



CLASSIC FAN COIL UNIT

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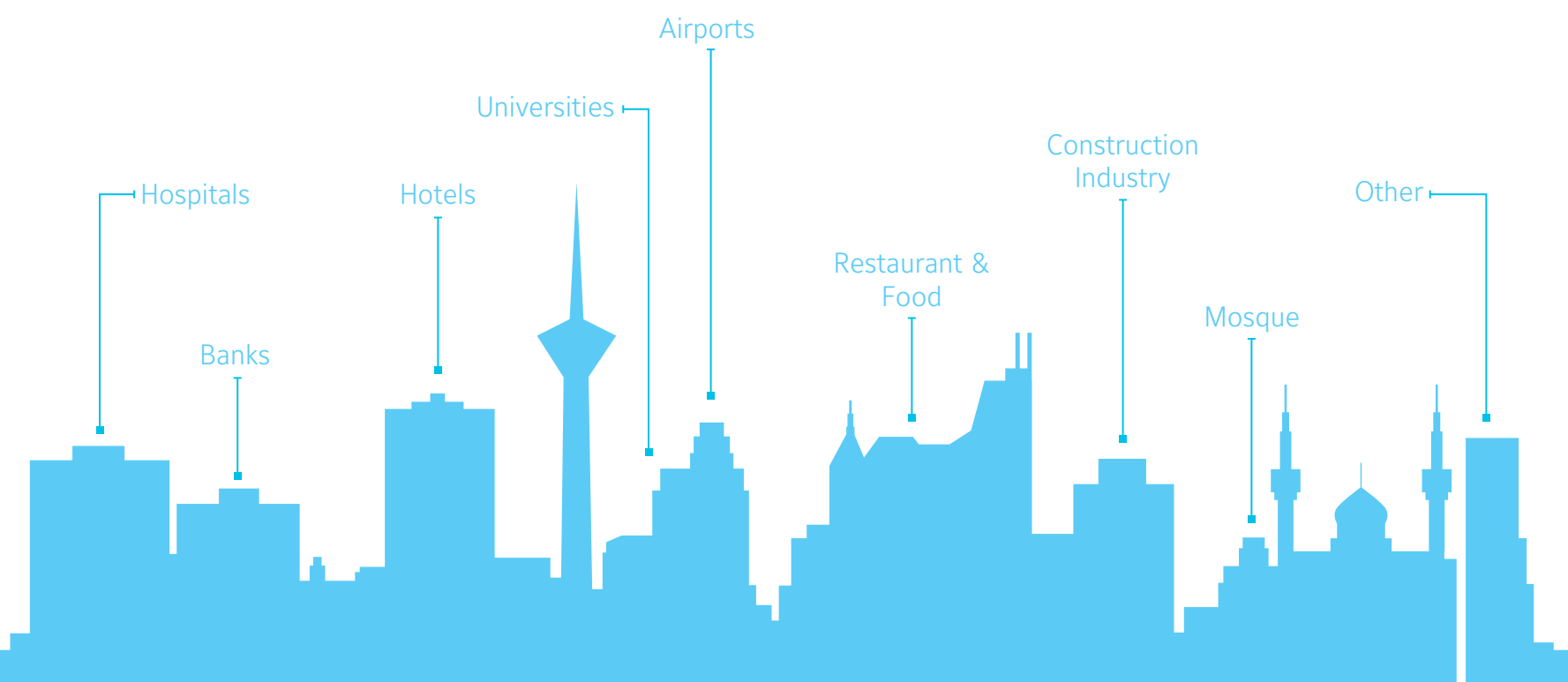
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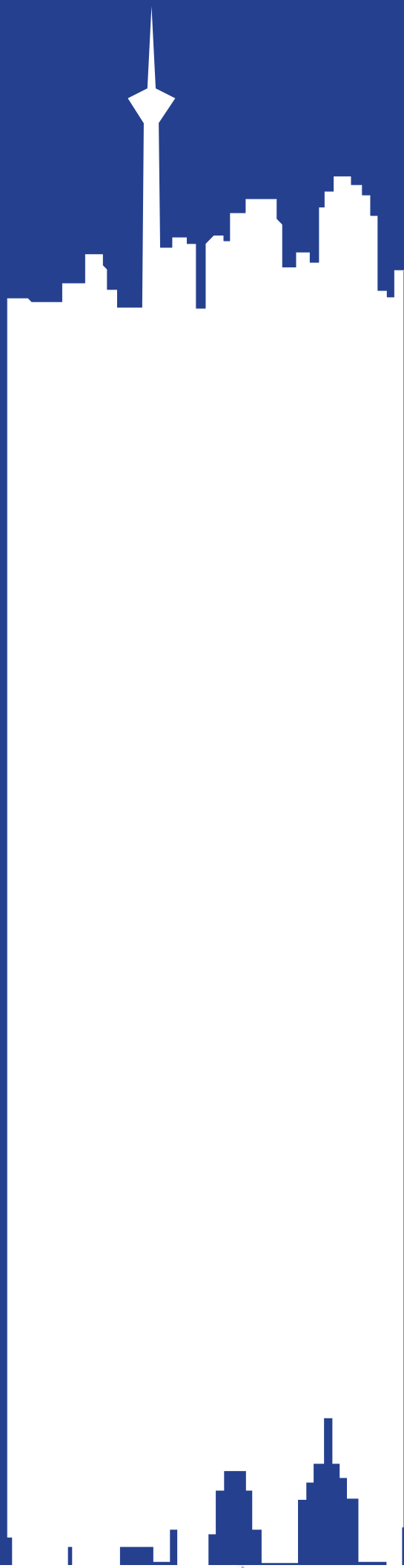
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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

Life's Pleasant Breeze







Horizontal Ceiling Concealed Model, (SRFCHC Series):

The SRFCHC Series fan coil units are designed for above ceiling or soffit installation, but the fan section on this model is located within an insulated plenum for sound attenuation. Conditioned air is supplied horizontally through a sidewall supply air grille, and return air is re-circulated through the unit via plenum or ducted return system (back or bottom return air intake configuration available). The ceiling concealed unit is suitable for external static pressures of up to 30 Pa.



Selection Example

Given:

Required Air Flow Rate: 600 CFM
Ambient Altitude: 4000 ft
Fan Speed: Medium

Summer Conditions

Total Cooling Load: 16000 Btu/hr
Sensible Cooling Load: 9900 Btu/hr
Entering Air Temperature: 80°F DB / 67°F WB
Entering Water Temperature: 46°F

Winter Conditions

Total Heating Load: 29000 Btu/hr
Entering Air Temperature: 72°F DB
Entering Water Temperature: 160°F

Step1: Appropriate Fan Coil Unit Selection:

Because of we need 600 CFM air flow rate, in first step we select SRFC-600. By referring to performance table, we can see total and sensible cooling capacity of this unit with 4.5 GPM chilled water flow rate in given summer conditions are 19950 Btu/hr and 13870 Btu/hr, respectively. In addition, heating capacity of this unit with 4.5 GPM hot water flow rate in given winter conditions is 40460 Btu/hr.

Step2: Comparison of Selected Model Performance with Our Requirements:

In this step, we check selected model performance in our condition:

Because of fan coil units performance tables are based on sea level altitude and fan high speed, we should be using load adjustment factor in our conditions, so by referring to tables 2 and 3, we have:

- Actual Total Cooling Capacity = $19950 \times 0.96 \times 0.86 = 16470$ Btu/hr
- Actual Sensible Cooling Capacity = $13870 \times 0.86 \times 0.83 = 9900$ Btu/h
- Actual Heating Capacity = $40460 \times 0.87 \times 0.84 = 29568$ Btu/hr

Therefore, the chosen unit satisfies the load requirements.

Step 3: Determine Water Flow Range

To determine water flow range, we can using following formula:

$$\text{Chilled water flow range (°F)} = \frac{\text{Actual Total Cooling Capacity (Btu/hr)}}{500 \times \text{Chilled Water Flow Rate (GPM)}} = \frac{16470}{500 \times 4.5} = 7.3^\circ\text{F}$$

$$\text{Hot water flow range (°F)} = \frac{\text{Actual Heating Capacity (Btu/hr)}}{500 \times \text{Hot Water Flow Rate (GPM)}} = \frac{29568}{500 \times 4.5} = 13.1^\circ\text{F}$$

Dimensions (Cont.)

Horizontal Ceiling Mounted, Exposed

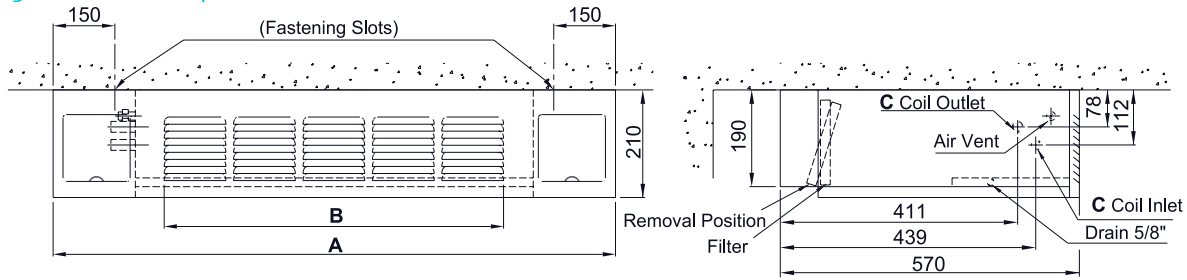


Table 9

Model	A	B	C
SRFC-200	920	510	3/4" FPT
SRFC-300	1120	640	3/4" FPT
SRFC-400	1220	780	3/4" FPT
SRFC-600	1360	910	3/4" FPT
SRFC-800	1620	1180	3/4" FPT
SRFC-1000	1920	1440	3/4" FPT
SRFC-1200	2270	1840	3/4" FPT

NOTE

- Left handed coil connections are shown.
- To order desired model add proper characters to model see nomenclature.
- All dimensions in mm.

Horizontal Ceiling Mounted, Concealed

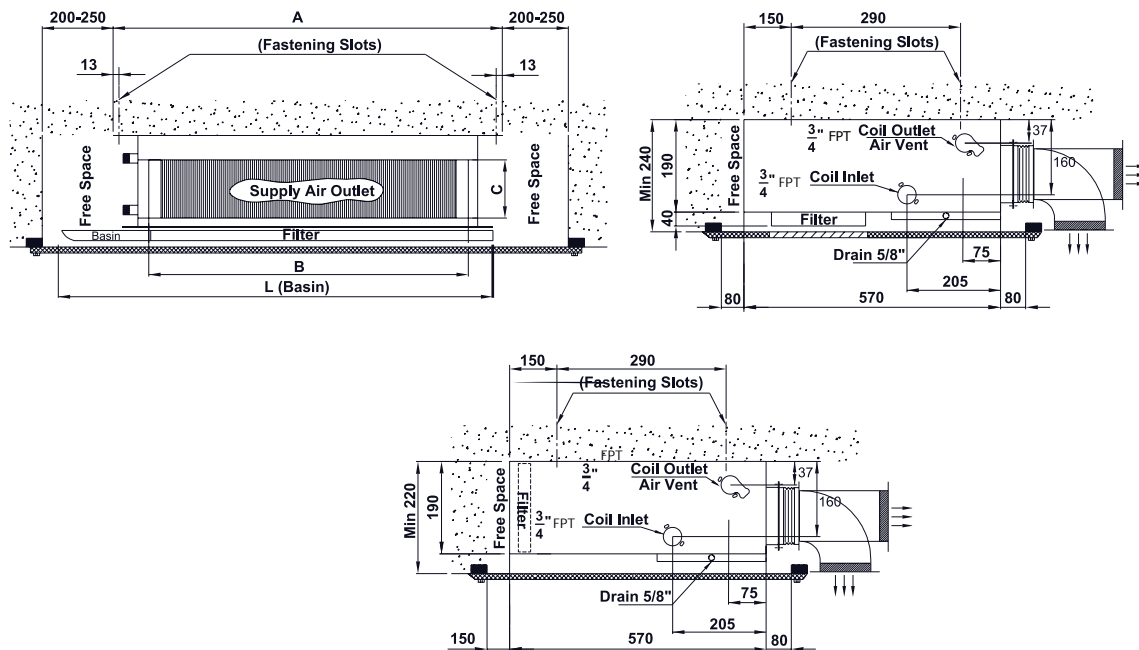


Table 10

Model	A	B	C	L
SRFC-200	650	540	155	810
SRFC-300	850	740	155	1060
SRFC-400	950	840	155	1060
SRFC-600	1090	980	155	1195
SRFC-800	1350	1240	155	1480
SRFC-1000	1650	1540	145	1720
SRFC-1200	2000	1860	145	2070

NOTE

- Left handed coil connections are shown.
- To order desired model add proper characters to model see nomenclature.
- All dimensions in mm.