

series six specifications

Air Cooled data for 60 Hz. at 72°F., 50%R.H. design conditions. (R22)

Model (Air cooled)	6AD/AU02	6AD/AU03	6AD/AU04	6AD/AU05
Total Capacity (BTUH)	29,064	40,180	48,597	60,453
Sensible Cap. (BTUH)	26,840	36,836	45,306	57,593
Airflow (CFM)	1,400	1,900	2,400	3,000
Approx. Net Weight (lbs.)	570	583	583	595

Water Cooled data for 60 Hz. at 72°F., 50%R.H. design conditions, 85°F. condensing water. (R22)

Model (Water cooled)	6WD/WU02	6WD/WU03	6WD/WU04	6WD/WU05
Total Capacity (BTUH)	29,337	39,903	49,398	59,918
Sensible Cap. (BTUH)	26,977	36,708	45,663	57,350
Airflow (CFM)	1,400	1,900	2,400	3,000
Approx. Net Weight (lbs.)	600	627	627	638

Glycol Cooled data for 60 Hz. at 72°F., 50% R.H. design conditions, 105°F. EGT, 40% solution. (R22)

Model (Glycol cooled)	6GD/GU02	6GD/GU03	6GD/GU04	6GD/GU05
Total Capacity (BTUH)	29,377	39,903	49,398	59,918
Sensible Cap. (BTUH)	26,977	36,708	45,663	57,350
Airflow (CFM)	1,400	1,900	2,400	3,000
Approx. Net Weight (lbs.)	600	627	627	638

Chilled water data at 72°F, 50%R.H. design conditions, 45°F EWT, with 10°F rise

Model (Chilled water)	6CD/CU02	6CD/CU03	6CD/CU04	6CD/CU05
Total Capacity (BTUH)	25,253	31,879	37,790	54,253
Sensible Cap. (BTUH)	25,253	31,879	37,790	54,253
Airflow (CFM)	1,400	1,900	2,400	3,000
Approx. Net Weight (lbs.)	517	517	528	528

Air Cooled data for 50 Hz. At 24°C., 50% R.H. design conditions. (R22)

Model (Air cooled)	6AD/AU02	6AD/AU03	6AD/AU04	6AD/AU05
Total Capacity (kW)	8.2	11.4	14.0	18.8
Sensible Cap. (kW)	8.1	10.7	13.1	17.7
Airflow (M/Hr.)	2380	3230	4080	5100
Approx. Net Weight (Kg.)	260	265	265	270

Water Cooled data for 50 Hz. At 24°C., 50% R.H. design conditions, 35°C condensing water. (R22)

Model (Water cooled)	6WD/WU02	6WD/WU03	6WD/WU04	6WD/WU05
Total Capacity (kW)	8.4	11.5	14.8	19.1
Sensible Cap. (kW)	8.2	10.8	13.5	17.8
Airflow (M/Hr.)	2380	3230	4080	5100
Approx. Net Weight (Kg.)	272	284	284	290

Glycol Cooled data for 50 Hz. At 24°C., 50% R.H. design conditions, 40°C. EGT, 40% solution. (R22)

Model (Glycol cooled)	6GD/GU02	6GD/GU03	6GD/GU04	6GD/GU05
Total Capacity (kW)	8.4	11.5	14.8	19.1
Sensible Cap. (kW)	8.2	10.8	13.5	17.8
Airflow (M/Hr.)	2380	3230	4080	5100
Approx. Net Weight (Kg.)	272	284	284	290

Chilled water data at 24°C., 50% R.H. design conditions, 7.2°C. EWT, with 5.6°C. rise

Model (Chilled water)	6CD/CU02	6CD/CU03	6CD/CU04	6CD/CU05
Total Capacity (kW)	9.8	12.6	15.0	21.2
Sensible Cap. (kW)	8.5	10.6	12.6	17.8
Airflow (M/Hr.)	2380	3230	4080	5100
Approx. Net Weight (Kg.)	235	235	240	240

Nomenclature

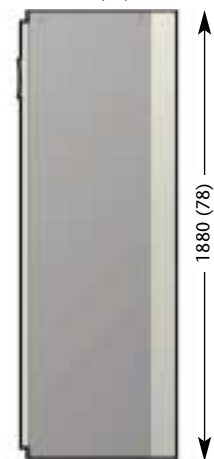
Series	6
System	A = Air Cooled W = Water Cooled G = Glycol Cooled C = Chilled Water
Air Flow	U = Upflow D = Downflow
Capacity	02 = 2 Ton 03 = 3 Ton 04 = 4 Ton 05 = 5 Ton
Voltage	Y = 208-1-60 W = 208/230-3-60 V = 460-3-60 Y = 575-3-60 K = 415-3-50 Z = 380-3-50
Reheat	E = Electric X = Not Required
Humidifier	B = Electrode Boiler X = Not Required
Compressor	H = Scroll T = Chilled Water
Cap. Control	G = Hot Gas Bypass A = Not Selected
Special	X = Custom Built

Note: * indicates special option with pricing request.

915 (36)



637 (25)



intelligent precision air conditioning



Canatal International Incorporated
2775 Slough Street
Mississauga, ON Canada L4T 1G2
Tel: 905-405-0800 Fax: 905-405-0807
www.canatal.com



ISO 9001

© 2000 Canatal International Inc.
All rights reserved.

In the interest of continuous improvement,
Canatal reserves the right to change
specifications without notice.



ISO 9001



precision air conditioning

Precision devices require a reliable precision environment

When you select Canatal, you benefit from years of experience. Canatal International Inc. is a member of a worldwide group of companies dedicated to the research, design, manufacture and application of precision air conditioning, building automation and environmental engineering. Canatal has drawn on this international base of experience in developing its exceptional precision air conditioning systems. Canatal is ISO-9001 registered with a strong commitment to world-class quality. Extensive and ongoing research and development has resulted in what are considered the market's most advanced and dependable products.

The Intelligent Solution

All precision air conditioning is not created equal. A combination of worldwide experience and Canatal's strong commitment to research and development has positioned Canatal as a technology leader in the precision air conditioning field. Design features such as the M52 advanced controller with touch-screen interface, modular construction, high sensible heat ratios and innovative dehumidification cycles are some examples of features incorporated in Canatal's products. Technology is what makes Canatal the intelligent solution for your precision air conditioning needs.



innovation

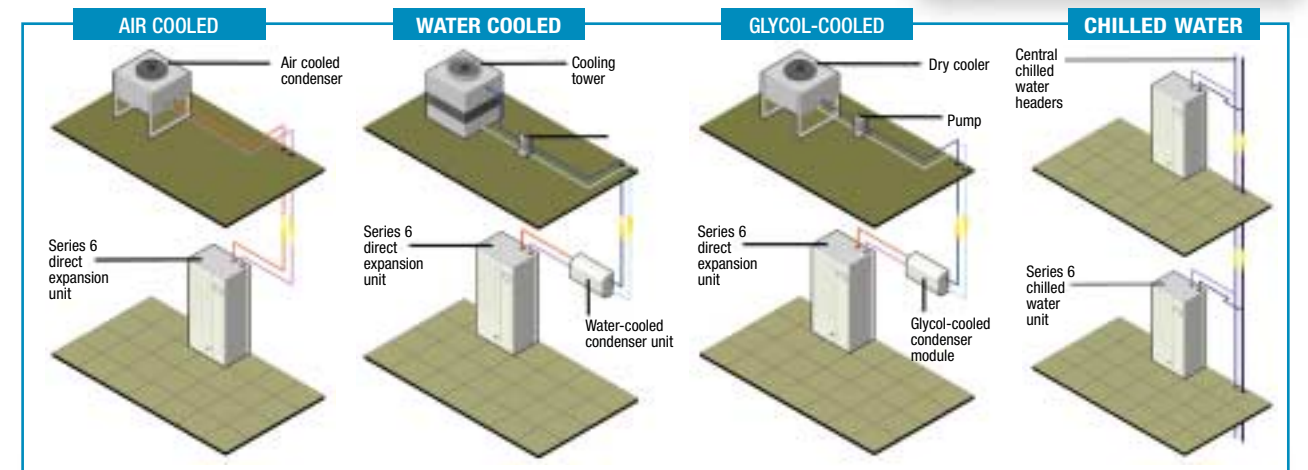
Compact, durable design

The Series 6 was designed with a compact footprint to allow for efficient use of floor space. Tight temperature and humidity control coupled with high-sensible cooling performance makes the Series 6 ideally suited for complete environmental control of sensitive electronic equipment. The cabinet is constructed of heavy gauge steel, internally lined with high-density insulation and finished in a durable epoxy powder paint. All components are located out of the air stream for maximum serviceability and easily accessed through a front hinged panel.



Versatility

The Series 6 has been designed to suit almost every application, offering four basic cooling systems in various capacities ranging from 2 to 5 tons, in either up-flow or down-flow configuration. The air cooled condenser coil is housed in a heavy gauge aluminum casing containing a copper tube and aluminum fin condensing coil with cooling provided by a vertical discharge, direct drive axial fan. For water or glycol-cooled applications, the tube-in-tube condenser is fitted with a two-way regulating valve. For cold climate operation, air-cooled condensers are available with two types of head pressure control systems. Select from heated receiver/flooded condenser system, or variable fan speed control with pressure sensor.





M 5 2 controller



Intelligence Made Visible: Canatal's M52 controller features a large, easy to read touch-activated LCD display.

Easy to Use: Simple icons to allow for quick programming and easy to read information. The main display features continuous room and unit status information available in several languages, expressed in degrees Fahrenheit or Celsius.

Precision: Full P-I-D control logic provides precise environmental control.

Graphic Data: System maintains graphic trending of temperature and humidity data over a 24-hour period.

Diagnostics: Detailed diagnostic routines and historic event log that keeps latest 50 events stored allow for easy fault analysis.

Alarm Monitoring: Multiple programmable alarm settings to assure safe operations.

Security: Three levels of security provides for the assignment of

different levels of access and protects against unauthorized changes to equipment settings.

Communications: The controller is network ready for up to eight units using the built-in powerful Co-Work network logic and is fully compatible with Canatal-Sachnet Building Automation System.

High Sensible Cooling

Designed to provide efficient equipment cooling with 90%+ sensible cooling ratios. Saves money and improves environmental control.

Compact Design

Modest footprint minimizes space requirement in equipment areas, while care and consideration for easy service access is maintained.

System Housing

The cabinet is constructed of heavy gauge steel, and finished with durable epoxy powder paint for maximum strength and durability, internally lined with high-density insulation. All service panels hinged from the front and locked with 1/4 turn captive fasteners to facilitate quick and easy access. Components are conveniently located out of the air stream to allow maintenance to occur without disturbing the unit operation.

Dehumidification

Innovative split evaporator coil design provides effective moisture removal in a discreet dehumidification mode. Coupled with SCR controlled electric reheat, this design feature provides precise humidity and temperature control.

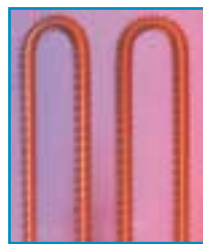
Capacity Control

Hot gas by-pass capacity control is available as an option.

Filters

Standard UL class 2 pleated 2" disposable filter with 30% average efficiency and 95% average arrestance to ASHRAE 52-76.

Optional higher efficiency filters also available.



Electric Heaters

Electric heating elements are of low density, tubular finned construction with a non-corrosive metal sheath. The system is modulated using an SCR control to ensure accurate temperature control to protect against thermal

shock of sensitive electronic equipment. Compared to staged reheat design, an SCR controlled system always presents a balanced three-phase load to the power supply.



design

1 - Refrigeration System

Copper tube and aluminum fin slab coil selected for minimum pressure drop and maximum efficiency. Stainless steel condensate drip pan with drain and optional condensate pump. System is designed for operation with R22 or R407C refrigerant. Standard features include high and low pressure cut-out switches, thermostatic expansion valve with external equalizer, refrigerant distributor, sight glass, filter-drier and liquid line shut-off valve.

2 - Drive Section

The blower is a double-inlet, double width, forward curve, centrifugal type. Each blower is dynamically and statically balanced. The blower is driven by an adjustable pulley and belt system and powered through a robust, high efficiency, TEFC type continuous-duty motor. The solid stainless steel shaft is supported on industrial duty ball bearings rated for a minimum 100,000 hours service life.

3 - Electrical

The Series 6 conforms to all major electrical requirements. Rotary disconnect switch is standard and comes interlocked with the front access panel. All wiring is number coded and neatly guided through wire duct to terminal strips for ease of servicing.

4 - Electrode Steam Humidifier

The humidifier is a self-contained electrode boiler type, complete with water level control and auto-drain functions. These humidifiers minimize energy consumption and may save up to 40% compared to IR style humidification. Electrode steam humidifiers provide particle-free steam that is evenly distributed across the evaporator coil. The humidifier is designed to operate on ordinary tap water and comes equipped with automatic flush system to reduce mineral precipitation. For servicing purposes the disposable canister is accessible from outside the air stream.

Other Options

Top discharge plenum with front and side single deflection grilles, insulated with separate pipe chase for field connections and finished to match cabinet; Floor stand with optional turning vane; Firestat; Smoke detector; Liquid detector; Condensate pump; Shipping Crate.

5 - Scroll Compressor

Scroll compressors use only three moving parts, providing exceptional reliability and energy efficiency as well as low vibration and noise. The compressor is resiliently mounted and located in a separate compartment outside the air stream. The compressor has internal overload protection and comes complete with crankcase heater. The compressor is fully piped with rotolock service valves and gauge ports for quick and easy service.





technology

Co-Work™ Connectivity

Our M52 controller is at the heart of all of Canatal's product intelligence. Co-Work is based on a unique multi-master network system designed by Canatal to maximize performance, reliability and manageability of our precision air conditioning systems. Its six key control functions guarantee the highest possible degree of on-site connectivity utilizing built-in IIC communication bus. An optional remote mounted panel allows for remote monitoring and control in a LAN environment. Common alarm output can be used for remote dial-up to an emergency service response unit for remote sites.

Control Redundancy

Means a Co-Work network is no longer dependent on a single designated master controller. Should a master controller experience technical difficulty, the system will automatically assign another controller to take on the master's duties. Therefore, the network actually has 'multiple masters', providing maximum redundancy and added protection.

Expansion of Control Steps

Provides for precise capacity matching with up to 8 steps of control. This means optimum operating efficiency and maximum system reliability.

Control Value Averaging

Avoids units fighting each other in the network by exchanging and averaging temperature and relative humidity sensor data between units in one space.

Duty Sharing

Equalizes runtime and standby time for all units in a network by coordinating the operation of standby and duty units based on accumulated runtime. This increases the network's reliability.

Data Synchronization

Allows the operator to review and change operational data at any random unit in the network. All changes will automatically be communicated and reset across all the units in the network, simplifying operations.

Sequential Load Activation

Provides for a coordinated activation of components for each unit in the network in order to minimize in-rush currents when components in a system are activated or deactivated at the same time.



flexibility

Take Full Control

The Series 6 was designed with many roles in mind, requiring adaptability to a wide range of control scenarios. Canatal's control solutions range from large network applications with full remote monitoring and control capability, to single unit applications requiring the reliability and accuracy of the M52 advanced controller.

Co-Work™

Every Series 6 is equipped with the M52 advanced controller, complete with Co-Work network capabilities. This allows for a maximum of 8 units to form a local area network without the need for additional external hardware.

Remote Supervisory Panel

A Co-Work network can be remotely monitored and controlled using the M52 Remote Supervisory Panel. This panel looks and displays exactly like another M52 controller, eliminating the need for additional operator training.

Canatal-SatchNet: Complete Central Monitoring and Control System

Our Canatal M52 controller is compatible with Canatal-SatchNet BAS. Canatal-SatchNet remote monitoring system is your most effective solution for remote surveillance and control. Connected through RS485 serial port communication, Canatal-SatchNet allows for control and monitoring of up to 32 SatchNet compatible devices in a network, expandable to 63 devices per site, to a maximum of 999 remote sites.

Other Building Automation System Connectivity

The M52 features a dry-contact common alarm output that can be programmed to send a signal for various alarm conditions. Fully integrated monitoring and control solutions are also available with various building automation systems.

