

Features

Excellent performance

The main unit is equipped with semi-hermetic screw compressor, integrating the motor, without worrying about shaft seal leakage.

The single or more compressors are provided with startup-shutdown cycle control program so as to uniformly load parts and extend service life. Multiple refrigerating circuits are provided for the unit, and when one circuit is under maintenance, other circuits are able to run normally as mutual standby. Unload and step down voltage start is provided for the compressors to prevent the impact on the power grid.

Ultra-low noise turbine blade design.

V-shaped appearance provides better heat dissipation.

Exclusive high-temperature unit

The high-temperature unit is able to provide 55-60°C hot water for air conditioning system, and the heat recovery type provides water for living, which conform to the Head-Power's high requirements on energy saving.

Easy installation

The unit enjoys compact structure, covers small area, saves machine room space; it almost not vibrates due to the provision of foundation anti-vibrating measure.

Upon delivery of the unit, the refrigerant and lubricating oil have been filled into it, then it's only necessary to connect the evaporator water pipe during installation, saving time and cost.

Lower running and maintenance cost

Intelligent program control can be achieved for the unit according to the load demand: 100%, 75%, 50%, 25% (or start), 0 and stepless energy adjustment, reducing energy consumption.

Total parts number of screw compressor is only 1/10 that of the reciprocating compressor, enabling the unit to have simple structure and less venerable parts, without the use of air intake and exhaust valves, not sensible to wet stroke and extremely low fault rate.

Failure-free operation time of the screw compressor is up to 40,000 hours.

Complete safety protections

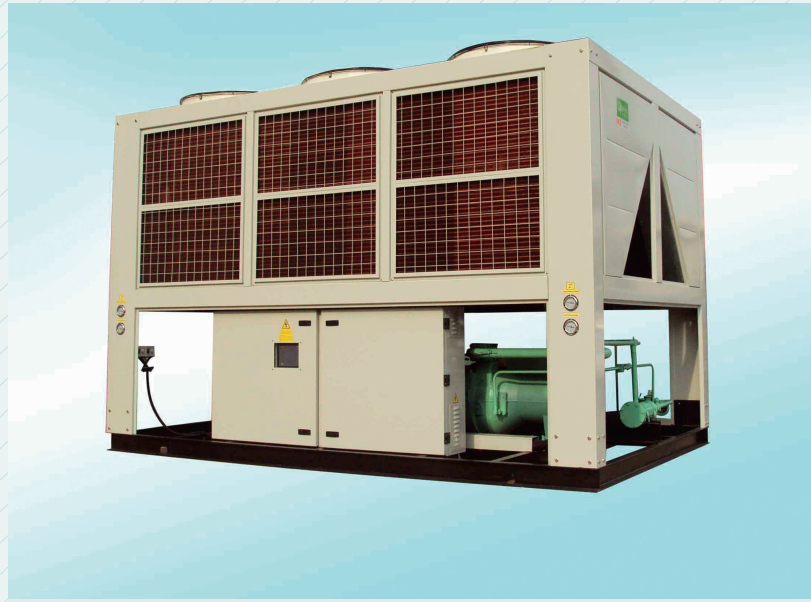
Pressure protection: High and low-pressure protecting devices

Motor protection: Voltage-loss protection, phase-loss protection, inverse phase protection and over-heat protection.

Anti-freezing protection: The unit will stop running in case of excessively low chilled water temperature

Safety valve protection: When the refrigerant pressure exceeds a certain value, the safety valve will be turned on automatically.

Above device protections ensure the safe and reliable running of the unit.



Model type nomenclature

HWAL R-G-□ D H 1

- 1 indicates refrigerant R134a, 2 indicates R407c, and R22--N/A
- H indicates heat recovery type
- D indicates twin compressors, single compressor--N/A
- Indicates cooling capacity
- Indicates high-temperature type; standard type--N/A
- R indicates heat pump type, and cooling only--N/A
- Head-Power air cooled screw water chiller

AIR COOLED SCREW WATER CHILLER/HEAT PUMP (R22/R407C)

Parameters	Model		380V/3N ~ 50HZ																
	R22	R407C	HWAL150	HWAL200	HWAL230	HWAL280	HWAL320	HWAL370	HWAL480	HWAL560	HWAL460	HWAL560	HWAL740	HWAL960	HWAL1100				
Normal Cooling Capacity	KW	KW	148	198	229	278	320	372	480	558	458	556	744	960	1116				
Normal Heating Capacity	R22	R407C	138	188	214	257	307	352	460	531	428	514	704	920	1060				
	R22	R407C	175	236	271	325	378	440	553	656	542	650	880	1106	1312				
Cooling Power Input	R22	R407C	166	222	255	310	359	420	526	620	510	620	840	1042	1240				
	R22	R407C	44.7	60.3	68	80	94	106	136	160	137	161	213	271	320				
Heating Power Input	R22	R407C	43.2	58.3	65.6	79	91	103	134.5	155	131	158	206	269	310				
	R22	R407C	47.9	64	72.6	84.8	99.7	113.7	143	170	145	170	227	286	340				
Power Supply			380V/3N ~ 50HZ																
Energy Adjustment			0-25-50-75-100%/Stepless Energy adjustment																
Compressor	Type	6+7Semi-hermetic Twin-Screw																	
	Qty	1 1 1 1 1 1 1 1 1 1 2 2 2 2 2																	
Refrigerant	Medium	R22/R407C																	
	Volume Control	43°C																	
	Throttle Method	external balanced thermostatic expansion valve/Electronic Expansion valve																	
Air Side Exchanger	Charge	kg	48	54	62	74	85	115	145	162	162	171	230	290	324				
	Type	Corrugated aluminum fin with female copper tube																	
Condensing Fan	Power	KW	1.5 x 4	1.5 x 4	1.5 x 4	1.5 x 6	1.5 x 6	1.5 x 6	1.5 x 6	1.5 x 6	1.5 x 6	1.5 x 6	1.5 x 8	1.5 x 8	1.5 x 10	1.5 x 12	1.5 x 12	1.5 x 16	1.5 x 20
	Type	Ultra-low-Noise Axial Type																	
Water Side Exchanger	Chilled Water Flow	m³/h	26	36	38	48	55	62	80	96	76	96	122	160	186				
	Hot Water Flow	m³/h	30	42	46	55	65	67	95	110	92	110	135	185	220				
	PIPe Connection	DN	DN80	DN80	DN80	DN100	DN100	DN100	DN100	DN100	DN100	DN125	DN125	DN150	DN150	DN200			
Noise Level	Water Resistance	KPa	50-80																
	dB(A)	64	64	64	65	65	66	66	66	67	68	68	68	69	70	71			
Unit Dimension	L	mm	2300	2500	3000	3500	4500	5000	6000	6800	5800	3500x2	5000x2	6000x2	6800x2				
	W	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200				
	H	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250				

1. Nominal cooling conditions: chilled water inlet temperature 12°C, outlet temperature 7°C; air side dry bulb temperature 35°C, wet bulb temperature 24°C;
 2. Nominal heating conditions: inlet water temperature 40°C, outlet water temperature 45°C; air side dry bulb temperature 7°C, wet bulb temperature 6°C;
 3. The refrigerant charge shall be based on that of R22.

Item	Model No	Parameters													
		HWALG 130H	HWALG 150H	HWALG 180H	HWALG 200H	HWALG 250H	HWALG 280H	HWALG 320H	HWALG 430H	HWALG 530H	HWALG 560DH	HWALG 640DH	HWALG 860DH	HWALG 1060DH	
Nominal Cooling Capacity	KW	128	150	175	195	250	280	320	430	530	560	640	860	1060	
Nominal Heating Capacity	KW	151	172	202	226	292	323	373	502	620	646	746	1004	1240	
Cooling Input Power	KW	36.5	43.1	50.5	56.7	69.1	76.9	88	117	146	154	176	234	292	
Heating Input Power	KW	39.2	45.9	53.7	60.8	73.9	81.5	94	127	156	163	188	254	312	
Power Supply		380V/3N ~ 50HZ													
Energy Adjustment		0-25-50-75-100%/Stepless energy adjustment													
Compressor	Type	6+7Semi-hermetic Twin-Screw													
	Qty	1	1	1	1	1	1	1	1	1	2	2	2	2	
Refrigerant	Medium	R134a													
	Volume control	55℃													
Throttle Method	external balanced thermostatic expansion valve/Electronic expansion valve														
	Charge	kg	38	44	56	62	76	84	110	141	162	168	220	282	324
Air Side Exchanger		Corrugated aluminum fin with female copper tube													
Condensing Fan	Type	Ultra-low-Noise Axial type													
	Power	KW	1.1 x 4	1.5 x 4	1.5 x 4	1.5 x 4	1.5 x 6	1.5 x 6	1.5 x 6	1.5 x 8	1.5 x 10	1.5 x 12	1.5 x 12	1.5 x 16	1.5 x 20
Water Side Exchanger	Type	Dry type shell and tube													
	Chilled Water Flow	m³/h	23	26	30	34	44	49	56	74	92	97	112	148	185
	Hot Water Flow	m³/h	26	30	35	39	50	56	64	86	108	112	130	173	215
	Pipe Connection	DN	DN65	DN80	DN80	DN80	DN80	DN100	DN100	DN100	DN125	DN125	DN150	DN150	DN200
Noise Level	Water Resistance	kPa	50 ~ 80												
	dB(A)	63	64	65	65	66	66	67	68	68	69	70	71	72	
Unit Dimension	L	mm	2300	2300	2300	2500	2500	2500	2500	3500	3800	4500	5800	6800	8000
	W	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	H	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250

1. Nominal cooling conditions: chilled water inlet temperature 12℃, outlet temperature 7℃, air side dry bulb temperature 35℃, wet bulb temperature 24℃; outlet water temperature 40℃, inlet water temperature 45℃, air side dry bulb temperature 7℃, wet bulb temperature 6℃.
 2. The hot water supply of heat recovery means the water volume heated from 20℃ to 50℃.

Features

Intelligent, optimized and energy saving

Global leading microcomputer control technology is adopted for the automatic control of the unit; PID calculation can be achieved according to the signal and the given values.

Enable to control 16 modules start or shutdown at the most so as to realize the rational matching of output and load, save electric power and always maintain the optimal running status of the unit.

Remote monitoring function

The new generation of microcomputer control has remote monitoring function and offers communication interfaces to connect to the central monitoring computer so as to realize automatic remote monitoring and bring user great convenience.

Wide scope of working

The unit is able to cool in 50℃ environmental temperature and heat in -10℃ temperature

Exclusive auxiliary electric heater (optional)

It enables heat pump unit achieve optimal efficiency and reliability in cold winter

Scroll compressor

Compared with other types of the same cooling capacity, it boasts less active parts, smaller turning torque, noise and vibration, higher reliability and efficiency, and other merits.

Quiet and comfortable

The unit is made of excellent acoustic material, equipped with compressor anti-vibrating device; the heat exhaust fan enjoys the spiral axial-flow blades, good air quantity and smaller vibration; the driving motor is provided with Level E insulating aluminum housing, boasts low speed, low noise, excellent heat dissipation against dust, water spray, and ensures safe use.



Model type nomenclature

