

**Quincy**

Refrigerant compressed air dryers



**QED- 250, QED- 300, QED- 350, QED- 450, QED- 500, QED- 600**

Instruction book





# Quincy

## Refrigerant compressed air dryers

QED- 250, QED- 300, QED- 350, QED- 450, QED- 500,  
QED- 600

From following serial No. onwards: CAQ 500 389

### **Instruction book**

Original instructions

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[www.quincycompressor.com](http://www.quincycompressor.com)

**Quincy**  
COMPRESSOR

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# 1 Safety precautions

## 1.1 Safety icons

### Explanation

	Danger to life
	Warning
	Important note

## 1.2 Safety precautions, general

### General precautions

	All responsibility for any damage or injury resulting from neglecting these precautions, or non-observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by the manufacturer.
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1. The dryers are designed for normal indoor use.
2. The operator must employ safe working practices and observe all related work safety requirements and regulations.
3. If any of the following statements does not comply with the applicable legislation, the stricter of the two shall apply.
4. Installation, operation, maintenance and repair work must only be performed by authorized, trained, specialized personnel.
5. The dryer is not considered capable of producing air of breathing quality. To obtain air of breathing quality, the compressed air must be adequately purified according to the applicable legislation and standards.
6. Before any maintenance, repair work, adjustment or any other non-routine checks, stop the dryer, press the emergency stop button, switch off the voltage and depressurize the dryer. In addition, the power isolating switch must be opened and locked. For plug versions, remove the plug from the wall socket and secure it.
7. Never play with compressed air. Do not apply the air to your skin or direct an air stream at people. Never use the air to clean dirt from your clothes. When using the air to clean equipment, do so with extreme caution and wear eye protection.
8. The owner is responsible for maintaining the dryer in safe operating condition. Parts and accessories shall be replaced if unsuitable for safe operation.
9. It is not allowed to walk or stand on the dryer or its components.

## 1.3 Safety precautions during installation

### Precautions during installation

1. The dryer must only be lifted using suitable equipment and in accordance with the applicable safety regulations. Loose or pivoting parts must be securely fastened before lifting. It is strictly forbidden to dwell or stay in the risk zone under a lifted load. Lifting acceleration and deceleration must be kept within safe limits. Wear a safety helmet when working in the area of overhead or lifting equipment.
2. Place the dryer where the ambient air is as cool and clean as possible. If necessary, install a suction duct. Never obstruct the air inlet. Care must be taken to minimize the entry of moisture at the inlet air.
3. Any blanking flanges, plugs, caps or desiccant bags must be removed before connecting the pipes.
4. Air hoses must be of correct size and suitable for the working pressure. Never use frayed, damaged or worn hoses. Distribution pipes and connections must be of the correct size and suitable for the working pressure.
5. The aspirated air must be free of flammable fumes, vapours and particles, e.g. paint solvents, that can lead to internal fire or explosion.
6. Arrange the air intake so that loose clothing worn by people cannot be sucked in.
7. Ensure that all piping is free to expand under heat and that it is not in contact with or close to flammable materials.
8. No external force may be exerted on the air outlet valve. The connected pipe must be free of strain.
9. If remote control is installed, the machine must bear a clear sign stating "Danger: This machine is remotely controlled and may start without warning".  
The operator has to make sure that the machine is stopped and that the isolating switch is open and locked before any maintenance or repair. As a further safeguard, persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the starting equipment.
10. Air-cooled machines must be installed in such a way that an adequate flow of cooling air is available and that the exhausted cooling air does not recirculate to the inlet.
11. The electrical connections must correspond to the applicable codes. The machines must be earthed and protected against short circuits by fuses in all phases. A lockable power isolating switch must be installed near the equipment.
12. On machines with automatic start-stop system or if the automatic restart function after voltage failure is activated, a sign stating "This machine may start without warning" must be affixed near the instrument panel.
13. Never remove or tamper with the safety devices, guards or insulation fitted on the machine. Every pressure vessel or auxiliary installed outside the machine to contain air above atmospheric pressure must be protected by a pressure-relieving device or devices as required.
14. Piping or other parts with a temperature in excess of 80°C (176°F) and which may be accidentally touched by personnel during normal operation must be guarded or insulated. Other high-temperature piping must be clearly marked.
15. For water-cooled machines, the cooling water system installed outside the machine has to be protected by a safety device with set pressure according to the maximum cooling water inlet pressure.
16. If no safety valve is present in the air net close to the desiccant dryer (e.g. safety valve of compressor), full flow safety valves must be installed on the dryer vessels.
17. If the maximum pressure of the compressor is higher than the design pressure of the dryer, a full flow safety valve must be installed between the compressor and the dryer in order to blow off the excessive pressure in case the safety valve of the dryer should be out of order or blocked.
18. When unit is not permanently secured to the floor in the vertical position or mounted horizontally, access to electrical equipment is feasible through the unit base. In this case additional barriers must be provided during installation. Tag with "warning high voltage" symbol



Also consult following safety precautions: [Safety precautions during operation](#) and [Safety precautions during maintenance or repair](#).  
These precautions apply to machinery processing or consuming air or inert gas. Processing of any other gas requires additional safety precautions typical to the application which are not included herein.  
Some precautions are general and cover several machine types and equipment; hence some statements may not apply to your machine.

## 1.4 Safety precautions during operation

### Precautions during operation

1. Always be careful when touching any piping or components of the dryer during operation. On dryers using heat to regenerate the desiccant, some parts will become very hot.
2. Use only the correct type and size of hose end fittings and connections. When blowing through a hose or air line, ensure that the open end is held securely. A free end will whip and may cause injury. Make sure that a hose is fully depressurized before disconnecting it.
3. Persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the remote start equipment.
4. Never operate the machine when there is a possibility of taking in flammable or toxic fumes, vapors or particles.
5. Never operate the machine below or in excess of its limit ratings.
6. Keep all bodywork closed during operation. Bodywork should be opened for short periods only, e.g. to carry out routine checks. Wear ear protectors when removing a panel.
7. People staying in environments or rooms where the sound pressure level reaches or exceeds 90 dB(A) shall wear ear protectors.
8. Periodically check that:
  - All guards are in place and securely fastened
  - All hoses and/or pipes inside the machine are in good condition, secure and not rubbing
  - There are no leaks
  - All fasteners are tight
  - All electrical leads are secure and in good order
  - Safety valves and other pressure relief devices are not obstructed by dirt or paint
  - Air outlet valve and air net, i.e. pipes, couplings, manifolds, valves, hoses, etc. are in good condition, free of wear or abuse
9. If warm cooling air from dryers is used in air heating systems, e.g. to warm up a working area, take precautions against air pollution and possible contamination of the breathing air.
10. Do not remove any of, or tamper with, the sound dampening material.
11. Never remove or tamper with the safety devices, guards or insulations fitted on the machine. Every pressure vessel or auxiliary installed outside the machine to contain air above atmospheric pressure shall be protected by a pressure relieving device or devices as required.
12. Yearly inspect the air receiver. Minimum wall thickness as specified in the instruction book must be respected. Local regulations remain applicable if they are more strict.



Also consult following safety precautions: [Safety precautions during installation](#) and [Safety precautions during maintenance or repair](#).  
 These precautions apply to machinery processing or consuming air or inert gas. Processing of any other gas requires additional safety precautions typical to the application which are not included herein.  
 Some precautions are general and cover several machine types and equipment; hence some statements may not apply to your machine.

## 1.5 Safety precautions during maintenance or repair

### Precautions during maintenance or repair

1. Always use the correct safety equipment (such as safety glasses, gloves, safety shoes, etc.).
2. Use only the correct tools for maintenance and repair work.
3. Use only genuine spare parts.
4. All maintenance work shall only be undertaken when the machine has cooled down.
5. A warning sign bearing a legend such as "Work in progress - do not start" shall be attached to the starting equipment.
6. Persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the remote starting equipment.
7. Close the dryer air outlet valve before connecting or disconnecting a pipe.
8. Before removing any pressurized component, effectively isolate the machine from all sources of pressure and relieve the entire system of pressure.
9. Never use flammable solvents or carbon tetrachloride for cleaning parts. Take safety precautions against toxic vapours of cleaning liquids.
10. Scrupulously observe cleanliness during maintenance and repair. Keep dirt away by covering the parts and exposed openings with a clean cloth, paper or tape.
11. Never weld on, or in any way modify, pressure vessels.
12. Whenever there is an indication or any suspicion that an internal part of a machine is overheated, the machine shall be stopped but no inspection covers shall be opened before sufficient cooling time has elapsed; this to avoid the risk of spontaneous ignition of the oil vapor when air is admitted.
13. Never use a light source with open flame for inspecting the interior of a machine, pressure vessel, etc.
14. Make sure that no tools, loose parts or rags are left in or on the machine.
15. All regulating and safety devices shall be maintained with due care to ensure that they function properly. They may not be put out of action.
16. Before clearing the machine for use after maintenance or overhaul, check that operating pressures, temperatures and time settings are correct. Check that all control and shut-down devices are fitted and that they function correctly.
17. Protect the motor, electrical and regulating components, etc. to prevent moisture from entering them, e.g. when steam-cleaning.
18. Make sure that all sound-damping material and vibration dampers, e.g. damping material on the bodywork, is in good condition. If damaged, replace it by genuine material from the manufacturer to prevent the sound pressure level from increasing.
19. Never use caustic solvents which can damage materials of the air net, e.g. polycarbonate bowls.
20. **The following safety precautions are stressed when handling refrigerant:**
  - Never inhale refrigerant vapours. Check that the working area is adequately ventilated; if required, use breathing protection.
  - Always wear special gloves. In case of refrigerant contact with the skin, rinse the skin with water. If liquid refrigerant contacts the skin through clothing, never tear off or remove the latter;

flush abundantly with fresh water over the clothing until all refrigerant is flushed away; then seek medical first aid.

**21. The following safety precautions are stressed when handling desiccant:**

- Take precautions not to inhale desiccant dust.
- Check that the working area is adequately ventilated; if required, use breathing protection.
- Do not overfill the dryer when replacing desiccant.



Also consult following safety precautions: [Safety precautions during installation](#) and [Safety precautions during operation](#).  
These precautions apply to machinery processing or consuming air or inert gas. Processing of any other gas requires additional safety precautions typical to the application which are not included herein.  
Some precautions are general and cover several machine types and equipment; hence some statements may not apply to your machine.

## 2 General description

### 2.1 Introduction

#### General

QED air dryers remove moisture from the compressed air by cooling the air to near freezing point. This causes the water to condense. The condensate is automatically drained. The dried air is warmed up before leaving the dryer.

An Infologic<sup>2</sup> controller controls and protects the dryer.



*QED-250 up to QED-600 - general view*

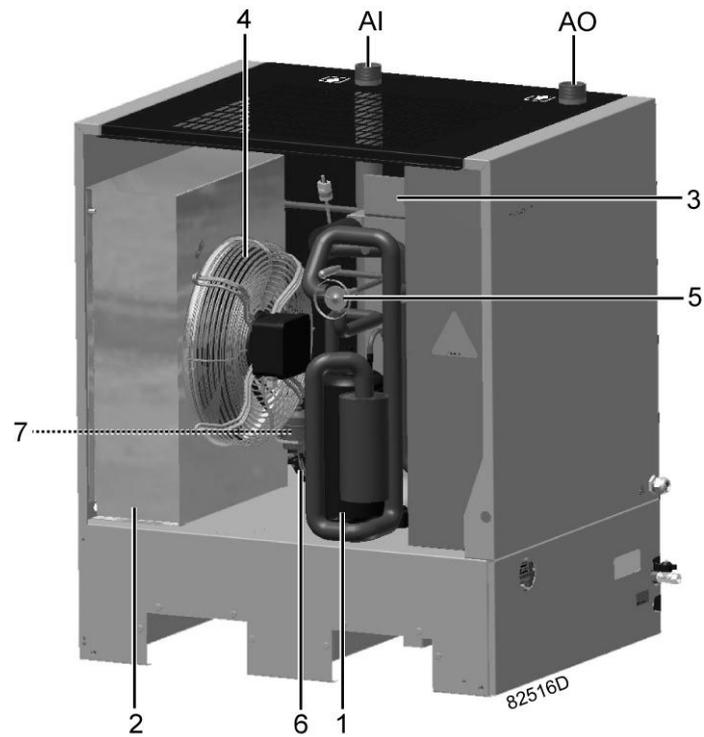
Reference	Designation
AO	Dry air outlet
AI	Wet air inlet
ER1	Infologic <sup>2</sup> controller



*QED-250 up to QED-600 - side view*

The front panel and the side panel can be removed for service operations.

Reference	Designation
1	Supply cable passage
Dm	Manual drain valve
Da	Automatic drain connection

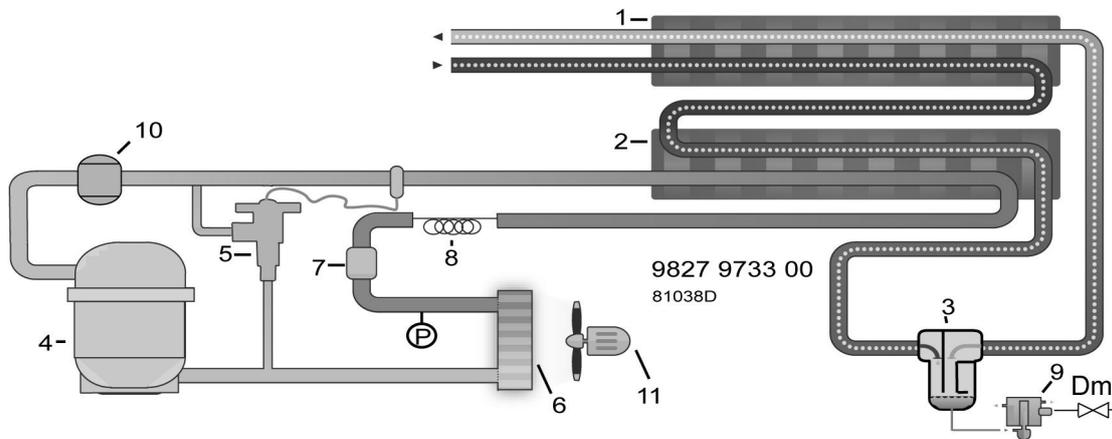


*QED-250 up to QED-600 - internal view*

Reference	Name
1	Compressor
2	Condenser
3	Heat exchanger
4	Condenser fan
5	Hot gas bypass valve
6	Capillary tube
7	Refrigerant dryer/filter

## 2.2 Air system

### Air flow diagram



*Air flow diagram*

Name	Reference
1	Heat exchanger
2	Evaporator
3	Water separator
4	Refrigerant compressor
5	Hot gas bypass valve
6	Condenser
7	Refrigerant dryer/filter
8	Capillary
9	Electronic condensate drain
10	Liquid separator
11	Cooling fan
Dm	Manual drain valve

### Description

Compressed air enters heat exchanger (1) and is cooled by the outgoing cold, dried air. Water in the incoming air starts to condense. The air then flows through heat exchanger/evaporator (2) where the refrigerant evaporates, causing the air to be further cooled to close to the evaporating temperature of the refrigerant. More water in the air condenses. The cold air then flows through separator (3) where the condensate is separated from the air.

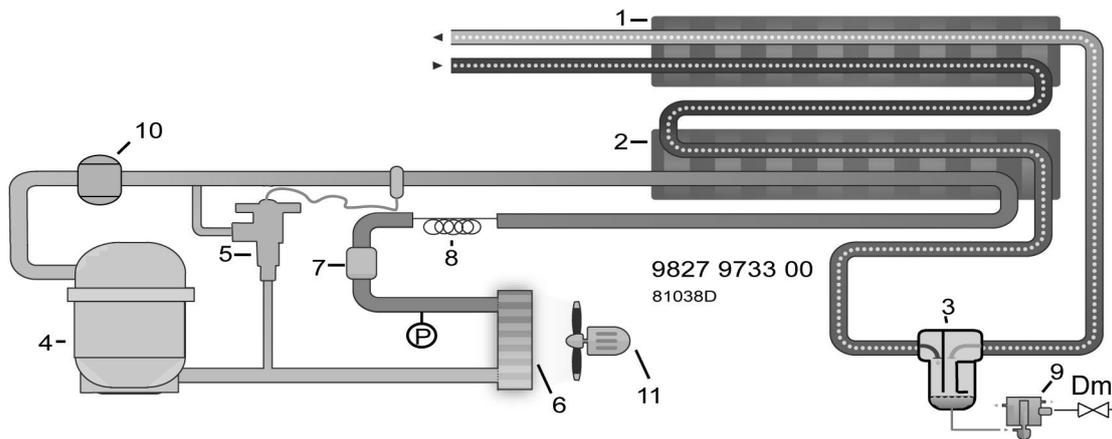
The separator is integrated in the heat exchanger/evaporator.

The condensate collects in the electronic condensate drain and is automatically drained. The cold, dried air flows through heat exchanger (1), where it is warmed up by the incoming air to approx. 5 °C (9 °F) below the temperature of the incoming air.

Condensation in the air net cannot occur unless the air is cooled to below the dew point, indicated on the control panel.

## 2.3 Refrigerant flow

### Flow diagram



Flow diagram

Name	Reference
1	Heat exchanger
2	Evaporator
3	Water separator
4	Refrigerant compressor
5	Hot gas bypass valve
6	Condenser
7	Refrigerant dryer/filter
8	Capillary
9	Electronic condensate drain
10	Liquid separator
11	Cooling fan
Dm	Manual drain valve

### Operation

The liquid separator (10) ensures that only refrigerant enters the compressor.

Compressor (4) delivers hot, high-pressure refrigerant gas which flows through condenser (6) where the refrigerant condenses.

The liquid refrigerant flows through dryer/filter (7) to the capillary tube (8). The refrigerant leaves the capillary tube at evaporating pressure.

The refrigerant enters evaporator (2), where it withdraws heat from the compressed air by further evaporation at constant pressure. The refrigerant leaves the evaporator and is sucked in again by the compressor.

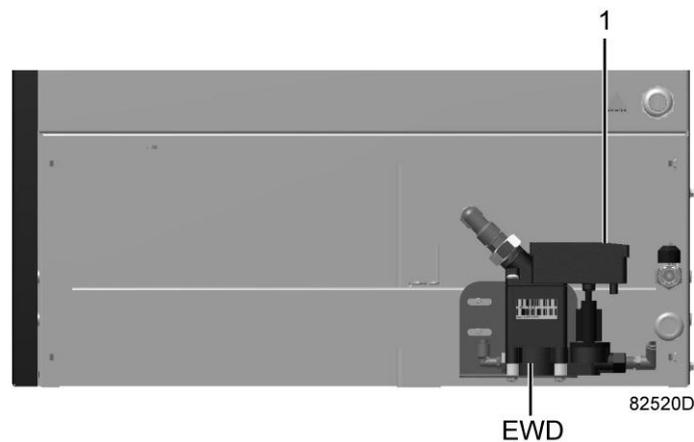
### Automatic regulation

The condenser pressure must be kept as constant as possible to obtain stable operation. The fan control switch therefore stops and starts the condenser cooling fan (11).

If, under partial or no load, the evaporator pressure drops to 7.3 bar(e) (105.8 psig), the bypass regulator (5) opens and hot, high-pressure gas is fed to the evaporator circuit to prevent the evaporator pressure from dropping any further.

## 2.4 Condensate drain system

### Description

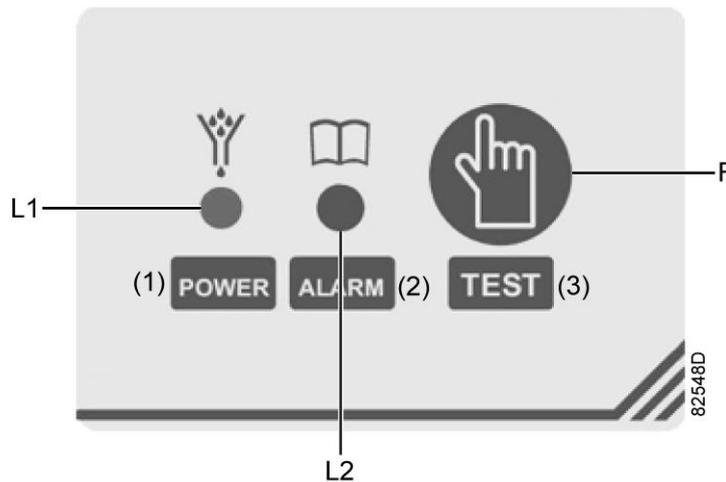


*Electronic water drain*

The dryers are equipped with an electronic water drain (EWD). The condensate from the condensate trap accumulates in a collector. When the condensate reaches a certain level, it is discharged through the drain outlet.

The condensate can also be drained by pressing the test button (1).

## Control panel



Control panel

### Text on control panel

Reference	Description
(1)	Power
(2)	Alarm
(3)	Test

### Table with references

Name	Description
L1	LED "drain voltage on"
L2	LED alarm
F	Functions button

The control panel on top of the drain includes a multifunction button and two state display LED's. When LED L1 is continuously on, this indicates that the solenoid valve is energized; when LED L1 is blinking, this indicates that the valve is draining. If no water is supplied to the drain, the valve will make a short forced opening every three hours. LED L2 indicates a possible alarm situation, See problem solving for detailed analysis, [Problem solving](#) .

The test button can be used in three different ways:

- When it is pressed during normal operation, it starts a manual drain test.
- When it is pressed during an alarm, it resets the control logic.
- By pressing it for at least five seconds, the self-diagnosis routine will be started. This function is very useful when the installation is finished, to check if the installation has been successful and to simulate the alarm situation without having to wait for condensate to build inside the dryer. To return to normal operation, just switch the drain off and on again.

## 3 Controller

### 3.1 Infologic<sup>2</sup> controller

#### Control panel



*Control panel*

#### General description

**The Infologic<sup>2</sup> controller automatically controls the dryer, i.e.:**

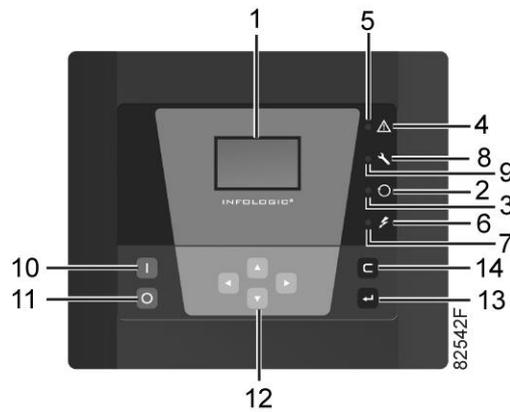
- Monitors the pressure dew point and the digital switches to ensure safe operation.
- Stops the dryer whenever necessary.
- Restarts the dryer when required.
- Allows selection of the control mode. See section [Calling up/modifying dryer regulation mode](#).

**In order to control the dryer and to read and modify programmable parameters, the controller has a control panel provided with:**

- LED's, indicating the status of the dryer
- A display, indicating the operating conditions or a fault
- Keys to control the dryer and to access the data collected by the controller
- Buttons to manually start and stop the dryer

## 3.2 Control panel

### Detailed description



*Control panel*

Reference	Designation	Function
1	Display	Shows icons and operating conditions.
2	Automatic operation symbol	
3	LED, Automatic operation	Indicates that the regulator is automatically controlling the dryer. The dryer is stopped and restarted depending on the air consumption and the data programmed in the regulator.
4	Warning symbol	
5	LED, Warning	Is lit if a warning condition exists.
6	Voltage symbol	
7	LED, Voltage on	Indicates that the voltage is switched on.
8	Service symbol	
9	LED, Service	Is lit when service is needed.
10	Start button	This button starts the dryer. Automatic operation LED (3) lights up. The Infologic <sup>2</sup> is operative.
11	Stop button	This button is used to stop the dryer. Automatic operation LED (3) goes out.
12	Scroll buttons	Use these buttons to scroll through the menu .
13	Enter button	Use this button to confirm the last action
14	Escape button	Use this button to go to previous screen or to end the current action.

### 3.3 Icons and symbols used on the display

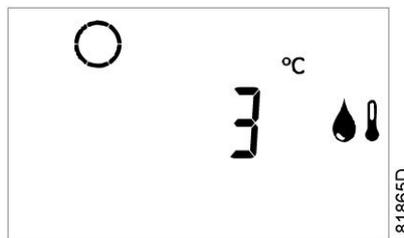
Function	Icon	Description
Dryer status	 81532D	When the dryer is stopped, the icon is standing still. When the dryer is operating, the icon is rotating.
Machine control mode	 81536D	Remote start / stop
	 81537D	LAN control
Automatic restart	 81538D	Automatic restart after voltage failure is active
Timer	 81539D	Indicates a timer is active
Service	 81541D	Service required
Units	°C 81108D	Temperature unit
	°F 81107D	Temperature unit
	hrs 81109D	Hours
	x1000 81110D	The value shown must be multiplied by 1000 to get the actual value
Other icons	 81542D	Motor
	 81545D	Drain
	 81852D	Flow switch on, energy saving mode off
	 81860D	Energy saving mode on (flow switch off)
	 81104D	Energy saving mode on and flow switch on

Function	Icon	Description
	 81117D	Ambient temperature
	 81106D	Dew point temperature

### 3.4 Main screen

#### Main screen

When the voltage is switched on, the first screen is a test screen. The next screen is the main screen, shown automatically:



*Main screen, basic indications*

In above image, the screen shows:

- The dryer status (the icon is rotating when the dryer compressor is running, standing still when stopped).
- The dew point temperature (3 °C/37.4 °F) with the dew point icon.

If certain other options are active, e.g. Energy efficient mode activated (see section [Calling up/modifying dryer regulation mode](#)), the main screen may also display the corresponding icons (see section [Icons used](#)).

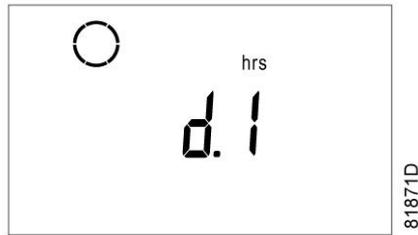
	Just after starting, the timer icon is displayed during a programmed time. After this period, the timer icon disappears again.
---	--

### 3.5 Scrolling through all screens

#### Scroll buttons

Scroll buttons (12) can be used to scroll through all screens. The screens are divided into register screens, measured data screens, digital input screens (numbered as <d. in>, <d. 1>, ...), parameter screens (numbered as <P. 1>, <P. 2>, ...), protections screens (numbered as <Pr. 1>, ...) and test screens (numbered as <t. 1>, ...).

During scrolling, the numbers of the screens appear in a consecutive order. For most screens, the unit of measurement and the related pictograph are shown together with the screen number.



*Example (operating hours)*

The screen shows the screen number <d. 1>, the unit used <hrs> and the related icon (operation). Press Enter key (13) to call up the number of operating hours.

**Overview of the screens**

Digital input screens	Designation	Related topic
d. in	Status of the digital inputs	See section <a href="#">Digital inputs</a>
d. 1	Running hours	See section <a href="#">Calling up running hours</a>
d. 2	Motor starts	See section <a href="#">Calling up motor starts</a>
d. 3	Module hours	See section <a href="#">Calling up module hours</a>
d. 4	Service timer reading	See section <a href="#">Calling up/Resetting the service timer</a>
d. 5	Actual program version	

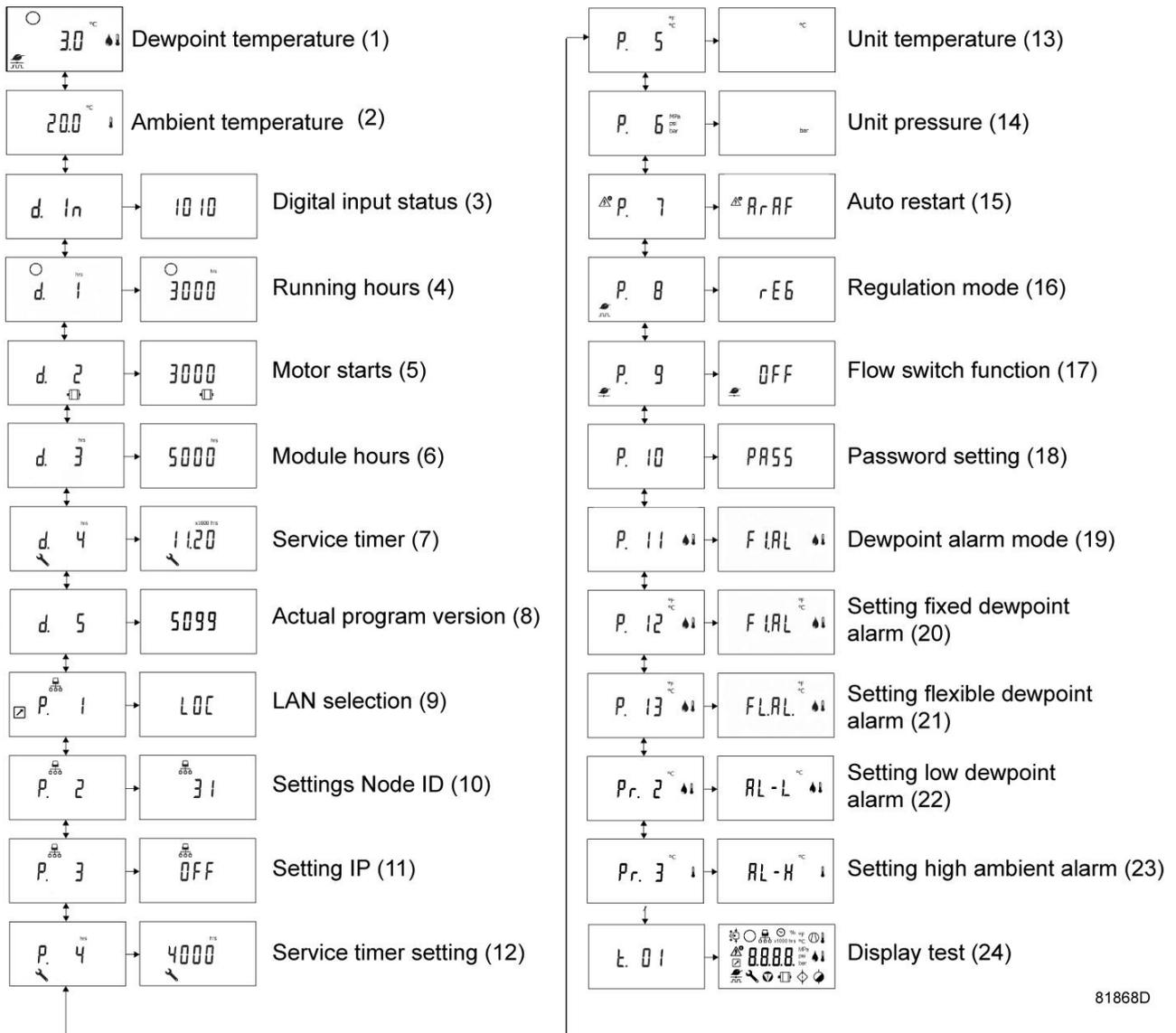
Parameter screens	Designation	Related topic
P. 1	Selection between local, remote or LAN control	See section <a href="#">Selection between Local, Remote or LAN control</a>
P. 2	Setting a node ID for LAN control and the channels for previous and actual version of the controller	See section <a href="#">Calling up/modifying CAN address control</a>
P. 3	Settings for IP, gateway and Subnet mask	See section <a href="#">Calling up/modifying IP, Gateway and Subnetmask</a>
P. 4	Service timer	See section <a href="#">Calling up/modifying service timer settings</a>
P. 5	Setting of the temperature unit	See section <a href="#">Calling up/Modifying unit of temperature</a>
P. 6	Setting of the pressure unit	See section <a href="#">Calling up/Modifying unit of pressure</a>
P. 7	Function: Automatic restart after voltage failure	See section <a href="#">Activating automatic restart</a>
P. 8	Setting of dryer regulation mode	See section <a href="#">Calling up/modifying dryer regulation mode</a>
P. 9	Flow switch	See section <a href="#">Calling up/modifying flow switch function</a>
P. 10	Setting a password	See section <a href="#">Activating password protection</a>

<b>Parameter screens</b>	<b>Designation</b>	<b>Related topic</b>
P. 11	Flexible or fixed alarm	See section <a href="#">Selection between flexible alarm and fixed alarm</a>
P. 12	Setting of fixed alarm	See section <a href="#">Calling up/modification fixed dew point alarm setting</a>
P. 13	Setting of flexible alarm	See section <a href="#">Calling up/modification flexible dew point alarm setting</a>

<b>Protections screens</b>	<b>Designation</b>	<b>Related topic</b>
Pr. 2	Low dew point alarm	See section <a href="#">Shutdown warning</a>
Pr. 3	High ambient temperature alarm	This value is fixed and cannot be modified. See section <a href="#">Shutdown warning</a>

<b>Test screens</b>	<b>Designation</b>	<b>Related topic</b>
t. 1	Display test	See section <a href="#">Test screens</a>

**Menu flow**



81868D

*Simplified menu flow*

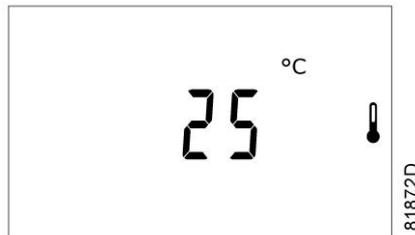
Ref.	Description	Ref.	Description
(1)	Dew point (main screen)	(13)	Temperature unit
(2)	Ambient temperature	(14)	Pressure unit
(3)	Digital input status	(15)	Auto restart function
(4)	Running hours	(16)	Dryer regulation mode
(5)	Motor starts	(17)	Flow switch setting
(6)	Module hours	(18)	Password setting
(7)	Service timer reading	(19)	Alarm options
(8)	Actual program version	(20)	Fixed alarm setting
(9)	LAN selection	(21)	Flexible alarm setting
(10)	Settings node ID	(22)	Low dew point alarm and shutdown setting
(11)	IP settings	(23)	High ambient alarm and shutdown setting

Ref.	Description	Ref.	Description
(12)	Service timer setting	(24)	Display test

### 3.6 Calling up ambient temperature

#### Calling up ambient temperature

Starting from the Main screen, press Scroll button (12). The ambient temperature will be shown:



In the above example, the screen shows that the ambient temperature is 25 °C (77 °F).

This temperature is used by the regulation algorithm to calculate a safe dew point in the energy efficient mode (see section [Calling up/modifying dryer regulation mode](#)).

### 3.7 Digital inputs

#### Status of digital inputs

Starting from the Main screen, press Scroll button (12) until <d. In> is shown and then press the Enter button (13). A screen similar to the following appears:



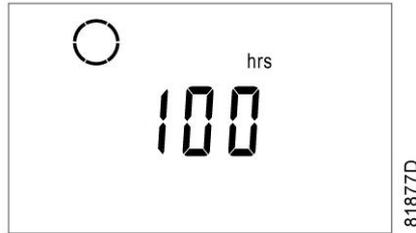
The screen shows (from left to right) the status of the remote start/stop switch, the electronic condensate drain contact and the flow switch.

Contact	Description	Value	Status
1	Remote Start/Stop switch status	0	Stop
		1	Start
2	Condensate drain contact status	0	Drain alarm
		1	No problem
3	Flow switch status	0	No flow
		1	Air flow

### 3.8 Calling up running hours

#### Calling up running hours

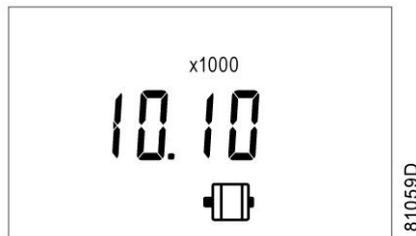
Starting from the Main screen, press Scroll button (12) until <d. 1> is shown and then press Enter button (13). A screen similar to the following appears:



The number of hours is shown in <hrs> (hours) or in <x1000 hrs> (hours x 1000). In above example, the screen shows the dryer has been running during 100 hours.

### 3.9 Calling up motor starts

#### Calling up motor starts



This screen shows the number of motor starts (x 1 or - if <x1000> lights up - x 1000). In the above example, the number of motor starts is 10100.

### 3.10 Calling up module hours

#### Calling up module hours

Starting from the Main screen, press Scroll button (12) until <d. 3> is shown and then press Enter button (13). A screen similar to the following appears:



In the example shown, the screen shows the unit used (hrs) and the value (5000): the regulator module has been in service during 5000 hours.

## 3.11 Calling up/resetting the service timer

### Calling up the service timer

The controller has a built-in timer to give a warning when certain maintenance activities are to be carried out.

Starting from the Main screen, press Scroll button (12) until <d. 4> is shown and then press Enter button (13). A screen similar to the following appears:



This screen shows the unit used <hrs> (or <x1000 hrs>) and the value <1191>. In the example shown, the compressor has run 1191 hours since the previous service (i.e. the last time the timer was reset).

### Service warning

A service warning will appear when the service timer has reached the programmed time interval. See section [Calling up/modifying service timer settings](#).

If the service timer exceeds the programmed time interval, alarm LED (5) will light up.

Stop the compressor, switch off the voltage and carry out the required service actions. See section Maintenance instructions.

After servicing, reset the service timer.

### Resetting the service timer

- Scroll to register screen <d. 4> and press Enter button (13).
- The reading (e.g. 4000) will appear.
- Press Enter button (13) and - if a password is set - enter the password. The value shown will start blinking, indicating that resetting is possible.
- Press Enter button (13) to reset the timer or - in case you desire to leave the screen without changes - press the Escape button (14) to cancel the operation.

## 3.12 Shut-down warning

### Description

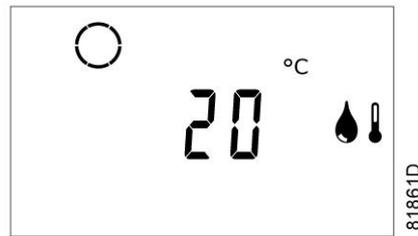
**A shutdown warning will appear in the event of:**

- A too low or too high dew point temperature
- A too high ambient temperature
- A drain fault

The dryer remains running. Alarm LED (5) is lit. The alarm disappears automatically when the abnormal condition ends.

## Dew point temperature warning

If the dew point temperature is lower than the programmed value (default value  $-0.1\text{ }^{\circ}\text{C}$  ( $31.8\text{ }^{\circ}\text{F}$ ), see section [Calling up/modifying low dew point setting](#)) or if it exceeds the warning level (see section [Selection between flexible alarm and fixed alarm](#)), alarm LED (5) will light up and the related pictograph (dew point) starts flashing.



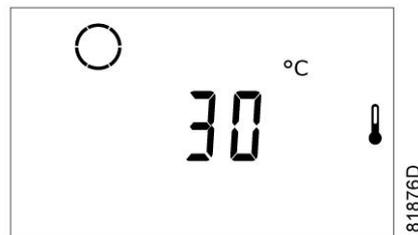
*Main screen with dew point temperature warning*

In the example shown, the dew point is  $20\text{ }^{\circ}\text{C}$  ( $68\text{ }^{\circ}\text{F}$ ) and the dew point icon is flashing.

If the dew point becomes normal again, the alarm will disappear.

## High ambient temperature alarm

If the ambient temperature is higher than the programmed value (default value  $50\text{ }^{\circ}\text{C}$  ( $122\text{ }^{\circ}\text{F}$ ), see section [Calling up/modifying high ambient temperature setting](#)) during at least 25 seconds, but still below  $60\text{ }^{\circ}\text{C}$  ( $140\text{ }^{\circ}\text{F}$ ), alarm LED (5) will light up and the related pictograph (ambient temperature) starts flashing.



*Main screen with ambient temperature warning*

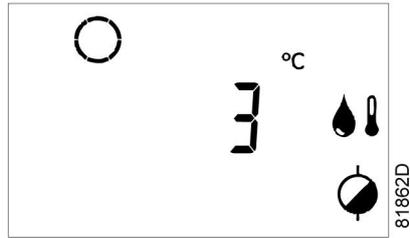
In the example shown, the dew point is  $30\text{ }^{\circ}\text{C}$  ( $86\text{ }^{\circ}\text{F}$ ) and the ambient temperature icon is flashing. See section [Calling up ambient temperature](#) to check the temperature.

If the ambient temperature drops again below the programmed value, the alarm will disappear.

## Drain alarm

### The drain alarm appears when:

- The drain is not able to drain all the condensate.
- The compressed air pressure is too low.
- During initial start-up it may indicate that the automatic drain is connected wrongly. See section [Problem solving](#).



*Main screen with drain alarm*

In case of a drain alarm, alarm LED (5) will light up and the related pictograph (drain) starts flashing.

**Remedy**

- It remains possible to scroll through other screens (using Scroll buttons 12) to check the actual status of the related parameters.
- If necessary, press the Stop button (11) to stop the dryer.
- If necessary, switch off the voltage, inspect the dryer and remedy.
- The warning message will disappear as soon as the warning condition disappears.

**3.13 Shut-down**

**Description**

**The dryer will shut down:**

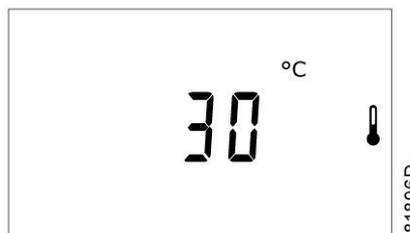
- In case the dew point temperature gets below - 0.5 °C (31.1 °F) (delay = 30 s)
- In case the ambient temperature is higher than 60 °C (140 °F) (delay = 60 s)
- In case of a problem with one of the temperature sensors

Alarm LED (5) will light up and the related icon (dew point or ambient temperature) starts flashing. The dryer is stopped and will have to be restarted manually after remedying the problem.

	After the dryer is stopped, it can take up to 5 minutes before the dryer can be restarted (protection against too frequent starting).
--	---

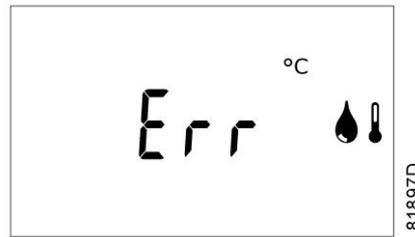
**Temperature sensor alarm**

If the dew point sensor or the ambient temperature sensor is disconnected or out of order, alarm LED (5) will light up and the related pictograph (dew point or ambient temperature) starts flashing.



*Main screen with ambient temperature alarm*

The display still shows the dew point (30 °C - 86 °F), but the ambient icon is flashing.



*Main screen with dew point sensor alarm*

The display shows <Err> and the dew point icon is flashing.

Press the Escape button (14) to reset and restart the dryer manually.

## 3.14 Selection between local, remote or LAN control

### Selection between local, remote or LAN control

Starting from the Main screen, press Scroll button (12) until <P. 1> is shown and then press Enter button (13). The actually selected control mode is shown: <LOC> for local control, <rE> for remote control or <LAN> for LAN control.

To change: press Enter button (13) and - if necessary - enter the password (see section [Activating password protection](#)). The actually selected control mode is blinking. Use Scroll button (12) to change the control mode. Press Enter button (13) to program the new control mode or press Escape button (14) to cancel.

## 3.15 Calling up/modifying CAN address

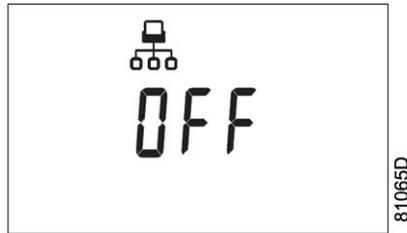
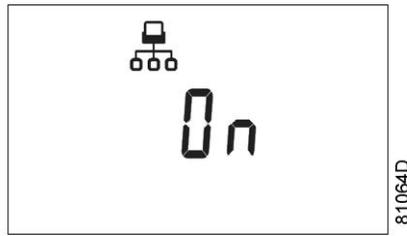
### Calling up

Starting from the main screen, press the Scroll button (12) until <P. 2> is shown and then press Enter button (13).

If necessary enter the password. The next screen shows that the function is ON or OFF. Press the Enter button (13) to change this mode. Use the Scroll buttons (12) to select <On> or <OFF> and press Enter to program.

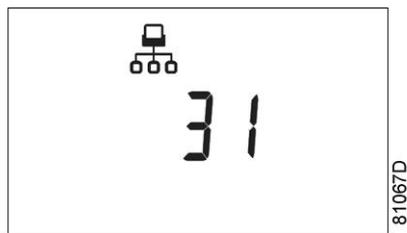
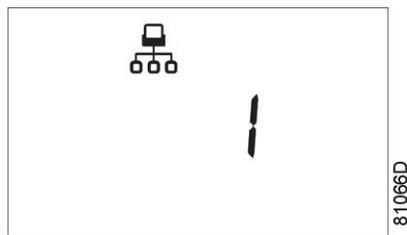
When this function is ON, use the Scroll buttons up or down (12) to see the node ID.

If desired the user can change this ID. Press the Enter button (13): the node ID value starts blinking. Use the Scroll buttons (12) to change the node ID. Press the Enter button (13) to program the new node ID or press the Escape button (14) to leave this screen or to cancel this operation.

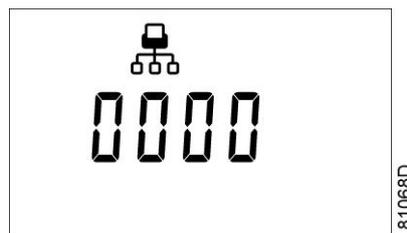


### Modifying the node ID

The node ID can be changed; use a value between 1 and 31. When the function is ON, the parameters cannot be modified. Change the function to OFF to change the node ID.



It is also possible to change the channels. The controller has 4 channels. When changing the channels, the controller can act as a Mk IV controller (a previous version of the controller). To set the channels, go to the screen where the node ID is visible. Press the Scroll button down (12). The following screen appears:



Press the Enter button (13) to modify the setting. The utmost left value will blink. Change this value by using the Scroll buttons (12). Press the Enter button (13) to confirm. Change the other values in the same way, as required.

After modifying the settings, the screen may look as follows:

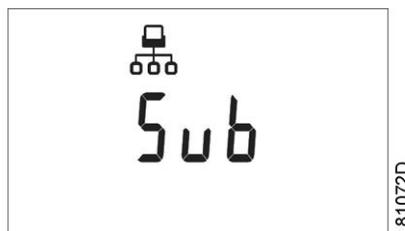
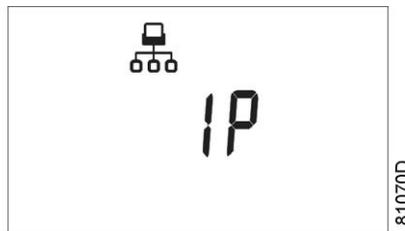


### 3.16 Calling up/modifying IP, Gateway and Subnetmask

#### Calling up

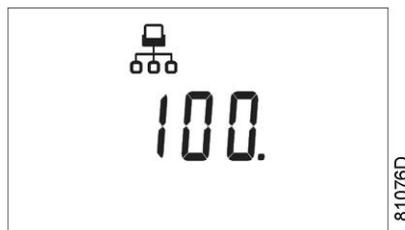
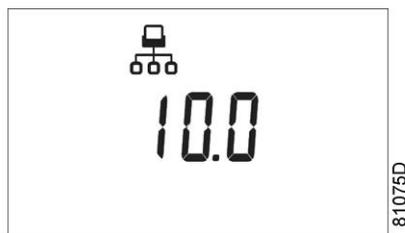
Starting from the Main screen, press the Scroll button (12) until <P. 3> is shown and then press Enter button (13).

The next screen shows either <OFF> or <On>. If <On>, press the Enter button (13) to modify it to <OFF>. Use the Scroll buttons Up or Down (12) to scroll between the items in this list (<IP> for IP address, <Sub> for Subnetmask or <GAtE> for Gateway):



## Modification

Press the Enter button (13) and if necessary enter the password. The first digits are blinking. Use the Scroll buttons Up or Down (12) to modify the settings and press Enter (13) to confirm. Modify the next digits the same way. The standard IP address is set as 192.168.100.100.



## 3.17 Calling up/modifying service timer settings

### Calling up/modifying service timer settings

Starting from the Main screen:

- Press Scroll button (12) until <P. 4> is shown and then press Enter button (13): the setting of the service timer is shown in <hrs> (hours) or <x1000 hrs> (hours x 1000). Example: <4000 hrs> means the timer is set at 4000 running hours.
- Press Enter button (13) to modify this value (a password may be required): the value starts blinking. Use the Scroll buttons (12) to modify the setting.

- Press Enter button (13) to program the new value.
- Press Escape button (14) to return to the parameter screen.

## 3.18 Calling up/modifying the unit of temperature

### Calling up/modifying unit of temperature

Starting from the Main screen, press Scroll button (12) until <P. 5> is shown and then press Enter button (13). The actually used unit is shown. Possible settings are <°C> and <°F>.

Press Enter button (13) (unit starts blinking) and use the Scroll buttons (12) to select another unit of temperature.

Press Enter button (13) to program the new unit.

Press Escape button (14) to return to the parameter screen.

## 3.19 Calling up/modifying unit of pressure

### Calling up/modifying unit of pressure

In a similar way as explained in section [Calling up/Modifying unit of temperature](#), also the unit of pressure can be modified. This is done in screen <P. 6>.

For dryers however, there is no indication of the pressure on the controller, so this setting is of no importance.

## 3.20 Calling up/modifying dryer regulation mode

### Description

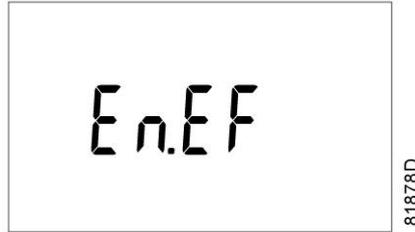
**The dryer has two regulation modes:**

- Regular mode  
The dryer achieves the lowest possible dew point.
- Energy efficient mode  
The dryer will regulate the dew point between the best achievable dew point and a safe dew point.

### Calling up/modifying dryer regulation mode

Starting from the Main screen, press arrow key (12) until <P. 8> is shown and then press enter key (13): the actual dryer regulation mode is shown as <rEG> (regular mode) or <En.EF.> (Energy efficient mode)





Press enter key (13) to modify this value (a password may be required), the value starts blinking. Use arrow keys (12) to modify this setting.

Press enter key (13) to program the new value and to return to the parameter screen.

Press Escape button (14) to return to the parameter screen.

### 3.21 Calling up/modifying flow switch function

#### Description

The flow switch monitors the compressed air flow through the dryer. If the function is active and when no flow is detected, the controller stops the dryer. The controller will restart the dryer when air flows through the dryer.

If the flow switch is not active, the dryer keeps running independently from the air flow.

#### Calling up/modifying flow switch function

Starting from the Main screen, press arrow key (12) until <P. 9> is shown and then press Enter key (13): the actual flow switch setting is shown: <StOP> (flow switch function is active) or <OFF> (flow switch function is not active).

Press Enter key (13) to modify this value (a password may be required), the value starts blinking. Use arrow keys (12) to modify the setting.

Press Enter key (13) to program the new value and use Escape key (14) to return to the parameter screen.

	The option <StbY> is not used and has therefore the same result as selecting <OFF>.
--	---



*The flow switch is active*



*The flow switch is not active*

### 3.22 Test screens

#### Display test

Starting from the Main screen, press Scroll buttons (12) until <t. 1> is shown and then press Enter button (13).

The display now shows all icons that can be displayed:



### 3.23 Activating automatic restart after voltage failure

#### Description

This function allows the compressor to restart automatically after a power failure.

This parameter, accessible in screen <P. 7>, can only be modified after entering a code. Consult Quincy if this function is to be activated.

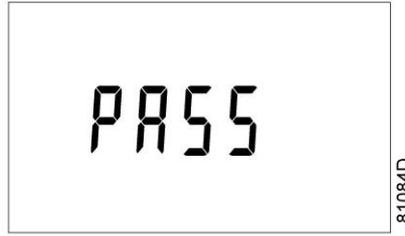


### 3.24 Activating password protection

Important settings such as the setting of the service timer and control mode settings can be protected by a password.

Starting from the Main screen:

- Press Scroll buttons (12) until <P. 10> is shown and press Enter button (13):



- Password (<PASS>) appears on the screen. Press the Enter button (13).
- The screen shows the password status (ON (<On>) or OFF (<OFF>)). Press Enter button (13) to modify.
- Change the value with Scroll buttons (12).
- Select <On> and press Enter button (13).
- Enter the new password and press Enter button (13) to confirm.
- Enter the password again and press Enter button (13) to confirm.
- <On> appears on the display. Press Escape button (14) to return to the previous screen.

	Lost passwords can not be recovered. Save the password carefully.
--	---

## 3.25 Selection between flexible alarm and fixed alarm

### Selecting between flexible alarm and fixed alarm

The dew point alarm can be set in fixed or flexible mode. If set to fixed mode, an alarm will be triggered when the dew point exceeds the alarm setting (e.g. 20°C/68 °F). If set to flexible mode, an alarm will be triggered if the dew point exceeds an offset of the desired dew point (e.g. ambient temperature minus 20 °C/68 °F).

Starting from the Main screen, press Scroll button (12) until <P. 11> is shown and then press Enter button (13). The actually selected control mode is shown on the display: <FI.AL> for fixed alarm, <FL.AL> for flexible alarm.



*Fixed alarm is selected*

To change: press Enter button (13) . The actually selected alarm mode is blinking. Use Scroll button (12) to change the alarm mode. Press Enter button (13) to program the new alarm mode. Press Escape button (14) to return to the parameter screens.

## 3.26 Calling up/modifying fixed dew point alarm setting

### Calling up/modifying fixed dew point alarm setting

Starting from the Main screen, press Scroll button (12) until <P. 12> is shown and then press Enter button (13): the actual setting of the fixed dew point alarm is shown.

Press Enter button (13) to modify this value the temperature unit starts blinking. Use the Scroll buttons (12) to modify the setting.

Press Enter button (13) to program the new value. Press Escape button (14) to return to the previous screen.

## 3.27 Calling up/modifying flexible dew point alarm setting

### Calling up/modifying flexible dew point alarm setting

Starting from the Main screen, press Scroll button (12) until <P. 13> is shown and then press Enter button (13). <FL.AL> is shown.

Press Enter button (13) again. Next screen is shown:



<SEt> is the offset value that will trigger the alarm. Press Enter button (13): the programmed value starts blinking. To change, use the Scroll buttons (12). Press Enter button (13) to modify and Escape button (14) to return to the previous screen.

It is also possible to adjust the value when the alarm must disappear again. This is done by adjusting the <rSEt> value. From the <SEt> screen, press the Scroll buttons (12). Following screen is shown:



Press Enter button (13): the programmed value starts blinking. To change, use the Scroll buttons (12). Press Enter button (13) to modify.

Press Escape button (14) to exit.

## 3.28 Calling up/modifying the low dew point setting

### Calling up/modifying the low dew point setting

In protection parameter set Pr. 2, the *Low dew point alarm level* (<AL-L>) and the *Low dew point shutdown level* (<Sd-L>) can be set. Both values are adjustable between -0.5 °C (31.1 °F) and -0.1 °C (31.82 °F).

Starting from the Main screen, press Scroll button (12) until <Pr. 2> is shown and then press Enter button (13): <AL-L> is shown.

Press Enter button (13): the programmed value starts blinking. Use the Scroll buttons (12) to modify.

Press Enter button (13) to confirm the new value and press Escape button (12) to return to previous screen.

From the screen where <AL-L> is shown, use the Scroll buttons (12) to go to <Sd-L>.

The value of <Sd-L> can be modified in a similar way.

Press Escape button (14) to return to the parameter screen.

## 3.29 Calling up/modifying high ambient temperature setting

### Calling up/modifying high ambient temperature setting

In protection parameter set Pr. 3, the *High ambient temperature alarm level* (<AL-H>) and the *High ambient temperature shutdown level* (<Sd-H>) can be set. Both values are adjustable between 35 °C (95 °F) and 60 °C (140 °F).

Starting from the Main screen, press Scroll button (12) until <Pr. 3> is shown and then press Enter button (13): <AL-H> is shown.

Press Enter button (13): the programmed value starts blinking. Use the Scroll buttons (12) to modify.

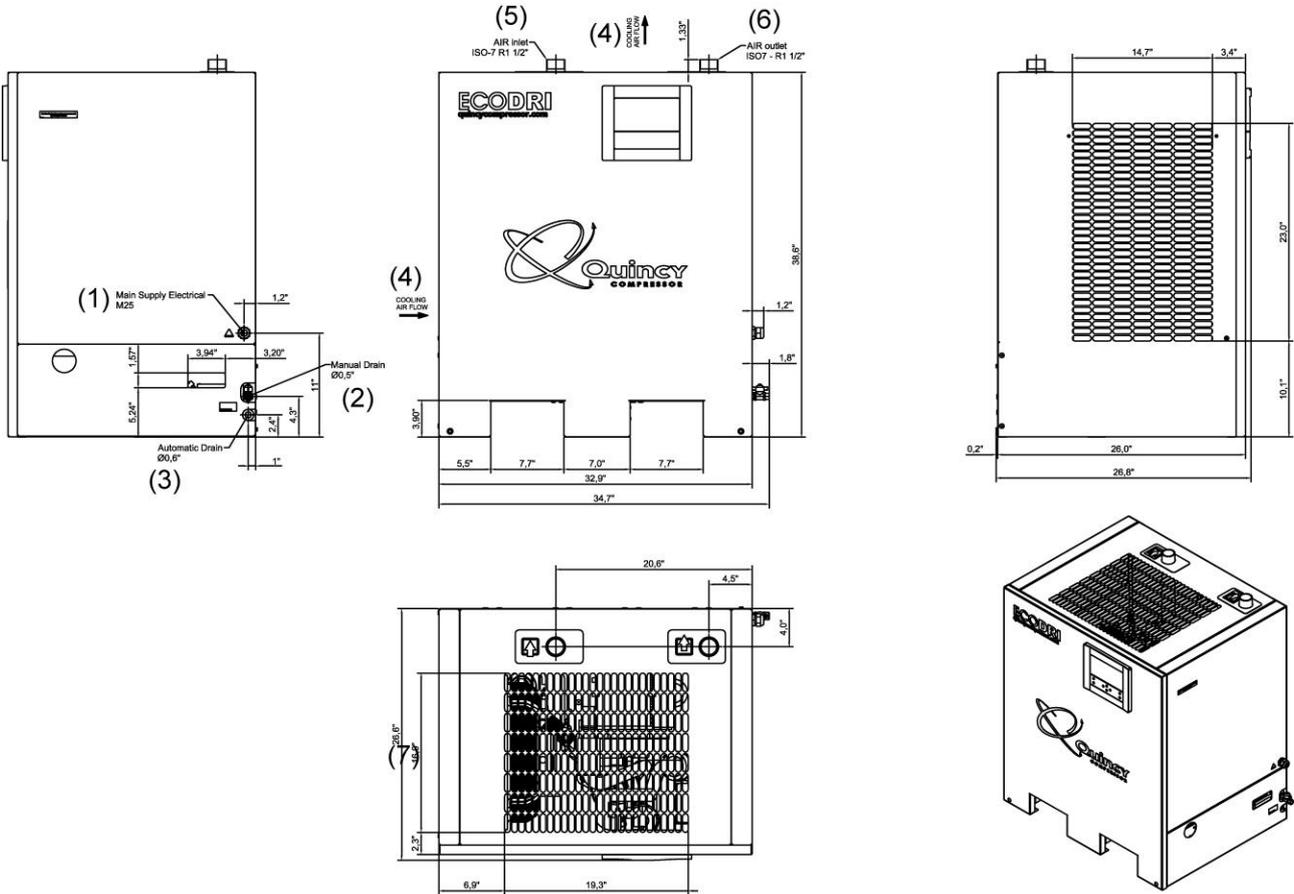
Press Enter button (13) to confirm the new value and press Escape button (12) to return to previous screen.

From the screen where <AL-H> is shown, use the Scroll buttons (12) to go to <Sd-H>.

The value of <Sd-H> can be modified in a similar way.

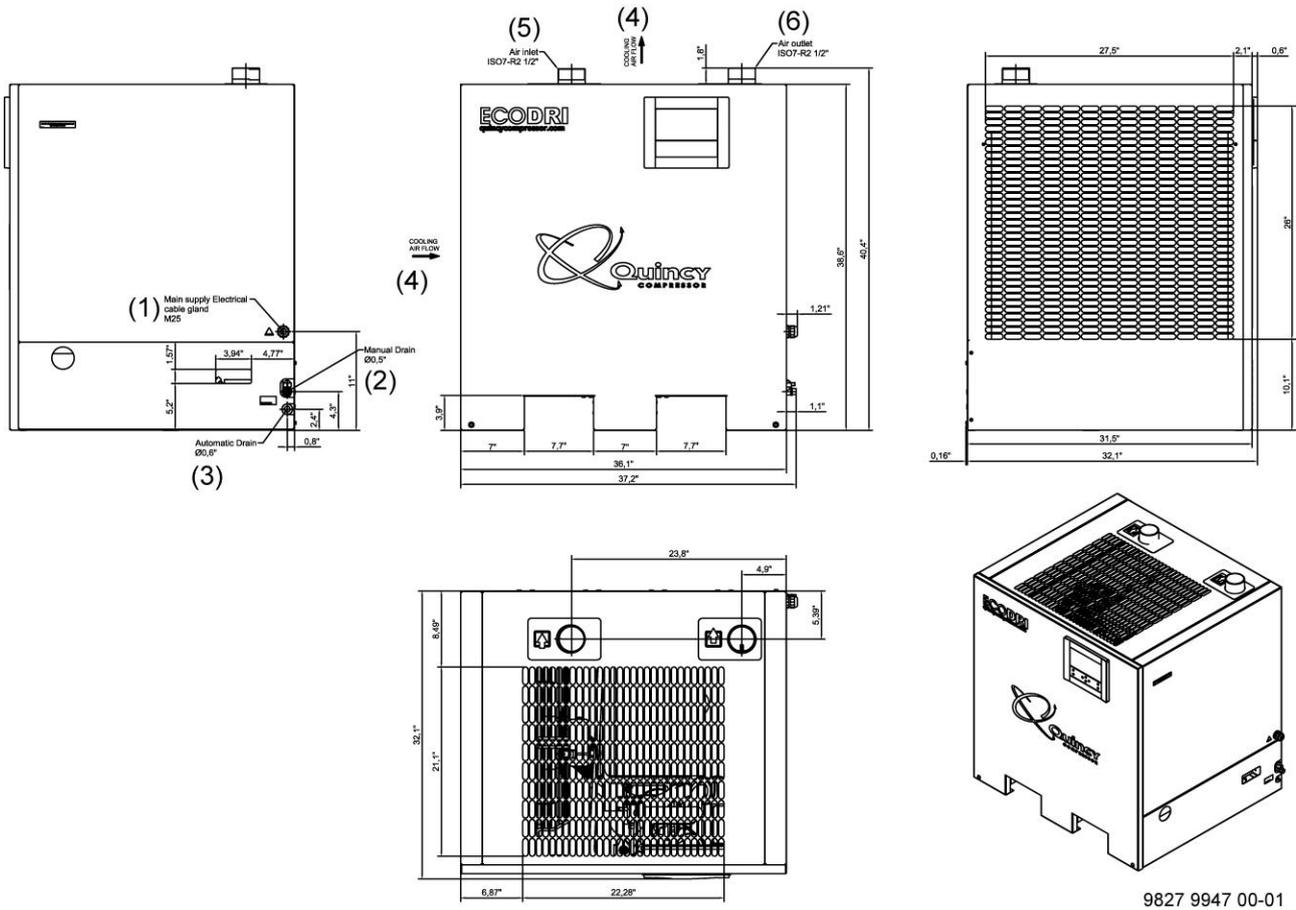
## 4 Installation

### 4.1 Dimension drawings



9827 9945 00-01  
82592D

*QED-250 and QED-300 - dimension drawing*

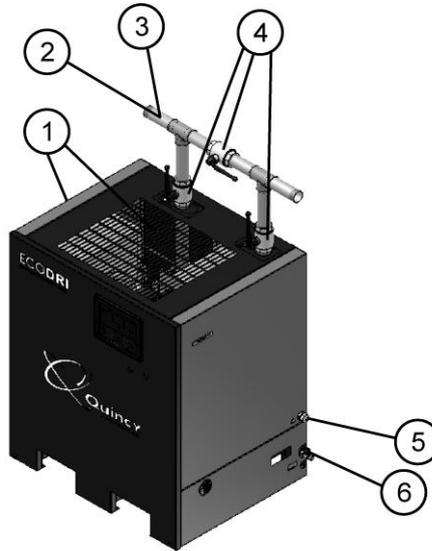


9827 9947 00-01  
82594D

*QED-350 up to QED-600 - dimension drawing*

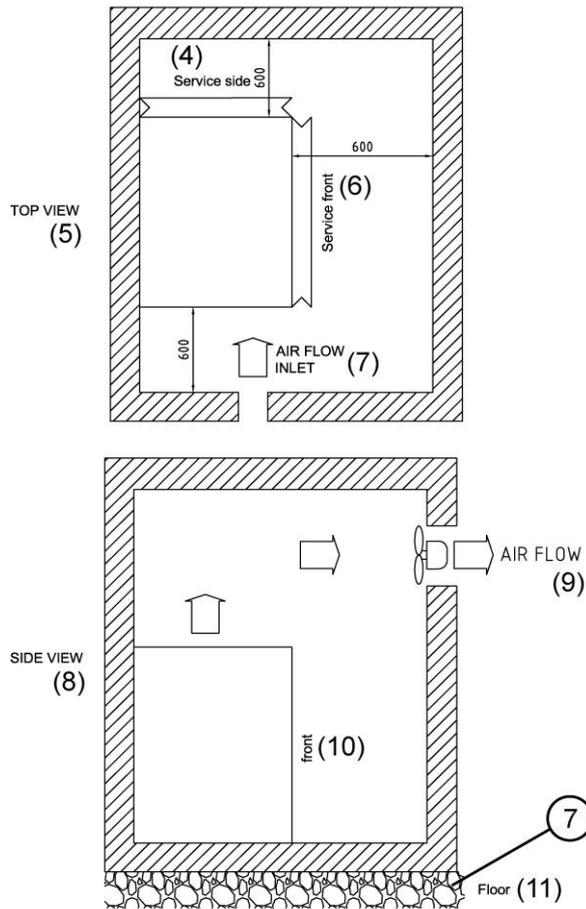
Reference	Name
(1)	Main supply electrical cable gland M25
(2)	Manual drain
(3)	Automatic drain
(4)	Cooling air flow
(5)	Air inlet
(6)	Air outlet

## 4.2 Installation proposal



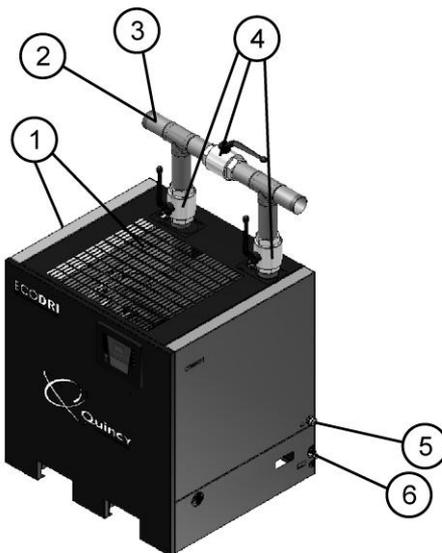
Standard dryer : (1)

- \* Dryer installation proposal with reference to minimum needed free area (2)
- \* Ventilation proposal (3)



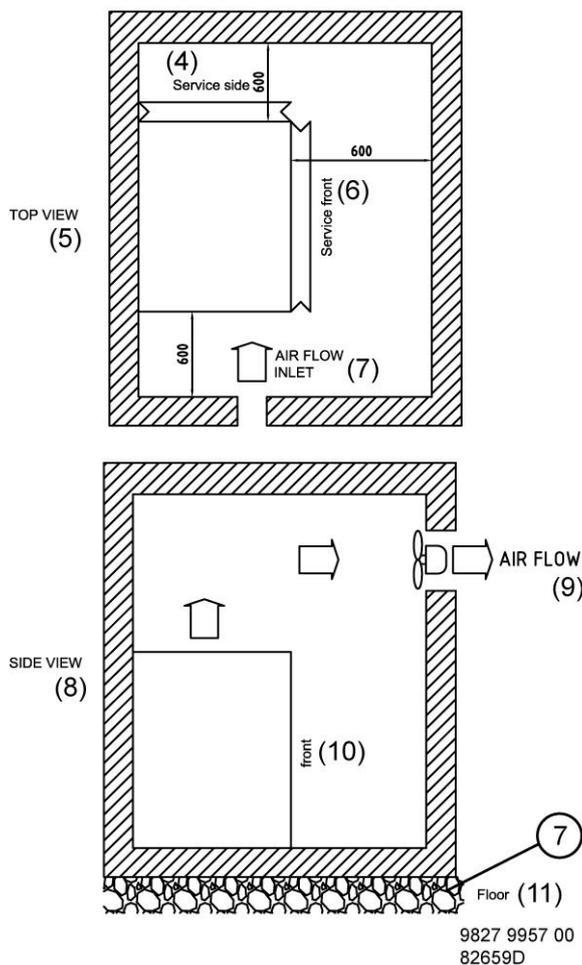
9827 9955 00  
82596D

*Installation proposal - QED-250 and QED-300*



Standard dryer : (1)

- \* Dryer installation proposal with reference to minimum needed free area (2)
- \* Ventilation proposal (3)



*Installation proposal - QED-350 up to QED-600*

Text on drawings:

Reference	Description
(1)	Standard dryer
(2)	Dryer installation proposal with reference to minimum needed free area
(3)	Ventilation proposal
(4)	Service side
(5)	Top view
(6)	Service front
(7)	Air flow inlet
(8)	Side view
(9)	Air flow
(10)	Front
(11)	Floor

Instructions

Reference	Description
1	The inlet grids and ventilation fan should be installed in such way that any recirculation of the cooling air is avoided. The maximum air velocity through the grids is 5 m/s (16.5 ft/s). The maximum allowable pressure drop over the cooling air ducts is 30 Pa (0.12 in wc). When 30 Pa is exceeded a ventilation fan should be installed at the outlet of the cooling air ducts.
2	Make sure all free water is removed from the compressed air before it enters the dryer. The water separator and drain system of the dryer are not designed to handle the water formed in the aftercooler of the compressor.
3	Make sure that no dirt particles (e.g. coming from corrosion in the compressed air network) can enter the dryer. These particles may be harmful to the dryer's heat exchanger and the condensate drain.
4	It is recommended to install bypass pipes over the dryer with bypass valves in order to isolate the dryer during service operations, without disturbing the compressed air delivery.
5	Power supply cable to be sized and installed by a qualified electrician.
6	The condensate drain pipes from the dryer to the collection point must not become submerged in the collected condensate. Do not allow untreated condensate to enter the draining system.
7	The refrigerant dryer should be installed on a level floor suitable for taking the weight of the dryer.

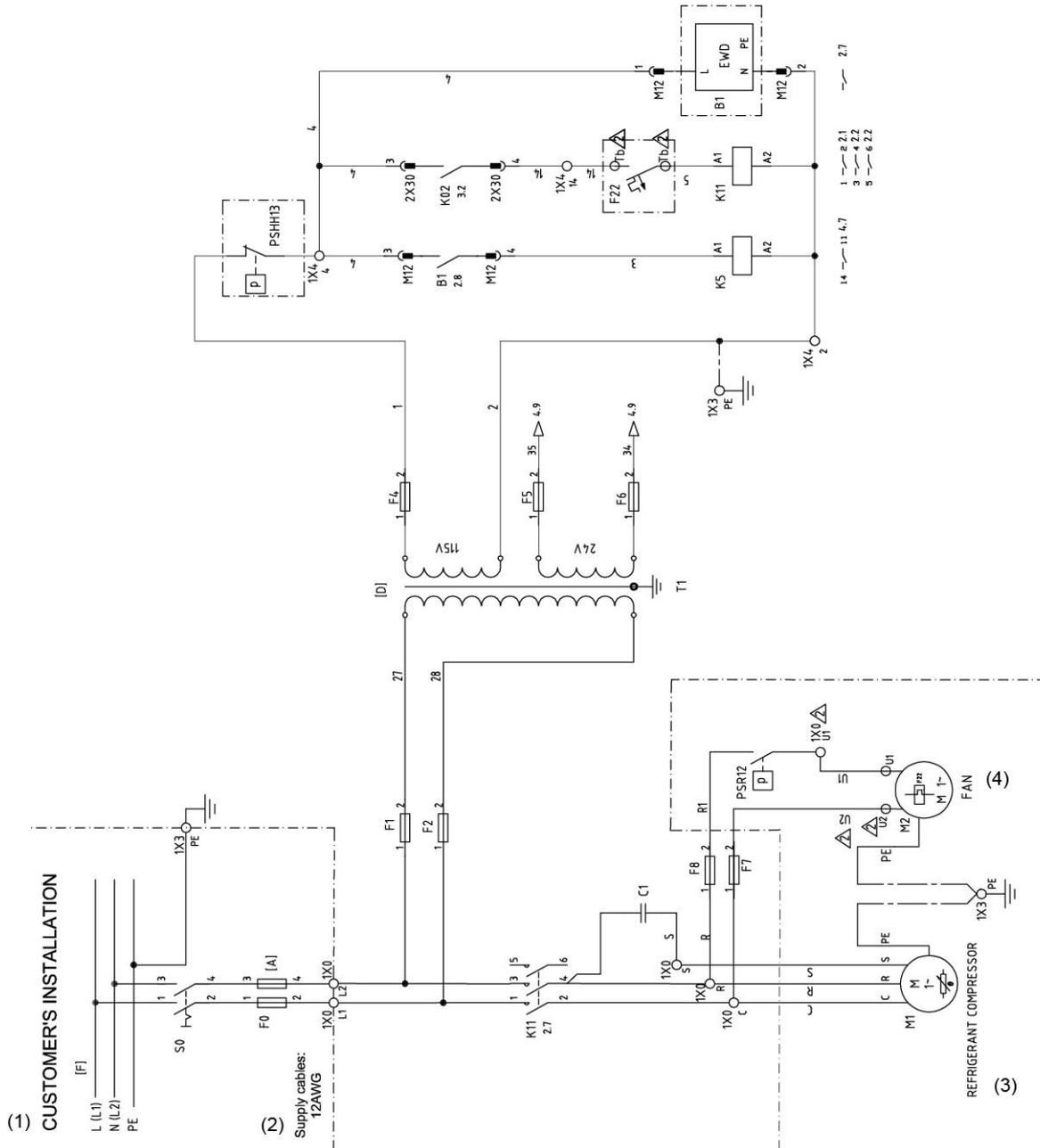
	<ul style="list-style-type: none"> <li>• All pipes to be installed stress-free to the dryer. Do not use the dryer as support for external pipes.</li> <li>• Avoid installation of the dryer in corrosive atmosphere.</li> <li>• The dryer is not designed for outdoor use.</li> <li>• Install a safety valve on the connection pipe between the compressor and the dryer!</li> </ul>
--	--

## 4.3 Electrical connections

### Electrical connections

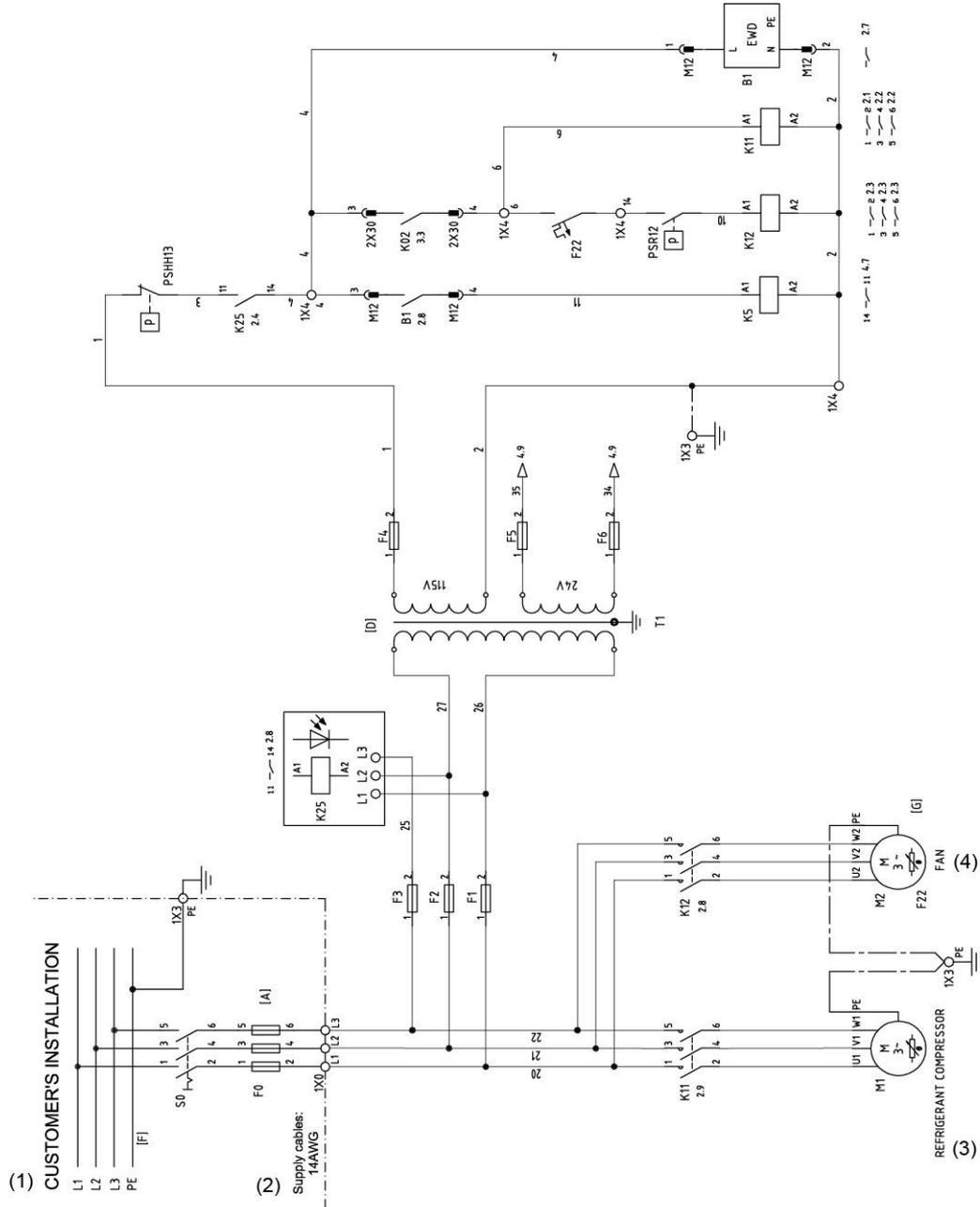
1. Provide an isolating switch nearby the dryer.
2. Check that the electric cables and wires inside the electric cabinet are clamped tight to their terminals.
3. Check the fuses and the setting of the overload relay. See section [Settings of fuses](#).
4. On single-phase units: connect the power supply cables to terminals L1, L2 of terminal strip (1X0).
5. On three-phase units: connect the power supply cables to terminals L1, L2, L3 of terminal strip (1X0).
6. Connect the earth conductor to earth bolt (1X3).





9820 7443 01  
84465D

Electrical diagram for single-phase, 60Hz units



9820 7443 00  
84466D

Electrical diagram for three-phase units, 50/60Hz

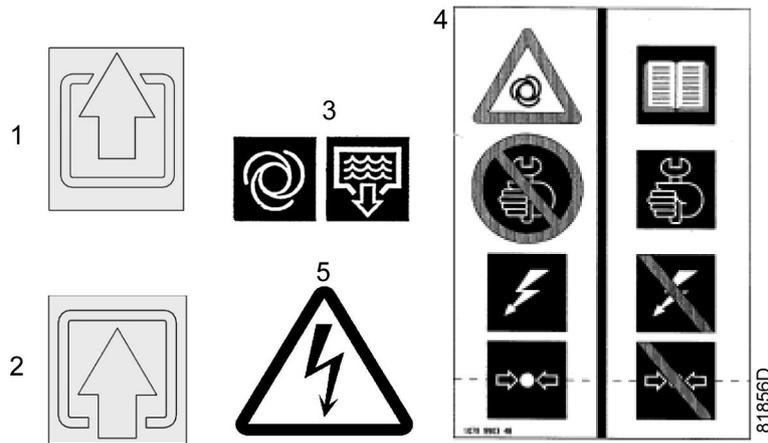
Typical designations used in the electrical diagrams

Reference	Designation
(1)	Customer's installation
(2)	Supply cables
(3)	Refrigerant compressor
(4)	Fan
B1	Electronic water drain
C1	Capacitor

Reference	Designation
E	Controller
F0	Fuse for customer's installation
F1-8	Fuses
F22	Fuse for fan motor M2
K11	Contactor for compressor
K12	Contactor for fan motor
K25	Phase sequence relay
K5	Relay (alarm functions)
M1	Compressor
M2	Fan motor
PSD11	Switch (PD filter)
PSHH13	High pressure switch
PSR12	Fan switch
S0	Switch for customer's installation
S1'	Remote start/stop
S2	Flow switch
TT01	Temperature sensor

## 4.4 Pictographs

### Pictographs



6 Contains fluorinated greenhouse gases covered by the Kyoto Protocol

Reference	Description
1	Dryer outlet
2	Dryer inlet
3	Automatic condensate drain

<b>Reference</b>	<b>Description</b>
4	Warning: switch off the voltage, depressurise the compressor and read the instruction book before carrying out maintenance work.
5	Warning, voltage
6	Information label refrigerant: Contains fluorinated greenhouse gases covered by the Kyoto Protocol.

## 5 Operating instructions

### 5.1 Warnings

#### Safety precautions

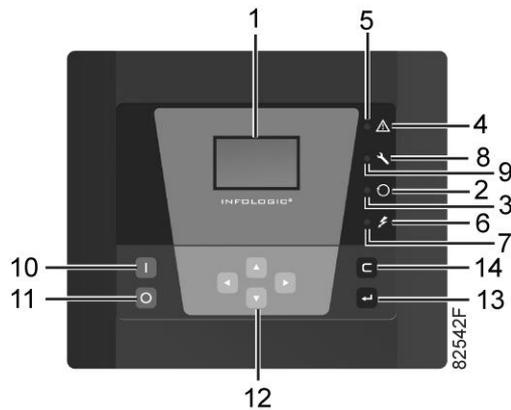
The operator must apply all relevant safety precautions, including those mentioned in this manual.

#### Altitude operation

Consult your supplier if operating above 3000 m (9843 ft).

### 5.2 Initial start

#### Procedure

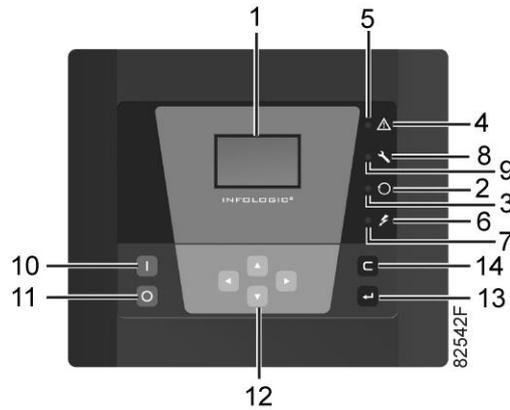


*Control panel*

Step	Action
1	A few minutes before starting, the main supply to the dryer must be switched on in order to initialize the Infologic <sup>2</sup> and the flow switch.
2	Press start button (10). After a few seconds the dryer is started. Three-phase units are provided with a phase sequence relay. When the dryer does not start, switch off the voltage and reverse two incoming electric lines.

## 5.3 Starting

### Control panel



*Control panel*

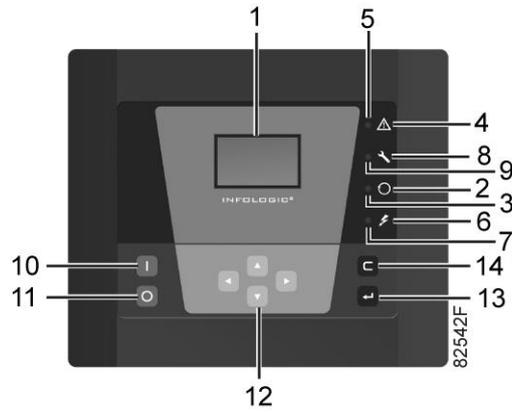
### Procedure

To prevent that wet air gets into the compressed air circuit, it is advised to follow next procedure:

Step	Action
1	Switch on the main supply to the dryer a few minutes before starting, to allow the Infologic <sup>2</sup> and the flow switch to initialize.
2	If installed, close the dryer bypass valve and the dryer outlet valve (customers installation).
3	Open the dryer air inlet valve (customers installation) and pressurize the dryer.
4	Press start button (10). After a few seconds the dryer is started.
5	Approximately 5 minutes later, open the dryer air outlet valve (customers installation).
6	Approximately 10 minutes later, the dew point will be stabilized.

## 5.4 During operation

### Description



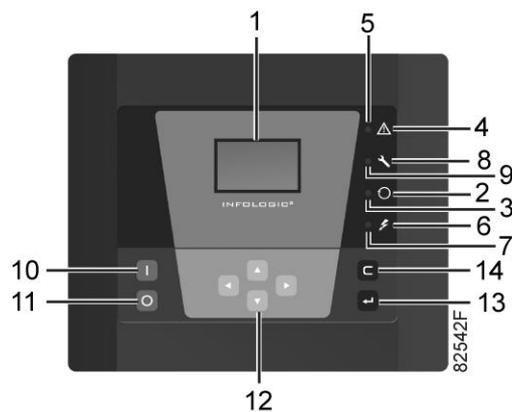
*Control panel*

### Regularly check:

- The pressure dew point on the display of the control panel. The pressure dew point will deviate from nominal if the air inlet conditions or volume flow differ from nominal.
- That condensate is discharged. The amount depends on the operating conditions.

## 5.5 Stopping

### Control panel



*Control panel*

**Procedure**

<b>Step</b>	<b>Action</b>
1	Close dryer inlet and outlet valves (customer's installation).
2	Press stop button (11). The dryer stops. Voltage on LED (4) remains lit. Leave the voltage on if the dryer has to remain on standby.

## 6 Maintenance instructions

### Attention

The dryers described in this manual contain HFC based refrigerant.

### Safety precautions

**When handling refrigerant, all applicable safety precautions must be observed. Please be aware of the following points:**

- Contact of refrigerant with the skin will cause freezing. Special gloves must be worn. In case of contact with the skin, the skin should be rinsed with water. On no account may clothing be removed.
- Fluid refrigerant will also cause freezing of the eyes; safety glasses must hence be worn.
- Refrigerant is harmful. Do not inhale refrigerant vapours. Check that the working area is adequately ventilated.

When removing the service panels of the dryer, be aware that internal elements such as the pipes can reach a temperature of 110°C (230°F). Therefore, wait until the dryer has cooled down before removing the panels.

Before starting any maintenance or repair work, switch off the voltage and close the air inlet and outlet valves.

Mind the sharp edges of the fan blades in case the condenser fan needs to be replaced. The use of hand protection is a requisite.

### Local legislation

**Local legislation may stipulate that:**

- Work on the refrigerant circuit of the cooling dryer or on any equipment which influences its function must be undertaken by an authorised control body.
- The installation should be checked once a year by an authorised control body.

### General

**The following remarks should be kept in mind:**

- Keep the dryer clean.
- The dryer is equipped with a new condenser technology, which provides the best efficiency on condition that the condenser maintenance instructions are followed closely.

## Preventive maintenance schedule

Period	Operation
Daily	Check that condensate is discharged during operation
Weekly	Drain cleaning: open the manual drain valve during a few seconds. Hold a towel against the drain outlet when opening.
Monthly	Drain inspection: press the test button on top of the electronic water drain (EWD)
	Condenser cleaning: proceed as follows: <ul style="list-style-type: none"> <li>• Stop the dryer and turn off the supply voltage.</li> <li>• Remove the front service panel.</li> <li>• Remove dust from the condenser surface using a vacuum cleaner.</li> <li>• Clean the condenser by blowing compressed air from outside to inside. Keep the compressed air nozzle more than 30 cm away from the condenser to avoid damaging of the condenser fins.</li> <li>• Remove dust from inside the dryer, e.g. with vacuum cleaner.</li> <li>• Close the front service panel</li> <li>• Start up the dryer.</li> </ul> Do not use water or solvents to clean the condenser.
Yearly/every 8000 hours	Replace the wearing parts of the electronic water drain (service kit)

## 7 Problem solving

### Warnings

	<ul style="list-style-type: none"> <li>• Before starting any maintenance or repairs, close the air outlet valve and press the test button on top of the electronic water drain to depressurise the air system.</li> <li>• Apply all relevant instructions in section <a href="#">Safety precautions during maintenance or repair</a>.</li> </ul>
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### Faults and remedies

Condition	Fault	Remedy
Pressure dew point too high	Air inlet temperature too high	Check and correct. If necessary, install a pre-cooler
	Ambient temperature too high	Check and correct. If necessary, draw cooling air via a duct from a cooler place or relocate the dryer.
	Air inlet pressure too low	Increase inlet pressure
	Dryer capacity exceeded	Reduce air flow
	Shortage of refrigerant	Have circuit checked for leaks and have the refrigerant circuit recharged

Condition	Fault	Remedy
Condenser pressure too high or too low	Fan control switch out of order	Replace
	Fan or fan motor out of order	Check fan/fan motor
	Ambient temperature too high	Check and correct. If necessary, draw cooling air via a duct from a cooler place or relocate the dryer.
	Condenser externally clogged	Clean condenser

Condition	Fault	Remedy
Compressor stops or does not start	Electric power supply to compressor is interrupted	Check and correct as necessary
	Thermic protection of refrigerant compressor motor has tripped	Motor will restart when motor windings have cooled down
	On three-phase units, phase sequence relay fault indication	Reverse two incoming electric lines.

Condition	Fault	Remedy
Evaporator pressure is too high or too low at unload	Hot gas bypass valve incorrectly set or out of order	Have hot gas bypass valve adjusted
	Shortage of refrigerant	Have circuit checked for leaks and recharged

Condition	Fault	Remedy
Phase sequence relay shut down (3-phase units)	Voltage supply connected wrong	Reverse two incoming electric lines. Also correct the rotation direction of the fan motor; if necessary change wiring K12:1, K12:3

Condition	Fault	Remedy
High pressure switch has shut down the dryer	Condenser pressure too high	Push the small button of the high pressure switch
		Clean condenser
		Improve ventilation of the cooling air

**Dew point alarm visible (red light and blinking dew point icon)**

Condition	Fault	Remedy
Dryer does not start	Circuit has not cooled down	Wait 1 minute before restarting the dryer

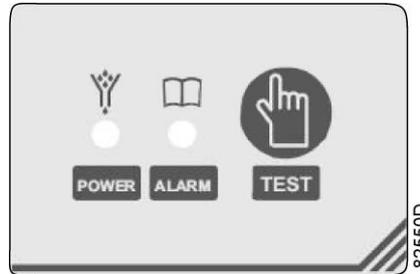
Condition	Fault	Remedy
Too high flow or inlet temperature too high	Dryer undersized	Try running in regular mode

Condition	Fault	Remedy
Phase sequence relay shut down	Voltage supply connected wrong	Reverse two incoming electric lines. Also correct the rotation direction of the fan motor if necessary change wiring K12:1, K12:3

Condition	Fault	Remedy
High pressure switch has shut down the dryer	Condensing pressure too high	Push the small button of the high pressure switch
		Clean condenser
		Improve ventilation of the cooling air

Condition	Fault	Remedy
Dew point alarm	Dew point sensor in wrong position or defective	Place the sensor in the correct position or replace it.

**Electronic condensate drain**



*Control panel*

Condition	Fault	Remedy
No LED lights up and the drain alarm appears on the display	The power supply is faulty	Check if the power supply voltage to the drain is 115V 50/60Hz
	The control Printed Circuit Board (PCB) of the drain is defective.	Replace the complete drain
	The feed line has insufficient slope	Lay the feed line with an adequate slope
	Unbalanced pressure on drain	Check if the venting line is properly installed
	The air pressure has dropped below the minimum pressure	Ensure there is the minimum pressure 0.2bar (2.8psi)
	The feed and/or outlet line is shut off or blocked	Check the feed line and the outlet line
	The drain filter is blocked by dirt	Open the manual drain valve to clean the drain filter. In case of heavy dirt, disassemble and clean carefully the filter.
	Wear	Order the wear kit and substitute all the parts included

Condition	Fault	Remedy
<p><b>Red LED L2 blinking</b> This routine will open (3 sec) and close (60 sec) the drain's valve until the floater is in lower position, so the water is completely drained.</p>	<p>Drain is dirty, the <b>external alarm signal is activated</b>. A dedicated pictogram on the controller starts flashing:</p>  <p>From this point onwards, the drain will remain in this routine, even after restart. Press the test button for at least 5 seconds to reset the drain (if you reset the alarm but you do not clean the drain, this alarm will restart again).</p>	
	<p>The air pressure has dropped below the minimum pressure</p>	<p>Ensure there is the minimum pressure</p>
	<p>The drain filter is blocked by dirt</p>	<p>Open the manual drain valve to clean the drain filter. In case of heavy dirt, disassemble and clean carefully the filter</p>
	<p>The feed and/or outlet line is shut off or blocked</p>	<p>Check the feed line and the outlet line</p>
	<p>Wear</p>	<p>Order the wear kit and substitute all the parts included</p>
<p><b>Red LED L2 on</b></p>	<p>An irreversible error occurred: replace the drain</p>	

## 8 Technical data

### 8.1 Settings of fuses

#### Overload relay and fuses

		QED-250	QED-300	QED-350
Frequency (Hz)	Voltage (V)	Main fuses, supply line (A)	Main fuses, supply line (A)	Main fuses, supply line (A)
UL/cUL				
60	220	20	20	25

		QED-450	QED-500	QED-600
Frequency (Hz)	Voltage (V)	Main fuses, supply line (A)	Main fuses, supply line (A)	Main fuses, supply line (A)
UL/cUL				
60	460	15	15	15

### 8.2 Reference conditions and limitations

#### Reference conditions

	Unit	60 Hz
Compressed air inlet pressure	bar(e)	7
Compressed air inlet pressure	psig	101.53
Compressed air inlet temperature	°C	38
Compressed air inlet temperature	°F	100.4
Ambient temperature	°C	38
Ambient temperature	°F	100.4
Relative humidity at inlet	%	100
Dew point	°C	4
Dew point	°F	39.2
Cooling air inlet temperature	°C	38
Cooling air inlet temperature	°F	100.4

#### Limitations

	Unit	60 Hz
Maximum compressed air inlet pressure	bar(e)	14
Maximum compressed air inlet pressure	psig	203
Minimum ambient air temperature	°C	1

	Unit	60 Hz
Minimum ambient air temperature	°F	34
Maximum ambient air temperature	°C	50
Maximum ambient air temperature	°F	122
Minimum compressed air inlet temperature	°C	1
Minimum compressed air inlet temperature	°F	34
Maximum compressed air inlet temperature	°C	60
Maximum compressed air inlet temperature	°F	140

### 8.3 Air dryer data

	All data specified below apply under reference conditions, see section <a href="#">Reference conditions and limitations</a> .
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#### Specific data

Air dryer type		Units	QED-250	QED-300	QED-350
Volume flow at dryer inlet		l/s	120	150	185
Volume flow at dryer inlet		cfm	254	318	392
Pressure drop over dryer without filters, approx.		bar	0.11	0.15	0.22
Pressure drop over dryer without filters, approx.		psi	1.60	2.18	3.19
Total power consumption, including cooling fan	60 Hz	kW	1.5	1.5	2.3
Total power consumption, including cooling fan	60 Hz	hp	2.28	3.22	3.08
Refrigerant type			R410a	R410a	R410a
Refrigerant charge (approx.)		kg	0.86	0.86	0.92
Refrigerant charge (approx.)		lb	1.90	1.90	2.03
Dryer mass (approx.)		kg	170	170	185
Dryer mass (approx.)		lb	375	375	408

Air dryer type		Units	QED-450	QED-500	QED-600
Volume flow at dryer inlet		l/s	220	245	285
Volume flow at dryer inlet		cfm	466	519	604
Pressure drop over dryer without filters, approx.		bar	0.12	0.18	0.22
Pressure drop over dryer without filters, approx.		psi	1.74	2.61	3.19
Total power consumption, including cooling fan	60 Hz	kW	2.5	2.9	3.1

<b>Air dryer type</b>		<b>Units</b>	<b>QED-450</b>	<b>QED-500</b>	<b>QED-600</b>
Total power consumption, including cooling fan	60 Hz	hp	3.49	3.89	4.16
Refrigerant type			R410a	R410a	R410a
Refrigerant charge (approx.)		kg	1.55	1.20	1.28
Refrigerant charge (approx.)		lb	3.42	2.65	2.82
Dryer mass (approx.)		kg	197	197	197
Dryer mass (approx.)		lb	434	434	434

## 9 Pressure equipment directives

### Components subject to 97/23/EC Pressure Equipment Directive

Components subject to 97/23/EC Pressure Equipment Directive greater than or equal to category II

Dryer type	Part number	Description	PED Class
QED-250 up to QED-600	1089 9139 14	High pressure switch	IV
QED-250 and QED-300	1624 2274 00	Heat exchanger	II
QED-350	1624 2275 00	Heat exchanger	II
QED-450 up to QED-600	1624 2276 00	Heat exchanger	II

### Overall rating

The dryer is conform to PED category II.

# 10 Declaration of conformity

## EC DECLARATION OF CONFORMITY

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16

We, ..... (1)....., declare under our sole responsibility, that the product

Machine name:

Machine type:

Serial number:

Which falls under the provisions of article 12.2 of the EC Directive 2006/42/EC on the approximation of the laws of the Member States relating to machinery, is in conformity with the relevant Essential Health and Safety Requirements of this directive.

The machinery complies also with the requirements of the following directives and their amendments as indicated.

	<b>Directive on the approximation of laws of the Member States relating to (2)</b>	<b>Harmonized and/or Technical Standards used (3)</b>	<b>Att'mnt</b>
a.			X
b.			
c.			X
d.			
e.			X

The harmonized and the technical standards used are identified in the attachments hereafter

.....(1)..... is authorized to compile the technical file.

**Conformity of the specification to the directives**

**Conformity of the product to the specification and by implication to the directives**

Issued by

Engineering

Manufacturing

Name

Signature

Date

84350D

*Typical example of a Declaration of Conformity document*

(1): Contact address:

Quincy Compressor

701 North Dobson Avenue

Bay Minette, AL 36507

United States

(2): Applicable directives

(3): Standards used

On the Declaration of Conformity / Declaration by the Manufacturer, the harmonized and/or other standards that have been used for the design are shown and/or referred to.

The Declaration of Conformity / Declaration by the Manufacturer is part of the documentation that is supplied with this device.





Performance You Demand. Reliability You Trust.



[www.quincycompressor.com](http://www.quincycompressor.com)