
CONDENSING DRYER

K5 ES HP PX

USER MANUAL



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User instructions K5 ES HP PX

Area of use

Condensing dryer K5 ES HP PX is primarily intended for professional use. It has been specially developed for use in occupied areas in event of emergency damage or where it is difficult to eliminate the humid air from an adsorption dehumidifier or run-off water from a more stationary condensing dryer. K5 ES HP PX has a built-in pump to allow continuous operation and a bucket for occasions when it is difficult to get rid of condensation water. K5 ES HP PX is compatible with and can be used together with Supervision for remote control and monitoring.

Properties:

<ul style="list-style-type: none">• High capacity level	<ul style="list-style-type: none">• Robust
<ul style="list-style-type: none">• Fan has high and low speeds, quiet operation	<ul style="list-style-type: none">• Demand controlled defrosting
<ul style="list-style-type: none">• Easy to transport	<ul style="list-style-type: none">• Stackable
<ul style="list-style-type: none">• Service-friendly	<ul style="list-style-type: none">• Easy-to-understand user interface
<ul style="list-style-type: none">• Very compact	<ul style="list-style-type: none">• Low weight
<ul style="list-style-type: none">• Ergonomic	<ul style="list-style-type: none">• Energy efficient
<ul style="list-style-type: none">• Portable and rollable	<ul style="list-style-type: none">• Digital interface with network function
<ul style="list-style-type: none">• Energy and time meter – resettable work counter	<ul style="list-style-type: none">• K5 ES HP PX has an extra heater with full temperature control that improves the drying effect

Delivery check

K5 ES HP PX is delivered fully assembled and ready to use.

The packaging contains:

Designation
K5 ES HP PX Dryer Corroventa

Manufacture directive

Condensing dryer K5 ES HP PX is tested according to applicable directives and standards by Intertek. The dryer is CE labelled.

Disclaimer

- Incorrect installation and/or incorrect use can cause damage to property as well as injury.
- The manufacturer assumes no liability for property damage or injury incurred as a result of failing to follow these instructions, the machine being used for purposes other than those intended or failure to observe these warnings. Such damage, injury or liability is not covered by the product warranty.
- The product warranty does not cover consumable parts or normal wear.
- The purchaser is responsible for checking the product upon delivery and before use to ensure it is in good condition. The product warranty does not cover damages resulting from the use of defective products.
- No changes or modifications to the machine may be performed without written consent from Corroventa Avfuktning AB.
- The product, technical data and/or installation and operating instructions are subject to change without notice.
- These user instructions contain information protected by applicable intellectual property laws. No part of these user instructions may be reproduced, stored in a retrieval system or transmitted to third parties in any form or by any means without the prior written consent of Corroventa Avfuktning AB.

Any comments regarding the content of this document must be sent to:

Corroventa Avfuktning AB
Mekanikervägen 3
564 35 Bankeryd, SWEDEN

Tel +46 (0) 36-37 12 00
Fax +46 (0) 36-37 18 30
E-post mail@corroventa.se

Safety information

The device can be used by children over 8 years old and people (including children) with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, if they have received guidance or information on how to use the device safely and understand the risks that may occur. Children must not play with the device. Cleaning and maintenance must not be carried out by children without the supervision of an adult.

Electrical installations carried out in connection with the dryer installation must be done by a qualified electrician in accordance with local and national regulations.

1. The dryer is only intended for indoor use.
2. The dryer must not be covered during operation, as this may cause overheating and fire.
3. The dryer's protective covers and shields must always be in place during operation.
4. The dryer must not be used as a work table, trestle or stool.
5. The dryer is not intended to be stood or climbed on.
6. Never operate the dryer without installing the filter as this may damage the dryer. Ensure that the filter is clean. If it is blocked, the machine may overheat.
7. Avoid sucking oil, grease or similar into the dryer.
8. The dryer may not be used in areas where it can produce explosive gases.
9. Do not insert objects into the intake or exhaust vents as this could damage the dryer and people.
10. The machine must be used and transported upright.
11. The dryer must always be upright when it is in operation. Place the dryer on a firm and flat surface so that it cannot overturn.
12. Do not damage the electrical cable. Extension cables must be intact and of the right quality and dimension. They must not run through water or over sharp edges.
13. Never carry or drag the dryer by the electrical cable or the drain hose.
14. Using electrical equipment in very damp or wet conditions can be dangerous. Do not operate the dryer if it is standing in water.
15. Always use an earth-fault breaker to minimise the risk of electric shock.
16. Water must not come into contact with the dryer's electrical components. If it does, ensure that they are dried thoroughly before the dryer is used again.
17. Never open the dryer for cleaning or service without first ensuring that the dryer is disconnected from power.
18. Repairs and maintenance of the dryer's cooling system must be performed by a qualified refrigeration engineer.
19. Repairs and maintenance of the dryer's electrical system must be performed by a qualified electrician.
20. The dryer must not be used with accessories other than those described in this manual or approved by Corroventa Avfuktning AB.
21. The dryer must be placed at a distance of at least half (0.5) a metre from walls and ceilings to ensure that air can circulate.
22. The equipment must be scrapped in accordance with local regulations.

Contact the supplier of this dryer for further advice on the safety and use of the product.



- The dryer contains Propane (R290), a natural refrigerant with low environmental impact.
- The refrigerant gas is flammable.
- Ensure that the cooling circuit's pipelines are not damaged. In case of damage to the cooling circuit, carry the machine out or ventilate the space and avoid naked flames or other spark-generating sources.
- Note that the refrigerant gas is odorless.
- The machine must always be stored upright, frost-free and in a ventilated area without sources that may cause sparking or near flammable substances.
- Do not use agents/methods to accelerate defrosting or cleaning other than those recommended by the manufacturer.
- The cooling circuit must not be punctured.

Relative humidity and its impact on materials

All air contains a greater or lesser degree of moisture. We cannot see it with the naked eye until it appears in the form of small water drops against a cold metal or glass surface for example. However, before it is visible, moisture is already causing problems by affecting materials and manufacturing processes, causing corrosion and growth of micro-organisms.

Air moisture is measured and usually given in relative humidity (% RH). It is a measurement of how much water vapour the air contains over how much it can hold in total at a given temperature and pressure. The higher the temperature, the more water the air can hold, but it is the relative humidity that is calculated and must be controlled to prevent corrosion or mould growth.

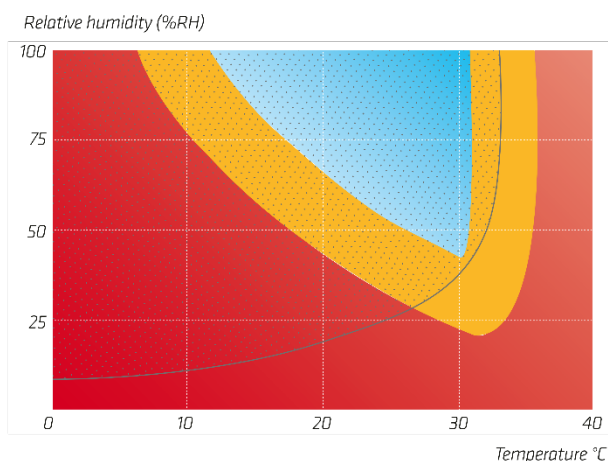
At 100% RH the air is saturated, and the moisture falls in the form of small water droplets. Steel corrodes at 60% RH and at 70% RH there is a risk of mould. A rule of thumb is that 50 % RH is a good climate for most materials.

How to choose dehumidification technique for a given situation

Compared to the adsorption principle, condensing dehumidification has the advantage of not having to route the wet air out from the room.

As a general aid to selecting technology for a given drying situation, it can be said that condensing dehumidification is the primary choice for drying in warm and humid spaces where drying must be achieved in an energy efficient way and when it is difficult to route the wet air out. One of the advantages over the adsorption technique is that the heat is not dissipated with the wet air from the room.

An adsorption dehumidifier with air-cooled condenser like L4, bridges these properties by working within a large area, including the primary area of the condensing dehumidifier. In other words, it is the best option for room drying at low temperatures, ideal for emergency damage and construction dehumidification.



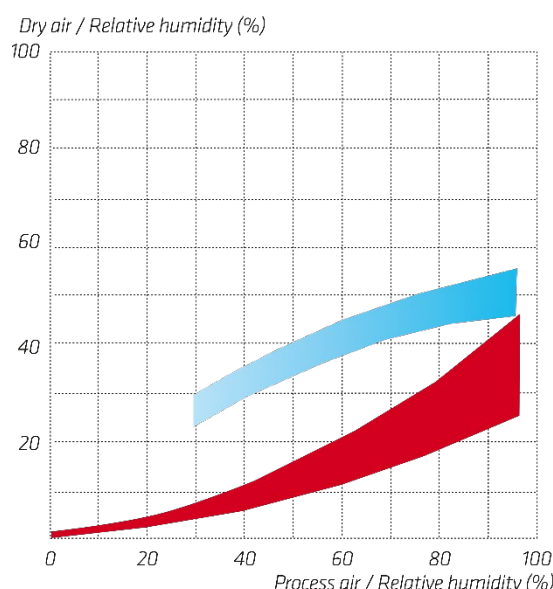
The diagram shows the type of dehumidifier that works best in each climate.

■ Adsorption dehumidifier – superior performance in the red area. Also works in the yellow and blue area.

■ Adsorption dehumidifier with condenser – functions in the dotted area.

■ Condensing dehumidifier – superior technology in the blue area. Does not work in the red area.

■ Transition zone

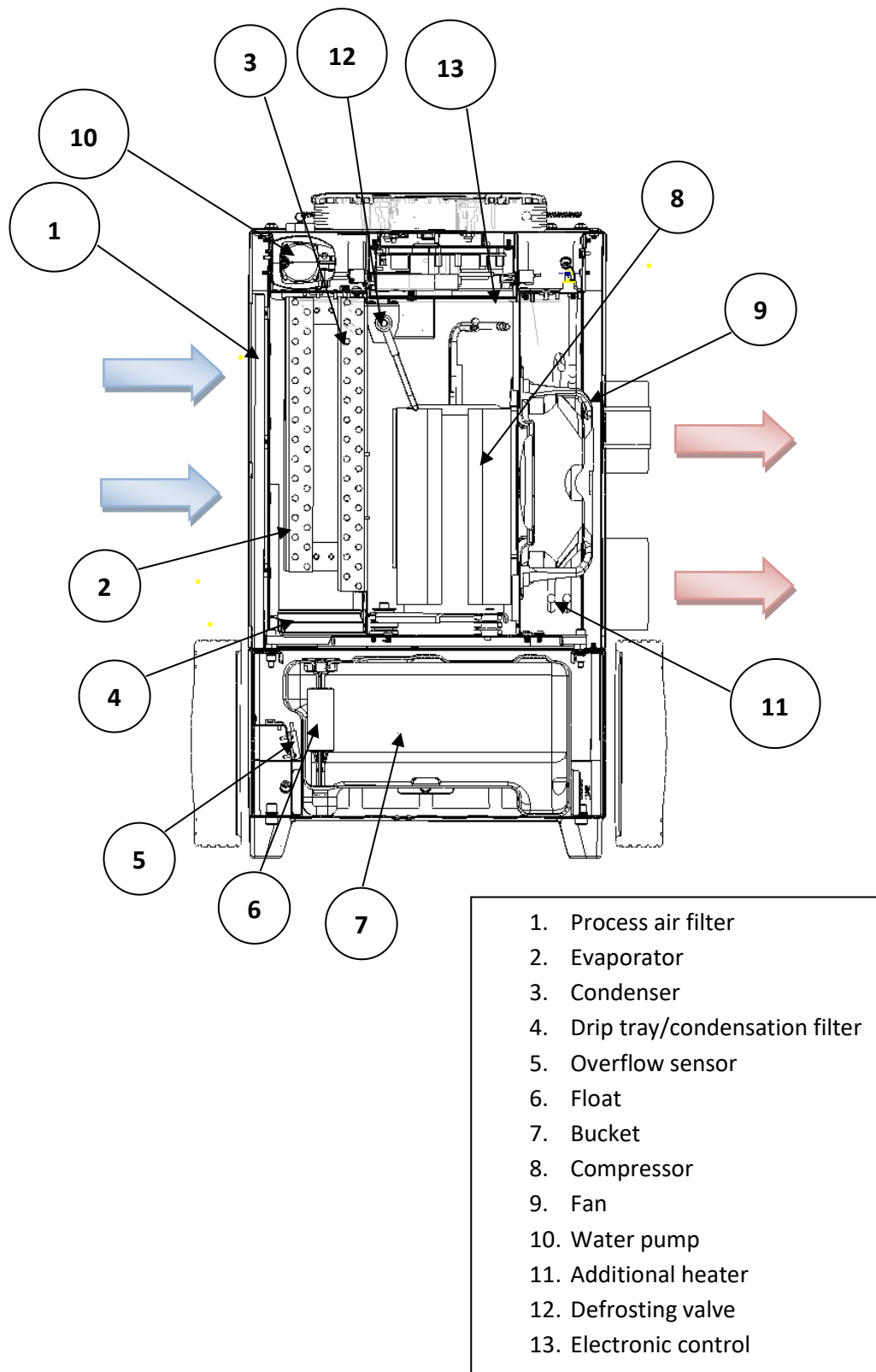


Dry air quality at 20°C

Example of basic differences between selecting a condensing dehumidifier or an adsorption dehumidifier.

As the graph above shows, condensing dehumidifiers are used in hot and humid spaces if room drying is required.

This is how the dryer works



The integrated fan (9) circulates the room air through the dryer. When the moist air passes through the evaporator (2) it is cooled down to dew point and condensation water is deposited. The water runs down into the bucket (7) via a condensation filter (4). The condensation water is evacuated from there automatically

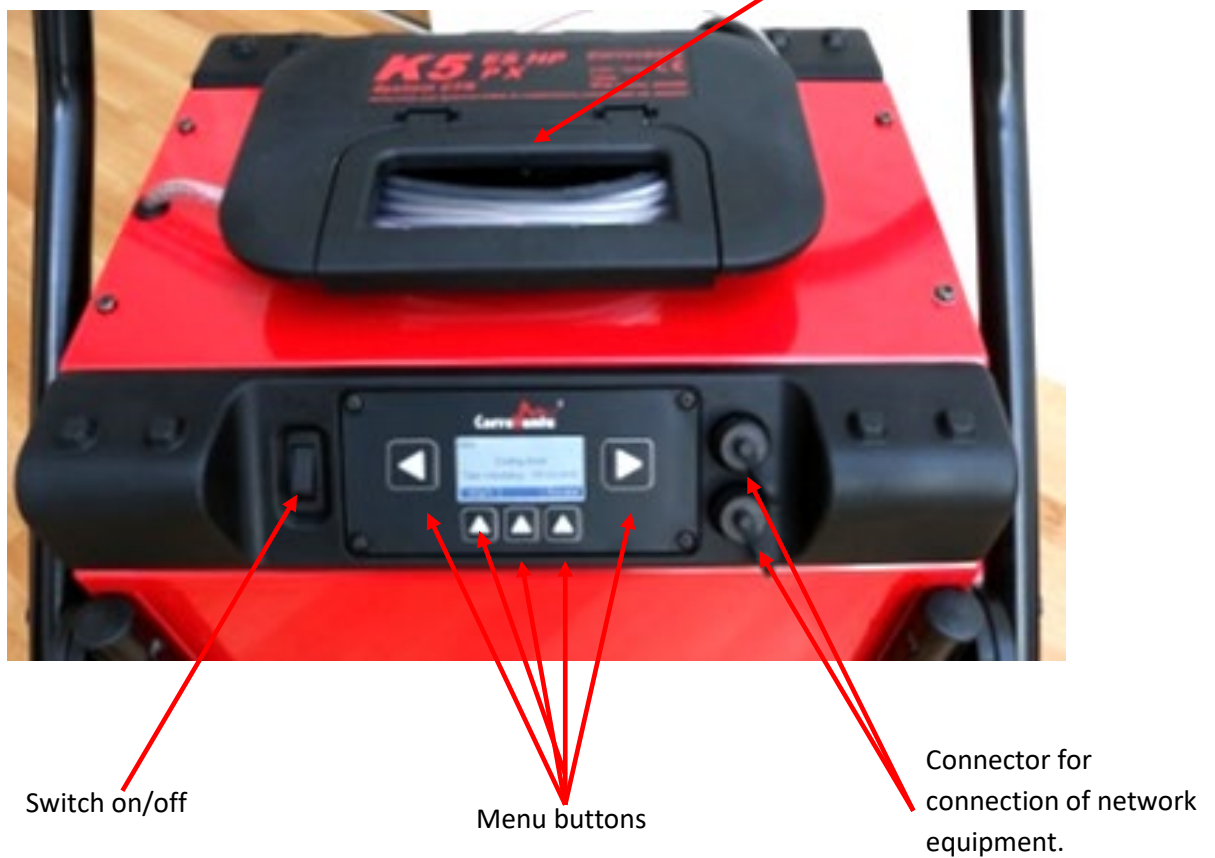
by the integrated water pump (10), which can manage a height of up to five metres. The pump runs continuously and if it does not manage to drain the water because of a pinched hose or other fault, the overflow sensor (5) activates, which stops the machine.

The dry and cold air then goes through the condenser (3) where it is heated, partly by the compressor heater and partly by the energy recovered during the previous transformation of water vapour to water. The dry and hot air is then blown into the premises again.

For optimal operation, machine defrosting is demand controlled and is only activated when the temperature and humidity conditions are such that frost forms on the cooling coil.

Overview, controls and connections

The images below show Corroventa K5 ES HP PX with its external parts and controls.

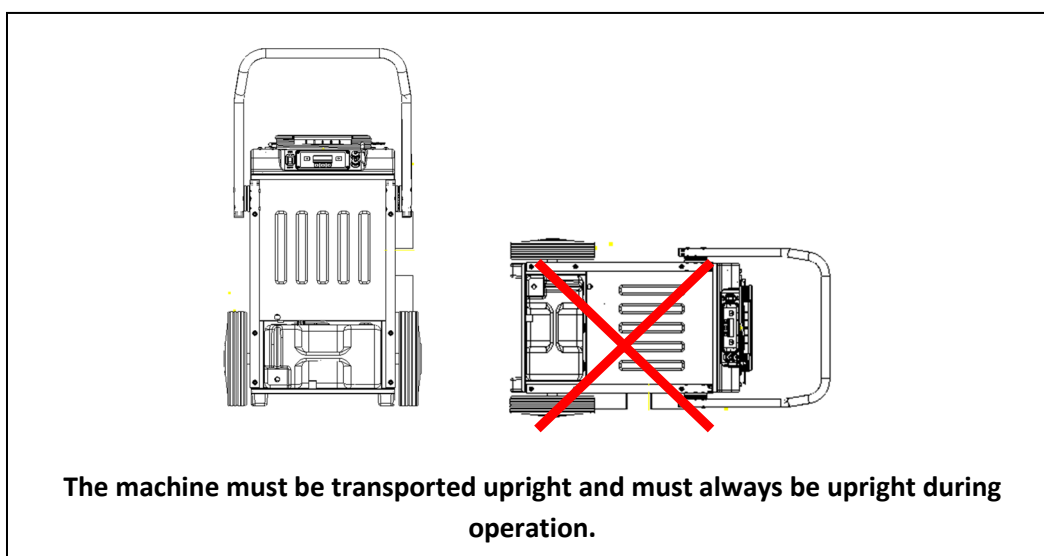


Electrical connection

The machine is connected to the earthed 230V/50Hz socket. K5 ES HP PX can be connected to a 10A, max 16A, fuse. Electronic control delays the start max 2 minutes.

Starting and operating

- Operating range humidity: 30-100% RH
- Operating range temperature: +3°C to +38°C
- The dryer must reach ambient temperature before starting, if stored in colder conditions.



1. Place the dryer on a firm and flat surface where it is not at risk of overturning. The surface should not be sensitive to water as some spillage may occur, for example when handling the bucket and condensation water hose. The dryer can be positioned against a wall as illustrated. In all other cases, the dryer must be placed at a distance of at least half (0.5) a metre from walls and ceilings to ensure that air can circulate.
2. If possible, close doors and windows etc. to use all the dehumidification capacity in the intended space rather than to dry the whole house/building. To minimise power consumption, try to ensure that the ambient temperature is approximately 20°C.
3. If using a condensation water hose, ensure that it is routed to a drain, sink or similar frost-free runoff for continuous operation.
4. The ambient temperature must be +3°C to +38°C.
5. K5 ES HP PX is equipped with demand controlled defrosting. If ice forms on the evaporator, the dryer defrosts automatically with help from hot gas defrosting. The machine resumes automatically when the evaporator is clear of ice.
6. K5 ES HP PX is equipped with an additional heater that increases the dry air temperature and thus improves the drying effect further. The additional heater's operating range is set to 18–22 °C from the factory in operating mode "Temp". In operating mode "On" the heater is activated continuously. The machine is also equipped with double overheating protection. A manual resettable MR that trips at 130°C and an automatic device that trips at 60°C. The manually resettable overheating protection is located under the cover above the fan.

For use on sensitive surfaces, note the following:

When the machine is turned off, any frost on the evaporator thaws and, if there is a lot of frost, this can cause spillage because the pump is off.

User instructions ES product family

Intended use

The adsorption dehumidifiers in the ES range have been developed and designed for drying water damage and building moisture. The dehumidifiers can be used freestanding or in combination with turbines, for pressure and suction drying of a layered construction for example.

Via the control panel, the user of K5 ES HP PX can optimise the operation for the intended job, set the capacity and volume, control the fan as well as use integrated or external sensors for temperature and relative humidity to achieve the desired effect in combination with the lowest possible energy consumption. K5 ES HP PX can also be used in networks and is prepared for remote monitoring and remote control. The unit has a folding carry handle designed for both pulling the machine along the ground and for lifting it. It also has handles with holders for the electrical cable and the hose, while its light weight means it is easy to carry, roll and install. The durable but flexible feet protect the floor surfaces and also make it possible to stack the machines. The dehumidifiers have a naturally robust construction that gives a long service life.

ES product family, menus and operation

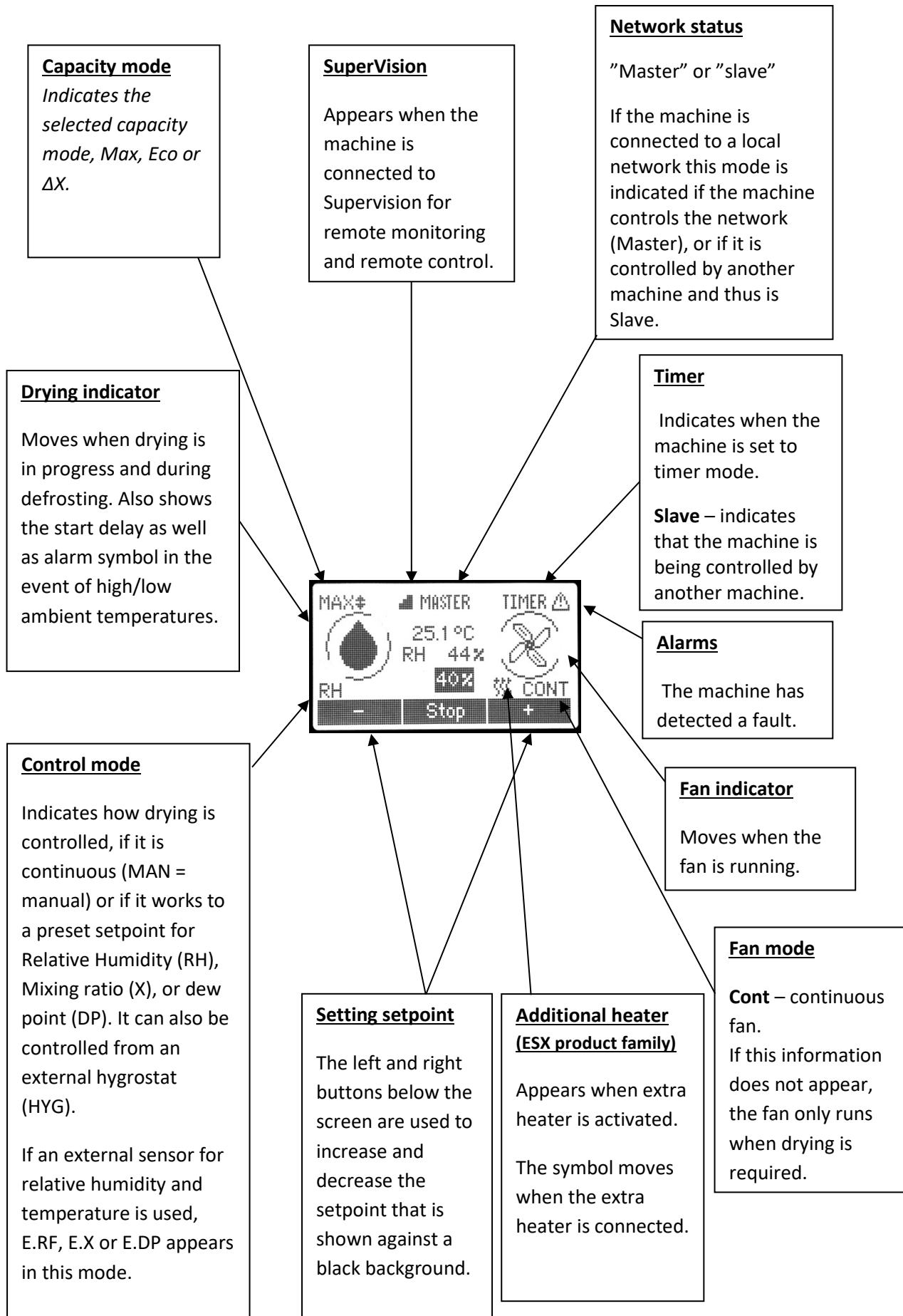
K5 ES HP PX has an easy-to-use user interface with a display and five buttons. The two larger buttons on each side of the display are used to select between different menus. These buttons are only intended for navigation and cannot be used to change the settings.

The three smaller buttons are used for selection and editing and their functions are always presented as text at the bottom of the screen. On the upper menus, the left-hand button is called the HOME button. One push of this button takes you straight back to the standard view. In many of the views there is an Info button that presents information that can be useful for inexperienced users.

If the display's background lighting goes out after the preset time, the first button push only illuminates the display.

If no button is pushed for ten minutes, a keylock is activated. The machine then must be unlocked by pushing the two upper button simultaneously. This procedure is presented as text and as an image on the display.

Upper buttons to the left and right –	Only menu navigation. Never change any settings.
Home button	Return to standard view.
Info button	Presents information. Electronic user instructions.



Start view

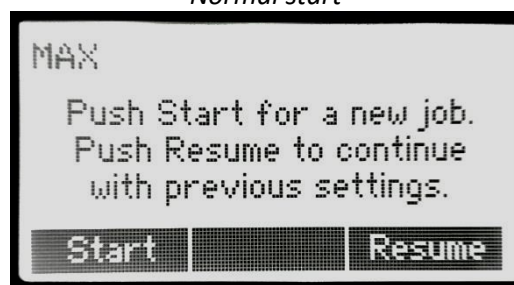
When K5 ES HP PX starts up, two options appear for the user on the display:

Start: Starts the machine with standard settings, continuous operation with maximum capacity. Previous settings such as use of sensor control, timer etc.

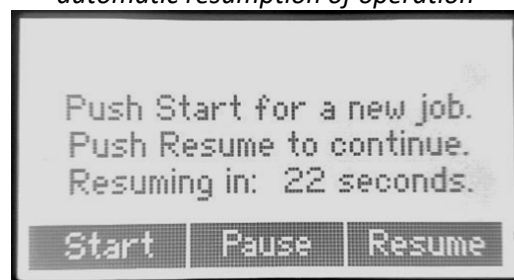
Resume: The machine resumes operation with the same settings that previously applied.

If the user did not press the stop button before the power was interrupted the last time the machine was used, the machine will automatically resume operation when the timer has counted down to zero. The countdown can be stopped by pressing the Stop button, which then switches the machines to standby until it is started manually.

Normal start



Start after power cut – automatic resumption of operation



Standard view

When K5 ES HP PX is in operation, the machine can always be stopped (set to standby) using the middle button below the display.

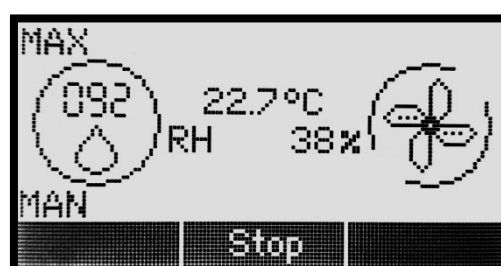
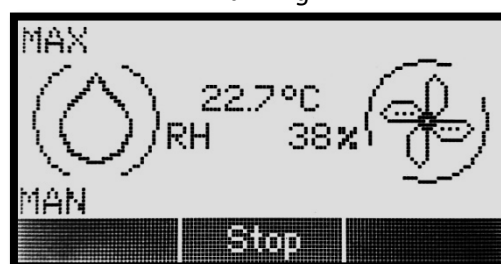
When the machine is running in a control mode instead of in manual mode, the setpoint (which is marked with black background in the middle of the screen) can be increased or decreased using the negative (-) and positive (+) buttons.

When the compressor has stopped, the start is delayed for at least 120 seconds. The remaining time until start appears in the round circle to the left.

Also shown here is whether the machine is defrosting and if it has stopped and gives an alarm for too high or too low ambient temperature.

In the event of a dehumidification process stoppage, the fan runs-on for post cooling for 120 seconds.

Standard view graphics. The machine is running.



Control mode

In control mode, it is determined whether drying should occur continuously (MAN - manual mode) or is only to be activated when necessary, on the basis of the ambient climate.

The selected control mode is displayed in the lower, left-hand corner in standard view.

Open the screen for selecting control mode by pressing the upper, right-hand button.

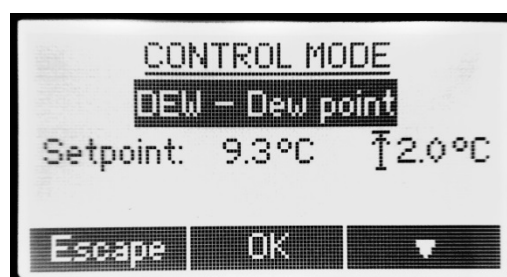
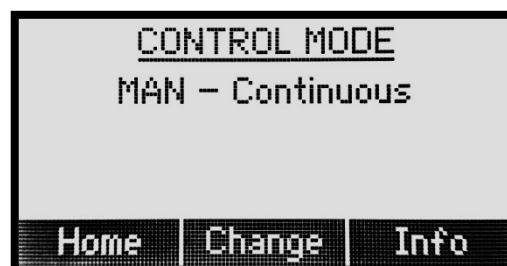
The following basic control modes are available:

MAN	Manual, continuous drying.
RH	Dehumidification for selectable relative humidity (%).
X	Dehumidification for selectable mixing ratio (g/kg).
DP	Dehumidification for selectable dew point (°C).
HYG	Dehumidification is controlled by an external hygostat that is connected to the machine.

Thanks to its network functions, you can also connect the machine to external temp. and RH sensors, and use their values to control operation, instead of the built-in sensor for relative humidity and temperature. The following modes for external sensors exist for this purpose:

E.RH	Dehumidification for selectable relative humidity (%) according to the input values from the external temp and RF sensor(s) that are connected to the machine.
E.X	Dehumidification for selectable mixing ratio (g/kg), according to the input values from the external sensor(s) that are connected to the machine.
E.DP	Dehumidification for selectable dew point (°C), according to the input values from the external sensor(s) that are connected to the machine.

The external control mode requires that the machine is network connected and connected to an external temp. and RH sensor. If the machine is not already connected



to the network, the machine asks whether to create a network.

If there are several sensors in the network and if the <All> option has been selected (instead of a single sensor, e.g. RHT61) the machine works on the "worst case scenario" and runs for as long as any of the sensors detects that the humidity is above the setpoint.

If the machine selects a mode other than MAN, the user will note that the setpoint can be set.

When the setpoint has been reached, drying stops automatically. If the humidity later rises above the setpoint again, drying resumes automatically.

Hysteresis

When one of control modes; RH, DP or X is selected, a symbol and a hysteresis value appears to the right of the display.

The symbol shows the setpoint value's position in the operation range as below.

↕ - centre

↓ - bottom

↑ - top



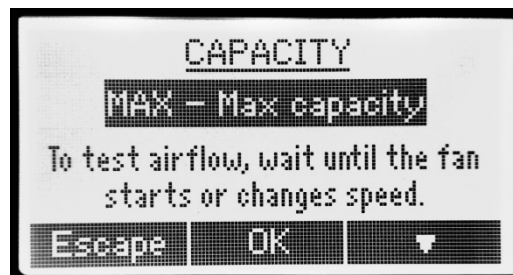
Capacity mode

The drying capacity of K5 ES HP PX can be optimised for a given work task and situation with three different operating modes.

When setting MAX (maximum) the machine works to remove as much water as possible. If the machine's total power is not required, it can instead be set to ECO (eco-mode) where the energy consumption per litre of removed water is minimised.

For localised water damage where the dry air quantity is not required, the machine can be set to ΔX (ΔX mode). In this mode, the machine produces a smaller amount of even drier air that further accelerates the drying process.

MAX	For maximum capacity. <ul style="list-style-type: none"> • High fan speed • Hot gas defrosting • Min temp 3°C • Max temp 38°C • RH min 0 %
ECO	For minimal energy consumption per litre of removed water. <ul style="list-style-type: none"> • High fan speed • Stop defrosting • Min temp 14°C • Max temp 38°C • RH min 35 %
ΔX	For maximum ΔX , as dry air as possible. Reduced air amounts suitable for e.g. local, isolated water damage. <ul style="list-style-type: none"> • Low fan speed • Hot gas defrosting • Min temp 3°C • Max temp 38°C • RH min 0 %



Extra heater K5 ES HP PX

K5 ES HP PX is equipped with an additional heater that increases the dry air temperature and thus improves the drying effect further.

When this function is selected, an icon for the extra heater appears below the fan symbol in standard view. The extra heater is of course only active when the fan is active.

Note! The extra heater may not be used if dry air is fed into another machine, because it can overheat.



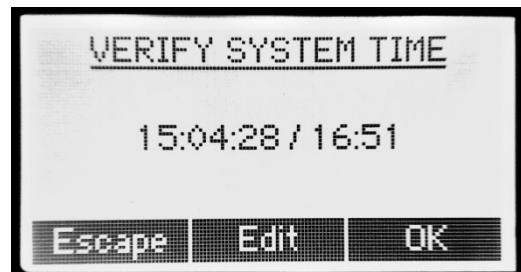
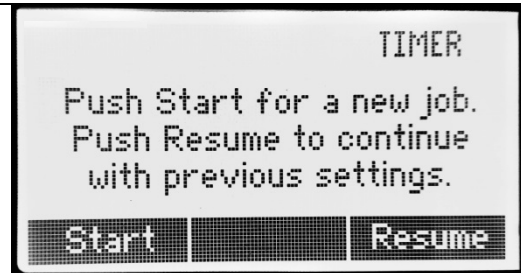
Timer

K5 ES HP PX has an integrated timer function that allows the user to determine when the machine is to run. When the timer function is used, the word Timer appears in the standard view's upper, right-hand corner according to the graphic to the right.

Activate the timer by pressing the right-hand arrow button four times to open the timer menu. Press Activate.

When the timer has been activated, the machine begins by prompting the user to check that the time and date have been set correctly. If they have been, press OK. If the time or date need changing, press Edit and adjust the values before continuing.

In the next step the user can set the time interval that the machine is to work within. The machine remembers the timer settings from the previous time it was used and shows its settings as the start values. The Other time setting determines whether the machine, during the day's remaining hours, must be in standby mode or run at lower fan speed for minimal noise.

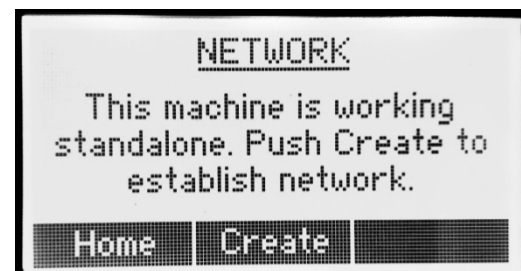




Network

Note! Install all system cables before the machines are started.

K5 ES HP PX has network functions that enable local interaction between machines, for example pressure drying and use of external sensors for relative humidity and temperature control of the machine. The network functions also prepare the machine for a future SuperVision system that will allow remote monitoring and remote control of the machines via Internet.

A network is established by installing the machines in the intended way and connecting them to each other using system cables before they are started.



<p>Open the network menu on the machine which is to be master, i.e. control the others. Press Create and wait while the machine establishes the network. This can take up to one minute.</p> <p>Once the network has been established, the display switches between the slave units in the network menu. These are indicated by type (e.g. A4) and bus address (e.g. 101).</p> <p>To change the settings for a slave unit, press Change and select the slave unit. The background lighting for the selected unit starts to flash to confirm that the unit has been selected.</p> <p>Desired settings can also be made directly on the relevant machine.</p> <p>Start the master machine when all desired settings have been made. The slaves start automatically within one minute. The machines are stopped in the same way. Press stop on the master machine and the slaves stop automatically shortly afterwards.</p> <p>As the network is controlled by the master machine, a slave unit that is started manually is stopped when the master machine is in standby. In the same way, a slave unit that is stopped manually is restarted manually when the master machine is in operation.</p>	
<p>Setup and maintenance menus</p> <p>The setup and maintenance menus contain functions that are not needed for normal operations.</p> <p>Date and time: Setting system date and system time: The format is YY:MM:DD / HH:MM.</p> <p>Language: Language selection for the interface.</p> <p>Menu system: The menu system is set to Advanced as standard with all functions visible and available. If it is set to Basic, the more advanced functions are removed from the menu system.</p> <p>Keylock: Option to activate/deactivate the keylock:</p> <p>RH hysteresis: Option to adjust the hysteresis settings for control mode RH. The setpoint's position in the operation interval and the hysteresis value can be set from here.</p>	 

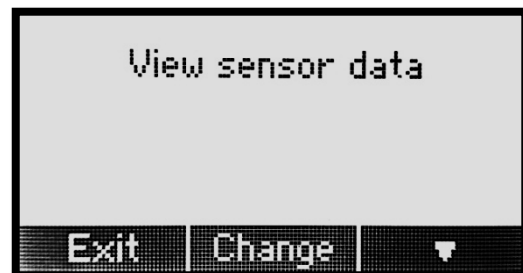
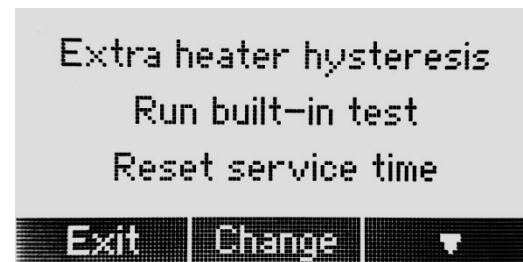
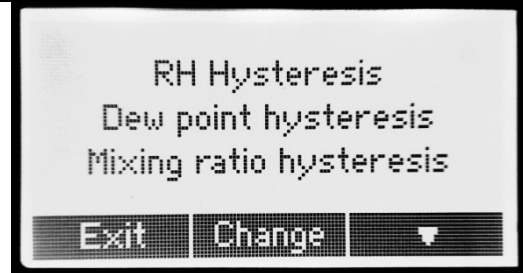
Dew point (DP) hysteresis: Option to adjust the hysteresis settings for control mode dew point (DP). The setpoint's position in the operation interval and the hysteresis value can be set from here.



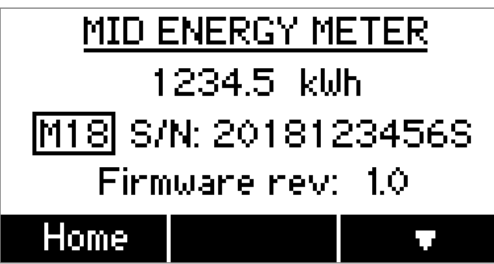
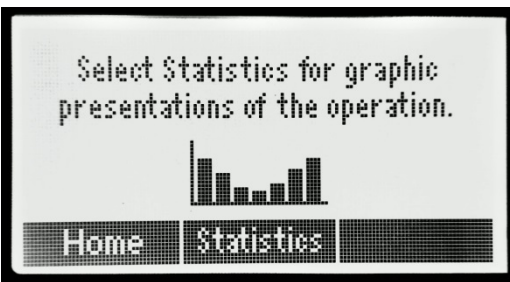
Mixing ratio (X) hysteresis: Option to adjust the hysteresis settings for control mode mixing ratio (X). The setpoint's position in the operation interval and the hysteresis value can be set from here.


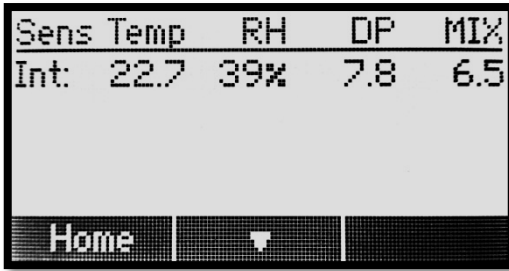
Run built-in test: A built-in self-test that is available to service technicians.

Reset service time: The machine is set to remind you about a service once a year. Once the service has been carried out, the service reminder can be reset using this function.

See sensor data: Function intended for service technicians.



<p>Counters</p> <p>This screen shows time and energy counters. The resettable work counters are displayed at the top. The date when the counters were reset is displayed below. After the date, the number of hours that have passed since the last reset are indicated to enable a quick comparison.</p> <p>Press Reset to reset the work counters. Confirm to reset the counters by pressing OK on the following screen.</p> <p>The counters for energy and hours for the entire service life of the machine are displayed at the bottom. These counters cannot be reset.</p> <p>With machines that have MID energy meters, the energy lifetime counter is removed from this screen and presented in the MID Energy meter menu.</p>	 
<p>MID Energy Meter</p> <p>This menu presents the total, accumulated energy consumption. For more information, please refer to chapter MID Energy Meter.</p>	
<p>Statistics</p> <p>Statistics are provided to assist the user's observation of the drying process and to enable the monitoring and follow-up of machine operation. The following graphs appear below the statistics menu:</p> <ul style="list-style-type: none"> • Average relative humidity for the last twelve hours and the last 14 days. • Average temperature for the last twelve hours and the last 14 days. • Number of hours in drying mode for the last 14 days. • Consumed energy in kWh for the last 14 days. <p>The last value, the bar at the far right in the respective graph, is the current hour or the current day.</p>	
<p>Alarms</p> <p>Identified alarms are shown on this screen. As soon as an alarm is identified, a pop-up window also appears.</p>	

<p>Additionally, a warning symbol appears in the standard view's upper right corner, as long as the fault remains.</p> <p>The user does not have to erase the alarms that are shown. As soon as the machine detects that the function has been reset, the alarm disappears automatically.</p>	
<p>Sensor data</p> <p>This screen shows the internal RT sensor's values. Only for reading off.</p>	

Control mode and hysteresis

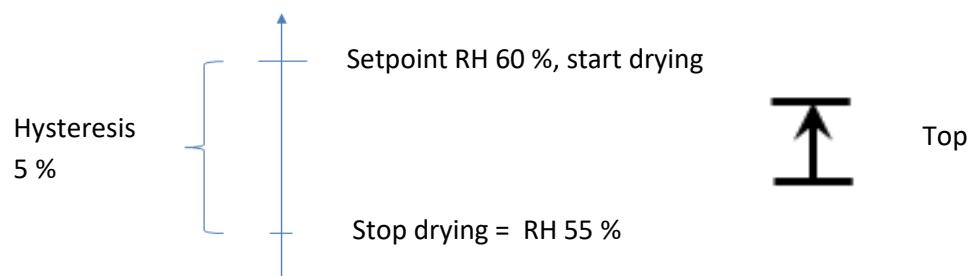
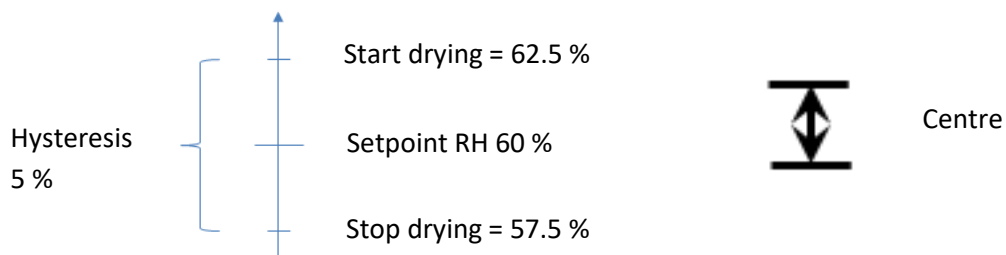
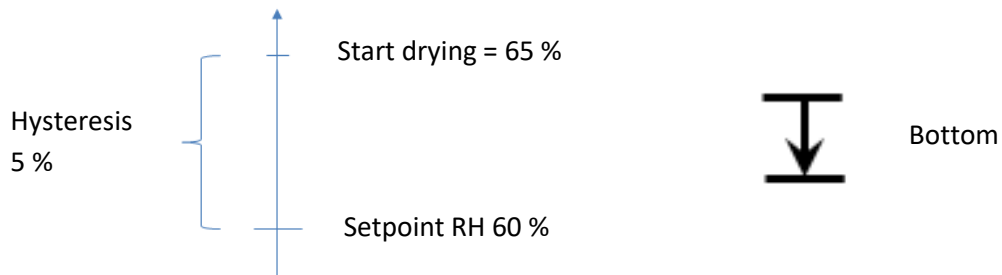
In addition to the normal, continuous drying operation, the operation of K5 ES HP PX can also be controlled via its built-in sensors for relative humidity and temperature as well as via its external hygostat or external, networked sensor.

If a built-in or external electronic sensor is used, the machine uses a software controlled hysteresis that stabilises machine operation and prevents too many restarts.

The table below shows the machine's standard settings. If changes are required, these can be made in the setup and maintenance menus.

Control mode	Hysteresis	Setpoint's position
RH	4 %	Bottom
Dew point	2°C	Top
Mixing ratio	0.5 g/kg	Bottom

The illustrations below describe the different hysteresis settings; bottom, centre and top.



Alarms

If the machine detects a fault, corresponding information appears in a pop-up window. Additionally, a warning symbol appears in the standard view's upper right corner, as long as one or more problems remain.

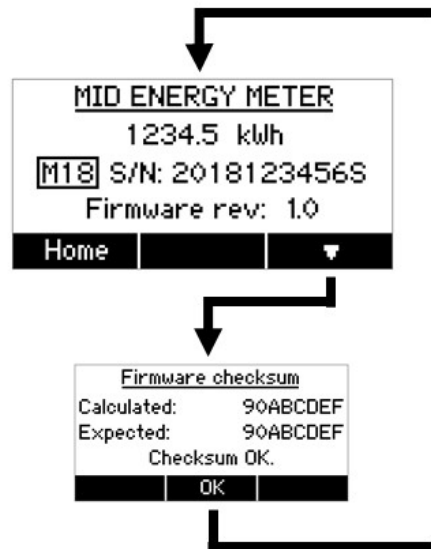
The following alarms can appear. Recommended corrective action is also given for each alarm.

Alarms	Action/advice
On or more slaves not responding	This alarm appears when the machine is used as master in a network that has lost contact with one or more of its slave machines. If this alarm appears, check all system cables and the power supply to all machines. When communication has been re-established the alarm disappears automatically again.
Ambient temperature too high!	The machine has switched off all heaters due to too high ambient temperature (above 40 degrees Celsius). If continuous fan is selected, the fan continues to run. The machine resumes operation automatically if the temperature drops.
Ambient temperature too low	The machine resumes operation automatically if the temperature rises. Check the function of the extra heater.
No contact with internal control board	Internal fault. If the alarm remains, contact a service technician.
Internal sensor fault Temp and RH sensor	Internal fault. If the alarm appears after the machine has been disassembled, the fault may be because the sensor connection to the cover has not been installed correctly. If not, and if the alarm remains, contact a service technician.
External Temp and RF sensor fault	The machine has lost contact with the external temp and RH sensor(s). Check that the cables are correctly installed. When contact with the external sensors has been lost, the machine automatically returns to using the built-in temp and RF sensor.
The statistics cannot be saved to the memory	Internal fault. If the alarm remains, contact a service technician.
The event log cannot be saved to the memory	Internal fault. If the alarm remains, contact a service technician.
Humidity too low	The machine resumes operation automatically if the humidity rises.
Hot gas sensor fault	Internal fault. If the alarm remains, contact a service technician.
Solenoid fault	Internal fault. If the alarm remains, contact a service technician. The machine switches to stop defrosting.
Stop defrosting takes longer than expected	Internal fault. If the alarm remains, contact a service technician.
Compressor operation interruption	Internal fault. If the alarm remains, contact a service technician.
Fault with temperature sensor in the evaporator	Internal fault. If the alarm remains, contact a service technician.
Insufficient cooling capacity	Internal fault. If the alarm remains, contact a service technician.

	technician.
Water level high	The bottom tray is filled with condensation water. Check that the condensation hose is not blocked. Check that the pump runs by holding the outlets on the condensation water hose and feel for a small pressure build up.

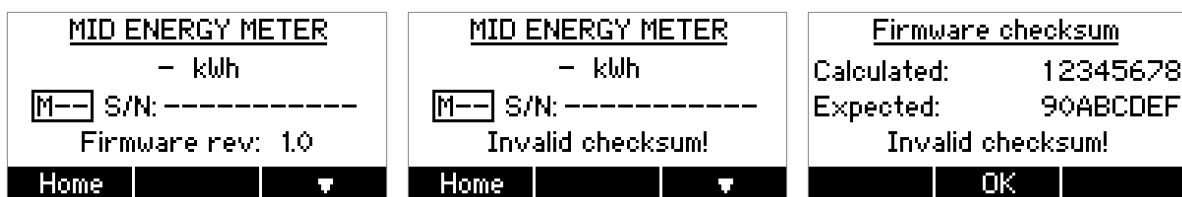
MID ENERGY METER MENU

Part of the main menu loop and accessible with either of the navigation keys, the MID Energy Meter menu presents the total, accumulated energy consumption. The affixing, M18 in the example below, as well as the serial number that follows is information on the built-in CEMP energy meter. The revision number given at the bottom row refers to the legally relevant firmware within the machine.



The integrity of the data presented with this menu is thoroughly checked and protected. One such important test is the calculation of a checksum to verify that the program memory has not been corrupted. The result of the latest calculation is always available with the Firmware checksum screen, accessed through the MID Energy Meter menu with the lower right button.

If any of the tests fail and the machine concludes that the available energy meter data must not be trusted, the information is removed from the screen and replaced with dashes. If the problem detected has to do with the checksum calculation, the bottom row of the screen will say so.



Left: Data removed due to communication error

Centre: Data removed due to checksum error

Right: Appearance of Firmware checksum screen when error is detected.

Network functions

As a member of the new ES product family, K5 ES HP PX can be included in a network together with other turbines and adsorption dehumidifiers with several functions, such as for example

- Operation with common timer.
- Interaction with the SuperVision system that enables remote monitoring and remote control of machine operation.

For network connected machines, no pre-configuration or other preparation is required. Once the machines have been installed, they can be connected easily using system cables. All that is then required is a single press of the Create button in the network menu on the machine that will be master. The master is the machine that is designated to control other machines. All machines can be used for this purpose.

The settings can be changed directly on the machine that is connected as a slave to another unit, and not only via the master machine. If the user selects to make necessary changes via the master machine, the display flashes on the selected slave machine for as long as the changes are being made. Thus avoiding confusion in that the machine can be easily identified.

Connecting machines to a Network

Carry out the following to connect machines to a network.

1. If the machines are connected, switch them off. Then connect the machines to each other using system cables. The two connectors on the machines have the same function, so it does not matter which of them is used. If SuperVision is to be used, it can be connected to any machine.
2. Start the machines.
3. Select which machine is to be master.
If the units are used in a network with the single purpose of monitoring and remotely controlling them via SuperVision, it does not matter which machine is master
4. Open the network menu as shown below using the right arrow button on the selected master machine.



(If the menu is not found, the Basic menu system has been activated on the machine. Change this by opening the setup and maintenance menus and set the menu system to Advanced.)

5. Press <Create> in the network menu and wait whilst the machine establishes the network.
6. Once the network has been created, the display switches between the different slaves at the top of the screen. If SuperVision has been connected, the text SuperVision appears at the bottom of the screen. It can take up to one minute for the text to appear.

When the above steps have been followed, all slave machines are controlled by the master. This means that all slave machines start and stop together with the master. They work with the same settings as they had before being connected in the network. If the settings need changing, press Change and then select the slave to be changed via the master. It is also possible to make the necessary changes on the machine itself. Whilst the slave machine is being changed, via the master, the slave machine's background lighting flashes so that the user can see which machine is selected.

Service reminder

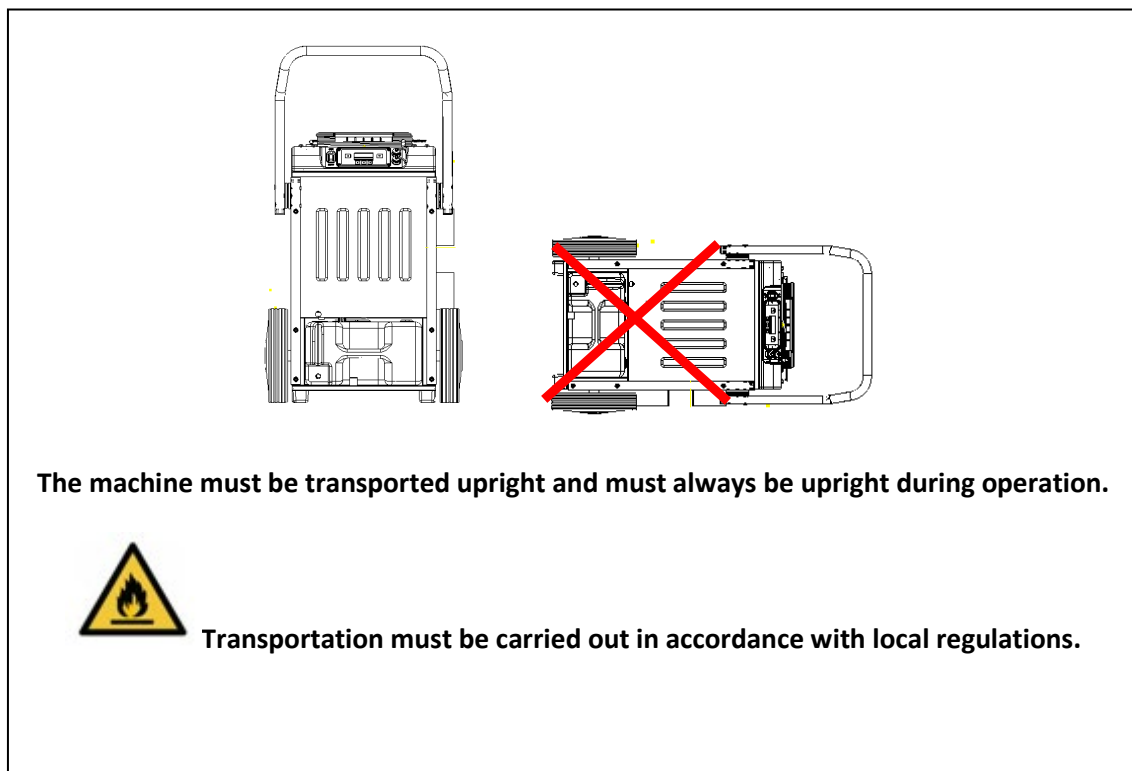
The machine is set to remind you about a service once a year. The reminder is given in the form of an alarm, but does not affect the operation of the machine. The service reminder function is reset in the setup and maintenance menus.



Transportation

Secure the dryer well when being transported.

If the machine toppled over during transportation, the machine must stand upright for at least 30 minutes prior to starting.



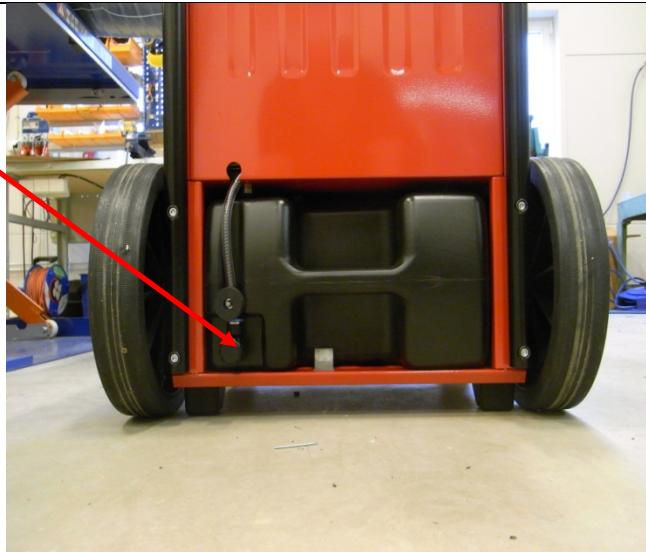
Storage

K5 ES HP PX can be stored stacked on top of each other as shown below, thus saving floor space. The machine must always be stored upright, frost-free and in a ventilated area without sources that may cause sparking or near flammable substances.



Bucket

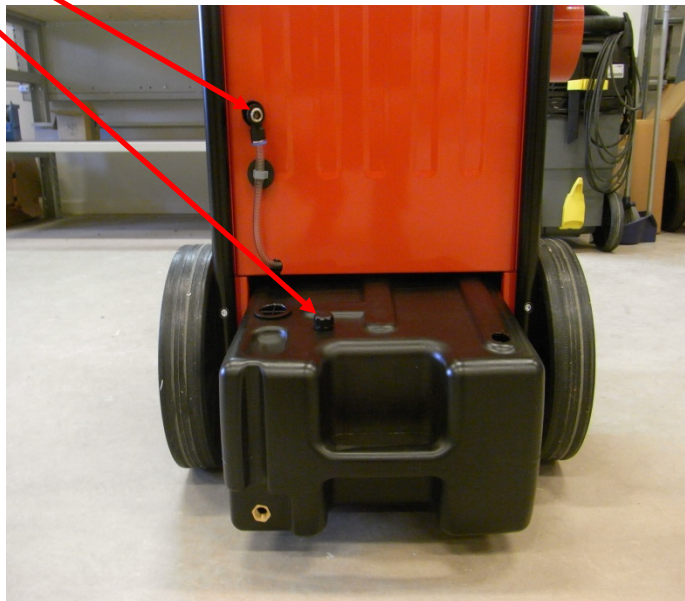
During pump operation: Connect hose connection with knob to the bucket. Reinstall the plug in the relevant hole on top of the bucket.



During bucket operation: Slacken off the knob on the hose connection and secure it with the magnet. Remove the plug on top of the bucket and screw it in instead of the knob. The bucket holds 9 litres. The compressor stops when the bucket is full and the alarm text: "empty bucket" appears.

In order for the machine to resume drying, the bucket must be emptied

Depress the catch and pull the bucket straight out.



Maintenance and service



Before starting any maintenance and servicing, the dryer must be unpowered.

Remove the plug from the wall socket.

All maintenance of the electrical system must be performed by a qualified electrician.

All maintenance of the cooling system must be performed by a qualified refrigeration engineer.

Do not use agents/methods to accelerate defrosting or cleaning other than those recommended by the manufacturer.

Replace the process air filter frequently, preferably before each new job it is installed for, and clean the dryer regularly, because dust and dirt reduce capacity and may cause overheating and fire.

Inspection and cleaning of process air filters, water filters and cleaning of drip trays and buckets

Inspect or clean water filters annually or more frequently if the machine is used in dirty environments, replace if necessary. Follow the instructions below:



Before starting any maintenance and servicing, the dryer must be unpowered.

Remove the plug from the wall socket.

Replacing/cleaning process air filter

1. Remove, carefully pull out the black process air filter. Clean or replace as necessary. Carefully replace the air filter, ensure it is inside the support edge and seals tightly.



Replacing/cleaning condensation water filter and drip tray.

2. Remove, carefully pull out the condensation water filter. Clean or replace as necessary. Check and clean the drip tray. Reinstall the water filter



Accessories and consumables

The following parts are available as accessories and consumables for K5 ES HP PX:

Part number	Designation
1003146	Condensation water filter
1002827	Process air filter

Fault tracing

Fault symptom	Probable cause	Actions
The capacity of the dryer seems to be low	Low ambient temperature or low relative air humidity.	Check relative air humidity. Increase the temperature in the area.
	The air flow is heavily reduced because of dirty filter.	Replace the filter.
	If the dehumidifier is used with a hygostat, this may be incorrect or incorrectly set to too high a relative humidity.	Check the external hygostat function by raising and lowering its setpoint and note that the machine switches off and on.
	During the time it has been installed, the machine has stopped on numerous occasions because of either too high or low ambient temperature.	Ensure that the temperature is kept within the machine's operating range, 3°C till 38 °C, and note that the capacity increases with increasing temperature.

Technical data

	K5 ES HP PX
Operating range, RH, %	30-100%
Operating temperature range, °C	+3 to +38
Rated output, W	500 (incl. additional heater: 1700)
Extra heater W	1200 (full temperature control)
Actual output at 20°C, 60% RH W	530
Max Capacity, l/day	45
Capacity 30°C, 80% RH, l/day	36
Capacity 20°C, 80% RH, l/day	18
Air flow, m ³ /hour	500
Supply voltage, 1 phase, 50Hz, V	230
Safety class	IP X4
Weight, kg	39,5
Bucket volume, litres	9
Dimensions, length x width x height, mm	520 x 445 x 710
Noise level, dB (A) 3m high speed	53
Noise level, dB (A) 3m low speed	48
Refrigerant	R290

CEMP ENERGY METERING DATA

NOTE: The below data, temperatures and current levels etc., relate to the built-in energy metering function, the CEMP, alone and not to the complete machine.

The CEMP declaration of conformity is available at www.corroventa.com/mid-certificate/.

Accuracy class	Class B
Rated Operating conditions	
Voltage	230VAC
Frequency	50Hz
Power factor	0.5ind. to 0.8cap.
Current	
I st	0.02A
I min	0.25A
I tr	0.5A
I ref	5A
I max	45A
Operating temperature	-25°C to + 55°C
Climate	Non-condensing
Environment/position	Closed location
Electromagnetic environment class	E2
Mechanical environment class	M2
Max capacity of energy register	9 999 999,9 kWh
Notified body	0402



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We have the knowledge and the equipment to find a solution as efficiently as possible.*

Corroventa develops, manufactures, sells and rents high quality products for dealing with water damage, moisture, odours and radon. We are one of the market leaders and specialists in innovation within the industry. Our products are compact, effective, ergonomic and energy efficient. In emergency situations and during flooding, Corroventa's customers have access to one of the largest rental parks in Europe. All our products are manufactured in Bankeryd, Sweden.

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CorroVenta[®]

CORROVENTA LTD

Unit 47, Melford Court, Hardwick Grange, Warrington
England, WA1 4RZ • Tel +46 (0)161-2449523