

Secura-Split®

XS 5000 - SERIES

swiss-made



Designations of models:

- XS 5000 - OEM 15 L/h
- XS 5000 - STD 15 L/h
- XS 5000 - 25 L/h

The **smallest** Sensor
for optimal Condensate Removal



EN Installation and Operating Instructions

PRODUCT DESCRIPTION

The Condensate Removal System **Secura-Split® XS 5000** 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® XS 5000** system includes:

- 1 sensor housing (**SENSOR-UNIT**)
- 1 pump (**PUMP-UNIT**), to be installed at any place within or outside the air conditioner
- 1 power unit with alarm relay output (**POWER-UNIT**)
- 1 line filter

The very small sensor housing fits into every 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 3/4 with condensate water, it starts the delay of 5 seconds. After this time, the pump is switched on and pumps the water out until the float housing is less than 1/2 full.

Note this feature during the putting into operation of the installation, when you empty water into the collection tray of the air conditioner with a container to test the system (the pump only starts after 5 seconds).

If in case of a defect pump or of a blockage, the pump is running for one minute continuously, the alarm relay in the power unit switches over, and the air conditioning unit can be turned off.

The sensor operates using capacitive level measurement, and has been specially developed for air conditioning systems. It also functions with lower conductivity of the condensate, but, above all, for water that is contaminated by dirt, oil or algae.

Unlike conventional condensate pumps with float switches, the system **Secura-Split® XS 5000** has no moving parts in the sensor housing that could be blocked by dirt or algae. In addition, this electronic sensor also operates in a sloping position (unlike float switches).

The pumps are extremely quiet, powerful and self-priming oscillating piston pumps and are fitted with non-return valves. The version "XS 5000 - 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 and a built in metallic tissue filter in the sensor housing.

TECHNICAL DATA

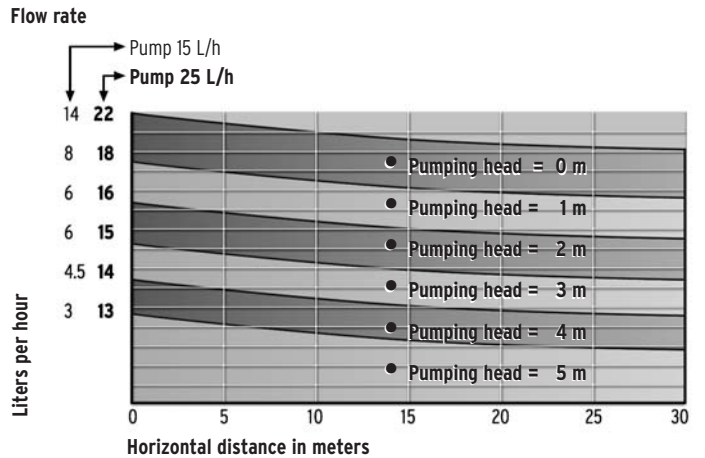
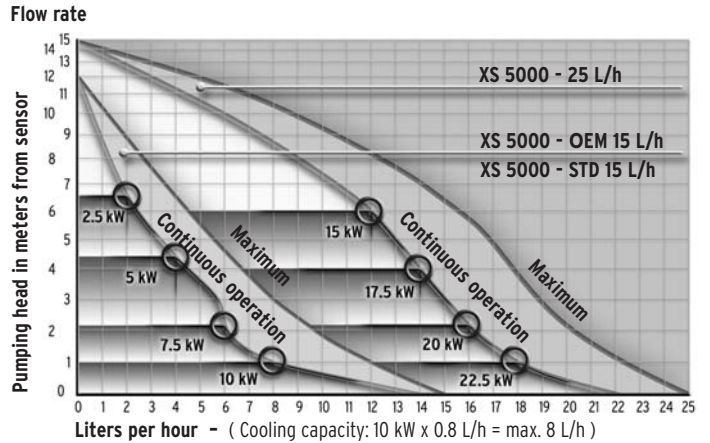
Power supply:	230 Vac, 50 Hz
Power consumption:	max. 50 Watts
Alarm relay:	16 A / max. 250 Vac
Ambient temperature:	0 - 45 °C
Thermal protection pump:	95 °C (only for version XS 5000 - STD 15 L/h)
Index of protection power unit:	IP 20
Index of protection sensor housing:	IP 54
Index of protection pumps:	IP 54
Noise level pumps:	XS 5000 - OEM 15 L/h: max. 20 dB(A) XS 5000 - STD 15 L/h: max. 19 dB(A) XS 5000 - 25 L/h: max. 23 dB(A)

ORDER DATA

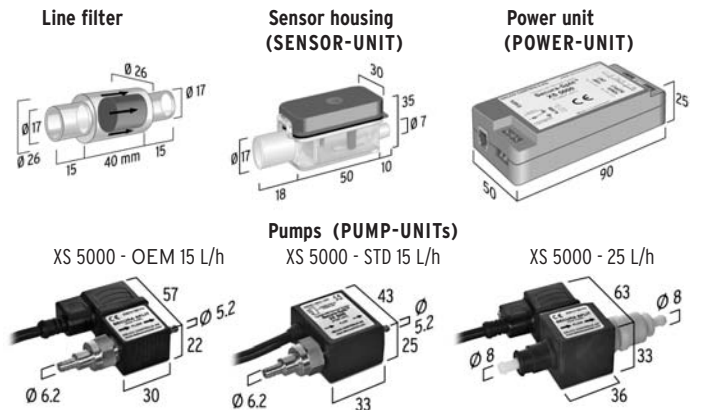
Secura-Split® XS 5000 - OEM 15 L/h:	No. 11.5000.OEM
Secura-Split® XS 5000 - STD 15 L/h:	No. 11.5000
Secura-Split® XS 5000 - 25 L/h:	No. 11.5000.25

FLOW RATE

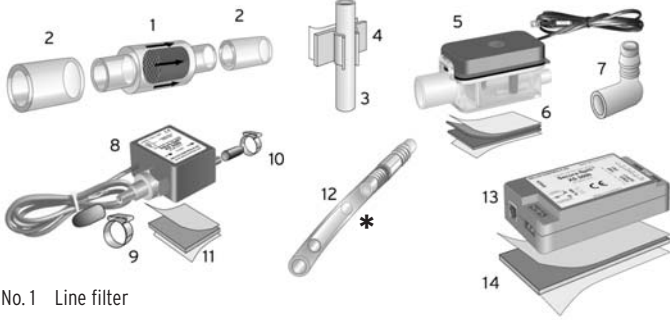
Max. flow rate:	XS 5000 - OEM 15 L/h:	15 L/h
	XS 5000 - STD 15 L/h:	15 L/h
	XS 5000 - 25 L/h:	25 L/h
Max. pumping head:	XS 5000 - OEM 15 L/h:	12 m
	XS 5000 - STD 15 L/h:	12 m
	XS 5000 - 25 L/h:	15 m
Max. suction head:	2 m (without back pressure)	
Max. horizontal head distance:	30 m	
Max. water temperature:	45 °C	



DIMENSIONS



DELIVERY PACKAGE / ACCESSORIES



- No. 1 Line filter
- No. 2 2 connectors, silicone, L = 35 mm, $\varnothing i = 15$ mm
- No. 3 Venting hose, PVC, L = 30 cm, $\varnothing i = 4$ mm
- No. 4 Self-adhesive hose clip for venting hose
- No. 5 Sensor housing (SENSOR-UNIT) with connection cable (1,5 m), incl. metallic tissue filter
- No. 6 Self-adhesive VELCRO tape (20 x 40 mm) to fasten the sensor housing
- No. 7 Angled adapter (90°) for the vertical connection of the hose to the sensor 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, $\varnothing i = 4$ 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**
- No. 13 Power unit with alarm relay output (POWER-UNIT)
- No. 14 Self-adhesive plastic foam tape (40 x 80 x 2 mm), to fasten the power unit

Attention:

The hoses ($\varnothing i = 6$ mm) for the connections from the sensor housing to the pump and from the pump to the drainpipe are not part of the delivery package.

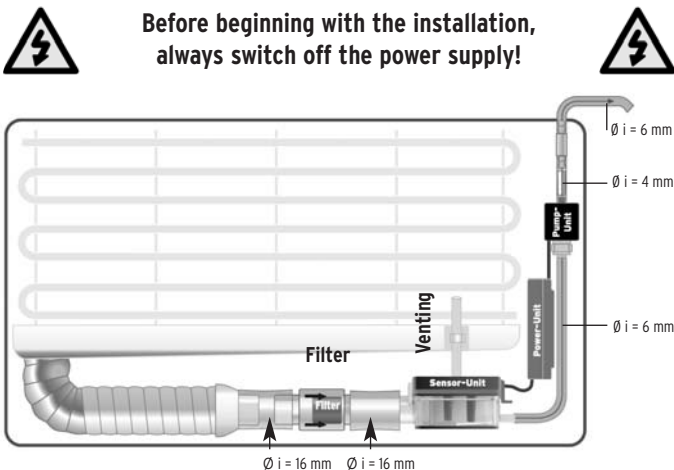
INSTALLATION

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!



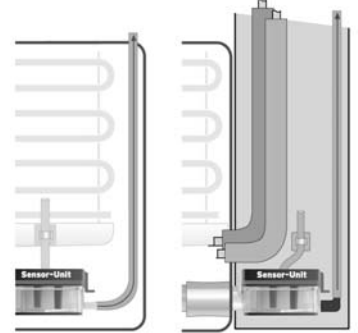
A) Line filter:

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 sensor 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 sensor housing (possibly slight slope).

B) Sensor housing:

- Mount the sensor housing (No. 5) as horizontally as possible in the lower part of the air conditioner using the enclosed VELCRO tape (No. 6).
- When mounting the sensor in an elbow installation duct, the angled adapter (No. 7) is clipped onto the sensor output and the hose is led away vertically upwards.



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

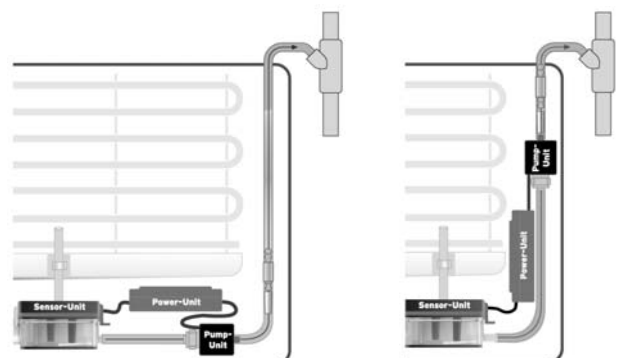
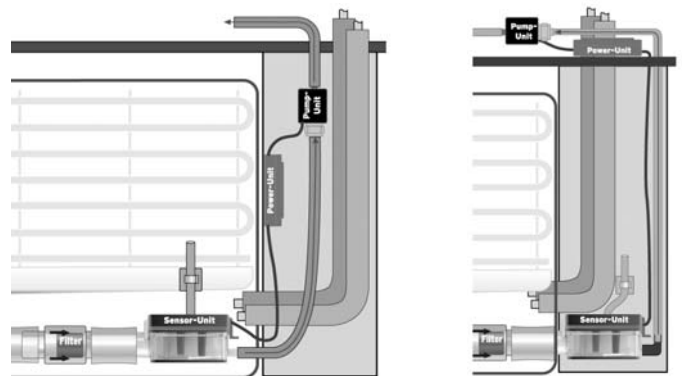
C) Venting:

In order that the sensor 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 sensor 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 sensor 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 sensor 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 pliers 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.

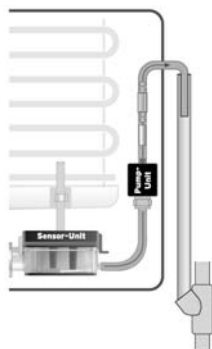
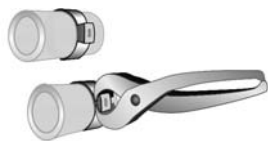
This cross section reduction reduces the noise level of the pump.

The end of the drain line must be at a level higher than the sensor housing to prevent self-discharging after the pump has been switched off (suction effect). If the drain outlet is lower than the sensor 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.

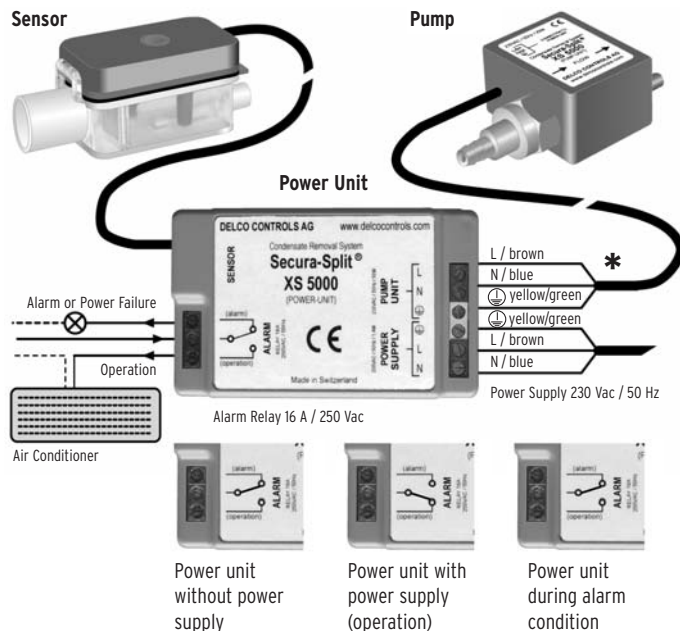


F) Power unit / Electrical connections / Alarm:

SAFETY TIP:

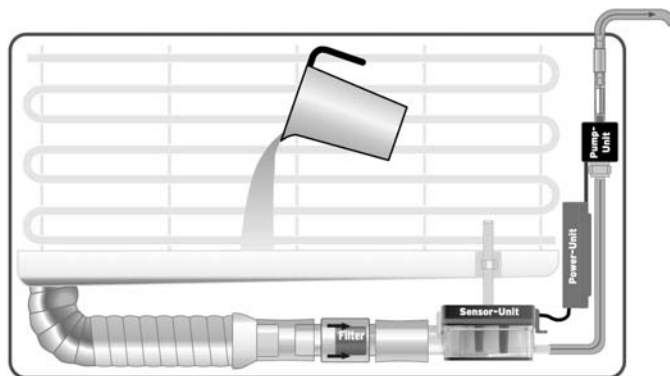
Before beginning with the installation, always switch off the power supply!

- Mount the power unit (No. 13) at a free position in the air conditioning system, in the installation duct or in the ceiling construction. Use the enclosed piece of foam adhesive tape for this (No. 14).
- Lead the connecting cable of the sensor housing (No. 5) to the power unit and insert the plug into the socket with the designation «SENSOR». Ensure that the plug is correctly seated.
- Lead the connecting cable from the pump (No. 8) to the power unit (No. 13) and connect the two/three wires to the terminals with the designation «PUMP-UNIT» (Line, Neutral, Earth) according to the circuit diagram.
- The mains power connection (from the air conditioning, room installation or control cabinet) will be connected to the terminals with the designation «POWER SUPPLY» according to the circuit diagram (Line, Neutral, Earth).
- If the alarm functions are used with the alarm relay, wire the alarm relay corresponding to its use according to the circuit diagram.



* 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 3/4 with condensate water, it starts the delay of 5 seconds. After this time, the pump is switched on and pumps the water out until the float housing is less than 1/2 full.

So Attention: The pump only starts after 5 seconds !

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 sensor 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).
- ✓ Check the correct switching on and off of the alarm relay or its alarm function (e.g. switching off the air conditioning, fault lamp, alarm system, etc.).

Attention: The alarm is delayed for 1 minute.

swiss made by:

DELCO CONTROLS AG
for refrigeration & airconditioning



Honerethof 1 • CH-8962 Bergdietikon • Switzerland
Tel. +41 (0)56 631 68 68 • Fax +41 (0)56 631 68 70
www.delcocontrols.com • delco@delcocontrols.com

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.

Sensor housing (SENSOR-UNIT):

When maintaining the air conditioner or putting it into operation in spring, the sensor housing should 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.
- Pull the plug out of the power unit and loosen all the hose connections to the sensor.
- Remove the cover, and, if necessary, also the seal.
- Now the metallic tissue filter can be pulled upwards and cleaned with water and a brush.
- The base pan and the sensor can be cleaned and rinsed carefully with water and a small brush.
- Now place the cleaned metallic tissue filter in its original position.
- Check the correct seating of the seal and clip the cover into the corresponding position.

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.

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® XS 5000** 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

- These installation Instructions are the sole property of **DELCO CONTROLS AG**. Reprints or copies without our written authorization are not allowed.
- These installation instructions were written with greatest care and attention; **DELCO CONTROLS AG** does not assume any liability for their use.
- **DELCO CONTROLS AG** reserves the right to modify or change at any time and without previous notice specifications, functions, design identity and technical information.
- Place of jurisdiction is our domicile.
- **Secura-Split®** is a registered trademark of **DELCO CONTROLS AG**.

Condensate Removal Systems for Air Conditioners

Secura-Split® 
XS 5000 - SERIES swiss-made



Designations of models:

- XS 5000 - OEM 15 L/h
- XS 5000 - STD 15 L/h
- XS 5000 - 25 L/h

The **smallest** Sensor
for optimal Condensate Removal



swiss made by:

DELCO CONTROLS AG
for refrigeration & airconditioning

Honerethof 1 • CH-8962 Bergdietikon • Switzerland
Tel. +41 (0)56 631 68 68 • Fax +41 (0)56 631 68 70
www.delcocontrols.com • delco@delcocontrols.com