



# Chilled Water Fan Coil

## European Universal Type

Vicot Air Conditioning Co., Ltd

Vicot Group is a high-tech corporation specialized in R&D, production, sales and service of renewable energy products.

The corporation has almost 2000 staff and nine business divisions and/or centers as following: Solar Thermal Energy Equipment Division, Vacuum Tube Division, Gas Fired Air Conditioning Division, Electrical Air Conditioning Division, Domestic Marketing & Sales Division, Export & Import Division, Administrative & Human Resource Center, Company Management Center and General Manager Office.

Our production base locates in Solar City, Dezhou, China, it covers an area of 150,000m<sup>2</sup> with modern workshops and office buildings of more than 80,000m<sup>2</sup>. Annual yield capabilities are as follows: 100,000 electrical AC units; 10,000 gas fired AC units; 200,000m<sup>2</sup> of collectors; 100,000 pieces of tubes; 5,000 standard sets of solar air conditioning system (20kW/ standard set), 200,000 standard sets of S.A.P central hot water system (10T/ standard set), 10,000 standard sets of S.A.P central distributed heating system (40kW/ standard set) and 500 standard sets of solar boiler system (700kW/ standard set). Designed annual production value reaches RMB5billion.

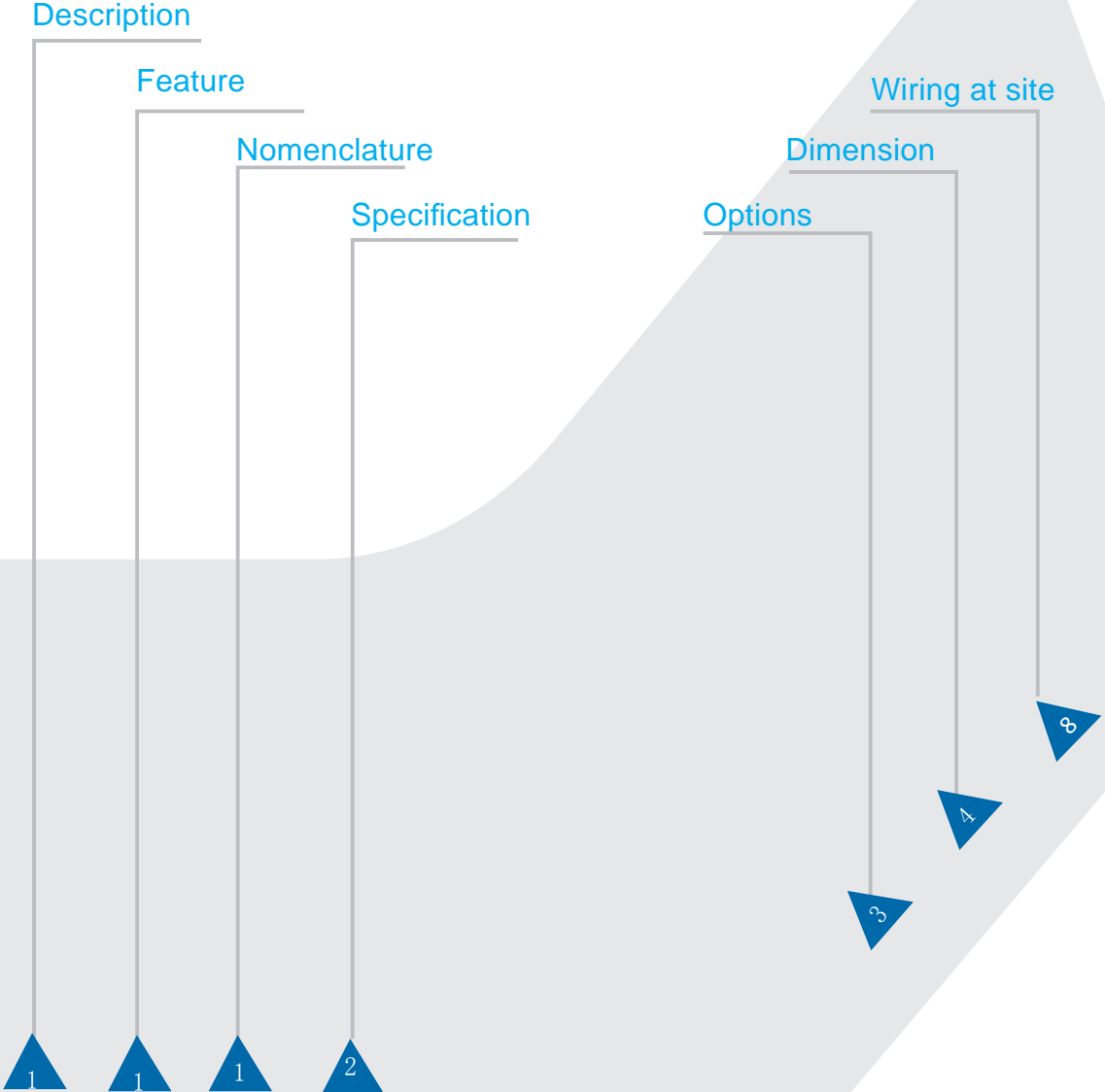
With the mission of "The same breath, energy saving together", the corporation realizes energy saving and environment protection by focusing on effective utilization of solar energy, air source energy, geothermal energy and other renewable energies in cooling, heating and domestic hot water fields, in pursuit of technology innovations in the field of global renewable energy utilization.

After years' practice in geothermal chiller & heat pump, air source chiller and heat pump and floor heating fields, Vicot accumulates rich experience in development and production and reaches a nationally advanced level. With a total investment of RMB 16 million in April 2008, after 3 years' collaboration with more than 20 global universities and research institutes in sequence, Vicot successfully and innovatively launched solar air conditioning system, S.A.P central hot water system, S.A.P central distributed heating system, solar boiler system, having more than 150 patents, large scale production of them has been realized, the past and current scientists and engineers' cherished wish has been realized. It places China at the world top level in solar medium temperature application field, it turns the dream into truth, for solar energy scale application in commercial and industrial field.

In the meantime of developing the technology of world leading new energy product, the corporation is operated with global advanced ERP technique, UPDI\WMS barcode storage system and ABC cost control system. Information, logistics and cash flow are highly integrated, which austere shows its concept of "Quality based on science, Price optimized for customer".



# Contents





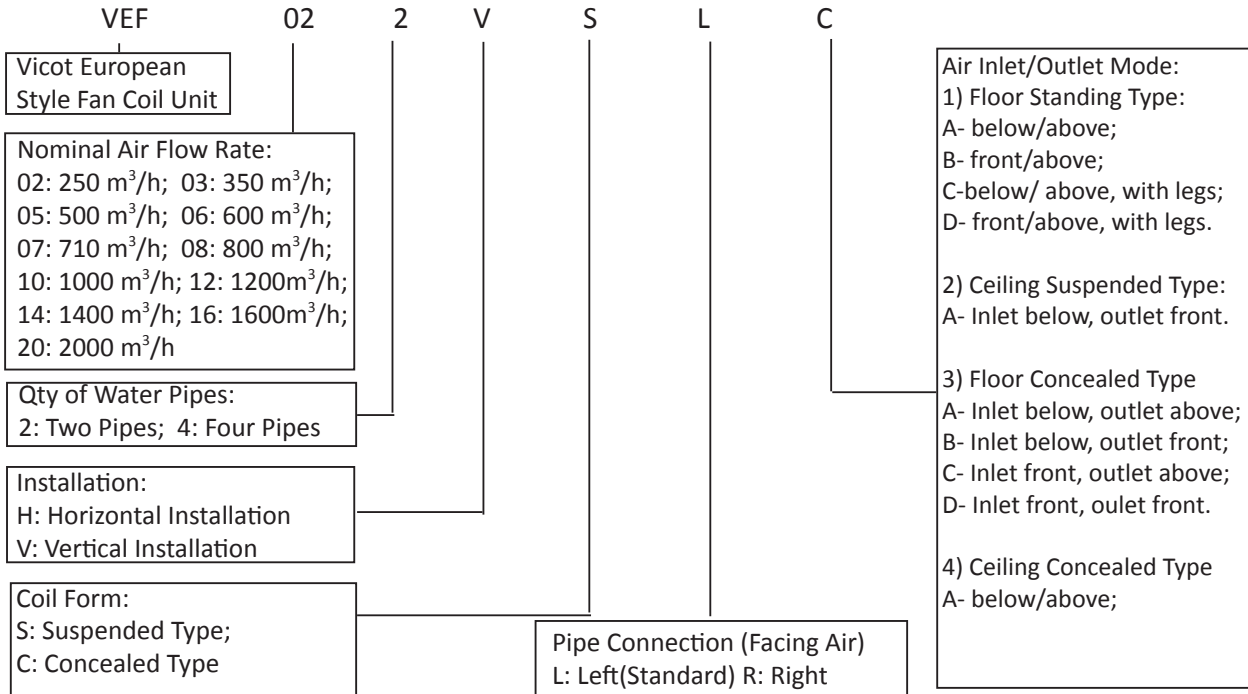
## Introduction

Vicot Fan Coil Units include floor standing, horizontal ceiling, suspended, concealed units, etc, which can be chosen by customers according to room structure, quantity of loading and decorate character.

## Feature

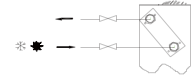
- ◆ VEF serial fan coil unit, compact structure, modern design, low electric consumption, low noise and convenient maintenance.
- ◆ Cold (hot) water supplied to cooling (heating) coil from concentrated cold (hot) source, the unit intakes the indoor air through fans, after cooled (heated) by the coil, the air will be sent to indoor again, the units recycles to keep the indoor temperature adjusted.
- ◆ The customers can choose two pipes type or four pipes type, to meet their requirement.
- ◆ Two installation types, decorative and concealed type to meet the construction request.

## Nomenclature



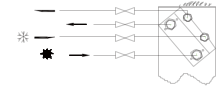
# Specification

Specification I - two pipes, three rows type



Model		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202	
Coil Length		mm	350	500	550	650	700	800	900	1000	1200	1500	
Air Flow	High	m <sup>3</sup> /h	298	428	619	671	813	988	1058	1480	1560	1983	2250
		CFM	175	252	364	395	478	581	622	871	918	1166	1324
	Med	m <sup>3</sup> /h	253	364	526	570	691	840	899	1258	1326	1686	1913
		CFM	149	214	309.5	335.5	406.5	494	529	740	780	991.5	1125
	Low	m <sup>3</sup> /h	194	278	402	436	528	642	688	962	1014	1298	1463
		CFM	114	164	237	257	311	378	405	566	596	758	860
Cooling Capacity	High	kW	1.44	2.06	2.98	3.5	4.02	4.5	5.31	6.87	7.46	8.61	10.61
	Med		1.18	1.69	2.44	2.87	3.30	3.69	4.35	5.63	6.12	7.06	8.70
	Low		0.91	1.31	1.89	2.22	2.55	2.86	3.37	4.36	4.74	5.47	6.74
Heating Capacity	High	kW	2.44	3.403	5.299	5.763	6.372	7.812	9.211	11.295	12.112	15.587	17.292
	Med		2.01	2.81	4.37	4.75	5.26	6.44	7.60	9.32	9.99	12.86	14.27
	Low		1.53	2.13	3.31	3.60	3.98	4.88	5.76	7.06	7.57	9.74	10.81
Water Flow		l/h	246	365	520	600	699	760	930	1230	1333	1500	1848
Water Press Drop		kPa	5.2	12.3	9.3	12.4	16.8	21.6	32.5	32.5	20.5	28	44.5
Sound Level	Max.	dB(A)	33	34	36	37	39	43	44	44	46	47	49
	Med.		27	28	28	29	33	37	38	39	41	42	45
	Min.		22	23	24	24	27	29	30	32	32	32	34
Dim	L	mm	758	908	958	1058	1108	1208	1308	1408	1608	1608	1908
	A		448	598	648	748	798	898	998	1098	1298	1298	1598
	B		472	622	672	772	822	922	1022	1122	1322	1322	1622
Motor		220V/50Hz/60Hz/1Ph											

Specification II - four pipes, four rows type



Model		VEF024	VEF034	VEF044	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204	
Coil Length		mm	350	500	550	650	700	800	900	1000	1200	1500	
Air Flow	High	m <sup>3</sup> /h	289	415	600	650	788	957	1025	1434	1512	1922	2180
		CFM	170	244	353	382	463	563	603	844	889	1130	1283
	Med	m <sup>3</sup> /h	245	353	510	553	670	814	871	1219	1285	1633	1853
		CFM	144	207	300	325	394	479	513	717	756	961	1090
	Low	m <sup>3</sup> /h	191	274	396	429	520	632	677	947	998	1268	1439
		CFM	112	161	233	252	306	372	398	557	587	746	846
Cooling Capacity	High	kW	1.38	1.98	2.86	3.36	3.86	4.32	5.10	6.60	7.16	8.27	10.19
	Med		1.15	1.64	2.37	2.79	3.20	3.59	4.23	5.47	5.94	6.86	8.45
	Low		0.90	1.29	1.86	2.18	2.51	2.81	3.31	4.29	4.66	5.37	6.62
Heating Capacity	High	kW	1.59	2.27	3.29	3.86	4.44	4.97	5.86	7.58	8.24	9.51	11.71
	Med		1.34	1.91	2.76	3.25	3.73	4.17	4.92	6.37	6.92	7.98	9.84
	Low		1.03	1.48	2.14	2.51	2.88	3.23	3.81	4.93	5.35	6.18	7.61
Cooling Water Flow		l/h	246	365	520	600	699	760	930	1230	1333	1500	1848
Heating Water Flow		l/h	125	176	229	296	316	371	451	525	601	750	984
Water Press Drop		kPa	5.20	12.3	9.3	12.4	16.8	21.6	32.5	32.5	20.5	28	44.5
Sound Level	Max.	dB(A)	33	34	36	37	39	43	44	44	46	47	49
	Med.		27	28	28	29	33	37	38	39	41	42	45
	Min.		22	23	24	24	27	29	30	32	32	32	34
Dim	L	mm	758	908	958	1058	1108	1208	1308	1408	1608	1608	1908
	A		448	598	648	748	798	898	998	1098	1298	1298	1598
	B		472	622	672	772	822	922	1022	1122	1322	1322	1622
Motor		220V/50Hz/60Hz/1Ph											
Input		W	35	41	53	69	94	103	117	156	187	201	210

# Specification

**Table 3- Air flow and cooling/heating capacities**

External Static Pressure		0 Pa	20 Pa	40 Pa	60 Pa	0 Pa	20 Pa	40 Pa	60 Pa	0 Pa	20 Pa	40 Pa	60 Pa
Model		VEF022-052		VEF024-054		VEF062-102		VEF064-104		VEF122-202		VEF124-204	
Total Cooling Capacity	Max	-	0.94	0.78	-	1	0.96	0.85	0.71	1	0.97	0.85	0.70
	Med	-	0.75	0.51	-	0.82	0.78	0.65	-	0.85	0.80	0.75	0.70
	Min	-	0.60	-	-	0.64	0.60	0.55	-	0.64	0.60	0.56	0.50
Sensible Cooling Capacity	Max	-	0.85	0.73	-	0.90	0.85	0.79	0.64	0.89	0.85	0.80	0.75
	Med	-	0.70	0.42	-	0.76	0.70	0.65	-	0.73	0.70	0.65	0.60
	Min	-	0.55	-	-	0.59	0.55	0.46	-	0.58	0.54	0.50	0.48
Heating Capacity	Max	-	0.93	0.74	-	1	0.95	0.86	0.66	1	0.97	0.92	0.83
	Med	-	0.75	0.60	-	0.83	0.79	0.73	-	0.83	0.79	0.74	0.68
	Min	-	0.58	0.54	-	0.63	0.58	0.49	-	0.63	0.60	0.55	0.45
Air Flow	Max	-	0.88	0.61	-	1	0.92	0.78	0.5	1	0.95	0.87	0.73
	Med	-	0.69	0.26	-	0.85	0.77	0.59	-	0.85	0.80	0.74	0.56
	Min	-	0.40	-	-	0.65	0.52	0.30	-	0.65	0.61	0.53	0.32

**Notes:**

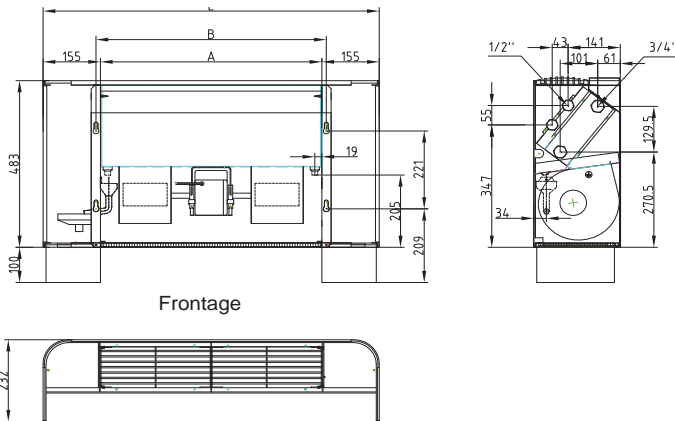
Cooling standard condition: Air inlet temperature D.B.  $t(d)=27^{\circ}\text{C}$ , W.B:  $t(w)=19.5^{\circ}\text{C}$ ; water inlet temperature's  $=7^{\circ}\text{C}$ , water outlet temperature:  $t=1^{\circ}\text{C}$ , water inlet and outler temperature difference:  $t=5^{\circ}\text{C}$ . Heating standard condition: Air inlet temperature D.B.  $t(d)=21^{\circ}\text{C}$ ; 1-Hot water input temperature:  $t=60$ ; water outlet temperature:  $t=50^{\circ}\text{C}$ , difference:  $t=10^{\circ}\text{C}$ ; 2- Hot water temperature:  $t=70^{\circ}\text{C}$ , the same water flow as 1. Noise figure is tested at where is 1m far away from each unit.

# Options

- 1- Water side copper ball filter
- 2- Indoor temperature controller (digital or mechanical)
- 3- Electric 2-way valve
- 4- Electric 3-way valve
- 5-Electrical Heater: 30% of cooling load
- 6-Static Pressure: 0 Pa,30 Pa

**The rule of juding unit's direction**

Standing in front of the unit, if the tubing on the left, it's left style, contrarily, it's right style.

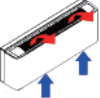

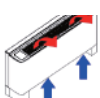


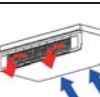


L: Unit length  
A: Coil length  
B: Hoisting length



# Dimension

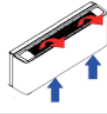

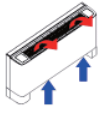
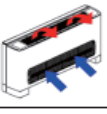
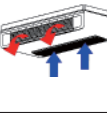
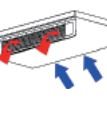
**Table 1- Suspended 2 pipes system**

VSLA	mm	VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L	756	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	483	483	483	483	483	483	483	483	483	483	483
	W	232	232	232	232	232	232	232	232	232	232	232
	kg	16	18	20	21	23	25	27	30	34	34	37
VSLB		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L	-	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	-	483	483	483	483	483	483	483	483	483	483
	W	-	247	247	247	247	247	247	247	247	247	247
	kg	-	18	20	21	23	25	27	30	34	34	37
VSLC		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L	756	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	583	583	583	583	583	583	583	583	583	583	583
	W	232	232	232	232	232	232	232	232	232	232	232
	kg	17	19	21	22	24	26	28	31	35	35	38
VSLD		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L	-	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	-	583	583	583	583	583	583	583	583	583	583
	W	-	247	247	247	247	247	247	247	247	247	247
	kg	-	19	21	22	24	26	28	31	35	35	38
HSLA		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L	-	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	-	247	247	247	247	247	247	247	247	247	247
	W	-	483	483	483	483	483	483	483	483	483	483
	kg	-	18	20	21	23	25	27	30	34	34	37
HSLB		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L	756	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	232	232	232	232	232	232	232	232	232	232	232
	W	483	483	483	483	483	483	483	483	483	483	483
	kg	16	18	20	21	23	25	27	30	34	34	37

- Introduction
- Feature
- Nomenclature
- Specification
- Option
- Dimension
- Wiring at site

## Dimension

**Table 2- Suspended 4 pipes system**

VSLA		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L	756	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	483	483	483	483	483	483	483	483	483	483	483
	W	232	232	232	232	232	232	232	232	232	232	232
	Kg	18	20	22	23	25	27	29	30	34	34	37
VSLB		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L	-	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	-	483	483	483	483	483	483	483	483	483	483
	W	-	247	247	247	247	247	247	247	247	247	247
	Kg	-	20	22	23	25	27	29	30	34	34	37
VSLC		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L	756	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	583	583	583	583	583	583	583	583	583	583	583
	W	232	232	232	232	232	232	232	232	232	232	232
	Kg	18	20	22	23	25	27	29	30	34	34	37
VSLD		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L	-	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	-	583	583	583	583	583	583	583	583	583	583
	W	-	247	247	247	247	247	247	247	247	247	247
	Kg	-	21	23	24	26	28	30	31	35	35	38
HSLA		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L	-	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	-	247	247	247	247	247	247	247	247	247	247
	W	-	483	483	483	483	483	483	483	483	483	483
	Kg	-	20	22	23	25	27	29	30	34	34	37
HSLB		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L	756	906	956	1056	1106	1206	1306	1406	1606	1606	1906
	H	232	232	232	232	232	232	232	232	232	232	232
	W	483	483	483	483	483	483	483	483	483	483	483
	Kg	18	20	22	23	25	27	29	30	34	34	37



# Dimension

Introduction

Feature

Nomenclature







Specification

Option

Dimension

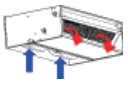

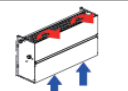
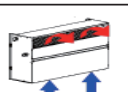


Wiring site

**Table 3- Concealed 2 pipes system**

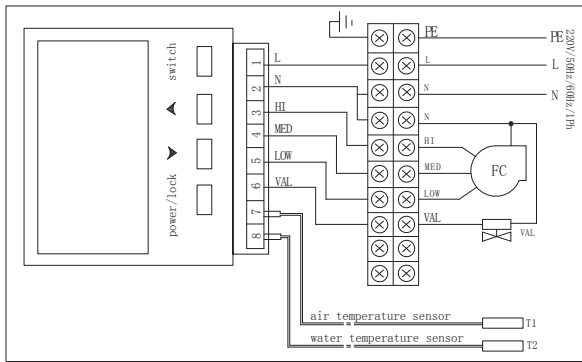
HCLA		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	247	247	247	247	247	247	247	247	247	247	247
	W	460	460	460	460	460	460	460	460	460	460	460
	Kg	15	16	18	19	20	22	24	28	34	34	37
HCLB		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	230	230	230	230	230	230	230	230	230	230	230
	W	460	460	460	460	460	460	460	460	460	460	460
	Kg	15	16	18	19	20	22	24	28	34	34	37
VCLA		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	230	230	230	230	230	230	230	230	230	230	230
	Kg	15	16	18	19	20	22	24	28	34	34	37
VCLB		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	230	230	230	230	230	230	230	230	230	230	230
	Kg	15	16	18	19	20	22	24	28	34	34	37
VCLC		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	247	247	247	247	247	247	247	247	247	247	247
	Kg	15	16	18	19	20	22	24	28	34	34	37
VCLD		VEF022	VEF032	VEF052	VEF062	VEF072	VEF082	VEF102	VEF122	VEF142	VEF162	VEF202
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	247	247	247	247	247	247	247	247	247	247	247
	Kg	15	16	18	19	20	22	24	28	34	34	37

## Dimension

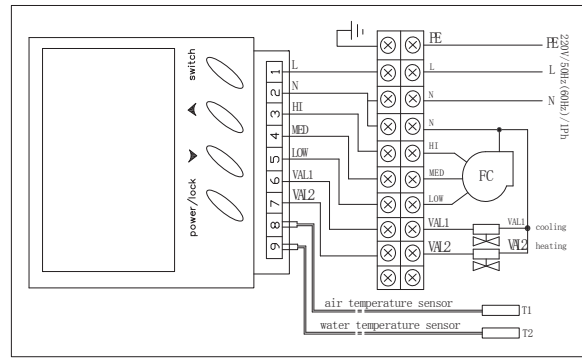
**Table 4- Concealed 4 pipes system**

HCLA		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	247	247	247	247	247	247	247	247	247	247	247
	W	460	460	460	460	460	460	460	460	460	460	460
	Kg	17	18	20	21	22	24	26	30	36	36	39
HCLB		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	230	230	230	230	230	230	230	230	230	230	230
	W	460	460	460	460	460	460	460	460	460	460	460
	Kg	17	18	20	21	22	24	26	30	36	36	39
VCLA		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	230	230	230	230	230	230	230	230	230	230	230
	Kg	17	18	20	21	22	24	26	30	36	36	39
VCLB		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	230	230	230	230	230	230	230	230	230	230	230
	Kg	17	18	20	21	22	24	26	30	36	36	39
VCLC		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	247	247	247	247	247	247	247	247	247	247	247
	Kg	17	18	20	21	22	24	26	30	36	36	39
VCLD		VEF024	VEF034	VEF054	VEF064	VEF074	VEF084	VEF104	VEF124	VEF144	VEF164	VEF204
	L1	498	648	698	798	848	948	1048	1148	1348	1348	1648
	H	460	460	460	460	460	460	460	460	460	460	460
	W	247	247	247	247	247	247	247	247	247	247	247
	Kg	17	18	20	21	22	24	26	30	36	36	39

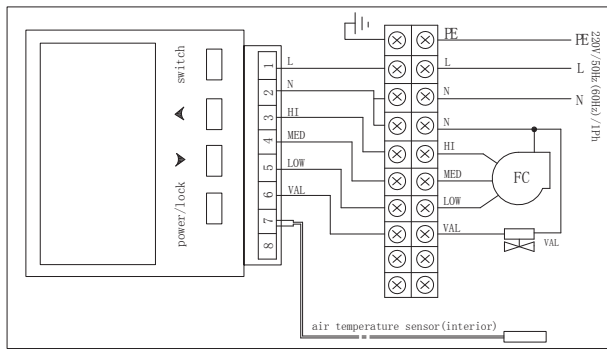
# Wiring at site



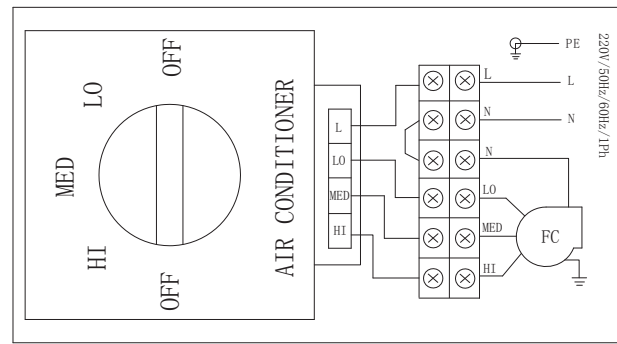
a



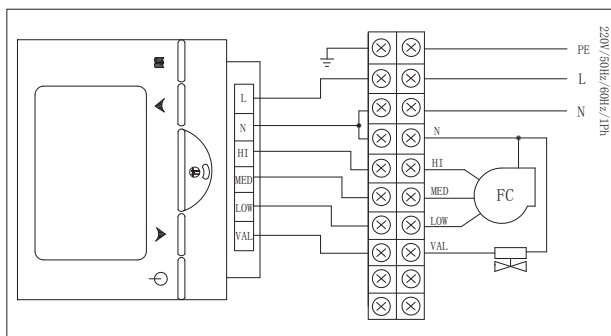
b



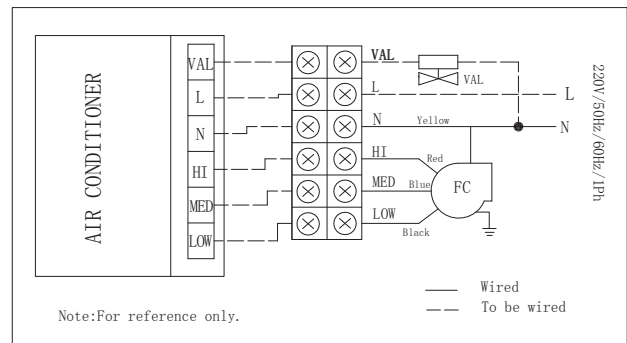
c



d



e



f

- a, b used for controller with air temperature sensor and water temperature sensor.
- c used for controller with interior air temperature sensor, with water temperature sensor.
- d used for controller with 3-speed function only.
- e used for controller with interior air temperature sensor, without water temperature sensor.
- f used for controller with 3-speed and temperature controlling functions.

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energy saving together.

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