

# TEMPERATURE CONTROL

## INDEX

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- 01** AIR TO WATER HEATING /COOLING PUMP
- 02** ELECRO EVOLUTION 2 ALLTITANIUM  
ANALOGUE CONTROLLER
- 03** OPTIMA COMPACT POOL HEATER
- 04** SFS JOEY
- 05** TITAN OPTIMA
- 06** POOL SMART PLUS
- 07** HEAT SMART & KOOL SMART PLUS
- 08** G2 HEAT EXCHANGER
- 09** SST HEAT EXCHANGER
- 10** PLATE HEAT EXCHANGER
- 11** AQUA POOL DEHUMIDIFIERS WITH HEATING  
& COOLING FUNCTION
- 12** WATER TO WATER POOL HEAT PUMP
- 13** AIR COOLED WATER CHILLER
- 14** INDOOR POOL DEHUMIDIFIER

# 01 AIR TO WATER HEATING / COOLING PUMP

Air/water heating/cooling pump is part of the AQUA product line, which indicates the swimming pool and SPA heat pump.

Swimming pool heat pump can be used for heating or cooling swimming pool, spa or some other open water system.

Water system pressure should be less than 3 bar. (Cannot be used for close water system such as air conditioning, ground source heating and so on.)

## PRODUCT FEATURES



### HIGH EFFICIENCY

Adopt heat pump for heating and the energy comes from ambient air. So its COP can reach 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

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



### CORROSION PREVENTION

The condenser uses titanium metal, its corrosion resistance is 4-5 times of ordinary copper tube, the corrosion ability of the unit is significantly improved, while the effective way to prevent fluoride leakage.

So the medium of heat exchange can also contain seawater, mild industrial water, etc.



### INTELLIGENT DEFROSTING

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



### 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 100m for flexible installation.
- Keep balance running of compressor
- Automatically adjusting capacity according to the change of water inlet the temperature.
- Can achieve the perfect docking with BMS. Realizing remote control based on user requirement for easy management and maintenance. And can realize multi unit modular operation



### COMPRESSOR

AQUA products and the world famous brand compressor manufacturers (COPELAND\ GMCC) have good cooperation, so as to ensure the high quality of the 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.

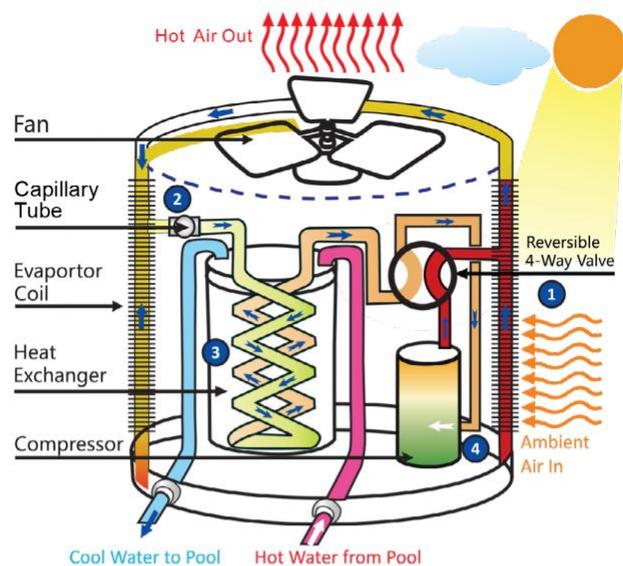
#### 3- STAGE THREE

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 heat transfer medium (the refrigerant) is colder than the outside air. As the outside air passes across the evaporator coil, the liquid refrigerant absorbs heat from the air and evaporates.

#### 2- STAGE TWO

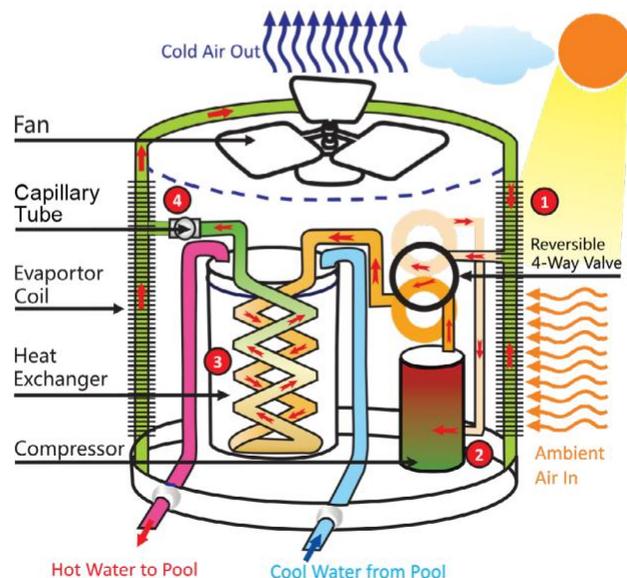
The gaseous refrigerant then passes to the compressor and is compressed. When compressed, the pressure is increased and the temperature of the vapor rises, effectively concentrating the heat.

#### 3- STAGE THREE

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.

#### 4- STAGE FOUR

The liquid refrigerant then passes through an capillary tube, reducing its pressure and temperature, ready to start the whole cycle once again.



## GAS TYPE – R410A

			PH-02620-R410A	PH-02625-R410A	PH-02630-R410A
Refrigerant					
Power supply		V/PH/Hz	220/1/50	220/1/50	220/1/50
YL-H01-Heating: A24/W26°C	Heating capacity	kW	9.5	12	14
		BTU/h	32414	40944	47768
	Power input	kW	1.7	2.2	2.5
	Current	A	7.9	9.9	4.6
	COP	W/W	5.5	5.5	5.5
YL-H02-Heating: A15/W26°C	Heating capacity	kW	8.1	10.2	11.9
		BTU/h	27552	34802	40603
	Power input	kW	1.8	2.2	2.6
	Current	A	8.0	10.1	4.6
	COP	W/W	4.6	4.6	4.6
YL-C01-Cooling: A35/W30°C	Cooling capacity	kW	7	9.0	10
		BTU/h	23338	29480	34393
	Power input	kW	1.8	2.3	2.7
	Current	A	8.3	10.6	4.7
	EER	W/W	3.75	3.70	3.80
YL-C02-Cooling: A46/W30	Cooling capacity	kW	5.814	7.3	8.6
		BTU/h	19837	25058	29234
	Power input	kW	1.9	2.5	2.8
	Current	A	8.8	11.3	5.0
	EER	W/W	3.00	2.96	3.04
OPERATING	Water outlet temp.range	°C	15-40	15-40	15-40
	Ambient temp.range	°C	0-53	0-53	0-53
HEAT EXCHANGER	Compressor brand		GMCC	GMCC	COMPLAND
	Compressor type		Rotary*1	Scroll*1	Scroll*1
	Controller				
	Noise	dB(A)	51	53	53
KEY	Type		Titanium /PVC	Titanium /PVC	Titanium /PVC
	Standard water flow	m³/h	4.1	5.2	6.0
	Suggested water flow	m³/h	4-6	5-7	6-8
	Water pressure drop(max)	KPa	6	10	11
	Water pipe				
	Water connection	mm	50	50	50
FAN	Position		Verticle	Verticle	Verticle
	Material		Plastic	Plastic	Plastic
	Air flow	m³/h	2000	2600	3500
DIMENSIONS (W x H x D)	Net	mm	688/696/737	688/696/737	746/686/941
	Shipping	mm	736/750/920	736/750/920	795/745/1110
WEIGHT		kg	63/77	70/77	95/110
Loading qty		20/40/40hq	63/144/144	63/144/144	42/96/144

PH-02640-R410A	PH-02650-R410A	PH-02660-R410A	PH-02670-R410A	PH-02700-R410A	PH-02710-R410A	PH-02712-R410A
380/3/50	380/3/50	380/3/50	380/3/50	380/3/50	380/3/50	380/3/50
17	21	25	31	35	40	45
58004	71652	85300	105772	119420	136480	153540
3.1	3.8	4.6	5.7	6.4	7.3	8.2
5.5	6.8	8.1	10.3	11.4	13.0	14.6
5.5	5.5	5.5	5.4	5.5	5.5	5.5
14.5	17.9	21.3	26.4	29.8	34.0	38.3
49303	60904	72505	89906	101507	116008	130509
3.2	3.9	4.6	5.9	6.5	7.4	8.3
5.6	6.9	8.3	10.5	11.6	13.3	14.9
4.6	4.6	4.6	4.5	4.6	4.6	4.6
12	15	18	22	25	29	32
41763	51589	61416	76156	85982	98266	110549
3.2	4.0	4.7	5.9	6.5	7.5	8.4
5.8	7.2	8.5	10.5	11.7	13.4	15.0
3.80	3.76	3.80	3.80	3.85	3.85	3.85
10.4	12.9	15.3	19.0	21.4	24.5	27.5
35498	43851	52204	64732	73085	83526	93966
3.4	4.3	5.0	6.3	7.0	7.9	8.9
6.1	7.6	9.0	11.2	12.4	14.2	16.0
3.04	3.01	3.04	3.04	3.08	3.08	3.08
15-40	15-40	15-40	15-40	15-40	15-40	5-40
0-53	0-53	0-53	0-53	0-53	0-53	0-53
COMPLAND						
Scroll*1	Scroll*1	Scroll*1	Scroll*1	Scroll*1	Scroll*2	Scroll*2
53	54	55	55	58	59	59
Titanium /PVC						
7.3	9.0	10.7	13.3	15.0	17.2	19.3
7-9	9-12	10-14	12-17	15-20	17-23	19-26
12	12	12	12	15	15	15
					PPR or PVC	PPR or PVC
50	50	50	63	63	63	63
Verticle						
Plastic						
3500	5500	5500	5500	7500	9000	10000
746/686/91	746/686/941	746/686/941	810/810/1079	860/860/1277	1453/708/1084	1453/708/1084
795/745/1110	795/745/1110	795/745/110	915/860/1230	910/910/1435	1520/780/1235	1525/780/1235
105/115	106/120	145/155	150/160	203/210	250/270	265/285
42/96/144	42/96/144	42/196/144	42/90/90		10/22/44	10/22/44

## GAS TYPE – R410A

			PH-02713-R410A	PH-02714-R410A	PH-02715-R410A	PH-02720-R410A
Refrigerant						
Power supply		V/PH/Hz	380/3/50	380/3/50	380/3/50	380/3/50
YL-H01-Heating: A24/W26°C	Heating capacity	kW	55	65	80	100
		BTU/h	187660	221780	272960	341200
	Power input	kW	10.0	11.8	14.5	18.2
	Current	A	17.9	21.1	26.0	32.5
	COP	W/W	5.5	5.5	5.5	5.5
YL-H02-Heating: A15/W26°C	Heating capacity	kW	46.8	55.3	68.0	85.0
		BTU/h	159511	188513	232016	290020
	Power input	kW	10.2	12.1	15.1	18.5
	Current	A	18.2	21.5	27.0	33.2
YL-C01-Cooling: A35/W30°C	Cooling capacity	kW	40	47	61	72
		BTU/h	135115	159682	208132	245664
	Power input	kW	10.4	12.3	16.1	19.3
	Current	A	18.6	22.0	28.7	34.4
YL-C02-Cooling: A46/W30	Cooling capacity	kW	33.7	39.8	51.9	61.2
		BTU/h	114848	135729	179812	208814
	Power input	kW	11.1	13.1	17.1	20.5
	Current	A	19.8	23.4	30.5	36.6
OPERATING	Water outlet temp.range	°C	5-40	15-40	15-40	15-40
	Ambient temp.range	°C	0-53	0-53	0-53	0-53
HEAT EXCHANGER	Compressor brand		COMPLAND	COMPLAND	COMPLAND	COMPLAND
	Compressor type		Scroll*2	Scroll*3	Scroll*3	Scroll*4
	Controller					
	Noise	dB(A)	59	62	62	62
KEY	Type		Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
	Standard water flow	m³/h	23.6	27.9	35.3	43.0
	Suggested water flow	m³/h	23.6-29	27.9-37	35-46	45-60
	Water pressure drop(max)	KPa	16	18	20	20
	Water pipe		PPR or PVC	PPR or PVC	PPR or PVC	
	Water connection	mm	63	63	63	110
FAN	Position		Verticle	Verticle	Verticle	Verticle
	Material		Plastic	Plastic	Plastic	Plastic
	Air flow	m³/h	13000	15000	18000	22000
DIMENSIONS (W x H x D)	Net	mm	1453/708/1284	2149/764/1306	2149/764/1306	1700/1476/1392
	Shipping	mm	1520/780/1453	2215/815/1455	2225/815/1455	1795/1545/1550
WEIGHT		kg	285/310	400/440	510/570	580/620
Loading qty		20/40/40hq	10/22/22	7/14/14	7/14/14	7/14/14

PH-02730-R410A	PH-02740-R410A	PH-02750-R410A	PH-02760-R410A	PH-02765-R410A	PH-02770-R410A	PH-02780-R410A
380/3/50	380/3/50	380/3/50	380/3/50	380/3/50	380/3/50	380/3/50
135	160	180	220	235	250	350
460620	545920	614160	750640	801820	853000	1194200
24.5	29.1	32.7	40.0	42.7	45.5	63.6
43.9	52.0	58.5	71.5	76.4	81.3	113.8
5.5	5.5	5.5	5.5	5.5	5.5	5.5
114.8	136.0	153.0	187.0	199.8	212.5	297.5
391527	464032	522036	638044	681547	725050	1015070
24.9	29.7	33.4	41.6	43.6	46.4	64.9
44.8	53.1	59.7	74.3	77.9	82.9	116.0
4.6	4.6	4.6	4.5	4.6	4.6	4.6
97	115	130	154	169	180	252
331646	393062	442195	525448	557310	614160	859824
25.9	30.9	34.6	40.5	44.5	47.4	66.3
46.4	55.2	61.8	72.4	79.6	84.7	118.5
3.74	3.73	3.75	3.80	3.80	3.80	3.80
82.6	97.9	110.2	130.9	143.8	153.0	214.2
281899	334103	375866	446631	490714	522036	730850
27.6	32.8	36.7	43.1	47.3	50.3	70.5
49.3	58.7	3.00	77.0	84.6	90.0	125.9
2.99	2.98	3.00	3.04	3.04	3.04	3.04
15-40	15-40	15-40	15-40	15-40	15-40	15-40
0-53	0-53	0-53	0-53	0-53	0-53	0-53
COMPLAND						
Scroll*5	Scroll*6 or 3	Scroll*7 or 3	Scroll*8 or 4	Scroll*10 or 4	Scroll*10 or 4	Scroll*10 or 4
62	65	65	65	65	68	68
Titanium /PVC						
58.0	68.8	77.4	94.6	101.0	107.5	150.5
58-65	68.91	77-103	90-120	101-125	107-143	150-160
22	23	24	25	25	26	28
			PPR or PVC	PPR or PVC	PVC	PVC
110	110	110	110	110	160	160
Verticle						
Plastic						
33000	33000	39000	44000	44000	60000	77000
2185/1767/1388	2185/1767/1388	2185/1767/1532	2185/1765/1532	2185/1767/1532	2188/2188/2236	3281/2188/2236
2235/1820/1550	2235/1820/1550	2235/1820/1695	2235/1820/1695	2235/1820/1695	2240/2240/2400	3335/2240/2400
820/870	928/960	1180/1230	1044/1080	1276/1320	1420/1470	2050/2180
3/6/6	3/6/6	3/6/6	3/6/6	2/5/5	2/5/5	2/5/5

## SWIMMING POOL HEAT PUMP -PHFD

			PHFD-02610-R410A	PHFD-02615-R410A	PHFD-02620-R410A
Power supply		V/PH/Hz	220-240/1/50		
YL-H01-Heating: A24/W26°C	Heating capacity	kW	5	7.3	9.8
		BTU/h	17060	24907.6	33437.6
	Power input	kW	0.9	1.3	1.8
	Current	A	4.1	6.0	8.1
	COP	W/W	5.5	5.5	5.5
YL-H02-Heating: A15/W26°C	Heating capacity	kW	4.3	6.2	8.3
		BTU/h	14501	21171.5	28422.0
	Power input	kW	0.9	1.4	1.8
	Current	A	4.2	6.2	8.3
	COP	W/W	4.6	4.6	4.6
YL-H03-Heating: A7/W26°C	Heating capacity	kW	3.2	4.6	6.2
		BTU/h	10748	15691.8	21066.7
	Power input	kW	0.8	1.2	1.7
	Current	A	3.8	5.6	7.5
	COP	W/W	3.7	3.7	3.7
YL-C01-Cooling: A35/W30°C	Cooling capacity	kW	3.6	5.3	7.1
		BTU/h	12283.2	17933.5	24075.1
	Power input	kW	1.0	1.4	1.9
	Current	A	4.4	6.4	8.6
	EER	W/W	3.8	3.8	3.8
YL-C02-Cooling: A46/W30°C	Cooling capacity	kW	3.1	4.5	6.0
		BTU/h	10440.7	15243.5	20463.8
	Power input	kW	1.0	1.5	2.0
	Current	A	4.6	6.8	9.1
	EER	W/W	3.0	3.0	3.0
MAX	Power input	kW	1.4	2	2.7
	Current	A	6.2	9	12.1
OPERATING	Water outlet temp.range	°C	15-40	15-40	15-40
	Ambient temp.range	°C	0-53	0-53	0-53
KEY	Compressor type		Rotary	Rotary	Rotary
	Noise	dB(A)	47	50	51
HEAT EXCHANGER	Type		Titanium / PVC	Titanium / PVC	Titanium / PVC
	Standard water flow	m³/h	2.1	3.1	4.2
	Water pressure drop(max)	KPa	4	6	6
	Water pipe				
	Water connection	mm	50	50	50
FAN	Position		Horizontal	Horizontal	Horizontal
	Material		1200	2000	2000
DIMENSIONS (W x H x D)	Net	mm	932 x 355 x 515	1000 x 350 x 627	1003 x 350 x 627
	Shipping	mm	980 x 335 x 676	1085 x 335 x 770	1085 x 355 x 770
WEIGHT		kg	48/55	50/58	50/63

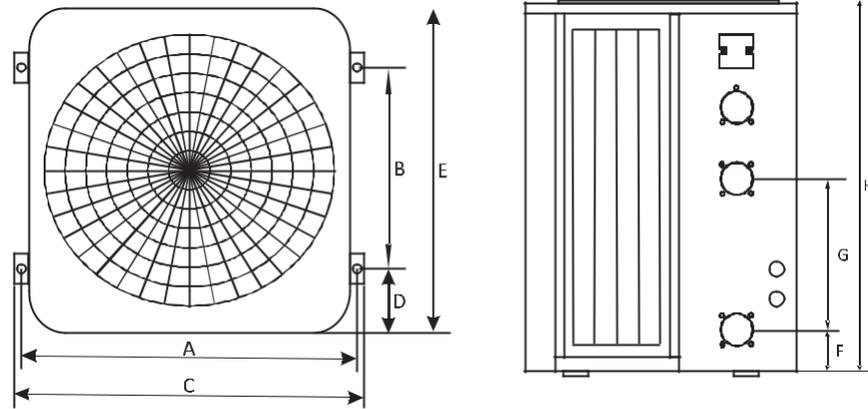
PHFD-02625-R410A	PHFD-02630-R410A	PHFD-02630-R410A	PHFD-02640-R410A	PHFD-02650-R410A	PHFD-02660-R410A
220-240/1/50		380-415/3/50			
12	14	14	17	21	25
40944	47768	47768	58004	71652	85300
2.2	2.6	2.5	3.1	3.8	4.5
9.9	11.6	4.6	5.5	6.8	8.1
5.5	5.5	5.5	5.5	5.5	5.5
10.2	11.9	11.9	14.5	17.9	21.3
34802.4	40602.8	40602.8	49303.4	60904.2	72505
2.2	2.6	2.6	3.2	3.9	4.6
10.1	11.9	4.6	5.6	6.9	8.3
4.6	4.6	4.6	4.6	4.6	4.6
7.6	8.8	8.8	10.7	13.2	15.8
25794.7	30093.8	30093.8	36542.5	45140.1	53739
2.0	2.4	2.4	2.9	3.5	4.2
9.2	10.8	4.2	5.1	6.3	7.6
3.7	3.7	3.7	3.7	3.7	3.7
8.6	10.1	10.1	12.2	15.1	18
29479.7	34393.0	34393	41762.9	51589.4	61416
2.3	2.7	2.7	3.2	4.0	4.7
10.6	12.4	4.7	5.8	7.2	8.5
3.7	3.7	3.8	3.8	3.8	3.8
7.3	8.6	8.6	10.4	12.9	15.3
25057.7	29234	29234	35498.4	43851.0	52203.6
2.5	2.9	2.8	3.4	4.3	5.0
11.3	13.2	5.0	6.1	7.6	9.0
3.0	3.0	3.0	3.0	3.0	3.04
3.3	3.8	3.8	4.6	5.7	6.8
14.9	17.5	17.4	21.1	25.9	31.0
15-40	15-40	15-40	15-40	15-40	15-40
0-53	0-53	0-53	0-53	0-53	0-53
Rotary	Rotary	Scroll	Scroll	Scroll	Scroll
53	53	53	53	54	55
Titanium / PVC	Titanium / PVC	Titanium / PVC	Titanium / PVC	Titanium / PVC	Titanium / PVC
5.2	6.0	6.0	7.3	9.0	10.7
10	11	11	12	12	12
50	50	50	50	50	50
Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
2600	3500	3500	3500	5500	5500
1003 x 350 x 627	1088 x 388 x 687	1088 x 388 x 687	1088 x 388 x 987	1088 x 388 x 987	1088 x 388 x 1287
1085 x 355 x 770	1130 x 445 x 830	1130 x 445 x 687	1130 x 445 x 1130	1130 x 445 x 1130	1130 x 445 x 1430
63/70	77/97	77/97	95/110	105/115	120/135

# SWIMMING POOL HEAT PUMP -PHFD

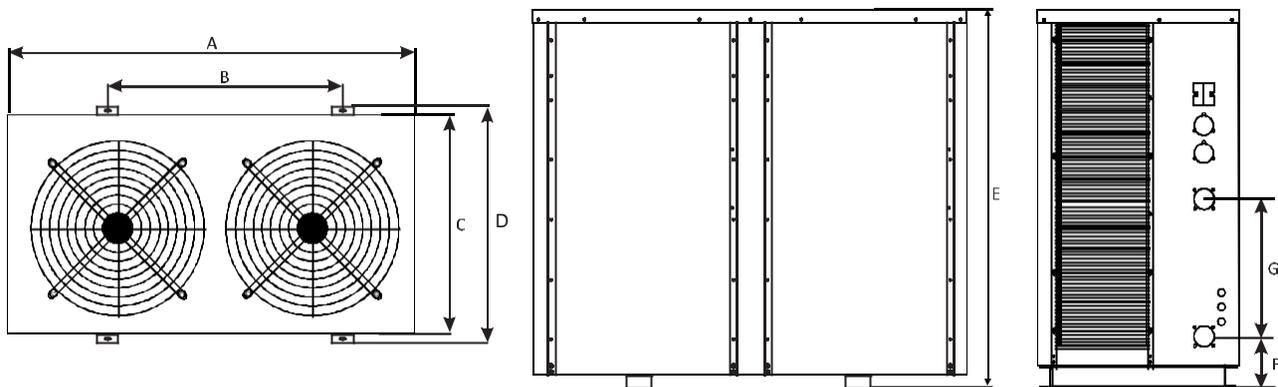
			PHFD-02670-R410A	PHFD-02710-R410A	PHFD-02712-R410A
Power supply		V/PH/Hz	380-415/3/50		
YL-H01-Heating: A24/W26°C	Heating capacity	kW	31	40	45
		BTU/h	105772	136480	153540
	Power input	kW	5.6	7.3	8.2
	Current	A	10.1	13.0	14.6
	COP	W/W	5.5	5.5	5.5
YL-H02-Heating: A15/W26°C	Heating capacity	kW	26.4	34.0	38.3
		BTU/h	89906.2	116008	130509
	Power input	kW	5.7	7.4	8.3
	Current	A	10.3	13.3	14.9
	COP	W/W	4.6	4.6	4.6
YL-H03-Heating: A7/W26°C	Heating capacity	kW	19.5	25.2	28.4
		BTU/h	66636.4	85982	96730.2
	Power input	kW	5.2	6.8	7.6
	Current	A	9.4	12.1	13.6
	COP	W/W	3.7	3.7	3.7
YL-C01-Cooling: A35/W30°C	Cooling capacity	kW	22.3	28.8	32.4
		BTU/h	76155.8	98265.6	110548.9
	Power input	kW	5.9	7.5	8.4
	Current	A	10.5	13.4	15.0
	EER	W/W	3.8	3.9	3.9
YL-C02-Cooling: A46/W30°C	Cooling capacity	kW	19.0	24.5	27.5
		BTU/h	64732.5	83525.8	93966.5
	Power input	kW	6.2	7.9	8.9
	Current	A	11.2	14.2	16.0
	EER	W/W	3.0	3.1	3.1
MAX	Power input	kW	8.5	10.9	12.3
	Current	A	38.4	49.6	55.8
OPERATING	Water outlet temp.range	°C	15-40	15-40	15-40
	Ambient temp.range	°C	0-53	0-53	0-53
KEY	Compressor type		Scroll	Scroll	Scroll
	Noise	dB(A)	59	59	59
HEAT EXCHANGER	Type		Titanium / PVC	Titanium / PVC	Titanium / PVC
	Standard water flow	m³/h	13.3	17.2	19.3
	Water pressure drop(max)	KPa	15	15	15
	Water pipe		PPR or PVC	PPR or PVC	PPR or PVC
	Water connection	mm	63	63	63
FAN	Position		Horizontal	Horizontal	Horizontal
	Material		7000	9000	1000
DIMENSIONS (W x H x D)	Net	mm	1088 x 388 x 1487	1454 x 752 x 1703	1454 x 752 x 1703
	Shipping	mm	1130 x 445 x 1630	1505 x 880 x 1845	1505 x 880 x 1845
WEIGHT		kg	130/145	250/270	265/285

PHFD-02713-R410A	PHFD-02714-R410A	PHFD-02715-R410A	PHFD-02720-R410A	PHFD-02730-R410A	PHFD-02740-R410A
380-415/3/50					
55	65	82	105	135	158
187660	221780	279784	358260	460620	539096
10.0	11.8	14.9	19.1	24.5	28.7
17.9	21.1	26.7	34.1	43.9	51.4
5.5	5.5	5.5	5.5	5.5	5.5
46.8	55.3	69.7	89.3	114.8	134.3
159511	188513	237816.4	304521.0	391527	458231.6
10.2	12.1	15.2	19.5	25.0	29.3
18.2	21.5	27.2	34.8	44.8	52.4
4.6	4.6	4.6	4.6	4.6	4.6
34.7	41.0	51.7	66.2	85.1	99.5
118225.8	139721.4	176263.9	225703.8	290190.6	339630.5
9.3	11.0	13.9	17.8	22.8	26.7
16.6	19.6	24.8	31.7	40.8	47.8
3.7	3.7	3.7	3.7	3.7	3.7
39.6	46.8	59	75.6	97.2	113.8
135115.2	159681.6	201444.5	257947.2	331646.4	388149.1
10.4	12.3	15.5	20.2	26.0	30.5
18.6	22.0	27.8	36.1	46.5	54.5
3.8	3.80	3.8	3.7	3.7	3.7
33.7	39.8	50.2	64.3	82.6	96.7
114847.9	135729.4	17122.8	219255.1	281899.4	329926.8
11.1	13.1	16.5	21.5	27.6	32.4
19.8	23.4	29.5	38.4	49.4	57.9
3.0	3.0	3.0	3.0	2.99	3.0
15.0	17.7	22.4	28.6	36.8	43.1
68.2	80.6	101.7	130.2	167.4	195.9
15-40	15-40	15-40	15-40	15-40	15-40
0-53	0-53	0-53	0-53	0-53	0-53
Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
59	62	62	62	62	65
Titanium / PVC					
23.6	27.9	35.3	45.1	58.0	67.9
16	18.0	20	20	22	23
PPR or PVC	PPR or PVC	PPR or PVC			
63	63	63	110	110	110
Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
13000	15000	18000	22000	28000	33000
1454 x 752 x 1703	2188 x 752 x 1703	2188 x 752 x 1703	1454 x 752 x 2103	2188 x 860 x 2248	2188 x 860 x 2248
1505 x 880 x 1845	2240 x 880 x 1845	2240 x 880 x 1845	1505 x 880 x 2245	2240 x 990 x 2390	2240 x 990 x 2390
285/310	400 x 440	490/540	540/600	820/870	910/950

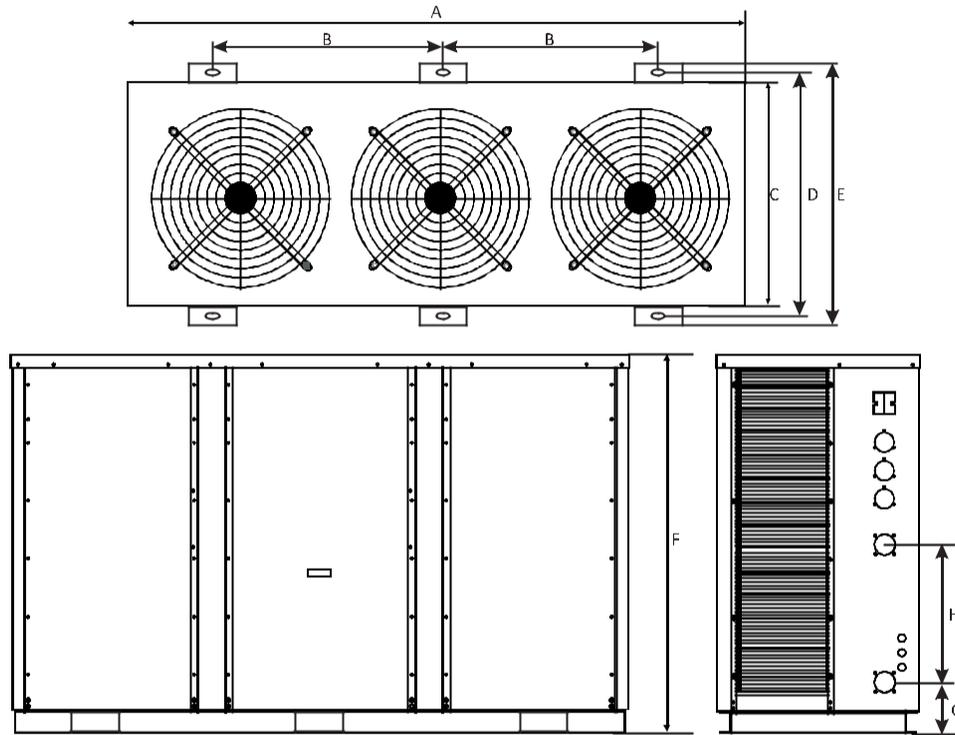
## UNIT DIMENSIONS: PH



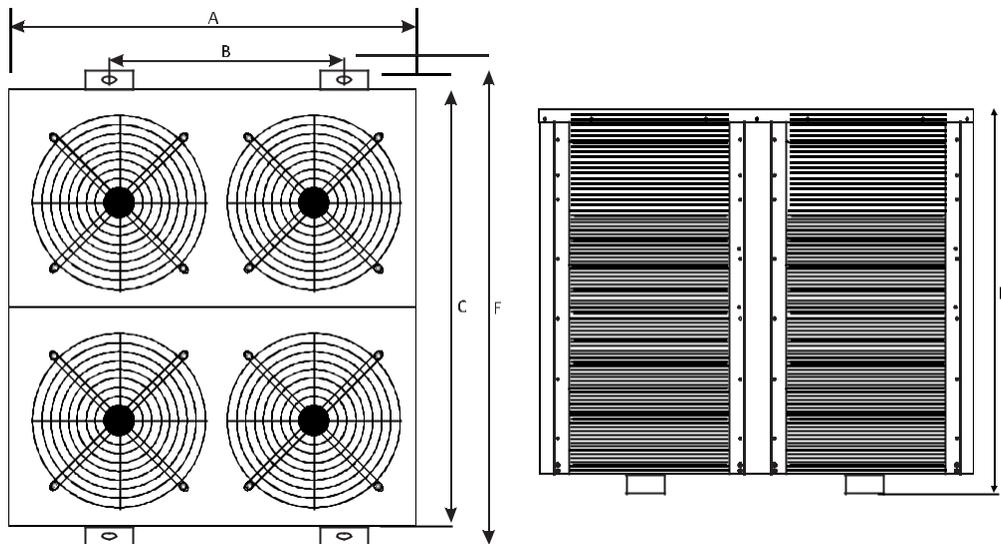
CODE	DIMENSIONS (mm)							
	A	B	C	D	E	F	G	H
PH-02620	666	445	688	125	696	95	330	737
PH-02625								
PH-02630	724	450	746	118	686	106	420	941
PH-02640								
PH-02650								
PH-02660								
PH-02670	850	582	874	114	810	121	380	1079
PH-02700	838	581	860	140	860	158	420	1277



CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PH-02710	1453	830	656	708	1084	130	420
PH-02712							
PH-02713	1450	830	565	708	1284	130	500

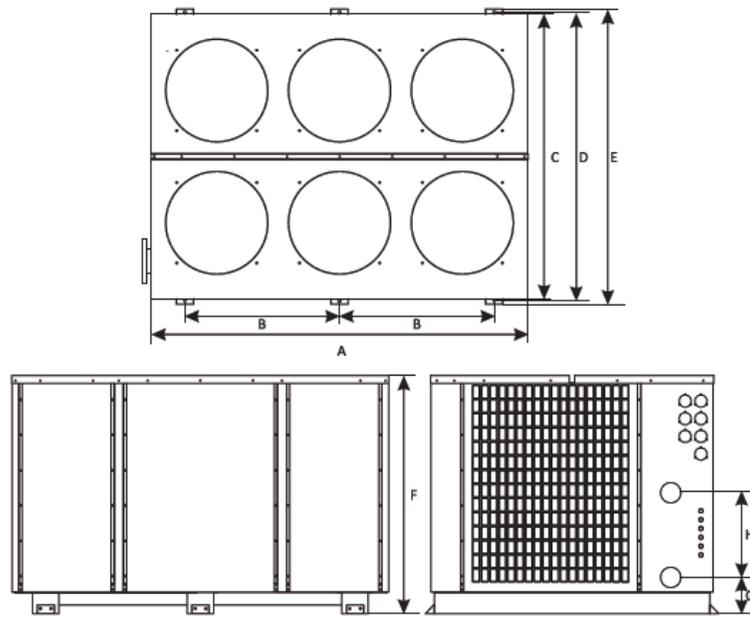


CODE	DIMENSIONS (mm)							
	A	B	C	D	E	F	G	H
PH-02714	2150	900	690	-	764	1306	169	500
PH-02715								

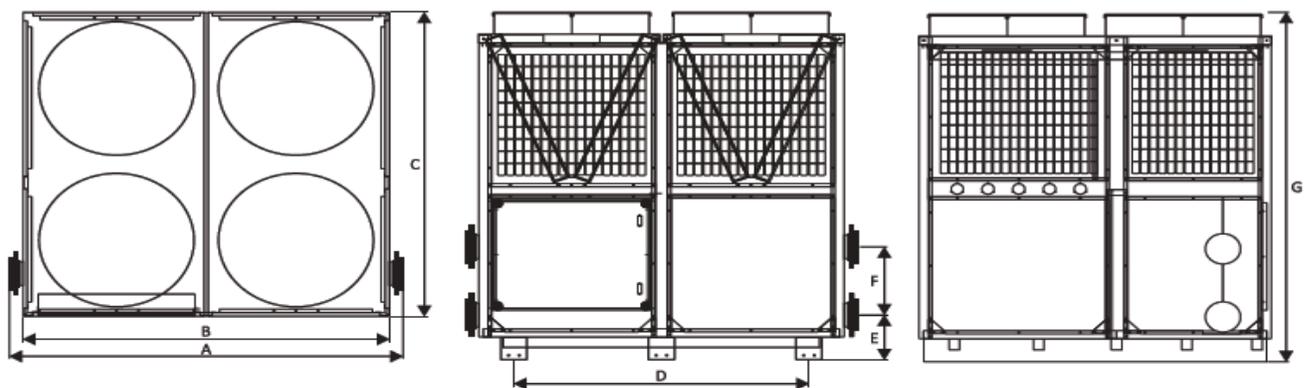


CODE	DIMENSIONS (mm)				
	A	B	C	D	E
PH-02720	1416	1100	1416	1471	310

TEMPERATURE CONTROL

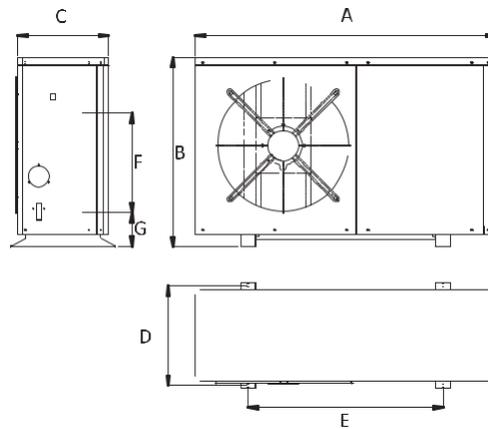


CODE	DIMENSIONS (mm)							
	A	B	C	D	E	F	G	H
PH-02730	2185	882	-	-	1767	1338	223	500
PH-02740								
PH-02750	2185	714	-	-	1767	1503	221	500
PH-02760								

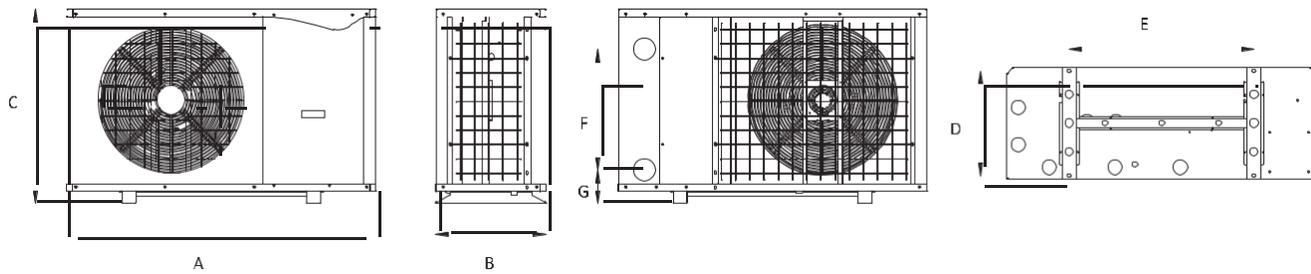


CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PH-02770	2240	2086	2010	1680	297	450	2310
PH-02780	3281	3186	2188	2680	265	380	2236

## UNIT DIMENTIONS: PHFD

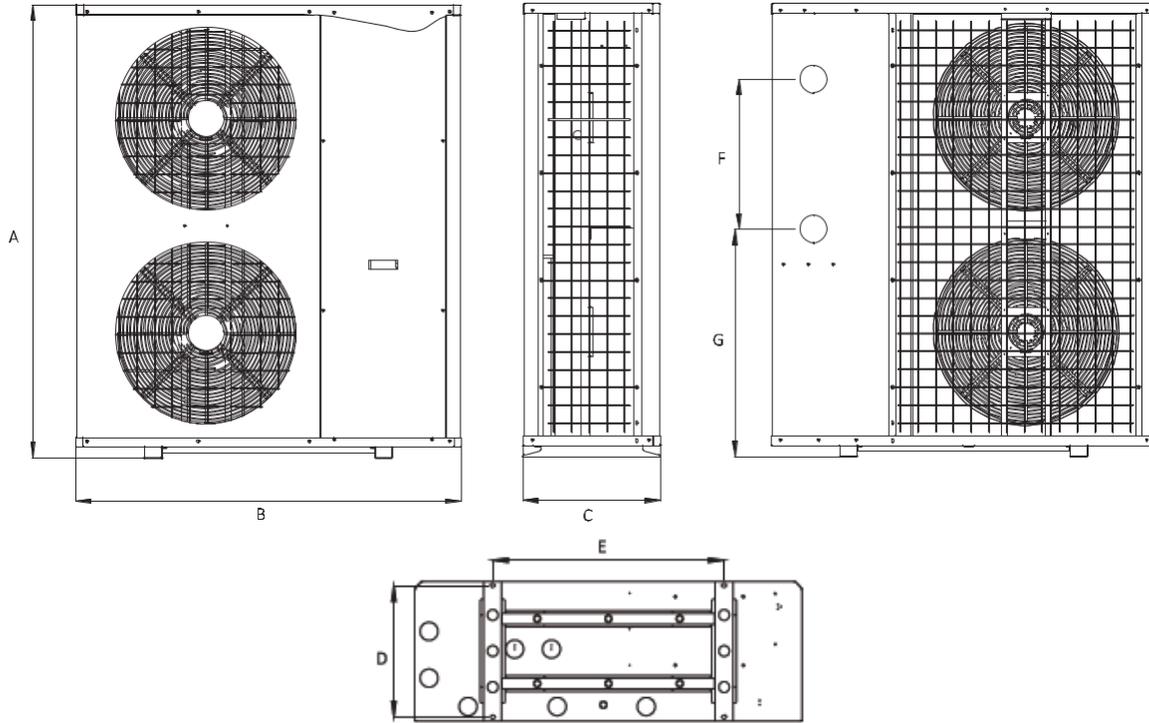


CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PHFD-02610	1003	627	303	330	650	330	111
PHFD-02615							
PHFD-02620							

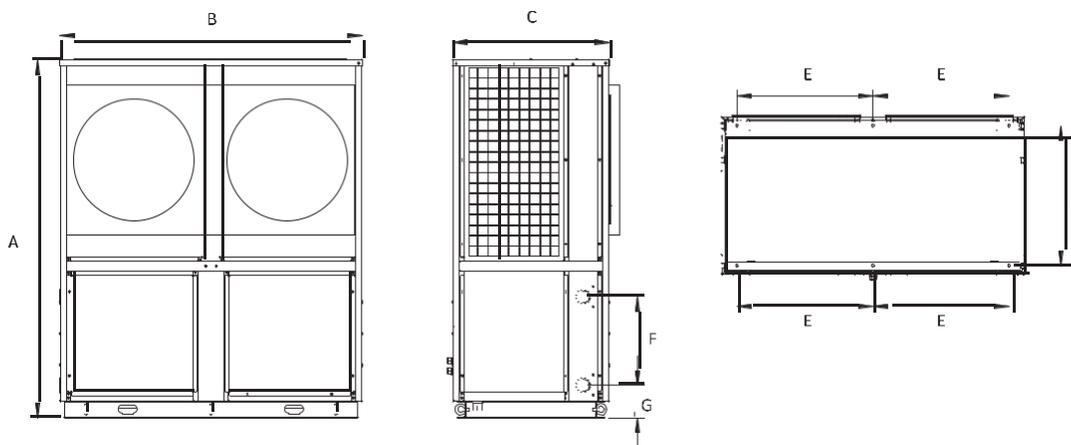


CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PHFD-02630	1088	388	677	365	650	420	115
PHFD-02640	1088	388	878	368	650	500	115
PHFD-02650							

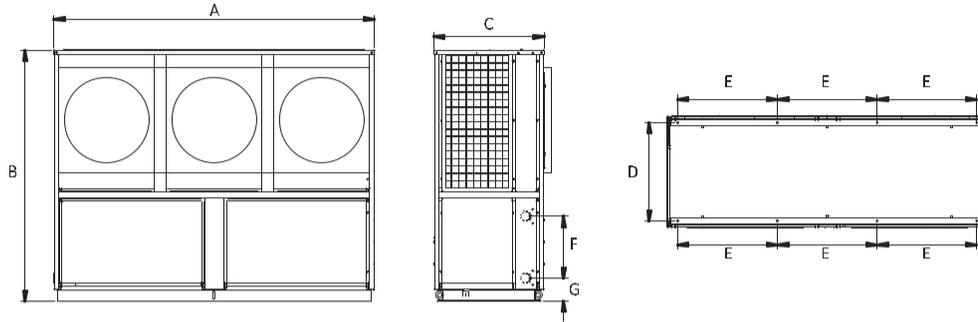
TEMPERATURE CONTROL



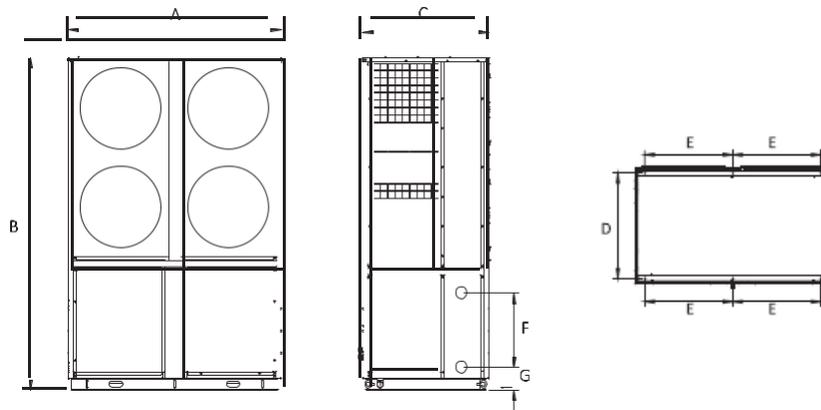
CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PHFD-02660	1268	1088	388	365	650	420	637
PHFD-02670	1468	1088	388	365	650	420	687



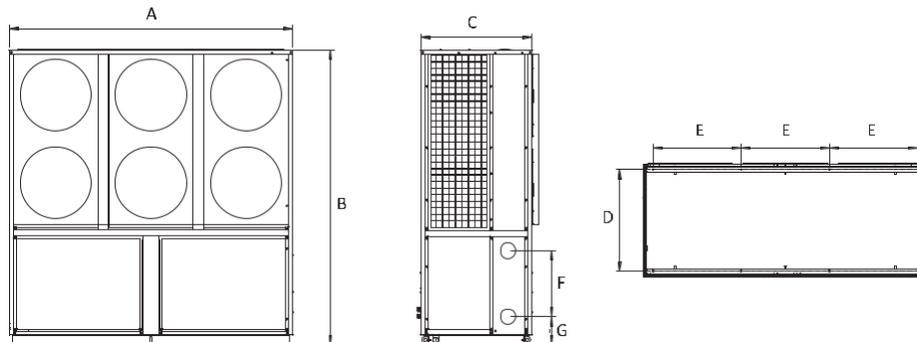
CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PHFD-02710	1468	1088	388	365	650	420	687
PHFD-02712							
PHFD-02713							



CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PHFD-02714	2188	1703	752	666	681	420	156
PHFD-02715							



CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PHFD-02720	1454	2248	860	774	654	500	156

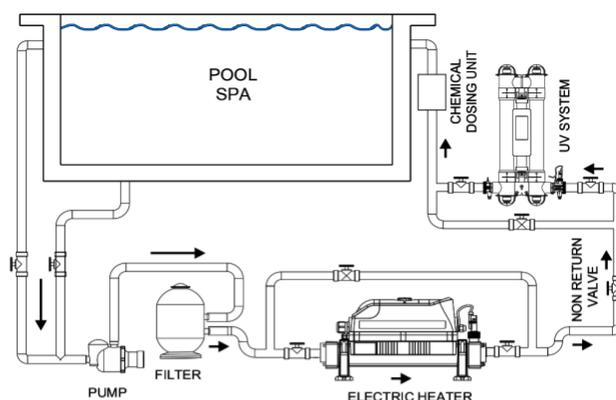


CODE	DIMENSIONS (mm)						
	A	B	C	D	E	F	G
PHFD-02730	2188	2248	860	774	681	500	216
PHFD-02740							

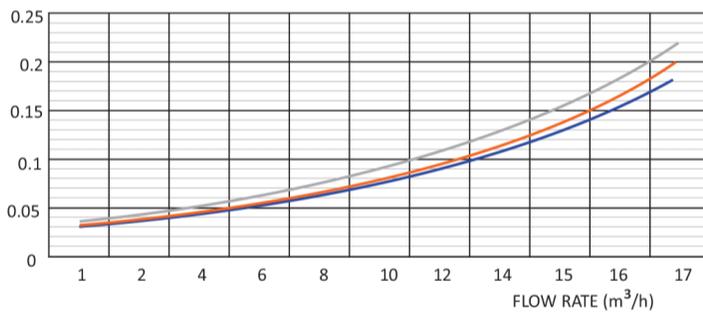
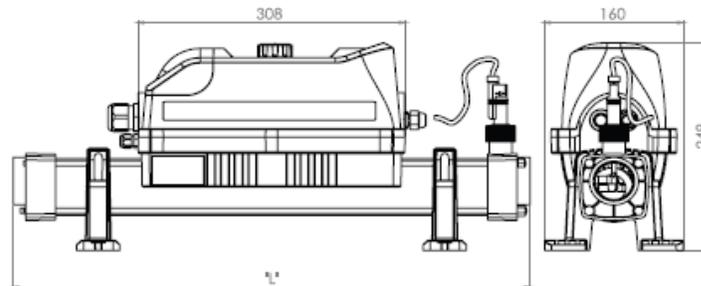
# 02 ELECRO EVOLUTION 2 ALL TITANIUM ANALOGUE CONTROLLER



- Ten power options ranging from 1-kW to 24-kW
- Easy installation, fully equipped and pre-wired
- Robust, durable construction
- Ultra-reliable flow switch allows safe operation
- Temperature thermostat and overheating sensor
- Compact, durable design
- Analogue control with 1.2°C differential or digital control
- With 0.5°C differential and selectable multi-lingual display
- Titanium flow tube and titanium heating element
- Can be floor or vertically wall mounted
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Silent operation



SPECIFICATIONS	
POWER SUPPLY	Single phase or three phase
FLOW REQUIREMENTS	Minimum flow: 2 kW to 6 kW, 1m³/h / Minimum flow: 9 kW to 24 kW, 4m³/h / Maximum flow: 17m³/h
HEATING ELEMENTS	Grade 1 titanium
FLOW TUBE	Grade 1 titanium
CONTROL THERMOSTAT	Analogue: 0 > 45°C (1.2°C differential) Digital: 0 > 45°C (0.5°C differential)
SAFETY THERMAL CUT OUT	60°C (Manual reset)
FLOW SWITCH	Gold tipped reed switch with titanium fulcrum pin
CONTACTOR	Siemens 3RT2023 or 3RT2027
SEALS	High temperature special formula EPDM ferrules, TPE end fitting gaskets
WATER CONNECTIONS	1.5" BSP female thread supplied with 1½"/50mm stepped ABS unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
INGRESS PROTECTION RATING	IP 44
FREQUENCY	50/60 Hz
WORKING PRESSURE	4 bar maximum
MOUNTING	Floor or wall mounting



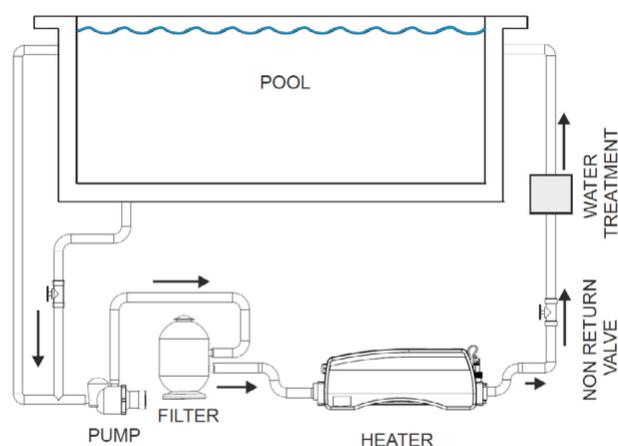
- UP TO 6-KW SINGLE PHASE
- 9 & 12-KW SINGLE PHASE
- 15 & 18-KW SINGLE PHASE & ALL 3-PHASE

CODE	POWER OUTPUT	CURRENT	LOAD	DIMENSIONS	PACKING	WEIGHT	VOLUME
	kW		Amp	L		kg	m <sup>3</sup>
E2-1-1	1	220~240V Single phase	6	462	1	5.5	0.059
E2-1-2	2		9	462	1	5.5	0.059
E2-1-3	3		13	462	1	5.5	0.059
E2-1-4	4.5		20	462	1	5.5	0.059
E2-1-6	6		27	462	1	5.5	0.059
E2-1-9	9		40	462	1	5.8	0.059
E2-1-12	12		53	462	1	5.8	0.059
E2-1-15	15		66	462	1	6.6	0.059
E2-1-18	18		79	462	1	6.6	0.059
E2-V-6	6	230~400V Single/3 phase	27/9	592	1	6.6	0.059
E2-V-9	9		40/13	592	1	6.6	0.059
E2-V-12	12		53/18	592	1	6.6	0.059
E2-V-15	15	400V 3 phase	22	592	1	6.6	0.059
E2-V-18	18		26	592	1	6.6	0.059
E2-V-24	24		35	592	1	6.6	0.059
E2D-1-1	1	220~240V Single phase	6	592	1	6.6	0.059
E2D-1-2	2		9	592	1	6.6	0.059
E2D-1-3	3		13	592	1	6.6	0.059
E2D-1-4	4.5		20	592	1	6.6	0.059
E2D-1-6	6		27	592	1	6.6	0.059
E2D-1-9	9		40	592	1	6.6	0.059
E2D-1-12	12		53	592	1	6.6	0.059
E2D-1-15	15		66	592	1	6.6	0.059
E2D-1-18	18		79	592	1	6.6	0.059
E2D-V-6	6	230~400V Single/3 phase	27/9	592	1	6.6	0.059
E2D-V-9	9		40/13	592	1	6.6	0.059
E2D-V-12	12		53/18	592	1	6.6	0.059
E2D-3-15	15	400V 3 phase	22	592	1	6.6	0.059
E2D-3-18	18		26	592	1	6.6	0.059
E2D-3-24	24		35	592	1	6.6	0.059

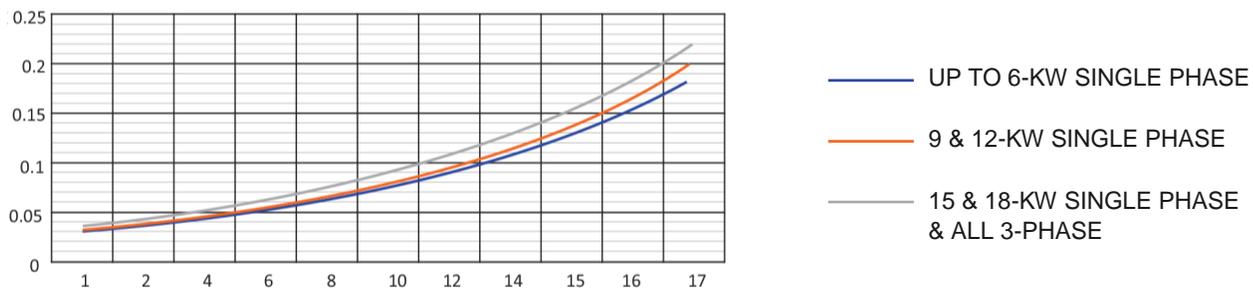
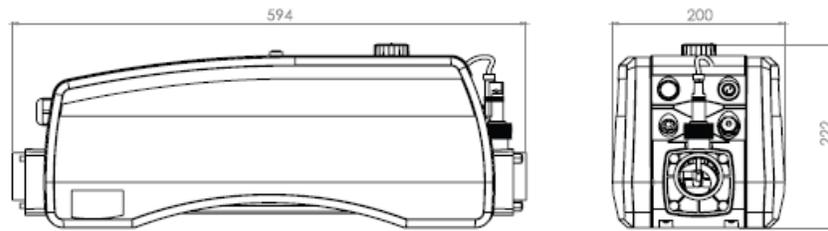
# 03 OPTIMA COMPACT POOL HEATER



- Nine power options ranging from 2-kW to 24-kW
- Easy installation, fully equipped and pre-wired
- Robust, durable construction
- Ultra-reliable flow switch allows safe operation
- Fitted with temperature thermostat and overheating sensor
- Compact, durable design
- Touchscreen control with soft-start for power supply protection
- Titanium flow tube and titanium heating element
- Can be floor or vertically wall mounted
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Silent operation



SPECIFICATIONS	
POWER SUPPLY	Single phase or three phase
FLOW REQUIREMENTS	Minimum flow: 2 kW to 6 kW, 1m <sup>3</sup> /h / Minimum flow: 9 kW to 24 kW, 4m <sup>3</sup> /h / Maximum flow: 17m <sup>3</sup> /h
HEATING ELEMENTS	Grade 1 titanium
FLOW TUBE	Grade 1 titanium
CONTROL THERMOSTAT	Touch Screen 0 > 45°C (0.5°C differential)
SAFETY THERMAL CUT OUT	60°C (Manual reset)
FLOW SWITCH	Gold tipped reed switch with titanium fulcrum pin
CONTACTOR	Siemens 3RT2023 or 3RT2027
SEALS	High temperature special formula EPDM ferrules, TPE end fitting gaskets
WATER CONNECTIONS	1.5" BSP female thread supplied with 1½"/50mm stepped ABS unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
INGRESS PROTECTION RATING	IP 44
FREQUENCY	50/60 Hz
WORKING PRESSURE	4 bar maximum
MOUNTING	Floor or wall mounting

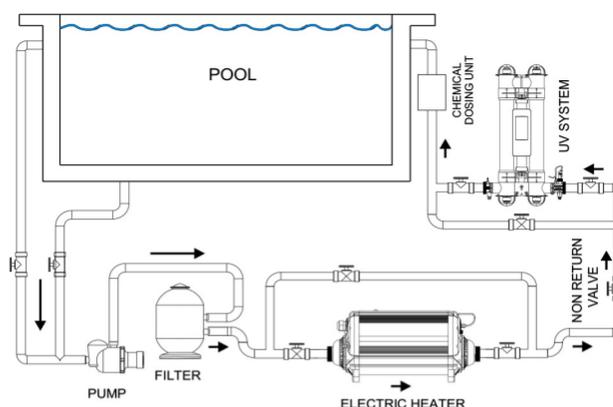


CODE	POWER OUTPUT	CURRENT	LOAD	PACKING	WEIGHT	VOLUME
	kW		Amp		kg	
OCPD-1-2	2	220~240V Single phase	9	1	8.8	0.059
OCPD-1-3	3		13	1	8.8	0.059
OCPD-1-4	4.5		20	1	8.8	0.059
OCPD-1-6	6		27	1	8.8	0.059
OCPD-1-9	9		40	1	9.2	0.059
OCPD-1-12	12		53	1	9.2	0.059
OCPD-1-15	15		66	1	9.7	0.059
OCPD-1-18	18		79	1	9.7	0.059
OCPD-V-6	6	230~400V Single/3 phase	27/9	1	9.7	0.059
OCPD-V-9	9		40/13	1	9.7	0.059
OCPD-V-12	12		53/18	1	9.7	0.059
OCPD-3-15	15	400V 3 phase	22	1	9.7	0.059
OCPD-3-18	18		26	1	9.7	0.059
OCPD-3-24	24		35	1	9.7	0.059

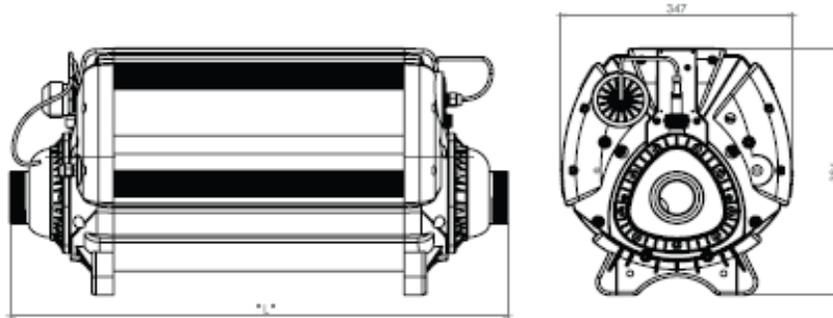
## 04 SFS JOEY



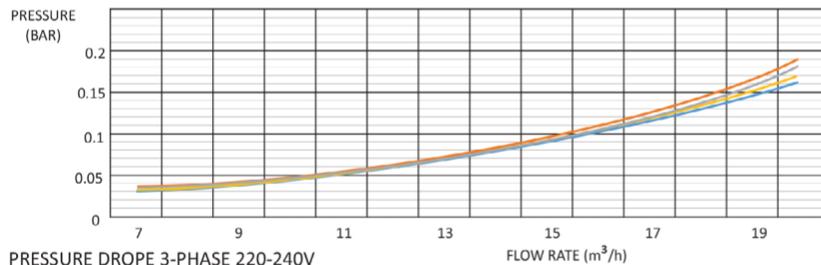
- Various power options ranging from 18-kW to 120-kW
- Easy installation, fully equipped and pre-wired
- Robust, durable construction
- Ultra-reliable flow switch allows safe operation
- Fitted with temperature thermostat and overheating sensor
- Compact, durable design
- TAnalogue control with 1.2°C differential or digital control with
- 0.5°C differential and selectable multi-lingual display
- Titanium flow tube and titanium heating element
- Can be floor or vertically wall mounted
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Silent operation



SPECIFICATIONS	
POWER SUPPLY	Single phase or three phase
FLOW REQUIREMENTS	Minimum flow: 7m <sup>3</sup> /h / Maximum flow: 15m <sup>3</sup> /h / Recommended flow: 8m <sup>3</sup> /h
HEATING ELEMENTS	Grade 1 titanium
FLOW TUBE	Grade 1 titanium
CONTROL THERMOSTAT	Analogue: 0 > 45°C (1.2°C differential)/Digital: 0 > 45°C (0.5°C differential)
SAFETY THERMAL CUT OUT	65°C safety thermal cut out (auto reset) against enclosure over-temperature 60°C safety thermal cut out (manual reset)
FLOW SWITCH	Gold tipped reed switch with titanium fulcrum pin
CONTACTOR	Cascade wired dual Siemens 3RT2023 or 3RT2027 for each element bank
SEALS	High temperature special formula EPDM ferrules, TPE end fitting gaskets
WATER CONNECTIONS	63mm spigot with 2"/63mm stepped ABS unions
INGRESS PROTECTION RATING	IP 44
FREQUENCY	50/60 Hz
WORKING PRESSURE	4 bar maximum
MOUNTING	Floor or wall mounting

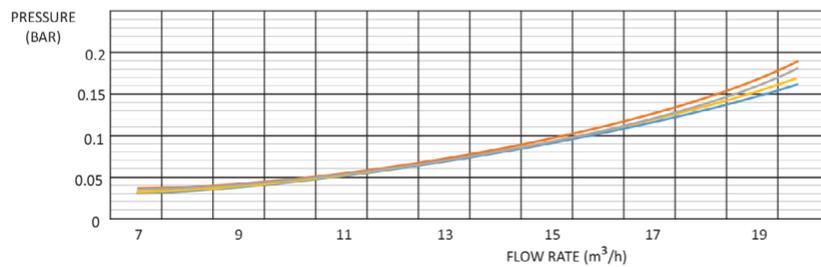


PRESSURE DROPE 3-PHASE 380-415V



- 18,24,30 & 36-KW
- 45,54,60 & 72 - KW
- 96-KW
- 120-KW

PRESSURE DROPE 3-PHASE 220-240V



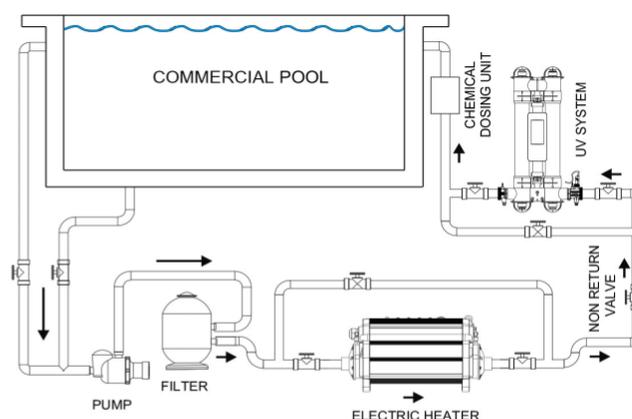
- 18,24,30 & 36-KW
- 45 & 54-KW
- 90 & 72-KW
- 90-KW

CODE	POWER OUTPUT	CURRENT	LOAD	DIMENSIONS	PACKING	WEIGHT	VOLUME
	kw		Amp	L		kg	m³
SFS-18	18	400V 3 phase	26	699	1	26	0.20
SFS-24	24		35	699	1	26	0.20
SFS-30	30		44	699	1	26	0.20
SFS-36	36		53	699	1	26	0.20
SFS-45	45		66	699	1	28	0.20
SFS-54	54		79	699	1	28	0.20
SFS-60	60		87	699	1	28	0.20
SFS-72	72		105	699	1	28	0.20
SFS-96	96		139	1042	1	44	0.28
SFS-120	120		174	1042	1	44	0.28
SFSD-18	18		46	699	1	26	0.20
SFSD-24	24		61	699	1	26	0.20
SFSD-30	30		76	699	1	26	0.20
SFSD-36	36		91	699	1	26	0.20
SFSD-45	45		114	699	1	28	0.20
SFSD-54	54		136	699	1	28	0.20
SFSD-60	60		151	1042	1	44	0.28
SFSD-72	72		181	1042	1	44	0.28
SFSD-96	96			1042	1	44	0.28
SFSD-120	120						

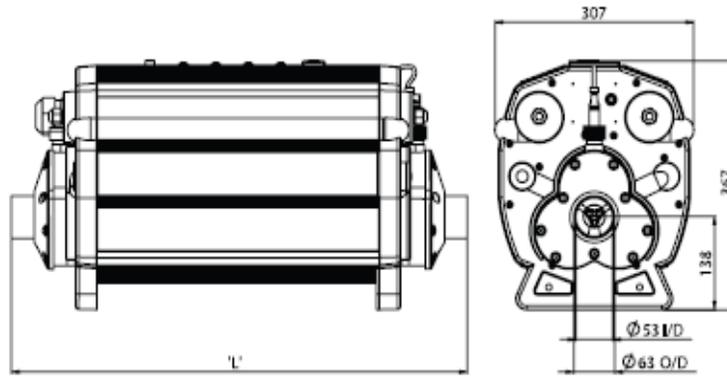
# 05 TITAN OPTIMA



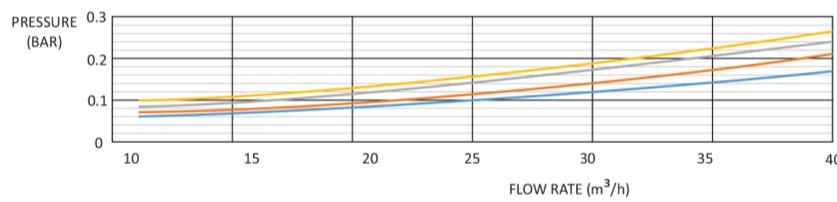
- Various power options ranging from 18-kW to 120-kW
- Easy installation, fully equipped and pre-wired
- Robust, durable construction
- Ultra-reliable flow switch allows safe operation
- Supplied with temperature thermostat and overheating sensor
- Compact, durable design
- Touchscreen control with soft-start for power supply protection
- Titanium flow tube and titanium heating element
- Can be floor or vertically wall mounted
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Silent operation



SPECIFICATIONS	
POWER SUPPLY	Single phase or three phase
FLOW REQUIREMENTS	Minimum flow: 12m³/h / Recommended flow: 30m³/h / Maximum flow: 45m³/h
HEATING ELEMENTS	Grade 1 titanium
FLOW TUBE	Grade 1 titanium
CONTROL THERMOSTAT	Touchscreen 0 > 45°C (0.5°C differential)
SAFETY THERMAL CUT OUT	65°C safety thermal cut out (auto reset) against enclosure over-temperature 60°C safety thermal cut out (manual reset)
FLOW SWITCH	Gold tipped reed switch with titanium fulcrum pin
CONTACTOR	Cascade wired dual Siemens 3RT2023 or 3RT2027 for each element bank
SEALS	High temperature special formula EPDM ferrules, TPE end fitting gaskets
WATER CONNECTIONS	63mm spigot with 2"/63mm stepped ABS unions
INGRESS PROTECTION RATING	IP 44
FREQUENCY	50/60 Hz
WORKING PRESSURE	4 bar maximum
MOUNTING	Floor or wall mounting

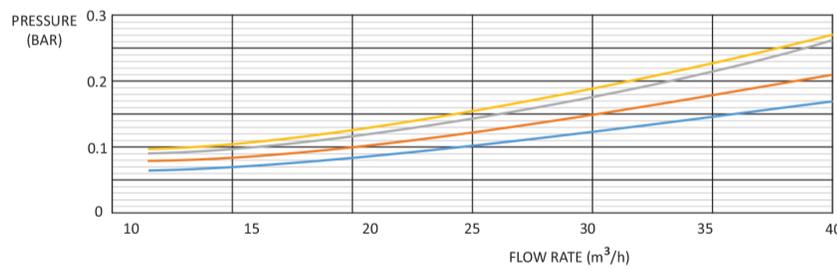


PRESSURE DROPE 3-PHASE 380-415V



- 18,24,30 & 36-KW
- 45,54,60 & 72 - KW
- 96-KW
- 120-KW

PRESSURE DROPE 3-PHASE 220-240V



- 18,24,30 & 36-KW
- 45 & 54-KW
- 90 & 72-KW
- 90-KW

CODE	POWER OUTPUT	CURRENT	LOAD	DIMENSIONS	PACKING	WEIGHT	VOLUME
	kW		Amp	L		kg	m <sup>3</sup>
CP-TS-18	18	400V 3 phase	26	699	1	25.8	0.20
CP-TS-24	24		35	699	1	25.8	0.20
CP-TS-30	30		44	699	1	25.8	0.20
CP-TS-36	36		53	699	1	25.8	0.20
CP-TS-45	45		66	699	1	28.0	0.20
CP-TS-54	54		79	699	1	28.0	0.20
CP-TS-60	60		87	699	1	28.0	0.20
CP-TS-72	72		105	699	1	28.0	0.20
CP-TS-96	96		139	1042	1	43.8	0.28
CP-TS-120	120		174	1042	1	43.8	0.28

# 06 POOL SMART PLUS



Touchscreen Heating Controller for swimming pools, comes with flow switch and temperature sensor for accurate monitoring and maintaining water temperature.

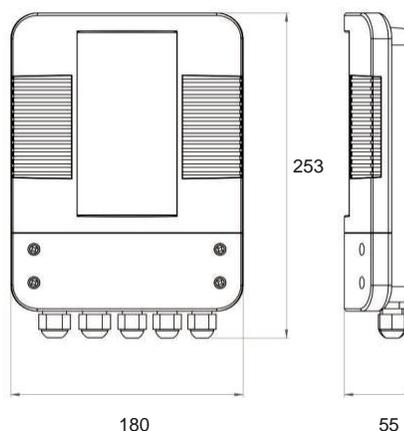
- Smart touchscreen display
- BMS (Building Management System) Integration Ready
- Multi-lingual interface
- Programmable 24-hour time clock (4 time zones)
- Flow and temperature sensor ports
- Accurate control to 0.5°C
- Diagnostic display



T-PIECE



50MM AND 1.5 " REDUCERS



SPECIFICATIONS	
POWER SUPPLY	Single phase 100-240V
AVAILABLE MODELS	Heating only
CONTROL THERMOSTAT	Digital: 0 > 45°C (0.5°C differential)
TEMPERATURE SENSOR	3 metre long (thermistor 103AT-2, R25=10K B=3435K)
FLOW SWITCH	3 metre long with gold tipped reed switch with titanium fulcrum pin
INGRESS PROTECTION RATING	IP 44
FREQUENCY	50/60Hz
MOUNTING	Wall mounting

CODE	DESCRIPTION	OUTPUTS	ACCESSORIES	PACKING	WEIGHT	VOLUME
					kg	m <sub>3</sub>
PSPC-POOL	Pool heating controller	Volt free heating output Volt free filtration pump output	3 meter long flow switch 3 meter long temperature sensor T-piece with 50mm and 1.5" reducers	1	1.6	0.013

# 07 HEAT SMART & KOOL SMART PLUS



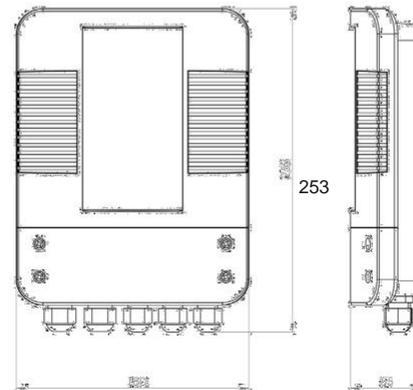
- Smart touchscreen display
- BMS (Building Management System) Integration Ready
- Multi-lingual interface
- Programmable 24-hour time clock (4 time zones)
- Flow and temperature sensor ports
- Accurate control to 0.5°C
- Diagnostic display



GRUNDFOS BUSTER PUMP



FLOW SWITCH AND TEMPERATURE SENSOR



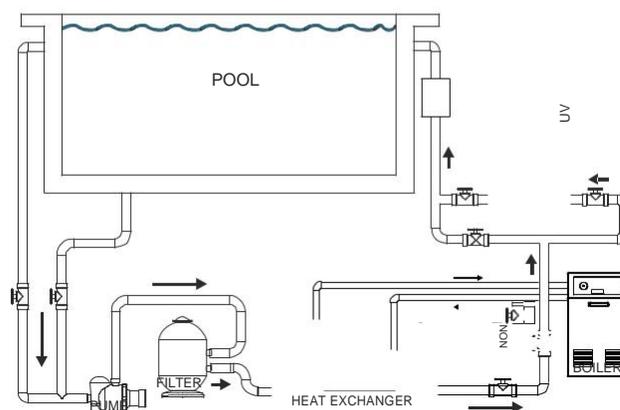
SPECIFICATIONS	
POWER SUPPLY	Single phase 100-240V
AVAILABLE MODELS	Heating only /Cooling only
CONTROL THERMOSTAT	Digital: 0 > 45°C (0.5°C differential)
TEMPERATURE SENSOR	1 metre long (thermistor 103AT-2, R25=10K B=3435K)
FLOW SWITCH	Gold tipped reed switch with titanium fulcrum pin
INGRESS PROTECTION RATING	IP 44
FREQUENCY	50/60Hz
MOUNTING	Wall mounting
OPTIONAL ACCESSORIES	Grundfos Booster Pump

CODE	DESCRIPTION	OUTPUTS	ACCESSORIES	PACKING	WEIGHT	VOLUME
					kg	m <sup>3</sup>
PSPC-HE	Heat exchanger controller	Volt free heating output Volt free filtration pump output 220-240V Booster Pump output	1 metre long flow switch 1 metre long temperature sensor	1	1.6	0.013
PSPC-HE-GP	Heat exchanger controller		Grundfos Booster Pump 1 metre long flow switch 1 metre long temperature sensor	1	3.5	0.021
KSPC-HE	Heat exchanger controller	Volt free heating output Volt free alarm pump output	1 metre long flow switch 1 metre long temperature sensor	1	1.6	0.013
KSPC-HE-GP	Heat exchanger controller		Grundfos Booster Pump 1 metre long flow switch 1 metre long temperature sensor	1	3.5	0.021

## 08 G2 HEAT EXCHANGER

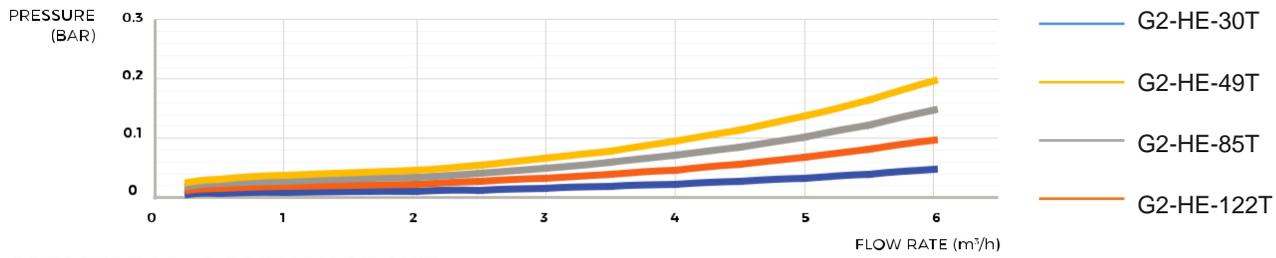


- The G2 Heat Exchanger is manufactured from top quality components and materials.
- Robust, durable construction.
- Titanium tube bundle - salt and sea water safe
- BS 316L Stainless Steel shell with special polyamide fittings
- Wall mountable (bracket supplied)
- Available with fully equipped Analogue or Digital control (optional).
- The heat exchanger construction gives a vast heat transfer surface area, consisting of a densely populated multi-tubular bundle, secured by the uniquely designed polyamide rubber tube sheet.
- The heat exchanger shell is constructed from BS 316L Stainless Steel enclosed by a rigid thermal shell for enhanced insulation of the primary (HOT) water, enabling even greater heat transfer; this is capped at each end with primary and secondary moulded fittings manufactured from specially formulated polymer alloy material.

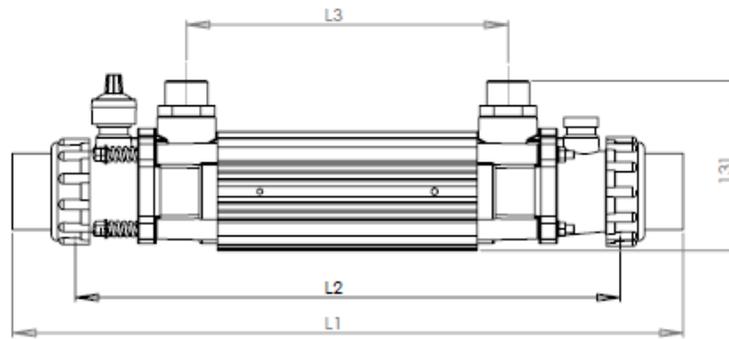
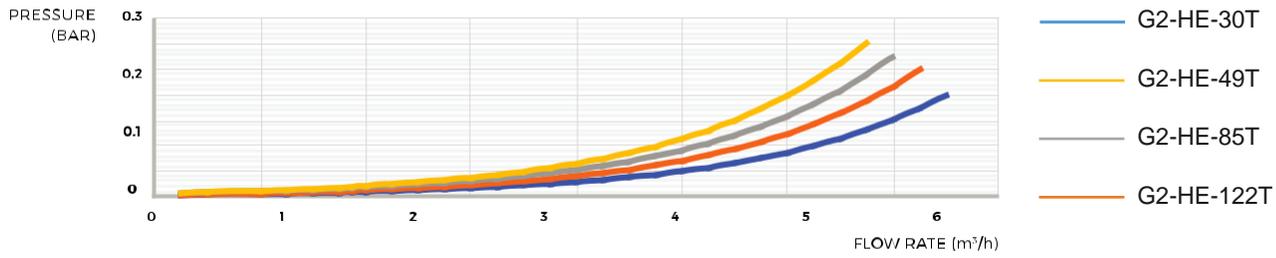


- The standard G2 heat exchanger is supplied complete with:
  - 2 x 1" male/male Brass Primary connections.
  - 1 x 1" Non-Return Valve.
  - Titanium thermostat pocket.
  - 1 x Blanking Cap and Gasket (for non-thermostat side).
- The G2 Heat Exchanger has been designed to allow the installation engineer to select which way to plumb the primary and secondary water to achieve maximum thermal gain; this is achieved by routing the primary flow in an opposing direction to the secondary (POOL) water.
- The G2 heat exchanger is installed in the pool filtration circuit from which water passes through the tube side of the exchanger. Water from the primary heating circuit flows counter-current through the shell side of the exchanger, heating the swimming pool water. Ideal for use with gas or oil fired boiler circuits, solar panels, heat pumps or chillers.
- Tube bundle: Pure titanium.
- Water connections:
  - Primary 1" BSP male (brass fittings supplied).
  - Secondary (POOL): 1.5" or 50 mm NB adapters for connection to PVC or ABS pipe.
- Working pressure: 4 bar maximum.

### PRESSURE DROP SECONDARY CIRCUIT



### PRESSURE DROP PRIMARY CIRCUIT



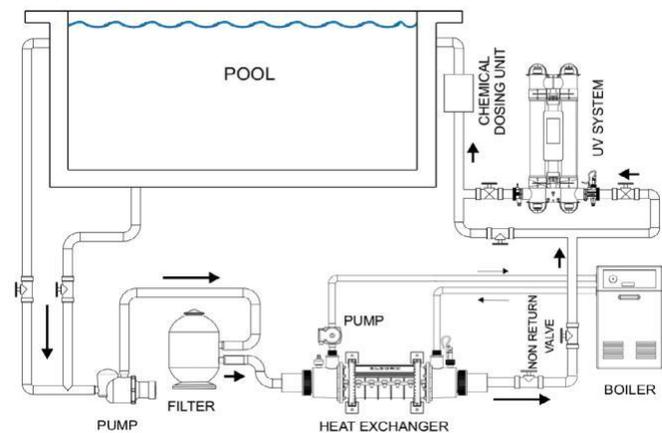
CODE	STANDARD POWER OUTPUT		DIMENSIONS			PACKING	WEIGHT	VOLUME
	kW	BTU	L1	L2	L3		kg	m <sup>3</sup>
G2-HE-30T	30	102K	540	426	247	1	3.9	0.016
G2-HE-49T	49	167K	710	596	417	1	5.0	0.021
G2-HE-85T	85	290K	840	726	547	1	6.3	0.026
G2-HE-122T	122	416K	1000	886	707	1	7.6	0.037

CODE	PRIMARY (HOT) FLOW	PRIMARY (HOT) HEAD LOSS	SECOND-ARY (POOL) FLOW	SECOND-ARY (POOL) HEAD LOSS	ΔT 15°C	ΔT 20°C	ΔT 30°C	ΔT 40°C	ΔT 50°C	ΔT 60°C	ΔT 70°C
	m <sup>3</sup>	kPa	m <sup>3</sup>	m <sup>3</sup>	kW						
G2-HE-30T	1.1	6.1	10	5	9	11	16	20	26	30	33
	1.3	6.8	10	5	10	13	18	23	31	34	39
	1.3	6.8	14	7	11	15	20	26	34	41	46
G2-HE-49T	1.6	7.7	16	9.2	13	18	25	33	41	50	56
	1.8	8.3	16	9.2	14	20	28	38	45	55	62
	2.2	9.3	17	9.8	16	22	33	44	52	64	73
G2-HE-85T	2.4	11.3	17	10.6	22	28	40	53	64	75	81
	2.7	12.9	17	10.6	26	32	46	60	73	82	89
	3.2	14.7	17	10.6	28	34	49	64	77	90	102
G2-HE-122T	3.8	18.3	19	12.6	33	43	68	75	93	108	120
	4.2	20	19	12.6	36	48	70	89	108	126	143
	4.6	21.1	19	12.6	38	53	73	95	116	137	156

# 09 SST HEAT EXCHANGER

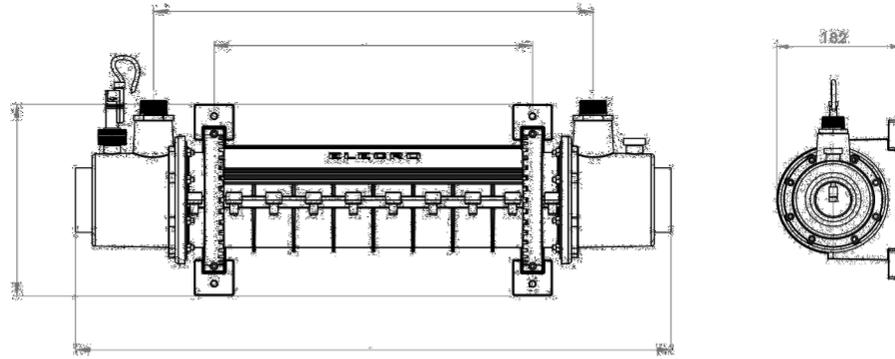


- Four models ranging from 36-kW to 95-kW
- Special formulated polymer
- Coiled titanium primary casing
- Salt and sea water compatible
- 30 bar (primary) and 3 bar (secondary) pressure tolerance
- Low pressure drop
- With optional Smart Touchscreen Controller & Booster Pump
- Temperature and flow sensor port
- Floor or wall mountable

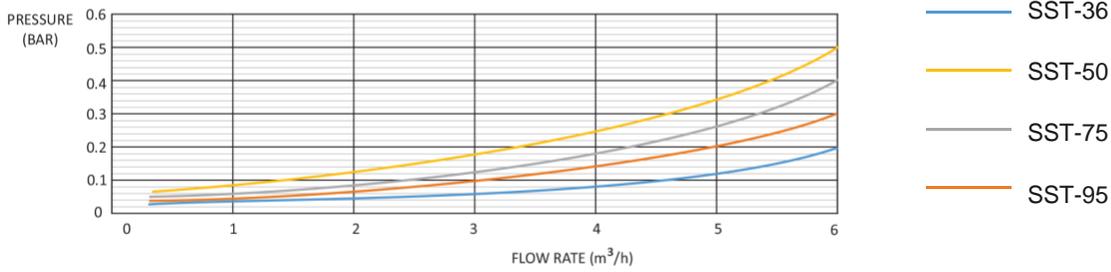


<b>PRIMARY CIRCUIT</b>	
FLOW TUBE	COILED TITANIUM
WATER CONNECTIONS	1" BSP MALE FITTING
FLOW TUBE	30 BAR MAXIMUM

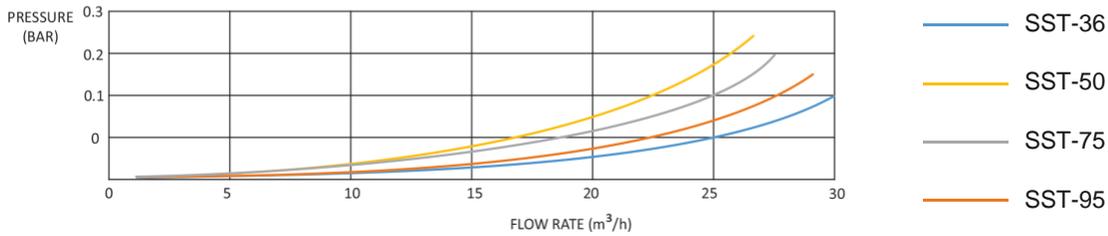
<b>SECONDARY CIRCUIT</b>	
FLOW TUBE	SPECIAL FORMULATED POLYMER
WATER CONNECTIONS	2 1/2"/63 MM STEPPED ABS UNIONS FOR RIGID PIPE CONNECTION WITH 1 1/2"/50MM REDUCERS
FLOW TUBE	30 BAR MAXIMUM



PRESSURE DROP PRIMARY CIRCUIT



PRESSURE DROP SECONDARY CIRCUIT



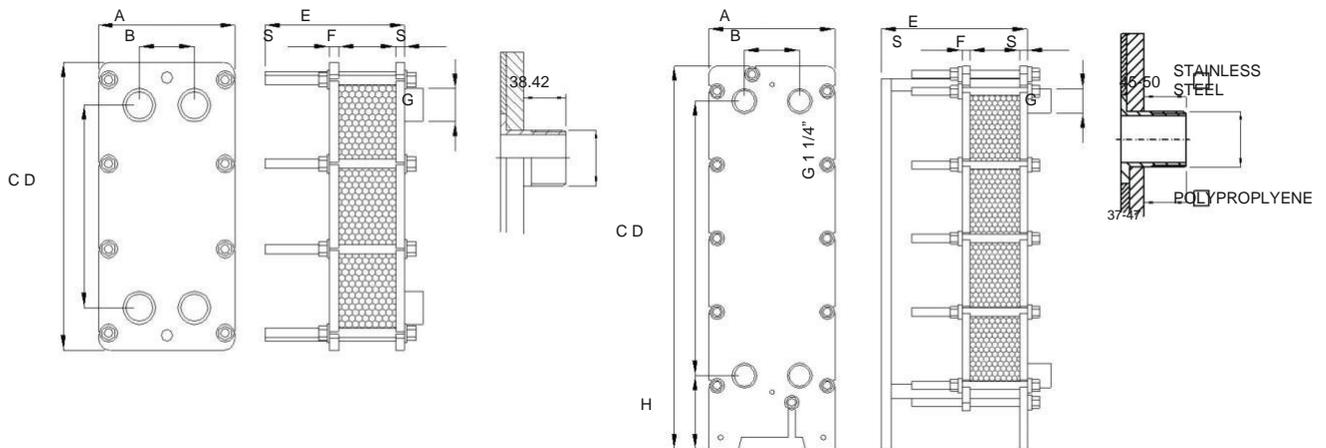
CODE	STANDARD POWER OUTPUT		DIMENSIONS			PACKING	WEIGHT	VOLUME
	kW	BTU	A	B	C		kg	m <sup>3</sup>
SST-36	36	123	290	143	478	1	5.8	0.055
SST-50	50	171	386	240	574	1	6.4	0.055
SST-75	75	256	530	384	718	1	7.6	0.075
SST-95	95	324	674	528	862	1	8.7	0.075

CODE	PRIMARY (HOT) FLOW	PRIMARY (HOT) HEAD LOSS	SECONDARY (POOL) FLOW	SECONDARY (POOL) HEAD LOSS	ΔT 50°C	ΔT 60°C	ΔT 70°C
	m <sup>3</sup>	kPa	m <sup>3</sup>	m <sup>3</sup>	kW	kW	kW
SST-36	1.1	6.1	12	5.0	26	30	33
SST-50	2.5	6.8	15	5.0	31	34	39
SST-75	2.7	6.8	18	5.0	34	41	46
SST-95	3.2	7.7	18	5.0	41	50	56

# 10 PLATE HEAT EXCHANGER



- High overall heat transfer coefficient
- Compact design gives maximum surface area to material volume without compromising mechanical robustness
- High performance with low hold-up volume  
Versatile, modular design
- Plate and gasket materials available to suit most fluid types
- Easy dismantling for rapid cleaning



DIMENSION (mm)	A	B	C	D	E	F	G	H	S
PHE100-TI	204	86	490	381	116	39.75	DN32	0	14/12
PHE140-TI	204	86	490	381	116	50.35	DN32	0	14/12
PHE180-TI	204	86	490	381	141	66.25	DN32	0	14/12
PHE240-TI	204	86	490	381	191	92.75	DN32	0	14/12
PHE290-TI	204	86	490	381	191	103.35	DN32	0	14/12
PHE330-TI	204	86	490	381	241	129.85	DN32	0	14/12
PHE370-TI	204	86	490	381	291	140.45	DN32	0	14/12
PHE410-TI	204	86	490	381	291	151.05	DN32	0	14/12
PHE450-TI	312	140	963	690	447	66.5	DN65	0	20/20
PHE500-TI	312	140	963	690	447	87.5	DN65	0	20/20
PHE550-TI	312	140	963	690	447	94.5	DN65	0	20/20
PHE610-TI	312	140	963	690	447	101.5	DN65	0	20/20
PHE670-TI	312	140	963	690	447	115.5	DN65	0	20/20
PHE730-TI	312	140	963	690	447	122.5	DN65	0	20/20
PHE780-TI	312	140	963	690	447	129.5	DN65	0	20/20
PHE820-TI	312	140	963	690	447	136.5	DN65	0	20/20

## SPECIFICATIONS

PROCESS DATA (HOT SIDE)	PHE100-TI	PHE140-TI	PHE180-TI	PHE240-TI	PHE290-TI	PHE330-TI	PHE370-TI	PHE410-TI
TEMP(IN)°C	90	90	90	90	90	90	90	90
TEMP(OUT)°C	70	70	70	70	70	70	70	70
FLOW RATE (M/H)	4.52	6.20	7.88	10.71	12.70	14.70	16.38	18.33
PRESSURE DROP (KPA)	22.11	25.54	24.50	25.04	26.62	25.55	27.18	29.57

PROCESS DATA (COLD SIDE)	PHE100-TI	PHE140-TI	PHE180-TI	PHE240-TI	PHE290-TI	PHE330-TI	PHE370-TI	PHE410-TI
TEMP(IN)°C	20	20	20	20	20	20	20	20
TEMP(OUT)°C	35	35	35	35	35	35	35	35
FLOW RATE (M/H)	5.88	8.07	10.26	13.94	16.54	19.13	21.32	23.86
PRESSURE DROP (KPA)	42.19	48.65	46.48	47.13	49.91	47.51	50.36	54.59
DELTA T LOG MEAN (C)	52.46	52.46	52.46	52.46	52.46	52.46	52.46	52.46
HEAT EXCHANGES (KW)	102	140	178	242	287	332	370	414

CONSTRUCTION DATA	PHE100-TI	PHE140-TI	PHE180-TI	PHE240-TI	PHE290-TI	PHE330-TI	PHE370-TI	PHE410-TI
HEAT TRANSFER AREA (M)	0.624	0.816	1.104	1.584	1.776	2.256	2.448	2.640
OVER SURFACING (%)	121.48	118.57	126.71	133.98	128.42	139.15	136.47	132.69
OVERALL K SERVICE(W/MC)	3114.33	3268.79	3071.85	2910.78	3078.84	2803.80	2879.64	2987.76
FOULING F (MC/KW)	0	0	0	0	0	0	0	0
PLATES THICKNESS (MM)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
OVERALL K CLEAN(W/MC)	6897.51	7144.68	6964.29	6813.72	7032.83	6705.26	6809.54	6952.19
WEIGHT EMPTY (KG)	29	30	32	35	36	39	40	41
WEIGHT FULL (KG)	30.778	32.346	34.698	38.618	40.186	44.106	45.674	47.242
VOLUME HOT SIDE (L)	0.714	0.918	1.224	1.734	1.938	2.448	2.652	2.856
VOLUME COLD SIDE (L)	0.714	0.918	1.224	1.734	1.938	2.448	2.62	2.856
NO. SERIES PASS HOT SIDE	1	1	1	1	1	1	1	1
NO. SERIES PASS COLD SIDE	1	1	1	1	1	1	1	1
NO. PARALLEL PASSES HOT SIDE	7	9	12	17	19	24	26	28
NO. PARALLEL PASSES COLD SIDE	7	9	12	17	19	24	26	28

## TEMPERATURE CONTROL

### SPECIFICATIONS

PROCESS DATA (HOT SIDE)	PHE450-TI	PHE500-TI	PHE550-TI	PHE610-TI	PHE670-TI	PHE730-TI	PHE780-TI	PHE820-TI
TEMP(IN)°C	90	90	90	90	90	90	90	90
TEMP(OUT)°C	70	70	70	70	70	70	70	70
FLOW RATE (M/H)	19.74	22.31	24.17	26.96	29.75	32.54	34.40	36.25
PRESSURE DROP (KPA)	23.28	21.45	21.85	22.51	23.26	22.72	23.21	23.73

PROCESS DATA (COLD SIDE)	PHE450-TI	PHE500-TI	PHE550-TI	PHE610-TI	PHE670-TI	PHE730-TI	PHE780-TI	PHE820-TI
TEMP(IN)°C	20	20	20	20	20	20	20	20
TEMP(OUT)°C	35	35	35	35	35	35	35	35
FLOW RATE (M/H)	25.70	29.04	31.46	35.06	38.72	42.35	44.77	47.19
PRESSURE DROP (KPA)	50.06	45.73	46.43	47.64	48.88	47.53	48.36	49.24
DELTA T LOG MEAN (C)	52.46	52.46	52.46	52.46	52.46	52.46	52.46	52.46
HEAT EXCHANGES (KW)	446	504	546	609	672	735	777	819

CONSTRUCTION DATA	PHE450-TI	PHE500-TI	PHE550-TI	PHE610-TI	PHE670-TI	PHE730-TI	PHE780-TI	PHE820-TI
HEAT TRANSFER AREA (M)	2.873	3.887	4.225	4.563	5.239	5.577	5.915	6.253
OVER SURFACING (%)	95.43	114.26	114.95	112.11	116.59	114.10	114.62	115.09
OVERALL K SERVICE(W/MC)	2957.66	2470.38	2462.15	2542.82	2443.82	2510.93	2502.74	2495.42
FOULING F (MC/KW)	0	0	0	0	0	0	0	0
PLATES THICKNESS (MM)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
OVERALL K CLEAN(W/MC)	5780.09	5293.03	5293.03	5393.57	5293.03	5375.97	5371.40	5367.30
WEIGHT EMPTY (KG)	150	155	156	158	161	163	164	166
WEIGHT FULL (KG)	157.85	165.20	167.65	170.10	175.00	177.45	179.90	182.35
VOLUME HOT SIDE (L)	3.825	5.100	5.525	5.950	6.800	7.225	7.650	8.075
VOLUME COLD SIDE (L)	3.825	5.100	5.525	5.950	6.800	7.225	7.650	8.075
NO. SERIES PASS HOT SIDE	1	1	1	1	1	1	1	1
NO. SERIES PASS COLD SIDE	1	1	1	1	1	1	1	1
NO. PARALLEL PASSES HOT SIDE	9	12	13	14	16	17	18	19
NO. PARALLEL PASSES COLD SIDE	9	12	13	14	16	17	18	19

# 11 AQUA POOL DEHUMIDIFIERS WITH HEATING & COOLING FUNCTION

AQUA Indoor Environmental Control Systems provide effective control of damaging moisture common with indoor pool facilities. They maintain a delicate balance of humidity control and manage air and water temperatures for maximum comfort at the lowest cost. This series uses heat pump technology to dehumidify the space and recycle the waste energy to heat both the air and pool water. They are available in many sizes and a variety of configurations for large indoor pools found in hotels, schools, natatoriums, aquatic centers and water parks.

## BUILT FOR THE CORROSIVE POOL ENVIRONMENT

AQUA dehumidifiers have many special design features to minimize maintenance and extend the life of the unit. All critical components are located out of the corrosive air stream, and coils are constructed from all copper and coated aluminum fins for long life. AQUA uses full-size air/water condensers for maximum pool and air heating or cooling. It utilizes a sophisticated controller that offers high efficient control strategies for more efficient intelligent pool operation. All units are constructed of heavy-gauge steel with side and roof panels galvanized and epoxy powder coated to resist corrosion. Panel insulation provides additional energy efficiency along with sound control for indoor and outdoor installations.

## RECYCLED ENERGY LESSENS THE NEED FOR FOSSIL FUEL HEATING

Indoor pools demand large quantities of heat to maintain space and water comfort conditions. Rather than relying on fossil fuel as the primary heat source, AQUA units utilize waste heat generated during dehumidification to heat the space and pool water. AQUA units return much more energy than they use with average recorded savings ranging from 40% to 60% over conventional outside air dilution systems. For every kilowatt of electrical power used to operate AQUA system, five kilowatts of heat are delivered to the natatorium and water. friendly interface - Self diagnosis



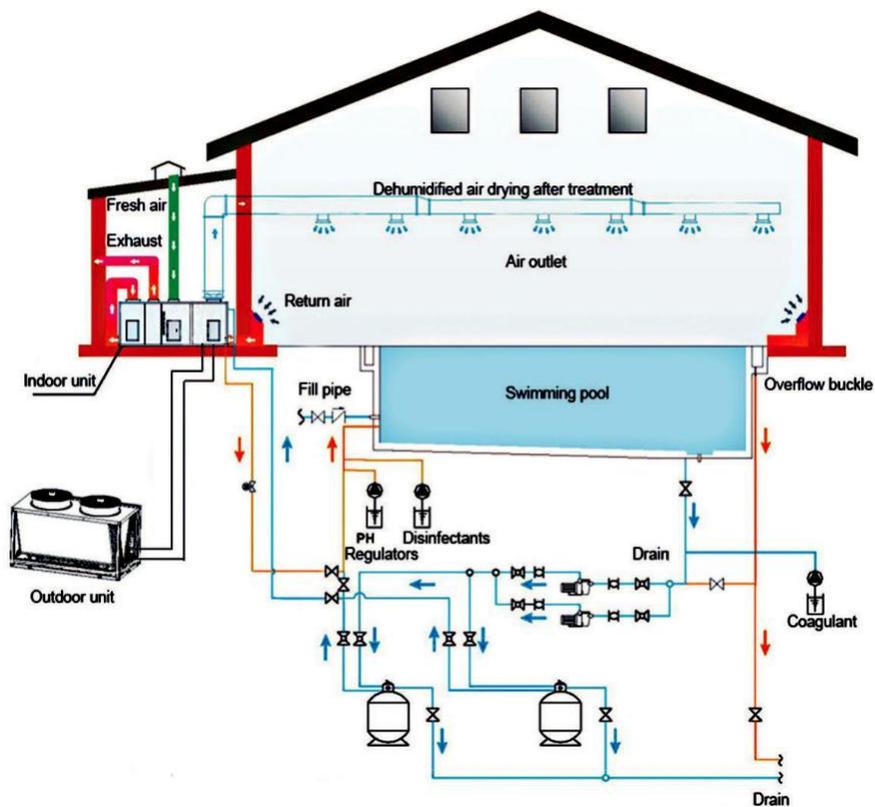
- Room hygrostat and thermostat.
- Automatically switches mode from heat to cool.
- Optional digital controller with display.

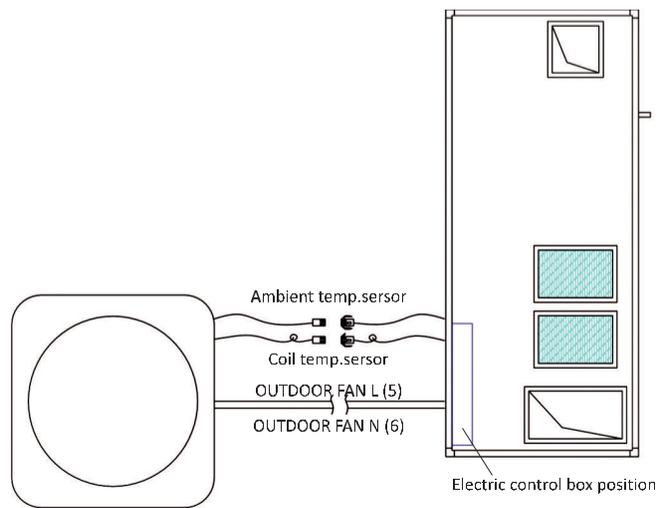
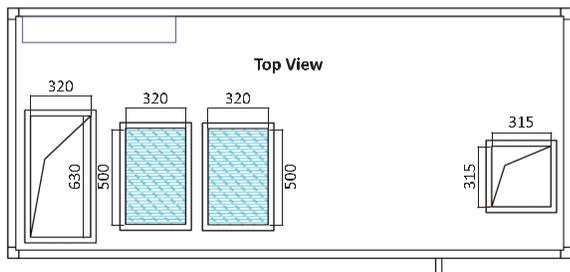
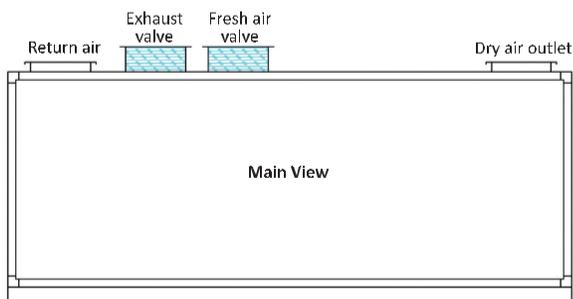
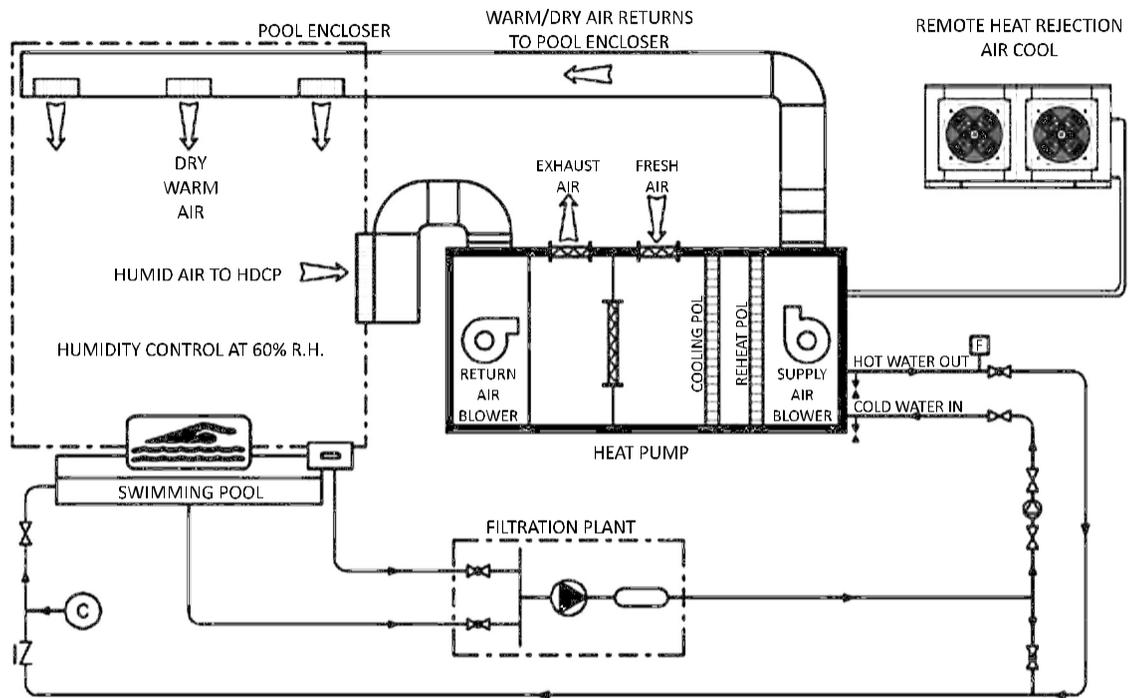
## TEMPERATURE CONTROL

### HIGH EFFICIENCY AND ENVIRONMENTALLY FRIENDLY

All models use R22 or R417A refrigerant and deliver excellent performance characteristics. Stage compressor cycling ensures minimum compressor operation for any given load for greater efficiency, and also maintains a high quality environment. The systems can be configured to return condensate back to the pool, saving the equivalent of the entire pool's volume over one year. For improved air quality, plasma filters can be added.

- Rugged features delivers unrivaled performance
- Scroll compressor, efficient and quiet operation
- Coated evaporator and reheat condenser coils, long life
- Titanium tube-in-shell water heat exchanger
- Powder coated cabinet, corrosion resistant
- Controller with user friendly interface
- Self diagnosis





TEMPERATURE CONTROL

			AD-15	AD-20	AD-25	AD-30	AD-40
POWER SUPPLY		V/P/Hz	380-415/3/50				
OUTPUT	COOLING	kW/h	25	33	41	51	65
	HEATING	kW/h	30	39	47	60	78
DEHUMIDIFICATION CAPACITY		kg/h	17	22	26	33	43
APPLICATION POOL SURFACE AREA		m <sup>2</sup>	68	88	104	132	172
RATED AIRFLOW		m <sup>3</sup> @ 300 Pa	4000	5000	6000	7500	9000
BLOWER	QTY.		2	2	2	2	2
	TYPE		CENTRIFUGAL				
	STATIC PRESSURE RANGE	Pa	100-500	100-500	100-500	100-500	100-850
	POWER INPUT	kW	1.5	1.5	2.2	2.2	3.5
COMPRESSOR	QTY.		1	1	1	2	2
	TYPE						
	POWER INPUT	kW	5.5	7	8.5	5.4	7
WATER HEAT EXCHANGER CONDENSER	RATED WORKING PRESSURE	MPa	1.2	1.2	1.2	1.2	1.2
	MAX. WATER TEMPERATURE	°C	40	40	40	40	40
	RATED WATER FLOW RATE	m <sup>3</sup>	4.7	6.1	7.2	9.4	12.2
	WATER CONN. SIZE	mm	32	32	38	50	50
AIR COOLED CONDENSER	QTY.		1	1	1	1	1
	RATED CAPACITY	kW	30	39	47	60	78
	RATED AIRFLOW	m <sup>3</sup>	10000	12000	15000	20000	24000
	NO.OF FANS		1	1	1	2	2
	FAN MOTOR POWER INPUT	kW	0.82	0.82	1.65	0.82	0.82
DIMENSIONS	OUTDOOR CONDENSER	mm	706	1450	1450	1450	1800
		mm	686	705	705	705	705
		mm	940	1065	1065	1065	1065
	INDOOR MAIN UNIT	mm	3000	3600	3600	3800	4200
		mm	1300	1520	1570	1670	1670
		mm	1200	1200	1260	1360	1450
INDOOR MAIN UNIT WEIGHT		kg	500	800	900	1200	1500
PACKING			1	1	1	1	1

AD-50	AD-60	AD-80	AD-100	AD-120	AD-160
380-415/3/50					
82	97	131	163	192	241
106	128	170	214	243	280
51	62	84	102	122	160
204	248	336	408	488	640
11000	13000	16600	21000	25000	32000
2	2	2	2	2	2
CENTRIFUGAL					
100-850	100-850	100-850	100-850	100-850	100-850
4	5.5	6	7	7.5	11
2	2	2 or 4	2 or 4	2 or 4	2 or 4
8.5	11	7 or 13	8.5 or 16.5	11 or 22	13 or 25
1.2	1.2	1.2	1.2	1.2	1.2
40	40	40	40	40	40
14.5	18.8	24.6	30.6	37.5	48
63	63	75	75	90	100
1	1	2	2	2	2
96	118	150	184	223	278
30000	40000	48000	60000	80000	90000
2	2	4	4	4	4
0.82	0.82	0.82	0.82	1.1	1.1
1850	2110	1800	1850	2110	2500
1000	1100	1000	1000	1100	1200
1320	1350	1320	1320	1350	1350
4600	4900	5400	5800	6600	7000
1930	2160	2200	2200	2150	2200
1520	1690	1840	2150	2200	2500
1650	1850	2200	2500	2700	3300
1	1	1	1	1	1

# 12 WATER TO WATER POOL HEAT PUMP

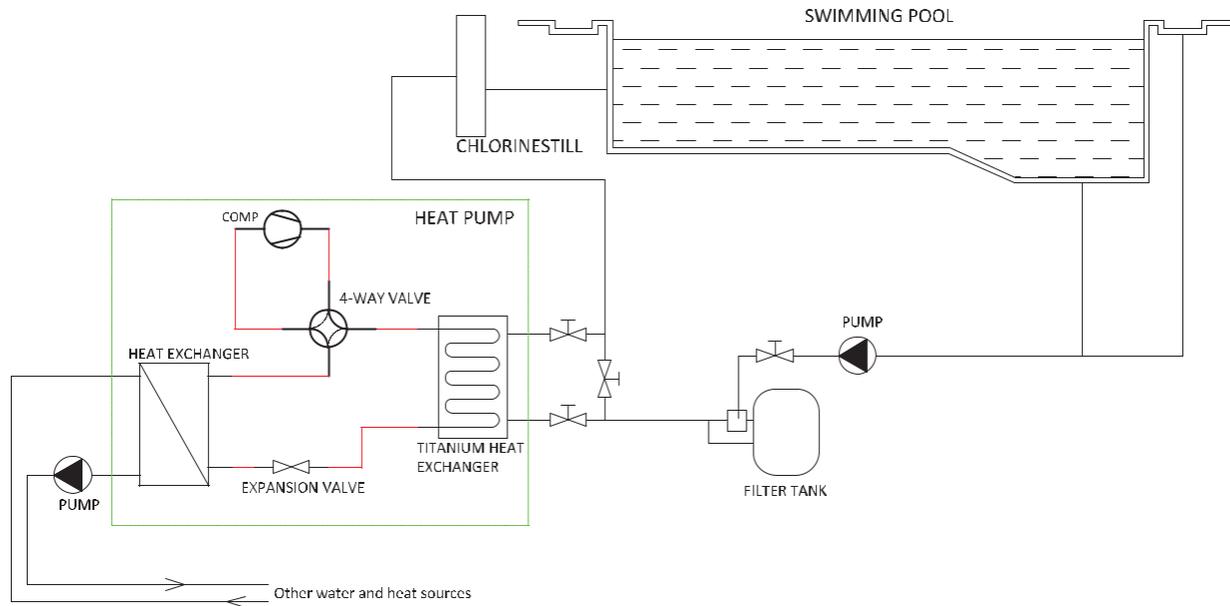


- Standard type (Heating capacity: 13.7kw~171kw)
- Touch design LCD control display and control signal are easier to be transferred to control system with BMS.
- Clock & Timing on/off function
- Efficiency
- Titanium heat exchanger
- Quiet Operation
- Environmentally Friendly
- Quality

## WATER TO WATER HEAT PUMP – R410A

		WN040SV	WN050SV	WN060SV	WN070SV	WN100SV
Power supply	V/PH/Hz	380-420/50/3				
Water yield	l/h	365	451	537	623	967
Sourcing water inlet Temp: 20°C, User's side water inlet/outlet @ 26°C/28°C						
Heating capacity	kW	17.0	21.0	25.0	29.0	45.0
Power input	kW	3.0	3.8	4.5	5.2	8.0
COP	W/W	5.6	5.6	5.6	5.6	5.6
Sourcing water inlet Temp: 15°C, User's side water inlet/outlet @ 26°C/28°C						
Heating capacity	kW	14.5	17.9	21.3	24.7	38.3
Power input	kW	3.2	4.0	4.7	5.5	8.3
COP	W/W	4.53	4.51	4.52	4.48	4.60
Sourcing water inlet Temp: 0°C, User's side water inlet/outlet @ 35°C/40°C						
Heating capacity	kW	10.9	13.6	18.2	21.0	27.1
Power input	kW	2.7	3.4	4.6	5.3	6.7
COP	W/W	3.98	3.95	3.96	3.96	4.03
Sourcing water inlet Temp: 0°C, User's side water inlet/outlet @ 35°C/40°C						
Heating capacity	kW	9.2	11.5	15.4	17.8	23
Power input	kW	2.7	3.4	4.6	5.3	6.7
COP	W/W	3.37	3.35	3.36	3.33	3.42
Sourcing water inlet Temp: 30°C, User's side water inlet/outlet @ 30°C/28°C						
Cooling capacity		9	11	15	17	22
Power input		2.7	3.4	4.5	5.3	6.6
EER		3.32	3.30	3.31	3.28	3.37
Rated running current	A	5.4	6.70	7.98	9.26	14.36
Max. running current	A	7.9	9.7	11.6	13.4	20.8
Water temp. setting (heating)	°C	15~40				
Water temp. setting (cooling)	°C	15~40				
Max outlet water temp.	°C	40				
Water connection	Inch	G1	G1	G1	G1-1/2	G1-1/2
Sound pressure level	db(A)	41	42	42	43	44
Net weight	kg	100	120	120	185	250
Net dimensions (L x W x H)	mm	900/760/860	900/760/860	900/760/860	900/760/860	1320/840/1130

**DIAGRAM**



WN120SV	WN150SV	WN200SV	WN250SV	WN300SV	WN400SV	WN500SV
380-420/50/3						
1182	1397	1806	2257	2687	3611	4514
Sourcing water inlet Temp: 20°C, User's side water inlet/outlet @ 26°C/28°C						
55.0	65	84	105	125	168	210
9.8	11.6	15.0	18.8	22.3	30.0	37.5
5.6	5.6	5.6	5.6	5.6	5.6	5.6
Sourcing water inlet Temp: 15°C, User's side water inlet/outlet @ 26°C/28°C						
46.8	55.3	71.4	89.3	106.3	142.8	178.5
10.2	12.2	15.9	19.6	23.6	32.1	39.4
4.56	4.53	4.48	4.56	4.49	4.45	4.53
Sourcing water inlet Temp: 0°C, User's side water inlet/outlet @ 35°C/40°C						
35.4	40	53	71	83	106	136
8.9	10.1	13.5	17.7	21.0	27.2	34.1
4.00	3.98	3.93	4.00	3.94	3.91	3.98
Sourcing water inlet Temp: 0°C, User's side water inlet/outlet @ 35°C/40°C						
30	34	45	60	70	90	115
8.8	10.1	13.5	17.7	21.0	27.2	34.1
3.39	3.37	3.33	3.39	3.34	3.31	3.37
Sourcing water inlet Temp: 30°C, User's side water inlet/outlet @ 30°C/28°C						
29	33	44	58	68	87	112
8.7	9.9	13.3	17.4	20.6	26.8	33.6
3.34	3.32	3.28	3.34	3.29	3.26	3.32
17.56	20.7	26.8	33.5	39.9	53.6	67.0
25.5	30.1	38.9	48.6	57.9	77.8	97.2
15-40						
15-40						
40						
G1-1/2	G2	G2	Dn90 Flange	Dn90 Flange	Dn110 Flange	Dn110 Flange
44	45	49	55	55	56	56
280	360	500	610	720	990	990
1320/840/1130	1320/840/1130	1750/1120/1000	1750/1120/1000	2000/1120/1000	2300/1120/1000	2300/1120/1000

# 13 AIR COOLED WATER CHILLER



- Touch design LCD control display and control signal are easier to be transferred to control system with BMS.
- Clock& Timing on/off function
- Phase monitor: Protects the compressor in case of phase loss or inversion
- High/low pressure protection available
- cooled water temperature

## AIR COOLED WATER CHILLER

			CH-0110	CH-0120	CH-0130
Power supply		V/PH/Hz	220/1/50		
Cooling: A35/24°C W/45/25°C	Cooling capacity	kW	5.3	7.0	8.8
		BTU/h	18084	23884	30026
	Chilled water production T=20°C	Us Gal/h	60	79	100
	Power input	kW	1.8	2.5	3.1
	Current	A	8.3	11.4	14.3
	EER	W/W	2.90	2.80	2.80
Cooling: A35/24°C W/45/25°C	Cooling capacity	kW	4.5	6.0	7.5
		BTU/h	15371	20301	25522
	Chilled water production T=20°C	Us Gal/h	51	68	85
	Power input	kW	22	3.0	3.7
	Current	A	9.8	13.4	16.9
	EER	W/W	2.09	2.02	2.02
Cooling: A35/24°C W/45/25°C	Cooling capacity	kW	4.3	5.7	7.2
		BTU/h	14829	19585	24621
	Chilled water production T=20°C	Us Gal/h	49	65	82
	Power input	kW	2.2	3.0	3.8
	Current	A	10.0	13.6	17.1
	EER	W/W	1.98	1.91	1.91
Cooling: A35/24°C W/45/25°C	Cooling capacity	kW	6.4	8.4	10.6
		BTU/h	21700	28661	36031
	Chilled water production T=20°C	Us Gal/h	36	48	60
	Power input	kW	1.5	2.0	2.6
	Current	A	6.8	9.3	11.7
	EER	W/W	4.2	4.1	4.1
MAX	Power input	kW	2.7	3.8	4.7
	Current	A	12.5	17.0	21.4
OPERATING	Water outlet temp. range	°C	5-40	5-40	5-40
	Ambient temp. range	°C	0-53	0-53	0-53
KEY	Compressor type		Rotary	Rotary	Scroll
	Noise	db(A)	52	52	55
HEAT EXCHANGER	Type		Titanium /PVC	Titanium /PVC	Titanium /PVC
	Standard water flow (min)	Us GPM	2.5	3.3	4.2
	Standard water flow (mix)	Us GPM	8.7	11.5	14.5
	Water pressure drop(max)	kPa	6	7	8
	Water connection	mm	40	40	40
FAN	Fan position		Horizontal	Horizontal	Verticle
DIMENSIONS (W x H x D)	Net	mm			
	Shipping	mm			
WEIGHT		kg	60/66	58/64	80/87

CH-0140	CH-0150	CH-0160	CH-0170	CH-0180
380/3/50				
10.5	14.2	17.5	28	34
35826	48450	59710	95536	116008
119	161	199	318	386
3.8	5.1	6.3	10.0	12.1
6.7	9.1	11.2	17.9	21.7
2.80	2.78	2.80	2.80	2.80
8.9	12.1	14.9	23.8	28.9
30452	41183	50754	81206	98607
101	137	169	270	328
4.4	6.0	7.4	11.80	14.3
7.9	10.8	13.2	21.1	25.6
2.02	2.02	2.02	2.02	2.02
8.6	11.6	14.4	23.0	27.9
29377	39729	48962	78340	95127
98	132	163	261	316
4.5	6.1	7.5	12.0	14.6
8.0	11.0	13.4	21.5	26.0
1.91	1.90	1.91	1.91	1.91
12.6	17.0	21.0	33.6	40.8
42991	58140	71652	114643	139210
72	97	119	191	232
3.1	4.2	5.1	8.2	9.9
5.5	7.5	9.1	14.6	17.8
4.1	4.1	4.1	4.1	4.1
5.6	7.7	9.4	15.0	18.2
10.1	13.7	16.8	26.8	32.6
5-40	5-40	5-40	5-40	5-40
0-53	0-53	0-53	0-53	0-53
Scroll	Scroll	Scroll	Scroll	Scroll
55	58	58	59	59
Titanium /PVC				
5.0	6.7	8.3	13.3	16.1
17.3	23.4	28.8	46.1	56.0
10	11	12	15	15
40	50	50	63	63
Verticle	Verticle	Verticle	Verticle	Verticle
380/3/50				
95/97	95/102	102/112	200/225	230/258

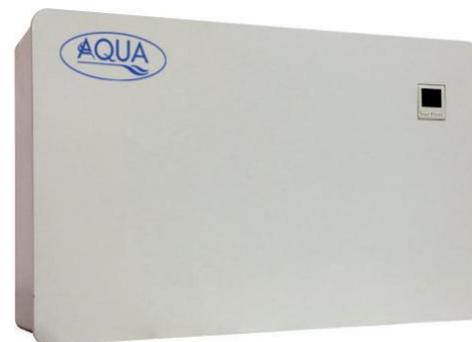
# 14 INDOOR POOL DEHUMIDIFIER

## FEATURES

- Portable Dehumidifiers type & Wall mounted
- Absorbing clammy air in house and transferring
- provide you a cool and comfortable environment
- Epoxy fin air exchanger (wall mounted)
- Clock & Timing on/off function(wall mounted )
- Efficiency
- Fashionable appearance
- Quiet operation
- Environmentally friendly
- Clear Windows, Dry Walls: No more foggy windows or condensation on walls in the pool room with AQUA dehumidifiers preserve the construction integrity and gives a pleasant feeling to the room occupants.
- Simple Installation: Can be free standing or remote. It is also duct ready, the control can be easily made in a 220 volts wiring.
- Quality Construction & Reliability: AQUA dehumidifier comes in white coated antihumidity paint or in stainless steel body, Digital LCD controller & gas pressure gauge. The unit is covered under a 5 year warrantee.
- Low Electrical Cost: AQUA dehumidifier utilizes a refrigeration system that requires a smaller electrical load.
- Humidity Control: Stabilize room conditions through dehumidification, this reduces the maintenance cost of the room and gives a very pleasant environment to the pool room.
- Indoor Pool Room Heating: Recovering energy from the dehumidification process will often heat an entire pool room for the cost of operating the dehumidifier alone.
- Indoor Pool Room Cooling: An optional remote condenser will allow the DCA system to cool the pool room during the warm months.
- Easy to Maintain: The AQUA dehumidifier system is a closed loop system with nothing to oil or lubricate. Simple return air filter maintenance is all that is needed.



PORTABLE



WALL MOUNTED



## INDOOR POOL DEHUMIDIFIER

INDOOR POOL DEHUMIDIFIER		WALL MOUNTED			PORTABLE			
		DW02	DW03	DW04	DM02	DM03	DM04	DM06
Power supply		220-240V-50HZ						
		Ambient Temp. 30°C, 80% relative humidity						
Rated capacity	l/h	2.3	3.2	4.5	2.5	3.2	4.5	6
Dehumidification Capacity per day	l	55.2	76.8	108	60	76.8	108	144
Recommended pool Area	m <sup>2</sup>	42	60	84	42	60	84	112
Air Volume	m <sup>3</sup> /h	450	600	750	450	600	750	900
Noise level	db(A)	44	46	50	44	46	50	50
Rated Power Input	kW	0.93	1.14	1.73	0.93	1.14	1.73	2.14
Rated Running Current	A	4.1	5	7.5	4.1	5	7.5	9.7
Max. Power Input	kW	1.02	1.25	1.9	1.40	1.71	2.60	3.21
Max. Running Current	A	4.3	5.4	8.2	6.3	7.8	11.8	14.6
Relative Humidity	%RH	40-100						
Temperature	°C	10-36						
Dimensions (L /W/H)	mm	868/260/720	868/260/720	1268/260/720	400/500/720	400/500/720	480/580/1008	480/580/1008
Net Weight	kg	46	51	64	45	50	63	130
Condensation Pipe Diameter	mm	16						