Modular Air Cooled Water Chiller/Heat Pump

+cold

Scroll air cooled water chiller

BMA Modular scroll unit is a new generation of modular unit developed by +cold. This unit is energy saving and convenient in use, which has the function of reverse cycle automatic defrosting, double steps automatic anti-freezing,built-in self-diagnosable system, and is controlled by microcomputer. Applicable to hotels, villas, hospitals, cinemas, stadiums, recreations, office blocks, factories and so on. It can also provide chilled water or moderate hot water for industria purpose.

The unit is suitable for installing in outspace such as roof, floor and porch, left off the boiler room and the special room, decreased the investment of building project. And no need of cooling tower and cooling

Features

- Modular design, huge application area; Automatic energy adjustment
- Multilevel parallel design, multilevel step-down start, love start current
- Hermetical scroll compressor, the full load efficiency is 7% higher and the partial load is 15-20% higher than screw compressor
- Microcomputer fuzzy defrosting design, through thousands of times of testing and adjustment, the frosting parameter can reach the best defrosting effect
- Heat recovery optional

Optional accessories

- Electric heater
- Water flexible connector
- Type filter
- Water pump
- Flow switch
- Heat recovery
- Anti-corrosion
- Rubber isolator
- Electronic expansion valve
- Remote control

- BMA: Cooling Only
- Cooling Capacity: 60-756kW

- BMN: Heat Pump
- Heating capacity: 65-826kW

R410A R407C

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Model		BMA065 BMN065	BMA085 BMN085	BMA100 BMN100	BMA130 BMN130	BMA160 BMN160	BMA200 BMN200
Power supply	V/Ph/Hz	380-415,3,50					
Cooling							
Cooling capacity	kw	65	85	97.5	130	168	197
Power input	kW	21	28.4	31.7	41.4	53.3	62.6
Current	A	36.90	50.9	55.1	73.40	94.00	109.70
EER	kW/kW	3.10	2.99	3.08	3.14	3.15	3.15
Heating							
Heating capacity	kW	65	95	105	135	176	210
Power input	kW	20.6	28.1	31	40.6	52.1	61.2
Current	A	36.20	50.00	54.20	72.20	92.30	107.80
COP	kW/kW	3.16	3.38	3.39	3.33	3.38	3.43
Max. power input	kW	25.2	34.1	38.0	49.7	64.0	75.1
Max. current input	A	44.3	61.1	66.1	88.1	112.8	131.6
Start current	A	146.0	152.0	171.0	189.0	319.0	334.0
Compressor							
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Power input	kW	2x9.7	3×8.8	3X9.7	4x9.7	2x20.4+8.3	2x20.4+2x8.3
Operation current	A	2x19.01	3×15.2	3X16.6	4x16.6	2x35.4+14.6	2x35.4+2x14.6
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant amount	kg	2x8.6	3×8.6	3X8.6	4x8.6	2x18+8.6	2x18+2x8.6
Axial condensing fan							
Quantity	nos.	2	2	2	2	4	4
Air flow rate	m^3/h	24000	36000	36000	48000	58000	68000
Power input	kW	0.75x2	1.5+0.75	1.5+0.75	1.5x2	2x1.1+2x0.75	4x1.1
Expansion valve type		Electronic expansion valve					
Evaporator							
Type		Shell and tube type					
Water flow rate	m^3/h	10.32	15.1	18.6	22	29	33.9
Water pressure drop	kPa	42	42	41	41	45	45
Connection pipe size	mm	DN50	DN50	DN50	DN65	DN80	DN100
Noise	dB(A)	70	72	72	75	75	75
Dimension Length	mm	2054	2054	2054	2260	2300	2409
Dimension Width	mm	1100	1100	1100	1248	2000	2260
Dimension Height	mm	2013	2124	2124	2375	1970	2494
Net weight	kgs	640	990	1060	1120	1760	2160

Model		BMA210 BMN210	BMA280 BMN280	BMA340 BMN340	BMA410 BMN410	BMA480 BMN480	BMA550 BMN550
Power supply	V/Ph/Hz	380-415,3,50					
Cooling							
Cooling capacity	kw	204	272	340	408	476	544
Power input	kW	66.1	88.3	110.3	132.5	154.5	176.6
Current	A	115.7	155.7	193.6	233.5	271.4	311.4
EER	kW/kW	3.08	3.08	3.08	3.08	3.08	3.08
Heating							
Heating capacity	kW	233.8	298.4	373	447.6	522.2	596.8
Power input	kW	64.6	86.3	107.8	129.5	151.0	172.6
Current	A	113.7	153.0	190.3	49.6	266.8	306.1
COP	kW/kW	3.62	3.46	3.46	3.46	3.46	3.46
Max. power input	kW	79.4	106.0	132.4	159.0	185.4	212.0
Max. current input	A	138.9	186.8	232.3	280.2	325.7	373.6
Start current	A	340.3	380.2	418.1	458.1	496.0	535.9
Compressor							
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Power input	kW	4x20.4	4x20.4	5x20.4	6x20.4	7x20.4	8x20.4
Operation current	A	4x35.4	4x35.4	5x35.4	6x35.4	7x35.4	8x35.4
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant amount	kg	3x18	4x18	5x18	6x18	7x18	8x18
Axial condensing fan							
Quantity	nos.	3	4	6	6	8	8
Air flow rate	m^3/h	76000	96000	120000	144000	168000	192000
Power input	kW	2x2.2+2x0.75	4x1.5	4x1.5+2x0.75	6x1.5	6x1.5+2x0.75	8x1.5
Expansion valve type		Electronic expansion valve					
Evaporator							
Type		Shell and tube type					
Water flow rate	m^3/h	35	46.8	58.5	70.2	82	93.6
Water pressure drop	kPa	48	48	47	50	48	50
Connection pipe size	mm	DN100	DN125	DN125	DN150	DN150	DN150
Noise	dB(A)	76	76	76	76	77	77
Dimension Length	mm	2409	2409	3610	3610	4811	4811
Dimension Width	mm	2260	2260	2260	2260	2260	2260
Dimension Height	mm	2494	2494	2494	2494	2494	2494
Net weight	kgs	2450	2450	2950	3200	4150	4520

Model			BMA650 BMN650	BMA700 BMN700	BMA770 BMN770
Power supply		V/Ph/Hz	380-415,3,50		
Cooling					
Cooling capacity		kw	650	704	768
Power input		kW	232	248	256
Current		A	429	459	474
EER		kW/kW	2.8	2.83	3
Heating					
Heating capacity		kW	712	770	840
Power input		kW	226.7	242	250
Current		A	418	448	463
COP		kW/kW	3.14	3.18	3.36
Max. power input		kW	278	297	306
Max. current input		A	514	550	567
Start current		A	1047	1120	1156
Compressor					
Compressor type			Scroll	Scroll	Scroll
Power input		kW	10x20.4	11x20.4	12x20.4
Operation current		A	10x35.4	11x35.4	12x35.4
Refrigerant type			R410A	R410A	R410A
Refrigerant amount		kg	10x18	11x18	12x18
Axial condensing fan					
Quantity		nos.	10	12	12
Air flow rate		m^3/h	243000	267500	292000
Expansion valve type			Electronic expansion valve		
Evaporator					
Type			Shell and tube type		
Water flow rate		m^3/h	116	121	132
Water pressure drop		kPa	50	50	50
Connection pipe size		mm	DN150	6*DN125	6*DN125
Noise		dB(A)	78	78	78
Dimension	Length	mm	6012	7176	7176
	Width	mm	2260	2260	2260
	Height	mm	2494	2474	2474
Net weight		kgs	6300	6500	7300

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