open cleaning port!

Burns or cauterization depending on process liquid property.

- ▶ Cleaning pipes must be installed
or
 - ▶ cleaning ports "IN" and "OUT" must be sealed by pegs!
-

CAUTION!



If the process pressure is higher than the cleaning pressure

process liquid enters the cleaning pipes while the holder is moving to the service position.

- ▶ A cleaning pipe with valve must be installed at the cleaning ports "IN" and "OUT"!
-

CAUTION!



If the cleaning liquid pressure exceeds 6 bar

holder and sensor may be damaged.

- ▶ Install a pressure reducer, if necessary!
-

CAUTION!



Contaminated cleaning liquid

can cause damage to the holder.

- ▶ Install a cleaning pipe with dirt trap at the cleaning port "IN"!
-



How to install the cleaning pipes:

1. Install valve and dirt trap in the cleaning pipe for the cleaning liquid supply.
2. Attach supply cleaning pipe to the cleaning port "IN". .
3. Install valve in cleaning pipe for drainage of the cleaning liquid.
4. Attach cleaning pipe to the cleaning port "OUT".
5. Check all connections for tightness.

!!!

To avoid premature contamination of the sensor the pressure of the cleaning liquid should be at least 1 bar!

4.6 Installing the sensor

Sensors with a diameter of 12mm and a connection thread PG 13.5 must be used in the CHEMTRAC retractable holder.

The length of the sensor depends on the sensor type and the selected holder.

!!!

Observe information in chapter 8.4 "Sensors"!

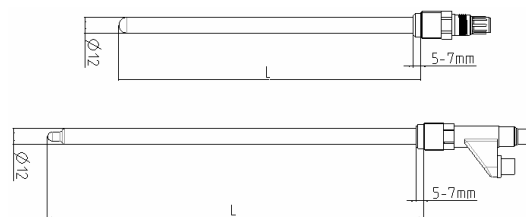


Fig. 8: Sensor filled with gel (top), sensor filled with liquid (bottom)

CAUTION!



To long Sensors

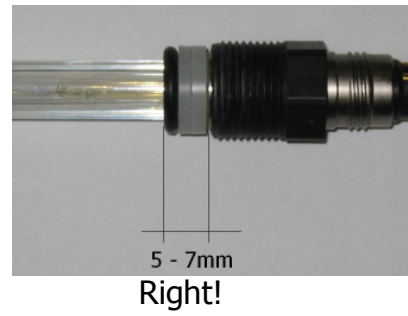
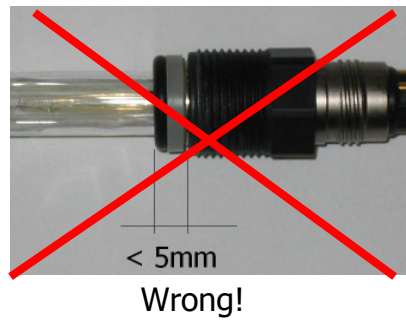
could be damaged during installation

- ▶ Check the sensor length and use delivered spacer if necessary!

Ensure that

- the holder is in the "service" position.
- all seals connected to the sensor are available.

- the sensor is not longer than the specified length.



-
-

How to install the sensor:

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

The retractable unit is now ready for operation.

5 Operation

5.1 Commissioning the holder

DANGER!



Risk of injury by leaking process liquid!

Burns or cauterization depending on process liquid property.

- ▶ Wear goggles and protective clothing!
- ▶ Check all seals and connections of holder before starting the process.



Wear goggles and protective clothing during commissioning of the holder!

Prior to the commissioning ensure the following:

- Seals are complete and in good working condition.
- Sensor is installed and tightened.
- Cleaning ports are sealed with pegs.
or:
- Cleaning pipes are installed and tight.
- Protection cage is adjusted correctly.

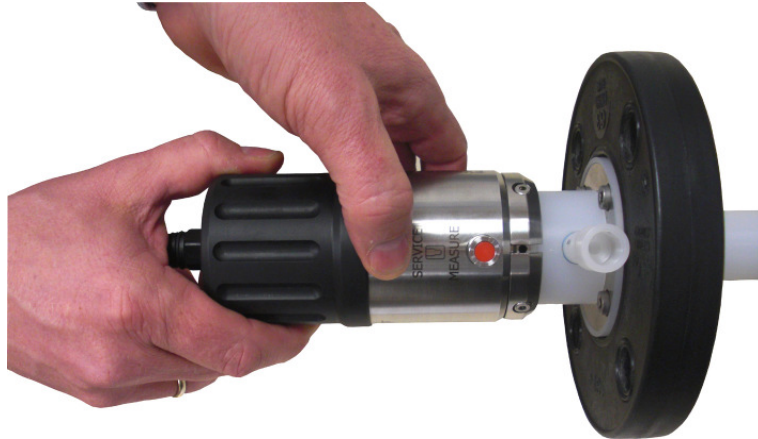
5.2 Manual operation of the holder



Wear goggles and protective clothing during commissioning of the holder!

Ensure that a Sensor is installed and tightened.

- Drive sensor into position „Measure“



Push interlocking bolt and turn rotary handle clockwise until interlocking bolt locks in position „Measure“

- Drive sensor into position „Service“



Push interlocking bolt and turn rotary handle counter - clockwise until interlocking bolt locks in position „Measure“.

6 Servicing

6.1 Servicing 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

6.2 Checking wetted seals

The retractable holder is fitted with an inspection window situated between the lower housing cramps.



Check inspection window for leaking process liquid on a regular basis.

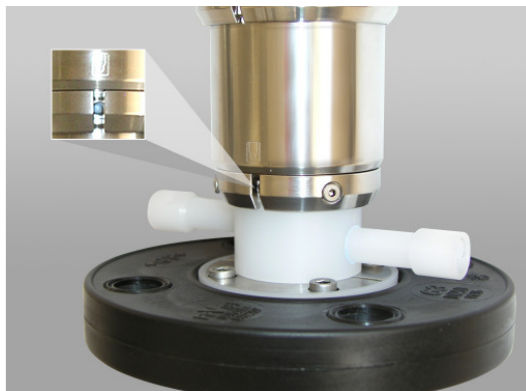


Fig. 9: Inspection window on lower housing clamp

WARNING!



Process liquid leaking on the inspection window!

Risk depending on process liquid property!

- ▶ Replace wetted seals.
 - ▶ Observe instructions in chapter 6.5!
-

6.3 Removing the sensor



How to remove the sensor:

1. Move holder to "service" position.
 2. Remove sensor cable.
 3. Remove PG cable gland.
 4. Remove sensor.
-

DANGER!



Broken glass sensor!

Broken glass may damage the wetted seals.

- ▶ Check wetted seals and replace if necessary.
 - ▶ Observe instructions in chapter 6.5!
-

6.4 Removing the cleaning chamber with process connection

DANGER!



System is under pressure.

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

- ▶ Tubing or tanks must be pressure-free, empty, clean and without potentially explosive atmosphere.
-

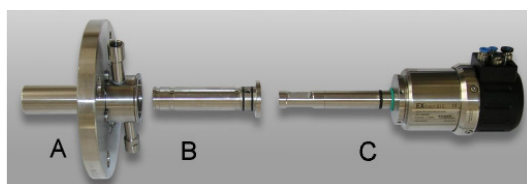


- Interrupt the process.
-

- Ensure that the system is pressure-free, empty, clean and without potentially explosive atmosphere.

How to remove the cleaning chamber:

1. Move holder to "service" position.
2. Remove sensor (chap. 6.3).
3. Loosen process connection.
4. Remove process seals and holder.
5. Loosen lower housing cramp screws (Fig. 9).
6. Disconnect cleaning chamber with process connection "A" from drive unit "D".
7. Remove cleaning cartridge from insertion rod "C".



- A Cleaning chamber with process connection
- B Cleaning cartridge
- C Insertion rod
- D Drive unit

Fig. 10: Removing the cleaning chamber and process connection

6.5 Replacing the wetted sealing

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 sealing.
- Drain and clean tubing or tanks.
- Ensure that there is no potentially explosive atmosphere

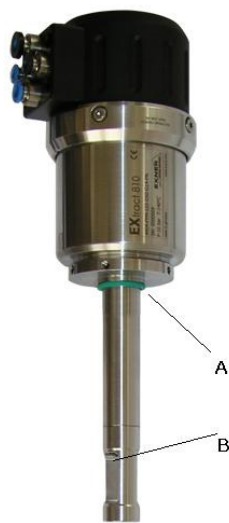


Install the seals chosen according to the holder and the process!

➤ Do only use original parts!

How to replace the seals:

1. Remove cleaning chamber with process connection (chap. 6.4).
2. Remove and replace outer O rings "A", "B" and inner O ring "C" on insertion rod.



O rings

Ø in [mm]

A 18.72 x 2.62

B 10.77 x 2.62

Fig. 11: O rings on insertion rod

B is left out

3. Remove and replace O rings "D" on cleaning cartridge.



O ring

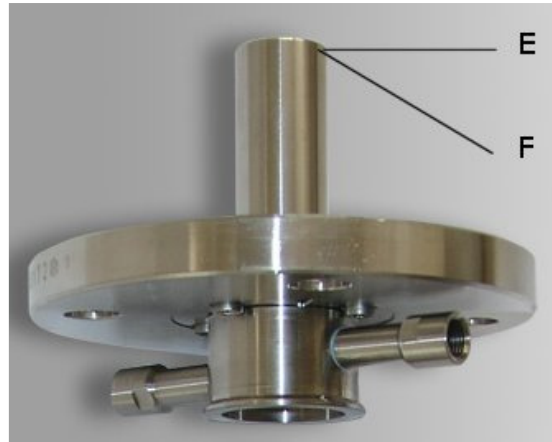
Ø in [mm]

D 21.95 x 1.78

Fig. 12: O ring on cleaning cartridge

4. Remove PTFE scraper "E" on cleaning chamber

5. Remove and replace O ring "F".
6. Position PTFE scraper "E" on O ring "F".

**Scraper**

Ø in [mm]

E 19 x 6 x 1**O ring**

Ø in [mm]

F 21.89 x 2.62

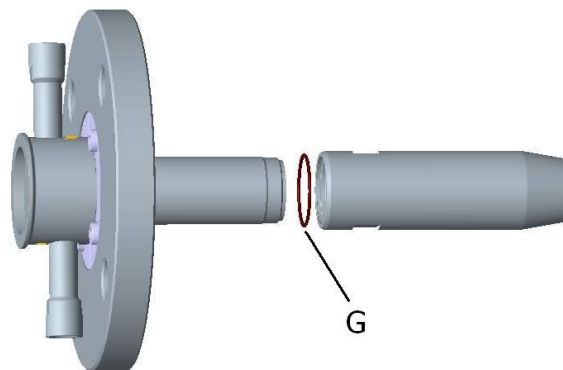
Fig. 13: O rings/scraper on cleaning chamber

Replace the PTFE scraper as follows:

**!!!**

Only applicable for CHEMtrac 811/821 with separated cleaning chamber:

7. Separated cleaning chamber: Remove and replace O ring "G".

**O ring**

Ø in [mm]

G 30 x 1.5

Fig. 14: Cleaning chamber 811/821



Only applicable for CHEMtrac 830 without PTFE scraper:

- Cleaning chamber CHEMtrac 830 without PTFE scraper, exchange O-ring „H“ and „I“.

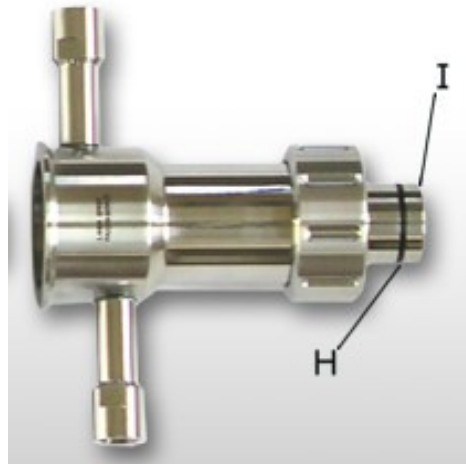


Abb. 16a: Cleaning chamber 830

O-Ring

Ø in [mm]

H 21,95 x 1,78

I 18,77 x 1,78

6.6 Assembling the drive unit and cleaning chamber



Ensure that

- all seals are installed and in good working condition.

How to install the cleaning chamber:

- Insert cleaning cartridge in cleaning chamber until it snaps into place.
- Insert drive unit with insertion rod.
- Press both components tightly together.
- Adjust drive unit until it snaps into place in the cleaning chamber.
- Adjust protection cage (chap. 4.4).
- Bring lower housing cramp in position and tighten.

The holder can now be reinstalled in the process.

Also observe the instructions in chapter 4:

- 4.3 Installing the holder
- 4.4 Adjusting the protection cage
- 4.5 Installing the cleaning
- 4.6 Installing the sensor

6.7 Replacing the drive unit

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 drive unit.
- ▶ Drain and clean tubing or tanks.
- ▶ Ensure that there is no potentially explosive atmosphere

WARNING!



Emitted compressed air

can cause material damage or personal injury.

- ▶ Switch off compressed air supply before removing the pneumatic tubes.

The new drive unit can now be installed:



Prior to installation,

- remove cleaning chamber with process connection (chap. 6.4).
- remove drive unit

How to install the new drive unit:

1. Put drive unit with insertion rod into cleaning chamber.
2. Assembling the drive unit and cleaning chamber.

3. Bring lower housing cramp in position and tighten.

6.8 Servicing plan

Carry out the servicing works in the recommended intervals!

- | | |
|----------------------|---|
| weekly | <ul style="list-style-type: none">▶ Checking wetted seals (chap. 6.2)▶ Check process connection.▶ Check cleaning pipes. |
| quarterly | <ul style="list-style-type: none">▶ Check and tighten screws of lower housing cramps. |
| once a year | <ul style="list-style-type: none">▶ Replace wetted seals (chap. 6.5). |
| every 3 years | <ul style="list-style-type: none">▶ Replace drive unit (chap. 6.7). |

6.9 Disposal

- | | |
|------------------|---|
| Holder | <p>Ensure that the holder is free from hazardous and toxic substances. Depending on your material the individual components must be disposed off separately.</p> <p>Observe regulations and rules for waste disposal applicable in the operator's country and at the site of use.</p> |
| Packaging | <p>The packaging is made of card board and can be disposed off with the waste paper.</p> |

7 Troubleshooting

Refer to the instructions and warnings in the specified chapters.

7.1 Holder does not move

▪ possible reason	▶ measure
▪ interlock bolt is not unlocked	▶ Unlock bolt and turn rotary handle (chap. 5.2)
▪ wrong direction of rotation	▶ Rotate the handle into the right direction (chap. 5.2)
▪ Insertion rod or protection cage are blocked.	▶ Preparing the system (chap. 4.1) Holder remains in "measuring" position ▶ Removing the cleaning chamber with process connection (chap. 6.4)

7.2 Frequent contamination of sensor

▪ possible reason	▶ measure
▪ cleaning pipes incorrectly connected	▶ check cleaning pipes (chap. 4.5)
▪ cleaning liquid pressure too low ▪ cleaning chamber is blocked	▶ raise cleaning pressure. ▶ pressure must be between 1 and 4 bar
▪ cleaning liquid not adequate	▶ choose adequate cleaning liquid
▪ cleaning period too short	▶ extend cleaning period
▪ cleaning interval too long	▶ reduce cleaning interval

7.3 Sensor breaks frequently

▪ possible reason	▶ measure
▪ sensor too long	▶ choose adequate sensor (chap. 4.6)
▪ seals on sensor are missing	▶ insert seals on sensor (chap. 4.6)
▪ process liquid contains solids	▶ Adjusting the protection cage(chap. 4.4)

7.4 Leakage of process liquid at inspection window

▪ possible reason	▶ measure
▪ wetted seals are defect	▶ Replacing the wetted sealing (chap. 6.5)

8 Technical specifications

8.1 Standards

Pressure equipment directive

8.2 Material properties

Wetted components						
Holder						
CHEMTRAC	stainless steel		plastic			seals
810M	1.4404/316L	Alloy C22, 2.4602				- EPDM - FPM - FFKM
811M	1.4404/316L	Alloy C22, 2.4602				
820M			PVDF	PEEK	PP	
821M			PVDF	PEEK		
830M	1.4404/316L					- EPDM FDA - FPM

Drive unit			
CHEMTRAC	cylinder	cylinder extension	seals
All types	1.4404/316	PA66 GF30	EPDM

8.3 Cleaning ports

Thread	
without gland	- G 1/8" (internal)
with gland	- G1/4" (internal)
with gland	- NPT 1/4" (internal)

Cleaning pressure	
	1 - 4 bar

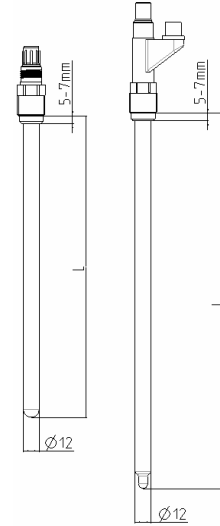
8.4 Sensors

Gel filled sensor

CHEMTRAC	l [mm]	d [mm]	PG
810M / 820M	225	12	13.5
811M / 821M	325	12	13.5
830M	225	12	13,5

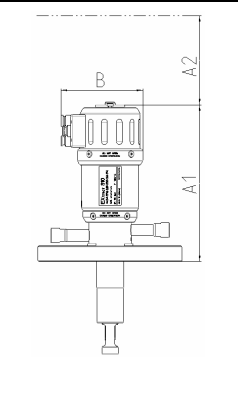
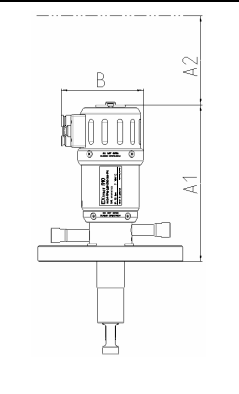
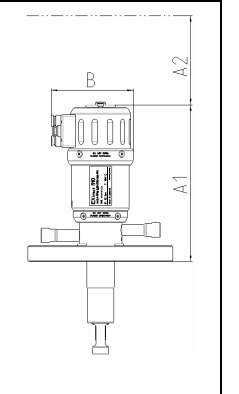
Sensor filled with liquid with refill connection

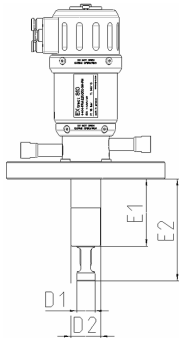
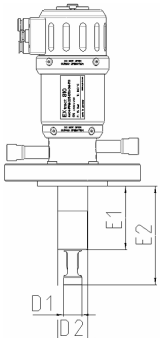
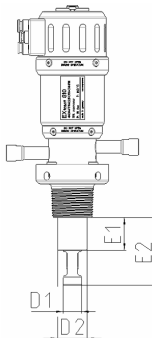
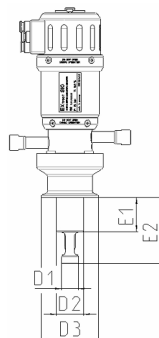
CHEMTRAC	l [mm]	d [mm]	PG
810M / 820M	280	12	13.5
811M / 821M	380	12	13.5
830M	280	12	13,5

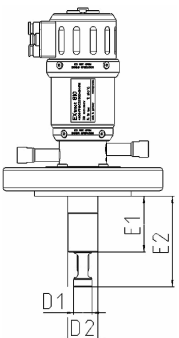
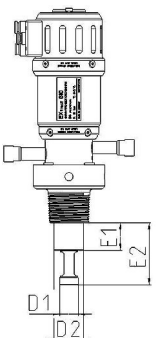


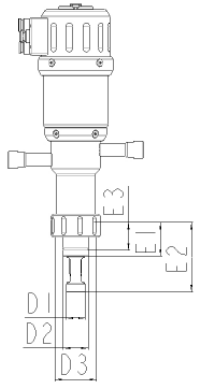
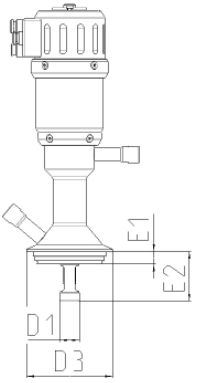
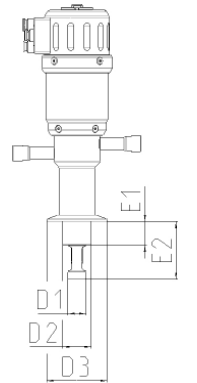
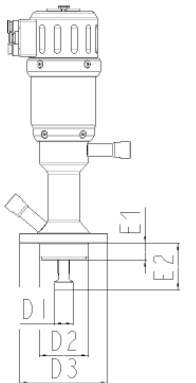
8.5 Dimensions

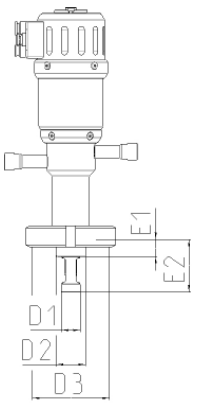
Holder

					
Dimensions	CHEMTRAC		CHEMTRAC		EXTRACT
	810M	811M	820M	821M	830M
A1 [mm]	180	180	180	180	180
A2 [mm]	350	480	350	480	480
B [mm]	69	69	69	69	69

Process connections CHEMTRAC 810M/811M								
	A		B		C		D	
	Flange 4404		Flange C22		NPT		TriClamp	
								
Dimensions	CHEMTRAC		CHEMTRAC		CHEMTRAC		CHEMTRAC	
	810M	811M	810M	811M	810M		810M	
E1 [mm]	71	171	66	166	34		39	
E2 [mm]	107	207	102	202	70		75	
D1 [mm]	19	19	19	19	19		19	
D2 [mm]	31	36	31	36	31		31	
D3 [mm]	-	-	-	-	-		64	

Process connections CHEMTRAC 820M/821M				
	A		B	
	Flange		NPT	
				
Dimensions	CHEMTRAC		CHEMTRAC	
	820M	821M	820M	821M
E1 [mm]	58	158	29	
E2 [mm]	94	194	65	
D1 [mm]	19	19	19	
D2 [mm]	31	36	30.5	

Process connections CHEMTRAC 830M					
	A	B	C		D
	Ingold DN 25	Varivent N	TriClamp		Neumo
					
Dimens.	O-RINGPOS. 28MM	DN40 - 125	1,5"	2"	DN50
E1 [mm]	34	12,3	22	25	17
E2 [mm]	70	48,3	58	61	48
E3 [mm]	28	-	-	-	-
D1 [mm]	19	19	19	19	19
D2 [mm]	25	-	30	30	50
D3 [mm]	G 1 1/4"	84	50,5	64	89,5

Process connections CHEMTRAC 830M		
	E	
	DIN 11851	
		
Dimens.	DN50	
E1 [mm]	18	
E2 [mm]	54	
D1 [mm]	19	
D2 [mm]	30	

D3 [mm]	Rd78 x 1/6"	
---------	-------------	--

8.6 Ambient conditions

Ambient temperature - 10 - 70 °C

Transport and storage temperature - 20 - 80 °C

8.7 Process conditions CHEMTRAC 810M/811M 830M

max. allowed pressure PS: 16 bar

max. allowed temperature TS: 140 °C

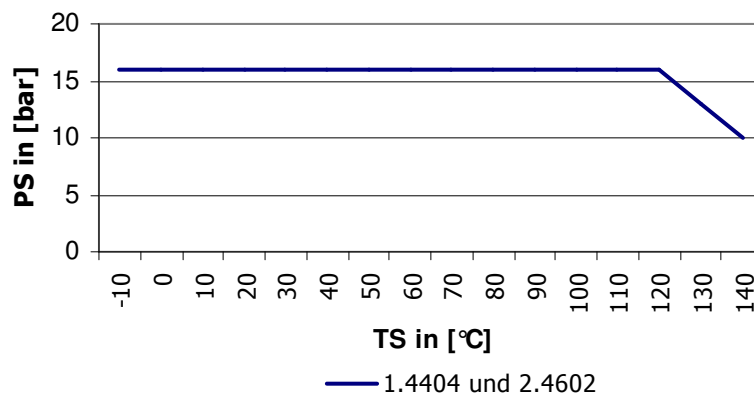


Fig. 15: Pressure temperature diagram CHEMTRAC 810M/811M 830M

8.8 Process conditions CHEMTRAC 820M/821M

max. allowed pressure PS 10 bar

max. allowed temperature TS 140 °C

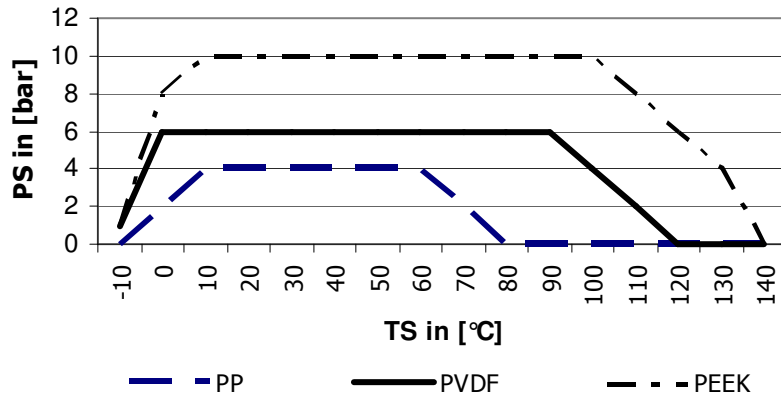


Fig. 16: Pressure temperature diagram CHEMTRAC 820M/821M

8.9 Ordering structure CHEMTRAC 810M

CHEMTRAC 810M retractable holder						
	Descr.	Holder, wetted material				
	44	stainless steel, 1.4404 / 316L				
	HC	Alloy C22, 2.4602				
	XX	special design				
		Descr.	Seals, wetted material			
		E	EPDM			
		V	FPM			
		K	FFKM			
		X	special design			
		Descr.	sensor			
		225	225mm PG 13.5 filled with gel			
		280	280mm PG 13.5 filled with liquid			
		XXX	special design			
		Descr.	Process connection			
		D32	flange DN32			
		D40	flange DN40			
		D50	flange DN50			
		A14	flange ANSI 1 1/4"			
		A12	flange ANSI 1 1/2"			
		A20	flange ANSI 2"			
		N14	NPT M 1 1/4"			
	T20	Tri Clamp 2"				
	XXX	special design				
	Descr.	Cleaning port				
	G18	G 1/8" (internal)				
	G14	G 1/4" (internal)				
	N14	1/4" NPT (internal)				
	XXX	special design				
	Descr.	Position reply				
	00	without				
	XX	special design				
CHEMTRAC 810M	-	-	-	-	-	Item number

8.10 Ordering structure CHEMTRAC 811M

Retractable holder CHEMtrac 811M																	
	<table border="1"> <thead> <tr> <th>Descr.</th> <th>Holder, wetted material</th> </tr> </thead> <tbody> <tr> <td>44</td> <td>stainless steel, 1.4404 / 316L</td> </tr> <tr> <td>HC</td> <td>Alloy C22, 2.4602</td> </tr> <tr> <td>XX</td> <td>special design</td> </tr> </tbody> </table>	Descr.	Holder, wetted material	44	stainless steel, 1.4404 / 316L	HC	Alloy C22, 2.4602	XX	special design								
	Descr.	Holder, wetted material															
	44	stainless steel, 1.4404 / 316L															
	HC	Alloy C22, 2.4602															
	XX	special design															
	<table border="1"> <thead> <tr> <th>Descr.</th> <th>Seals, wetted material</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>EPDM</td> </tr> <tr> <td>V</td> <td>FPM</td> </tr> <tr> <td>K</td> <td>FFKM</td> </tr> <tr> <td>X</td> <td>special design</td> </tr> </tbody> </table>	Descr.	Seals, wetted material	E	EPDM	V	FPM	K	FFKM	X	special design						
	Descr.	Seals, wetted material															
	E	EPDM															
	V	FPM															
	K	FFKM															
	X	special design															
	<table border="1"> <thead> <tr> <th>Descr.</th> <th>Sensor</th> </tr> </thead> <tbody> <tr> <td>325</td> <td>325mm PG 13.5 filled with gel</td> </tr> <tr> <td>380</td> <td>380mm PG 13.5 filled with liquid</td> </tr> <tr> <td>XXX</td> <td>special design</td> </tr> </tbody> </table>	Descr.	Sensor	325	325mm PG 13.5 filled with gel	380	380mm PG 13.5 filled with liquid	XXX	special design								
	Descr.	Sensor															
	325	325mm PG 13.5 filled with gel															
	380	380mm PG 13.5 filled with liquid															
	XXX	special design															
	<table border="1"> <thead> <tr> <th>Descr.</th> <th>Process connection</th> </tr> </thead> <tbody> <tr> <td>D40</td> <td>flange DN40</td> </tr> <tr> <td>D50</td> <td>flange DN50</td> </tr> <tr> <td>A12</td> <td>flange ANSI 1 1/2"</td> </tr> <tr> <td>A20</td> <td>flange ANSI 2"</td> </tr> <tr> <td>N14</td> <td>NPT M 1 1/4"</td> </tr> <tr> <td>T20</td> <td>Tri Clamp 2"</td> </tr> <tr> <td>XXX</td> <td>special design</td> </tr> </tbody> </table>	Descr.	Process connection	D40	flange DN40	D50	flange DN50	A12	flange ANSI 1 1/2"	A20	flange ANSI 2"	N14	NPT M 1 1/4"	T20	Tri Clamp 2"	XXX	special design
	Descr.	Process connection															
	D40	flange DN40															
	D50	flange DN50															
	A12	flange ANSI 1 1/2"															
A20	flange ANSI 2"																
N14	NPT M 1 1/4"																
T20	Tri Clamp 2"																
XXX	special design																
<table border="1"> <thead> <tr> <th>Descr.</th> <th>Cleaning port</th> </tr> </thead> <tbody> <tr> <td>G18</td> <td>G 1/8" (internal)</td> </tr> <tr> <td>G14</td> <td>G 1/4" (internal)</td> </tr> <tr> <td>N14</td> <td>1/4" NPT (internal)</td> </tr> <tr> <td>XXX</td> <td>special design</td> </tr> </tbody> </table>	Descr.	Cleaning port	G18	G 1/8" (internal)	G14	G 1/4" (internal)	N14	1/4" NPT (internal)	XXX	special design							
Descr.	Cleaning port																
G18	G 1/8" (internal)																
G14	G 1/4" (internal)																
N14	1/4" NPT (internal)																
XXX	special design																
<table border="1"> <thead> <tr> <th>Descr.</th> <th>Position reply</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>without</td> </tr> <tr> <td>XX</td> <td>special design</td> </tr> </tbody> </table>	Descr.	Position reply	00	without	XX	special design											
Descr.	Position reply																
00	without																
XX	special design																
CHEMTRAC 811M	- - - - -																
	Item number																

8.11 Ordering structure CHEMTRAC 820M

Retractable holder CHEMTRAC 820M	
Descr.	Holder, wetted material
PP	PP
PV	PVDF
PK	PEEK
XX	special design
Descr.	Seals, wetted material
E	EPDM
V	FPM
K	FFKM
X	special design
Descr.	sensor
225	225mm PG 13.5 filled with gel
280	280mm PG 13.5 filled with liquid
XXX	special design
Descr.	process connection
D50	flange DN50
A20	flange ANSI 2"
N14	NPT M 1 1/4"
XXX	special design
Descr.	cleaning port
G18	G 1/8" (internal)
G14	G 1/4" (internal)
N14	1/4" NPT (internal)
XXX	special design
Descr.	position reply
00	without
XX	special design
CHEMTRAC 820M	- - - - - Item number

8.12 Ordering structure CHEMTRAC 821M

Retractable holder CHEMTRAC 821M	
Descr.	Holder, wetted material
PV	PVDF
PK	PEEK
XX	special design
	Seals, wetted material
E	EPDM
V	FPM
K	FFKM
X	special design
Descr.	Sensor
325	325mm PG 13.5 filled with gel
380	380mm PG 13.5 filled with liquid
XXX	special design
Descr.	Process connection
D50	flange DN50
A20	flange ANSI 2"
N14	NPT M 1 1/4"
XXX	special design
Descr.	Cleaning port
G18	G 1/8" (internal)
G14	G 1/4" (internal)
N14	1/4" NPT (internal)
XXX	special design
Descr.	Position reply
00	without
XX	special design
CHEMTRAC 821M	Item number

8.13 Ordering structure CHEMTRAC 830M

CHEMTRAC 830M retractable holder	
Descr.	Holder, wetted material
44	stainless steel, 1.4404 / 316L
XX	special design
Descr.	Seals, wetted material
E	EPDM FDA
V	FPM
X	special design
Descr.	sensor
225	225mm PG 13.5 filled with gel
280	280mm PG 13.5 filled with liquid
XXX	special design
Descr.	Process connection
IN28	Ingold DN25 (G1 1/4") O-Ring-Pos. 28mm
VARN	Varivent N DN40-125
TC15	TriClamp 1,5" (OD Ø50,5mm)
TC20	TriClamp 2" (OD Ø64mm)
BCT5	NEUMO BioControl 50
MV50	DIN 11851 DN50 (Milchrohr)
XXXX	special
Descr.	Cleaning port
G18	G 1/8" (internal)
G14	G 1/4" (internal)
N14	1/4" NPT (internal)
XXX	special design
Descr.	Position reply
00	without
XX	special design
CHEMTRAC 830M	Item number

9 Parts and accessories

Seal kits		
CHEMTRAC	Part	Item number
810M / 820M	Seal kit EPDM	285063660
	Seal kit FPM	285063680
	Seal kit FFKM	285063700
811M / 821M	Seal kit EPDM	285063670
	Seal kit FPM	285063690
	Seal kit FFKM	285063710
830M IN28	Seal kit EPDM FDA	
	Seal kit FPM	
830M VARN + BCT5	Seal kit EPDM FDA	
	Seal kit FPM	
830M TC15/TC20 + MV50	Seal kit EPDM FDA	
	Seal kit FPM	



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

Drive unit with pneumatic position reply		
CHEMTRAC	Part	Item number
810M/811M / 820M/821M / 830M	Drive unit for sensor L = 225/325 mm	285077540
810M/811M / 820M/821M / 830M	Drive unit for sensor L = 280/380 mm	285077550



Drive units are available for order only in conjunction with an insertion rod!

Insertion rods		
CHEMTRAC	Part	Item number
810M	Insertion rod 1.4404 / 316L	285063480
	Insertion rod 2.4602 / Alloy C22	285063500
811M	Insertion rod 1.4404 / 316L	285063490
	Insertion rod 2.4602 / Alloy C22	285063510
820M	Insertion rod PP	285063530
	Insertion rod PVDF / Alloy C22	285063430
	Insertion rod PEEK	285063440
821M	Insertion rod PVDF / Alloy C22	285063450
	Insertion rod PEEK	285063470
830M	Insertion rod 1.4404 / 316L	285063480



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