

COOLING UNIT FOR CONTROL PANELS - OUTDOOR APPLIANCE

IP65 - ODR series - models 4218 - 4225 - 4233



COOLING UNIT FOR OUTDOOR - ODR series – models 4218 - 4225 - 4233

Available on request:

- with AISI304-2B stainless steel carpentry - extension code **_0X**
- with AISI316-2B stainless steel carpentry - extension code **_XX**
- with heat exchangers with cataphoresis treatment for use in marine environments or in environments with aggressive atmospheres - suffix code **_CM**.

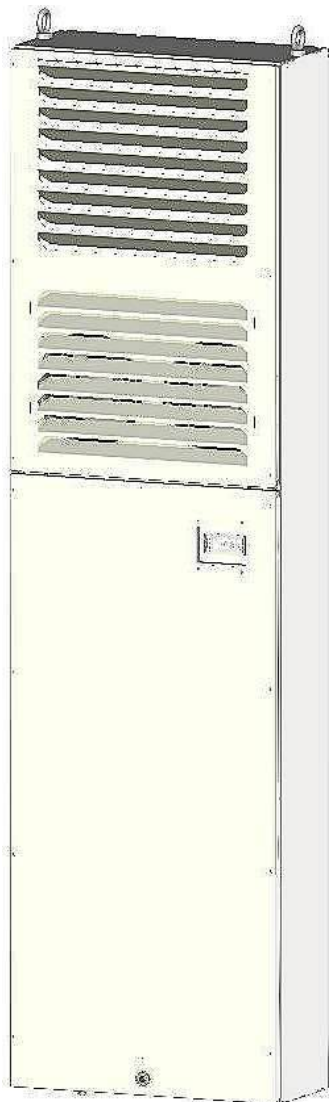
Electrical variants: H31 = 230V 1ph 50-60Hz - N33 = 400/460V 3ph 50/60Hz

eg. code ODR4233N330000**07** standard three-phase version painted textured RAL7035 carpentry

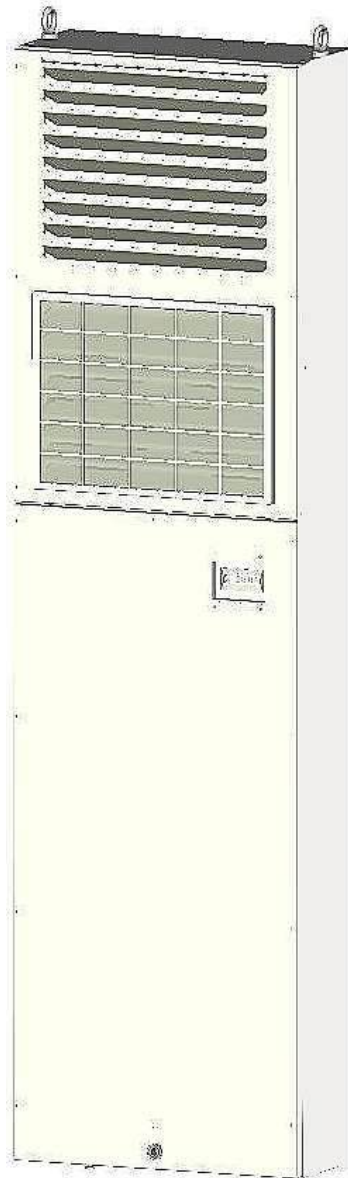
eg. code ODR4233H31**0X0X00** single-phase variant with unpainted AISI304 2B carpentry

eg. code ODR4233N33**XXXX00** three-phase variant with unpainted AISI316 2B carpentry

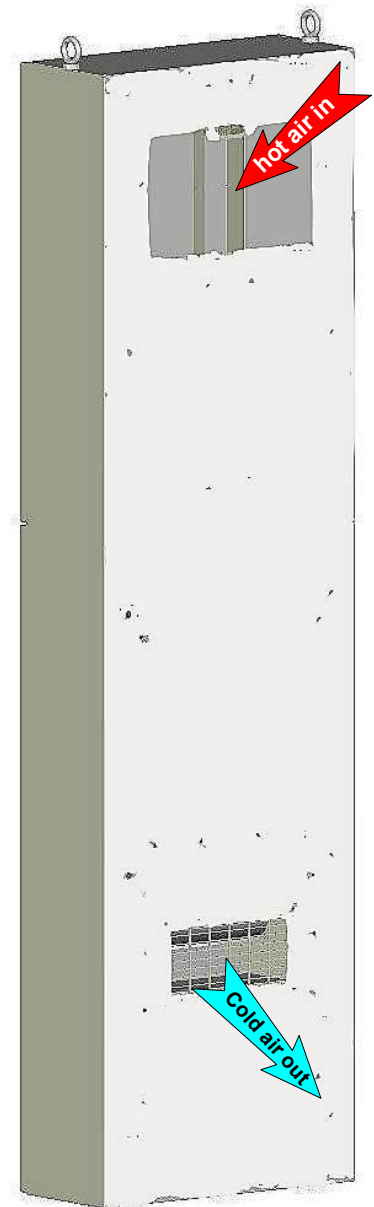
eg. code ODR4233H31**0X0X****_CM** single-phase variant with unpainted AISI304 2B carpentry and exchangers with protective cataphoresis treatment



**Front view
without air filter**



**Front view
with basket and
condenser air filter**



Rear view

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Device description

- Outdoor appliance: it allows maintaining the IP65 degree of protection between the air conditioner and the electrical panel (it must be fixed to the wall using all the screws provided for coupling and the gasket between the air conditioner and the panel must be accurately positioned and adequately compressed). If the cabinet wall deforms under the thrust of the gasket it will be necessary to reinforce it with suitable longitudinal members.
- It can be installed on the door or side wall, outside the switchgear or completely built-in (no specific accessories are required for completely built-in installation). To make a semi-recessed installation, 110 mm approx., it is necessary to use the subframe cod. PAI1041110xx (the xx extension defines the paint color)
- Supply voltage: 230V 50Hz AC single-phase or 400V 50Hz / 460V 60Hz AC three-phase
- A 9-pole Wago quick connector facilitates connection to the power supply and signal networks
- The cooling process is governed by a digital electronic microprocessor thermostat, with integrated alarm functions, faulty probe, incorrect connection, over range, open doors, etc.
- In the event of a dirty filter and/or condenser, or a faulty fan or an out-of-range ambient temperature, a pressure switch and a thermoregulator probe protect the refrigerant circuit both against overpressure and against overtemperature.
- To signal evaporator fan failure or loss of refrigerant fluid a pressure switch (optional) for low pressure control can be installed
- A voltage-free contact of the blocking relay allows the signal to be re-launched of alarm to the control PLC:
relay always energized during normal operation, de-energized in the event of anomaly or breakdown of the relay itself. Remote signaling connection via the 9-pin Wago connector.
- The speed of the condenser fan is electronically regulated to adjust the air consumption to the actual needs of the system.
- R 134a refrigerant fluid without CFC.
- The condensate produced by the cooling process is collected in a tank placed on the floor of the air conditioner
An automatic pump controlled by a level switch discharges the condensate outside, When, due to a blockage in the discharge line or a fault in the pump, the maximum admitted level is reached, a second level switch stops the cooling process and activates an alarm signal. The drain pump is itself a check valve and prevents outside ambient air from being drawn into the internal cooling circuit of the cabinet via the drain line
- Installation kit is supplied complete with studs, washers, nuts, sealing gasket and lift eyebolts.

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TECHNICAL FEATURES 230V 1~ 50-60Hz

<i>ITEM CODE</i>	<i>ODR</i>	4218 H31	4225 H31	4233 H31
USEFUL COOLING OUTPUT				
L35 - L35 (50/60) L35 - L50 (50/60)	W W	1.800 / 1.850 1.420 / 1.560	2.500 / 2.680 2.000 / 2.180	3.300/ 3.450 2.480/ 2.660
OPERATION FIELD				
ENVIRONMENTAL TEMPERATURE CABINET TEMPERATURE	°C °C	- 10 +55 +25 +45		
VOLTAGE				
RATED VOLTAGE	V / Hz	230V 50-60Hz 1~		
CURRENT				
RATED CURRENT (FLA) (50/60) START UP CURRENT (LRA) (50/60)	A A	5,5/5,8 19/20,5	6,5/7,5 24/25	8.4/8,8 35/36
POWER CONSUMPTION				
RATED L35 - L35 MAXIMUM L35 - L50	W W	1.010 / 1.150 1.180 / 1.380	1.190 / 1.600 1.680 / 1.860	1.740 / 1.900 1.920 / 2.230
REFRIGERANT				
TYPE FILLING ADMISSIBLE PRESSURE	R g. kPa	134a 640 2.400	134a 800 2.400	134a 810 2.400
PROTECTION CATEGORY - EN 60529				
INTERNAL CIRCUIT EXTERNAL CIRCUIT	IP IP	65 44		
FAN FLOW FREE MOUTH				
INTERNAL CIRCUIT EXTERNAL CIRCUIT	mc/h mc/h	810 1.050	810 1.480	
NOISE LEVEL				
MAXIMUM	dB (A)	62	69	
NET WEIGHT				
ACCESSORIES EXCLUDED	Kg	84	88	92
COLOR				
STANDARD	RAL	7035 (Other colors aviable on request)		
OVERALL DIMENSIONS				
WIDTH DEPTH (WITHOUT GRID) HEIGHT	mm. mm. mm.	500 220 1.800		
DUTY CYCLE				
		100 %		
ADJUSTMENT				
BUILT-IN DIGITAL ELECTRONIC THERMOSTAT		Default factory settings: set =35 °C – Δt =5k		

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TECHNICAL FEATURES 400/460V 3~ 50/60Hz

ITEM CODE	ODR	4218 N33	4225 N33	4233N33
USEFUL COOLING OUTPUT				
L35 - L35 (50/60)	W	1.800 / 1.850	2.500 / 2.680	3.300/ 3.450
L35 - L50 (50/60)	W	1.420 / 1.560	2.000/ 2.180	2.480/ 2.660
OPERATION FIELD				
ENVIRONMENTAL TEMPERATURE	°C	- 10 +55		
CABINET TEMPERATURE	°C	+25 +45		
VOLTAGE				
RATED VOLTAGE	V / Hz	400/460V 50/ 60Hz 3 ~		
CURRENT				
RATED CURRENT (FLA 50/60)	A	2,2 / 2,3	2,6 / 2,8	3,2 / 3,4
START UP CURRENT (LRA 50/60)	A	9,4 / 9,8	13 / 15	13 / 15
POTENZA ASSORBITA				
RATED L35 - L35 (50/60)	W	1.010 / 1.150	1.190 / 1.600	1.740 / 1.900
MAXIMUM L35 - L50 (50/60)	W	1.180 / 1.380	1.680 / 1.860	1.920 / 2.230
REFRIGERANT				
TYPE	R	134a	134a	134a
FILLING	g.	640	800	810
ADMISSIBLE PRESSURE	kPa	2.400	2.400	2.400
PROTECTION CATEGORY - EN 60529				
INTERNAL CIRCUIT	IP	65		
EXTERNAL CIRCUIT	IP	44		
FAN FLOW FREE MOUTH				
INTERNAL CIRCUIT	mc/h	810	810	
EXTERNAL CIRCUIT	mc/h	1.050	1.480	
NOISE LEVEL				
MAXIMUM	dB (A)	62	69	
NET WEIGHT				
ACESSORIES EXCLUDED	Kg	88	92	96
COLOR				
STANDARD	RAL	7035 (Other colors aviable on request)		
OVERALL DIMENSIONS				
WIDTH	mm.	500		
DEPTH (WITHOUT GRID)	mm.	220		
HEIGHT	mm.	1.800		
DUTY CYCLE				
		100 %		
ADJUSTMENT				
BUILT-IN DIGITAL ELECTRONIC THERMOSTAT		Default factory settings: set =35 °C – Δt =5k		

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DESCRIZIONE DEL CODICE E DELLE VARIANTI - CODE AND VARIANTS DESCRIPTION						
ODR	4233	H31	00	00	07	AA
1	2	3	4	5	6	7
series	model	mains voltage	frame sheet type	external casings sheet metal type	paint color	special executions
1	3 digit = series: eg. PXS / PSC / ODR / TXS, AW etc.		see the catalog			
2	4 digit = model: eg. 4140 / 6160 / 5310 / 5401 etc.		see the catalog			
3	3 digit = mains voltage: eg. H31- N31- N33 - etc.		see table in catalog			
4	2 digit = sheet metal type of the frame		Standard = galvanized steel	00		
			on request AISI304 2B steel	0X		
			on request AISI316 2B steel	XX		
5	2 digit = sheet metal type of the external covers		standard painted carbon steel	00		
			on request AISI304 2B steel	0X		
			on request AISI316 2B steel	XX		
6	2 digit = exterior casing paint color other non standard colors available on request: see table in catalog		standard paint RAL7035	07		
			eg. non standard RAL7032	01		
			for others colors see catalog	??		
7	2 digit = custom executions on request		standard = blank			
			custom executions = TBD	??		

STANDARD EQUIPMENT

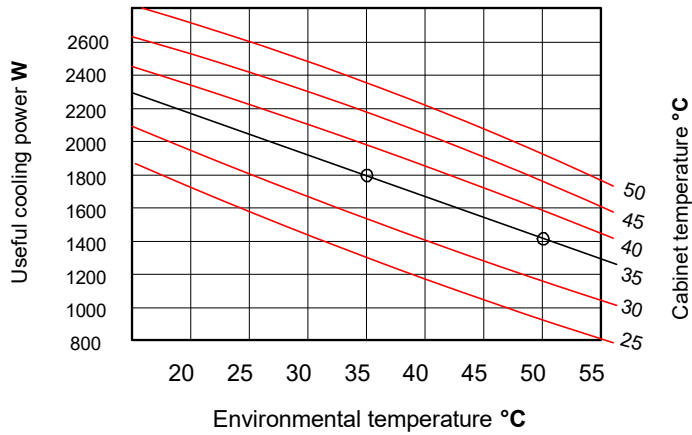
1. Installation, use and maintenance manual	3. Condensate draining kit that consisting:
2. Installation kit that consisting:	
<ul style="list-style-type: none"> • trheaded studs, nuts, washers • sealing gasket • lifting eyebolts 	<ul style="list-style-type: none"> • Elbow hose connector • drain pipe
	4. Test certificated
	5. Warranty certificated

OPTIONAL EQUIPMENT	Item code
Subframe for semi-recessed installation 110 mm. RAL7035 painted	PAI 104111007
Optional accessory for signaling the cooling circuit low pressure alarm	PAF208009-1041
Basket to containing the filters for the filtration of the condenser cooling ambient air RAL7035painted	104122D107
Dust filter septum to filtering environ air of condenser cooling	050100-0415-0315-012
Oil resistant filter septum in aluminium sock to filtering environ air of condenser cooling	050320-0415-0315-010

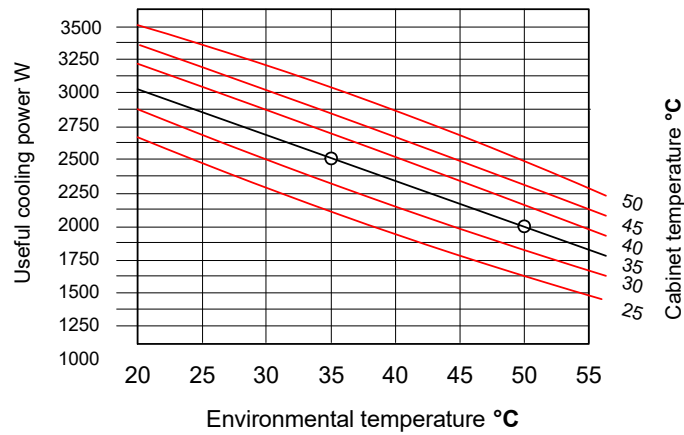
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REFRIGERATING POWER DIAGRAMS DIN 3168

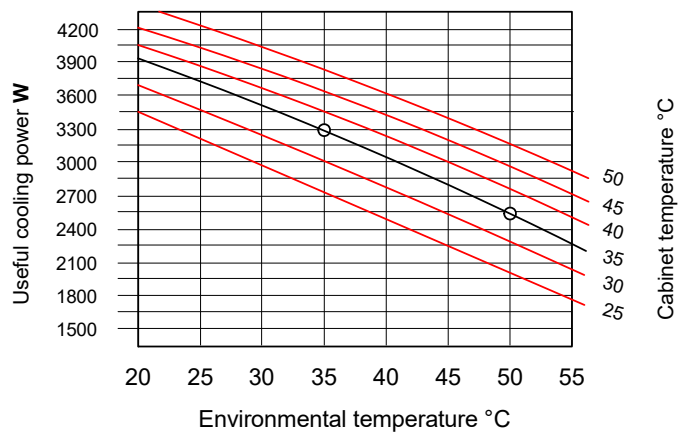
mod. ODR_4218



mod. ODR_4225



mod. ODR_4333



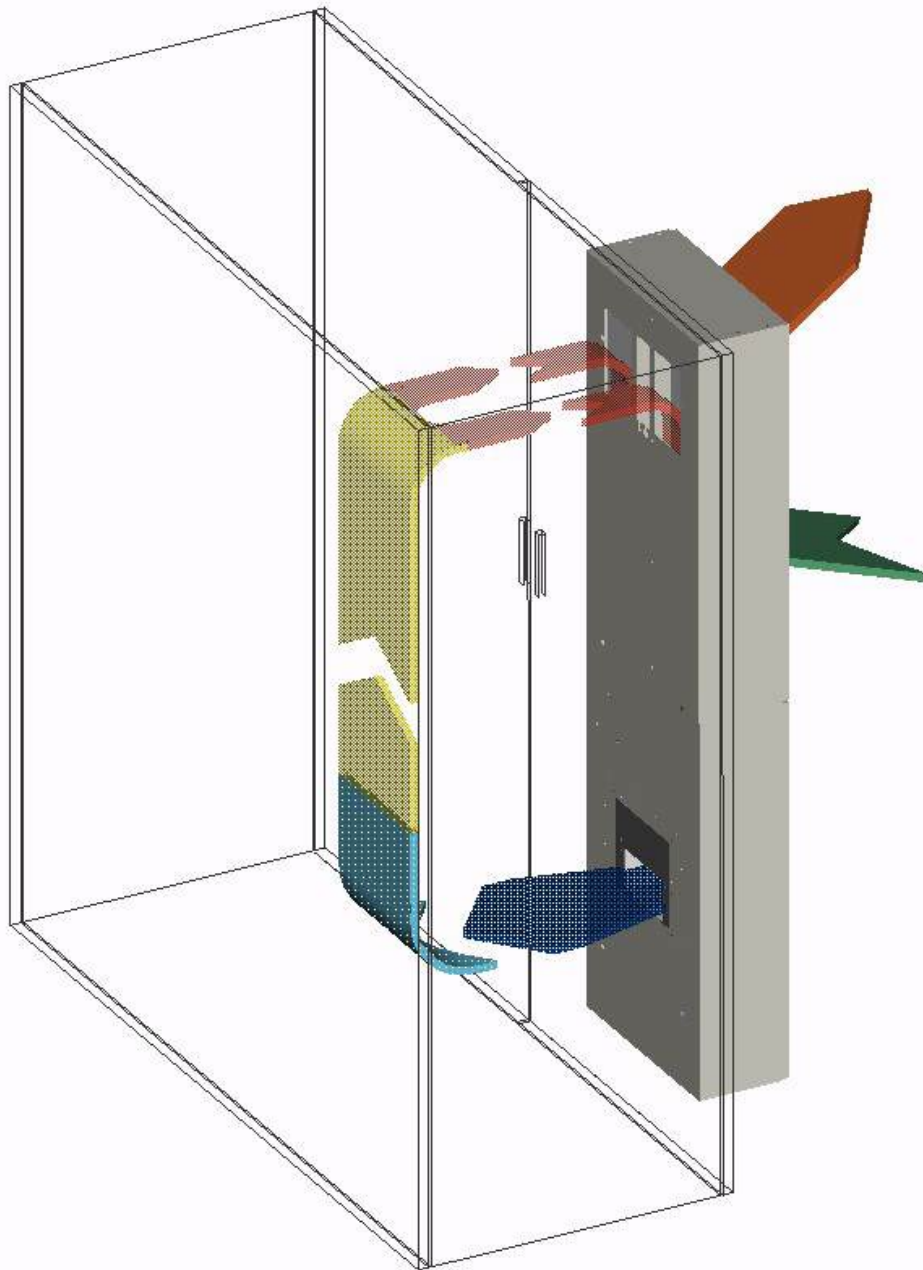
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VENTILATION FLOWS:

The large distance between the panel's ventilation openings ensures uniform temperature distribution, preventing the formation of heat pockets.

The flow of air expelled from the condenser, directed upwards, does not disturb the personnel working near the equipment.

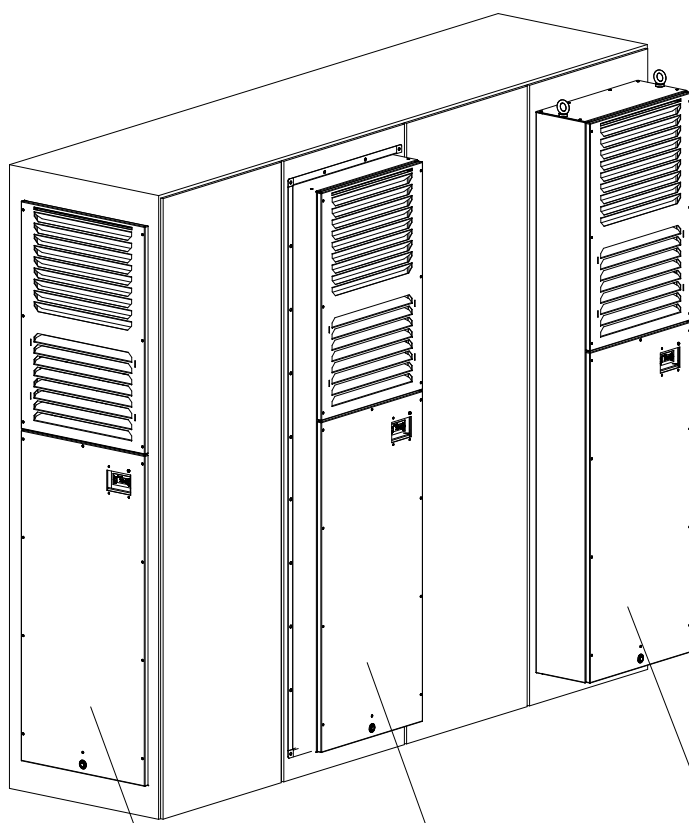
The room air intake grill, removable by click, is designed to accommodate a filtering septum



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OVERALL DIMENSIONS ACCORDING TO THE TYPE OF INSTALLATION:

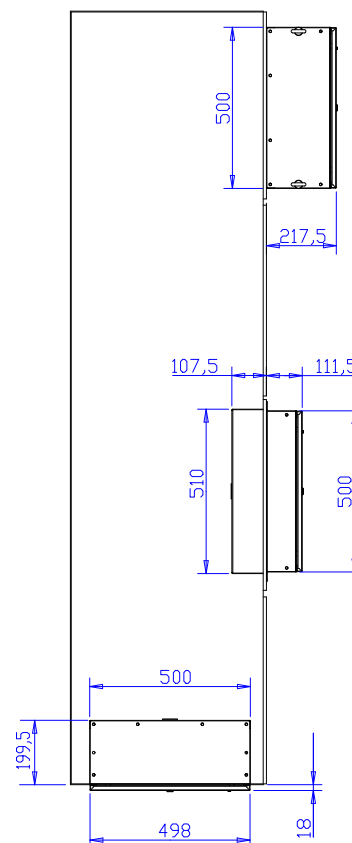
Installation	External	Internal
STANDARD – TOTALLY OUTSIDE THE CABINET	220	-----
STANDARD TOTALLY RECESSED IN THE CABINET	20	200
OPTIONAL SEMIRECESSED WITH CARTER PAI 4233-100	112	108



Standard version fully recessed in the cabinet

With casing accessory code PAI1041-110 cashed 110 mm into cabinet

Standard version completely outside of the cabinet



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STANDARD VERSION - OUTSIDE THE CABINET INSTALLED

ODR series - IP65

Technical drawing showing the ODR series cooling unit. The front view shows a unit with a width of 1800 mm and a height of 500 mm. The side view shows a depth of 200 mm. A lifting eyebolt is located 15.5 mm from the top edge and 2 mm from the side edge. The top view shows the internal components, including the condenser coils and the discharge pipe fitting. The unit is shown installed inside a cabinet, with a red arrow indicating 'hot air suction' and a blue arrow indicating 'cooled air delivery'.

Condensate discharge pipe fitting

Standard air conditioner totally recessed inside the cabinet
no specific accessory is required

Disegno N° :	Gorlago li: 08/02/2023	Mod. ODR_4218 - ODR_4225 - ODR_4233	S.I.M. Engineering s.r.l.
Sostituisce il N° :	Disegnato da: Rovelli	totally inside the enclosure mounting	Via B. Colleoni 35-37 - 24060 Gorlago (BG) - Italy
Sostituito dal N° :	Approvato da:		Tel +39 035 88 26 34 - Fax +39 035 482 11 46
	Materiale: Spessore: Verniciatura:		
	Formato : A3 SCALA : 0,100		

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OUTSIDE THE CABINET INSTALLED DESCRIPTION AND CUT-OUT TEMPLATE

Outside the enclosure mounting

Template for windows and fixing holes cutting

IP65 - ODR series

Condenser hot air discharge grid in the environ

Window hot air suction from the cabinet and connector for power supply and signals wiring cabling

Access window to the digital electronic thermostat

Air intake grid from the environment for cooling the condenser

Cooled air - delivery window into cabinet

Condensate drain pipe fitting

nr 13 holes ϕ 9

Sealing gasket

Window of colded air delivery into cabinet

Lifting eyebolts

Wago 9 poles quick connector to connect the power supply and signals

Hot air suction window from the cabinet

Window of colded air delivery into cabinet

Disegno N° :
Sostituisce il N° :
Sostituito dal N° :

Formato : A3
SCALAO,100

Materiale:
Spessore:
Verniciatura:

Gorlago li: 28/03/2023
Disegnato da: Rovelli
Approvato da:

NOTE: Outside the enclosure mounting
mod. ODR_4218 - ODR_4225 - ODR_4233

S.I.M. Engineering s.r.l.
Via B. Colleoni, 35-37 - 24060 Gorlago (BG) - Italy
Tel +39 035 89 2634 - Fax +39 035 482 11 45

COOLING UNIT FOR OUTDOOR - ODR series – models 4218 - 4225 - 4233

STANDARD VERSION - INSTALLED TOTALLY RECESSED INSIDE THE CABINET

ODR series - IP65

Condensate discharge pipe fitting

Lifting eyebolts

1800

500

15.5

2

200

hot air suction

cooled air delivery

Standard air conditioner totally recessed inside the cabinet
no specific accessory is required

Disegno N° :	Formato : A3	Gorlago li: 08/02/2023	S.I.M. Engineering s.r.l.
Sostituisce il N° :	SCALA: 0,100	Disegnato da: Rovelli	Via B. Colleoni, 35/37 - 24060 Gorlago (BG) - Italy
Sostituito dal N° :		Approvato da:	Tel +39 035 88.26.34 - Fax +39 035 482.11.45
		<p>mod. ODR_4218 - ODR_4225 - ODR_4233 totally inside the enclosure mounting</p>	
		<p>Materiale: Spessore: Verniciature:</p>	

