INSTALLATION, USE AND PROGRAMMING MANUAL





MOTORIZED PLENUM

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2 GENERALITY'

2.1.1 INTRODUCTION

This manual was conceived with the aim of making the installation, programming and use of the MOTORIZED PLENUM as simple as possible.

By reading and applying the rules of this manual, you will be able to carry out the installation, programming and use of the aforementioned MOTORIZED PLENUM in a simple and intuitive way.

Read this document carefully before carrying out any installation, programming and use operations.

You must not proceed with any operation unless you have first carefully read and understood this manual in all its parts.

In particular, all precautions listed in the manual must be adopted.

The documentation, manuals and boxes of the devices composing the MOTORIZED PLENUM must be kept for any requests for warranty issues.

The installation of the MOTORIZED PLENUM must take into account both the purely technical needs for good operation and any local legislation in force and specific provisions.

Make sure that upon delivery of the MOTORIZED PLENUM, there are no obvious signs of damage caused by transport. In this case, communicate it directly to Air Control (logistica@aircontrolclima.it)

Contact Air Control (<u>info@aircontrolclima.it</u>) or visit the website <u>www.aircontrolclima.it</u> to receive further information or updates to the technical documentation and for any proposal to improve this manual. All reports received will be rigorously examined.

2.1.2 FUNDAMENTAL SAFETY RULES

We remind you that the use of products that use electricity requires compliance with some fundamental safety rules:

- Disabled and unaided people are prohibited from using the plenum.
- It is forbidden to touch the MOTORIZED PLENUM and related accessories with bare feet or with wet or damp parts of the body.
- Any extraordinary maintenance operation is prohibited before having disconnected the MOTORIZED PLENUM and related accessories from the electrical power supply by positioning the system's main switch to off.
- It is forbidden to modify, to your liking, the type of wiring and position of the components, foreseen and indicated by Air Control. Tampering will immediately void the warranty

2.1.3 SYMBOLOGY

The symbols shown in the following booklet allow you to quickly provide information necessary for the correct installation, programming and use of the MOTORIZED PLENUM

Safety related symbols

	ATTENTION Only authorized personnel	It warns that the indicated operations are important for safe operation.		
<u> </u>	DANGER Risk of electric shock	It warns that failure to comply with the instructions poses a risk of electric shock.		
Ĩ	DANGER	It warns that failure to comply with the requirements entails a risk of harm to exposed people.		
!	WARNING	It warns that failure to comply with the instructions entails a risk of damage to the MOTORIZED PLENUM.		
	DANGER	It warns that there are moving parts and poses a risk of harm to exposed people.		
2.1.4 W	2.1.4 WARNINGS			

Â	The installation of the MOTORIZED PLENUM must be carried out by qualified and authorized personnel according to the regulations in force in the various countries.
Â	Avoid installing the MOTORIZED PLENUM in very humid rooms or with the presence of large heat sources.
Â	On the electrical side, to prevent any risk of electrocution, it is essential to disconnect the main switch before carrying out electrical connections and any connection operations
4	It is recommended to use a dedicated power circuit; never use a shared power supply with other equipment
4	To connect from the NH-CFI-CDZ and NH-GTP-UNI communication interfaces to the CDZ unit, check what is indicated in the dedicated manual present in the packaging of the aforementioned
4	For the correct positioning of the NH-CIR-INVERTER interface, in order to guarantee perfect communication with the receiver of the CDZ unit, check what is indicated in the dedicated manual present in the packaging of the aforementioned
!	Make sure that the first commissioning is carried out by qualified personnel

2.1.5 CONFORMITY

The CE marking (present on each article composing the MOTORIZED PLENUM) certifies compliance with the following community standards:

•	Low Voltage Directive	2014/35/EC
•	WEEE	2012/19/EU
•	Machinery Directive (annex VIIB)	2006/42/EC
•	Electromagnetic Compatibility Directive	2014/30/EC
•	RoHS2	2011/65/EU
•	WEEE	20 12/19/EU

2.1.6 RANGE

	-1-	-2-	-3-	-4-
3PCAB-CDZ-200-CFI	3PCAB	CDZ	200	CFI

1) Defines the number of outlets and whether wired by the manufacturer 2) Defines the type of ducted unit for the creation of the motorized plenum 3) Defines the type of size of the motorized dampers to be connected to the plenum

4) Defines the type of interface

of communication:

CFI: Wire Interface (NH-CFI-CDZ)

CIR: IR Interface (NH-CIR-INVERTER)

GTP: Hydronic Interface (NH-GTP-UNI)

2.1.7 IDENTIFICATION

-The type of MOTORIZED PLENUM is identifiable through the plate located on the side panel, control unit and electrical components side.

-On the packaging there will be an additional identification plate with the type of MOTORIZED PLENUM and the shipping references.

-The plate on the packaging has no value for the traceability of the product in the years following the sale.

- The removal, deterioration and illegibility of the plate located on the MOTORIZED PLENUM causes major problems in the identification of the product, in the availability of spare parts and therefore in any future extraordinary maintenance.

2.1.8 CONSTRUCTION FEATURES

PLENUM:

PLM-CDZ



CONTROL UNIT :

KN-UNI-WIFI



COMMUNICATION INTERFACE:

Option: NH-CFI-CDZ / Option: NH-CIR-INVERTER / Option: NH-GTP-UNI



MOTORIZED DAMPERS:

NH-CO-UNI-DIM



ELECTRICAL COMPONENTS:

CABLES 0.5 MMQ (for BUS/A+B-/MOTOR connection)



2.1.9 DESCRIPTION OF OPERATION

The MOTORIZED PLENUM is a device with the following characteristics and peculiarities:

- It allows timely control of the summer and winter air conditioning of the areas present, in residential and commercial interventions;
- It allows significant energy savings for heating and cooling, thanks to full control of the CDZ unit both in terms of speed modulation and control of the compressor inverter function;
- The motorized dampers guarantee the air flow for the rooms air conditioning according to requests and needs;
- Operation with RADIO or WIRED remote displays (ETERNAL Master and SMART Slave);
- Provision for easy connection to the wifi network for remote management (KOOLNOVA CLIMA APP);

2.1.10 DELIVERY STATE

The supply includes:

- MOTORIZED PLENUM according to the supply requests in the order confirmation
- Predisposition for built-in bracketing for ceiling and wall mounting (PLM-CDZ)
- Labels/stickers (CE marking...) already positioned on the MOTORIZED PLENUM.
- Dedicated installation manuals for individual components and boxes of related accessories used to create the MOTORIZED PLENUM

Mandatory accessory: for the correct use of the MOTORIZED PLENUM, it is necessary to provide the dedicated ETERNAL and SMART controls

2.1.11 START-UP REQUIREMENTS

Before starting, make sure there are no external bodies inside the MOTORIZED PLENUM.

Check the fixings of the pipes connected to the motorized dampers, of the electrical accessories such as INTERFACES and CONTROL UNIT and correctness of the electrical connections made.

2.1.12 DISASSEMBLY AND DISPOSAL

Do not disassemble or dispose of the product yourself. The dismantling, demolition and disposal of the product must be carried out by authorized personnel in accordance with local regulations



2.1.13 OPERATOR SAFETY PRECAUTIONS

During the installation, disassembly and disposal operations of the MOTORIZED PLENUM, it is essential to adopt all the necessary safety measures to protect operators from residual risks that cannot be eliminated. In particular, the use of Personal Protective Equipment (PPE) appropriate for the work phases is mandatory.

• Insulating gloves: To protect against electric shock.

- Safety shoes: To protect your feet from falling heavy objects.
- Seat belt and harness: For work at heights or in unstable conditions.

Operators must be trained on the correct use of PPE and must scrupulously follow the current safety regulations. It is essential that all PPE complies with local and international provisions on workplace safety.

Please note: This section must be integrated with current local provisions on occupational safety and health, which may vary depending on the jurisdiction. Operators must be updated on the specific regulations applicable in their work context.

3.1.1 GENERALITY

-Before starting any operation to carry out the installation and electrical connection, make sure that the MOTORIZED PLENUM is not electrically powered.

-Carry out the necessary electrical connections of the NH-CFI-CDZ and NH-GTP-UNI communication interfaces to the CDZ unit, as indicated in the dedicated manual present in the packaging of the aforementioned

-For the correct positioning of the NH-CIR-INVERTER interface, in order to guarantee perfect communication with the receiver of the CDZ unit, check what is indicated in the dedicated manual present in the packaging of the aforementioned

-Absolutely avoid passing the electrical power cables (220V) in direct contact with the PLM-CDZ or components inside the MOTORIZED PLENUM.

3.1.2 PLENUM FIXING TO THE CDZ UNIT

-Before proceeding with fixing the MOTORIZED PLENUM to the CDZ internal unit, it is strongly recommended that both are hung from the ceiling and already in position in the place intended for the final installation

- Proceed, then, to fix the MOTORIZED PLENUM to the CDZ internal unit, using both the provision for the built-in bracket for ceiling or wall mounting, and the specific flange present on the entrance of the aforementioned;

-Fix the MOTORIZED PLENUM to the CDZ internal unit using drilling screws (screws not supplied)

- Tape with adhesive aluminum tape to ensure maximum hold



The image shown above is purely representative, as an example of fixing support, and does not in any way reflect the finished product

3.1.3 CONNECTIONS WITH CABLE INTERFACE PLENUM (XPCAB-CDZ-DN-CFI)



CONNECTIONS BY THE INSTALLER				
LN	PHASE AND NEUTRAL POWER SUPPLY (220V)	From QE to KN-UNI-WIFI		
AC UNIT	CONNECTION TO THE CDZ INTERNAL UNIT (check what is indicated in the dedicated manual of the interface present)	From NH-CFI-CDZ to CDZ INTERNAL UNIT		





_1 L2



NH-CFI-CDZ (option A+ B-) NH-CFI-CDZ (option BUS)



CONNECTIONS BY THE INSTALLER			
LN	PHASE AND NEUTRAL POWER SUPPLY (220V)	From QE to KN-UNI-WIFI	
	POSITIONING THE NH-CIR-INVERTER TRANSMITTER IN FRONT OF THE CDZ IR RECEIVER <u>(check what is indicated</u> in the dedicated manual of the interface present)	From NH-CIR-INVERTER to IR RECEIVER OF THE CDZ INDOOR UNIT	





KN-UNI-WIFI

NH-CIR-INVERTER

3.1.5 CONNECTIONS FOR HYDRONIC INTERFACE PLENUM (XPCAB-CDZ-DN-GTP)



CONNECTIONS BY THE INSTALLER		
LN	PHASE AND NEUTRAL POWER SUPPLY (220V)	From QE to KN-UNI-WIFI
LN	PHASE AND NEUTRAL POWER SUPPLY (220V) (check what is indicated in the dedicated manual of the interface present)	From QE to NH-CFI-GTP
0-10V	CONNECTION TO THE CDZ INTERNAL UNIT FOR EC INVERTER MOTORS (check what is indicated in the dedicated manual of the interface present)	From NH-CFI-GTP to CDZ INTERNAL UNIT
COM V1 V2 V3 (clean contacts NO)	CONNECTION TO THE CDZ INTERNAL UNIT FOR 3 SPEED MOTORS (check what is indicated in the dedicated manual of the interface present)	From NH-CFI-GTP to CDZ INTERNAL UNIT
K5 K6 (clean contacts NO)	CONNECTION TO THE HEAT PUMP FOR SUMMER – WINTER MANAGEMENT (check what is indicated in the dedicated manual of the interface present)	From NH-CFI-GTP to the HEAT PUMP
Hon (clean contact NO)	CONNECTION TO THE CIRCULATOR/PUMP OR SOLENOID VALVE (check what is indicated in the dedicated manual of the interface present)	From NH-CFI-GTP to CDZ INTERNAL UNIT





KN-UNI-WIFI

4.1.1 GENERALITY'

Carry out the following activities and checkS to ensure full and correct functioning of the MOTORIZED PLENUM

4.1.2 ACTIVITY'

ACTIVITY	HOW TO DO IT	WARNING	QR CODE (video tutorial)
Electrical check	 Check that you have made the electrical connections as indicated in the aforementioned manual and specified in the instruction booklet of the CDZ interface present 		
Aeraulic check	 Check and make a note carefully , which circular detachment of the MOTORIZED PLENUM was used to connect the delivery terminal present in the area, in order to optimize the configuration indicated in the following steps Example: Z1 = Living room / Z2 = Kitchen / Z3 = study and so on 		
Power the MOTORIZED PLENUM	- Power the MOTORIZED PLENUM from QE (220 V!!!) and check that the D7/D8/D9 LEDs	\$ (
RADIO SYSTEM Zone Configuration (Z1-Z8)	 RADIO: By opening the front cover of the control unit, press and release the pairing button to activate the radio channel and then press the "OK" button on the touch display of the RADIO controls that will be supplied together with the MOTORIZED PLENUM (ETERNAL and SMART) to configure them with the control unit outputs (Z1-Z2-Z3, etc.) Once the configuration is complete, press and release the pairing button again to close the radio channel From the ETERNAL master command, set summer (snowflake) or winter (sun) operation and adjust the desired temperature on all commands, including SMART slaves In case of errors in the configuration of the zones, from the ETERNAL master command, perform reset by holding down the settings symbol for 6 sec, click on the word "Reset", give "OK", and wait until all the commands have reset (on the the message "press ok to configure" will appear on the display) 		
	 FILO: Press the "OK" button on the touch display of the FILO commands that will be supplied together with the MOTORIZED 	Í	

WIRE SYSTEM Zone Configuration (Z1-Z8)	PLENUM (ETERNAL and SMART) to configure them with the control unit outputs (Z1-Z2-Z3, etc.) - From the ETERNAL master command, set summer (snowflake) or winter (sun) operation and adjust the desired temperature on all commands, including SMART slaves - In case of errors in the configuration of the zones, from the ETERNAL master command, perform reset by holding down the settings symbol for 6 sec, click on the word "Reset", give "OK", and wait until all the commands have reset (on the the message "press ok to configure" will appear on the display) - Proceed with the configuration again	
RADIO/WIRE SYSTEM Special configuration of a single ETERNAL or SMART thermostat with management of double or multiple motorized damper	 From the ETERNAL master command, hold down the settings symbol to open the installer menu, click on the INT icon and set 40, press ok From your smartphone, activate the wifi network and connect, first disabling mobile data, to the ESP_XXXX network generated by the KN-UNI-WIFI control unit Enter the KOOLNOVA CLIMA app, click on the settings symbol and enter the "ADVANCED SETTINGS" Scan the QR Code of the control unit on the door of the control unit or on the instruction sheet inside the package Click "follow" and choose the "ENGINES" option The following screen will appear, where it will be necessary to set the desired outputs for the management of double or multiple motorized shutters, where Zone 1-8 are the thermostats, while the abbreviations M1-M8 are the motorized shutters Zone MI M2 M3 M4 M5 M6 M7 M8 Zone I = Living room => M1 M2 // Zone2 = Kitchen => M3 // Zone3 = Study => M4 // and so on	

	- Close the KOOLNOVA CLIMA APP	
RADIO/WIRE SYSTEM Configuration NH-CFI-CDZ / NH- GTP-UNI	- Activation is automatic and no procedure is necessary	
RADIO/WIRE SYSTEM Configuration NH-CIR-INVERTER	- From the ETERNAL master command, hold down the settings symbol to open the installer menu, click on the INT icon and set 50, press ok, then set the machine code (see dedicated table), and finally press ok to activate IR communication with the CDZ internal unit	
APP configuration – KOOLNOVA CLIMA (manual)	 From the ETERNAL master command, hold down the settings symbol to open the installer menu, click on the INT icon and set 40, press ok From your smartphone, activate the wifi network and connect, first disabling mobile data, to the ESP_XXXX network generated by the KN-UNI-WIFI control unit Enter the KOOLNOVA CLIMA app, click on the settings symbol and enter "INSTALLATION" and then "MANUAL INSTALLATION" Scan the QR Code of the Modem or manually enter the data of the existing wi-fi, click "to follow" Scan the QR Code or manually enter the data of the KN-UNI-WIFI control unit, click "to follow" Click "follow" again making sure you are still connected to ESP_XXXXX Wait a few seconds for the message "the project has been added successfully" to appear If so, the system is correctly configured, if not, repeat the above operation Create the account by clicking on "NEW USER" and entering credentials such as NAME, PASSWORD and E-MAIL (you will be asked to enter a verification code via e-mail) Once the account has been created, enter the NAME and PASSWORD previously entered, and press the + button to add the project by 	STEP 1



5.1.1 GENERALITY'

In the event of defects or faults, take note of any problem, the model and serial number of the MOTORIZED PLENUM and contact Air Control on 02/4548 2147 or via e-mail at <u>amministrazione@aircontrolclima.it</u>

5.1.2 PROBLEMS , CAUSES AND REMEDIES

PROBLEM	CAUSES	REMEDIES
KN-UNI-WIFI control	No power	 Check the connection of the KN-UNI-WIFI control unit to the electrical network
unit LEDs off 🤍 🌱 🚟		- Check that there is 220V - LN voltage
		 Check the connection of the KN-UNI-WIFI control unit to the electrical network
NH-CFI-CDZ interface	No communication with the CDZ internal unit	- Check that there is 220V – LN voltage
LEDs off		 Check that you have complied with the connections indicated in the manual and instructions in the packaging of the aforementioned interface
	No communication with the CDZ internal unit	 Check the connection of the KN-UNI-WIFI control unit to the electrical network
NH-CIR-INVERTER interface LED off		- Check that there is 220V – LN voltage
		- Check that you have correctly entered the communication code for the installed CDZ internal unit
	No communication with the CDZ internal unit	 Check the connection of the KN-UNI-WIFI control unit to the electrical network
NH-GTP-UNI interface		- Check that there is 220V – LN voltage
LED off		 Check that you have complied with the connections indicated in the manual and instructions in the packaging of the aforementioned interface
		 Check the connection of the KN-UNI-WIFI control unit to the electrical network
		- Check that there is 220V – LN voltage
Failure or partial opening or closing of motorized shutters	No power / Adjustment pin inserted	 Remove power from QE for 10 minutes and turn it back on
		- Check that the pin for manual air flow adjustment on the single damper has not been inserted

6.1.1 DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

AIR CONTROL srl VIA COLICO 10, 20158 MILAN (MI)

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

Directive 2006/42/EC relating to machinery in accordance with Annex IIB

The equipment is intended for incorporation into another machine and in this case the machinery directive applies as partly completed machinery as per def. in art.1 of Directive 2006/42/EC taking up the definition of COMPLETELY COMPLETED MACHINERY (PCM, Partly Completed Machinery) [Art. 2(g)]: sets that almost constitute a quasi-machine, but which, alone, are not capable of guaranteeing a well-defined application. A spare part is a partly completed machine. Partly completed machinery is solely intended to be incorporated or assembled with other machinery or with other partly completed machinery or equipment to constitute partly completed machinery covered by this Directive.

DECLARES THAT

the basic requirements of the EC Machinery Directive 2006/42/EC-Appendix I are met for the following points:

1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1/2/3, 1.2.6, 1.2.7, 1.2.8, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 1.3.7, 1.3.8, 1.5.1, 1.5.2, 1.5.4, 1.5.6, 1.5.7, 1.5.8, 1.5.9, 1.6.1, 1.6.2, 1.5.4,

1.6.3, 1.6.4, 1.6.5, 1.7.1, 1.7.2, 1.7.3, 1.7.4

 Product type
 Partly completed machine - PCM partly completed machinery

 Description
 MOTORIZED PLENUM

Commissioning is prohibited until it is ensured that the complete system in which the partly completed machinery is incorporated does not comply with the provisions of EC Directive 2006/42/EC.

The assembly, as a partly completed machine made up of elements of proven conformity, also satisfies the requirements of the harmonized standards applicable to the directives mentioned below

Electromagnetic Compatibility Directive (2014/30/EU)

Low Voltage Directive (2014/35/EU)

Directive 2011/65/EU (ex2002/95/EC) "RoHS" and subsequent amendments with <u>Delegated Amendment/Supplementation Directives</u> Directive 2012/19/EU (ex 2002/96/EC) "WEEE"

We also declare that AIR CONTROL is classified as a "downstream user" and does not generate any new substances that require registration. Constant communication with your suppliers allows you to trace the supply chain of raw materials and any semi-finished products purchased. Any changes to what has been declared regarding REACH will be promptly communicated to all interested customers. With the above, we declare that all the products supplied do not contain SVHC substances and comply with EC regulation 1907/2006

AIR CONTROL srl VIA COLICO 10, 20158 MILAN (MI)

Declaration of incorporation of partly completed machinery according to Machinery Directive 2006/42/EC annex IIB

DECLARES THAT

that the following product meets following essential requirements of Machinery Directive 2006/42/EC: 1.1.2.1.1.3.1.1.5.1.2.1.1.2.2.1.2.3.1.2.4.1/2/3.1.2.6.1.2.7.1.2.8.1.3.1.1.3. 2.1.3.3.1.3.4.1.3.5.1.3.7.1.3.8.1.5.1.1.5.2.1.5.4.1.5.6.1.5.7.1.5.8.1.5.9, 1.6.1.1.6.2.1.6.3.1.6.4.1.6.5.1.7.1. 1.7.2, 1.7.3, 1.7.4

Product type

PCM partly completed machinery

Description

MOTORIZED PLENUM

The partly completed machinery must not be put into service until the relevant machinery into which it is to be incorporated has been declared in conformity with the essential requirements of the Machinery Directive 2006/42 /EC. The following standards have also been applcable: Low Voltage Directive 2014/35/EU EMC Directive 2014/30/EU Directive 2011/65/EU (ex2002/95/EC) "RoHS" and subsequent amendments by delegated directives Directive 2012/19/EU (ex 2002/96/EC) "WEEE"

We also declare that AIR CONTROL classifies itself as a "downstream user" and does not generate any new substances that need to be registered. Constant communication with its suppliers makes it possible to trace the supply chain of raw materials and any semi-finished products purchased. Any changes to the REACH will be promptly communicated to all interested customers. With the foregoing, it is hereby declared that all products supplied do not contain SVHC substances and comply with EC regulation 1907/2006

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