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CODE 99215088 CO_2NNEXT QUICK START GUIDE

RIVACOLD
MASTERING COLD

EN

QUICK START GUIDE

CO_2NNEXT

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

rev00 - 09/2018

1

BEFORE CONSULTING THIS QUICK START GUIDE MAKE SURE THAT THE PARTLY COMPLETED MACHINERY HAS BEEN CORRECTLY INSTALLED AND CONNECTED.

FOR PARTLY COMPLETED MACHINERY HANDLING AND INSTALLATION OPERATIONS, CAREFULLY READ THE "ASSEMBLY INSTRUCTIONS"

2

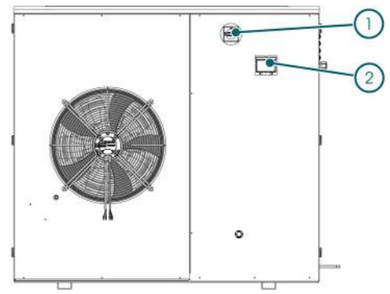
PREPARATION FOR START-UP

Before bringing the nearly completed machine to steady-state operating conditions several preliminary checks must be carried:

- Make sure that all the valves on the partly-completed machine and on the system are open, that the service valves are closed and that they all are fitted with caps.
- Make sure that all the electronic thermostatic valves of the users are correctly programmed.

To start the system it is necessary to follow this sequence of operations:

- Set the disconnector (1) of the electrical panel to ON to supply the entire system;
- Set the electronic control to ON via the display (2) and carry out the operations indicated.



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BUTTONS		ASSOCIATED FUNCTIONS
⚠	ALARM	It shows the list of active alarms and access to the alarm logs.
◎	PRG	It is used to enter the main menu.
↩	BACK	Return to the previous page.
↑	UP	It switches to the upper value in a list or increases the value of a variable highlighted by the cursor.
↓	DOWN	It switches to the lower value in a list or decreases the value of a variable highlighted by the cursor.
↵	ENTER	Enter the selected sub-menus or confirm the set values.

LED indicators management

BUTTONS		ASSOCIATED FUNCTIONS
Red	⚠	Flashing: Active alarms not seen. Fixed: Alarms seen
Yellow	◎	Control Hecu CO_2 in state of ON
Green	↩	Control Hecu CO_2 in powered status

VACUUM

Check that all the valves on the partly completed machinery and on the system are open.

- Vacuum phase duration: approx. 24 h
- Vacuum level: 0.3mbar, constant
- The liquid passage indicator IND1 must indicate the absence of moisture (green colour).

Service valve for vacuum pump:

- RS2 or RS2.P delivery (if present);
- liquid RS3;
- positive intake RS1.

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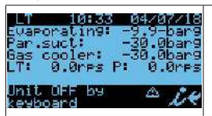
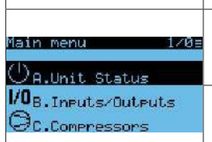
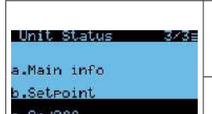
Manual mode for vacuum procedure, to be performed only with the unit in OFF.

	Press the display key	◎
	Press the key	↵
	The cursor will move onto the first figure of the password. Enter "0000" and press the key	↵
	Select the "A. Unit Status" item	↓
	Press the key	↵
	Select the item "c.On/Off" item	↓
	Press the key	↵
	Press the key	↵

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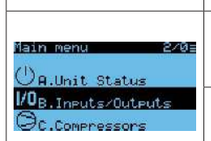
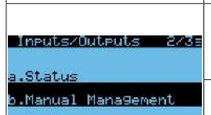
	Press the display key	◎
	Press the key	↵
	The cursor will move onto the first figure of the password. Enter "0000" and press the key	↵
	Select the "B. Inputs/Outputs" item	↓
	Press the key	↵
	Move down with the key	↓
	until "b. Manual Management" is highlighted, then press	↵

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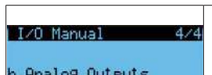
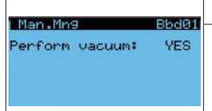
	Move down with the key
	until "d. Vacuum" is highlighted, then press
	Press the key
	the mask as shown in the figure is reached. At that point, press one of the arrow keys to switch from NO to YES. Then select YES by means of the ENTER key

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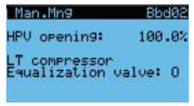
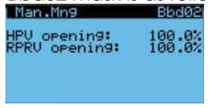
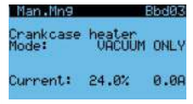
	Press the key to reach the mask as shown in the figure. Make sure that the values are equal to 100% of opening for the valve and in position O=Open for the equalisation valves present
	NOTE: In the **TN machines** the Bbd02 mask is as follows: 
	Confirm by pressing the key
	Move down with the key Check and retain the default values

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If there is a cell control (MPX Pro or Ultracella) connected to the unit, it is also possible to force the electronic thermostatic valve to facilitate the vacuum procedure and refrigerant loading.

	Press the display key
	Press the key
	The cursor will move onto the first figure of the password. Enter the password "0000". The press the key
	Move down with the key
	until "E. Evaporator" is highlighted, then press the key

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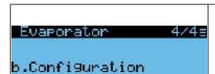
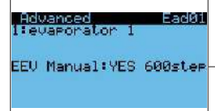
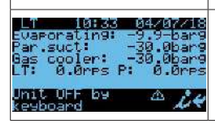
	Move down with the key until "d. Driver EVD" is highlighted, then press the key
	Press the key
	Select YES
	Press again to confirm the selection
	Select the value to be entered (100% = 600 step)
	Press again to confirm the selection
	Press the key until returning to the main page

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REFRIGERANT LOAD

The pre-load stage must be performed in the gaseous phase ONLY.

For the refrigerant pre-load phase the following are necessary:

- that the partly-completed machine is electrically powered so that the YVEq.P YVEq.LT compressor bypass solenoid valves (if present) are energised);
- that the condensing unit and therefore the compressor and/or the compressors are in the OFF position from the electronic control keyboard;
- that the valves HPV and VFL are manually opened by electronic control to guarantee opening of the entire refrigeration circuit.

During refrigerant pre-load it is necessary to insert CO_2 in the gaseous state at a pressure value well above the triple point (5.185 bar(a)) to avoid the formation of dry ice inside the system. A gaseous pre-filling of 10 bars is recommended throughout the circuit. The load points are RS1, RS2, RS3 and RS1.LT and RS2.P (if present). The reading of the pressure on each section is possible from the main screen of the electronic control.

The utilities must already be configured and programmed correctly for use with CO_2.
Activate the utilities gradually during loading.
During the loading phase the compressors will be activated and any alarms in the initial phase may be present.

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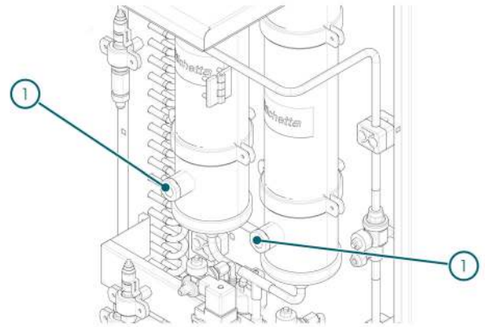
The phase of loading consists of restoring the partly-completed machine, putting the condensing unit and/or the compressors in ON from electronic control and following the steps provided in the chapter on starting up.
Loading can continue in liquid phase on RS3 tap or in vapour phase on RS1, RS1.LT (if present).
The utilities must be activated. Loading is complete when the liquid level inside the receivers is at least above the half-way mark on the sight glass (1) found on the receivers and there are no bubbles on the IND1 sight glass in stationary conditions.
The passage indicator also provides indications on the presence of humidity. This must not be present. If any is found, the system must be stopped and the emptying and loading phases repeated.



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OIL LOAD

Use only the type of oil indicated

The oil must be added according to the refrigerant load as indicated in the table. If the refrigerant load is LOWER than 4kg, NO oil must be added.

Load Refrigerant **R744**	**Up to 4kg**	**Over 4 kg**
Load **PAG100 OIL**	**DO NOT** add OIL	Add 50g for each kg of refrigerant

The operation is carried out by following these steps:

- Stop the utilities and wait for the compressors to stop;
- Place the machine in OFF from the electronic control;
- Close the general intake valve r1;
- Remove the internal pressure by acting on the RS1 and RS2 valves;
- Using the RS1 valve, load oil and at the same time aspirate with a vacuum pump on the service valve RS2;
- Once loading is complete, close the RS1 and continue with the drain phase to the value previously described;
- Remove the vacuum pump and related pipes;
- Open the previously closed valves, reactivate the machine, reactivate the utilities and wait for the system to stabilize, making sure there are no alarms present:

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The partly-completed machine does not include oil monitoring in order to check its presence inside the compressor and the refrigerant circuit, however the electronic controller includes a function that facilitates return of the oil to certain working conditions of the compressor by forcing the compressor to work at a fixed speed for a set time in order to recover the oil lost along the refrigerant circuit.

FINAL PHASE

Wait until the system is stable and perform the necessary optimisations, referring to the machine manual, software manual of the controls.

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