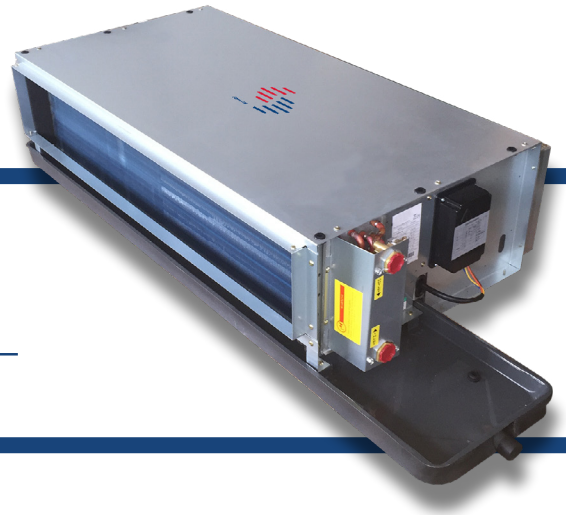
SURNA®
Cultivation Technologies



ISOSTREAM®
SURNA FAN COIL
WITH HOT WATER REHEAT COIL
MODELS SFC(4R)-XXXX-PX-AECM-X-L

This multi-use fan coil is another addition to our full line of purpose-built climate control equipment designed specifically for controlled environment agriculture (CEA). The unit meets the demanding nature of CEA, providing high latent (dehumidification) output with minimal energy use via the variable speed fan motor, while staying within a reasonable price point.

This unit can be mounted inside the growing space, unducted, OR can reside outside the space and ducted in.

The Surna Fan Coil (SFC) is available standard in four different sizes with cooling output ranging from 1 to 6 tons with other custom sizes available upon request, ensuring a solution for any size environment. Utilizing designs with multiple units within each grow space allows for distributed airflow throughout while offering redundancy if a unit fails or need maintenance, and our fan coil designs are all compatible with CO_2 injection systems.

When applied into a chilled water system with automation, this system provides the ability to change entering water temperatures, flow rate, and fan speed to provide real time changes to the cooling or dehumidification capacity provided at any given point in order to precisely manage temperature and humidity. In addition to providing precise climates, it also allows the flexibility to modify the system output capacity as conditions in the facility change.

Sensible heat ratio (SHR) is a term used to describe the amount of sensible cooling (temperature reduction) vs latent cooling (dehumidification) for any given air conditioning unit. By coupling with a properly designed chilled water system and lower entering water temperatures, SFC units have been constructed to have more latent cooling than comfort cooling fan coil units of similar tonnage.

The Surna whisper-quiet fan coil uses EC motors to optimize airflow while modulating chilled water valves are used to fine-tune for minimizing energy consumption.

FEATURES AND BENEFITS

Installation Versatility
Can be utilized in a variety of installation configurations and applications such as ceiling mount free discharge, ducted outside the space, and ducted inside the space.

Filtration
Includes an efficiency class Merv 3 standard with options for Merv 8-14 or HEPA filtration designs.

CO_2 Injection
Unit CO_2 injection options available for dispersion uniformity through the cultivation environment.

SPECIFICATIONS

Custom configurations and sizes may be available upon request

PHYSICAL	SFC(4R)-300-PX-AECM-X-L 4-Pipe with Hot Water Reheat	SFC(4R)-600-PX-AECM-X-L 4-Pipe with Hot Water Reheat	SFC(4R)-1000-PX-AECM-X-L 4-Pipe with Hot Water Reheat	SFC(4R)-1600-PX-AECM-X-L 4-Pipe with Hot Water Reheat
Length	33-11/16 in (855.7 mm)	49-7/16 in (1,255.7 mm)	69-1/16 in (1,754.2 mm)	76-15/16 in (1,954.2mm)
Width	28-5/8 in (727.08 mm)			31-7/16 in (798.51 mm)
Height	9-13/16 in (249.2 mm)			11-13/16 in (300.0 mm)
Weight	63 lbs (28.58 kg)	88 lbs (39.92 kg)	130 lbs (58.97 kg)	176 lbs (79.83 kg)
Chilled Water Inlet	3/4 in (19.05 mm) NPT			
Chilled Water Outlet	3/4 in (19.05 mm) NPT			
Hot Water Inlet	3/4 in (19.05 mm) NPT			
Hot Water Outlet	3/4 in (19.05 mm) NPT			
Condensate Drainage Connection	3/4 in (19.05 mm) NPT			
ELECTRICAL				
Power Supply (V/Ph/Hz)	220/1/60			
Min.Circuit Ampacity (MCA)	1 A		2 A	4 A
Max. Overcurrent Protection (MOP)	2 A		4 A	8 A
Full Load Amps (FLA)	0.6 A	0.9 A	1.6 A	3.5 A
FAN MOTOR				
Fan Motor Power @ Max. Speed	63 W	102 W	180 W	380 W
Fan Motor Running Current @ 220V	0.57 A	0.93 A	1.64 A	3.45 A
CERTIFICATIONS				
	ETL			
CHILLED WATER COIL PERFORMANCE				
Applied Output Tonnage Range	12,000 - 36,000 BTU/Hr (3.52 - 10.55 kW)	24,000 - 48,000 BTU/Hr (7.03 - 14.07 kW)	36,000 - 60,000 BTU/Hr (10.55 - 17.58 kW)	48,000 - 72,000 BTU/Hr (14.07 - 21.10 kW)
Nominal Output	13,151 BTU/Hr (3.85 kW)	20,876 BTU/Hr (6.12 kW)	31,669 BTU/Hr (9.28 kW)	52,103 BTU/Hr (15.27 kW)
Rated Airflow	406 CFM (689.80 m^3/h)	690 CFM (1,172.32 m^3/h)	1,040 CFM (1,766.97 m^3/h)	1,865 CFM (3,168.66 m^3/h)
Water Flow Rate	2.82 GPM (640.49 L/h)	4.93 GPM (1,119.72 L/h)	7.85 GPM (1,782.93 L/h)	12.31 GPM (2,795.91 L/h)
Water Pressure Drop	19.4 Ft/Head (58.0 kPa)	22.5 Ft/Head (67.3 kPa)	32.6 Ft/Head (97.4 kPa)	31.4 Ft/Head (93.9 kPa)
REHEAT COIL PERFORMANCE				
Hydronic Heating Capacity (EWT 140°F/60°C)	15,027 BTU/Hr (4.40 kW)	30,188 BTU/Hr (8.85 kW)	41,903 BTU/Hr (12.28 kW)	75,000 BTU/Hr (21.98 kW)

Note::

a. Assumes entering water temperature (EWT) of 45° F (7.22° C)

b. Airflow is adjustable

c. Data assumes specified GPM

d. All dimensions are approximate within 1/16 of an inch of those indicated.

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P 303.993.5271

E info@surna.com

August 2021

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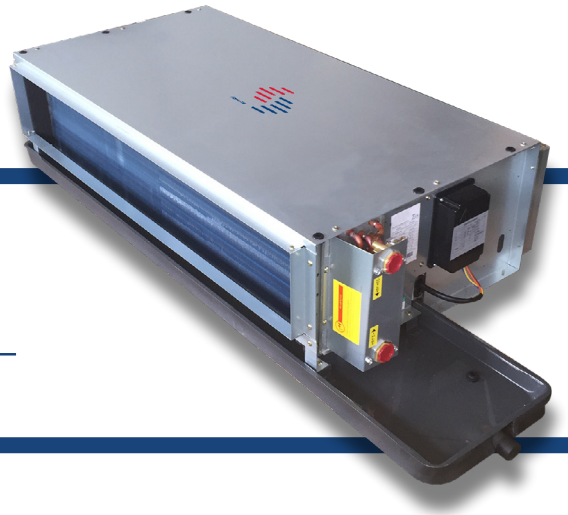

ISOSTREAM®
SURNA FAN COIL

COOLING ONLY
MODELS SFC(4R)-XXXX-VX-AECM-X-L

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The Surna Fan Coil (SFC) is available standard in four different sizes with cooling output ranging from 1 to 6 tons with other custom sizes available upon request, ensuring a solution for any size environment. Utilizing designs with multiple units within each grow space allows for distributed airflow throughout while offering redundancy if a unit fails or need maintenance, and our fan coil designs are all compatible with CO_2 injection systems.

When applied into a chilled water system with automation, this system provides the ability to change entering water temperatures, flow rate, and fan speed to provide real time changes to the cooling or dehumidification capacity provided at any given point in order to precisely manage temperature and humidity. In addition to providing precise climates, it also allows the flexibility to modify the system output capacity as conditions in the facility change.

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The Surna whisper-quiet fan coil uses EC motors to optimize airflow while modulating chilled water valves are used to fine-tune for minimizing energy consumption.

FEATURES AND BENEFITS

Installation Versatility
Can be utilized in a variety of installation configurations and applications such as ceiling mount free discharge, ducted outside the space, and ducted inside the space.

Filtration
Includes an efficiency class Merv 3 standard with options for Merv 8-14 or HEPA filtration designs.

CO_2 Injection
Unit CO_2 injection options available for dispersion uniformity through the cultivation environment.

SPECIFICATIONS

Custom configurations and sizes may be available upon request

PHYSICAL	SFC(4R)-300-VX-AECM-X-L 2-Pipe, Cooling Only	SFC(4R)-600-VX-AECM-X-L 2-Pipe, Cooling Only	SFC(4R)-1000-VX-AECM-X-L 2-Pipe, Cooling Only	SFC(4R)-1600-VX-AECM-X-L 2-Pipe, Cooling Only
Length	33-11/16 in (855.7 mm)	49-7/16 in (1,255.7 mm)	69-1/16 in (1,754.2 mm)	76-15/16 in (1,954.2 mm)
Width	21-5/8 in (549.28 mm)			24-7/16 in (620.71 mm)
Height	9-13/16 in (249.2 mm)			11-13/16 in (300.0 mm)
Weight	51 lbs (23.13 kg)	68 lbs (30.84 kg)	95 lbs (43.09 kg)	132 lbs (59.87 kg)
Water Inlet	3/4 in (19.05 mm) NPT			
Water Outlet	3/4 in (19.05 mm) NPT			
Condensate Drainage Connection	3/4 in (19.05 mm) NPT			
ELECTRICAL - Without Heat				
Power Supply (V/Ph/Hz)	220/1/60			
Min.Circuit Ampacity (MCA)	1 A		2 A	4 A
Max. Overcurrent Protection (MOP)	2 A		4 A	8 A
Full Load Amps (FLA)	0.6 A	0.9 A	1.6 A	3.5 A
FAN MOTOR				
Fan Motor Power @ Max. Speed	63 W	102 W	180 W	380 W
Fan Motor Running Current @ 220V	0.57 A	0.93 A	1.64 A	3.45 A
CERTIFICATIONS				
	ETL			
CHILLED WATER COIL PERFORMANCE				
Applied Output Tonnage Range	12,000 - 36,000 BTU/Hr (3.52 - 10.55 kW)	24,000 - 48,000 BTU/Hr (7.03 - 14.07 kW)	36,000 - 60,000 BTU/Hr (10.55 - 17.58 kW)	48,000 - 72,000 BTU/Hr (14.07 - 21.10 kW)
Nominal Output	14,259 BTU/Hr (4.18 kW)	24,984 BTU/Hr (7.32 kW)	39,769 BTU/Hr (11.66 kW)	62,319 BTU/Hr (118.26 kW)
Rated Airflow	406 CFM (689.80 m^3/h)	690 CFM (1,172.32 m^3/h)	1,040 CFM (1,766.97 m^3/h)	1,865 CFM (3,168.66 m^3/h)
Water Flow Rate	2.82 GPM (640.49 L/h)	4.93 GPM (1,119.72 L/h)	7.85 GPM (1,782.93 L/h)	12.31 GPM (2,795.91 L/h)
Water Pressure Drop	19.4 Ft/Head (58.0 kPa)	22.5 Ft/Head (67.3 kPa)	32.6 Ft/Head (97.4 kPa)	31.4 Ft/Head (93.9 kPa)

Note::

a. Assumes entering water temperature of 45° F (7.22° C)

b. Airflow is adjustable

c. Data assumes specified GPM

d. All dimensions are approximate within 1/16 of an inch of those indicated.

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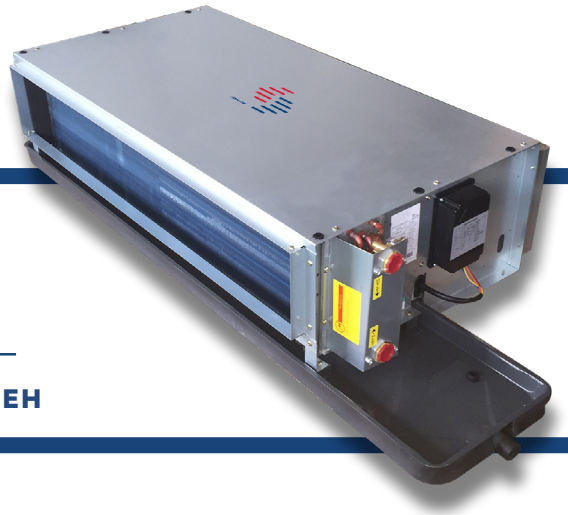

ISOSTREAM®
SURNA FAN COIL
WITH ELECTRIC HEAT
MODELS SFC(4R)-XXXX-VX-AECM-X-L-EH

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Filtration
Includes an efficiency class Merv 3 standard with options for Merv 8-14 or HEPA filtration designs.

CO_2 Injection
Unit CO_2 injection options available for dispersion uniformity through the cultivation environment.

SPECIFICATIONS

Custom configurations and sizes may be available upon request

PHYSICAL	SFC(4R)-300-VX-AECM-X-L-EH 2-Pipe with Electric Heat	SFC(4R)-600-VX-AECM-X-L-EH 2-Pipe with Electric Heat	SFC(4R)-1000-VX-AECM-X-L-EH 2-Pipe with Electric Heat	SFC(4R)-1600-VX-AECM-X-L-EH 2-Pipe with Electric Heat
Length	33-11/16 in (855.7 mm)	49-7/16 in (1,255.7 mm)	69-1/16 in (1,754.2 mm)	76-15/16 in (1,954.2 mm)
Width	25-6/8 in (654.1 mm)			28-9/16 in (725.5 mm)
Height	9-13/16 in (249.2 mm)			11-13/16 in (300.0 mm)
Weight	60 lbs (27.22 kg)	81.5 lbs (36.97 kg)	113 lbs (51.23 kg)	155.5 lbs (70.53 kg)
Water Inlet	3/4 in (19.05 mm) NPT			
Water Outlet	3/4 in (19.05 mm) NPT			
Condensate Drainage Connection	3/4 in (19.05 mm) NPT			
ELECTRICAL				
Power Supply (V/Ph/Hz)	220/1/60			
Min. Circuit Ampacity (MCA)	17.4 A	29 A	35.1 A	36.3 A
Max. Overcurrent Protection (MOP)	20 A	30 A	40 A	
Full Load Amps (FLA)	14.2 A	23.7 A	28.9 A	30.7 A
FAN MOTOR				
Fan Motor Power @ Max. Speed	63 W	102 W	180 W	380 W
Fan Motor Running Current @ 220V	0.57 A	0.93 A	1.64 A	3.45 A
CERTIFICATIONS				
	ETL			
CHILLED WATER COIL PERFORMANCE				
Applied Output Tonnage Range	12,000 - 36,000 BTU/Hr (3.52 - 10.55 kW)	24,000 - 48,000 BTU/Hr (7.03 - 14.07 kW)	36,000 - 60,000 BTU/Hr (10.55 - 17.58 kW)	48,000 - 72,000 BTU/Hr (14.07 - 21.10 kW)
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Water Pressure Drop	19.4 Ft/Head (58.0 kPa)	22.5 Ft/Head (67.3 kPa)	32.6 Ft/Head (97.4 kPa)	31.4 Ft/Head (93.9 kPa)
ELECTRIC HEAT PERFORMANCE				
Max. Heating Capacity	3 kW	5 kW	6 kW	

Note::

a. Assumes entering water temperature of 45° F (7.22° C)

b. Airflow is adjustable

c. Data assumes specified GPM

d. All dimensions are approximate within 1/16 of an inch of those indicated.

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All data subject to change without notice