

# Zoning and air distribution systems

2023







Publication: ZONING AND AIR DISTRIBUTION SYSTEM  
PRODUCT GUIDE

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# Zoning and air distribution systems

## INTRODUCTION

Over the past 10 years, the way buildings are renovated and designed has changed profoundly, just as expectations and needs for indoor comfort have become more precise and sophisticated. The energy efficiency criteria required for new nZEB (Nearly Zero Energy Buildings) constructions have also become mandatory by law (EU-27).

This drive towards green evolution, in line with the provisions of European Directive 2010/31/EU (the so-called EPBD, Energy Performance of Buildings Directive), has led the entire heating, air-conditioning, ventilation and domestic hot water production sector to profound renewal, both in the public and private sectors. In fact, air system solutions are playing a decisive role in the energy, quality, safety and health of the air inside buildings.

AIR CONTROL, which has been dealing with indoor comfort for 20 years, has developed a variety of products, systems and solutions to masterfully solve the need for comfort in plant engineering, inside buildings. This product range leaves nothing to chance and ensures quality at clear costs and lead times right from the design phase.

Our aim is to offer the market an excellent service; this is why we have produced this guide dedicated to architects, planners, thermal technicians, installers, plant operation and maintenance companies and, more generally, to all those involved in comfort choices in modern building-plant systems.

We hope you enjoy reading!



# COMPANY

## Profile

*"We meet customers' needs for thermal comfort and well-being with effort and passion through innovative, design-oriented solutions."*

Air Control is an industry leader specialising in the production and distribution of air control devices.

It is part of an articulated system of partner companies pursuing a single objective: to supply the professional market with systems that allow cooling and air exchange in buildings and indoor environments with special attention on indoor air quality and energy savings.



Thanks to our attentive, qualified staff, we offer a comprehensive technical consulting service. Our mission is to fulfil customer expectations with effort and passion, both in terms of comfort and environmental well-being and in terms of both aesthetics and design in the solutions adopted.

We are able based on a mechanical/executive design to realise any air distribution system with precision and timeliness, providing everything from ducting to diffusers, from heat recovery to air handling units up to active sanitization systems to guarantee not only an efficient system but also good, healthy air quality. Air Control's technical staff is available to guide you towards the most advantageous and most suitable plant solution for your needs.



# A COMPANY success story

**2009**

Air Control becomes the exclusive distributor in Italy for motorised zoning systems.

**2014**

PL Clima S.r.l., a company dealing with the design and construction of machinery in the field of industrial and civil ventilation, joins the group.

**2019**

Air Bee S.r.l. becomes part of the group, with the aim of designing and manufacturing devices for residential use that utilise the potential of Dust Free® active sanitizing technology.

**2021**

AQSAFE joins the group to design, manufacture and distribute AQSENSOR, innovative devices for air quality monitoring and control.

**2005**

2005 Air Control is founded in Milan thanks to the initiative of its two founders:

**Luca Gatti and Federico Ruberto**

**2012**

GP Engineering S.r.l., a specialised plant design company, joins the group.

**2015**

Air quality becomes one of the company's business units. Air Control is the exclusive distributor of Dust Free® technologies for Europe and the Middle East.

**2019**

Air Control moves to its new premises in Via Colico, Milan.

**2022**

Air Control exports its products to over 15 countries with a network of 35 agencies in Italy and 5 dedicated distributors for the foreign market.





All the information contained in this publication in printed format is also available in digital format online. We advise you to always consult our website:

[www.aircontrolclima.it](http://www.aircontrolclima.it)



# Zoning and air distribution systems

## CONSULTATION GUIDE

### 1.0 ZONING

PAGE 8

### 2.0 AIR DISTRIBUTION

PAGE 54

### 3.0 KITS FOR DUCTED SYSTEMS

PAGE 80

### 5.0 EXAMPLES OF APPLICATION

PAGE 98

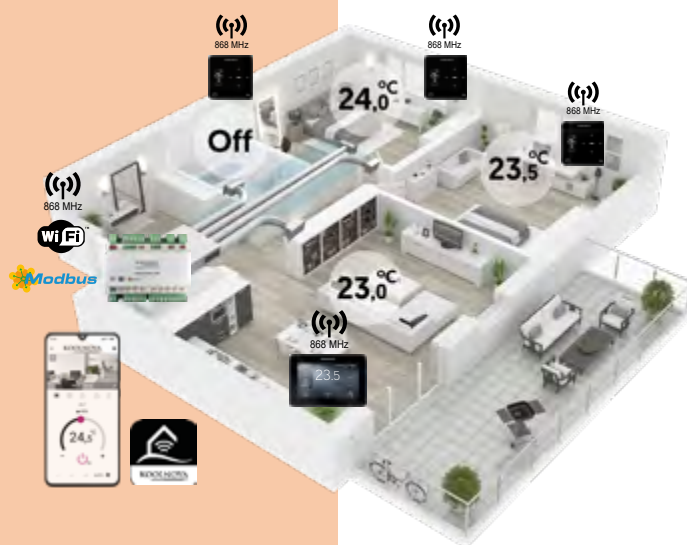
### 6.0 TECHNICAL DESIGN SUPPORT

PAGE 102

ASSISTANCE, GENERAL TERMS AND CONDITIONS OF SALE, WARRANTY AND SERVICES



# 1.0 ZONING



## THE CLEAR VISION OF ZONING SYSTEM CENTRALITY

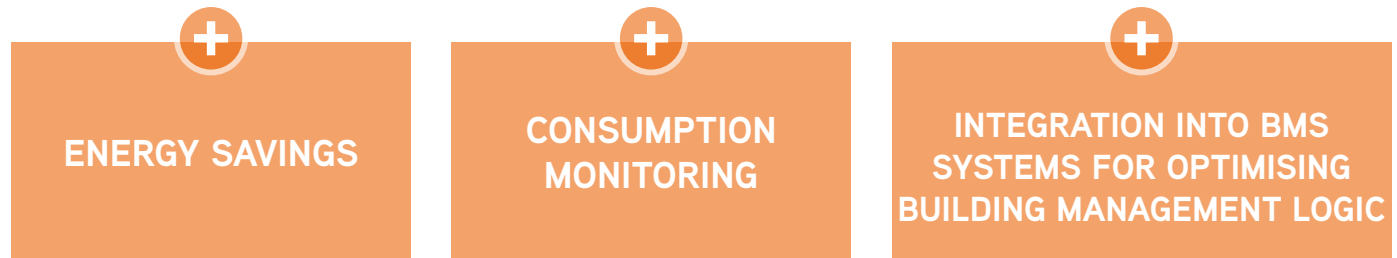
In recent years, the European Commission has been focusing its attention on the concept of buildings that are not only efficient but also “intelligent”, where the management and use of data can generate further energy savings and further cuts in climate-altering emissions directly or indirectly due to buildings. The key concept is that the approach of energy optimisation of buildings has been, especially in the decade from 2010-2020, predominantly based on the energy efficiency of single components (construction or plant engineering) or a series of components contributing to energy consumption, with the aim of improving the overall energy class of buildings and increasing the use of renewable energy sources. Although this approach retains its validity and importance, it has increasingly been found in recent years that energy savings are not only achieved through the introduction of components, systems or installations that improve energy performance alone but also through numerous other factors such as efficient and effective control of their correct use and the monitoring of energy performance. It is also very important that building energy consumption is based on actual need (e.g. by taking into account the actual occupation of the premises by people) and that, thanks to the availability of new monitoring and control technologies, it is possible to interact in an increasingly intelligent manner with renewable energy production and storage systems, which are increasingly common in new-generation “smart buildings”. In this sense, a further boost to efficiency and intelligence in buildings came in 2018 with Directive (EU) 2018/844 (so-called EPBD III) on energy efficiency in buildings, which came about as a recast of the previous Directive 2010/31/EU. The EPBD III actually introduced the concept of the Smart Readiness Indicator (SRI): an indicator that aims in the decade from 2020-2030 to promote digitally compatible renovations, integrate renewable energy and allow measurement of actual energy consumption, taking into account users' needs and possible optimisations resulting from the management of an enormous amount of increasingly available data relating to the building.



## 1.0 ZONING

Koolnova systems fit into this scenario by allowing intelligent control of plant temperatures, aimed at saving and monitoring energy consumption, while at the same time being easily implemented in the BMS logic of the building.

### PROS



### MOTORISED SYSTEMS FOR DUCTED INSTALLATIONS

New-generation buildings designed with the principle of containing energy consumption increasingly require “customised” air-conditioning systems capable of satisfying the increasingly refined requirements of environmental comfort and aesthetics of the solutions adopted.

Unlike multi-split systems that are often oversized and unsightly, ducted air-conditioning systems can be designed for the actual energy requirements of rooms, combining aesthetic and design choices.

Thanks to the Koolnova zoning system, ducted systems fully meet these requirements.

### WHAT IS ZONING

“Zoning” means dividing a flat or office into zones, allowing independent control of the air-conditioning and comfort of each room.

### WHAT ARE THE BENEFITS

#### *Comfort*

Independent temperature control in all zones.

#### *Reduced installed power*

The ductable unit can be sized for actual simultaneous use:

Living area or sleeping area.

#### *Reduced energy consumption*

No unnecessary energy is wasted as the air-conditioning is switched off in unoccupied rooms.

Koolnova adapts unit output according to need.



## 1.1 Temperature management of ducted air systems

*(direct expansion or water fan coil)*

**SYSTEM  
WITH RADIO  
CONTROLS**



WITH MOTORISED DAMPERS  
PAGE 14

**SYSTEM  
WITH WIRED  
CONTROLS**



WITH MOTORISED DAMPERS  
PAGE 16

## 1.2 Management of mixed system temperatures

*(ducted air or water fan coil + radiant panel integration)*

**SYSTEM  
WITH RADIO  
CONTROLS**



WITH MOTORISED DAMPERS +  
RADIANT PANEL INTEGRATION  
PAGE 18

**SYSTEM  
WITH WIRED  
CONTROLS**



WITH MOTORISED DAMPERS +  
RADIANT PANEL INTEGRATION  
PAGE 20



## 1.3 Management of radiant panel only

*(radiant heating)*



**SYSTEM  
WITH RADIO  
CONTROLS**



MANIFOLD HEAD ON/OFF MANAGEMENT  
PAGE 22



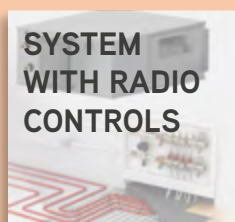
**SYSTEM  
WITH WIRED  
CONTROLS**



MANIFOLD HEAD ON/OFF MANAGEMENT  
PAGE 23

## 1.4 Management of radiant panel and dehumidifier control

*(radiant heating and air-conditioning, air dehumidification)*



**SYSTEM  
WITH RADIO  
CONTROLS**



MANIFOLD HEAD ON/OFF MANAGEMENT +  
DEHUMIDIFICATION CONTROL  
PAGE 24



**SYSTEM  
WITH WIRED  
CONTROLS**



MANIFOLD HEAD ON/OFF MANAGEMENT +  
DEHUMIDIFICATION CONTROL  
PAGE 25

## 1.5 Control of motorised elements via external home automation

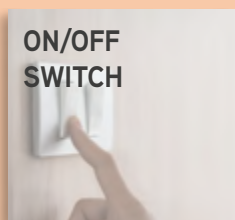


**EXTERNAL  
HOME  
AUTOMATION**



MOTORISED DAMPERS OR VENTS  
MANAGEMENT VIA EXTERNAL ON/OFF HOME AUTOMATION  
PAGE 26

## 1.6 Control of motorised elements via on/off switch



**ON/OFF  
SWITCH**



MOTORISED DAMPERS  
ACTIVATION VIA ON/OFF SWITCH  
PAGE 28



## 1.7 Product data sheets



RADIO AND WIRED CONTROL UNITS  
PAGE 30



RADIO SYSTEM CONTROLS  
PAGE 32



WIRED SYSTEM CONTROLS  
PAGE 34



MACHINE COMMUNICATION INTERFACES  
PAGE 37



RADIANT FLOOR INTEGRATION MODULE  
PAGE 40



HOME AUTOMATION UNIT  
PAGE 41





SWITCH UNIT  
PAGE 41



MOTORISED DAMPERS  
PAGE 43



EXTRA COMPONENTS  
PAGE 45



SANITIZATION KIT  
PAGE 46





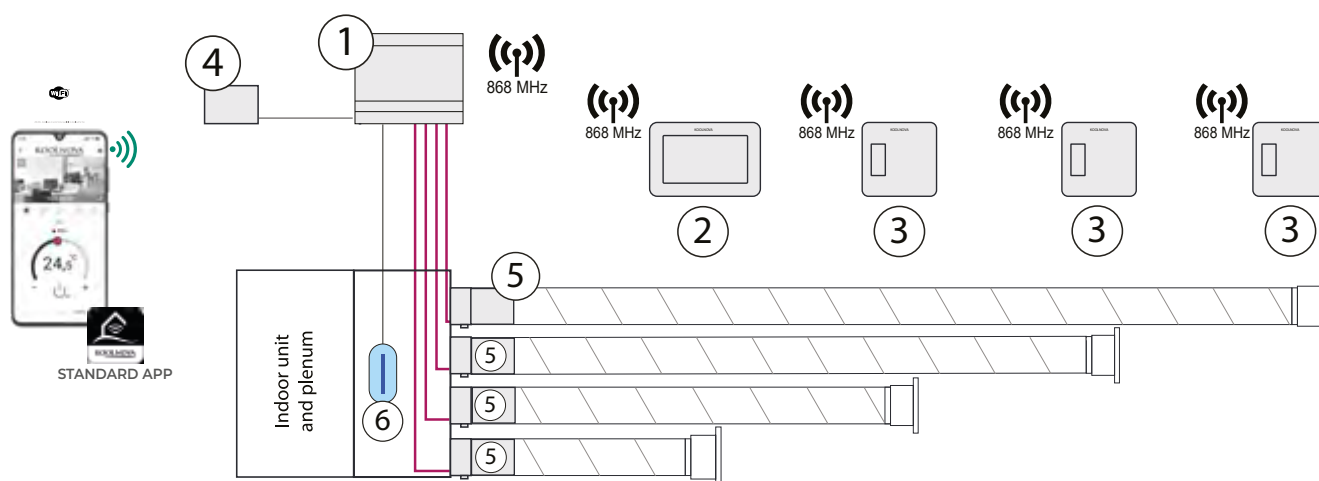
## RADIO SYSTEM WITH MOTORISED DAMPERS

Control system for ducted air installations.

Individual zone temperature control.  
NO WIRING BETWEEN CONTROLS AND CONTROL UNIT.  
SIMPLIFIED ONE-CLICK CONFIGURATION.



### SYSTEM DIAGRAM



### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① CONTROL UNIT		RADIO CONTROL UNIT	1	KN-RADIO-WIFI
② CONTROLS		ETERNAL MASTER RADIO CONTROL *	1	see page 15
		SMART SLAVE RADIO CONTROL	# zones	see page 15
④ INTERFACES		INFRARED INTERFACE	1	NH-CIR-INVERTER
		WIRED INTERFACE		see page 15
		FAN COIL INTERFACE		NH-GTP-UNI
⑤ MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER	# zones	see page 15
⑥ SANITIZATION KIT		SANI KIT FOR SYSTEMS UP TO 7 KW	optional	KIT-SANI-1
		SANI KIT FOR SYSTEMS FROM 7 UP TO 14 KW	optional	KIT-SANI-2

\* CHOICE OF CONTROLS (E.G.: 3 zones - 1 Eternal MASTER control + 2 Smart SLAVE controls)



# 1.1 Temperature management of ducted air systems

(direct expansion or water fan coil)

## TECHNICAL DATA

### CHOICE OF COMPONENTS

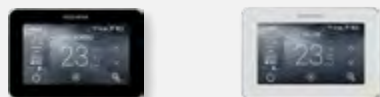
#### RADIO CONTROL UNIT KN-RADIO-WIFI



- Simple installation without wiring to zone controls. • Controls up to 8 air zones + 8 underfloor heating zones.
- Controls up to 4 ducted indoor units.

#### ETERNAL RADIO CONTROLS

##### KN-ETERNAL-M KB-ETERNAL-M



- Wireless communication without wiring (50 m range). • Control of operating modes (hot, cold). • Ambient temperature selection with 0.5°C intervals. • Zone On-Off. • System shut-down (MASTER). • Temperature and machine speed control. • Zone reading of ambient temperature and relative humidity. • SLEEP function. • Hourly programming. • Lithium-ion rechargeable battery powered with USB cable.

#### SMART RADIO CONTROLS

##### KN-SMART-S KB-SMART-S



- Wireless communication without wiring (50 m range). • Temperature setpoint selection with 0.5°C intervals. • Zone On-Off. • Zone reading of ambient temperature and relative humidity. • SLEEP function. • Lithium-ion rechargeable battery powered with USB cable.

#### INFRARED INTERFACE NH-CIR-INVERTER

FOR DIRECT EXPANSION MACHINES WITH INFRARED REMOTE CONTROL



- CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). • Connection to the system BUS. • Programmable from MASTER control to communicate with various brands on the market (see compatibility table).

Model		Model	
Daikin	10	Airwell	9
Mit. Electric	6	Idema	12
Fujitsu	15	Hokkaido	12
Toshiba	16	Hitachi	21
LG	7	Sabiana	23
Panasonic	3	Haier	29
Samsung	17	Kaysun	12
Carrier	0	Sanyo	8

#### WIRED INTERFACE NH-CFI-CDZ

FOR DIRECT EXPANSION MACHINES WITH WIRED CONTROL



- CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). • Connection to the BUS or RS485 output of the system.

Model	Code
Daikin residential	NH-CFI-DAI1
Daikin VRV-SKYLINE	NH-CFI-DAI3
Mitsubishi	NH-CFI-MIT
Mitsubishi HEAVY	NH-CFI-MIH
Samsung	NH-CFI-SAM
Samsung SA2 NASA	NH-CFI-SAM2
Fujitsu 3-wire	NH-CFI-FUI1
Fujitsu CN65	NH-CFI-FUI2
Toshiba MMD-UP mini VRV	NH-CFI-TOS
Toshiba	NH-CFI-TOS1
Hitachi	NH-CFI-HIT
Hisense	NH-CFI-HIS
LG	NH-CFI-LGE
Midea	NH-CFI-MID
Panasonic PACI ECOI	NH-CFI-PAN1
Panasonic ETHEREA	NH-CFI-PAN2

#### FAN COIL INTERFACE NH-GTP-UNI

FOR HYDRONIC FAN COIL WITH ON/OFF FAN OR INVERTER



- FAN COIL function management (ON/OFF, fan speed change, hot-cold valve management).
- Connection to the system BUS.
- Fan management via relay (3 speeds) or 0-10 V contact (inverter).



#### MOTORISED DAMPER NH-CO-Ø-SLAVE

- Motorised duct damper manufactured from galvanised steel sheet. • Installations where you want to control the passage of air. • Able to be operated in parallel with another motorisation (1 control manages up to 2 motors) - Ø 125, 150, 200 and 250.

NH-CO-125-SLAVE
NH-CO-150-SLAVE
NH-CO-200-SLAVE
NH-CO-250-SLAVE





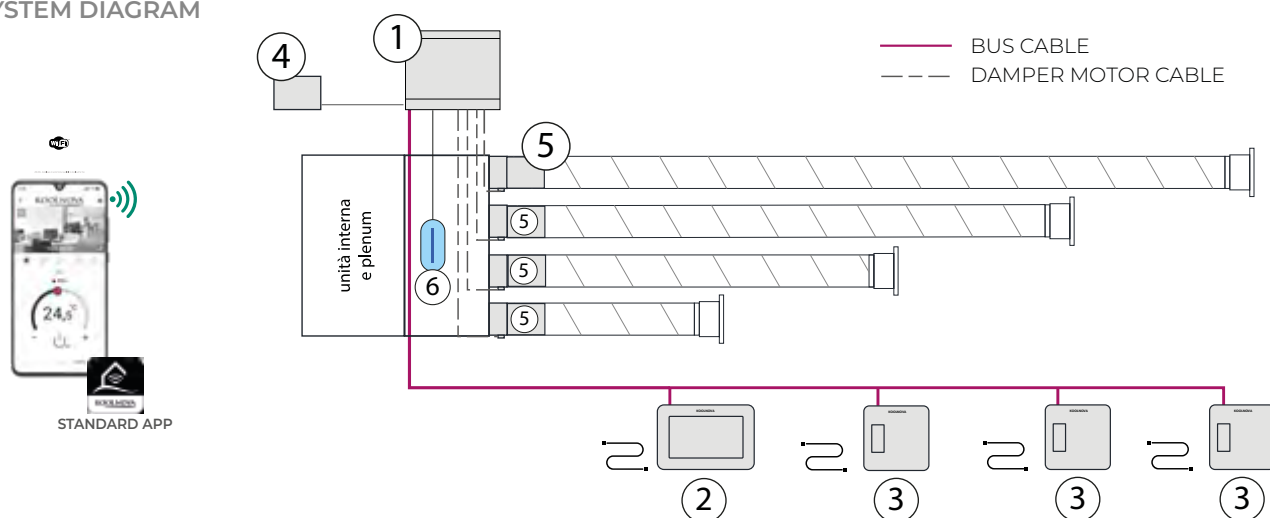
## WIRED SYSTEM WITH MOTORISED DAMPERS

Control system for ducted air installations.

Individual zone temperature control.  
COMFORT AND DESIGN FOR EXISTING SYSTEMS.  
SIMPLIFIED CONFIGURATION.



### SYSTEM DIAGRAM



### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① CONTROL UNIT		WI-FI WIRE CONTROL UNIT	1	KN-FILO-WIFI
② CONTROLS		ETERNAL WIRED CENTRALISING UNIT *	1	see page 17
		SMART WIRED CONTROL	# zones	see page 17
④ INTERFACES		INFRARED INTERFACE	1	NH-CIR-INVERTER
		WIRED INTERFACE		see page 17
		FAN COIL INTERFACE		NH-GTP-UNI
⑤ MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER	# zones	see page 17
⑥ SANITIZATION KIT		SANI KIT FOR SYSTEMS UP TO 7 KW	optional	KIT-SANI-1
		SANI KIT FOR SYSTEMS FROM 7 UP TO 14 KW	optional	KIT-SANI-2

\* CHOICE OF CONTROLS (E.G.: 3 zones - 1 Eternal MASTER control + 2 Smart SLAVE controls or 2 SLAVE Touch controls)



# 1.1 Temperature management of ducted air systems

(direct expansion or water fan coil)

## TECHNICAL DATA

### CHOICE OF COMPONENTS

#### WIRE CONTROL UNIT Wi-Fi

##### KN-FILO-WIFI



Wire control unit prearranged for installation on DIN rail. For systems where home automation control of the building is desired, including air conditioning. Control of up to 8 air zones + 8 underfloor heating zones + 32 Zone Modules.

#### ETERNAL WIRED CENTRALISING UNIT

##### KN-ETERNAL-M-FI



##### KB-ETERNAL-M-FI



· Wired communication via BUS cable to the motorised elements (see wiring diagram). · Control of operating modes (hot, cold). · Ambient temperature selection with 0.5°C intervals. · Zone On-Off. System shut-down (MASTER). · Temperature and machine speed control. · Zone reading of ambient temperature and relative humidity. · SLEEP function. · Hourly programming.

#### WIRED CONTROL

##### KN-SMART-S-FI



##### KB-SMART-S-FI



· Wired communication via BUS cable to the motorised elements (see wiring diagram). · Nominal temperature selection with 0.5°C intervals. · Zone On-Off. · Zone reading of ambient temperature and relative humidity. · SLEEP function.

#### INFRARED INTERFACE

##### NH-CIR-INVERTER

FOR DIRECT EXPANSION MACHINES WITH INFRARED REMOTE CONTROL



· CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). · Connection to the system BUS. · Programmable from MASTER control to communicate with various brands on the market (see compatibility table).

Model		Model	
Daikin	10	Airwell	9
Mit. Electric	6	Idema	12
Fujitsu	15	Hokkaido	12
Toshiba	16	Hitachi	21
LG	7	Sabiana	23
Panasonic	3	Haier	29
Samsung	17	Kaysun	12
Carrier	0	Sanyo	8

#### WIRED INTERFACE

##### NH-CFI-CDZ

FOR DIRECT EXPANSION MACHINES WITH WIRED CONTROL



· CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). · Connection to the BUS or RS485 output of the system.

Model	Code
Daikin residential	NH-CFI-DAI1
Daikin VRV-SKYLINE	NH-CFI-DAI3
Mitsubishi	NH-CFI-MIT
Mitsubishi HEAVY	NH-CFI-MIH
Samsung	NH-CFI-SAM
Samsung SA2 NASA	NH-CFI-SAM2
Fujitsu 3-wire	NH-CFI-FUI1
Fujitsu CN65	NH-CFI-FUI2
Toshiba MMD-UP mini VRV	NH-CFI-TOS
Toshiba	NH-CFI-TOS1
Hitachi	NH-CFI-HIT
Hisense	NH-CFI-HIS
LG	NH-CFI-LGE
Midea	NH-CFI-MID
Panasonic PACI ECOI	NH-CFI-PAN1
Panasonic ETHEREA	NH-CFI-PAN2

#### FAN COIL INTERFACE

##### NH-GTP-UNI

FOR HYDRONIC FAN COIL WITH ON/OFF FAN OR INVERTER



· FAN COIL function management (ON/OFF, fan speed change, hot-cold valve management). · Connection to the system BUS. · Fan management via relay (3 speeds) or 0-10 V contact (inverter).



#### MOTORISED DAMPER NH-CO-Ø-SLAVE

· Motorised duct damper manufactured from galvanised steel sheet. · Installations where you want to control the passage of air. · Able to be operated in parallel with another motorisation (1 control manages up to 2 motors) - Ø 125, 150, 200 and 250.

NH-CO-125-SLAVE
NH-CO-150-SLAVE
NH-CO-200-SLAVE
NH-CO-250-SLAVE





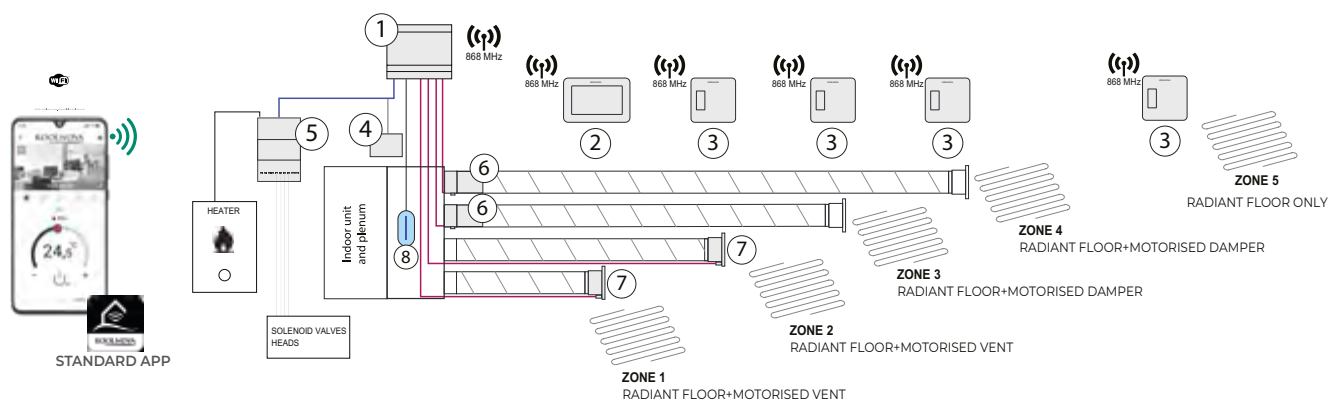
## RADIO SYSTEM MOTORISED DAMPERS WITH RADIANT PANEL INTEGRATION

Control system for ducted air installations in combination with radiant panel.

Individual zone temperature control.  
COMFORT AND DESIGN FOR EXISTING SYSTEMS.  
SIMPLIFIED CONFIGURATION.



### SYSTEM DIAGRAM



### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① CONTROL UNIT		RADIO CONTROL UNIT	1	KN-RADIO-WIFI
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		SMART SLAVE RADIO CONTROL	# zones	see page 19
④ INTERFACES		INFRARED INTERFACE	1	NH-CIR-INVERTER
		WIRED INTERFACE		see page 19
		FAN COIL INTERFACE		NH-GTP-UNI
⑤ RADIANT MODULE		RADIANT MODULE (up to 8 expandable zones)	1	NH-SR-UNI
⑥ MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER	# zones	see page 19
⑧ SANITIZATION KIT		SANI KIT FOR SYSTEMS UP TO 7 KW	optional	KIT-SANI-1
		SANI KIT FOR SYSTEMS FROM 7 UP TO 14 KW	optional	KIT-SANI-2

\* CHOICE OF CONTROLS EXAMPLE 5 ZONES: 3 ZONES (AIR AND RADIANT) + 2 ZONES (RADIANT ONLY) = 1 MASTER + 4 SLAVES



## 1.2 Mixed system temperature management

(ducted air or water fan coil + radiant panel integration)

### TECHNICAL DATA

#### CHOICE OF COMPONENTS

##### RADIO CONTROL UNIT KN-RADIO-WIFI



· Simple installation without wiring to zone controls. · Controls up to 8 air zones + 8 underfloor heating. · Controls up to 4 ducted indoor units.

##### ETERNAL RADIO CONTROLS

###### KN-ETERNAL-M



###### KB-ETERNAL-M



· Wireless communication without wiring (50 m range). · Control of operating modes (hot, cold). · Ambient temperature selection with 0.5°C intervals. · Zone On-Off. · System shut-down (MASTER). · Temperature and machine speed control. · Zone reading of ambient temperature and relative humidity. · SLEEP function. · Hourly programming. · Lithium-ion rechargeable battery powered with USB cable.

##### SMART RADIO CONTROLS

###### KN-SMART-S



###### KB-SMART-S



· Wireless communication without wiring (50 m range). · Temperature setpoint selection with 0.5°C intervals. · Zone On-Off. · Zone reading of ambient temperature and relative humidity. · SLEEP function. · Lithium-ion rechargeable battery powered with USB cable.

##### INFRARED INTERFACE NH-CIR-INVERTER

FOR DIRECT EXPANSION MACHINES  
WITH INFRARED REMOTE CONTROL



· CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). · Connection to the system BUS. · Programmable from MASTER control to communicate with various brands on the market (see compatibility table).

Model	Model
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Fujitsu 15	Hokkaido 12
Toshiba 16	Hitachi 21
LG 7	Sabiana 23
Panasonic 3	Haier 29
Samsung 17	Kaysun 12
Carrier 0	Sanyo 8

##### WIRED INTERFACE NH-CFI-CDZ

FOR DIRECT EXPANSION MACHINES  
WITH WIRED CONTROL

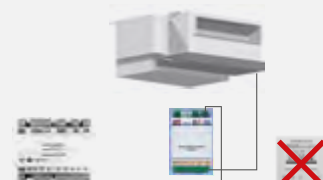


· CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). · Connection to the BUS or RS485 output of the system.

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Samsung SA2 NASA	NH-CFI-SAM2
Fujitsu 3-wire	NH-CFI-FUI1
Fujitsu CN65	NH-CFI-FUI2
Toshiba MMD-UP mini VRV	NH-CFI-TOS
Toshiba	NH-CFI-TOS1
Hitachi	NH-CFI-HIT
Hisense	NH-CFI-HIS
LG	NH-CFI-LGE
Midea	NH-CFI-MID
Panasonic PACI ECOI	NH-CFI-PAN1
Panasonic ETHEREA	NH-CFI-PAN2

##### FAN COIL INTERFACE NH-GTP-UNI

FOR HYDRONIC FAN COIL WITH ON/OFF FAN  
OR INVERTER



· FAN COIL function management (ON/OFF, fan speed change, hot-cold valve management). · Connection to the system BUS. · Fan management via relay (3 speeds) or 0-10 V contact (inverter).

##### RADIANT FLOOR MODULE NH-SR-UNI



· Allows management of the underfloor system manifold heads via relay contacts · BUS connection, two polarity-free wires. · Self-installing.



##### MOTORISED DAMPER NH-CO-Ø-SLAVE

· Motorised duct damper manufactured from galvanised steel sheet. · Installations where you want to control the passage of air. · Able to be operated in parallel with another motorisation (1 control manages up to 2 motors) · Ø 125, 150, 200 and 250.

NH-CO-125-SLAVE
NH-CO-150-SLAVE
NH-CO-200-SLAVE
NH-CO-250-SLAVE





## WIRED SYSTEM MOTORISED DAMPERS WITH RADIANT PANEL INTEGRATION

Control system for ducted air installations in combination with radiant panel.

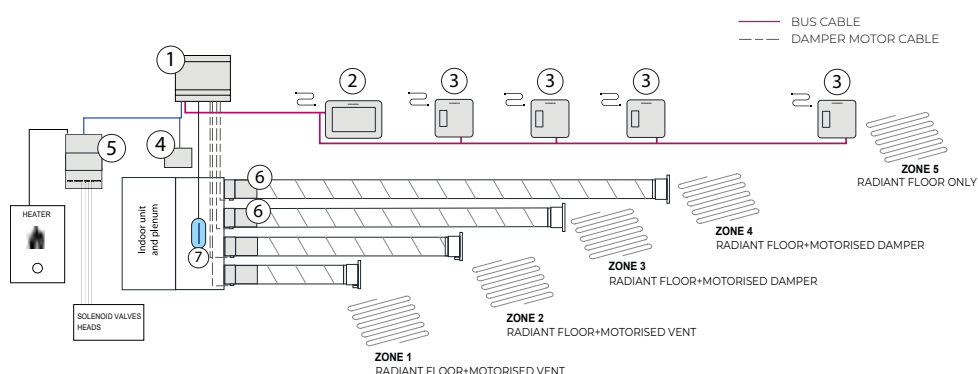
Individual zone temperature control.  
COMFORT AND DESIGN FOR EXISTING SYSTEMS.  
SIMPLIFIED CONFIGURATION.



### SYSTEM DIAGRAM



STANDARD APP



### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① CONTROL UNIT		WI-FI WIRE CONTROL UNIT	1	KN-FILO-WIFI
② CONTROLS		ETERNAL WIRED CENTRALISING UNIT *	1	see page 21
		SMART WIRED CONTROL	# zones	see page 21
④ INTERFACES		INFRARED INTERFACE	1	NH-CIR-INVERTER
		WIRED INTERFACE		see page 21
		FAN COIL INTERFACE		NH-GTP-UNI
⑤ RADIANT MODULE		RADIANT MODULE (up to 8 expandable zones)	1	NH-SR-UNI
⑥ MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER	# zones	see page 21
⑦ SANITIZATION KIT		SANI KIT FOR SYSTEMS UP TO 7 KW	optional	KIT-SANI-1
		SANI KIT FOR SYSTEMS FROM 7 UP TO 14 KW	optional	KIT-SANI-2

\* CHOICE OF CONTROLS EXAMPLE 5 ZONES: 3 ZONES (AIR AND RADIANT) + 2 ZONES (RADIANT ONLY) = 1 MASTER + 4 SLAVES - control with initial code KB colour WHITE



## 1.2 Mixed system temperature management

(ducted air or water fan coil + radiant panel integration)

### TECHNICAL DATA

#### CHOICE OF COMPONENTS

##### WIRE CONTROL UNIT Wi-Fi

###### KN-FILO-WIFI



Wire control unit prearranged for installation on DIN rail. For systems where home automation control of the building is desired, including air conditioning. Control of up to 8 air zones + 8 underfloor heating zones + 32 Zone Modules.

##### ETERNAL WIRED CENTRALISING UNIT

###### KN-ETERNAL-M-FI

###### KB-ETERNAL-M-FI



· Wired communication via BUS cable to the motorised elements (see wiring diagram). · Control of operating modes (hot, cold). · Ambient temperature selection with 0.5°C intervals. · Zone On-Off. System shut-down (MASTER). · Temperature and machine speed control. · Zone reading of ambient temperature and relative humidity. · SLEEP function. · Hourly programming.

##### WIRED CONTROL

###### KN-SMART-S-FI

###### KB-SMART-S-FI



· Wired communication via BUS cable to the motorised elements (see wiring diagram). · Nominal temperature selection with 0.5°C intervals. · Zone On-Off. · Zone reading of ambient temperature and relative humidity. · SLEEP function.

##### INFRARED INTERFACE

###### NH-CIR-INVERTER

FOR DIRECT EXPANSION MACHINES WITH INFRARED REMOTE CONTROL



· CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). · Connection to the system BUS. · Programmable from MASTER control to communicate with various brands on the market (see compatibility table).

Model		Model	
Daikin	10	Airwell	9
Mit. Electric	6	Idema	12
Fujitsu	15	Hokkaido	12
Toshiba	16	Hitachi	21
LG	7	Sabiana	23
Panasonic	3	Haier	29
Samsung	17	Kaysun	12
Carrier	0	Sanyo	8

##### WIRED INTERFACE

###### NH-CFI-CDZ

FOR DIRECT EXPANSION MACHINES WITH WIRED CONTROL



· CDZ function management (ON/OFF, fan speed change, temperature set point change with consumption optimisation logic). · Connection to the BUS or RS485 output of the system.

Model	Code
Daikin residential	NH-CFI-DAI1
Daikin VRV-SKYLINE	NH-CFI-DAI3
Mitsubishi	NH-CFI-MIT
Mitsubishi HEAVY	NH-CFI-MIH
Samsung	NH-CFI-SAM
Samsung SA2 NASA	NH-CFI-SAM2
Fujitsu 3-wire	NH-CFI-FUI1
Fujitsu CN65	NH-CFI-FUI2
Toshiba MMD-UP mini VRV	NH-CFI-TOS
Toshiba	NH-CFI-TOS1
Hitachi	NH-CFI-HIT
Hisense	NH-CFI-HIS
LG	NH-CFI-LGE
Midea	NH-CFI-MID
Panasonic PACI ECOI	NH-CFI-PAN1
Panasonic ETHEREA	NH-CFI-PAN2

##### FAN COIL INTERFACE

###### NH-GTP-UNI

FOR HYDRONIC FAN COIL WITH ON/OFF FAN OR INVERTER



· FAN COIL function management (ON/OFF, fan speed change, hot-cold valve management). · Connection to the system BUS. · Fan management via relay (3 speeds) or 0-10 V contact (inverter).

##### RADIANT FLOOR MODULE

###### NH-SR-UNI



· Allows management of the underfloor system manifold heads via relay contacts · BUS connection, two polarity-free wires. · Self-installing.



##### MOTORISED DAMPER

###### NH-CO-Ø-SLAVE

· Motorised duct damper manufactured from galvanised steel sheet. · Installations where you want to control the passage of air. · Able to be operated in parallel with another motorisation (1 control manages up to 2 motors) · Ø 125, 150, 200 and 250.

NH-CO-125-SLAVE

NH-CO-150-SLAVE

NH-CO-200-SLAVE

NH-CO-250-SLAVE



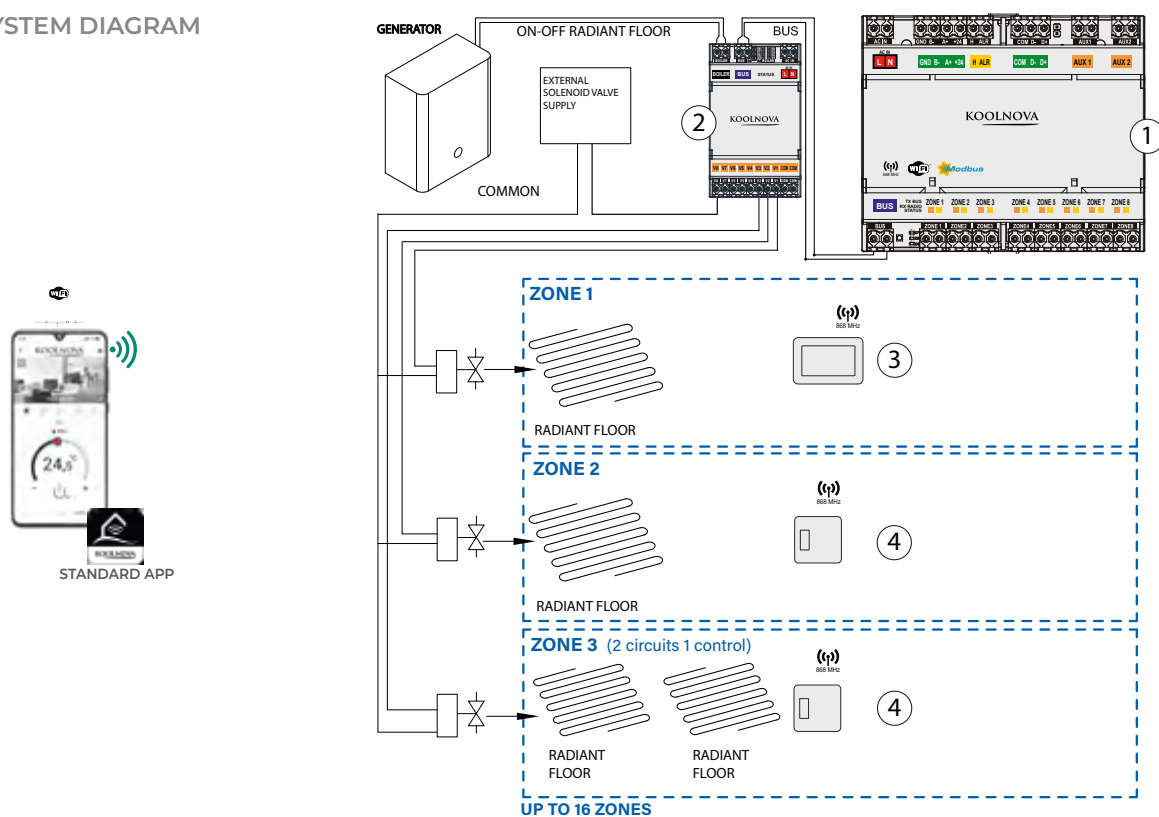


## RADIO SYSTEM MANIFOLD HEAD ON/OFF MANAGEMENT

Radiant panel zone control system.

Individual zone temperature control.  
COMFORT AND DESIGN FOR HEATING CONTROL.  
SIMPLIFIED CONFIGURATION.

### SYSTEM DIAGRAM



### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① CONTROL UNIT		RADIO CONTROL UNIT	1	KN-RADIO-WIFI
② MODULE		FROM 1 TO 8 ZONES - RADIANT MODULE	1	NH-SR-UNI
		FROM 9 TO 16 ZONES - RADIANT MODULES	2	
③ CONTROLS		ETERNAL MASTER RADIO CONTROL *	1	KN-ETERNAL-M
		SMART SLAVE RADIO CONTROL	# zones	KN-SMART-S
				KB-SMART-S

\* CHOICE OF CONTROLS (E.G.: 3 zones - 1 Eternal MASTER control + 2 Smart SLAVE controls) - control with initial code KB colour WHITE



## 1.3 Management of radiant panel only

(radiant heating)

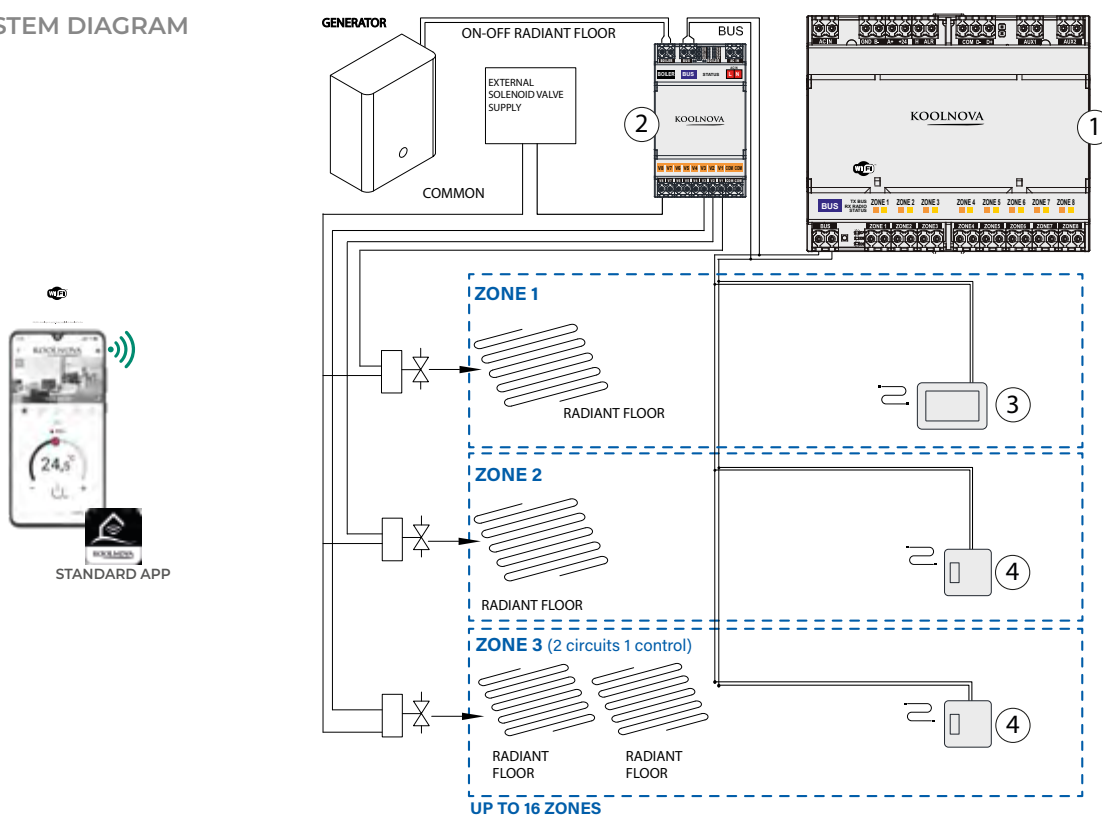


### WIRED SYSTEM MANIFOLD HEAD ON/OFF MANAGEMENT

Radiant panel zone control system.

Individual zone temperature control.  
COMFORT AND DESIGN FOR HEATING CONTROL.  
SIMPLIFIED CONFIGURATION.

#### SYSTEM DIAGRAM



#### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① CONTROL UNIT		WI-FI WIRE CONTROL UNIT	1	KN-FILO-WIFI
② MODULE		FROM 1 TO 8 ZONES - RADIANT MODULE	1	NH-SR-UNI
		FROM 9 TO 16 ZONES - RADIANT MODULES	2	
③ CONTROLS		ETERNAL WIRED CENTRALISING UNIT *	1	KN-ETERNAL-M-FI
		SMART WIRED CONTROL*	# zones	KB-ETERNAL-M-FI
				KN-SMART-S-FI
				KB-SMART-S-FI

\* CHOICE OF CONTROLS (E.G.: 3 zones - 1 Eternal MASTER control + 2 Smart SLAVE/TOUCH controls) - control with initial code KB colour WHITE



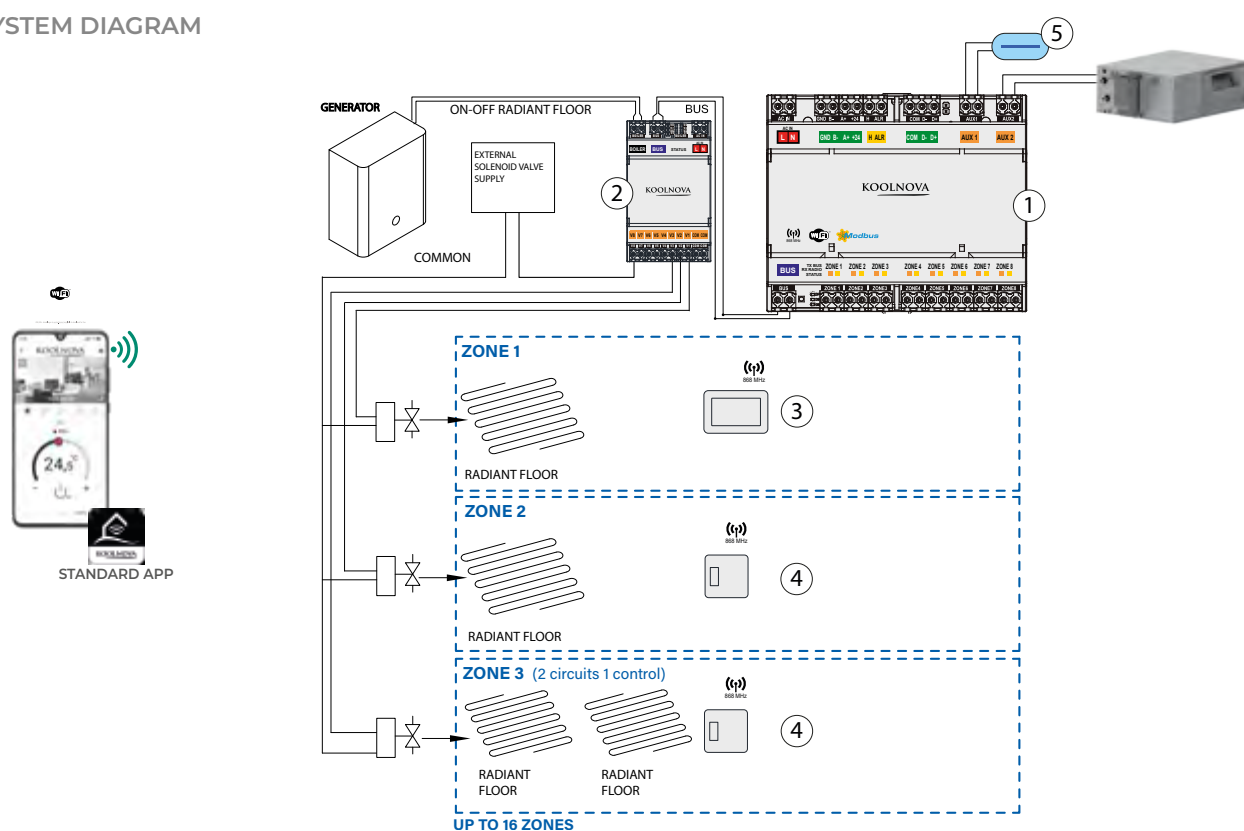


## RADIO SYSTEM MANIFOLD HEAD ON/OFF MANAGEMENT + DEHUMIDIFICATION CONTROL

Radiant panel zone control system and dehumidifier management.

Individual zone temperature and humidity control.  
COMFORT AND DESIGN FOR EXISTING SYSTEMS.  
SIMPLIFIED CONFIGURATION.

### SYSTEM DIAGRAM



### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① CONTROL UNIT		RADIO CONTROL UNIT	1	KN-RADIO-WIFI
② MODULE		RADIANT MODULE (up to 8 expandable zones)	1	NH-SR-UNI
③ CONTROLS		ETERNAL MASTER RADIO CONTROL *	1	KN-ETERNAL-M KB-ETERNAL-M
		SMART SLAVE RADIO CONTROL	# zones	KN-SMART-S KB-SMART-S
⑤ SANITIZATION KIT FOR DEHUMIDIFIERS		SANI KIT FOR SYSTEMS UP TO 7 KW	optional	KIT-SANI-1
		SANI KIT FOR SYSTEMS FROM 7 UP TO 14 KW	optional	KIT-SANI-2

\* CHOICE OF CONTROLS (E.G.: 3 zones - 1 Eternal MASTER control + 2 Smart SLAVE controls) - control with initial code KB colour WHITE



## 1.4 Management of radiant panel and dehumidifier control

(radiant heating and air-conditioning, air dehumidification)

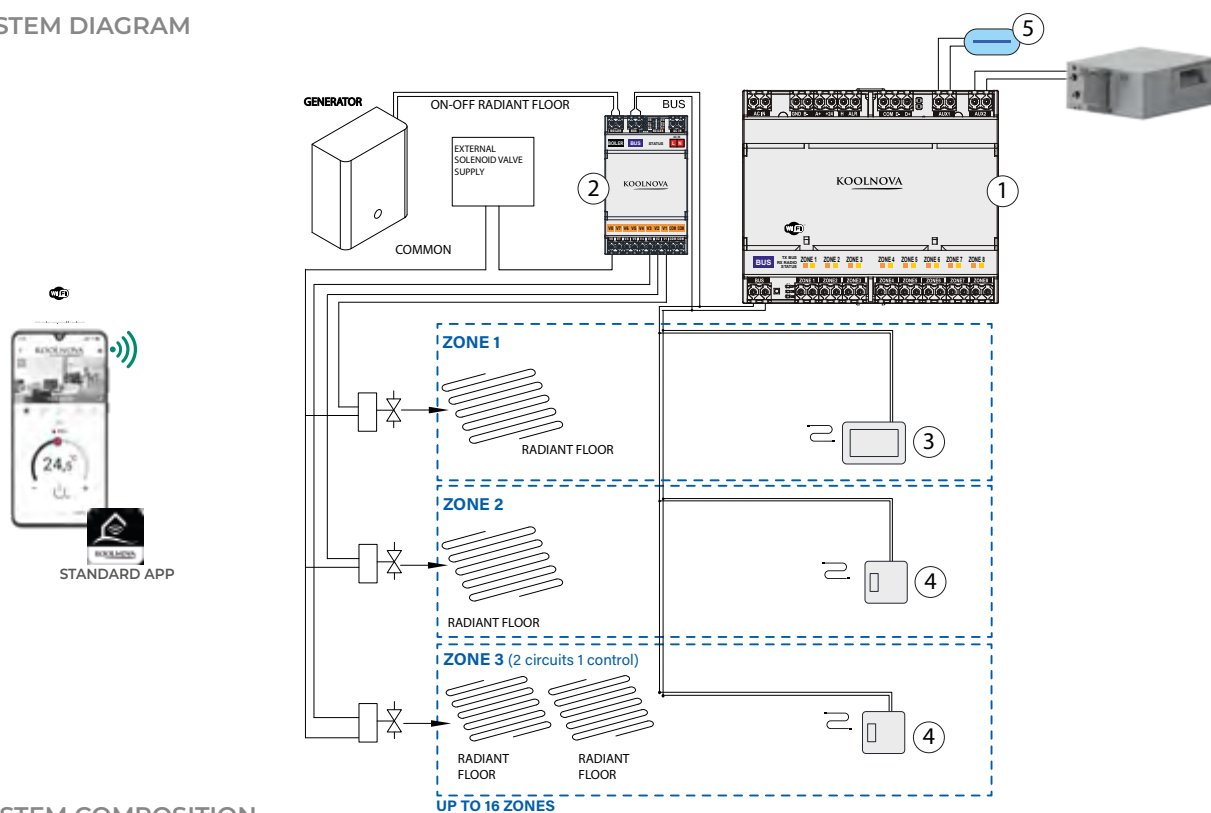


### WIRED SYSTEM MANIFOLD HEAD ON/OFF MANAGEMENT + DEHUMID- IFICATION CONTROL

Radiant panel zone control system and dehumidifier management.

Individual zone temperature and humidity control.  
COMFORT AND DESIGN FOR EXISTING SYSTEMS.  
SIMPLIFIED CONFIGURATION.

#### SYSTEM DIAGRAM



#### SYSTEM COMPOSITION

	COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
①	CONTROL UNIT		WI-FI WIRE CONTROL UNIT	1	KN-FILO-WIFI
②	MODULE		RADIANT MODULE (up to 8 expandable zones)	1	NH-SR-UNI
③	CONTROLS		ETHERNET WIRED CENTRALISING UNIT *	1	KN-ETERNAL-M-FI KB-ETERNAL-M-FI
④			SMART WIRED CONTROL	# zones	KN-SMART-S-FI KB-SMART-S-FI
⑤	SANITIZATION KIT FOR DEHUMIDIFIERS		SANI KIT FOR SYSTEMS UP TO 7 KW	optional	KIT-SANI-1
			SANI KIT FOR SYSTEMS FROM 7 UP TO 14 KW	optional	KIT-SANI-2

\* CHOICE OF CONTROLS (E.G.: 3 zones - 1 Ethernal MASTER control + 2 Smart SLAVE/TOUCH controls) - control with initial code KB colour WHITE

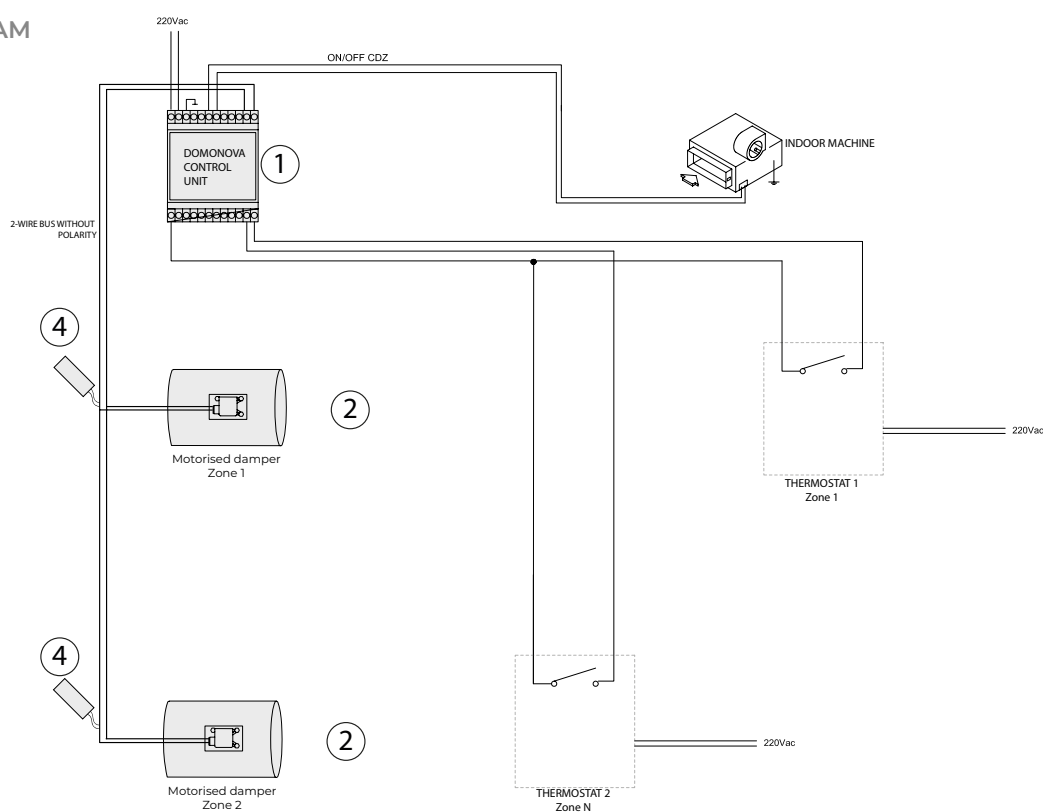




## MOTORISED DAMPERS MANAGEMENT VIA EXTERNAL HOME AUTOMATION

Opening and closing of motorised DAMPERS will be controlled by thermostats in the home automation system.

### SYSTEM DIAGRAM



### SYSTEM COMPOSITION

COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
① HOME AUTOMATION UNIT		HOME AUTOMATION UNIT	1	NH-DO
② MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER	# zones	see page 27
④ ELECTRONICS		ELECTRONICS FOR MOTORISED ELEMENTS	# zones	see page 27



## 1.5 Control of motorised elements via external home automation

### TECHNICAL DATA

#### CHOICE OF COMPONENTS

##### DOMO UNIT

##### NH-DO



Description see page 41

##### DOMO ELECTRONICS

##### NH-ELE-DOMO-...



Model	Code
Mot. element 1	NH-ELE-DOMO-00
Mot. element 2	NH-ELE-DOMO-01
Mot. element 3	NH-ELE-DOMO-02
Mot. element 4	NH-ELE-DOMO-03
Mot. element 5	NH-ELE-DOMO-04
Mot. element 6	NH-ELE-DOMO-05
Mot. element 7	NH-ELE-DOMO-06
Mot. element 8	NH-ELE-DOMO-07
Mot. element 9	NH-ELE-DOMO-08

##### EXAMPLE OF CHOICE OF COMPONENTS

5-zone system with 5 circular dampers

##### LIST OF CODES

Quantity	Code
1	NH-DO
3	NH-CO-150-SLAVE
2	NH-CO-200-SLAVE
1	NH-ELE-DOMO-00
1	NH-ELE-DOMO-01
1	NH-ELE-DOMO-02
1	NH-ELE-DOMO-03
1	NH-ELE-DOMO-04



Different electronic coding for each individual motorised element.



##### MOTORISED DAMPER

##### NH-CO-Ø-SLAVE

• Motorised duct damper manufactured from galvanised steel sheet. • Installations where you want to control the passage of air. • Able to be operated in parallel with another motorisation (1 control manages up to 2 motors) • Ø 125, 150, 200 and 250.

NH-CO-125-SLAVE
NH-CO-150-SLAVE
NH-CO-200-SLAVE
NH-CO-250-SLAVE

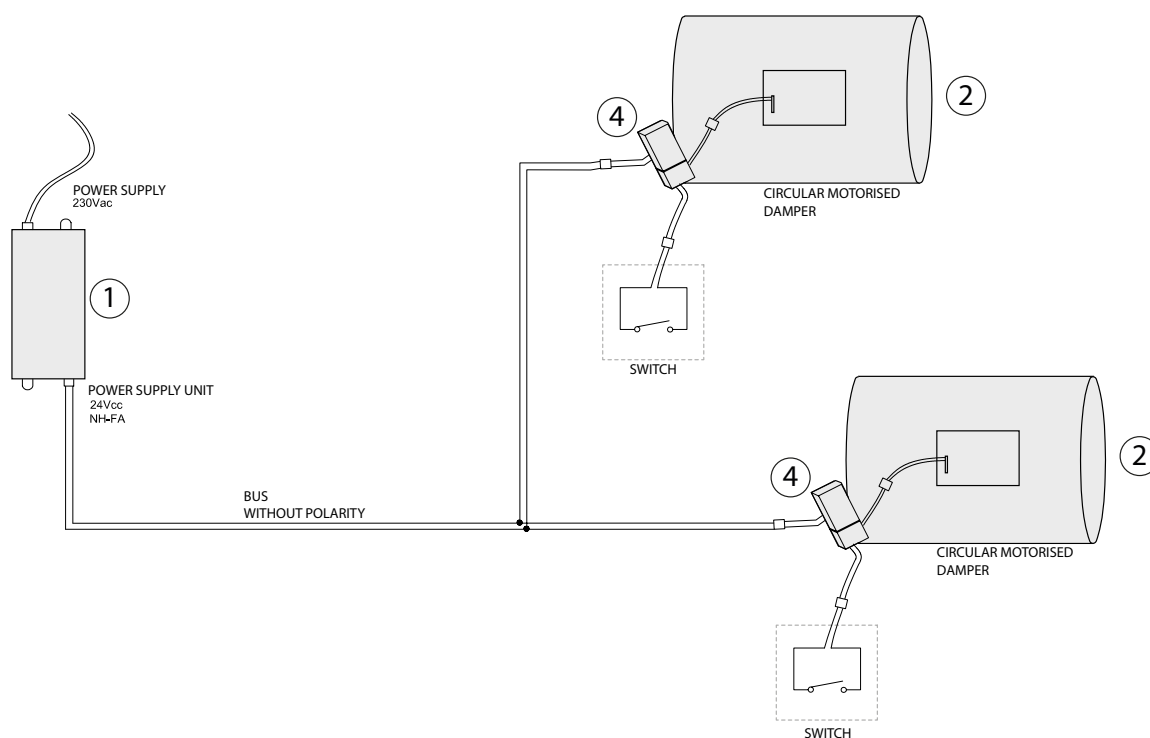




## MOTORISED DAMPERS ACTIVATED VIA ON/OFF SWITCH

Opening and closing of motorised DAMPERS will be controlled by the switches connected to them.

### SYSTEM DIAGRAM



### SYSTEM COMPOSITION

	COMPONENT	IMAGE	DESCRIPTION	QTY.	CODE
①	TRANSFORMER		TRANSFORMER (up to 6 motorised elements)	1	NH-FA
②	MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER	# zones	see page 29
④	ELECTRONICS		ELECTRONICS FOR MOTORISED ELEMENTS	# zones	NH-ELE-INT




# 1.6 Control of motorised elements via on/off switch

## TECHNICAL DATA

### CHOICE OF COMPONENTS

TRANSFORMER


NH-FA



Description see page 41

SWITCH ELECTRONICS \*

NH-ELE-INT



Model	Code
Switch electronics	NH-ELE-INT


EXAMPLE OF CHOICE OF COMPONENTS

5-zone system with 5 circular dampers

LIST OF CODES

Quantity	Code
1	NH-FA
3	NH-CO-150-SLAVE
2	NH-CO-200-SLAVE
5	NH-ELE-INT





MOTORISED DAMPER

NH-CO-Ø-SLAVE

- Motorised duct damper manufactured from galvanised steel sheet.
- Installations where you want to control the passage of air.
- Able to be operated in parallel with another motorisation (1 control manages up to 2 motors)
- Ø 125, 150, 200 and 250.

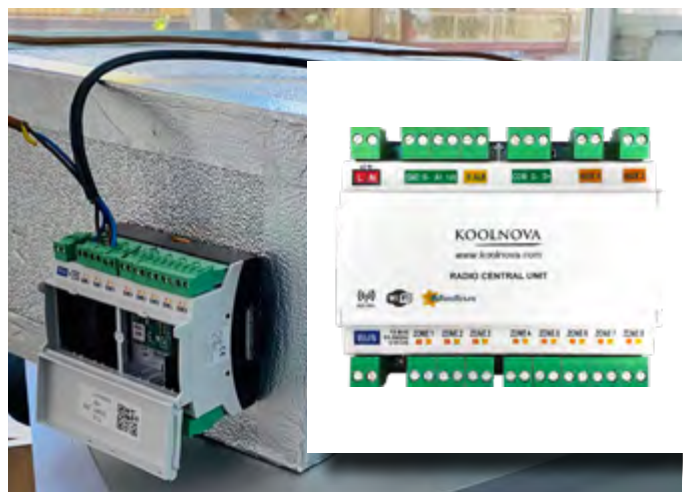
NH-CO-125-SLAVE

NH-CO-150-SLAVE

NH-CO-200-SLAVE

NH-CO-250-SLAVE





## RADIO CONTROL UNIT

### CODE DESCRIPTION

RADIO CONTROL UNIT:

KN-RADIO-WIFI

### DESCRIPTION

RADIO control unit with provision for DIN rail installation.

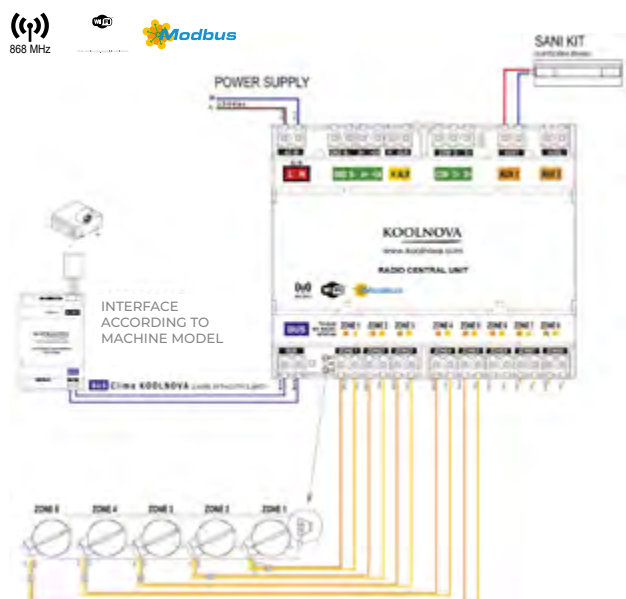
Simple installation without wiring and local control via RADIO controls. Remote control from the KOOLNOVA CLIMA APP or KOOLNOVA DOMO APP available for IOS and Android systems or BMS.

### FEATURES

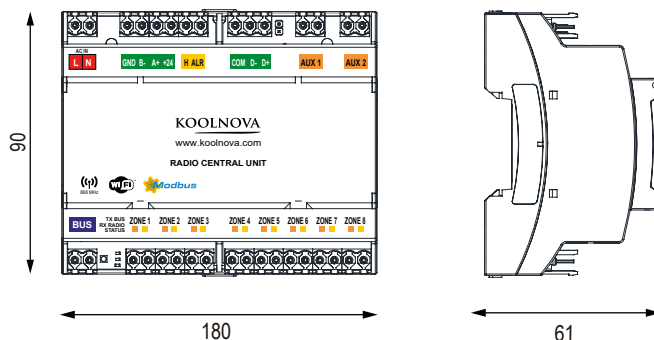
- KOOLNOVA BUS output. Two polarity-free wires for connecting the different motorised elements.
- Input for total system shut-down (fire alarm or external ON-OFF).
- Input for humidity sensor (for cooling plane).
- Controls up to 8 air zones + 8 underfloor heating zones.
- Controls up to 4 ducted indoor units.
- Connection with RADIO thermostats (8 max).
- Wi-Fi module for communication with the KOOLNOVA cloud.
- RS485 communication ports.
- Frost protection function.
- V.IN: 100~277 VAC 50/60 Hz
- I.IN. max: 0.45 Amp
- AC load capacity: 10A/277 VAC
- DC load capacity: 10A/30 VDC
- Class II
- Weight: 270 g

### SYSTEM DIAGRAM\*

\*Request complete wiring diagram



## DIMENSIONS





## 1.7 Product data sheets



### WIRE CONTROL UNIT

DESCRIZIONE CODICE

WIRE CONTROL UNIT:

KN-FILO-WIFI

### DESCRIPTION

Wire control unit prearranged for installation on DIN rail.

For systems where home automation control of the building is desired, including air conditioning.

It allows remote access via internet to all elements of the system, monitoring and commanding them.

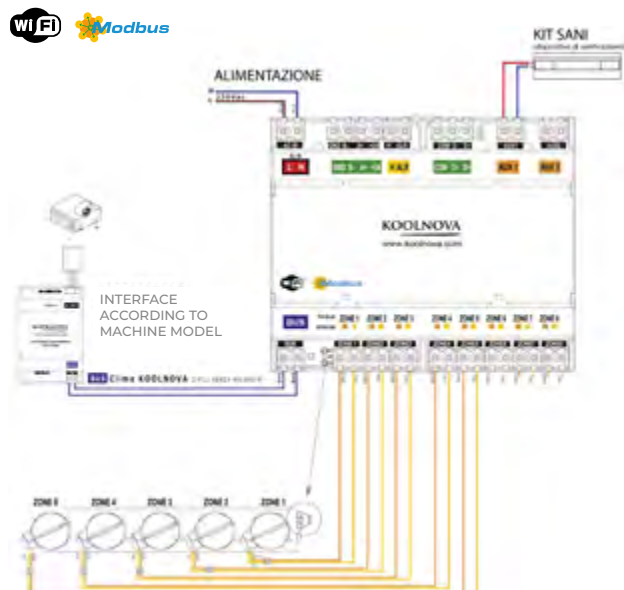
Associated with the zone home automation modules, it allows the control of: lighting, rolling shutters, technical alarms (fire, flood, gas, presence, opening doors and windows).

Simple installation and local control from wired thermostatic controls (up to 8 zones).

Remote control by KOOLNOVA CLIMA APP and KOOLNOVA DOMO APP available for IOS and Android or BMS systems.

### SYSTEM DIAGRAM\*

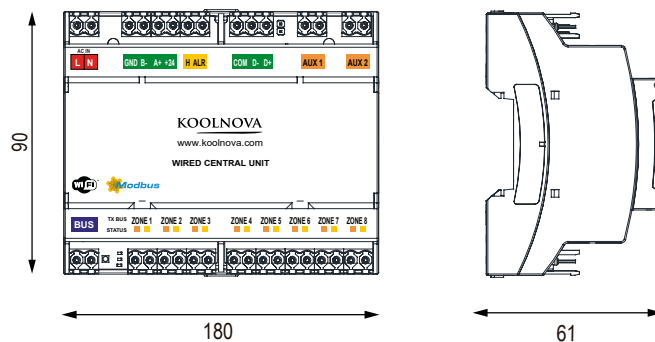
\*Request complete wiring diagram



### FEATURES

- KOOLNOVA BUS exit. Two wires without polarity for connecting the different motorized elements.
- Control of up to 8 air zones + 8 underfloor heating zones + 32 Zone Modules.
- Simultaneous control of air and underfloor heating (automatic mode).
- 5 operating modes: cold, hot, SR, SR+Cold, SR+Hot.
- Control up to 4 air machines via cable or IR gateway.
- Including infrared inverter gateway for total control of direct expansion machines.
- NO relay output with the possibility of switching on a dehumidifier.
- WiFi module for communication with the KOOLNOVA cloud.
- WPA/WPA2 security mode and WEP/AES encryption.
- RS485 communication ports.
- Frost protection function.
- V.IN: 100~277VAC 50/60Hz
- I.IN. max: 0.45 Amps
- AC Load Capacity: 10A/277VAC
- DC load capacity: 10A/30VDC
- Class II
- Weight: 270g

### DIMENSIONS







## ETERNAL RADIO CONTROL

### CODE DESCRIPTION

BLACK RADIO MASTER:	KN-ETERNAL-M
WHITE RADIO MASTER:	KB-ETERNAL-M

### DESCRIPTION

Graphic interface with 4.3" screen and metallic and glass finish.

Communication via radio.

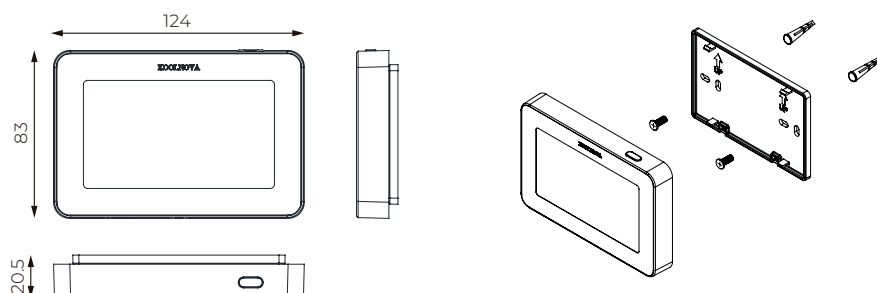
Lithium-ion rechargeable battery powered. Includes mounting base and Micro USB to USB cable for charging.

### FEATURES

- Surface mounting (incl. support base for wall installation).
- Temperature setpoint selection 0.5°C ranges. On-Off zone and system shut-down.
- Operating modes (cold/heat/floor heating and combined cycles) and system efficiency.
- Zone reading of ambient temperature and relative humidity.
- Temperature and machine speed management via communication interface.
- SLEEP function and hourly programming.
- 6 languages (Spanish, Italian, English, French, Portuguese, German).
- Frost protection function.
- Device power supply: 5V, 500mA (min).
- Maximum flow rate in open space: 50 m.
- Type of probe: IC.
- Weight: 180g.

## DIMENSIONS

DIMENSIONS IN MM WITH SUPPORT INCLUDED





# 1.7 Product data sheets



## SMART RADIO CONTROL

CODE DESCRIPTION	
BLACK RADIO SLAVE:	KN-SMART-S
WHITE RADIO SLAVE:	KB-SMART-S

### DESCRIPTION

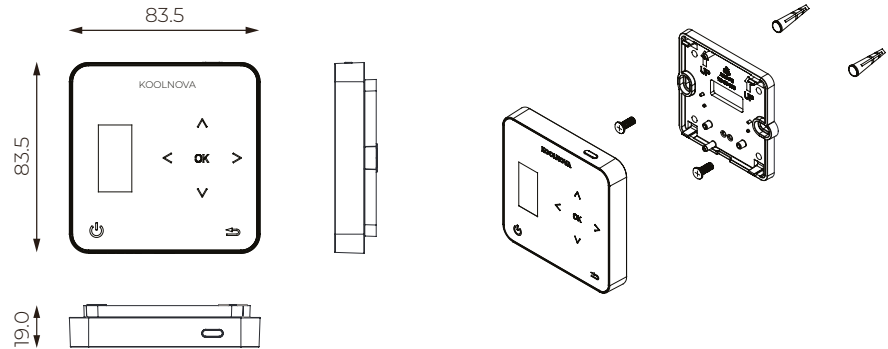
1.3" OLED screen and backlit capacitive keys with metallic colour finish.  
Radio communication.  
Lithium-ion rechargeable battery powered.  
Includes surface mounting bracket and Micro USB to USB cable for charging.

### FEATURES

- Nominal temperature selection. 0.5°C ranges. On-Off zone.
- Indoor unit temperature and speed control.
- Zone reading of ambient temperature and relative humidity %.
- SLEEP function.
- 6 languages (Spanish, Italian, English, French, Portuguese, German).
- Adjustable brightness of backlit capacitive buttons.
- Frost protection function.
- Device load: 5V, 500mA (min.).
- Reading and display accuracy:  $\pm 0.5^{\circ}\text{C}$ .
- Maximum flow rate in open space: 50 m.
- Type of probe: IC.
- Weight: 110g.

## DIMENSIONS

DIMENSIONS IN MM WITH SUPPORT







## ETERNAL WIRED CONTROL

### CODE DESCRIPTION

BLACK WIRED MASTER:	KN-ETERNAL-M-FI
WHITE WIRED MASTER:	KB-ETERNAL-M-FI

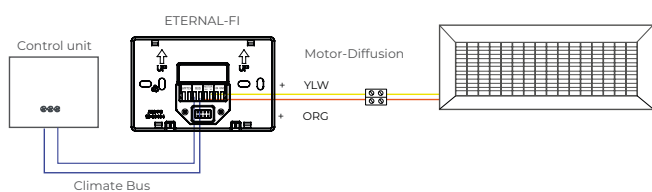
### DESCRIPTION

Graphic interface with 4.3" capacitive screen with metallic colour finish. Wired communication, two polarity-free BUS KOOLNOVA wires. Self-powered, no external power supply required.

### FEATURES

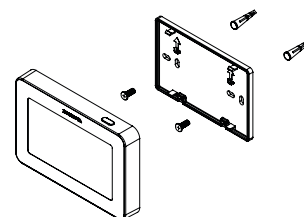
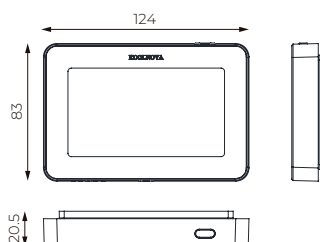
- Nominal temperature selection.
- 0.5°C ranges. On-Off zone.
- Complete system shut-down.
- Indoor unit operating mode and thermal efficiency setting.
- Zone reading of ambient temperature and relative humidity %.
- SLEEP function and hourly programming.
- Remote access and control to other system zones.
- 6 languages (Spanish, Italian, English, French, Portuguese, German).
- Window contact.
- ECO mode to reduce building energy consumption.
- Maximum consumption: 50mA.
- Reading and display accuracy:  $\pm 0.5$  °C.
- Type of probe: IC.
- Weight: 200g.

### CONNECTION DIAGRAM



## DIMENSIONS

DIMENSIONS IN MM WITH SUPPORT INCLUDED





# 1.7 Product data sheets



## SMART WIRED CONTROL

CODE DESCRIPTION	
BLACK WIRED SLAVE:	KN-SMART-S-FI
WHITE WIRED SLAVE:	KB-SMART-S-FI

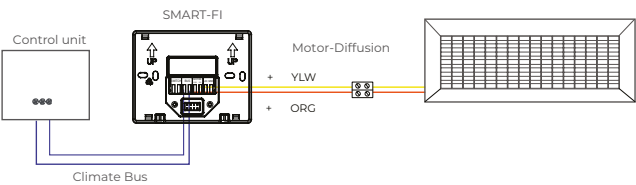
### DESCRIPTION

1.3" OLED screen and backlit capacitive keys with metallic colour finish.  
Powered via two polarity-free BUS wires.

### FEATURES

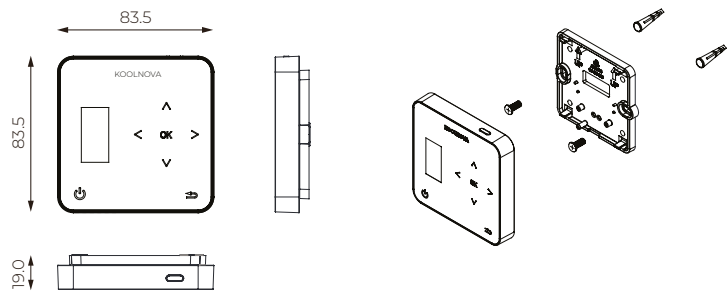
- Nominal temperature selection. 0.5°C ranges. On-Off zone.
- Indoor unit temperature and speed control.
- Zone reading of ambient temperature and relative humidity %.
- SLEEP function.
- 6 languages (Spanish, Italian, English, French, Portuguese, German).
- Adjustable brightness of backlit capacitive buttons.
- Frost protection function.
- Window contact.
- Weight: 110g.

### CONNECTION DIAGRAM



## DIMENSIONS

DIMENSIONS IN MM WITH SUPPORT







## DESCRIPTION

The wired touch controls, connected to the motorized elements of the system, work as a zone thermostat and it is therefore necessary to set one up for each room. The MASTER command, unlike the SLAVE commands, will also allow you to manage the system's operating mode. Set temperature in 0.5°C intervals. It connects directly to the BUS cable.

Manual/automatic fan speed selection.

Weekly time programming, up to 4 programs per zone.

Possibility to select modes: COLD, HOT, RADIANT FLOOR, combined cycle.



## DESCRIPTION

Wi-Fi control unit supplied in an IP 67 watertight box. Wi-Fi module included for managing all functions via application (APP KOOLNOVA CLIMA) which allows remote display and management of the plan of the air-conditioned rooms.

Compatible with Android and IOS formats.

Can only be used with NH-TOUCH-4G controls.

Control of up to 16 air conditioning zones (or 32 vents) + 16 radiant floor zones.

KOOLNOVA BUS output, two wires without polarity for connecting the different elements of the system and 2 RS485 MODBUS protocol communication outputs. Alarm input. NO relay output with the possibility of switching from 8A/250Vac.

- 24 VDC external transformer power supply.

- Maximum Consumption: 12V.

- Dimensions (LXWXH): 160X75X117 mm.

## WIRED TOUCH CONTROL

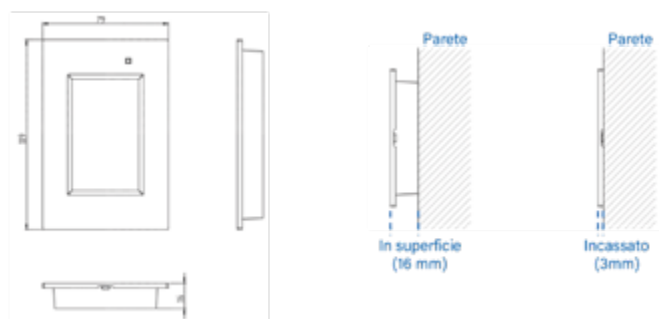
### CODE DESCRIPTION

WIRED MASTER: NH-TOUCH4G-M-FI

WIRED SLAVE: NH-TOUCH4G-S-FI

WIRED THERMOSTAT: NH-TOUCH4G-T-FI

## DIMENSIONS



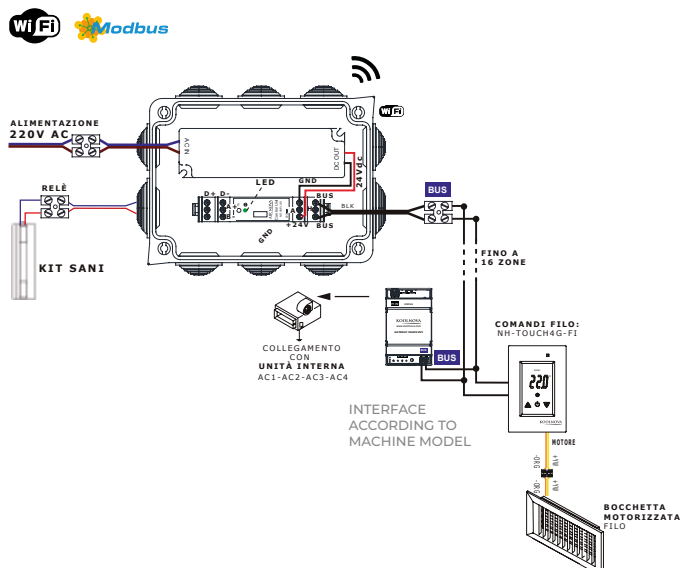
## WI-FI CONTROL UNIT

### CODE DESCRIPTION

CONTROL UNIT: NH-ES-3G-WIFI

### SYSTEM DIAGRAM\*

\*Request complete wiring diagram





## 1.7 Product data sheets



### FAN COIL INTERFACE

#### CODE DESCRIPTION

FAN COIL INTERFACE:

NH-GTP-UNI

#### DESCRIPTION

This device can control both the stop/start as well as the change of operating mode (cold/hot) of the installation as well as the fan coil speeds (0-10V output available).

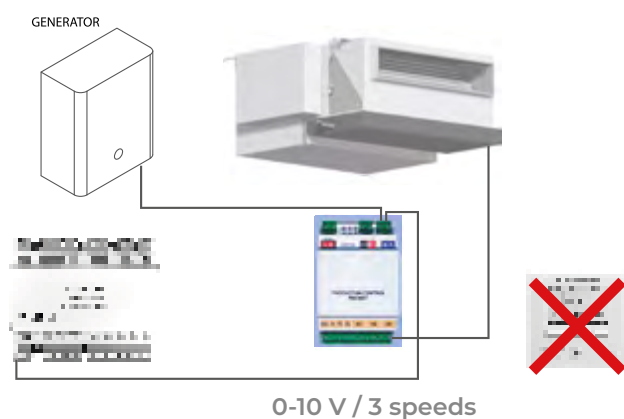
Configurable as production control and fan coil control.

The same module with 4 connection possibilities.

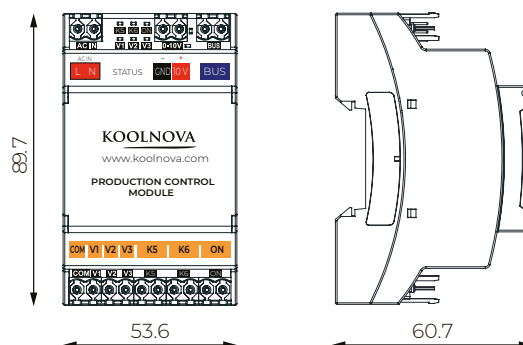
#### FEATURES

- Koolnova bus connection input. Two polarity-free wires.
- Isolated relay output for fan coil ON/OFF control.
- Isolated relay output for system production control.
- Isolated relay output for 3-speed control.
- 0-10V output for fan coil speeds.
- Machine selection (AC) via Switches.
- Control of operating mode (cold/hot).
- Operating indicator LED diodes.
- Power supply: 230 V~ 50/60Hz.
- Power supply voltage: 90-264 Vac.
- Frequency interval: 47-63 HZ.
- Max. power: 3.5W.
- Class II
- Weight: 139 g.

#### SYSTEM DIAGRAM



### DIMENSIONS







## WIRED INTERFACE

### CODE DESCRIPTION

WIRED INTERFACE:

NH-CFI-... \*

\* Complete the code with the reference table

## DESCRIPTION

Device that enables communication between the Koolnova system and the air-conditioning system. It has a specific algorithm to achieve maximum energy efficiency by optimising the inverters. It allows the working conditions of the air-conditioning system to be configured according to the actual demand of the system. Communication via cable.

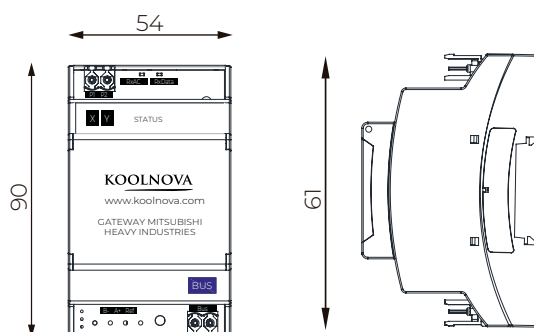
## FEATURES

- Connection with CLIMA KOOLNOVA BUS (two polarity-free wires) with consumption on bus < 170mW.
- Power supply from the INTERFACE and connection to the machine via two wires X, Y.
- 3- or 4-speed machine selection via switch under cover (S3).
- Up to 4 INTERFACES per control unit selectable via switches under cover.
- V.BUS: 24V.
- P.BUS max.: 170mW.
- V. Machine (AC UNIT): 17V.
- P.Machine max.: 600mW.
- Class II
- Weight: 80 g.

Model	Code *
Daikin residential	NH-CFI-DAI1
Daikin VRV-SKYLINE	NH-CFI-DAI3
Mitsubishi	NH-CFI-MIT
Mitsubishi HEAVY	NH-CFI-MIH
Samsung	NH-CFI-SAM
Samsung SA2 NASA	NH-CFI-SAM2
Fujitsu 3-wire	NH-CFI-FUI1
Fujitsu CN65	NH-CFI-FUI2
Toshiba MMD-UP mini VRV	NH-CFI-TOS
Toshiba	NH-CFI-TOS1
Hitachi	NH-CFI-HIT
Hisense	NH-CFI-HIS
LG	NH-CFI-LGE
Midea	NH-CFI-MID
Panasonic PACI ECOI	NH-CFI-PAN1
Panasonic ETHEREA	NH-CFI-PAN2

## DIMENSIONS

## SYSTEM DIAGRAM





# 1.7 Product data sheets



## INFRARED INTERFACE

CODE DESCRIPTION	
INFRARED INTERFACE:	NH-CIR-INVERTER

### DESCRIPTION

Infrared interface enables communication between the KOOLNOVA system and the air-conditioning system.  
It has a specific algorithm to achieve maximum energy efficiency by optimising the inverter systems. It allows the working conditions of the air-conditioning system to be configured to the actual demand of the installation.

### FEATURES

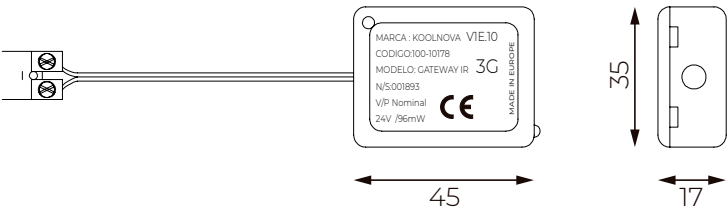
- Connection to the system BUS.
- SELF-POWERED. No external power source is required.
- Programming via remote control.
- Automatic and complete control of machine functions: ON/OFF, hot/cold switching, fan speed change depending on the number of open vents, temperature set point.
- Weight 5 g.
- Note = Indoor unit with infrared receiver is required.

Model		Model	
Daikin	10	Airwell	9
Mit. Electric	6	Idema	12
Fujitsu	15	Hokkaido	12
Toshiba	16	Hitachi	21
LG	7	Sabiana	23
Panasonic	3	Haier	29
Samsung	17	Kaysun	12
Carrier	0	Sanyo	8

\* request technical manual for all other models

## DIMENSIONS

### SYSTEM DIAGRAM







## RADIANT FLOOR MODULE

### CODE DESCRIPTION

RADIANT MODULE

NH-SR-UNI

### DESCRIPTION

Radiant floor module for managing installations with radiant floors or radiators. Self-installing, no programming required. In carril DIN 3-module box. Controls up to 16 zones (8+8) with the same control unit.

### FEATURES

- Two-wire polarity-free bus connection input.
- Plug. Self-installing. No programming required.
- Isolated relay output for controlling 8 solenoid valves.
- Selection of solenoid valve orientation V1-V8 (8 zones).
- Expandable to 16 zones by adding another module.
- Isolated relay output for boiler ON/OFF and N.O./N.C control.
- LED status indicators.
- Three-module DIN-rail housing.
- External power supply 230Vac.
- Max. power: 3.5W
- Class II
- Weight: 147 g.

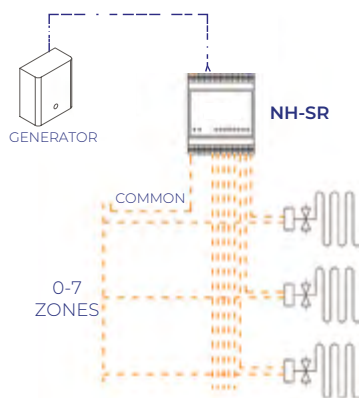
UP TO 8 ZONES



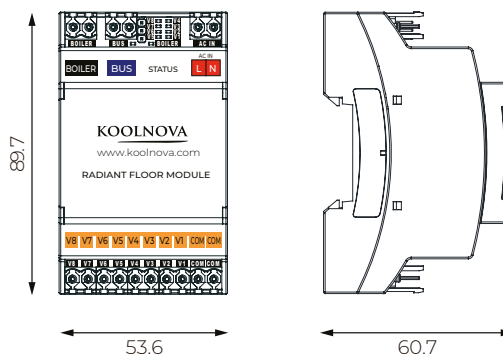
FROM 8 TO 16 ZONES



### SYSTEM DIAGRAM



## DIMENSIONS





## 1.7 Product data sheets



### HOME AUTOMATION UNIT

#### CODE DESCRIPTION

HOME AUTOMATION UNIT: NH-DO

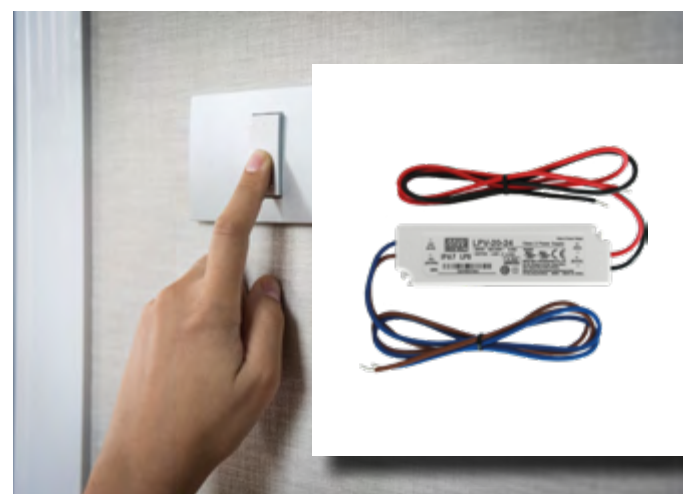
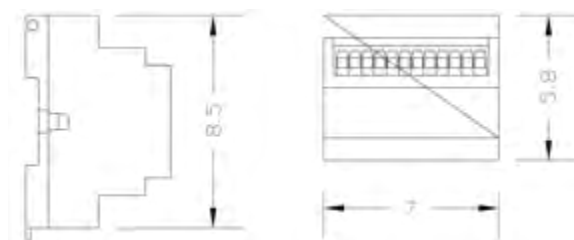
#### DESCRIPTION

The NH-DO module allows control of each of its motorised diffusion elements by means of an external device which can be a standard thermostat or a home automation system.

The different motorised elements can be controlled in 2 ways:

- With a standard thermostat with relay output compatible with the zone contact of the Koolnova control unit.
- With a home automation control unit that will connect to all the different motorised elements via actuators.

### DIMENSIONS



### SWITCH UNIT

#### CODE DESCRIPTION

SWITCH UNIT: NH-FA

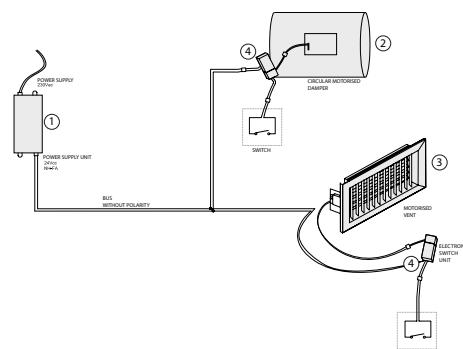
#### DESCRIPTION

NH-FA is an AUTONOMOUS control system which allows opening and closing of the motorised diffuser to be managed by activating a switch or button that can be purchased from any electrical goods shop.

Dimensions: 118 x 35 x 26 mm.

Does not control temperature.

#### SYSTEM DIAGRAM







## ZONE HOME AUTOMATION MODULE

### CODE DESCRIPTION

MODULE: KN-MDZ

### DESCRIPTION

A control unit that allows users to implement basic home automation management for the control of shutters, windows and alarms to the standard Koolnova system.

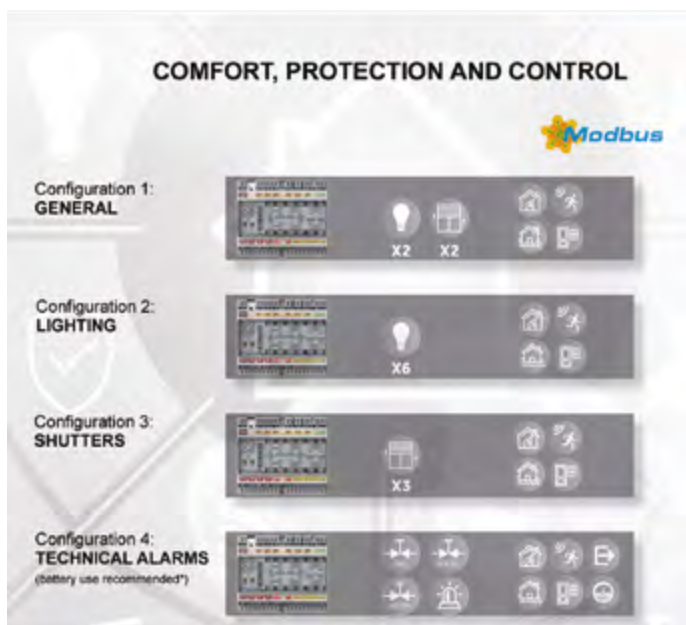
ModBus RTU device on RS485 that does not require address configuration; it is self-assigned by the system. Clear and comprehensive status indication via illuminated front panel.

As with all ModBus installations it is necessary to use certified RS485 cables as well as BUS termination resistors.

System management only via KOOLNOVA DOMO application



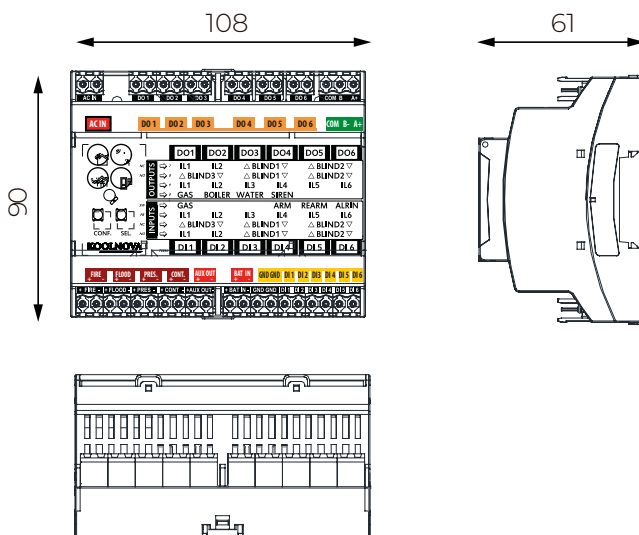
KOOLNOVA DOMO APP



### FEATURES

- 6 extra-low voltage digital inputs (SELV), configurable NC/NO; switch/button.
- Maximum distance to actuator 40 m.
- 6 digital outputs (DO) as SPST 220V/7A dry contact, general loads and capacitive loads up to 51A peak. NC/NO configurable.
- Various configurations:
  - General (lighting and blinds)
  - Lighting
  - Blinds
  - Technical alarms

## DIMENSIONS





## 1.7 Product data sheets



### MOTORISED DAMPER

#### CODE DESCRIPTION

<b>DAMPER:</b>	NH-CO-Ø-SLAVE	E.g. NH-CO-150-SLAVE
<b>CMV DAMPER:</b>	NH-CO-Ø-SLAVE-CMV	E.g. NH-CO-150-SLAVE-CMV

#### DESCRIPTION

Motorised duct damper.  
Useful for those installations where you want to control the passage of air through the same duct.

#### FEATURES

- Damper manufactured from galvanised steel sheet.
  - Electronic unit on board the damper capable of controlling up to 2 motors.
  - **External thermal insulation.**
  - **DOUBLE PIN FOR OPENING AND CLOSING END STOP ADJUSTMENT (air min.)**
  - Weight: 1.2 Kg (Ø200).
- NEW**
- **Double inlet damper for CDZ + CMV supply management.**
  - CMV damper only compatible with PLM-CMV plenum.
- COMING SOON**

#### STANDARD DAMPER

DIAMETER	CODE
125	NH-CO-125-SLAVE
150	NH-CO-150-SLAVE
200	NH-CO-200-SLAVE
250	NH-CO-250-SLAVE



### TECHNICAL DATA

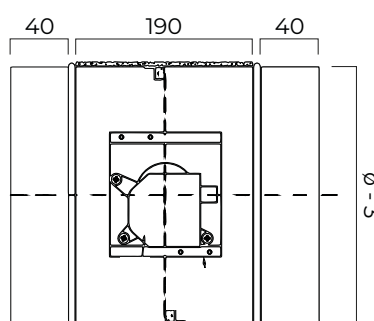
DIAMETER (mm)	Flow rate m³/h	LENGTH (mm)
125	188-640	190
150	235-800	
200	370-1375	
250	188-640	250

#### CMV DAMPER

DIAMETER	CODE
125	NH-CO-125-SLAVE-CMV
150	NH-CO-150-SLAVE-CMV
200	NH-CO-200-SLAVE-CMV
250	NH-CO-250-SLAVE-CMV



### DIMENSIONS







## RECTANGULAR BY-PAS

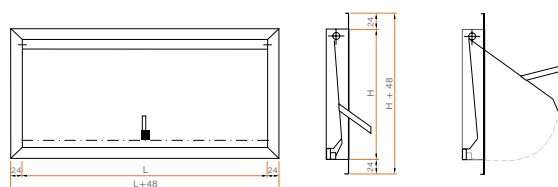
### CODE DESCRIPTION

**RECTANGULAR DAMPER**      **NH-BP-LXH**      E.g. NH-BP-200X150

### DESCRIPTION

It is advisable to install an overpressure damper so that when closing a motorised element the latter adjusts itself, restoring optimal pressure in the system. The counterweight displacement curve has been carefully designed so that the force to be applied to actuate it is always the same regardless of the degree of opening.

## DIMENSIONS AND TECHNICAL DATA



Length	Height	Area	Flow rate m³/h	Speed m/s
200	150	0.03	400	3.7
300	150	0.045	650	4.0
300	200	0.06	850	3.9
400	150	0.06	850	3.9
400	200	0.08	1100	3.8

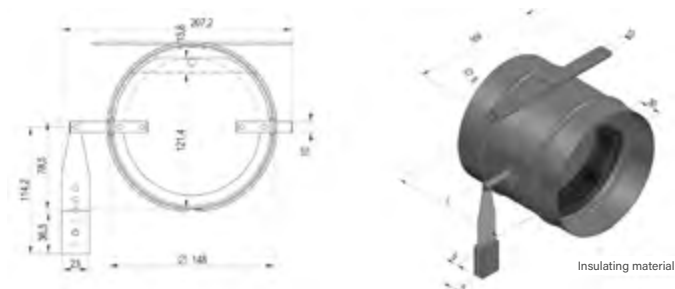


## CIRCULAR BY-PAS

### CODE DESCRIPTION

**CIRCULAR DAMPER**      **NH-BI-Ø**      E.g. NH-BI-200

## DIMENSIONS AND TECHNICAL DATA



Length	Ø	Flow rate m³/h	Speed m/s
150	150	245	3,7
200	200	390	3,6

### DESCRIPTION

It is advisable to install an overpressure damper so that when closing a motorised element the latter adjusts itself, restoring optimal pressure in the system. Overpressure damper for circular duct mounting. Insulated damper with limit switch. Ceiling fixing bracket.



## 1.7 Product data sheets



### EXPANSION CONTROL UNIT

#### CODE DESCRIPTION

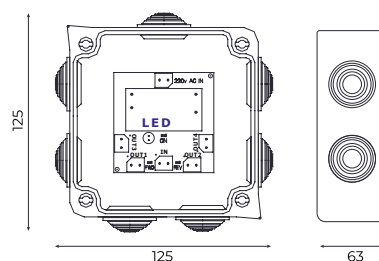
EXPANSION CONTROL UNIT: **NH-UAM**

#### DESCRIPTION

The motor amplifier unit allows the control of up to 4 additional motors.

Powered directly from the 220 Vac mains; it includes an LED to indicate unit status.

### DIMENSIONS



### ENERGY METER

#### CODE DESCRIPTION

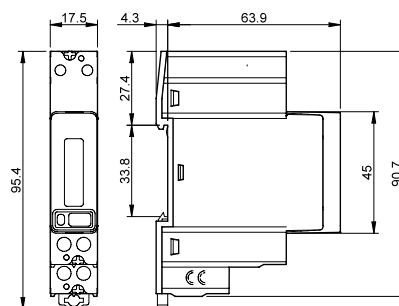
ENERGY METER: **NH-METER**

#### DESCRIPTION

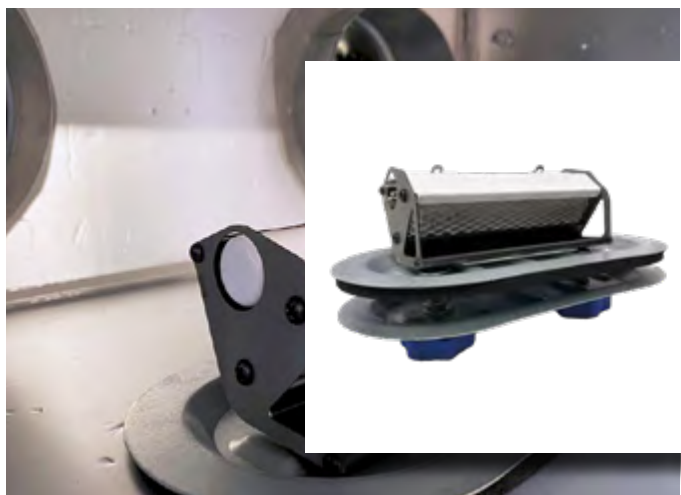
Single-phase bi-directional energy meter with LCD display and MID certificate. S0 pulse output, equipped with IR communication port. NFC technology makes it possible to read the measured energy even when there is no voltage and to program and customise the meter via smartphone (NFC APP FINDER). Rated current 5A (40 A maximum). Single-phase 230 V AC 50/60 Hz.

*Note: consumption control is via external APP NFC FINDER*

### DIMENSIONS







## SANITIZATION KIT

### CODE DESCRIPTION

SANITIZATION KIT

KIT-SANI1



### DESCRIPTION

Pre-wired kit ideal for quick, easy installation inside air supply plenums.

The kit consists of the FC UNIT 3" device pre on a metal inspection hatch for quick installation in plenums and ducts.

The pre-wired junction box allows quick connection of the UV lamp and power supply.

The junction box is also equipped with a cable for the lamp ON/OFF contact.

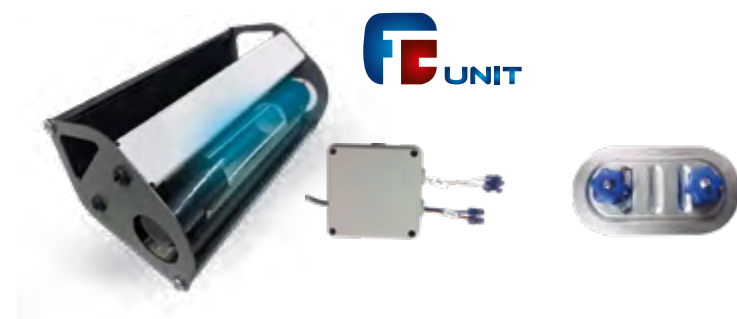
### FEATURES

- For systems up to 7 kW.
- Module dimensions (BxHxD): 126 x 79 x 50 mm

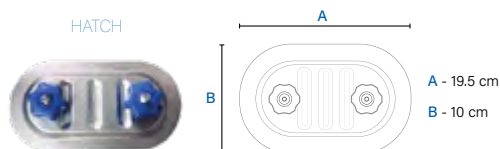
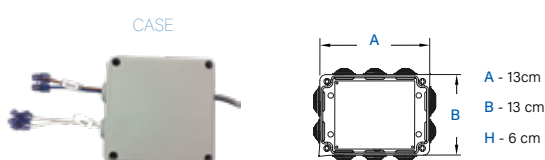
### Code KIT-SANI-1

Code	COMPONENT	QUANTITY
DF09960	FC UNIT MODULE	1
HATCH	HATCH	1
TRAS-F-KIT-1	TRANSFORMER CASE	1

## DIAGRAM

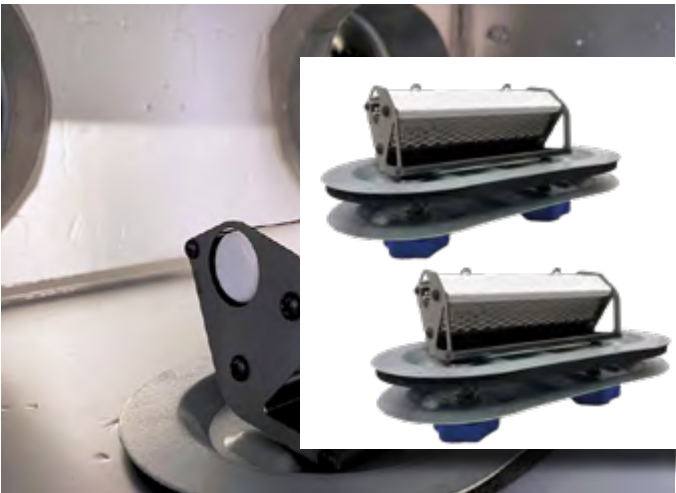


**SANI 1 KIT:** 1 FC UNIT 3" with  
1 hatch + 1 junction box





# 1.7 Product data sheets



## SANITIZATION KIT

CODE DESCRIPTION	
SANITIZATION KIT	KIT-SANI2



### DESCRIPTION

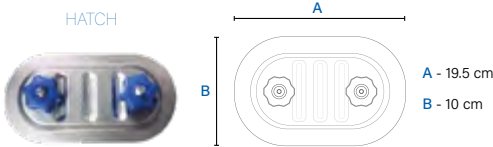
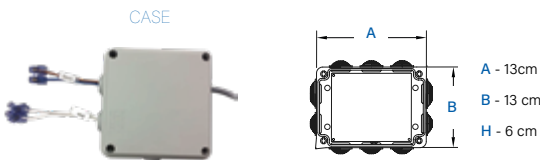
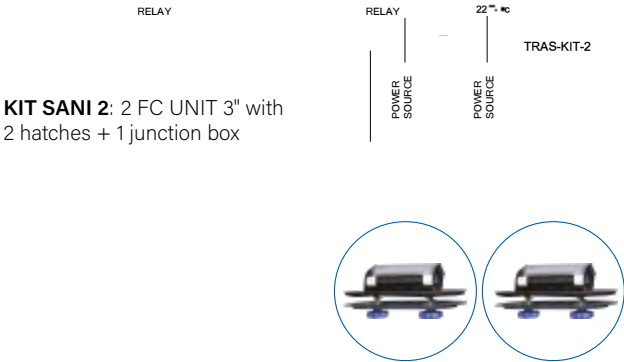
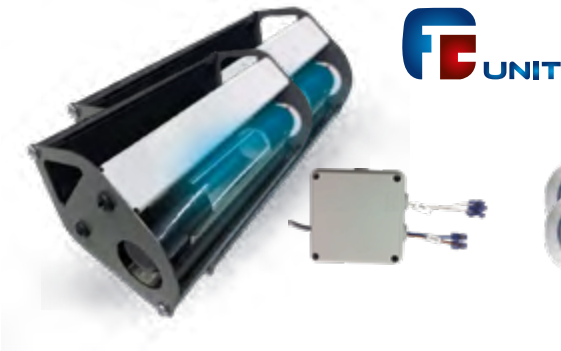
Pre-wired kit ideal for quick, easy installation inside air supply plenums.  
The kit consists of the FC UNIT 3" device pre on a metal inspection hatch for quick installation in plenums and ducts.  
The pre-wired junction box allows quick connection of the UV lamp and power supply.  
The junction box is also equipped with a cable for the lamp ON/OFF contact.

### FEATURES

- For systems from 7 up to 14 kW.
- Module dimensions (BxHxD): 126 x 79 x 50 mm

Code KIT-SANI-2		
Code	COMPONENT	QUANTITY
DF09960	FC UNIT MODULE	2
HATCH	HATCH	2
TRAS-F-KIT-2	TRANSFORMER CASE	1

## DIAGRAM





## 2.0 AIR DISTRIBUTION



### **STRONG CORPORATE ORIENTATION TOWARDS QUALITY AND COMPREHENSIVENESS IN AIR DISTRIBUTION**

Thanks to its correct design, the objective of this wide range of air distribution products and components is the comfort, hygiene, healthiness and safety of confined spaces, finding application in many sectors: industrial, commercial or civil.

Each section of distribution has a specific purpose and must be designed and implemented with appropriate precautions. In particular, attention must be paid to the materials used in relation to the type and positioning of the distribution. Furthermore, a significant aspect in the air distribution strategy is the positioning of the inlet and outlet vents, which must be able to ensure considerable uniformity of air renewal and exchange as well as the treatments necessary to guarantee thermo-hygrometric comfort. The importance of air distribution is growing in residential as well as commercial and industrial applications as its workmanlike construction from quality components designed to be combined together in a single system is a key factor in creating an efficient, healthy and maintainable air system.

In addition to classic sheet metal air ducts and components, AIR CONTROL produces pre-insulated ducts and components, constructed using polyurethane foam sandwich panels.

The reduced weight, estimated to be approximately eight times less than a traditional sheet metal system, allows for considerable advantages in terms of compliance with regulations related to work safety and earthquake-proofing of modern structures. Duct construction begins with the plotting of the individual components by computer. The pieces are then cut by automatic machines and bent if necessary to achieve the various special pieces and finally joined following a gluing, pressing and taping process. Once the various parts of the air



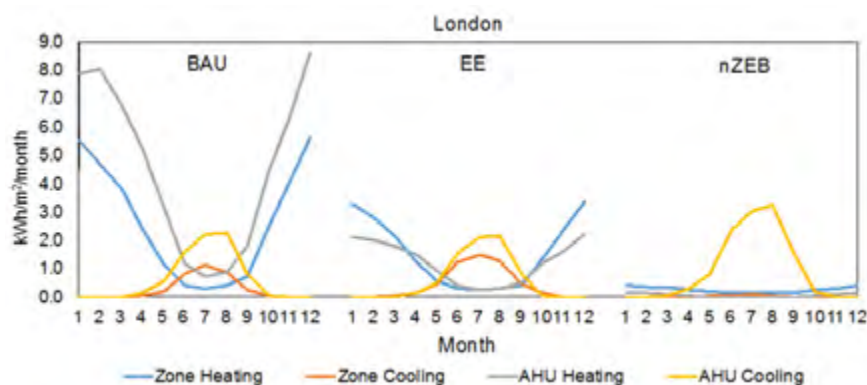
## 2.0 AIR DISTRIBUTION

system have been obtained, they can be easily joined together using special flanges. Air Control offers all components based on the executive design to be able to implement any type of air distribution by producing and supplying from the duct to the diffuser, from the heat recovery unit to the air handling unit to the Dust Free air sanitization systems capable of guaranteeing active sanitization of the ducts themselves and of the rooms.

### AIR CONTROL AND ITS CARE FOR THE COMPLETE PACKAGE OF AIR CIRCUIT COMPONENTS

Ventilation and air handling with AHUs will play an increasingly crucial role in the effect of energy efficiency goals of buildings, which will lead to substantial changes in the relationship between heat loads and the amount of air to be renewed with an impact (also) in the design of the AHUs and air distribution systems themselves.

As can be qualitatively appreciated from the diagram below [1], the importance of AHUs in both energy-efficient (EE) and nZEB buildings is growing greatly compared to traditional buildings of the past (BAU - Buildings As Usual) with low energy efficiency criteria.



For example, in the field of summer air-conditioning, due to the general trend of increasing renewal rates and lower winter loads due to the very low dispersion of the building envelope, there is clearly a greater weight in terms of consumption of the AHU Cooling item, which also depends on the efficiency of the air distribution.

In this context, it is therefore clear that having a complete range of air distribution elements available, sized together with Air Control and meticulously prepared building site by building site, item by item, is a very important value for customers who have to install and manage more and more complex systems on building sites that are increasingly hectic in terms of time and progress.

[1] Research "Energy performance analysis of an office building in three climate zones: Monthly zone and AHU heating and cooling demand simulation for Office Building" edited by Elsevier B.V. a company of the Reed-Elsevier group, one of the world's largest scientific publishers.



## RESIDENTIAL



GENERIC PLENUM



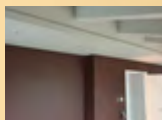
SETTLING BOX



PIPING



GRILLES



DIFFUSERS



The specificity of the Air Control residential air distribution range is that it offers customers all the necessary parts to create a complete air system through “a single, specialised professional supplier”.



## COMMERCIAL



AIR DUCTS

SPIRAL TUBE AND FITTINGS

DIFFUSERS

REGULATION

FILTRATION AND SILENCERS

FIRE PROTECTION

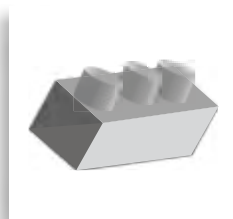
The specificity of the Air Control commercial air distribution range is that it offers Customers excellent products and unrivalled pre/post special "site by site" sales support.



## 2.1 Custom plenums and accessories



**DUCTED  
PLENUM**  
*supply and return plenum*  
**PAGE 54**



**DUCTED  
PLENUM  
DIAGRAM**  
*form to fill out for plenum  
construction*  
**PAGE 59**



**DIFFUSER  
PLENUM**  
*plenum for linear diffuser*  
**PAGE 60**



**GRILLE PLENUM**  
*plenum for vents and grilles*  
**PAGE 62**



**SLEEVES**  
*junction collars*  
**PAGE 64**

## 2.2 Insulated piping

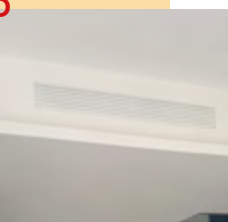


**TES**  
*insulated flexible aluminium pipe*  
**PAGE 65**

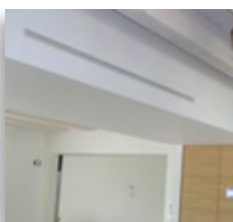
**NEW!**

**CONCEALED**

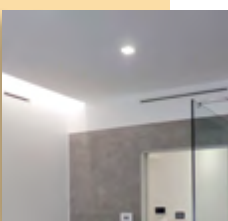
## 2.3 Concealed diffuser plenum without frame



**PSB**  
*concealed vent plenum*  
**PAGE 66**



**PSD**  
*concealed diffuser  
plenum*  
**PAGE 68**



**PSF**  
*concealed single slot  
plenum*  
**PAGE 76**



### 2.4 Vents and grilles



**BMA**  
*supply vent and adjustable  
fins*

**PAGE 72**



**SC AND CT**  
*damper and counterframe*

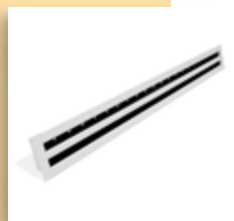
**PAGE 76**



**GRA6**  
*tilting return grille  
with filter*

**PAGE 74**

### 2.5 Diffusers



**DLF**  
*linear slot diffuser with  
deflectors*

**PAGE 78**





## DUCTED PLENUM

CODE DESCRIPTION		
SUPPLY PLM:	PLM-CDZ*	E.g. PLM-FBA60/71
CLOSED SUPPLY PLM:	PLM-C-CDZ*	E.g. PLM-C-FBA60/71
SPECIAL SUPPLY PLM:	PLM-SPECIAL*	
SANI1 KIT SUPPLY PLM:	PLM-CDZ-KS1*	
SANI2 KIT SUPPLY PLM:	PLM-CDZ-KS2*	
CDZ SUPPLY PLM WITH CMV CONNECTION:	PLM-CMV**	
RETURN PLM:	PLR-CDZ*	E.g. PLR-FBA60/71
FILTER HOLDER RETURN PLM:	PLR-FILTER*	
CLOSED RETURN PLM:	PLR-C-CDZ*	E.g. PLR-C-FBA60/71
SPECIAL RETURN PLM:	PLR-SPECIAL*	

For closed plenum see code SLEEVE page 64

\* When ordering, you can use the generic code indicating the machine model and number of connections.

\*\* Generic code for cmv dampers. When ordering, specify the machine model and the number of connections.

### DESCRIPTION

Plenum for air-conditioners, dehumidifiers, fan coils and ducted fan coils.  
Complete with collars for connection to flexible pipes.  
Made with pre-insulated panel.  
Installed on-board.

### UPON REQUEST

Non-standard dimensions.  
NOT ALL MODELS INDICATED IN THE TABLE.

### FEATURES

Material: aluminium and polyurethane foam.  
**STANDARD plenum depth 250 mm.**  
Width and height as machine outlet.

- **PLM-CMV** with PAL separator septum.
- **Special tailor-made** plenums.

### ACCESSORIES

Support for filter on return plenum.

Possibility of supply with **SANITIZATION SYSTEM**  
PLM-CDZ-KS1 / PLM-CDZ-KS2 (recommended)

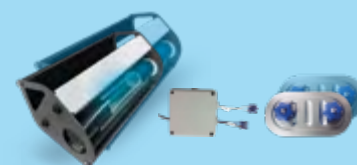


SYSTEM UP TO 7 KW

Code KIT-SANI-1		
Code	COMPONENT	QUANTITY
DF09960	FC UNIT MODULE	1
HATCH	HATCH	1
TRASF-KIT-1	TRANSFORMER CASE	1

SYSTEM FROM 7 UP TO 14 KW



Code KIT-SANI-2		
Code	COMPONENT	QUANTITY
DF09960	FC UNIT MODULE	2
HATCH	HATCH	2
TRASF-KIT-2	TRANSFORMER CASE	1





## 2.1 Custom plenums and accessories

**ATTENTION:** The table does not include all brands and models of machines on the market. Please check the measurements with technicians.

BRAND	MODEL	SUPPLY CODE	RETURN CODE	BRAND	MODEL	SUPPLY CODE	RETURN CODE
	FBA 35/50	PLM-FBA35/50	PLR-FBA35/50		PEAD MJA 35/50	PLM-PEADM35/50	PLR-PEADM35/50
	FBA 60/71	PLM-FBA60/71	PLR-FBA60/71		PEAD MJA 60/71	PLM-PEADM60/71	PLR-PEADM60/71
	FBA 100/140	PLM-FBA100/140	PLR-FBA100/140		PEAD MJA 100/125	PLM-PEADM100/125	PLR-PEADM100/125
	FDA 125	PLM-FDA125	PLR-FDA125		PEAD MJA 140	PLM-PEADM140	PLR-PEADM140
	FDA 200/250	PLM-FDA200/250	PLR-FDA200/250		PEAD SM JAL 71	PLM-PEADSM71	PLR-PEADSM71
	FDQ 125	PLM-FDQ125	PLR-FDQ125		PEAD SM JAL 100/125	PLM-PEADSM100/125	PLR-PEADSM100/125
	FDXM 25/30	PLM-FDXM25/35	PLR-FDXM25/35		PEAD SM JAL 140	PLM-PEADSM140	PLR-PEADSM140
	FDXM 50/60	PLM-FDXM50/60	PLR-FDXM50/60		SEZ M 25	PLM-SEZ25	PLR-SEZ25
	FNA 25/35	PLM-FNA25/35	PLR-FNA25/35		SEZ M 35/50	PLM-SEZ35/50	PLR-SEZ35/50
	FNA 50/60	PLM-FNA50/60	PLR-FNA50/60		SEZ M 60/71	PLM-SEZ60/71	PLR-SEZ60/71
	FNQ 25/35	PLM-FNQ25/35	PLR-FNQ25/35		PEFY M VMA-A 20/32	PLM-PEFYM20/32	PLR-PEFYM20/32
	FNQ 50/60	PLM-FNQ50/60	PLR-FNQ50/60		PEFY M VMA-A 40/63	PLM-PEFYM40/63	PLR-PEFYM40/63
	FWB 02/04 BT	PLM-FWB02/04	PLR-FWB02/04		PEFY M VMA-A 71/80	PLM-PEFYM71/80	PLR-PEFYM71/80
	FWB 05/07 BT	PLM-FWB05/07	PLR-FWB05/07		PEFY M VMA-A 100/125	PLM-PEFYM100/125	PLR-PEFYM100/125
	FWB 08/10 BT	PLM-FWB08/10	PLR-FWB08/10		PEFY M VMA-A 140	PLM-PEFYM140	PLR-PEFYM140
	FWB CTN 04/05 CFN	PLM-FWBCTN04/05	PLR-FWBCTN04/05		PEFY M VMA-E 20/32	PLM-PEFYP20/32	PLR-PEFYP20/32
	FWB CTN 06/08 CFN	PLM-FWBCTN06/08	PLR-FWBCTN06/08		PEFY M VMA-E 40/50	PLM-PEFYP40/50	PLR-PEFYP40/50
	FWB CTN 10/17 CFN	PLM-FWBCTN10/17	PLR-FWBCTN10/17		PEFY M VMA-E 63/80	PLM-PEFYP63/80	PLR-PEFYP63/80
	FWD AT/AF 4	PLM-FWD4	PLR-FWD4		PEFY M VMA-E 100/125	PLM-PEFYP100/125	PLR-PEFYP100/125
	FWD AT/AF 6	PLM-FWD6	PLR-FWD6		PEFY M VMA-E 140	PLM-PEFYP140	PLR-PEFYP140
	FWD AT/AF 08/10	PLM-FWD08/10	PLR-FWD08/10		PEFY VMHS-E 40/63	PLM-PEFYPH40/63	PLR-PEFYPH40/63
	FWD AT/AF 12	PLM-FWD12	PLR-FWD12		PEFY VMHS-E 71/80	PLM-PEFYPH71/80	PLR-PEFYPH71/80
	FWEDAF 03/05 NSV3	PLM-FWEDAF03/05	PLR-FWEDAF03/05		PEFY VMHS-E 100/140	PLM-PEFYPH100/140	PLR-PEFYPH100/140
	FWEDAF 06 NSV3	PLM-FWEDAF06	PLR-FWEDAF06		PEFY VMHS-E 200/250	PLM-PEFYPH200/250	PLR-PEFYPH200/250
	FWEDAF 07/10 NSV3	PLM-FWEDAF07/10	PLR-FWEDAF07/10		PEFY VMREL 20/32	PLM-PEFYPR20/32	PLR-PEFYPR20/32
	FWEDAT 03/05 NSV3	PLM-FWEDAT03/05	PLR-FWEDAT03/05		PEFY VMSIE 15/32	PLM-PEFYPV15/32	PLR-PEFYPV15/32
	FWEDAT 06 NSV3	PLM-FWEDAT06	PLR-FWEDAT06		PEFY VMSIE 40/50	PLM-PEFYPV40/50	PLR-PEFYPV40/50
	FWEDAT 07/10 NSV3	PLM-FWEDAT07/10	PLR-FWEDAT07/10		PEFY VMSIE 63	PLM-PEFYPV63	PLR-PEFYPV63
	FWM 15/02	PLM-FWM15/02	PLR-FWM15/02		PEFY W VMSA 15/32	PLM-PEFYW15/32	PLR-PEFYW15/32
	FWM 25/03	PLM-FWM25/03	PLR-FWM25/03		PEFY W VMSA 40/50	PLM-PEFYW40/50	PLR-PEFYW40/50
	FWM 35/06	PLM-FWM35/06	PLR-FWM35/06		PEFY W VMA-A 20/32	PLM-PEFYWA20/32	PLR-PEFYWA20/32
	FWP AT 02/04	PLM-FWPAT02/04	PLR-FWPAT02/04		PEFY W VMA-A 40	PLM-PEFYWA40	PLR-PEFYWA40
	FWP AT 05/07	PLM-FWPAT05/07	PLR-FWPAT05/07		PEFY W VMA-A 50/80	PLM-PEFYWA50/80	PLR-PEFYWA50/80
	FWPCTN 04/05 CFN	PLM-FWPCTN04/05	PLR-FWPCTN04/05		PEFY W VMA-A 100/125	PLM-PEFYWA100/125	PLR-PEFYWA100/125
	FWPCTN 06/08 CFN	PLM-FWPCTN06/08	PLR-FWPCTN06/08		PEFY W VMA-E 20	PLM-PEFYWP20	PLR-PEFYWP20
	FWPCTN 10/17 CFN	PLM-FWPCTN10/17	PLR-FWPCTN10/17		PEFY W VMA-E 25/32	PLM-PEFYWP25/32	PLR-PEFYWP25/32
	FWA AT 02	PLM-FWS2	PLR-FWS2		PEFY W VMA-E 40/50	PLM-PEFYWP40/50	PLR-PEFYWP40/50
	FWA AT 03	PLM-FWS3	PLR-FWS3		PEFY W VMSI-E 10/25	PLM-PEFYWS10/25	PLR-PEFYWS10/25
	FWA AT 06	PLM-FWS6	PLR-FWS6		PEFY W VMSI-E 32/40	PLM-PEFYWS32/40	PLR-PEFYWS32/40
	FWA AT 08	PLM-FWS8	PLR-FWS8		PEFY W VMSI-E 50	PLM-PEFYWS50	PLR-PEFYWS50
	FXDA A 10/32	PLM-FXDA10/32	PLR-FXDA10/32				
	FXDA A 40/50	PLM-FXDA40/50	PLR-FXDA40/50				
	FXDA A 63	PLM-FXDA63	PLR-FXDA63				
	FXDQ A 15/32	PLM-FXDQ15/32	PLR-FXDQ15/32				
	FXDQ A 40/50	PLM-FXDQ40/50	PLR-FXDQ40/50				
	FXDQ A 63	PLM-FXDQ63	PLR-FXDQ63				
	FXSA A 15/32	PLM-FXSA15/32	PLR-FXSA15/32				
	EXSA A 40/50	PLM-EXSA40/50	PLR-EXSA40/50				
	EXSA A 63/80	PLM-EXSA63/80	PLR-EXSA63/80				
	FXSA A 100/125	PLM-FXSA100/125	PLR-FXSA100/125				
	FXSA A 140	PLM-FXSA140	PLR-FXSA140				
	FNSQ A 100/125	PLM-FNSQ100/125	PLR-FNSQ100/125				
	FXSQ A 10/32	PLM-FXSQ10/32	PLR-FXSQ10/32				
	FXSQ A 40/50	PLM-FXSQ40/50	PLR-FXSQ40/50				
	FXSQ A 63/80	PLM-FXSQ63/80	PLR-FXSQ63/80				
	EXSQ A 140	PLM-EXSQ140	PLR-EXSQ140				




BRAND	MODEL	SUPPLY CODE	RETURN CODE
<b>SAMSUNG</b>	AC HNMCEH 35	PLM-HNM35	PLR-HNM35
	AC JNHHPKH 180/200	PLM-JNH180/200	PLR-JNH180/200
	AC JNMCEH 35	PLM-JNM35	PLR-JNM35
	AC JNMCEH 100/125	PLM-JNM100/125	PLR-JNM100/125
	AC UNMCEH 71	PLM-UNM71	PLR-UNM71
	AC KNHPKH 200/250	PLM-KNH200/250	PLR-KNH200/250
	AC MNLDKH 26/35	PLM-MNL26/35	PLR-MNL26/35
	AC MNLDKH 52/71	PLM-MNL52/71	PLR-MNL52/71
	AC MNMDKH 35/71	PLM-MNM35/71	PLR-MNM35/71
	AC MNMDKH 90/100	PLM-MNM90/100	PLR-MNM90/100
	AC MNMDKH 120/140	PLM-MNM120/140	PLR-MNM120/140
	AC RNLDKG 26/35	PLM-RNL26/35	PLR-RNL26/35
	AC RNLDKG 52/71	PLM-RNL52/71	PLR-RNL52/71
	AC RNMDKG 35/71	PLM-RNM35/71	PLR-RNM35/71
	AC RNMDKG 100	PLM-RNM100	PLR-RNM100
	AC RNMDKG 120/140	PLM-RNM120/140	PLR-RNM120/140
	AC SDXEA 90/100	PLM-SDXEA90/100	PLR-SDXEA90/100
	AE ANLDEH 22/36	PLM-ANLD22/36	PLR-ANLD22/36
	AE ANLDEH 56	PLM-ANLD56	PLR-ANLD56
	AE ANMPEH 71	PLM-ANM/71	PLR-ANM/71
	AE ANMPEH 90	PLM-ANM/72	PLR-ANM/72
	AE MNLDEH 22/36	PLM-MNLD22/36	PLR-MNLD22/36
	AE MNLDEH 56	PLM-MNLD56	PLR-MNLD56
	AE MNMPEH 71	PLM-MNMP71	PLR-MNMP71
	AE MNMPEH 90	PLM-MNMP90	PLR-MNMP90
	AJ RBLDEG 26/36	PLM-RBL26/36	PLR-RBL26/36
	AJ TNLDEG 26/35	PLM-TNL26/35	PLR-TNL26/35
	AJ TNLDEG 52	PLM-TNM52	PLR-TNM52
	AM ANLDKH 22/36	PLM-ANLD17/36	PLR-ANLD17/36
	AM ANMPKH 22/71	PLM-ANMPK22/71	PLR-ANMPK22/71
	AM ANMPKH 90	PLM-ANMPK90	PLR-ANMPK90
	AM ANMPKH 112/140	PLM-ANMPK112/140	PLR-ANMPK112/140
	AM FNHDEH 220/280	PLM-FNH22/28	PLR-FNH22/28
	AM FNLDEH 17/36	PLM-FNL17/36	PLR-FNL17/36
	AM FNLDEH 45/56	PLM-FNL45/56	PLR-FNL45/56
	AM FNLDEH 71	PLM-FNL71	PLR-FNL71
	AM FNMDEH 22/36	PLM-FNM22/36	PLR-FNM22/36
	AM FNMDEH 90	PLM-FNM90	PLR-FNM90
	AM HNHPKH 112/140	PLM-HNHP112/140	PLR-HNHP112/140
	AM HNMPKH 36/71	PLM-HNMP36/71	PLR-HNMP36/71
	AM HNMPKH 90	PLM-HNMP90	PLR-HNMP90
	AM HNMPKH 112/140	PLM-HNMP112/140	PLR-HNMP112/140
	AM JNHFKH 180/224	PLM-JNHFI80/224	PLR-JNHFI80/224
	AM NMDEH 45/71	PLM-NMD45/71	PLR-NMD45/71
	DH EAV2 70/90	PLM-DHE70/90	PLR-DHE70/90
<b>FUJITSU</b>	ARXG KHTAP 12/14	PLM-ARXG12/14	PLR-ARXG12/14
	ARXG KHTAP 18/30	PLM-ARXG18/30	PLR-ARXG18/30
	ARXG KHTA 45/54	PLM-ARXG45/54	PLR-ARXG45/54


BRAND	MODEL	SUPPLY CODE	RETURN CODE
<b>FUJITSU</b>	ARXG KLLAP 18	PLM-ARXG18	PLR-ARXG18
	ARXG KLLAP 9/14	PLM-ARXG9/14	PLR-ARXG9/14
	ARXG KMLA 22/45	PLM-ARXG22/45	PLR-ARXG22/45
	ARYG LHTA 45/54	PLM-ARYG45/54	PLR-ARYG45/54
	ARYG LHTBP 12/14	PLM-ARYGLH12/14	PLR-ARYGLH12/14
	ARYG LHTBP 18/30	PLM-ARYGLH18/30	PLR-ARYGLH18/30
	ARYG LHTBP 36/54	PLM-ARYGLH36/54	PLR-ARYGLH36/54
	ARYG LLTB 12/14	PLM-ARYGLL12/14	PLR-ARYGLL12/14
	ARYG LLTB 18	PLM-ARYGLL18	PLR-ARYGLL18
	ARYG LMLA 24/36	PLM-ARYGLM24/36	PLR-ARYGLM24/36
	ARYG LMLA 45	PLM-ARYGLM45	PLR-ARYGLM45
	ARYG LMLA/LE 30/36	PLM-ARYGLM30/36	PLR-ARYGLM30/36
	ARYG LSLAP 12/14	PLM-ARYGLS12/14	PLR-ARYGLS12/14
	ARYG LSLAP 18	PLM-ARYGLS18	PLR-ARYGLS18
<b>TOSHIBA</b> Leading innovation	RG3DV-E 07/13	PLM-RAS07/13	PLR-RAS07/13
	RAS M G3DV 16	PLM-RAS16	PLR-RAS16
	M U2DVG 07/13	PLM-RASM07/13	PLR-RASM07/13
	M U2DVG 16	PLM-RASM16	PLR-RASM16
	M U2DVG 22/24	PLM-RASM22/24	PLR-RASM22/24
	RM BTP-E 1101/1606	PLM-RAV1101/1606	PLR-RAV1101/1606
	RM BTP-E 561	PLM-RAV561	PLR-RAV561
	RM BTP-E 801	PLM-RAV801	PLR-RAV801
	RM DTP-E 2241/2801	PLM-RAV2241/2801	PLR-RAV2241/2801
	RM SDT-E 301/561	PLM-RAV301/561	PLR-RAV301/561
	SM BTP-E 1101/1606	PLM-RAVS1101/1606	PLR-RAVS1101/1606
	SM BTP-E 406/566	PLM-RAVS406/566	PLR-RAVS406/566
	SM BTP-E 806	PLM-RAVS806	PLR-RAVS806
	SM DTP-E 2244/2804	PLM-RAVS2244/2804	PLR-RAVS2244/2804
	SM SDT-E 304/564	PLM-RAVS304/564	PLR-RAVS304/564
	MMD AP BHP-E 76/186	PLM-MM76/186	PLR-MM76/186
	MMD AP BHP-E 246/306	PLM-MM246/306	PLR-MM246/306
	MMD AP BHP-E 366/566	PLM-MM366/566	PLR-MM366/566
	MMD AP BHP1-E 76/186	PLM-MMD76/186	PLR-MMD76/186
	MMD AP BHP1-E 246/306	PLM-MMD246/306	PLR-MMD246/306
	MMD AP BHP1-E 366/566	PLM-MMD366/566	PLR-MMD366/566
	MMD AP HP-E 726/966	PLM-MMD726/966	PLR-MMD726/966
	MMD AP HP1-E 186/276	PLM-MMDA186/276	PLR-MMDA186/276
	MMD AP HP1-E 366/566	PLM-MMDA366/566	PLR-MMDA366/566
	MMD AP SHP1-E 56/184	PLM-MMDA56/184	PLR-MMDA56/184
	MMD AP SHP1-E 244/274	PLM-MMDA244/274	PLR-MMDA244/274
	MMD AP SHPE 56/184	PLM-MMDP56/184	PLR-MMDP56/184
	MMD SPHY 31/121	PLM-MMDU31/121	PLR-MMDU31/121
	MMD SPHY 151/181	PLM-MMDU151/181	PLR-MMDU151/181
	MMD SPHY 241/271	PLM-MMDU241/271	PLR-MMDU241/271






## 2.1 Custom plenums and accessories


BRAND	MODEL	SUPPLY CODE	RETURN CODE
	GM1A4 07/24	PLM-ARNU07/24	PLR-ARNU07/24
	GM2A4 28/42	PLM-ARNU28/42	PLR-ARNU28/42
	GB8A4 76/96	PLM-ARNU76/96	PLR-ARNU76/96
	GL1G4 05/09	PLM-ARNU05/09	PLR-ARNU05/09
	GL2G4 12/18	PLM-ARNU12/18	PLR-ARNU12/18
	GL3G4 21/24	PLM-ARNU21/24	PLR-ARNU21/24
	CBL N12 09	PLM-CB09	PLR-CB09
	CBL N22 12/18	PLM-CB12/18	PLR-CB12/18
	CLF N50 09/12	PLM-CL09/12	PLR-CL09/12
	CLF N60 18	PLM-CL18	PLR-CL18
	CMF N10 18/24	PLM-CMF18/24	PLR-CMF18/24
	CMN N14 18/24	PLM-CMN18/24	PLR-CMN18/24
	CMR N10 18/24	PLM-CMR18/24	PLR-CMR18/24
	UB NHO 18/24	PLM-UB18/24	PLR-UB18/24
	UL F50 12/18	PLM-UL12/18	PLR-UL12/18
	UMF N10 12/18	PLM-UMF12/18	PLR-UMF12/18
	UMF N10 30	PLM-UMF30	PLR-UMF30
	UMF N10 36/42	PLM-UMF36/42	PLR-UMF36/42
	UMF N30 36/48	PLM-UMF36/48	PLR-UMF36/48
	UMF N20 24/30	PLM-UMF24/30	PLR-UMF24/30
	UM N30 48/60	PLM-UMF48/60	PLR-UMF48/60
	UM N14 30	PLM-UMN30	PLR-UMN30
	UM N24 36/42	PLM-UMN36/42	PLR-UMN36/42
	UMR N10 30	PLM-UMR30	PLR-UMR30
	UMR N20 36/42	PLM-UMR36/42	PLR-UMR36/42

	AUX4RBL4 26/35	PLM-ADT26/35	PLR-ADT26/35
	AUX4RBL4 52	PLM-ADT52	PLR-ADT52
	AUX4RCL4 52/71	PLM-ADTRC52/71	PLR-ADTRC52/71
	AUX4SKL3 26/35	PLM-ADTSK26/35	PLR-ADTSK26/35
	AUX4SKL3 52	PLM-ADTSK52	PLR-ADTSK52
	UX4RDH4 71/105	PLM-AUD71/105	PLR-AUD71/105
	UX4RHH5 125/175	PLM-AUD125/175	PLR-AUD125/175
	UX4SHH3 105/175	PLM-AUD4S105/175	PLR-AUD4S105/175
	UXASLL3 71	PLM-AUDAS71	PLR-AUDAS71


	PS AT 35	PLM-GUDPS35	PLR-GUDPS35
	PS AT 50	PLM-GUDPS50	PLR-GUDPS50
	PS AT 71	PLM-GUDPS71	PLR-GUDPS71
	PS AT 85	PLM-GUDPS85	PLR-GUDPS85
	PHS AT 71	PLM-GUDPHS71	PLR-GUDPHS71
	PHS AT 85	PLM-GUDPHS85	PLR-GUDPHS85
	PHS AT 100	PLM-GUDPHS100	PLR-GUDPHS100
	PHS AT 140	PLM-GUDPHS140	PLR-GUDPHS140
	PHS AT 160	PLM-GUDPHS160	PLR-GUDPHS160
	GFHEA K3DNA 09/12	PLM-GFHEA09/12	PLR-GFHEA09/12
	GFHEA K3DNA 18	PLM-GFHEA18	PLR-GFHEA18
	GFHEA K3DNA 21/24	PLM-GFHEA21/24	PLR-GFHEA21/24
	GFH K3FI 12/18	PLM-GFHK312/18	PLR-GFHK312/18
	GFH K3FI 24/36	PLM-GFHK324/36	PLR-GFHK324/36


	HSIERA 48/60	PLM-HS148/60	PLR-HS148/60
	MSIERA 12	PLM-MS12	PLR-MS12
	MSIERA 18	PLM-MS18	PLR-MS18
	MSI-2ERA 24/28	PLM-MS24/28	PLR-MS24/28
	S2SMIFA 50	PLM-S2SM150	PLR-S2SM150
	S2SMIFA 71	PLM-S2SM171	PLR-S2SM171
	S2SM3FA 35	PLM-S2SM335	PLR-S2SM335
	S2SM3FA 50	PLM-S2SM350	PLR-S2SM350
	S2SM3FA 71	PLM-S2SM371	PLR-S2SM371
	S2SM3FA 90	PLM-S2SM390	PLR-S2SM390
	S2SM3FA 105	PLM-S2SM3105	PLR-S2SM3105
	S2SM3FA 125	PLM-S2SM3125	PLR-S2SM3125
	S2SM3FA 140	PLM-S2SM3140	PLR-S2SM3140
	AD S2S SIFA 25/35	PLM-S2SADS125/35	PLR-S2SADS125/35
	AD S2S SIFA 50	PLM-S2SADS150	PLR-S2SADS150
	AD S2S SIFA 71	PLM-S2SADS171	PLR-S2SADS171
	AD S2S S2FA 25/35	PLM-S2SADS225/35	PLR-S2SADS225/35
	AD S2S S2FA 50	PLM-S2SADS250	PLR-S2SADS250
	AD S2S S2FA 71	PLM-S2SADS271	PLR-S2SADS271
	AD SSIERA 09/12	PLM-SS109/12	PLR-SS109/12
	AD SSIERA 18/24	PLM-SS118/24	PLR-SS118/24
	ADH HIERG 105	PLM-ADH105	PLR-ADH105
	ADH HIERG 125	PLM-ADH125	PLR-ADH125
	ADH HIERG 140	PLM-ADH140	PLR-ADH140


	RAD QPE 18	PLM-RAD18	PLR-RAD18
	RAD PPA 50/70	PLM-RAD50/70	PLR-RAD50/70
	RAD RPA 23/50	PLM-RAD25/50	PLR-RAD25/50
	RAD PPD 50/70	PLM-RADP50/70	PLR-RADP50/70
	RAD RPE 25/35	PLM-RAD25/35	PLR-RAD25/35
	RAD RPE 50/60	PLM-RAD50/60	PLR-RAD50/60
	RPI FSN4E 2/3	PLM-RPI2/3	PLR-RPI2/3
	RPI FSN4E 4/6	PLM-RPI4/6	PLR-RPI4/6
	RPIM UNEINH 3	PLM-RPIM3	PLR-RPIM3
	RPIM UNEINH 4/6.5	PLM-RPIM4/65	PLR-RPIM4/65

	MTBD 35	PLM-MTBD35	PLR-MTBD35
	MTBD 52/70	PLM-MTBD52/70	PLR-MTBD52/70
	MTBD 88	PLM-MTBD88	PLR-MTBD88
	MTBD 105/160	PLM-MTBD105/160	PLR-MTBD105/160
	MTBE 35	PLM-MTBE35	PLR-MTBE35
	MTBE 52/70	PLM-MTBE52/70	PLR-MTBE52/70
	MTBE 88	PLM-MTBE88	PLR-MTBE88
	MTBE 105/160	PLM-MTBE105/160	PLR-MTBE105/160
	MTII FNXDO 09	PLM-MTI09	PLR-MTI09
	MTIU FNXDO 12	PLM-MTI12	PLR-MTI12
	FNXDO 18	PLM-MTI18	PLR-MTI18
	FNXDO 24	PLM-MTI24	PLR-MTI24
	FNXDO 36	PLM-MTI36	PLR-MTI36




BRAND	MODEL	SUPPLY CODE	RETURN CODE
	CSMZ UD3EA 20	PLM-CSZ20	PLR-CSZ20
	CSZ 20/60	PLM-CSZ20/60	PLR-CSZ20/60
	CSZ UD3EAW 25/60	PLM-CSZ25/60	PLR-CSZ25/60
	SMF2E5A 15/56	PLM-SM15/56	PLR-SM15/56
	SMF2E5A 60/90	PLM-SM60/90	PLR-SM60/90
	SMF2E5A 106/160	PLM-SM106/160	PLR-SM106/160
	SMF3E5B 15/56	PLM-SMF15/56	PLR-SMF15/56
	SMF3E5B 60/90	PLM-SMF60/90	PLR-SMF60/90
	SMF3E5B 106/160	PLM-SMF106/160	PLR-SMF106/160
	SMM1E5A 15/56	PLM-SMM15/56	PLR-SMM15/56
	SPE2E5 250	PLM-SPE250	PLR-SPE250
	SPE2E5B 200/250	PLM-SPE200/250	PLR-SPE200/250
	SPF1E5A/B 36/50	PLM-SPF36/50	PLR-SPF36/50
	SPF1E5A/B 60/71	PLM-SPF60/71	PLR-SPF60/71
	SPF1E5A/B 100/140	PLM-SPF100/140	PLR-SPF100/140
	SPF3E 1014	PLM-PF1014	PLR-PF1014
	SPF3E 3650	PLM-PF3650	PLR-PF3650
	SPF3E 6071	PLM-PF6071	PLR-PF6071
	SPN1E5A/B 100/140	PLM-PNB100/140	PLR-PNB100/140
	SPN1E5A/B 36/50	PLM-PNB36/50	PLR-PNB36/50

	KX6F 45/56	PLM-FDUM45/56	PLR-FDUM45/56
	KX6F 71/90	PLM-FDUM71/90	PLR-FDUM71/90
	KX6F 112/140	PLM-FDUM112/140	PLR-FDUM112/140
	KXE6F 22/56	PLM-FDUME22/56	PLR-FDUME22/56
	KXE6F 71/90	PLM-FDUME71/90	PLR-FDUME71/90
	KXE6F 112/160	PLM-FDUME112/160	PLR-FDUME112/160
	VF/VH 40/50	PLM-FDUMV40/50	PLR-FDUMV40/50
	VF/VH 60/71	PLM-FDUMV60/71	PLR-FDUMV60/71
	VF/VH 100/140	PLM-FDUMV100/140	PLR-FDUMV100/140
	FDU VF1 71	PLM-FDU71	PLR-FDU71
	FDU VF1/VF2 100	PLM-FDU100	PLR-FDU100
	FDU VF 100/140	PLM-FDU100/140	PLR-FDU100/140
	FDU VG 200/240	PLM-FDU200/240	PLR-FDU200/240
	SRR ZMS 25/35	PLM-SRR25/35	PLR-SRR25/35
	SRR ZMS 50/60	PLM-SRR50/60	PLR-SRR50/60

	HUCI-7A 1080	PLM-HUCI1080	PLR-HUCI1080
	HUCI-7A 1400	PLM-HUCI1400	PLR-HUCI1400
	HUCI-7A 710	PLM-HUCI710	PLR-HUCI710
	HUCU-ZAL 350	PLM-HUCU350	PLR-HUCU350
	HUCU-ZAL 530	PLM-HUCU530	PLR-HUCU530

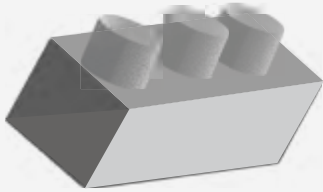
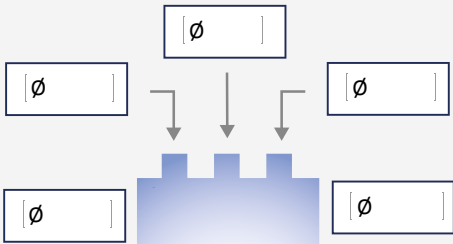
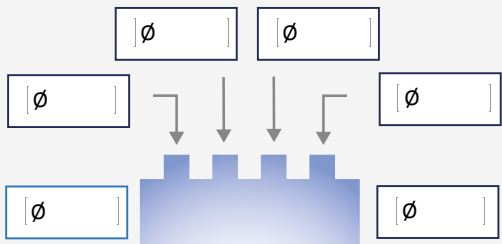
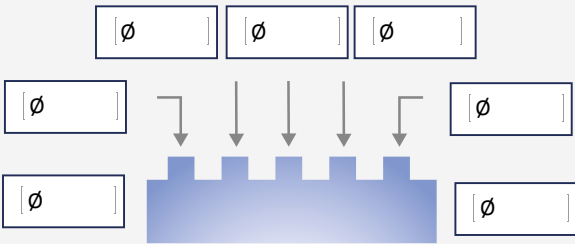
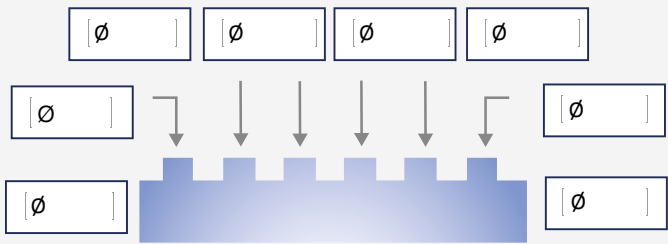
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	ID2XY 53M	PLM-ID2XY53	PLR-ID2XY53
	ID2XY 140/160M	PLM-ID2XY140/160	PLR-ID2XY140/160
	ID2XY 150M	PLM-ID2XY150	PLR-ID2XY150
	MPINH 15/25 CC2	PLM-MPINHC15/25	PLR-MPINHC15/25
	MPINH 31/51 CC2	PLM-MPINHC31/51	PLR-MPINHC31/51

BRAND	MODEL	SUPPLY CODE	RETURN CODE
	FCZI 200/250	PLM-FCZI200/250	PLR-FCZI200/250
	FCZI 300/350	PLM-FCZI300/350	PLR-FCZI300/350
	FCZI 400/550	PLM-FCZI400/550	PLR-FCZI400/550
	FCZI 700/950	PLM-FCZI700/950	PLR-FCZI700/950
	LGCD 350	PLM-LCG350	PLR-LCG350
	LGCD 500	PLM-LCG500	PLR-LCG500
	LGCD 700/850	PLM-LCG700/850	PLR-LCG700/850
	LGCD 1000	PLM-LCG1000	PLR-LCG1000
	LGCD 1200/1600	PLM-LCG1200/1600	PLR-LCG1200/1600
	LCID 071/121	PLM-LCI071/121	PLR-LCI071/121
	LCID 141/161	PLM-LCI141/161	PLR-LCI141/161
	LCID 270	PLM-LCI270	PLR-LCI270
	LCID 350/700	PLM-LCI350/500	PLR-LCI350/500
	LCID 1400/1600	PLM-LCI1400/1600	PLR-LCI1400/1600
	LCID 700/1200	PLM-LCI700/1200	PLR-LCI700/1200
	MLG 250	PLM-MLG250	PLR-MLG250
	MLG 350	PLM-MLG350	PLR-MLG350
	MLG 500	PLM-MLG500	PLR-MLG500
	VED 030/040	PLM-VED030/040	PLR-VED030/040
	VED 130/140	PLM-VED130/140	PLR-VED130/140
	VED 230/240	PLM-VED230/240	PLR-VED230/240
	VED 330/340	PLM-VED330/340	PLR-VED330/340
	VED 530/541	PLM-VED530/541	PLR-VED530/541
	VED 730/741	PLM-VED730/741	PLR-VED730/741

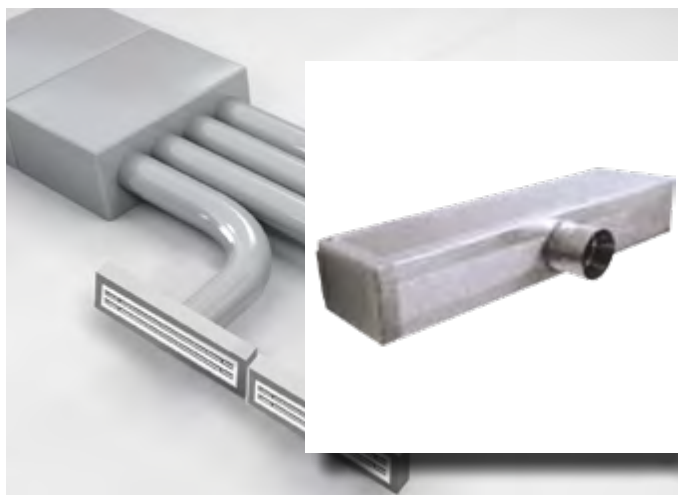


## 2.1 Custom plenums and accessories

### DUCTED PLENUM DIAGRAM

TO:		DATE:	
		ORDER CD.:	
SPECIFICHE PLENUM			
BRAND:		MODEL:	
<div></div> <div><div><input type="checkbox"/> <i>Generic product code</i> <b>PLM-CDZ</b> Supply plenum</div><div><input type="checkbox"/> <i>Generic product code</i> <b>PLM-C-CDZ</b> Closed supply plenum</div><div><input type="checkbox"/> <i>Generic product code</i> <b>PLR-CDZ</b> Return plenum</div><div><input type="checkbox"/> <i>Generic product code</i> <b>PLR-C-CDZ</b> Closed return plenum</div></div>			
NUMBER AND ARRANGEMENT OF CONNECTIONS			
<i>indicate the diameter of the sleeves in the boxes</i>			
<p>3-connection plenum</p> 		<p>4-connection plenum</p> 	
<p>5-connection plenum</p> 		<p>6-connection plenum</p> 	
NOTES:			





## DIFFUSER PLENUM

### CODE DESCRIPTION

REAR CONNECTION:	PLPDLF-LNF	E.g. PLPDLF-08002F*
SIDE CONNECTION:	PLLDLF-LNF	E.g. PLLDLF-08002F*
TOP CONNECTION:	PLSDF-LNF	E.g. PLSDF-08002F*
CMV MAN./MAN.: *	PLPDLF-MM-LNF	E.g. PLPDLF-MM-08002F
CLOSED:	PLCDLF-LNF	E.g. PLCDLF-08002F

\* Specify the number of slots (code references in table)

\* Supplied with 1  $\varnothing 75$  detachment and separator

### DESCRIPTION

Plenum box for linear diffusers made of polyurethane foam complete with collar/s for hose connection.

### INSTALLATION

Installed on ceilings or walls.  
Fixing: with screws.

### UPON REQUEST

Non-standard dimensions.

### FEATURES

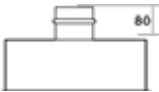


Tailor-made.  
Material: aluminium and polyurethane foam.  
Depth 200 to 350 mm.

### USE

Suitable for channelling hot or cold air from equipment to individual rooms.

### ACCESSORIES

-

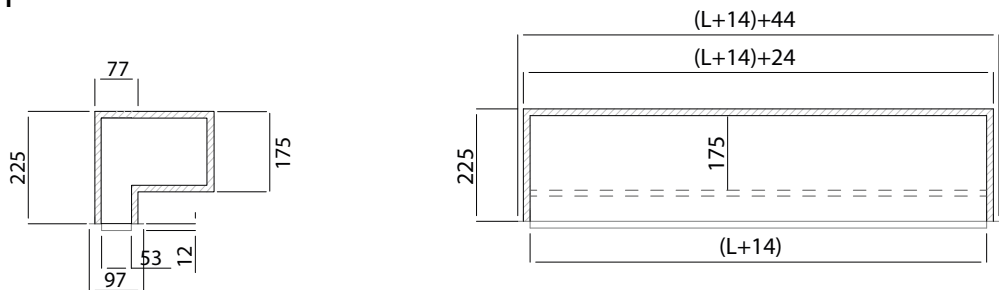
mm →			
LENGTH	REAR CONNECTION CODE	SIDE CONNECTION CODE	TOP CONNECTION CODE
600	PLPDLF-06001F	PLLDLF-06001F	PLSDF-06001F
	PLPDLF-06002F	PLLDLF-06002F	PLSDF-06002F
	PLPDLF-06003F	PLLDLF-06003F	PLSDF-06003F
	PLPDLF-06004F	PLLDLF-06004F	PLSDF-06004F
800	PLPDLF-08001F	PLLDLF-08001F	PLSDF-08001F
	PLPDLF-08002F	PLLDLF-08002F	PLSDF-08002F
	PLPDLF-08003F	PLLDLF-08003F	PLSDF-08003F
	PLPDLF-08004F	PLLDLF-08004F	PLSDF-08004F
1000	PLPDLF-10001F	PLLDLF-10001F	PLSDF-10001F
	PLPDLF-10002F	PLLDLF-10002F	PLSDF-10002F
	PLPDLF-10003F	PLLDLF-10003F	PLSDF-10003F
	PLPDLF-10004F	PLLDLF-10004F	PLSDF-10004F
1500	PLPDLF-15001F	PLLDLF-15001F	PLSDF-15001F
	PLPDLF-15002F	PLLDLF-15002F	PLSDF-15002F
	PLPDLF-15003F	PLLDLF-15003F	PLSDF-15003F
	PLPDLF-15004F	PLLDLF-15004F	PLSDF-15004F
2000	PLPDLF-20001F	PLLDLF-20001F	PLSDF-20001F
	PLPDLF-20002F	PLLDLF-20002F	PLSDF-20002F
	PLPDLF-20003F	PLLDLF-20003F	PLSDF-20003F
	PLPDLF-20004F	PLLDLF-20004F	PLSDF-20004F



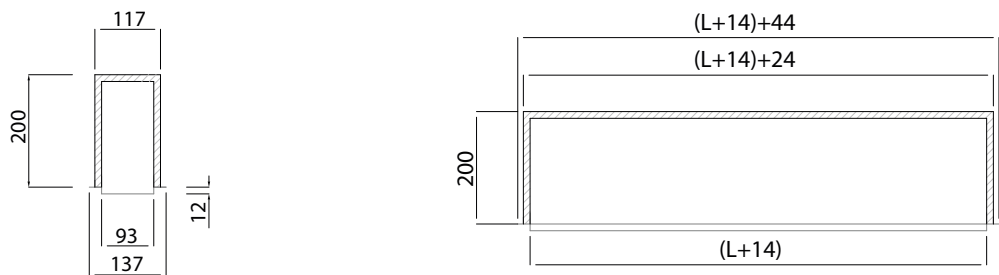
## 2.1 Custom plenums and accessories

### DIMENSIONS

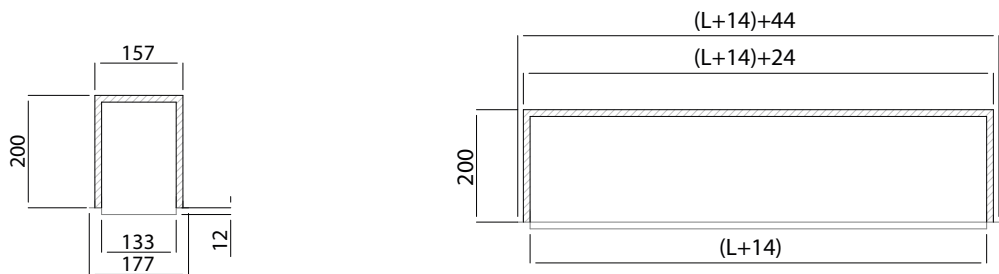
#### 1 SLOT



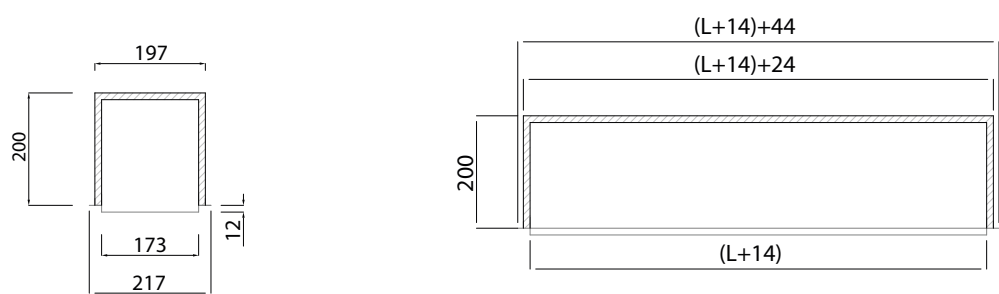
#### 2 SLOTS



#### 3 SLOTS



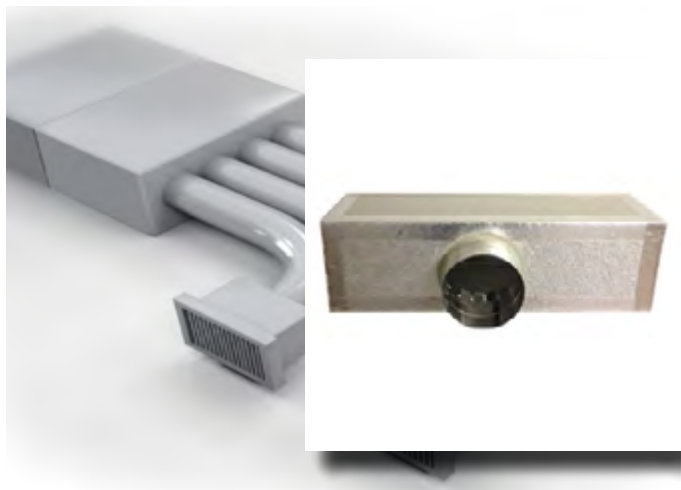
#### 4 SLOTS



#### EXAMPLE OF COMPATIBLE LINEAR DIFFUSER







## GRILLE PLENUM

CODE DESCRIPTION		
REAR CONNECTION:	PLP-LXH	E.g. PLP-600X150*
SIDE CONNECTION:	PLL-LXH	E.g. PLL-600X150*
TOP CONNECTION:	PLS-LXH	E.g. PLS-600X150*
REAR SUP./RET. CONNECTION:	PLP-LXH-MR	E.g. PLP-600X150-MR
SIDE SUP./RET. CONNECTION:	PLL-LXH-MR	E.g. PLL-600X150-MR
CMV MAN./MAN.: *	PLP-MM-LXH	E.g. PLP-MM-600X150
CLOSED:	PLC-LXH	E.g. PLC-600X150
Create your own code with connection number and diameter:		PL*LXH-N°*XDØ*
		E.g. PLP600X150-D150 (1 Ø150 conn.) E.g. PLP600X150-2XD150 (2 Ø150 conn.)

\* Specify the connection type (R;T;S) the number of connections and the diameter.

\* Supplied with 1 Ø75 detachment and separator

### DESCRIPTION

Plenum box made of polyurethane foam with PVC side joints complete with collar/s for flexible pipe connection.

### INSTALLATION

Installed on ceilings or walls.  
Fixing: with screws.

### UPON REQUEST

Non-standard dimensions.

### FEATURES

Tailor-made.  
Material: aluminium and polyurethane foam.  
Depth 200 to 350 mm.

### USE

Suitable for channelling hot or cold air from equipment to individual rooms.

### ACCESSORIES

-

mm →									
	CODES HEIGHT 100			CODES HEIGHT H 150 (BLUE CAPS)			CODES HEIGHT H 200		
	REAR CONN.	SIDE CONN.	TOP CONN.	REAR CONN.	SIDE CONN.	TOP CONN.	REAR CONN.	SIDE CONN.	TOP CONN.
Ø CONNECTION RECOMMENDED	100 - 150			100 - 150 - 200			100 - 150 - 200		
LENGTH									
200	PLP-200X100	PLL-200X100	PLS-200X100	PLP-200X150	PLL-200X150	PLS-200X150	PLP-200X200	PLL-200X200	PLS-200X200
300	PLP-300X100	PLL-300X100	PLS-300X100	PLP-300X150	PLL-300X150	PLS-300X150	PLP-300X200	PLL-300X200	PLS-300X200
400	PLP-400X100	PLL-400X100	PLS-400X100	PLP-400X150	PLL-400X150	PLS-400X150	PLP-400X200	PLL-400X200	PLS-400X200
500	PLP-500X100	PLL-500X100	PLS-500X100	PLP-500X150	PLL-500X150	PLS-500X150	PLP-500X200	PLL-500X200	PLS-500X200
600	PLP-600X100	PLL-600X100	PLS-600X100	PLP-600X150	PLL-600X150	PLS-600X150	PLP-600X200	PLL-600X200	PLS-600X200
700	PLP-700X100	PLL-700X100	PLS-700X100	PLP-700X150	PLL-700X150	PLS-700X150	PLP-700X200	PLL-700X200	PLS-700X200
800	PLP-800X100	PLL-800X100	PLS-800X100	PLP-800X150	PLL-800X150	PLS-800X150	PLP-800X200	PLL-800X200	PLS-800X200
900	PLP-900X100	PLL-900X100	PLS-900X100	PLP-900X150	PLL-900X150	PLS-900X150	PLP-900X200	PLL-900X200	PLS-900X200
1000	PLP-1000X100	PLL-1000X100	PLS-1000X100	PLP-1000X150	PLL-1000X150	PLS-1000X150	PLP-1000X200	PLL-1000X200	PLS-1000X200
1100	PLP-1100X100	PLL-1100X100	PLS-1100X100	PLP-1100X150	PLL-1100X150	PLS-1100X150	PLP-1100X200	PLL-1100X200	PLS-1100X200
1200	PLP-1200X100	PLL-1200X100	PLS-1200X100	PLP-1200X150	PLL-1200X150	PLS-1200X150	PLP-1200X200	PLL-1200X200	PLS-1200X200

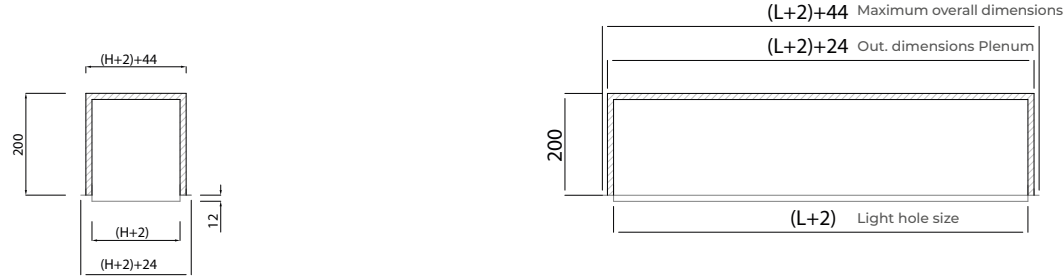


## 2.1 Custom plenums and accessories

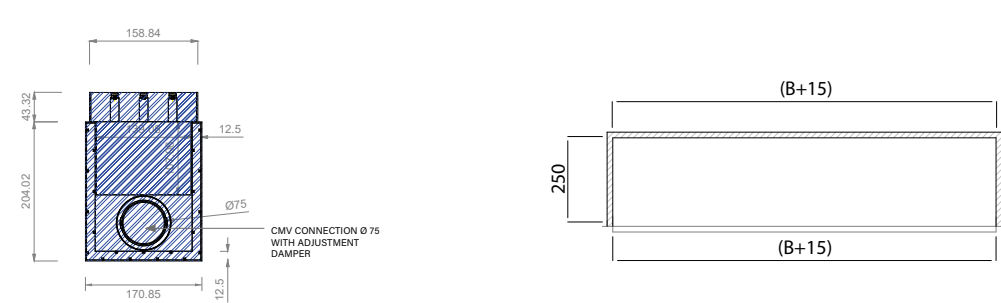
### DIMENSIONS

All measurements expressed in mm.

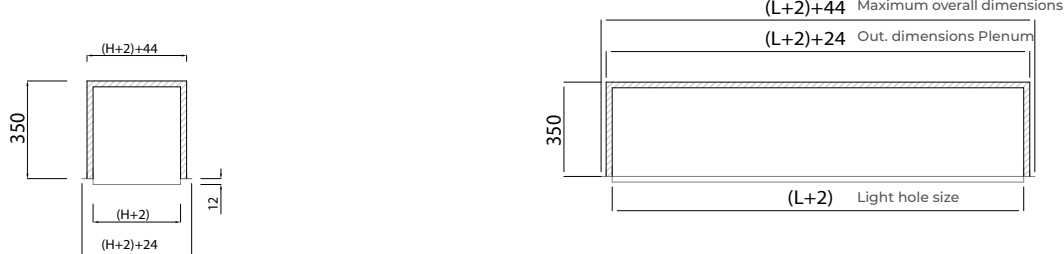
plenum **PLP** height 100 and 200 mm



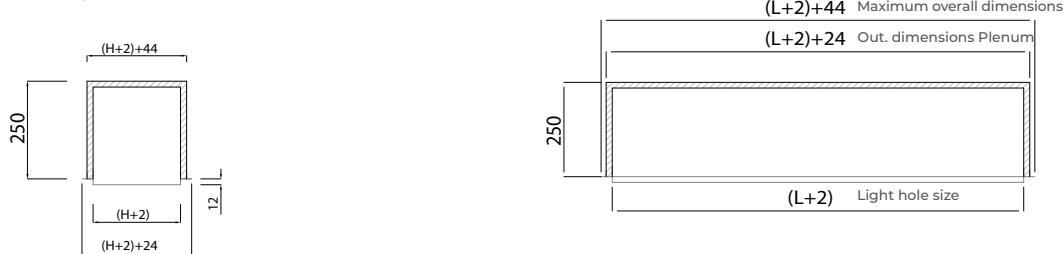
PLP height 150 mm (blue caps)



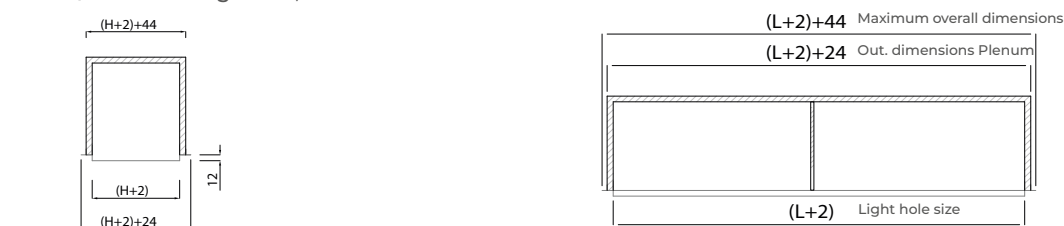
plenum **PLL** height 100, 150 and 200 mm



plenum **PLS** height 100, 150 and 200 mm



plenum **SUPPLY/RETURN** height 100, 150 and 200 mm







## SLEEVES

### CODE DESCRIPTION

<b>COLLARS:</b>	<b>SLEEVEØ</b>	E.g. SLEEVE160
-----------------	----------------	----------------

### DESCRIPTION

Aluminium sheet metal collars with h 120 mm.  
Made to connect hoses to ducts.

Supplied open for minimum storage space.  
Closure with interlocking tab without rivet.

### FEATURES

Diameters: from 100 to 500 mm.



### PIPE CLAMPS

**Product code FSI60-135**

**Product code FSI60-170**

**Product code FSI60-270**

Stainless steel pipe clamps for flexible piping.  
Standards DIN 3017 - AISI 430.  
For easy, fast application.  
Equipped with a locking device welded on the clamp.  
From 60 to 270 mm.

DIAMETER	DESCRIPTION	CODE
100	ALUMINIUM SHEET METAL COLLAR Ø 100 mm	SLEEVE100
120	ALUMINIUM SHEET METAL COLLAR Ø 120 mm	SLEEVE120
150	ALUMINIUM SHEET METAL COLLAR Ø 150 mm	SLEEVE150
160	ALUMINIUM SHEET METAL COLLAR Ø 160 mm	SLEEVE160
200	ALUMINIUM SHEET METAL COLLAR Ø 200 mm	SLEEVE200
250	ALUMINIUM SHEET METAL COLLAR Ø 250 mm	SLEEVE250
300	ALUMINIUM SHEET METAL COLLAR Ø 300 mm	SLEEVE300
315	ALUMINIUM SHEET METAL COLLAR Ø 315 mm	SLEEVE315
350	ALUMINIUM SHEET METAL COLLAR Ø 350 mm	SLEEVE350
400	ALUMINIUM SHEET METAL COLLAR Ø 400 mm	SLEEVE400
450	ALUMINIUM SHEET METAL COLLAR Ø 450 mm	SLEEVE450
500	ALUMINIUM SHEET METAL COLLAR Ø 500 mm	SLEEVE500



## 2.2 Insulated piping



### TES

CODE DESCRIPTION		
FLEXIBLE PIPE:	TESØ	E.g. TES203

#### DESCRIPTION

Flexible aluminium foil pipe reinforced with a polyester film and supported by a steel wire spiral structure.  
Thermal insulation provided by a polyester fibre mat (25 mm thick 16 kg m3).

#### INSTALLATION

Ducted system.

#### UPON REQUEST

-

#### FEATURES

Material: aluminium.  
10 m pack.  
Temperature: from -30° C to +140° C.  
Operating pressure: Max. 2500 Pa.  
Air velocity: 25 m/s Max.

#### USE

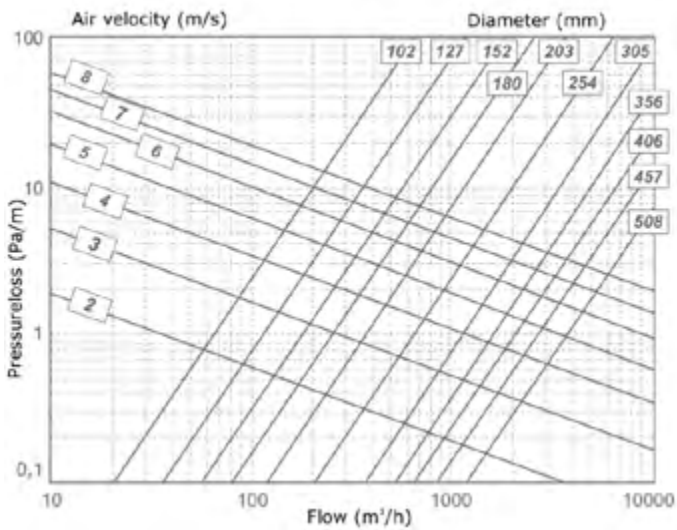
Heating, ventilation and air-conditioning.

#### ACCESSORIES

Pipe clamps.

DIAMETER	DESCRIPTION	CODE
102	INSULATED FLEX PIPE Ø 102 mm	TES102
127	INSULATED FLEX PIPE Ø 127 mm	TES127
160	INSULATED FLEX PIPE Ø 160 mm	TES160
203	INSULATED FLEX PIPE Ø 203 mm	TES203
254	INSULATED FLEX PIPE Ø 254 mm	TES254
305	INSULATED FLEX PIPE Ø 305 mm	TES305
315	INSULATED FLEX PIPE Ø 315 mm	TES315
356	INSULATED FLEX PIPE Ø 356 mm	TES356
406	INSULATED FLEX PIPE Ø 406 mm	TES406
457	INSULATED FLEX PIPE Ø 457 mm	TES457
508	INSULATED FLEX PIPE Ø 508 mm	TES508
560	INSULATED FLEX PIPE Ø 560 mm	TES560
610	INSULATED FLEX PIPE Ø 610 mm	TES610

### TECHNICAL DATA







## PSB

### CODE DESCRIPTION

VENT PLM + CONNECTION POSITION:	PSBLXH*	E.g. PSB400X150P
CMV MAN./MAN.: *	PSB-MM-LXH	E.g. PSB-MM-400X150
VENT PLM + CONNECTION POSITION NUMBER AND DIAMETER:	PSBLXH*-Ø	E.g. PSB400X150P-D200

\* Connection position (P-rear, L-side, S-top)

\* Supplied with 1 Ø75 detachment and separator

### DESCRIPTION

PSB are concealed vent plenums.  
Made of rigid polyurethane foam panel with a density of 49 (+/-2) kg/m<sup>3</sup>.  
Adjustable semi-gloss painted RAL9016 aluminium fins.

### INSTALLATION

Ceiling, wall and drywall.  
Installed at a height of 2.5 to 3.5 m.

### UPON REQUEST



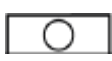


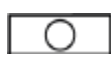



Non-standard dimensions.  
SUPPLY and RETURN version.

### FEATURES

Material: polyurethane and steel.  
Visible grille finish: painted white RAL9016.

### USE

Heating and air-conditioning.

									
	H 100			H 150			H 200		
L. (mm)	REAR CONN.	SIDE CONN.	TOP CONN.	REAR CONN.	SIDE CONN.	TOP CONN.	REAR CONN.	SIDE CONN.	TOP CONN.
200	PSB200X100P	PSB200X100L	PSB200X100S	PSB200X150P	PSB200X150L	PSB200X150S	PSB200X200P	PSB200X200L	PSB200X200S
300	PSB300X100P	PSB300X100L	PSB300X100S	PSB300X150P	PSB300X150L	PSB300X150S	PSB300X200P	PSB300X200L	PSB300X200S
400	PSB400X100P	PSB400X100L	PSB400X100S	PSB400X150P	PSB400X150L	PSB400X150S	PSB400X200P	PSB400X200L	PSB400X200S
500	PSB500X100P	PSB500X100L	PSB500X100S	PSB500X150P	PSB500X150L	PSB500X150S	PSB500X200P	PSB500X200L	PSB500X200S
600	PSB600X100P	PSB600X100L	PSB600X100S	PSB600X150P	PSB600X150L	PSB600X150S	PSB600X200P	PSB600X200L	PSB600X200S
700	PSB700X100P	PSB700X100L	PSB700X100S	PSB700X150P	PSB700X150L	PSB700X150S	PSB700X200P	PSB700X200L	PSB700X200S
800	PSB800X100P	PSB800X100L	PSB800X100S	PSB800X150P	PSB800X150L	PSB800X150S	PSB800X200P	PSB800X200L	PSB800X200S
900	PSB900X100P	PSB900X100L	PSB900X100S	PSB900X150P	PSB900X150L	PSB900X150S	PSB900X200P	PSB900X200L	PSB900X200S
1000	PSB1000X100P	PSB1000X100L	PSB1000X100S	PSB1000X150P	PSB1000X150L	PSB1000X150S	PSB1000X200P	PSB1000X200L	PSB1000X200S
1500	PSB1500X100P	PSB1500X100L	PSB1500X100S	PSB1500X150P	PSB1500X150L	PSB1500X150S	PSB1500X200P	PSB1500X200L	PSB1500X200S
2000	PSB2000X100P		PSB2000X100S	PSB2000X150P		PSB2000X150S	PSB2000X200P		PSB2000X200S
3000	PSB3000X100P		PSB3000X100S	PSB3000X150P		PSB3000X150S	PSB3000X200P		PSB3000X200S
3500	PSB3500X100P		PSB3500X100S	PSB3500X150P		PSB3500X150S	PSB3500X200P		PSB3500X200S
4000	PSB4000X100P		PSB4000X100S	PSB4000X150P		PSB4000X150S	PSB4000X200P		PSB4000X200S
4500	PSB4500X100P		PSB4500X100S	PSB4500X150P		PSB4500X150S	PSB4500X200P		PSB4500X200S
5000	PSB5000X100P		PSB5000X100S	PSB5000X150P		PSB5000X150S	PSB5000X200P		PSB5000X200S
6000	PSB6000X100P		PSB6000X100S	PSB6000X150P		PSB6000X150S	PSB6000X200P		PSB6000X200S



## 2.3 Concealed diffuser plenum without frame

### TECHNICAL DATA

LxH : dimensions

D : air density

Q : air flow

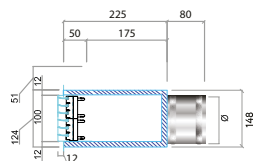
All dimensions are expressed in mm

LxH	D Kg/mc	Ae mq	air throw (m)		Q (m³/h)		LxH	D Kg/mc	Ae mq	air throw (m)		Q (m³/h)		LxH	D Kg/mc	Ae mq	air throw (m)		Q (m³/h)	
			min.	max.	min.	max.				min.	max.	min.	max.				min.	max.	min.	max.
200x100	1,225	0,0121	4,0	8,6	106	292	200x150	1,225	0,0190	5,0	9,8	168	462	200x200	1,225	0,0256	6,0	11,5	226	621
300x100	1,225	0,0171	4,7	9,3	151	415	300x150	1,225	0,0274	6,2	11,8	242	665	300x200	1,225	0,0373	7,1	13,8	329	905
400x100	1,225	0,0217	5,4	10,6	192	527	400x150	1,225	0,0352	6,8	13,7	310	853	400x200	1,225	0,0482	8,2	16,0	425	1170
500x100	1,225	0,0261	6,0	11,5	230	632	500x150	1,225	0,0425	7,6	15,0	375	1030	500x200	1,225	0,0585	8,9	18,0	516	1420
600x100	1,225	0,0302	6,4	12,4	266	732	600x150	1,225	0,0494	8,2	16,2	436	1199	600x200	1,225	0,0684	9,7	19,9	603	1658
800x100	1,225	0,0379	7,2	13,9	335	920	800x150	1,225	0,0625	9,3	18,4	551	1516	800x200	1,225	0,0869	11,5	22,4	766	2107
1000x100	1,225	0,0452	7,8	15,4	399	1097	1000x150	1,225	0,0747	10,2	20,1	659	1813	1000x200	1,225	0,1042	12,0	22,7	919	2528
1500x100	1,225	0,0620	9,2	18,3	546	1503	1500x150	1,225	0,1029	11,7	23,2	908	2497	1500x200	1,225	0,1442	14,6	30,3	1272	3498
2000x100	1,225	0,0773	10,6	20,8	682	1875	2000x150	1,225	0,1288	12,9	25,7	1136	3123	2000x200	1,225	0,1809	16,4	32,9	1595	4387

### DIMENSIONS

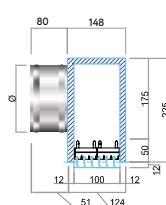
#### HEIGHT 100 mm

With connection P



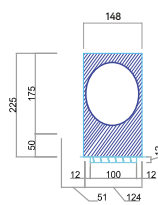
Note=For connection up to ø250 mm (ø200 and ø250 oval)

With connection S



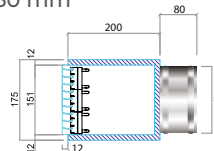
Note=For connection up to ø250 mm (ø200 and ø250 oval)

With connection L

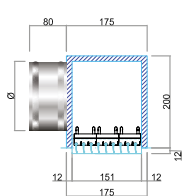


Note=For connection up to ø150 mm

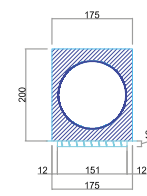
#### HEIGHT 150 mm



Note=For connection up to ø250 mm (ø200 and ø250 oval)

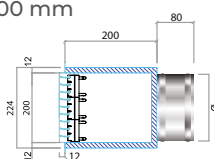


Note=For connection up to ø250 mm (ø200 and ø250 oval)

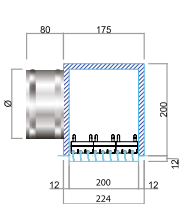


Note=For connection up to ø150 mm

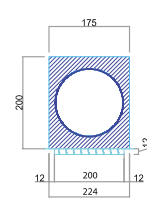
#### HEIGHT 200 mm



Note=For connection up to ø250 mm (ø200 and ø250 oval)



Note=For connection up to ø250 mm (ø200 and ø250 oval)



Note=For connection up to ø150 mm





## PSD

### CODE DESCRIPTION - PLASTERBOARD INSTALLATION

PLM DIFFUSER + CONNECTION POSITION:	PSDLXH*	Es. PSD600X50P
PLM DIFFUSER + CONNECTION POSITION:+ NR. AND DIAMETER:	PSDLXH*-Ø	Es. PSD600X50P-D200 (1 att. ø200)

### CODE DESCRIPTION - WALL / TABLE INSTALLATION

PLM DIFFUSER + CONNECTION POSITION:	PSDMLXH*	Es. PSDM600X50P
PLM DIFFUSER + CONNECTION POSITION:+ NR. AND DIAMETER:	PSDMLXH*-Ø	Es. PSDM600X50P-D200 (1 att. ø200)

\* Port Location (P-Back, S-Top)  
L-lateral, -> indicate right or left side when ordering (front view)

## DESCRIPTION

PSD are plenum diffusers complete with retractable diffuser without frame. Made with rigid polyurethane foam panel with a density of 49 (+/-2) kg/m<sup>3</sup>.

## INSTALLATION

Wall and ceiling, can be installed on masonry e drywall.

## ON DEMAND






Non-standard dimensions.  
DELIVERY version - DELIVERY for HVAC.

## FEATURES

Material: polyurethane and steel.  
Visible grille finish: painted white RAL9016.  
Adjustable fins in RAL9016 aluminium.

## USE

Heating and conditioning.

				
LENGTH (mm)	REAR CONNECTION	SIDE CONNECTION	TOP CONNECTION	FIN REPLACEMENT KIT
200	PSD200X50P	PSD200X50L	PSD200X50S	SD200X50
300	PSD300X50P	PSD300X50L	PSD300X50S	SD300X50
400	PSD400X50P	PSD400X50L	PSD400X50S	SD400X50
600	PSD600X50P	PSD600X50L	PSD600X50S	SD600X50
800	PSD800X50P	PSD800X50L	PSD800X50S	SD800X50
1000	PSD1000X50P	PSD1000X50L	PSD1000X50S	SD1000X50
1200	PSD1200X50P	PSD1200X50L	PSD1200X50S	SD1200X50
1500	PSD1500X50P	PSD1500X50L	PSD1500X50S	SD1500X50
2000	PSD2000X50P	PSD2000X50L	PSD2000X50S	SD2000X50
2500	PSD2500X50P	PSD2500X50L	PSD2500X50S	SD2500X50
3000	PSD3000X50P	PSD3000X50L	PSD3000X50S	SD3000X50
3500	PSD3500X50P	PSD3500X50L	PSD3500X50S	SD3500X50
4000	PSD4000X50P	PSD4000X50L	PSD4000X50S	SD4000X50
4500	PSD4500X50P	PSD4500X50L	PSD4500X50S	SD4500X50
5000	PSD5000X50P	PSD5000X50L	PSD5000X50S	SD5000X50
6000	PSD6000X50P	PSD6000X50L	PSD6000X50S	SD6000X50



## 2.3 Concealed diffuser plenum without frame

### TECHNICAL DATA

LxH : dimensions  
D : air density  
Q : air flow

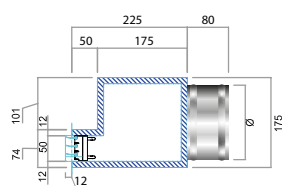
All dimensions are expressed in mm

LxH	D Kg/mc	Ae mq	air throw (m)		Q (m³/h)	
			min.	max.	min.	max.
200x50	1,225	0,0054	3,1	5,7	48	132
300x50	1,225	0,0075	3,4	6,4	67	183
400x50	1,225	0,0095	3,7	7,0	84	230
500x50	1,225	0,0113	4,0	7,5	100	274
600x50	1,225	0,0130	4,2	8,0	115	316
800x50	1,225	0,0163	4,6	9,0	144	395
1000x50	1,225	0,0193	5,0	9,8	170	469
1500x50	1,225	0,0263	6,0	11,6	232	639
2000x50	1,225	0,0328	6,6	13,0	289	795

### DIMENSIONS

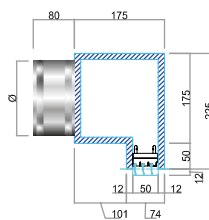
#### PSD HEIGHT 50 mm - PLASTERBOARD INSTALLATION

Detail PSD height 50 mm with connection P



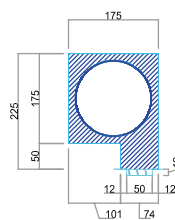
For connection up to ø250 mm (ø200 and ø250 oval)

Detail PSD height 50 mm with connection S



For connection up to ø250 mm (ø200 and ø250 oval)

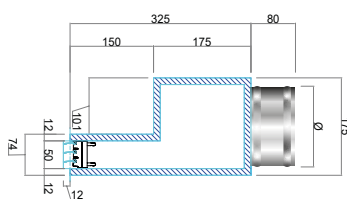
Detail PSD height 50 mm with connection L



For connection up to ø150 mm

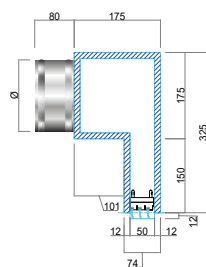
#### PSDM HEIGHT 50 mm - WALL / TABLE INSTALLATION

Detail PSDM height 50 mm with connection P



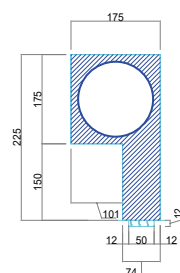
For connection up to ø250 mm (ø200 and ø250 oval)

Detail PSDM height 50 mm with connection S



For connection up to ø250 mm (ø200 and ø250 oval)

Detail PSDM height 50 mm with connection L



For connection up to ø150 mm





## PSF - SINGLE SLOT

### CODE DESCRIPTION - PLASTERBOARD INSTALLATION

SINGLE SLOT PLENUM GENERIC:	PSFLXH*	Es. PSF800X30P
SINGLE SLOT PLENUM WITH CONNECTION DIAMETER:	PSFLXH*-Ø	Es. PSF800X30P-D200 (1 att. ø200)

### CODE DESCRIPTION - WALL / TABLE INSTALLATION

SINGLE SLOT PLENUM GENERIC:	PSFMLXH*	Es. PSFM800X30P
SINGLE SLOT PLENUM WITH CONNECTION DIAMETER:	PSFMLXH*-Ø	Es. PSFM800X30P-D200 (1 att. ø200)

\* Port Location (P-Back, S-Top)

L-lateral, -> indicate right or left side when ordering (front view)

### DESCRIPTION

PSFs are plenums complete with a concealed slot diffuser, without a frame.

Made of rigid polyurethane foam panel with a density of 49 (+/-2) kg/m<sup>3</sup>.

### INSTALLATION

Wall, ceiling, can be installed in masonry and drywall.

### ON DEMAND

Non-standard dimensions.



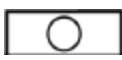
DELIVERY version - DELIVERY for HVAC.

### FEATURES

Material: polyurethane and steel.  
Without grill flaps.

### USE

Heating and air-conditioning.

→			
	1 SLOT		
LENGTH (mm)	REAR CONNECTION	SIDE CONNECTION	TOP CONNECTION
200	PSF200X30P	PSF200X30L	PSF200X30S
300	PSF300X30P	PSF300X30L	PSF300X30S
400	PSF400X30P	PSF400X30L	PSF400X30S
600	PSF600X30P	PSF600X30L	PSF600X30S
800	PSF800X30P	PSF800X30L	PSF800X30S
1000	PSF1000X30P	PSF1000X30L	PSF1000X30S
1200	PSF1200X30P	PSF1200X30L	PSF1200X30S
1500	PSF1500X30P	PSF1500X30L	PSF1500X30S
2000	PSF2000X30P	PSF2000X30L	PSF2000X30S
2500	PSF2500X30P	PSF2500X30L	PSF2500X30S
3000	PSF3000X30P	PSF3000X30L	PSF3000X30S
4000	PSF4000X30P	PSF3500X30L	PSF3500X30S
5000	PSF5000X30P	PSF5000X30L	PSF5000X30S
6000	PSF6000X30P	PSF6000X30L	PSF6000X30S



## 2.3 Concealed diffuser plenum without frame

### PSF TECHNICAL DATA

LxH : dimensions

D : air density

Q : air flow

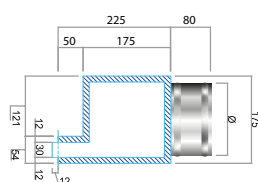
All dimensions are expressed in mm

LxH	D Kg/mc	Ae mq	air throw (m)		Q (m³/h)	
			min.	max.	min.	max.
200x30	1,225	0,0046	2,6	4,6	41	112
300x30	1,225	0,0064	3,0	5,6	56	155
400x30	1,225	0,0080	3,4	6,5	71	195
500x30	1,225	0,0096	3,7	7,0	84	232
600x30	1,225	0,0110	3,9	7,4	97	267
800x30	1,225	0,0138	4,2	8,3	121	334
1000x30	1,225	0,0163	4,6	9,3	144	396
1500x30	1,225	0,0222	5,5	10,7	196	539
2000x30	1,225	0,0277	6,2	11,9	244	671

### DIMENSIONS

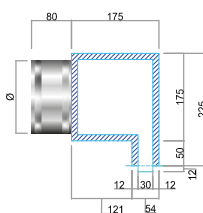
#### PSF HEIGHT 30 mm - PLASTERBOARD INSTALLATION

Detail PSF height 30 mm with connection P



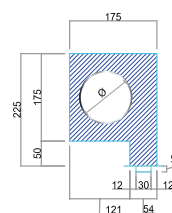
For connection up to ø250 mm (ø200 and ø250 oval)

Detail PSF height 30 mm with connection S



For connection up to ø250 mm (ø200 and ø250 oval)

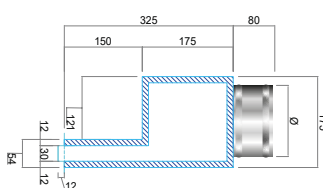
Detail PSF height 30 mm with connection L



For connection up to ø150 mm

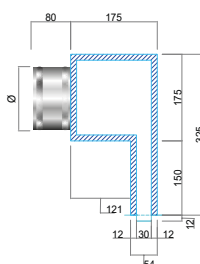
#### PSFM HEIGHT 30 mm - WALL / TABLE INSTALLATION

Detail PSFM height 30 mm with connection P



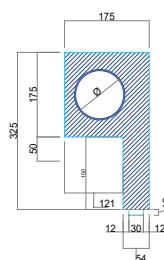
For connection up to ø250 mm (ø200 and ø250 oval)

Detail PSFM height 30 mm with connection S



For connection up to ø250 mm (ø200 and ø250 oval)

Detail PSFM height 30 mm with connection L







## BMA

### CODE DESCRIPTION

VENT WITH HORIZONTAL- VERTICAL FINS:	<b>BMA-OV-LXH</b>	E.g. BMA-OV-400X150
CALIBRATION DAMPER:	<b>SC-LXH</b>	E.g. SC-400X150
COUNTERFRAME:	<b>CT-LXH</b>	E.g. CT-400X150

Aluminium-coloured product (final code letter "A") - e.g. BMA-OV400X150A

### DESCRIPTION

The BMA series provides air supply only vents with one or two rows of individually adjustable 20 mm pitch fins.

### INSTALLATION

Clip fixing.  
Installed on walls or ducts at a height of 2.5 to 3.5 m.

### UPON REQUEST

Non-standard dimensions.  
Choice of RAL colours.  
Holes on frame for installation with screws.  
Version BMA-VO (VERTICAL/HORIZONTAL)

### FEATURES









Material: aluminium.  
Finish: painted white RAL9016.

### USE

They are used in wall or duct installations, in both heating and air-conditioning supply.

### ACCESSORIES

SC galvanised steel calibration damper with opposed-movement fins.  
CT galvanised steel subframe to be walled in.

							
LXH (mm)	BMA-OV	SC	CT	LXH (mm)	BMA-OV	SC	CT
200X100	BMA-OV-200X100	SC-200X100	CT-200X100	700X200	BMA-OV-700X200	SC-700X200	CT-700X200
300X100	BMA-OV-300X100	SC-300X100	CT-300X100	800X200	BMA-OV-800X200	SC-800X200	CT-800X200
400X100	BMA-OV-400X100	SC-400X100	CT-400X100	1000X200	BMA-OV-1000X200	SC-1000X200	CT-1000X200
500X100	BMA-OV-500X100	SC-500X100	CT-500X100	300X300	BMA-OV-300X300	SC-300X300	CT-300X300
600X100	BMA-OV-600X100	SC-600X100	CT-600X100	400X300	BMA-OV-400X300	SC-400X300	CT-400X300
700X100	BMA-OV-700X100	SC-700X100	CT-700X100	500X300	BMA-OV-500X300	SC-500X300	CT-500X300
800X100	BMA-OV-800X100	SC-800X100	CT-800X100	600X300	BMA-OV-600X300	SC-600X300	CT-600X300
1000X100	BMA-OV-1000X100	SC-1000X100	CT-1000X100	700X300	BMA-OV-700X300	SC-700X300	CT-700X300
200X150	BMA-OV-200X150	SC-200X150	CT-200X150	800X300	BMA-OV-800X300	SC-800X300	CT-800X300
300X150	BMA-OV-300X150	SC-300X150	CT-300X150	1000X300	BMA-OV-1000X300	SC-1000X300	CT-1000X300
400X150	BMA-OV-400X150	SC-400X150	CT-400X150	400X400	BMA-OV-400X400	SC-400X400	CT-400X400
500X150	BMA-OV-500X150	SC-500X150	CT-500X150	500X400	BMA-OV-500X400	SC-500X400	CT-500X400
600X150	BMA-OV-600X150	SC-600X150	CT-600X150	600X400	BMA-OV-600X400	SC-600X400	CT-600X400
700X150	BMA-OV-700X150	SC-700X150	CT-700X150	700X400	BMA-OV-700X400	SC-700X400	CT-700X400
800X150	BMA-OV-800X150	SC-800X150	CT-800X150	800X400	BMA-OV-800X400	SC-800X400	CT-800X400
1000X150	BMA-OV-1000X150	SC-1000X150	CT-1000X150	1000X400	BMA-OV-1000X400	SC-1000X400	CT-1000X400
200X200	BMA-OV-200X200	SC-200X200	CT-200X200	500X500	BMA-OV-500X500	SC-500X500	CT-500X500
300X200	BMA-OV-300X200	SC-300X200	CT-300X200	600X500	BMA-OV-600X500	SC-600X500	CT-600X500
400X200	BMA-OV-400X200	SC-400X200	CT-400X200	800X500	BMA-OV-800X500	SC-800X500	CT-800X500
500X200	BMA-OV-500X200	SC-500X200	CT-500X200	1000X500	BMA-OV-1000X500	SC-1000X500	CT-1000X500
600X200	BMA-OV-600X200	SC-600X200	CT-600X200				



## 2.4 Vents and grilles

### TECHNICAL DATA

Vk: effective speed (m/s)

m<sup>3</sup>/h: flow rate

L1 (m): nozzle throw without damper, fin deflection 0°, with coanda effect (ceiling), terminal velocity 0.25 m/sec and

T max. 15°C

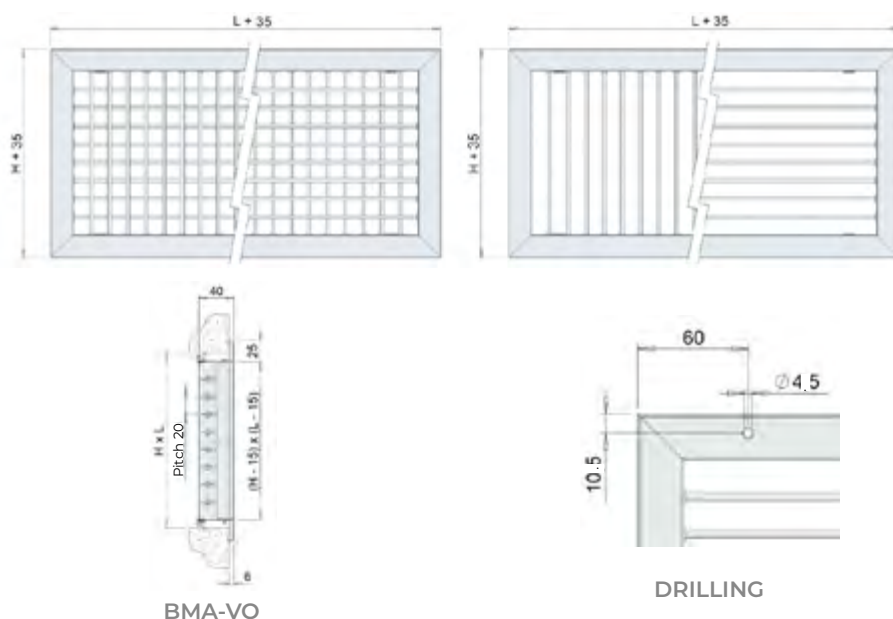
All dimensions expressed in mm.

Dimensions LxH	Effective cross-section m <sup>2</sup>	m <sup>3</sup> /h	L1	m <sup>3</sup> /h	L1	Dimensions LxH	Effective cross-section m <sup>2</sup>	m <sup>3</sup> /h	L1	m <sup>3</sup> /h	L1
200x100	0.013	100	3	160	5	500x200	0.071	560	7.5	900	10
300x100	0.018	140	3.7	230	5.6	600x200	0.086	682	10	1080	11
400x100	0.025	200	4.5	320	6.8	800x200	0.115	910	10.3	1450	13
500x100	0.033	260	6	420	8	1000x200	0.145	1150	10	1830	15.6
600x100	0.042	335	6.8	500	9	300x300	0.058	460	5.8	730	9
200x150	0.020	160	3.6	240	5.4	400x300	0.085	670	6.8	1070	10
300x150	0.029	230	4.1	370	7	500x300	0.110	870	8.1	1380	12
400x150	0.039	310	4.3	500	8	600x300	0.136	1080	9.6	1730	15
500x150	0.051	400	5	640	9	800x300	0.178	1410	10.5	2250	16
600x150	0.059	470	5.8	750	9.5	1000x300	0.226	1790	13	2860	18
800x150	0.086	682	6	1083	11	400x400	0.115	910	8	1430	12
200x200	0.026	200	4	300	6	600x400	0.180	1430	11	2290	17
300x200	0.044	350	5.8	550	8	800x400	0.245	1940	12	3080	18
400x200	0.057	450	6.5	720	9	1000x400	0.310	2460	16	3940	20
Vk (m/s)		2.2		3.5				2.2		3.5	

NOISE INDEX dB(A)

Vk (m/s)	dB(A)		
	defl. 0°	defl. 20°	defl. 40°
2.2	15/20	18/23	20/25
3.5	20/25	23/28	25/30

### DIMENSIONS







## GRA6

### CODE DESCRIPTION

RETURN GRILLE WITH WHITE FILTER:	GRA6-LXH	E.g.: GRA6-800X400
RETURN GRILLE WITH ALUMINIUM FILTER:	GRA6-LXHA	E.g.: GRA6-800X400A
GRILLE HOLDER PLENUM SIDE CONNECTION:	PLLGRA6-LXH	E.g.: PLLGRA6-800X400
GRILLE HOLDER PLENUM REAR CONNECTION:	PLPGRA6-LXH	E.g.: PLPGRA6-800X400

Aluminium-coloured product (final code letter "A") - e.g. GRA6-800X400A  
Standard grille holder PLENUM depth 200 mm

### DESCRIPTION

Air intake grille, 25 mm pitch, constructed with fixed horizontal fins tilted at 45°C with double hinged opening frame for easy filter housing and replacement.

### INSTALLATION

Installation is carried out by fixing the outer frame of the grille to the wall using screws.

### UPON REQUEST

Non-standard dimensions.  
Closure with magnets or with push-pull system.

### FEATURES

Material: aluminium.  
Finish: painted white RAL9016.  
Colour: final code letter "A" aluminium.  
Filter: 12 mm thick COARSE class (G2).  
Closure: by screw.

### USE

For outside air intake or in rooms where dust pre-filtration is recommended.

### ACCESSORIES

SC galvanised steel calibration damper with opposed-movement fins.  
CT galvanised steel subframe to be walled in.

**ATTENTION:** The table includes all white grille sizes. For other CODES please refer to the table above.

	HEIGHT (mm)					
	H 200	H 300	H 400	H 500	H 600	H 800
LENGTH (mm)						
200	GRA6-200X200	GRA6-200X300	GRA6-200X400	GRA6-200X500	GRA6-200X600	GRA6-200X800
300	GRA6-300X200	GRA6-300X300	GRA6-300X400	GRA6-300X500	GRA6-300X600	GRA6-300X800
400	GRA6-400X200	GRA6-400X300	GRA6-400X400	GRA6-400X500	GRA6-400X600	GRA6-400X800
500	GRA6-500X200	GRA6-500X300	GRA6-500X400	GRA6-500X500	GRA6-500X600	GRA6-500X800
600	GRA6-600X200	GRA6-600X300	GRA6-600X400	GRA6-600X500	GRA6-600X600	GRA6-600X800
800	GRA6-800X200	GRA6-800X300	GRA6-800X400	GRA6-800X500	GRA6-800X600	GRA6-800X800
1000	GRA6-1000X200	GRA6-1000X300	GRA6-1000X400	GRA6-1000X500	GRA6-1000X600	GRA6-1000X800
1200	GRA6-1200X200	GRA6-1200X300	GRA6-1200X400	GRA6-1200X500	GRA6-1200X600	GRA6-1200X800



## 2.4 Vents and grilles

### TECHNICAL DATA

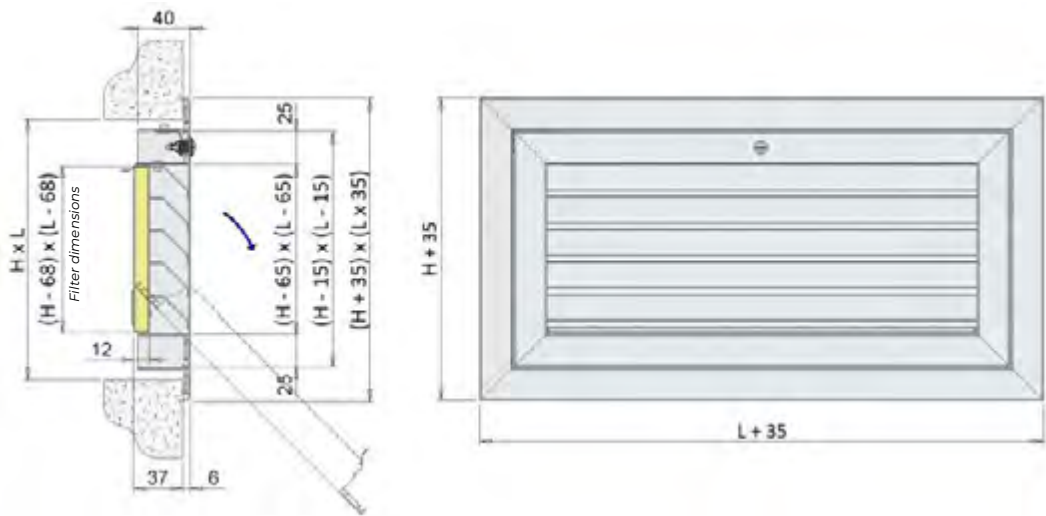
m<sup>3</sup>/h: air flow  
V m/s: front speed on filter  
We recommend an air velocity at the filter of 1.5 m/s to limit pressure losses and maintain filtration efficiency. The flow rate data in the table refers to the grille with the filter.  
All dimensions expressed in mm.

Dimension H	V m/s	Dimension L						
		200	300	400	500	600	800	1000
		flow rate m <sup>3</sup> /h						
200	1.5	63	121	180	238	296	413	530
	2	84	162	240	317	395	551	706
300	1.5	121	234	346	458	571	795	1020
	2	162	312	461	611	761	1060	1360
400	1.5	180	346	512	679	845	1178	1510
	2	240	461	683	905	1127	1570	2014
500	1.5	238	458	679	899	1119	1560	2000
	2	317	611	905	1199	1492	2080	2667
600	1.5	296	571	845	1119	1394	1942	2491
	2	395	761	1127	1492	1858	2590	3321
800	1.5	413	795	1178	2560	1942	2707	3471
	2	551	1060	1570	2080	2590	3609	4629
1000	1.5	530	1020	1510	2000	2491	3471	4452
	2	706	1360	2014	2667	3321	4629	5936

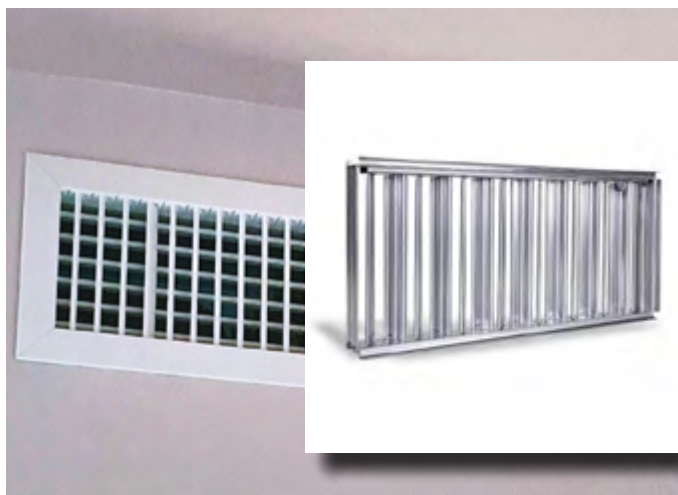
NOISE INDEX dB(A)

V m/s	dB(A)
1.5	32/38
2	39/45

### DIMENSIONS







## SC

### CODE DESCRIPTION

VENT ADJUSTMENT DAMPER: SC-LXH E.g.: SC-400X150

### DESCRIPTION

Galvanised steel calibration fins with opposing movement suitable for vents and grilles.

### FEATURES

Material: galvanised steel.  
Maximum dimensions for one-piece construction 1000 mm x 600 mm (WXH).

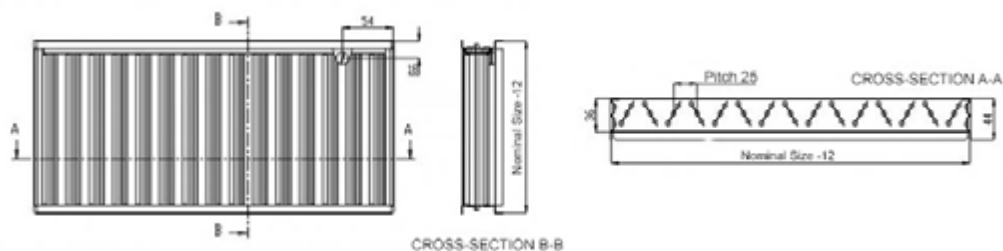
### INSTALLATION

Installation takes place directly on the neck of the vent or grille.

### USE

Suitable for vents and grilles.

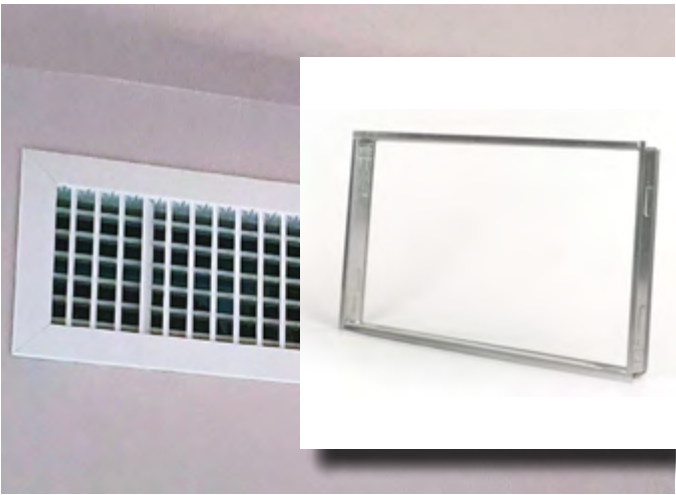
## DIMENSIONS



	LENGTH (mm)							
	H 200	H 300	H 400	H 500	H 600	H 800	H 1000	H 1200
HEIGHT (mm)								
100	SC-200X100	SC-300X100	SC-400X100	SC-500X100	SC-600X100	SC-800X100	SC-1000X100	SC-1200X100
125	SC-200X125	SC-300X125	SC-400X125	SC-500X125	SC-600X125	SC-800X125	SC-1000X125	SC-1200X125
150	SC-200X150	SC-300X150	SC-400X150	SC-500X150	SC-600X150	SC-800X150	SC-1000X150	SC-1200X150
200	SC-200X200	SC-300X200	SC-400X200	SC-500X200	SC-600X200	SC-800X200	SC-1000X200	SC-1200X200
300	SC-200X300	SC-300X300	SC-400X300	SC-500X300	SC-600X300	SC-800X300	SC-1000X300	SC-1200X300
400	SC-200X400	SC-300X400	SC-400X400	SC-500X400	SC-600X400	SC-800X400	SC-1000X400	SC-1200X400
500	SC-200X500	SC-300X500	SC-400X500	SC-500X500	SC-600X500	SC-800X500	SC-1000X500	SC-1200X500
600	SC-200X600	SC-300X600	SC-400X600	SC-500X600	SC-600X600	SC-800X600	SC-1000X600	SC-1200X600
800	SC-200X800	SC-300X800	SC-400X800	SC-500X800	SC-600X800	SC-800X800	SC-1000X800	SC-1200X800
1000	SC-200X1000	SC-300X1000	SC-400X1000	SC-500X1000	SC-600X1000	SC-800X1000	SC-1000X1000	SC-1200X1000



## 2.4 Vents and grilles



CT

CODE DESCRIPTION		
COUNTERFRAME FOR VENTS:	CT-LXH	E.g.: CT-400X150

### DESCRIPTION

Galvanised sheet metal counterframes for grilles and vents.  
The counterframes are supplied with special clamps that are bent during installation for anchorage to the walls.

### INSTALLATION

The frame is supplied disassembled and must be assembled on site.

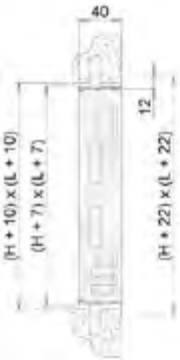
### FEATURES


Material: galvanised sheet metal.

### USE

Suitable for vents and grilles.

## DIMENSIONS



 HEIGHT (mm)	LENGTH (mm)									
	H 200	H 300	H 400	H 500	H 600	H 700	H 800	H 900	H 1000	H 1200
100	CT-200X100	CT-300X100	CT-400X100	CT-500X100	CT-600X100	CT-700X100	CT-800X100	CT-900X100	CT-1000X100	CT-1200X100
125	CT-200X125	CT-300X125	CT-400X125	CT-500X125	CT-600X125	CT-700X125	CT-800X125	CT-900X125	CT-1000X125	CT-1200X125
150	CT-200X150	CT-300X150	CT-400X150	CT-500X150	CT-600X150	CT-700X150	CT-800X150	CT-900X150	CT-1000X150	CT-1200X150
200	CT-200X200	CT-300X200	CT-400X200	CT-500X200	CT-600X200	CT-700X200	CT-800X200	CT-900X200	CT-1000X200	CT-1200X200
300	CT-200X300	CT-300X300	CT-400X300	CT-500X300	CT-600X300	CT-700X300	CT-800X300	CT-900X300	CT-1000X300	CT-1200X300
400	CT-200X400	CT-300X400	CT-400X400	CT-500X400	CT-600X400	CT-700X400	CT-800X400	CT-900X400	CT-1000X400	CT-1200X400
500	CT-200X500	CT-300X500	CT-400X500	CT-500X500	CT-600X500	CT-700X500	CT-800X500	CT-900X500	CT-1000X500	CT-1200X500
600	CT-200X600	CT-300X600	CT-400X600	CT-500X600	CT-600X600	CT-700X700	CT-800X600	CT-900X600	CT-1000X600	CT-1200X600
800	CT-200X800	CT-300X800	CT-400X800	CT-500X800	CT-600X800	CT-700X800	CT-800X800	CT-900X900	CT-1000X800	CT-1200X800
1000	CT-200X1000	CT-300X1000	CT-400X1000	CT-500X1000	CT-600X1000	CT-700X1000	CT-800X1000	CT-900X1000	CT-1000X1000	CT-1200X1000





## DLF

CODE DESCRIPTION		
DIFFUSER:	DLF10-L-F	E.g. DLF10-800-1F
WITH DEFLECTION FINS:	DLF20-L-F	E.g. DLF20-800-1F
WITHOUT FINS + DAMPER:	DLF30-L-F	E.g. DLF30-800-1F
WITH FINS + DAMPER:	DLF40-L-F	E.g. DLF40-800-1F
WITH FINS + DAMPER + EQUALISER:	DLF50-L-F	E.g. DLF50-800-1F
CORNER 90°:	DLF90-F	E.g. DLF90-1F
FIXING BRIDGE:	CVL-V	
CONTINUITY KIT:	KIT-DLF	

Aluminium-coloured product (final code letter "A") - e.g. DLF20-800-1FA

### DESCRIPTION

DLF are linear slot diffusers with an aerodynamic aluminium profile and adjustable deflectors for optimised air throw control.

### INSTALLATION

Direct duct or plenum installation with bridge mounting system.  
Ceiling installation is generally between 2.5 and 3.1 m high.

### UPON REQUEST

Slots: 5 or 6.  
Different RAL colour  
White deflector colour.

### FEATURES










Material: aluminium.  
Finish: painted white RAL9016 with black deflectors (standard).  
Finish code "A" aluminium with black deflectors.  
Slots: 1 to 4 in standard version.

### USE

Diffuser suitable for both supply and return air in large rooms. Its modularity allows great freedom of design.

### ACCESSORIES

Equaliser network.  
Sliding calibration damper.

										
SLOTS	L (mm)	DLF10	DLF20	DLF30	DLF40	DLF50	PLLDLF	PLPDLF	PLSDF	DLF 90
1F	800	DLF10-800-1F	DLF20-800-1F	DLF30-800-1F	DLF40-800-1F	DLF50-800-1F	PLLDLF-08001F	PLPDLF-08001F	PLSDF-08001F	DLF90-1F
	1000	DLF10-1000-1F	DLF20-1000-1F	DLF30-1000-1F	DLF40-1000-1F	DLF50-1000-1F	PLLDLF-10001F	PLPDLF-10001F	PLSDF-10001F	
	1500	DLF10-1500-1F	DLF20-1500-1F	DLF30-1500-1F	DLF40-1500-1F	DLF50-1500-1F	PLLDLF-15001F	PLPDLF-15001F	PLSDF-15001F	
	2000	DLF10-2000-1F	DLF20-2000-1F	DLF30-2000-1F	DLF40-2000-1F	DLF50-2000-1F	PLLDLF-20001F	PLPDLF-20001F	PLSDF-20001F	
2F	800	DLF10-800-2F	DLF20-800-2F	DLF30-800-2F	DLF40-800-2F	DLF50-800-2F	PLLDLF-08002F	PLPDLF-08002F	PLSDF-08002F	DLF90-2F
	1000	DLF10-1000-2F	DLF20-1000-2F	DLF30-1000-2F	DLF40-1000-2F	DLF50-1000-2F	PLLDLF-10002F	PLPDLF-10002F	PLSDF-10002F	
	1500	DLF10-1500-2F	DLF20-1500-2F	DLF30-1500-2F	DLF40-1500-2F	DLF50-1500-2F	PLLDLF-15002F	PLPDLF-15002F	PLSDF-15002F	
	2000	DLF10-2000-2F	DLF20-2000-2F	DLF30-2000-2F	DLF40-2000-2F	DLF50-2000-2F	PLLDLF-20002F	PLPDLF-20002F	PLSDF-20002F	
3F	800	DLF10-800-3F	DLF20-800-3F	DLF30-800-3F	DLF40-800-3F	DLF50-800-3F	PLLDLF-08003F	PLPDLF-08003F	PLSDF-08003F	DLF90-3F
	1000	DLF10-1000-3F	DLF20-1000-3F	DLF30-1000-3F	DLF40-1000-3F	DLF50-1000-3F	PLLDLF-10003F	PLPDLF-10003F	PLSDF-10003F	
	1500	DLF10-1500-3F	DLF20-1500-3F	DLF30-1500-3F	DLF40-1500-3F	DLF50-1500-3F	PLLDLF-15003F	PLPDLF-15003F	PLSDF-15003F	
	2000	DLF10-2000-3F	DLF20-2000-3F	DLF30-2000-3F	DLF40-2000-3F	DLF50-2000-3F	PLLDLF-20003F	PLPDLF-20003F	PLSDF-20003F	
4F	800	DLF10-800-4F	DLF20-800-4F	DLF30-800-4F	DLF40-800-4F	DLF50-800-4F	PLLDLF-08004F	PLPDLF-08004F	PLSDF-08004F	DLF90-4F
	1000	DLF10-1000-4F	DLF20-1000-4F	DLF30-1000-4F	DLF40-1000-4F	DLF50-1000-4F	PLLDLF-10004F	PLPDLF-10004F	PLSDF-10004F	
	1500	DLF10-1500-4F	DLF20-1500-4F	DLF30-1500-4F	DLF40-1500-4F	DLF50-1500-4F	PLLDLF-15004F	PLPDLF-15004F	PLSDF-15004F	
	2000	DLF10-2000-4F	DLF20-2000-4F	DLF30-2000-4F	DLF40-2000-4F	DLF50-2000-4F	PLLDLF-20004F	PLPDLF-20004F	PLSDF-20004F	



## 2.5 Diffusers

### TECHNICAL DATA

m<sup>3</sup>/h: flow rate

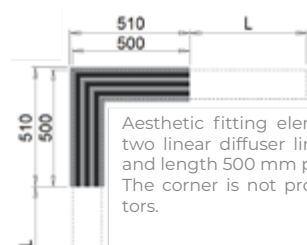
L1 (m): Data referred to diffusers 1m long, with a terminal speed Vt=0.25 m/s and with a temperature differential of 10/12 °C, mounted flush with the ceiling and with lateral throw.

dB(A): noise index.

N.B= The position of the deflectors reduces the effective section. With the deflectors completely open or if the diffuser is used for recovery, the flow rates in m<sup>3</sup>/h shown in the table can be increased.

No. SLOTS	Effective section m²	Flow rate			
1F (1 m)	0,02	m³/h	72	105	140
		throw	1.8	2.7	3.6
2F (1 m)	0,04	m³/h	144	210	280
		throw	2.5	3.8	5
3F (1 m)	0,06	m³/h	216	315	420
		throw	3	4.7	6
4F (1 m)	0,08	m³/h	288	420	560
		throw	3.5	5.4	7
effective speed (vk)		m/s	2	3	4
pressure drops		Pa	8	15	26
noise index		dB(A)	<20	22	32

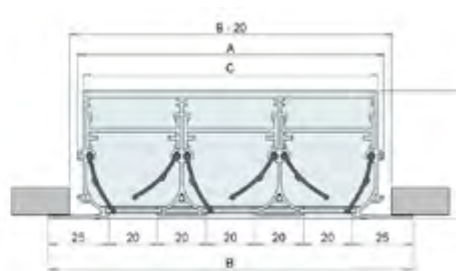
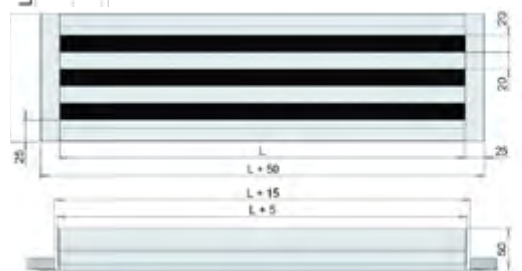
### DIMENSIONS



Aesthetic fitting element between the two linear diffuser lines with 90° angle and length 500 mm per side. The corner is not provided with deflectors.



The continuity kit is an accessory needed to create continuous lines of linear diffusers longer than 2 metres long. It consists of two junction plates for aligning and connecting two line components.



# SLOTS	L (mm)	A	B	C	# stands
1F	800	46	70	41	2
	1000				2
	1500				2
	2000				2
2F	800	86	110	81	2
	1000				2
	1500				2
	2000				2
3F	800	126	150	121	2
	1000				2
	1500				2
	2000				3
4F	800	166	190	161	2
	1000				2
	1500				2
	2000				3



## 3.0 KITS FOR DUCTED SYSTEMS

MOTORISED  
EASY KIT

EASY-KIT lets you quickly produce a rough estimate of the material required for a Koolnova zoning system for room-by-room temperature management in ducted systems.

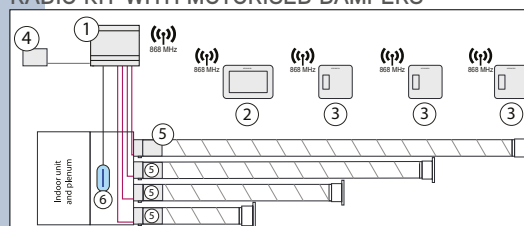


AIR CONTROL has sought to facilitate the quotation of KOOLNOVA zoning systems by means of KITS which include all the components necessary to manage temperature control in ducted systems with both RADIO and WIRED systems, in the motorised damper version. This tool is not intended to replace careful design of this type of system but it does allow a quick, simple cost estimate for the following two types of control systems:

### 1. KOOLNOVA ZONING SYSTEM WITH RADIO CONTROLS (SOLUTION WITHOUT WIRING TO THERMOSTATS)

Below is an example diagram of the RADIO systems in the MOTORISED SHUTTER version which includes the control unit (1), Radio thermostats (2/3), the communication interface with the ducting (4), the motorised dampers (5) and, as a recommended optional extra, the active sanitization kit to be inserted in the plenum (6).

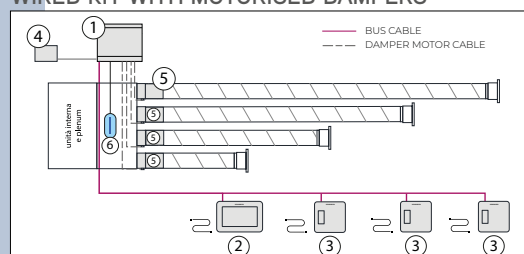
#### RADIO KIT WITH MOTORISED DAMPERS



### 2. KOOLNOVA ZONING SYSTEM WITH WIRED CONTROLS (SOLUTION WITH WIRING TO THERMOSTATS)

Below is an example diagram of the WIRED systems in the MOTORISED SHUTTER version which includes the control unit (1), WIRED thermostats (2/3), the communication interface with the ducting (4), the motorised dampers (5) and, as a recommended optional extra, the active sanitization kit to be inserted in the plenum (6).

#### WIRED KIT WITH MOTORISED DAMPERS












## 3.0 KITS FOR DUCTED SYSTEMS

### COMPONENTS INCLUDED IN THE MOTORISED KITS

#### RADIO KIT

①	CONTROL UNIT		RADIO CONTROL UNIT
②	CONTROLS		ETERNAL MASTER RADIO CONTROL *
③			SMART SLAVE RADIO CONTROL
④	INTERFACES		INFRARED INTERFACE
			WIRED INTERFACE
			FAN COIL INTERFACE
⑤	MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER

#### WIRED KIT

①	CONTROL UNIT		WIRED UNIT
②	CONTROLS		ETERNAL WIRED CENTRALISING UNIT *
③			SMART WIRED CONTROL
④	INTERFACES		INFRARED INTERFACE
			WIRED INTERFACE
			FAN COIL INTERFACE
⑤	MOTORISED DAMPER		CIRCULAR MOTORISED DAMPER

### QUICK GUIDE TO CHOOSING A ZONING KIT

#### 1. CHOOSE THE TYPE OF KOOLNOVA ZONING SYSTEM TO SUIT YOUR NEEDS:

- RADIO SYSTEM WITH MOTORISED DAMPERS (page 84)
- WIRED SYSTEM WITH MOTORISED DAMPERS (page 86)

#### 2. CHOOSE THE NUMBER OF ZONES THAT THE SYSTEM HAS TO CONTROL: FROM 2 TO 7 ZONES

#### 3. CHOOSE YOUR KIT ACCORDING TO THE TYPE OF KOOLNOVA INTERFACE THAT CAN COMMUNICATE WITH THE FOLLOWING TYPES OF DUCTED AIR-CONDITIONING MACHINES:



**PRACTICAL EXAMPLE OF ZONING KIT IDENTIFICATION: 5-ZONE WITH RADIO CONTROL AND MOTORISED CIRCULAR DAMPERS TO BE COMBINED WITH A WIRED DIRECT EXPANSION MACHINE.**



KIT CODE		KIT CODE		KIT CODE	
<b>5KITMOT-S-RN-IR</b>		<b>5KITMOT-S-RN-CFI-...*</b>		<b>5KITMOT-S-RN-GTP</b>	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KN-ETERNAL-M	1	KN-ETERNAL-M	1	KN-ETERNAL-M	1
KN-SMART-S	4	KN-SMART-S	4	KN-SMART-S	4
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1



## GUIDE TO READING THE CODE

**KITMOT**  
MOTORISED KIT

Example

**4KITMOT-S-RN-CFI-DAI**



# ZONES	KIT TYPE	MOT ELEMENTS	SYSTEM TYPE	INTERFACE TYPE
2			<b>RN</b> (radio) 868 MHz 	IR
3				
<b>4</b>	<b>KITMOT</b>	<b>DAMPER</b> <b>S</b> 	<b>RB</b> (radio) 868 MHz 	<b>CFI-...</b> 
5			<b>FN</b> (filo) 	<b>GTP</b> 
6				
7			<b>FB</b> (filo) 	<b>NOINT</b> 

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER ZONING KITS **WITHOUT** COMMUNICATION **INTERFACE** THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS **NOINT**.

IF YOU WANT TO ADD THE ENTIRE AIR DISTRIBUTION TO YOUR ZONING KIT, ALSO SELECT THE CORRESPONDING AIR DISTRIBUTION KIT WHICH YOU WILL CHOOSE ACCORDING TO THE VARIOUS TYPES OF SUPPLY DIFFUSERS.



## 3.1 Motorised system with radio controls



### RADIO KIT WITH DAMPER

*from 2 to 7 zones*

BLACK CONTROLS

PAGE 84

WHITE CONTROLS

PAGE 85

## 3.2 Motorised system with wired controls



### WIRED KIT WITH DAMPER

*from 2 to 7 zones*

MIXED CONTROLS

PAGE 86



### WIRED KIT WITH DAMPER

*from 2 to 7 zones*

BLACK OR WHITE

CONTROLS

PAGE 87





868 MHz

## RADIO KIT WITH DAMPER BLACK CONTROLS

**RN**

CHOOSE THE KIT ACCORDING TO THE INTERFACE

DIRECT EXPANSION IR REMOTE CONTROL KIT	DIRECT EXPANSION WITH CFI WIRED CONTROL	GTP WATER FAN COIL

\* Wired interface code table page 38

## 2 ZONE

KIT CODE		KIT CODE		KIT CODE	
2KITMOT-S-RN-IR		2KITMOT-S-RN-CFI-...*		2KITMOT-S-RN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KN-ETERNAL-M	1	KN-ETERNAL-M	1	KN-ETERNAL-M	1
KN-SMART-S	1	KN-SMART-S	1	KN-SMART-S	1
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 3 ZONE

KIT CODE		KIT CODE		KIT CODE	
3KITMOT-S-RN-IR		3KITMOT-S-RN-CFI-...*		3KITMOT-S-RN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KN-ETERNAL-M	1	KN-ETERNAL-M	1	KN-ETERNAL-M	1
KN-SMART-S	2	KN-SMART-S	2	KN-SMART-S	2
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 4 ZONE

KIT CODE		KIT CODE		KIT CODE	
4KITMOT-S-RN-IR		4KITMOT-S-RN-CFI-...*		4KITMOT-S-RN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KN-ETERNAL-M	1	KN-ETERNAL-M	1	KN-ETERNAL-M	1
KN-SMART-S	3	KN-SMART-S	3	KN-SMART-S	3
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 5 ZONE

KIT CODE		KIT CODE		KIT CODE	
5KITMOT-S-RN-IR		5KITMOT-S-RN-CFI-...*		5KITMOT-S-RN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KN-ETERNAL-M	1	KN-ETERNAL-M	1	KN-ETERNAL-M	1
KN-SMART-S	4	KN-SMART-S	4	KN-SMART-S	4
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 6 ZONE

KIT CODE		KIT CODE		KIT CODE	
6KITMOT-S-RN-IR		6KITMOT-S-RN-CFI-...*		6KITMOT-S-RN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KN-ETERNAL-M	1	KN-ETERNAL-M	1	KN-ETERNAL-M	1
KN-SMART-S	5	KN-SMART-S	5	KN-SMART-S	5
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 7 ZONE

KIT CODE		KIT CODE		KIT CODE	
7KITMOT-S-RN-IR		7KITMOT-S-RN-CFI-...*		7KITMOT-S-RN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KN-ETERNAL-M	1	KN-ETERNAL-M	1	KN-ETERNAL-M	1
KN-SMART-S	6	KN-SMART-S	6	KN-SMART-S	6
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER ZONING KITS WITHOUT COMMUNICATION INTERFACE THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NOINT. COMPLETE YOUR ZONING KIT WITH COMPATIBLE DISTRIBUTION KITS.



## 3.1 Motorised system with radio controls



### RADIO KIT WITH DAMPER WHITE CONTROLS

**RB**

CHOOSE THE KIT ACCORDING TO THE INTERFACE

DIRECT EXPANSION IR REMOTE CONTROL KIT	DIRECT EXPANSION WITH CFI WIRED CONTROL	GTP WATER FAN COIL

\* Wired interface code table page 38

## 2 ZONE

KIT CODE		KIT CODE		KIT CODE	
2KITMOT-S-RB-IR		2KITMOT-S-RB-CFI-...*		2KITMOT-S-RB-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KB-ETERNAL-M	1	KB-ETERNAL-M	1	KB-ETERNAL-M	1
KB-SMART-S	1	KB-SMART-S	1	KB-SMART-S	1
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 3 ZONE

KIT CODE		KIT CODE		KIT CODE	
3KITMOT-S-RB-IR		3KITMOT-S-RB-CFI-...*		3KITMOT-S-RB-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KB-ETERNAL-M	1	KB-ETERNAL-M	1	KB-ETERNAL-M	1
KB-SMART-S	2	KB-SMART-S	2	KB-SMART-S	2
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 4 ZONE

KIT CODE		KIT CODE		KIT CODE	
4KITMOT-S-RB-IR		4KITMOT-S-RB-CFI-...*		4KITMOT-S-RB-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KB-ETERNAL-M	1	KB-ETERNAL-M	1	KB-ETERNAL-M	1
KB-SMART-S	3	KB-SMART-S	3	KB-SMART-S	3
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 5 ZONE

KIT CODE		KIT CODE		KIT CODE	
5KITMOT-S-RB-IR		5KITMOT-S-RB-CFI-...*		5KITMOT-S-RB-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KB-ETERNAL-M	1	KB-ETERNAL-M	1	KB-ETERNAL-M	1
KB-SMART-S	4	KB-SMART-S	4	KB-SMART-S	4
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 6 ZONE

KIT CODE		KIT CODE		KIT CODE	
6KITMOT-S-RB-IR		6KITMOT-S-RB-CFI-...*		6KITMOT-S-RB-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KB-ETERNAL-M	1	KB-ETERNAL-M	1	KB-ETERNAL-M	1
KB-SMART-S	5	KB-SMART-S	5	KB-SMART-S	5
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 7 ZONE

KIT CODE		KIT CODE		KIT CODE	
7KITMOT-S-RB-IR		7KITMOT-S-RB-CFI-...*		7KITMOT-S-RB-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-RADIO-WIFI	1	KN-RADIO-WIFI	1	KN-RADIO-WIFI	1
KB-ETERNAL-M	1	KB-ETERNAL-M	1	KB-ETERNAL-M	1
KB-SMART-S	6	KB-SMART-S	6	KB-SMART-S	6
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER ZONING KITS WITHOUT COMMUNICATION INTERFACE THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NOINT. COMPLETE YOUR ZONING KIT WITH COMPATIBLE DISTRIBUTION KITS.





## WIRED KIT WITH DAMPER

**F**

CHOOSE THE KIT ACCORDING TO THE INTERFACE

DIRECT EXPANSION IR REMOTE CONTROL KIT	DIRECT EXPANSION WITH CFI WIRED CONTROL	GTP WATER FAN COIL
		

\* Wired interface code table page 38

## 2 ZONE

KIT CODE		KIT CODE		KIT CODE	
2KITMOT-S-F-IR		2KITMOT-S-F-CFI-...*		2KITMOT-S-F-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
NH-TOUCH4G-S-FI	1	NH-TOUCH4G-S-FI	1	NH-TOUCH4G-S-FI	1
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 3 ZONE

KIT CODE		KIT CODE		KIT CODE	
3KITMOT-S-F-IR		3KITMOT-S-F-CFI-...*		3KITMOT-S-F-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
NH-TOUCH4G-S-FI	2	NH-TOUCH4G-S-FI	2	NH-TOUCH4G-S-FI	2
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 4 ZONE

KIT CODE		KIT CODE		KIT CODE	
4KITMOT-S-F-IR		4KITMOT-S-F-CFI-...*		4KITMOT-S-F-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
NH-TOUCH4G-S-FI	3	NH-TOUCH4G-S-FI	3	NH-TOUCH4G-S-FI	3
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 5 ZONE

KIT CODE		KIT CODE		KIT CODE	
5KITMOT-S-F-IR		5KITMOT-S-F-CFI-...*		5KITMOT-S-F-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
NH-TOUCH4G-S-FI	4	NH-TOUCH4G-S-FI	4	NH-TOUCH4G-S-FI	4
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 6 ZONE

KIT CODE		KIT CODE		KIT CODE	
6KITMOT-S-F-IR		6KITMOT-S-F-CFI-...*		6KITMOT-S-F-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
NH-TOUCH4G-S-FI	5	NH-TOUCH4G-S-FI	5	NH-TOUCH4G-S-FI	5
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 7 ZONE

KIT CODE		KIT CODE		KIT CODE	
7KITMOT-S-F-IR		7KITMOT-S-F-CFI-...*		7KITMOT-S-F-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1	NH-ES-3G-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
NH-TOUCH4G-S-FI	6	NH-TOUCH4G-S-FI	6	NH-TOUCH4G-S-FI	6
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER ZONING KITS WITHOUT COMMUNICATION INTERFACE THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NOINT. COMPLETE YOUR ZONING KIT WITH COMPATIBLE DISTRIBUTION KITS.



## 3.2 Motorised system with wired controls



### WIRED KIT WITH DAMPER BLACK OR WHITE CONTROLS

FN

FB

CHOOSE THE KIT ACCORDING TO THE INTERFACE

DIRECT EXPANSION IR REMOTE CONTROL KIT	DIRECT EXPANSION WITH CFI WIRED CONTROL	GTP WATER FAN COIL
		

\* Wired interface code table page 38

## 2 ZONE

KIT CODE		KIT CODE		KIT CODE	
2KITMOT-S-FN-IR		2KITMOT-S-FN-CFI-...*		2KITMOT-S-FN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-FILO-WIFI	1	KN-FILO-WIFI	1	KN-FILO-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
KN-SMART-S-FI	1	KN-SMART-S-FI	1	KN-SMART-S-FI	1
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

EXAMPLE OF KIT CODES WITH WHITE CONTROLS

2KITMOT-S-FB-IR		2KITMOT-S-FB-CFI-...*		2KITMOT-S-FB-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KB-ETERNAL-M-FI	1	KB-ETERNAL-M-FI	1	KB-ETERNAL-M-FI	1
KB-SMART-S-FI	1	KB-SMART-S-FI	1	KB-SMART-S-FI	1

## 3 ZONE

KIT CODE		KIT CODE		KIT CODE	
3KITMOT-S-FN-IR		3KITMOT-S-FN-CFI-...*		3KITMOT-S-FN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-FILO-WIFI	1	KN-FILO-WIFI	1	KN-FILO-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
KN-SMART-S-FI	2	KN-SMART-S-FI	2	KN-SMART-S-FI	2
NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2	NH-CO-150-SLAVE	2
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 4 ZONE

KIT CODE		KIT CODE		KIT CODE	
4KITMOT-S-FN-IR		4KITMOT-S-FN-CFI-...*		4KITMOT-S-FN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-FILO-WIFI	1	KN-FILO-WIFI	1	KN-FILO-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
KN-SMART-S-FI	3	KN-SMART-S-FI	3	KN-SMART-S-FI	3
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1	NH-CO-200-SLAVE	1
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 5 ZONE

KIT CODE		KIT CODE		KIT CODE	
5KITMOT-S-FN-IR		5KITMOT-S-FN-CFI-...*		5KITMOT-S-FN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-FILO-WIFI	1	KN-FILO-WIFI	1	KN-FILO-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
KN-SMART-S-FI	4	KN-SMART-S-FI	4	KN-SMART-S-FI	4
NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3	NH-CO-150-SLAVE	3
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 6 ZONE

KIT CODE		KIT CODE		KIT CODE	
6KITMOT-S-FN-IR		6KITMOT-S-FN-CFI-...*		6KITMOT-S-FN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-FILO-WIFI	1	KN-FILO-WIFI	1	KN-FILO-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
KN-SMART-S-FI	5	KN-SMART-S-FI	5	KN-SMART-S-FI	5
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2	NH-CO-200-SLAVE	2
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

## 7 ZONE

KIT CODE		KIT CODE		KIT CODE	
7KITMOT-S-FN-IR		7KITMOT-S-FN-CFI-...*		7KITMOT-S-FN-GTP	
CODE	QTY.	CODE	QTY.	CODE	QTY.
KN-FILO-WIFI	1	KN-FILO-WIFI	1	KN-FILO-WIFI	1
KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1	KN-ETERNAL-M-FI	1
KN-SMART-S-FI	6	KN-SMART-S-FI	6	KN-SMART-S-FI	6
NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4	NH-CO-150-SLAVE	4
NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3	NH-CO-200-SLAVE	3
NH-CIR-INVERTER	1	NH-CFI-...*	1	NH-GTP-UNI	1

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER ZONING KITS WITHOUT COMMUNICATION INTERFACE THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NOINT. COMPLETE YOUR ZONING KIT WITH COMPATIBLE DISTRIBUTION KITS.



## 3.0 KITS FOR DUCTED SYSTEMS



### EASY KIT DISTRIBUTION

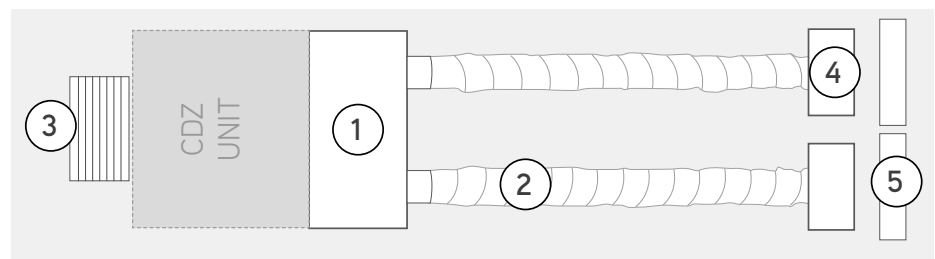
EASY-KIT lets you quickly produce a rough estimate of the material required for the implementation of an air distribution system in ducted systems.

AIR CONTROL has sought to facilitate the quotation of air distribution systems of ducted systems by means of KITS which include all the components necessary to create ducted systems with 5 different types of supply diffusers.

This tool is not intended to replace careful design of this type of system but it does allow a quick, simple cost estimate of all the components needed to distribute air in ducted systems.

#### AIR DISTRIBUTION SYSTEM FOR DUCTED SYSTEMS

The following is an example diagram of an air distribution system comprising the customised air supply plenum for the ducted machine (1), the insulated flexible supply pipes including pipe clamps (2), the tilting filter holder return grille complete with filter (3), the supply diffuser holder plenums (4) and the supply diffusers (5) which can be chosen from the following 5 different types (A,B,C,D,E).



PLENUM COMPLETE WITH  
SLEEVES  
Code **PLM-CDZ**



FLEXIBLE PIPE TES  
Code **TES160**  
Code **TES203**



CLAMPS  
Code **FSI60-270**



TILTING RETURN GRILLE  
WITH FILTER  
Code **GRA6-800X400**



## 3.0 KITS FOR DUCTED SYSTEMS

⑤

### TYPE A DIFFUSER

STANDARD DOUBLE DEFLECTION VENT



### TYPE B DIFFUSER

LINEAR SLOT DIFFUSER



### TYPE C DIFFUSER

CONCEALED VENT PLENUM  
WITH BUILT-IN BOX



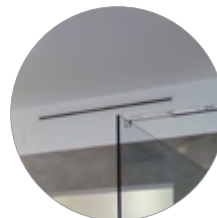
### TYPE D DIFFUSER

CONCEALED DIFFUSER PLENUM  
WITH BUILT-IN BOX h 50 mm



### TYPE E DIFFUSER

CONCEALED SLOT PLENUM  
WITH BUILT-IN BOX h 30 mm



### QUICK GUIDE TO CHOOSING AN AIR DISTRIBUTION KIT

1. Choose the type and aesthetics of the supply diffuser to suit your needs:


- a. STANDARD DOUBLE DEFLECTION VENT (page 92)
- b. STANDARD 2-SLOT LINEAR DIFFUSER (page 93)
- c. CONCEALED VENT WITHOUT FRAME (page 94)
- d. CONCEALED LINEAR DIFFUSER WITHOUT FRAME (page 95)
- e. CONCEALED SLOT DIFFUSER WITHOUT FRAME (page 96)

2. CHOOSE THE NUMBER OF AIR FLOWS THAT YOUR AIR DISTRIBUTION SYSTEM MUST HANDLE:

FROM 2 TO 7 ZONES

### PRACTICAL EXAMPLE OF AIR DISTRIBUTION KIT IDENTIFICATION: 5 AIR SUPPLIES WITH CONCEALED LINEAR DIFFUSERS WITHOUT FRAME.





PSB

Concealed vent plenum

KIT CODE			
5KITDIS-PSB-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSB300X150P-D150	3
TES160	10	PSB400X150P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	10		

PSD

Concealed diffuser plenum

KIT CODE

**5KITDIS-PSD-P**

CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSD800X50P-D150	3
TES160	10	PSD1000X50P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	10		

## PSF

Concealed slot plenum

### KIT CODE

#### 5KITDIS-PSF-P

CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSF800X30P-D150	3
TES160	10	PSF1000X30P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	10		



## GUIDE TO READING THE CODE

### KITDIS

DISTRIBUTION KITS

Example

**4KITDIS-BMA-P**



# ZONES	KIT TYPE	DIFFUSER TYPE	MACHINE PLENUM
2		BMA	
3		DLF	
4	KITDIS	PSB	P WITH PLENUM
5		PSD	NP WITHOUT PLENUM
6		PSF	
7		PLP	

IN COMBINATION WITH MOTORISED VENT ONLY

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER **DISTRIBUTION KITS WITHOUT DUCTED SUPPLY PLENUM** THROUGH ALL KIT CODES FROM 2 TO 7 ZONES **WITH THE FINAL CODE LETTERS NP.**

IF YOU WANT TO ADD ALL THE KOOLNOVA ZONING COMPONENTS TO YOUR AIR DISTRIBUTION KIT FOR ROOM-BY-ROOM TEMPERATURE MANAGEMENT IN DUCTED SYSTEMS, ALSO SELECT THE CORRESPONDING RADIO OR WIRED MOTORISED KIT WHICH YOU WILL CHOOSE ACCORDING TO THE COMMUNICATION INTERFACE SUITABLE FOR THE DUCTED SYSTEM YOU HAVE SELECTED. PLEASE NOTE THAT IF YOU HAVE SELECTED A **BMA,DLF,PSB,PSD OR PSF AIR DISTRIBUTION KIT**, THE ONLY COMPATIBLE MOTORISED KITS **ARE THOSE WITH CIRCULAR MOTORISED DAMPERS.**



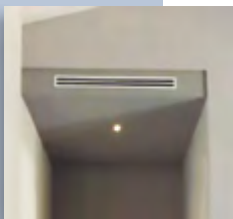
## 3.3 Air distribution elements



### DISTRIBUTION KIT WITH TERMINAL BMA

*FROM 2 TO 7 ZONES*

PAGE 92



### DISTRIBUTION KIT WITH TERMINAL DLF

*FROM 2 TO 7 ZONES*

PAGE 93

**NEW!**



### DISTRIBUTION KIT WITH TERMINAL PSB

*FROM 2 TO 7 ZONES*

PAGE 94

**NEW!**

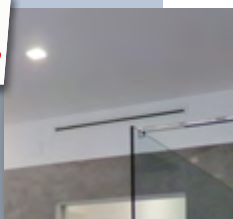


### DISTRIBUTION KIT WITH TERMINAL PSD

*FROM 2 TO 7 ZONES*

PAGE 95

**NEW!**



### DISTRIBUTION KIT WITH TERMINAL PSF

*FROM 2 TO 7 ZONES*

PAGE 96



### PLP DISTRIBUTION KIT COMBINED ONLY WITH MOTORISED VENTS

*FROM 2 TO 7 ZONES*

PAGE 97





## BMA DISTRIBUTION KIT

Easy-kit lets you quickly produce a rough estimate of the material required for the implementation of an air distribution system in ducted systems.

## 2 ZONE

KIT CODE			
2KITDIS-BMA-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	SC-300X150	2
TES160	10	BMA-OV-300X150	2
FSI60-270	4	GRA6-800X400	1
PLP300X150-D150	2		

## 3 ZONE

KIT CODE			
3KITDIS-BMA-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	BMA-OV-300X150	2
TES160	10	PLP400X150-D200	1
TES203	10	SC-400X150	1
FSI60-270	6	BMA-OV-400X150	1
PLP300X150-D150	2	GRA6-800X400	1
SC-300X150	2		

## 4 ZONE

KIT CODE			
4KITDIS-BMA-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	BMA-OV-300X150	3
TES160	10	PLP400X150-D200	1
TES203	10	SC-400X150	1
FSI60-270	8	BMA-OV-400X150	1
PLP300X150-D150	3	GRA6-800X400	1
SC-300X150	3		

## 5 ZONE

KIT CODE			
5KITDIS-BMA-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	BMA-OV-300X150	3
TES160	10	PLP400X150-D200	2
TES203	10	SC-400X150	2
FSI60-270	10	BMA-OV-400X150	2
PLP300X150-D150	3	GRA6-800X400	1
SC-300X150	3		

## 6 ZONE

KIT CODE			
6KITDIS-BMA-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	BMA-OV-300X150	4
TES160	20	PLP400X150-D200	2
TES203	10	SC-400X150	2
FSI60-270	12	BMA-OV-400X150	2
PLP300X150-D150	4	GRA6-800X400	1
SC-300X150	4		

## 7 ZONE

KIT CODE			
7KITDIS-BMA-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	BMA-OV-300X150	4
TES160	20	PLP400X150-D200	3
TES203	20	SC-400X150	3
FSI60-270	14	BMA-OV-400X150	3
PLP300X150-D150	4	GRA6-800X400	1
SC-300X150	4		

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER DISTRIBUTION KITS WITHOUT DUCTED SUPPLY PLENUM THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NP.



## 3.3 Air distribution elements



### DLF DISTRIBUTION KIT

Easy-kit lets you quickly produce a rough estimate of the material required for the implementation of an air distribution system in ducted systems.

## 2 ZONE

KIT CODE			
2KITDIS-DLF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	DLF20-800-2F	2
TES160	10	CVL-V	4
FSI60-270	4	GRA6-800X400	1
PLPDLF-08002F-D150	2		

## 3 ZONE

KIT CODE			
3KITDIS-DLF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLPDLF-10002F-D200	1
TES160	10	DLF20-1000-2F	1
TES203	10	CVL-V	6
FSI60-270	6	GRA6-800X400	1
PLPDLF-08002F-D150	2		
DLF20-800-2F	2		

## 4 ZONE

KIT CODE			
4KITDIS-DLF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLPDLF-10002F-D200	1
TES160	10	DLF20-1000-2F	1
TES203	10	CVL-V	8
FSI60-270	8	GRA6-800X400	1
PLPDLF-08002F-D150	3		
DLF20-800-2F	3		

## 5 ZONE

KIT CODE			
5KITDIS-DLF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLPDLF-10002F-D200	2
TES160	10	DLF20-1000-2F	2
TES203	10	CVL-V	10
FSI60-270	10	GRA6-800X400	1
PLPDLF-08002F-D150	3		
DLF20-800-2F	3		

## 6 ZONE

KIT CODE			
6KITDIS-DLF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLPDLF-10002F-D200	2
TES160	20	DLF20-1000-2F	2
TES203	10	CVL-V	12
FSI60-270	12	GRA6-800X400	1
PLPDLF-08002F-D150	4		
DLF20-800-2F	4		

## 7 ZONE

KIT CODE			
7KITDIS-DLF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLPDLF-10002F-D200	3
TES160	20	DLF20-1000-2F	3
TES203	20	CVL-V	14
FSI60-270	14	GRA6-800X400	1
PLPDLF-08002F-D150	4		
DLF20-800-2F	4		

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER DISTRIBUTION KITS WITHOUT DUCTED SUPPLY PLENUM THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NP.





## PSB DISTRIBUTION KIT

Easy-kit lets you quickly produce a rough estimate of the material required for the implementation of an air distribution system in ducted systems.

## 2 ZONE

KIT CODE			
2KITDIS-PSB-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSB300X150P-D150	2
TES160	10	GRA6-800X400	1
FSI60-270	4		

## 3 ZONE

KIT CODE			
3KITDIS-PSB-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSB300X150P-D150	2
TES160	10	PSB400X150P-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	6		

## 4 ZONE

KIT CODE			
4KITDIS-PSB-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSB300X150P-D150	3
TES160	10	PSB400X150P-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	8		

## 5 ZONE

KIT CODE			
5KITDIS-PSB-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSB300X150P-D150	3
TES160	10	PSB400X150P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	10		

## 6 ZONE

KIT CODE			
6KITDIS-PSB-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSB300X150P-D150	4
TES160	20	PSB400X150P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	12		

## 7 ZONE

KIT CODE			
7KITDIS-PSB-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSB300X150P-D150	4
TES160	20	PSB400X150P-D200	3
TES203	20	GRA6-800X400	1
FSI60-270	14		

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER DISTRIBUTION KITS WITHOUT DUCTED SUPPLY PLENUM THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NP.



## 3.3 Air distribution elements



### PSD DISTRIBUTION KIT

Easy-kit lets you quickly produce a rough estimate of the material required for the implementation of an air distribution system in ducted systems.

## 2 ZONE

KIT CODE			
2KITDIS-PSD-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSD800X50P-D150	2
TES160	10	GRA6-800X400	1
FSI60-270	4		

## 3 ZONE

KIT CODE			
3KITDIS-PSD-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSD800X50P-D150	2
TES160	10	PSD1000X50P-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	6		

## 4 ZONE

KIT CODE			
4KITDIS-PSD-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSD800X50P-D150	3
TES160	10	PSD1000X50P-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	8		

## 5 ZONE

KIT CODE			
5KITDIS-PSD-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSD800X50P-D150	3
TES160	10	PSD1000X50P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	10		

## 6 ZONE

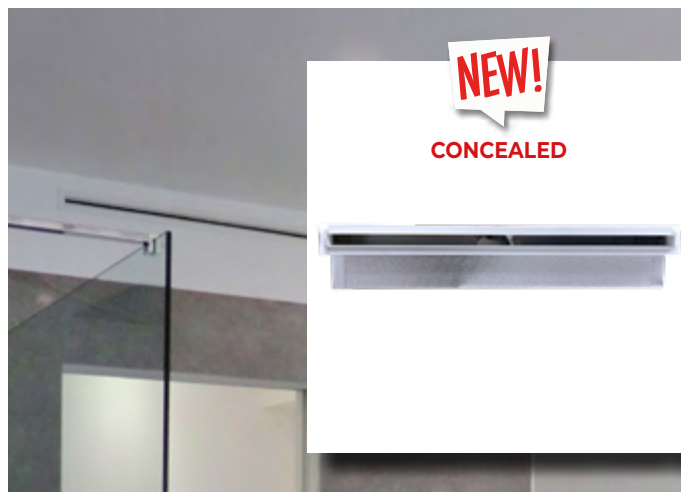
KIT CODE			
6KITDIS-PSD-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSD800X50P-D150	4
TES160	20	PSD1000X50P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	12		

## 7 ZONE

KIT CODE			
7KITDIS-PSD-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSD800X50P-D150	4
TES160	20	PSD1000X50P-D200	3
TES203	20	GRA6-800X400	1
FSI60-270	14		

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER DISTRIBUTION KITS WITHOUT DUCTED SUPPLY PLENUM THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NP.





## PSF DISTRIBUTION KIT

Easy-kit lets you quickly produce a rough estimate of the material required for the implementation of an air distribution system in ducted systems.

## 2 ZONE

KIT CODE			
2KITDIS-PSF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSF800X30P-D150	2
TES160	10	GRA6-800X400	1
FSI60-270	4		

## 3 ZONE

KIT CODE			
3KITDIS-PSF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSF800X30P-D150	2
TES160	10	PSF1000X30P-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	6		

## 4 ZONE

KIT CODE			
4KITDIS-PSF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSF800X30P-D150	3
TES160	10	PSF1000X30P-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	8		

## 5 ZONE

KIT CODE			
5KITDIS-PSF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSF800X30P-D150	3
TES160	10	PSF1000X30P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	10		

## 6 ZONE

KIT CODE			
6KITDIS-PSF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSF800X30P-D150	4
TES160	20	PSF1000X30P-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	12		

## 7 ZONE

KIT CODE			
7KITDIS-PSF-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PSF800X30P-D150	4
TES160	20	PSF1000X30P-D200	3
TES203	20	GRA6-800X400	1
FSI60-270	14		

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER DISTRIBUTION KITS WITHOUT DUCTED SUPPLY PLENUM THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NP.



## 3.3 Air distribution elements



### PLP DISTRIBUTION KIT

Easy-kit lets you quickly produce a rough estimate of the material required for the implementation of an air distribution system in ducted systems.

## 2 ZONE

KIT CODE			
2KITDIS-PLP-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLP300X150-D150	2
TES160	10	GRA6-800X400	1
FSI60-270	4		

## 3 ZONE

KIT CODE			
3KITDIS-PLP-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLP300X150-D150	2
TES160	10	PLP400X150-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	6		

## 4 ZONE

KIT CODE			
4KITDIS-PLP-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLP300X150-D150	3
TES160	10	PLP400X150-D200	1
TES203	10	GRA6-800X400	1
FSI60-270	8		

## 5 ZONE

KIT CODE			
5KITDIS-PLP-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLP300X150-D150	3
TES160	10	PLP400X150-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	10		

## 6 ZONE

KIT CODE			
6KITDIS-PLP-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLP300X150-D150	4
TES160	20	PLP400X150-D200	2
TES203	10	GRA6-800X400	1
FSI60-270	12		

## 7 ZONE

KIT CODE			
7KITDIS-PLP-P			
CODE	QTY.	CODE	QTY.
PLM-CDZ	1	PLP300X150-D150	4
TES160	20	PLP400X150-D200	3
TES203	20	GRA6-800X400	1
FSI60-270	14		

**NOTE:** FOR EASIER STOCK MANAGEMENT, IT IS POSSIBLE TO ORDER DISTRIBUTION KITS WITHOUT DUCTED SUPPLY PLENUM THROUGH ALL KIT CODES FROM 2 TO 7 ZONES WITH THE FINAL CODE LETTERS NP.



## 5.0 EXAMPLES OF APPLICATION

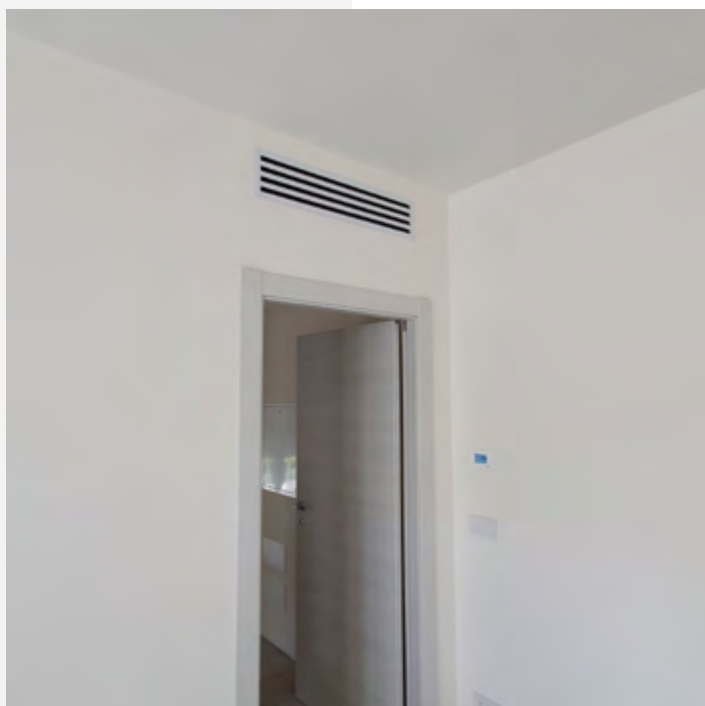


### BMA

Double deflection vent installation.

### DLF

2-slot aluminium ceiling diffuser and 3-slot white wall diffuser installation.



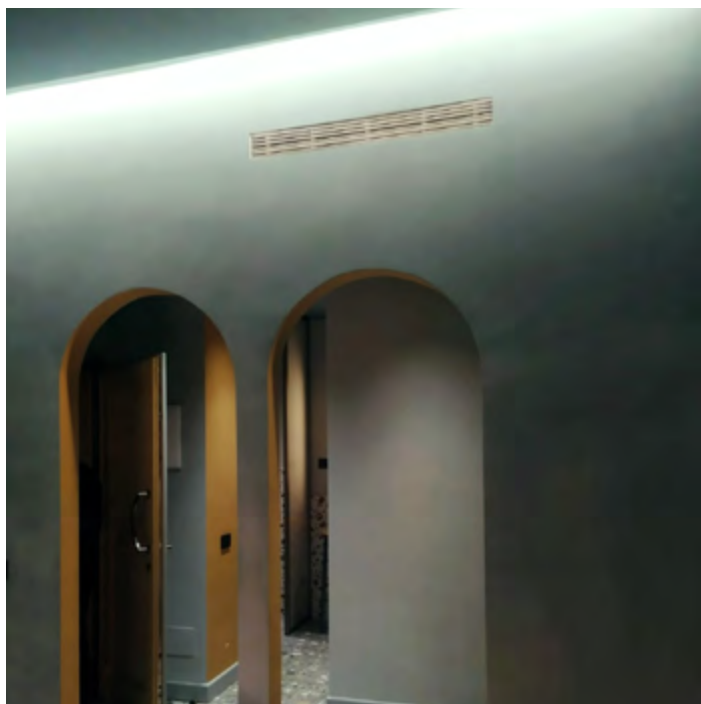


## 5.0 EXAMPLES OF APPLICATION



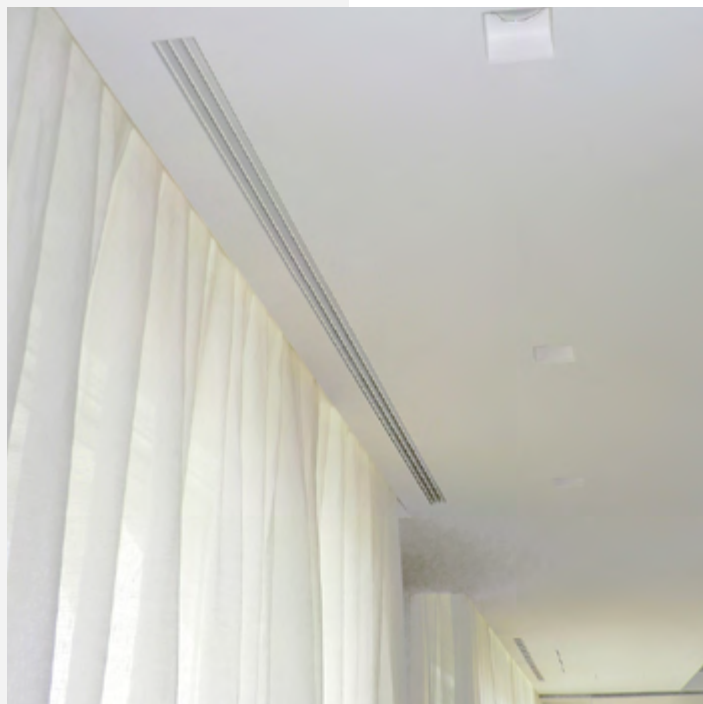
### PSB

Various length frameless vent plenum installation.





## 5.0 EXAMPLES OF APPLICATION



### PSD

Ceiling installation and installation of part of the various length concealed diffuser plenum without the use of the continuity kit.



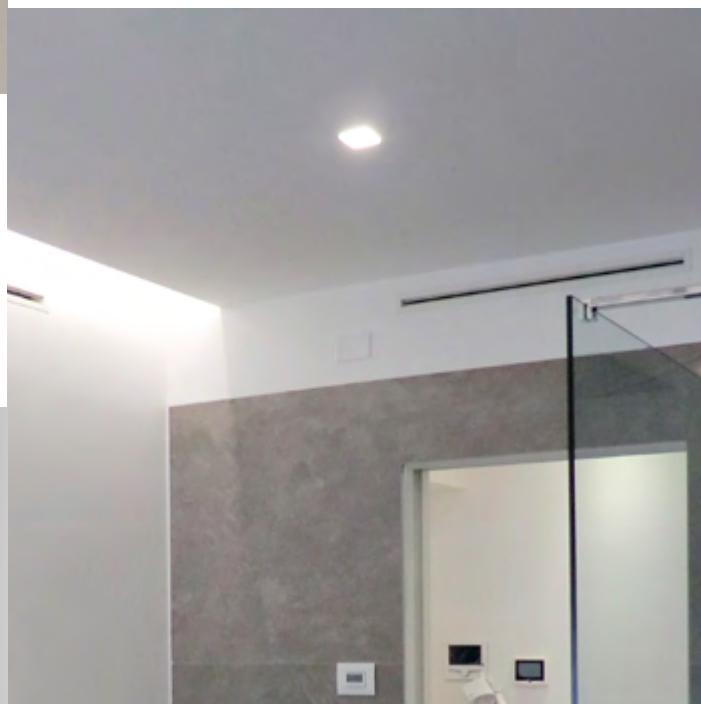
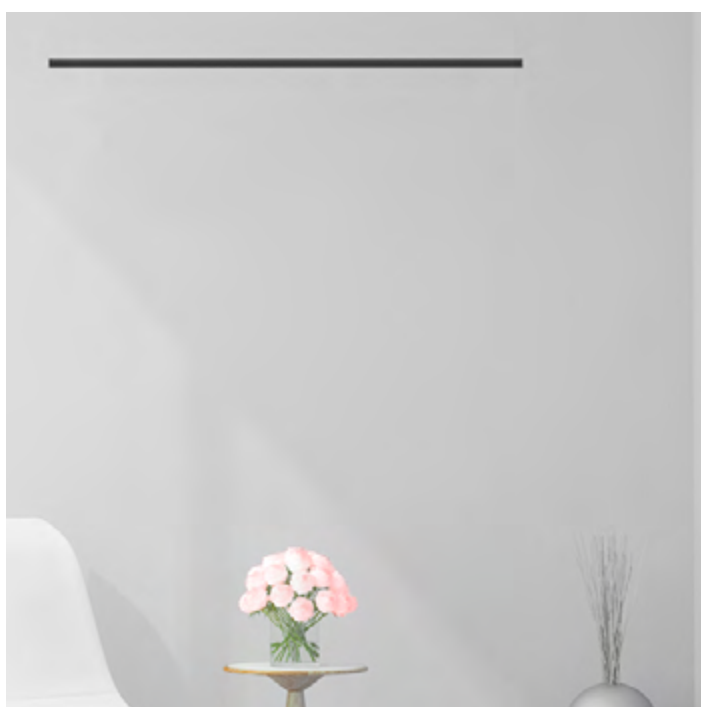


## 5.0 EXAMPLES OF APPLICATION



### PSF

Ceiling installation and installation of part of the concealed slot plenum with supply, height 3 cm. Installation does not include the continuity kit.





## 6.0 TECHNICAL DESIGN SUPPORT



### DESIGN SUPPORT FOR DUCTED AND CMV SYSTEMS

The design phase of a system is crucial as it ensures optimal system efficiency through professional implementation and timely maintenance.

Air Control offers a support service for the design of ducted and CMV systems that lets you obtain an example diagram of the system in dwg and pdf formats. This technical service does not replace the actual design of the system but is intended as a service that can simply provide an indicative diagram of how the system and its air distribution has been designed. For more complex systems, Air Control recommends contacting professionals capable of developing an accurate, certified design.

This technical assistance service therefore has no value in terms of system certification and the information shown in the tables must always be verified and approved by the installation company, which takes full responsibility.

CODE	DESCRIPTION
<b>DWG-CDZ</b>	CDZ UNIT DISTRIBUTION DIAGRAM
<b>DWG-ADD-CDZ</b>	ADDITIONAL CDZ DISTRIBUTION DIAGRAM
<b>DWG-CMV</b>	CMV UNIT DISTRIBUTION DIAGRAM
<b>DWG-ADD-CMV</b>	ADDITIONAL CMV DISTRIBUTION DIAGRAM
<b>DWG-CDZ-CMV</b>	CDZ + CMV DISTRIBUTION DIAGRAM

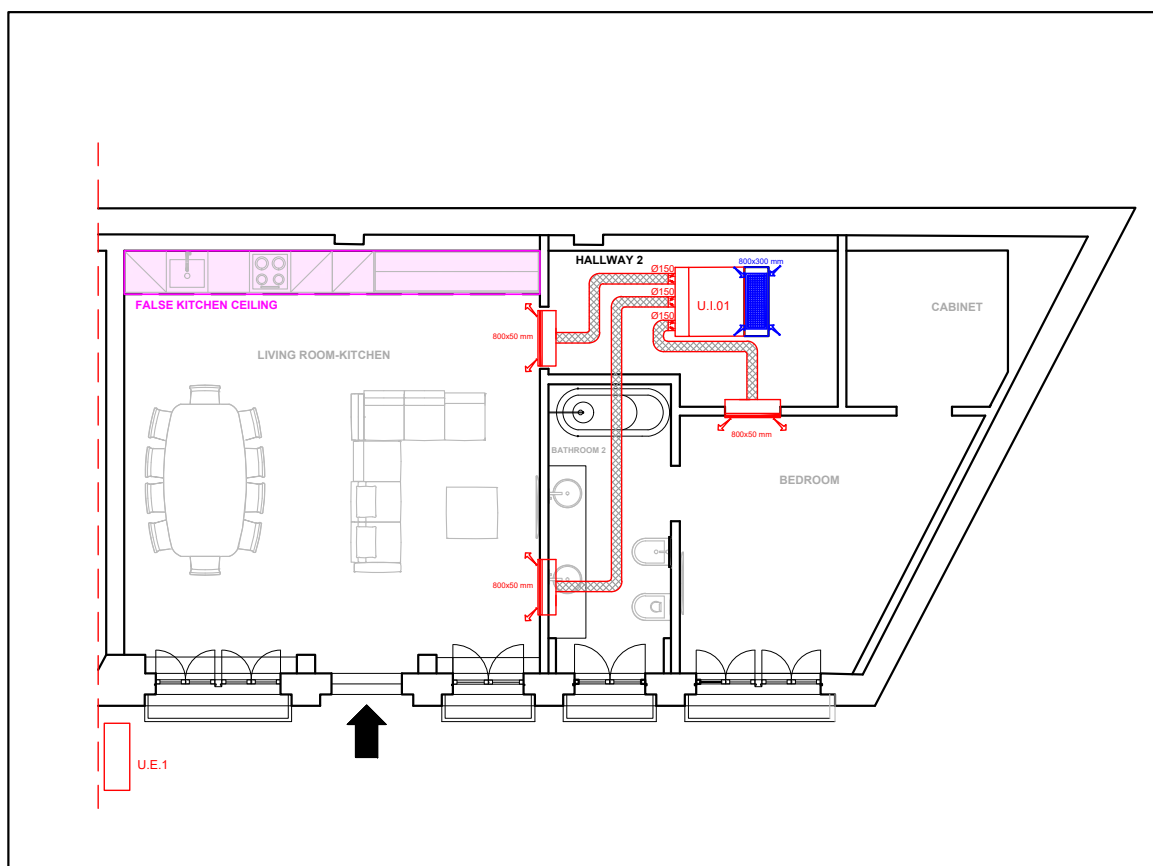
CHECK THE PRICES ON THE PRICE LIST. PRICES ARE NOT SUBJECT TO DISCOUNTS OR PREMIUMS.



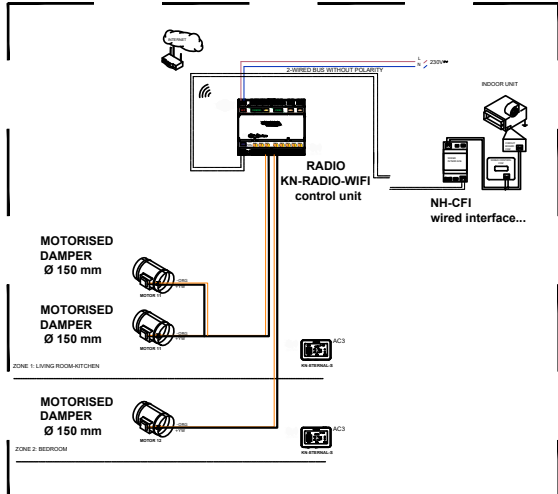
## 6.0 TECHNICAL DESIGN SUPPORT

### EXAMPLE OF AIR-CONDITIONING ONLY SYSTEM

#### AIR-CONDITIONING



#### REGULATION



#### KEY

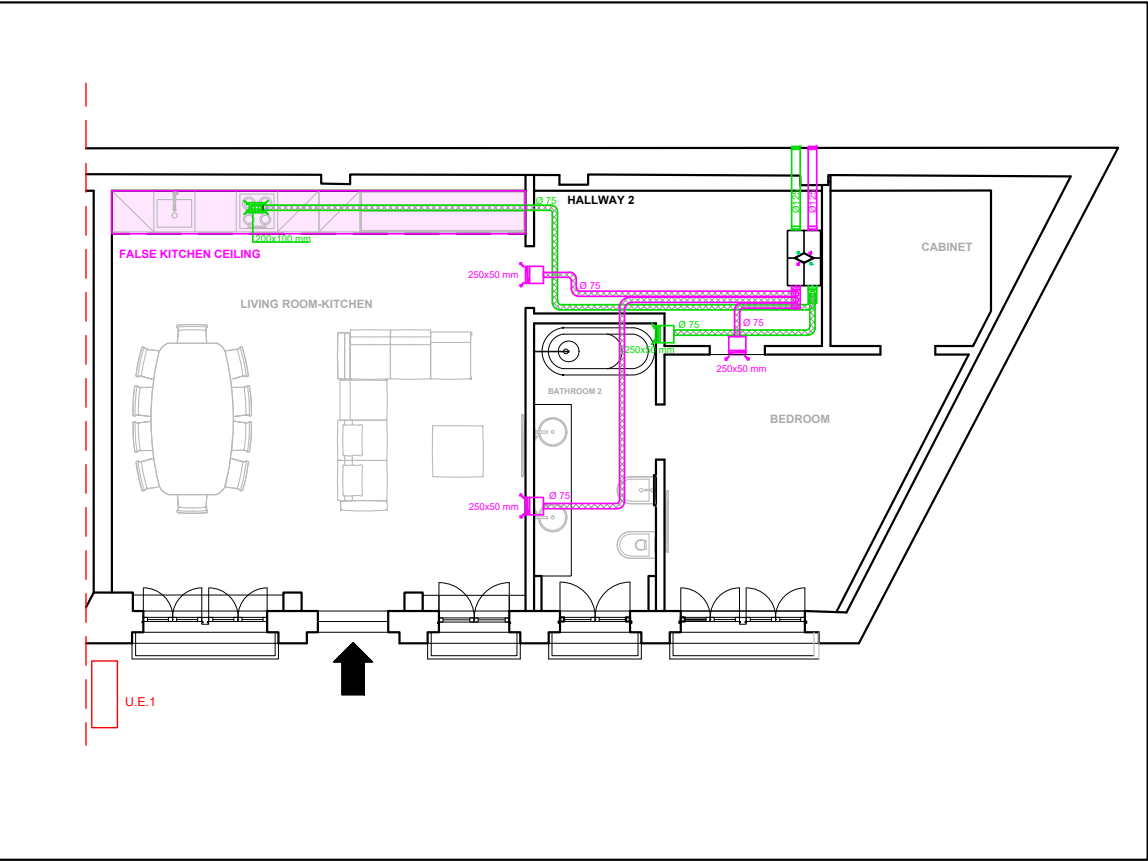
	1 OUTDOOR UNIT...
	1 INDOOR UNIT...
	CONCEALED LINEAR DIFFUSERS...
	CONCEALED LINEAR DIFFUSERS...
	CMV RETURN GRILLE
	CDZ RETURN GRILLE
	HEAT RECOVERY UNIT SERIES...
	MOTORISED DAMPERS



# 6.0 TECHNICAL DESIGN SUPPORT

## EXAMPLE OF CMV ONLY SYSTEM

CMV



KEY

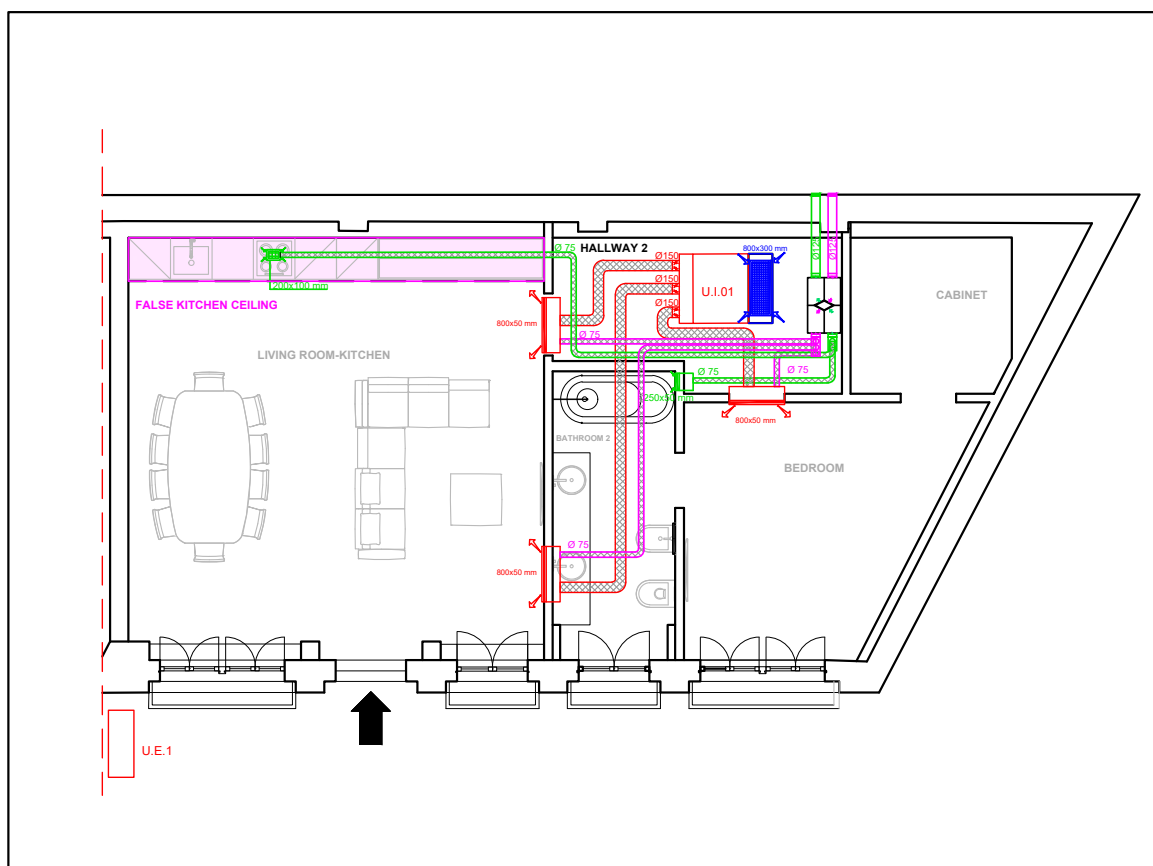
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	1 INDOOR UNIT...
	CONCEALED LINEAR DIFFUSERS...
	CONCEALED LINEAR DIFFUSERS...
	CMV RETURN GRILLE
	CDZ RETURN GRILLE
	HEAT RECOVERY UNIT SERIES...
	MOTORISED DAMPERS



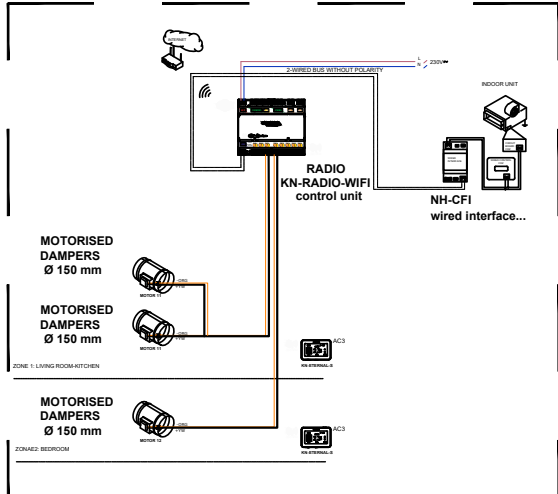
## 6.0 TECHNICAL DESIGN SUPPORT

### EXAMPLE AIR-CONDITIONING AND CMV SYSTEM

#### AIR-CONDITIONING AND CMV



#### REGULATION



#### KEY

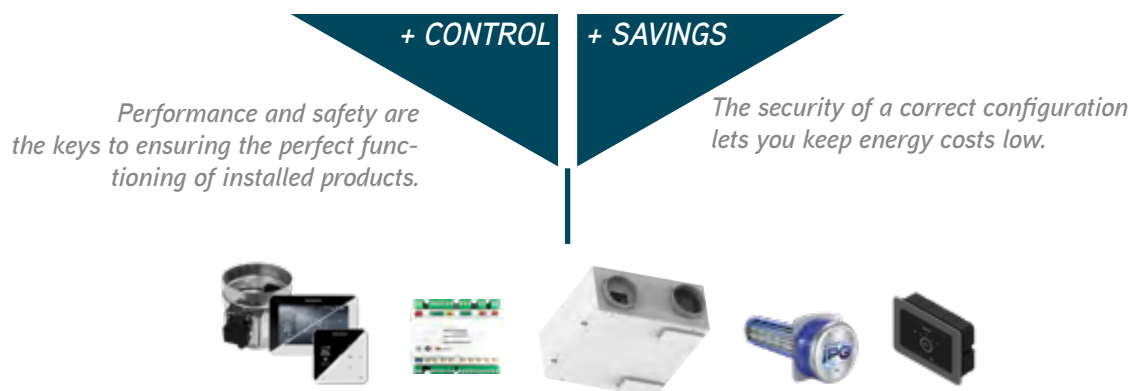
	U.E.01	1 OUTDOOR UNIT...
	U.I.01	1 INDOOR UNIT...
		CONCEALED LINEAR DIFFUSERS...
		CONCEALED LINEAR DIFFUSERS...
		CMV RETURN GRILLE
		CDZ RETURN GRILLE
		HEAT RECOVERY UNIT SERIES...
		MOTORISED DAMPERS



## AIR CONTROL SERVICE

### AIR CONTROL TECHNOLOGIES

Air Control provides a team of professionals for pre-installation inspection and commissioning for zoning and cmv systems. The company is able to operate throughout Italy thanks to a trained, qualified network of technical assistance centres.



"THE BEST SERVICE IS IF THE CUSTOMER DOESN'T NEED TO CALL YOU, DOESN'T NEED TO TALK TO YOU. IT JUST WORKS."

Jeff Bezos -CEO of Amazon

### COMMISSIONING

When placing an order for one or more zoning systems or one or more mechanical ventilation units, please also include the commissioning proposed by Air Control srl.

Once the system or unit has been installed, simply contact us to ensure intervention by one of our technicians within 5/10 working days.

#### ZONING COMMISSIONING

##### Installation compliance

- control or sensor positioning check
- correct positioning check of motorised dampers or vents

##### Electrical connections

- control unit connection check
- interface connection check
- motorised element connection check
- thermostat and accessory connection check

##### Programming and configuration

- complete system configuration
- correct operation check
- APP configuration for remote management



#### CMV COMMISSIONING

##### Installation compliance

- unit structure check
- IP tightness check
- correct installation check

##### Hydraulic, air and electrical connections

- congruity check between ducts and the unit
- tightness check of ducts connecting to the unit
- correct unit slope and condensate drain installation check
- unit electrical connections and control check

##### Programming and configuration

- remote control unit configuration
- correct operation check
- APP configuration (if available) for the unit



#### INSTRUCTIONS AND REPORTS

- functionality training
- operation and maintenance advice
- commissioning report

DOWNLOAD THE  
FORM  
FOR COMMISSIONING



CODE	DESCRIPTION
VISIT-PRE-ZON	ZONING PRE-INSTALLATION INSPECTION
COM-ZON	SINGLE INTERFACE ZONING COMMISSIONING
ADD-COM-ZON	MAX. 4 INTERFACE ZONING COMMISSIONING
ADD-COM-RAD	SINGLE NH-SR COMMISSIONING
ADD-COM-MDZ	SINGLE MDZ COMMISSIONING
ADD-COM-ZON-SANI	SINGLE SANI KIT ZONING COMMISSIONING
KIT-PRE-COM-ZON	SINGLE INTERF. ZONING INSPECTION + COMM.

CHECK THE PRICES ON THE PRICE LIST. PRICES ARE NOT SUBJECT TO DISCOUNTS OR PREMIUMS.

CODE	DESCRIPTION
VISIT-PRE-CMV	CMV PRE-INSTALLATION INSPECTION
COM-CMV	SINGLE UNIT CMV COMMISSIONING
ADD-COM-CMV	MAX. 3 UNIT CMV COMMISSIONING
AGG-MIS-CMV-SANI	SINGLE SANI CMV COMMISSIONING
KIT-PRE-COM-CMV	INSPECTION + COM - SINGLE CMV UNITÀ

CHECK THE PRICES ON THE PRICE LIST. PRICES ARE NOT SUBJECT TO DISCOUNTS OR PREMIUMS.



## AIR CONTROL SERVICE



**MORE THAN 50  
SERVICE CENTRES  
NATIONWIDE**

*FIND YOUR LOCAL  
SERVICE CENTRE*



SERVICE CONTACTS

TEL. +39 02.45482147

[assistenza@aircontrolclima.it](mailto:assistenza@aircontrolclima.it)







## CATALOGUE DELIVERY FORM

### Delivered by

(mandatory field)

Name

Surname

### Delivered to

(mandatory field)

Name

Surname

Company name

Address

Postal  
code

City

E-mail

Mobile  
phone

### Sector

(mandatory field)

☐ INSTALLER

☐ HEAT PROVIDER

☐ PRIVATE ENTITY

☐ PROFESSIONAL

☐ BUILDER

☐ HOTEL

☐ DESIGNER

☐ OEM BUILDER

☐ OTHER

☐ DEALER

☐ PUBLIC ENTITY

### Documentation

(mandatory field)

☐ ZONING AND AIR DISTRIBUTION SYSTEMS 2023

Nr.

☐ MECHANICAL VENTILATION, AIR HANDLING, SANITIZATION AND MONITORING SYSTEMS 2023

Nr.

### Terms of trade

☐ RESERVED DISCOUNTS

### INFORMATION ON THE PROTECTION OF PERSONAL DATA ART. 13 OF REGULATION (EU) 679/2016

In compliance with the Regulation on the protection of individuals with regard to the processing of personal data and on the free movement of such data (Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016), Air Control Srl, with registered office in Via Colico 10, 20158 Milan - Tel. (+39) 0245482147 - PEC: aircontrolsl@pec.it, as "Data Controller", is required to provide some information regarding the use of personal data. The Data Protection Officer can be contacted at the following e-mail address: info@aircontrolclima.it. The personal data held by the Company is collected directly from its customers or from third parties, meaning primarily those entities authorised to place the products and services offered by the Company or entities that have delegated the exercise of certain activities to the Company. Such data may also be acquired from outside Companies, authorised by customers themselves to communicate the same data to third parties, for the purposes of commercial information, market research, or direct offers of products or services. Processing of the above-mentioned data is carried out in compliance with the aforementioned Regulation and confidentiality obligations. The purposes of the processing for which the personal data are intended and the obligatory or optional nature of data. The personal data are processed as part of the Company's normal activity for the following purposes:

1. Purposes strictly related and instrumental to the management of customer relations (e.g. acquisition of information prior to the conclusion of a contract, execution of transactions on the basis of obligations arising from the customer contract, checks and assessments of the results and performance of relations, as well as on the risks associated with them, etc.). The provision of personal data necessary for these purposes is not obligatory, but refusal to provide such data may make it impossible for the Company to carry out what has been requested. Data processing does not require the consent of the Data Subject. The legal basis of the processing is execution of the contract.

2. Purposes related to the obligations established by laws, regulations as well as provisions issued by the Authorities and financial system Supervisory Bodies. The provision of personal data necessary for these purposes is obligatory and its processing does not require consent; the legal basis of the processing lies in the fulfilment of a legal obligation and/or the existence of a legitimate interest of the Data Controller. Purposes functional to the Company's business, such as: - Promotion and sale of the Company's products and services by e-mail, telephone, information and advertising material, automated communication systems, etc. - Market surveys. The provision of personal data for these purposes is not obligatory and their processing requires the consent of the Data Subject. The legal basis for the processing is the consent of the Data Subject. Categories of persons to whom data may be disclosed in order to carry out part of its activities, the Company makes use of the following entities in addition to the companies belonging to the "Crédit Agricole" Group, i.e. subsidiaries or associated companies pursuant to Article 2359 of the Italian Civil Code. - Third parties, including in particular the following categories: - Companies that provide banking and financial services (e.g. services offered jointly by Air Control Srl and banks/intermediary placement agents of our products); - Subjects that offer services for the acquisition, registration and processing of data deriving from documents and supports supplied or originated by customers and having as their object mass processing; - Subjects that carry out printing, transmission, enveloping, transport and sorting of communications to customers; - Subjects that carry out archiving activities of documentation relating to customer relations; - Subjects that provide hardware outsourcing and data processing services. Personal data is not subject to diffusion. The Company will retain personal data for a period of 10 (ten) years starting from the termination of the contractual relationship with the customer, subject to the provisions of Article 17 of the Regulation. Right of access to personal data and other rights of access; In relation to the personal data provided, the Data Subject may exercise the rights set out in EU Regulation 679/2016: - Right to obtain rectification, integration, erasure of personal data or restriction of the processing of personal data; Right to object to the processing; Right to data portability; Right to withdraw consent; Right to lodge a complaint with the Data Protection Authority. The interested party may exercise the rights referred to in the Regulation by sending a written communication by registered letter or by PEC to the headquarters of Air Control Srl, Via Colico 10, 20158 Milan, Italy, addressing it to the attention of the Air Control srl Management.

☐ I AUTHORIZE THE USE OF MY PERSONAL DATA

Place and Date

Stamp and Signature









## GENERAL TERMS AND CONDITIONS OF SALE, WARRANTY AND SERVICES

### PRICES

The prices indicated in our price lists are not binding. AIR CONTROL reserves the right to change list prices and product characteristics without prior notice. The price is per truckload at Air Control warehouses in Milan and includes packaging, unless the customer's request indicates otherwise. Prices do not include VAT.

### ORDERS

Orders will only be accepted in writing. AIR CONTROL will send the relevant order confirmation as soon as possible, correcting any anomalies or discrepancies and indicating the estimated date of shipment. Partial deliveries are possible in the event of special customer requirements or non-availability in stock of all the material ordered.

### TERMS OF PAYMENT

Different terms may be agreed upon by written agreement with AIR CONTROL SRL sales personnel. Any deadlines that are not paid by the due date shall result in application of the statutory interest in force from that date and payment of the related ancillary costs. In the event of non-compliance, AIR CONTROL reserves the right to stop any orders still outstanding and to require payment of the customer's total debt.

### SHIPPING AND PACKAGING

The material will be shipped in cardboard boxes, carriage paid, with charges on the invoice. For further information, please contact AIR CONTROL SRL sales staff. Material shall travel at the customer's risk. Any special packaging requested directly by the Customer will be charged separately.

### ORDER CANCELLATION

Orders may only be cancelled if previously approved by AIR CONTROL Sales Management. All related costs shall be borne by the customer.

### DEFECTIVE MATERIAL UNDER WARRANTY

AIR CONTROL shall deliver/ship material under warranty on account of replacement only upon prior receipt of the returned goods, which have been checked and verified in the company and were previously authorised. Otherwise, the following shall apply. In case of request for replacement under warranty of material that has not yet been received and checked by AIR CONTROL, the goods shall be delivered/shipped upon receipt of the "returns" form which has been duly completed and signed, with regular issuance of a bill of sale and related invoice.

Upon return of the replaced material, to be received in AIR CONTROL, within 15 days from the date of the transport document mentioned in the previous point, the relative invoice will be totally reversed with the issue of a credit note, subject to verification of the effective defect/conditions of the material. The faulty goods shall be collected at the expense of AIR CONTROL upon notification of goods ready by the customer, then proceeding to the appropriate defectiveness checks in the company in order to provide for the possible reversal.

Once 15 days have elapsed from the date of the transport document of the material requested for replacement, relative returns will no longer be accepted and payment of the corresponding invoice will still be required, considering it subject to the normal sales policy in force.

### NON-CONFORMITY ATTRIBUTABLE TO THE CUSTOMER

The customer has 8 days from the date of delivery to return the material. Return authorisation is given after emailing the request form duly completed and stamped by AIR CONTROL. All transport costs in appropriate packaging shall be borne by the customer and acceptance of the return does not imply the reversal of the items on the invoice. Returned material will only be reversed if it is in perfect condition and in working order. AIR CONTROL will however retain 20% of the total amount of the relative credit note as compensation for handling costs. Returns will not be accepted for non-catalogue material, material with special dimensions, made of PAL or incomplete with original box, except in special cases to be agreed upon with the management. Request forms that are not duly completed will not be considered valid. Transport of any replacement material shall be borne by the Customer.

### WARRANTY CONDITIONS

AIR CONTROL products are guaranteed for two years against any manufacturing defect. After 10 days from the date of delivery, claims will only be accepted for problems relating to component defects.

### SPECIAL SIZES

For special sizes, the price of the standard size directly above will be applied and returns will not be accepted under any circumstances. Please consult AIR CONTROL sales staff for possible delivery times and availability.

### DISPUTE RESOLUTION

Any dispute, of any kind or nature whatsoever, arising directly or indirectly from the sale of AIR CONTROL material, products or services shall be subject to Italian law and the competent court shall be Milan (Italy). By signing the order, the customer declares acceptance of all the conditions set out.



Follow Air Control Srl



**AIR CONTROL SRL**  
Via Colico, 10  
20158 Milan (MI)  
Tel. +39 0245482147  
[info@aircontrolclima.it](mailto:info@aircontrolclima.it)  
[www.aircontrolclima.it](http://www.aircontrolclima.it)