



*YOUR PERFECT PARTNER*

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**HWCW-SERIES**  
**Chiller Water Air Handling Unit**  
**Chiller Water Primary air Handling Unit**  
**1500-40000m<sup>3</sup>/h(24 Models)**



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**H.W. International Air Conditioning Ltd.**

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**Vertical Type Unit 座地式風櫃**



**Horizontal Type Unit 吊掛式風櫃**



**Modular Air Handling Unit 模塊式空氣處理機**

## Introduction

### "HOOAIR" CHILLER WATER AIR HANDLING UNIT

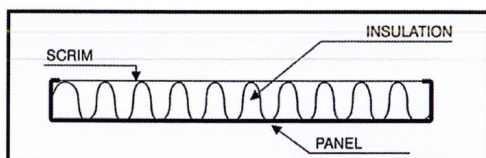
The purpose of this catalogue is to help consulting engineers and equipment specifiers in the preliminary selection of 'HOOAIR' air handling units. However, if required, our sales officers will be happy to provide a computerised unit selection to confirm or complete your preliminary selection.

Now introducing a new dimension in central station air handling unit systems 'HOOAIR' HWCW series chiller water primary air or air handling units. HORIZONTAL/ VERTICAL discharge with 24 standard model capacity range from 1500 m<sup>3</sup>/hr. - 40000m<sup>3</sup>/hr. cooling capacity from 6.7kw to 749 kw.

\* If any special design requirements please refer to our Sales Department.

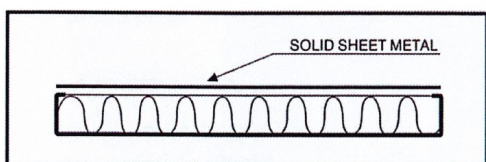
EFFICIENT INSULATION NOW YOU CAN CHOOSE DIFFERENT KIND PANEL TO MEET YOUR SPECIFIC OR JOB REQUIREMENTS.

#### 1. "Single Skin"



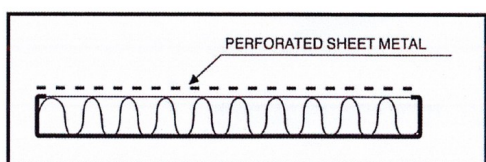
A plan fiberglass scrim preventing erosion of insulation by the airstream  
25mm-50mm thickness fiberglass  
/polyurethane (PU) insulation.

#### 2. "Double Skin"



Sheet metal with insulation between the inner and the outer panel 25mm-80mm  
penal thickness polyurethane (PU)  
insulation cover with solid sheet metal.

#### 3. "Double Skin" With perforated inner skin



Sandwiched insulation for sound absorption 25mm - 80mm fiberglass/  
polyurethane (PU)insulation with  
perforated.

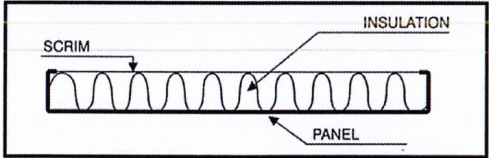
**此** 簡介說明‘豪亞空調’標準型號產品及詳細參考資料，可供工程師或設計人員等使用。如需要特別設計時，可直接聯絡本公司營業部或代理商，由我們專業營業工程師，利用已設計及認可電腦軟件進行輸入及設計輸出，務求使我們的產品能在設計及使用上符合客戶要求。

在此特別向各顧問公司、客戶工程人員推薦、全新設計及開發的‘豪亞空調’HWCW系列雙層櫃板，新鮮空氣處理或空氣處理機，可選擇立式或卧式送風位置，我們可提供24個標準型號，送風量由每小時1500立方米至每小時40000立方米，制冷量由6.7千瓦至749千瓦。

\*如任何項目設計要求超出標準型號能力，可向本公司營業部查詢。

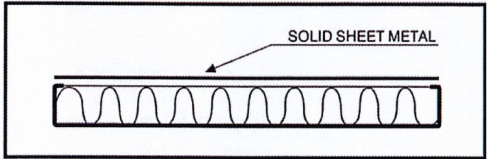
現在閣下可選配高效能隔熱材料，裝配於風櫃門板上。

1. “單層櫃板”



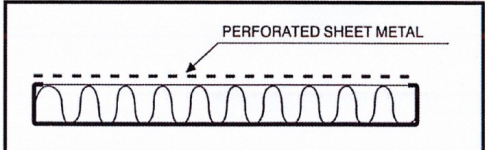
採用材料

玻璃棉板或高密度硬聚氨酯保溫。  
門板厚度：25mm-50mm
2. “雙面櫃板”



採用材料

高密度硬聚氨酯保溫，雙面封鍍鋅鐵板。  
門板厚度：25mm-80mm
3. “雙面沖孔鍍鋅門”



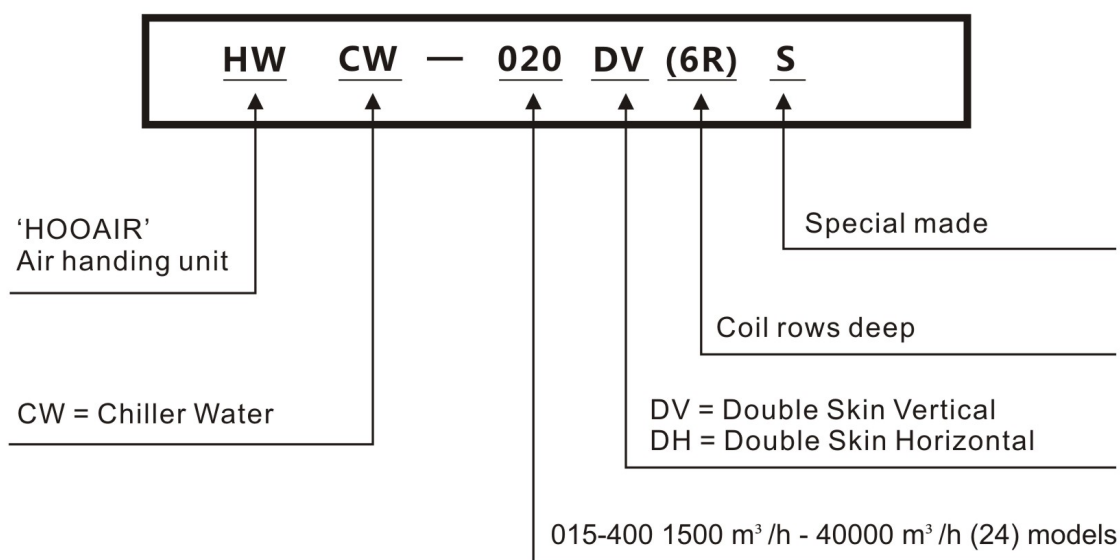
採用材料

高密度硬聚氨酯保溫及玻璃棉板鍍鋅沖孔鐵門板。  
門板厚度：25mm-80mm

**The HWCW series product line of 'HOOAIR' air handling unit is based on a modular system.**

組合選型號識別顯示

EXAMPLE: / 選例:



HWCW產品系列，可透過圖解例子了解型號特性、送風量、制冷能力、送風方向、盤管行數及機身編號等。

## 1. CHOICE OF BLOWER

雙進風離心式風扇

These are two types of centrifugal fans available

a. D.I.D.W. forward curved (前傾)

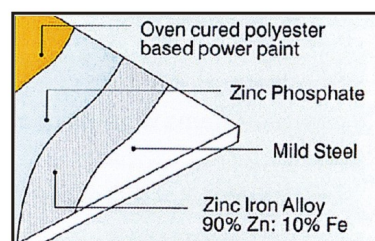
b. D.I.D.W. Backward curved (後傾)



## 2. UV POWDER COATING PANELS

櫃身經防腐蝕靜電噴塗處理防紫外光線

All external panels are factory painted with durable oven cured polyester based powder paint.



## 3. EC PLUG FAN

無段變頻風扇

Easy for services maintenance & reducing the energy power consumption.



## 4. ANTI-VIBRATION ISOLATION

風扇及馬達避震裝置

As standard from the factory, the fan & motor assembly are mounted on a common base with neoprene or spring anti-vibration mountings.



## 5. FLEXIBLE DUCT CONNECTOR

出風位置避震接駁

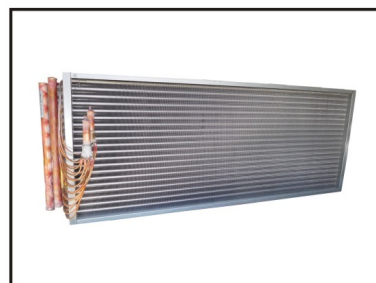
A flexible duct connector is provided to minimise any transmission or vibration to the unit casing.



## 6. DIRECT EXPANSION COILS

雪種盤管

These coils are of a aluminium, plate fins with bell collars and bonded to used O.D. copper tubes by mechanical expansion coils are provided with pressure type brass distributors with solder type connections and have a minimum and have minimum for two distributors. Copper plate & epoxy coating plate fins are available as an option.

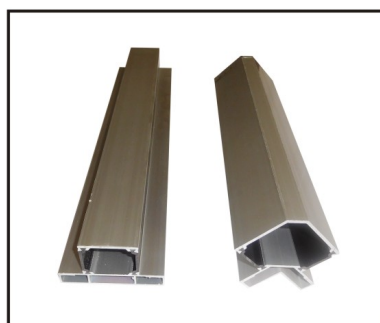


## Features and Benefits 產品特性及優點

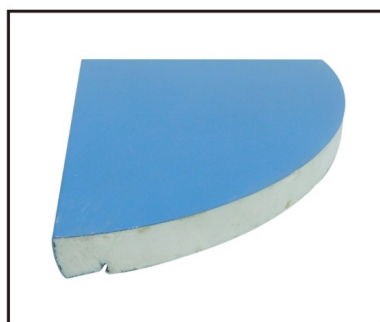
- Special design die cast aluminium alloy corner joint.
- 特別設計鋁合金鑄壓三角連接座。



- Special made extruded aluminium alloy pentapost frame with anti-corrosion anodized finish
- 經陽極防腐蝕處理鋁合金擠壓成型鋁框架。



- Double skin panel galvanized steel sheet with corro-coat PE polyester powder coat and in-fill. Instapak CFC-FREE polyurethane foam (PU).
- 雙層櫃板、鍍鋅鐵板外經過靜電粉噴塗防紫外光、防腐蝕。
- 板層中央注入 CFC-FREE 高密度硬聚氨酯隔熱材料。



### EASY MAINTENANCE & SITE INSTALLATION

Panels and accessories can be easily removed, rearranged or exchanged on site if necessary. The user will appreciate on site accessibility of components. Air tight access doors and sturdy double skinned floor. Easy assembly of sections reduces contractors installation time.

- 容易保養、安裝組合簡單方便。全部門板及配件可拆下再到地盤組合還原，令安裝人員及工程節省時間及金錢，令工程可在最短時間內完成。





## Computer Selection Program 軟件處理數據

### Computer Quick Selection (2.1 Edition)

We have made available a computer program to finalise your selection. For applications where face velocities. Exceeds 3.0m/sec drift eliminators are recommended to avoid moisture carry over.

全新電腦軟件設計(2.1版本), 助你選擇最有效能的產品及型號。在設計過程中, 冷水盤管表面風速超過每秒3米最好採用擋水器。

**H.W. International Air Conditioning Ltd.**  
HOOAIR COIL SELECTION PROGRAM

TYPE:  
MODEL:  
EDITION: 1  
QUOTATION:  
PROJECT:  
CUSTOMER:

INPUT DATA: ELEVATION: 0. FOULING FACTOR: 0.0050

TAG	SCMS	MAX	FV	EDB	EWB	EWT	%	APD	WPD	FPM	TURB
W-100	8.333			33.0	28.0	7.0					N

ACTUAL FINNED UNIT COIL

QTY	WIDTH	LENGTH	TYPE	TYPE	ROW	FPM	TYPE	KW	LPS	WTR	TWT
1	562	1460	W	W	WD	WD					

OUTPUT DATA:

STANDARD FACE VELOCITY (MSEC):  
ACTUAL FACE AREA(SQ. M):

SELECTION RUN:	1	1	1	1	1	1
DIAGNOSTIC:	W	W	W	W	W	W
COIL TYPE:	2	3	6	8		
ROWS:	3	4	6	8	10	12
FIN TYPE:	SF	SF	SF	SF	SF	SF
FPM:	393	393	393	393	393	393
TURB:	N	N	N	N	N	N

EDB:	23.2	19.4	14.2	11.6
EWB:	22.2	19.1	14.1	11.5
SENSIBLE KW:	102.5	142.3	196.9	224.6
TOTAL KW:	241.9	352.7	499.2	567.4
LPS:	11.57	16.87	23.89	27.15
WTR:	5.0	5.0	5.0	5.0
VELOCITY(MSEC):	1.4	2.0	1.4	1.6
APD(KPA):	76.1	114.1	228.3	304.4
WPD(KPA):	15.9	40.2	23.2	34.8

DESIGN: DAT  
APPROVAL(DSIGN): DAT  
APPROVAL(SALE): DAT  
APPROVAL(CUSTOMER): DAT

**H.W. International Air Conditioning Ltd.**  
HOOAIR COIL SELECTION PROGRAM

TYPE:  
MODEL:  
EDITION: 1  
QUOTATION:  
PROJECT:  
CUSTOMER:

INPUT DATA: ELEVATION: 0. FOULING FACTOR: 0.0050

TAG	SCMS	MAX	FV	EDB	EWB	EWT	%	APD	WPD	FPM	TURB
W-100	2.7777			27.0	19.5	7.0					N

ACTUAL FINNED UNIT COIL

QTY	WIDTH	LENGTH	TYPE	TYPE	ROW	FPM	TYPE	KW	LPS	WTR	TWT
1	562	1460	W	W	WD	WD					

OUTPUT DATA:

STANDARD FACE VELOCITY (MSEC):  
ACTUAL FACE AREA(SQ. M):

SELECTION RUN:	1	1	1	1	1	1
DIAGNOSTIC:	W	W	W	W	W	W
COIL TYPE:	3	4	6	8	10	12
ROWS:	3	4	6	8	10	12
FIN TYPE:	SF	SF	SF	SF	SF	SF
FPM:	393	393	393	393	393	393
TURB:	N	N	N	N	N	N

EDB:	16.3	14.3	11.7	10.1	9.1	8.5
EWB:	15.5	13.9	11.6	10.1	9.1	8.4
SENSIBLE KW:	36.53	43.50	52.40	57.70	61.14	63.42
TOTAL KW:	40.50	55.07	74.65	86.77	94.44	99.39
LPS:	1.928	2.635	3.372	4.152	4.519	4.755
WTR:	5.0	5.0	5.0	5.0	5.0	5.0
VELOCITY(MSEC):	0.5	0.7	1.0	1.1	1.2	1.3
APD(KPA):	102.6	142.7	220.1	296.8	373.2	449.4
WPD(KPA):	2.4	5.2	12.3	20.3	28.4	36.4

DESIGN: DAT  
APPROVAL(DSIGN): DAT  
APPROVAL(SALE): DAT  
APPROVAL(CUSTOMER): DAT

**H.W. International Air Conditioning Ltd.**  
HOOAIR COIL SELECTION PROGRAM

TYPE:  
MODEL:  
EDITION: 1  
QUOTATION:  
PROJECT:  
CUSTOMER:

INPUT DATA: ELEVATION: 0. FOULING FACTOR: 0.0050

TAG	SCMS	MAX	FV	EDB	EWB	EWT	%	APD	WPD	FPM	TURB
W-100	2.7777			27.0	19.5	7.0					N

ACTUAL FINNED UNIT COIL

QTY	WIDTH	LENGTH	TYPE	TYPE	ROW	FPM	TYPE	KW	LPS	WTR	TWT
1	562	1460	W	W	WD	WD					

OUTPUT DATA:

STANDARD FACE VELOCITY (MSEC):  
ACTUAL FACE AREA(SQ. M):

SELECTION RUN:	1	1	1	1	1	1
DIAGNOSTIC:	W	W	W	W	W	W
COIL TYPE:	3	4	6	8	10	12
ROWS:	3	4	6	8	10	12
FIN TYPE:	SF	SF	SF	SF	SF	SF
FPM:	393	393	393	393	393	393
TURB:	N	N	N	N	N	N

EDB:	16.3	14.3	11.7	10.1	9.1	8.5
EWB:	15.5	13.9	11.6	10.1	9.1	8.4
SENSIBLE KW:	36.53	43.50	52.40	57.70	61.14	63.42
TOTAL KW:	40.50	55.07	74.65	86.77	94.44	99.39
LPS:	1.928	2.635	3.372	4.152	4.519	4.755
WTR:	5.0	5.0	5.0	5.0	5.0	5.0
VELOCITY(MSEC):	0.5	0.7	1.0	1.1	1.2	1.3
APD(KPA):	102.6	142.7	220.1	296.8	373.2	449.4
WPD(KPA):	2.4	5.2	12.3	20.3	28.4	36.4

DESIGN: DAT  
APPROVAL(DSIGN): DAT  
APPROVAL(SALE): DAT  
APPROVAL(CUSTOMER): DAT

# Standard Performance Data 標準型號性能數據



空調冷水風櫃性能參數表 (Performance Data) AHU  
 入水溫度(Entering temp.)7°C, 出水溫度 (Leaving temp.) 12°C

入風參數		乾球溫度 (DB) 27°C, 濕球溫度 (WB) 19.5°C						乾球溫度 (DB) 27°C, 濕球溫度 (WB) 19.5°C						乾球溫度 (DB) 27°C, 濕球溫度 (WB) 19.5°C					
Model	風量 CMH	行數 (Rows) 4, 每寸翅片數 (FPI) 10						行數 (Rows) 6, 每寸翅片數 (FPI) 10						行數 (Rows) 8, 每寸翅片數 (FPI) 10					
		總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW
HWCW-015	1500	6.7	5.8	0.55	2.1	7.6	6.4	0.41	1.6	9.5	7.2	0.46	2.3	14.4	10.3	0.69	5.8	17.0	12.4
HWCW-020	2000	10.4	8.3	0.83	5.4	12.1	9.2	0.64	4.2	14.4	10.3	0.69	5.8	17.0	12.4	0.81	3.3	21.8	15.5
HWCW-025	2500	12.1	10.0	0.97	3.2	13.9	11.1	0.74	2.4	17.0	12.4	0.81	3.3	21.8	15.5	1.04	5.8	21.8	15.5
HWCW-030	3000	15.8	12.5	1.26	5.7	18.4	14.0	0.98	4.3	21.8	15.5	1.04	5.8	21.8	15.5	1.04	5.8	21.8	15.5
HWCW-040	4000	20.3	16.4	1.21	5.9	25.8	19.2	1.23	7.7	31.4	21.6	1.50	13.3	31.4	21.6	1.50	13.3	31.4	21.6
HWCW-050	5000	27.4	21.3	1.64	11.5	33.5	24.5	1.78	8.0	38.9	26.9	1.86	10.4	38.9	26.9	1.86	10.4	38.9	26.9
HWCW-060	6000	31.2	24.9	1.49	10.6	40.4	29.4	1.93	10.2	48.3	33.0	2.31	17.3	48.3	33.0	2.31	17.3	48.3	33.0
HWCW-065	6500	34.6	27.3	1.66	13.4	44.7	32.2	2.14	12.9	53.0	36.0	2.54	21.6	53.0	36.0	2.54	21.6	53.0	36.0
HWCW-070	7000	38.0	29.6	1.82	16.6	48.8	35.0	2.34	15.8	57.6	39.0	2.76	26.3	57.6	39.0	2.76	26.3	57.6	39.0
HWCW-080	8000	44.6	34.3	2.13	24.1	57.1	40.6	2.73	22.9	65.3	44.4	3.12	21.0	65.3	44.4	3.12	21.0	65.3	44.4
HWCW-090	9000	48.9	38.1	2.34	14.0	63.4	45.3	3.03	17.6	74.6	50.4	3.57	28.9	74.6	50.4	3.57	28.9	74.6	50.4
HWCW-100	10000	55.6	42.8	2.66	19.0	71.8	50.9	3.43	23.5	84.0	56.5	4.02	38.3	84.0	56.5	4.02	38.3	84.0	56.5

Note: The above specifications are subject to change without notice  
 注意：以上產品規格及尺寸如有更改，恕不另行通知



## Standard Performance Data 標準型號性能數據

空調冷水風櫃性能參數表 (Performance Data) AHU  
 入水溫度 (Entering temp.) 7°C, 出水溫度 (Leaving temp.) 12°C

入風參數		乾球溫度 (DB) 27°C, 濕球溫度 (WB) 19.5°C				乾球溫度 (DB) 27°C, 濕球溫度 (WB) 19.5°C				乾球溫度 (DB) 27°C, 濕球溫度 (WB) 19.5°C			
盤管		行數 (Rows) 4, 每寸翅片數 (FPI) 10				行數 (Rows) 6, 每寸翅片數 (FPI) 10				行數 (Rows) 8, 每寸翅片數 (FPI) 10			
Model	風量 CMH	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa
HWCW-120	12000	66.5	51.3	3.18	17.5	87.6	61.7	4.19	31.7	96.8	66.1	4.63	16.1
HWCW-130	13000	72.3	55.7	3.46	17.9	95.2	66.9	4.56	30.2	106.2	72.2	5.08	20.2
HWCW-150	15000	84.8	64.8	4.06	20.1	101.5	73.8	4.85	12.1	121.4	82.8	5.81	17.1
HWCW-160	16000	95.8	72.6	4.58	13.4	119.4	83.9	5.72	14.6	138.8	92.3	6.64	23.4
HWCW-180	18000	106.8	81.31	5.11	12.7	137.2	95.5	6.57	20.1	158.4	104.8	7.58	31.9
HWCW-190	19000	114.2	86.4	5.46	14.8	146.1	101.4	6.99	23.2	168.2	111.1	8.05	36.7
HWCW-200	20000	117.9	90.1	5.64	12.4	155.2	107.3	7.43	26.7	175.7	116.4	8.41	23.8
HWCW-240	24000	147.4	110.4	7.05	20.6	185.0	128.2	8.85	20.4	212.7	140.5	10.18	33.1
HWCW-280	28000	165.6	126.3	7.92	11.2	217.7	150.4	10.42	24.8	249.7	164.6	11.95	39.8
HWCW-300	30000	176.6	135.0	8.45	11.1	232.5	160.8	11.13	24.5	266.9	176.1	12.77	39.2
HWCW-350	35000	206.0	157.5	9.86	11.7	271.3	187.6	12.98	25.5	311.4	205.4	14.90	40.5
HWCW-400	40000	235.4	179.9	11.26	12.4	310.1	214.4	14.83	26.7	355.9	234.7	17.03	42.0

Note: The above specifications are subject to change without notice  
 注意: 以上產品規格及尺寸如有更改, 恕不另行通知

# Standard Performance Data 標準型號性能數據



## 空調冷水風櫃性能參數表 (Performance Data) PAU

入水溫度(Entering temp.) 7°C, 出水溫度 (Leaving temp.) 12°C

入風參數		乾球溫度 (DB) 33°C, 濕球溫度 (WB) 28°C				乾球溫度 (DB) 33°C, 濕球溫度 (WB) 28°C				乾球溫度 (DB) 33°C, 濕球溫度 (WB) 28°C			
盤管		行數 (Rows) 4, 每寸翅片數 (FPI) 10				行數 (Rows) 6, 每寸翅片數 (FPI) 10				行數 (Rows) 8, 每寸翅片數 (FPI) 10			
Model	風量 CMH	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa
HWCW-015	1500	13.8	5.9	0.66	3.2	20.8	8.3	0.99	8.3	25.0	9.9	1.20	13.8
HWCW-020	2000	21.4	8.8	1.02	8.0	29.6	11.8	1.42	18.3	34.8	13.7	1.67	29.2
HWCW-025	2500	25.2	10.5	1.21	4.8	36.3	14.4	1.74	11.6	43.0	17.0	2.06	18.7
HWCW-030	3000	32.8	13.5	1.57	8.5	45.2	17.9	2.16	18.9	52.9	20.9	2.53	29.8
HWCW-040	4000	47.6	19.3	2.28	19.2	63.2	25.0	3.02	40.4	66.4	26.2	3.18	8.1
HWCW-050	5000	59.1	23.9	2.83	14.8	78.8	31.1	3.77	31.7	86.3	34.0	4.13	14.8
HWCW-060	6000	74.0	29.8	3.54	24.5	90.7	36.0	4.34	17.7	106.0	41.8	5.07	24.0
HWCW-065	6500	81.5	32.7	3.90	30.5	99.8	39.5	4.77	22.2	116.0	45.8	5.55	29.9
HWCW-070	7000	88.9	35.6	4.25	37.2	103.8	41.2	4.97	13.0	122.3	48.2	5.85	17.9
HWCW-080	8000	100.5	40.3	4.81	30.5	121.9	48.3	5.83	18.8	142.2	56.1	6.80	25.4
HWCW-090	9000	114.3	45.8	5.47	34.9	134.9	53.5	6.46	15.3	158.4	62.5	7.58	20.9
HWCW-100	10000	118.7	48.0	5.68	13.8	153.0	60.6	7.32	20.4	178.3	70.4	8.53	27.5

Note: The above specifications are subject to change without notice

注意: 以上產品規格及尺寸如有更改, 恕不另行通知



## Standard Performance Data 標準型號性能數據

空調冷水風櫃性能參數表 (Performance Data) PAU  
 入水溫度 (Entering temp.) 7°C, 出水溫度 (Leaving temp.) 12°C

入風參數		乾球溫度 (DB) 33°C, 濕球溫度 (WB) 28°C				乾球溫度 (DB) 33°C, 濕球溫度 (WB) 28°C				乾球溫度 (DB) 33°C, 濕球溫度 (WB) 28°C			
Model	風量 CMH	行數 (Rows) 4, 每寸翅片數 (FPI) 10				行數 (Rows) 6, 每寸翅片數 (FPI) 10				行數 (Rows) 8, 每寸翅片數 (FPI) 10			
		總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa	總冷量 KW	顯冷量 KW	流量 L/S	水阻力 Kpa
HWCW-120	12000	148.4	59.7	7.10	22.9	187.2	74.0	8.96	28.1	216.7	85.5	10.37	37.4
HWCW-130	13000	163.3	65.5	7.81	28.5	198.3	78.5	9.49	21.6	231.4	91.3	11.07	29.3
HWCW-150	15000	174.2	70.7	8.33	13.6	234.6	92.8	11.23	31.6	267.4	105.5	12.79	33.1
HWCW-160	16000	220.6	88.0	10.56	36.1	251.3	99.3	12.02	12.6	291.8	115.3	13.96	19.0
HWCW-180	18000	242.9	97.1	11.62	21.1	289.5	114.3	13.85	17.2	333.3	131.7	15.94	25.6
HWCW-190	19000	259.2	103.5	12.40	24.4	308.7	121.8	14.77	19.8	343.8	135.7	16.45	14.3
HWCW-200	20000	275.8	110.0	13.19	28.2	327.8	129.3	15.68	22.6	374.7	148.2	17.93	33.3
HWCW-240	24000	335.8	133.7	16.07	37.6	390.8	154.2	18.70	17.3	447.8	177.1	21.42	26.1
HWCW-280	28000	386.1	153.9	18.47	33.8	460.5	181.7	22.03	19.3	525.7	208.0	25.15	29.1
HWCW-300	30000	418.2	166.6	20.01	40.4	492.3	194.2	23.55	19.1	562.4	222.5	26.91	28.8
HWCW-350	35000	480.2	191.5	22.97	29.4	573.6	226.3	27.45	20.7	655.6	259.4	31.37	30.8
HWCW-400	40000	546.4	218.0	26.14	29.6	655.6	258.7	31.37	22.6	749.3	296.4	35.85	33.3

Note: The above specifications are subject to change without notice  
 注意: 以上產品規格及尺寸如有更改, 恕不另行通知

# Unit Physical Data 機組數據



Model 型號	Air-Flow 送風量 CMH	Fan Dia. 風扇直徑 (mm)	Fan Motor 風扇馬達 Kw (功率)	Connections 水管接頭 Inch (英寸)						Drain 排水管 Inch (英寸)	Unit Weight 機組總重量					
											4R (4 行) Kg (公斤)	6R (6 行) Kg (公斤)	8R (8 行) Kg (公斤)			
				4R AHU	6R AHU	8R AHU	4R PAU	6R PAU	8R PAU		(H) (V)	(H) (V)	(H) (V)			
HWCW-015	1500	180	0.55	1"	1"	1"	1-1/4"	1-1/4"	1-1/4"	1"	120	150	130	160	140	170
HWCW-020	2000	180	0.55	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1"	130	160	140	170	145	180
HWCW-025	2500	200	0.75	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1"	135	170	145	180	148	190
HWCW-030	3000	225	0.75	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	1-1/2"	1"	141	180	150	210	190	230
HWCW-040	4000	250	0.75	1-1/4"	1-1/4"	1-1/2"	1-1/2"	1-1/2"	2"	1"	170	200	190	230	210	260
HWCW-050	5000	280	0.75	1-1/2"	1-1/2"	1-1/2"	2"	2"	2-1/2"	1"	180	215	210	250	230	280
HWCW-060	6000	315	1.5	1-1/2"	1-1/2"	1-1/2"	2"	2"	2-1/2"	1"	210	250	240	290	260	320
HWCW-065	6500	315	1.5	1-1/2"	1-1/2"	2"	2-1/2"	2-1/2"	2-1/2"	1"	240	300	270	330	300	360
HWCW-070	7000	355	1.5	1-1/2"	1-1/2"	2"	2-1/2"	2-1/2"	2-1/2"	1-1/4"	280	340	310	370	340	400
HWCW-080	8000	355	1.5	1-1/2"	2"	2"	2-1/2"	2-1/2"	2-1/2"	1-1/4"	320	380	350	420	390	450
HWCW-090	9000	400	2.2	1-1/2"	2"	2"	2-1/2"	2-1/2"	2-1/2"	1-1/4"	360	430	400	480	450	520
HWCW-100	10000	400	2.2	2"	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	1-1/4"	400	480	450	540	500	580

Note: The above specifications are subject to change without notice  
 注意：以上產品規格及尺寸如有更改，恕不另行通知

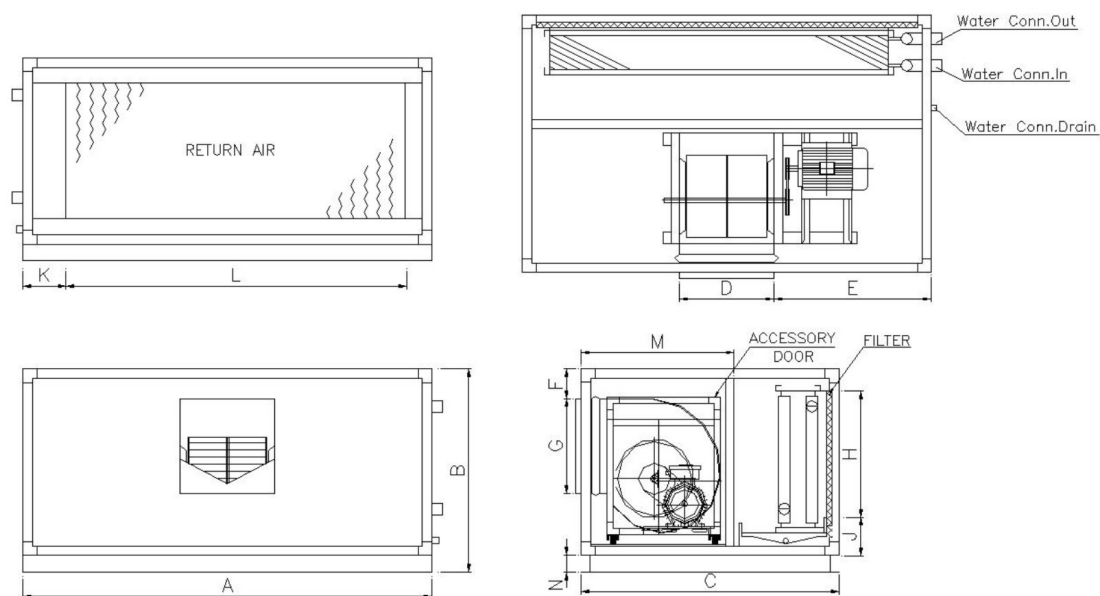


## Unit Physical Data 機組數據

Model 型號	AIR-FLOW 送風量 CMH	FAN Dia. 風扇直徑 (mm)	FAN MOTOR 風扇馬達 Kw(功率)	CONNECTIONS 水管接頭 inch(英寸)							DRAIN 排水管 inch	UNITWEIGHT 機組總重量					
				4R AHU	6R AHU	8R AHU	4R PAU	6R PAU	8R PAU	4R (4 行) Kg (公斤)			6R (6 行) Kg (公斤)		8R (8 行) Kg (公斤)		
										(H)		(V)	(H)	(V)	(H)	(V)	(H)
HWCW-120	12000	400	3	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	1-1/4"	450	550	520	620	570	660
HWCW-130	13000	450	3	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	1-1/4"	520	630	580	700	630	730
HWCW-150	15000	450	4	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	1-1/4"	590	700	650	780	720	830
HWCW-160	16000	500	4	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	1-1/4"	640	750	710	850	780	900
HWCW-180	18000	500	5.5	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"X 2	1-1/4"	700	820	780	950	850	980
HWCW-190	19000	500	5.5	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"X 2	1-1/4"	780	900	860	1050	980	1150
HWCW-200	20000	560	5.5	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"X 2	1-1/4"	855	1050	950	1100	1050	1250
HWCW-240	24000	560	7.5	2-1/2"	3"	3"	3"	3"	3"	3"X 2	1-1/4"	950	1150	1050	1150	1150	1350
HWCW-280	28000	630	7.5	3"	3"	3"	3"	3"	3"	3"X 2	1-1/4"	1050	1250	1150	1300	1250	1500
HWCW-300	30000	630	7.5	3"	3"	3"	3"	3"	3"	3"X 2	1-1/4"	1180	1400	1300	1550	1400	1700
HWCW-350	35000	710	11	3"	3"	3"	3"	3"	3"	3"X 2	1-1/4"	1300	1550	1450	1750	1600	1950
HWCW-400	40000	710	15	3"	3"	3"	3"	3"	3"	3"X 2	1-1/4"	1450	1750	1600	1900	1700	2050

Note: The above specifications are subject to change without notice  
注意：以上產品規格及尺寸如有更改，恕不另行通知

## Horizontal Type Unit Dimensional Chart (吊掛式風櫃尺寸表)



MODEL	A	B	C			D	E	F	G	H	J	K	L	M	N
			4R	6R	8R										
HWCW-015	820	620	1015	1065	1115	229	430	165	229	362	151	185	440	515	*
HWCW-020	930	620	1015	1065	1115	229	430	165	229	362	151	185	585	515	*
HWCW-025	860	715	1030	1080	1130	256	430	190	256	457	151	205	585	530	*
HWCW-030	1010	715	1030	1080	1130	288	430	145	288	457	151	195	700	530	*
HWCW-040	1260	715	1080	1130	1180	322	469	100	322	457	151	195	935	580	*
HWCW-050	1295	815	1135	1185	1235	361	467	100	361	553	151	195	975	635	*
HWCW-060	1500	815	1135	1185	1235	404	548	100	404	553	151	200	1165	635	*
HWCW-065	1595	815	1135	1185	1235	404	596	100	404	553	151	205	1265	635	*
HWCW-070	1500	910	1195	1245	1295	453	524	105	453	648	164	215	1170	695	*
HWCW-080	1665	910	1195	1245	1295	453	606	105	453	648	164	210	1330	695	*
HWCW-090	1595	1035	1260	1310	1360	507	544	144	507	775	164	250	1260	760	*
HWCW-100	1735	1035	1260	1310	1360	507	614	144	507	775	164	220	1400	760	*

### Notes:

1) The above specifications are subject to change without notice.

以上產品規格及尺寸如有更改,恕不通知.

2) The above units are mm

以上單位為毫米

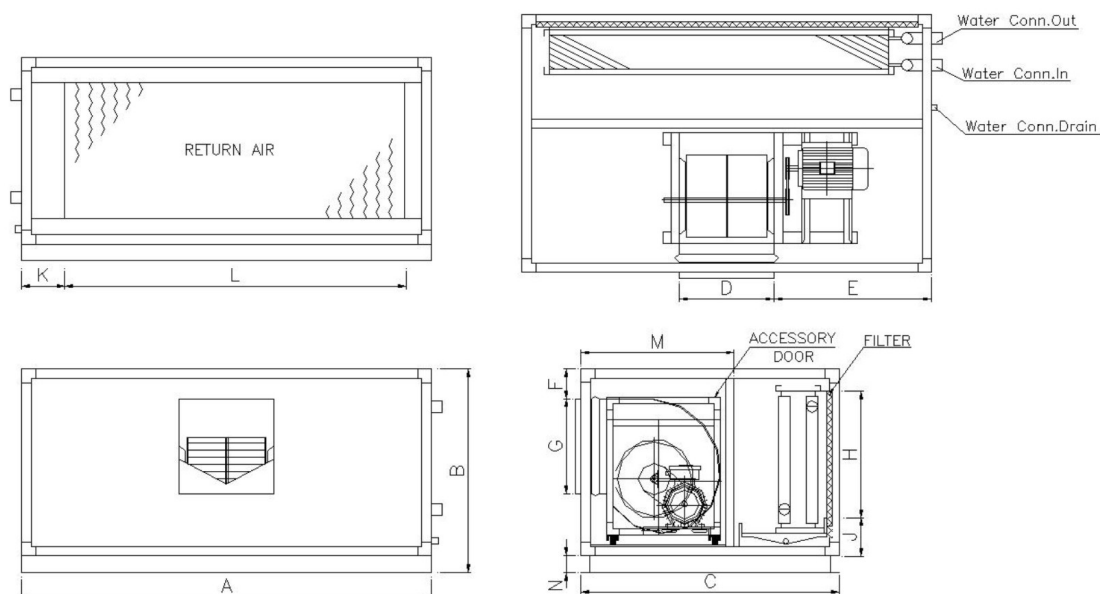
3) The width(A) is based on 6 rows of PAU

潤(A)度尺寸是以 PAU 6 rows 計算

4) \*Standard model excluded base frame

帶\*型號產品無底架

## Horizontal Type Unit Dimensional Chart (吊掛式風櫃尺寸表)



MODEL	A	B	C			D	E	F	G	H	J	K	L	M	N
			4R	6R	8R										
HWCW-120	1835	1195	1390	1440	1490	507	664	244	507	870	164	185	1500	890	64
HWCW-130	1920	1225	1390	1440	1490	569	676	203	569	902	164	185	1570	890	64
HWCW-150	2100	1260	1390	1440	1490	569	766	263	569	934	164	205	1750	890	64
HWCW-160	2000	1365	1420	1470	1520	638	681	90	638	1060	164	195	1650	920	64
HWCW-180	2205	1365	1420	1470	1520	638	784	90	638	1060	164	195	1850	920	64
HWCW-190	2305	1365	1420	1470	1520	638	834	90	638	1060	164	195	1960	920	64
HWCW-200	2410	1375	1560	1610	1660	715	848	90	715	1060	164	200	2060	1060	76
HWCW-240	2450	1585	1560	1610	1660	715	868	277	715	1250	164	205	2100	1060	76
HWCW-280	2900	1535	1660	1710	1760	801	910	101	801	1200	164	215	2270	1160	76
HWCW-300	3085	1560	1660	1710	1760	801	990	195	801	1200	164	210	2430	1160	100
HWCW-350	3205	1750	1800	1850	1900	898	1016	202	898	1403	164	250	2550	1300	100
HWCW-400	3300	1900	1800	1850	1900	898	1066	322	898	1555	164	220	2650	1300	100

### Notes:

1) The above specifications are subject to change without notice.

以上產品規格及尺寸如有更改,恕不通知.

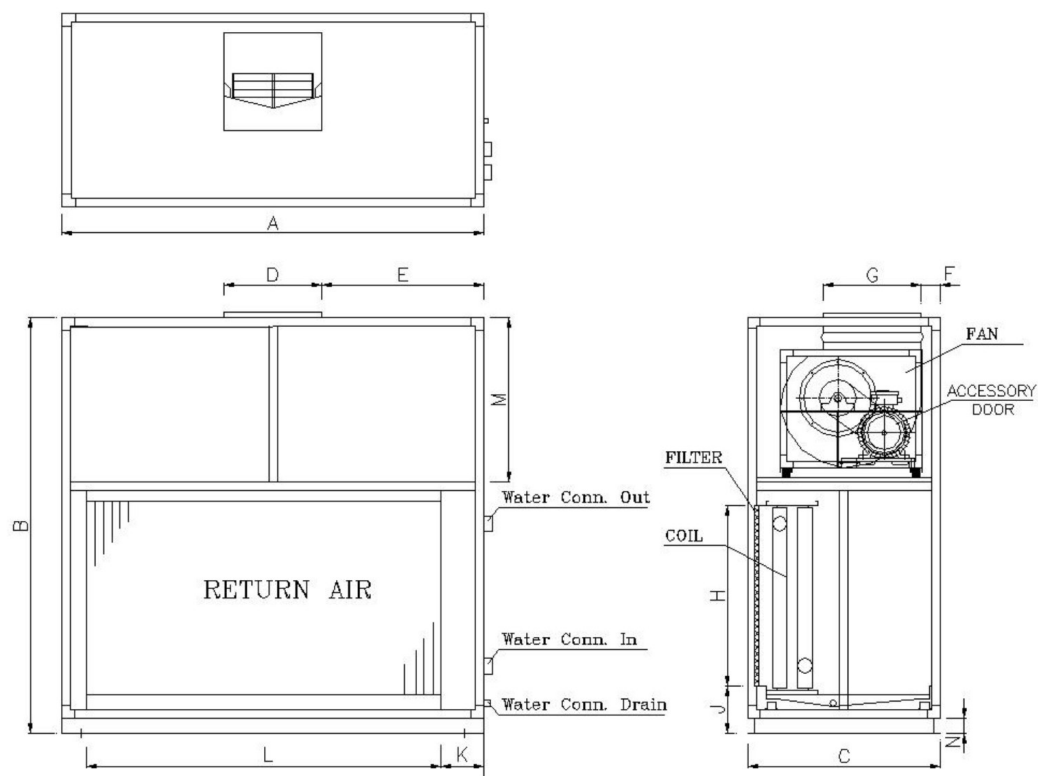
2) The above units are mm

以上單位為毫米

3) The width(A) is based on 6 rows of PAU

潤(A)度尺寸是以 PAU 6 rows 計算

## Vertical Type Unit Dimensional Chart (座地式風櫃尺寸表)



MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N
HWCW-015	820	1150	610	229	430	100	229	362	151	180	440	490	51
HWCW-020	930	1150	610	229	430	100	229	362	151	180	585	490	51
HWCW-025	860	1245	610	256	430	100	256	457	151	180	585	520	51
HWCW-030	1010	1330	665	288	430	100	288	457	151	180	700	570	64
HWCW-040	1260	1330	725	322	469	100	322	457	151	205	935	610	64
HWCW-050	1295	1495	785	361	467	100	361	553	151	205	975	670	64
HWCW-060	1500	1510	785	404	548	100	404	553	151	205	1165	730	64
HWCW-065	1595	1510	785	404	596	100	404	553	151	205	1265	730	64
HWCW-070	1500	1670	865	453	524	100	453	648	164	205	1170	810	64
HWCW-080	1665	1670	865	453	606	100	453	648	164	205	1330	810	64
HWCW-090	1595	1825	865	507	544	100	507	775	164	205	1260	900	64
HWCW-100	1735	1875	945	507	614	100	507	775	164	205	1400	900	64

Notes:

4) The above specifications are subject to change without notice.

以上產品規格及尺寸如有更改,恕不通知.

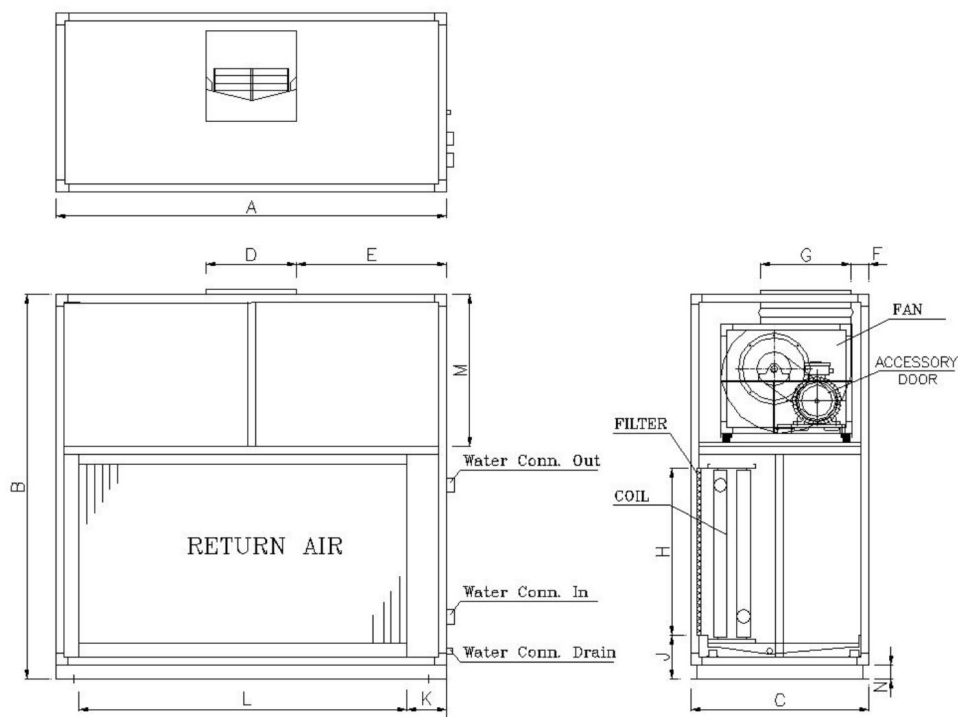
5) The above units are mm

以上單位為毫米

6) The width(A) is based on 6 rows of PAU

潤(A)度尺寸是以 PAU 6 rows 計算

## Vertical Type Unit Dimensional Chart (座地式風櫃尺寸表)



MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N
HWCW-120	1835	2025	1010	507	664	100	507	870	164	205	1500	900	64
HWCW-130	1920	2090	1010	569	676	100	569	902	164	220	1570	950	64
HWCW-150	2100	2140	1010	569	766	100	569	934	164	220	1750	950	64
HWCW-160	2000	2330	1080	638	681	100	638	1060	164	220	1650	1050	64
HWCW-180	2205	2380	1080	638	784	100	638	1060	164	220	1850	1050	64
HWCW-190	2305	2380	1080	638	834	100	638	1060	164	220	1960	1050	64
HWCW-200	2410	2465	1230	715	848	100	715	1060	164	220	2060	1150	76
HWCW-240	2450	2660	1230	715	868	100	715	1250	164	220	2100	1150	76
HWCW-280	2620	2950	1360	801	910	100	801	1403	164	220	2270	1260	76
HWCW-300	2780	2950	1360	801	990	100	801	1403	164	220	2430	1260	100
HWCW-350	2930	3250	1510	898	1016	100	898	1555	164	250	2550	1430	100
HWCW-400	3300	3250	1510	898	1066	100	898	1555	164	250	2920	1430	100

Notes:

7) The above specifications are subject to change without notice.

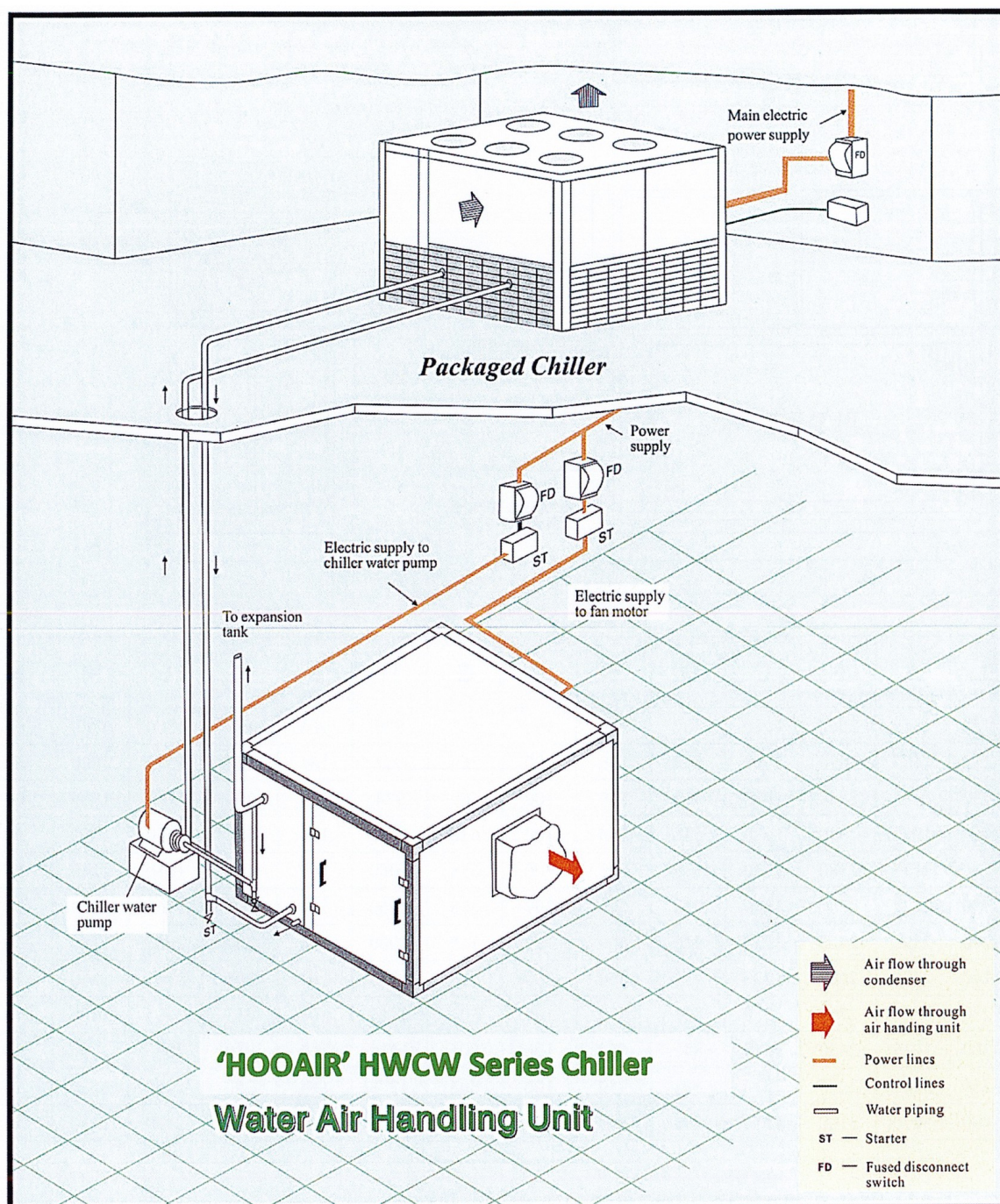
以上產品規格及尺寸如有更改,恕不通知.

8) The above units are mm

以上單位為毫米

9) The width(A) is based on 6 rows of PAU

潤(A)度尺寸是以 PAU 6 rows 計算



Maintenance space min .600 - 800 mm

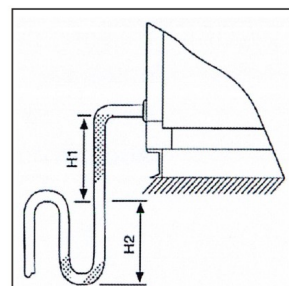
維修空間至少 600 到 800 mm

## Water Dripping

- check and clean drain pipe
- check pipe insulation
- check coil face velocity ( max 2.8 m / sec.)

## Drain Problem

- check drain pipe and connection
- check air filter
- check static pressure meter
- check air-volume control dampers



H1 Should be more than pressure difference  
H2 Should be more than 15mm

				no. off bells									
2-pole	1			.55	1.5	2.2	2.2	2.2	2.2	2.2	2.2	max. motor output	
	2			1.1	2.2	4.0	4.0	4.0	4.0	4.0	4.0		
	3			1.5	4.0	4.0	4.0	7.5	7.5	18.5	18.5		
4-pole	1			.55	1.1	1.5	2.2	2.2	2.2	2.2	2.2	max. motor output	
	2			1.1	1.5	3.0	4.0	4.0	4.0	4.0	4.0		
	3			1.5	3.0	4.0	4.0	7.5	7.5	11.0	11.0		
1	2	3		71	80	90	100	112	118	132	140	160	→ motor pulley
≤315			71	1.00	.89	.79	.71	.63	.60	.54	.51	.44	
			80	1.13	1.00	.89	.80	.71	.68	.61	.57	.50	
			90	1.27	1.12	1.00	.90	.80	.76	.68	.64	.56	
≤450			100	1.41	1.25	1.11	1.00	.89	.85	.76	.71	.62	
			112	1.58	1.40	1.24	1.12	1.00	.95	.85	.80	.70	
			118	1.66	1.48	1.31	1.18	1.05	1.00	.89	.84	.74	
≤710/ 560			132	1.86	1.65	1.47	1.32	1.18	1.12	1.00	.94	.82	
			140	1.97	1.75	1.56	1.40	1.25	1.19	1.06	1.00	.88	
			160	2.25	2.00	1.78	1.60	1.43	1.36	1.21	1.14	1.00	
all			200	2.82	2.50	2.22	2.00	1.79	1.69	1.52	1.43	1.25	
			250	3.52	3.12	2.78	2.50	2.23	2.12	1.89	1.79	1.56	
			280	3.94	3.50	3.11	2.80	2.50	2.37	2.12	2.00	1.75	
			400	5.63	5.00	4.44	4.00	3.57	3.39	3.03	2.86	2.50	

## ENSURE THAT:

- the correct pulleys and number of belts are fitted
- the pulleys are fitted as close as possible to the bearings
- the drive and driven pulleys are correctly aligned (see sketch 2)
- the drive belts are correctly tensioned (see sketch 1)

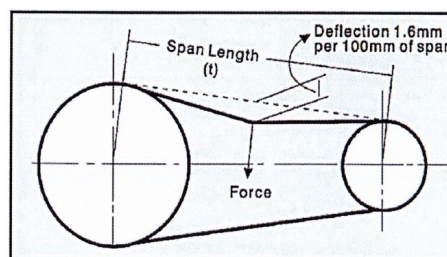
## ALL OF THESE FEATURES WILL:

- maximise belt, pulley and bearing life
- minimise wear and noise

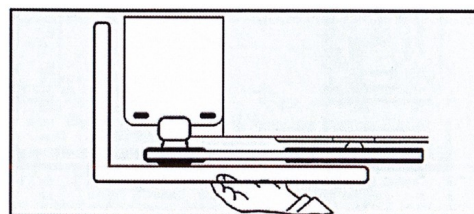
## MAINTENANCE

- check belts for tension and wear (tension see sketch 1)
- check that pulleys are firmly attached to their shafts
- regrease bearings when necessary (355 and upward only)
- check bearing for wear\*
- clean impeller when necessary

\*bearings should be replaced before failure due to wear,  
since a seizure may cause damage to the fan and motor



Sketch 1) drive tension



Sketch 2) correct alignment of pulleys

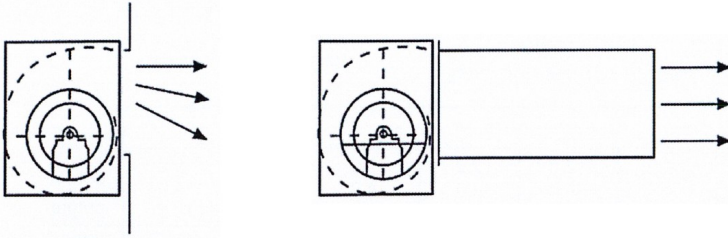
## V- BELT TENSION

Regular inspection of the v-belt tension is of major important to ensure a good operating unit. In any case this inspection has to take place after the first 100 running hours and subsequently after each (approx.) 1000 hours or once a year. The v-belt tension is inspected with a "finger-push" (see sketch), and the correct tension gives a total deflection of approx. 2-3cm.

**DUCT WORK**– Be sure to use canvas covered ducts at the air suction inlet and discharge outlets.

- Be sure to install an air filter at the return air suction and primary air suction outlet.

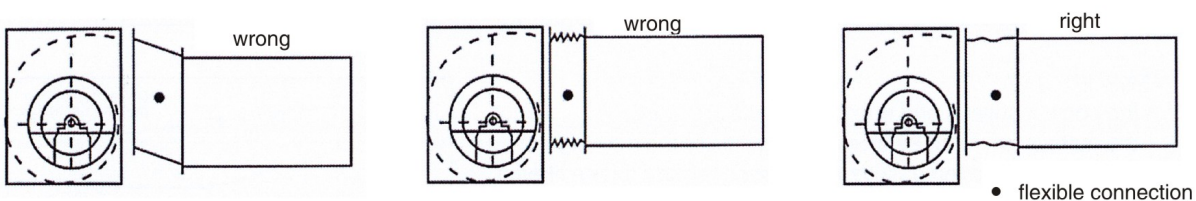
## Outlet Conditions .Free versus Ducted



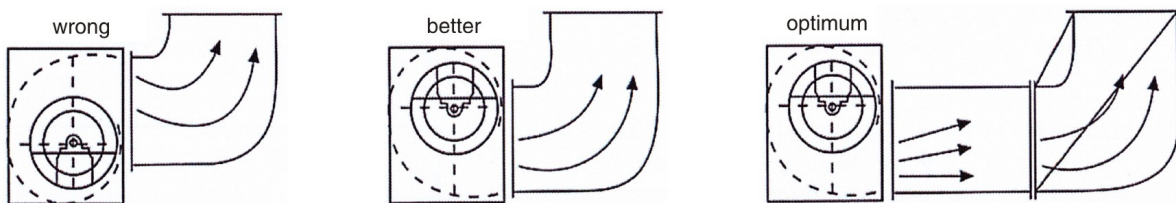
Discharging a centrifugal fan directly to atmosphere or plenum chamber is inefficient, because all dynamic pressure is lost. This can be improved by ducting the outlet, which regains part of the dynamic pressure and allows the air to become less turbulent.

## Air Flow– Laminar versus Turbulent

The performance and pressure losses of components in an air handling system (coil, filters, dampers, etc.) are based on laminar flow. The devices should therefore be placed at a distance no closer than 3–4 times the fan impeller diameter from the fan outlet, or straightening devices must be applied. Not doing this will result in higher pressure losses, loss of performance and increased noise levels.



A smooth passage at the discharge is desirable at all times. Avoid misalignment or concertina.

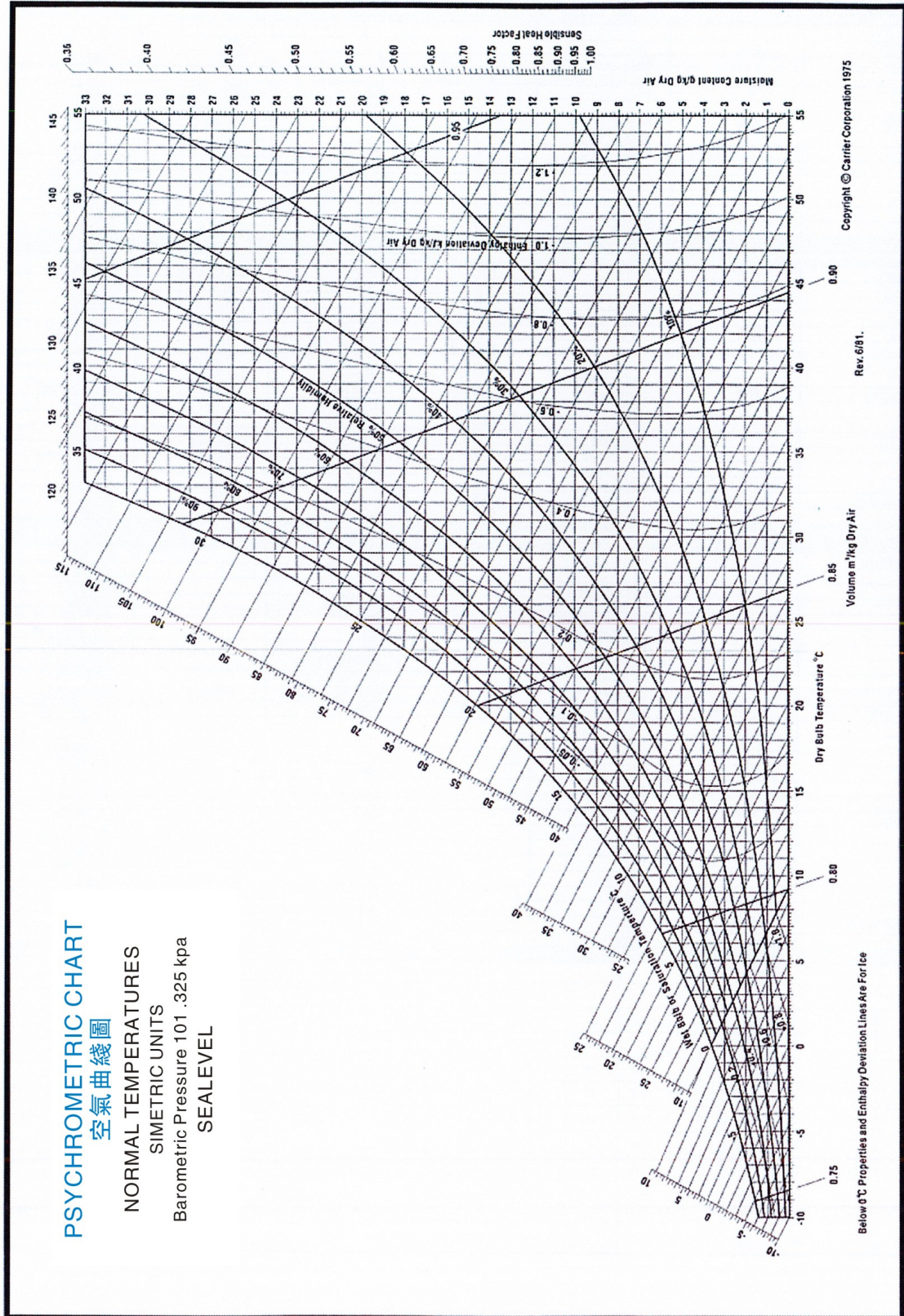


Extremely high losses occur when attempts are made to change the direction of the airflow close to the fan discharge.

- Electrical work**
- Be sure to use independent branch circuit.
  - Be sure to ground the unit
- (The grounding terminal is located on the joint box mounting plate covered by the access panel. [right])



# Psychrometric Chart 空氣曲綫圖



攝氏C	攝氏F	C	F	C	F	C	F	C	F	C	F	C	F	C	F	C	F
-10	14.0	10	50.0	27	80.6	37	98.6	47	116.6	57	134.6	67	152.6	77	170.6	90	194.0
-8	17.6	12	53.6	28	82.4	38	100.4	48	118.4	58	136.4	68	154.4	78	172.4	92	197.6
-6	21.2	14	57.2	29	84.2	39	102.2	49	120.2	59	138.2	69	156.2	79	174.2	94	201.2
-4	24.8	16	60.8	30	86.0	40	104.0	50	122.0	60	140.0	70	158.0	80	176.0	96	204.8
-2	28.4	18	64.4	31	87.8	41	105.8	51	123.8	61	141.8	71	160.8	81	177.8	98	208.4
0	32.0	20	68.0	32	89.6	42	107.6	52	125.6	62	143.6	72	161.6	82	179.6	100	212.0
2	35.6	22	71.6	33	91.4	43	109.4	53	127.4	63	145.4	73	163.4	83	181.4	102	215.6
4	39.2	24	75.2	34	93.2	44	111.2	54	129.2	64	147.2	74	165.2	84	183.2	104	219.2
6	42.8	25	77.0	35	95.0	45	113.0	55	131.0	65	149.0	75	167.0	85	186.8	106	222.8
8	46.4	26	78.8	36	96.8	46	114.8	56	132.8	66	150.8	76	168.8	88	190.4	108	226.4



ISO 9001 : 2015  
Certificate No.: CC 1160

## Selection of AHU 風櫃設計資料表格

<b>Customer:</b> <b>Project:</b> <b>Location:</b> <b>Date:</b>		<b>Person To Contact:</b> <b>Job No.:</b> <b>Telephone:</b> <b>Fax:</b>	
<b>FAN SELECTION:</b> <b>Air Volume:</b> <b>Fan Type:</b> <b>Type of Blade:</b> <b>Drive:</b> <b>Total Pressure:</b> <b>External Static Pressure:</b>		<b>Fan Speed (rpm):</b> <b>Fan Efficiency (%):</b> <b>Sound Power Level (db A):</b> <b>Absorbed Power:</b> <b>Motor Speed (rpm):</b> <b>Motor Rating (kw):</b> <b>Power Supply (volt/phase/Hz):</b>	
<b>COIL SELECTION:</b> <b>AIR SIDE</b> <b>On Coil (DB/WB):</b> <b>Off Coil (DB/WB):</b> <b>Max Face Velocity (m/s):</b> <b>Total Load (kw):</b> <b>Sensible Load (km):</b> <b>Air Pressure Drop (Pa):</b> <b>Tube/ Fin Material:</b> <b>No. Of Rows/ Fin Pitch:</b> <b>Coil Face Area (m<sup>2</sup>):</b> <b>Coil Dimensions (H x W):</b>		<b>WATER SIDE</b> <b>Water In:</b> <b>Water Out:</b> <b>Water Flow Rate:</b> <b>Water Pressure Drop:</b> <b>Water Velocity (m/s):</b> <b>Piping Connection Size:</b> <b>Drain Connection Size:</b>	
<b>FILTER SELECTION:</b> <b>Type:</b> <b>Material:</b> Aluminium <input type="checkbox"/> , Nylon <input type="checkbox"/> , Special Specify _____ <b>Dimension (H x W x Thickness):</b> <b>Quantity:</b> <b>Pressure Drop(Pa):</b> <b>Efficiency (%):</b>			
<b>UNIT LAYOUT:</b>		<b>Model:</b>	
		<b>Overall Dimension H x W x D:</b>	
		<b>Type:</b> Single Skin <input type="checkbox"/> Double Skin <input type="checkbox"/>	
		<b>External Sheet:</b>	
		<b>Internal Sheet:</b>	
		<b>Insulation:</b>	
		<b>Frame:</b>	
		<b>Channel Base/Foot:</b>	
		<b>Weatherproof Canopy:</b>	
<b>Total Weight:</b>			
<b>Remarks:</b>			

If any enquiry, please contact our office:  
Tel: 852-2796 8888 Fax: 852-2796 8899



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