

Chinese and English
中·英文版本



Refrigerated
Compressed Air **Dryers**
压缩空气干燥机

品質·專業·服務
Quality·Professional·Service
最大的運行保證
The most running guaranty

Operation manual for dryer

干燥機操作手冊



Thank you for choosing series PRODUCT.At the same time when we are improving our product property and quality We also hope we can find out if you have any quality-related problems or any dissatisfaction when you use our product. We will accept with sincerity and implement in earnest any of your better suggestions that are applicable For the production

Thank for your success choice

非常感謝您選用本公司系列產品，在我們不斷改良產品性能及品質的同時，更希望能了解您在使用過程中是否有質量問題或不滿的方面，若能提出更好的建議，並適合生產，我公司將會真誠地採納並認真實行。

謝謝您的成功選擇！

1.1 General warnings 普通提示

This machine has passed the strict test before leaving the factory, however, you are still required to read this manual carefully and completely to ensure the safe and reliable operation of the machine.

Before operating the machine. User should check the running (service) condition described in the technical data. This machine provides stable properties with hardly any problems. If, however, user fails to set (install) and operate the machine correctly, some function or misleading sign would be regarded as error. Therefore if any fault occurs, user should check for any improper setting (installation) or misapplication, or observe the machine carefully for any abnormal movement and find out the root cause. In case that the problem cannot possibly be solved, contact us for necessary service.

We will not take responsibility for any failure of meeting the safety requirement during operating, running, maintenance and repair implemented by user, even if the said safety requirement is not emphasized specifically in this manual.

雖然出廠前本機器均經過嚴格的品質測試，但為能夠確保機器安全且可靠的運轉，請您務必詳加熟讀本操作手冊。

操作者在機器實際運轉之前，請先注意技術資料中所提供的運轉（使用）條件，本機器性能穩定，極少出現問題，但用戶服務設置（安裝）或使用不當，會把某種功能及某種假象認以為是故障，因此，出現問題的時候，首先考慮是否自己設置（安裝）或使用不當，或認真觀察機器所出現的情況，仔細查找原因，如確不能解決，請與我們聯繫，取得必要的服務。

在操作、運行、維護、維修時未能達到安全程度，本公司不承擔責任，即使這些安全條款示在本手冊中嚴格控制。

1.2 Cautions 注意事項

- Keep the coolant away from flame to prevent decomposition that would generate harmful gas if breathed and cause death.
- Before welding for cooling system, empty the coolant thoroughly and dispose of properly.
- Operator must follow local codes for working, operation and safety as well as internal codes applicable on site. Only qualified person is allowed to perform any maintenance or repair, and another similarly qualified person should be present for supervision and assistance if necessary, so it is recommended that a specially appointed person should control this machine.
- Never remove, change or adjust any protective or warning signs or safety device.
- Never remove any protection or safety device whether temporarily or permanently during the running of machine.
- Never perform the maintenance and repair until the machine is stopped and deenergized and also make sure that no accidental operation would possibly restart the machine.
- Before disassemble any component while pressure is applied. make sure to switch off all pressure sources connected to the machine group and release the pressure from the whole system.
- Make sure that no tools left in the machine and there is no loose component or other problem
- 制冷劑不要接觸火焰分解，吸入此氣體有致命的危險。
- 在焊接制冷系統前，必須先排空制冷劑，並作妥善處理。
- 操作者必須遵守當地的工作、操作、安全法規及現存的工廠內部法規，維護、維修工作必須由專門操作人員進行，必要時同另一個具有此能力的人監督、幫助、所以建議用專人管理此機器。
- 保護、安全標志、安全設施不應被移動、改變或調整。
- 在機器動作時，不可暫時或永久地移開任何保護及安全設施。
- 祇有在停機，切斷電源的情況下才可實施維護工作，並確保此機器不可能由於誤操作而重新啟動。
- 在壓力下拆掉一個元件前，必須把機組與所有壓力來源切除，並把整個系統卸壓。
- 確保機器內未遺忘任何工具，鬆動件及其它。

1.3 Cautions 注意事項

- Make sure to read and understand this manual carefully and thoroughly. Any failure of following procedures or cautions described in the manual would lead to accident or injury.
- Never let your hand, arm or body touch the hot surface or running parts such as fan.
- Keep your body, handhold tools and other conductors a way from exposed electric circuit.
- Never start this machine in any unsafe condition. Never attempt to run this machine while there is any problem found.
- Keep working pressure below the rated pressure for dryer (refer to the value on the nameplate attached to this machine).
- Never apply the compressed air to the dryer while it is not in operation, otherwise moisture may accumulate on the wall in the backend pipeline damaging the quality of the compressed air. The good practice is to start the dryer first and wait for 3 minutes before applying compressed air.
- Never operate the machine with incomplete phases (check the power supply for adequate voltage and complete phases), otherwise serious injury may occur.
- 祇有仔細閱讀本操作手冊并充分理解，不遵循手冊中的工作程序和注意事項會有產生事故和人身安全的可能性。
- 手、胳膊及身體不要觸及高溫表面、風扇運轉等部件。
- 身體、手持工具及其它導電物應避開電路暴露端頭。
- 絕不在不安全狀態下啟動本機器，若發現問題，不要企圖開機。
- 工作壓力不要高于幹燥機額定壓力（請參考機身標貼為準）。
- 若幹燥機沒有運轉，不要通入壓縮空氣，否則幹燥機後置管路內會存在水份，使壓縮空氣污染的品質下降。最好的方法是先開動幹燥機，待3分鐘後再通入壓縮空氣。
- 絕不在缺相狀態下運轉此機器（應在開機前檢查電源有足夠的電壓、相數）否則將會導致重大事故！



Never start the machine under abnormal working condition. Refer to relevant information in this manual for normal working condition. It is recommended that, operators indicate in written that they have read this manual carefully, and that the manual is maintained properly. We are not liable for the loss of this manual.

在不正常工況下不要開機，至于正常工況，參見手冊中的有關內容。我們建議操作人員以書面的形式表明已仔細閱讀過本操作手冊，并請妥善保管，若丟失本公司不承擔責任！

1.4 Transportation and handling 運輸及搬運

Never throw or impact or vibrate the dryer violently during handling and hoisting.

The dryer can be slanted to an angle of below 45° for a short time transportation. In case of long distance transportation in a slant position at large-angle or in the horizontal position, the compressor may be damaged during hoisting. Forklift truck or elevator for goods may be used for the handling of this machine while the same position, as that for the normal operation, must be maintained. Make sure not to damage the out casing of the equipment.

幹燥機搬運、吊裝時嚴禁重摔、碰撞及嚴重的震動。

幹燥機可以在短時間內以一個不超過45°的傾斜度運轉，但如果進行了大傾斜角度或臥置長途運輸，則可能存在壓縮機等部件在吊掛時產品損壞等危險，本機器可用叉車或貨物升降車搬運，且一定要保持與機器正常運行時的同樣位置，設備外殼決不能損壞。

- | | |
|---|-------------------------------|
| A. In order to avoid damage of the equipment and the components, please be careful when handling. | A. 為了使機組和零件避免損傷，在處理搬運期間請小心處理。 |
| B. Regularly handling uses crane and roller. Anyway do not drag by force. | B. 正規的搬運是吊車或滾筒，無論如何不應該強行搬運。 |
| C. Use crane to lift the equipment. | C. 如果抬高機組請用起重機設備。 |
| D. use pads to avoid damage. | D. 必須採用軟墊以防止損傷。 |

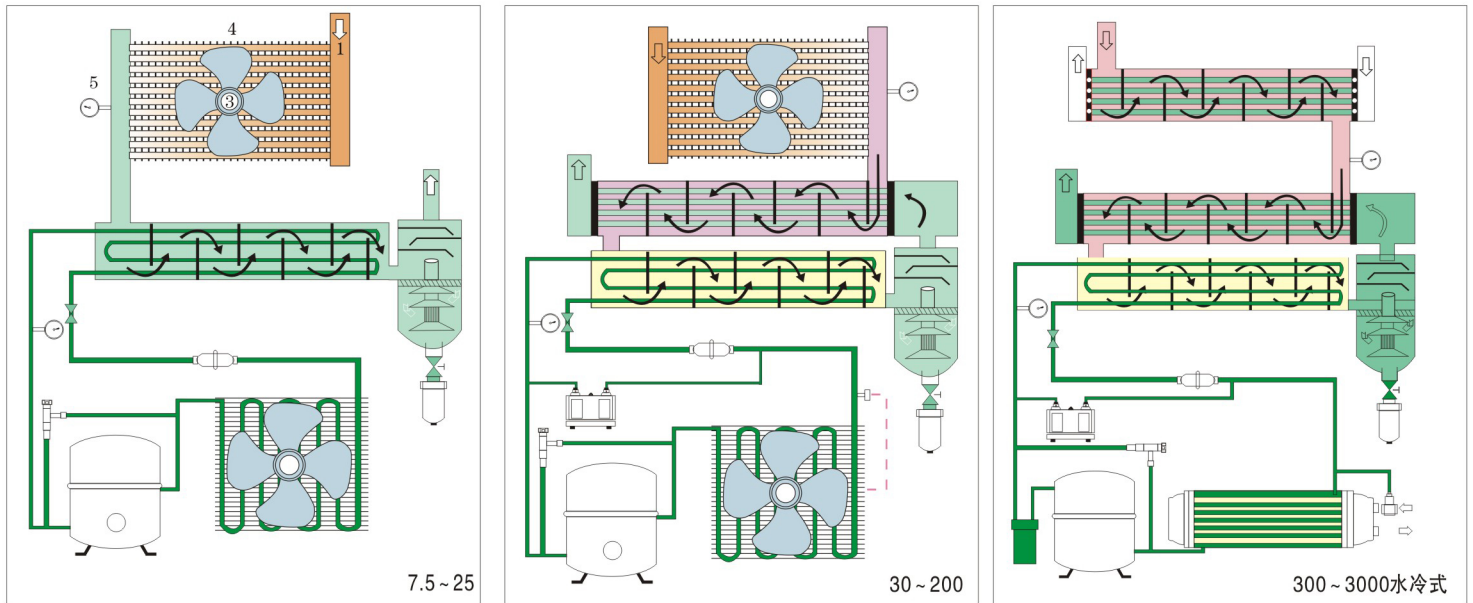
Description of the system 系統說明

2.1 working principle of the dryer 乾燥機的工作原理

According to theory of air cooling and drying, the cooling compressed air dryers series utilize refrigeration facility to cool the compressed air to a certain dew point and separate out correspond water, then separate gas and liquid through separator, then drain out the water by auto-drainage valve to get the dry dew point required by compressed air.

壓縮空氣乾燥機根據空氣冷凍乾燥的原理,利用制冷設備將壓縮空氣冷卻到一定露點溫度後析出相應所含的水分,並通過分離器進行了氣液分離。再由自動泄水器將水排出,從而使壓縮空氣變得所需要的乾燥露點。

2.2 Flow chart 流程圖



Air Inlet 1、空氣入口	Front Refrigerator 4、前置冷却器	Pre-cooler 7、預冷/再热器	Dry filter 10、乾燥過濾器	Whirl wind water separator 13、旋風式分水器
Air outlet 2、空氣出口	Air pressure meter 5、空氣壓力表	Cooled media evaporator 8、冷媒蒸發器	Gas-cooled condenser 11、氣冷式冷凝器	Pressure meter at the outlet 14、自動排水器
Fan motor 3、風扇馬達	Evaporation thermometer 6、蒸發溫度表	Expand valve 9、膨脹閥	Cooled media compressor 12、冷媒壓縮機	Reheater 15、熱氣旁通閥

2.3 Control Panel 控制面板

When electrify, the indicator light of power is one (red). During the normal running, the running indicator light is on (green). If it is abnormal, the abnormal indicator light is on (yellow). Please examine the equipment when at abnormal state.

通電時電源指示燈亮(紅),正常之運轉中運轉指示燈(綠)是一直亮。如有異常指示燈(黃)亮,異常狀況請檢查機器。

Power supply [red] 電源指示燈 [紅]

Elec Fault [green] 電器異常指示燈 [綠]

Stop [red] 停止指示燈 [紅]

Operation [green] 運轉指示燈 [綠]

Eva Pressure Gauge 蒸發壓力表

Air Pressure Gauge 空氣壓力表



Note: If no abnormal noise or abnormal phenomenon exist, start the equipment. Once finding abnormal situation, stop the equipment immediately and find out the reason.

注意: 如无异常噪音或异常现象存在。可启动此机组: 一时发现异常, 即刻开机, 查明原因。

Installation 安裝

3.1 Installation Places Avoided 避免之安裝場所

It is strongly recommended that the dryer is equipped with a gas container. check and see if the position is appropriate for installation by firstly considering its effect on the operation of the machine and then the convenience for tubing. Make sure not to allow heat from the compressor or other heat sources to be discharged onto the dryer.

Keep the installation away from the combustible and explosive gas or goods. Install the dryer in the clean, dry place and allow for sufficient space for convenient maintenance. Keep the machine away from wind and rain and maintain the ambient temperature at 2-45°C. The occasional running of the machine at 49°C would not cause damage but would affect the cooling capacity and dry air dew point, and therefore, it is better not to run the machine at this temperature to prevent machine from tripping due to high voltage. operation at ambient temperature below 2°C would damage the dryer. If the ambient temperature is 0°C, the steam trap (pipe) will be frozen and clogged and heating is needed to increase ambient (environment) temperature.

TO ensure normal operation of the machine, good ventilation is needed for the surround space of the machine to avoid overhigh ambient temperature. Before installation, allow for sufficient space for the control panel, and make sure that there is an unblocked outlet and inlet for the cooling air. At the place where there is a direct sunshine, heat emission would be affected, and therefore, the machine is not allowed to install at the place where there are much steam, oil gas, hot gas, and dust such as diesel engine, generator, chimney, painting, woodworker, cement tub, and grinding machine. The machine should be installed, used and operated strictly in compliance with state or local legal provision, standard and regulations.

乾燥機最好裝置一個儲氣罐，安裝前應注意場所是否恰當，首先要考慮對機器蓋的影響再考慮配管的方便性，勿讓空壓機的熱氣或其它熱源排放在乾燥機上。

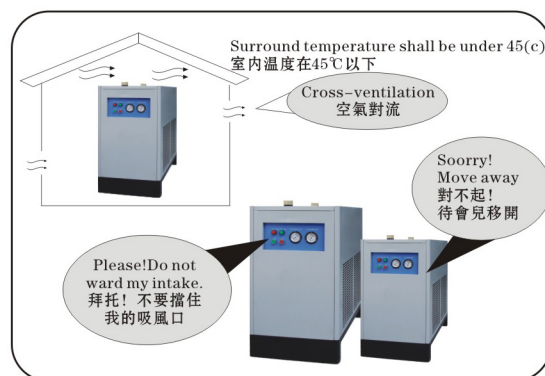
勿裝于四周有易燃、易爆氣體或物品的場所。

安裝乾燥機的地方應清潔、乾燥，為維護方便，四周應留出足夠的空間，機器應避免風雨的侵襲，環境溫度應為2~45°C。機器偶爾在49°C的環境下運行不會有損壞，但制冷量和乾燥空氣露點會受到影響，故盡量避免在些種環境溫度下使用，以免使機器高壓跳機，環境溫度低於2°C時運行可能會使乾燥機損壞，如果環境溫度低於0°C以下時，可能會使疏水器（管）凍結而堵塞，請對周圍（環境）進行加熱（升溫）。

為確保機器正常運行，機器四周應有良好的通風，使環境溫度不至升得過高。在安裝前控制面板處應留出足夠的空間，冷卻風出、入口請確保一個暢通無阻的冷卻風出口。

陽光可以直接照射的地方一影響散熱，勿將機器安裝在柴油引擎、發電機、煙囪、噴漆場所、木工機、水泥槽、研磨機等蒸氣、油氣、熱氣、粉塵多的場所。

機器的安裝、使用和操作應嚴格遵守所在國家和地方的相應法律條文、標準和規定。



Places without good ventilation (sufficient ventilated space around is need), obturation and hot places inside room (if needed, inside room shall have sufficient ventilation, And the surround temperature shall be under 45°C.

通風不好的地方（周圍要有充分之通風空間）。密閉之室內等熱的地方（不得不而要設置時，室內需有充分的換氣，且周圍溫度要在45°C以下）



Shaky places, acclivitous places, places where drainage is easy to be clotted (if needed, please use heater to avoid clotting.)

有震動的地方，有傾斜的地方。排水有可能凝結的地方，（不得不而要設置時，請使用凝結防止用加熱器）連接自動排水器之排水配管不能自然流水的地方。



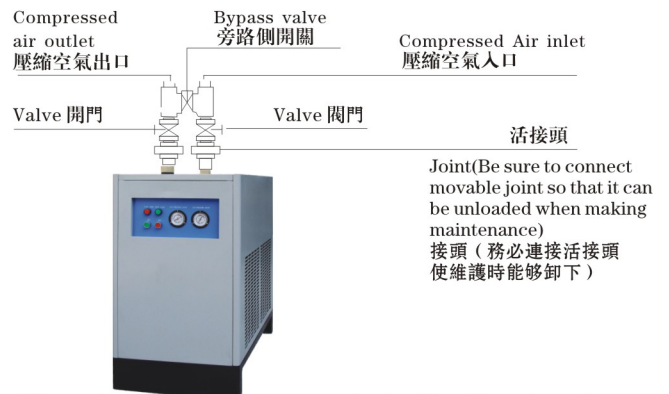
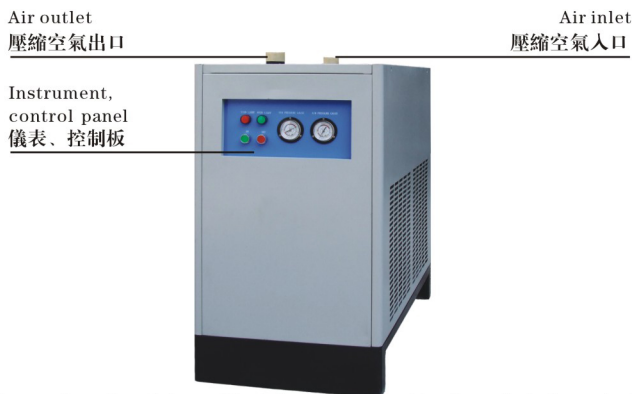
Places directly suffered from rain or wind and humid places, places with much dust and places with erosive gas.

雨或風將直接打到之地方或濕氣多的地方，灰塵、易燃、易爆或有腐蝕性氣體的地方。

3.2. About Air Tubing 有關空氣配管



Pay attention to the label on the machine 安裝時特別注意機身標貼為準



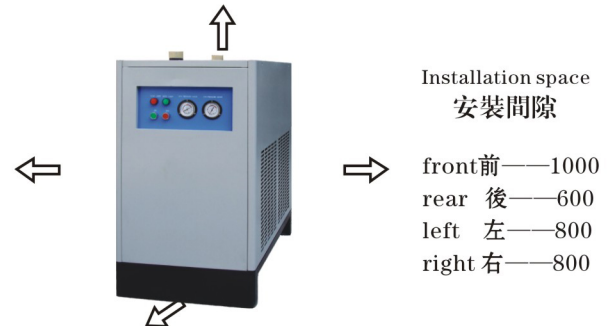
Purge clean the piping with air before connection is made to keep dust and foreign substance from entering.
為了不使塵埃等異物進入，配管內要充分噴氣幹淨後才連接。

When using, generally, the bypass valve is off and the valve at the entrance of the air dehumidifier is on.
使用時通常是旁路側的開關，而空氣乾燥機出入口的開關。

3.3. Water-cooled dryer installation 水冷式乾燥機的安裝

1. High water runoff and low water temperature may cause frozen on the surface of the evaporator.
2. Low water runoff and high water temperature may cause shutdown of the equipment due to the high voltage exceeding 2.5Mpa.
3. The equipment cannot be installed outside.
4. The following requirement must be observed when installing the equipment.
 - A. Observe the relative regulations made by the local government and relative departments
 - B. Installation personals must be in familiar with the local regulations.

1. 如果水流量過高或水溫過低，可能造成蒸發器表面結霜。
2. 如果水流量過少或水溫過高，可能造成機組的高壓超過2.5Mpa而停機。
3. 該機組不能安裝在室外露天環境。
4. 安裝機組時必須按照以下要求。
 - A. 必須遵守當地政府和有關部門的相應規定。
 - B. 配電時，安裝人員一定要熟悉當地法規才能勝任。



3.4. water-cooled pipeline installation 水冷式乾燥機的聯接

The installation of all pipeline system should conforms to the local regulations. The design of the pipeline must reduce bent and high/low move, which can save money and keep the best function.

The correct installation is as follows:

1. When maintenance and service, close the valve to separate the equipment from the pipeline system;
2. On the most top place of the pipeline system, set automatic exhaust valve instead of manual
3. Keep sufficient water pressure in the system (i.e. adjust valve);
4. Install pressure meter and temperature meter for maintenance and service;
5. In front of the water pump, equipped with filter to eliminate the impurity of the water;
6. The diameter of the pipe shall be configured according to the distance and pressure.

所有管道系統的安裝應符合當地的法規。管道的設計必須減少彎曲和高低移位，使能節省費用并保持最佳垢機組性能。

正確的安裝應包括以下：

1. 在維修保養時，關閉閘門以使機組與管道系統隔離；
2. 在管道系統內最高點，設手動或自動排氣閘；
3. 保持系統內充足的水壓（如：有調節閘）；
4. 便于保養和檢修，應安裝壓力表和溫度表；
5. 在水泵前應裝設過濾器，以清除水中的雜質；
6. 管徑須依揚程、距離、壓力適當配置。

3.5 Condenser water pipeline 冷凝器水管道

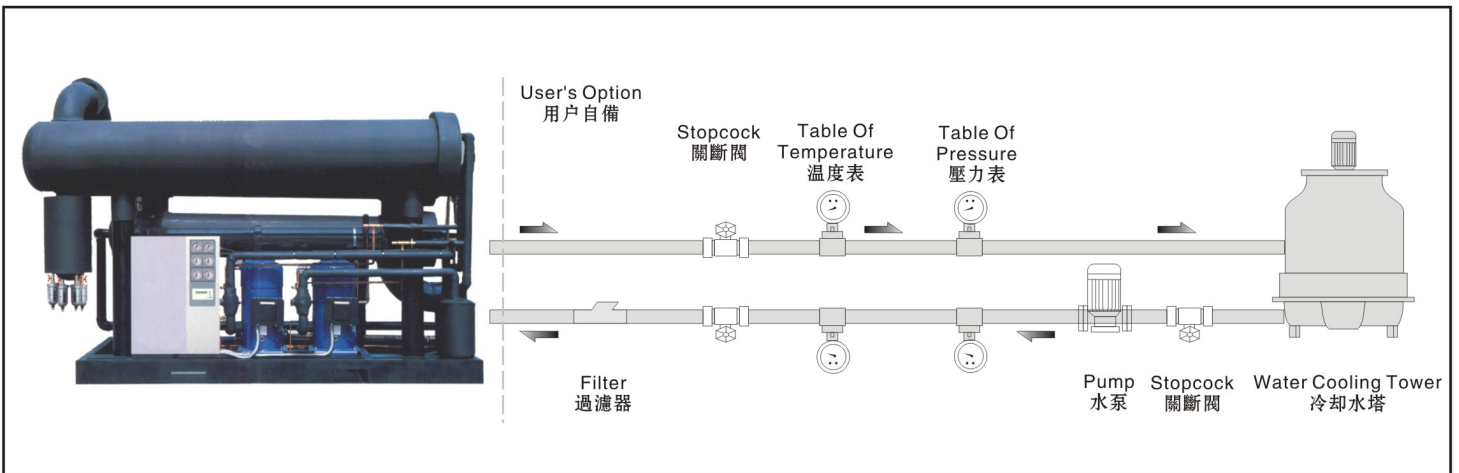
The pipeline of the condenser has been equipped before out of the factory. The site pipeline should be connectde to the pipe on the equipment. The outtake and intake pipe shall be connected with the pipe markde before out of the factory.

機組內的冷凝器管道均攤在出廠前裝齊，現場管道應接到機組的接管上。進出水管應與在出廠前所標貼好的管口相接。

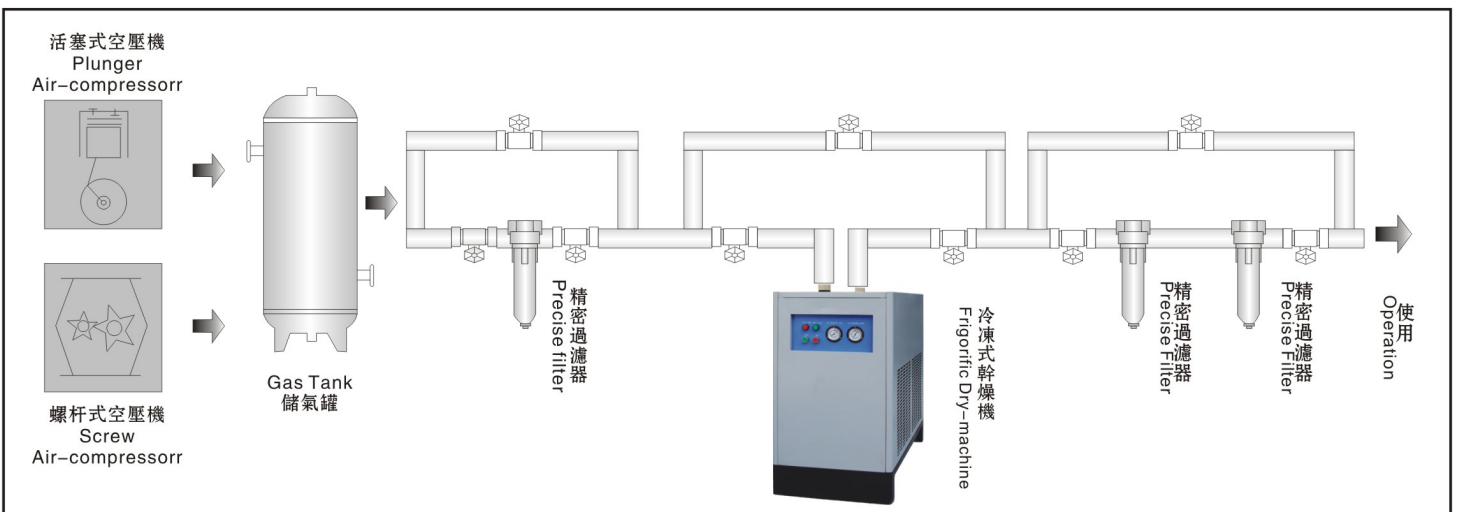
3.6 Cooling tower installation 冷却塔的安裝

Wheng the equipment connecting with the cooling tower, a certain water pressure must be ensured. The water capacity flowing through the cooling tower shoule be stable. Meanwhile, no matter if the load and temperature outside change or not, the water capacity through the condenser must be adjusted, in order to keep stable cooling pressure and the lumidity of the condenser.

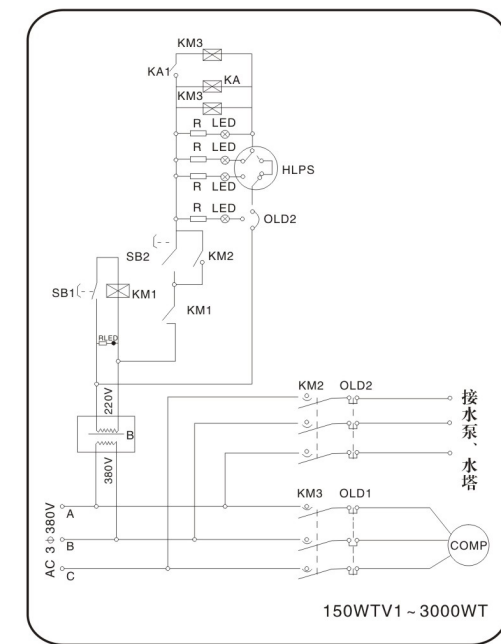
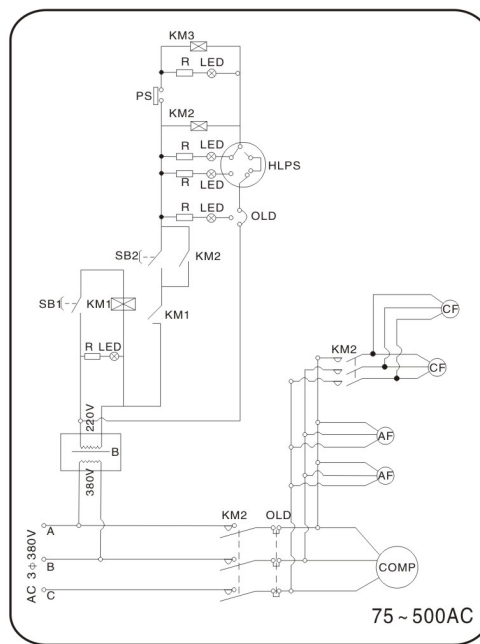
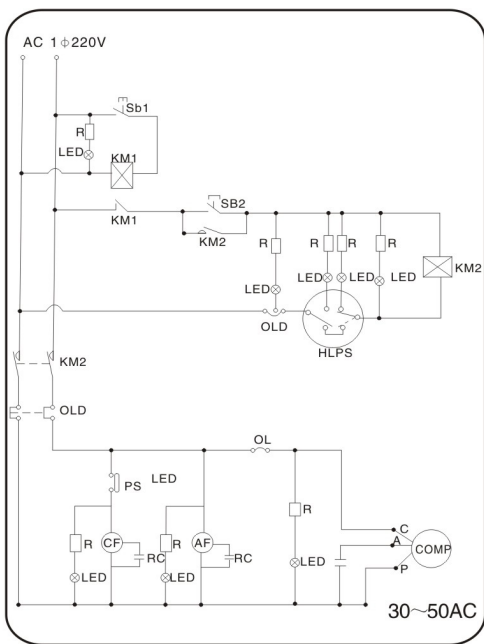
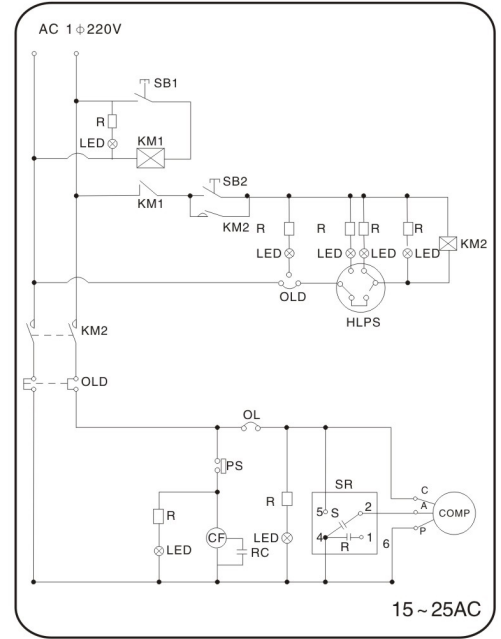
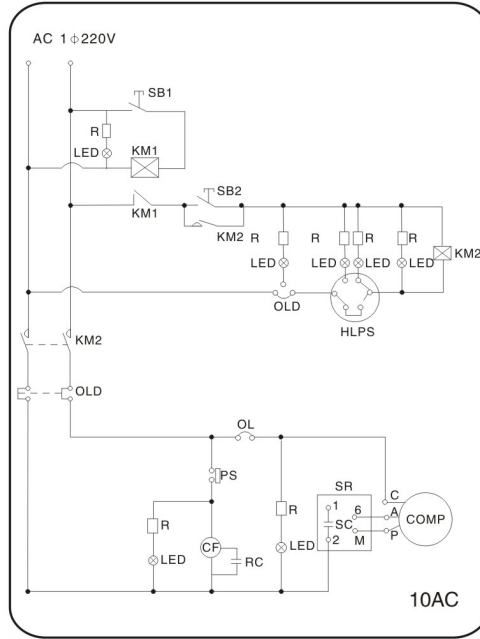
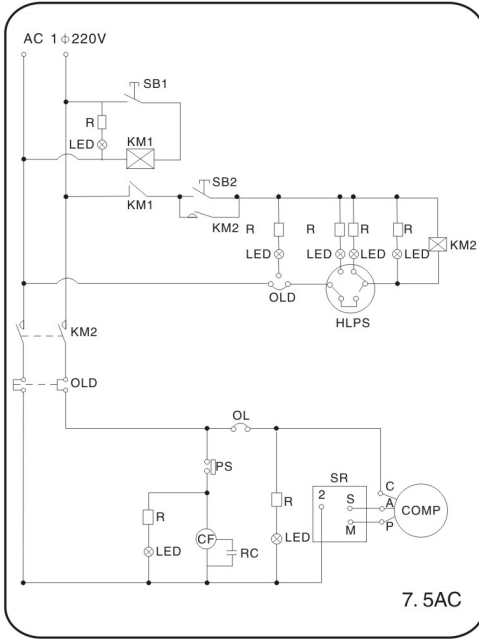
當機組與冷却塔連接時，要保證有一定的水壓。流過冷却塔的水量應穩定。同時，無論負荷和外界溫度是否變化，必須可以調節流過冷凝器的水流量，以保持冷凝壓力恆定和冷凝器的混球工况以保證熱力膨脹閥或其他元件的正常運行。



3.7 Meets ISO8573.1 standard in distribution system 符合ISO8573.1配置範例



3.8. Electric Swagram 電氣配綫圖



KM1	中間繼電器 Center relay	SR	啓動電 Start running
KM2、KM3	交流接觸器 AC contact	RC	運轉電容 Running capacitor
KA	時間繼電器 Time relay	SC	啓動電容 Start capacitor
SB1、SB2	常開微動開關 Common on switch	R	電阻 Resistance
OLD	過載保護器 Overload protector	LED	指示燈 Indicator light
HLPS	高低壓保護器 High/low voltage protector	AF	冷却器電機 Cooling compressor
PS	壓力開關 Pressure switch	CF	冷凝器電機 Cooling media compressor
OL	過載電 Overload	COMP	冷媒壓縮機 Condensation compressor

Periodic Examination and Management 定期的检查或维护



There could be dewfall on the out surface of the coolant compressor depending on the operaton status,which is not fault and will not shorten machine life nor affect air quality.Users are assured to continue the use of machine.

因使用的狀態，冷媒壓縮機外表可能會有結露的情況，這不是故障，此現象不會縮短機器的壽命及影響壓縮空氣的品質，請放心使用。

4.1 Daily examination 每天的檢查

燈
When pressing the light switch to "start-up", is the (green) light on?
自動排水
Does the automatic sewerage drain out periodically? If the drainage is not smoothly, press "automatic sewerage cleaning" for clean.

按成“啟動”時，(綠)燈會亮嗎？
水是否有定期的排出？如動作不順請按以下“自動排水器的清洗”來清洗。

壓力表

During running, the evaporator pressure meter indicates 0.6Mpa, which means overload state. Please check the following "overload state" conditions.

運轉中，蒸發壓力表的指示0.6Mpa以上，有可能是滿負荷狀態。請查對下邊“滿負荷狀態”各條件。

Special points: 特別指示：

When the needle are within 0.3-0.6Mpa, it is the best working state.

針在0.3-0.6Mpa範圍內即是最佳工作狀態。

4.2 Examination and management monthly 每月一次的檢查及維護

Machine with electronic:

For the machine with electronic drainer, check with manual button (TEST) every day and see if there is any water coming out. The electronic drainer can be timed as required by the customer with SEC for second and MIN for minute. Make sure not to allow water to drip down on the drainer causing electric short circuit and damage.

電子排水器：

安裝電子排水器的機型，請每天用手動按鍵（TEST）檢查是否有水排出，電子排水器的時間可根據用戶所需要的時間設定，SEC為秒鐘，min為分鐘，請注意不要讓水濺落在排水器上，造成電氣短路而損壞。

	Manual testing button 手動試驗按鍵
SEC 秒鐘	min 秒鐘

Cleaning of automatic sewerage:

1. Turn on the ball valve, turn on the bypass valve, and set the pressure of automatic sewerage to "0".
2. Screw out the bottom tube by tube clamp.
3. Inject the dissolvent of neutral abluent into the inside, and clean it by sufficiently shaking.
4. lock the clamp tightly according to the original installation, then turn off the drainage valve, and turn on the ball valve.

Cleaning of the intake at left side (front)

Use cleaner, brush ball or sprayer to clean the radiator once every week. Clean the dust on the intake at the right side (front). Turn off the drainage valve and turn on the ball valve.

自動排水器的清洗：

1. 開關球閥，開戶旁路閥，使自動排水器的壓力為“0”
2. 用管鉗將底部管髓放開。
3. 將溶有中性洗劑之水注入其內部，充分搖動以清洗。請絕對不要使用溶劑。
4. 請安原來安裝，把夾緊圈鎖緊，將放出閥關閉，而球閥開戶。

左側（前方）通風口（吸氣口）的清掃：

請每星期一次用吸塵機，刷子球吹或噴嘴清除散熱網。清除右側（前方）面通風口（吸氣口）的灰塵。



Troubleshooting 故障排除

The troubles caused by the cooled compressed air dryers itself or the outside factor is caused by the following six factors and troubleshooting.

冷凍式壓縮空氣乾燥機本身故障及外在因素所產生之故障情形，不外乎下列八大因素及其故障排除方法：

5.1 Air pressure is too much 空氣壓降太大

Phenomena 現象	Reasons 原因	Troubleshooting 故障排除
Air Pressure At Operation Site Is Worse Than The Large Site, 操作現場比空壓機壓差過大	The Door Of Pipeline Does Not Open Totally, 管路閥門未全開	Open The Valve Totally,將閥門全開
	Diameter of Tube Is Too Small,管徑太小	Enlarge The Diameter Of Pipe,管徑加大
	Pipeline Is Too Long,管路太長, 彎頭、接頭太多	Re-design The Pipeline System,管路系統重新設計
	Too Many Elbows And Joints,管路連接處漏氣太多	Check Elbow And Joint,檢查彎頭接頭
	The Connection Of Pipeline Is Leaking,管路中的過濾器阻塞	Clean The Filter Or Replace The Core Of The Filter 過濾器清洗或換新過濾器
Air Insufficient 現場用氣不足	The Runoff Blocked BY The Filter In The Pipeline Exceeds The Rating Of Air Compressor,現場使用流量超過空壓機額定流量自然降低	1.Replace The Air Compressor With Larger Capacity 換容量較大的空壓機壓力 2.Reduce The Capacity Of Air Runoff 減低空氣流量
	The Runoff Reducing The Temperature Switch Has Trouble,溫度開關故障	Renew The Temperature Switch,更新溫度開關
Air And Condenser Frozen. 蒸發器結冰	Expanding Valve Blocks 膨脹閥堵塞失效	Renew Expanding Valve 更新膨脹閥

5.2 Drainage of water abnormal 除水情況不良

Phenomena 現象	Reasons 原因	Troubleshooting 故障排除
Abnormal indication 現場有水份	Air Bypass Valve Does Not Close Totally,空氣旁路閥沒有全開	Close bypass valve 閉緊旁路閥
	Air Does Not Pass The Dehumidifier,空氣沒有通過乾燥機	Close down dryers entry & exit valves 乾燥機出入口閥門全開
	Air Runoff Is Large And Pressure Is Too Large,空氣流量大壓力降太大	Re-design air compression system 空壓源系統重新設計
	Sewerage Abnormal,排水器不良	Cleaning or replacing 清洗或換新
	Sewerage Is Much Higher Than Automatic Sewerage,排水管高出自動排水器	Re-setup sewerage system 排水管路重新裝置
	Bad matching of compressor and dryers 空壓機太大, 乾燥機太小匹配不良	Re-design the matching 重新設計匹配問題
	Whether or not the inlet and outlet of the compressed air are connected reversely 壓縮空氣進出口是否接反	Rechecking 重新校對
Orate temperature 蒸發溫度指示異常	Drier Needs A Renewal In 蒸發溫度太高	Check the compressor's load 檢查空壓機氣源負荷
	Exit And Entry Valves' System,周圍環境空氣污染通風不良	Select good positioning or improve the ventilation 選擇適當位置或改善通風
	Check The expansion valve Conditions,膨脹閥堵塞失效	Replace the expansion Valve更新膨脹閥
	Cooling media leakage冷媒漏	Check the cooling media or re-fill-up cooling media 查捕冷媒漏處, 灌冷媒
	Meters damage 儀表損壞	Replace meters 更新儀表

Troubleshooting 故障排除

5.3 Total not running 全部不運轉

Phenomena 現象	Reasons 原因	Troubleshooting 故障排除
Powerless 無電源	Fuses break or Non-fuse On and breaks 保險熔斷或熔斷絲開關跳脫	Be Sure If There Is Short-phase 確認電源是否有缺相短路 Short-circuit Of Power Supply 檢查保險絲或熔絲開關
	The voltage 斷綫	Check The Fuse And Find The Place Of Breaking, 找出斷綫處, 加以檢修
	Transformer failure 變壓器故障	Replacing transformer 更換變壓器
	Abnormal, or power cord is too thin 電壓異常或電源綫太小[電壓降]	And Repair It. Replace New Switch, 請照銘牌上額定電壓指示選擇
Whether there is power or non-power. 有電源但不能啟動	Low voltage poor of contact. 開關不良	New Switch 換新開關
	Poor switch or poor of contact. 接觸器不良	New Contact 換新接觸器
	Over relay 過載電	According To The Rating Currency On The Nameplate 不良換新過載電
	Capacitor Abnormally 電容器不良	New Capacitor, 換新電容器
	Starts abnormally 啟動電 不良	New starter, 換新啟動電
	High/low Pressure abnormally 高低壓壓力開關不良	New High/low Pressure Switch 換新高低壓壓力開關
	Compressor Does Not Reset After 溫度開關不良	New Temperature Switch 換新溫度開關
	Switches abnormally 壓縮機不良	New Compressor 換新壓縮機
	Therefore intermediate relay block 中間繼電器故障	Repair or replace auxiliary relay (water-cooled dryer) 修復或更換中間繼電器 (水冷式乾燥機)
Switches are normal but do not start. 開關全部正 常但不能啟動	High/low Pressure skipping, Temperature 高低壓跳膠後, 未復掃	After Finding Out The Reason Of Skipping, Reset Or Replace 找出跳脫原因後, 再RESET
	Electromagnetism Does Not Reset After Opening/closing O.L. 電磁開關O.L未復掃	After Finding Out The Of Skipping, reset Or Replace
	Opening/closing Of High Pressure Does Not Reset. 高壓開關未復掃	找出原因後, 再RESET
	Error Set Of Temperature Open/close 溫度開關設定誤差	New Temperature Switch 重新設定或換新溫度開關
	Compressor Is Abnormal. 壓縮機不良	New Compressor 換新壓縮機
	Defective auxiliary relay 中間繼電器不良	Repair or replace auxiliary relay 修復或更換中間繼電器

Troubleshooting 故障排除

5.4 Ineffective running 正常运转、但效果不佳

Phenomena 現象	Reasons 原因	Troubleshooting 故障排除
Too low evaporating temperature 蒸發溫度指示過低	Bad evaporation temperature meter(low pressure meter)蒸發溫度表（低壓表）不良	Replace evaporating temperature meter 換新蒸發溫度表（低壓表）
	Blocked expansion valve 膨脹閥阻塞	Replace expansion valve 換新膨脹閥
	Temperature switch or pressure switch set low 溫度開關或壓力開關設定過低	Re-setup 重新調整設定
	Leaking cooling-media 冷媒漏	Repair the leakage and re-fill-up cooling-media 查出漏何處，加灌冷媒
Too high surrounding temperature 蒸發溫度指示過高	Too high evaporating temperature 周圍溫度高	Improve the ventilation 改善周圍溫度，通風良好位置
	Bad heat-air bypass valve 熱氣旁路閥失效	Adjust or replace the heat-air bypass valve 調整或換新熱氣旁路伐
	Blocked condenser 冷凝器阻塞	Clearing 清除
	Too much air processing 空氣處理過大	Re-design the matching 重新設計匹配問題
	Worn-out cooling-media compressor valve-plates 冷媒壓縮機進排氣閥片磨損	Replace the compressor 換新壓縮機
	Whether the condenser fan is rotating in the wrong direction(75and above dryer) 冷凝器風機是否反轉（75以上乾燥機）	Readjustment 重新調整
	Insufficient cooling water or overhigh temperature of water 冷却水水量不足或水溫過高	Readjustment(water-cooled dryer)重新較正（水冷式乾燥機）

5.5 Abnormally start 啟動後不良

Phenomena 現象	Reasons 原因	Troubleshooting 故障排除
ABNORMAL VOLTAGE 電壓異常	Power cord short-circuit with scorch smell not long after starting 啟動不久後，電纜短路產生燒焦味道	Chain Control Circuit And Switch Need Check-up To 連鎖控制線路及開關重新配置
HIGH PRESSURE BREAK,DIFFICULT TO RESET AND START, 高壓跳脫雖有復 還是不能啟動	Pressure switch abnormal 壓力開關不良	Either Replace 換新壓力開關
	Fan abnormal 風扇不良	Either Find The 換新風扇馬達
	Overload break 過載跳脫	Problems In Motor Or Other Places. 查出原因或檢查電
	Condenser scaled 冷凝器積垢	Good ventilation 多清洗
	Too much cool media 冷媒太多	With suitable 減少適當冷媒
	Too high surrounding temperature 環境溫度過高	Environmental 改善周圍溫度，通風良好位置
	Expanding valve blocked 膨脹過濾器阻塞	Environmental 換新膨脹閥
	Filter blocked 乾燥過濾器阻塞	A Great help In Maintaining The Facility 換新過濾網
OVERLOAD BREAKS 運載電跳脫	Start capacitor,pressure switch abnormal 啟動電 不良	Renewing Good 換新啟動電
	Compressor overload 電容器不良	Expansion Valve And 換新電容器
	Defective pressure switch 壓力開關不良	Replace pressure switch 換新壓力開關
	Compressor overload 壓縮機超負荷	Dryer overload,reduce air treatment capacity 乾燥機超負荷，減少空氣處理量
	Too high surrounding temperature 周圍溫度過高	The improvement ambient temperature airs the well place 改善周圍溫度，通風良好位置
	Setting current value too low 電 廠宇電流值太低	Contacting Owing to bad Contact. 調整電流值
	Poor contact 電 接觸不良	Regular check-up Is 清理或換新
	Power supply loss-phase 電源久相	A Must For Smooth Operation 查出電源久相因素
	Poor contact of the contactor 接觸器不良或接點不良	And Good Maintenance Of The system. 清理或換新接觸器

Guarantee card 保证卡

We appreciate your using "HONGDA" cooling dryers. This compressed air dehumidifier is world-class product produced under experienced and strict management. Within one year from the date purchased, if you have any technical problem, we will make prompt reply and after-sale service.

衷心的感謝你採用“H O N G D A”牌冷凍式乾燥機，本壓縮空氣乾燥機，在經驗豐富及嚴密的管理下，所創造的世界級產品。自購買日起壹年內，如有使用技術上之問題，我們將為您解答及迅速的為您做售後服務，並將按保證書履行保證。

請按虛線剪下，寄回去本公司。



Following card 跟踪卡

In order to ensure your right, please fill in this card with detailed information after purchasing. The contents of the two cards shall be conformed. Then fax to our company through service network, in order to provide prompt service for you.

為了保障您的權益，購買後請詳細填寫此卡，兩卡登記內容務必一致，由服務網傳回本公司，以便迅速為您服務。

Name of Customer 顧客名稱: _____
Date of purchase 購買日期: _____
Address of Installation 安裝地址: _____
Model 型 式 : _____
Production Code 制造號碼: _____

When you need service, please contact out nearest service site 需要服務時, 請就近聯絡本公司服務站

Name 名 稱 : _____
Address 地 址 : _____
Tel 電 話 : _____
Fax 傳 真 : _____

請按虛線剪下, 寄回去本公司。

Name of Customer 顧客名稱:
Date of purchase 購買日期:
Address of Installation 安裝地址:
Model 形 式 :
Production Code 制造號碼:

Purchased the equipment from 機器購自

Name 名 稱: _____
Address 地 址: _____
Tel 電 話: _____
Fax 傳 真: _____
Contact person 經辦人: _____

Technological Specifications 技术参数

Technological Specifications of wind of wind cooling type dryer 气冷式干燥机技术参数

The parameters are subject to changes without notification 以下參數如有更改，恕不預先通知

Type 型號 AC	Flow capacity 處理風量 Nm ³ /min scfm		Compressor 壓縮機 KW	Ele.power 電源 V/50Hz	Connection 管徑	Dimensions 尺寸 W×D×H.mm	Weight 重量 Kg
HD-7.5AC	1.0	35	0.30	220	3/4"	610×400×640	38
HD-10AC	1.5	53	0.35	220	1"	750×420×800	52
HD-15AC	2.0	71	0.5	220	1"	750×420×800	65
HD-20AC	2.5	88	0.75	220	1"	800×450×850	73
HD-25AC	3.0	106	1	220	1"	800×450×850	80
HD-30AC	3.5	124	1.25	220	1 1/2"	930×510×950	92
HD-40AC	5.0	176	1.5	220	1 1/2"	930×510×950	100
HD-50AC	6.5	230	2	220	2"	980×570×1050	115
HD-60AC	8.0	282	2	220	2"	980×570×1050	136
HD-75AC	10.5	371	2.5	220	2 1/2"	1080×600×1150	160
HD-100AC	13.5	477	3	220	2 1/2"	1180×700×1300	210
HD-120AC	15	530	4	380	3"	1280×700×1400	235
HD-150AC	20	706	5	380	3"	1280×700×1400	265
HD-180AC	25	883	6	380	3"	1380×750×1400	293
HD-200AC	28.5	1006	7.5	380	3"	1380×750×1400	325

The maximum conditions for use:
最大使用條件

A. Inlet temperature is <80°C
A. 入口溫度 <80°C

B. Ambient temperature is <45°C
B. 環境溫度 <45°C

C. Air pressure is 1.0Mpa
C. 空氣壓力1.0Mpa

Pressure dew-point:
壓力露點

2 ~ 10°C (Equivalent of air pressure dew-point-20°C)
2 ~ 10°C (相當於大氣壓露點-20°C)

Refrigerant 制冷劑

R22 (R411B)

Notes 注: 1Nm³/min=35.3SCFM 1.0Mpa=10.2kg/cm²

Technological specifications of water cooling type dryer 水冷式干燥機技術參數

The parameters are subject to changes without notification 以下參數如有更改，恕不預先通知

Type 型號 WT	Flow capacity 處理風量 Nm ³ /min scfm		Compressor 壓縮機 KW	Connection 管徑 water	Cooling water 冷却水量 L/min	Cooling tower 冷却水塔 T/R	Dimensions 尺寸 W×D×H.mm	Weight 重量 Kg
HD-150WT	20	706	5	F3"	70	8	1280×700×1400	265
HD-200WT	28.5	1006	7.5	F3"	90	8	1380×750×1400	325
HD-300WT	35	1236	7.5	F3"	112	10	1500×900×1450	486
HD-400WT	45	1588	10	F4"	150	15	1500×900×1450	578
HD-500WT	55	1942	12	F4"	180	20	1650×1000×1450	660
HD-600WT	65	2295	15	F5"	225	20	1650×1000×1450	850
HD-700WT	75	2648	17.5	F5"	350	25	2000×1300×1500	970
HD-800WT	85	3000	20	F6"	300	25	2000×1300×1500	1020
HD-900WT	105	3706	22.5	F6"	325	30	2400×1400×1600	1100
HD-1000WT	120	4236	25	F8"	375	30	2400×1400×1600	1160
HD-1500WT	170	6001	40	F8"	525	50	2800×1700×1900	1460
HD-2000WT	230	8120	50	F10"	750	60	3800×1700×1900	1870
HD-2500WT	290	10237	63	F10"	900	70	4000×1900×2000	2250
HD-3000WT	370	13061	75	F12"	1050	80	5000×2000×2300	2580

Cuter type 外形

Starting from Model 800, open-type design 自800型起，敞開式設計

Electricity 電源

AC 380V 3PH 50/60Hz

The maximum conditions for use:
最大使用條件

A. Inlet temperature is <80°C
A. 入口溫度 <80°C

B. Ambient temperature is <45°C
B. 環境溫度 <45°C

C. Air pressure is 1.0Mpa
C. 空氣壓力1.0Mpa

D. Entry temperature of cooling water below 32°C
D. 冷却水入口溫度32°C以下

Pressure dew-point:
壓力露點

2 ~ 10°C (Equivalent of air pressure dew-point-20°C)
2 ~ 10°C (相當於大氣壓露點-20°C)

Refrigerant 制冷劑

R22 (R411B)

Notes 注: 1Nm³/min=35.3SCFM 1.0Mpa=10.2kg/cm²

Guarantee Sheet 保證書

We appreciate your using our **HONGDA** air purify facility. We guarantee that if there is any problem concerned material and production, we will guarantee according to the following items and repair and replace damaged components free of charge.

1. Native written pledge merely is living the listed below situation effectively:

- (1. The stipulation manipulates to keep in good repair set the freezing style dry utensil of the male" operation pamplet" of this produce according to **HONGDA** tablet.
- (2. Therefore the block of this produce is really not as a result of the improper unit,the negligence of use person and natural disaster is what arouses to operation either repair
- (3. Invent the size and weares and teares and either the doctor not after dimolishes.
- (4. Therefore possessing the block altogether all after native corporation serve personnel staff either engage by special arrangement serving business and mend.

2. This written pledge is indisposedly used, and the automatic sluicing cuts down and exact filter...Await the consumption stuff.

3. Please consumer ought to proper assuring written pledge. and writes the produce to follow the tracks of to check in order that native corporation serves in the interest of you, and shows written pledge in order to obtain gurranteing the rights and interests when indispensability. Plesase in the hour of need to serving get in touch with our corporation in the neighbourhood of to serve the net.

我們感謝您采用本公司空氣淨化設備，今以此書向保證，倘若在材料上或制造上有問題而發生故障，則本公司願意向用戶服務按照下列條款保證，為用戶免費修理并更換損壞零件。

一、本保證書僅在下列情況有效：

- 1、本產品按本系列冷凍式乾燥機“操作手冊”之規定操作保養。
- 2、本產品之故障并非因不當的裝置，操作或修理，使用者之疏忽，天災引起的。
- 3、編造號碼未經拆除、磨損、或變遷。
- 4、凡有故障均攤經過本公司服務人員或特約服務商修理。

二、本保證書不適用於自動泄水伐、精密過濾器……等消耗性材料。

三、用戶應妥善保管保證書、并填寫產品跟踪卡以便本公司為您服務，必要時，請出示保證書書以獲得保證權益。需要服務時，請就近聯系我公司服務網。

All descriptions in this manual reflect the situation at the time when it is printed. We reserve the rights to revise the technology and specifications, which is also applicable for the products already ordered.

手冊中所有內容祇反映印刷當時的情況，本公司保留技術、規格化等更改的權力，這同樣適用於已經打貨的產品。