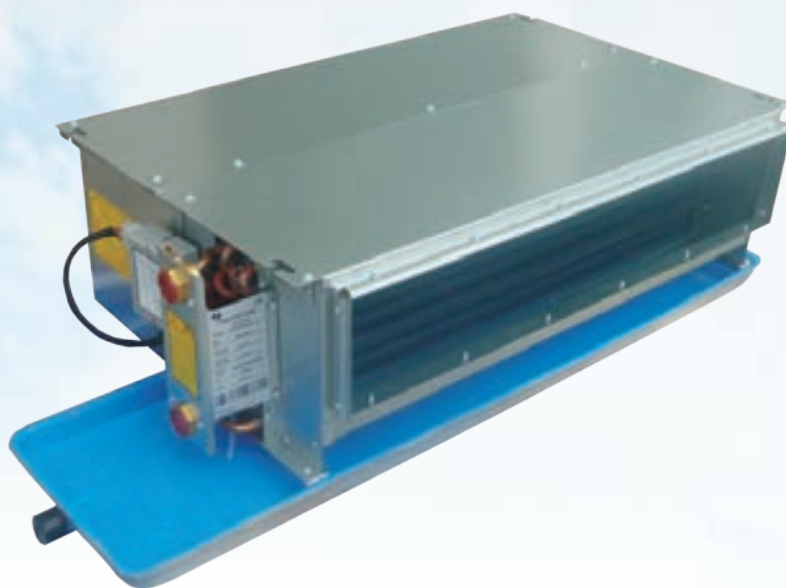


## PHCD-Series



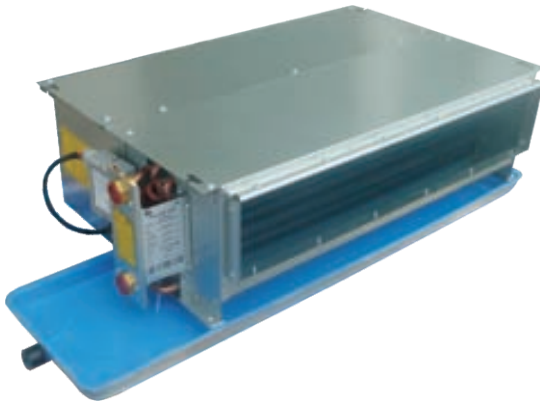
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# Low Static Ducted FCU

## Model: PHCD

### Introduction

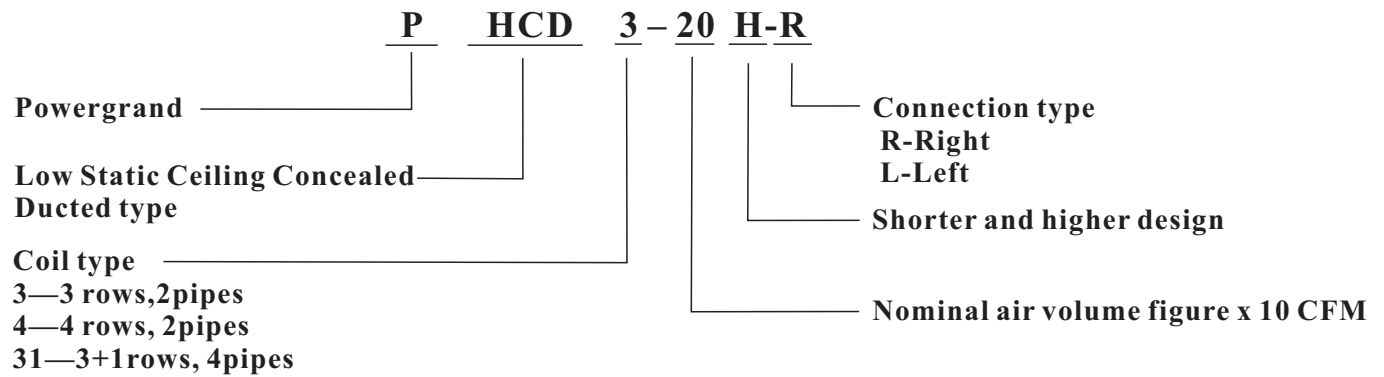


PHCD fan coil unit is designed for a fully concealed ceiling installation. The external static pressure(ESP) is up to 75Pa. Owing to its low static and low noise, this product is suitable for hotel, office building and other public building.

Unit is standard supplied with bottom air return plenum box and Nylon filter.

The unit casing is made of galvanized steel. Powder coating cabinet is for option.

### Nomenclature



### Design Features

#### Quiet Centrifugal fan

High efficiency fan with low noise, direct driven DIDW forward curved steel wheel.

#### High Efficiency Coil

Coil are constructed of 3/8”(9.52mm) O.D seamless copper tubes. Aluminum blue fins are mechanically bonded to copper tubes. All coils are tested by 300psi air pressure.

#### Whole Punched Drain Pan

The whole punched drain pan , no welding traces, is coated with an epoxy finish for easy cleaning to help prevent microbial growth and to fight corrosion. The drain pan is insulated with a form-fitted closed cell insulation to prevent condensation build-up on the outside of the drain pan.

#### Service-Friendly Manual Air Vent

Air vent hand valve is conveniently located over the drain pan and does not require any tools to vent the coil

#### Easy to installation and maintenance

Fan deck assembly is designed for easy take off and service.

# Low Static Ducted FCU

## Model: PHCD

### General Data

Spec			PHCD-20	PHCD-30	PHCD-40	PHCD-50	PHCD-60	PHCD-80	PHCD-100	PHCD-120	PHCD-140	PHCD-160	PHCD-180	PHCD-200
Nominal Air volume		CFM	200	300	400	500	600	800	1000	1200	1400	1600	1800	2000
Coil	Copper tube		3/8"(9.52mm)OD seamless copper tube											
	Fins		Hi-efficiency wavy corrugated aluminium blue fins											
	Fins per Inch	FPI	12	12	12	12	12	12	12	12	12	12	12	12
	Coil length	mm	490	590	690	790	920	1240	1440	1650	1750	1640	1800	1900
	Coil height	mm	200	200	200	200	200	200	200	200	200	250	250	250
Fan	Fan type		Double inlet centrifugal forward curve, steel wheel,direct driven											
	Qty	pcs	1	2	2	2	2	3	4	4	4	4	4	4
Motor	Voltage		220-240V/1Ph/50-60HZ,110-127V/1Ph/50HZ											
	Motor speed		4 speed											
	Qty	pcs	1	1	1	1	1	2	2	2	2	2	2	2
	Max power input	W	49	68	80	84	105	131	169	200	224	298	355	425
Noise level at 1.0m distance	H	dB(A)	36	37	39	43	44	44	46	48	52	49	50	52
	M	dB(A)	27	29	34	45	37	37	38	39	46	47	48	48
	L	dB(A)	24	25	29	30	33	33	34	35	37	38	39	41
Water pipe	Cooling coil		3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	1"FTP	1"FTP	1"FTP
	Heating coil (4 pipes unit)		3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP
Drain pipe			3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP
Package Dimension	L	mm	780	880	980	1080	1280	1580	1680	1980	2080	1980	2080	2140
	W	mm	527	527	527	527	527	527	527	527	527	587	587	587
	H	mm	265	265	265	265	265	265	265	265	265	315	315	315
Net Weight		kg	19	21	22	24	26	36	37	45	48	52	56	58

Spec			PHCD-80H	PHCD-100H	PHCD-120H	PHCD-140H	PHCD-160H	PHCD-180H	PHCD-200H
Nominal Air volume		CFM	800	1000	1200	1400	1600	1800	2000
Coil	Copper tube		3/8"(9.52mm)OD seamless copper tube						
	Fins		Hi-efficiency wavy corrugated aluminium blue fins						
	Fins per Inch	FPI	12	12	12	12	12	12	12
	Coil length	mm	830	940	940	1000	1160	1320	1430
	Coil height	mm	300	300	350	350	350	350	350
Fan	Fan type		Double inlet centrifugal forward curve, steel wheel,direct driven						
	Qty	pcs	2	2	2	2	2	2	2
Motor	Voltage		220-240V/1Ph/50-60HZ,110-127V/1Ph/50HZ						
	Motor speed		4 speed						
	Qty	pcs	1	1	1	1	1	1	1
	Max power input	W	126	158	196	218	290	349	416
Noise level at 1.0m distance	H	dB(A)	40	42	44	46	48	48	49
	M	dB(A)	34	36	41	42	43	43	45
	L	dB(A)	31	32	43	35	35	37	39
Water pipe	Cooling coil		3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	1"FTP	1"FTP	1"FTP
	Heating coil (4 pipes unit)		3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP	3/4"FTP
Drain pipe			3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP	3/4"MTP
Package Dimension	L	mm	1080	1280	1280	1280	1480	1580	1680
	W	mm	527	587	647	647	647	647	647
	H	mm	365	365	415	415	415	415	415
Net Weight		kg	36	37	45	48	52	56	58



# Low Static Ducted FCU

## Model: PHCD

### Performance Data

The performance data lists regular EU standard, ARI 440 standard and District Cooling. For more conditions, please refer to our selection software.

#### 1. Standard rating

The following rating conditions are used:

**Cooling:** Entering air temperature: +27°C DB; +19.5°C WB  
Water inlet/outlet: +7/12°C  
ESP: 50Pa

**Heating:** Entering air temperature: +20°C DB  
Water inlet temperature: +50°C  
Water flow rate as for the cooling conditions.  
ESP: 50Pa

#### 3rows, 2pipes

Model			PHCD3-20	PHCD3-30	PHCD3-40	PHCD3-50	PHCD3-60	PHCD3-80	PHCD3-100	PHCD3-120	PHCD3-140	PHCD3-160	PHCD3-180	PHCD3-200
Airflow	H	CFM	269	391	469	490	603	711	980	1088	1205	1390	1614	1874
	M		214	320	339	362	444	518	666	825	890	1123	1217	1297
	L		170	198	217	234	351	370	456	592	695	820	868	903
Total Cooling Capacity	H	KW	2.56	3.66	4.12	4.57	5.72	7.02	9.47	10.84	11.97	13.73	15.20	17.57
	M		2.18	3.18	3.29	3.69	4.59	5.59	7.17	8.87	9.61	11.78	12.44	13.52
	L		1.84	1.93	2.24	2.68	3.87	4.35	5.41	6.93	8.00	9.34	9.71	10.35
Sensible Cooling Capacity	H	KW	1.83	2.61	3.01	3.27	4.05	4.94	6.63	7.52	8.28	9.54	10.74	12.37
	M		1.54	2.24	2.35	2.60	3.20	3.87	4.94	6.08	6.57	8.10	8.67	9.36
	L		1.28	1.54	1.66	1.84	2.67	2.96	3.66	4.68	5.41	6.34	6.66	7.05
Heating Capacity	H	KW	2.94	4.12	4.82	5.23	6.41	7.87	10.44	11.82	12.97	14.98	16.95	19.42
	M		2.48	3.57	3.82	4.21	5.14	6.23	7.88	9.64	10.40	12.81	13.81	14.90
	L		2.10	2.51	2.71	3.01	4.29	4.81	5.91	7.50	8.63	10.14	10.72	11.33
Water Flow Rate	H	L/S	0.12	0.17	0.20	0.22	0.27	0.34	0.45	0.52	0.57	0.66	0.73	0.84
	M		0.10	0.15	0.16	0.18	0.22	0.27	0.34	0.42	0.46	0.56	0.59	0.65
	L		0.09	0.11	0.11	0.13	0.18	0.21	0.26	0.33	0.38	0.45	0.46	0.49
Water Pressure Drop	H	Kpa	10.21	19.71	10.51	13.81	21.58	19.59	33.67	46.13	55.66	46.61	27.43	36.11
	M		8.26	16.38	7.82	10.43	16.19	14.51	23.37	35.44	41.72	38.10	21.09	25.57
	L		6.62	10.35	5.13	6.85	12.93	10.44	16.13	25.61	32.78	28.10	15.24	18.00

Model			PHCD3-80H	PHCD3-100H	PHCD3-120H	PHCD3-140H	PHCD3-160H	PHCD3-180H	PHCD3-200H
Air flow	H	CFM	679	950	1044	1181	1350	1567	1831
	M		505	649	780	854	1074	1152	1216
	L		366	446	539	671	794	878	897
Total Cooling Capacity	H	KW	6.81	9.17	10.52	11.79	13.39	14.92	17.30
	M		5.49	6.97	8.51	9.32	11.35	11.98	12.90
	L		4.32	5.27	6.44	7.79	9.08	9.81	10.30
Sensible Cooling Capacity	H	KW	4.78	6.43	7.28	8.16	9.30	10.52	12.16
	M		3.79	4.80	5.82	6.36	7.80	8.32	8.90
	L		2.94	3.57	4.34	5.26	6.16	6.73	7.01
Heating Capacity	H	KW	7.63	10.15	11.45	12.77	14.60	16.61	19.12
	M		6.11	7.67	9.26	10.07	12.36	13.29	14.21
	L		4.78	5.76	6.97	8.40	9.85	10.84	11.28
Water Flow Rate	H	L/S	0.33	0.44	0.50	0.56	0.64	0.71	0.83
	M		0.26	0.33	0.41	0.44	0.54	0.57	0.62
	L		0.21	0.25	0.31	0.37	0.43	0.47	0.49
Water Pressure Drop	H	Kpa	18.9	31.63	44.17	54.62	44.65	26.89	35.39
	M		14.24	22.06	33.42	40.08	35.96	20.16	24.08
	L		10.39	15.26	23.19	31.66	26.82	15.50	17.91

#### 4rows, 2pipes

Model			PHCD4-20	PHCD4-30	PHCD4-40	PHCD4-50	PHCD4-60	PHCD4-80	PHCD4-100	PHCD4-120	PHCD4-140	PHCD4-160	PHCD4-180	PHCD4-200
Airflow	H	CFM	253	370	441	466	569	677	932	1037	1147	1319	1539	1788
	M		205	308	326	349	426	498	639	800	865	1098	1176	1254
	L		163	191	209	222	336	355	434	572	671	801	836	869
Total Cooling Capacity	H	KW	3.17	4.53	5.17	5.70	7.02	8.64	11.59	13.17	14.50	16.65	18.76	21.62
	M		2.71	3.95	4.14	4.60	5.65	6.82	8.71	10.81	11.70	14.49	15.35	16.59
	L		2.26	2.30	2.72	3.22	4.70	5.20	6.38	8.30	9.57	11.33	11.78	12.45
Sensible Cooling Capacity	H	KW	2.14	3.06	3.55	3.86	4.74	5.78	7.78	8.78	9.67	11.12	12.67	14.59
	M		1.81	2.64	2.79	3.07	3.75	4.50	5.74	7.13	7.71	9.59	10.22	11.00
	L		1.49	1.78	1.93	2.10	3.09	3.38	4.14	5.39	6.23	7.40	7.72	8.12
Heating Capacity	H	KW	3.32	4.71	5.49	5.96	7.27	8.90	11.85	13.36	14.66	16.89	19.34	22.18
	M		2.82	4.08	4.36	4.77	5.80	6.99	8.85	10.92	11.79	14.65	15.73	16.89
	L		2.34	2.77	33.05	3.29	4.79	5.28	6.43	8.33	9.60	11.40	11.98	12.58
Water Flow Rate	H	L/S	0.15	0.22	0.25	0.27	0.34	0.41	0.55	0.63	0.69	0.79	0.90	1.03
	M		0.13	0.19	0.20	0.22	0.27	0.33	0.42	0.52	0.56	0.69	0.73	0.79
	L		0.11	0.13	0.14	0.15	0.22	0.25	0.30	0.40	0.46	0.54	0.56	0.59
Water Pressure Drop	H	Kpa	17.65	32.52	18.29	23.54	35.16	32.29	53.28	71.13	84.61	71.67	44.32	57.05
	M		14.60	27.57	14.03	18.20	27.10	24.37	37.85	56.19	65.52	60.70	34.87	41.57
	L		11.78	17.67	9.32	11.91	21.77	17.62	26.13	40.94	51.53	45.25	25.41	29.49

# Low Static Ducted FCU

## Model: PHCD

### Performance Data

The following rating conditions are used:

**Cooling:** Entering air temperature: +27°C DB; +19.5°C WB  
Water inlet/outlet: +7/12°C  
ESP: 50Pa

**Heating:** Entering air temperature: +20°C DB  
Water inlet temperature: +50°C  
Water flow rate as for the cooling conditions.  
ESP: 50Pa

#### 4rows, 2pipes

Model			PHCD4-80H	PHCD4-100H	PHCD4-120H	PHCD4-140H	PHCD4-160H	PHCD4-180H	PHCD4-200H
Airflow	H	CFM	648	906	994	1128	1282	1501	1745
	M		489	624	827	830	1051	1116	1171
	L		351	426	512	651	776	846	861
Total Cooling Capacity	H	KW	8.36	11.25	12.75	14.31	16.24	18.45	21.25
	M		6.73	8.49	11.08	11.33	13.97	14.77	15.75
	L		5.16	6.27	7.57	9.35	11.02	11.90	12.36
Sensible Cooling Capacity	H	KW	5.58	7.56	8.49	9.54	10.84	12.46	14.32
	M		4.44	5.60	7.32	7.45	9.24	9.81	10.41
	L		3.35	4.06	4.90	6.08	7.19	7.80	8.05
Heating Capacity	H	KW	8.60	11.54	12.93	14.46	16.50	18.99	21.77
	M		6.88	8.62	11.20	11.40	14.14	15.12	16.01
	L		5.24	6.32	7.59	9.38	11.10	12.10	12.49
Water Flow Rate	H	L/S	0.40	0.50	0.61	0.68	0.78	0.88	1.01
	M		0.32	0.40	0.53	0.54	0.67	0.71	0.75
	L		0.25	0.30	0.36	0.45	0.53	0.57	0.59
Water Pressure Drop	H	Kpa	31.18	50.36	68.23	83.30	68.88	43.62	55.92
	M		24.07	35.94	57.69	63.04	57.55	33.44	39.10
	L		17.53	25.02	36.59	50.11	43.34	25.83	29.27

The following rating conditions are used:

**Cooling:** Entering air temperature: +27°C DB; +19.5°C WB  
Water inlet/outlet: +7/12°C  
ESP: 50Pa

**Heating:** Entering air temperature: +20°C DB  
Water inlet/outlet: +70°C/60°C  
ESP: 50Pa

#### 3+1rows, 4pipes

Model			PHCD31-20	PHCD31-30	PHCD31-40	PHCD31-50	PHCD31-60	PHCD31-80	PHCD31-100	PHCD31-120	PHCD31-140	PHCD31-160	PHCD31-180	PHCD31-200
Airflow	H	CFM	253	370	441	466	569	677	933	1037	1148	1320	1540	1789
	M		205	308	326	349	426	498	640	801	866	1098	1177	1255
	L		155	163	191	223	337	355	434	573	671	801	837	870
Total Cooling Capacity	H	KW	2.45	3.53	3.94	4.41	5.49	6.79	9.14	10.48	11.56	13.23	14.70	17.01
	M		2.12	3.12	3.22	3.62	4.49	5.46	7.00	8.73	9.47	11.66	12.22	13.28
	L		1.79	1.85	2.18	2.58	3.75	4.21	5.20	6.76	7.78	9.18	9.45	10.06
Sensible Cooling Capacity	H	KW	1.75	2.50	2.87	3.15	3.88	4.76	6.39	7.25	7.98	9.17	10.37	11.95
	M		1.42	2.07	2.17	2.40	2.95	3.56	4.55	5.65	6.12	7.59	8.04	8.68
	L		1.24	1.27	1.49	1.77	2.58	2.86	3.51	4.56	5.26	6.22	6.47	6.84
Heating Capacity	H	KW	2.08	2.95	3.28	3.70	4.59	5.74	7.61	8.76	9.62	11.03	12.20	14.02
	M		1.80	2.59	2.70	3.06	3.78	4.66	5.93	7.33	7.94	9.69	10.19	11.10
	L		1.59	1.72	1.95	2.34	3.31	3.82	4.71	6.03	6.87	8.07	8.36	8.95
Cooling Water Flow Rate	H	L/S	0.12	0.17	0.19	0.21	0.26	0.32	0.44	0.50	0.55	0.63	0.70	0.81
	M		0.10	0.15	0.15	0.17	0.21	0.26	0.33	0.42	0.45	0.56	0.58	0.63
	L		0.09	0.09	0.10	0.12	0.18	0.20	0.25	0.32	0.37	0.44	0.45	0.48
Cooling Water Pressure Drop	H	Kpa	9.66	18.77	9.93	13.19	20.46	18.73	32.17	44.08	53.19	44.43	26.28	34.58
	M		8.00	15.94	7.61	10.17	15.71	14.06	22.64	34.70	40.94	37.62	20.61	24.98
	L		3.68	6.37	9.96	6.53	12.42	10.01	15.33	24.77	31.63	27.46	14.70	17.34
Heating Water Flow Rate	H	L/S	0.05	0.07	0.08	0.09	0.11	0.14	0.18	0.21	0.23	0.26	0.29	0.33
	M		0.04	0.06	0.06	0.07	0.09	0.11	0.14	0.18	0.19	0.23	0.24	0.26
	L		0.04	0.04	0.05	0.06	0.08	0.09	0.11	0.14	0.16	0.19	0.20	0.21
Heating Water Pressure Drop	H	Kpa	1.99	3.85	3.00	4.05	6.32	7.81	6.67	9.25	11.15	11.62	9.44	12.41
	M		1.63	3.23	2.29	3.11	4.84	5.87	4.73	7.26	8.59	9.73	7.38	9.01
	L		1.23	1.37	2.19	2.16	4.05	4.48	3.45	5.55	7.04	7.58	5.63	6.72

Model			PHCD31-80H	PHCD31-100H	PHCD31-120H	PHCD31-140H	PHCD31-160H	PHCD31-180H	PHCD31-200H
Airflow	H	CFM	648	906	995	1128	1283	1502	1746
	M		489	625	827	831	1052	1117	1172
	L		351	427	513	652	777	847	861
Total Cooling Capacity	H	KW	6.58	8.87	10.16	11.41	12.91	14.48	16.72
	M		5.39	6.82	8.94	9.18	11.25	11.79	12.63
	L		4.19	5.10	6.20	7.61	8.93	9.55	9.99
Sensible Cooling Capacity	H	KW	4.60	6.21	7.02	7.88	8.95	10.19	11.73
	M		3.51	4.43	5.80	5.92	7.31	7.73	8.23
	L		2.84	3.45	4.17	5.14	6.05	6.54	6.79
Heating Capacity	H	KW	5.60	7.39	8.52	9.52	10.78	12.04	13.82
	M		4.62	5.77	7.48	7.74	9.38	9.88	10.64
	L		3.81	4.61	5.60	6.74	7.87	8.44	8.90
Cooling Water Flow Rate	H	L/S	0.31	0.42	0.48	0.54	0.62	0.69	0.80
	M		0.26	0.33	0.43	0.44	0.54	0.56	0.60
	L		0.20	0.24	0.30	0.36	0.43	0.46	0.48
Cooling Water Pressure Drop	H	Kpa	18.06	30.26	42.19	52.33	42.57	25.85	33.84
	M		13.90	21.41	35.66	39.30	35.54	19.74	23.42
	L		9.97	14.62	22.07	30.72	26.22	14.97	17.21
Heating Water Flow Rate	H	L/S	0.13	0.18	0.20	0.23	0.26	0.29	0.33
	M		0.11	0.14	0.18	0.18	0.22	0.24	0.25
	L		0.09	0.11	0.13	0.16	0.19	0.20	0.21
Heating Water Pressure Drop	H	Kpa	3.79	6.27	8.88	11.00	11.15	9.32	12.18
	M		2.91	4.47	7.43	8.28	9.22	7.11	8.51
	L		2.23	3.29	5.01	6.86	7.25	5.72	6.67



# Low Static Ducted FCU

## Model: PHCD

### Performance Data

#### 2. ARI-440 Standard rating

The following rating conditions are used:

**Cooling:** Entering air temperature: +80°F DB; +67°F WB  
Water inlet/outlet: +45/55°F  
ESP: 0. 2inH<sub>2</sub>O

**Heating:** Entering air temperature: +68°F DB  
Water inlet temperature: +140°F  
Water flow rate as for the cooling conditions.  
ESP: 0. 2inH<sub>2</sub>O

#### 3rows, 2pipes

Model			PHCD3-20	PHCD3-30	PHCD3-40	PHCD3-50	PHCD3-60	PHCD3-80	PHCD3-100	PHCD3-120	PHCD3-140	PHCD3-160	PHCD3-180	PHCD3-200
Air flow	H	CFM	269	391	469	490	603	711	980	1088	1205	1390	1614	1874
	M		214	320	339	362	444	518	666	825	890	1123	1217	1297
	L		170	198	217	234	351	370	456	592	695	820	868	903
Total Cooling Capacity	H	Btu/h	8055	11570	12867	14403	18089	22253	30103	34608	38226	43789	48157	55768
	M		6860	10068	10341	11672	14608	17782	22901	28396	30785	37645	39557	43106
	L		5836	6109	7167	8533	12321	13925	17338	22253	25700	29966	31024	33140
Sensible Cooling Capacity	H	Btu/h	5904	8430	9693	10546	13106	15973	21502	24403	26894	30956	34744	40069
	M		4983	7236	7577	8396	10376	12526	16007	19761	21365	26314	28089	30342
	L		4164	4983	5358	5973	8635	9625	11911	15256	17611	20615	21604	22901
Heating Capacity	H	Btu/h	13004	18396	21126	23106	28533	34915	46485	52697	57953	66827	75291	86451
	M		11126	15939	16826	18669	22935	27816	35188	43106	46485	57270	61502	66451
	L		9215	11126	12184	13447	19249	21536	26417	33550	38703	45325	47850	50649
Water Flow Rate	H	Gpm	1.59	2.38	2.54	2.85	3.65	4.44	6.02	6.97	7.77	8.88	9.67	11.25
	M		1.43	2.06	2.06	2.38	3.01	3.65	4.60	5.71	6.18	7.61	7.93	8.72
	L		1.11	1.43	1.59	1.74	2.54	2.85	3.49	4.44	5.23	6.02	6.18	6.66
Water Pressure Drop	H	ftH <sub>2</sub> O	2.71	5.26	2.77	3.67	5.77	5.25	9.05	12.46	15.06	12.59	7.34	9.68
	M		2.20	4.39	2.07	2.78	4.35	3.91	6.32	9.61	11.33	10.32	5.67	6.90
	L		1.77	2.80	1.37	1.84	3.49	2.83	4.39	6.98	8.93	7.64	4.12	4.88

Model			PHCD3-80H	PHCD3-100H	PHCD3-120H	PHCD3-140H	PHCD3-160H	PHCD3-180H	PHCD3-200H
Air flow	H	CFM	679	950	1044	1181	1350	1567	1831
	M		505	649	780	854	1074	1152	1216
	L		366	446	539	671	794	878	897
Total Cooling Capacity	H	Btu/h	21604	29147	33550	37680	42697	47304	54915
	M		17509	22253	27236	29864	36280	38123	41161
	L		13823	16894	20717	25017	29147	31331	32970
Sensible Cooling Capacity	H	Btu/h	15461	20819	23618	26485	30171	34028	39386
	M		12287	15597	18908	20683	25359	26963	28874
	L		9556	11604	14130	17133	20034	21843	22765
Heating Capacity	H	Btu/h	33823	45154	51161	57099	65120	73891	85086
	M		27202	34232	41400	45086	55222	59147	63311
	L		21400	25700	31161	37645	44096	48396	50444
Water Flow Rate	H	Gpm	4.28	5.86	6.82	7.61	8.56	9.51	11.10
	M		3.49	4.44	5.55	6.02	7.29	7.61	8.24
	L		2.85	3.33	4.12	5.07	5.86	6.34	6.66
Water Pressure Drop	H	ftH <sub>2</sub> O	5.07	8.49	11.94	14.78	12.06	7.21	9.83
	M		3.84	5.96	9.07	10.89	9.74	5.43	6.50
	L		2.82	4.15	6.33	8.63	7.30	4.19	4.86

#### 4rows, 2pipes

Model			PHCD4-20	PHCD4-30	PHCD4-40	PHCD4-50	PHCD4-60	PHCD4-80	PHCD4-100	PHCD4-120	PHCD4-140	PHCD4-160	PHCD4-180	PHCD4-200
Air flow	H	CFM	253	370	441	466	569	677	932	1037	1147	1319	1539	1788
	M		205	308	326	349	426	498	639	800	865	1098	1176	1254
	L		163	191	209	222	336	355	434	572	671	801	836	869
Total Cooling Capacity	H	Btu/h	10171	14574	16519	18294	22594	27850	37406	42594	46929	53823	60410	69659
	M		8703	12730	13277	14812	18225	22082	28226	35086	37987	46963	49591	53686
	L		7304	7474	8806	10444	15222	16928	20785	27031	31161	36860	38226	40478
Sensible Cooling Capacity	H	Btu/h	6963	9966	11502	12560	15427	18874	25393	28703	31604	36314	41263	47577
	M		5870	8601	9079	10000	12253	14710	18772	23311	25222	31365	33345	35939
	L		4881	5802	6314	6860	10102	11058	13550	17679	20444	24232	25222	26587
Heating Capacity	H	Btu/h	14881	21092	24505	26656	32560	39864	53243	59966	65905	75837	86690	99489
	M		12628	18260	19522	21400	26007	31365	39761	49147	52970	65905	70615	75871
	L		10478	12457	13686	14812	21536	23823	28942	37475	43277	51366	53925	56622
Water Flow Rate	H	Gpm	2.06	3.01	3.33	3.65	4.60	5.55	7.61	8.56	9.51	10.78	12.20	14.11
	M		1.74	2.54	2.69	3.01	3.65	4.44	5.71	7.13	7.61	9.51	9.99	10.78
	L		1.43	1.74	1.90	2.06	3.01	3.49	4.12	5.39	6.34	7.45	7.77	8.08
Water Pressure Drop	H	ftH <sub>2</sub> O	4.90	9.03	5.04	6.53	9.78	9.00	14.87	19.91	23.70	20.05	12.33	15.90
	M		4.06	7.69	3.89	5.07	7.57	6.83	10.62	15.79	18.41	17.03	9.75	11.64
	L		3.29	4.97	2.61	3.35	6.11	4.96	7.38	11.56	14.54	12.75	7.14	8.31

# Low Static Ducted FCU

## Model: PHCD

### Performance Data

The following rating conditions are used:

**Cooling:** Entering air temperature: +80°F DB; +67°F WB  
Water inlet/outlet: +45/55°F  
ESP: 0. 2inH<sub>2</sub>O

**Heating:** Entering air temperature: +68°F DB  
Water inlet temperature: +140°F  
Water flow rate as for the cooling conditions.  
ESP: 0. 2inH<sub>2</sub>O

#### 4rows, 2pipes

Model			PHCD4-80H	PHCD4-100H	PHCD4-120H	PHCD4-140H	PHCD4-160H	PHCD4-180H	PHCD4-200H
Air flow	H	CFM	648	906	994	1128	1282	1501	1745
	M		489	624	827	830	1051	1116	1171
	L		351	426	512	651	776	846	861
Total Cooling Capacity	H	Btu/h	26963	36280	41263	46314	52526	59420	68465
	M		21809	27509	35939	36792	45291	47748	50990
	L		16792	20410	24710	30478	35871	38635	40171
Sensible Cooling Capacity	H	Btu/h	18225	24642	27748	31161	35393	40512	46690
	M		14505	18294	23925	24369	30205	32014	33993
	L		10956	13311	16075	19932	23550	25495	26348
Heating Capacity	H	Btu/h	38567	51707	58021	65018	74062	85188	97646
	M		30956	38806	50376	51332	63584	67919	72014
	L		23550	28464	34164	42253	49966	54437	56212
Water Flow Rate	H	Gpm	5.39	7.29	8.24	9.35	10.62	12.05	13.79
	M		4.44	5.55	7.29	7.45	9.19	9.67	10.30
	L		3.33	4.12	4.91	6.18	7.29	7.77	8.08
Water Pressure Drop	H	ftH <sub>2</sub> O	8.70	14.05	19.11	23.34	19.28	12.14	15.59
	M		6.75	10.08	16.20	17.74	16.15	9.36	10.96
	L		4.94	7.06	10.35	14.14	12.22	7.26	8.25

The following rating conditions are used:

**Cooling:** Entering air temperature: +80°F DB; +67°F WB  
Water inlet/outlet: +45/55°F  
ESP: 0. 2inH<sub>2</sub>O

**Heating:** Entering air temperature: +68°F DB  
Water inlet/outlet: +180°F / +140°F  
ESP: 0. 2inH<sub>2</sub>O

#### 3+1rows, 4pipes

Model			PHCD31-20	PHCD31-30	PHCD31-40	PHCD31-50	PHCD31-60	PHCD31-80	PHCD31-100	PHCD31-120	PHCD31-140	PHCD31-160	PHCD31-180	PHCD31-200
Air flow	H	CFM	253	370	441	466	569	677	933	1037	1148	1320	1540	1789
	M		205	308	326	349	426	498	640	801	866	1098	1177	1255
	L		155	163	191	223	337	355	434	573	671	801	837	870
Total Cooling Capacity	H	Btu/h	7713	11161	12355	13925	17372	21536	29079	33447	36929	42219	46622	54028
	M		6655	9795	10068	11399	14198	17304	22219	27782	30171	37031	38601	42082
	L		5666	5904	6963	8225	11980	13481	16690	21707	25017	29454	30205	32253
Sensible Cooling Capacity	H	Btu/h	5631	8089	9249	10171	12526	15393	20717	23516	25905	29761	33550	38703
	M		4812	7031	7372	8157	10068	12150	15529	19283	20888	25871	27372	29557
	L		4027	4096	4846	5734	8362	9283	11434	14847	17099	20239	20990	22219
Heating Capacity	H	Btu/h	6212	9079	9522	11161	14232	17952	24301	28567	31570	35905	38260	44540
	M		5495	8157	8055	9488	12048	15017	19454	24505	26724	32219	32765	36212
	L		4812	5222	6143	7270	10478	12253	15393	20000	22901	26656	26792	29113
Cooling Water Flow Rate	H	Gpm	1.59	2.22	2.54	2.85	3.49	4.28	5.86	6.82	7.45	8.56	9.35	10.94
	M		1.27	1.90	2.06	2.22	2.85	3.49	4.44	5.55	6.02	7.45	7.77	8.40
	L		1.11	1.11	1.43	1.59	2.38	2.69	3.33	4.44	5.07	5.86	6.02	6.50
Cooling Water Pressure Drop	H	ftH <sub>2</sub> O	2.57	5.01	2.62	3.51	4.47	5.02	8.66	11.92	14.39	12.01	7.04	9.29
	M		2.12	4.23	2.00	2.70	4.19	3.77	6.08	9.34	11.04	10.11	5.50	6.69
	L		1.71	0.99	2.69	1.76	3.35	2.72	4.17	6.76	8.63	7.47	3.98	4.71
Heating Water Flow Rate	H	Gpm	0.32	0.48	0.48	0.63	0.63	0.95	1.27	1.43	1.59	1.74	1.90	2.22
	M		0.32	0.48	0.48	0.48	0.63	0.79	0.95	1.27	1.27	1.59	1.59	1.74
	L		0.32	0.32	0.32	0.32	0.48	0.63	0.79	0.95	1.11	1.27	1.27	1.43
Heating Water Pressure Drop	H	ftH <sub>2</sub> O	0.18	0.37	0.27	0.38	0.62	0.78	0.68	0.98	1.19	1.22	0.94	1.26
	M		0.16	0.32	0.21	0.31	0.50	0.61	0.51	0.79	0.95	1.05	0.76	0.95
	L		0.13	0.12	0.22	0.21	0.41	0.46	0.37	0.60	0.77	0.82	0.58	0.71

Model			PHCD31-80H	PHCD31-100H	PHCD31-120H	PHCD31-140H	PHCD31-160H	PHCD31-180H	PHCD31-200H
Air flow	H	CFM	648	906	995	1128	1283	1502	1746
	M		489	625	827	831	1052	1117	1172
	L		351	427	513	652	777	847	861
Total Cooling Capacity	H	Btu/h	20922	28191	32424	36485	41195	45905	53106
	M		17099	21638	28430	29284	35768	37270	40069
	L		13413	16348	19966	24471	28669	30512	32014
Sensible Cooling Capacity	H	Btu/h	14915	20103	22765	25563	29011	32970	37987
	M		11980	15120	19761	20239	24949	26314	28055
	L		9215	11195	13550	16724	19693	21229	22048
Heating Capacity	H	Btu/h	17543	23516	27782	31263	35086	37850	43925
	M		14881	18908	24915	26041	31195	31877	34813
	L		12219	15017	18635	22492	26007	27065	28976
Cooling Water Flow Rate	H	Gpm	4.28	5.71	6.50	7.29	8.24	9.19	10.78
	M		3.49	4.44	5.71	5.86	7.13	7.45	8.08
	L		2.69	3.33	3.96	4.91	5.71	6.18	6.50
Cooling Water Pressure Drop	H	ftH <sub>2</sub> O	4.85	8.14	11.41	14.17	11.51	6.93	9.09
	M		3.72	5.75	9.59	10.61	9.55	5.27	6.28
	L		2.71	3.98	6.03	8.39	7.14	4.05	4.67
Heating Water Flow Rate	H	Gpm	0.95	1.11	1.43	1.59	1.74	1.90	2.22
	M		0.79	0.95	1.27	1.59	1.59	1.74	1.74
	L		0.63	0.79	0.95	1.11	1.27	1.43	1.43
Heating Water Pressure Drop	H	ftH <sub>2</sub> O	0.38	0.64	0.94	1.17	1.17	0.93	1.24
	M		0.30	0.47	0.81	0.91	1.00	0.74	0.90
	L		0.23	0.35	0.54	0.75	0.78	0.59	0.70

# Low Static Ducted FCU

## Model: PHCD

### Performance Data

#### 3. District Cooling Standard rating

The following rating conditions are used:

Cooling: Entering air temperature: +24.4°CDB; +17.2°C WB

Water inlet/outlet: +5.5/14.4°C

ESP: 50Pa

#### 4rows, 2pipes

Model			PHCD4-20	PHCD4-30	PHCD4-40	PHCD4-50	PHCD4-60	PHCD4-80	PHCD4-100	PHCD4-120	PHCD4-140	PHCD4-160	PHCD4-180	PHCD4-200
Airflow	H	CFM	253	370	441	466	569	677	932	1037	1147	1319	1539	1788
	M		205	308	326	349	426	498	639	800	865	1098	1176	1254
	L		163	191	209	222	336	355	434	572	671	801	836	869
Total Cooling Capacity	H	KW	2.03	2.95	3.18	3.66	4.62	5.76	7.80	9.07	10.02	11.43	12.41	14.42
	M		1.77	2.62	2.64	3.04	3.82	4.68	6.06	7.60	8.27	10.09	10.40	11.40
	L		1.52	1.89	1.97	2.23	3.25	3.69	4.60	6.00	6.91	8.11	8.24	8.84
Sensible Cooling Capacity	H	KW	1.73	2.49	2.82	3.12	3.86	4.74	6.41	7.31	8.06	9.24	10.36	11.77
	M		1.46	2.16	2.24	2.50	3.09	3.72	4.78	5.97	6.48	8.01	8.43	9.13
	L		1.22	1.48	1.58	1.74	2.56	2.83	3.50	4.57	5.28	6.24	6.44	6.82
Water Flow Rate	H	L/S	0.05	0.08	0.09	0.10	0.12	0.15	0.21	0.24	0.27	0.31	0.33	0.39
	M		0.05	0.07	0.07	0.08	0.10	0.13	0.16	0.20	0.22	0.27	0.28	0.31
	L		0.04	0.05	0.05	0.06	0.09	0.10	0.12	0.16	0.19	0.22	0.22	0.24
Water Pressure Drop	H	Kpa	5.20	9.80	5.15	6.95	10.71	9.99	16.67	22.85	27.33	22.95	13.57	17.65
	M		4.42	8.49	4.11	5.56	8.52	7.80	12.31	18.52	21.73	19.78	10.99	13.33
	L		3.67	5.75	2.89	3.85	7.03	5.87	8.86	13.95	17.52	15.22	8.32	9.84

Model			PHCD4-80H	PHCD4-100H	PHCD4-120H	PHCD4-140H	PHCD4-160H	PHCD4-180H	PHCD4-200H
Airflow	H	CFM	647	906	994	1128	1282	1501	1745
	M		489	624	827	830	1051	1116	1171
	L		351	426	512	651	776	846	861
Total Cooling Capacity	H	KW	5.61	7.56	8.80	9.91	11.15	12.25	14.20
	M		4.64	5.89	7.76	8.04	9.75	10.07	10.89
	L		3.67	4.50	5.52	6.77	7.89	8.32	8.79
Sensible Cooling Capacity	H	KW	4.59	6.22	7.07	7.96	9.01	10.19	11.77
	M		3.68	4.66	6.12	6.27	7.72	8.10	8.66
	L		2.81	3.43	4.17	5.16	6.07	6.51	6.77
Water Flow Rate	H	L/S	0.15	0.20	0.24	0.27	0.30	0.33	0.38
	M		0.12	0.16	0.21	0.22	0.26	0.27	0.29
	L		0.10	0.12	0.15	0.18	0.21	0.22	0.24
Water Pressure Drop	H	Kpa	9.71	15.71	21.99	26.95	22.07	13.42	17.35
	M		7.74	11.66	18.93	20.99	18.79	10.62	12.63
	L		5.85	8.45	12.60	17.08	14.59	8.46	9.77

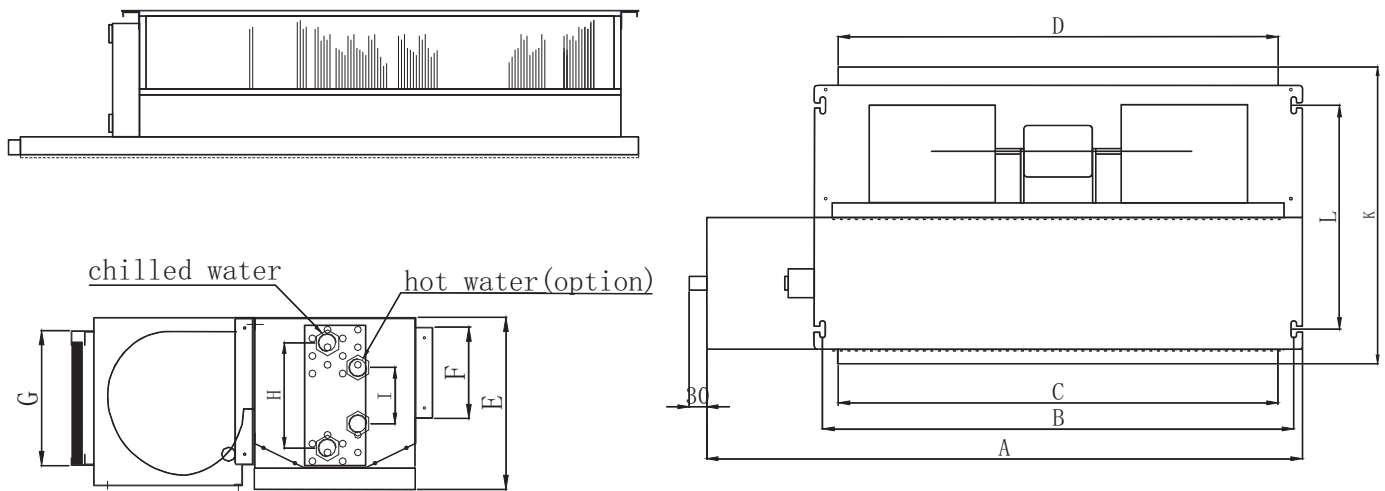
### Dimensional Data

Model	A	B	C	D	E	F	G	H	K	L
PHCD-20	740	522	470	470	245	130	192	150	517	390
PHCD-30	840	622	570	570	245	130	192	150	517	390
PHCD-40	940	722	670	670	245	130	192	150	517	390
PHCD-50	1040	822	770	770	245	130	192	150	517	390
PHCD-60	1240	952	900	900	245	130	192	150	517	390
PHCD-80	1540	1272	1220	1220	245	130	192	150	517	390
PHCD-100	1640	1472	1420	1420	245	130	192	150	517	390
PHCD-120	1940	1682	1630	1630	245	130	192	150	517	390
PHCD-140	2040	1782	1730	1730	245	130	192	150	517	390
PHCD-160	1940	1672	1620	1620	295	180	242	200	577	390
PHCD-180	2040	1832	1780	1780	295	180	242	200	577	450
PHCD-200	2100	1932	1880	1880	295	180	242	200	577	450
PHCD-80H	1040	862	810	810	345	230	292	250	517	390
PHCD-100H	1240	972	920	920	345	230	292	250	577	390
PHCD-120H	1240	972	920	920	395	280	342	300	637	510
PHCD-140H	1240	1032	980	980	395	280	342	300	637	510
PHCD-160H	1440	1192	1140	1140	395	280	342	300	637	510
PHCD-180H	1540	1332	1280	1280	395	280	342	300	637	510
PHCD-200H	1640	1432	1380	1380	395	280	342	300	637	510

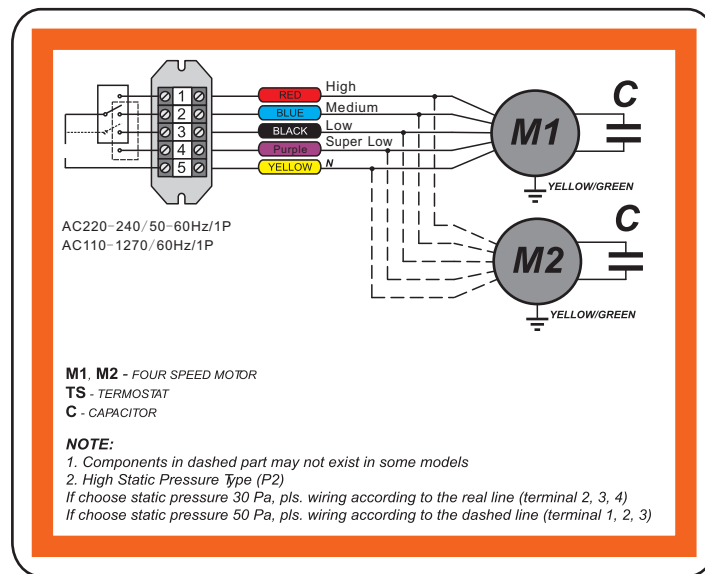


# Low Static Ducted FCU

Model: PHCD



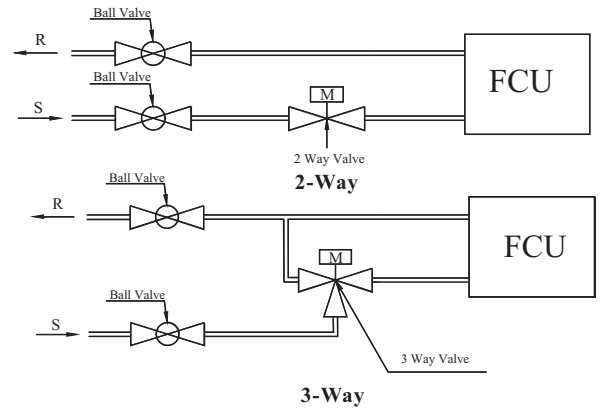
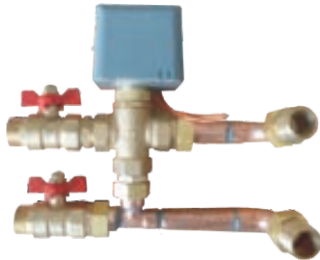
## Wiring Diagrams



# Option Accessories

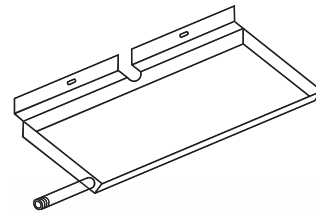
## 1. Valve packages

Factory installed 2-way or 3-way valves for 2-pipe and 4-pipe system. Basic package includes ball valve, motorized valve, and connector.



## 2. Auxiliary drain pan

Auxiliary is especially for condensate water from valve package; powder coating housing with insulation.



## 3. Electric Heater

- Electric Heater made of PTC martial. High safety (with the rising of temperature, the current is decreasing)
- Internal wiring rated at 105°C , automatic rest
- Silent solid state relays
- Manual rest secondary limits is for option



## 4. Mechanical Thermostat

Cool and Heat mode

Room temperature setting

- Three selectable fan speeds
- Motorized valve control



TC2000J(2 pipes)  
TC2002J(4 pipes)

## 5. Electronic LCD Thermostat

- LCD display, detect and display room temperature
- Cool, heat, and vent mode
- Auto-random restart and parameters memory set in case of power failure
- Weekly timer setting
- Remote Control( Optional)



TC08L8 ( 2 pipes)  
TC08L8CV2( 4 pipes)

## 6. Motorized Valve

- Conform with the European pressure equipment directive PED 97/23/EC
- Actuators conform with the protection requirements of council directive 89/336/EEC
- Forging brass body
- Efficient power consumption and less noise



Vb5471 ( 2-Way)



Vb5871(3-Way)

## 7. Spring hanger

Use for hanger the FCU to the ceiling. Rubber and spring composed together to absorb vibration of the FCU. Reduce the noise effectively.



Model: SHF