

FAN COIL



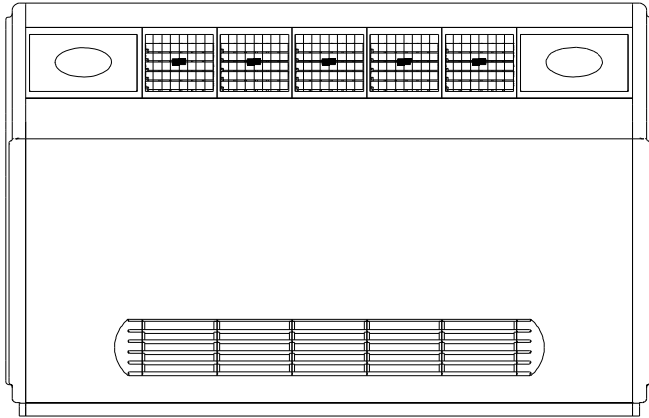
AzarNasim
HVAC SYSTEMS



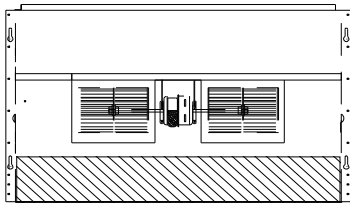


Coil fin per inch correction factor

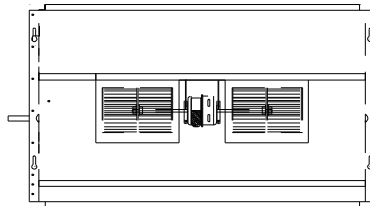
- Floor mounted (TDFF)
- Wall mounted (TDFW)
- Ceiling mounted (TDFC)



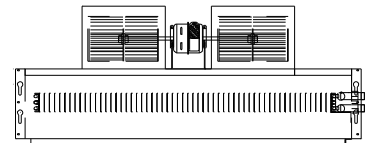
Ceiling Mounted Concealed Fan Coil



Model U
TCFU



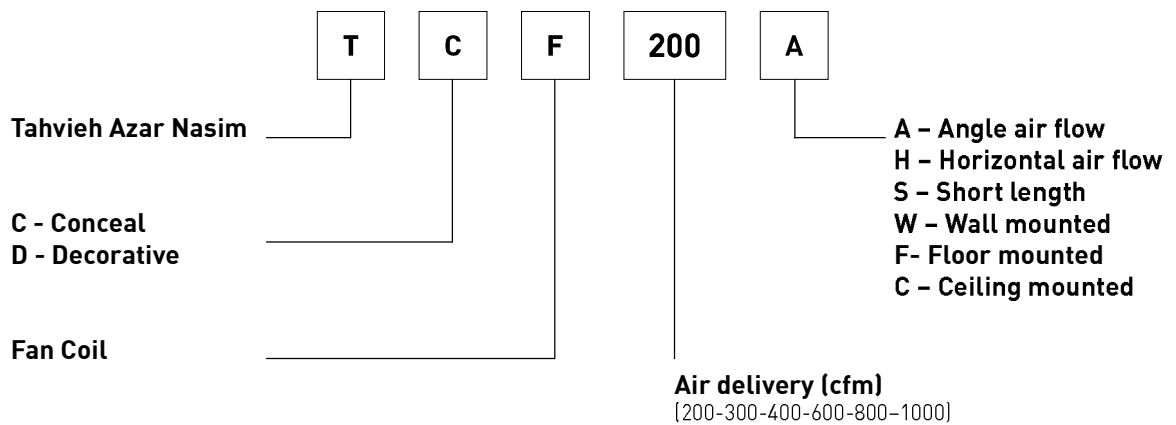
Model L
TCFL



Model H
TCFH

Ceiling Mounted Compact Concealed Fan Coil

Nomenclature



Tahviah Azar Nasim Company pioneers in air conditioning system productions and industrial processes in Iran. Decorative Fan Coil Units with unique design and structure is one of the products of this company.



General Description:

Azar Nasim fan coil units are steeped decorative type in different capacities from 200 cfm to 1000 cfm and manufacture in three kinds:

1. Ceiling fan coil unit without cabin
2. Floor mounted fan coil units decorative (with cabin)
3. Ceiling mounted fan coil units decorative (with cabin)

- A.** Outlet air is adjustable in four directions.
- B.** Main structure of the units is made of Aluminum profiles.
- C.** Sides and air outlets are made of ABS.
- D.** Front panel of the unit is made of mild steel sheets and coated with electrostatic powder paint.
- E.** All internal sheets and condensate tray are hot dip galvanized coated with aero flex insulator.

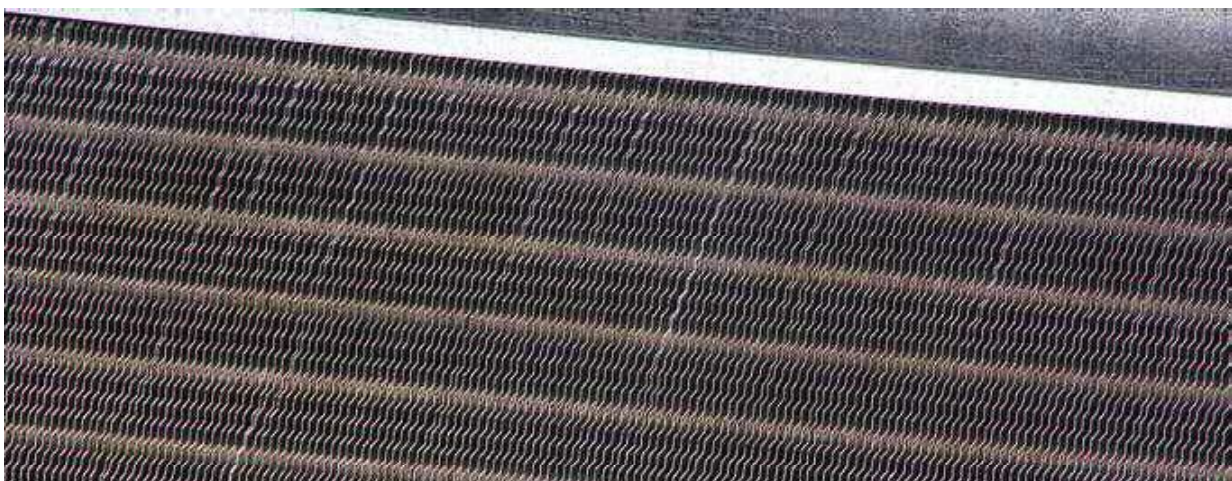
Coils:

1. Three rows coils (8 tubes in each row) from

copper Tubes with diameters of 3/8" and aluminum fins With spacing of 12 FPI is standard part of all Azar Nasim fan coil units. All the coils are Degreased, washed and tested up to 200 Psi.

Electro motors:

1. Fan coil units electromotor are single phase 4speeds, with heat relay to protect the electro motor winding against over loading.



**Fans:**

1. Steel or ABS centrifugal fans which statically and dynamically balanced with low noise level are used.

Filter:

1. Air filter is mounted at air inlet with ABS frame and easily cleanable.

Key Board:

1. Electric key board with OFF chassis and 4 speed touch keys (Night mode, 1-2-and 3) is mounted on fan coil units. Remote control can be provided on client's request.

Intelligent Systems:

1. This system installed on the fan coil units to protect energy wasting. In case of failure of Chiller, Boiler, or circulation pump or air trap in the coil, intelligent system automatically off the fan coil until the problem is solved.

Decorative Fan Coil

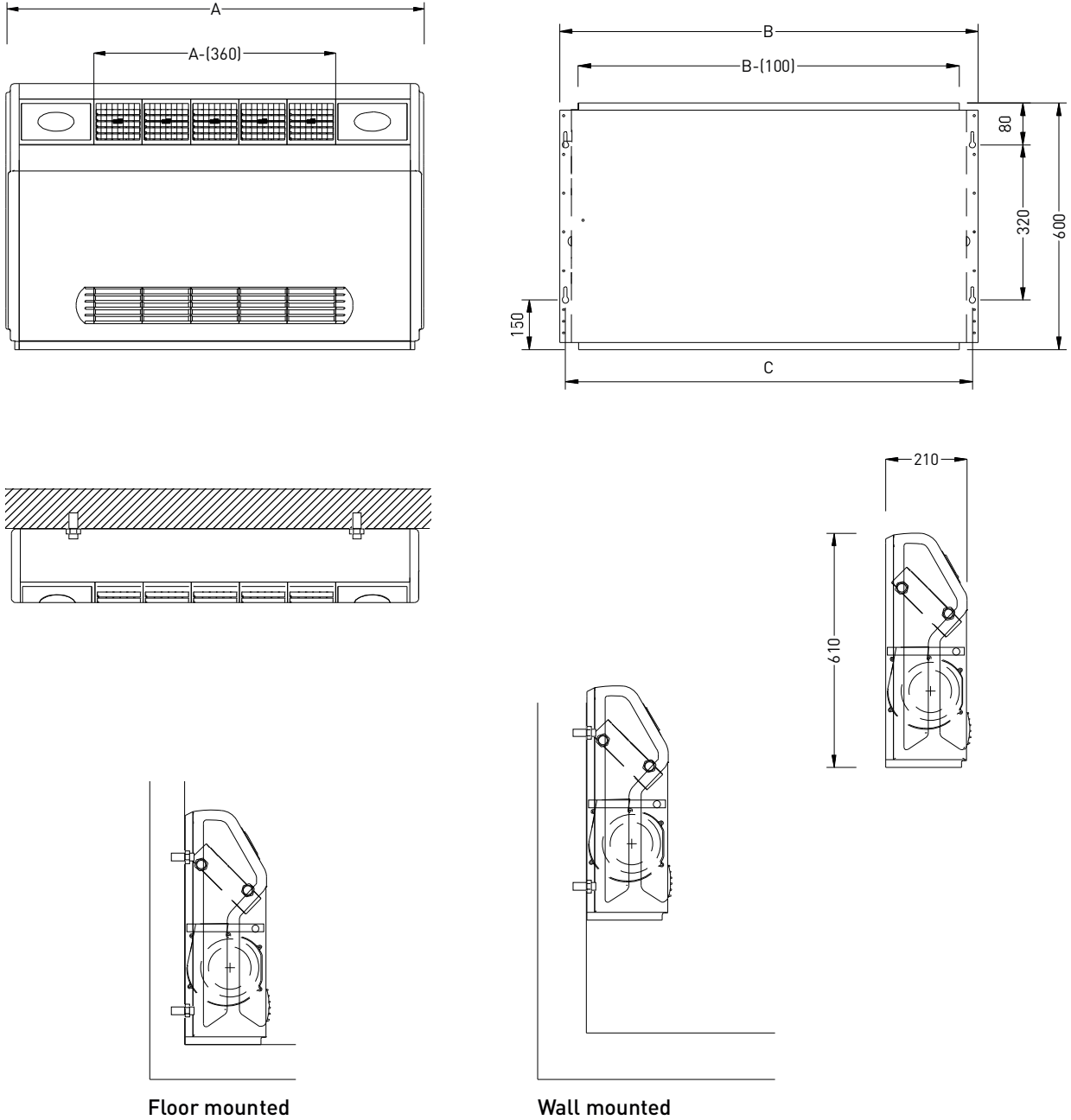
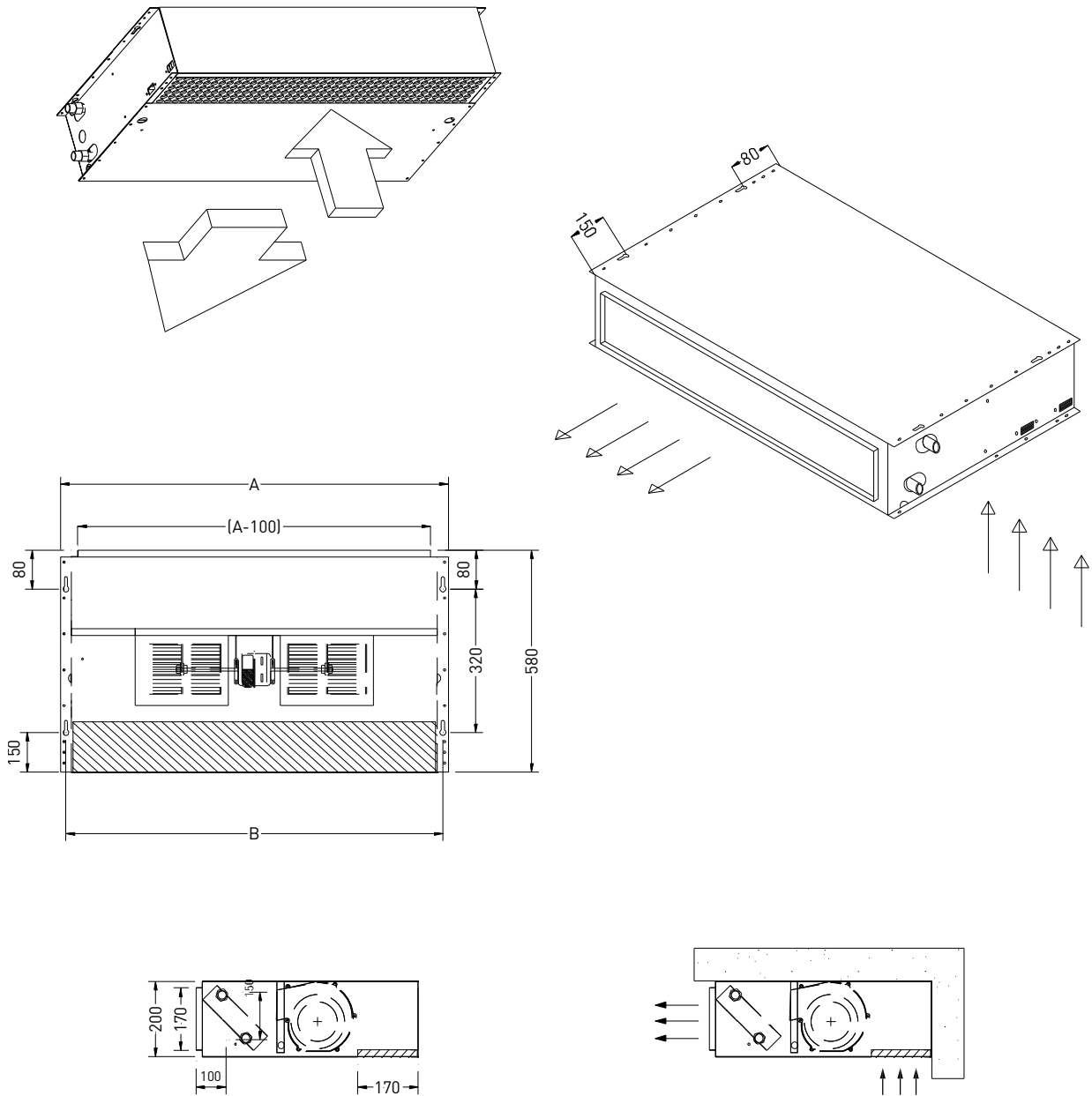


Table 1		Exposed Decorative Fan Coil Dimensions					
Model	200	300	400	600	800	1000	
A (mm)	864	990	1116	1240	1620	1995	
B (mm)	562	687	812	937	1312	1687	
C (mm)	540	665	790	920	1290	1667	



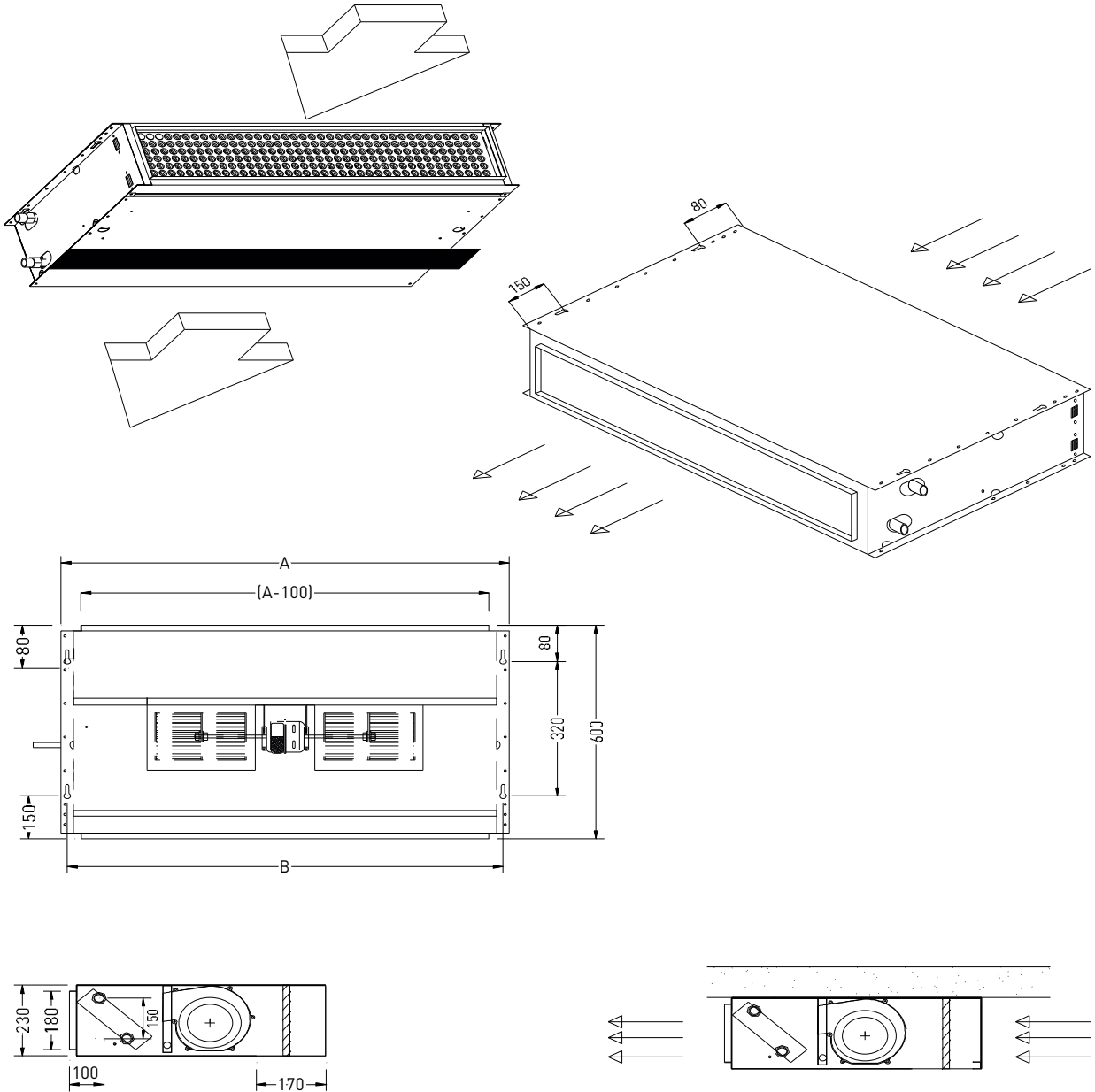
Ceiling Mounted Conceal Fan Coil Angle Air flow



Model	200	300	400	600	800	1000
A (mm)	562	687	812	937	1312	1687
B (mm)	540	665	790	920	1290	1667

Ceiling Mounted Conceal Fan Coil

Horizontal Air Flow



Model	200	300	400	600	800	1000
A (mm)	562	687	812	937	1312	1687
B (mm)	540	665	790	920	1290	1667



Ceiling Mounted Conceal Fan Coil Short length

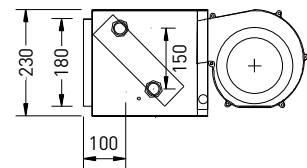
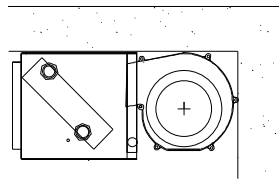
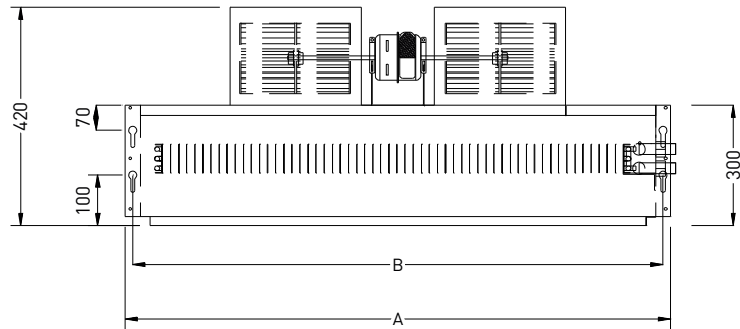
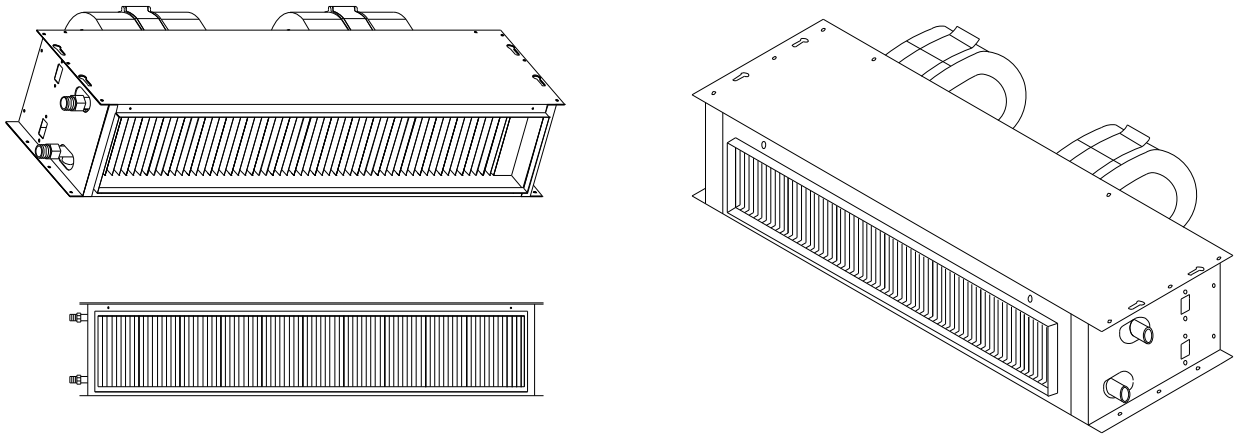


Table 4 Ceiling Mounted Concealed Fan Coil Dimensions

Model	200	300	400	600	800	1000
A (mm)	610	720	940	1050	1380	1600
B (mm)	562	687	812	937	1312	1687

Description	Unit Size					
	200	300	400	600	800	1000
Nominal Air Flow Rate (Cfm)	200	300	400	600	800	1000
*Unit Weight (Kg)	21	24	27	30	45	54
Number of Motors	1	1	1	1	2	2
Nominal Power (W)	25	25	45	45	2×45	2×45
Total Rated Amps	0.4	0.4	0.65	0.65	1.05	1.3
Coil Face Area (Ft)	0.97	40	1.63	1.92	2.51	3.17
Tube Size	3/8" O.D.					
No of Rows	3					
No of Fins/Inch	12					

*Unit weights given are for exposed models. For concealed reduce values by approximately 35%

Model	Air Flow (Cfm)	Cooling			Heating	
		Total Cap. (Btu/Hr)	Sensible Cap. (Btu/Hr)	Water Flow (Gpm)	Capacity (Btu/Hr)	Water Flow (Gpm)
TCFA-200	200	9200	6250	2.0	21800	2.5
TCFA-300	300	11800	8700	2.5	30750	3.5
TCFA-400	400	15400	12250	3.5	38750	4.0
TCFA-600	600	19700	14750	4.0	48250	5.0
TCFA-800	800	24400	18250	5.0	62750	6.5
TCFA-1000	1000	30500	23250	6.5	75000	7.5

Note:

1. Capacities are based on high fan speed.
2. Cooling capacities are based on entering water at 45 F and entering air at 80 F D.B., 67 F W.B.
3. Heating capacities are based on entering air at 70 F D.B. entering and leaving water at 180 F and 160 F respectively.



CHILLER WATER RATINGS

Model	Entering water temperature (°F)	GPM	Pressure Downfall (F.T.W.G)	Entering air temperature (°F)											
				63 WB		75 DB.		65 WB.		77DB		67WB.		80DB	
				Sensible (BTU/hr.)	Total (BTU/hr.)	Sensible (BTU/hr.)	Total (BTU/hr.)	Sensible (BTU/hr.)	Total (BTU/hr.)	Sensible (BTU/hr.)	Total (BTU/hr.)	Sensible (BTU/hr.)	Total (BTU/hr.)		
200	42	1.5	2.2	6000	7600	6200	8450	6500	9400						
		2	3.6	6500	8200	6700	9250	7000	10400						
		2.5	5.4	7000	8800	7200	9800	7500	11000						
	44	1.5	2.2	5500	6800	5700	7700	6000	8700						
		2	3.6	6000	7600	6200	8450	6500	9400						
		2.5	5.4	6500	8200	6700	9100	7000	10000						
	46	1.5	2.2	4500	6200	5000	7000	5500	8000						
		2	3.6	5000	6600	5500	7500	6000	8600						
		2.5	5.4	5500	7300	6000	8300	6500	9400						
300	42	2	4.4	8000	9800	8400	10900	9000	12000						
		2.5	6.5	8500	10800	8700	11900	9500	13100						
		3	9	9000	11200	9400	12350	10000	13700						
	44	2	4.4	7500	8900	8000	9900	8500	11000						
		2.5	6.5	8000	9600	8500	10700	9000	12000						
		3	9	8500	10100	9000	11350	9500	12800						
	46	2	4.4	6500	7900	7200	8900	8000	10000						
		2.5	6.5	7000	8600	7700	9700	8500	11000						
		3	9	7500	9000	8200	10200	9000	11600						
400	42	2.5	6.5	10500	12900	11000	14200	11500	15800						
		3	9	11000	13500	11500	15000	12000	16600						
		3.5	11.5	11500	14200	12000	15700	12500	17400						
	44	2.5	6.5	10000	11600	10700	13000	11500	14400						
		3	9	10500	12200	11200	13700	12000	15400						
		3.5	11.5	11000	12800	11700	14350	12500	16000						
	46	2.5	6.5	9000	10400	9700	11800	11000	13400						
		3	9	9500	10900	10400	12400	11500	14000						
		3.5	11.5	10000	11400	10900	13000	12000	14800						
600	42	3.5	5.2	13000	17000	14200	18900	15500	21000						
		4	6.3	13500	17900	14700	19800	16000	21900						
		4.5	4.2	14000	18600	15200	20600	16500	22800						
	44	3.5	4.2	12500	15400	13500	17300	14500	19400						
		4	5.2	13000	16200	14000	18200	15000	20400						
		4.5	6.3	13500	16800	14400	18850	15500	21000						
	46	3.5	4.2	11500	13700	12700	15650	14000	17800						
		4	5.2	12000	14400	13200	16500	14500	18800						
		4.5	6.3	12500	15000	13700	17200	15000	19600						
800	42	4.5	7.6	17500	21600	19000	24000	20500	26400						
		5	9.4	18000	22300	19500	24600	21000	27200						
		5.5	11	18500	22800	20000	25300	21500	28000						
	44	4.5	7.6	17000	19800	17500	22000	18000	24400						
		5	9.4	17500	20400	18000	22650	18500	25200						
		5.5	11	18000	20900	18400	23300	19000	26000						
	46	4.5	7.6	15000	17400	16200	20000	17500	22600						
		5	9.4	15500	18400	16700	20800	18000	23400						
		5.5	11	16000	18800	17200	21300	18500	24100						
1000	42	6	7	21000	27300	23000	30100	25000	33200						
		6.5	8	21500	27900	23500	30800	25500	34000						
		7	9	22500	28400	24200	31300	26000	34600						
	44	6	7	20500	25000	21700	28000	23000	31000						
		6.5	8	21000	25400	22200	28500	23500	31800						
		7	9	22000	25800	22900	28800	24000	32200						
	46	6	7	18500	22400	20400	25400	22500	28800						
		6.5	8	19000	22800	20900	25850	23000	29200						
		7	9	19500	23300	21400	26500	23500	30000						

Note:

1. Capacities are based on high fan speed.
2. For unit capacities at med. or low speed, multiply table values by the given correction factor.

MOTOR SPEED	CORRECTION FACTOR
MEDIUM	0.90
LOW	0.80

HOT WATER RATINGS



Table 8

Model	Entering water temperature (°F)	GPM	Pressure Downfall (F.T.W.G)	Entering air temperature (°F)		
				68 DB.	70DB	72DB
				Total (BTU/hr.)	Total (BTU/hr.)	Total (BTU/hr.)
200	140	2.5	3.6	14000	12700	11500
		3	5.4	14500	13200	12000
		2	7.3	15000	13700	12500
	160	2.5	3.6	18000	17200	16500
		3	5.4	18500	17700	17000
		2	7.3	19000	18200	17500
	180	2.5	3.6	22000	21200	20500
		3	5.4	22500	21700	21000
		3	7.3	23000	22000	21500
300	140	3.5	9	19500	18700	18000
		4	11.4	20000	19200	18500
		3	15	20500	19700	19000
	160	3.5	9	25500	24500	23500
		4	11.4	26000	25000	24000
		3	15	26500	25500	24500
	180	3.5	9	31500	30200	29000
		4	11.4	32000	30700	29500
		3.5	15	32500	31200	30000
400	140	4	11.5	24500	23700	23000
		4.5	15	25000	24200	23500
		3.5	18	25500	24700	24000
	160	4	11.5	32500	31500	30500
		4.5	15	33000	32000	31000
		3.5	18	33500	32500	31500
	180	4	11.5	39000	38200	37500
		4.5	15	39500	38700	38000
		4.5	18	40000	39200	38500
600	140	5	6.3	31500	30200	29000
		5.5	7.5	32000	30700	29500
		4.5	9	32500	31200	30000
	160	4.5	6.3	40000	39000	38000
		5	7.5	40500	39500	38500
		5.5	9	41000	40000	39000
	180	4.5	6.3	48500	47700	47000
		5	7.5	49000	48200	47500
		5.5	9	49500	48700	48000
800	140	6	12.6	41000	39700	38500
		6.5	14.5	41500	40200	39000
		7	16.2	42000	40700	39500
	160	<5	12.6	52000	51000	50000
		6.5	14.5	52500	51500	50500
		7	16.2	53000	52000	51000
	180	6	12.6	63500	62200	61000
		6.5	14.5	64000	62700	61500
		7	16.2	64500	63200	62000
1000	140	7.5	10	49500	48200	47000
		8	11.5	50000	48700	47500
		8.5	12.8	50500	49200	48000
	160	7.5	10	62500	61200	60000
		8	11.5	63000	61700	60500
		8.5	12.8	63500	62200	61000
	180	7.5	10	76000	75000	74000
		8	11.5	76500	75500	74500
		8.5	12.8	77000	76000	75000

Note:

1. Capacities are based on high fan speed.
2. For unit capacities at med. or low speed, multiply table values by the given correction factor.

MOTOR SPEED	CORRECTION FACTOR
MEDIUM	0.90
LOW	0.80

