



*intelligent* precision air conditioning



 **CANATAL**

**ISO 9001**



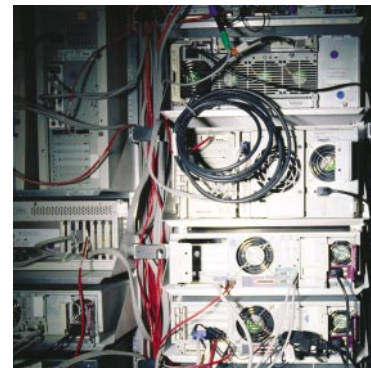
## precision air conditioning

### *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*

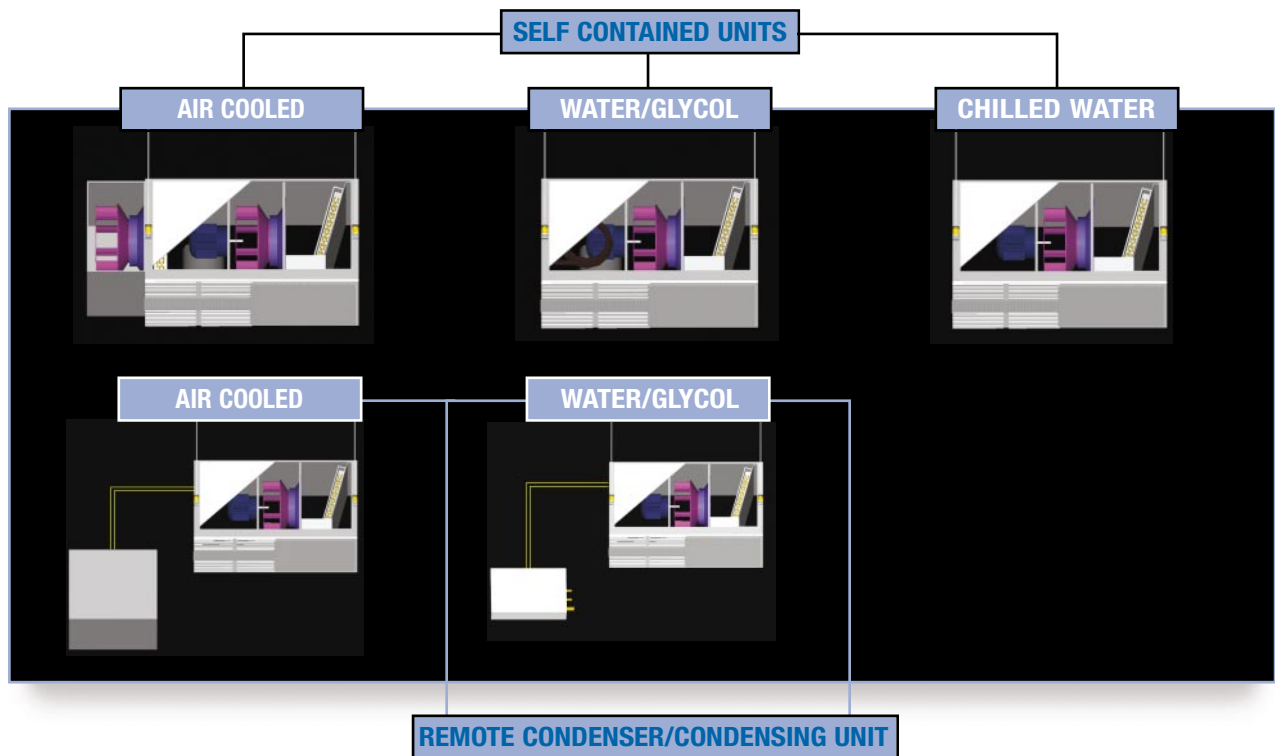
All precision air conditioning is not created equal. A combination of worldwide experience and Canatal's strong commitment to research and development has positioned Canatal as a technology leader in the precision air conditioning field. Design features such as the M52 advanced controller with touch-screen 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.





*Compact and Versatile design*

Canatal's Series 11 is a compact ceiling mounted air conditioning unit designed to provide quiet, reliable and efficient environmental control for mission critical applications. The compact version of the Series 11 is designed to fit in a standard 2 x 4ft. standard T-bar suspended ceiling system. The nominal capacity ranges from 12Mbh (3.5kW) to 28Mbh (8.2kW). This versatile product can be applied in packaged or split configurations for spot cooling, or ducted installations. The Series 11 is available in air cooled, water/glycol cooled and chilled water systems.





### ***FAN***

Quiet and reliable direct-drive, plenum-mounted backward inclined fan in draw-through layout with air proving switch.

### ***COMPRESSOR***

Efficient, quiet and reliable scroll compressor (reciprocating compressor for 1tr unit) with resilient mountings and internal overload protection.

### ***REFRIGERATION ACCESSORIES***

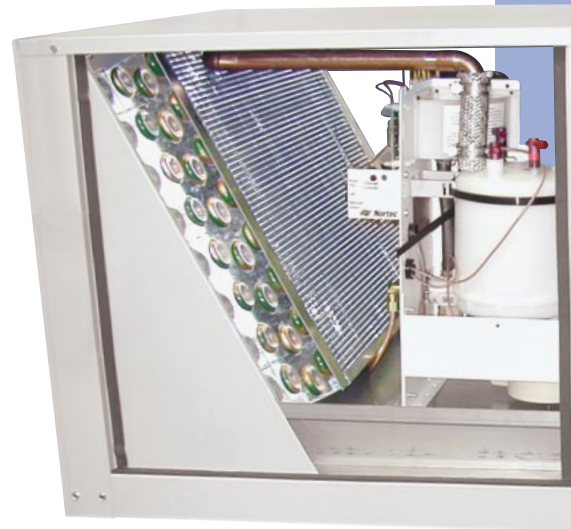
Hi-low pressure cut-out switch, thermostatic expansion valve, sight-glass and filter drier.

### ***HEAT EXCHANGERS***

Copper tube and aluminum fin slab coil construction. Order for use with R22, or R407C refrigerant.

### ***CONDENSATE PAN***

Double slope stainless steel condensate pan with float switch overflow protection. Left or right side drain.



### ***SUPPLY/RETURN AIR GRILLE***

Adjustable three-way deflection supply air grill with off-white enamel finish.

### ***RETURN AIR FILTER***

Hinged bottom access to filter compartment (slide-out filter box for ducted applications).

### ***DUCTED APPLICATIONS***

Ducted supply air and/or return air applications available.

### ***CONDENSERS***

Indoor air-cooled condensers/condensing units use direct-drive plenum-mounted backward inclined fan.

Outdoor air-cooled condensers/condensing units use direct-drive propeller fan. Water/glycol systems use co-axial condensers fitted with 2-way valves.



#### ***SYSTEM HOUSING***

Heavy gauge steel with thermal/acoustically insulated cabinet.

#### ***EXTERIOR FINISH***

Attractive two-tone epoxy powder coat paint.

#### ***HANGER MOUNTS***

Removable hanger brackets with optional spring isolation mounts.

#### ***SERVICE ACCESS***

Removable panels for easy service access.

#### ***ELECTRICAL***

Isolated electrical panel conforms to UL/CSA and IEC requirements.

#### ***ELECTRICAL DISCONNECT***

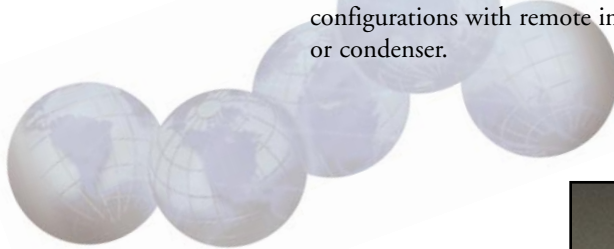
Internally mounted rotary disconnect switch.

#### ***HOT GAS BYPASS***

Available on direct expansion models (not available in split system with remote condensing units).

#### ***MULTIPLE CONFIGURATIONS***

Available as a self-contained packaged unit, or split system configurations with remote indoor/outdoor condensing unit, or condenser.



#### ***STANDARD CONTROLLER***

Digital programmable remote mounted heat/cool controller with LCD display. Auto or continuous fan operation, short cycle protection, cold start low pressure over ride.

#### ***CANATAL M52 CONTROLLER (OPTION)***

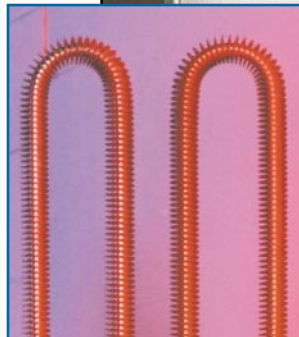
Touch screen display with Co-Work® network capabilities (see "technology" page for details).

#### ***HUMIDIFIER (OPTION)***

Optional 5lbs/hr. electrode steam humidifier with automatic water level control. Auto adaptive control allows for safe operation with ordinary tap water. Requires upgrade to M52 controller.

#### ***ELECTRIC REHEAT (OPTION)***

Low density tubular finned, single-stage 5kW electric reheat. Constructed with non-corrosive metal sheath. SCR control available for use with Canatal M52 Control System.





## Canatal 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.





### *Co-Work® Connectivity*

Our 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 automatic dial-up to an emergency service response unit for remote sites.

- **Control Redundancy** means a Co-Work network is not 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.

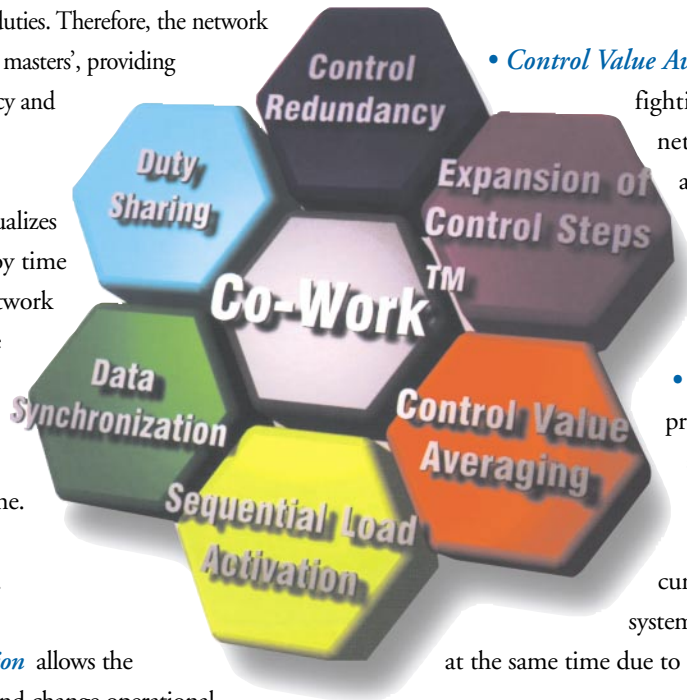
- **Duty Sharing** equalizes runtime and standby time for all units in a network by coordinating the operation of standby and duty units based on accumulated runtime. This increases the network's reliability.

- **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.

- **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.

- **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 due to power disruptions.



# series eleven specifications

## Self-contained air-cooled models for

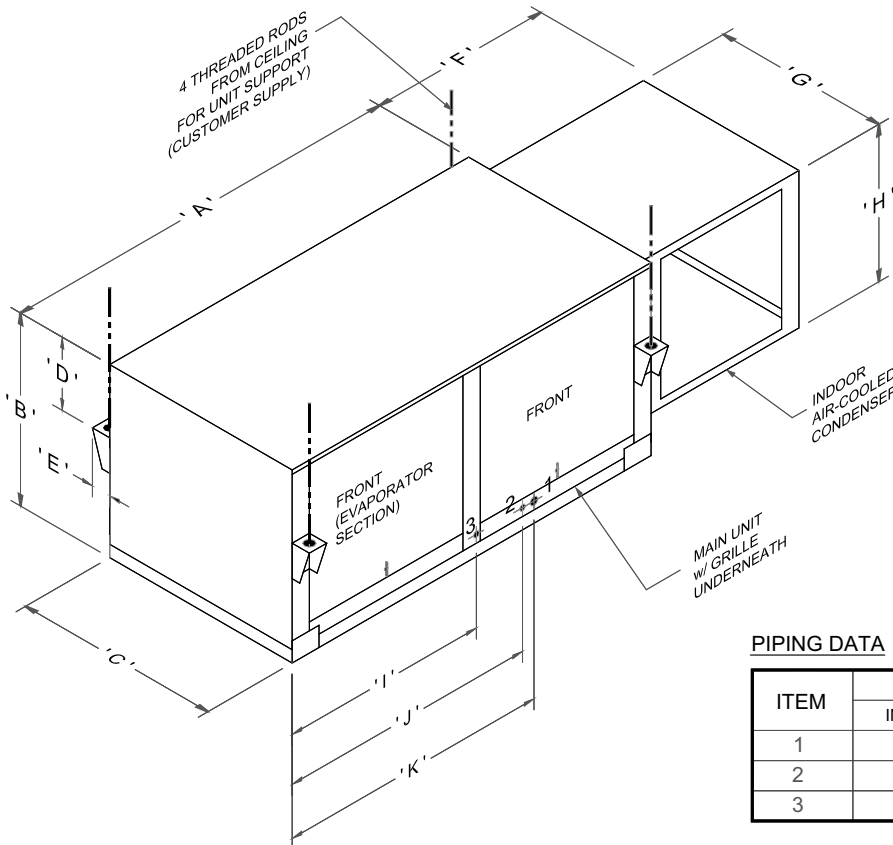
Model	60 Hz. at 75°F/24°C, 50% RH (R22)				50 Hz. at 75°F/24°C, 50% RH (R407C)				
	11AX10	11AX15	11AX20	11AX25	11AX10	11AX15	11AX20	11AX25	
Total Capacity (Mbtu)	12.7	18.2	22.6	26.1	(kW)	3.5	5.4	6.3	6.8
Sensible Cap. (Mbtu)	11.1	16.4	20.2	23.0	(kW)	3.1	4.7	5.6	6.2
Airflow(CFM)	500	750	950	1100	(M/Hr.)	850	1275	1615	1870

## Self-contained water/glycol cooled models for

Model	60 Hz. at 75°F/24°C, 50% RH (R22)				50 Hz. at 75°F/24°C, 50% RH (R407C)				
	11W/GX10	11W/GX15	11W/GX20	11W/GX25	11W/GX10	11W/GX15	11W/GX20	11W/GX25	
Total Capacity (Mbtu)	12.7	18.4	23.4	26.9	(kW)	3.5	5.5	6.4	7.0
Sensible Cap. (Mbtu)	11.1	16.5	20.6	23.4	(kW)	3.1	4.8	5.7	6.3
Airflow(CFM)	500	750	950	1100	(M/Hr.)	850	1275	1615	1870

## Chilled Water models at

Model	75°F/24°C, 50% RH, 45°F/7.2°C EWT				75°F/24°C, 50% RH, 45°F/7.2°C EWT				
	11CW10	11CW15	11CW20	11CW25	11CW10	11CW15	11CW20	11CW25	
Total Capacity (Mbtu)	15.1	21.0	25.0	27.9	(kW)	4.4	6.2	7.3	8.2
Sensible Cap. (Mbtu)	12.6	18.1	22.0	24.9	(kW)	3.7	5.3	6.5	7.3
Airflow(CFM)	500	750	950	1100	(M/Hr.)	850	1275	1615	1870



### DIMENSIONAL DATA

ITEM	DIMENSION	
	INCHES	MILLIMETERS
A	46 3/4	1187
B	21 3/4	552
C	23 3/4	603
D	8 1/4	210
E	2 1/4	57
F	21	533
G	20 1/4	514
H	17 3/4	451
I	24	610
J	30	762
K	31 1/2	800

### PIPING DATA

ITEM	DIAMETER		DESCRIPTION
	INCHES	MILLIMETERS	
1	1	25	Electrical Power Supply
2	3/4	19	Electrical Control Wiring
3	1	25	Drain Outlet

**TONNAGE**  
1 ~ 2.5 Tons



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