

1S202111



# Large Split Side Discharge DC Inverter Series

R410A 50Hz



**Midea Building Technologies Division**  
**Midea Group**

Add.: Midea Headquarters Building, 6 Midea Avenue, Shunde, Foshan, Guangdong, China

Postal code: 528311

mbt.midea.com    www.midea-group.com



Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document.

# 2022

MAKE A BEAUTIFUL TOMORROW

# Midea MBT

Midea MBT(Midea Building Technologies) is a key division of the Midea Group, a leading provider of comprehensive solutions of intelligent building, involving energy sources, elevators, control systems, and heating, ventilation & air conditioning. Midea MBT has continued with the tradition of innovation upon which it was founded and emerged as a global leader in the HVAC and building management industry. A strong drive for advancement has resulted in an extensive R&D department that has placed Midea MBT at the forefront of a competitive edge. Through these independent projects and joint-cooperation with other global enterprises, Midea has supplied thousands of innovative solutions to customers worldwide.

Several production bases are situated on Shunde, Chongqing, Hefei, and Italy.

MBT Shunde: 38 product lines focusing on VRF, Split Products, Heat Pump Water Heaters and AHU/FCU.

MBT Chongqing: 14 product lines focusing on Water Cooled Centrifugal/Screw/Scroll Chillers, Air Cooled Screw/Scroll Chillers and AHU/FCU.

MBT Hefei: 11 product lines focusing on VRF, Chillers and Heat Pump Water Heaters.

Clivet S.p.A: 50,000m2 workshop in Feltre and Verona, covering products such as ELFO system, hydronic, WHLP, packaged, split and close control and so on.





# Midea Global Spare Parts Center

The global spare parts center provides high quality and fast spare parts supply. Midea online system (<https://tsp.midea.com>) can query and purchase spare parts with one click, further shortening the supply time of spare parts.



- Regional Spare parts center
- Shared Spare parts inventory

## Contents

- » 09 Introduction
- » 10 General Features
- » 13 Duct Indoor Unit Series
- » 19 Floor-standing Indoor Unit Series
- » 23 Dimensions
- » 24 Controllers



# Introduction

Midea split type air conditioners are designed and manufactured to meet the requirements of the home, office, hotel and others public occasion use. The units are completely assembled, internally wired, charged outdoor unit with refrigerant at the factory.

## Large Split Side Discharge DC Inverter Series

Application	Power Supply	Series	Nominal Cooling Capacity (kBtu/h)				
			38	48	76	96	
R410A T1 (DC Inverter) (Heat Pump)	220-240V, 1Ph~,50Hz	Indoor units	Medium static pressure duct indoor unit				○
			High static pressure duct indoor unit				○
			Floor standing indoor unit				○
	380-415V, 3N~,50Hz	Outdoor units				○	
R410A T1 (DC Inverter) (Cooling Only)	220-240V, 1Ph~,50Hz	Indoor units	Medium static pressure duct indoor unit			○	○
			High static pressure duct indoor unit			○	○
			Floor standing indoor unit			○	○
		Outdoor units			○	○	

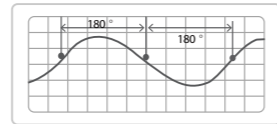
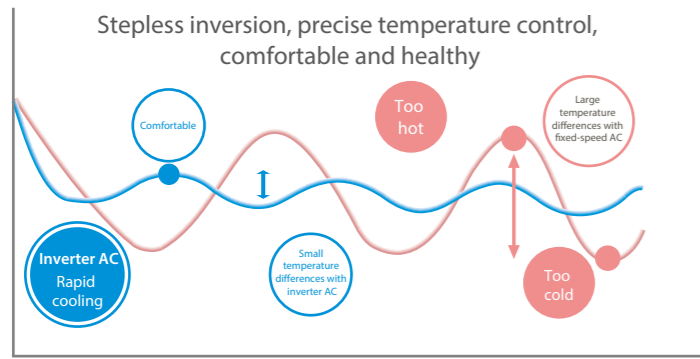
# General Features



# General Features for Large Split Side Discharge DC Inverter Series Outdoor Unit

## DC inverter technology, precise temperature control

The DC inverter compressor system reaches full load rapidly providing less temperature fluctuation and improved living environment.



**DC inverter technology**  
New generation 180° sine wave drive technology, higher energy efficiency



**Compressor seamless inverter main board**  
Wider inverter range control



**High-precision EXVs**  
Each EXV part achieves **480 pulse rate** to precisely adjust refrigerant flow



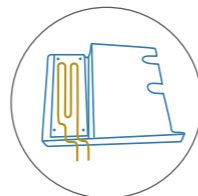
**High-precision temperature sensor**  
It can react to temperature fluctuations with a precision of **0.5°C**.

## Refrigerant cooling PCB

The outdoor unit uses refrigerant cooling technology to cool the electric control box guaranteeing the stable and safe running of the control system.

It improves the high temperature cooling capabilities, resulting in a system that can provide powerful cooling in 55°C environment, with increased high temperature cooling efficiency of 15~20%, rapidly cools in high temperature environments, with a temperature drop rate that is 5-10% faster than that of conventional ACs.

\* The above data was cited from a nationally accredited laboratory.



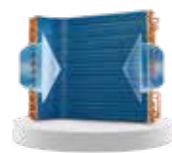
Liquid cooling is more efficient, allowing it to function in high temperature environments and making it more adaptable to high-temperature urban environments.

## Brand name components, smart manufacturing, professionalism, and premium quality

Combines a variety of multi-core components such as brand name DC inverter compressors, high efficiency heat exchanger, and a high functionality motor. This ensures that the system is high quality, energy-saving, quiet, and durable.



**Compressor of renowned brand**  
Utilizes brand name high-efficiency DC inverter compressor for powerful operation that is more energy efficient and stable.



**Efficient Heat Exchanger**  
Features an overlapping multiple-outlet route design, distributing the flow of air more evenly, delivering higher heat transfer and increased efficiency.



**High functionality motor**  
Utilizes new manufacturing technology and materials to effectively mitigate wear and tear and improve operating efficiency.



**Quiet fan blades**  
The structure of this unit's fan blades has been optimized using CFD technology, reducing the electric motor's energy consumption and operating noise.

## Silence technology ensures a quiet operating environment

To implement quieter running of IDU and ODU, we used advanced technologies such as CFD and FEM, researching the sources of component vibration in air conditioning systems and optimizing the fan's blades, resulting in an air conditioning unit that creates a more comfortable and harmonious work environment for customers.



- Newly-designed air guide ring
- Newly-designed air outlet grille
- Motor mount features a vibration-reduction design



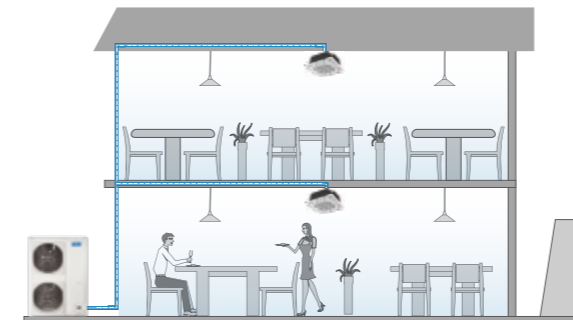
- New-generation DC inverter compressor with high performance and low noise
- Compressor soundproof enclosure processing
- Vibration-reduction design of 3D simulation pipe



- Large vibration-reduction axial fan
- Refrigerant flow muffling
- Vibration-reduction outer casing for outdoor unit

## A long-pipe high-drop design allows flexible installation and optimizes space

A long-pipe high-drop design allows users to flexibly select the installation location, optimizing the use of space.



Maximum pipe length  
**70m**

Maximum level difference between IDU and ODU  
**30m**

## Creates a small footprint, saving installation space

The outdoor unit has a small footprint with only 0.333m<sup>2</sup> for a 8/10HP cooling only unit, which can significantly save installation space.



Takes up a small footprint

## Matchable Table

### One drive one system



Medium static pressure duct



High static pressure duct



Floor standing unit

# Duct Indoor Unit Series



## Duct Indoor Unit

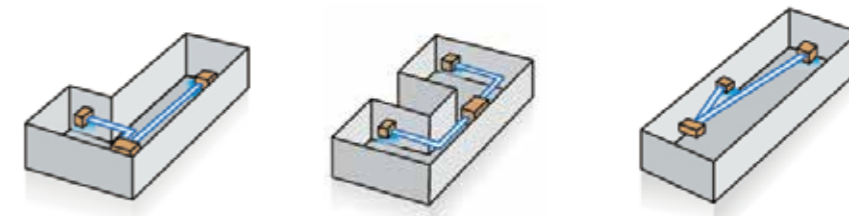


### Convenient installation

- ❖ Compact design. Concealed installation without floor space requirement.
- ❖ Hidden in the ceiling, unit installation is not hindered by the location of lighting fixtures or room structure.
- ❖ Air inlet & outlet flange are standard for easy duct connection.
- ❖ Easy maintenance through the inspection port.

### Free air duct design

- ❖ Multi diffusers from one indoor unit, air-conditioned multi rooms at the same time.
- ❖ Three speeds of air supply can be chosen via controller.
- ❖ The indoor unit is suitable for various applications where there are many rooms or halls, such as restaurant, concert halls and hotels.
- ❖ Flexible duct design for different room styles.



Auto Restart  
Function



Auto  
Defrosting



Independent  
Dehumidification



Timer



PTC Heater



Anti-Cold  
Air Function



Wired  
Controller



## Specifications

T1 Application  
DC inverter medium static pressure duct, heat pump  
DC inverter high static pressure duct, heat pump

MTA-96HWAN1  
MHA-96HWAN1



Model			MTA-96HWAN1	MHA-96HWAN1
Outdoor unit model / Quantity			MOUB-96HD1N1-R / 1	MOUB-96HD1N1-R / 1
Power supply			220-240V~, 1Ph, 50Hz	220-240V~, 1Ph, 50Hz
Cooling	Capacity	kW	28.00	28.00
	Input	kW	10.77	11.20
	EER	W/W	2.60	2.50
	SEER	W/W	3.90	3.80
Heating	Capacity	kW	31.50	31.00
	Input	kW	9.55	9.39
	COP	W/W	3.30	3.30
	HSPF	W/W	4.62	4.62
Max. power input		W	14000 (Whole unit)	14000 (Whole unit)
Max. current		A	29 (Whole unit)	29 (Whole unit)
Air flow (H)		m³/h	4400	4600
External static pressure		Pa	100Pa	50 ~ 200
Noise level (H)		dB(A)	55	55
Fan	Type	/	Centrifugal	Centrifugal
	Drive type	/	Direct	Direct
Coil		/	Copper tube and aluminum fin	Copper tube and aluminum fin
Controller		/	Wired controller	Wired controller
Refrigerant pipe	Liquid	mm	Φ9.53	Φ9.52
	Gas	mm	Φ22.2	Φ22
Dimension	Body (WxHxD)	mm	1462x462x797	1462x462x797
	Packing (WxHxD)	mm	1555x500x875	1555x500x875
Net / Gross weight		kg	85/94	90/99

### Notes:

1. T1 cooling capacity test condition: Outdoor ambient temperature: 35°C, indoor temperature 27°C DB / 19°C WB; refrigerant pipe length between indoor unit and outdoor unit is 7.5m.
2. Heating capacity test condition: Outdoor ambient temperature: 7°C DB / 6°C WB, indoor temperature 20°C DB / 15°C WB; refrigerant pipe length between indoor unit and outdoor unit is 7.5m.
3. Specifications are subject to change without prior notice for product improvement.

## Specifications

MOUB-96HD1N1-R



Model			MOUB-96HD1N1-R
Outdoor unit power supply			380-415V~, 3Ph, 50Hz
Max. power input		kW	12.4 (Outdoor unit)
Max. current		A	24.1 (Outdoor unit)
Noise level		dB(A)	60
Compressor	Type	/	Rotary
	Quantity	/	1
Rdfrigerant	Type	/	R410A
	Quantity	/	6kg
Fan type		/	Axial fan
Coil		/	Copper tube and aluminum fin
Refrigerant pipe	Liquid	mm	Φ9.52
	Gas	mm	Φ22
Ambient temperature	Cooling	°C	10~55
	Heating	°C	-15~27
Dimension	Body (WxHxD)	mm	1120x1558x528
	Packing (WxHxD)	mm	1270x1720x565
Net / Gross weight		kg	142/164

## Specifications

T1 Application  
 DC inverter medium static pressure duct, cooling only  
 DC inverter high static pressure duct, cooling only  
 MTA-96CWDN1  
 MTA-76CWDN1  
 MHA-96CWDN1  
 MHA-76CWDN1



Indoor unit model/ Quantity			MTA-96CWDN1	MTA-76CWDN1	MHA-96CWDN1	MHA-76CWDN1
Outdoor unit model / Quantity			MOUC-96CDN1-R/1	MOUC-76CDN1-R/1	MOUC-96CDN1-R/1	MOUC-76CDN1-R/1
Indoor unit power supply			220-240V, 1Ph~, 50Hz	220-240V, 1Ph~, 50Hz	220-240V, 1Ph~, 50Hz	220-240V, 1Ph~, 50Hz
Cooling	Capacity	kW	28.8	23.5	28.8	23.5
	Input	kW	13.9	11.2	14.4	11.5
	EER	W/W	2.07	2.1	2	2.04
	SEER	W/W	3.1	3.3	3.1	3.2
Max. power input		W	1000 (Indoor unit)	1000 (Indoor unit)	1200 (Indoor unit)	1200 (Indoor unit)
Air flow		m³/h	4400	4400	4600	4600
Standard external static pressure		Pa	100Pa (50-150pa)	100Pa (50-150pa)	150Pa (50-196pa)	150Pa (50-196pa)
Noise level		dB(A)	55/53/51	55/53/51	55/53/51	55/53/51
Fan	Type		Centrifugal	Centrifugal	Centrifugal	Centrifugal
	Drive type		Direct	Direct	Direct	Direct
Coil			Copper tube and aluminum fin			
Controller			Wired controller	Wired controller	Wired controller	Wired controller
Refrigerant pipe	Liquid	mm	Ø9.53	Ø9.53	Ø9.53	Ø9.53
	Gas	mm	Ø22.2	Ø22.2	Ø22.2	Ø22.2
Dimension	Net (WxHxD)	mm	1462x462x797	1462x462x797	1462x462x797	1462x462x797
	Packing (WxHxD)	mm	1555x500x875	1555x500x875	1555x500x875	1555x500x875
Net/Gross weight		kg	85/94	85/94	90/99	90/99

## Specifications

MOUC-96CDN1-R  
 MOUC-76CDN1-R



Outdoor unit model			MOUC-96CDN1-R	MOUC-76CDN1-R
Outdoor unit power supply			380-415V, 3Ph~, 50Hz	380-415V, 3Ph~, 50Hz
Max. power input	kW		14 (Outdoor unit)	14 (Outdoor unit)
Max. current	A		32 (Outdoor unit)	32 (Outdoor unit)
Noise level	dB(A)		62	62
Compressor	Type	/	Rotary	Rotary
	Quantity	/	1	1
Refrigerant	Type	/	R410A	R410A
	Quantity	Kg	3.9	3.9
Fan type / Drive type		/	Axial fan/Direct	Axial fan/Direct
Coil			Copper tube and aluminum fin	Copper tube and aluminum fin
Refrigerant piping size	Liquid	mm	Ø9.53	Ø9.53
	Gas	mm	Ø22.2	Ø22.2
Ambient temperature	Cooling	°C	10-55	10-55
Dimension	Body (WxHxD)	mm	978x1327x400	978x1327x400
	Packing (WxHxD)	mm	1082x1460x435	1082x1460x435
Net / Gross weight		kg	115/125	115/125

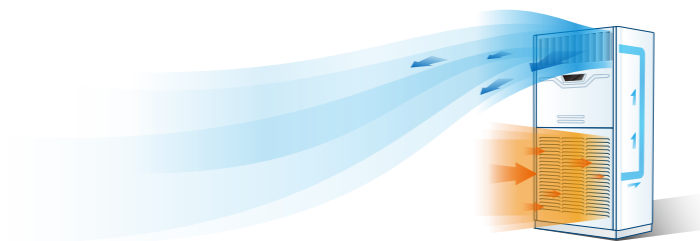
# Floor-standing Indoor Unit Series



## Floor-standing Indoor Unit



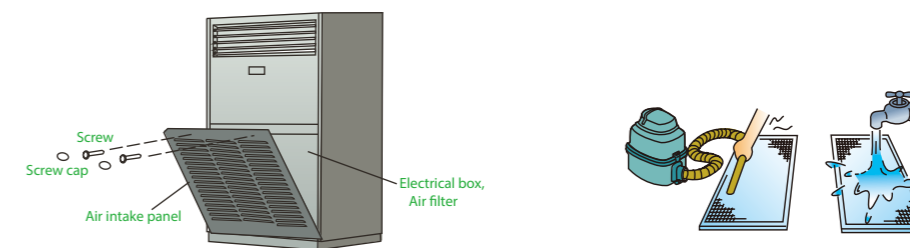
Strong wind, long distance air supply



Touch screen control



Washable inlet air filter



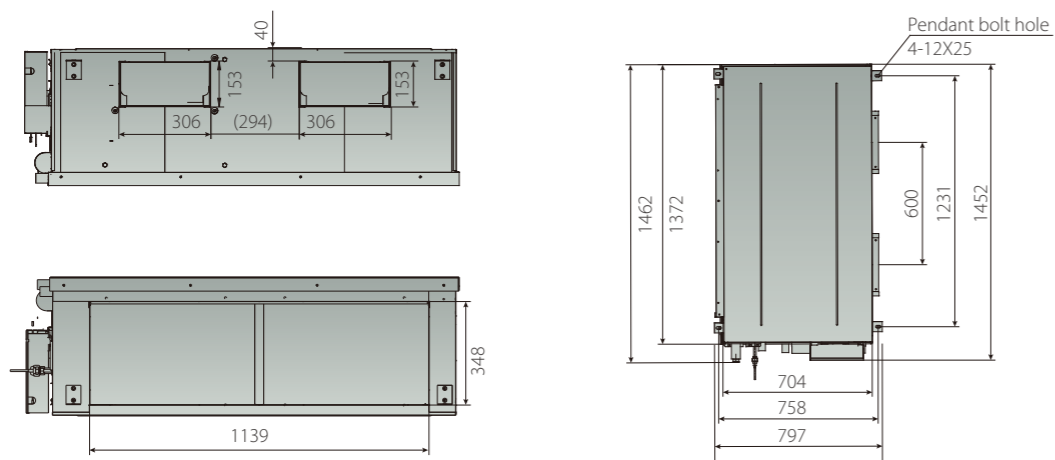
- Anti-Cold Air Function
- Auto Restart Function
- Auto Defrosting
- Independent Dehumidification
- Timer
- PTC Heater

Features: ■ Standard ■ Optional

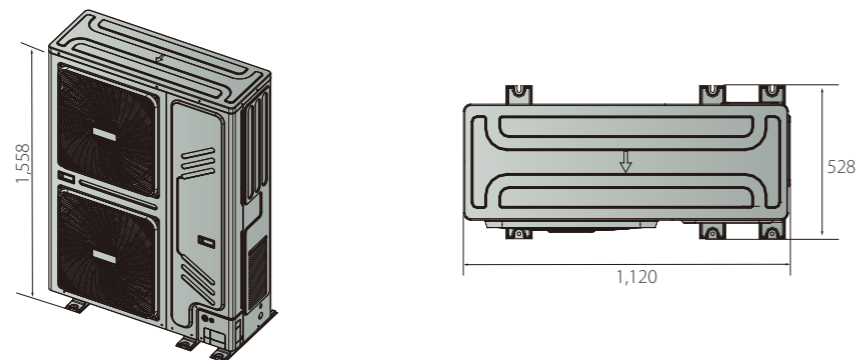


# Dimensions

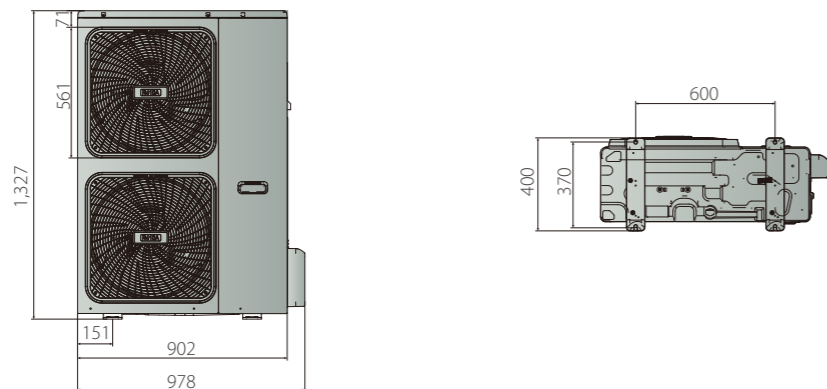
T1 application  
 Indoor unit: MHA-96HWAN1, MTA-96HWAN1, MHA-96CWDN1, MHA-76CWDN1, MTA-96CWDN1, MTA-76CWDN1  
 (Units: mm)



T1 application  
 Outdoor unit: MOUB-96HD1N1-R  
 (Units: mm)



T1 application  
 Outdoor unit: MOUC-96CDN1-R, MOUC-76CDN1-R, MOUC-96CDN1-C, MOUC-76CDN1-C  
 (Units: mm)



# Controllers



