

TEMPERATURE CONTROL 14/02

AIR TO WATER HEATING / COOLING PUMP

Heat pumps can be used for heating or cooling swimming pools, spas or other open water systems. The water system pressure should be less than 3 bar. (Cannot be used for closed water systems such as air conditioning, ground source heating and so on.)

✓ Product features



High Efficiency

Our heat pumps are highly efficient, taking the energy from the ambient air and transferring that heat to the pool. The heat pump can reach a COP of 5.5.



Safety

Water and electricity are completely separate. ECO friendly gas, no fire, no electricity leakage, safer than fuel burner or electrical heater.



Environmentally Friendly

Choose R407C, R410-A, R22 as refrigerant, according to the requirements of EU Montreal Protocol.



Corrosion Prevention

The condenser uses titanium metal which is 4 to 5 times more corrosion resistant than ordinary copper tubes and is significantly more effective for the prevention of fluoride leakages. Liquids containing seawater or mild industrial water can pass through these systems without any problems.



Intelligent Defrosting

By means of both mechanical and automatic control, defrosting can be operated over a shorter time to avoid severe attenuation of heating capacity in winter and when not in use.



Antifreezing Control

The unit starts up automatic antifreezing control when shutdown (no power off), using of antifreezing heat exchanger, 10 freezing tests, no leakage..



Various protective measures

- Lack-phase and anti-phase protection
- Self memory function when power off
- Overpressure protection
- Leakage refrigerant protection
- Water protection for unit
- Overcurrent protection
- Temperature over protection



Advanced control system

- Displaying operating and trouble status
- Checking real-time operation parameters etc
- The cable length between controller and the unit can be up to 30m for flexible installation (on request)
- Keep balance running of compressor
- Automatically adjusting capacity according to the change of water inlet the temperature
- Can achieve the perfect docking with BMS. Set remote control based on user requirement for easy management and maintenance. And can set multi unit modular operation



Compressor

AQUA uses world famous brand compressor such as COPELAND and GMCC to ensure the highest quality of machine.

? How does the unit work?

...AS A CHILLER

1- STAGE ONE

The temperature of the hot gaseous refrigerant discharged from the compressor is much higher than the outside ambient air temperature. When the outside air passes across the condenser coil, the gaseous refrigerant transfers its heat to the air and condenses into liquid.

2- STAGE TWO

The liquid refrigerant passes through the capillary tube, reducing its pressure and temperature.

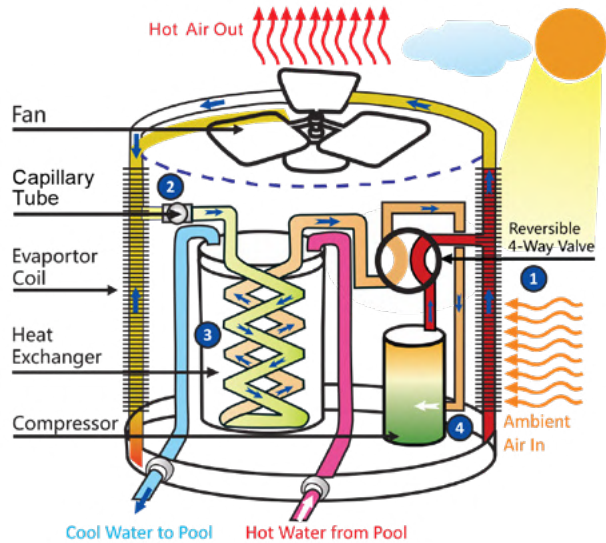
3- STAGE THREE

The low temperature refrigerant passes to the heat exchanger evaporator, where the actual heat transfer takes place: the refrigerant absorbs heat from the water pumped into the heat exchanger and evaporates, whereby the water temperature is reduced.

4- STAGE FOUR

The gas refrigerant is then sucked to the compressor and compressed, increasing its pressure and temperature, ready to start the whole cycle once again.

CAPILLARY TUBE



...AS A HEAT PUMP

1- STAGE ONE

The gaseous refrigerant passes to the compressor and is compressed. When compressed, the pressure is increased and the temperature of the vapor rises, effectively concentrating the heat.

2- STAGE TWO

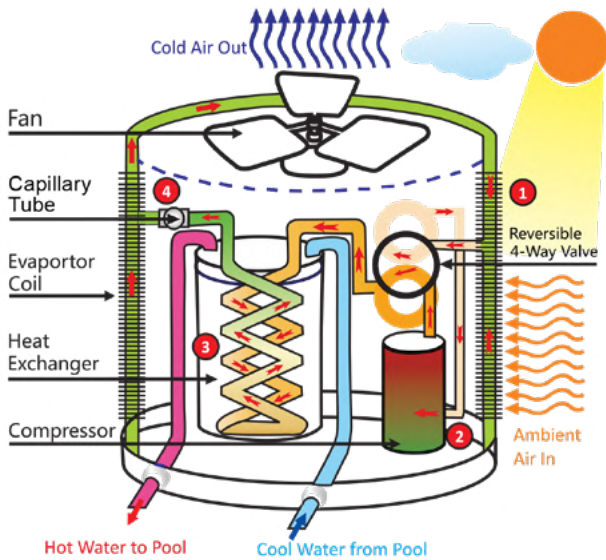
The hot gaseous refrigerant passes to the heat exchanger condenser, where the actual heat transfer takes place: the intensely hot gaseous refrigerant transfers its heat to the water pumped into the heat exchanger and condenses back into a liquid.

3- STAGE THREE

The liquid refrigerant then passes through an capillary tube, reducing its pressure and temperature. The heat transfer medium (the refrigerant) is colder than the outside air.

4- STAGE FOUR

As the outside air passes across the evaporator coil, the liquid refrigerant absorbs heat from the air and evaporates, ready to start the whole cycle once again.



TOP DISCHARGE

 Models

Refrigerant		PH2-02620 -R410A	PH2-02625 -R410A	PH2-02630 -R410A-1	PH2-02630 -R410A-2	PH2-02640 -R410A
Power supply	V/PH/Hz	R410A 220~240/1/50	R410A 220~240/1/50	R410A 220~240/1/50	R410A 380~415/3/50	R410A 380~415/3/50
	kW	9.5	12	14	14	17
YL-H01-Heating: A24/W26°C	Heating capacity	32414	40944	47768	47768	58004
	Power input	1.7	2.2	2.5	2.5	3.1
	COP	5.5	5.5	5.5	5.5	5.5
YL-H02-Heating: A15/W26°C	Heating capacity	8.1	10.2	11.9	11.9	14.5
	Power input	27552	34802	40603	40603	49303
	COP	1.8	2.2	2.6	2.6	3.2
YL-C01-Cooling: A35/W30°C	Power input	4.6	4.6	4.6	4.6	4.6
	COP	7	9.0	10	10	12
	Heating capacity	23338	29480	34393	34393	41763
YL-C02-Cooling: A46/W30	Power input	1.8	2.3	2.7	2.7	3.2
	EER	3.75	3.70	3.80	3.80	3.80
	Heating capacity	5.814	7.3	8.6	8.6	10.4
MAX. POWER INPUT	Power input	19837	25058	29234	29234	35498
	EER	1.9	2.5	2.8	2.8	3.4
	W/W	3.0	2.96	3.04	3.04	3.04
MAX. CURRENT	W/W	2.9	3.7	4.2	4.2	5.1
	A	14	18	8	8	9
	°C	15 ~ 40	15~40	15~40	15~40	15~40
OPERATING	Heating water temp range	12 ~ 30	12 ~ 30	12~30	12~30	12~30
	Cooling water temp range	-15 ~ 53	-15 ~ 53	-15 ~ 53	-15 ~ 53	-15~53
	Ambient temp range	Rotary	Rotary	Scroll	Scroll	Scroll
KEY	Compressor type	Rotary	Rotary	Scroll	Scroll	Scroll
	Controller	micro processor based digital controller with LCD touch screen display				
	Noise	51	53	53	53	53
HEATING EXCHANGER	Type	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
	Water flow (min.)	2.3	2.9	3.4	3.4	4.2
	Water flow (max)	5.4	6.9	8.0	8.0	9.7
	Water pressure drop (max)	10	10	12	12	12
	Water connection	50	50	50	50	50
FAN	Water pipe	-	-	-	-	-
	Fan Position	Verticle	Verticle	Verticle	Verticle	Verticle
	Material	Plastic	Plastic	Plastic	Plastic	Plastic
DIMENSIONS (L x W x H)	Air flow	2000	2600	3500	3500	3500
	Net	670 x 670 x 945	670 x 670 x 945	715 x 715 x 1080	715 x 715 x 1080	715 x 715 x 1080
	Shipping	730 x 730 x 1095	730 x 730 x 1095	775 x 775 x 1230	775 x 775 x 1230	775 x 775 x 1230
WEIGHT	-	88/98	88/98	98/105	109/123	113/118

TOP DISCHARGE

Models

	Refrigerant	PH2-02650 -R410A	PH2-02660 -R410A	PH2-02670 -R410A	PH2-02680 -R410A	PH2-02685 -R410A
Power supply	V/PH/Hz	R410A 380~415/3/50	R410A 380~415/3/50	R410A 380~415/3/50	R410A 380~415/3/50	R410A 380~415/3/50
YL-H01-Heating: A24/W26°C	Heating capacity	21 kW	25 kW	31 kW	35 kW	40 kW
	Power input	71652 BTU/h	85300 BTU/h	105772 BTU/h	119420 BTU/h	136480 BTU/h
	COP	3.8 W/W	4.5 W/W	5.7 W/W	6.4 W/W	7.3 W/W
YL-H02-Heating: A15/W26°C	Heating capacity	17.9 kW	21.3 kW	26.4 kW	29.8 kW	34.0 kW
	Power input	60904 BTU/h	72505 BTU/h	89906 BTU/h	101507 BTU/h	116008 BTU/h
	COP	3.9 W/W	4.6 W/W	5.9 W/W	6.5 W/W	7.4 W/W
YL-C01-Cooling: A35/W30°C	Cooling capacity	15 kW	18 kW	22 kW	25 kW	29 kW
	Power input	51589 BTU/h	61416 BTU/h	76156 BTU/h	85982 BTU/h	98266 BTU/h
	EER	4.0 W/W	4.7 W/W	5.9 W/W	6.5 W/W	7.5 W/W
YL-C02-Cooling: A46/W30	Cooling capacity	12.9 kW	15.3 kW	19.0 kW	21.4 kW	24.5 kW
	Power input	43851 BTU/h	52204 BTU/h	64732 BTU/h	73085 BTU/h	83526 BTU/h
	EER	4.3 W/W	5.0 W/W	6.2 W/W	7.0 W/W	7.9 W/W
MAX. POWER INPUT		3.01 kW	3.04 kW	3.04 kW	3.08 kW	3.08 kW
MAX. CURRENT		6.4 A	7.5 A	9.4 A	10.4 A	11.9 A
OPERATING	Heating water temp range	11 °C	13 °C	17 °C	19 °C	21 °C
	Cooling water temp range	15~40 °C	15~40 °C	15~40 °C	15~40 °C	15~40 °C
	Ambient temp range	12~30 °C	12~30 °C	12~30 °C	12~30 °C	12~30 °C
KEY	Compressor type	-15~53 °C	-15~53 °C	-15~53 °C	-15~53 °C	-15~53 °C
	Controller	Scroll	Scroll	Scroll	Scroll	Scroll
	Noise	55 dB(A)	55 dB(A)	58 dB(A)	59 dB(A)	59 dB(A)
HEATING EXCHANGER	Type	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
	Water flow (min.)	5.2 m³/h	6.1 m³/h	7.6 m³/h	8.6 m³/h	9.8 m³/h
	Water flow (max)	12.0 m³/h	14.3 m³/h	17.8 m³/h	20.1 m³/h	22.9 m³/h
	Water pressure drop (max)	12 KPa	12 KPa	15 KPa	15 KPa	11 KPa
	Water connection	50 mm	50 mm	63 mm	50 mm	63 mm
FAN	Water pipe	-	-	-	-	PPR OR PVC
	Fan Position	Verticle	Verticle	Verticle	Verticle	Verticle
	Material	Plastic	Plastic	Plastic	Plastic	Plastic
DIMENSIONS (L x W x H)	Air flow	5500 m³/h	5500 m³/h	6500 m³/h	7500 m³/h	9000 m³/h
	Net	715x715x1080 mm	715x715x1080 mm	860x860x1090 mm	860x860x1090 mm	950x950x1500 mm
	Shipping	775x775x1230 mm	775x775x1230 mm	920x920x1240 mm	920x920x1240 mm	1010x1010x1650 mm
WEIGHT	-	117/131 kg	128/142 kg	144/163 kg	150 / 169 kg	230 / 255 kg

TOP DISCHARGE

Models

	Refrigerant	PH2-02690 -R410A	PH2-02695 -R410A	PH2-02710 -R410A	PH2-02712 -R410A	PH2-02713 -R410A
Power supply	V/PH/Hz	R410A	R410A	R410A	R410A	R410A
YL-H01-Heating: A24/W26°C	Heating capacity	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50
	kW	45	55	40	45	55
	BTU/h	153540	187660	136480	153540	187660
YL-H02-Heating: A15/W26°C	Power input	8.2	10.0	7.3	8.2	10.0
	W/W	5.5	5.5	5.5	5.5	5.5
	COP	38.3	46.8	34.0	38.3	46.8
YL-C01-Cooling: A35/W30°C	Heating capacity	130509	159511	116008	130509	159511
	BTU/h	8.3	10.2	7.4	8.3	10.2
	kW	4.6	4.6	4.6	4.6	4.6
YL-C02-Cooling: A46/W30	Power input	32	40	29	32	40
	W/W	110549	135115	98266	110549	135115
	BTU/h	8.4	10.4	7.5	8.4	10.4
MAX. POWER INPUT	Power input	3.85	3.80	3.85	3.85	3.80
	EER	27.5	33.7	24.5	27.5	33.7
	kW	93966	114848	83526	93966	114848
MAX. CURRENT	Heating capacity	8.9	11.1	7.9	8.9	11.1
	BTU/h	3.08	3.04	3.08	3.08	3.04
	W/W	13.4	17	11.9	13.4	17
OPERATING	Heating water temp range	24	30	21	24	30
	Cooling water temp range	15~40	15~40	15~40	15~40	15~40
	Ambient temp range	12~30	12~30	12~30	12~30	12~30
KEY	Compressor type	-15~53	-15~53	-15~53	-15~53	-15~53
	Controller	Scroll	Scroll	Scroll	Scroll	Scroll
	Noise	59	60	59	59	60
HEATING EXCHANGER	Type	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
	Water flow (min.)	11.1	13.5	9.8	11.1	13.5
	Water flow (max)	25.8	31.5	22.9	25.8	31.5
FAN	Water pressure drop (max)	11	14	11	11	14
	Water connection	63	63	63	63	63
	Water pipe	PPR OR PVC	PPR OR PVC	PPR OR PVC	PPR or PVC	PPR or PVC
DIMENSIONS (L x W x H)	Fan Position	Verticle	Verticle	Verticle	Verticle	Verticle
	Material	Plastic	Plastic	Plastic	Plastic	Plastic
	Air flow	10000	13000	9000	10000	13000
WEIGHT	Net	950x950x1500	1000x1000x1500	1453x708x1084	1453 x 708 x 1084	1453 x 708 x 1284
	Shipping	1010x1010x1650	1050x1050x1650	1520x780x1235	1520 x 780 x 1235	1520 x 780 x 1435
	-	240 / 266	288 /313	230 / 256	265 /285	285 / 310

TOP DISCHARGE



Models

	Refrigerant	PH2-02714 -R410A	PH2-02715 -R410A	PH2-02720 -R410A	PH2-02730 -R410A	PH2-02740 -R410A
Power supply	V/PH/Hz	R410A	R410A	R410A	R410A	R410A
YL-H01-Heating: A24/W26°C	Heating capacity	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50
	kW	65	82	100	135	160
	BTU/h	221780	279784	341200	460620	545920
YL-H02-Heating: A15/W26°C	Power input	11.8	14.9	18.2	24.5	29.1
	W/W	5.5	5.5	5.5	5.5	5.5
	COP	55.3	69.7	85.0	114.8	136.0
YL-C01-Cooling: A35/W30°C	Heating capacity	188513	237816	290020	391527	464032
	BTU/h	12.1	15.2	18.5	25.0	29.7
	Power input	4.6	4.6	4.6	4.6	4.6
YL-C02-Cooling: A46/W30	COP	47	59	72	97	115
	kW	159682	201444	245664	331646	393062
	BTU/h	12.3	19.8	19.3	26.0	30.9
MAX. POWER INPUT	Power input	3.80	2.98	3.74	3.74	3.73
	EER	39.8	50.2	61.2	82.6	97.9
	Cooling capacity	135729	171228	208814	281899	334103
MAX. CURRENT	Power input	13.1	16.5	20.5	27.6	32.8
	kW	3.04	2.98	2.99	2.99	2.98
	W/W	20	25	31	41	49
OPERATING	Heating water temp range	35	44	55	74	88
	Cooling water temp range	15~40	15~40	15~40	15~40	15~40
	Ambient temp range	12~30	12~30	12~30	12~30	12~30
KEY	Compressor type	-15~53	-15~53	-15~53	-15~53	-15~53
	Controller	Scroll	Scroll	Scroll	Scroll	Scroll
	Noise	64	64	64	65	65
HEATING EXCHANGER	Type	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
	Water flow (min.)	16	20.1	24.6	33.2	39.3
	Water flow (max)	37.3	47.0	57.3	77.4	91.7
FAN	Water pressure drop (max)	20	20	25	25	25
	Water connection	63	63	110	110	110
	Water pipe	PPR or PVC	PPR or PVC	PVC	PVC	PVC
DIMENSIONS (L x W x H)	Fan Position	Verticle	Verticle	Verticle	Verticle	Verticle
	Material	Plastic	Plastic	Plastic	Plastic	Plastic
	Air flow	15000	18000	22000	28000	33000
WEIGHT	Net	1890 x 1000 x 1335	1890 x 1000 x 1355	1890x1000x1335	2188x1240x2380	2188x1240x2380
	Shipping	1940 x 1050 x 1485	1940 x 1050 x 1485	1940x1050x1485	2238x1290x2530	2238x1290x2530
	-	413/450	416/456	553/596	820/870	846x886

TOP DISCHARGE

Models

	Refrigerant	PH2-02750 -R410A	PH2-02760 -R410A	PH2-02765 -R410A	PH2-02770 -R410A	PH2-02780 -R410A
Power supply	V/PH/Hz	R410A 380~415/3/50	R410A 380~415/3/50	R410A 380~415/3/50	R410A 380~415/3/50	R410A 380~415/3/50
YL-H01-Heating: A24/W26°C	Heating capacity	kW 180	kW 220	kW 235	kW 250	kW 350
	Power input	BTU/h 614160	BTU/h 750640	BTU/h 801820	BTU/h 853000	BTU/h 1194200
	COP	kW 32.7	kW 40.0	kW 42.7	kW 45.5	kW 63.6
YL-H02-Heating: A15/W26°C	COP	W/W 5.5	W/W 5.5	W/W 5.5	W/W 5.5	W/W 5.5
	Heating capacity	kW 153.0	kW 187.0	kW 199.8	kW 212.5	kW 297.5
	Power input	BTU/h 522036	BTU/h 638044	BTU/h 681547	BTU/h 725050	BTU/h 1015070
YL-C01-Cooling: A35/W30°C	COP	kW 33.4	kW 40.8	kW 43.6	kW 46.4	kW 64.9
	Power input	W/W 4.6	W/W 4.6	W/W 4.6	W/W 4.6	W/W 4.6
	Heating capacity	kW 130	kW 158	kW 169	kW 180	kW 252
YL-C02-Cooling: A46/W30	Power input	BTU/h 442195	BTU/h 540461	BTU/h 577310	BTU/h 614160	BTU/h 859824
	EER	kW 34.6	kW 41.7	kW 44.5	kW 47.4	kW 66.3
	Cooling capacity	W/W 3.75	W/W 3.80	W/W 3.80	W/W 3.80	W/W 3.80
MAX.POWER INPUT	Power input	kW 110.2	kW 134.6	kW 143.8	kW 153.0	kW 214.2
	EER	BTU/h 375866	BTU/h 459392	BTU/h 490714	BTU/h 522036	BTU/h 730850
	Power input	kW 36.7	kW 44.3	kW 47.3	kW 50.3	kW 70.5
MAX.CURRENT	EER	W/W 3.00	W/W 3.04	W/W 3.04	W/W 3.04	W/W 3.04
	Heating water temp range	kW 55	kW 66	kW 71	kW 75	kW 106
	Cooling water temp range	A 98	A 119	A 127	A 135	A 189
OPERATING	Ambient temp range	°C 15~40	°C 15~40	°C 15~40	°C 15~40	°C 15~40
	Compressor type	°C 12~30	°C 12~30	°C 12~30	°C 12~30	°C 12~30
	Controller	°C -15~53	°C -15~53	°C -15~53	°C -15~53	°C -15~53
KEY	micro processor based digital controller with LCD touch screen display	Scroll	Scroll	Scroll	Scroll	Scroll
	Noise	dB(A) 65	dB(A) 65	dB(A) 65	dB(A) 67	dB(A) 68
	Type	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
HEATING EXCHANGER	Water flow (min.)	m³/h 44.2	m³/h 54.0	m³/h 57.7	m³/h 61.4	m³/h 86
	Water flow (max)	m³/h 103.2	m³/h 126.1	m³/h 134.7	m³/h 143.3	m³/h 200.6
	Water pressure drop (max)	KPa 25	KPa 25	KPa 25	KPa 26	KPa 28
FAN	Water connection	mm 110	mm 110	mm 110	mm 160	mm 160
	Water pipe	PVC	PVC	PVC	PPR or PVC	PVC
	Fan Position	Verticle	Verticle	Verticle	Verticle	Verticle
DIMENSIONS (L x W x H)	Material	Plastic	Plastic	Plastic	Plastic	Plastic
	Air flow	m³/h 39000	m³/h 44000	m³/h 44000	m³/h 55000	m³/h 77000
	Net	mm 2188x1240x2380	mm 2188x1240x2380	mm 2188x1240x2380	mm 2188x1240x2380	mm 3200x2188x2360
WEIGHT	Shipping	mm 2238x1290x2530	mm 2238x1290x2530	mm 2238x1290x2530	mm 2238x2238x2510	mm 3250x2238x2510
	-	kg 1408/1438	kg 1468/1518	kg 1488/1538	kg 1420/1470	kg 2030/2100

FRONT DISCHARGE

 Models

		PHFD2-02610 -R410A	PHFD2-02615 -R410A	PHFD2-02620 -R410A	PHFD2-02625 -R410A	PHFD2-02630-1 -R410A
Refrigerant		R410A	R410A	R410A	R410A	R410A
YL-H01-Heating: A24/W26°C	Power supply	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
	Heating capacity	5 kW	7.3 BTU/h	9.8 BTU/h	12 BTU/h	14 BTU/h
	Power input	17060 kW	24908 kW	33438 kW	40944 kW	47768 kW
	COP	0.9 W/W	1.5 W/W	2.0 W/W	2.4 W/W	2.8 W/W
YL-H02-Heating: A15/W26°C	Heating capacity	4.3 kW	6.2 BTU/h	8.3 BTU/h	10.2 BTU/h	11.9 BTU/h
	Power input	14501 kW	21171 kW	28422 kW	34802 kW	40603 kW
	COP	0.9 W/W	1.4 W/W	1.9 W/W	2.4 W/W	2.8 W/W
	COP	4.6 W/W	4.3 W/W	4.3 W/W	4.3 W/W	4.3 W/W
YL-H03-Heating: A7/W26°C	Heating capacity	4 kW	5.3 BTU/h	7 BTU/h	9 BTU/h	10 BTU/h
	Power input	12283 kW	17933 kW	24075 kW	29480 kW	34393 kW
	Power input	1 kW	1.4 kW	1.9 kW	2.3 kW	2.7 kW
	EER	3.75 W/W	3.75 W/W	3.75 W/W	3.70 W/W	3.80 W/W
YL-C01-Cooling: A35/W30°C	Cooling capacity	3.1 kW	4.4676 BTU/h	5.9976 BTU/h	7.3 BTU/h	8.6 BTU/h
	Power input	10441 kW	15243 kW	20464 kW	25058 kW	29234 kW
	EER	1 W/W	1.5 W/W	2.0 W/W	2.5 W/W	2.8 W/W
	EER	3 W/W	3.00 W/W	3.00 W/W	2.96 W/W	3.04 W/W
MAX.	Power input	1.4 kW	2.2 kW	3.0 kW	3.7 kW	4.2 kW
	Current	6.2 A	11 A	15 A	18 A	8 A
	Water outlet temp.range	15~40 °C	15~40 °C	15~40 °C	15~40 °C	15~40 °C
	Ambient temp.range	0~53 °C	0~53 °C	0~53 °C	0~53 °C	0~53 °C
OPERATING	Compressor type	Rotary	Rotary	Rotary	Rotary	Scroll
	Noise	47 dB(A)	51 dB(A)	53 dB(A)	53 dB(A)	53 dB(A)
	Type	Titanium / PVC	Titanium / PVC	Titanium / PVC	Titanium / PVC	Titanium/PVC
	Water flow (min.)	1.3 m³/h	1.8 m³/h	2.4 m³/h	2.9 m³/h	3.4 m³/h
HEAT EXCHANGER	Water flow (max.)	2.9 m³/h	4.2 m³/h	5.6 m³/h	6.9 m³/h	8.0 m³/h
	Water pressure drop(max)	6 KPa	8 KPa	10 KPa	10 KPa	12 KPa
	Water pipe	-	-	-	-	-
	Water connection	50.00 mm	50 mm	50 mm	50 mm	50 mm
FAN	Position	horizontal	Horizontal	Horizontal	Horizontal	horizontal
	Air flow	2000 m³/h	2000 m³/h	2000 m³/h	2600 m³/h	3500 m³/h
	Net	900 x 340 x 623 mm	900 x 340 x 623 mm	900 x 340 x 623 mm	900 x 340 x 623 mm	1100 x 440 x 673 mm
	Shipping	960 x 400 x 773 mm	960 x 400 x 773 mm	960 x 400 x 773 mm	960 x 400 x 773 mm	1157 x 497 x 823 mm
WEIGHT	-	48 / 55 kg	62 / 73 kg	62 / 73 kg	62 / 73 kg	102/109 kg

FRONT DISCHARGE



		PHFD2-02630-2 -R410A	PHFD2-02640 -R410A	PHFD2-02650 -R410A	PHFD2-02660 -R410A	PHFD2-02670 -R410A
YL-H01-Heating: A24/W26°C	Refrigerant	R410A	R410A	R410A	R410A	R410A
	Power supply	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
	Heating capacity	14 kW	17 BTU/h	21 kW	25 BTU/h	31 kW
	Power input	47768 kW	58004 kW	71652 kW	85300 kW	105772 kW
YL-H02-Heating: A15/W26°C	COP	2.8 W/W	3.4 W/W	4.2 W/W	5.0 W/W	6.2 W/W
	Heating capacity	11.9 kW	14.5 BTU/h	17.9 kW	21.3 BTU/h	26.4 kW
	Power input	40603 kW	49303 kW	60904 kW	72505 kW	89906 kW
	COP	2.8 W/W	4.3 W/W	4.2 W/W	5.0 W/W	6.1 W/W
YL-H03-Heating: A7/W26°C	Heating capacity	10 kW	12 BTU/h	15 kW	18 BTU/h	22 kW
	Power input	34393 kW	41763 kW	51589 kW	61416 kW	76156 kW
	EER	2.7 W/W	3.2 W/W	4.0 W/W	4.7 W/W	5.9 W/W
	Cooling capacity	3.80 kW	3.80 BTU/h	3.76 kW	3.80 BTU/h	3.80 kW
YL-C01-Cooling: A35/W30°C	Power input	29234 kW	35498 kW	43851 kW	52204 kW	64732 kW
	EER	2.8 W/W	3.4 W/W	4.3 W/W	5.0 W/W	6.2 W/W
	Power input	3.04 kW	3.04 kW	3.01 kW	3.04 kW	3.04 kW
	Current	4.2 A	5.1 A	6.4 A	7.5 A	9.4 A
OPERATING	Water outlet temp.range	15~40 °C	15~40 °C	15~40 °C	15~40 °C	15~40 °C
	Ambient temp.range	0~53 °C	0~53 °C	0~53 °C	0~53 °C	0~53 °C
	Compressor type	Scroll	Scroll	Scroll	Scroll	Scroll
	Noise	53 dB(A)	55 dB(A)	55 dB(A)	58 dB(A)	59 dB(A)
HEAT EXCHANGER	Type	Titanium/PVC	Titanium/PVC	Titanium/PVC	Titanium/PVC	Titanium/PVC
	Water flow (min.)	3.4 m³/h	4.2 m³/h	5.2 m³/h	6.1 m³/h	7.6 m³/h
	Water flow (max.)	8.0 m³/h	9.7 m³/h	12.0 m³/h	14.3 m³/h	17.8 m³/h
	Water pressure drop(max)	12 KPa	12 KPa	12 KPa	15 KPa	15 KPa
FAN	Water pipe	—	—	—	—	PPR or PVC
	Water connection	50 mm	50 mm	50 mm	50 mm	63 mm
	Position	horizontal	horizontal	horizontal	horizontal	horizontal
	Air flow	3500 m³/h	3500 m³/h	5500 m³/h	5500 m³/h	7000 m³/h
DIMENSIONS (L x W x H)	Net	1100 x 440 x 673 mm	1100 x 440 x 673 mm	1100 x 440 x 873 mm	1150 x 450 x 973 mm	1100 x 440 x 1378 mm
	Shipping	1157 x 497 x 823 mm	1157 x 497 x 823 mm	1157 x 497 x 1023 mm	1207 x 507 x 1125 mm	1157 x 497 x 1528 mm
WEIGHT	-	102 / 109 kg	102 / 109 kg	107 / 129 kg	120 / 134 kg	136 / 151 kg

FRONT DISCHARGE

 Models

		PHFD2-02710 -R410A	PHFD2-02712 -R410A	PHFD2-02713 -R410A	PHFD2-02714 -R410A	PHFD2-02715 -R410A
Refrigerant		R410A	R410A	R410A	R410A	R410A
YL-H01-Heating: A24/W26°C	Power supply	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
	Heating capacity	40 kW	45 kW	55 kW	65 kW	82 kW
	Power input	136480 BTU/h	153540 BTU/h	187660 BTU/h	221780 BTU/h	279784 BTU/h
	COP	8.0 W/W	9.0 W/W	11.0 W/W	13.0 W/W	16.4 W/W
YL-H02-Heating: A15/W26°C	Heating capacity	34.0 kW	38.3 kW	46.8 kW	55.3 kW	69.7 kW
	Power input	116008 BTU/h	130509 BTU/h	159511 BTU/h	188513 BTU/h	237816 BTU/h
	COP	7.9 kW	8.9 kW	10.9 kW	12.9 kW	16.2 kW
	COP	4.3 W/W	4.3 W/W	4.3 W/W	4.3 W/W	4.3 W/W
YL-H03-Heating: A7/W26°C	Heating capacity	29 kW	32 kW	40 kW	47 kW	59 kW
	Power input	98266 BTU/h	110549 BTU/h	135115 BTU/h	159682 BTU/h	201444 BTU/h
	Power input	7.5 kW	8.4 kW	10.4 kW	12.3 kW	15.5 kW
	EER	3.85 W/W	3.85 W/W	3.80 W/W	3.80 W/W	3.80 W/W
YL-C01-Cooling: A35/W30°C	Cooling capacity	24.5 kW	27.5 kW	33.7 kW	39.8 kW	50.2 kW
	Power input	83526 BTU/h	93966 BTU/h	114848 BTU/h	135729 BTU/h	171228 BTU/h
	Power input	7.9 kW	8.9 kW	11.1 kW	13.1 kW	16.5 kW
	EER	3.08 W/W	3.08 W/W	3.04 W/W	3.04 W/W	3.04 W/W
MAX.	Power input	11.9 kW	13.4 kW	17 kW	20 kW	25 kW
	Current	21 A	24 A	30 A	35 A	44 A
OPERATING	Water outlet temp.range	15~40 °C	15~40 °C	15~40 °C	15~40 °C	15~40 °C
	Ambient temp.range	0~53 °C	0~53 °C	0~53 °C	0~53 °C	0~53 °C
KEY	Compressor type	Scroll	Scroll	Scroll	Scroll	Scroll
	Noise	59 dB(A)	59 dB(A)	60 dB(A)	64 dB(A)	64 dB(A)
HEAT EXCHANGER	Type	Titanium/PVC	Titanium/PVC	Titanium/PVC	Titanium/PVC	Titanium/PVC
	Water flow (min.)	9.8 m³/h	11.1 m³/h	13.5 m³/h	16.0 m³/h	20.1 m³/h
	Water flow (max.)	22.9 m³/h	25.8 m³/h	31.5 m³/h	37.3 m³/h	47.0 m³/h
	Water pressure drop(max)	11 KPa	11 KPa	14 KPa	20 KPa	20 KPa
FAN	Water pipe	PPR or PVC	PPR or PVC	PPR or PVC	PPR or PVC	PPR or PVC
	Water connection	63 mm	63 mm	63 mm	63 mm	63 mm
	Position	horizontal	horizontal	horizontal	horizontal	horizontal
	Air flow	9000 m³/h	10000 m³/h	13000 m³/h	15000 m³/h	18000 m³/h
DIMENSIONS (L x W x H)	Net	1455 x 755 x 1705 mm	1455 x 755 x 1705 mm	1455 x 755 x 1705 mm	2188 x 755 x 1705 mm	2188 x 755 x 1705 mm
	Shipping	1505 x 805 x 1855 mm	1505 x 805 x 1855 mm	1505 x 805 x 1855 mm	2238 x 805 x 1855 mm	2238 x 805 x 1855 mm
WEIGHT	-	333 / 368 kg	333 / 368 kg	333 / 368 kg	445 / 485 kg	445 / 485 kg

FRONT DISCHARGE



Models

		PHFD2-02720 -R410A	PHFD2-02730 -R410A	PHFD2-0274 -R410A
Refrigerant		R410A	R410A	R410A
Power supply	V/PH/Hz	380-415/3/50	380-415/3/50	380-415/3/50
YL-H01-Heating: A24/W26°C	Heating capacity	kW	135	158
		BTU/h	460620	539096
	Power input	kW	27.0	31.6
YL-H02-Heating: A15/W26°C	COP	W/W	5.0	5.0
	Heating capacity	kW	114.8	134.3
		BTU/h	391527	458232
YL-H03-Heating: A7/W26°C	Power input	kW	26.7	31.3
	COP	W/W	4.3	4.3
	Heating capacity	kW	97	114
YL-C01-Cooling: A35/W30°C	Power input	BTU/h	331646	388149
	EER	kW	26.0	30.5
	Cooling capacity	kW	3.74	3.73
MAX.	Power input	BTU/h	82.6	96.7
	EER	kW	281899	329927
	Current	kW	27.6	32.4
OPERATING	Water outlet temp.range	W/W	2.99	2.98
	Ambient temp.range	kW	41	49
	Compressor type	A	74	87
KEY	Noise	°C	15~40	15~40
	Type	°C	0~53	0~53
	Water flow (min.)	dB(A)	Scroll	Scroll
HEAT EXCHANGER	Water flow (max.)		65	65
	Water pressure drop (max)	m³/h	Titanium/PVC	Titanium/PVC
	Water pipe	m³/h	33.2	38.8
FAN	Water connection	KPa	77.4	90.6
	Position	mm	25	25
	Air flow	mm	PPR or PVC	PPR or PVC
DIMENSIONS (L x W x H)	Net	mm	110	110
	Shipping	mm	horizontal	horizontal
	Weight	kg	28000	33000
WEIGHT			1455 x 755 x 2250	2188 x 860 x 2250
			1505 x 805 x 2400	2238 x 910 x 2400
			536 / 576	727 / 781



TEMPERATURE CONTROL 14/01

HEAT PUMP TOP/FRONT DISCHARGE INVERTER

Incorporates purpose-built components for long lasting and high efficiency that achieves maximum results. Internal fins, containing high performance titanium dioxide TiO₂, provides a corrosion resistance, impermeable ice formation and a dustproof evaporator coil.



Technical features

- Used for heating or cooling residential and public pools such as hotels, schools, fitness centres, and aqua parks
- From 16kW up to 200kW
- High efficiency that reaches up to 13 COP, reduces energy usage and enables a longer swimming season
- Unique design metal cabinet with integrated control system
- Inverter fan with low noise level and vertical air discharge. As a result, the sound level of the unit at 1 meter, is as low as 40dB(A) under silence mode
- Defrosting: At reduced noise levels, the unit defrosts the evaporator when the ventilator is activated
- High/Low pressure protection available
- Intelligent touch screen LCD control system can be connected to BMS or Wi-Fi
- Titanium Heat Exchanger
- Titanium dioxide TiO₂ coating for the evaporator provides protection from corrosion and delivers maximum life expectancy
- Mitsubishi inverter compressor with R410A Refrigerant
- Phase monitor: Protects the compressor in case of phase loss or inversion
- Super Silent:
 - The compressor inside the unit is wrapped with a new noise reduction internal sponge, proven to effectively reduce sound levels
 - The Mitsubishi Inverter compressor produces a much lower running noise level
 - A newly developed fan blade design is employed within the heat pump which makes the unit run even quieter
- An electronic expansion valve, on each compressor, regulates the refrigerant flow rate to ensure the unit operates with high efficiency in different weather conditions



Wifi
Connectivity



TiO₂
Coating



COP
up to 13



Electronic
Expansion Valve



Inverter
Compressor



Titanium Heat
Exchanger



Inverter
Fan

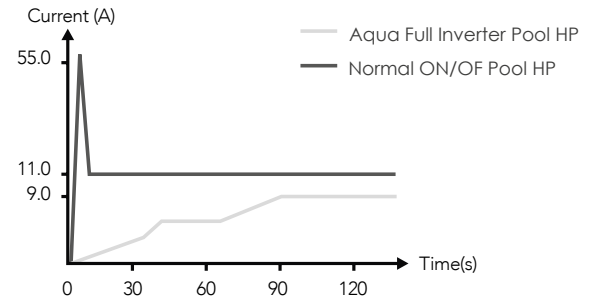
SIMPLIFY YOUR LIFE WITH THE ELECRO APP

Connection via Wi-Fi and 4G enables you to take full control of your swimming pool heat pump from anywhere in your home or office with a simple app on your smartphone.



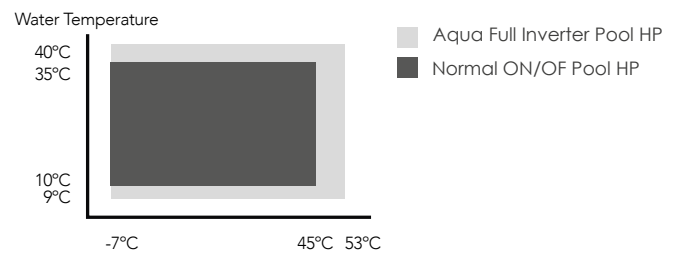
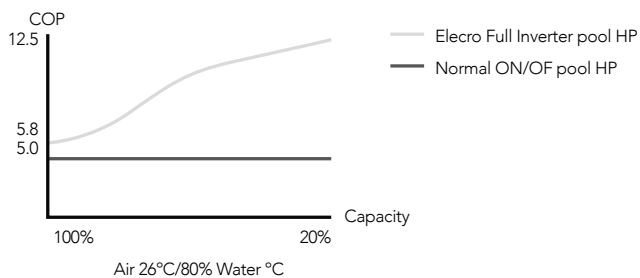
SOFT START

Aqua Full Inverter Pool Heat Pumps achieve a stairlike rise of the compressor frequency. When the unit starts, the current will gradually rise from 0A to half of the rated current, and then rise step-by-step to the rated current within a few minutes. Normal on/off heat pumps start with an instantaneous current over 6 times higher than the full-inverter heat pumps, which will be harmful to the home electricity system.



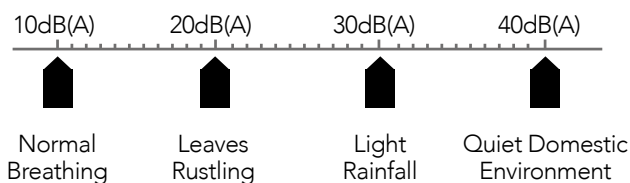
HIGH ENERGY EFFICIENCY AND LARGE RUNNING RANGE

Aqua Full Inverter Pool Heat Pumps can reach a COP as high as 12.5 at the ambient condition (Air 26°C/Humidity 80%) and keep a high EER at 53°C ambient temperature.



24DB(A) LOW NOISE AT 10M DISTANCE

The Aqua Full Inverter Pool Heat Pump is specially designed with a silence mode to create a comfortable living environment for users at night. Under silence mode, the heat pump is running at 24dB(A) low noise, equivalent to a whisper.



TOP DISCHARGE

Models

MODEL	INTOP-3021	INTOP-3024	INTOP-3028	INTOP-3030	INTOP-3035
PERFORMANCE CONDITION	A27 / W26 C°				
Heating Output (kW)	6.2-21.1	6.72-23.7	6.72-28	8.5-30.5	7.1-35.0
Power Input (kW)	0.45-3.2	0.46-3.65	0.46-4.5	0.59-4.7	0.62-6.73
COP	13.7-6.6	14.61-6.49	14.61-6.22	14.3-6.5	11.4-5.2
PERFORMANCE CONDITION	A15 / W26 C°				
Heating Output (kW)	4.8-16.9	4.8-17.3	4.8-20.5	6.4-23.8	6.4-27.5
Power Input (kW)	0.68-3.1	0.63-3.83	0.63-4.4	0.82-4.5	0.97-6.63
COP	7.06-5.45	7.6-4.52	7.6-4.66	7.8-5.29	6.6-4.15
PERFORMANCE CONDITION	A45 / W40 C°				
Cooling Output (kW)	2.8-11.9	2.9-13.2	2.9-13.2	4.76-15.5	4.76-15.7
Power Input (kW)	0.7-4.5	0.73-5.5	0.73-5.5	1.21-6.1	1.21-6.2
EER	4.0-2.64	3.96-2.4	3.96-2.4	3.93-2.54	3.93-2.53
PERFORMANCE CONDITION	A35 / W30 C°				
Cooling Output (kW)	3.3-14.0	3.5-16.5	3.5-16.5	5.8-18.9	5.8-19.6
Power Input (kW)	0.55-4.0	0.60-5.3	0.6-5.3	1.0-5.73	1.0-6.1
EER	6.0-3.5	5.8-3.11	5.8-3.11	5.75-3.3	5.75-3.21
Power Supply (V/Hz/Ph)	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Rated Heating Capacity (kW)	21	24	28	30	35
Rated power Input (kW)	4.0	4.6	5.7	6.2	7.5
Rated current (A)	18	21	26	28	34
Compressor Type-Quantity	1	1	1	1	1
Fan type	DC	DC	DC	DC	DC
Fan Quantity	1	1	1	1	1
Fan Air flow (m3/ h)	6000	6600	6600	8000	8000
Throttling device	EEV	EEV	EEV	EEV	EEV
Sound power level 1m (dB(A))	48-55	48-56	48-56	50-57	53-59
Water Side Heat Exchanger Type	Twisted Titanium Heat Exchanger				
Water Pressure Drop (kPa)	16	18	20	23	25
Water Connection (mm)	50	50	50	50	50
Nominal Water Flow (m3/h)	9	10.5	12	12.5	14.6
Operating temperature range-Heating (°c)	-15~43				
Operating temperature range-Cooling (°c)	5~43				
Leaving water temprature range-Heating (°c)	18~40				
Leaving water temprature range-Cooling (°c)	12~40				
Refrigerant Type	R32				
Refrigerant GWP	675				
Refrigerant charge (kg)	1.4	1.4	1.9	1.9	1.9
Operation Pressure Low Side (Mpa)	2.1	2.1	2.1	2.1	2.1
Operation Pressure High Side (Mpa)	4.4	4.4	4.4	4.4	4.4
Unit size (mm)	715x715x1078	715x715x1078	860x860x1090	860x860x1090	860x860x1090
Packing size (mm)	775x775x1243	775x775x1243	920x920x1255	920x920x1255	920x920x1255
Unit Net weight (kg)	106	110	110	120	125
Unit Gross weight (kg)	126	130	130	140	145

TOP DISCHARGE

Models

MODEL	INTOP-3035S	INTOP-3045S	INTOP-3055S	INTOP-3110S	INTOP-3220S
PERFORMANCE CONDITION	A27 / W26 C°				
Heating Output (kW)	7.1-35.0	10.5-47.5	12.0-56.3	24.2-114	48.5-225
Power Input (kW)	0.62-6.73	0.78-7.8	0.90-9.2	1.8-18.5	3.58-36.9
COP	11.4-5.2	13.5-6.09	13.3-6.1	13.44-6.16	13.55-6.10
PERFORMANCE CONDITION	A15 / W26 C°				
Heating Output (kW)	6.4-27.5	7.85-36.5	9.2-42.0	18.5-85.0	37.1-172
Power Input (kW)	0.97-6.63	1.08-7.6	1.3-8.8	2.6-17.5	5.1-35.3
COP	6.6-4.15	7.27-4.8	7.08-4.77	7.12-4.86	7.27-4.87
PERFORMANCE CONDITION	A45 / W40 C°				
Cooling Output (kW)	4.76-15.7	5.7-24.3	6.4-26.2	12.8-52.5	25.5-105
Power Input (kW)	1.21-6.2	1.46-9.2	1.68-9.5	3.35-20.0	6.75-40.2
EER	3.93-2.53	3.9-2.63	3.81-2.75	3.82-2.63	3.78-2.61
PERFORMANCE CONDITION	A35 / W30 C°				
Cooling Output (kW)	5.8-19.6	7.05-33.0	8.6-35.0	17.0-70.3	34.0-141
Power Input (kW)	1.0-6.1	1.2-9.8	1.32-10.0	2.65-20.0	5.3-40.0
EER	5.75-3.21	5.88-3.37	6.52-3.5	6.42-3.52	6.42-3.53
Power Supply (V/Hz/Ph)	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Rated Heating Capacity (kW)	35	45	55	110	220
Rated power Input (kW)	7.7	10.2	10.7	21.4	43.4
Rated current (A)	15	20	21	42	85
Compressor Type-Quantity	1	1	1	2	4
Fan type	DC	DC	DC	DC	DC
Fan Quantity	1	1	1	2	2
Fan Air flow (m3/ h)	8000	11000	12000	24000	48000
Throttling device	EEV	EEV	EEV	EEV	EEV
Sound power level 1m (dB(A))	53-59	54-63	56-64	60-67	65-71
Water Side Heat Exchanger Type	Twisted Titanium Heat Exchanger				
Water Pressure Drop (kPa)	25	28	30	30	34
Water Connection (mm)	50	63	63	100	100
Nominal Water Flow (m3/h)	14.6	15.5	18	36.5	74
Operating temperature range-Heating (°c)	-15~43				
Operating temperature range-Cooling (°c)	5~43				
Leaving water temprature range-Heating (°c)	18~40				
Leaving water temprature range-Cooling (°c)	12~40				
Refrigerant Type	R32				
Refrigerant GWP	675				
Refrigerant charge (kg)	1.9	2.8	3.2	6.4	12.8
Operation Pressure Low Side (Mpa)	2.1	2.1	2.1	2.1	2.1
Operation Pressure High Side (Mpa)	4.4	4.4	4.4	4.4	4.4
Unit size (mm)	860x860x1090	950x950x1500	950x950x1500	1100x1100x2320	2260x1100x2320
Packing size (mm)	920x920x1255	1010x1010x1665	1010x1010x1665	1160x1160x2500	2360x1160x2500
Unit Net weight (kg)	125	220	230	360	920
Unit Gross weight (kg)	145	250	260	390	960

FRONT DISCHARGE

Models

MODEL	INVFRONT-3007	INVFRONT-3011	INVFRONT-3016
PERFORMANCE CONDITION	A27 / W26 C°		
Heating Output (kW)	2.50~7.80	3.49~11.20	5.82~16.1
Power Input (kW)	0.17~1.16	0.31~1.71	0.50~2.43
COP	14.70~6.72	11.26~6.55	11.64~6.63
PERFORMANCE CONDITION	A15 / W26 C°		
Heating Output (kW)	1.81~6.05	2.58~8.90	4.00~12.4
Power Input (kW)	0.20~1.09	0.30~1.69	0.48~2.41
COP	9.05~5.55	8.6~5.27	8.33~5.15
PERFORMANCE CONDITION	A45 / W40 C°		
Cooling Output (kW)	1.23~3.55	1.56~4.62	2.55~7.1
Power Input (kW)	0.41~1.65	0.51~2.20	0.82~3.1
EER	3.00~2.15	3.06~2.10	3.11~2.29
PERFORMANCE CONDITION	A35 / W30 C°		
Cooling Output (kW)	1.35~5.03	1.6~6.5	2.8~9.3
Power Input (kW)	0.36~1.65	0.45~2.2	0.65~3.1
EER	3.75~3.05	3.56~2.94	4.31~3.00
Power Supply (V/Hz/Ph)	220-240/1/50	220-240/1/50	220-240/1/50
Rated Heating Capacity (kW)	7	11	16
Rated power Input (kW)	1.6	2.1	3.0
Rated current (A)	7.2	9.5	13.5
Compressor Type-Quantity	1	1	1
Fan type	DC	DC	DC
Fan Quantity	1	1	1
Fan Air flow (m3/ h)	1800	1800	2400
Throttling device	EEV	EEV	EEV
Sound power level 1m (dB(A))	36-47	38-49	40-50
Water Side Heat Exchanger Type	Twisted Titanium Heat Exchanger		
Water Pressure Drop (kPa)	16	18	20
Water Connection (mm)	50	50	50
Nominal Water Flow (m3/h)	3.40	4.80	6.90
Operating temperature range-Heating (°C)	'-15~43		
Operating temperature range-Cooling (°C)	5~43		
Leaving water temprature range-Heating (°C)	18~40		
Leaving water temprature range-Cooling (°C)	12~40		
Refrigerant Type	R32/R410A		
Refrigerant GWP	675		
Refrigerant charge (kg)	1.4	1.4	1.9
Operation Pressure Low Side (Mpa)	2.1	2.1	2.1
Operation Pressure High Side (Mpa)	4.4	4.4	4.4
Unit size (mm)	900×340×623	900×340×623	1020×440×673
Packing size (mm)	960x400x786	960x400x786	1080x500x836
Unit Net weight (kg)	38	40	62
Unit Gross weight (kg)	53	55	80

FRONT DISCHARGE

Models

MODEL	INVFRONT-3018	INVFRONT-3021	INVFRONT-3026
PERFORMANCE CONDITION	A27 / W26 C°		
Heating Output (kW)	5.90~18.5	8.15~21.2	8.3~26.0
Power Input (kW)	0.50~2.78	0.74~2.83	0.75~4.20
COP	11.8~6.65	11.01~7.51	11.07~6.19
PERFORMANCE CONDITION	A15 / W26 C°		
Heating Output (kW)	4.05~14.1	5.96~17.0	6.06~20.2
Power Input (kW)	0.49~2.75	0.72~2.96	0.73~4.05
COP	8.27~5.13	8.28~5.73	8.30~4.99
PERFORMANCE CONDITION	A45 / W40 C°		
Cooling Output (kW)	2.55~7.1	3.2~11.9	3.2~13.2
Power Input (kW)	0.82~3.1	1.06~6.0	1.06~6.8
EER	3.11~2.29	3.02~1.98	3.02~1.94
PERFORMANCE CONDITION	A35 / W30 C°		
Cooling Output (kW)	2.8~9.3	3.3~13.6	3.3~14.5
Power Input (kW)	0.65~3.1	0.86~4.6	0.86~5.7
EER	4.31~3.00	3.84~2.96	3.84~2.54
Power Supply (V/Hz/Ph)	220-240/1/50	220-240/1/50	220-240/1/50
Rated Heating Capacity (kW)	18	21	26
Rated power Input (kW)	3.0	4.4	5.5
Rated current (A)	13.5	20	28
Compressor Type-Quantity	1	1	1
Fan type	DC	DC	DC
Fan Quantity	1	1	1
Fan Air flow (m3/ h)	2400	3500	3500
Throttling device	EEV	EEV	EEV
Sound power level 1m (dB(A))	41-50	43-52	43-52
Water Side Heat Exchanger Type	Twisted Titanium Heat Exchanger		
Water Pressure Drop (kPa)	23	25	25
Water Connection (mm)	50	50	50
Nominal Water Flow (m3/h)	7.96	9.10	11.20
Operating temperature range-Heating (°C)	-15~43		
Operating temperature range-Cooling (°C)	5~43		
Leaving water temprature range-Heating (°C)	18~40		
Leaving water temprature range-Cooling (°C)	12~40		
Refrigerant Type	R32/R410A		
Refrigerant GWP	675		
Refrigerant charge (kg)	1.9	1.9	1.9
Operation Pressure Low Side (Mpa)	2.1	2.1	2.1
Operation Pressure High Side (Mpa)	4.4	4.4	4.4
Unit size (mm)	1020×440×673	1100×440×877	1100×440×877
Packing size (mm)	1080x500x836	1160x500x1040	1160x500x1040
Unit Net weight (kg)	70	95	104
Unit Gross weight (kg)	88	115	124