

## AIR DRYER

### USER MANUAL (refrigerated air dryers)

"WinsPlus - 1,2/ 11 m<sup>3</sup>/min - Manuale d'uso. "



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**TRANSPORT**

Transport of air dryers should be done with a suitable forklift. The device should be lifted from the marked points, not sideways or upside down.

**PLACEMENT**

- The air dryer must be placed on a flat surface and vertically.
- The air dryer should not be exposed to rain, sunlight and external environment directly.
- Service and ventilation should be provided by leaving a space of at least 50 cm around the air dryer.
- The hot air discharged from the air compressor should not reach the dryer.

Ambient air temperature should be between +4 °C and + 45 °C and air circulation must be provided.

- There should be no chemical products that can damage copper and aluminum in the environment and should not be stored. (For example, ammonia gas, etc.) Rain water and direct sunlight should be prevented from reaching the air dryer.

**ASSEMBLY**

- Only trained and authorized personnel should install the air dryer.
- Installation should be made in accordance with the working pressure specified on the air dryer label.
- The electricity supply line specified on the air dryer label must be drawn.
- Safety elements and protection cover materials on the device should never be dismantled or changed.
- The air dryer energy connection should not be shared with another appliance panel.
- The air dryer must be connected to each installed pressure tank and its accessories with the necessary safety valve.

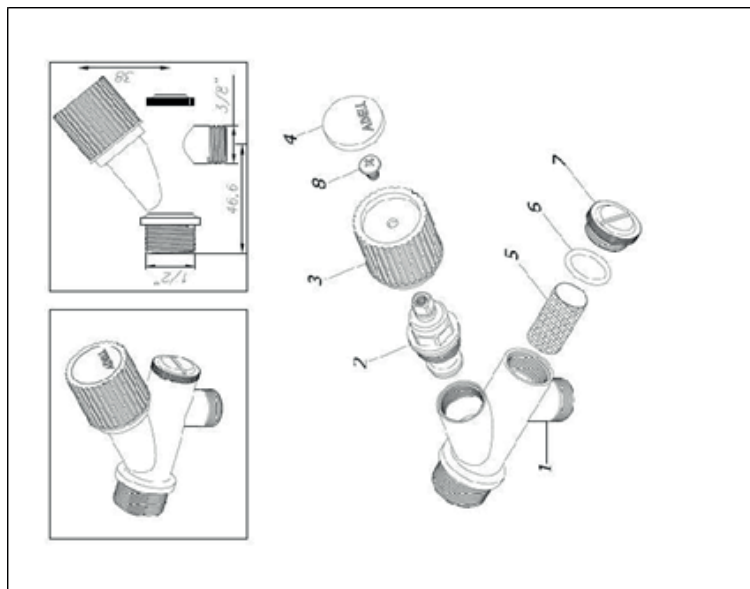
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- A suitable air installation and line filters should be used and a by-pass line should be installed to shut off the air during maintenance-repair.

### MAINTENANCES

- Before maintenance, the air dryer must be turned off, the power must be cut off and the compressed air in the system must be discharged.
- The condenser should be cleaned regularly with compressed air.
- Clean water and air filter in the drain valve should be cleaned regularly.
- Air inlet and outlet line filter internal elements should be changed regularly.





- Filter no. 5 should be cleaned regularly with compressed air and water. Otherwise, it may cause purge solenoid valve malfunctions.



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#### 2. GENERAL INFORMATION

 <b>AIR DRYER</b>	
	MODEL NO : <b>WPS - 1200</b>
	SERIAL NO : <b>A21-10200</b>
PRODUC. DATE - M/Y :	<b>03/21</b>
NOMINAL FLOW RATE :	<b>1,2m3 / min.</b>
MAX. AIR PRESSURE	<b>16 bar</b>
MAX. INLET AIR TEMP. :	<b>50°C</b>
AMBIENT TEMP. :	<b>45°C</b>
DEW-POINT :	<b>+3°C</b>
REFRIGERANT :	<b>R134A</b>
REFRIG. DSIGN PRES.HP/LP :	<b>16/2,2bar</b>
ELECTRIC SUPPLY :	<b>230/1/50</b>
<a href="http://www.noitech.com">www.noitech.com</a> <a href="mailto:info@noitech.com">info@noitech.com</a>	

## AIR DRYER WORKING PRINCIPLE

- a) When the dryer is turned on, the compressor presses the refrigerant gas into the system with high pressure and heat, and the compressor runs continuously without stopping.
- b) The hot refrigerant gas is cooled by the fan in the condenser, condensed and liquefied. Fan operation is controlled by a pressure switch or a temperature sensor mounted on the condenser outlet.
- c) The liquefied gas is stored in the liquid tank. The refrigerant stored in liquid form is sprayed from the liquid tank to the heat exchanger with an expansion valve or a capillary pipe. This expansion valve and capillary pipe are protected by the drier filter in the system and the particle trap filter coupled to its body.
- d) The sprayed refrigerant gas takes the heat of the air passing through the heat exchanger and cools it. While the compressed air is being cooled, the liquid refrigerant gas returns to the gas phase and is sucked in by the compressor. This closed-circuit gas cycle continues continuously.
- e) In order to keep the refrigerant gas pressure and refrigerant temperature constant in the heat exchanger, hot gas is supplied to the cold gas return from the hot gas discharge line of the compressor with a by-pass valve. In some dryers; heat exchanger pressure is controlled by automatic expansion valves (regulator).

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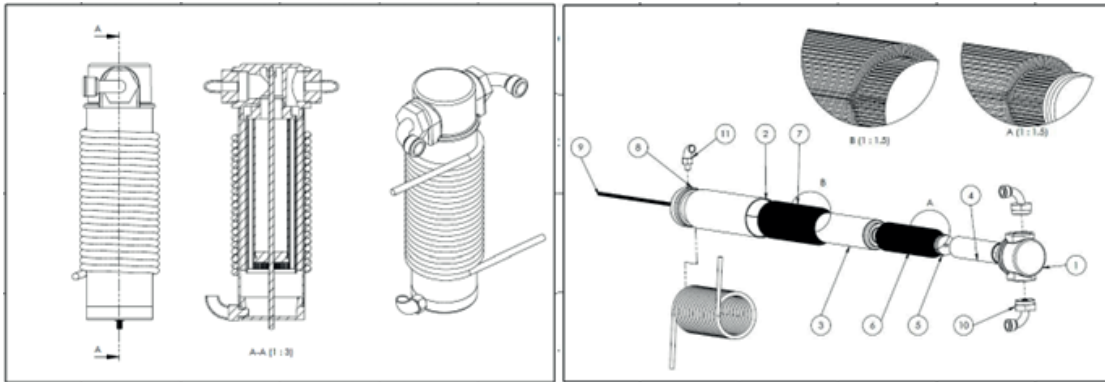
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#### COMPRESSED AIR CIRCUIT

As the compressed air passes through the pre-cooling circuit in the air dryer heat exchanger, it is compared with the compressed air that has been cooled at +3 °C and pre-cooling is provided.

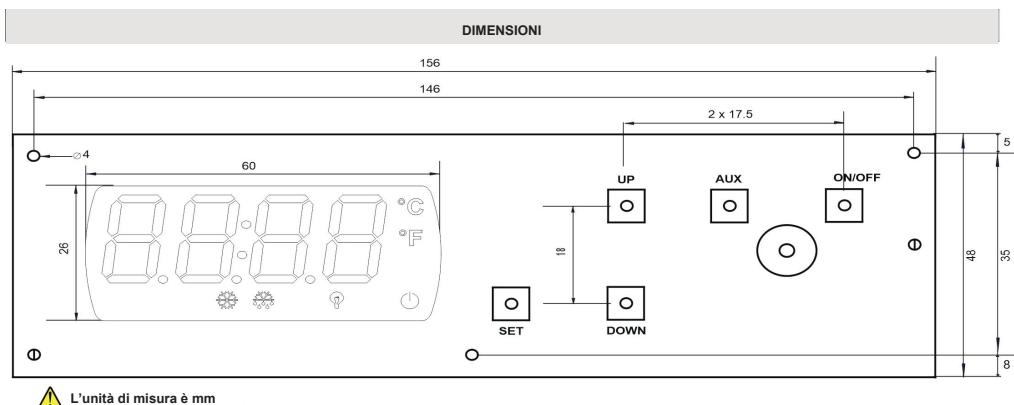
The air passing through the pre-cooling circuit is lowered by the targeted 3°C in the gas-air comparison section in the heat exchanger. The cooled compressed air is discharged from the water separator by means of a timed discharge valve.

#### Air Dryer Heat Exchanger Picture:



#### OPERATING;

#### FRONT PANEL SIZE








## AIR DRYER

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#### FRONT PANEL



COMANDI DEL PANNELLO FRONTALE			
Led	Descrizione	Pulsante	Descrizione
	<b>Led acceso/spento</b> -Non si accende quando il dispositivo è "acceso", si accende quando il dispositivo è "spento".	MAN	-Visualizzazione del setpoint in modalità di funzionamento, -La visualizzazione del valore del parametro selezionato in modalità di programmazione serve a confermare il valore del parametro modificato.
	<b>Led del compressore</b> -Acceso quando l'uscita del compressore è attiva, spento quando è inattiva.	UP	-Silenziamiento del cicalino in modalità di funzionamento, -In modalità di programmazione, la commutazione tra i parametri ha la funzione di aumentare il valore del parametro selezionato.
	<b>Led di scarico</b> -Acceso quando l'uscita di drenaggio è attiva, lampeggiante quando i ritardi di protezione e il tempo di scarico sono attivi, spento quando è inattivo.	DOWN	-In modalità di programmazione, la commutazione tra i parametri ha la funzione di diminuire il valore del parametro selezionato.
°C	<b>Grado Celsius Led</b> -Se l'unità di misura della temperatura è impostata come gradi Celsius, è attiva, se è impostata come Fahrenheit, è disattivata.	AUX	-In modalità operativa, il parametro otyp ha la funzione di avviare lo scarico manuale se è selezionato def e di accendere e spegnere l'uscita di illuminazione se è selezionato light.
°F	<b>Grado Fahrenheit Led</b> -Se l'unità di misura della temperatura è impostata su gradi Fahrenheit, è attiva, mentre se è impostata su gradi Celsius è disattivata.	ON	-In modalità operativa, spegne/accende il dispositivo.
	<b>Led di allarme</b> -Si accende in condizioni di allarme e di guasto.		
	<b>Illuminazione a led</b> -L'uscita AUX è impostata come funzione di illuminazione e si accende quando l'uscita è attiva.		

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#### ON- OFF

#### Manual turning on/ /Off of the device

If the ON/OFF button is pressed for 4 seconds while in operation mode (no key lock), the indicator turns off, temperature measurement and control is not performed, the outputs become passive and turn off.

If the ON/OFF button is pressed again for 4 seconds, the indicator lights up, the device continues to measure and control the temperature and turns on.

#### CONNECTION TYPE

### CONNECTION DIAGRAM

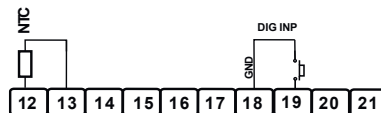
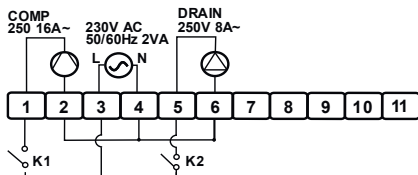


FMC02 is a drain controller. The device must be used in accordance with the instructions. Installation and electrical connections must be made by technical personnel in accordance with the instructions in the user manual. There should be no electricity in the connecting cables during assembly. The device must be protected from moisture, vibration and pollution. Attention should be paid to the operating temperature. Assembly cables should not be routed near high power lines and devices.

#### FMC02-230

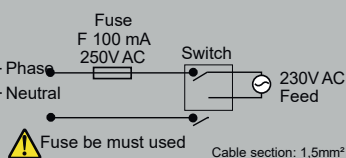
#### DIGITAL DRAIN THERMOSTAT

RoHS



#### FEED:

184-253V AC  
50/60Hz 2VA



#### NOTE:

- 1) Supply cables must comply with the requirements of IEC 60227 or IEC 60245.
- 2) In accordance with the security rules, the mains switch must be in a position that the operator can easily reach and there must be a sign indicating that the switch is related to the device.



The entire device has DOUBLE INSULATION.



Screw tightening torque  
0.4-0.5Nm.



## Device Features

### AIR DRYER FEATURES

Microprocessor controlled electronic card is used in WinsPlus series air dryers. Two temperature sensors on this board measure continuously. 1. The sensor controls the dew temperature of the device. 2. The sensor ensures the safe operation of the device by controlling the condenser temperature of the device and the temperature of the cooling compressor in some models.

1. Fault-warning contact output on the dryer control card can be output with FREE contact.

2. In case of any malfunction, it gives an audible and alarming sound and an error code appears on the screen.

The air dryer is equipped with control equipment to prevent malfunctions that may occur in the formation of the following errors.

- Condenser temperature control sensor  
(Models between 1200-3800 lt/min)
- Compressor temperature control sensor  
(All models above 5500 lt/min)

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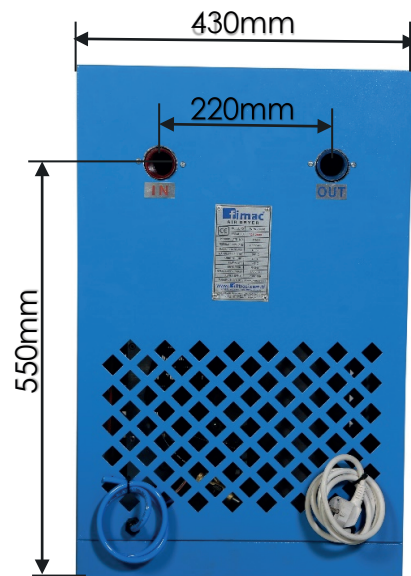
- Klixon high temperature switch  
(All models)
- Low Pressure Switch  
(All models with 5500 lt/min and above)
- Condenser high pressure switch  
(All models with 5500 lt/min and above)
- Phase fault relay  
(All models with 11.000 lt/min and above)
- Compressor thermal  
(All models with 11.000 lt/min and above)
- Fan thermal  
(All models with 11.000 lt/min and above)

The air dryer warns the user against the following errors by giving an audible-light warning on the front panel.

- High pressure warning alarm (All models)
- Sensor faults alarm (All models)
- Cooling fault alarm (All models)
- Freeze warning alarm (All models)
- Service-maintenance time alarm (All models)
- Low pressure warning alarm (Models with 5500 lt/min and above)

Sizes Show 1200-3800 Models

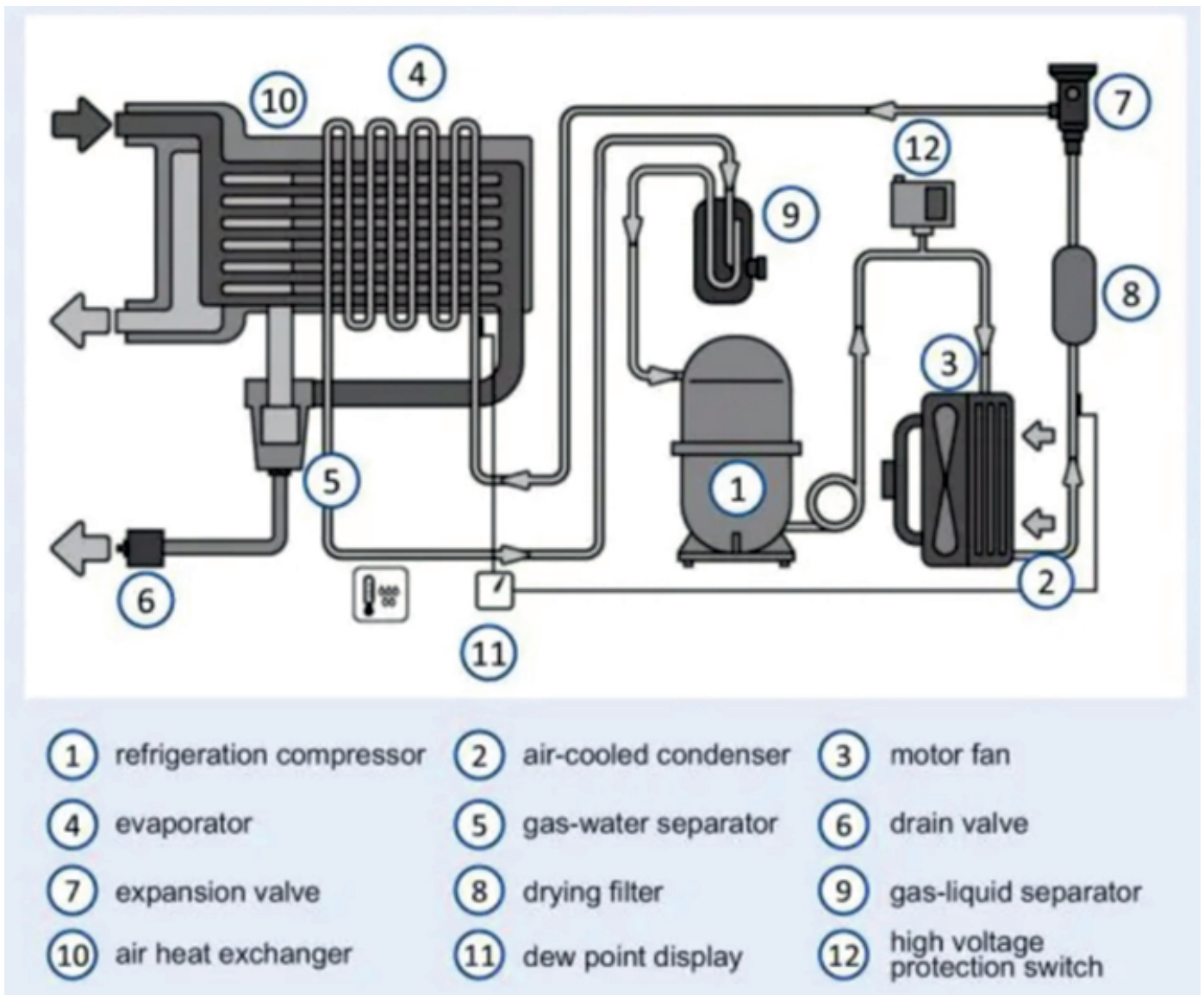
#### 4. TECHNICAL SPECIFICATIONS



## AIR DRYER

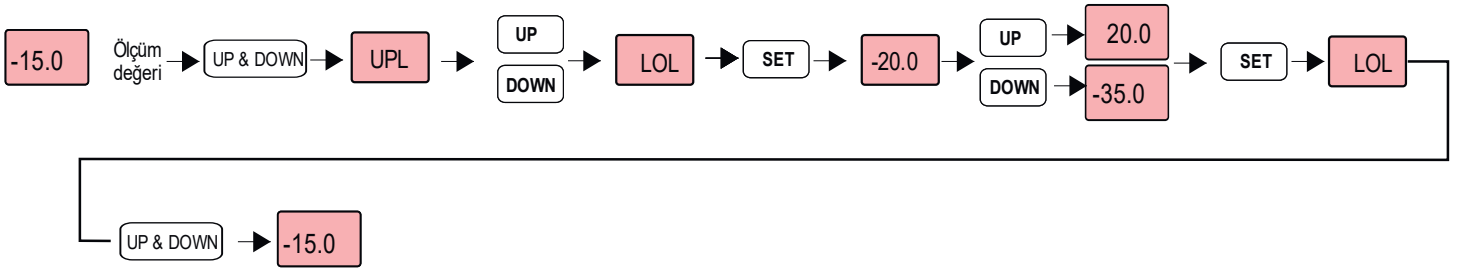
### USER MANUAL

#### REFRIGERATION DIAGRAM



#### 5. SETTINGS

##### Setting Parameters



In operating mode, the NTC measurement value is displayed on the screen. If the NTC measurement value is displayed (if the device password is entered), the UP&DOWN keys are pressed together for 3 seconds to enter the parameter menu.

Switching between parameters is provided with the UP and DOWN keys in the menu. If the MAN key is pressed when the parameter message to be adjusted is displayed, the value of that parameter is displayed. The value of the relevant parameter can be changed with the UP and DOWN keys. Then, by pressing the MAN key, the parameter value is saved and the parameter is exited.

When UP&DOWN keys are pressed together after exiting the parameter, it switches to the working screen without waiting. If no key is pressed while making adjustments in the parameter menu, the device automatically returns to the operating screen after 60 seconds.



## SETTINGS

### Turning Off the Beeper

An audible warning is activated when an alarm condition occurs. The audible warning can be turned off by pressing the UP button.

### Manual Drain Operation

When O.typ =dEf is selected, manual drain operation is started if AUX key is pressed in operating mode (no key lock). If d.dur parameter is 0, manual drain is also disabled.

### Restoring Factory Settings

If the device is energized while holding the DOWN key, the d.PAr message will be displayed and the factory parameter values will be restored.

### \* Adjusting the evaporation gas pressure:

Evaporation gas pressure is made with the hex bolt on the automatic expansion/hot gas by-pass valve.

Adjustment is made by turning clockwise to increase the pressure and counterclockwise to decrease it.

R134a gas pressure: 2.1 bar

R407c gas pressure: 5.5 bar

- **Compressor temperature position value adjustment: (Win-sPlus-3800-11.000)**

Go to the screen with the parameter value from the menu on the screen and click the on-off button to see the adjusted value.

Adjust the value with the up and down keys.

**Factory setting : Max. 45°C**