

Condensate Pumps for Air Conditioners

Secura-Split®  **ECP 1A - SERIES** swiss-made

Designations of models:

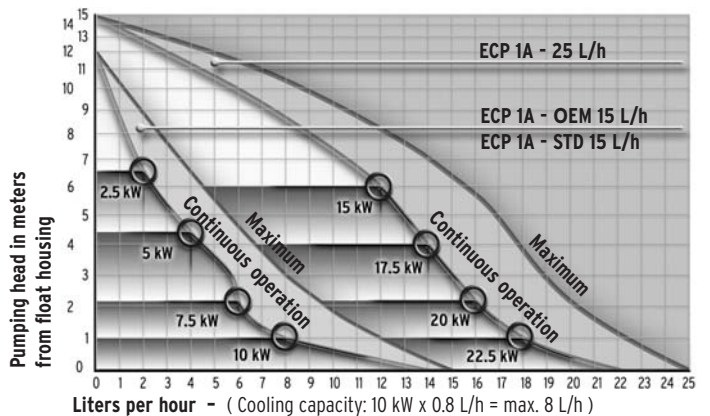
- ECP 1A - OEM 15 L/h
- ECP 1A - STD 15 L/h
- ECP 1A - 25 L/h

«The Swiss **€**co **C**ondensate **P**ump» 

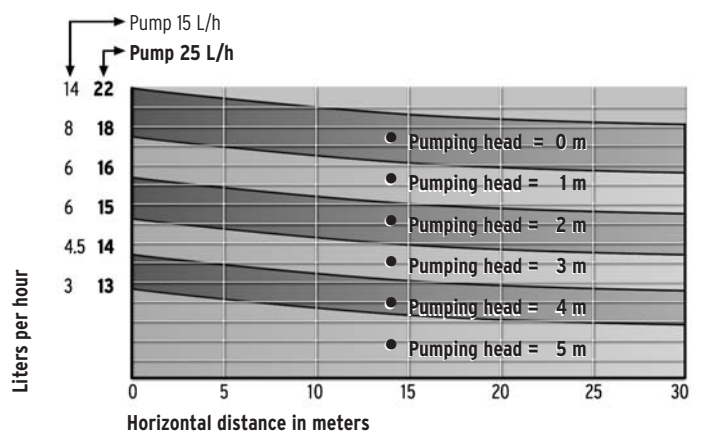
FLOW RATE

Max. flow rate:	ECP 1A - OEM 15 L/h:	15 L/h
	ECP 1A - STD 15 L/h:	15 L/h
	ECP 1A - 25 L/h:	25 L/h
Max. pumping head:	ECP 1A - OEM 15 L/h:	12 m
	ECP 1A - STD 15 L/h:	12 m
	ECP 1A - 25 L/h:	15 m
Max. suction head:	2 m (without back pressure)	
Max. horizontal head distance:	30 m	
Max. water temperature:	45 °C	

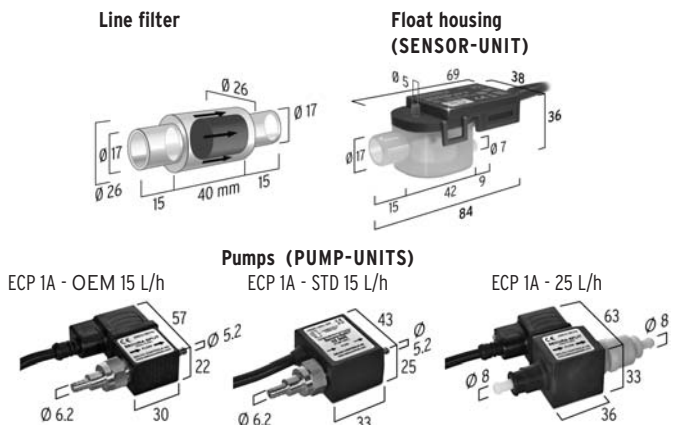
Flow rate



Flow rate



DIMENSIONS



EN Installation and Operating Instructions

PRODUCT DESCRIPTION

The Condensate Pump **Secura-Split® ECP 1A** has been developed especially for Minisplit wall-hung air conditioners with a cooling capacity of up to 10 kW / 34'000 BTU (Pump 15 L/h) respectively 22,5 kW / 76'500 BTU (Pump 25 L/h). It can, however, also be used for other types of air conditioners such as ceiling-mounted units.

The Secura-Split® ECP 1A system includes:

- 1 float housing (**SENSOR-UNIT**) with integrated electronic system
- 1 pump (**PUMP-UNIT**), to be installed at any place within or outside the air conditioner
- 1 line filter

The very small float housing fits into almost any air conditioner and installation is easy.

It is connected via the line filter at the condensate water drain hose of the air conditioner.

As soon as the float housing is filled up to 2/3 with condensate water, the pump is switched on and pumps the water out until the float housing is less than 1/3 full.

The pumps are extremely quiet, powerful and self-priming oscillating piston pumps and are fitted with non-return valves. The version «ECP 1A - STD 15 L/h» is fitted with an integrated temperature protection switch and, in addition, this pump is also encased in insulating plastic to reduce the noise level.

Since the flow rate of each pump is reduced by even very low dirt accumulation, the system has a line filter.

TECHNICAL DATA

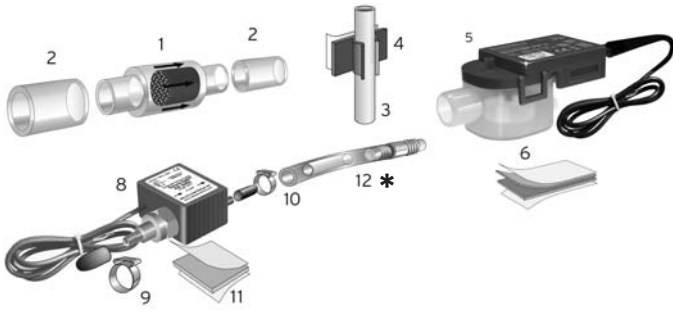
Power supply:	230 Vac, 50 Hz
Power consumption:	max. 50 Watts
Ambient temperature:	0 - 45 °C
Thermal protection pump:	95 °C (only for version "ECP 1A - STD 15 L/h")
Index of protection float housing:	IP 20
Index of protection pumps:	IP 54
Noise level pumps:	ECP 1A - OEM 15 L/h: max. 20 dB(A)
	ECP 1A - STD 15 L/h: max. 19 dB(A)
	ECP 1A - 25 L/h: max. 23 dB(A)

ORDER DATA

Secura-Split® ECP 1A - OEM 15 L/h:	No. 11.1000.OEM
Secura-Split® ECP 1A - STD 15 L/h:	No. 11.1000
Secura-Split® ECP 1A - 25 L/h:	No. 11.1000.25

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DELIVERY PACKAGE / ACCESSORIES



- No. 1 Line filter
- No. 2 2 connectors, silicone, L = 35 mm, Øi = 15 mm
- No. 3 Venting hose, PVC, L = 30 cm, Øi = 4 mm
- No. 4 Self-adhesive hose clip for venting hose
- No. 5 Float housing (SENSOR-UNIT) with terminals for power supply and pump, incl. connection cable (1 m) for power supply
- No. 6 Self-adhesive VELCRO tape (20 x 40 mm) to fasten the float housing
- No. 8 Pump (PUMP-UNIT) with connection cable (1,5 m)
- No. 9 Hose clamp for pump entry („10 mm“ for pumps 15 L/h / „11,3 mm“ for pump 25 L/h)
- No. 10 Hose clamp for pump exit („7 mm“ for pumps 15 L/h / „11,3 mm“ for pump 25 L/h)
- No. 11 Self-adhesive plastic foam tape to fasten the pump
 2 pieces 24 x 24 x 5 mm for pump **OEM 15 L/h**
 1 piece 33 x 43 x 5 mm for pump **STD 15 L/h**
 1 piece 50 x 40 x 5 mm for pump **25 L/h**
- No. 12 Hose, PVC, L = 30 cm, Øi = 4 mm, incl. cross section reducer and hose connecting piece (4/6 mm)
 * only for the pumps **OEM 15 L/h** and **STD 15 L/h**

Attention:

The hoses (Øi = 6 mm) for the connections from the float housing to the pump and from the pump to the drainpipe are not part of the delivery package.

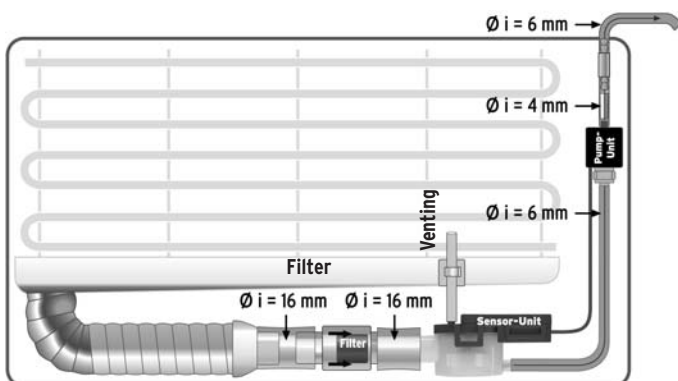
INSTALLATION

Attention:

- This system has been developed and is approved for use in a closed device (air conditioner), in an installation duct or in a ceiling construction. An open installation is not allowed.
- Appropriate coverings (air conditioner coverings) must prevent access to the system.
- This system may only be installed in dry rooms.
- Only specialized personnel may install this system.

SAFETY TIP:

Before beginning with the installation, always switch off the power supply!



A) Line filter:

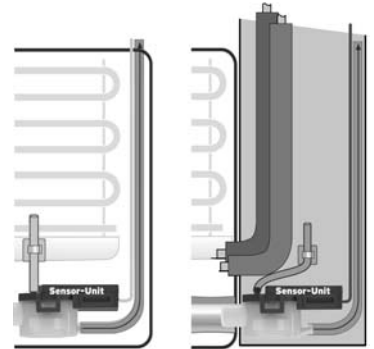
Since the flow rate of each pump is reduced by even very low dirt accumulation, the use of filters is highly recommended:

- Fasten the connecting pieces (No. 2) supplied with the system to the line filter (No. 1) and install the line filter, as shown in the figure, at the entry of the float housing (No. 5).
- Check the correct mounting position of the filter. Check whether the water circulates in the direction of the arrows shown on the label.
- Run the condensate drain hose (possibly shorten it) from the collection tray of the air conditioner to the inlet of the line filter.
- The condensate water should automatically flow from the collection tray through the filter in the float housing (possibly slight slope).

B) Float housing:

- Mount the float housing (No. 5) as horizontally as possible in the lower part of the air conditioner or in the elbow installation duct, using the enclosed VELCRO tape (No. 6).

It is important that the float housing does not directly contact the housing of the air conditioner; otherwise vibrations could be transmitted from the pump.



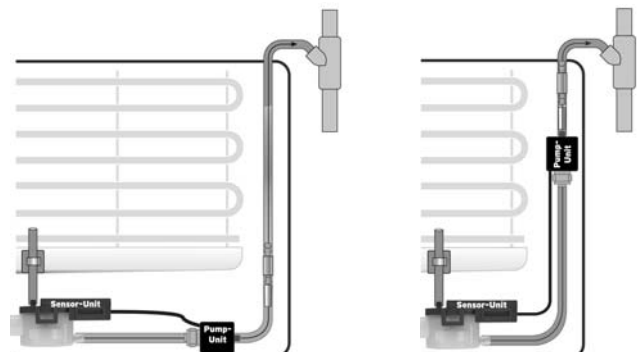
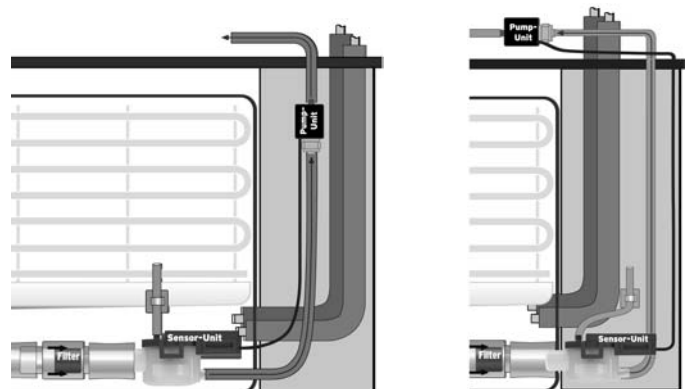
C) Venting:

In order that the float housing can fill itself with water or air can escape, venting is required.

- Fasten the venting hose (No. 3) as shown in the figure to the float housing (No. 5).
- Run the hose directly and as steeply as possible upwards to a level above the condensate collection tray of the air conditioner.
- Fasten the venting hose by means of an auto-adhesive hose clip (No. 4) at an appropriate point.

D) Pump:

- Mount the pump (No. 8) at a free place in the air conditioner, in an installation duct or in a ceiling construction, max. 2 m above the float housing by means of the enclosed plastic foam tape (No. 11).
- Remove the protective sleeves at pump entry and exit.



Attention:

- Be sure that the water flows horizontally through the pump, or preferably from bottom to the top.
- Be sure that the mounting position of the pump is correct. Check that the water circulates in the direction of the arrows shown on the label.

Be sure that the pump does not contact the housing of the air conditioner in order that no vibrations can be transmitted.
If there are noise problems, the pump should be insulated with foam material.

E) Hose connections:

- Install a hose (not included with the delivery package) with an inside diameter of 6 mm (6 x 10 mm) from the exit of the float housing (No. 5) to the entry of the pump (No. 8).
- Fasten the hose to the pump with the enclosed hose clamp (No. 9).
- For pressing these variable ear hose clamps, you need a pair of pincers or a commercial standard vise grip wrench.
- **Pump 25 L/h:** Install a hose (not included with the delivery package) with an inside diameter 6 mm (6 x 10 mm) at the exit of the pump by means of the enclosed 11,3 mm hose clamp (No. 10) to the exit.
- **Pumps OEM 15 L/h and STD 15 L/h:** Fasten the enclosed 4 mm hose (No. 12) at the exit of the pump by means of the enclosed 7 mm hose clamp (No. 10). At the end of this piece of hose (No. 12) a hose connector for 6 mm hoses is fitted. Install a hose (not included with the delivery package) with an inside diameter 6 mm (6 x 10 mm) from this connector to the exit.
If you use a 4 mm hose for the line from the pump to the draining outlet, this can be connected directly to the pump. Cut the cross section reduction out from the piece of hose (No. 12) and introduce this piece into your 4 mm hose.
This cross section reduction reduces the noise level of the pump.



The end of the drain line must be at a level higher than the float housing to prevent self-discharging after the pump has been switched off (suction effect). If the drain outlet is lower than the float housing, the drain hose from the pump should be inserted into a hose of larger diameter in the drain zone.

Be careful that all hoses are installed horizontally or preferably ascending upwards in order that no air bubbles in the hose can form (noise problems).

Be careful that the hoses do not contact the housing of the air conditioner to prevent vibration transmissions from the pump.

If there are noise problems, insulate the hoses with foam material.



F) Electrical connections:

SAFETY TIP:

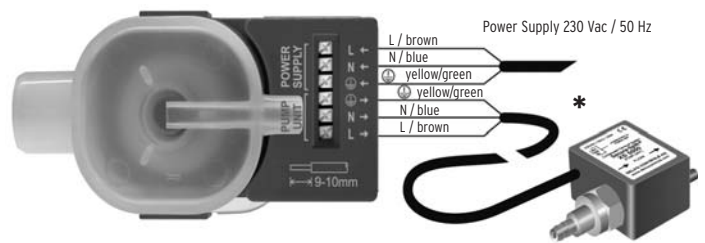
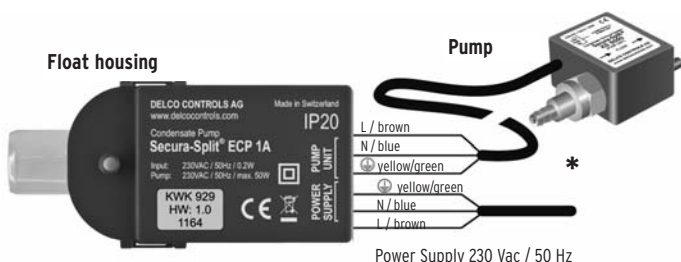


Before beginning with the installation, always switch off the power supply!



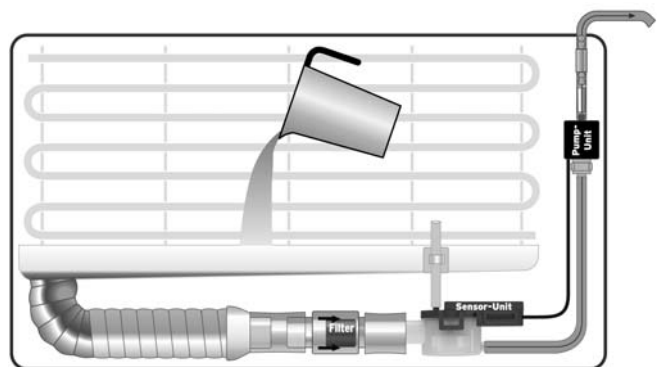
Run the connection cable of the float housing (SENSOR-UNIT) (No. 5) into the terminal box of the air conditioner (room installation or control cabinet), and connect the 3 conductors according to the electrical diagram (L = Line, N = Neutral, ⊕ = Earth).

- The mains power is connected to the terminals with the designation «POWER SUPPLY» (L = Line, N = Neutral, ⊕ = Earth).
- The connecting cable from the pump (No. 8) is connected to the float housing (No. 5) to the terminals with the designation «PUMP-UNIT» (L = Line, N = Neutral, ⊕ = Earth).



* The pump «25 L/h» does not require the earth connection !

PUTTING INTO OPERATION



- ✓ Inspect the complete installation as well as all connections and interconnections.
- ✓ Switch on the electrical power supply of the condensate removal system and of the air conditioner.
- ✓ With an appropriate container carefully empty water into the collection tray of the air conditioner. As soon as the float housing is filled up to 2/3 with condensate water, the pump is switched on and pumps the water out until the float housing is less than 1/3 full.

Since air is sucked in by the pump, the pump is very loud for a short moment. As soon as there is water in the pump, the noise level reduces drastically. This occurs only during the first start-up.

- ✓ Check the correct switching on and off of the pump depending on water level.
- ✓ Be sure that when switching on the pump no air is sucked from the sensor housing. In this case the float housing has been installed in a too inclined position.
- ✓ Carefully empty water once more into the collection tray (pump ON without interruption) until the hose is filled from the pump to the drain outlet. No more air may be in the hoses (noise problems).

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MAINTENANCE / CLEANING

SAFETY TIP:



Before beginning with the maintenance always switch off the power supply!



Line filter:

Check the line filter at regular intervals. Replace it promptly to prevent a back-up. Spare filters are available from your dealer.
Option: Article „Filter 26 x 40 mm“ (Code 11.10.2271.050)

Float housing (SENSOR-UNIT):

When maintaining the air conditioner or putting it into operation in spring, the float housing must be inspected and, if necessary, cleaned depending on use and dirt accumulation.

- Interrupt the power supply of the condensate removal system and of the air conditioner.
- Remove the base pan with the float from the sensor.
- Now the pan and the float can be cleaned and rinsed carefully with water and a small brush.
- Place the float in its original position in the base pan and fix the base pan to the sensor.

Now you can continue as described in the chapters «INSTALLATION» and «PUTTING INTO OPERATION».

SAFETY

Water alarm:

It is recommended that a separate water alarm signaling device be installed if there is danger of water damages due to clogged drain hoses or other operation faults.
Option: Article „SSA873“ (Code 11.9800)

EC DECLARATION OF CONFORMITY

This system fulfills the provisions of the following directives:

2006/95/EEC

«Council directive of 12 December 2006 on the harmonization of the laws of the member states relating to electrical equipment designed for use within certain limits».

2004/108/EEC

«Council directive of 15 December 2004 on the approximation of the laws of the member states relating to electromagnetic compatibility».

GUARANTEE

For the quality of design and execution of this system, **DELCO CONTROLS AG** undertakes, for the duration of two years from the date of delivery, to guarantee that all goods which have proved to be unserviceable or defective due to defective material or design, will at our discretion either be repaired free of charge in our workshop or replaced as necessary by new ones, or we will grant an adequate price reduction to a maximum level of the paid purchase price.

All other guarantee claims and damages claims exceeding the above guarantee are excluded.

Notifications of defects must be lodged immediately and in writing.

The purchaser shall bear all shipping costs for rejected, repaired or replaced goods.

PROPER USE

Before using this system, the user should assure himself that the product is suitable for the intended use (condensate water) as well as or the way it should be used (air conditioner).

The **Secura-Split® ECP 1A** system has been developed for the use in the air conditioning technology and for condensate water.

For safe function of this system it must be installed and operated according to the information in these operating Instructions.

It may only be installed in dry rooms.

Applications differing from the intended use are not allowed.

For damages to our systems due to conversion, change or modification of the product, incorrect application, false installation, missing maintenance or missing or clogged filters, our guarantee will become void and **DELCO CONTROLS AG** is dispensed from any liability.

MISCELLANEOUS

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- These installation instructions were written with greatest care and attention; **DELCO CONTROLS AG** does not assume any liability for their use.
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- Place of jurisdiction is our domicile.
- **Secura-Split®** is a registered trademark of **DELCO CONTROLS AG**.

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Secura-Split® 
ECP 1A - SERIES *swiss-made*



Designations of models:

- ECP 1A - OEM 15 L/h
- ECP 1A - STD 15 L/h
- ECP 1A - 25 L/h

«The Swiss **€** Condensate Pump»



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