High Performance Beyond Expectations

New air flow grille
Air supply distance is increased by 24% together with the 30Pa ESP.

New refrigerant cooling design
Reduce the risk of overheating of IPM, guaranteeing the stable and safe running of the control system.

High-efficiency oil separator
Improve the capacity and ensure stable operation.

Enclosed electrical box on the top
High reliability and convenient maintenance.

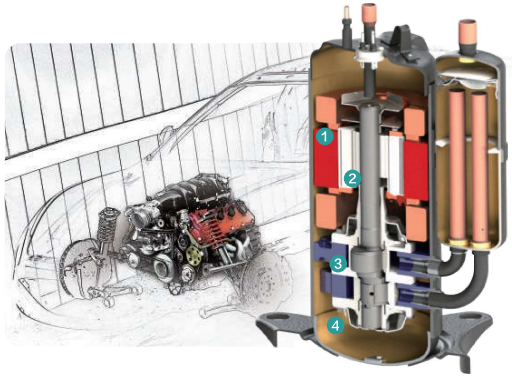
High-efficiency twin rotary compressor
High efficiency, low noise and high reliability.

Heat exchanger with Hi-Black fin
High anti-corrosion capability.

Take Hi-Smart E+ Series as an example.

High-efficiency DC Inverter Compressor

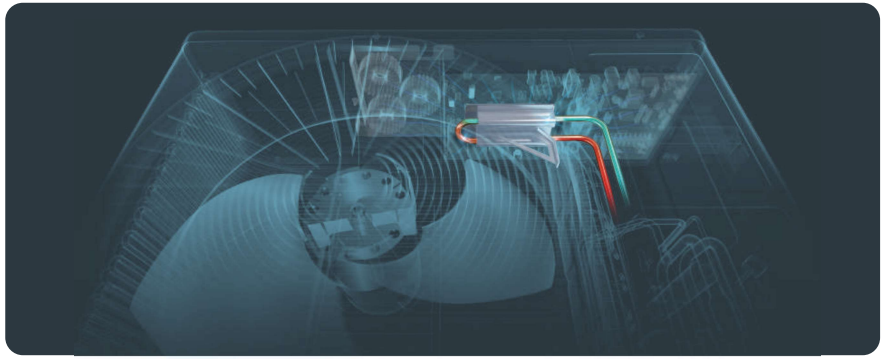
A high-efficiency DC inverter dual rotary compressor is adopted. It features unique dual-pressure chamber design and symmetrical location, which can effectively reduce the vibration and noise and improve the compressor performance, especially the performance under low-frequency operation.
Moreover, the dual rotary compressor has a small lubricating oil injection volume with stable oil return, and comes with a gas-liquid separator, which makes the system more reliable.



1. **High-efficiency motor**
   Optimize the motor design to improve compressor performance.
2. **Optimized rotor design**
   Lower the center of gravity of the compressor to reduce the noise and vibration.
3. **Flat mechanism design**
   Improve the volumetric efficiency and the total performance.
4. **Screw interactive fastening**
   Improve fastening effect and reduce deformation of the core.

Patented 360° Fitted Refrigerant Cooling Technology

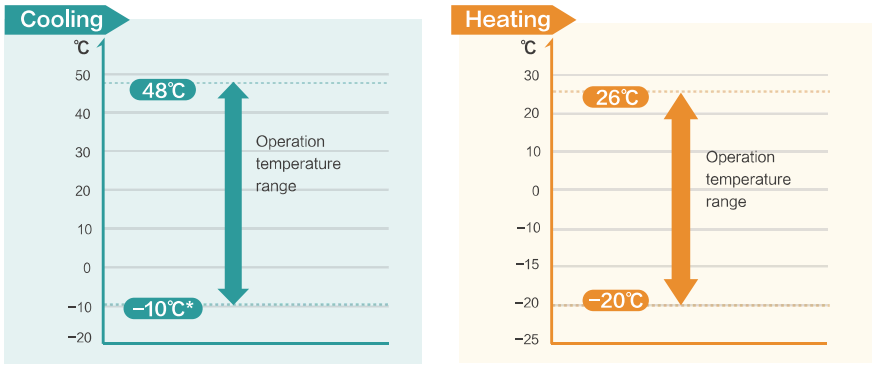
To maintain the lifespan of the delicate electronic components, the unit uses patented 360° fitted refrigerant cooling technology to cool the whole electronic box effectively. It can overcome poor heat dissipation and solve high ambient temperature issues inside the electronic box, maintaining an efficient and reliable operation under harsh environment.



Note: 1.Compared with air-cooled technology, the temperature in electric box can be reduced about by **10%**.
2.There is no refrigerant cooling kit inside the Hi-Smart L+ series(single phase unit).

Wide Operating Range

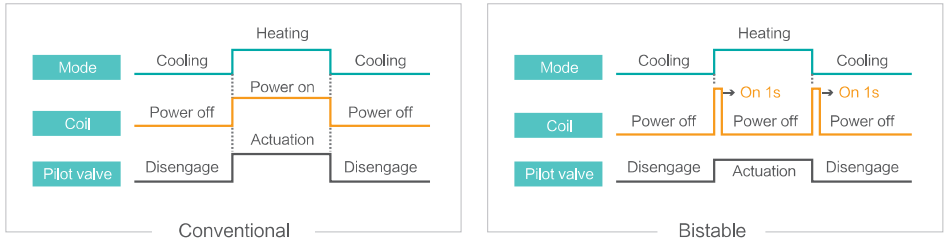
Extended operation range creates wider application potential, in cooling mode the operation range is from −10℃* to 48℃ and in heating mode the operation range is from −20℃ to 26℃, which adapts to many extreme conditions.



* In cooling mode, the operation is under interval operation when the temperature is below −5℃.

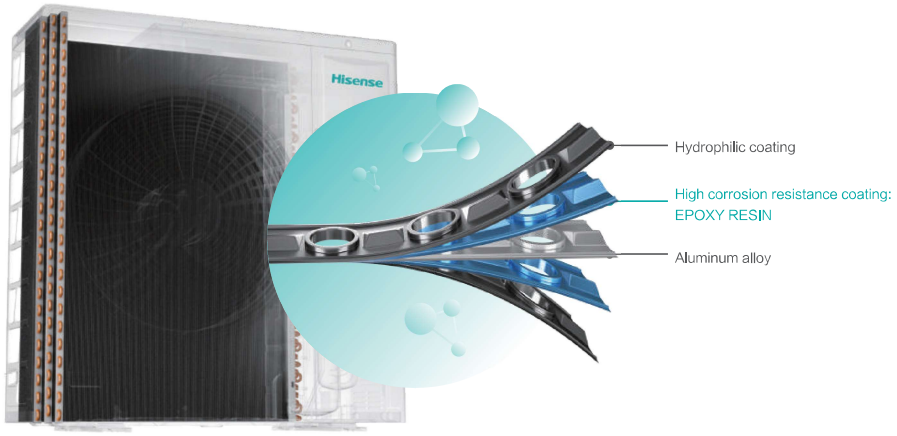
Bistable Four−way Valve

The bistable four−way valve is adopted in the outdoor unit, which only consumes power when reversing. During the normal operation (regardless of cooling or heating), it is no need to be energized. Compared with conventional four−way valve, it is more energy−saving. Moreover, the reliability of valve coil is greatly improved.



Hi−Black Fin (Standard)

All the heat exchangers adopt Hi−Black fin, which has excellent anti−corrosive performance. Hi−Black fins are coated with epoxy resin using film−forming techniques while the traditional resins are acrylic resins. The epoxy resin is 1.5 times thicker than acrylic resin, and its acid−resistant, alkali−resistant and salt−fog resistant properties is 3 times better than acrylic resin.

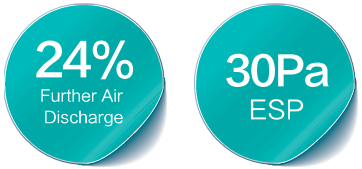


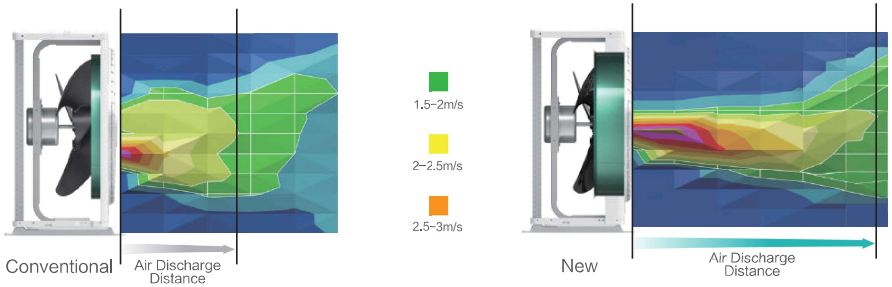
Note: For the anti−corrosive solution for the whole outdoor unit, please contact with our local engineers.

Further Air Discharge Distance

Optimized Air Duct System Design

An additional air duct like channel surrounding the fan is designed to further discharge the air and avoid discharge air from being absorbed again. Besides, together with the 30Pa external static pressure, air is tested to discharge up to 24% further compared with the conventional one.





Hi-Smart E+ Series

Capacity (HP)			4.0	5.0	6.0
	Model		AVW-41HJFHH1	AVW-48HJFHH1	AVW-54HJFHH1
	Power Supply		AC 1Φ, 220-240V/50/60Hz		
Cooling	Capacity	kW	12.1	14.0	15.5
		Btu/h	41500	48000	53000
	Power Input	kW	3.73	4.33	5.64
	EER	W/W	3.24	3.23	2.75
	SEER	—	7.72	7.66	7.17
Heating	Capacity	kW	14.0	16.0	18.0
		Btu/h	48000	54500	61500
	Power Input	kW	2.99	3.73	4.63
	COP	W/W	4.05	3.75	3.35
	SCOP	—	4.41	4.36	4.26
Ventilation	Air Flow Rate	m³/min	71	71	71
Sound Pressure Level	Cooling/Heating	dB(A)	53/54	54/55	54/55
Weight	Net	kg	88	89	90
	Gross	kg	103	104	105
Outer Dimensions	Height	mm	990	990	990
	Width	mm	950	950	950
	Depth	mm	320	320	320
Packing Dimensions	Height	mm	1126	1126	1126
	Width	mm	1070	1070	1070
	Depth	mm	470	470	470
Cabinet Color		—	Grayish White		
Ref. Piping	Gas	mm	Φ15.88	Φ15.88	Φ15.88
		in.	5/8	5/8	5/8
	Liquid	mm	Φ9.53	Φ9.53	Φ9.53
		in.	3/8	3/8	3/8
Refrigerant	Type	—	R410A		
	Before Shipment	kg	4.0	4.0	4.0
Connectable Indoor Units	Max. Qty.	pc	8	9	10
	Connection Ratio	%	50-150	50-150	50-150
Piping Design	Max. Piping Length	m	70	70	70
	Total Piping Length	m	135	135	135
	Height Difference Between ODU and IDU	m	40	40	40
		m	30	30	30
	Height Difference Between IDUs	m	15	15	15
Operation Range	Cooling	DB(℃)	(-10*) -5 ~ 48		
	Heating	DB/WB(℃)	-20/-20.5 ~ 26/15.5		

NOTES:
1. The rated cooling and heating capacity are tested in the following conditions:
Cooling Operation Conditions: indoor air inlet temperature: 27℃ DB 19℃ WB, outdoor air inlet temperature: 35℃ DB, pipe length : 7.5m, pipe lift: 0m
Heating Operation Conditions: indoor air inlet temperature: 20℃ DB, outdoor air inlet temperature: 7℃ DB 6℃ WB, pipe length: 7.5m, pipe lift: 0m
2. The above noise values are measured in the anechoic chamber without reflected echo, therefore the impact of the reflected echo must be taken into consideration at the scene.
Measurement point: 1m from the service cover surface and 1.5m from floor level.
3. *1 When the temperature is between -10℃ and -5℃, the cooling operation is under interval operation.

Hi-Smart L+ Series

Capacity (HP)			4.0	5.0	6.0	4.0	5.0	6.0
	Model		AVW-41HJFHH2	AVW-48HJFHH2	AVW-54HJFHH2	AVW-41HKFHH2	AVW-48HKFHH2	AVW-54HKFHH2
	Power Supply		AC 1Φ, 220-240V/50/60Hz			AC 3Φ, 380-415V/50/60Hz		
Cooling	Capacity	kW	12.1	14.0	15.5	12.1	14.0	15.5
		Btu/h	41500	48000	53000	41500	48000	53000
	Power Input	kW	2.79	3.43	4.18	2.79	3.43	4.18
	EER	W/W	4.33	4.08	3.71	4.33	4.08	3.71
	SEER	—	8.20	8.10	8.00	8.20	8.10	8.00
Heating	Capacity	kW	14.0	16.0	18.0	14.0	16.0	18.0
		Btu/h	48000	54500	61500	48000	54500	61500
	Power Input	kW	3.08	3.71	4.47	3.08	3.71	4.47
	COP	W/W	4.55	4.31	4.03	4.55	4.31	4.03
	SCOP	—	4.85	4.70	4.55	4.85	4.70	4.55
Ventilation	Air Flow Rate	m³/min	90	90	100	120	120	127
Sound Pressure Level	Cooling/Heating	dB(A)	52/55	52/55	53/56	52/55	52/55	53/56
Weight	Net	kg	106	107	108	112	113	114
	Gross	kg	118	119	120	123	124	125
Outer Dimensions	Height	mm	1380	1380	1380	1380	1380	1380
	Width	mm	950	950	950	950	950	950
	Depth	mm	370	370	370	370	370	370
Packing Dimensions	Height	mm	1531	1531	1531	1531	1531	1531
	Width	mm	1070	1070	1070	1070	1070	1070
	Depth	mm	515	515	515	515	515	515
Cabinet Color		—	Grayish White					
Ref. Piping	Gas	mm	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
		in.	5/8	5/8	5/8	5/8	5/8	5/8
	Liquid	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
		in.	3/8	3/8	3/8	3/8	3/8	3/8
Refrigerant	Type	—	R410A					
	Before Shipment	kg	3.8	3.8	4.1	3.8	3.8	4.1
Connectable Indoor Units	Max. Qty.	pc	9	11	12	9	11	12
	Connection Ratio	%	50-150	50-150	50-150	50-150	50-150	50-150
Piping Design	Max. Piping Length	m	100	100	100	100	100	100
	Total Piping Length	m	150	150	150	150	150	150
	Height Difference Between ODU and IDU	m	50	50	50	50	50	50
		m	40	40	40	40	40	40
	Height Difference Between IDUs	m	15	15	15	15	15	15
Operation Range	Cooling	DB(℃)	(-10*) -5 ~ 48					
	Heating	DB/WB(℃)	-20/-20.5 ~ 26/15.5					

NOTES:
1. The rated cooling and heating capacity are tested in the following conditions:
Cooling Operation Conditions: indoor air inlet temperature: 27℃ DB 19℃ WB, outdoor air inlet temperature: 35℃ DB, pipe length : 7.5m, pipe lift: 0m
Heating Operation Conditions: indoor air inlet temperature: 20℃ DB, outdoor air inlet temperature: 7℃ DB 6℃ WB, pipe length: 7.5m, pipe lift: 0m
2. The above noise values are measured in the anechoic chamber without reflected echo, therefore the impact of the reflected echo must be taken into consideration at the scene.
Measurement point: 1m from the service cover surface and 1.5m from floor level.
3. *1 When the temperature is between -10℃ and -5℃, the cooling operation is under interval operation.

Hi-Smart C+ Series

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Capacity (HP)			8.0	10.0	12.0
	Model		AVW-76HKFHH2	AVW-96HKFHH2	AVW-114HKFHH2
	Power Supply			AC 3Φ, 380-415V/50/60Hz	
Cooling	Capacity	kW	22.4	28.0	33.5
		Btu/h	76400	95500	114300
	Power Input	kW	6.22	8.12	13.40
	EER	W/W	3.60	3.45	2.50
	SEER	—	7.00	7.80	7.55
Heating	Capacity	kW	25.0	31.5	37.5
		Btu/h	85300	107500	128000
	Power Input	kW	5.81	7.59	10.08
	COP	W/W	4.30	4.15	3.72
	SCOP	—	4.50	4.50	4.30
Ventilation	Air Flow Rate	m³/min	150	163	163
Sound Pressure Level	Cooling/Heating	dB(A)	55/58	56/59	56/59
Weight	Net	kg	145	157	158
	Gross	kg	161	174	175
Outer Dimensions	Height	mm	1650	1650	1650
	Width	mm	1100	1100	1100
	Depth	mm	390	390	390
Packing Dimensions	Height	mm	1806	1806	1806
	Width	mm	1185	1185	1185
	Depth	mm	530	530	530
Cabinet Color		—		Grayish White	
Ref. Piping	Gas	mm	Φ22.2	Φ25.4	Φ25.4
		in.	7/8	1/1	1/1
	Liquid	mm	Φ12.7	Φ12.7	Φ12.7
		in.	1/2	1/2	1/2
Refrigerant	Type	—		R410A	
	Before Shipment	kg	5.5	6.5	6.5
Connectable Indoor Units	Max. Qty.	pc	15	18	19
	Connection Ratio	%	50-150	50-150	50-150
Piping Design	Max. Piping Length	m	150	150	150
	Total Piping Length	m	300	300	300
	Height Difference Between ODU and IDU	m	50	50	50
		m	40	40	40
	Height Difference Between IDUs	m	15	15	15
Operation Range	Cooling	DB(℃)		(-10*) -5 ~ 48	
	Heating	DB/WB(℃)		-20/-20.5 ~ 26/15.5	

NOTES:
1. The rated cooling and heating capacity are tested in the following conditions:
   Cooling Operation Conditions: indoor air inlet temperature: 27℃ DB 19℃ WB, outdoor air inlet temperature: 35℃ DB, pipe length : 7.5m, pipe lift: 0m
   Heating Operation Conditions: indoor air inlet temperature: 20℃ DB, outdoor air inlet temperature: 7℃ DB 6℃ WB, pipe length: 7.5m, pipe lift: 0m
2. The above noise values are measured in the anechoic chamber without reflected echo, therefore the impact of the reflected echo must be taken into consideration at the scene.
Measurement point: 1m from the service cover surface and 1.5m from floor level.
3. *1 When the temperature is between -10℃ and -5℃, the cooling operation is under interval operation.

Hi-Smart H Series

Compact Size and Light Weight

Mini VRF H series outdoor units are compact in size for more convinient and flexible space design and installment hides in corners of balconies and yards or even on rooftops when necessary. With smaller and slimmer body frame meaning a lot of unnecessary weights are taken off which makes installment or positioning simpler.