

HYUNDAI

Air to Water Heat Pump



M-Thermal Mono/Split A Series



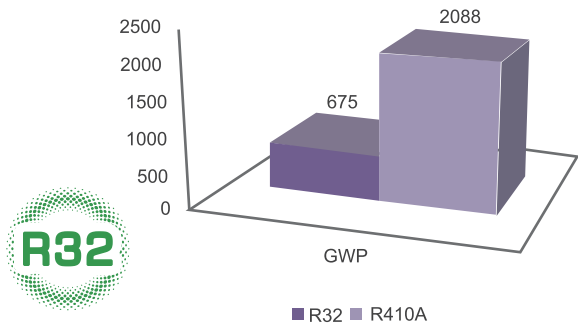
DC Inverter



R32 environmental refrigerant

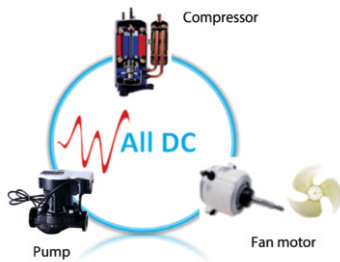
- Higher heat transfer coefficient and better performance
- Less charged volume is needed in the system
- Less costs and easier to get R32
- Lower GWP and carbon emission

(GWP: Global Warming Potential)



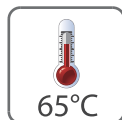
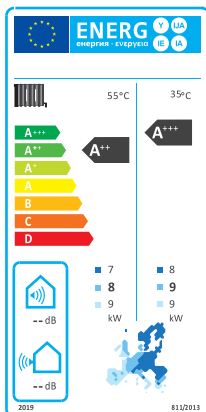
Inverter system design

All the units are equipped with DC compressor, DC fan motor, DC pump, which allows precise control of motor speed, ensuring that only the power necessary to perfectly match the real load is used and energy saving.



Powerful heating with high efficiency

- No capacity attenuation at -10°C ambient temperature
- Operation range down to -25°C
- Maximum LWT reach 65°C
- Single point maximum COP 5.20
- SCOP 5.21, Energy efficiency level: A+++



Structure innovation

- Single fan compact structure design for big capacity with lower noise
- 270mm thinnest size in industry for indoor unit, which is ideal transformation plan for gas burner and convenient for replacing



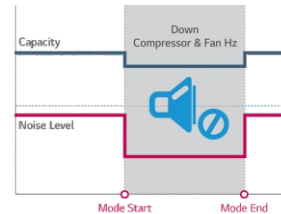
Single fan structure
Greatly reduces noise!



270mm
Thinnest!

Extremely silent

- Two level of silent mode provides more comfort
- Silent mode minimum sound power level 53dB



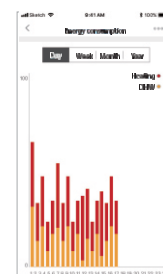
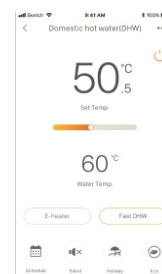
Multi-function wired controller and APP control

- Multiple languages meet customer needs
- Modbus protocol and network flexibility
- Maximum 6 units controlled by one controller and automatic addressing
- Holiday away & Holiday home makes life convenient
- Built-in wifi module supports APP control



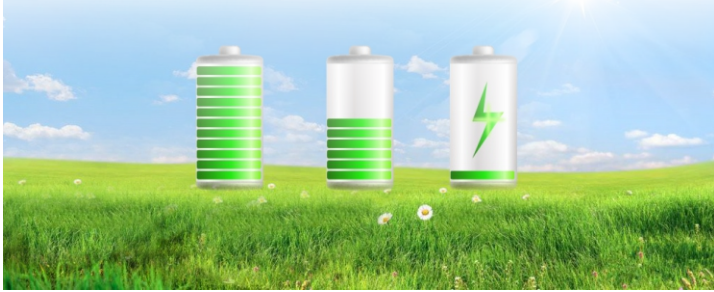
Through APP, user can:

- Check the running state of heat pump, zone switch, operation mode and temperature.
- Set switch, operation mode and temperature of each zone
- Know energy consumption and energy-saving suggestion



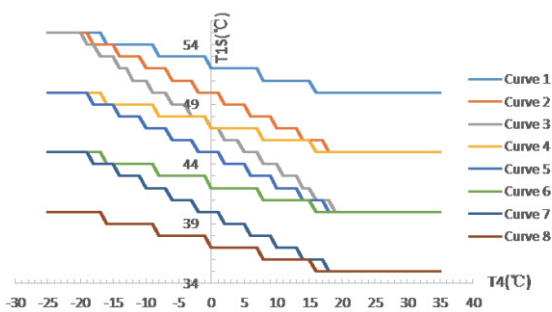
Smart Grid function

Heat pump adjusts the operation according to different electrical signals. Power consumption of the system can be automatically adjusted according to the peak and valley power to reduce the power consumption to the greatest extent



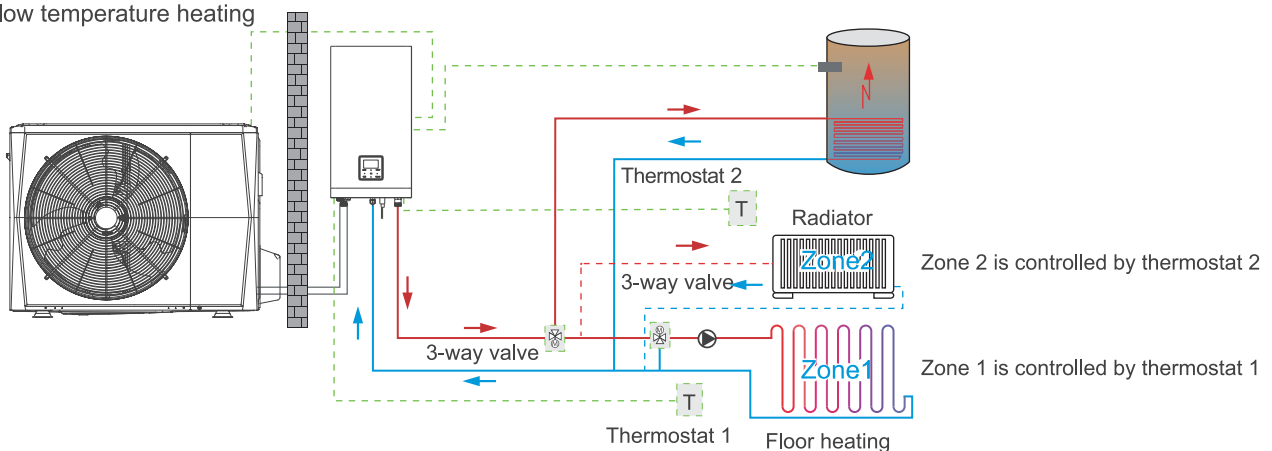
Climate curve function

Totally there are 32 climate correlation curves for choice and one custom curve is optional. Once the curve is selected, the unit set the outlet water temperature automatically according to the outdoor ambient temperature, which realizes intelligent control.



More flexible zone control

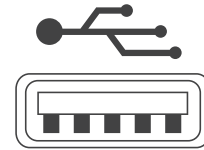
- More accurate low temperature area temperature control
- DC water pump accurate control of water flow and electromagnetic three-way valve cycle regulation to achieve stable low temperature heating



Hydronic adapter board is optional. With the help of hydronic box adapter board, maximum 8 thermostats for 8 rooms are available to control heat pump, which greatly improves the operation convenience.

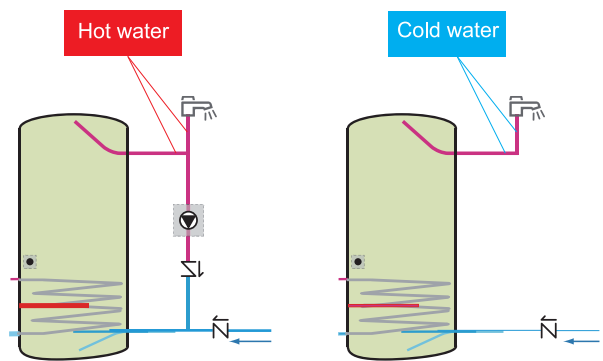
USB function

- Realize setting transmission between wired controllers
- Realize program upgrade with one key and save the time of on-site installation



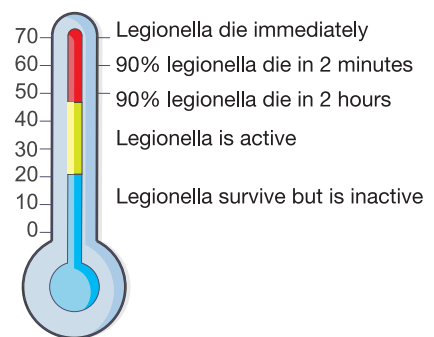
DHW pump function

The DHW pump function is used to return water in the water pipe net to the hot water tank according to set timer. With the function, when hot water is needed, hot water will flow out from tap immediately without waiting time.



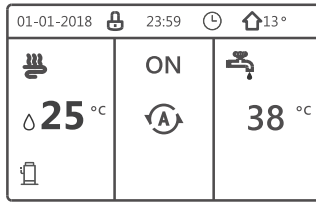
Disinfect function

The disinfect function is used to kill legionella by 60-70 °C water to ensure the health and safety.

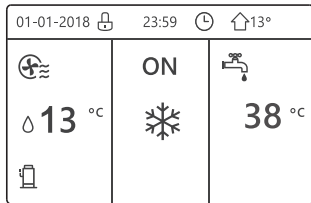


Mode combination

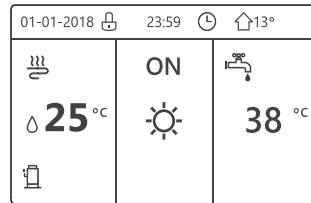
There are 4 single operation mode (Cool, Heat, DHW, Auto) and 3 combined operation mode to meet different demands of using.



Auto & DHW mode



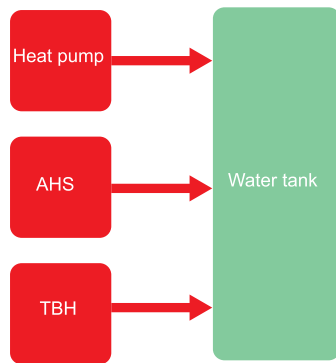
Cool & DHW mode



Heat & DHW mode

Fast DHW function

FAST DHW function is used to force the system to operate in DHW mode when hot water is needed urgently.

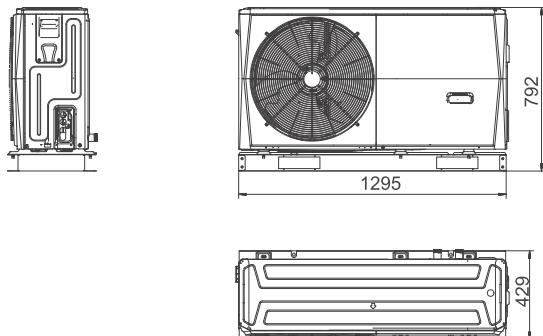


Additional control

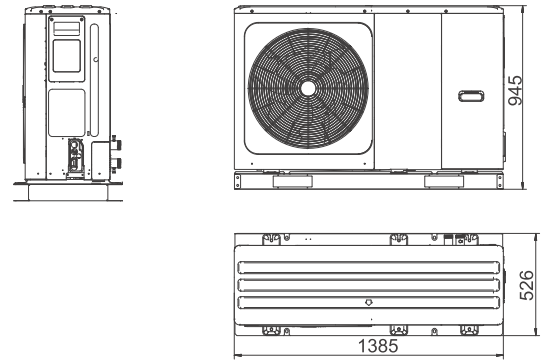
- ▶ Remote control for ON/OFF, TBH, AHS
- ▶ Balance tank temperature sensor (field supplied) ensures accurate water temperature control

Unit Dimensions (Unit: mm)

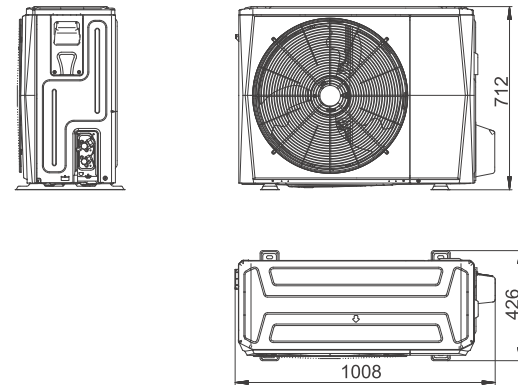
Mono 4~6kW



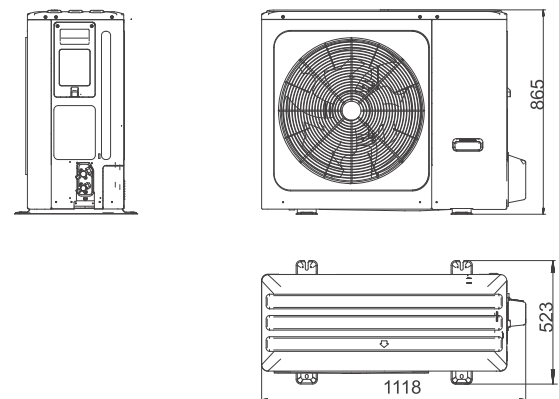
Mono 8~16kW



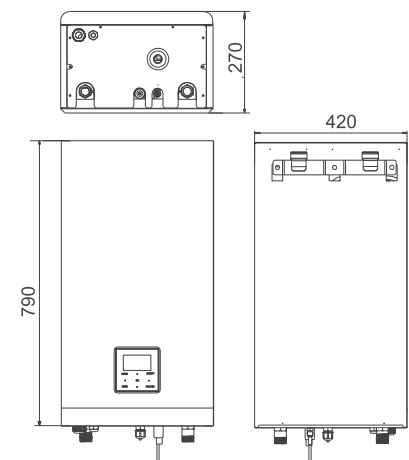
Split outdoor unit 4~6kW



Split outdoor unit 8~16kW



Split indoor unit



Specifications

Mono

Outdoor unit model HYHC-			V4W/ D2N8-B	V6W/ D2N8-B	V8W/ D2N8-B	V10W/ D2N8-B	V12W/ D2N8-B	V14W/ D2N8-B	V16W/ D2N8-B	V12W/ D2RN8-B	V14W/ D2RN8-B	V16W/ D2RN8-B	
Power supply		V/Ph/Hz	220-240/1/50							380-415/3/50			
Heating ¹	Capacity	kW	4.20	6.35	8.40	10.0	12.1	14.5	15.9	12.1	14.5	15.9	
	Rated input	kW	0.82	1.28	1.63	2.02	2.44	3.15	3.53	2.44	3.15	3.53	
	COP			5.10	4.95	5.15	4.95	4.95	4.60	4.50	4.95	4.60	4.50
Heating ²	Capacity	kW	4.30	6.30	8.10	10.0	12.3	14.1	16.0	12.3	14.1	16.0	
	Rated input	kW	1.13	1.70	2.10	2.67	3.32	3.92	4.57	3.32	3.92	4.57	
	COP			3.80	3.70	3.85	3.75	3.70	3.60	3.50	3.70	3.60	3.50
Heating ³	Capacity	kW	4.40	6.00	7.50	9.50	11.9	13.8	16.0	11.9	13.8	16.0	
	Rated input	kW	1.49	2.03	2.36	3.06	3.90	4.68	5.61	3.90	4.68	5.61	
	COP			2.95	2.95	3.18	3.10	3.05	2.95	2.85	3.05	2.95	2.85
Cooling ⁴	Capacity	kW	4.50	6.50	8.30	9.90	12.00	13.50	14.90	12.00	13.50	14.90	
	Rated input	kW	0.82	1.35	1.64	2.18	3.04	3.75	4.38	3.04	3.75	4.38	
	EER			5.50	4.80	5.05	4.55	3.95	3.60	3.40	3.95	3.60	3.40
Cooling ⁵	Capacity	kW	4.70	7.00	7.45	8.20	11.5	12.4	14.0	11.5	12.4	14.0	
	Rated input	kW	1.36	2.33	2.22	2.52	4.18	4.96	5.60	4.18	4.96	5.60	
	EER			3.45	3.00	3.35	3.25	2.75	2.50	2.50	2.75	2.50	2.50
Seasonal space heating energy efficiency class ⁶	Water outlet at 35°C	class	A+++										
	Water outlet at 55°C	class	A++										
Refrigerant	Type(GWP)		R32(675)										
	Charged volume	kg	1.40			1.40			1.75				
Sound power Level ⁷	dB		55	58	59	60	65	65	68	65	65	68	
Unit dimension (W×H×D)	mm		1295×792×429				1385×945×526						
Packing dimension (W×H×D)	mm		1375×965×475				1465×1120×560						
Net/Gross weight	kg		98/121		121/148			144/170			160/188		
Outdoor air temperature range	Cooling	°C	-5~43										
	Heating	°C	-25~35										
	DHW	°C	-25~43										
Water side heat exchanger			Plate type										
Water pump	Max. pump head	m	9										
Water side connection		mm	R1"				R5/4"						
Backup E-heater ⁸	Standard mounted	kW	/										
	Optional	kW	3	3	3/9	3/9	3/9	3/9	3/9	3/9	3/9	3/9	
	Capacity steps			1	1	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Power supply	3kW	V/Ph/Hz	220-240/1/50									
9kW		V/Ph/Hz	380-415/3/50										
Water outlet temperature range	Cooling	°C	5~25										
	Heating	°C	25~65										
	DHW (tank)	°C	30~60										

Notes:

1. Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°C
2. Evaporator air in 7°C, 85% R.H., Condenser water in/out 40/45°C
3. Evaporator air in 7°C, 85% R.H., Condenser water in/out 47/55°C
4. Condenser air in 35°C, Evaporator water in/out 23/18°C
5. Condenser air in 35°C, Evaporator water in/out 12/7°C
6. Seasonal space heating energy efficiency class testes in average climate general conditions.
7. Testing standard: EN12102-1.
8. Backup electric heater is built into all models. For three phase type backup electric heater, 3/6kW can be achieved by changing DIP switch when heat pump is equipped with 9kW.
9. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014.

Specifications

Split

Outdoor unit model name HYHA-			V4W/D2N8-B	V6W/D2N8-B	V8W/D2N8-B	V10W/D2N8-B	V12W/D2N8-B	V14W/D2N8-B	V16W/D2N8-B	V12W/D2RN8-B	V14W/D2RN8-B	V16W/D2RN8-B		
Indoor unit model name			HB-A60/CGN8-B			HB-A100/CGN8-B			HB-A160/CGN8-B					
Heating ¹	Capacity	kW	4.25	6.20	8.30	10.0	12.1	14.5	16.0	12.1	14.5	16.0		
	Rated input	kW	0.82	1.24	1.60	2.00	2.44	3.09	3.56	2.44	3.09	3.56		
	COP		5.20	5.00	5.20	5.00	4.95	4.70	4.50	4.95	4.70	4.50		
Heating ²	Capacity	W	4.35	6.35	8.20	10.0	12.3	14.2	16.0	12.3	14.2	16.0		
	Rated input	W	1.14	1.69	2.08	2.63	3.24	3.89	4.44	3.24	3.89	4.44		
	COP		3.80	3.75	3.95	3.80	3.80	3.65	3.60	3.80	3.65	3.60		
Heating ³	Capacity	W	4.40	6.00	7.50	9.50	12.0	13.8	16.0	12.0	13.8	16.0		
	Rated input	W	1.49	2.00	2.36	3.06	3.87	4.60	5.52	3.87	4.60	5.52		
	COP		2.95	3.00	3.18	3.10	3.10	3.00	2.90	3.10	3.00	2.90		
Cooling ⁴	Capacity	W	4.50	6.55	8.40	10.00	12.00	13.50	14.90	12.00	13.50	14.90		
	Rated input	W	0.81	1.34	1.66	2.08	3.00	3.75	4.38	3.00	3.75	4.38		
	EER		5.55	4.90	5.05	4.80	4.00	3.60	3.40	4.00	3.60	3.40		
Cooling ⁵	Capacity	W	4.70	7.00	7.40	8.20	11.6	12.7	14.0	11.6	12.7	14.0		
	Rated input	W	1.36	2.33	2.19	2.48	4.22	4.98	5.71	4.22	4.98	5.71		
	EER		3.45	3.00	3.38	3.30	2.75	2.55	2.45	2.75	2.55	2.45		
Seasonal space heating energy efficiency class ⁶	Water outlet at 35°C	class	A+++											
	Water outlet at 55°C	class	A++											
OUTDOOR UNIT														
Power supply			V/Ph/Hz						220-240/1/50			380-415/3/50		
Refrigerant	Type(GWP)		R32(675)											
	Charged volume		kg			1.50			1.65			1.84		
Sound power Level ⁸			dB(A)		56	58	59	60	64	65	68	64	65	68
Unit dimension (W×H×D)			mm			1008×712×426			1118×865×523					
Packing dimension (W×H×D)			mm			1065×800×485			1180×890×560					
Net/Gross weight			kg		58/64		77/88		96/110			112/125		
Outdoor air temperature range	Cooling		°C										-5~43	
	Heating		°C										-25~35	
	DHW		°C										-25~43	
INDOOR UNIT														
Unit dimension (W×H×D)			mm		420×790×270									
Packing dimension (W×H×D)			mm		525×1050×360									
Net/Gross weight			kg		37/43			39/45						
Water pump	Max. pump head		m		9									
	Standard mounted		kW		/									
	Optional		kW		3/9									
Backup E-heater ⁹	Capacity steps		1/3											
	Power supply	3kW	V/Ph/Hz		220-240/1/50									
		9kW	V/Ph/Hz		380-415/3/50									
Water outlet temperature range	Cooling		°C										5~25	
	Heating		°C										25~65	
	DHW (tank)		°C										30~60	
Sound power level ⁸			dB(A)		38	38	42	42	43	43	43	43	43	43

Notes:

1. Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°C
2. Evaporator air in 7°C, 85% R.H., Condenser water in/out 40/45°C
3. Evaporator air in 7°C, 85% R.H., Condenser water in/out 47/55°C
4. Condenser air in 35°C, Evaporator water in/out 23/18°C
5. Condenser air in 35°C, Evaporator water in/out 12/7°C
6. Seasonal space heating energy efficiency class testes in average climate general conditions.
7. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014
8. Testing standard: EN12102-1
9. For three phase type backup electric heater, 3/6kW can be achieved by changing DIP switch when hydronic box is equipped with 9kW.



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