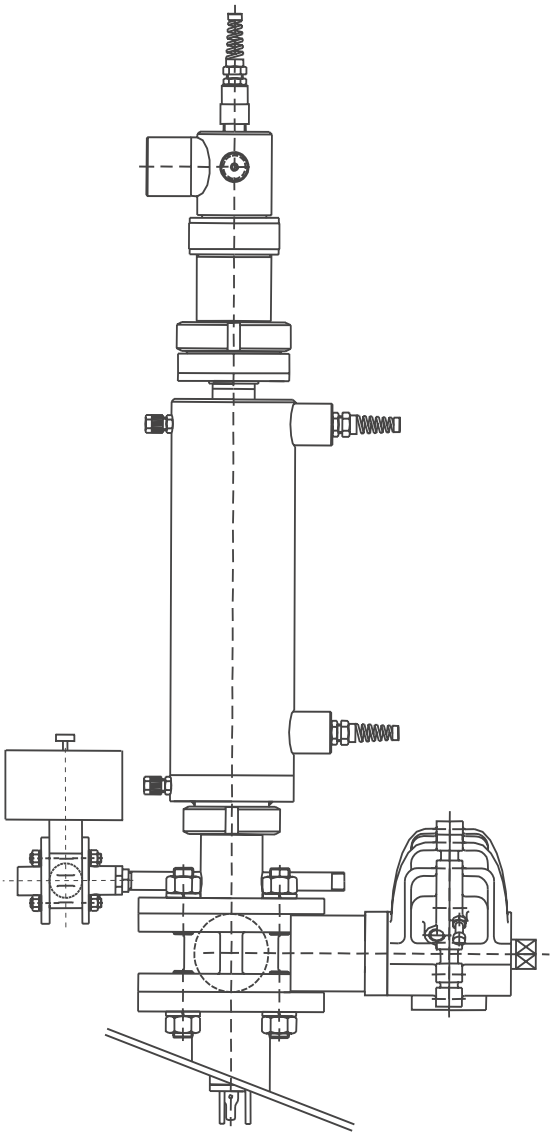
BA 218C/07/en/05.00
No. 51502598

CleanFit P
CPA 477
Retractable Assembly for Measuring pH/Redox

Operating Instructions



Endress+Hauser
The Power of Know How

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1 Safety

1.1 Safety symbols

Warning!
This symbol alerts you to hazards which could cause serious injuries as well as damage to the instrument if ignored.

Caution!
This symbol alerts you to possible faults which could arise from incorrect operation. They could cause damage to the instrument if ignored.

Note!
This symbol indicates important items of information.

1.2 Intended application

The hand-operated or pneumatically operated retractable assembly CleanFit P CPA 477 is designed for installing pH/redox sensors in tanks and pipes.

Its mechanical design permits its use in pressurised systems (see Technical Data).

The responsibility for compliance with the following safety requirements lies with the operator:
- Explosion protection regulations
- Installation instructions
- Operating instructions for the assembly and its materials
- Local prevailing standards and regulations

1.3 Installation, start-up and operation

Warning!
- Installation, electrical connection, start-up, operation and maintenance of the measuring system must be carried out exclusively by trained specialists authorised by the system operator.
- Technical personnel must be familiar with the instructions in this manual and must adhere to them.
- When the assembly is operated in explosive atmospheres, it is imperative to comply with the regulations applicable.
- Before switching on the system check all the connections again for correctness.
- Do not operate damaged assemblies which could pose a danger, and mark them as defective.
- Measuring point faults may only be repaired by authorised and trained personnel.
- If faults cannot be repaired, the assembly must be taken out of service and secured against unintentional start-up.
- Repairs may only be carried out by the manufacturer or by the Endress+Hauser service organisation.

1.4 Operational safety

The CPA 477 assembly has been designed for safety according to the state of the art and in compliance with the applicable regulations and EC directives (see Technical Data).
However, if it is used improperly or other than for its intended purpose, it may pose a hazard, e.g. through incorrect installation or the wrong operating conditions.

Warning!
- If the device is used for any application other than those described in this manual, it may lead to unsafe and improper functioning of the measuring system and is therefore not permitted.
- Make sure you strictly adhere to the warnings and notes in these Betriebsanleitung.

Instructions for installation in pressurised systems

Warning!
- Do not exceed the maximum assembly operating pressure.
- Depressurise the system before installing or removing the assembly.
- Inspect screw unions, valves and pipes for leaks or damage on a regular basis.

1.5 Return

If the assembly has to be repaired, please return it **cleaned** to the Endress+Hauser sales centre responsible. Please use the original packaging where possible.
When returning assemblies used in toxic or highly aggressive processes, do not forget to fill in the Safety regulation form and insert it with the assemblies for repairs to E+H instruments (see last page but one of these Operating Instructions).

2 Identification

2.1 Equipment name

2.1.1 Nameplate

The assembly variant is recognisable from the order code on the nameplate.

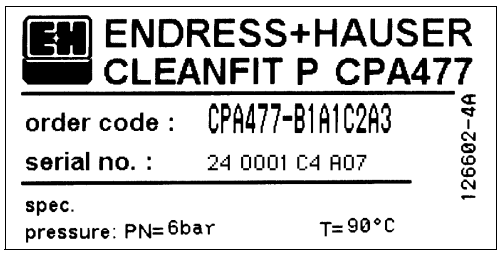


Fig. 2.1: Nameplate of CleanFit P CPA 477

2.1.2 Product structure

Retractable assembly / limit switch motor							
	B	Pneumatics without limit switch (retrofittable)					
	C	Pneumatics with 2 pneumatic limit switches					
	Y	Special design to customer specifications					
		Electrode holder					
		A	Stainless steel SS 316Ti, for gel electrodes with Pg 13.5 (length 120 mm).				
		B	PVDF, for special pressurised KCl electrode (length 270 mm)				
		Y	Special design to customer specifications				
			Assembly material				
			A	Stainless steel in contact with medium SS 316Ti; housing PA			
			Y	Special design to customer specifications			
				Seal material			
				1	EPDM		
				2	VITON®		
				9	Special design to customer specifications		
					Process connection / shut-off		
					A	Flange DN 40 with rinse chamber (ball valve: customer supply)	
					B	Ball valve SS 316 / SS CF-8M flange DN 40 with manual operation	
					C	Ball valve SS 316 / SS CF-8M flange DN 40 with pneumatic forced control (only drive assembly variant C)	
					Y	Special design to customer specifications	
						Additional equipment	
						2	with rinse connections 1 x G ¼ and 1 x G ½ external thread
						3	with rinse connections 2 x G ¼ and 1 x G ½ external thread
						4	with rinse connections 1x NPT ¼" and 1 x NPT ½" external thread
						5	with rinse connections 2 x NPT ¼" and 1 x NPT ½" external thread
						9	Special design to customer specifications
CPA 477-							complete order code

2.2 Scope of supply

Caution!
- Make sure the packaging is undamaged! If any damage is found, contact your postal service or forwarding agent. Keep any damaged packaging until matters have been clarified.
- Make sure the contents are undamaged! If any damage is found, contact your postal service or forwarding agent and inform the suppliers. Keep any damaged goods until matters have been clarified.
- Inspect the delivery for completeness and quantity according to the delivery papers, and the instrument type and version as shown on the nameplate.

The following items are included in the delivery:
- CleanFit P CPA 477 assembly
- Betriebsanleitung BA 218C/07/en

In case of any queries please contact your supplier or the Endress+Hauser sales centre responsible (see back page of this Betriebsanleitungmanual).

2.3 Registered trademark

VITON®
Registered trademark of E.I. Du Pont de Nemours & Co., Wilmington, USA.
Tradename for FKM

3 Installation

The following procedure should be followed for a complete measuring system installation:
1. Mounting and connecting an electrode (see Chapter 3.3.1)
2. Water connection to rinse connections (see Chapter 3.3.2)
3. Installing the assembly (see Chapter 3.3).

3.1 Measuring system

A full measuring system comprises:

- Retractable assembly CleanFit P CPA 477
- 1 pH/redox gel electrode (120 mm) or pH liquid KCl electrode (270 mm)
- pH/redox measuring transmitter, e.g. Mycom CPM 152, MyPro CPM 431, Liquisys M CPM 223/253
- Autoclean CPC 20, Injector CYR 10 (in connection with Mycom CPM 152 only)
- Measuring cable (for gel electrode) CPK 1, CPK 7 or CPK 9 (terminated)

Optional:
- Junction box VBA for measuring cable extension
- Measuring cable CYK 71 (unterminated) for measuring cable extension

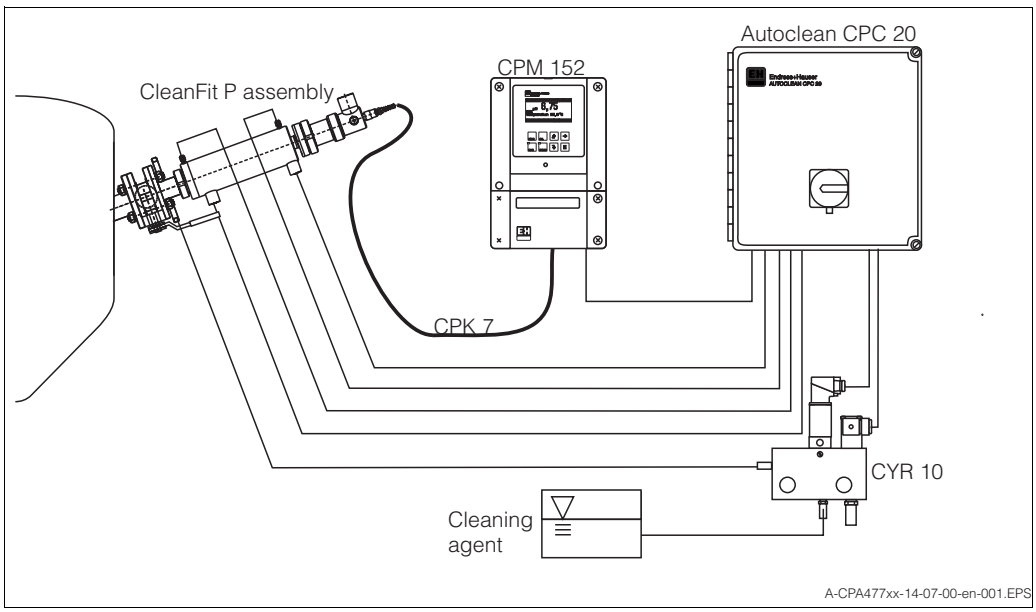


Fig. 3.1: Complete measuring system for CPA 477 with Mycom CPM 152

3.2 Installation conditions

3.2.1 Dimensions

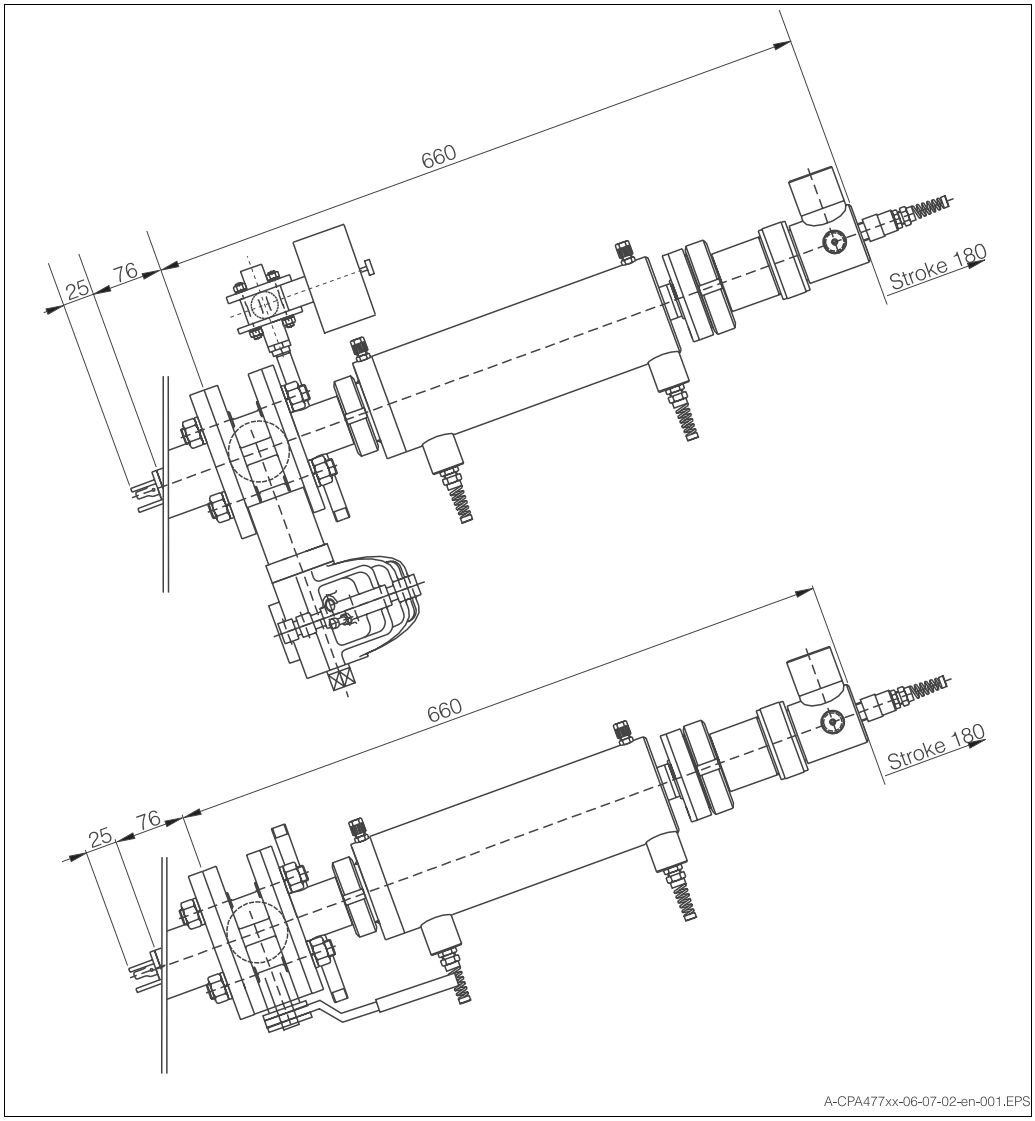


Fig. 3.2: (top): CPA 477 with pneumatic ball valve drive in measuring position
(bottom): CPA 477 with manually operated ball valve in measuring position

3.2.2 Installation location/position

The CleanFit P CPA 477 assembly is designed for installation on tanks or pipes. The installation angle should be 20° to the horizontal.

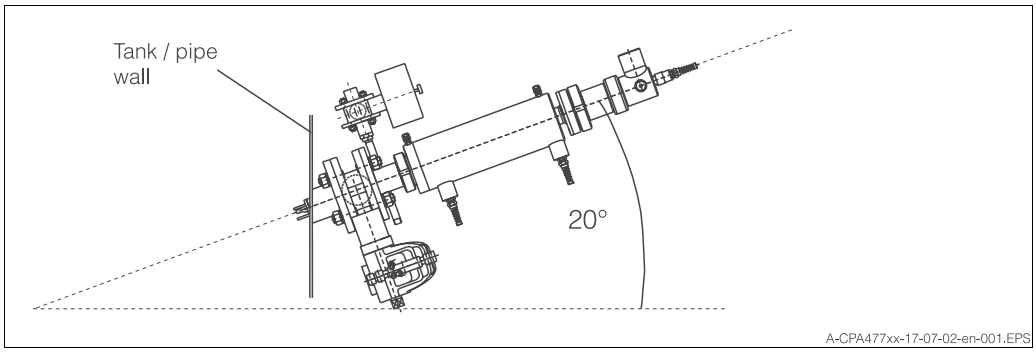


Fig. 3.3: Installing the CPA 477. The installation angle should be 20° to the horizontal.

Note!
When setting up the measuring point, allow a minimum untoleranced dimension of 1.510 mm for installation!

3.3 Installation

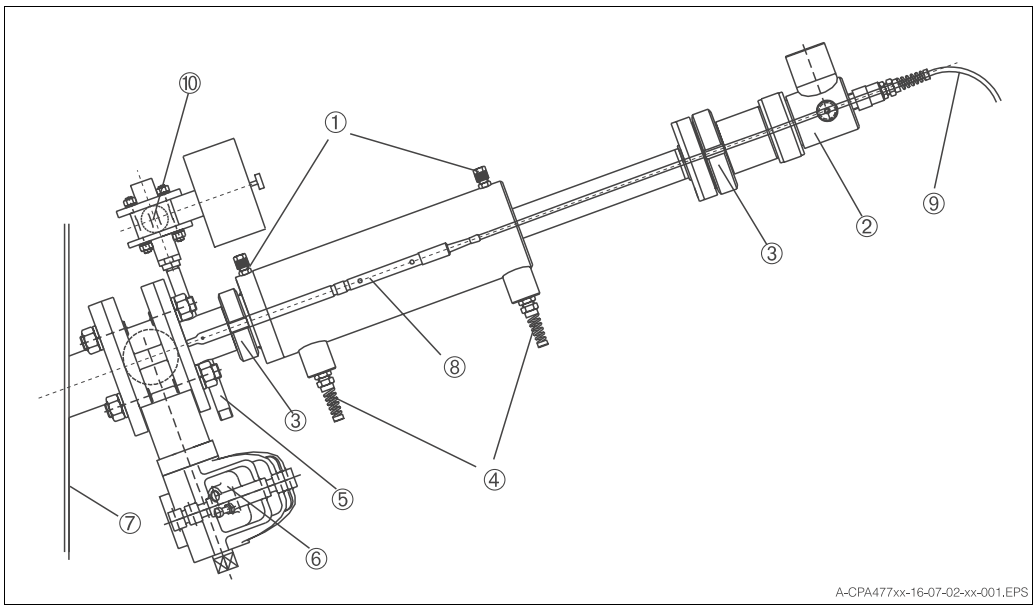


Fig. 3.4: CPA 477 retractable assembly in maintenance position

1 *Compressed air connections of cylinder control*
2 *Pushbutton*
3 *Slotted nuts*
4 *Limit switch*
5 *Rinse connections*
6 *Ball valve drive*
7 *Tank wall*
8 *Measuring electrode (pressurised, flooded)*
9 *pH cable*
10 *Shut off valve for rinse liquid*

3.3.1 Installing the electrode

Note!
- Before installing a new gel electrode, make sure that the electrode shaft is fitted with thrust collar A and O-ring B and that the yellow protective electrode cap is removed.
- Moisten the electrode shaft before installing the electrode. Simply immerse in water.

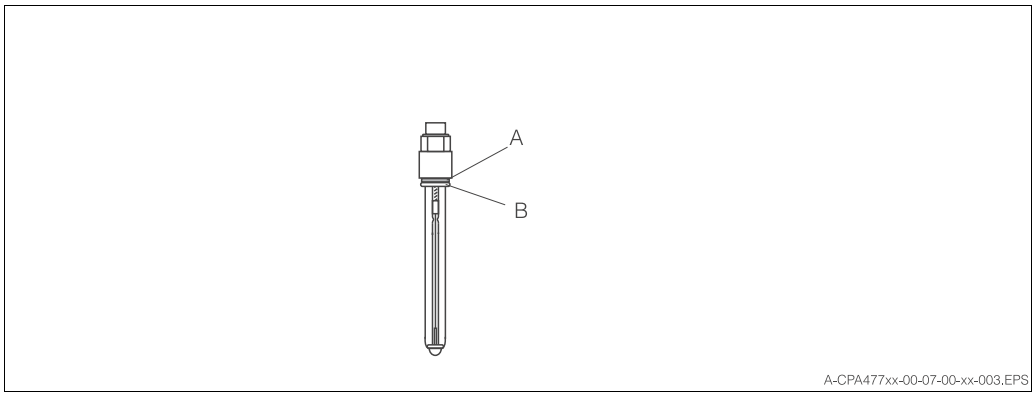


Fig. 3.5: Thrust collar A and O-ring B on a gel electrode

Gel electrode

1. Place assembly in »Maintenance« position
2. Shut off assembly connection to process using ball valve
3. Slacken slotted nuts on assembly head and extract electrode holder from assembly
4. Unscrew electrode guide from electrode holder using socket spanner (WAF 22)
5. Carefully insert electrode in electrode guide (①), tighten by hand and then tighten by ¼ turn using socket spanner (WAF 17) (②)
6. Insert measuring cable from below through electrode holder
7. Screw measuring cable on electrode plug-in head and tighten hand-tight.
8. Screw electrode guide in electrode holder using socket spanner (WAF 22)
9. Insert electrode holder in assembly and tighten slotted nuts

Remove electrode in the reverse sequence of operations.

Note!
The electrode holder is available separately as an accessory.

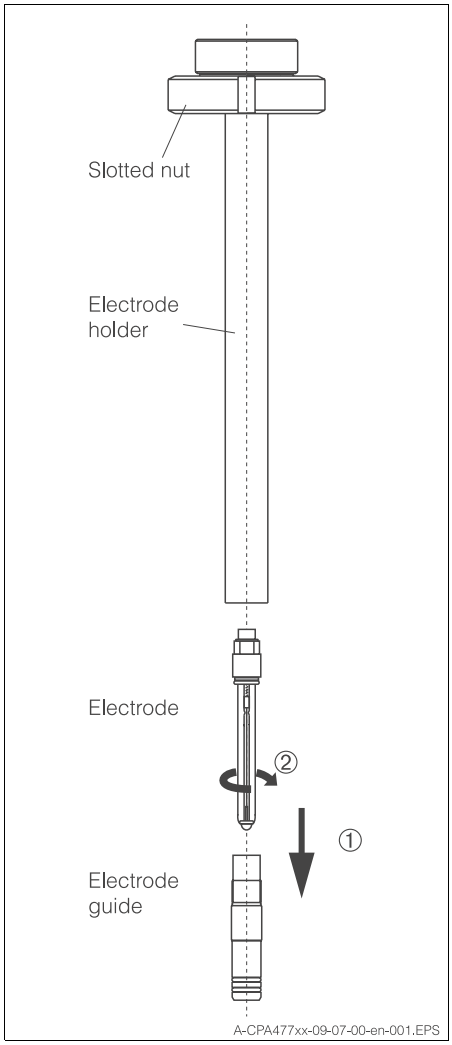


Fig. 3.6: Installing a gel electrode in the CleanFit P CPA 477 assembly

KCl electrode

1. Place assembly in »Maintenance« position
2. Use ball valve to shut off assembly connection to process
3. Slacken slotted nuts on KCl dispensing tank and remove electrode holder from assembly
4. Unscrew electrode guide from electrode holder using socket spanner (WAF 22)
5. Mount following on electrode:
   – thrust collar
   – O-ring
   – spacer
   – O-ring
   – thrust collar
   Make sure that O-rings contact electrode neckings
6. Carefully insert electrode in electrode guide, tighten by hand and then tighten by ¼ turn using socket spanner (WAF17)
7. Insert measuring cable from below through electrode holder
8. Screw measuring cable on electrode plug-in head and tighten hand-tight.
9. Screw electrode guide into electrode holder using socket spanner (WAF 22) and tighten to stop (this clamps the electrode)
10. Insert electrode holder in assembly and screw tight by means of slotted nuts
11. Connect compressed air hose to compressed air connection.

Remove electrode in the reverse sequence of operations.

Note!
The electrode holder is available separately as an accessory.

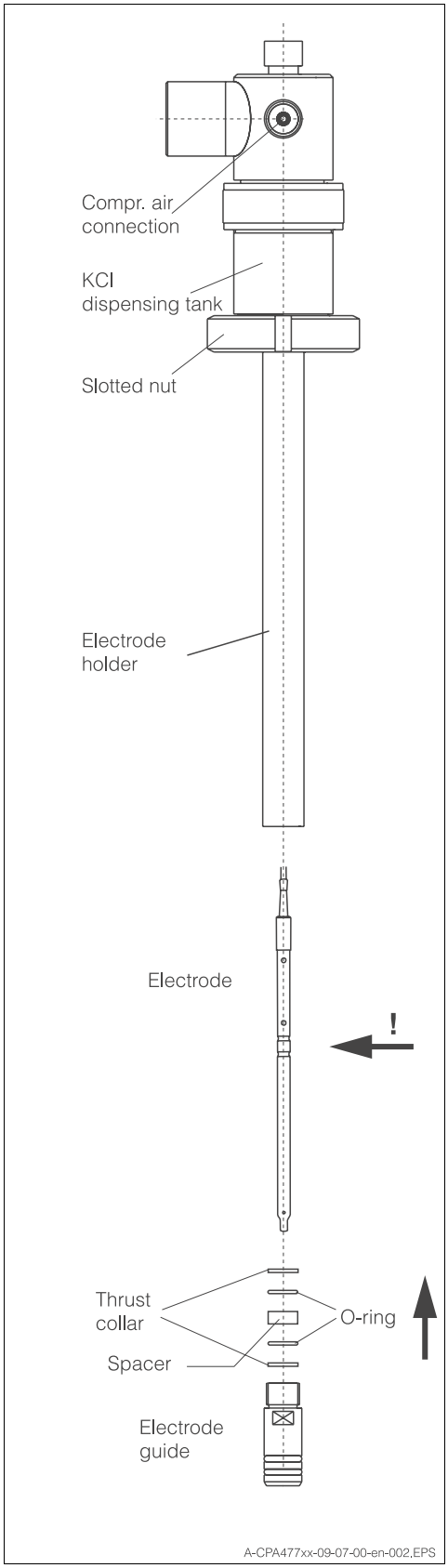


Fig. 3.7: Installing the liquid KCl electrode in the CleanFit P CPA 477 assembly

3.3.2 Water connection (only on version with rinse connection)

Connect the hot water line (approx. 60°C) to the rinse connections provided with external thread (see Fig. 3.4). One connection is for the water inlet, the other is the water outlet. Make sure that the discharge is free and pressureless.

The CleanFit P CPA 477 assembly is operated at a water pressure of 2 to 6 bar. A dirt trap and a non-return valve should be installed in the water supply line.

Caution!
- If the water pressure can rise above 6 bar (including any transient pressure surges), install a pressure reducing valve upstream, otherwise the assembly may be damaged.
- The outlet should be located above the inlet as far as possible so that the electrode does not run dry in the rinse chamber.

Besides water, other or additional cleaning solutions may be used in the rinse chamber. However, pay attention to the material resistance of the assembly and comply with the maximum permitted temperatures (see Technical Data).

3.3.3 Connecting the pneumatic limit switch

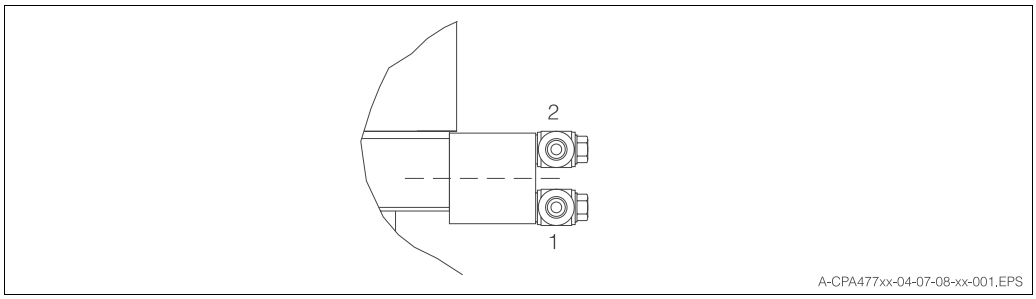


Fig. 3.8: Pneumatic limit switch (1 = input, 2= output)

The lower limit switches are for the »Measurement« function and the upper switches for the »Maintenance« function, see Fig. 3.9

The air lines must have a minimum nominal width of DN 4 mm.

Connect the pneumatic limit switches to the compressed air lines running to the assembly control as follows, see Chapter 3.3.4:

Caution!
If the air pressure can rise above 8 bar (including any transient pressure surges), install a pressure reducing valve upstream, otherwise the assembly may be damaged.

3.3.4 Compressed air connection to assembly control (when equipped with manually operated ball valve)

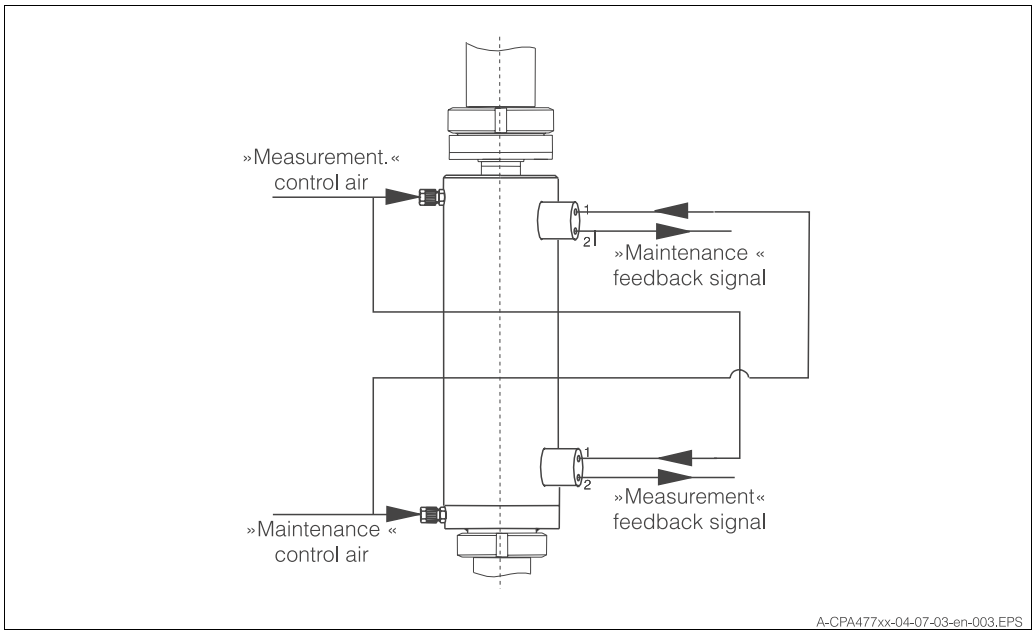


Fig. 3.9: Compressed air connections for CPA 477

The CleanFit P CPA 477 assembly is operated at an air pressure of 4 to 8 bar.
The air must be filtered (40 µm), and be water- and oil-free.
There is no continuous air consumption.

- Connect the control air line for »Measurement« to upper ¼" screw union.
- Connect the control air line for »Maintenance« to lower ¼" screw union.

Connect the compressed air lines for the »Measurement« position feedback signal to the lower limit switch at the connections marked 1 (= inlet) and 2 (= outlet). When the »Measurement« position is reached, the air applied to inlet 1 is switched through and can be tapped at connection 2.

Connect the compressed air lines for the »Maintenance« position feedback signal to the upper limit switch at the connections marked 1 and 2. When the »Maintenance« position is reached, the air applied to inlet 1 is switched through and can be tapped at connection 2.

3.3.5 Compressed air connection to assembly control (when equipped with forced control)

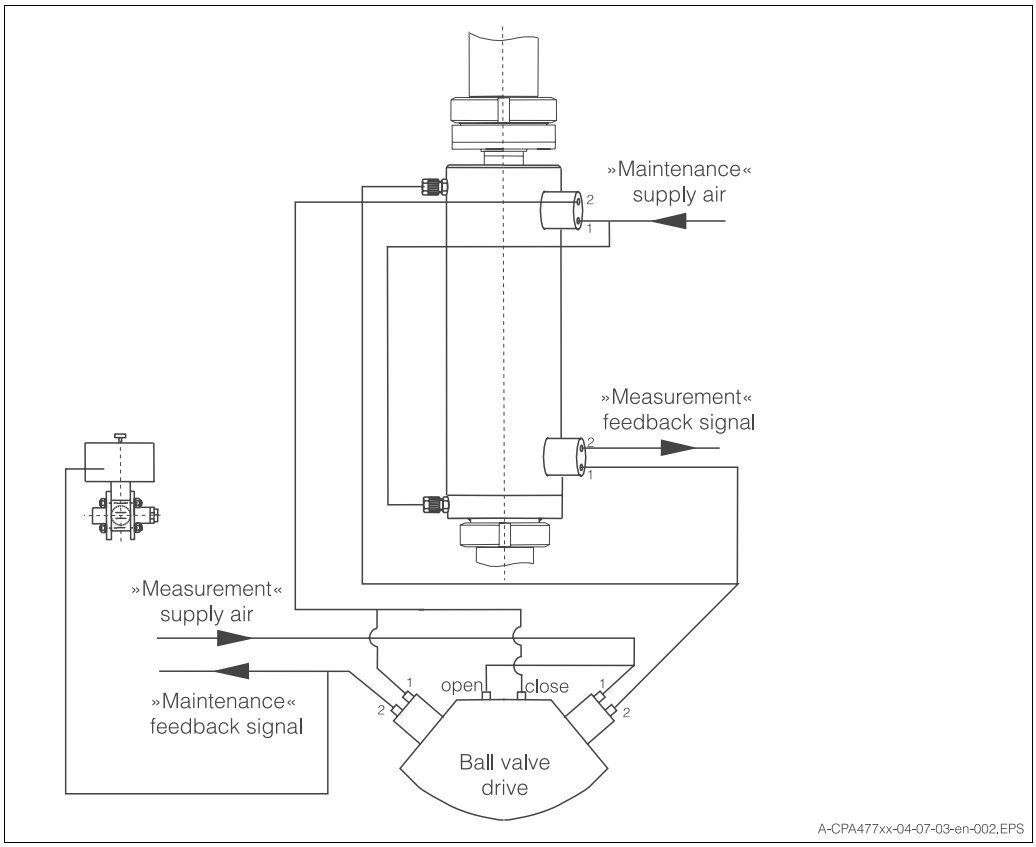


Fig. 3.10: Connection of the pneumatic lines to the CPA 477 assembly with forced control
1 = input, 2 = output

Please connect:
- The supply air line »Maintenance« to the upper limit switch on the assembly (»T« branching point)
- The line feedback signal »Measurement« to the lower limit switch on the assembly (»T« branching point)
- The supply air line »Measurement« to the »T« branching point on the limit switch at the ball valve drive
- The line feedback signal »Maintenance« to the »T« branching point on the limit switch at the ball valve drive

Already connected are:
The »Measurement« supply air line to the ball valve at input 1 of the limit switch and terminal »auf« (»open«).
The compressed air line for the »Measurement position feedback signal to the terminal of the limit switch marked 2 (= output) on the ball valve and also to input 1 of the lower limit switch and to the upper compressed air connection of the assembly.
On the assembly, when the »Measurement« position is reached, the air applied to inlet 1 is switched through and can be tapped at connection 2 with a compressed air line.

The »Maintenance« supply air line on the assembly to Input 1 of the upper limit switch and to the lower compressed air connection.
The compressed air line for the »Maintenance« position feedback signal to the upper limit switch terminal marked 2 of the assembly and also on the ball valve to the input 1 of the limit switch and to the air connection »zu« (»close«).

When the »Maintenance« position is reached, the air applied to inlet 1 is switched through on the limit switch of the ball valve, and can be tapped at connection 2 with a compressed air line.

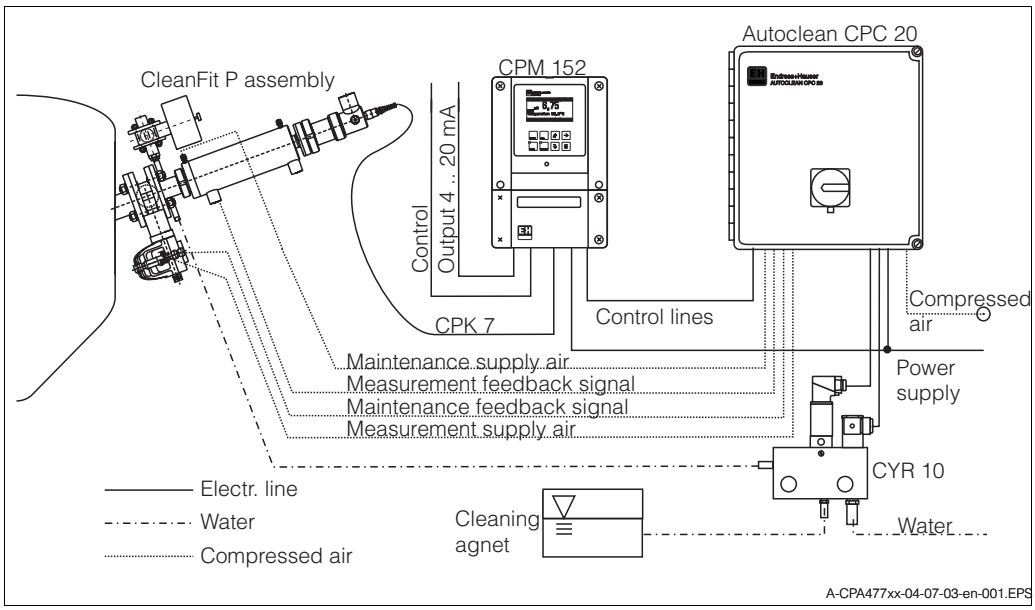


Fig. 3.11: Connecting the auxiliary lines to the CPA 477 assembly

3.3.6 Installing the assembly

Set the assembly to maintenance position (see Fig. 3.4) and attach it to the selected connection on the tank or pipe.

Process connections are available for the CleanFit P CPA 477 assembly:

flange DN 40, ball valve DN 40 with pneumatic drive, ball valve DN 40 with manual operation

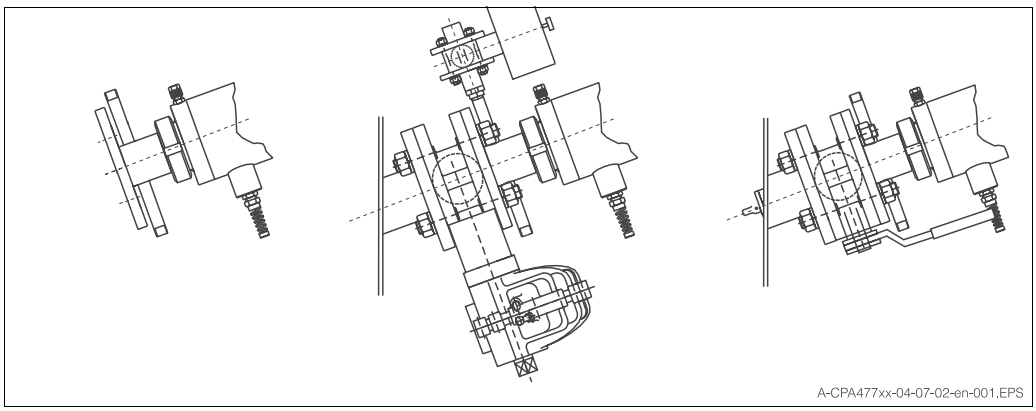


Fig. 3.12: Available process connections on the CPA 477 assembly

Hinweis!
The welding socket is available as an accessory (see paragraph »accessories«)

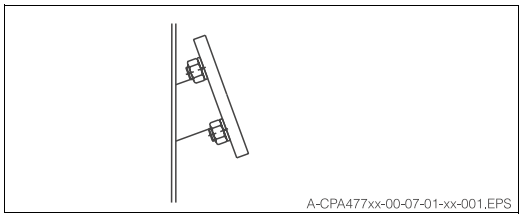


Fig. 3.13: Welding socket as accessory

Note!
Before assembly, please note the following:

- Check the correct seating of the O-rings on the assembly.

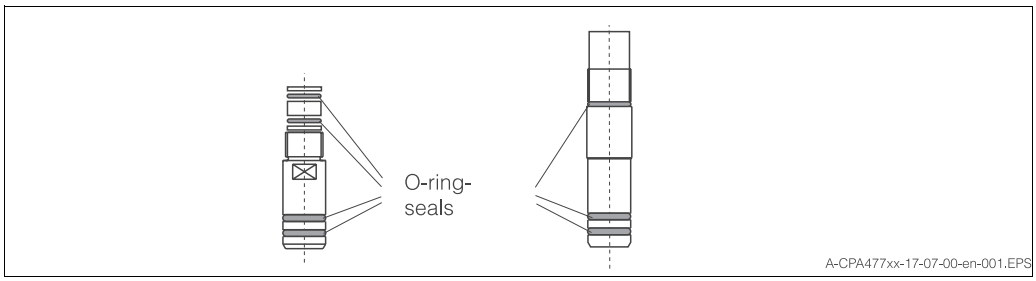


Fig. 3.14: O-ring seals of the CPA 477 (in contact with medium)
left: electrode guide of KCl electrode
right: electrode guide of gel electrode

- Check the seat of the flange seal between the flanges.

4 Operation

4.1 Starting up the assembly

Note!
Before the first start-up, make sure of the following points:

- All seats are correctly seated (on the assembly and process connection)
- Electrode is correctly installed and connected
- Water supply line is correctly connected to the rinse connections
- Pneumatic limit switches are correctly connected

Caution!
Before applying compressed air to the pneumatic assembly, make sure the connections of all air lines are correctly fitted!

4.2 Operating the CPA 477 in manual mode

»Measurement« process
1. Open ball valve.
2. Immerse assembly in process using control.

»Maintenance« process
1. Extract assembly from process.
2. Close ball valve.
3. Carry out maintenance work (see Chapter 5)

4.3 CPA 477 in pneumatic mode

Operating the permanent forced version depends on the control fitted. Refer to the control operating manual for instructions.

Note!
If a maintenance switch is fitted on the measuring transmitter, set it to »Maintenance« or »Service«.

5 Maintenance

Warning!
Risk of injury! Before starting maintenance work on the assembly, make sure that the process line and the tank are depressurised, empty and rinsed. Mover the assembly to the »Maintenance« position and close the ball valve.

The measurement can be corrupted by electrode fouling or malfunction, e.g.:
- Deposits on pH-sensitive part of glass electrode
  → cause poor response time and low sensitivity or shallow slope.
- Fouling or blocking of membrane
  → causes poor response time and unstable measurement.

To ensure a reliable measurement, the electrodes must be cleaned at regular intervals. The frequency and intensity of the cleaning operation depend on the measuring medium.

5.1 Cleaning

Clean the electrode:
- before every calibration
- at regular intervals during operation as necessary.

Cleaning can take place manually by removing the electrode or via the rinse connection (if fitted).

Note!
- Do not use any abrasive cleaning agents for cleaning the electrodes. This can lead to irreparable damage to the measuring surfaces.
- After cleaning, rinse the rinse chamber with copious amounts of water (possibly distilled or de-ionised). Any residual cleaning agent can falsify the measurement drastically.
- After every cleaning operation, re-calibrate the measuring system.

Manual cleaning

All parts in contact with the medium, e.g. the electrode and the electrode holder, must be cleaned at regular intervals. Remove the electrode in the reverse sequence of operations 1 to 9 (or 11) as described in Chapter 3.3.1

- Light dirt can be removed using suitable cleaning agents.
- Severe fouling must be removed with a soft brush and then a suitable cleaning agent.
- Remove persistent fouling by soaking in a liquid cleaner.

Cleaning via the rinse connection
(only when equipped accordingly)

The rinse connection is used to clean the assembly automatically, e.g. using Autoclean CPC 20.

Selecting cleaning agents

The selection of cleaning agent depends on the type of fouling. The most frequent fouling and the associated cleaning agents are listed in the table below:

Type of contamination	Cleaning agent
Greases and oils	Substances containing tensides (alkaline) or water-soluble organic solvents (e.g. alcohol)
Lime deposits, metal hydroxide deposits, heavy biological deposits	3% HCl or with Chemoclean: HCl (10%) in injector thinned to approx. 3%
Sulphide deposits	Mixture of hydrochloric acid (3%) and thiocarbamide (commercially available)
Protein deposits	Mixture of hydrochloric acid (01 molar) and pepsin (commercially available)
Fibres, suspended substances	Water under pressure, poss. with surface-active agents
Light biological deposits	Water under pressure

Caution!
Do not use solvents containing halogen for cleaning. This could destroy the plastic components on the assembly.

Note!
Only clean redox electrodes mechanically. Chemical cleaning applies a potential to the electrode that takes several hours to decay. This potential causes measuring errors.

5.2 Calibration

Careful and regular calibrations are indispensable to ensure reliable and precise measurement. Calibration cycles depend on the application and the required measurement accuracy.

In practice, calibration cycles must be determined on a case by case basis. At the start, we recommend frequent calibration, e.g. one a week, in order to familiarise yourself with the running characteristics.

When carrying out the calibration, always refer to the calibration instructions of the associated measuring transmitter (see Operating Instructions of the measuring transmitter).

To simplify the calibration process, a calibration vessel and holder are available as accessories. When the accessories are used, the electrode need not be completely removed, only the electrode holder.

Calibration with electrode removed

Note!
- The calibration times depend on the process conditions and the measuring medium.
- Do not allow electrodes to stand in distilled water.
- Do not allow electrodes to stand dry.

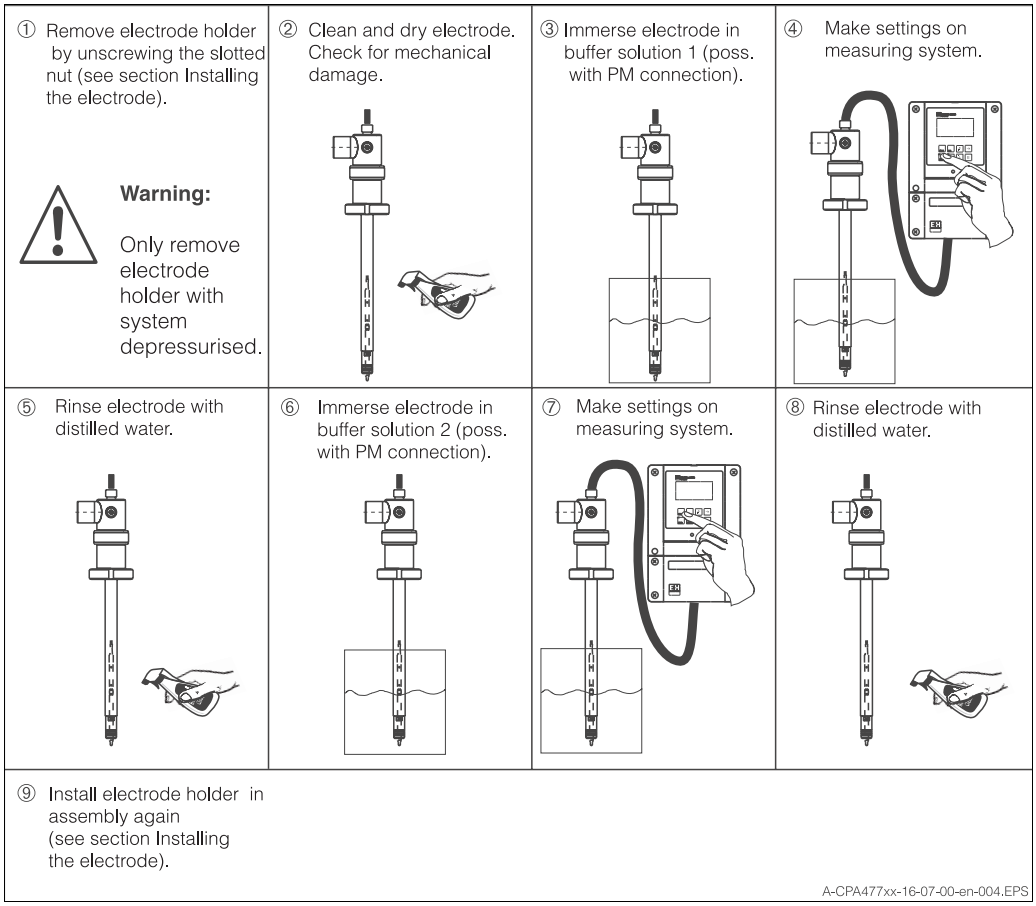


Fig. 5.1: Calibrating the electrode when removed

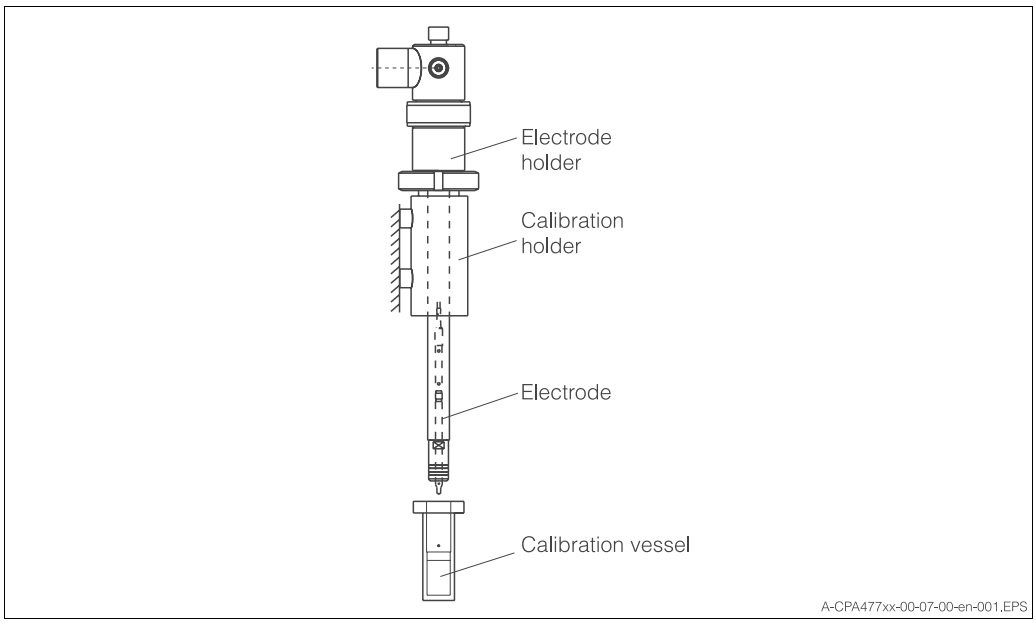


Fig. 5.2: Calibration holder and vessel as accessories for calibration process

5.3 Repairs

The CleanFit P CPA 477 retractable assembly requires very little maintenance. The following repair work is needed to ensure reliable operation:
- Replace damaged assembly parts.
- Keep O-rings and sealing surfaces on the assembly free of dirt.
- Grease dry O-rings.
- Inspect O-rings in contact with medium (see Fig. 3.14) at regular intervals and replace at reasonable intervals.
- Remove deposits clinging to the assembly for time to time.

Warning!
Any other intervention or modifications to the assembly are not permitted and will render all warranty claims null and void.

6 Accessories

Endress+Hauser offers the following accessories specially designed for the CPA 477 retractable assemblies:

6.1 Connection accessories

- Welding socket
  Stainless steel SS 316Ti, flange DN 40
- Retrofit set of limit switches
  Set of pneumatic limit switches (2 pcs); Order No: 51502940

6.2 Electrodes

- pH/redox combination electrodes, length 120 mm
  OrbiSint W CPS 11/12
- Pressurised liquid KCl special pH electrode,
  length 270 mm with fixed cable 10 m
  (E_0 = 7.0, pH = 2 ...14; T = 0 ... 130°C, 3 x Pt membranes); Order No: 51502943
- Measuring cable CPK 1, CPK 7 or CPK 9
  e.g. CPK 1, 10 m, SSA head, up to 80°C: Order No. CPK1-100A
  e.g. CPK 7, 10 m, SSA head, up to 80°C, Ex: Order No. CPK7-10Z
  e.g. CPK 9, 10 m, SSA head, up to 130°C, Order No. CPK9-HBA1A
- Calibration solution CPY 2
- Holder PP and calibration vessel made of Plexiglas for electrode holder
  Order No: 51502944

6.3 Spare parts

- Electrode holder for special KCl pressurised electrode
  Order No: 51502936
- Electrode holder for gel electrode
  Order No: 51502937
- Set of seals, in contact with medium for electrode holder
  EPDM; Order No: 51502938
  VITON®; Order No: 51502939

6.4 Control of retractable assembly during cleaning / calibration

- Autoclean CPC 20
  Automatic cleaning control for CleanFit retractable assemblies. Control cabinet with pneumatic valves, switches for position feedback signal, terminal strip for status signals. Protection class IP 54.
  Technical Information TI 161C/07/en (Order No. 50089137)
- Liquisys M CPM 223/253
  pH/redox measuring transmitter. Integrated electrode function monitoring, measured value monitoring, free configuration of alarm contact
  Technical Information TI 194C/07/en (Order No. 51500276)
- Mycom CPM 152
  pH/redox field measuring transmitter. Integrated electrode function monitoring, alpha value compensation, calibration messages, history memory, menu prompting and communication display. Protection class IP 65.
  Technical Information TI 143C/07/en (Order No. 50077399)

7 Technical Data

General specifications	
Manufacturer	Endress+Hauser
Product name	CleanFit P CPA 477
Ambient conditions	
Ambient temperature (nominal operating conditions)	> 0°C!
Process conditions	
Process temperature range	5 ... 90°C
Process pressure range	0 ... 6 bar
Physical data	
Immersion depth of electrode	40 mm
Required freedom of installation	min. 1.510 mm
Electrode lengths	120 mm (gel), 270 mm (KCl)
Weight of assembly	approx. 22 kg (with pneumatic drive)
Materials	
Materials in contact with medium	Rinse chamber: Stainless steel SS 316Ti Ball valve: Stainless steel SS 316 / CF-8M Electrode guide: Stainless steel SS 316Ti Seals: VITON®, EPDM
Materials not in contact with medium	Housing: PA KCl electrode holder: PVDF Gel electrode holder: Stainless steel
Process connections	
Flange DN 40 (ball valve supplied by customer), ball valve DN 40, hand operated, ball valve DN 40 with forced control	
Network connections	
Rinse connections	For rinse water: 1 x G ¼ and 1 x G ½ external thread 1 x NPT ¼" and 1 x NPT ½" external thread For rinse water and cleaning solution: 2 x G ¼ and 1 x G ½ external thread 2 x NPT ¼" and 1 x NPT ½" external thread
Rinsing medium	Hot water (approx. 60°C or higher) Rinse water pressure 2 ... 6 bar
Cleaning medium	Selected depending on type and degree of fouling
Compressed air connections	Pressure 4 ... 8 bar (pressure at pressure head min. 0.5 bar higher than process pressure) air filtered (40 µm), water- and oil-free air tubes with minimum DN 4 mm
Limit switches	Pneumatic 3/2-way valve

Pressure-temperature chart

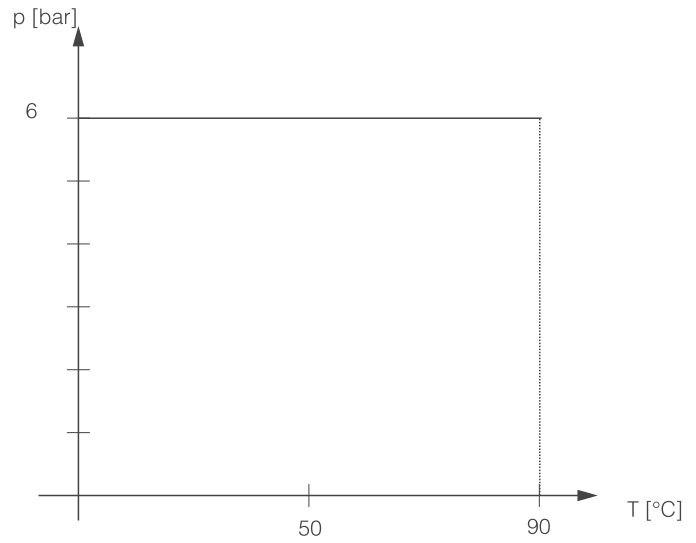


Fig. 7.1: Pressure-temperature chart for CleanFit P CPA 477 assembly

Subject to modifications.

Index

Gefahrgutblatt für Reparaturen an E+H-Geräten
Safety regulation form for repairs of E+H instruments
Bulletin de marchandises dangereuses pour réparations des instruments E+H

Lieber Kunde, bitte helfen Sie uns mit Ihren Informationen, damit wir Ihre Reparatur schnell, exakt und risikofrei durchführen können.
Dear customer, please help us with your information to handle your repair fast, exact and free of any risks for the technicians.
Cher client, aidez-nous avec vos informations, afin que nous puissions exécuter vos réparations rapidement, exactement et sans risques.

Firma / company / entreprise: _____

Abt. / dept. / service: _____

Anschrift / adress / adresse: _____

Name / name / nom: _____

Tel. / phone: _____

Fax: _____

Sensortyp / type of sensor / modèle de détecteur: _____

Auswertegerät / type of instrument / type d´appareil: _____

Seriennummer / serial no. / numéro de série: _____

Seriennummer / serial no. / numéro de série: _____

Prozessdaten / process data / données des opérations

Medium: _____

Chemische Formel:
Chemical formula:
Formule chimique: _____

Gereinigt mit / cleaned with / nettoyé avec

Medium: _____

_____

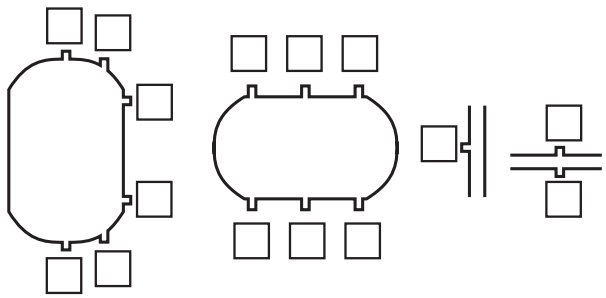
SAFE ☐
Ungefährlich
Safe to handle
Sans danger

Aggregatzustand / state of aggregation / état d´agrégation

flüssig/liquid liquide ☐ fest/solid solide ☐

gasförmig/gazeous gazéiforme ☐ pulverig/powdery poudreux ☐

Einbauort / mounting place / lieu de montage



Ex-Anlage / Ex-Zone / Ex-plan

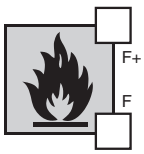
Ja Yes Oui ☐ Nein No Non ☐ Zone Class _____

Sicherheitshinweise / safety regulations / normes de sécurité

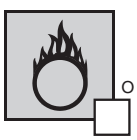

Umweltgefährlich
Dangerous for the envir.
Dangereux pour l'envir.


Radioaktiv
Radioactive
Radioactif

Giftig
Toxic
Toxique

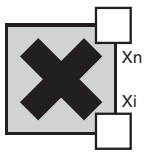


Entzündlich
Flammable
Inflammable

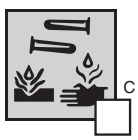


Brandfördernd
Oxidizing
Comburant

Expl.gefährlich
Explosive
Explosif



Schädlich / Reizend
Harmful / Irritant
Nocif / Irritant



Ätzend
Corrosive
Corrosif

SAFE ☐
Ungefährlich
Safe to handle
Sans danger

➤ Hiermit bestätigen wir, dass die zurückgeschickten Geräte frei sind von jeglichen Gefahr- oder Giftstoffen (Säuren, Laugen, Lösungsmitteln, usw.). Radioaktiv kontaminierte Geräte müssen vor Einsendung entsprechend den Strahlenschutzvorschriften dekontaminiert werden. Falls spezielle Handhabungsvorschriften nötig sind, legen Sie diese bitte bei.
➤ We herewith confirm that the returned instruments are free of any dangerous or toxic materials (acids, caustics, solvents, etc.). Radioactive contaminated instruments must be decontaminated according to nuclear safety regulations prior to shipment. If special handling regulations are required, please attach.
➤ Par la présente, nous certifions que les instruments en retour sont exempts de tous risques de contamination ou de matières toxiques. Avant expédition les instruments contaminés par de la radio-activité doivent être décontaminés en référence aux prescriptions des règles de securité en vigueur contre les radiations nucléaires. Au cas où des règles de manipulations spécifiques sont nécessaires, veuillez les joindre s. v. p.

Datum / date:
Firmenstempel / stamp / cachet: _____

Unterschrift:
Signature: _____

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The Power of Know How

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