



Quantum Series

High Static Pressure Duct



Midea Building Technologies Division
Midea Group

Quantum-HSPD-202509

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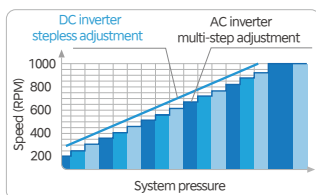
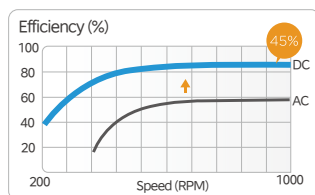
Midea is constantly developing and improving its products.

Please note that all the pictures in the document are for reference only. Actual products may vary.



Full DC Inverter Technology

The Outdoor units uses full DC inverter compressor to achieve high precision stepless speed adjustment according to system operation, and ensures that the system is always in optimum condition, operating more efficiently, more consistently and with less noise.



Wider frequency adjustment range



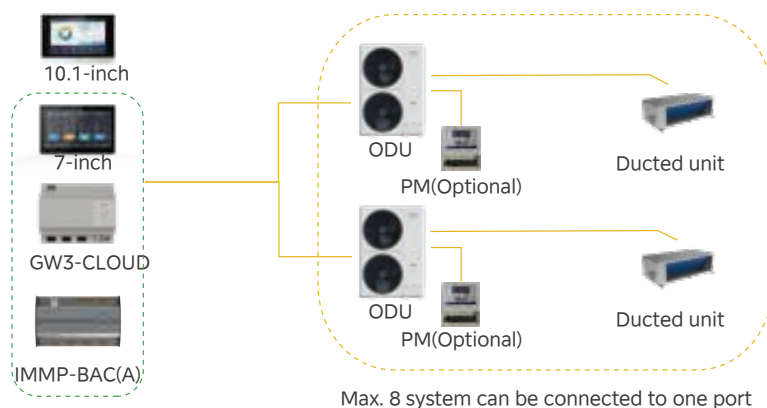
Faster cooling and heating



Higher energy efficiency

Multiple Control Solutions

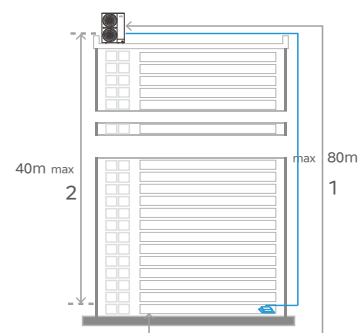
The outdoor unit can be connected to a centralized controller, or connected to a third-party management system through a BMS gateway.



Flexible Piping Design

The total piping length of the system can be up to 80m, the level difference between indoor and outdoor units can be up to 40m, making the system perfectly suitable for all buildings.

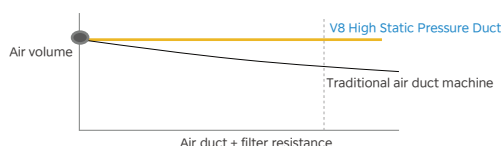
	Permitted value(m)	68~120 kBtu/h	150~250 kBtu/h
Pipe Length	Equivalent length between the farthest indoor unit and the outdoor unit(Actual)	60	80
Level difference	Level difference between IDU~ODU	Outdoor Unit Up	40
		Outdoor Unit Down	40



AIR FLOW

Constant Airflow Technology

Through the independent constant air volume digital fan technology, the air volume is independently detected and adjusted to realize constant air volume and no attenuation in the whole life.



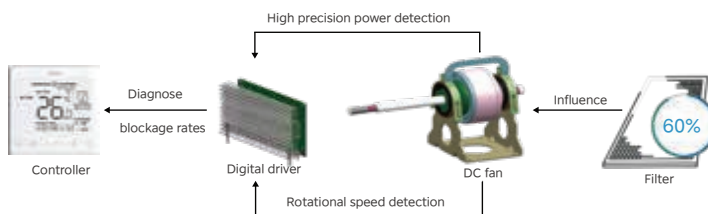
380-415V 3N~50/60Hz Heat Pump

Outdoor Unit Model	Indoor Unit Type	Indoor Unit Capacity(kW)	Indoor Unit Capacity(kBtu/h)	Indoor Unit Model	Number of connectable indoor units
MOUL-76HD1N1-G	High Static Pressure Duct	22.4	76	MHL-76HDN1	1
MOUL-96HD1N1-G	High Static Pressure Duct	28	96	MHL-96HDN1	1
MOUL-120HD1N1-G	High Static Pressure Duct	33.5	120	MHL-120HDN1	1
MOUL-150HD1N1-G	High Static Pressure Duct	45	150	MHL-150HDN1	1
MOUL-192HD1N1-G	High Static Pressure Duct	56	192	MHL-192HDN1	1

HEALTH

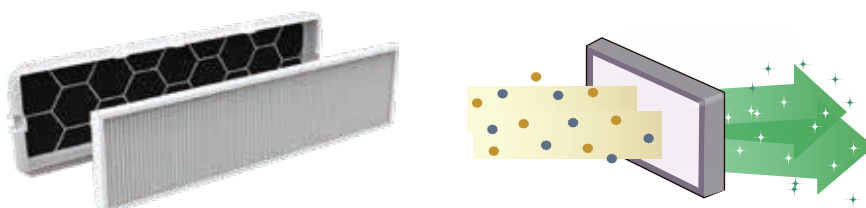
Visualization of Dirty Blockage Rate

Built-in self-learning model can detect the real-time resistance of the filter screen and restore the true state of the filter screen. 10 levels blockage rates can be accurately identified and displayed on the controller, reminding the user to clean the filter in time.



Efficiency Filter Screen

Optional F7 or H13-class air filter, Equipped with H13 HEPA high-efficiency filter screen, it can filter 0.5 micron extremely fine particles, and the primary filtration efficiency is more than 99.95%.

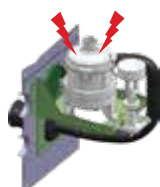


* This function is available as a customization option.

WIDER APPLICATION

Intelligent Leak Feedback

Digital feedback DC water pump, Take the initiative to sense the pump speed and water flow, judge whether there is jamming attenuation or damage, and give early warning to avoid water leakage
Integrated drainage pipe design reduces the sealing points of traditional design from 6 to 2, reduces breakpoints and reduces.



High-lift Drain Pump

A drain pump with a 1200mm raise height is fitted as standard, simplifying installation of the drain piping.



SPECIFICATION - HIGH STATIC PRESSURE DUCT

Model name			MHL-76HDN1	MHL-96HDN1
Power supply		V/Ph/Hz	1-phase, 220-240V, 50/60Hz	1-phase, 220-240V, 50/60Hz
Cooling ¹	Capacity	kW	22.4	28
		kBtu/h	76.4	95.5
	Power input	W	600	840
Heating ²	Capacity	kW	25	31.5
		kBtu/h	85.3	107.5
	Power input	W	600	840
Air flow rate ³		m ³ /h	4400/4156/3911/3667/ 3422/3178/2933	5200/4911/4622/4333/ 4044/3756/3467
External static pressure ⁴		Pa	150(50~280)	150(50~280)
Sound pressure level ⁵		dB(A)	49/47/45/43/41/39/38	51/49/47/45/43.5/42/41
Sound power level		dB(A)	68/66/64/62/60.5/59/58	70.5/69/67/65/63/61/60
Unit	Net dimensions ⁶ (W×H×D)	mm	1300×910×477	1300×910×477
	Packed dimensions (W×H×D)	mm	1580×1090×650	1580×1090×650
	Net/Gross weight	kg	82/120	82/120
Pipe connections	Liquid/Gas pipe	mm	Φ9.52/Φ19	Φ12.7/Φ22
	Drain pipe	mm	OD Φ32	OD Φ32

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
- Stable operation external static pressure range. (Note: setting external static pressure outside the unit's optimal static pressure range may lead to higher noise levels and lower airflow rate. For the optimal external static pressure range refer to the unit's installation manual.)
- Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured 1.4m below the unit in a semi-anechoic chamber.
- The dimension is only the body size, excluding the size of the installation lug, connecting copper pipe, etc. For detailed dimensions, please refer to the installation manual.
- All specifications are measured at standard external static pressure.
- The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATION - HIGH STATIC PRESSURE DUCT

Model name			MHL-120HDN1	MHL-150HDN1	MHL-192HDN1
Power supply		V/Ph/Hz	1-phase, 220-240V, 50Hz	1-phase, 220-240V, 50Hz	1-phase, 220-240V, 50Hz
Cooling ¹	Capacity	kW	33.5	45	56
		kBtu/h	114.3	153.6	191.1
	Power input	W	810	1850	2030
Heating ²	Capacity	kW	38	56	63
		kBtu/h	129.7	191.1	215
	Power input	W	810	1850	2030
Air flow rate ³		m ³ /h	4700/4387/4073/3760/ 3447/3133/2820	7500/7000/6500/6000/ 5500/5000/4500	8400/7840/7280/6720/ 6160/5600/5040
External static pressure ⁴		Pa	200 (0-400)	300 (0-400)	300 (0-400)
Sound pressure level ⁵		dB(A)	52/51/49/48/46/44/43	58/56/54/52/50/49/48	59/58/56/54/53/51/49
Sound power level		dB(A)	74/72/70/68/66/63/61	79/78/76/74/72/70/67	81/80/77/75/73/71/69
Unit	Net dimensions ⁶ (WxHxD)	mm	1300×580×900	1850×580×900	1850×580×900
	Packed dimensions (WxHxD)	mm	1530×730×1060	2080×730×1060	2080×730×1060
	Net/Gross weight	kg	128/153	166/204	170/208
Pipe connections	Liquid/Gas pipe	mm	Φ12.7/Φ25.4	Φ15.9/Φ28.6	Φ15.9/Φ28.6
	Drain pipe	mm	OD Φ32	OD Φ32	OD Φ32

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
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- All specifications are measured at standard external static pressure.
- The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATION - OUTDOOR UNIT

Model name			MOUL-76HD1N1-G	MOUL-96HD1N1-G
Power supply		V/Ph/Hz	3-phase, 380-415V, 50/60Hz	3-phase, 380-415V, 50/60Hz
Cooling(T1) ¹	Capacity	kW	22.40	28.50
		kBtu/h	76.40	95.50
	Power input	kW	6.30	8.40
	EER		3.56	3.39
Heating ²	Capacity	kW	22.40	28.50
		kBtu/h	76.40	95.50
	Power input	kW	5.30	7.30
	COP		4.23	3.90
Compressor	Type		DC inverter rotary	DC inverter rotary
	Quantity		1	1
Fan	Type		Propeller	Propeller
	Quantity		2	2
	Airflow rate	m ³ /h	9000	11000
Refrigerant	Type		R410A	R410A
	Factory charge	kg	6.5	6.5
Pipe connections ³	Liquid pipe	mm	Φ12.7	Φ12.7
	Gas pipe	mm	Φ19.1	Φ22.2
Sound pressure level ⁴		dB(A)	58	60
Net dimensions (W×H×D)		mm	1120×1558×528	1120×1558×528
Packed dimensions (W×H×D)		mm	1270×1720×565	1270×1720×565
Net weight		kg	143	144
Gross weight		kg	159	160
Ambient temp. operation range	Cooling	°C(DB)	-5 to 55	-5 to 55
	Heating	°C(WB)	-20 to 24	-20 to 24

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those of the unit's stop valves.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.
- The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATION - OUTDOOR UNIT

06

Model name			MOUL-120HD1N1-G	MOUL-150HD1N1-G	MOUL-192HD1N1-G
Power supply		V/Ph/Hz	3-phase, 380-415V, 50/60Hz	3-phase, 380-415V, 50/60Hz	3-phase, 380-415V, 50/60Hz
Cooling(T1) ¹	Capacity	kW	33.50	45.00	56.00
		kBtu/h	114.30	153.50	191.10
	Power input	kW	9.20	12.00	16.30
	EER		3.64	3.75	3.44
Heating ²	Capacity	kW	33.50	50.00	63.00
		kBtu/h	114.30	170.60	215.00
	Power input	kW	8.10	11.10	15.30
	COP		4.14	4.50	4.12
Compressor	Type		DC inverter rotary	DC inverter	DC inverter
	Quantity		1	1	1
Fan	Type		Propeller	Propeller	Propeller
	Quantity		2	2	2
	Airflow rate	m ³ /h	11300	12500	18500
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	kg	8	8	8.5
Pipe connections ³	Liquid pipe	mm	Φ12.7	Φ15.9	Φ15.9
	Gas pipe	mm	Φ22.2	Φ28.6	Φ28.6
Sound pressure level ⁴		dB(A)	61	60	61
Net dimensions (W×H×D)		mm	1120×1558×528	1130×1760×580	1250×1760×580
Packed dimensions (W×H×D)		mm	1270×1720×565	1210×1916×597	1330×1916×597
Net weight		kg	157	192	223
Gross weight		kg	173	206	238
Ambient temp. operation range	Cooling	°C(DB)	-5 to 55	-15 to 55	-15 to 55
	Heating	°C(WB)	-20 to 24	-30 to 30	-30 to 30

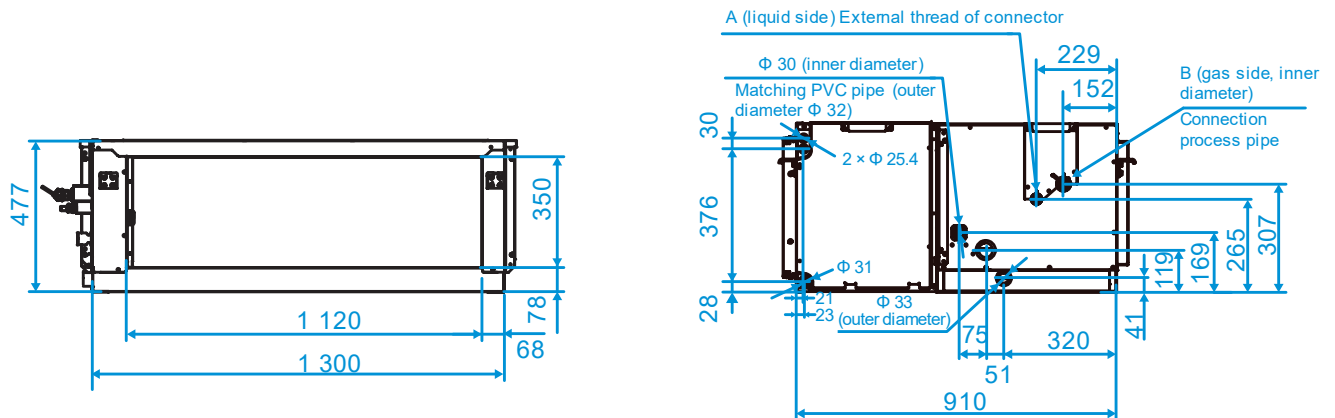
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- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those of the unit's stop valves.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.
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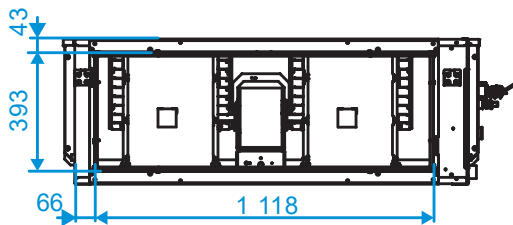
INDOOR UNITS (DIMENSIONS)

MODEL CODE: MHL-76HDN1 / MHL- 96HDN1

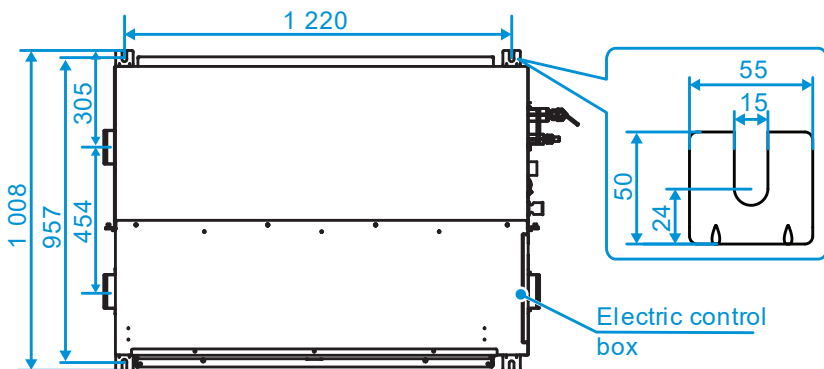
Dimensions of the air inlets above diagram.



Dimensions of the air inlets:



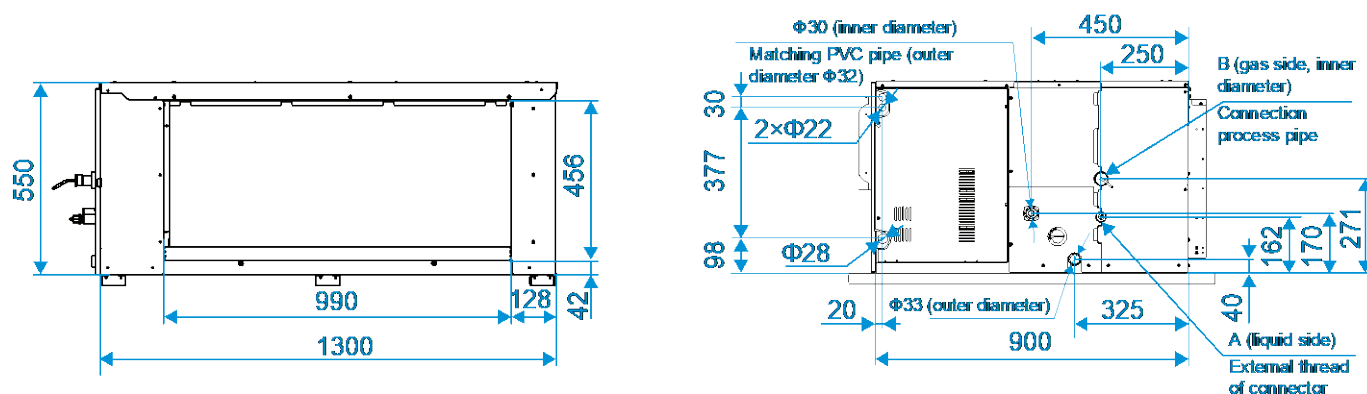
Dimensions of lugs and the screw hole of air outlet/inlet flange:



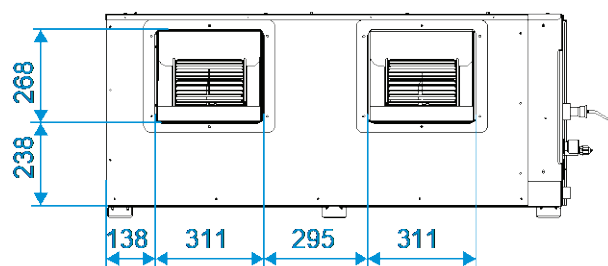
MHL-76HDN1 / MHL-96HDN1	Supply Air	Return Air
	1118 X 393	1120 X 350

MODEL: MHL-120HDN1

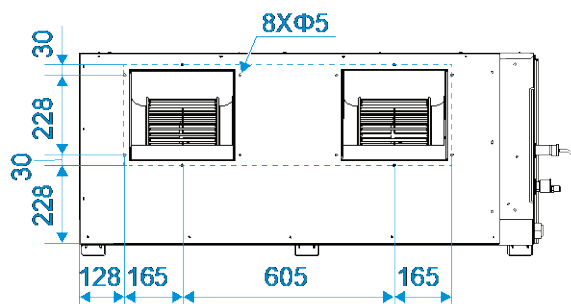
Dimensions of the air inlets above diagram.



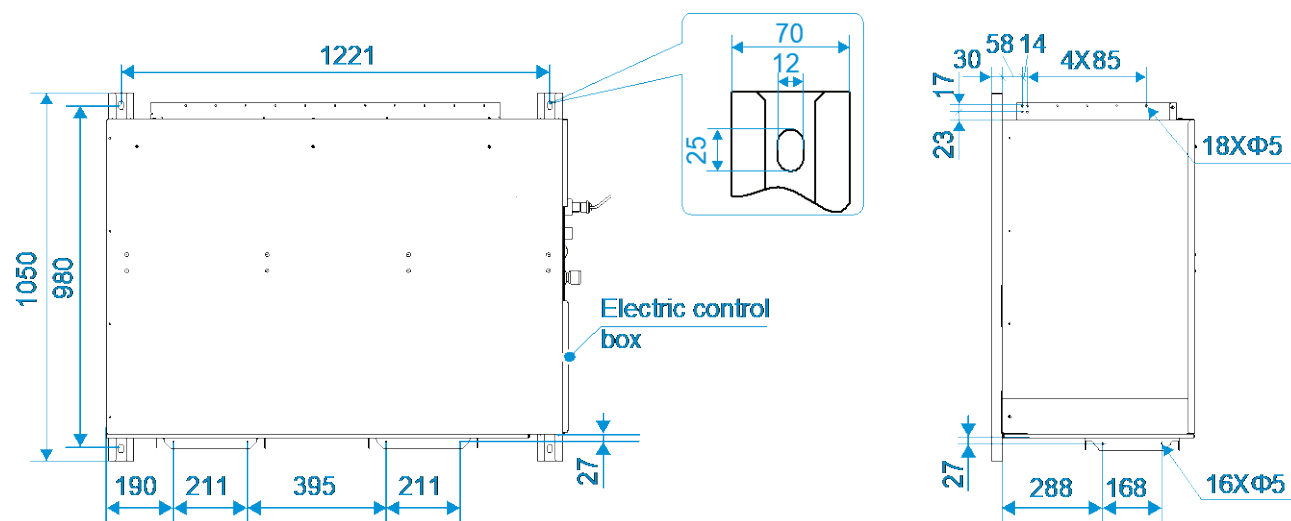
Dimensions of the air outlets:



Dimensions of the air duct installation hole after the air outlet flange is removed:



Dimensions of lugs and the screw hole of air outlet/inlet flange:



MHL-120HDN1	Supply Air	Return Air
	917 X 268	990 X 456

MODEL: MHL-150HDN1 / MHL-192HDN1

Technical drawing of the R134A refrigerant unit, showing front and side views with dimensions in millimeters.

Front View Dimensions:

- Overall width: 1850
- Overall height: 550
- Internal width: 1540
- Internal height: 456
- Bottom flange width: 128
- Bottom flange thickness: 42

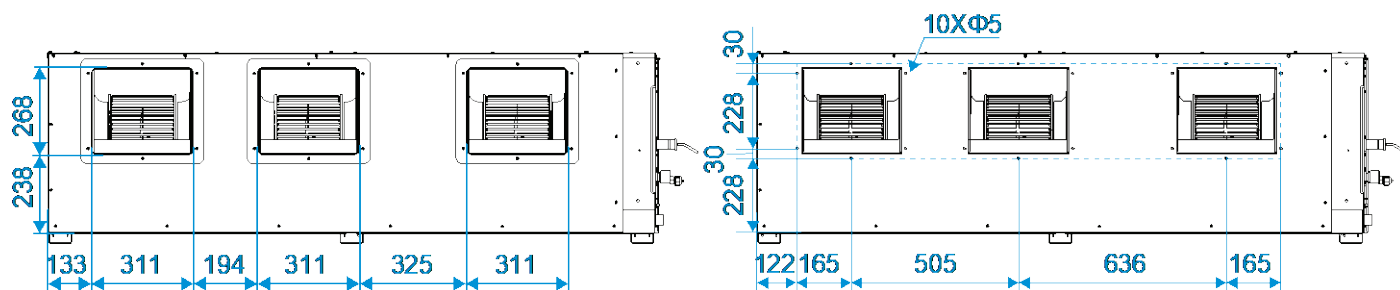
Side View Dimensions:

- Overall depth: 450
- Internal depth: 250
- Top flange thickness: 30
- Internal height from top flange: 377
- Bottom flange thickness: 98
- Internal height from bottom flange: 271
- Bottom flange thickness (liquid side): 162
- Bottom flange thickness (gas side): 170
- Bottom flange thickness (total): 271
- Bottom flange thickness (liquid side, internal): 40
- Bottom flange thickness (gas side, internal): 162
- Bottom flange thickness (total, internal): 271
- Bottom flange thickness (liquid side, external): 162
- Bottom flange thickness (gas side, external): 170
- Bottom flange thickness (total, external): 271
- Bottom flange thickness (liquid side, internal): 40
- Bottom flange thickness (gas side, internal): 162
- Bottom flange thickness (total, internal): 271
- Bottom flange thickness (liquid side, external): 162
- Bottom flange thickness (gas side, external): 170
- Bottom flange thickness (total, external): 271

Connection Details:

- Top connection: $\Phi 30$ (inner diameter) Matching PVC pipe (outer diameter $\Phi 32$)
- Bottom connection: $2 \times \Phi 22$
- Gas side connection: $\Phi 33$ (outer diameter)
- Liquid side connection: $\Phi 28$
- Connection process pipe
- External thread of connector

Dimensions of the air duct installation hole after the air outlet flange is removed:



Technical drawing of the 1000L container showing front, side, and detail views with dimensions in mm.

Front View Dimensions:

- Overall Width: 1771
- Overall Height: 1050
- Internal Height: 980
- Bottom Panel Segments (from left to right): 182, 211, 294, 211, 425, 211
- Right Side Panel Height: 27

Side View Dimensions:

- Top Panel Segment: 58
- Top Panel Thickness: 14
- Top Panel Mounting: 4X85
- Top Panel Height: 30
- Top Panel Offset: 17
- Top Panel Depth: 23
- Bottom Panel Segment: 288
- Bottom Panel Segment: 168
- Bottom Panel Mounting: 16XΦ5
- Bottom Panel Height: 27

Detail View Dimensions:

- Top Panel Width: 70
- Top Panel Thickness: 12
- Top Panel Mounting: 25

Labels:

- Electric control box
- 18XΦ5
- 16XΦ5

MHL-150HDN1 / MHL-192HDN1	Supply Air	Return Air
	1452 X 268	1540 X 456



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