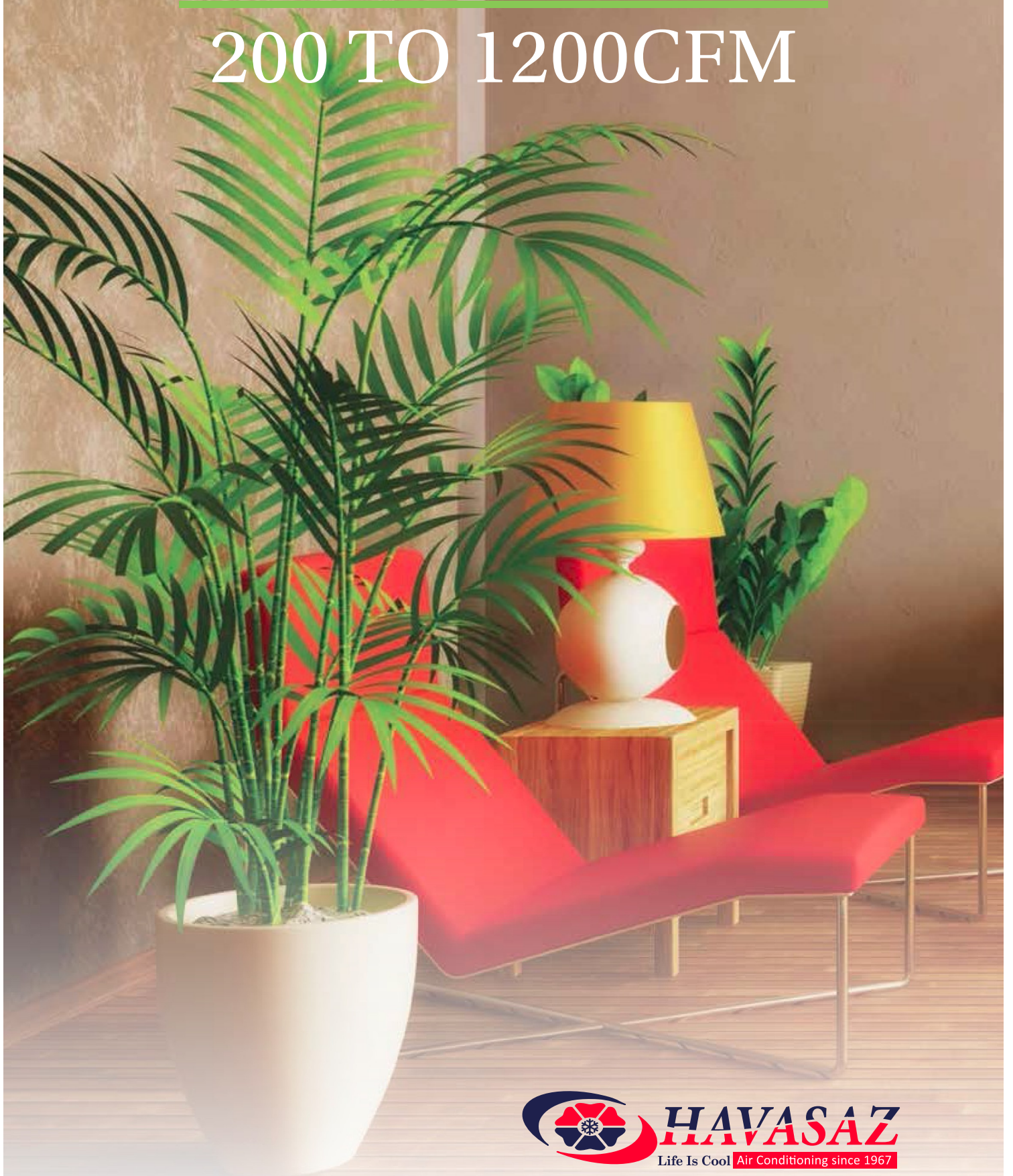




ROOM FAN COIL

ROOM FAN COIL

200 TO 1200CFM



HAVASAZ Contents

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INTRODUCTION

A design which includes the finest technical and styling feature

unit versatility

Havasaz fan coils have been designed to meet all hotel, residential and office building requirement by greatest possible versatility of application. The heart of these fan coils is a basic unit which was conceived to utilize a limited number of pieces, common to all models, to which additional pieces are assembled order to build for specific models.

Its modern outlook features a slender design, characterized by its unique construction which blends with any interior design.

coil

Has a low water flow requirement which substantially reduces pumping power consumption, resulting in lower electricity bill and smaller pipe size. The coil is continuous aluminum fin plate, designed with special stamping it obtain a better heat transfer. All coil have 14 fins per inch with maximum coil face area, plus silver alloy brazed bends and joint with 3/8" O>D copper tubing which are mechanically expanded into the fins. A manual air vent is location at the return header. one V plug is located at the low point of the header. The coil is reversible at job site to conveniently suit the final location of piping system. All coils are tested at 450 psig maximum working pressure, all collectors are made of brass pipes and traded for easy connection.

Drain pan

Condensation is prevented by an air chamber made of the drain pan the support face plates. There are two drain connection located a the pan (left or right). Secondary drain pans are also available if required. In addition, ceiling types are with secondary pan for easy derange.

Fan and motor

Assembly is carefully matched to balance fan load with motor speed for best performance and economical operation. Smooth and exceptionally quiet operation is achieved with low speed motors (5 and 4 poles) low discharge air velocity, three speeds, shaded pole, or split phase capacitor (for lower power consumption and higher power factor) single phase 220 volts, 50 cycle can be ordered. Both options are wound for high static pressure duty and have automatically reset thermal protection with life sealed bearing for a minimum of 20,000 hours running. Electrical connections between the motor and 3 speed selector switch are made by means of a one way plug which prevents any possible look up mistakes. Fan motor assemblies are fitted with one or more centrifugal aluminum fans, statically and dynamically balanced. Fans are designed to deliver the required air flow at low speeds (around 1000 rpm) with large discharge area for better air distribution over the coil surface and as a result, all models show a noise level of around +/-35 db and better.

Enclosure

Is constructed from heavy gauge steel finished with a smooth baked in coat of white or beige powder coated (other colors are also available upon request and with quantity order). The enclosure has a grill door at front side, for easy accessibility to components, motors, blower and filter port.

Technical specification

Casing:

Unit casing is fabricated with heavy gauge galvanized steel, reinforced internal sides. All casing are insulated for better sound and heat protection.

Drain pan:

Fabricated from heavy gauge galvanized steel, removable and insulated for condensation.

Cabinet:

Cabinet made from heavy gauge steel, formed into an aerodynamic shape and distinguished design. The front panel shall be insulated with neoprene coated insulation, rust proofed, phosphatized and finished with a smooth baked on coat of enamel.

Coil:

Are 2 row deep with 3/8 O.D. copper tubing and 14 fins of aluminum per inch of coil length 250mm width. Tubes are mechanically bonded into the fins by automatically expanding machines.

All coils shall be provided with threaded brass tube connections, air vents, and drain plunge they shall be tested for 450 psig pressure and suitable to be used both side as left and Wight.

Filter:

All metal type washable filters, are provided as standard filter

They shall be easily removed from unit.

Fans:

Fans are forward curved blade centrifugal type, statically and dynamically balanced. They are made of aluminum for resistance against corrosion. Fan housing is made of heavy gauge galvanized steel for sound and corrosion protection.

Motor:

Are split phase capacitor (shaded pole) signal phase, 220V,50HZ. Bearings are 11 fe sealed and lubricated for a minimum of 20,000 to 30,000 hours of operation. All motors are mounted on rubber floating rings for isolation. Motor rpm are around 1000, 3 speeds and equipped with internal automatical reset thermal protection (resistance up to 120 degree Celsius).

Fan speed control:

Control box located on the left or right side, which include 4 position switch provide 3 speeds (on and off).

Wall mounted control box for remote control shall be provided per customer request.

MODEL SELECTION KEY WORD



CAPACITY RATINGS , TECHNICAL SPECIFICATIONS

Coil Specification	FANCOIL TYPE	200	300	400	600	800	1000	1200
	FACE AREA(sq.ft)	1.13	1.6	2	2.3	2.9	3.9	4.7
	TUBE O.B(inch)	3/8" COPPER TUBE						
	no of tube	20						
	FPI	14 ALUMINIUM FINS PER INCH						
	FIN TYPE	STAGGERE COPPOGATED						
Celectro Motor&Fan	NO OF FANS	1	1	2	2	3	4	4
	NO OF MOTORS	1	1	1	1	2	2	2
	MAX, POWER INPUT (watt)	25	25	30	37	37+25	37+30	37+37
	POWER SUPPLY (V/PH/HZ)	220/1/50						
(CFM)	HIGH	200	300	400	600	800	1000	1200
	MEDIUM	170	240	320	420	600	750	930
	LOW	140	160	280	320	450	520	650



COOLING CAPACITY

Cold Water Rating													
Model	Entering Water Temperature (°C)	Water flow rate (m3/hr)	Pressure Drop (KPA)	Entering air temperature (°C)		Water flow rate (m3/hr)	Pressure Drop (KPA)	Entering air temperature (°C)		Water flow rate (m3/hr)	Pressure Drop (KPA)	Entering air temperature (°C)	
				17,2WB.	23,9 DB.			18,3WB.	25 DB.			19,4WB.	26,6 DB.
				Sensible (KW)	Total (KW)			Sensible (KW)	Total (KW)			Sensible (KW)	Total (KW)
200	5.5	0.23	0.5	1.021	1.48	0.29	0.7	1.184	1.85	0.35	1	1.322	2.24
	6.6	0.15	0.2	0.79	0.96	0.26	0.6	1.092	1.68	0.32	0.8	1.238	2.03
	7.7	0.11	0.1	0.7	0.7	0.2	0.4	0.929	1.29	0.29	0.7	1.159	1.87
300	5.5	0.41	1.6	1.703	2.62	0.47	2	1.86	3	0.54	2.6	2.059	3.49
	6.6	0.36	1.3	1.568	2.34	0.43	1.7	1.733	2.75	0.51	2.3	1.918	3.25
	7.7	0.31	1	1.434	2.02	0.39	1.4	1.606	2.47	0.47	2	1.83	3
400	5.5	5.5	3.1	2.308	3.55	0.63	3.8	2.499	4.03	0.73	5	2.755	4.67
	6.6	0.5	2.6	2.191	3.32	0.58	3.3	2.337	3.71	0.68	4.4	2.572	4.36
	7.7	0.45	2.1	1.980	2.87	0.53	2.8	2.191	3.37	0.63	3.8	2.424	4.04
600	5.5	7.9	6.3	3.258	5.09	0.89	7.9	3.508	5.75	1.03	10.2	3.857	6.65
	6.6	0.72	5.3	3.016	4.64	0.83	6.8	3.292	5.31	0.97	9	3.676	6.23
	7.7	0.65	4.4	2.787	4.16	0.76	5.7	3.056	4.85	0.9	7.8	3.410	5.78
800	5.5	1.06	12.4	4.284	6.8	1.19	15.2	4.673	7.66	1.37	19.6	5.121	8.83
	6.6	0.97	10.5	4.037	6.21	1.1	13.2	4.396	7.09	1.29	17.3	4.802	8.28
	7.7	0.87	8.6	3.689	5.59	1.01	11.2	4.089	6.49	1.2	15.1	4.543	7.7
1000	5.5	1.36	23.9	5.336	8.47	1.53	29.4	5.996	9.83	1.76	37.6	6.554	11.3
	6.6	1.25	20.3	5.2	8	1.42	25.5	5.648	9.11	1.65	33.3	6.148	10.6
	7.7	1.12	16.7	4.759	7.21	1.3	21.7	5.261	8.35	1.54	29.1	5.829	9.88
1200	5.5	1.65	38.8	6.678	10.6	1.85	47.6	7.259	11.9	2.13	60.9	7.946	13.7
	6.6	1.51	23	6.208	9.7	1.72	41.3	6.82	11	2	54	7.424	12.8
	7.7	1.36	27.3	5.782	8.76	1.58	35.2	6.363	10.1	1.86	47.2	7.08	12

Capacities are based on high fan speed

Motor speed	Correction factor
Medium	0,9
Low	0,8

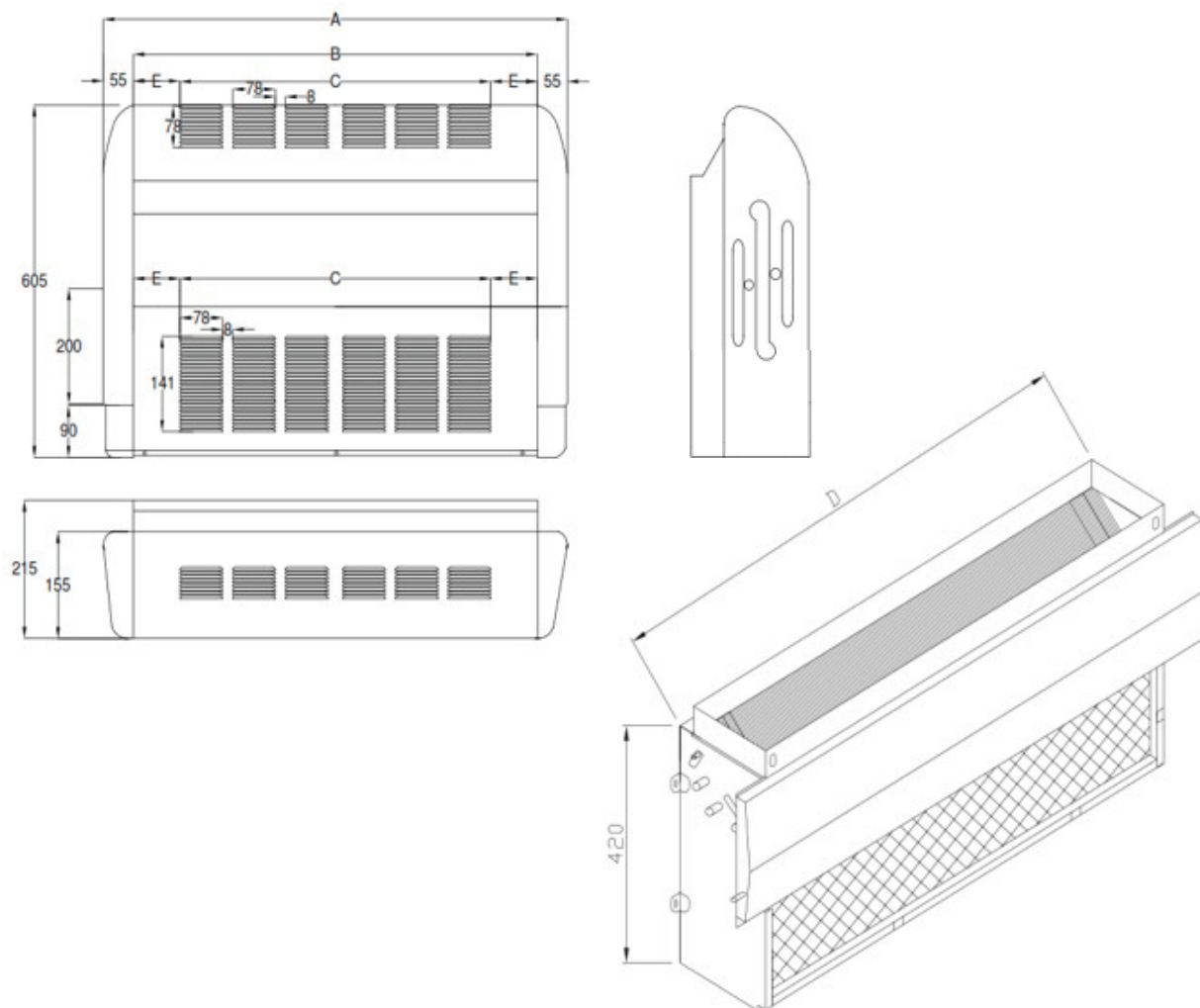
HEATING CAPACITY

Hot Water Rating													
Model	Entering Water Temperature (°C)	Water flow rate (m3/hr)	Perssure Drop (KPA)	Entering air temperature (°C)		Water flow rate (m3/hr)	Perssure Drop (KPA)	Entering air temperature (°C)		Water flow rate (m3/hr)	Perssure Drop (KPA)	Entering air temperature (°C)	
				13,75WB.	20 DB.			14,65WB.	21,1 DB.			15,56WB.	22,2 DB.
				Sensible (KW)	Total (KW)			Sensible (KW)	Total (KW)			Sensible (KW)	Total (KW)
200	60	0.23	0.4	2.94	2.94	0.22	0.3	2.84	2.84	0.22	0.3	2.74	2.74
	71.1	0.31	0.6	3.93	3.93	0.3	0.5	3.83	3.83	0.3	0.5	3.73	3.73
	82.2	0.39	0.8	4.92	4.92	0.38	0.8	4.81	4.81	0.38	0.8	4.71	4.71
300	60	0.35	0.9	4.45	4.45	0.34	0.8	4.3	4.3	0.33	0.8	4.15	4.15
	71.1	0.47	1.4	5.92	5.92	0.46	1.4	5.76	5.76	0.4	1.3	5.61	5.61
	82.2	0.59	2	7.38	7.38	0.57	2	7.38	7.35	0.56	1.9	7.07	7.07
400	60	0.47	1.7	5.93	5.93	0.45	1.6	5.73	5.73	0.44	1.5	5.53	5.53
	71.1	0.62	2.7	7.85	7.85	0.61	2.6	7.65	7.65	0.59	2.5	7.45	7.45
	82.2	0.78	3.9	9.78	9.78	0.76	3.7	9.57	9.57	0.75	3.6	9.37	9.37
600	60	0.66	3.4	8.31	8.31	0.63	3.2	8.04	8.04	0.61	3	7.76	7.76
	71.1	0.87	5.4	11	11	0.85	5.1	10.7	10.7	0.83	4.9	10.5	10.5
	82.2	1.09	7.7	13.7	13.7	1.07	7.4	13.4	13.4	1.05	7.1	13.2	13.2
800	60	0.87	6.5	11	11	0.84	6.1	10.6	10.6	0.81	5.7	10.3	10.3
	71.1	1.15	10.2	14.5	14.5	1.12	9.8	14.2	14.2	1.1	9.3	13.8	13.8
	82.2	1.44	14.6	18.1	18.1	1.41	14	17.7	17.7	1.38	13.5	17.3	17.3
1000	60	1.1	12.2	13.9	13.9	1.06	11.2	13.5	13.5	1.03	10.8	13	13
	71.1	1.46	19.2	18.4	18.4	1.42	18.3	17.9	17.9	1.38	17.5	17.4	17.4
	82.2	1.82	27.2	22.8	22.8	1.78	26.2	22.3	22.3	1.74	25.2	21.9	21.9
1200	60	1.34	20.1	17	17	1.3	18.9	16.5	16.5	1.26	17.8	15.9	15.9
	71.1	1.78	31.6	22.4	22.4	1.74	30.2	21.9	21.9	1.69	28.8	21.3	21.3
	82.2	2.22	44.8	27.8	27.8	2.17	43.2	27.3	27.3	2.13	41.5	26.7	26.7

Capacities are based on high fan speed

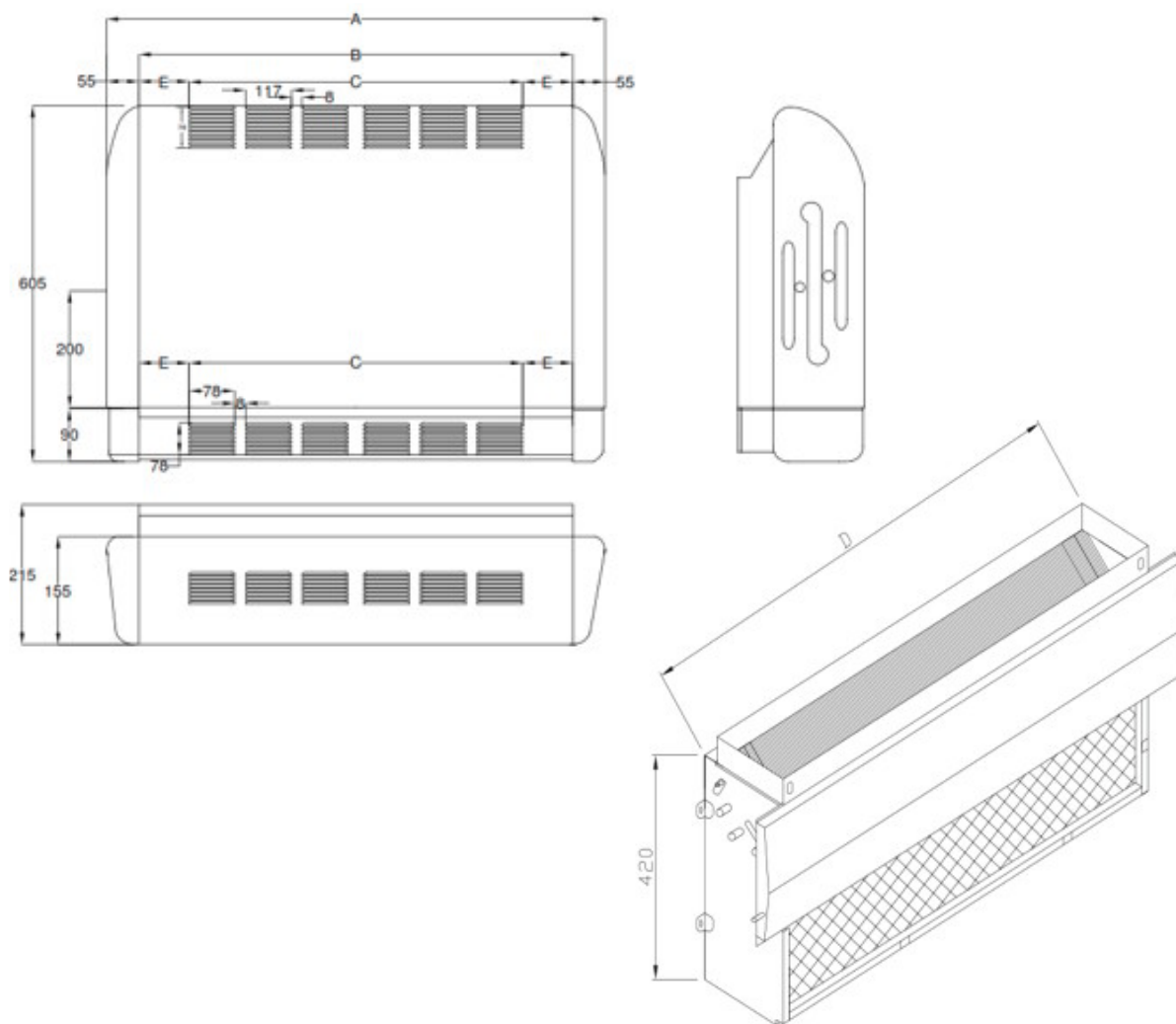
Motor speed	Correction factor
Meduim	0,9
Low	0,8

FAN COIL UNIT DIMENSIONS HLXFF,T



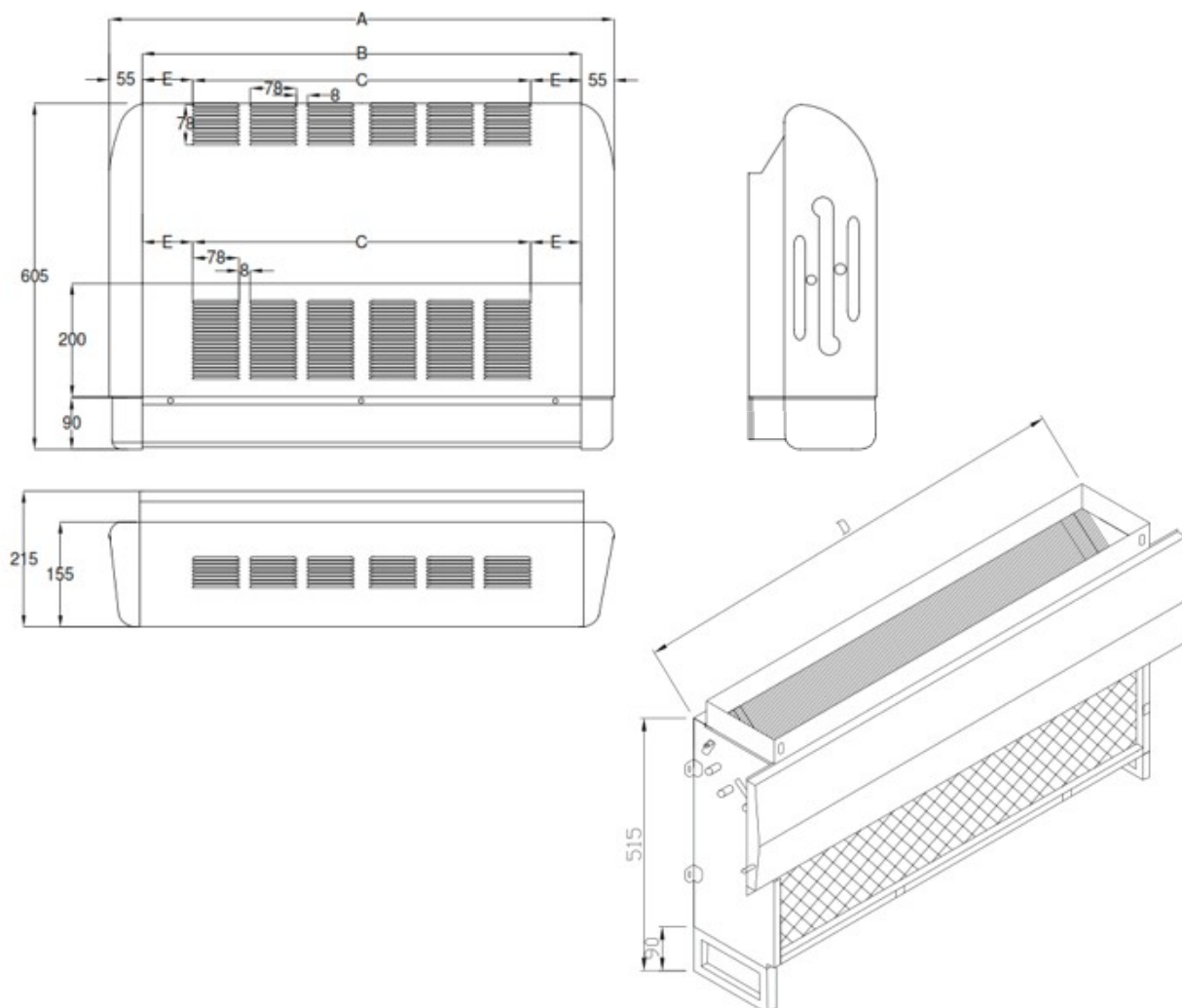
MODEL	HLXFC,CC 200	HLXFC,CC 300	HLXFC,CC 400	HLXFC,CC 600	HLXFC,CC 800	HLXFC,CC 1000	HLXFC,CC 1200
A	880	1070	1230	1340	1560	1920	2220
B	770	960	1120	1230	1450	1810	2110
C	508	680	852	1024	1196	1368	1712
D	544	724	886	994	1214	1578	1878
E	131	140	134	103	127	221	199
تعداد شبکه	6	8	10	12	14	16	20

FAN COIL UNIT DIMENSIONS HLXFD,CC



MODEL	HLXFC,CC 200	HLXFC,CC 300	HLXFC,CC 400	HLXFC,CC 600	HLXFC,CC 800	HLXFC,CC 1000	HLXFC,CC 1200
A	880	1070	1230	1340	1560	1920	2220
B	770	960	1120	1230	1450	1810	2110
C	508	680	852	1024	1196	1368	1712
D	544	724	886	994	1214	1578	1878
E	131	140	134	103	127	221	199
تعداد شبکه	6	8	10	12	14	16	20

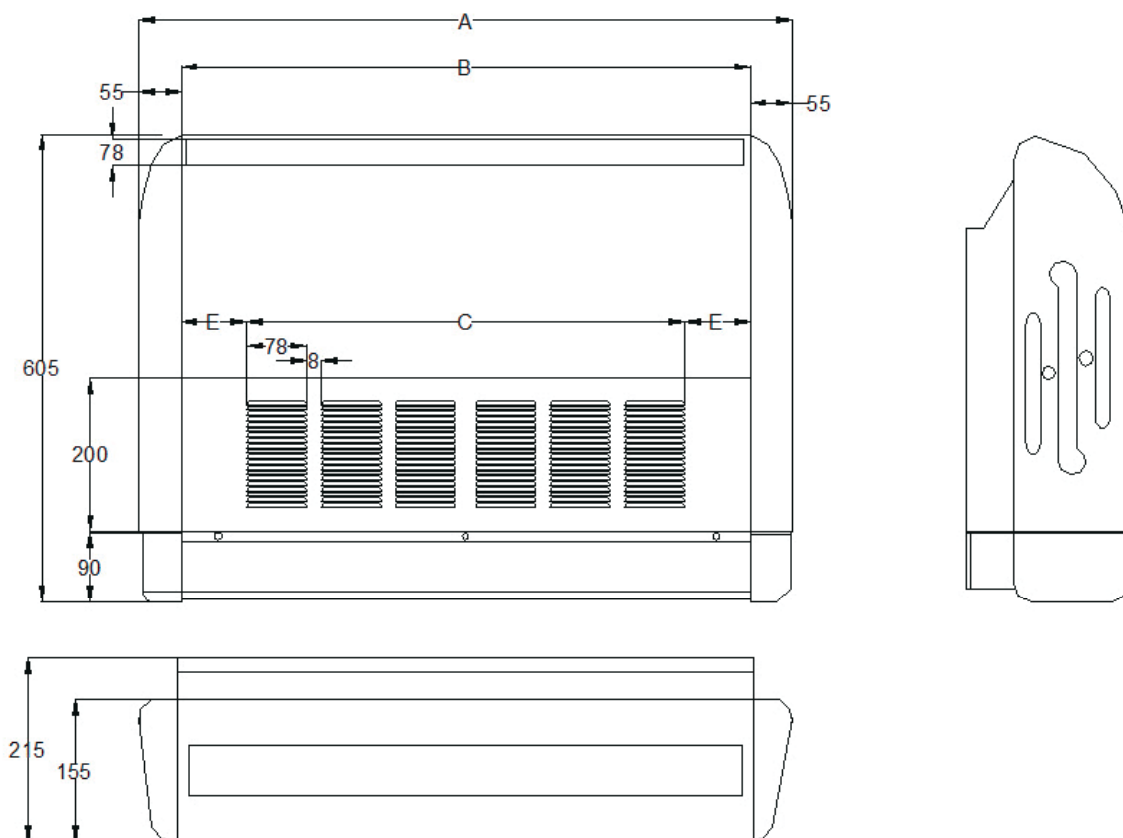
FAN COIL UNIT DIMENSIONS HLXFC,CC



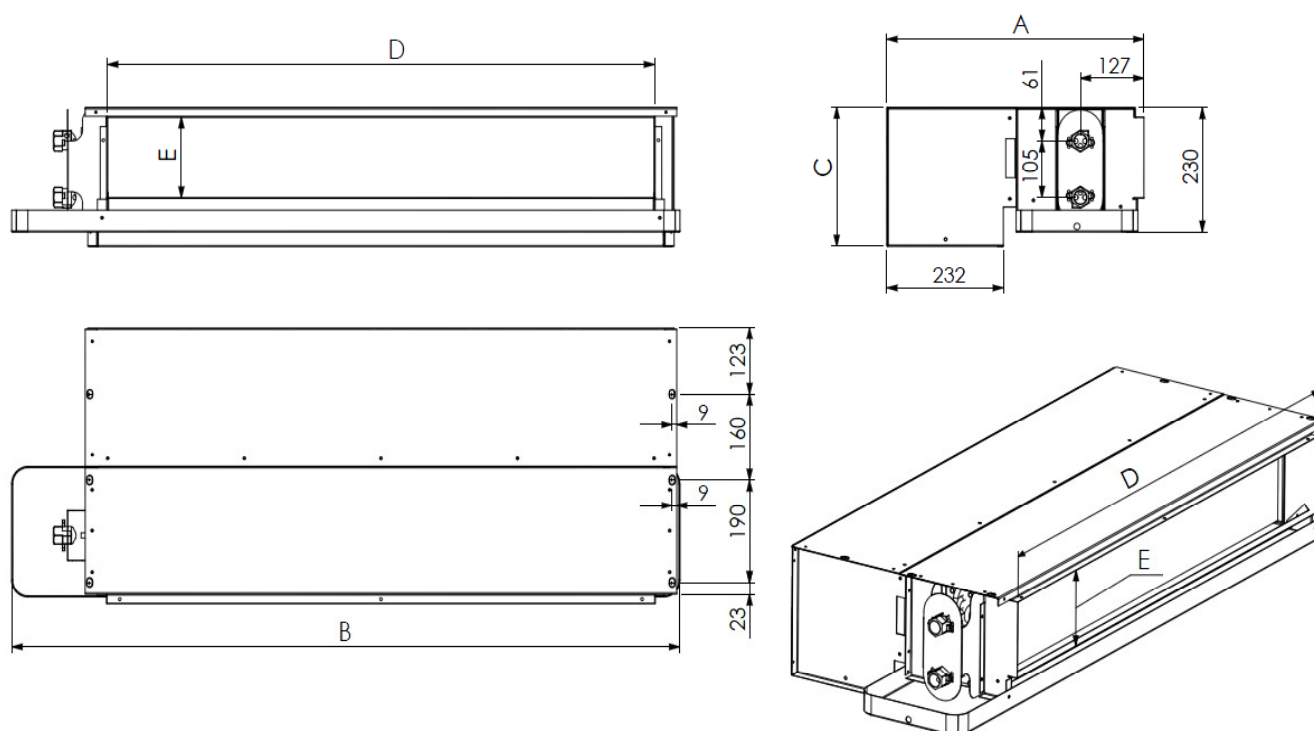
MODEL	HLXFC,CC 200	HLXFC,CC 300	HLXFC,CC 400	HLXFC,CC 600	HLXFC,CC 800	HLXFC,CC 1000	HLXFC,CC 1200
A	880	1070	1230	1340	1560	1920	2220
B	770	960	1120	1230	1450	1810	2110
C	508	680	852	1024	1196	1368	1712
D	544	724	886	994	1214	1578	1878
E	131	140	134	103	127	221	199
تعداد شبکه	6	8	10	12	14	16	20

FAN COIL UNIT DIMENSIONS HLXFP

MODEL	HLXFC,CC 200	HLXFC,CC 300	HLXFC,CC 400	HLXFC,CC 600	HLXFC,CC 800	HLXFC,CC 1000	HLXFC,CC 1200
A	880	1070	1230	1340	1560	1920	2220
B	770	960	1120	1230	1450	1810	2110
C	508	680	852	1024	1196	1368	1712
D	544	724	886	994	1214	1578	1878
E	131	140	134	103	127	221	199
تعداد شبکه	6	8	10	12	14	16	20

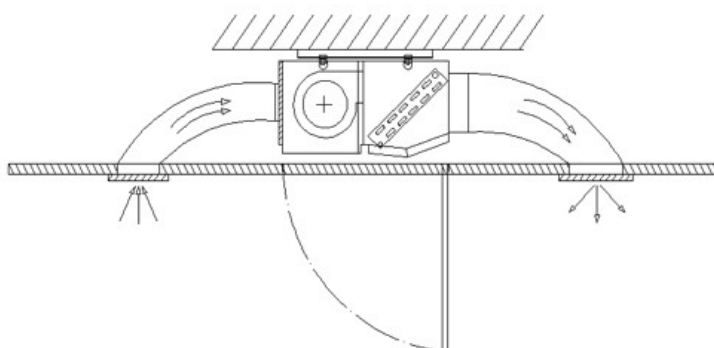
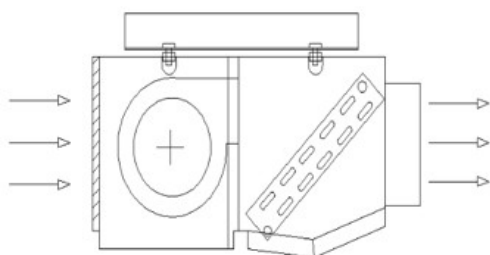
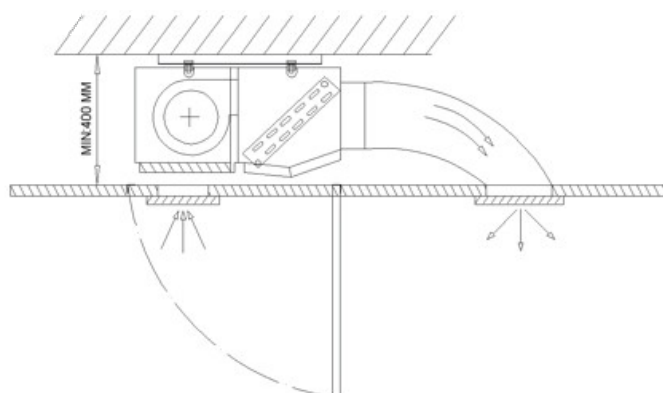
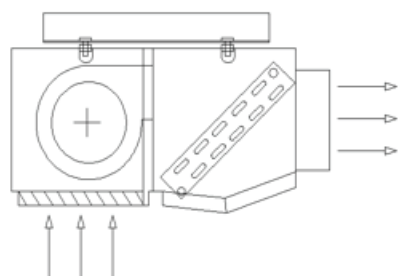
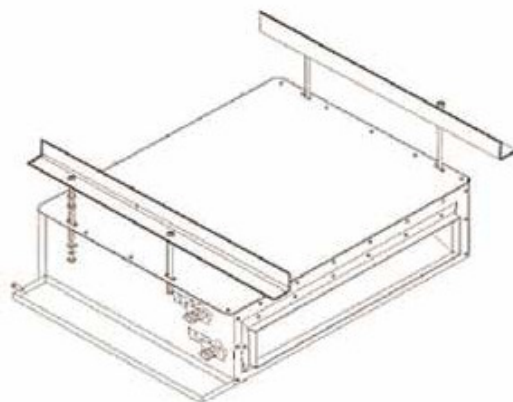
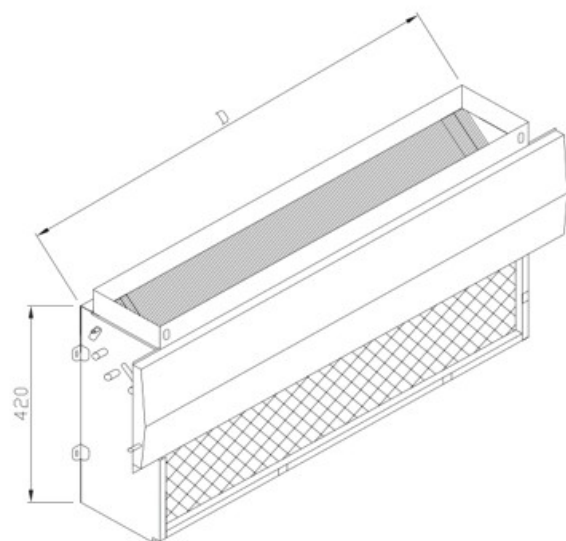


CEILING FAN COIL



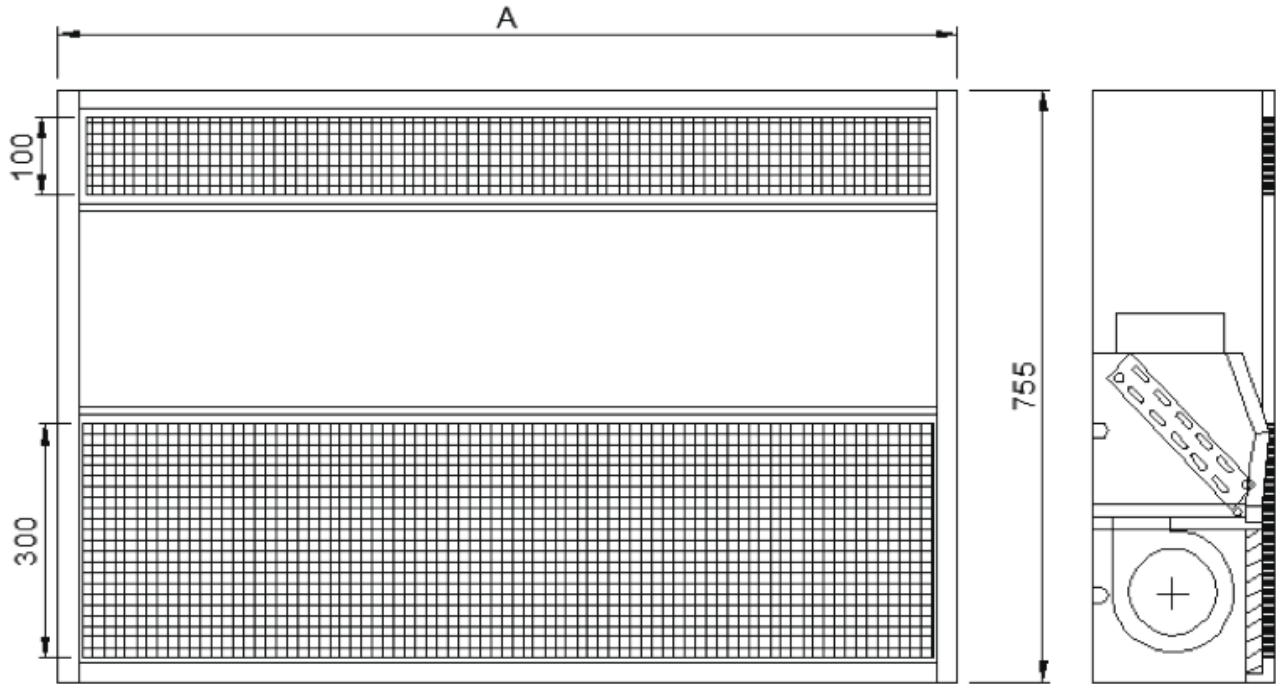
MODEL	HLXFC,CC 200	HLXFC,CC 300	HLXFC,CC 400	HLXFC,CC 600	HLXFC,CC 800	HLXFC,CC 1000	HLXFC,CC 1200
A	512	512	512	512	512	512	512
B	660	840	1000	1110	1330	1695	1995
C	257	257	257	257	257	257	257
D	420	600	760	870	1090	1455	1755
E	150	150	150	150	150	150	150
تعداد شبکه	---	---	---	---	---	---	---

FAN COIL UNIT INSTALLATION



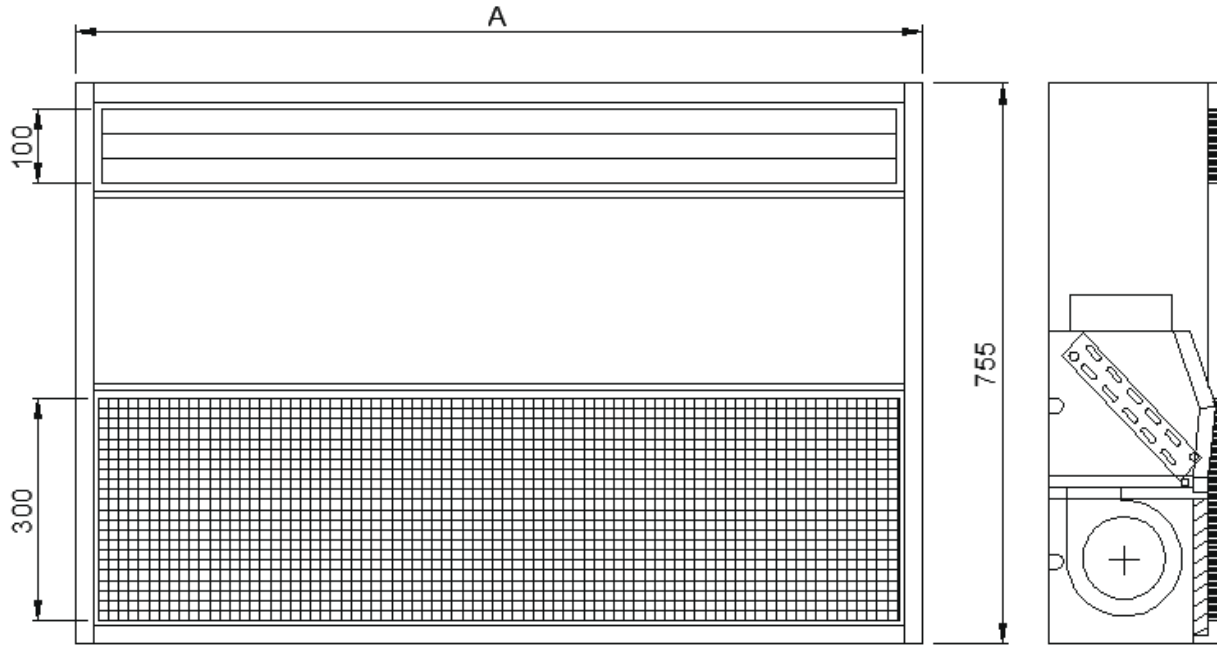
MODEL	HDFC 200	HDFC 300	HDFC 400	HDFC 600	HDFC 800	HDFC 1000	HDFC 1200
D	544	724	886	994	1214	1578	1878

FAN COIL UNIT HLXFFCA



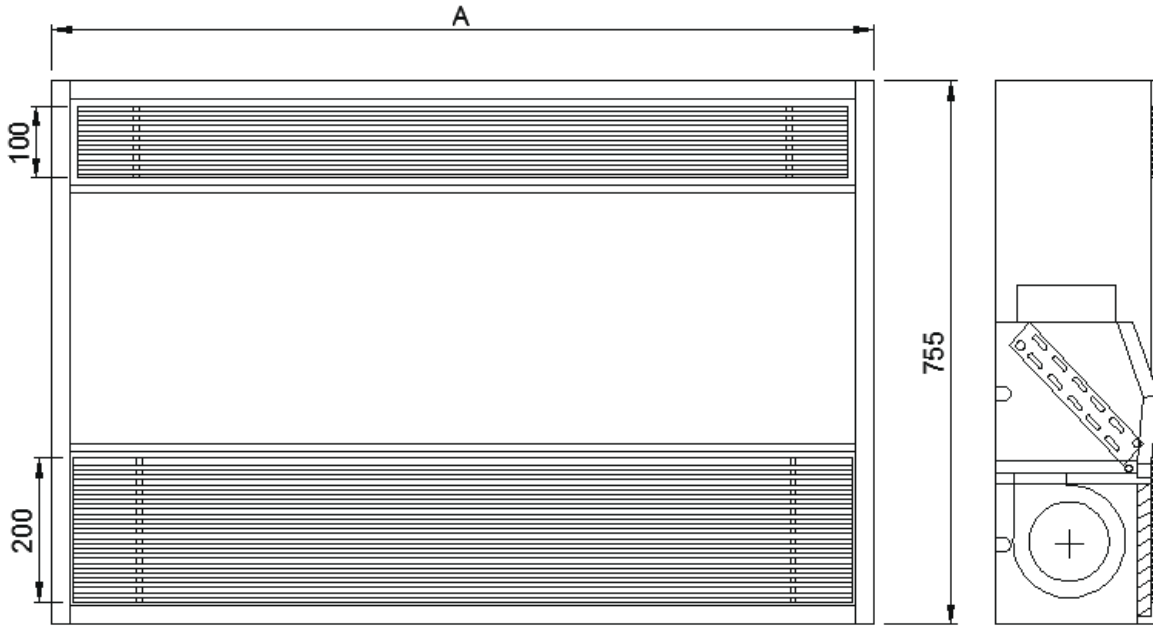
C	HDFC 200	HDFC 300	HDFC 400	HDFC 600	HDFC 800	HDFC 1000	HDFC 1200
A	745	925	11000	1200	1420	1780	2080

FAN COIL UNIT HLXFPCA



MODEL	HDFC 200	HDFC 300	HDFC 400	HDFC 600	HDFC 800	HDFC 1000	HDFC 1200
D	544	724	886	994	1214	1578	1878

FAN COIL UNIT HLXFACA



C	HDFC 200	HDFC 300	HDFC 400	HDFC 600	HDFC 800	HDFC 1000	HDFC 1200
A	745	925	11000	1200	1420	1780	2080

2Pipe 4-Way Cassette



- . Capacity range: 300CFM to 1500CFM, available in 2-pipe
- . 220-240V/1Ph/50Hz power supply is standard
- . 4way air supply panel is standard for 4-way cassette
- . Unique design of the centrifugal fan ensures extra-quiet operation and high efficiency. Wireless remote control with LED display is standard, wired control is optional. Safety grill for safety maintenance
- . Built-in drain pump with high pumping head
- . Optional extended drainage pan for protecting your ceiling better
- . Four-speed motor with one reserved for more choice
- . Fresh air supply makes life healthier and more comfortable

MODEL			HCFC-300	HCFC-400	HCFC-600
AIR FLOW	High/Med/Low	CFM	300/260/210	400/340/280	590/500/420
Cooling Capacity	Btu/h		10200	12600	19400
	KW		3	3.7	5.7
Heating Capacity	Btu/h		13600	17000	32700
	KW		4	5.1	9.6
Sound pressure level	High/Med/Low	db(A)	36/33/28	42/39/32	45/42/36
Water flow rate	GPM		2.3	2.8	4.3
Water pressure drop	Kpa		14	15	23.8
Pipe connection	inlet Water	Inch (mm)	3/4 " (19.05)	3/4 " (19.05)	3/4 " (19.05)
	Outlet Water	Inch (mm)	3/4 " (19.05)	3/4 " (19.05)	3/4 " (19.05)
	Drain pipe	(mm)	Ø25	Ø25	Ø32
Body	Dimensions	W*H*D	575*261*575	575*261*575	840*230*840
	Packing	W*H*D	670*290*670	670*290*670	900*260*900
Panel	Dimensions	W*H*D	647*50*647	647*50*647	950*45*950
	Packing	W*H*D	715*123*715	715*123*715	1023*90*1035
Body	Gross Weight	Kg	16.5	16.5	25
Panel	Gross Weight	kg	2.5	2.5	6

MODEL			HCFC-750	HCFC-950	HCFC-1200	HCFC-1500
AIR FLOW	High/Med/Low	CFM	740/620/530	940/800/680	1180/1000/850	1500/1280/1080
Cooling Capacity	Btu/h		23800	27900	35400	44000
	KW		7	8.2	10.4	12.9
Heating Capacity	Btu/h		39200	47000	59700	60000
	KW		11.5	13.8	17.5	17.6
Sound pressure level	High/Med/Low	db(A)	46/42/37	48/44/39	49/45/40	50/46/41
Water flow rate	GPM		5.3	6.2	7.8	9.7
Water pressure drop	Kpa		25.2	31.2	44	40
Pipe connection	inlet Water	Inch (mm)	3/4 " (19.05)	3/4 " (19.05)	3/4 " (19.05)	3/4 " (19.05)
	Outlet Water	Inch (mm)	3/4 " (19.05)	3/4 " (19.05)	3/4 " (19.05)	3/4 " (19.05)
	Drain pipe	(mm)	Ø32	Ø32	Ø32	Ø32
Body	Dimensions	W*H*D	840*230*840	840*300*840	840*300*840	840*300*840
	Packing	W*H*D	900*260*900	900*330*900	900*330*900	900*330*900
Panel	Dimensions	W*H*D	950*45*950	950*45*950	950*45*950	950*45*950
	Packing	W*H*D	1035*90*1035	1035*90*1035	1035*90*1035	1035*90*1035
Body	Gross Weight	Kg	25	30.5	30.5	31.8
Panel	Gross Weight	kg	6	6	6	6

Note:

H: high fan speed; M: medium fan speed; L: low fan speed.

Cooling conditions: entering water 7℃, temperature rise 5℃, entering air temperature 27℃DB/19℃WB.

Heating conditions: entering water 50℃, entering air temperature 20℃DB, the same water flow as the cooling conditions.

The noise is tested in the semi-anechoic test room.

2Pipe 2-Way Cassette



- .Capacity range: 300CFM to 600CFM, available in 2-pipe
- .220-240V/1Ph/50Hz power supply is standard
- .4way air supply panel is standard for 4-way cassette .
- .Unique design of the centrifugal fan ensures extra-quiet operation and high efficiency. Wireless remote control with LED display is standard, wired control is . optional. Safety grill for safety maintenance
- . Built-in drain pump with high pumping head
- . Optional extended drainage pan for protecting your ceiling better
- . Four-speed motor with one reserved for more choice
- .Fresh air supply makes life healthier and more comfortable

MODEL			HCFC-300	HCFC-400	HCFC-600
AIR FLOW	High/Med/Low	CFM	300/270/240	370/330/300	590/520/470
Cooling Capacity	Btu/h		10300	12900	19400
	KW		3.04	3.79	5.7
Heating Capacity	Btu/h		17500	21900	32800
	KW		5.13	6.41	9.6
Sound pressure level	High/Med/Low	db(A)	36/34/32	37/35/34	42/39/37
Water flow rate	GPM		2.3	2.86	4.3
Water pressure drop	Kpa		14	20	20.2
Pipe connection	inlet Water	Inch (mm)	1/2 " (12.7)	1/2 " (12.7)	1/2 " (12.7)
	Outlet Water	Inch (mm)	1/2 " (12.7)	1/2 " (12.7)	1/2 " (12.7)
	Drain pipe	(mm)	Ø25	Ø25	Ø25
Body	Dimensions	W*H*D	1054*169*425	1054*169*425	1200*198*655
	Packing	W*H*D	1155*245*490	1155*245*490	1380*265*720
Panel	Dimensions	W*H*D	1180*25*465	1180*25*465	1420*10*755
	Packing	W*H*D	1232*107*517	1232*107*517	1500*110*870
Body	Gross Weight	Kg	12.8	12.8	32.6
Panel	Gross Weight	kg	3.5	3.5	9

Note:

H: high fan speed; M: medium fan speed; L: low fan speed.

Cooling conditions: entering water 7℃, temperature rise 5℃, entering air temperature 27℃DB/19℃WB.

Heating conditions: entering water 50℃, entering air temperature 20℃DB, the same water flow as the cooling conditions.

The noise is tested in the semi-anechoic test room.



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شرکت هواساز همیشه سعی بر آن دارد با استفاده از قطعات و متريال مرغوب نياز مشتريان خود را برآورده سازد که در ذيل به معرفي برخي از مشارکت کنندگان در تامین قطعات اين شرکت می پردازيم :

مرغوب ترين قطعات و اجزاء :

انواع کویل های **Cu/Cu , Cu/hydrophilic Al Heresite Coating**
کمپرسورهای **Frasscold,bitzer,copeland , Carrier,refcomp** از نوع **Scroll , Screw , Reciprocating**
مبدلهاي **Shell & Tube** مارک راديران و **Compact Plate Heat Exchanger** مارک **Danfoss**

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