

metropolitan®



**Invisible Air Conditioner
without Out Door Unit**

metropolitan

Invisible Air Conditioner without outdoor unit

Heating
Pump

A/A Class



Powerful and fast air conditioning Easy to install



Metropolitan is innovative mono block heating pump especially studied for total outdoor invisibility and very low price .

Is specially used for building where is necessary to respect building decorum , or in the down town , where local law prohibit outdoor condensing unit , and every where outdoor decorum is installation priority .

Metropolitan is specially studied to replace Window machine inside container living .

Metropolitan , is air conditioner without outdoor unit , studied to have maximum comfort all the season .

Metropolitan , is suggested for temperate and cold climate area , can work well supplying good heating performance in heating pump mode in the medium season.

Because no need gas connection , this machine should be a good solution for professional installer to solve specific problem and also for not qualified installer because no need license of the refrigeration to install it .

Metropolitan The invisible air conditioner.



Perfect Outdoor looking

Metropolitan is especially suggested where not possible to install , outdoor condensing unit .

- Down town
- Historical Building
- Building decorum
- Professional installation
- Container living



Flexible outdoor grill (optional)

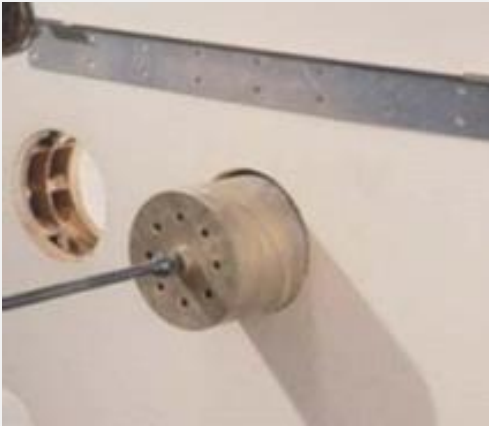
Metropolitan has flexible outdoor grill , for easy installation from inside room . This is useful for installation where outdoor access is denied .

Perfect look and perfect decorum for your building

Invisible outdoor grill supplied for series

Invisible outdoor grill , the installer can paint with wall color to make it totally invisible because this grill will be open from the condenser air flow .





Easy and fast installation

Metropolitan no need license of the refrigeration to be installed . Is necessary to drill with specific tooling , two holes , 160 mm diameter in the wall .

The tooling to make 160 mm hole is easy to find in the market everywhere

Basic Design is White color , but under required the factory can develop customized design



Grey Body

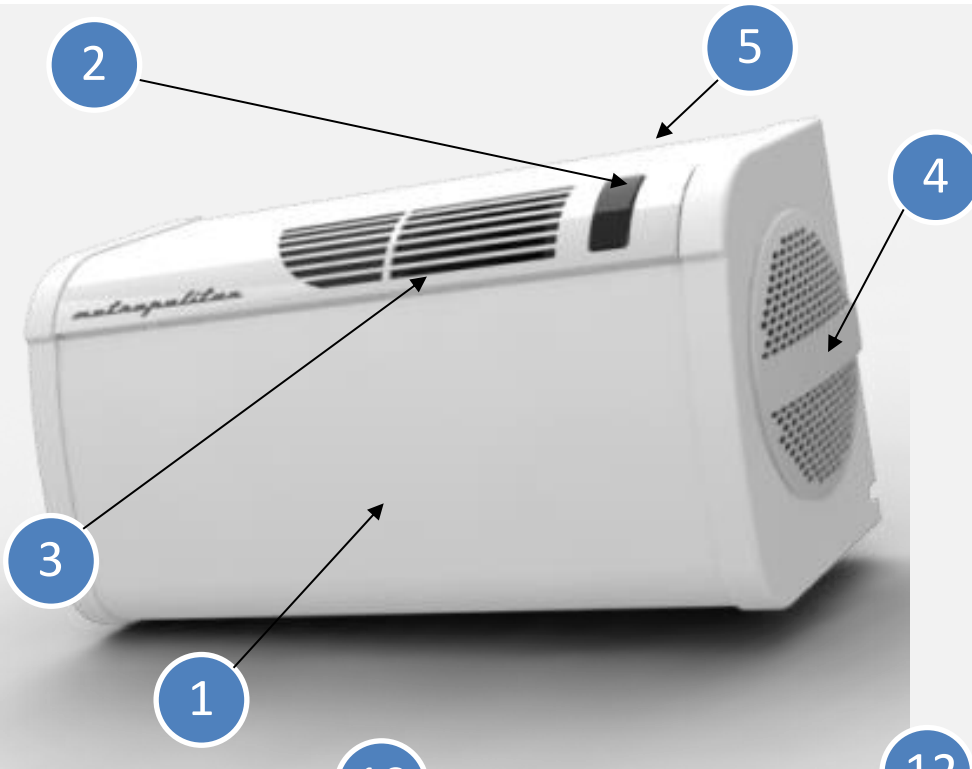


Standard White

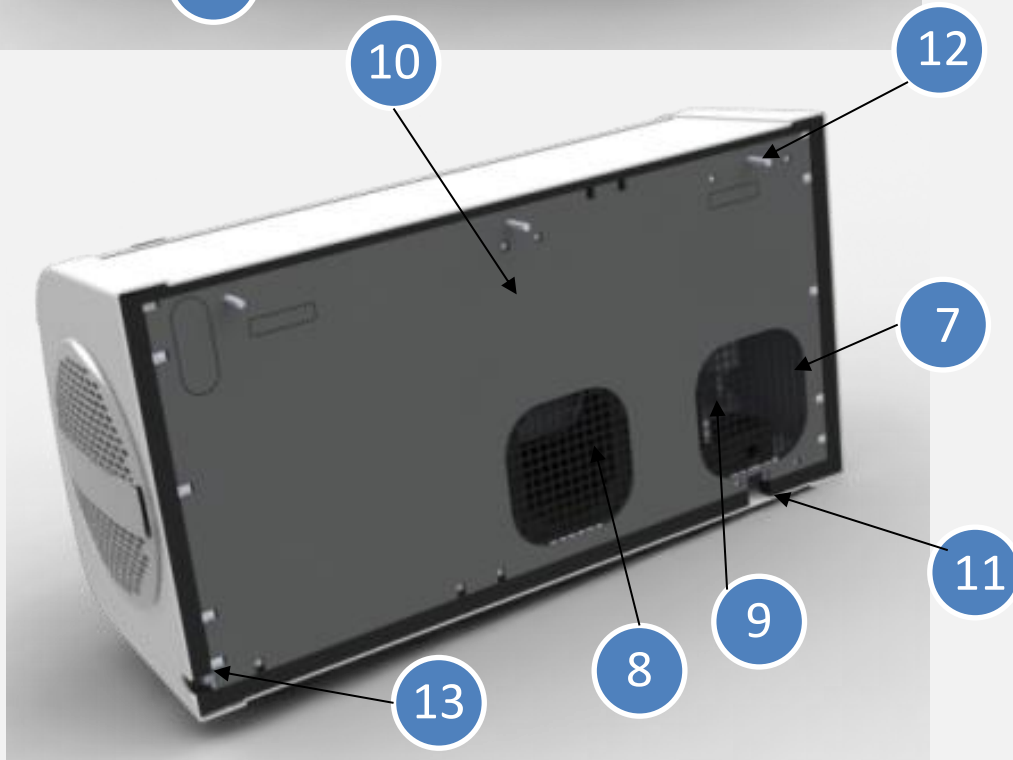


Wi-fi device and App

With this optional you can manage your machine with wifi and App from your smartphone .



1. Frontal panel in solid white ABS
2. Function display
3. Outlet indoor air
4. Inlet air , filter , carbon filter optional
5. Solid structure in galvanized painted steel



7. Inlet air
8. Outlet air
9. EPP structure to adsorb vibration , noise and max durability for no corrosion and no rust
10. Anti-vibration sponge
11. Two option water discharge
12. Three special anchor to fix the machine
13. Power cable side

Standard washable filter and Optional Carbon filter

Standard machine is supplied with washable filter anti-dust . On required is possible to supply active carbon filter or catalytic filter to clean air from smell , odors and smoke



Remote control

Easy and intuitive remote control for access to all machine function . Through this remote control is possible to activate timer function and weekly program .



Display Function

Inside display , there are LEDs to show all machine function

- Heating mode
- Cooling mode
- Fan mode
- Dry mode
- Alarm machine

Solid and strong metallic outlet

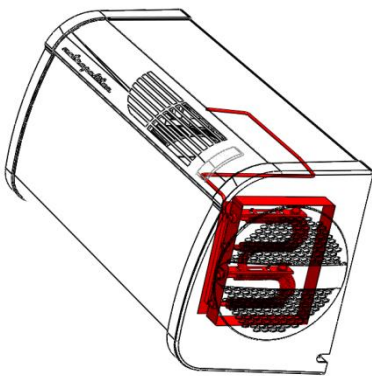
Machine is studied easy and strong for installation in B&B and modular building application where worker or student don't take care about product



Double water discharge option

The machine can discharge water through two possibility . One inside room or with pipes connected inside the big hole . This solution (see side image) is appreciate where not possible to make the third holes in the wall .

Innovative



Additional PTC heater

12 HP is supplied with 1000 PTC heater to reinforce heating power when out door temperature is very low .

10 HP : this is accessory optional

On required is possible to supply 2000 PTC heater



Innovative

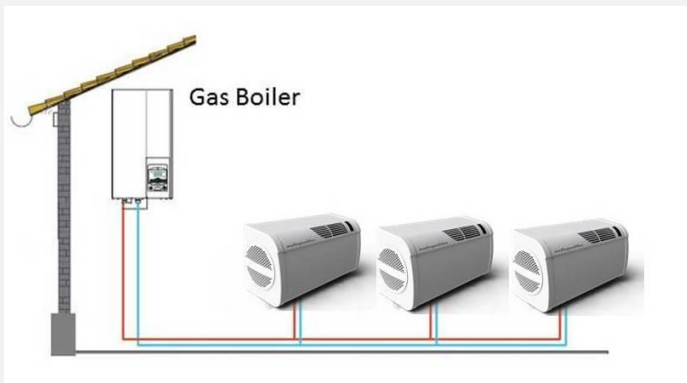
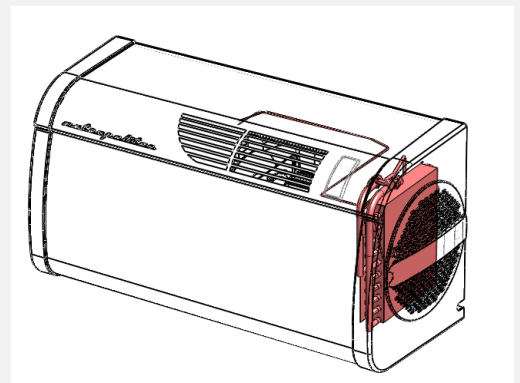
Replace Traditional radiator

In Europe is very common radiator installed below the window . The new Metropolitan thanks to the Optional accessory , an additional water exchanger , could be installed in one minutes from installer during the machine installation . In this way , the machine can replace radiator below the window .

Easy to add water exchanger

The water exchanger , is easy to install and can supply with traditional water temperature supplied from Boiler (50 °C) more than 2,0 Kw in heating mode .

Thanks to this accessory the machine can have higher performance all the season also when outdoor temperature is very low .



Energy saving all season

- A class Air conditioner in summer
- A Class Heating pump during middle season .
- Gas Boiler performance with high efficiency fan coils during strong winter higher than HP COP performance .

Machine work range from – 20 °C to 52 °C outdoor

Window contact

Electronic on board has window contact , studied for Hotel guest to switch OFF the machine and assure minimum energy lost for Hotel owner .

When the window will close machine restart again with original mode .

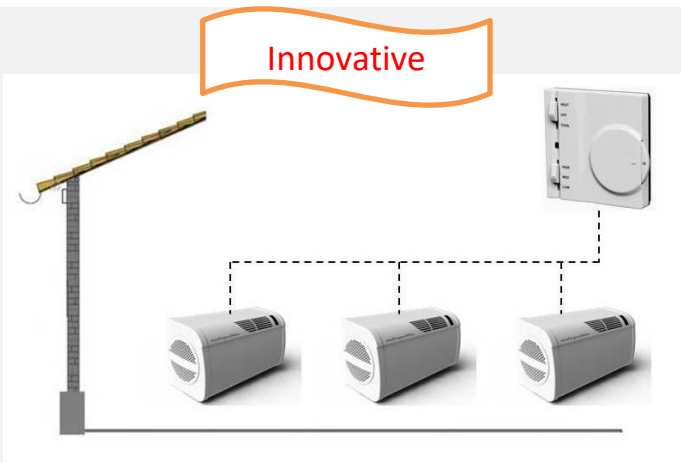


Wall pad to manage single machine or machine net

Easy and intuitive wall pad to manage or single machine (like Hotel room) or net machine (like small office or apartment). With the wall pad is possible to manage Cooling or Heating mode and three fan speed .



Innovative



Net control

With wall pad is possible to manage big machine net (more than 50 machines) and long distance net (more than 50 meters) . This accessory could be interesting to divide the zone .

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360 ° Outlet Grill Optional

Interesting optional accessory to supply 360 ° air diffusion .
This accessory is made from 4 round grill , and could be oriented in independent way .
In this way is possible to direct the air flux where is required for your perfect comfort .



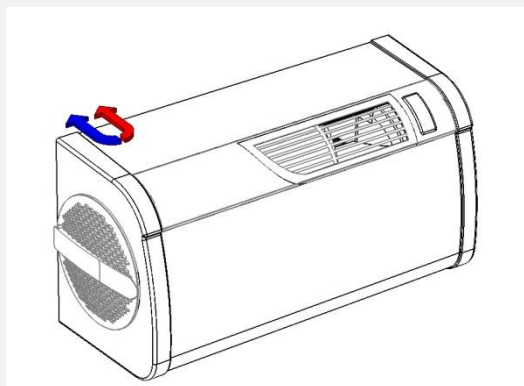
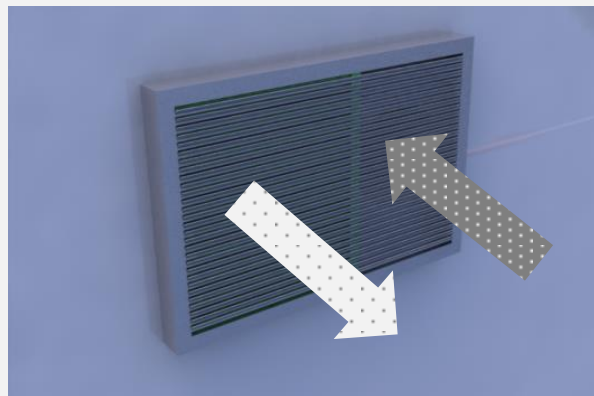
Very dirty container living area



OUTDOOR Grill + Additional Filter is Optional accessory

For very dusty area , where is located the container living , the Outodoor grill + additional washable filter can preserve outdoor exchange life and machine performance for long time .

The filter used could be washable filter or disposable filter



Modular Air Fresh Intake

Very useful for Hotel application , Air Fresh intake can regenerate indoor quality air and reduce CO2 .

Air Flow could be 40 m3/h or 80 m3/ following the room use for two or four person .

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Installation suggested



Container living – Modular building

Metropolitan is the best solution for price and easy installation to compare and wins against Window A/C , and Split A/C for this kind of application .



House in down town

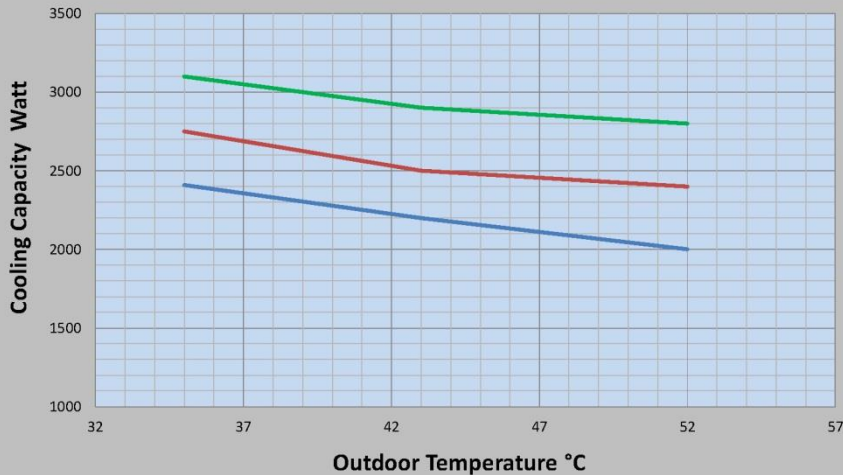
Many condominium and municipality regulations of every city strictly restrict the installation of outdoor units on building facades, particularly in historical centres in cities This surely limits your potential sales and earnings with traditional split .



B&B

Metropolitan is the best solution for B&B and Holiday house , where is necessary to install air conditioner and save cost

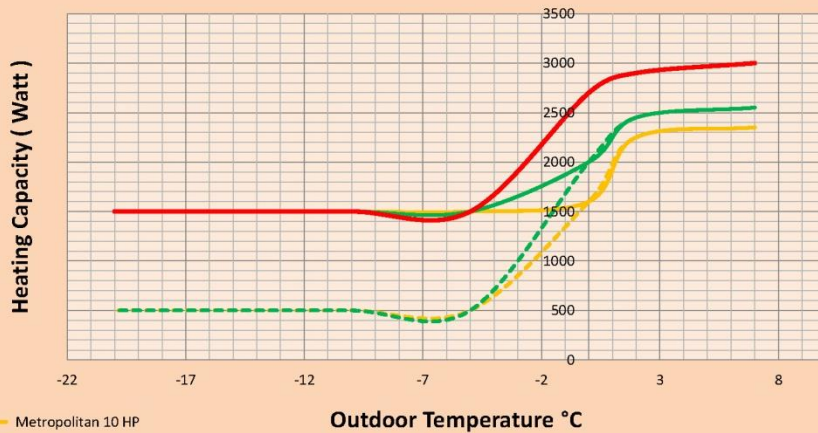
Metropolitan Cooling test Indoor Temperature 27 °C



— Metropolitan 10 HP
— Metropolitan 12 HP
— Metropolitan 12 HP INVERTER

Conform to Erp 2015
Testing criteria Indoor T°C and Outdoor T°
Cooling (1) DB 27°C - WB 19°C DB 35°C - WB 24°C

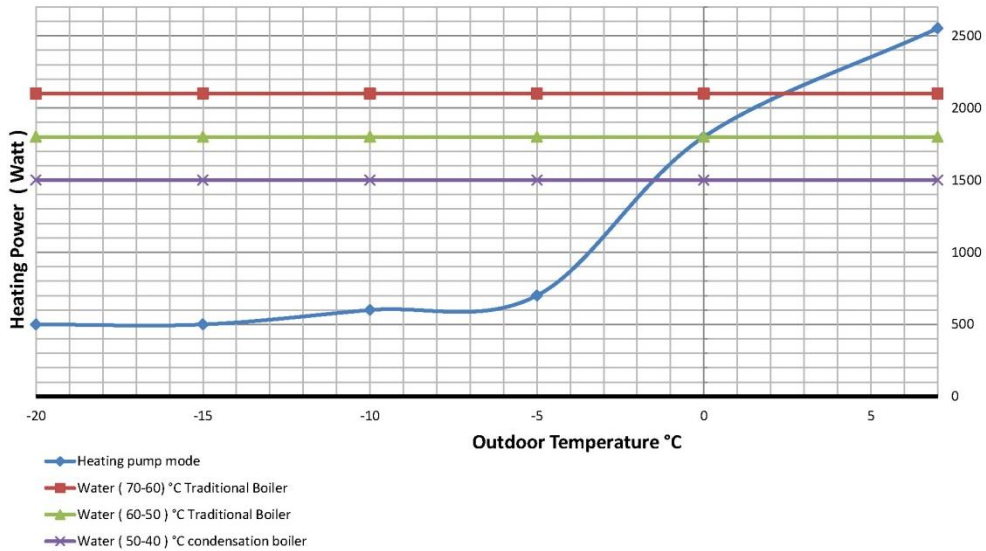
Metropolitan Heating Pump Test Indoor temperature + 20 °C



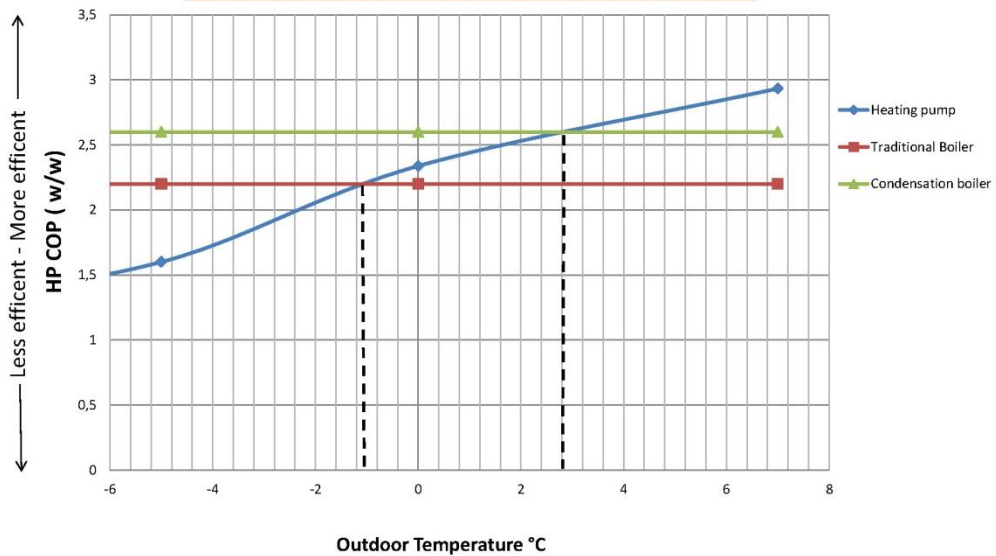
--- Metropolitan 10 HP
--- Metropolitan 10 HP + Optional Heater "
--- Metropolitan 12 HP
--- Metropolitan 12 HP + Optional Heater "
— Metropolitan 12 HP INVERTER

Conform to Erp 2015
Testing criteria Indoor T°C and Outdoor T°
Heating (2) DB 20°C - WB 15°C DB 7°C - WB 6°C

Optional Water Exchanger test in Heating Mode 20 °C Indoor Temperature



Break Even Point (Heating pump - traditional boiler - condensation boiler)



Dimension

10 HP / 12 HP

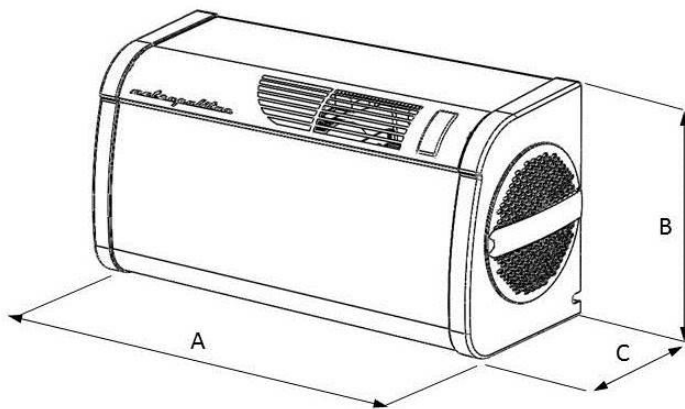
Dimension A (mm)	840
Dimension B (mm)	430
Dimension C (mm)	330
Net weight (Kg)	41 / 42
Gross weight (Kg)	46 / 47

Metropolitan the best solution for old house , for soft renovation house to increase one House energy class .

Thanks to HP device and air fresh system , this machine is especially studied for house renovation where EPS insulating is fixed inside .

The machine is the perfect solution for installation in :

- Down Town
- Historical Building
- Flat in the big building
- House Decorum
- Hotel and B&B
- Holiday village
- Container living



Metropolitan , invisible Heating Pump



Technical Data	10 HP	12 HP
NOMINAL COOLING CAPACITY (WATT)	2,410 W	2750 W
MIN AND MAX COOLING CAPACITY (WATT)		
NOMINAL HEATING CAPACITY (WATT)	2,350 W	2550 W
MIN AND MAX HEATING CAPACITY (WATT)		
ADDITIONAL PTC HEATER 1000 WATT	OPTIONAL	1000 watt
INPUT WATT (Cooling/Heating)	862 / 750	1050 / 800
EER CLASS (W/W)	2,79 (A)	2,61 (A)
COP CLASS (W/W)	3,10 (A)	3,10 (A)
ROOM AIR VOLUME (QM/h)	400	450
FAN SPEED SETTING	3+AUTO	3+AUTO
DEHUMIDIFIATION CAPACITY (LITRES / H)	0,90	1,05
NOISE LEVEL INDOOR SPL (MIN-MAX) (dB / A)	27-38	27-41
NOISE LEVEL INDOOR LWA (MAX) (dB / A)	53	57
NOISE LEVEL OUTDOOR (dB / A)	43-50-52	43-50-52
POWER SUPPLY	230V/50Hz,	230V/50Hz,
REFRIGERANT TYPE	R32 or R410-a	R32 or R410-a
DIMENSIONS WIDTH*HEIGHT*DEPTH (mm)	840 x 430 x 330	840 x 430 x 330
PACKINGS WIDTH*HEIGHT*DEPTH (mm)	956 x 532 x 400	956 x 532 x 400
SINGLE MACHINE WEIGHT (NET/GROSS) (Kg)	41/46	42/47
EUROPALLETS 80 x 120 (6 PCS) Dimension CM	80 x 120 x 174	80 x 120 x 174
PALLETS + 6 MACHINES WEIGHT	301 Kg	307 Kg
WALL HOLE DIAMETER	162 mm	162 mm
OUTDOOR WORKING CONDITION	+52 / -15 °C	+52 / -15 °C
CERTIFICATION (CE and RoHs)	CE-LVD-EMC	CE-LVD-EMC

Conform to Erp 2015

Testing criteria Indoor T°C and Outdoor T°

Cooling (1) DB 27°C - WB 19°C DB 35°C - WB 24°C

Heating (2) DB 20°C - WB 15°C DB 7°C - WB 6°C

Water Performance – Indoor T°C DB 20°C - WB 15°C DB / Water 70 °C IN and 60 °C Out for different water T°

see performance graph in the other page .

Invisible Air Conditioner without outdoor unit

Technical Data	10 HP	12 HP
FUNCTIONS		
COOLING	YES	YES
HEATING PUMP	YES	YES
DHEUMIDIFIER	YES	YES
TIMER	YES	YES
AUTO-RESTART	YES	YES
WINDOW CONTACT	YES	YES
REMOTE CONTROL	YES	YES
DISPLAY FUNCTION ON BOARD	YES	YES
WATER DISCHARGE FROM BIG PIPE IN COOLING AND HEATING MODE	YES	YES
SECOND OPTION WATER DISCHARGE DRAINAGE PIPE INTERNAL AMBIENT	YES	YES
WATER PUMP	OPTIONAL	OPTIONAL
AIR FRESH INTAKE	YES	YES
ACCESSORY KIT		
FLEXIBLE PIPES 500 mm WALL DEEP	2 PCS	2 PCS
PAPER INSTALLATION MAP TEMPLATE	YES	YES
EXTERNAL INIVIBLE GRILL	2 PCS	2 PCS
DRAINAGE WATER PIPE	YES	YES
EXTENSION WATER PIPE	YES	YES
INSTRUCTION INSTALLATION MANUAL	YES	YES
EXTERNAL FLEXIBLE GRILL (Optional)	Optional	Optional
OUTDOOR GRILL + ADDITIONAL FILTER	Optional	Optional
INDOOR OUTLET GRILL 360° AIR DIFFUSION	Optional	Optional
WATER EXCHANGER 2000 WATT	Optional	Optional
Wi-Fi device and App	Optional	Optional
WALL PAD	Optional	Optional
ACTIVE CARBON FILTER/CATALYTIC FILTER	Optional	Optional
CONTAINER LOADING (20'/40'GP/40'HC)	136 / 280 / 350	136 / 280 / 350

Important Note : Manufacturer can change Technical information and data to improve product without notice

ZYMBO ITALIA

ZYMBO ITALIA srl

Via Levrini 13
25080 Padenghe sul Garda (Brescia) - Italy

Tel : (+39) 030-9907908
E-mail : technical.consultant@zymbo.eu
Web : www.zymbo.eu

P.IVA 038357900985
REA 567017