



# CLIMATEWORX INTERNATIONAL

MISSION CRITICAL  
AIR CONDITIONING SYSTEMS

VERTICAL  
FLOOR MOUNT

Series PS6

**2-5 Ton Units**

Designed for Precision  
Built for Efficient Performance



# Series PS6

2-5 Tons

VERTICAL FLOOR MOUNT PRECISION AIR CONDITIONER

## Designed for Precise Efficient Performance

The Series PS6 mission critical air conditioner is ClimateWorx' compact footprint CRAC/CRAH unit. It has been designed from the ground up to be the industry leading economical footprint, cutting edge energy efficient and user friendly from a network and programming perspective. While redesigning this unit ClimateWorx also created the most serviceable unit on the market by making it **100% front serviceable**.

### COOLING MODES

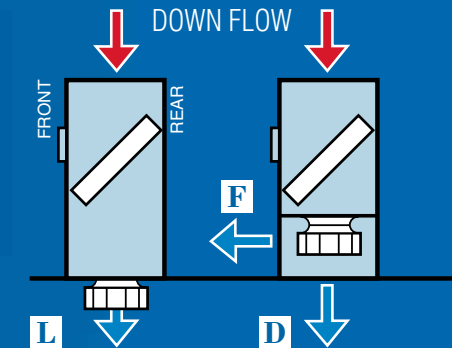
- Air Cooled DX
- Water Cooled DX
- Glycol Cooled DX
- Chilled Water
- Dual and Free Cool

### CONFIGURATIONS

- Down flow

### AIR FLOW

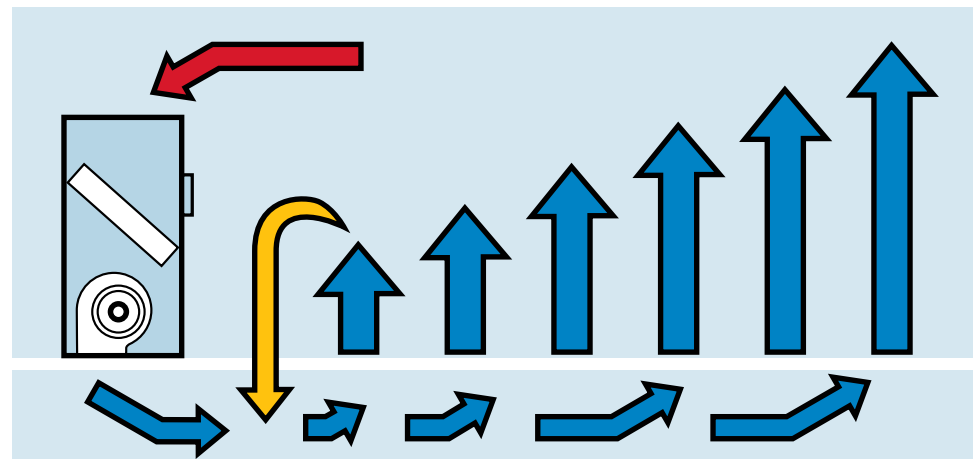
- See diagram on right for available air flow configurations



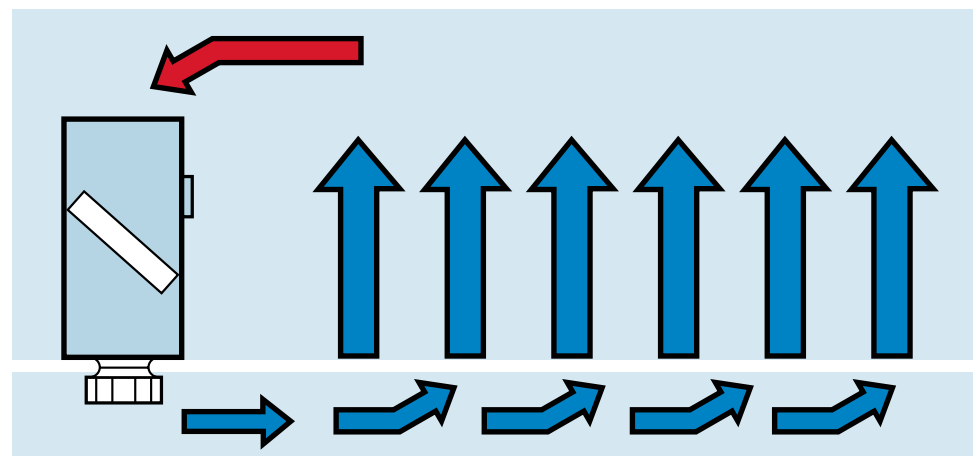
### ENERGY EFFICIENT

ClimateWorx has created a more energy efficient air conditioner by optimizing the coil design, the fan motor and fan type. Together these features can reduce energy consumption by 10-40%.

- EC direct drive fans are more energy efficient than belt driven fans.
- Variable speed EC fans. EC fan speed is controlled by our on board advanced microprocessor to meet the changing demands.
- ClimateWorx' coil design nets a high sensible heat ratio.
- Plenum fans develop static pressure which delivers air evenly to where perforated tiles are placed, reducing hot spots and energy requirements.



A scroll fan's high velocity pressure distributes air unevenly, and can lead to recirculated air near the air conditioning unit.



A plenum fan's high static pressure distributes air evenly. With proper positioning of perforated tiles, hot spots can be better controlled.



### SUPERIOR CONTROL

ClimateWorx' control system not only maximizes performance, reliability and manageability of the air conditioning system, but also makes controlling the system easy through the graphically intuitive touch screen display.

### M52 NETWORK CONTROLLER

- P-I-D control logic, microprocessor based controller.
- Touch-screen graphic interface.
- Alarm & event logging for accurate trouble-shooting.
- Continuous on-screen graphing of temperature and humidity.
- Self diagnostics of all systems operations.
- Three levels of security, password protected.
- Network ready.



### CO-WORK NETWORKING

- Co-Work enables a maximum of 8 master or slave circuits to form a local area network.
- Any unit can control local area network.
- Duty sharing.
- Sequential load activation.
- Data synchronization.
- Control value averaging.
- Expansion of control steps.
- Controller redundancy.



### ATS (AUTO TRANSFER SWITCH) OPTIONAL

- Control the source of power at the flick of a switch.

### INSTALLATION AND MAINTENANCE FRIENDLY

When it comes time to service the unit, ClimateWorx' Series PS6 air conditioner is both extremely reliable and very easy to live with. By paying close attention to component layout, and aided by access doors, the Series PS6 air conditioner is designed to be **100% front serviceable**.

- Minimum raised floor height is 18" for dropped fan configuration.
- Plenum fan ships inside unit and drops easily requiring only one technician.
- Where floor is less than 18" high, plenum fans mount inside the unit.
- Direct drive fans don't require belts.
- Maintenance-free EC motors.
- Electrode boiler humidifier serviceable without disturbing air stream (optional).
- 100% front serviceable.



Shipped in this position, simply remove the braces and drop the fan for under floor applications.

# SERIES PS6 Technical Data - 60 Hz

		Air-cooled System PS6AD				Water-cooled System PS6WD				Glycol-cooled System PS6GD				Chilled-Water System PS6 CD				Air Dual-cooling System PS6DD				Water Dual-cooling System PS6HD				Glycol Dual-cooling System PS6ED				Glycol Free-cooling System PS6FD			
		02	03	04	05	02	03	04	05	02	03	04	05	02	03	04	05	02	03	04	05	02	03	04	05	02	03	04	05	02	03	04	05
<b>Cooling Capacity</b> - Direct Expansion - Rated at standard air volume, 95°F (35°C) ambient temperature																																	
75°F (24°C) DB, 50%rh																																	
Net Total	BTUH	27747	37262	44618	54853	30201	39371	48290	60354	27308	35662	43748	54037	n/a	n/a	n/a	n/a	27338	37105	44055	50965	29825	39084	47723	59316	26898	35447	43167	53000	26898	35447	43167	53000
Net Sensible	BTUH	25201	32824	39550	51859	25902	33550	40710	53049	25123	32439	39333	51888	n/a	n/a	n/a	n/a	24792	32667	38987	50551	25526	33263	40143	52012	24713	32224	38753	50851	24713	32224	38753	50851
THR	BTUH	36370	48286	59577	74803	37177	48925	60768	77416	36251	47861	59331	74419	n/a	n/a	n/a	n/a	36370	48286	59577	70462	37177	48925	60768	77416	36251	47861	59331	74419	36251	47861	59331	74419
<b>Cooling Capacity</b> - Rated at standard air volume, 45°F (7.2°C) entering water & 10°F (5.6°C) temperature rise																																	
75°F (24°C) DB, 50%rh																																	
Net Total	BTUH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	29177	37329	55606	64959	28938	37206	55374	64409	28938	37206	55374	64409	28938	37206	55374	64409	24457	28781	51090	60273
Net Sensible	BTUH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	25275	32745	45433	53837	25036	32622	45201	53288	25036	32622	45201	53288	25036	32622	45201	53288	23235	28781	43443	51584
Flow Rate	GPM	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.3	8.1	12.1	14.4	6.3	8.1	12.1	14.4	6.3	8.1	12.1	14.4	6.3	8.1	12.1	14.4	Standard air volume, 45°F entering glycol			
Unit Pressure Drop	ft-H2O	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.8	4.4	11.3	15.6	2.8	4.4	11.3	15.6	2.8	4.4	11.3	15.6	2.8	4.4	11.3	15.6	-	-	-	-
<b>Fan Section</b> - EC Plenum Fan																																	
Standard Air Volume	CFM	1400	1900	2400	3000	1400	1900	2400	3000	1400	1900	2400	3000	1400	1900	2400	3000	1400	1900	2400	3000	1400	1900	2400	3000	1400	1900	2400	3000	1400	1900	2400	3000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Quantity of Fans		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Net Total Fan Motor Power	KW	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		
Absorbed Power	KW	0.2	0.4	0.6	1.2	0.2	0.4	0.6	1.2	0.2	0.4	0.6	1.2	0.2	0.4	0.6	1.2	0.3	0.5	0.8	1.5	0.3	0.5	0.8	1.5	0.3	0.5	0.8	1.5	0.3	0.5	0.8	1.5
<b>Compressor</b> - Refrigerant R407C																																	
Quantity of Compressors		1	1	1	1	1	1	1	1	1	1	1	1	n/a	n/a	n/a	n/a	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	n/a	n/a	n/a	n/a	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	
<b>Evaporator Coil</b> - Copper tube / aluminium fin - S/S drain pan																																	
Face Area	ft²	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	n/a	n/a	n/a	n/a	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	
Rows Deep		3	3	3	4	3	3	3	4	3	3	3	4	n/a	n/a	n/a	n/a	3	3	3	4	3	3	3	4	3	3	3	4	3	3	4	
Fins per inch		13	13	13	13	13	13	13	13	13	13	13	13	n/a	n/a	n/a	n/a	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
Face Velocity	FPM	187	253	320	400	187	253	320	400	187	253	320	400	n/a	n/a	n/a	n/a	187	253	320	400	187	253	320	400	187	253	320	400	187	253	320	400
Refrigerant Charge	Lbs	4.8	4.8	4.8	6.1	factory	factory	factory	factory	factory	factory	factory	factory	n/a	n/a	n/a	n/a	4.8	4.8	4.8	6.1	factory	factory	factory	factory	factory	factory	factory	factory	factory	factory	factory	
<b>Chilled-water Coil</b> - Copper tube / aluminium fin - S/S drain pan																																	
Face Area	ft²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5		
Rows Deep		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	3	4	4	3	3	4	4	3	3	4	4	3	3	4	4	3	3	4	
Fins per inch		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
Face Velocity	FPM	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	187	253	320	400	187	253	320	400	187	253	320	400	187	253	320	400	187	253	320	400
<b>Electric Reheat 1</b> - Single Stage, finned tubular type heater, SCR Controlled																																	
Capacity	KW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Quantity of Heaters		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
<b>Hot Gas Reheat</b> - 71.6°F (22°C) E.A.T., two stages																																	
Heating Capacity	BTUH	15,903	17,569	18,930	20,404	15,903	17,569	18,930	20,404	15,903	17,569	18,930	20,404	-	-	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
<b>Hot Water Reheat</b> - 180°F (82.2°C) E.W.T., 71.6°F (22°C) E.A.T. - 2-way modulating control valve, optional 3-way																																	
Heating Capacity	BTUH	31,193	34,129	36,477	38,964	31,193	34,129	36,477	38,964	31,193	34,129	36,477	38,964	31,193	34,129	36,477	38,964	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Water Flow Rate	GPM	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Pressure Drop	ft-H2O	0.61	0.62	0.62	0.63	0.61	0.62	0.62	0.63	0.61	0.62	0.62	0.63	0.61	0.62	0.62	0.63	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
<b>Steam Reheat</b> - 227°F (108.3°C) saturated steam, 71.6°F (22°C) E.A.T. - 2-way modulating control valve																																	
Heating Capacity	BTUH	53945	60834	69296	78176	53945	60834	69296	78176	53945	60834	69296	78176	53945	60834	69296	78176	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
<b>Humidifier Section</b>																																	
Electrode Boiler Type 1																																	
Capacity	lb/hr	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Humidifier Power	KW	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	
<b>Filter Section</b> - Pleated disposable type, 30% efficiency to ASHRAE 52-76																																	
Downflow Models																																	
Quantity of Filters		2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	
Nominal Size	LxWxD-in	20 x 24 x 2 / 12 x 24 x 2				20 x 24 x 2 / 12 x 24 x 2				20 x 24 x 2 / 12 x 24 x 2				20 x 24 x 2 / 12 x 24 x 2				20 x 24 x 2 / 12 x 24 x 2				20 x 24 x 2 / 12 x 24 x 2				20 x 24 x 2 / 12 x 24 x 2							
<b>Piping Connection Size</b>																																	
Liquid Line	- ODM -in	1/2	1/2	1/2	1/2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/2	1/2	1/2	1/2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Hot Gas Line	- ODM -in	5/8	5/8	5/8	5/8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/8	5/8	5/8	5/8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4		
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Chilled Water	- ODM -in	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8		
Condensing Water	- ODM -in	n/a	n/a	n/a	n/a	1-1/8	1-1/8	1-3/8	1-3/8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Glycol Solution	- ODM -in	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1-5/8	1-5/8	1-5/8	1-5/8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8		
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Steam Condensate	- ODM -in	3/4																															



# Series PS6

## Standard Features\*

OTHER OPTIONS AND ACCESSORIES ARE AVAILABLE

\* denotes standard features

### EVAPORATOR COIL & DRAIN PAN\*

Coil-3/8" copper tubes expanded into aluminum fins. Stainless Steel corrosion free condensate drain pan under the coil.

### DISCONNECT\*

Non-Fused. Locking Type.



SCR Reheat

### SCR REHEAT\*

Silicon Controlled Rectifier controlled, with an extruded aluminium heat sink. Heating element low watt-density, tubular finned construction with a noncorrosive metal sheath electrically & thermally protected.

### FILTERS\*

Standard capacity, Merv 8 filters, 50mm (2") deep, pleated type having 25-30% efficiency, 90-92% arrestance to ASHRAE 52-76. Available optional 100mm (4") deep on single cooling mode models.

### EC DIRECT DRIVE FANS\*

- EC direct drive fans are more energy efficient than belt driven fans.
- Variable speed EC fans run only as fast as necessary.
- Plenum fans develop static pressure which delivers air evenly to where perforated tiles are placed, reducing hot spots and energy requirements.
- Maintenance-free EC motors.

### MAINTENANCE FRIENDLY DIRECT DRIVE

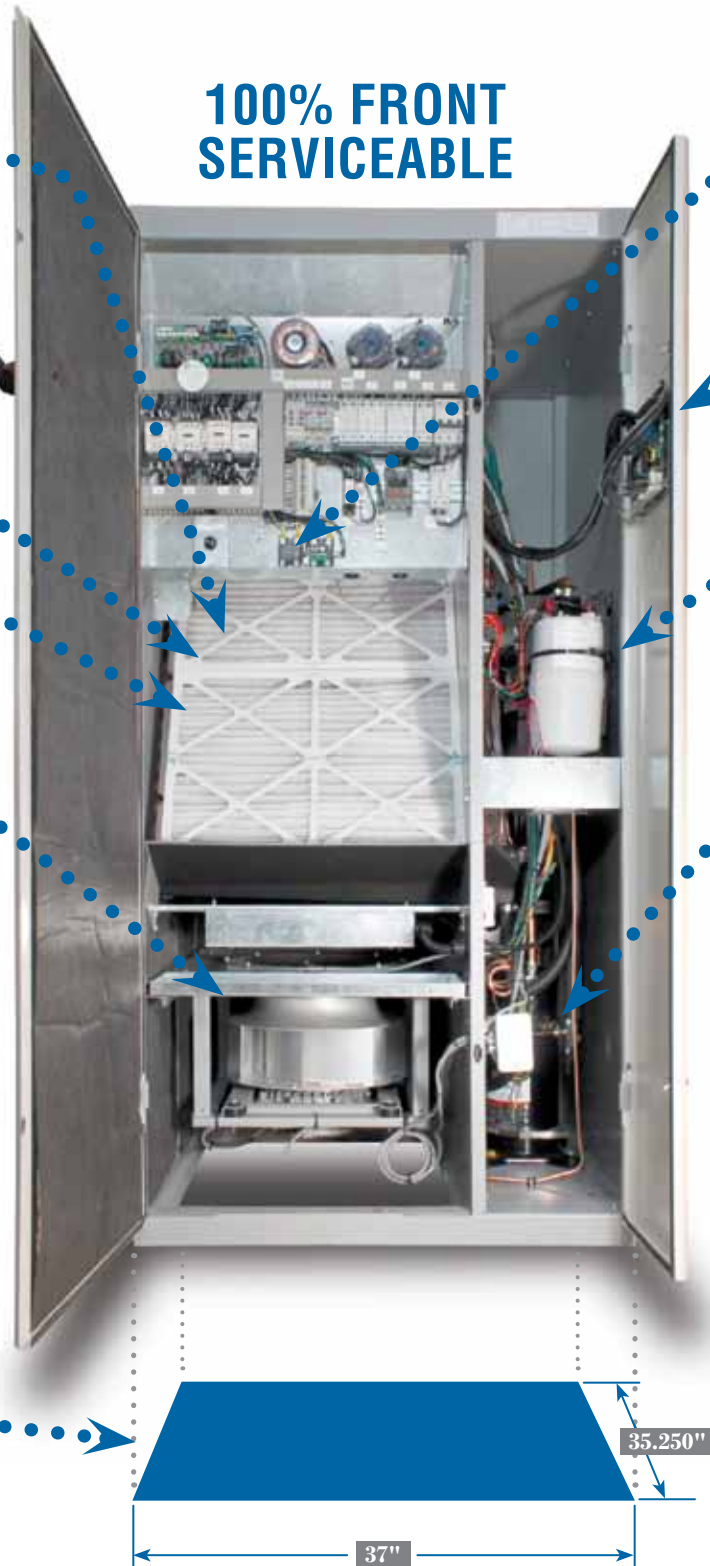
- The need to adjust or replace noisy or worn out belts is eliminated forever.
- You will no longer need to change dirty filters that have been clogged up with belt dust



### COMPACT FOOTPRINT\*

ClimateWorx' CRAC/CRAH PS6 unit has been designed from the ground up to be the industry leading economical footprint.

## 100% FRONT SERVICEABLE



### AUTO TRANSFER SWITCH (ATS)

Monitors the availability of power from either source to the unit, using phase monitor devices and automatically switches to the secondary source of power when the primary source fails, using mechanically and electrically interlocked contractors. The ATS has primary selector switch for easy change over from one source or other as primary.

### M52 CONTROLLER\*

Microprocessor based control system with automatic control and monitoring capability.



M52 Controller

### HUMIDIFIER\*

The humidifier is a self-contained electrode boiler type complete with water level control and auto-drain functions. The humidifier is front serviceable without disturbing the air flow.

### SCROLL COMPRESSORS\*

- Equipped with:
- Suction rotolock valve
  - Discharge rotolock valve
  - Gauge ports
  - Internal thermal overload
  - Vibration isolators
  - Crank Case Heater



Scroll Compressor

### INLET AIR PLENUMS

Available in a variety of standard heights. Please consult our factory for a size to fit your needs.

### FLOOR STANDS

Floor stand shall be a welded steel frame with corrosion resistant finish in heights from 8 to 24 inches. The stands shall have adjustable legs for levelling with 1 inch of adjustment. Come in variable heights and are available with or without OSHA guards. For floor stands greater than 24 inches please consult factory.

### PIPING CONNECTIONS\*

Top or bottom.

### CONDENSATE PUMP

Condensate pump shall remove condensate from evaporator and humidifier when a drain is not available near by. Pump is shipped loose for field installation.



### SINGLE POINT LIQUID DETECTION

Liquid detection shall consist of a single point liquid sensor. Sensor wires directly into the microprocessor and includes 10 feet of wire for field placement.



### CABLE LIQUID DETECTION

Liquid detection shall consist of liquid cable sensor. Cable wires directly into the microprocessor and includes 10 feet of wire to extend to the bottom of the unit and up to 75 feet of sensing cable shall be supplied with the unit for field placement.



### SINGLE ZONE LIQUID DETECTION

Remote liquid detection shall consist of Single Zone Liquid Detection with discrete alarm. Single Zone Liquid Detection shall detect and report the presence of water or any other conductive liquids. Unit shall be supplied with 15 feet of sensing cable.



### FIRE STAT

Factory mounted and wired fire stat will shut the unit down in the event of high heat detection.



### SMOKE DETECTOR

Smoke detector is factory mounted and wired to shut unit down in the event of the presence of smoke.



### SPRING OPEN/CLOSE CHILLED WATER VALVE ACTUATOR

Chilled Water Valve (CW) actuator to position CW valve in Open or Close upon loss of power.



### 3-WAY VALVES

Chilled Water or Condenser Water Regulating Valve c/w bypass balancing valve (150 psi).





ClimateWorx International Inc. is focused on research, design, manufacture and application of Precision Air Conditioning Equipment providing reliable mission critical climate control. ClimateWorx' offering and design capabilities can meet your specifications with product lines of vertical floor mount, wall mount, ceiling mount and plenum fan units. ClimateWorx, a family and employee owned and operated business is fully committed to offering superior service and state of the art quality standards to satisfy our customers' needs. Our dedicated research and development team works continuously to improve the current product line as well as focusing on the development of new products that are needed to compete in the Data Center Cooling arena.

With the support of solid market leaders, including BMP Metals Inc. ([www.bmpmetals.com](http://www.bmpmetals.com)) and CableTalk Systems Inc. ([www.cabletalk.com](http://www.cabletalk.com)) which have been providing quality integrated solutions for nearly three decades, ClimateWorx can offer comprehensive solutions for all your Data Centre needs.

**Robert R. Bédard**  
Director

[rrbedard@climaworxinternational.com](mailto:rrbedard@climaworxinternational.com)  
1-800-648-2584



## OUR MISSION

To offer superior service and state of the art quality standards for the mutual benefit of our customers and employees.

## OUR VISION

We will be globally recognized as a leader in the design and manufacture of innovative, quality solutions that satisfy the requirements of "mission-critical" environments.



## Mission Critical Climate Control

### ClimateWorx International Inc.

14 Chelsea Lane  
Brampton ON, L6T 3Y4, Canada  
Tel: (905) 405-0800  
Fax: (905) 405-0807  
1-800-648-2584  
[www.climaworxinternational.com](http://www.climaworxinternational.com)

### ISO 9001:2008

All rights reserved.  
In the interest of continuous improvement, ClimateWorx reserves the right to change specifications without notice.

All ClimateWorx equipment is evaluated and accepted by a Nationally Recognized Testing Laboratory, NRTL accredited organization to UL 1995 standard.

### BEMPRO GLOBAL GROUP

ClimateWorx International Inc. is part of the Bempro Global Group of companies.