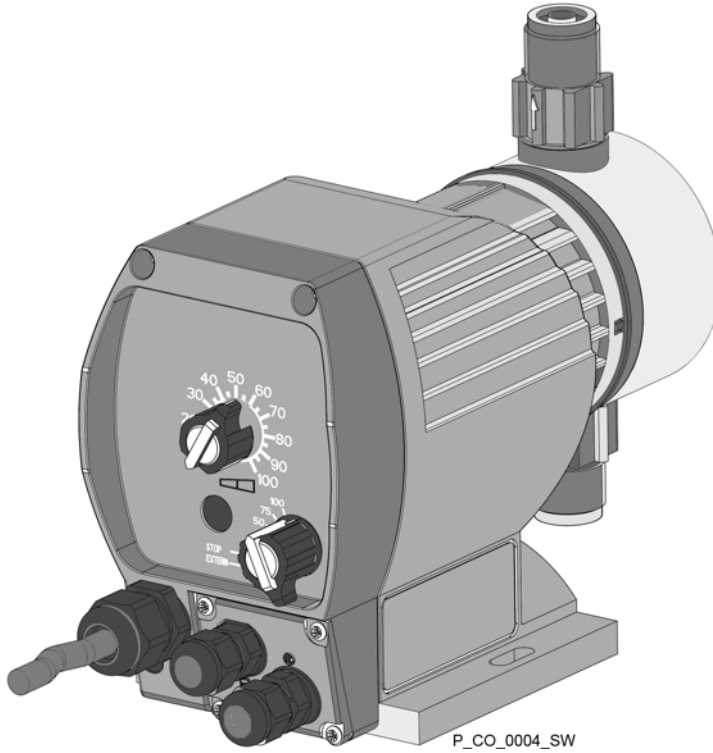
Operating instructions

Solenoid Metering Pump
CONCEPT^{plus} CNPb

EN



Target group: trained and authorised personnel.

Please carefully read these operating instructions before use. · Do not discard.
The operator shall be liable for any damage caused by installation or operating errors.
The latest version of the operating instructions are available on our homepage.

Supplementary information

Fig. 1: Please read!

Read the following supplementary information in its entirety! Should you already know this information, you will benefit more from referring to the operating instructions.

The following are highlighted separately in the document:

- Enumerated lists

→ Operating guidelines

⇨ Outcome of the instructions

Information

This provides important information relating to the correct operation of the unit or is intended to make your work easier.

Safety notes

Safety notes are identified by pictograms - see "Safety Chapter".

Validity

These operating instructions conform to current EU regulations applicable at the time of publication.

General user instructions

These operating instructions are only intended for skilled users responsible for the operating of oscillating metering pumps.

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1 Identity code

Product range CONCEPT plus, Version b								
CNPb	**Type**							
	_ _ _ _	Performance data at maximum back pressure and type: refer to name-plate on the pump housing						
		Material						
		PP	Polypropylene					
		NP	Clear acrylic/PVC					
		PV	PVDF					
			Diaphragm and seal					
			E	Standard with EPDM seals				
			B	Standard with FPM seals				
			T	Standard with PTFE flat seal				
				Dosing head version				
				0	without bleed valve, without valve spring			
				1	without bleed valve, with valve spring			
				2	with bleed valve, without valve spring			
				3	with bleed valve, with valve spring			
				7	with SER head			
					Hydraulic connector			
					0	Standard connection		
						Design		
						0	with ProMinent logo	
							Electrical connection	
							A	100 - 230 V, standard European plug
							B	100 - 230 V, Swiss plug

Product range CONCEPT plus, Version b												
							C	100 - 230 V, Australian plug				
							D	100 - 230 V, USA plug				
								Cable assembly				
								0	Without cable and retrofit kit			
								A	With external and level input retrofit kit, loose, without level switch			
								B	With external and level input retrofit kit, fitted, without level switch			
								F	With level input, fitted, with level switch			
								G	With external and level input, fitted, with external cable and level switch			
									Accessories			
									0	no accessories		
									1	Supplied accessories		
										Control version		
										0	External contact	

2 Overview of equipment

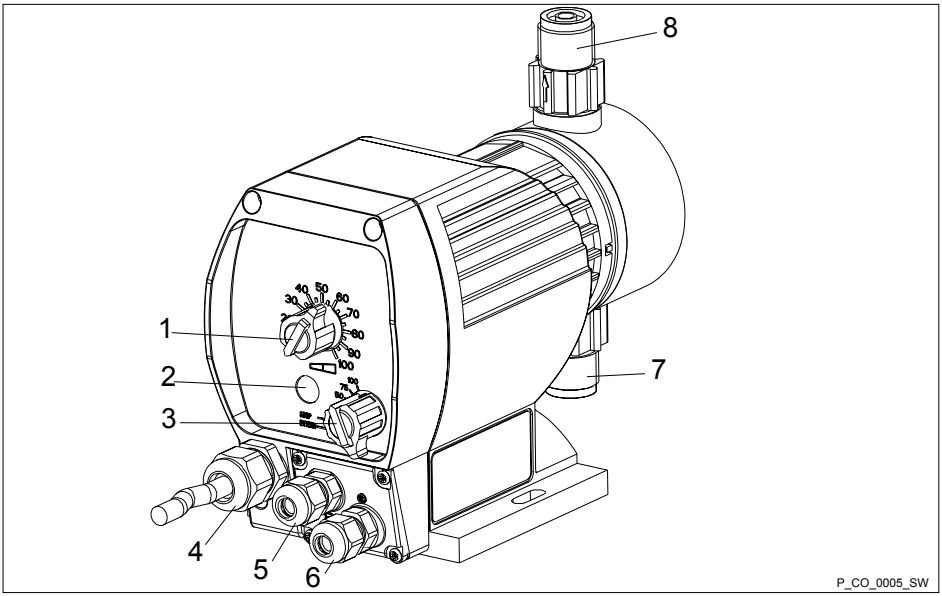


Fig. 2: Overview of equipmentCONCEPT plus

1 Stroke length adjustment knob
2 Fault / operating indicator (fault red / operation green)
3 Multifunctional switch (stroke rates (in % of 180 or 240 strokes/min), Stop, "External" operating mode (retrofit kit))
4 Mains cable
5 "External control" terminal (in "External" operating mode, control via contact signal; optional)
6 "Level switch" terminal (for 1-stage level switch; optional)
7 Suction valve
8 Discharge valve

The leakage hole is between the suction valve and the drive housing.

3 Safety chapter

Explanation of the safety information

The following signal words are used in these operating instructions to identify different severities of a hazard:

Signal word	Meaning
WARNING	Denotes a possibly hazardous situation. If this is disregarded, you are in a life-threatening situation and this can result in serious injuries.
CAUTION	Denotes a possibly hazardous situation. If this is disregarded, it could result in slight or minor injuries or material damage.

Warning signs denoting different types of danger

The following warning signs are used in these operating instructions to denote different types of danger:

Warning signs	Type of danger
	Warning – automatic start-up.
	Warning – danger zone.

3.1 Intended use

NOTICE!

Wear caused by "Pump ON/OFF" using the mains connection

Frequent switching of the pump on and off (>2 times each day) using the supply voltage leads to increased wear in the pump. The pump is not technically designed for this.

If necessary, use the "Pause" function to switch the pump to standby mode. Do not switch the pump on and off using the supply voltage to spare a pause input.

- Only use the pump to meter liquid feed chemicals.
- Only use the pump once it has been correctly installed and started up in accordance with the technical data and specifications contained in the operating instructions.
- Observe the general limitations with regard to viscosity limits, chemical resistance and density - see also ProMinent Resistance List in the Product Catalogue or at www.prominent.com!
- All other uses or modifications are prohibited.
- The pump is not designed to meter gaseous media and solids.
- The pump is not intended to meter flammable media without appropriate protective measures having been put in place.
- The pump is not intended to meter explosive media.

- The pump is not intended for operation in areas at risk from explosion.
- The pump is not intended to meter radioactive media.
- The pump is not designed for use outdoors without appropriate protective measures having been put in place.
- The pump is not intended for private use.
- The pump should only be operated by trained and authorised personnel.

  Ensure that personnel are familiar with oscillating metering pumps and their operation.
- You have a duty to observe the information contained in the operating instructions during the different phases of the unit's service life.

3.2 Safety information

WARNING!

Warning about personal and material damage

The pump can start to pump, as soon as it is connected to the mains voltage.

– Install an emergency cut-off switch in the pump power supply line or integrate the pump in the emergency cut-off management of the system.

WARNING!

Danger from hazardous substances!

Possible consequence: Fatal or very serious injuries.

Please ensure when handling hazardous substances that you have read the latest safety data sheets provided by the manufacture of the hazardous substance. The actions required are described in the safety data sheet. Check the safety data sheet regularly and replace, if necessary, as the hazard potential of a substance can be re-evaluated at any time based on new findings.

The system operator is responsible for ensuring that these safety data sheets are available and that they are kept up to date, as well as for producing an associated hazard assessment for the workstations affected.

CAUTION!

Warning of feed chemical spraying around

Feed chemical may spray out of the hydraulic components if they are tampered with or opened due to pressure in the liquid end and adjacent parts of the system.

– Disconnect the pump from the mains power supply and ensure that it cannot be switched on again by unauthorised persons.
– Ensure that the system is at atmospheric pressure before commencing any work on hydraulic parts of the system.

Danger of electric shock

- The mains voltage in the interior is no longer sufficiently shielded if there is a damaged housing or an opening is left open.
- Safely disconnect the pump from the mains/power supply as quickly as possible if the housing is damaged or an opening is left open.

Warning of feed chemical spraying around

- The metering pump may generate a multiple of its nominal pressure. Hydraulic parts can rupture if a pressure line is blocked.
- Correctly install a back pressure valve in the pressure line downstream of the metering pump.

Warning of excessive pumping

- The pump can meter too much if there is a negative pressure difference between the pressure and suction sides.
- For instance, use a back pressure valve with a minimum opening pressure of 1.5 bar with a free drain (not possible with 0213).

CAUTION!

Danger of injury to personnel and material damage

The use of untested third party components can result in injury to personnel and material damage.

– Only fit parts to metering pumps that have been tested and recommended by ProMinent.

Information in the event of an emergency

In an emergency, either pull out the mains plug, turn the multifunctional switch to "Stop" or press the Emergency Stop switch installed on the customer's side or disconnect the pump from the mains power supply in line with the emergency shut-down management guidelines for your system!

If feed chemical escapes, additionally ensure that the hydraulic system around the pump is at atmospheric pressure. Adhere to the safety data sheet for the feed chemical.

4 Storage and Transport

WARNING!

Only return the metering pump for repair in a cleaned state and with a flushed liquid end - refer to the section on decommissioning!

Only return metering pumps with a completed Decontamination Declaration form. The Decontamination Declaration constitutes an integral part of an inspection / repair order. We can only inspect or repair a unit if a Decontamination Declaration is submitted that has been completed correctly and in full by an authorised and qualified person on behalf of the pump operator.

The "Decontamination Declaration Form" can be found at www.prominent.com.

Ambient conditions

Data	Value	Unit
Minimum storage and transport temperature	-10	°C
Maximum storage and transport temperature	+50	°C
Maximum air humidity *	95	% rel. humidity

* non-condensing

5 Assembly and installation

CAUTION!

Warning of feed chemical spraying around

The pipes can become loose or rupture if they are not installed correctly.

- Route all hose lines so they are free from mechanical stresses and kinks.
- Only use original hoses with the specified hose dimensions and wall thicknesses.
- Only use clamp rings and hose sleeves intended for the respective hose diameter to ensure the long service life of the connections.

CAUTION!

Warning of feed chemical spraying around

PTFE seals, which have already been used / compressed, can no longer reliably seal a hydraulic connection.

- Always use new and unused PTFE seals.

CAUTION!

Warning of excessive pumping

The pump can meter too much if there is a negative pressure difference between the pressure and suction sides.

- For instance, use a back pressure valve with a minimum opening pressure of 1.5 bar with a free drain (not possible with 0213).

CAUTION!

Possibility of your switching relay contacts bonding

The high starting current can cause the contacts of the switching relay to bond together if the mains voltage switches a solenoid metering pump on and off in a process.

- Use the switching options offered by the external contact to control the pump (functions: Pause or Contact).
- Use a starting current limiter (part no. 1059333 for 230 V) if it is impossible to avoid switching the pump on and off via a relay.

CAUTION!

Material damage possible due to power surges

Should the pump be connected to the mains power supply in parallel to inductive consumers (such as solenoid valves, motors), inductive power surges can damage the control when it is switched off.

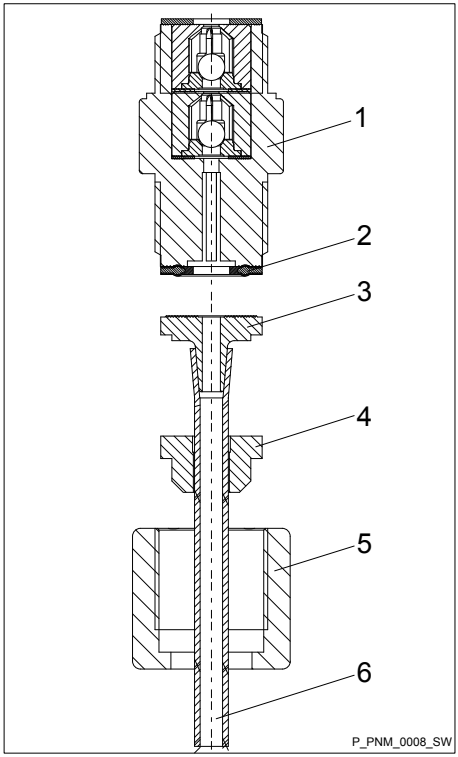
– Provide the pump with its own contacts (Phase) and supply with voltage via a contactor relay or relay.
– Should this not be possible, then switch a varistor (part no. 710912) or an RC gate (0.22 µF/220 Ω, part no. 710802) in parallel.

Dosing rate too low

- The liquid end valves can be disturbed by vibrations.
- Secure the metering pump to prevent vibrations from occurring.

"Installation instructions for External + Level CNPb retrofit kit (order no. 1046731)" - see Appendix.

Installing the hose line



1. Assemble the metering pump on a tank or a bracket using screws and washers (Ø 6 mm).
2. Cut the pressure hose to the required length.
3. Pull the union nut (5) and clamp ring (4) over the hose line (6).
4. Push the shortened hose end **up to the stop** over the nozzle (3).
5. Press the hose (6) on and tighten the union nut (5).
6. Install the suction line.

To do so, shorten the free end of the suction line so that the foot valve hangs just above the base of the tank.

With feed chemicals containing impurities or sediment, shorten the free end of the suction line so that the foot valve hangs at least 50 mm above the base of the tank.

Keep the suction line and the suction lift as short as possible.

Route the suction line on an upward gradient.

7. Install a foot valve.

6 Maintenance

Interval	Maintenance work	Personnel
Annually * **	Check the diaphragm for damage** - refer to "Repair".	
Quarterly *	■ Check that the hydraulic lines are fixed firmly to the liquid end. ■ Check that the discharge valve and suction valve are fitted tightly. ■ Check the leak-tightness of the entire liquid end - particularly around the leakage hole. ■ Check that the flow is correct: Allow the pump to prime briefly - turn the multifunctional switch briefly to "100%". ■ Check that the electrical connectors are intact. ■ Check the integrity of the housing. ■ Check that the dosing head screws are tight.	Technical personnel

* with normal loading (approx. 30 % of continuous operation).

With heavy-duty loading (e.g. continuous operation): Shorter intervals.

** Check the metering diaphragm more frequently with feed chemicals that put particular pressure on the diaphragm, e.g. those containing abrasive additives.

Tightening torque

Data	Value	Unit
Tightening torque for screws:	4.5 ... 5.0	Nm

7 Repairs

Carry out repairs, which should be performed by qualified technical personnel, in line with the safety notes:

- Cleaning a valve
- Replacing the diaphragm

All other repairs: Contact your responsible ProMinent branch!

Replacing the diaphragm

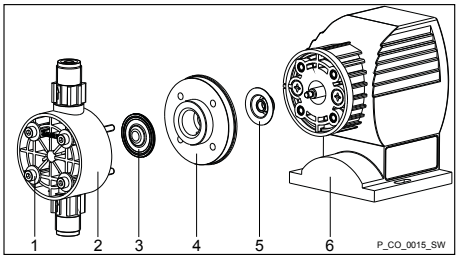


Fig. 3

- If necessary take protective measures.
- Adhere to the safety data sheet for the feed chemical.
- Ensure that the system is at atmospheric pressure.

1. Empty the liquid end (turn the liquid end upside down and allow the feed chemical to run out; flush out with a suitable medium; flush the liquid end thoroughly when using hazardous feed chemicals!)
2. Turn the stroke adjustment dial as far as 0 % stroke length when the pump is running (the drive axle is then difficult to turn).
3. Switch off the pump.
4. Unscrew the hydraulic connectors on the discharge and suction side.
5. Remove the screws (1).
6. Loosen the dosing head (2) and the backplate (4) from the pump housing (6) - but only loosen!
7. Hold the pump housing (6) with one hand and clamp the diaphragm (3) with the other hand between the dosing head (2) and the backplate (4).
8. Loosen the diaphragm (3) from the drive axle with a gentle backwards turn of the dosing head (2), diaphragm (3) and backplate (4) in an anticlockwise direction.
9. Unscrew the diaphragm (3) completely from the drive axle.
10. Remove the backplate (4) from the pump housing (6).

11. Check the condition of the safety diaphragm (5) and replace if necessary.

12. Push the safety diaphragm (5) onto the drive axle only until it lies flush with the pump housing (6) and no further!

13. Tentatively screw the new diaphragm (3) onto the drive axle until it can go no further.

    ⇨ The diaphragm (3) is now sitting at the stop of the thread.

14. Should this not work, remove dirt or swarf from the threads and screw the diaphragm (3) onto the drive axle correctly this time.

Ensure that the diaphragm is screwed exactly onto the drive axle otherwise the pump will subsequently not meter accurately!

15. Unscrew the diaphragm (3) again.

16. Place the backplate (4) onto the pump housing (6).

CAUTION!

Leakage may become apparent at a later stage.

- Make sure that the leakage hole points downwards when the pump is installed later - please refer to !
- Place the backplate (4) immediately in the correct position on the pump housing (6)! Do not twist the backplate on the pump housing to prevent the safety diaphragm (5) becoming warped!

17. Place the diaphragm (3) into the backplate (4).

CAUTION!

Leakage may become apparent at a later stage.

- Do not over-tighten the diaphragm (3) in the following step!
- Ensure that the backplate (4) remains in its position so that the safety diaphragm does not become warped!

18. Hold the backplate (4) firmly and screw the diaphragm (3) in a clockwise direction until it is sitting tightly (the twisting resistance of the return spring can be felt).

19. Set the stroke length to 100 %.

20. Place the dosing head (2) with the screws (1) onto the diaphragm (3) and the backplate (4) - ensure that the suction connector points downwards when the pump is subsequently fitted.

21. Gently tighten the screws (1) and then tighten them diagonally. See below for tightening torque.

CAUTION!

Leakage possible

– Check the tightening torque of the screws after 24 hours of operation!
– With PP and PV dosing heads, check the tightening torque again after three months!

Tightening torque

Data	Value	Unit
Tightening torque for screws:	4.5 ... 5.0	Nm

8 Faults

Fault description	Cause	Remedy
Pump does not prime in spite of full stroke motion and bleeding.	Minor crystalline deposits on the ball seat due to the valves drying out	Take the suction hose out of the storage tank and thoroughly flush out the liquid end
	Major crystalline deposits on the ball seat due to the valves drying out	Dismantle and clean the valves.
Fluid is escaping from the backplate.	The screws in the dosing head are too loose	Tighten the screws in the dosing head crosswise - see below for the tightening torque.
	The diaphragm is not tight.	Replace the diaphragm - refer to "Repair".
Fault/operating indicator does not illuminate.	The wrong mains voltage or no mains voltage is connected.	Connect the pump correctly to the specified mains voltage - according to the specification on the nameplate
Fault/operating indicator is red.	The fluid level in the storage tank has reached "Liquid level low".	Fill the storage tank.
	The multifunctional switch is positioned between 2 selection options.	Allow the multifunctional switch to lock into selection option 1.
	Electronics fault	Return the pump.

Tightening torque

Data	Value	Unit
Tightening torque for screws:	4.5 ... 5.0	Nm

9 Decommissioning

WARNING!

Danger from chemical residue

There is normally chemical residue in the liquid end and on the housing after operation. This chemical residue could be hazardous to people.

– It is mandatory that the safety information in the "Storage, transport and unpacking" chapter are read before shipping or transport.
– Thoroughly clean the liquid end and the housing of chemicals and dirt. Adhere to the material safety data sheet for the feed chemical.

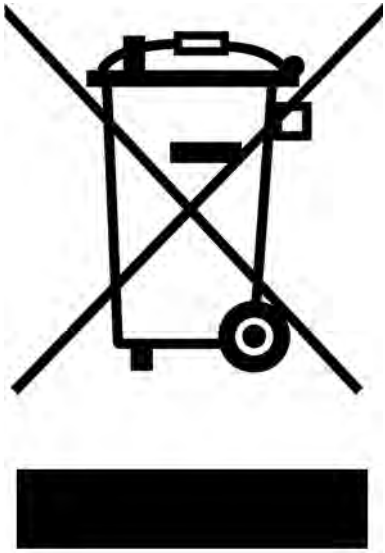
CAUTION!

Environmental hazard due to electronic waste

There are components in the pump, which can have a toxic effect on the environment.

– Note the pertinent regulations currently applicable in your country!

Sign indicating EU collection system



In accordance with the European Directive 2012/19/EU on waste electrical and electronic equipment, this device features the symbol showing a waste bin with a line through it. The device must not be disposed of along with domestic waste. To return the device, use the return and collection systems available and observe the local legal requirements.

10 Technical data

Tab. 1: CNPb performance table for 180 strokes/min

Type	Minimum pump capacity at maximum back pressure			Minimum pump capacity at medium back pressure			Connector size Outer ∅ x inner ∅	Suction lift*	Priming lift**	Max. priming pressure on the suction side
	bar	l/h	ml/stroke	bar	l/h	ml/stroke	mm	m water column	m water column	bar
concept plus										
1000	10	0.74	0.07	5.0	0.97	0.09	6x4	6.0	1.8	8
1601	16	1.1	0.10	8.0	1.4	0.13	6x4	6.0	2.0	8
1002	10	2.4	0.19	5.0	2.6	0.24	6x4	5.0	2.5	5
0704	7	3.9	0.36	3.5	4.4	0.41	6x4	4.0	3.0	3
0309	3	9.0	0.83	1.5	13.0	1.20	8x5	2.0	2.0	1
0215	1.5	16.4	1.52	1.0	18.3	1.70	8x5	1.5	1.5	0.5
concept plus metering pumps with self-bleeding dosing head SER***										
1002	10	1.8	0.17	5.0	2.7	0.2	6x4	1.8	1.8	5
0704	7	3.0	0.28	3.5	4.3	0.4	6x4	1.8	1.8	3
0309	3	9.0	0.83	1.5	13.6	1.3	8x5	1.8	1.8	1
0215	1.5	13.2	1.22	-	-	-	8x5	1.8	1.8	0.5

Tab. 2: CNPb performance table for 240 strokes/min

Type	Minimum pump capacity at maximum back pressure			Minimum pump capacity at medium back pressure			Connector size Outer Ø x inner Ø	Suction lift*	Priming lift**	Max. priming pressure on the suction side
	bar	l/h	ml/stroke	bar	l/h	ml/stroke	mm	m water column	m water column	bar
concept plus										
1001	10	1.0	0.07	5.0	1.3	0.09	6x4	6.0	1.8	8
1602	16	1.5	0.10	8.0	1.9	0.13	6x4	6.0	2.0	8
1003	10	3.0	0.21	5.0	4.3	0.30	6x4	5.0	2.5	5
0705	7	5.2	0.36	3.5	5.9	0.41	6x4	4.0	3.0	3
0312	3	12.0	0.83	1.5	17.3	1.20	8x5	2.0	2.0	1
0223	1.5	21.9	1.52	1.0	25.2	1.75	8x5	1.5	1.5	0.5
concept plus metering pumps with self-bleeding dosing head SER***										
1003	10	2.4	0.17	5.0	3.06	0.25	6x4	1.8	1.8	5
0705	7	4.2	0.29	3.5	5.2	0.36	6x4	1.8	1.8	3
0312	3	12.9	0.83	1.5	17.6	1.22	8x5	1.8	1.8	1
0223	1.5	18.6	1.29	-	-	-	8x5	1.8	1.8	0.5

* Suction lifts with a filled suction line and filled liquid end

** Priming lifts with clean and moist valves, feed chemical water (20 °C), at 100% stroke length, max. stroke rate, free outlet or opened bleed valve and correctly installed piping.

*** The given performance data constitutes guaranteed minimum values, calculated using water as the medium at room temperature. The bypass connection with a self-bleeding dosing head is 6 x 4 mm.

Tab. 3: Material specifications

Material type	Dosing head	Suction/pressure connector	Seals	Valve balls
PPT	Polypropylene	Polypropylene	PTFE	ceramic
PPE	Polypropylene	Polypropylene	EPDM	ceramic
PPB	Polypropylene	Polypropylene	FPM-B	ceramic
NPT	Clear acrylic	PVC	PTFE	ceramic
NPE	Clear acrylic	PVC	EPDM	ceramic
NPB	Clear acrylic	PVC	FPM-B	ceramic
PVT	PVDF	PVDF	PTFE	ceramic

Diaphragm: with PTFE coating

Housing: PPE, fibreglass-reinforced

Electrical data

Tab. 4: CNPb 100 ... 230 VAC ± 10%, 50 Hz/60 Hz

Specification	180 strokes/min	240 strokes/min
Nominal power	11.1 ... 10.5 W	14.3 ... 13.4 W
Current I eff	0.4 ... 0.2 A	0.46 ... 0.22 A
Peak current	1.5 A	1.5 A
Fuse*	1.6 slow blow	1.6 slow blow

* Fuses must have VDE, UL and CSA certification!

Technical data for the inputs (contact input, level input)

Data	Value	Unit
Voltage with open contacts	5 ± 0.5	VDC
Input resistance	12 ± 0.5	kΩ
Short circuit current	0.5 ± 0.05	mA
Maximum level for "0" signal	1.0	V
Maximum level for "1" signal	3.5	V
Minimum closing time of contact input	20	ms
Reaction time of level input	2	s

Temperatures

CAUTION!

The 240 stroke version may fail

The 240 stroke version can overheat at ambient temperatures higher than 35 °C.

– Only use the 240 stroke version at ambient temperatures of less than 35 °C.

Data	Value	Unit
Storage and transport temperatures	-10 ... +50	°C
Ambient temperature during operation	-10 ... +45	°C

Tab. 5: Maximum permissible medium temperature

Dosing head material	Long term at max. back pressure	For max. 15 min at max. 2 bar
PPE / PPB / PPT	50 °C	100 °C
NPE / NPB	45 °C	45 °C

Dosing head material	Long term at max. back pressure	For max. 15 min at max. 2 bar
NPT	45 °C	60 °C
PVT	60 °C	120 °C

Climate

Data	Value	Unit
Maximum air humidity*:	95	% relative humidity

*non-condensing

Degree of protection and protection class

Protection against contact and moisture:

IP 66 according to DIN EN 60529 with pollution level 2

NEMA 4X / indoor as per NEMA 250

Degree of protection:

1 - mains connection with protective earth conductor

Shipping weight

Specification	Value	Unit
Shipping weight	1.8	kg

Sound pressure level

Sound pressure level LpA < 75 dB in accordance with EN ISO 20361 (type 1000)

Sound pressure level LpA < 70 dB in accordance with EN ISO 20361 (all other types)

at maximum stroke length, maximum stroke rate, maximum back pressure (water)

11 Accessories

Suction lances

Article	Order no.
Suction lance for 200 l drum, storage tank opening 2” DIN 570, PPE	1022511
Suction lance for 200 l drum, storage tank opening 2” DIN 570, PCB	1022512
Suction lance for storage tank 5 - 50 l drum, storage tank opening d50, PPE	1022645
Suction lance for storage tank 5 - 50 l drum, storage tank opening d50, PCB	1022644

Variable suction lance with 1-stage level switch, closes when the chemical level is low.

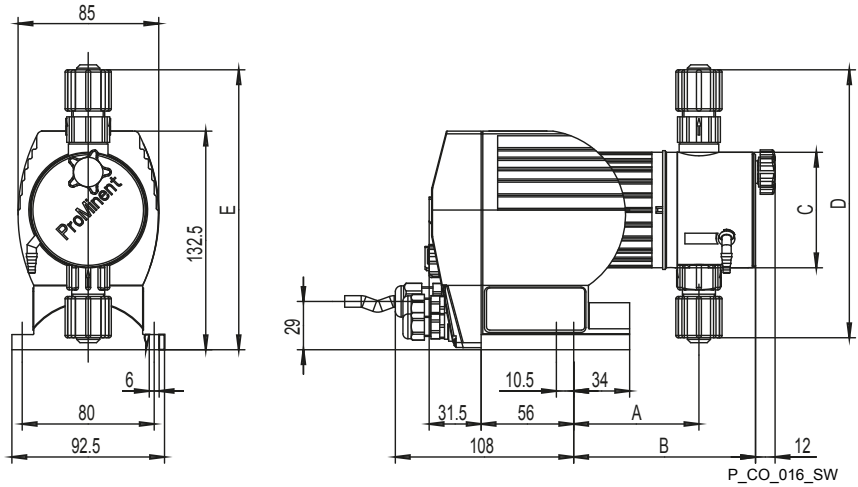
Retrofit kits

Article	Order no.
External + float switch input retrofit kit CNPb	1046731

12 Dimensional drawings

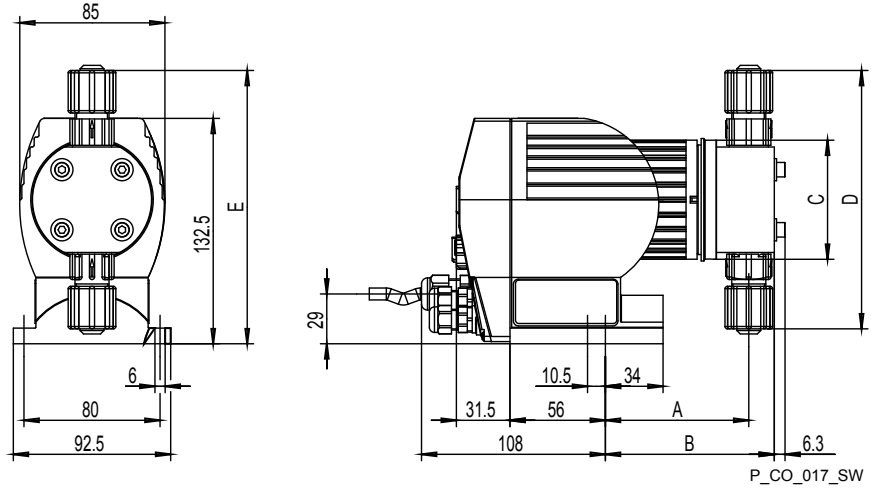
CONCEPT plus with vent valve, PP and NP

Dimensions are in mm.



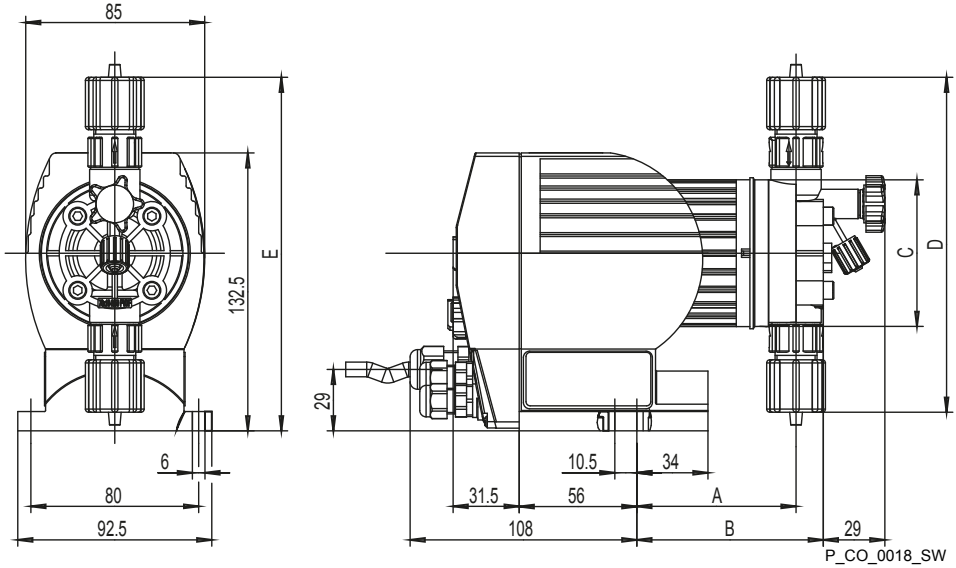
Types	A	B	C	D	E
0309-0213	79	112	90	178	176
1000-0704	76	110	70	162	170

CONCEPT plus without vent valve, PP and NP



Types	A	B	C	D	E
0309-0213	81	96	90	175	172
1000-0704	84	99	70	152	161

CONCEPT plus PV



Types	A	B	C	D	E
0309-0213	78	95	90	177	175
1000-0704	76	89	70	160	169

13 Declaration of Conformity for Machinery

In accordance with DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, Appendix I, BASIC HEALTH AND SAFETY REQUIREMENTS, section 1.7.4.2. C.

We,

- ProMinent GmbH
- Im Schuhmachergewann 5 - 11
- D - 69123 Heidelberg, Germany,

hereby declare that the product specified in the following complies with the relevant basic health and safety rules of the EC Directive, on the basis of its functional concept and design and in the version marketed by us.

Any modification to the product not approved by us will invalidate this declaration.

Tab. 6: Extract from the Declaration of Conformity

Designation of the product:	Metering pump, CONCEPT ^{plus} product range
Product type:	CNPb...
Serial number:	see nameplate on the device
Relevant directives:	Machinery Directive (2006/42/EC) Compliance with the protection targets of the Low Voltage Directive according to Appendix I, No. 1.5.1 of the Machinery Directive 2006/42/EC EU RoHS Directive (2011/65/EU) EMC Directive (2014/30/EU)
Harmonised standards applied, in particular:	EN ISO 12100: 2010 EN 809:1998 + A1:2009 + AC:2010 EN 61010-1:2010 EN 50581:2012 EN 61000-6-2:2005 + AC:2005 EN 61000-6-3:2007 + A1:2011 + AC:2012
Date:	20.04.2016

You can download the Declaration of Conformity at www.prominent.com.

14 UK Declaration of Conformity

We,

- ProMinent GmbH
- Im Schuhmachergewann 5 - 11
- D - 69123 Heidelberg
- Germany

hereby declare that the product identified below conforms to the basic health and safety requirements of the Regulations, by virtue of its design and construction, and in the configuration placed on the market by us.

This declaration is no longer applicable if changes are made to the product without our authorisation.

Tab. 7: Extract from the Declaration of Conformity

Product description:	Metering pump, CONCEPT PLUS series
Product type:	CNPb...
Serial no.:	see type plate on the unit
Applicable Regulations:	Supply of Machinery (Safety) Regulations 2008 The safety objectives of the Electrical Equipment (Safety) Regulations 2016 were complied with in accordance with Appendix 1, No. 1.5.1 of the Supply of Machinery (Safety) Regulations 2008 Electromagnetic Compatibility Regulations 2016 Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
Applied harmonised standards, especially:	BS EN ISO 12100: 2010 BS EN 809:1998 + A1:2009 BS EN 61010-1:2010 BS EN 61000-6-2:2005 BS EN 61000-6-3:2007 + A1:2011 BS EN IEC 63000:2018
Date:	23/02/2021

You will find the UK Declaration of Conformity to download on our homepage.

15 Approvals

NSF-61

The pump is approved according to NSF-61 ...

Tab. 8: ... with the following requirements:

Identity code specification	Identity code design
Material:	NPE and PVT
Seal material:	PTFE and EPDM diaphragms
Dosing head design:	without valve spring

EAC

The pump is approved according to EAC with certificate number TC N RU D-DE.AY14.B. 02691.

The CONCEPT plus CNPb has the following approvals in addition to CE approval:

$_{C}$ MET $_{US}$

The pump is approved as per $_{C}$ MET $_{US}$ with the following restriction:

- Ambient temperature during operation: -10 °C ... +40 °C.

NSF-50

The pump is approved according to NSF-50.

16 Installation instructions for External + Level CNPb retrofit kit (order no. 1046731)

Installation

Scope of delivery: 1 cable, 2 m; 1 cable threaded connector; 1 nut; 2 plugs; 1 Torx key, TX9

Connector for the external control (External operating mode)

A contact or an electronic switch (contact control, e.g. contact water meter) can be connected to the 3-wire cable for the external control of the pump. The pump responds to the contact closing. The pump responds to the contact opening with Pause function. With Pause function, "Control version": "0" the pump stops when the contact closes. With Pause function, "Control version": "5" the pump starts when the contact closes.

- Ensure that only trained and authorised personnel are permitted to install the retrofit kit.
- Disconnect the pump from the mains/power supply and secure it to prevent it from being switched on again.

Tab. 9: External control connectors

Colour	Function
GND	black
Contact	blue
Pause	brown

1. Unscrew the cover at the bottom right on the front of the pump.
2. Punch open the marked openings.
3. Push a nut into each recess on the cover and tighten the lower part of the threaded cable connectors to make them watertight.
4. Thread the external cable and the suction lance cable through a threaded cable connector.
5. Connect the plugs to the ends of the cables.

   To do so, push a screwdriver (0.4 x 2.5 x 75 mm) into the one hole and guide the cable end into the other hole.
6. Insert the plugs into the respective recess on the PCB in the pump.
7. Screw the cover back onto the pump and tighten the threaded cable connectors until they are watertight.

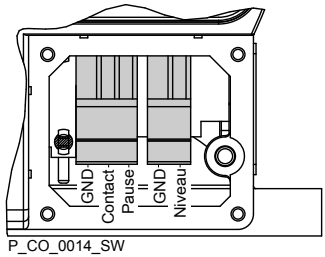


Fig. 4: View of the inserted plugs in the open pump - external control on the left, level alarm on the right

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