AIRROOM
IZONE



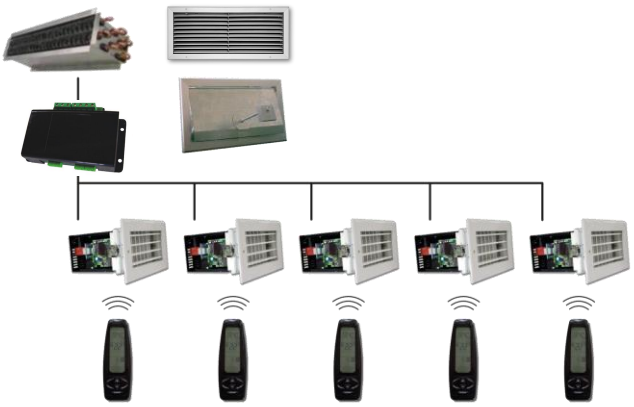
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AIRROOM ZONED CLIMATE CONTROL SYSTEM

The new AIRROOM zoned climate control system is the ideal complement to a ducted air conditioning system, as it optimizes the energy efficiency of the entire climate control system while also significantly improving comfort.

This system is designed to save energy and is suitable for efficiently regulating any type of ducted HVAC system that includes an air conditioning unit with a remote on/off function, with the major advantage of not having to modify the air conditioning unit's control system that governs that installation.



OPERATION. REDUCED ENERGY CONSUMPTION

The system works by controlling each zone of the installation individually, allowing the temperature in each zone to be set independently, as well as enabling the system to shut off unoccupied zones and turn off the air conditioning unit when the zones reach the comfort level selected by the user on the corresponding zone control.

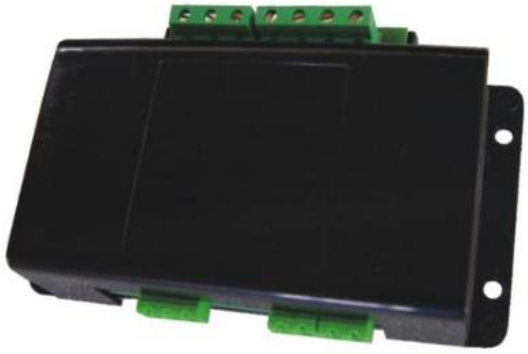
This system, therefore, reduces the operating time of the air conditioner, thereby extending its service life and providing significant energy savings.

CENTRAL PROCESSING UNIT

The central control unit is responsible for coordinating the operation of all components of the zone system and connecting to the air conditioning equipment, setting its operating status to "on" or "off."

Up to 16 smart diffusion elements can be connected to a single central unit, which can be expanded to include additional zones if necessary.

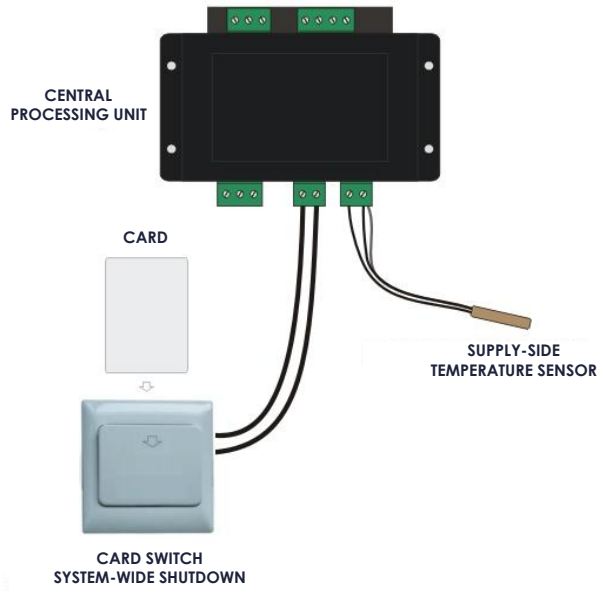
The central unit is designed for screw mounting and, optionally, for DIN rail mounting.



The central processing unit also has the following functions:

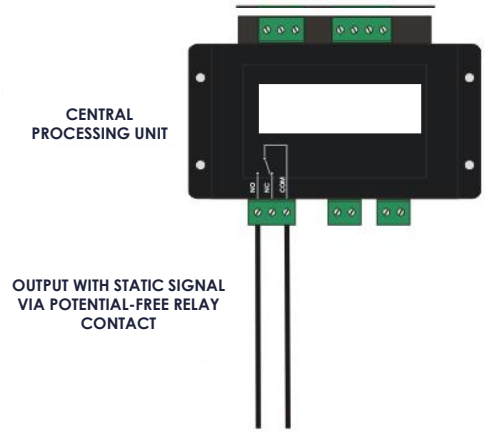
- Air conditioner startup delay (anti-short-circuit time for compressor protection), configurable on the control unit itself.
- Digital input for remote system shutdown, with the option to connect a card switch (similar to a hotel room key card), a fire alarm contact, or a timer.
- Optional control of the air conditioner's supply air temperature (not applicable to units with electric heating).

The temperature sensor is detected automatically, which means that if it is not connected, the unit operates without taking the supply temperature into account; however, if it is connected, the unit operates according to the following safety limits, shutting down the machine if these limits are exceeded: Low supply temperature: < 9°C. High supply temperature: > 42°C.



TURNING ON/OFF THE AIR CONDITIONER UNIT

The air conditioner is turned on and off via a potential-free relay contact. The system allows for the start/stop control of any air conditioner available on the market. In some cases, it is necessary to include an auxiliary component in the unit's own control system to enable remote start/stop.



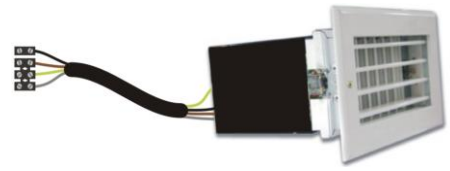
CLOSED GRILLES: OPEN CONTACT. MACHINE SHUTDOWN

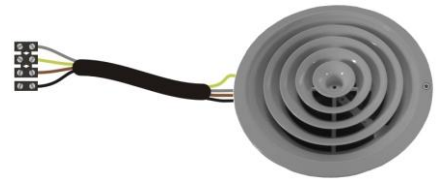
OPEN GRILLES: CONTACT CLOSED. MACHINE RUNNING

DIFFUSION ELEMENTS: SMART AND SLAVE

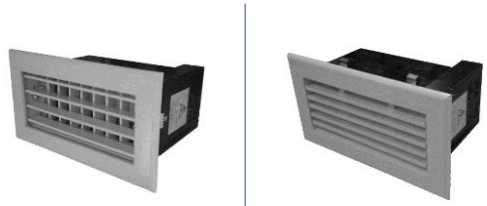
The air distribution elements can consist of several **IR** grilles (one master and several slave units) or an **IR** grille combined with other compatible models (one master and several slave units). The system offers a wide range of motorized diffusion options. The grilles and diffusers are standard sizes, and both elements can be supplied in different sizes depending on the installation requirements.

To facilitate installation, the smart diffusion elements are supplied with 30 centimeters of hose, and the connection terminals are accessible at one end so that the smart diffusion element does not need to be handled.

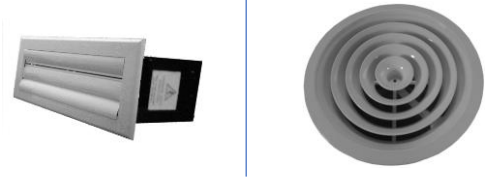




Types of grilles:
•Double-deflection grilles with movable blades (M Series).
• Linear grilles with blades at 0° (L Series).
• Grilles with movable curved blades (C Series).



Types of diffusers:
Not all diffusers are equipped with smart controls.
•Circular (DR Series).



The motor built into the diffusion elements is unique and operates silently.

The diffusers are equipped with an infrared receiver to receive data transmitted by the remote control, as well as a temperature sensor to measure the ambient temperature of the zone to be heated or cooled. This feature means that the zone system does not require any additional installation of a wall-mounted thermostat or similar device, since the diffuser unit itself acts as a thermostat and can thus be controlled using a remote control that requires no installation whatsoever.



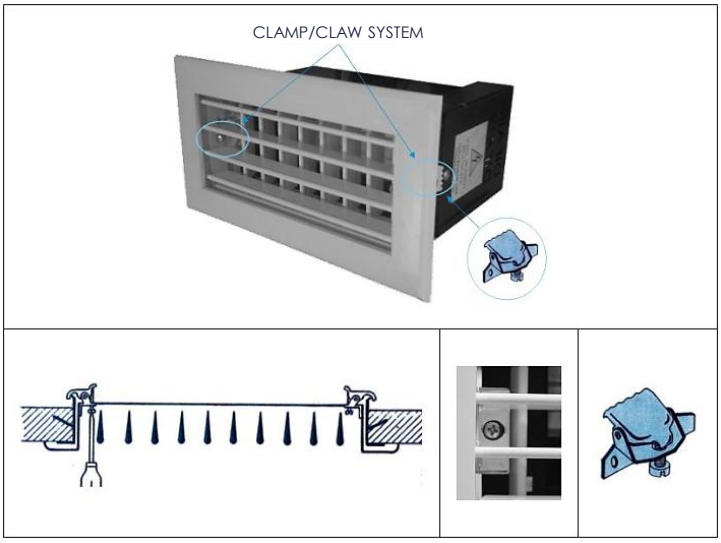


A green LED indicator is incorporated into each diffuser element to indicate whether the unit is on or off.

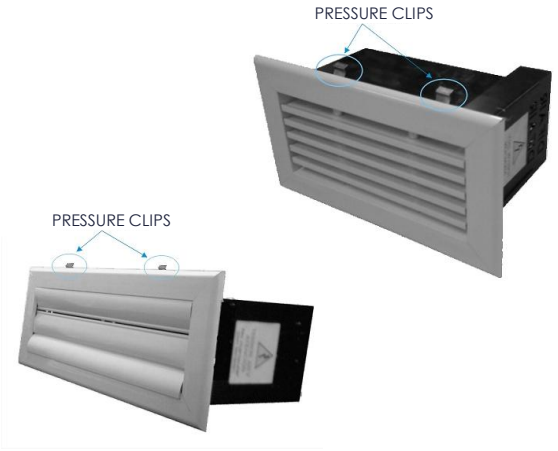
The standard colors for the system's finish are lacquered white (RAL-9016) and anodized aluminum; other colors are available on specific request.

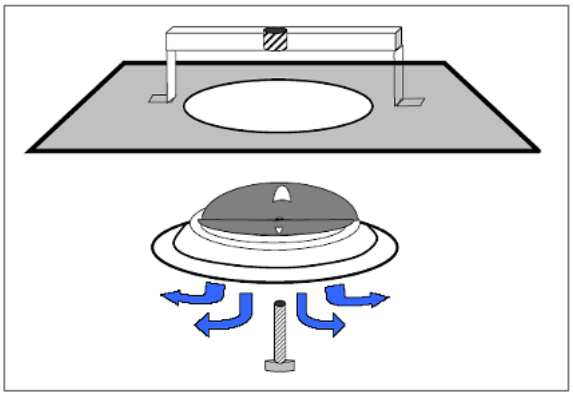
The double-deflection grilles with movable blades are secured using a unique clamp/claw system.





The grilles are attached to the damper using pressure clips.





The diffusers are secured using a mounting crossbar.

MULTI-PULSE ZONE. MASTER SMART DIFFUSION ELEMENTS AND SLAVE DIFFUSION ELEMENTS. GRILLES AND DIFFUSERS

In multi-outlet zones—that is, zones with more than one air outlet—it is possible to install a master smart diffuser in one of the air outlets and connect slave diffusers to it.

The slave diffusion elements do not include electronic controls or a temperature sensor (nor do they include an LED indicator), since they are controlled by the smart diffusion elements to which they are connected, meaning that the opening or closing of the slave diffuser's motorized damper occurs in tandem with the opening or closing of the motorized damper of the smart diffuser to which it is connected.

The multi-pulse zone consists of:

- Master smart duffusion element.
- Slave diffusion element.

ZONE TEMPERATURE CONTROL

Smart diffusers are the ones that determine the temperature of the zone thanks to the unique sensor built into them.

REMOTE CONTROL

In multi-outlet zones—that is, zones with more than one air outlet—it is possible to install a master smart diffuser in one of the air outlets and connect slave diffusers to it.

WIRELESS REMOTE CONTROL

The slave diffuser elements do not include electronic controls or a temperature sensor (nor do they include an LED indicator), since they are controlled by the smart diffuser elements to which they are connected, meaning that the opening or closing of the slave diffuser's motorized damper occurs in tandem with the opening or closing of the motorized damper of the smart diffuser to which it is connected.

Each motorized diffusion element is controlled by a wireless remote control, allowing the user to select individual settings for each zone. The following options are available:

- on/off status
- cool/heat operating mode
- setpoint temperature, selectable from 10°C to 30°C

generando de esta manera una situación de confort inmejorable.

Cualquier mando a distancia puede controlar la zona que desee, dado que no hay asociación entre él mismo y el elemento de difusión motorizado.

The remote control is powered by two 1.5V **AAA** batteries.

Important: The air conditioning unit's control panel acts as the master control; you must use it to select the system's operating mode.



Every time the smart diffuser receives a signal, the built-in buzzer emits 1 or 2 beeps, depending on whether the command is to start or stop, respectively.

In the event of a temperature sensor failure, the diffusion element closes, and an alarm is signaled by the **LED** indicator and four beeps from the horn whenever a command is sent from the remote control.

Since the remote control is not the device responsible for measuring the ambient temperature in the area, it can be placed anywhere.

SCHEDULE FOR EACH ZONE

The remote control allows you to set 24-hour start and stop schedules for each zone.

Scheduled Start: If the timers are enabled, the motorized diffuser in the programmed zone begins operating according to the data transmitted from the remote control starting at the time set as the scheduled start time.

Scheduled Start: If the timers are enabled, the motorized diffuser in the programmed zone begins operating according to the data transmitted from the remote control starting at the time set as the scheduled start time.

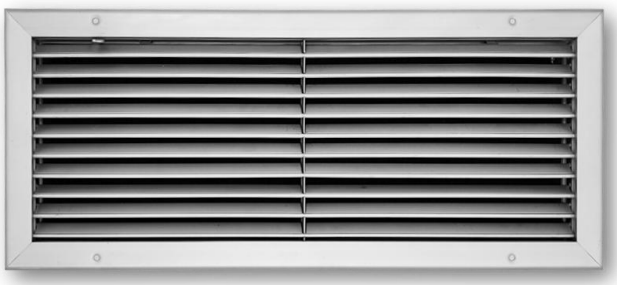
RETURN GRILLES

Types of return grilles:

- Rejillas de retorno de lamas horizontales fijas a 45º.
- Rejillas de retorno de lamas verticales fijas a 45º.

Rejillas motorizadas de impulsión + retorno. Consultar.

On request, return grilles can be equipped with a filter to improve the quality of the air supplied to the climate-controlled rooms. The return grilles are secured using a clamp/claw system.



BYPASS GATE/DAMPER. PRESSURE IN THE DUCT

To maintain constant pressure inside the air duct, it is necessary to install an overpressure damper—provided that one is not already installed—so that when a motorized diffuser closes or opens, and a pressure change occurs in the duct, this damper self-regulates, readjusting the pressure inside the duct and thereby preventing overpressure in the duct and any resulting noise that could become bothersome.



A zone-based HVAC system must be equipped with a pressure compensator. Physically, this compensator is a single-blade bypass damper.

When a damper is closed, the dynamic pressure in the duct increases, and this pressure is converted into static pressure on the duct walls. This increase in static pressure is compensated for by opening the bypass damper, which reduces the static pressure and, consequently, the dynamic pressure. In this way, the air velocity inside the duct is controlled.





OPERATING VOLTAGE

The **AIRROOM** system must be connected to a 230 VAC, 50/60 Hz power supply.

NOTE: The grounding terminal is included in the diffuser to provide, when connected, greater safety for the installation.

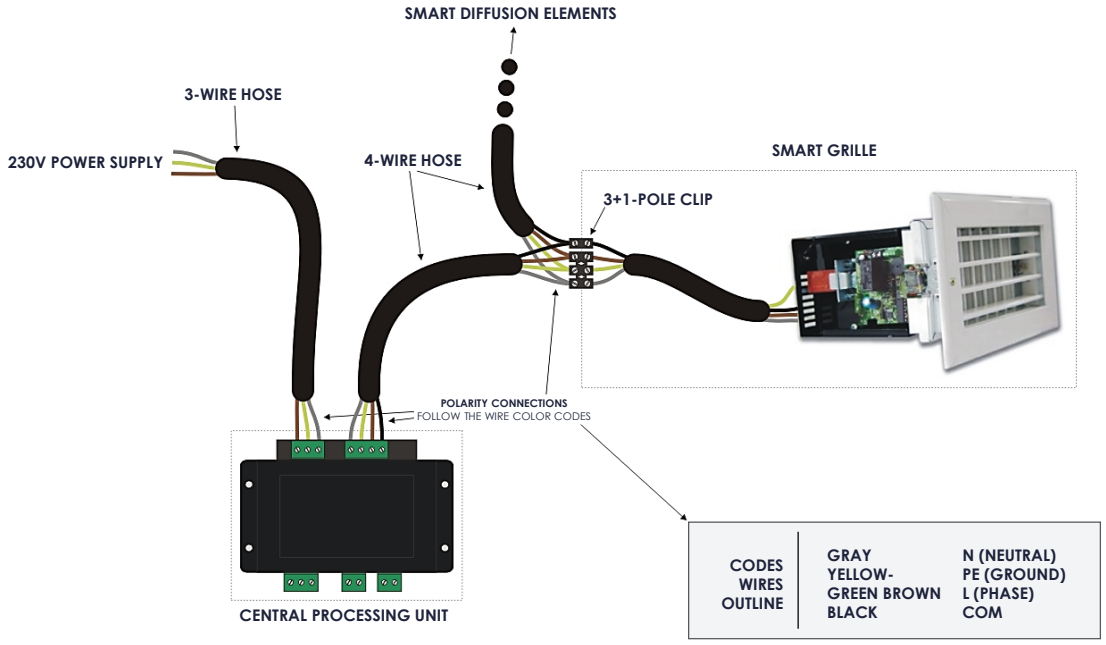
IN THE EVENT OF A POWER OUTAGE

If power is lost, the diffuser starts up in "off" mode, requiring you to reselect both the operating mode and the setpoint temperature, as well as the schedule, if one is active.

INSTALLATION AND CONNECTION

Traditionally, installing this type of system requires a significant time investment on the part of the installer. This system greatly reduces installation and commissioning time, offering a very simple installation process, which makes it suitable for both new construction and existing installations.

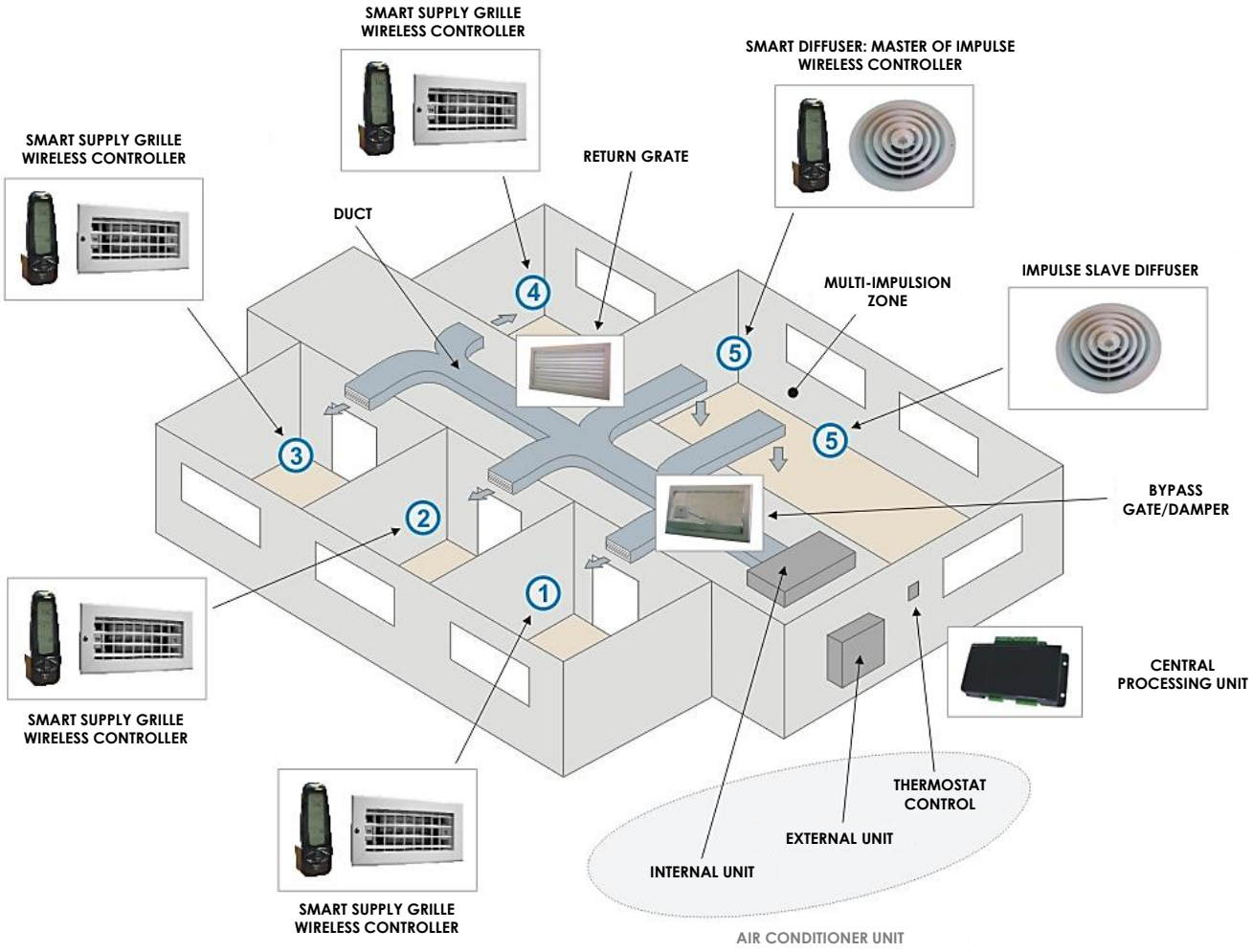
The various components of the system are connected using a single 4-wire hose with a cross-sectional area of 1 mm².



Note: The wire colors shown in this wiring diagram may vary depending on the hose used.

This system allows for the connection of up to 16 diffusion elements to a single central unit, and can be expanded to include additional zones on request, and this system is also fully automatic and self-installing, as it requires no configuration whatsoever, either by the installer or by the user.

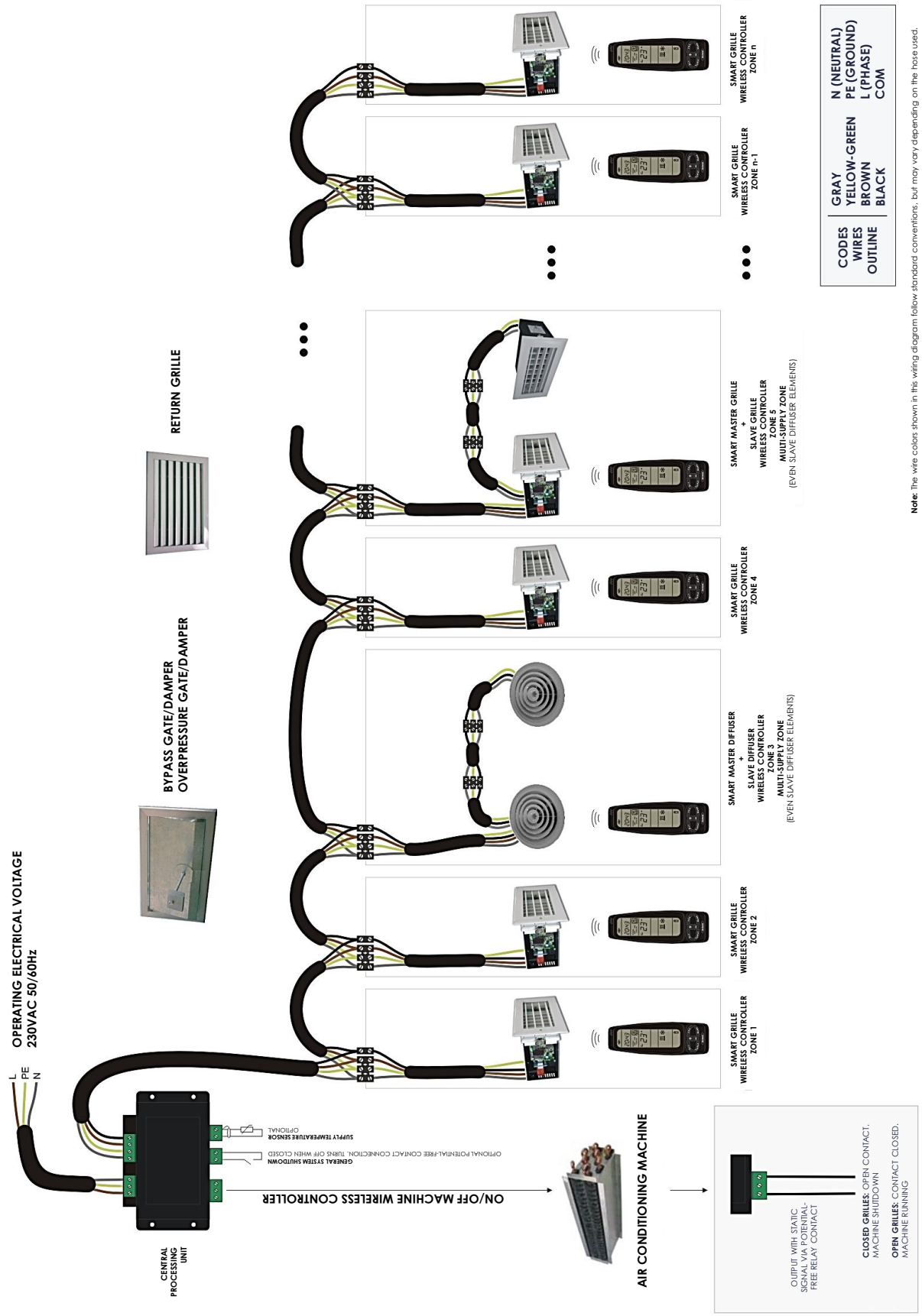
ZONED CLIMATE CONTROL SYSTEM
AIRROOM



AIRROOM TECHNICAL SPECIFICATIONS

Power Supply Voltage	230VAC 50/60Hz
Output	Via a voltage-activated relay contact max. voltage 250VAC max. Intensity 3A
Operating temperature	0ºC to 50ºC
Operating humidity	max. 95% h.r. no condensation

AIRROOM CONNECTION DIAGRAM



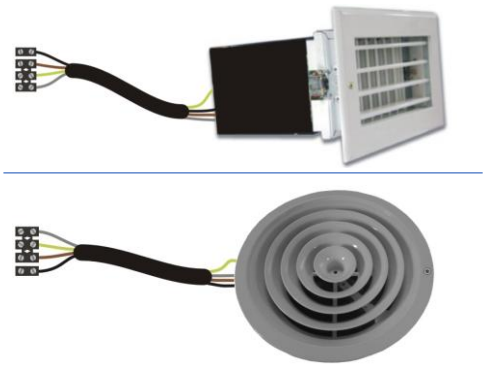
Note: The wire colors shown in this wiring diagram follow standard conventions, but may vary depending on the hose used.

iZONE SINGLE-ZONE AIR CONDITIONING

The new **iZONE** single-zone smart climate control system is the ideal product for climate control in a single room (bedroom, office, living room, etc.) when the air conditioning system is ducted, optimizing climate control and significantly increasing comfort in that controlled room.

The **iZONE** control system is a very simple product, as it consists only of a wireless remote control and a smart diffuser, with both components communicating via wireless technology.

The **iZONE** control is essentially a standalone smart diffusion element.



APPLICATIONS

In ducted HVAC systems, in most cases, there is a room where temperature control is essential. Furthermore, the ideal temperature for each room is determined independently of the others based on its geographic orientation, its intended use, and, of course, whether it is occupied at any given time. For this reason, iZONE allows for independent temperature control in different rooms within the same home, retail space, or office.
In summary, the iZONE smart control system allows you to adjust the temperature of a specific room independently of the others, or simply shut off the heating element, without the other rooms having to sacrifice the comfort of climate control.

This control does not affect the air conditioner.

OPERATION

The operation of the smart diffusion element is based on maintaining the user-selected setpoint temperature in the conditioned room.

Important: The air conditioning unit's control panel acts as the master control; you must use it to select the system's operating mode.

DIFFUSION ELEMENTS: SMART AND SLAVE

The air distribution elements are the same as those included in the **AIRROOM** zone system (the multi-impulsion zone concept can also be applied).

WIRELESS CONTROLLER

The **iZONE** control system uses the same wireless remote control as the AIRROOM zoning system.

RELAY CONTACT OUTPUT

The smart diffusion element includes a relay contact output that signals whether the motorized damper is open or closed.

OPERATING VOLTAGE

The iZONE smart diffuser must be connected to a 230 VAC, 50/60 Hz power supply for proper operation using only three wires.

The ground terminal is included with the diffuser to provide, when connected, added safety for the installation!

INSTALLATION AND ASSEMBLY

This control is very easy to install, greatly reducing installation and commissioning time; it is also a fully automatic, self-installing device, as it requires no configuration by the user. Installation is very simple, as you only need to run the power cable to the smart lighting fixture.

To enjoy the iZONE single-zone climate control system, all you need is for the installation to have a ducted HVAC system; simply remove the air diffuser in the selected room and replace it with the iZONE smart motorized diffuser. Once installed, everything is ready to control the temperature in that room.

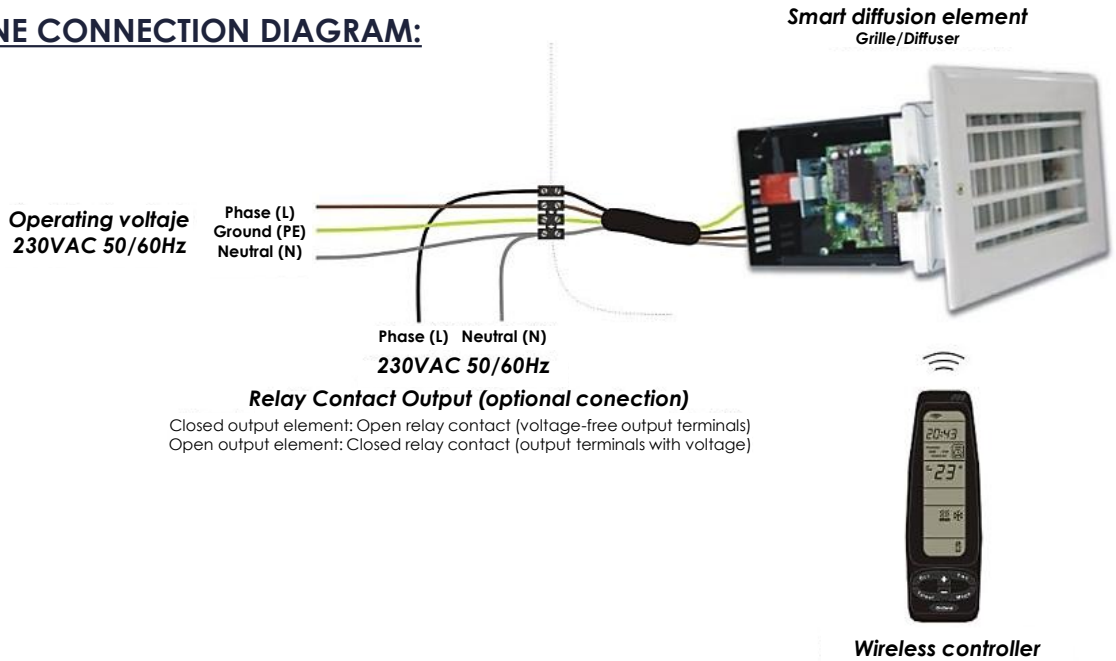
AIR DUCT PRESSURE

IMPORTANT: Using more than one iZONE control in the same system without the necessary preparation could cause problems or even malfunctions in the system. Consult an authorized installer.

iZONE TECHNICAL SPECIFICATIONS

Power Supply Voltage	230VAC 50/60Hz
Output	Via a voltage-activated relay contact max. voltage 250VAC max. Intensity 3A
Operating temperature	0ºC to 50ºC
Operating humidity	max. 95% h.r. no condensation

iZONE CONNECTION DIAGRAM:



NOTE: The wire colors shown in this wiring diagram follow a standard color code, but may vary depending on the hose used.

QUICK SELECTION TABLE FOR SMART SUPPLY GRILLES

HEIGHT		LENGTH									
200				200	250	300	400	500	600	800	1000
150		150	200	300	350	450	550	650	800	1000	
100		200	300	400	500	600	800	1000			
m³/h											
100	Alc dB(A) Δ P	3 9 0,3									
200	Alc DB(A) Δ P	6 10 1,2	5 12 0,6	4,5 8 0,3							
300	Alc dB(A) Δ P	9,5 32 2,8	8 21 1,3	6,5 15 0,7	5,5 11 0,5	5 8 0,3					
400	Alc dB(A) Δ P	12 39 5	10 30 2,1	9 25 1,2	7,2 16 0,7	7 12 0,6	6,2 11 0,5				
500	Alc dB(A) Δ P		13 37 3,6	11 29 1,9	10 25 1,1	8 20 0,9	7,6 15 0,5	7 6 0,4	6,5 5 0,3		
600	Alc dB(A) Δ P		15 40 5	14 36 2,9	12 30 1,7	11 25 1,1	9,5 20 0,6	7,8 8 0,5	7,6 7 0,3	6,6 4 0,2	
700	Alc dB(A) Δ P			15 38 2,3	14 33 2,1	13 30 1,8	11 26 0,9	9,5 17 0,65	8 14 0,4	7,2 9 0,2	
800	Alc dB(A) Δ P			17 43 4,9	16 37 2,9	14 33 2	13 28 1,1	12 19 0,8	10 15 0,6	9,3 10 0,3	8 7 0,17
900	Alc dB(A) Δ P				17 40 3,7	16 37 3,3	14 29 1,4	13 23 0,9	12 19 07	10 12 0,4	9 9 0,25
1.000	Alc dB(A) Δ P				20 43 5	18 38 3,4	16 32 1,9	14 27 1,3	13 21 0,8	12 15 0,25	10 12 0,30
1.200	Alc dB(A) Δ P					21 44 5	19 37 3	17 31 1,7	15 28 1,2	13 22 0,7	12 14 0,45
1.400	Alc dB(A) Δ P						21 41 4	20 34 2,2	18 33 1,8	15 26 0,9	14 18 0,6
1.600	Alc dB(A) Δ P						29 45 5	23 40 3,2	20 35 2	18 29 1,2	16 21 0,8
1.800	Alc dB(A) Δ P							28 42 3,9	23 39 3	20 30 1,5	18 25 0,9
2.000	Alc dB(A) Δ P							34 43 4,8	28 42 3,7	22 36 3	20 29 1,2
2.200	Alc dB(A) Δ P								33 44 4	28 38 2,1	22 31 1,5
2.400	Alc dB(A) Δ P								35 45 4,2	30 39 2,6	25 32 1,6
2.600	Alc dB(A) Δ P									35 41 3,4	30 36 2,2
2.800	Alc DB(A) Δ P									40 44 4	33 38 2,7
3.000	Alc dB(A) Δ P										35 40 3
3.500	Alc dB(A) Δ P										45 44 4

CORRECTION FACTORS

Angle of divergence	*45º*	*90º*
Δ P = Tables x	1,1	1,5
dB(A) = Tables +	2	3
Alc = Tables x	0,7	0,5

Alc = For a residual velocity of 0.5 m/s.

dB(A) = Noise level of open blades without flow regulation.

Δ P = Static pressure drop mm c.a.

QUICK SELECTION TABLE FOR SMART SUPPLY DIFFUSERS

Size		6"	8"	10"	12"	14"
m³/h	Ø Neck	140	196	252	308	364
100	Ve Δ P dB(A) L	3,3 0,65 15 0,5-0,8	1,8 0,1 5 0,2-0,6			
150	Ve Δ P dB(A) L	5 1,6 28 0,5-1	2,7 0,4 9 0,4-0,8			
200	Ve Δ P dB(A) L	6,6 2,6 36 0,8-1,4	3,6 0,9 20 0,7-,1,1	2,2 0,2 7 0,5-0,8		
250	Ve Δ P dB(A) L	8,2 4,2 43 0,9-1,6	4,5 1,3 25 0,8-1,4	2,8 0,4 10 0,6-1,1	1,9 0,1 9 0,6-0,9	
300	Ve Δ P dB(A) L		5,3 1,8 30 0,9-1,5	3,3 0,65 16 0,9-1,4	2,2 0,2 8 0,7-1,1	
350	Ve Δ P dB(A) L		6,2 2,5 34 1,1-1,8	3,9 1 23 0,9-1,4	2,6 0,4 9 0,8-1,3	1,9 0,1 11 0,7-1,1
400	Ve Δ P dB(A) L		7,1 4 42 1,3-2	4,4 1,2 25 1-1,6	3 0,5 13 0,9-1,4	2,1 0,1 10 0,8-1,3
450	Ve Δ P dB(A) L		8 4 42 1,4-2,1	5 1,5 29 1,2-1,9	3,4 0,7 20 1-1,6	2,4 0,2 12 0,9-1,4
500	Ve Δ P dB(A) L		9 5 46 1,5-2,3	5,5 1,9 32 1,3-2	3,7 0,9 23 1,2-1,8	2,6 0,3 11 1-1,5
550	Ve Δ P dB(A) L			6 2,3 34 1,4-2,1	4,1 1 24 1,2-1,9	3 0,5 15 1,1-1,7
600	Ve Δ P dB(A) L			6,6 2,7 37 1,5-2,3	4,5 1,3 27 1,3-2	3,1 0,5 16 1,2-1,9
650	Ve Δ P dB(A) L			7 3 36 1,5-2,4	4,9 1,5 29 1,4-2,1	3,5 0,8 22 1,3-1,9
700	Ve Δ P dB(A) L			7,8 3,8 43 1,6-2,6	5,2 1,7 31 1,5-2,3	3,7 0,9 24 1,4-2

Size		10"	12"	14"
m³/h	Ø Neck	252	308	364
750	Ve Δ P dB(A) L	8,2 4,2 44 1,8-2,8	5,7 1,9 34 1,5-2,4	4 1 26 1,4-2,1
800	Ve Δ P dB(A) L	8,6 4,9 46 1,9-2,9	6 2,2 35 1,7-2,5	4,2 1,1 27 1,4-2,3
850	Ve Δ P dB(A) L	9 5 47 1,9-3	6,4 2,4 36 1,8-2,7	4,5 1,3 31 1,5-24
900	Ve Δ P dB(A) L		6,8 2,5 37 1,8-2,9	4,6 1,4 29 1,6-2,5
950	Ve Δ P dB(A) L		7 3 40 1,9-2,9	5 1,5 32 1,7-2,6
1.000	Ve Δ P dB(A) L		7,3 3,4 41 2,3	5,2 1,7 33 1,8-2,8
1.100	Ve Δ P dB(A) L		8 4 45 2,1-3,3	5,8 2 36 1,9-3
1.200	Ve Δ P dB(A) L		8,7 5 48 2,3-3,6	6,2 2,5 38 2-3,2
1.300	Ve Δ P dB(A) L		9,5 5,8 50 2,5-3,8	6,7 2,7 41 2,2-3,4
1.400	Ve Δ P dB(A) L			7,3 3,4 43 2,4-3,6
1.500	Ve Δ P dB(A) L			8 4 46 2,5-3,9
1.600	Ve Δ P dB(A) L			8,5 4,5 48 2,6-4
1.700	Ve Δ P dB(A) L			9 5 50 2,8-4,3

Ve = Speed at the neck.

dB(A) = Sound level.

Δ P = Pressure drop mm c.a.

L = Range in "m" for a final speed of 0.2–0.5 m/s.

QUICK SELECTION TABLE FOR SMART SUPPLY GRILLES

HEIGHT		LENGTH									
200				200	250	300	400	500	600	800	1000
150		150	200	300	350	450	550	650	800	1000	
100		200	300	400	500	600	800	1000			
m³/h											
100	Alc dB(A) Δ P	2,2 6 0,7	1,8 3 0,1								
200	Alc DB(A) Δ P	4,2 23 2,2	3,5 17 0,9	3,1 15 0,5							
300	Alc dB(A) Δ P	6,5 33 6,5	5,2 26 1,7	4,7 21 1,2	4,0 17 0,7	3,5 15 0,4					
400	Alc dB(A) Δ P		7,5 35 3,3	6,0 30 1,9	5,5 25 1,0	4,7 20 0,9	4,2 15 0,4				
500	Alc dB(A) Δ P		8,5 38 5,3	7,8 33 3,3	6,7 29 1,7	6,3 25 1,2	5,5 22 0,7	4,5 14 0,3			
600	Alc dB(A) Δ P			9,5 41 4,4	8,3 34 2,1	7,5 29 1,8	6,2 26 1,0	5,7 20 0,7	5,1 15 0,4		
700	Alc dB(A) Δ P			10,3 45 5,5	9,8 42 4,4	9,5 38 3,2	7,5 30 1,2	6,5 24 0,7	6,2 20 0,6		
800	Alc dB(A) Δ P				10,2 42 3,9	9,7 37 2,9	8,5 35 1,8	8,0 27 1,0	7,0 23 0,9		
900	Alc dB(A) Δ P				11,9 45 5,0	10,5 40 3,7	9,5 36 1,9	8,5 30 1,2	8,0 26 1.0	7,2 22 0,7	
1.000	Alc dB(A) Δ P				13,3 47 5,7	12,5 43 4,5	10,2 39 2,5	9,5 33 1,7	9,0 28 1,2	8,3 23 1	7,6 19 0,7
1.200	Alc dB(A) Δ P					13,8 50 5,8	12,9 44 3,9	11,0 37 2,1	10,2 34 1,7	9,0 28 0,9	8,2 25 0,6
1.400	Alc dB(A) Δ P						14,5 48 5,3	13,3 42 3,3	12,4 37 2,1	10,2 33 1,3	9,4 28 0,7
1.600	Alc dB(A) Δ P							15,2 45 4,2	14,2 40 2,9	11,8 35 1,8	10,3 30 0,9
1.800	Alc dB(A) Δ P							17,0 47 5,2	15,7 43 3,4	13,4 39 2,1	11,2 32 1,2
2.000	Alc dB(A) Δ P								18,2 52 4,4	15,3 45 2,8	13,4 37 1,5
2.200	Alc dB(A) Δ P								19,5 49 5,2	16,5 45 3,3	14,2 35 1,7
2.400	Alc dB(A) Δ P									19,1 47 3,7	16,5 37 1,9
2.600	Alc dB(A) Δ P									21,3 49 4,4	18,2 39 2,1
2.800	Alc DB(A) Δ P									22,1 50 5,0	20,6 41 2,8
3.000	Alc dB(A) Δ P										21,4 43 3,1
3.500	Alc dB(A) Δ P										25,2 47 3,9

CORRECTION FACTORS		
Angle of divergence	*45º*	*90º*
Δ P = Table x	1,1	1,5
dB(A) = Table +	2	3
Alc = Table x	0,7	0,5

Alc = For a residual velocity of 0.5 m/s.

dB(A) = Noise level of open blades without flow regulation.

Δ P = Static pressure drop mm c.a.

QUICK SELECTION TABLE FOR RETURN GRILLES, PART 1

HEIGHT		LENGTH															
500																	
400																400	450
350														350	400	450	500
300												300	350	400	500	500	600
250									250		300	350	400	500		600	700
200						200		250	300	350	400	450	500	600	700	800	900
150				200		250	300	350	400	450	500	600	700	800	900	1.000	1.200
100		200	250	300	350	400	450	500	600	700	800	900	1.000	1.200			
m³/h																	
100	Vel	1,8	1,3														
	ΔP	0,8	0,3														
	dB(A)	17	15														
150	Vel	2,7	2,2	1,7	1,4												
	ΔP	2	1,4	0,8	0,4												
	dB(A)	24	21	20	19												
200	Vel	3,7	2,9	2,2	1,9	16	1,4										
	ΔP	3,3	2,2	1,4	0,9	0,6	0,4										
	dB(A)	31	27	25	22	20	19										
250	Vel	4,6	3,7	2,9	2,4	2,1	1,7	1,5									
	ΔP	5,3	3,4	2,2	1,7	1,1	0,9	0,5									
	dB(A)	36	33	27	26	22	20	19									
300	Vel	5,5	4,4	3,3	2,9	2,5	2,1	1,8	1,5								
	ΔP	7	4,7	2,8	2,2	1,7	1,1	0,8	0,5								
	dB(A)	40	37	35	31	28	25	23	20								
350	Vel		5,1	3,9	3,4	2,9	2,5	2,1	1,7	1,5							
	ΔP		6,1	3,9	3,1	2,2	1,7	1,1	0,8	0,5							
	dB(A)		41	39	35	31	28	2,5	23	20							
400	Vel		5,8	4,5	3,9	3,3	2,8	2,4	2	1,7	1,5						
	ΔP		7,8	5	3,9	2,8	2,2	1,7	1,1	0,7	0,5						
	dB(A)		45	43	39	35	32	29	27	24	20						
450	Vel			5	4,3	3,7	3,2	2,7	2,3	1,9	1,7	1,4					
	ΔP			6,1	4,8	3,4	2,8	2	1,4	0,8	0,6	0,4					
	dB(A)			46	41	38	35	32	29	26	24	19					
500	Vel			5,6	4,9	4,2	3,5	3	2,5	2,1	1,8	1,6	1,4				
	ΔP			7,3	5,9	4,5	3,1	2,5	1,7	1,1	0,8	0,6	0,4				
	dB(A)			49	45	41	38	35	32	29	27	23	20				
550	Vel				5,4	4,6	3,9	3,3	2,8	2,4	2,1	1,8	1,6	1,4			
	ΔP				7	5,3	3,9	2,8	2,2	1,7	1,1	0,8	0,6	0,4			
	dB(A)				49	45	41	37	35	30	28	25	23	20			
600	Vel				5,8	5	4,3	3,6	3,1	2,6	2,3	2	1,7	1,5			
	ΔP				7,8	6,1	4,8	3,3	2,5	2	1,4	1,1	0,8	0,5			
	dB(A)				51	47	43	39	35	3,2	30	28	27	23			
650	Vel					5,4	4,6	3,8	3,3	2,8	2,5	2,1	1,9	1,6	1,4		
	ΔP					7	5,3	3,6	2,8	2,2	1,7	1,2	0,8	0,6	0,4		
	dB(A)					48	44	41	38	35	32	30	28	25	20		
700	Vel						5	4,2	3,6	3	2,6	2,3	2	1,7	1,5		
	ΔP						6,1	4,5	3,3	2,5	2	1,4	1,1	0,8	0,5		
	dB(A)						45	43	40	37	35	32	30	26	21		
750	Vel						5,2	4,5	3,8	3,2	2,8	2,5	2,2	1,9	1,6	1,4	
	ΔP						6,4	5	3,6	2,8	2,2	1,7	1,4	0,8	0,6	0,4	
	dB(A)						47	45	41	38	36	33	31	27	26	20	
800	Vel							4,8	4	3,6	3,2	2,8	2,4	2	1,7	15	
	ΔP							5,9	4,2	3,4	2,8	2,2	1,7	1,1	0,8	0,5	
	dB(A)							47	43	40	38	35	33	28	27	21	
850	Vel							5,1	4,3	3,8	3,4	2,9	2,5	2,1	1,8	1,6	1,4
	ΔP							6,1	4,8	3,6	3,1	2,2	1,7	1,1	0,8	0,6	0,4
	dB(A)							48	44	41	39	36	34	29	28	25	21
900	Vel							5,4	4,6	3,9	3,5	3	2,6	2,3	1,9	1,7	1,5
	ΔP							7	5,3	3,9	3,2	2,5	2	1,4	0,8	0,7	0,5
	dB(A)							50	46	43	40	38	36	33	29	27	23
950	Vel								4,9	4,1	3,4	3,2	2,8	2,4	2,1	1,8	1,5
	ΔP								5,9	4,2	3,1	2,8	2,2	1,7	1,1	0,8	0,6
	dB(A)								48	44	41	39	37	34	30	28	26
1.000	Vel								5,1	4,3	3,8	3,4	2,9	2,5	2,2	1,9	1,6
	ΔP								6,1	4,8	3,6	3,1	2,2	1,7	1,4	0,9	0,7
	dB(A)								50	46	43	41	39	35	31	29	27
1.100	Vel								5,6	5	4,4	3,8	3,3	2,8	2,4	2,1	1,8
	ΔP								7,3	6,1	4,8	3,6	2,8	2,2	1,7	1,1	0,8
	dB(A)								51	48	47	44	41	37	34	32	28

Vel = m/s total section

dB(A) = Noise level with blades open (without damper).

Δ P = Static pressure drop mm c.a.

CORRECTION FACTORS

	Control Opening		
	25%	50%	100%
ΔP= x	x 5	x 2,5	x 1
dB(A)= +	+ 14	+ 7	+ 0

QUICK SELECTION TABLE FOR RETURN GRILLES, PART 2

HEIGHT		LENGTH																
500												500	600	700	800	900	1.000	1.200
400							400	450	500	600	700	800	900	1.000	1.200			
350					350	400	450	500	600	700	800	900	1.000	1.200				
300			300	350	400	450	500	600	700	800	900	1.000	1.200					
250		300	350	400	500		600	700	800	1.000		1.200						
200		400	450	500	600	700	800	900	1.000	1.200								
150		500	600	700	800	900	1.000	1.200										
100		800	900	1.000	1.200													
m³/h																		
1.200	Vel	4,8	4,2	3,6	3,1	2,6	2,2	1,9	1,7	1,4								
	ΔP	5,9	4,5	3,4	2,5	2	1,4	0,8	0,7	0,4								
	dB(A)	50	47	45	39	36	34	28	27	22								
1.300	Vel	5	4,4	3,8	3,3	2,8	2,4	2	1,9	1,5	1,3							
	ΔP	6,1	4,8	3,6	2,8	2,2	1,7	1,1	0,9	2,4	0,3							
	dB(A)	5,1	48	46	4,2	39	36	34	29	24	22							
1.400	Vel	5,6	4,7	4,2	3,5	3	2,7	2,3	2	1,4	1,3							
	ΔP	7,3	5,6	3,1	2,5	2	1,4	1,1	0,6	0,4	0,3							
	dB(A)	52	49	48	44	40	37	36	35	26	22							
1.500	Vel		5	4,6	3,7	3,3	2,9	2,5	2,1	1,8	1,5	1,4						
	ΔP		6,1	5,3	3,4	2,8	2,2	1,7	1,1	0,8	0,5	0,4						
	dB(A)		51	49	46	42	39	37	36	29	24	22						
1.600	Vel		5,3	4,9	4	3,6	3,1	2,7	2,2	1,9	1,6	1,5	1,3					
	ΔP		6,7	5,9	4,2	3,4	2,5	2	1,4	0,9	0,6	0,5	0,3					
	dB(A)		52	50	48	44	41	3,7	38	32	27	24	22					
1.700	Vel			5,2	4,2	3,8	3,3	2,8	2,3	2	1,7	1,5	1,4					
	ΔP			6,4	4,5	3,6	2,8	2,2	1,4	1,1	0,7	0,5	0,4					
	dB(A)			51	50	46	42	40	39	34	29	25	22					
1.800	Vel			5,5	4,5	4	3,5	3	2,5	2,1	1,8	1,6	1,5	1,3				
	ΔP			7,3	5	4,2	3,1	2,5	1,7	1,1	0,8	0,6	0,5	0,3				
	dB(A)			52	51	47	43	42	41	35	30	28	24	22				
1.900	Vel				4,7	4,2	3,7	3,2	2,6	2,2	1,9	1,7	1,5	1,4				
	ΔP				5,6	4,5	3,4	2,8	2	1,4	9,8	0,7	0,5	0,4				
	dB(A)				52	48	44	43	42	36	34	29	25	22				
2.000	Vel				5	4,4	3,9	3,3	2,8	2,4	2	1,8	1,6	1,4	1,3			
	ΔP				6,1	4,8	3,9	2,8	2,2	1,6	1,1	0,8	0,6	0,4	0,3			
	dB(A)				53	49	46	44	43	37	36	31	28	23	22			
2.200	Vel					4,9	4,2	3,6	3	2,6	2,2	2	1,8	1,6	1,4			
	ΔP					5,9	4,5	3,4	2,5	2	1,4	1	0,8	0,6	0,4			
	dB(A)					50	48	46	45	40	38	36	32	29	23			
2.400	Vel						4,6	4	3,3	2,8	2,5	2,2	1,9	1,7	1,6			
	ΔP						5,3	4,2	2,8	2,2	1,7	1,4	0,9	0,7	0,6			
	dB(A)						51	50	48	43	40	38	35	30	29			
2.600	Vel						5	4,3	3,6	3,1	2,6	2,4	2,1	1,9	1,7	1,3		
	ΔP						6,1	4,8	3,4	2,5	2	1,7	1,1	0,9	0,7	0,3		
	dB(A)						52	51	50	45	42	40	37	36	30	22		
2.800	Vel						5,4	4,6	3,9	3,3	2,9	2,5	2,2	2	1,8	1,4	1,3	
	ΔP						7	5,3	4	2,8	2,2	1,7	1,4	1,1	0,8	0,4	0,3	
	dB(A)						53	52	51	46	43	43	38	35	34	23	22	
3.000	Vel							5	4,1	3,6	3,1	2,7	2,4	2,1	1,9	1,5	1,4	
	ΔP							6,1	4,2	3,4	2,5	2	1,7	1,1	0,9	0,5	0,4	
	dB(A)							53	52	48	45	43	39	38	37	26	23	
3.250	Vel							5,4	4,5	3,9	3,3	3	2,6	2,3	2,1	1,7	1,5	
	ΔP							7	5	3,9	2,8	2,5	2	1,4	1,1	0,7	0,5	
	dB(A)							54	53	49	46	44	41	39	35	31	27	
3.500	Vel								4,8	4,2	3,6	3,2	2,8	2,5	2,2	1,8	1,7	
	ΔP								5,9	4,5	3,4	2,8	2,2	1,7	1,4	0,8	0,7	
	dB(A)								54	51	48	46	43	41	37	34	31	
3.750	Vel									4,4	3,8	3,4	3	2,7	2,4	2	1,8	
	ΔP									4,8	3,6	3,1	2,5	2	1,7	1,1	0,8	
	dB(A)									53	50	47	44	43	38	36	35	
4.000	Vel									4,8	4,1	3,6	3,2	2,9	2,5	2,1	1,9	
	ΔP									5,9	4,2	3,4	2,8	2,5	1,7	1,1	0,9	
	dB(A)									54	51	48	46	45	42	36	37	
4.500	Vel									5,3	4,6	4,1	3,6	3,2	2,8	2,3	2,1	
	ΔP									6,7	5,3	4,2	3,4	2,8	2,2	1,4	1,1	
	dB(A)									55	52	50	48	47	44	42	40	
5.000	Vel										5,1	4,6	4	3,6	3,2	2,6	2,3	
	ΔP										6,1	5,3	4,2	3,4	2,8	2	1,4	
	dB(A)										53	52	51	49	46	45	44	

Vel = m/s total section

dB(A) = Noise level with blades open (without damper).

Δ P = Static pressure drop mm c.a.

CORRECTION FACTORS

	Control Opening		
	25%	50%	100%
ΔP= x	x 5	x 2,5	x 1
dB(A)= +	+ 14	+ 7	+ 0

CATÁLOGO AIRROOM_V20240726

QUICK SELECTION TABLE FOR BYPASS GATES/DAMPERS

Airflow of the indoor unit (m³/h)							
1.400	1.800	2.000	2.300	3.000	4.000	5.300	7.200
300 x 200 400 x 150	400 x 200	600 x 150	500 x 200	500 x 250	600 x 300	500 x 250 2 Unidades	600 x 300 2 Unidades



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