Conlift1, Conlift2, Conlift2 pH+

Small lifting stations 50 Hz





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1. Product overview

Conlift for condensate applications

Conlift1	Features
	Four inlets with grommets to seal and fix the inlet hose.
	 180 °-rotatable flange for selection of optimum discharge position.
1 22.22	 IP24 cover for protection against splashing water.
Jun 10	 Two snap-fasteners enabling easy access to the tank in case of service.
	Pump operation test button.
	 Stepped outlet socket for Ø8 and Ø10 mm hoses.
	 Non-return valve with bayonet connection for easy service.
	 Special inlet design preventing sedimentation and evaporation from boiler.
	 Stainless-steel motor shaft additionally protected by a shaft seal.
	Self-venting hydraulics.
	 Rotating lip seal protecting bearing and motor against evaporation from tank.
	 Special float switch designed to prevent evaporation from tank and corrosion on micro switches.
	$\frac{\omega}{\omega}$ • Alignment wheel enabling easy adjustment in wall-hung installations.
	Suitable for wall-hung and floor-standing installation.

 Conlift2
 Features

 Image: Provide the set of the set

Conlift2 pH+	Features
TM05 1811 361	 The Conlift2 pH+ has the same features as Conlift2, but is supplied with a neutralisation unit which can be installed on top of or next to the lifting station. The unit neutralises condensate with a pH value below 2.5 coming from gas or oil boilers.

Applications

Grundfos Conlift1, Conlift2 and Conlift2 pH+ are suitable for the pumping of condensate which is collected below sewer level or which cannot flow to the sewage system or drain of the building by means of a natural downward slope.

Typical applications:

- Condensate boilers. A 200 kW boiler can be drained up to 5 m duty point.
- For condensate with a pH value above 2.5.
- For condensate from air-conditioning systems, cooling and refrigeration systems, air dehumidifiers and evaporators.
- For condensate with a pH value below 2.5, use Conlift2 pH+.



Fig. 1 Examples of application

Functions

The condensate runs by natural fall through a hose into the tank.

The liquid level in the tank is controlled automatically by a float switch. The condensate is pumped through the discharge hose to the drain.

The Conlift has a safety overflow switch with a 1.7-metre electric cable. This overflow switch can be connected to the condensate boiler and set to stop the boiler in case of an alarm.

The Conlift has a maintenance-free shaded-pole motor with the following features:

- through-going stainless-steel shaft for pump hydraulics
- built-in thermal switch
- for intermittent operation S3.

The thermal switch stops the motor in case of overload. When the motor has cooled to normal temperature, it will restart automatically.



Fig. 2 Example of Conlift installation

In order to protect the sewage system, we recommend the use of a neutralisation unit. The neutralisation unit is included in Conlift2 pH+ and is available as an accessory for Conlift1 and Conlift2.

Irrespective of the capability of the Conlift, local regulations may require the installation of a neutralisation unit, even for pH values of 2.5 or higher.

2. Conlift1



Applications

The Conlift1 is suitable for the pumping of condensate which is collected below sewer level or which cannot flow to the sewage system or drain of the building by means of a natural downward slope.

Typical applications:

- Condensate boilers. A 200 kW boiler can be drained ٠ up to 5 m duty point.
- For condensate with a pH value above 2.5.
- For condensate from air-conditioning systems, • cooling and refrigeration systems, air dehumidifiers and evaporators.
- For condensate with a pH value below 2.5, use Conlift2 pH+.



Fig. 4 Example of application

- Fully sealed against moisture and evaporation.
- Quick and easy installation.
- Very silent and smooth operation.
- Can be mounted on the floor or on a wall.
- Pre-assembled non-return valve.
- Pump operation test button.
- Incorporates high-water float switch.
- Fully automatic operation.
- Inlet and discharge hose connectors included. •

Sizing guide

TM05 1810 3611

FM05 1814 3611

Vertical or horizontal pumping



TM05 1815 3611

Fig. 5 Maximum lengths of vertical and horizontal discharge hoses

Figure 5 shows the maximum lengths of vertical and horizontal discharge hoses. The hose length depends on the hose diameter and is based on a flow velocity of 0.7 m/s. Four bends, a non-return valve and an isolating valve have already been taken into account.

Conlift1

Construction features

Conlift1		Description	
4	Pos.	Operational reliability	
6	1	Special float switch designed to prevent evaporation from tank and corrosion on micro switches.	
10	2	Motor Stainless-steel motor shaft additionally protected by a shaft seal. Rotating lip seal protecting bearing and motor against evaporation from tank. Built-in motor protection.	
2	3	Four inlets with grommets to seal and fix the inlet hose.	
	<u>₹</u> 4	IP24 cover for protection against splashing water.	
	⁵ ⁶	Self-venting hydraulics.	
13 15 1	TM05 182	Overflow switch that can be connected to the condensate boiler and set to stop the boiler in case of an alarm.	
14	Pos.	Easy maintenance and service	
11 m	7	Two snap-fasteners enabling easy access to the tank in case of service.	
180°	8	Pump operation test button.	
7 11	9	Stepped outlet socket for $\varnothing 8$ and $\varnothing 10$ mm hoses.	
12	10	Non-return valve with bayonet connection for easy service.	
5	11	Special inlet design preventing sedimentation and evaporation from boiler.	
TA	M05 1824 4011	Four feet below inlets keeping the sensitive float system load-free in case of service.	
	Pos.	Easy installation and replacement	
	13	Suitable for wall-hung and floor-standing installation.	
9	14	180 °-rotatable flange for selection of optimum discharge position.	
	15	Alignment wheel enabling easy adjustment in wall-hung installations.	
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Conlift1

This section shows an installation example and describes the installation requirements. Installation is done quickly and easily by using flexible hose connectors with several adapter options for almost any hose diameter.



Fig. 6 Installation example

Connections

Four inlets with grommets to seal and fix the inlet hose. Stepped outlet socket for $\varnothing 8$ and $\varnothing 10$ mm hoses.

Product numbers

Product	Schuko plug	Without plug
Conlift1	97936156	97936173

Level control

The liquid level in the tank is controlled automatically by a float switch.

The Conlift1 can be retrofitted with an alarm PCB and a neutralisation unit which are available as accessory.

Construction

Sturdy collection tank with four inlets for wall-hung or floor-standing installation. Built-in pump with automatic level control, self-venting hydraulics and free-flow impeller for safe pumping of aggressive condensate with low solid content. The motor, float switch and pump housing are mounted on a service-friendly component bracket on top of the tank.

The additional alarm cable can either be connected to an external alarm system or to a low-voltage circuit for shutdown of condensate source.

Component	Material
Collecting tank	PP
Component bracket and cover	PP
Pump housing	PP
Impeller	PP
Shaft	Stainless steel
Discharge hose	PVC

Included fittings

- 1 inlet adapter, Ø19/32/30 mm
- 4 inlet grommets, Ø18-22 mm
- 1 drain pipe adapter, Ø21.5/40 mm
- screws and plugs for wall-hung installation
- 6 metres of PVC hose, Ø10/14 mm
- 1 alignment wheel.

Accessory/ service part	Description	Product number
pH+ Box	Complete neutralisation unit including fitting accessories, neutralisation granulate and pH indicator.	97936176
Extension hose	6 metres of PVC hose with 10 mm internal diameter including one hose coupling.	97936177
Granulate refill package	Granulate, 4 x 1.4 kg and pH indicator	97936178
Alarm PCB Conlift	Printed-circuit board (PCB) enabling additional pump start at alarm level or stop of boiler with acoustic alarm.	97936209

FM05 1814 3611

Accessories

Supply voltage

1 x 230 VAC - 6 %/+ 6 %, 50 Hz, PE. See nameplate.

Input power

P1 = 70 W.

Input current

I = 0.65 A.

Alarm connection

An external alarm can be connected via the high-water level switch.

The cable can stand a control voltage of 250 VAC, 2.5 A.

Cable length

Alarm and power supply cables: 1.7 metres.

Storage temperature

When stored in dry rooms:

- Empty tank: -10 °C to +50 °C.
- Tank with condensate: above 0 °C (risk of frost not allowed).

Ambient temperature

+5 °C to +35 °C.

Liquid temperature

- Average temperature: +50 °C.
- Briefly: maximum +90 °C for 5 minutes.

Operating mode

Intermittent operation: S3 - 30 %, 1 minute, 60 starts/hour.

Maximum head

5.5 metres.

Maximum flow rate

600 litres/hour.

pH value of condensate

2.5 or higher.

Density of condensate

Maximum 1000 kg/m³.

Motor protection

• Thermal overload switch: +120 °C.

Insulation class: F.

Enclosure class

IP24.

Weight

2.0 kg.

Volume

- Tank volume: 2.65 litres. •
- Useful volume: 0.9 litre.
- Alarm condition: 2.1 litres.
- Operating condition: 1.7 litres.

Dimensions



Fig. 7 Dimensions





Fig. 8 Performance curve

FM05 1868 3811

3. Conlift2



Fig. 9 Conlift2

Applications

The Conlift2 is designed for a higher safety level than Conlift1. It comes with an integrated alarm device offering acoustic alarm when the high-water level is reached and the possibility of switching the boiler source off or starting the pump to keep the boiler running until service can be performed.

Typical applications:

- Condensate boilers. A 200 kW boiler can be drained up to 5 m duty point.
- For condensate with a pH value above 2.5.
- For condensate from air-conditioning systems, cooling and refrigeration systems, air dehumidifiers and evaporators.
- For condensate with a pH value below 2.5, use Conlift2 pH+.



Fig. 10 Example of application

Features

- Fully sealed against moisture and evaporation.
- Quick and easy installation.
- Very silent and smooth operation.
- Can be mounted on the floor or on a wall.
- Pre-assembled non-return valve.
- Pump operation test button.
- Incorporates high-water float switch.
- Acoustic high-water alarm device offering the possibility of starting the pump and/or switching the boiler source off.
- Detects kinked discharge hose.
- Fully automatic operation.
- Inlet and discharge hose connectors included.

Sizing guide

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Vertical or horizontal pumping





Fig. 11 Maximum lengths of vertical and horizontal discharge hoses

Figure 11 shows the maximum lengths of vertical and horizontal discharge hoses. The hose length depends on the hose diameter and is based on a flow velocity of 0.7 m/s. Four bends, a non-return valve and an isolating valve have already been taken into account.

Construction features

Conlift2 Description			iption
6		Pos.	Operational reliability
4		1	Special float switch designed to prevent evaporation from tank and corrosion on micro switches.
119		2	Motor Stainless-steel motor shaft additionally protected by a shaft seal. Rotating lip seal protecting bearing and motor against evaporation from tank. Built-in motor protection.
		3	Four inlets with grommets to seal and fix the inlet hose.
2	•	4	IP24 cover for protection against splashing water.
		5	Self-venting hydraulics.
	325 4111	6	Printed-circuit board (PCB) with acoustic alarm device enabling additional pump start.
	TM05 18	7	Overflow switch that can be connected to the condensate boiler and set to stop the boiler in case of an alarm.
		Pos.	Easy maintenance and service
	5	8	Two snap-fasteners enabling easy access to the tank in case of service.
180°		9	Pump operation test button.
8	2	10	Stepped outlet socket for $\varnothing 8$ and $\varnothing 10$ mm hoses.
	23	11	Non-return valve with bayonet connection for easy service.
	5	12	Special inlet design preventing sedimentation and evaporation from boiler.
NA	4111	13	Four feet below inlets keeping the sensitive float system load-free in case of service.
	TM05 1824		
		Pos.	Easy installation and replacement
		14	Suitable for wall-hung and floor-standing installation.
		15	180 °-rotatable flange for selection of optimum discharge position.
10		16	Alignment wheel enabling easy adjustment in wall-hung installations.
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This section shows an installation example and describes the installation requirements. Installation is done quickly and easily by using flexible hose connectors with several adapter options for almost any hose diameter.



Fig. 12 Installation example

Connections

Four inlets with grommets to seal and fix the inlet hose. Stepped outlet socket for $\varnothing8$ and $\varnothing10$ mm hoses.

Product numbers

Product	Schuko plug	Without plug
Conlift2	97936158	97936174

Level control

The liquid level in the tank is controlled automatically by a float switch.

Conlift2 incorporates a printed-circuit board (PCB) enabling additional functions when the level in the tank reaches high-water level.

The contact on the PCB can be set to two positions:

Position 1: The pump is started and an acoustic alarm is generated.

Position 0: The condensate source is switched off and an acoustic alarm is generated.

The Conlift2 can be retrofitted with a neutralisation unit which is available as an accessory.

Construction

Sturdy collection tank with four inlets for wall-hung or floor-standing installation. Built-in pump with automatic level control, self-venting hydraulics and free-flow impeller for safe pumping of aggressive condensate with low solid content. The motor, float switch and pump housing are mounted on a service-friendly component bracket on top of the tank.

The additional alarm cable can either be connected to an external alarm system or to a low-voltage circuit for shutdown of condensate source.

Component	Material
Collecting tank	PP
Component bracket and cover	PP
Pump housing	PP
Impeller	PP
Shaft	Stainless steel
Discharge hose	PVC

Included fittings

- 1 inlet adapter, Ø19/32/30 mm
- 4 inlet grommets, Ø18-22 mm
- 1 drain pipe adapter, Ø21.5/40 mm
- screws and plugs for wall-hung installation
- 6 metres of PVC hose, Ø10/14 mm
- 1 alignment wheel.

Accessories

Accessory/ service part	Description	Product number
pH+ Box	Complete neutralisation unit including fitting accessories, neutralisation granulate and pH indicator.	97936176
Extension hose	6 metres of PVC hose with 10 mm internal diameter including one hose coupling.	97936177
Granulate refill package	Granulate, 4 x 1.4 kg and pH indicator	97936178
Alarm PCB Conlift	Printed-circuit board (PCB) enabling additional pump start at alarm level or stop of boiler with acoustic alarm.	97936209

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Supply voltage

1 x 230 VAC - 6 %/+ 6 %, 50 Hz, PE. See nameplate.

Input power

P1 = 70 W.

Input current

I = 0.65 A.

Alarm connection

An external alarm can be connected via the high-water level switch.

The cable can stand a control voltage of 250 VAC, 2.5 A.

Cable length

Alarm and power supply cables: 1.7 metres.

Storage temperature

When stored in dry rooms:

- Empty tank: -10 °C to +50 °C.
- Tank with condensate: above 0 °C (risk of frost not allowed).

Ambient temperature

+5 °C to +35 °C.

Liquid temperature

- Average temperature: +50 °C.
- Briefly: maximum +90 °C for 5 minutes.

Operating mode

Intermittent operation: S3 - 30 %, 1 minute, 60 starts/hour.

Maximum head

5.5 metres.

Maximum flow rate

600 litres/hour.

pH value of condensate

2.5 or higher.

Density of condensate

Maximum 1000 kg/m³.

Motor protection

• Thermal overload switch: +120 °C.

Insulation class: F.

Enclosure class

IP24.

Weight

2.0 kg.

Volume

- Tank volume: 2.65 litres. •
- Useful volume: 0.9 litre.
- Alarm condition: 2.1 litres.
- Operating condition: 1.7 litres.

Dimensions



Fig. 13 Dimensions









4. Conlift2 pH+



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Fig. 15 Conlift2 pH+

Applications

The Conlift2 pH+ comes with an integrated acoustic alarm device indicating high-water level. The Conlift2 pH+ is supplied with a neutralisation unit that raises the pH value of the aggressive condensate from below 2.5 to a neutral level. We particularly recommend Conlift2 pH+ for oil boilers generating low pH values and for gas boilers above 200 kW.

Typical applications:

- Condensate boilers. A 200 kW boiler can be drained up to 5 m duty point.
- For condensate with a pH value below 2.5 from gas or oil boilers.
- We recommend to use a neutralisation unit for aggressive condensate in these cases:
 - If the boiler performance is higher than 200 kW.
 - Oil boilers.
 - If the pH value of the condensate is below 2.5.
- For condensate from air-conditioning systems, cooling and refrigeration systems, air dehumidifiers and evaporators.



Fig. 16 Example of application

Features

- Fully sealed against moisture and evaporation.
- Quick and easy installation.
- Very silent and smooth operation.
- Can be mounted on the floor or on a wall.
- Pre-assembled non-return valve.
- Pump operation test button.
- Incorporates high-water float switch.
- Acoustic high-water alarm device offering the possibility of starting the pump and/or switching the boiler source off.
- Detects kinked discharge hose.
- Fully automatic operation.
- Neutralisation unit with granulate for pH values below 2.5.
- Selectable position of neutralisation unit.
- pH tester for monitoring of the pH level.
- Inlet and discharge hose connectors included.

Sizing guide

Vertical or horizontal pumping



Fig. 17 Maximum lengths of vertical and horizontal discharge hoses

Figure 17 shows the maximum lengths of vertical and horizontal discharge hoses. The hose length depends on the hose diameter and is based on a flow velocity of 0.7 m/s. Four bends, a non-return valve and an isolating valve have already been taken into account.

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Construction features

Conlift2 pH+		Description	
3	Pos.	Operational reliability	
	1	Special float switch designed to prevent evaporation from tank and corrosion on micro switches.	
	2	Motor Stainless-steel motor shaft additionally protected by a shaft seal. Rotating lip seal protecting bearing and motor against evaporation from tank. Built-in motor protection.	
10	3	Four inlets with grommets to seal and fix the inlet hose.	
	4	IP24 cover for protection against splashing water.	
	5	Self-venting hydraulics.	
	9 0	Printed-circuit board (PCB) with acoustic alarm device enabling additional pump start.	
	TM05 182	Overflow switch that can be connected to the condensate boiler and set to stop the boiler in case of an alarm.	
45	Pos.	Easy maintenance and service	
15	8	Two snap-fasteners enabling easy access to the tank in case of service.	
180°	9	Pump operation test button.	
	10	Stepped outlet socket for Ø8 and Ø10 mm hoses.	
Contraction of the second second	11	Non-return valve with bayonet connection for easy service.	
	12	Special inlet design preventing sedimentation and evaporation from boiler.	
1115 1827 4111		Four feet below inlets keeping the sensitive float system load-free in case of service.	
	Pos.	Easy installation and replacement	
	14	Suitable for wall-hung and floor-standing installation.	
17	15	180 °-rotatable flange for selection of optimum discharge position.	
	16	Alignment wheels enabling easy adjustment in wall-hung installations.	
16 9	17	Neutralisation unit designed to neutralise the acid condensate coming from gas or oil boilers.	
	7		
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	-		

Installation requirements

This section shows an installation example and describes the installation requirements. Installation is done quickly and easily by using flexible hose connectors with several adapter options for almost any hose diameter.





Fig. 18 Installation example

Connections

Four inlets with grommets to seal and fix the inlet hose. Stepped outlet socket for $\varnothing 8$ and $\varnothing 10$ mm hoses.

Product numbers

Product	Schuko plug	Without plug
Conlift2 pH+	97936172	97936175

Accessories

Level control

The liquid level in the tank is controlled automatically by a float switch.

Conlift2 pH+ incorporates a printed-circuit board (PCB) enabling additional functions when the level in the tank reaches the high-water level.

The contact on the PCB can be set to two positions:

Position 1: The pump is started and an acoustic alarm is generated.

Position 0: The condensate source is switched off and an acoustic alarm is generated.

Construction

Sturdy collection tank with four inlets for wall-hung or floor-standing installation. Built-in pump with automatic level control, self-venting hydraulics and free-flow impeller for safe pumping of aggressive condensate with low solid content. The motor, float switch and pump housing are mounted on a service-friendly component bracket on top of the tank.

The additional alarm cable can either be connected to an external alarm system or to a low-voltage circuit for shutdown of condensate source.

Component	Material
Collecting tank	PP
Component bracket and cover	PP
Pump housing	PP
Impeller	PP
Shaft	Stainless steel
Discharge hose	PVC

Included fittings

- 1 inlet adapter, Ø19/32/30 mm
- 4 inlet grommets, Ø18-22 mm
- 1 drain pipe adapter, Ø21.5/40 mm
- screws and plugs for wall-hung installation
- 6 metres of PVC hose, Ø10/14 mm
- 2 alignment wheels
- granulate and pH indicator.

Accessory/ service part	Description	Product number
pH+ Box	Complete neutralisation unit including fitting accessories, neutralisation granulate and pH indicator.	97936176
Extension hose	6 metres of PVC hose with 10 mm internal diameter including one hose coupling.	97936177
Granulate refill package	Granulate, 4 x 1.4 kg and pH indicator	97936178
Alarm PCB Conlift	Printed-circuit board (PCB) enabling additional pump start at alarm level or stop of boiler with acoustic alarm.	97936209

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Technical data

Supply voltage

1 x 230 VAC - 6 %/+ 6 %, 50 Hz, PE. See nameplate.

Input power

P1 = 70 W.

Input current

I = 0.65 A.

Alarm connection

An external alarm can be connected via the high-water level switch.

The cable can stand a control voltage of 250 VAC, 2.5 A.

Cable length

Alarm and power supply cables: 1.7 metres.

Storage temperature

When stored in dry rooms:

- Empty tank: -10 °C to +50 °C.
- Tank with condensate: above 0 °C (risk of frost not allowed).

Ambient temperature

+5 °C to +35 °C.

Liquid temperature

- Average temperature: +50 °C.
- Briefly: maximum +90 °C for 5 minutes.

Operating mode

Intermittent operation: S3 - 30 %, 1 minute, 60 starts/hour.

Maximum head

5.5 metres.

Maximum flow rate

600 litres/hour.

pH value of condensate

2.5 or higher.

Density of condensate

Maximum 1000 kg/m³.

Motor protection

• Thermal overload switch: +120 °C.

Insulation class: F.

Enclosure class

IP24.

Weight

2.0 kg.

Volume

- Tank volume: 2.65 litres.
- Useful volume: 0.9 litre.
- Alarm condition: 2.1 litres.
- Operating condition: 1.7 litres.
- Granulate box volume: 1.2 kg.

Dimensions





Fig. 19 Dimensions

Performance





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5. Further product documentation

WebCAPS



WebCAPS is a **Web**-based **C**omputer **A**ided **P**roduct **S**election program available on www.grundfos.com. WebCAPS contains detailed information on more than 220,000 Grundfos products in more than 30 languages.

Information in WebCAPS is divided into six sections:

- Catalogue
- Literature
- Service
- Sizing
- Replacement
- · CAD drawings.





WinCAPS



Fig. 21 WinCAPS CD-ROM

WinCAPS is a Windows-based Computer Aided Product Selection program containing detailed information on more than 220,000 Grundfos products in more than 30 languages.

The program contains the same features and functions as WebCAPS, but is an ideal solution if no internet connection is available.

WinCAPS is available on CD-ROM and updated once a year.

Subject to alterations.



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