



**ECO SUPERSLIM 1WAY  
SERIES**  
CASSETTE FAN COILS

**MODELS**

PCSL-ECM

Slimline Cassette Fan Coils with EC Motor 230V/50Hz.

**ECO SUPERSLIM  
1WAY  
SERIES  
FAN COILS** | MODEL PCSL-ECM

## NEW PRODUCT



## ECO SUPERSLIM 1WAY SERIES FAN COILS

PCSL-ECM

### Product Presentation

The PCSL-ECM ECO 1way Super Slim Cassette Fan Coils Series, feature an innovative design, high control flexibility, and easy maintenance.

The PCSL-ECM fan coil use tangential fans and are equipped with condensate water pump and energy efficient EC motors. With a sophisticated temperature regulator, this product guarantees thermal comfort in every season.

It heats and cools extremely quickly, and once the desired temperature is reached it maintains it accurately and silently.

### Product Range

The ECO 1way Superslim Cassette Fan Coils Series offers a range of 230V/50Hz, with the following capacities:

- **2 sizes of 2 pipe models 2 row models from 2.56kW to 3.19kW (8700 BTU/H to 10900 BTU/H) cooling capacity and 2.6kW to 3.21kW (8900 BTU/H to 10950 BTU/H) heating capacity.**

### Product Features

- **Energy Efficiency.** The PCSL-ECM ECO 1way Super Slim Cassette Fan Coils Series incorporate a DC motor with variable speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto - Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 - 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 - 5 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

- **Casing Design.** The special height of 152mm is meant for reduced space installations in hotels, apartments, offices, etc.

- **Low Sound.** The tangential fans and a very quiet integrated condensate pump grant very low noise levels.

- **Flexibility for Distribution and Maintenance.** The PCSL-ECM ECO 1way Super Slim Cassette Fan Coils Series have been designed to maximize product flexibility on site and in stock offering the following features:

- Ceiling installation, ease of installation and maintenance;

- Easy to remove front panel, filter and integrated drain pump and drain pan.

- 1-step access to power terminals and auxiliary contacts for quick and easy wiring.

- Easy-to-connect external valves, which can be fitted directly onto the cassette during installation.

### Standard Configuration

The PCSL-ECM ECO 1 Way Super Slim Series Cassette Fan Coils offer as standard 2mm nylon net filter; stepping motors for louvers, LED display with infra-red signal receiver and condensate pump with float switch.

### Control Options

The PCSL-ECM ECO 1way Super Slim Cassette Fan Coils Series offers the following Control options to satisfy specific applications.

- **Total Control Board (S type)** – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It offers the following control options: Continuous with modulation ; 2 pipe configuration; with or without valves; with or without electrical heater; preheat configuration; complete diagnostics.

It also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

- **Flexi Control Board (W type)** – Flexible function control for External Thermostat applications, with control of Drain Pump, Louvers, Zone Control product operations, and limited LED diagnostics.

## PCSL ECM ECO SUPERSLIM 1WAY SERIES FAN COILS

### Technical Specifications (Eurovent Standards)

PCSL-V-ECM Hydronic Slimline Cassette, 2 Pipe with EC Motor

UNIT CONFIGURATION		PCSL-[Size]-V-ECM		01	02
		Configuration		2-pipe	
		Number of Fan Blowers		Single	
		Power Supply	(V/Ph/Hz)	230 / 1 / 50	
		Operation Control		S Type: Total control version. W Type: Flexible control version.	
PERFORMANCE DATA	Air	Air Flow	H	450	600
			M	350	450
			L	150	250
	Cooling	Cooling Capacity	H	2.56	3.19
			M	2.12	2.56
			L	1.05	1.62
		Sensible Cooling Capacity	H	1.79	2.27
			M	1.47	1.79
			L	0.73	1.11
		Latent Cooling Capacity	H	0.77	0.92
			M	0.65	0.77
			L	0.32	0.51
	FCEER	Rating	135.8	149.5	
		Class	B	B	
	Heating	Heating Capacity	H	2.6	3.21
			M	2.15	2.6
			L	1.08	1.65
		Max. Elec. Heater Cap.		1.0	
	FCCOP	Rating	261.5	252.8	
		Class	B	B	
	Sound	Sound Pressure Level (Outlet)	37 / 33 / 23	41 / 37 / 26	
		Sound Power Level (Outlet)	46 / 42 / 32	50 / 46 / 35	
	Electrical	Power input in cooling mode (1)	H	18	27
			M	13	18
			L	9	10
		Power input in heating mode (1)	H	13	22
			M	8	13
L			4	5	
Fan Motor Running Current		H	0.16	0.23	
Hydronic	Cooling Water Flow Rate	H	439	547	
		M	363	439	
		L	180	278	
	Cooling Pressure Drop	H	25.4	36.9	
		M	18.4	25.4	
		L	5.6	11.7	
	Heating Water Flow Rate	H	445	551	
		M	368	445	
		L	185	283	
	Heating Pressure Drop	H	21.8	31.3	
		M	15.8	21.8	
		L	4.9	10.1	
Water Content	L	0.642	0.642		
CONSTRUCTION AND PACKING DATA	Water Connections	Type	Internal Thread		
		In / Out	12.7 [1/2"]		
	Condensate Drainage Connection		19 [3/4"]		
	Dimensions	L	1054		
		W	427		
		H	152		
	Panel Dimensions		1182 x 467 x 25		
Net Weight		13.5			



#### Cooling mode (2 pipe):

Return air temperature: 27C DB/19C WB.  
Inlet/outlet water temperature: 7C/12C.

#### Heating mode (2 pipe):

Return air temperature: 20C.  
Inlet/outlet water temperature: 45C/40C.

For High ΔT Condition Requirements, please refer to Sonkor Selection Software.

(1): Fan motor power includes PCB power input.

**ECO SUPERLIM  
1WAY  
SERIES  
FAN COILS**

MODEL PCSL-ECM

**Product Accessories**

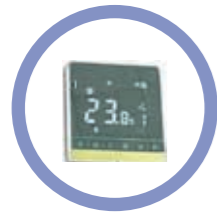
CONTROL ACCESSORIES



**INFRA-RED HANDSET CONTROLLER + WALL HOLDER**

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.



**UNLIMITED WIRED WALL PAD CONTROLLER**

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.



**DIP SWITCH CONFIGURATION SERVICE**

Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.



**EXTERNAL CONNECTION PLUGS**

Factory prewired units with external accessory plugs for fast and easy connections.



**UNIVERSAL EC THERMOSTAT**

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0-10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0-50°C, 5-95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

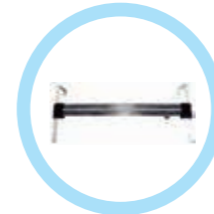


**STCD SERIES THERMOSTATS**

(FOR FLEXI CONTROL BOARD)

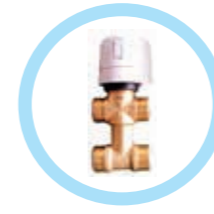
Please visit [www.sonkor.com](http://www.sonkor.com) for further information on our STCD thermostat range.

MORE ACCESSORIES



**ELECTRICAL HEATERS**

The electric heater is supplied for winter heating as an alternative to the auxiliary hot water coil. We offer a complete range of PTC (Positive Thermal Coefficient) electric heaters kits, easy to connect to control box, with mounting fixture. The electric heater configuration is selectable by DIP switch on the internal control board.



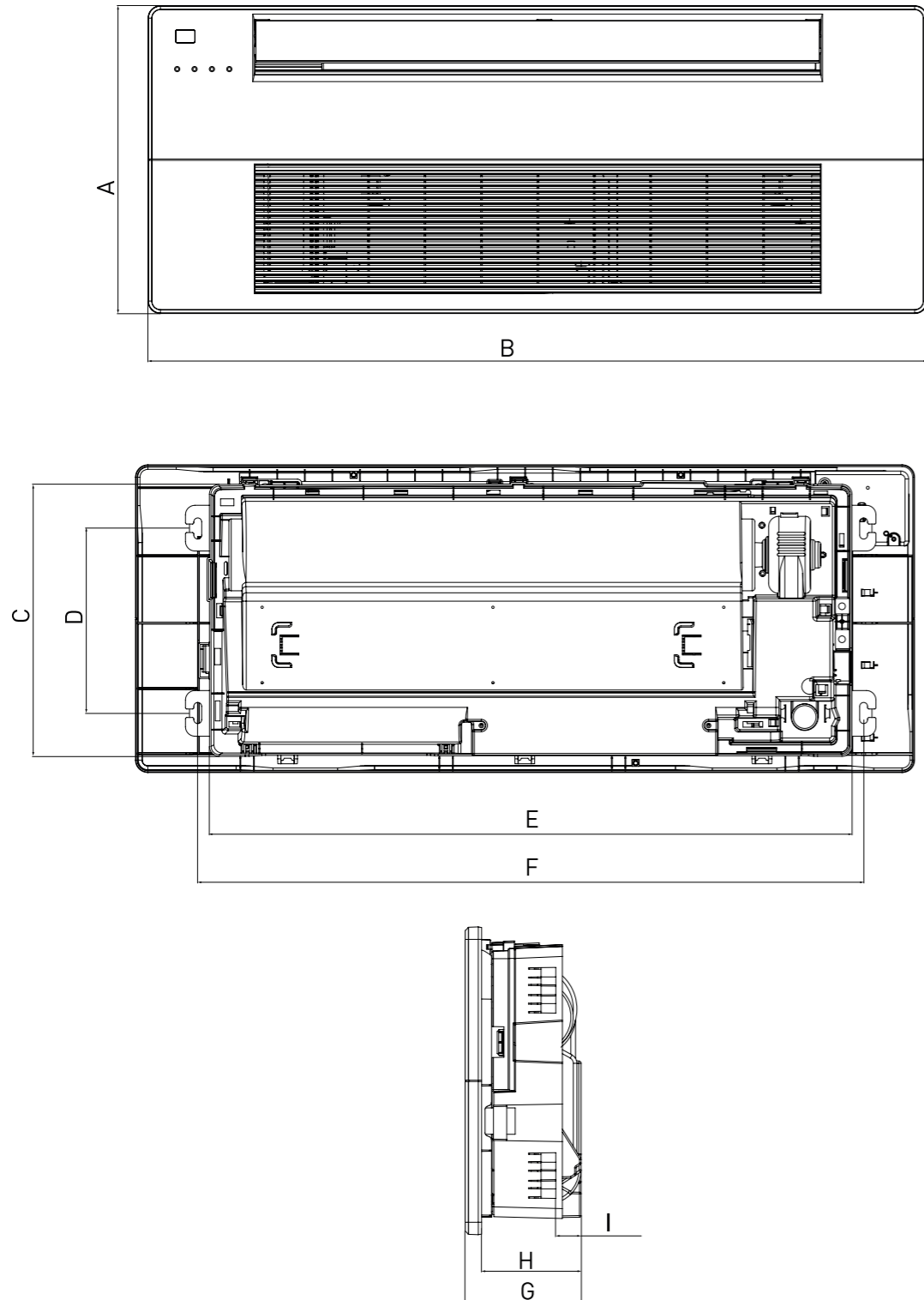
**VALVES + VALVE KITS**

2-way On/Off or 3-way bypass valves, 1/2" sizes with thermoelectric or 24Vac modulating Actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options. Distance between inlet and outlet pipe connections standardized at 1.57inches (40mm) for hot water circuit, and 1.97inches (50mm) for cold water circuit.

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**1WAY**  
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**Dimensional Drawings (mm) PCSL-ECM, 2Pipe Single Fan Models**



Model	Unit Dimensions (mm)								
	A	B	C	D	E	F	G	H	I
PCSL-01-V-ECM	467	1182	412	280	975	1010	176	151	38
PCSL-02-V-ECM	467	1182	412	280	975	1010	176	151	38