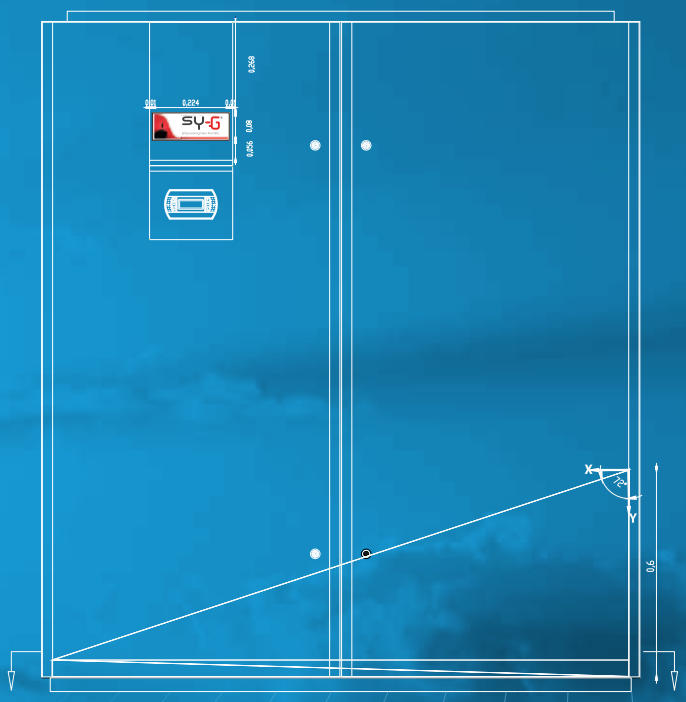
SERIES PP
MODEL: DXW-IFC

SY-G®
Empowering New Frontiers™

PRECISION AIR CONDITIONER FOR CRITICAL APPLICATIONS

COOLING CAPACITY 27.9~106.7 KW



www.sy-g.com

Sy-G® is a worldwide supplier of high efficiency refrigeration solutions. Under a vision of vertically integrated manufacturing, which includes our own coils, condensers and dry coolers, quality control is closely monitored throughout the industrial process, resulting in high-end reliable products. Our permanent efforts in securing the highest levels of quality in our products and solutions, are backed up by ISO 9001, ISO 14001, OSHAS 18001, UL, TUV and CE certifications.

We continuously strive to design innovative solutions that satisfy and exceed the changing expectations of each industry. Series PP product family is specifically designed and manufactured to meet the demanding mission critical requirements, including Data Center, Telecommunications, IT, Medical and Industrial applications; combining precise temperature and humidity control with outstanding reliability and energy efficiency throughout 24x7 continuous operation.

SERIES PP

PORTFOLIO OF PRECISION AIR CONDITIONERS OFFER

A variety of heat-rejection options to meet the specific needs of any installation. Specifically, Model DXW-IFC is designed and built for reliability, achieve energy efficiency through dual cooling sources, EC fans and indirect free cooling.

HIGHLIGHTS

Precise Control:

The control accuracy for Temperature is ±1% and ±5%.

Heat Rejection Arrangement:

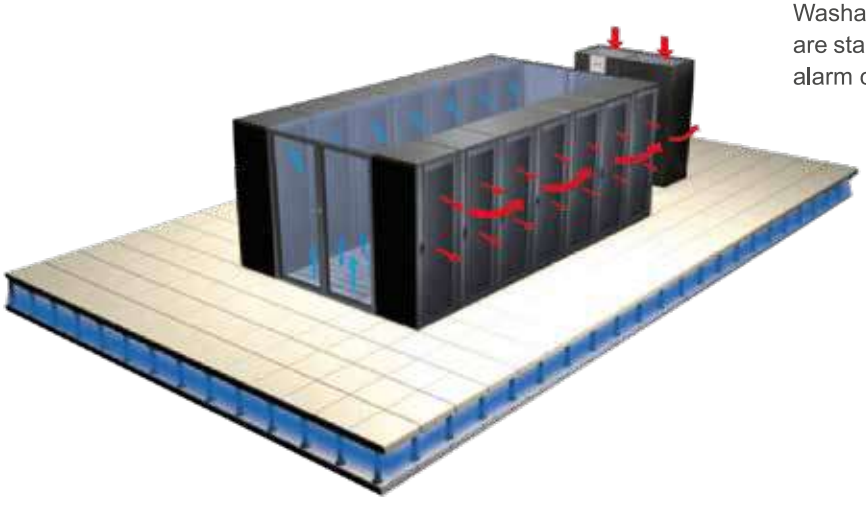
Flexible Heat Rejection arrangement, able to operate in Direct Expansion mode, Indirect Free Cooling mode and Mixed (Direct Expansion and Indirect Free Cooling) mode.

Supply and Return Air Arrangements:

Air supply arrangements include Downflow (bottom discharge) and Upflow (top discharge). Return air arrangements include top return, bottom return, front return, and rear return.

Corrosion Proof:

The unit's framework has a corrosion protection treatment that protects the unit during its life cycle.



Easy Maintenance:

The technical compartment housing the compressor, humidifier, control and safety devices is separate from the air flow, enabling ordinary service and preventive to occur during operation. For these purposes, the unit is fully accessible from the front.

EC Fan:

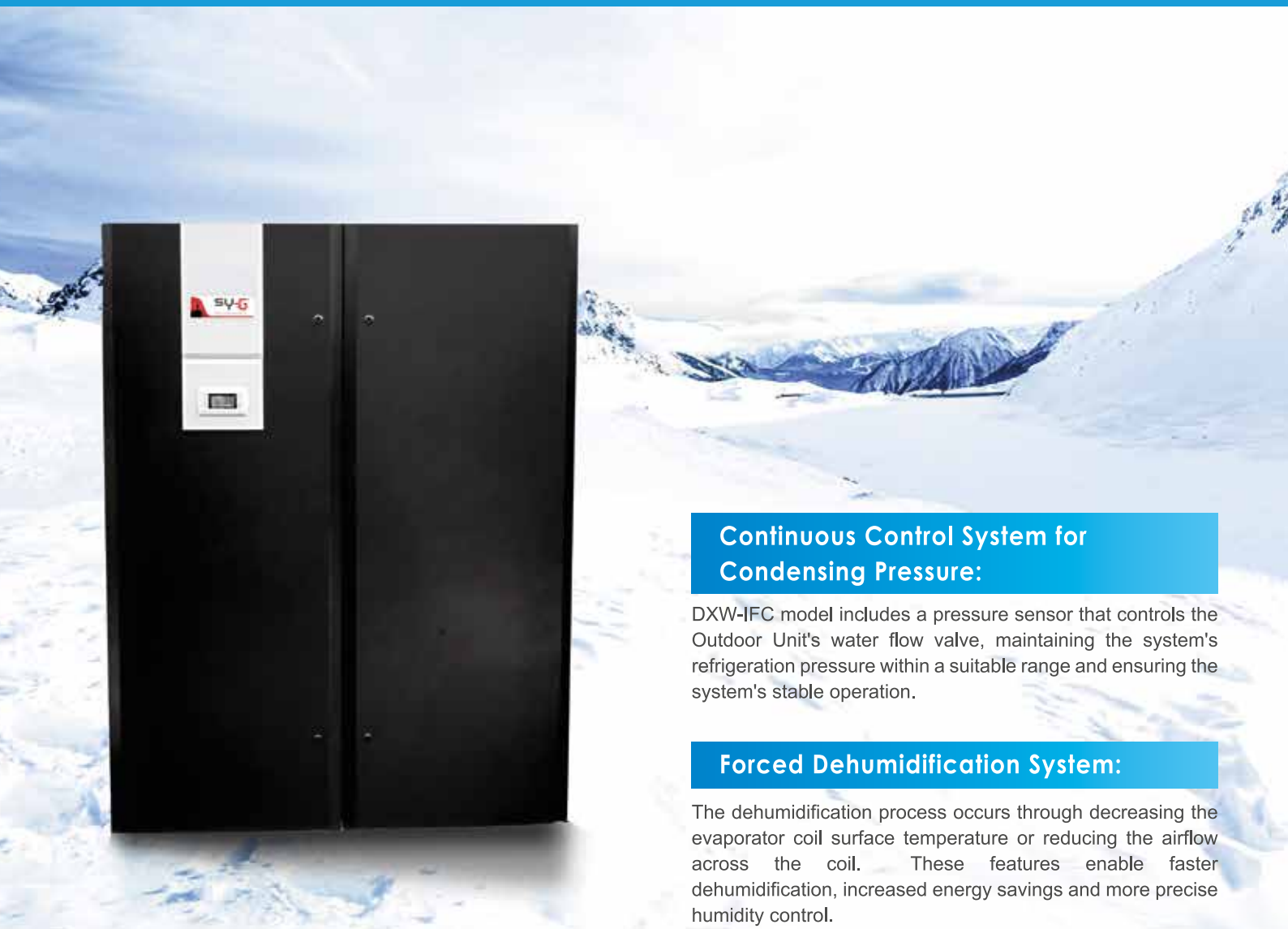
High efficiency, high durability EC fans come standard in this unit.

Scroll Compressor:

This type of compressor produces low vibration, low noise and great efficiency. Scroll inverter compressors are available as an option, this type of compressors allows for further efficiency as they can vary speed continuously according to the cooling demand.

Air Filter:

Washable, easy to maintain and durable G4 class air filters are standard, with optional air pressure switch, a clogged filter alarm can be triggered when the filter is dirty.



Continuous Control System for Condensing Pressure:

DXW-IFC model includes a pressure sensor that controls the Outdoor Unit's water flow valve, maintaining the system's refrigeration pressure within a suitable range and ensuring the system's stable operation.

Forced Dehumidification System:

The dehumidification process occurs through decreasing the evaporator coil surface temperature or reducing the airflow across the coil. These features enable faster dehumidification, increased energy savings and more precise humidity control.

Isolated Control Panel:

All the electrical and control components are installed in an isolated control panel with orderly wiring and clear labeling, meeting the IEC standards.

Electrode Humidifier:

An electrode humidifier, controlled by a microprocessor, monitors and adjusts the humidifying capacity precisely, while the water quality monitoring and wash extends the maintenance interval, prolonging the working life of the unit.

Self-diagnosis:

All the microprocessor-connected components are continuously monitored and controlled, and, in case of malfunction, the unit is shut down and the fault is shown on the display.

Electric Heater:

The electric heater is built with stainless steel pipes and wrapped fins, which allow for a reduced operating temperature, therefore eliminating ionization, and avoiding unpleasant odors.

Design innovative solutions

FEATURES:

- Constructed with a steel frame and painted with epoxy powder to ensure proper adhesion to the surface.
- Microprocessor control system with touch screen display for controller.
- Equipped with high efficiency Electronically Commutated (EC) fans.
- Aluminum water pan with drainpipe, liquid receiver complete with accessories, leak detection sensor, and coolant tank.
- R410A environmentally friendly refrigerant.
- Electric resistance heaters with temperature control, built with low density heating components and non-corrosive metal sheath tubular finned.
- Self-contained immersed electrode boiler type humidifier with water level control and auto-drain functions.
- Independent electrical protections for: compressor, fan, motor, heater, and humidifier.
- Hermetic scroll compressor equipped with electrical protector, phase protector, exhaust muffler, and oil tank heater.
- Thermodynamic expansion valve (TXV).
- Washable G4 fiber-pad folded filter, built with an exterior aluminum mount structure.
- Hot gas bypass.
- Liquid detection sensor.
- Independent refrigerant charging system for high pressure and low pressure lines.
- Indoor service valves.
- The water piping is not exposed and is installed in compliance with international standards.

OPTIONAL FEATURES:

- Electronic expansion valve (EXV).
- Scroll inverter type compressors.
- Automatic Transfer Switch (ATS) enabling dual power sources for the unit.
- Multiple communication protocols for remote monitoring, such as: SNMP (web interface), Modbus and BACnet.

BENEFITS:

- Capability for cooling, heating, de-humidifying, and humidifying, as well as filtering air in the room.
- High Sensible Heat Ratio (SHR).
- World-class Energy Efficiency Ratio (EER).
- Designed and manufactured to operate at 3,000 meters above sea level without suffering any altitude degradation.
- Random multiple unit insertion after a power failure, with a time delay from 2 to 60 seconds, avoiding simultaneous unit start.
- The control system allows customized programming of temperature, relative humidity, and manual start-up of components. In addition, up to sixteen (16) units can be installed to function synchronously in parallel, alternate, and/or redundant configurations.
- Optional energy saving working mode.
- EC fans are 30 to 50% more efficient, have an average lifespan of 10 to 15 years, and for ease of maintenance, there are no belts to change or pulleys to adjust.
- Compressor positive start to avoid short-cycling alarms and low-pressure lockout.
- Highly accurate temperature and humidity control that extends the service interval and life-cycle, designed to operate with ordinary tap water and equipped with automatic water supply and flushing system to reduce mineral precipitation.
- All units are 100% front serviceable with all major components located away from the airflow stream, providing important space savings.
- Electric board, protection switches and control devices are installed in a separated compartment, making the unit serviceable without requiring shut down.
- Lateral panels and doors are internal covered with B1 insulation material, according to DIN 4102. This internal covers that be self-extinguishing and non-inflammable.

Energy Saving Technologies

OPTIONAL ENERGY

SAVING RUNNING MODES

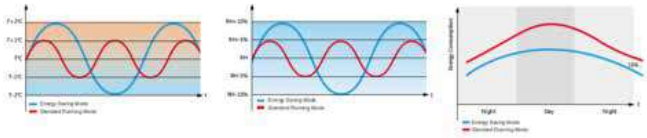
The DXW-IFC model offers the two following running modes, which are selected from the controller display:

STANDARD RUNNING MODE:

Temperature and humidity are controlled within a narrow ranges.

ENERGY SAVING MODE:

Energy savings can be achieved by controlling temperature and humidity within wider ranges.

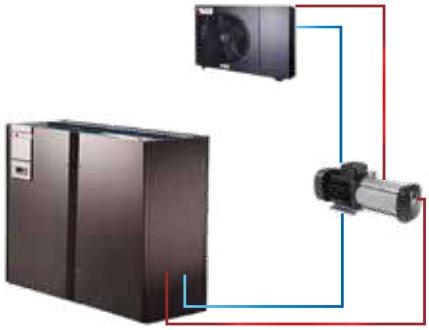


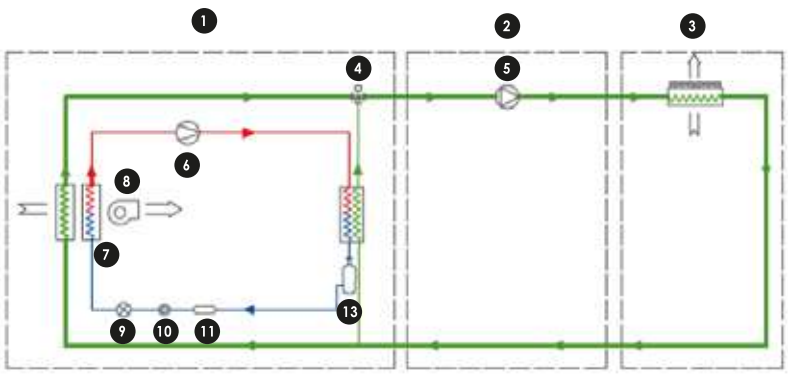
HEAT REJECTION OPTIONS

Water Cooled Direct Expansion with Indirect Free Cooling:

The DXW-IFC model is a system that combines Water Cooled Direct Expansion mechanical cooling with Indirect Free Cooling. The two cooling modes share the same water system.

When there is a cooling requirement, and the difference between indoor and ambient temperatures is acceptable, the Indirect Free Cooling unit will run providing heat rejecting via the Dry Cooler (outdoor unit). Only when Indirect Free Cooling capacity is insufficient to meet the cooling demand, will the unit start up mechanical cooling. Reduced run time of the mechanical system through the use of Indirect Free Cooling saves energy.





1 Indoor Unit
2 Pump group (optional)
3 Dry cooler (optional)
4 3-way valve
5 Pump
6 Compressor
7 Evaporator
8 Supply fan
9 Expansion valve
10 Sight glass
11 Filter dryer
12 Plate Heat Exchanger
13 Receiver

MAIN COMPONENTS INDOOR UNIT:

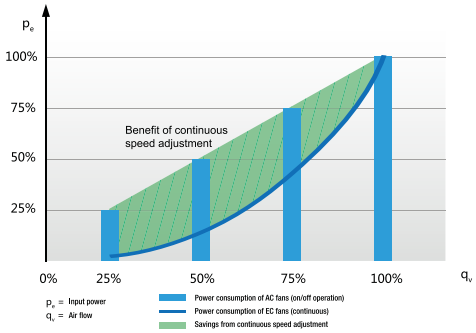
Highly efficient EC Fan

- Backwards curved, directly coupled, carbon-fiber fan.
- Lifespan of 10 to 15 years.
- Maintenance-free ball bearings.
- No belts and pulleys.
- Does not require belt changes and pulley adjustments.
- High efficiency.
- Quiet operation.
- High-strength, corrosion-resistant aluminum alloy carrier with a jacket of special, fiber-reinforced plastic.
- Thermal overload motor protection.

OTHER ADVANTAGES OF EC FAN

Energy Efficiency

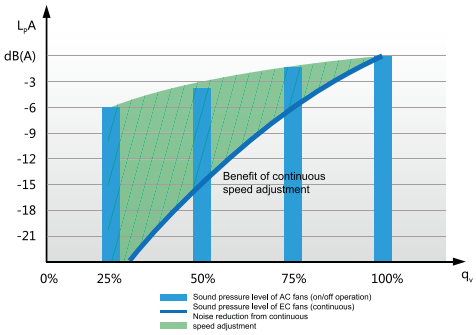
EC fans have brushless DC motors and integrated control modules. Motor efficiencies of 85-90% are achievable; 30% to 50% higher than traditional AC fans. The difference in energy efficiency between variable speed EC fan control and traditional on/off fixed speed AC fans can be seen in the graph; the bars show the power consumption of fans which are switched in gradually as required while the blue curve shows the power consumption with infinitely variable speed control.



Lower Noise

In a given installation, switching off half the fans (and halving the air flow) will typically only reduce the generated noise by approximately 3 dB. Compare this to EC fans, where reducing fan speed to provide half the air flow typically yields a reduction of approximately 15 dB. This is possible as EC fans are able to operate across an infinitely controllable speed range, which in turn effectively avoids electromagnetic and rectifier noise (generated by other traditional motor and speed control devices), thus reducing the overall noise level.

In the graph, the bars indicate the sound pressure level of fans which are switched in gradually as required and the blue curve shows the sound pressure level with infinitely variable speed control. As can be seen from the picture EC fan sound pressure level is 12dB lower compared to the traditional AC fan.



Compact, Integrated Electronic Control System

All EC fans have dedicated speed control modules and filters built into the motor assembly, making for a compact and self-contained solution. All that is required is to connect the main power supply and the sensor signals to the controller for complete speed control of between 10% and 100%. EC fans provide a simple, convenient solution and can also support group control and remote monitoring.

Heater

- Electric resistance heaters with temperature control.
- Low density heating components, tubular finned construction.

Filters:

- Pleated type filters with 25-30 % efficiency, > 95% compliant with ASHRAE 52.1 (MERV 8).
- G4 fiber-pad folded filter.
- Washable, built with an exterior mount aluminum structure.

Immersed Electrode Humidifier:

- Self-contained electrode boiler type with water level control and auto-drain functions.
- Incorporates advanced control system, which supplies highly accurate humidity control and also extends the service interval and life-cycle.
- Designed to operate with ordinary tap water and equipped with automatic water supply and flushing system to reduce mineral precipitation.

Compressor:

- Hermetic scroll compressor equipped with electric protector,exhaust muffler and oil tank heater.
- Compressor rubber absorber.
- Phase loss monitor.
- Installed away from the air path to avoid disturbing the unit's operation during service visits.
- Compressor positive start to avoid short-cycling alarms and low-pressure lockout.

DRY COOOLER

The Dry Cooler systems take advantage of low external temperatures to perform heat transfer using water as a means of heat transport. Easy coupling to the traditional climate control system with refrigerant, to obtain considerable energy savings.
Its components are built and assembled in the factory, wich allows having a design vanguard, precise and reliable. When coupled with traditional DXA systems, optimizing the operation of your air conditioning system, alternating its operation in mode: direct expansion with refrigerant, free cooling mode and mixed mode.

FEATURES:

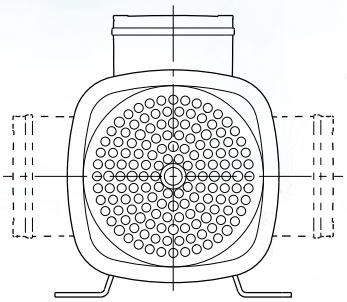
- Built with light weight, anti-corrosion and anti-rust aluminum sheets.
- Designed to to provide Indirect Free Cooling mode.
- Equipped with high efficiency, variable speed, directly coupled EC fans.
- Independent On/Off switch.
- Versatile installation, horizontal or vertical options.

BENEFITS:

- Built for extreme outdoor environments.
- Designed to operate at 3,000 meters above sea level without suffering altitude degrading.
- Closed water circuit, does not consume any water was the system is installed.
- Operational parameters are configured, controlled and monitored from the system's display.
- Design for high efficiency and energy savings.

PUMP

The cold water circuit circulates through the indoor unit and the Dry Cooler, by means of a variable flow pump, which maintains a constant flow of water.In Water Cooled Direct Expansion (DXA) mode , the water absorbs the heat of the refrigerant in the plate condenser located in the indoor unit. The pump is responsible for circulating the water to the dry cooler to expel heat to the environment.



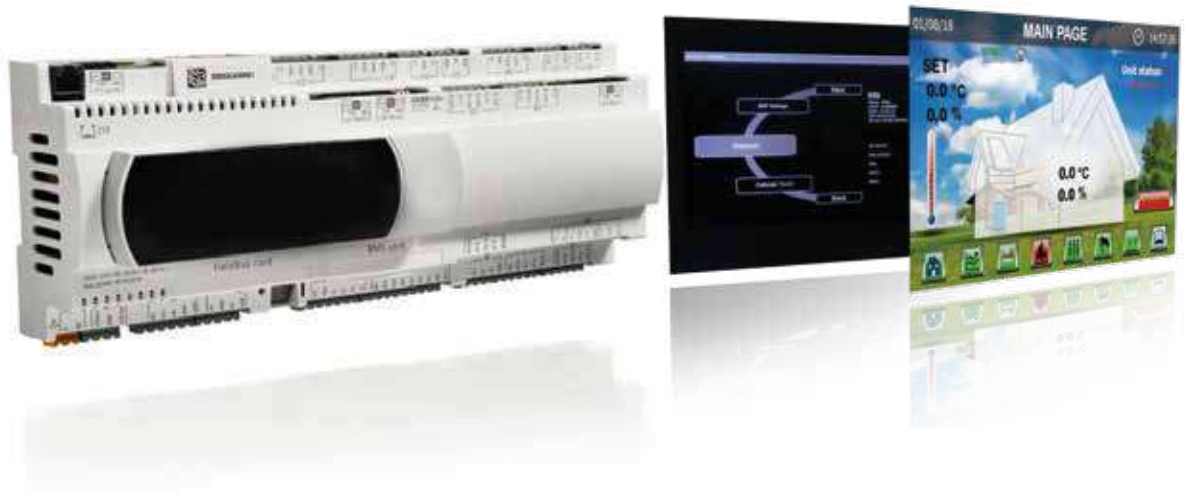
FEATURES:

- Light weight, anti-corrosion and anti-rust design.
- Water flow rate of 15.2m3/h
- Versatile working modes including: constant curve, constant pressure, constant flow, constant differential pressure, constant differential temperature.
- Two (2) water pumps for redundant operation.
- Includes valves, piping, sensors, filters, relief valves, manometers, among other accessories.
- Water cooling capacity from 0° C to 100° C.

BENEFITS:

- Built for extreme outdoor environments.
- Designed to operate at 3,000 meters above sea level without suffering altitude degrading.
- Operational parameters are configured, controlled and monitored from the system's display.
- Easy coupling to hydraulic pipe.
- Water flow control in the hydraulic system through frequency converter.

MICROPROCESSOR CONTROL SYSTEM



Microprocessor Control System:

- All components are continuously monitored and controlled through the microprocessor.
- All units are built with Carel's most recent pCO microprocessor with automatic control and monitoring capabilities.
- The pCO series controller feature a 32-bit microprocessor, 4 MB storage capacity ensure high performance in terms of speed and memory space, a large touch screen display.
- The control system has an adjustable tolerance temperature of +/- 0.5 ºC and a relative tolerance humidity control of +/-1% RH.
- The pCO series controllers can interface with various communication protocols like: ModBus®, BacNet™, Johnson Metasys®, DLL for Windows®, TCP/IP, SNMP, LonWorks®, Trend, among others.
- The pCO series control systems allow for configuration display in several languages, including: English, Spanish, Chinese, and Japanese, among others.
- Multiple levels of password protection for parameter configuration.
- Each controller can exchange data with the other controllers at high speed without requiring additional hardware.
- Includes digital inputs, analogue and PWM outputs.
- Up to sixteen (16) units can be installed to function synchronized in parallel or redundant configuration.
- Lead-lag control when two or more units are installed, in case of a unit failure, the standby unit will activate automatically.
- Allows setting daily starts and stops of the unit according to weekly program.
- Dry contacts inputs and outputs.

Manual Control:

- Able to activate or deactivate each component according to the needs of commissioning and service of the unit.
  - Fluid temperature set point.
  - Fluid presssure set point.
  - EC FAN speed set point.
  - Start free cooling function set point.

Alarm Display:

- Date and time of most recent intervened alarm (yy/mm/dd/hh/mm).
- Temperature and humidity set points.
- Temperature and humidity alarms.
- Low and high pressure alarms.
- Low and high voltage alarms.
- Dirty filter alarm.
- Air flow alarms.
- Flood alarm.
- Smoke alarm.
- Dry Cooler fan failure alarms.
- Pump failure alarm.
- Compressor short-cycle alarm.
- Compressor overload alarm.
- Compressor phase loss alarm.
- Water flow alarms.
- Water temperature alarms.

Configuration Display:

- Temperature and humidity set points.
- Temperature and humidity alarms.
- Indirect Free Cooling set points.

pGD TOUCH

pGD Touch is a programmable touchscreen terminal designed for HVAC/R applications. It can be connected over a network to pCO family controllers, or to any BMS (Building Management System) via a serial connection, using protocols such as Modbus® or BACnet®. pGD Touch is an innovative device that simplifies the human-machine interface and assists the user in browsing the various screens.

Easily and conveniently monitor operation of a unit or a system from one or more locations, where necessary with different password- protected access levels.
Set parameters based on system requirements, for example changing the time when a device is activated.

The pGD touch screen can create a graph of temperature, humidity. This data can be exported to a USB memory drive or SD card, to analyze.

The terminal features several serial ports and can be used to connect together networks that employ different technology and protocols (e.g. an Ethernet network with BACnet IP protocol to an RS485 network with BACnet MS/TP protocol).
pGD Touch comes with TFT LCD screen and resistive touchscreen panel, with LED backlighting, communication ports (Ethernet and RS485/RS232/RS422, configured by software). All terminals feature a USB port for updating the software and downloading data (logs, alarms).

Connectivity

Ethernet connectivity means pGD Touch can be used in an IP LAN. The use of standard communication protocols (HTTP, FTP, etc.) and client/ server architecture allow remote connection from:
Mobile devices (e.g. tablets): for simple remote control of the main unit/system functions by end users or service personnel;
Portable computer: for complete monitoring and programming of all unit or system functions by the manufacturer or service personnel; the touch terminal can act as a supervisor, becoming the access point for remote control.

Temperature and Humidity:

- Return air temperature.
- Return air relative humidity.
- Temperature set point.
- Humidity set point.
- Water temperature.

Working Status:

- Indoor unit supply fans.
- Compressors.
- Dehumidification activation valves.
- Two - stage electric heaters.
- Automatic or manual restart status of components.
- High pressure of the refrigeration system.
- Control and monitoring of the unit.
- Outdoor unit fans.

Working hours of every main component:

- Indoor unit supply fans.
- Individual compressor.
- Humidifier.
- Heaters.
- Dry cooler fan working hours.
- Pumps.

TECHNICAL SPECIFICATIONS FOR DISPLAY:

TECHNICAL CHARACTERISTICS:	
DISPLAY	
Type	LCD TFT
Resolution	800x480 (WVGA);
Active display area	7” diagonal, 16/9
Colors	64 K
Backlighting	LED
Brightness control	Yes
Response Time (max.)	Tr =10 ms; Tf =16 ms
Color chromaticity (CIE)	White (Ø = 0°) x = 0.249 ÷ 0.349; y = 0.278 ÷ 0.378
Luminance (min.)	180 cd/m2
Luminance Uniformity (min.)	0,7
SYSTEM RESOURCES	
Operating system	Microsoft Windows CE 6.0
Microprocessor	TI AM3505 – 600MHz
User memory	128 MB Flash
RAM	256 MB DDR2
USER INTERFACE	
Touchscreen	Resistive
System LED indicators	1 green and 1 red
INTERFACES	
Ethernet Port 1	Auto-MDIX 10/100 Mbit - RJ45 female
USB Port	Host interface 2.0 - USB type A fem - 500 mA max Lmax cable < 1m
Serial Port	RS485 max 115 Kb
	Screw connections pitch 5.08
FUNCTIONALITY	
Vector graphics	Yes, SVG 1.0 support included
Dynamic objects	Yes, Visibility, position, rotation
TrueType fonts	Yes
Multi-protocol	Yes
History and trends	Yes. Limited to the size of the Flash memory
Multilingual	Yes, with setting of the run-time language and limited only by the available memory
Recipes	Yes. Limited to the size of the Flash memory
Alarms	Yes
Event list	Yes
Passwords	Yes
Real Time Clock	Yes, with battery back-up
Screen saver	Yes
Buzzer	"Beep" at touch pressure (configurable)
RATINGS	
Minimum power cross-section	0.5 mm2
Max. power consumption	12W
Fuse	Automatic
Weight	Approx 1 kg
Battery	Non rechargable lithium mod BR2330
ENVIRONMENTAL CONDITIONS	
Working temperature	-20...+60 °C
Storage temperature	-20...+70 °C
Working and storage humidity	5...85 % relative, non-condensing humidity
Protection rating	IP65 (front); IP20 (rear)
Pollution Grade	Grade II
DIMENSIONS	
Front panel LxH	187x147 mm (7.36x5.79“)
Drilling AxB	176x136 mm (6.93x5.35“)
Depth	45+4 mm (1.77+0.16”)
Compliant with the European standards EMC and LVD Directives. UL Certificate, File E226306	

INDOOR UNIT TECHNICAL SPECIFICATIONS FOR:
PP Series DXW(1) 60 KW - 208~230V/3Ph/60Hz

INDOOR UNIT TECHNICAL SPECIFICATIONS FOR: PP SERIES DXW(1) 60 KW - 208~230V/3PH/60HZ		
UNIT MODEL		PPUDXW60AO PPDDXW60AO
Supply air scheme(2)		U: Upflow D: Downflow
POWER SUPPLY		
Power source		208~230V, 3Ph, 60Hz
Unit máx. operating power input	kW	67.2
Unit máx. operating current	A	87,1
Max. power	KW	53,5
Max. current	A	103,6
COMPRESOR COOLING CAPACITY(3)		
Total	kW [Btu/h]	65.7 [224,168]
Sensible	kW [Btu/h]	62.1 [211,885]
FREE COOLING CAPACITY(4)		
Total	kW [Btu/h]	55.9 [190,731]
Sensible	kW [Btu/h]	51.4 [175,377]
SUPPLY FAN		
Type		Caseless backward EC centrifugal fan
Qty of fan	n	3
Air volume	m^3/h [CFM]	21,300 [12,537]
External static	Pa	Standard ESP is 75Pa adjustment range is 50-300 Pa
Power input	KW	5,1
COMPRESSOR		
Qty of compressor	n	2
Power input	KW	2×11.6
Type		Hermetic Scroll
REFRIGERANT		
Type		R410A
AIR FILTER		
Type		G4/plate
Qty of filters - U: Upflow	n	2,1,1
HUMIDIFIER		
Type		Electrode
Humidifying capacity(5)	kg/h	8,0
Power input	KW	11,3
DRY COOLER		
Model		CMEH80
Qty	n	1
PIPING CONNECTION		
Humidifier water in	in	1/2"
Condensate drain	in	3/4"
Free cooling pipe	in	2 - 1/2"
Refr. Discharge	mm	2×28
Refr. Liquid	mm	2×19
WATER COOLING CIRCUIT - Incorporated in the Indoor Unit		
Water flow	m^3/h	15,4
Pressure drop (plate heat exchanger)	kPa	20
Pressure drop (water cooling coil)	kPa	28
Control flow water		Three (03) way valve to control the water flow
Mode of operation		System mixed: water and refrigerant system (the air pass through the water closed system before the DX System)
Water storage container	u	1 - Included in the pump group
SYSTEM CONTROL UNIT		
Type		microprocessor - Display parameters from indoor, Dry Cooler and Pump
DIMENSIONS AND WEIGHT		
Width	mm	2.490
Depth	mm	890
Height	mm	1.960
Weight	kg	812
ENVIRONMENTAL SPECIFICATIONS		
Altitude above sea level	m	up to 3.000
CERTIFICATIONS & STANDARDS		
Quality & Compliance(6)		RoHS directive: 2012/50/EU; Directive for low voltage: 2014/35/EU (included in CE); DIN EN IEC 61340-5-1; EMC - directive: 2014/30/EU (included in CE); CE Complaint

Note: Data are for 208~230V, 3Ph, 60Hz with 20 Pa of ESP (External Static Pressure) in case of Down Flow Units and 50 Pa of ESP in Up Flow Units

(1) — DXW-IFC: Indirect Free-cooling plus direct expansion cooled with water

(2) — All specifications apply for U: Upflow and D: Downflow discharge.

(3) — Return air dry bulb temperature 27°C, RH 40%, Outdoor dry bulb temperature 35°C

(4) — The IFC cooling capacity rated at: Return air 27°C DB, 40% R.H.; external air temperature: +2° C DB

(5) — The above capacities of heater and humiditifier are standard. Other customized option are available

(6) — CQC31-439125-2010 Energy saving standard apply only to 40, 60, 70, 80 KW models

DRY COOLER UNIT UNIT TECHNICAL SPECIFICATIONS FOR:
PP SERIES DXW(1) 60 KW - 208~230V/1Ph/60Hz

DRY COOLER UNIT PP SERIES DXW(1) 60 KW - 208~230V/1Ph/60Hz		
UNIT MODEL		**CMEH80ADC**
Cooling capacity(2)	kW / kBTUh	86,1 / 293,77
Water Flow	m^3/h	14,7
Pressure drop	kpa	78,5
Pressure loss	Bar	0,87
FAN		
Qty of fan	n	3
Air flow rate	m^3/h	32.400
POWER SUPPLY		
Input current	A	7,1
CONNECTION TUBE SIZE		
Water inlet pipe Ø	in	2"
Water outlet pipe Ø	in	2"
HEAT TRANSFER COEFFICIENT		
Coefficient	W/m^2 °K	31
ENVIRONMENTAL SPECIFICATIONS		
Altitude above sea level	m	up to 3.000
DIMENSIONS AND WEIGHT		
Length	mm	3.580
Width	mm	630
Height	mm	1.335
Weight	kg	255

(1) — DXW-IFC: Indirect Free-cooling plus direct expansion cooled with water.
(2) — The capacity is rated at outside temperature 28°C and 40% RH. Maximum water input temperature 45 °C and water output 40 °C.

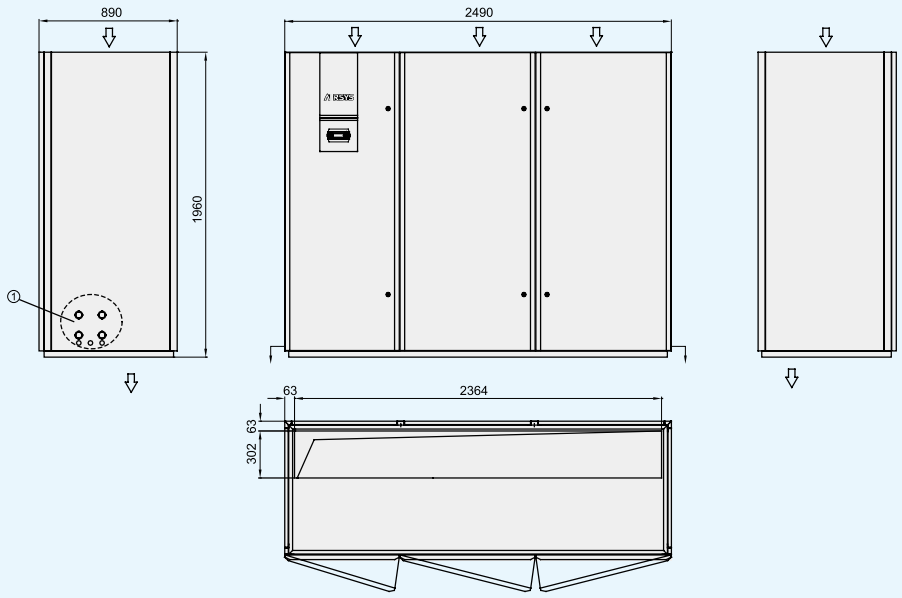
PGU PUMP GROUP BOX TECHNICAL SPECIFICATIONS FOR:
PP SERIES DXW(1) 60 KW - 208/3Ph/60Hz or 220/1Ph/60Hz

PGU PUMP GROUP BOX PP SERIES DXW(1)60 KW - 208/3Ph/60Hz or 220/1Ph/60Hz			
UNIT MODEL		**PUG15**	
Water Flow (2)	m^3/h	15.2	
Pressure	m	28	
Temperature push water	°C	0 °C up to 100 °C	
Pump Qty.	n	2 - (1 Redundant)	
POWER SUPPLY			
Voltage	V	208/3Ph/60Hz	220/1Ph/60Hz
Input power	kW	2.2	
Input current	A	6.16	10
CONNECTION TUBE SIZE			
Water inlet pipe Ø	in	2"	
Water outlet pipe Ø	in	2"	
WATER PRESSURE			
Pressure	W/m^2 °K	> 26	
HEAT TRANSFER COEFFICIENT			
Coefficient	W/m^2 °K	> 26	
ENVIRONMENTAL SPECIFICATIONS			
Altitude above sea level	m	up to 3.000	
Operating temperature	°C	up to 50 °C	
IP Rating		IP55	
DIMENSIONS AND WEIGHT			
Length	mm	1.390	
Width	mm	750	
Height	mm	1.050	
Weight	kg	150	

(1) — DXW-IFC: Indirect Free-cooling plus direct expansion cooled with water.
(2) — Each unit is equipped with two pumps, use one and the other one stand by. Above parameters is rated at signal pump works.

TECHNICAL SPECIFICATIONS FOR:

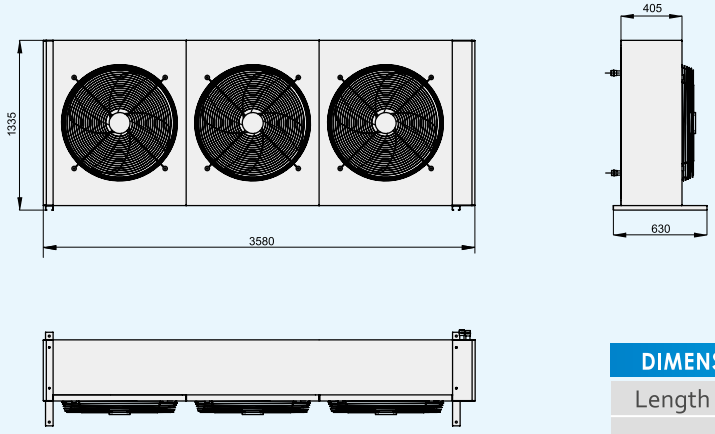
A4 UNIT CABINET DIMENSIONS DRAWING FOR UNDER FLOW UNIT



Pipe connect area: Specific position and kinds differ slightly in different unit series. Refer to the onsite unit.

DIMENSIONS AND WEIGHT:		
Width	mm	2.490
Depth	mm	890
Height	mm	1.960
Weight	kg	812

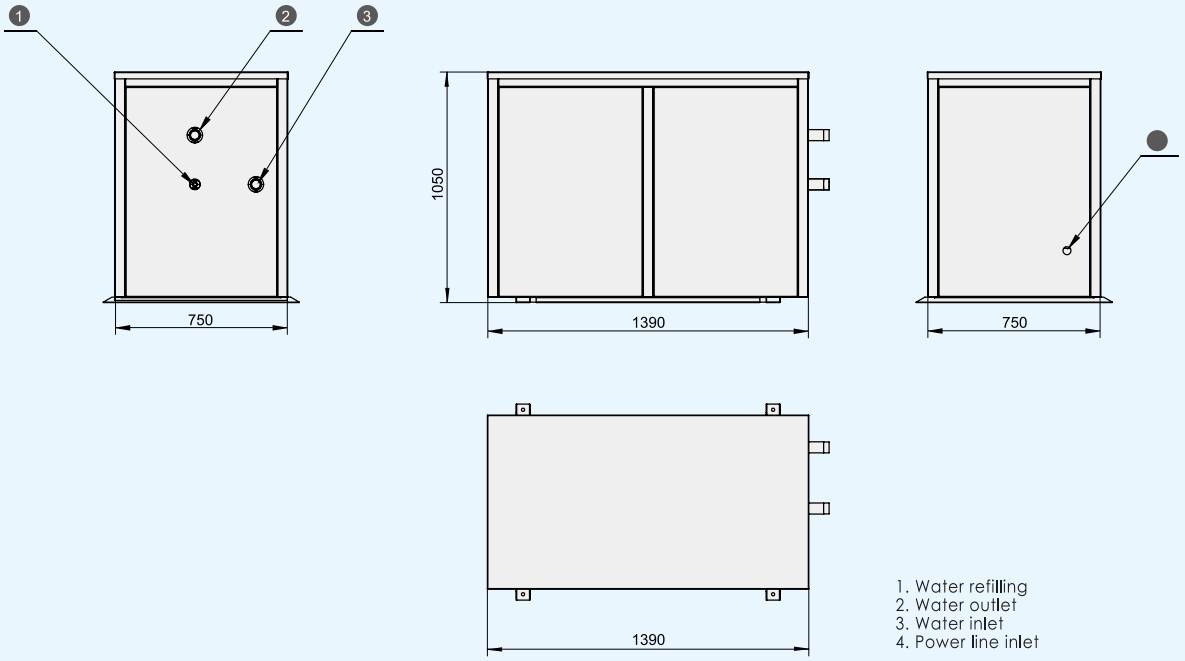
CMEH80ADC



DIMENSIONS AND WEIGHT:		
Length	mm	3.580
Width	mm	630
Height	mm	1.335
Weight	kg	255

TECHNICAL SPECIFICATIONS FOR:

PUG PUMP GROUP DIMENSIONS DRAWING



DIMENSIONS AND WEIGHT:		
Length	mm	1.390
Width	mm	750
Height	mm	1.050
Weight	kg	150

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