AWMW SERIES OIL-FREE MAGNETIC LEVITATION CENTRIFUGAL CHILLER

AirWellTech
艾瑞维特

Product Overview

AWMW Series Magnetic Bearing Variable Frequency Centrifugal Water-Cooled Chiller adopts permanent magnet synchronous variable frequency centrifugal compressor supported by active magnetic bearings as core component.

When the compressor operates, electromagnetic force levitates the rotor to avoid physical contact and metal friction. The unit achieves outstanding energy efficiency, stable performance and ultra-low noise operation.



Features

- The compressor is equipped with high-efficiency permanent magnet synchronous motor with VFD, delivering excellent efficiency under partial load conditions.
- Adopting active magnetic bearing structure, the rotor runs without contact, resulting in minimal mechanical loss, low vibration and low noise.
- The unit removes the entire lubrication oil system. No pre-lubrication before startup, no regular oil maintenance required, greatly cutting operation and maintenance costs.
- Soft start with low inrush current, less impact to power grid.

Application

It is widely used in large office buildings, hotels, hospitals, shopping malls, data centers, transport hubs, as well as industrial sectors including chemical industry, biopharmaceuticals, food & beverage. It meets both comfort air conditioning and industrial process cooling requirements..

Model description

AWMW | 150 | A | C | 1 | D | F | M

- M — Power:
- F — Evaporator Type: D-Dry; F -Flooded
- D — Compressor No: D-2; S-1
- 1 — Refrigerant: 1-134A
- C — Features: C-Cooling;
- A — Design Code: A、B、C.....
- 150 — Capacity Code: RT
- AWMW — Prod. Code: Oil-free magnetic water-cooled chiller

Specifications

Model AWMW***...			65	90	140	190	240	290	340	400
Nominal cooling capacity	KW		214.5	316.5	492	668	834	1006	1150	1372
	x10³Kcal/h		184.5	272.2	423	575	717	865	989	1180
	USRT		61	90	140	190	237	286	327	390
Nominal Power	KW		38.8	56.4	87.8	116	144	172	203	237
COP			5.53	5.61	5.6	5.78	5.78	5.85	5.67	5.79
Nominal current	A		66	90	140	185	231	265	323	344
Max. operating current	A		83	119	188	247	292	360	433	445
Power supply			380V/3N~/50Hz							
Capacity control			25%~100% Stepless capacity regulation							
Compressor	Type		Hydrodynamic Air Foil Centrifugal Refrigeration Compressor							
	Start-up method		VFD startup							
	Qty	Unit	1	1	1	1	1	1	1	1
Condenser	Type		Water cooled shell and tube							
	water flow	m³/h	43.5	64.2	100	134.8	168	203	233	277
	Resistance	KPa	67	69	73	84	93	93	93	95
	Connection Size		DN80	DN100	DN125	DN150	DN150	DN200	DN200	DN200
Evaporator	Type		Water cooled shell and tube							
	water flow	m³/h	36.9	54.4	84.6	115	143.5	173	198	236
	Resistance	KPa	65	68	71	80	88	89	89	92
	Connection Size		DN80	DN100	DN125	DN150	DN200	DN200	DN200	DN200
Dimension	Length	mm	2035		3100		3800		3900	
	Width	mm	1305		1500		1800		2000	
	Hight	mm	1835		2150		2150		2350	
Weight	Net	Kg	2000	2400	2850	3300	3500	3600	4600	4800
	Run	Kg	2200	2640	3150	3630	3850	3960	5060	5280

Note:

- Nominal working condition for cooling: inlet/outlet water temperature(evaporator):12/7℃, inlet/outlet water temperature(condenser):30/35℃;
- The evaporator water side fouling coefficient is 0.018㎡·℃/kW ; while condenser water side fouling coefficient is 0.044 ㎡ ·℃/kW.
- Power supply: 380V/3Ph/50Hz, Allowable fluctuation of voltage±10%.
- The water pressure drop of evaporator and condenser does not include any external pipes and parts resistance.
- The dimension and weight data in the table is just for reference, if you need the detailed dimension, please contact with the company.