



BUILDING EFFICIENCY

Energy Efficient Variable Speed EC Motor
Fan Coil Unit Solutions
Model YECAH

Product Introduction

INTRODUCTION

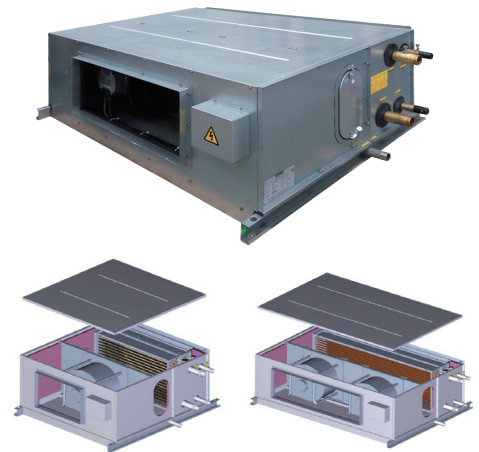
Johnson Controls YORK® YECAH ceiling mounted compact cabinet fan coil units are high airflow and high static pressure air-conditioning units using high efficiency 355 mm diameter EC plug fan(s).

YECAH fan coil units have been designed incorporating variable speed EC motor technology to meet the needs of today's sustainable building designs and to exceed the stringent European ErP 2015 energy standard. They are the ideal HVAC solution for both new construction and revovation projects for hotels, retail centers, office buildings, and education facilities. The 355 mm diameter EC plug fans operate at lower RPM, lower noise, and higher efficiency levels when compared to ceiling concealed units incorporating multiple fans with smaller diameter impellers.

YECAH fan coils are available in 4 models with integral EC fan(s) incorporate fully variable 0-10v speed control, and are suitable for a wide range of chilled water and hot water flow rates, including wide delta T applications to maximize pump energy savings. YECAH fan coil units are available with multiple coil options for each model (the 2 pipe system has 4 or 6 rows, and the 4 pipe system has 4+1, 6+1, 4+2 or 6+2 rows). The air flow ranges from nominal 750 L/s to 1500 L/s, while the external static pressure ranges from 175 Pa to 375 Pa.

Each YECAH unit is made of galvanized steel with 15 mm thick non-combustible thermal insulation. It contains built-in cooling & heating coils, single or dual EC variable speed plug fan assemblies, a removable inspection panel with sash catches, and large removable access panels to the fan section.

Cooling and heating coil use copper tubes with corrugated aluminium fins, mounted above a full stainless steel drain pan. The EC plug fan(s) feature EC technology and with a wide RPM range, can satisfy variable airflow and pressure from a 0 - 10 VDC control signal. A MODBUS high level data connection is provided as standard.



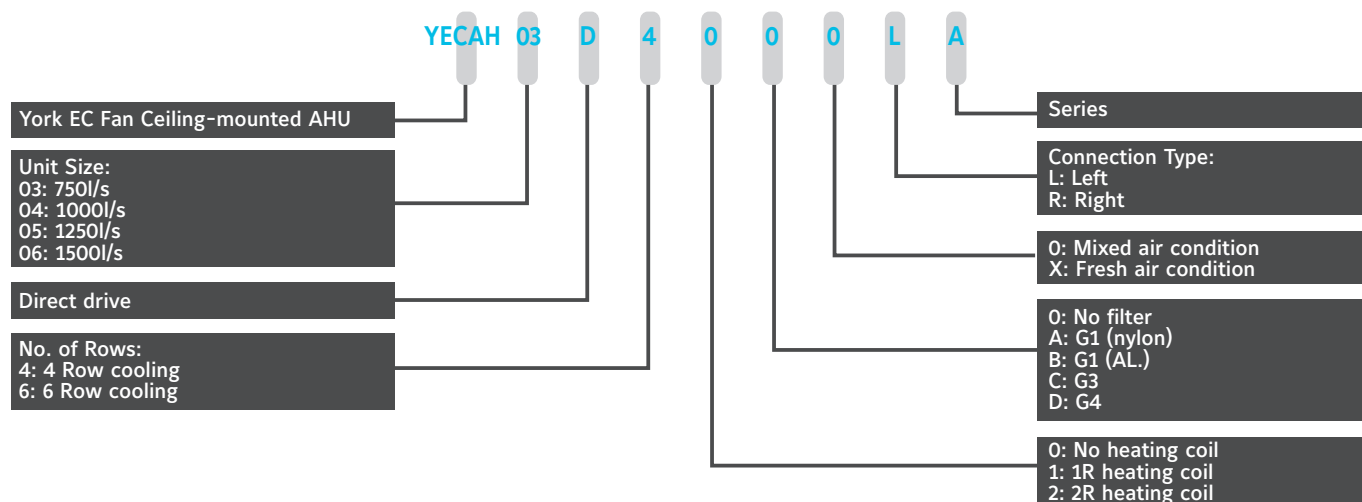
GENERAL	Coils	4R Cooling Coil Only	■
		6R Cooling Coil Only	▲
		1R/ 2R Heating Coil	▲
	Motor Protection	IP 54 - 50 Hz	■
	Fin Protection	Hydrophilic Fin	■
	Drain Pan	Stainless Steel Drain Pan	■
	Coil Header	Copper	■
	Filters & Rails	G1 (Nylon) filter	▲
		G1 (Aluminium mesh) filter	▲
		G3 Plate filter	▲
		G4 Plate filter	▲
	Legend	Thermostat	▲

Legend:

Standard ■
Option ▲

Nomenclature & Feature

NOMENCLATURE



FEATURES AND BENEFITS

Energy saving	Coil is made of expanded copper tubes and corrugated fins to achieve high exchange efficiency. 355mm diameter EC plug fans provide high efficiency and static capability over wide operation range.	Significant energy savings. Fan and motor performance rating exceeds the 2015 ErP (European Energy- related Products Directive).
Low noise level	Each fan and motor assembly has been dynamically and statically balanced. Variable speed, low noise, directly driven EC fan.	Whisper-quiet comfort condition results in satisfied occupants.
Easy drainage	Full Drain pan allows quick and easy drainage of condensation. Drain pan is made of high quality stainless steel.	Full drain pan design provides superior condensate management.
Compact size & low height	Ceiling concealed unit is restricted to 508 mm height to fit within commercial building ceiling spaces.	Suits many ducted HVAC applications.
Ease of installation	Threaded Brass connector is provided for easy piping connection. Purge valves are provided on all coils to assist in commissioning.	Reduces installation and commissioning time and cost.
Easy maintenance	EC fans are direct drive with sealed-for-life bearings. Inspection panel allows fast and easy periodic inspection of coil and drain tray. Optional unit mounted filter track.	Reduced maintenance time and cost.

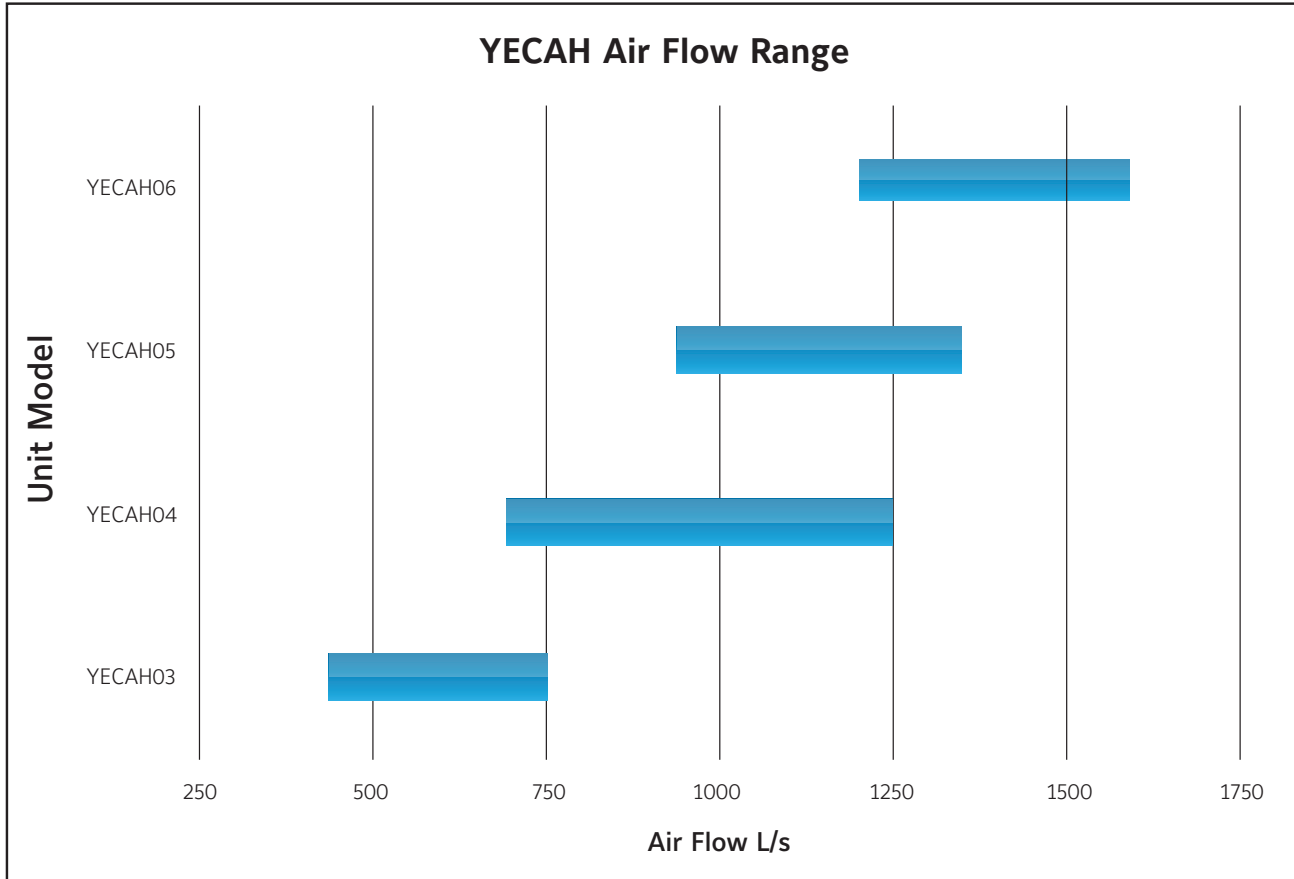
Technical Specifications

MODEL		YECAH03	YECAH04	YECAH05	YECAH06	
PERFORMANCE						
Nominal Air Flow	L/S	750	1000	1250	1500	
Nominal External Static Pressure	Pa	175	175	175	175	
COIL						
Face Area	sq.m	0.284	0.508	0.508	0.610	
Face Velocity	m/s	2.64	1.97	2.46	2.46	
Header Material		Copper				
Max Working Pressure	kPa	1600				
COOLING COIL						
Water Flow Rate	4 Rows	L/S	0.31	0.45	0.48	0.62
	6 Rows		0.40	0.56	0.68	0.82
Water Pressure Drop	4 Rows	kPa	17.2	20.2	10.3	25.8
	6 Rows		18.0	21.8	30.5	18.4
Water Content	4 Rows	L	3.0	3.8	3.8	4.6
	6 Rows		4.6	5.7	5.7	6.8
Air Pressure Drop	4 Rows	Pa	130	75	105	105
	6 Rows		205	115	165	165
Nominal Capacity	4 Rows	kW	9.1	13.2	14.0	18.2
	6 Rows		11.7	16.7	20.0	23.8
HEATING COIL						
Water Flow Rate	1 Row	L/S	0.12	0.19	0.21	0.25
	2 Rows		0.27	0.42	0.47	0.58
Water Pressure Drop	1 Row	kPa	2.0	7.5	8.8	15.0
	2 Rows		2.5	9.3	11.7	19.7
Water Content	1 Row	L	0.8	0.9	0.9	1.1
	2 Rows		1.5	1.9	1.9	2.3
Air Pressure Drop	1 Row	Pa	25	15	20	20
	2 Rows		55	30	45	45
Nominal Capacity	1 Row	kW	9.9	15.5	16.9	20.6
	2 Rows		21.6	34.2	38.6	47.0
MOTOR						
Type		Electronically Commutated				
No. of Motor		1	1	2	2	
Nameplate Rating Input	W	750	750	750×2	750×2	
Control Signal Input		V	0~10VDC			
Nameplate Amps (220V / 1 Ph. / 50 – 60 Hz.)		A	3.3	3.3	3.3×2	3.3×2
Nameplate Power Supply		-	230V / 1 Ph. / 50 – 60 Hz			
FAN						
Type		BC SWSI Plug				
Quantity		1	1	2	2	
UNIT DIMENSIONS						
Width	mm	950	1500	1500	1750	
Depth	mm	940	940	940	940	
Height	mm	508	508	508	508	
Weight (4R Coil)	kg	151	186	201	220	
Weight (6R+2R Coil)	kg	168	210	225	250	

Notes: 1. Standard mixed air cooling conditions: air inlet at 23°C DB/17°C WB; chilled water inlet/outlet at 6°C/13°C.
2. Cooling Coil APD at wet condition.
3. Heating Coil APD at dry condition.

4. The weight listed in the table is the shipping weight.
5. The weight does not include water volumes.

Technical Specifications



Technical Specifications

MOTOR POWER INPUT(W)

MODEL	ESP (Pa)	450 L/S	550 L/S	650 L/S	700 L/S	750 L/S	800 L/S	850 L/S	900 L/S	950 L/S	
YECAH03	175	208	268	345	392	442					
	225	251	315	398	448	502					
	275	295	365	453	506	563					
	325	341	417	511	566	627					
	375	389	471	570	629	692					
YECAH04	175				289	321	357	402	446	498	
	225				341	373	409	456	502	555	
	275				396	430	468	515	561	616	
	325				451	490	530	580	627	681	
	375				510	550	594	647	697		
YECAH05	175									446	
	225									532	
	275									624	
	325									718	
	375									816	
YECAH06	175										
	225										
	275										
	325										
	375										

MOTOR POWER INPUT(W)

MODEL	ESP (Pa)	450 L/S	550 L/S	650 L/S	700 L/S	750 L/S	800 L/S	850 L/S	900 L/S	950 L/S	
YECAH03	175	234	310	409	465	529					
	225	277	360	464	523	591					
	275	322	412	522	584	655					
	325	369	465	582	648	722					
	375	419	520	645	714						
YECAH04	175				309	343	385	431	479	534	
	225				362	398	441	487	536	594	
	275				418	457	502	550	600	657	
	325				474	517	565	616	668	728	
	375				533	578	630	685			
YECAH05	175									514	
	225									606	
	275									698	
	325									796	
	375									898	
YECAH06	175										
	225										
	275										
	325										
	375										

Note: Airflow and inputpower data are for dry coil and without filter.

ENERGY EFFICIENT EC MOTOR AHU SOLUTIONS MODEL YECAH

4 Rows Cooling Coil+1 Row Heating Coil

1000 L/S	1050 L/S	1100 L/S	1150 L/S	1250 L/S	1300 L/S	1350 L/S	1450 L/S	1500 L/S	1550 L/S	1600 L/S
553	614	679								
613	677									
676										
480	508	548	584	662	702					
572	602	644	682	764	808					
666	698	744	784	872	920					
764	800	848	892	986	1036					
864	904	956	1004	1102	1156					
			526	598	632	672	756	796	844	892
			620	698	736	778	870	914	964	1016
			720	804	842	888	986	1032	1086	1142
			824	914	954	1004	1108	1156	1214	1272
			934	1028	1072	1124	1232	1284	1344	1406

6 Rows Cooling Coil+1 Row Heating Coil

1000 L/S	1050 L/S	1100 L/S	1150 L/S	1250 L/S	1300 L/S	1350 L/S	1450 L/S	1500 L/S	1550 L/S	1600 L/S
598	665									
660	728									
725										
558	596	644	686	790	846					
652	694	744	790	900	958					
748	794	848	896	1014	1076					
848	898	954	1008	1132	1198					
954	1006	1066	1122	1254	1324					
			592	672	718	768	876	924	982	1046
			690	776	826	878	992	1044	1104	1174
			792	886	938	992	1114	1168	1232	1304
			900	998	1054	1110	1238	1296	1364	1440
			1012	1116	1174	1234	1368	1430		

Performance Data

PERFORMANCE RATINGS

COOLING COIL

Model	Airflow	Rows	Inlet Chilled Water Temp	Air Inlet Temp (Dry Bulb/Wet Bulb) 27°C/19°C					Air Inlet Temp (Dry Bulb/Wet Bulb) 23°C/17°C					Air Inlet Temp (Dry Bulb/Wet Bulb) 35°C/24°C				
				Total Cooling Capacity	Sensible Cooling Capacity	Air Off Temp (Dry Bulb/Wet Bulb)	Water Flow Rate	Water Pressure Drop	Total Cooling Capacity	Sensible Cooling Capacity	Air Off Temp (Dry Bulb/Wet Bulb)	Water Flow Rate	Water Pressure Drop	Total Cooling Capacity	Sensible Cooling Capacity	Air Off Temp (Dry Bulb/Wet Bulb)	Water Flow Rate	Water Pressure Drop
	L/S		°C	kW	kW	°C	L/S	kPa	kW	kW	°C	L/S	kPa	kW	kW	°C	L/S	kPa
YECAH03	750	4	5	14.5	10.8	14.9/13.2	0.50	36.7	10.5	8.1	14.0/12.7	0.35	22.0	25.1	16.1	16.6/15.0	0.85	43.7
			6	13.0	10.1	15.7/13.9	0.44	30.5	9.1	7.5	14.7/13.3	0.31	17.2	23.6	15.5	17.2/15.6	0.81	39.7
			7	11.6	9.5	16.3/14.4	0.40	25.3	7.8	6.8	15.4/13.9	0.27	12.9	21.8	14.8	18.1/16.3	0.75	34.2
			8	10.4	9.0	17.0/15.0	0.35	21.3	6.6	6.2	16.1/14.3	0.23	9.7	20.1	14.1	18.9/17.0	0.68	29.0
		6	9	9.3	8.4	17.6/15.4	0.32	17.5	5.7	5.6	16.8/14.7	0.20	7.4	18.6	13.5	19.6/17.6	0.63	26.0
			5	18.2	12.9	12.6/11.5	0.62	37.1	13.4	9.8	12.2/11.3	0.46	22.6	28.2	17.6	14.9/13.6	0.96	26.5
			6	16.4	12.1	13.5/12.3	0.56	30.7	11.7	9.0	13.0/12.1	0.40	18.0	26.5	16.9	15.7/14.4	0.91	24.1
			7	14.8	11.3	14.3/13.1	0.50	25.8	10.2	8.3	13.8/12.8	0.35	14.4	24.6	16.0	16.7/15.2	0.84	20.6
			8	13.2	10.7	15.1/13.8	0.46	21.8	8.7	7.6	14.6/13.5	0.29	10.5	22.8	15.3	17.5/16.0	0.78	18.3
YECAH04	1000	4	9	11.7	10.0	15.8/14.4	0.40	17.4	7.5	6.9	15.3/14.0	0.25	8.2	20.9	14.6	18.4/16.7	0.71	15.7
			5	20.0	14.4	14.9/13.0	0.68	41.4	15.0	11.0	13.9/12.3	0.51	24.9	30.8	19.9	18.0/15.8	1.05	13.7
			6	18.1	13.5	15.7/13.6	0.61	34.1	13.2	10.2	14.5/12.9	0.45	20.2	28.6	19.0	18.7/16.5	0.98	11.9
			7	16.3	12.7	16.3/14.2	0.56	29.5	11.4	9.4	15.2/13.5	0.39	15.3	26.1	17.9	19.6/17.2	0.89	9.9
		6	8	14.5	11.9	17.0/14.8	0.50	23.6	9.8	8.6	15.9/14.0	0.34	11.5	24.2	17.2	20.3/17.8	0.83	8.7
			9	12.9	11.2	17.6/15.3	0.44	19.1	8.4	7.8	16.5/14.5	0.29	8.8	22.0	16.3	21.0/18.4	0.75	7.3
			5	25.6	17.8	12.1/11.0	0.88	48.0	19.2	13.7	11.7/10.9	0.65	28.2	36.7	23.1	15.2/13.9	1.24	15.4
			6	23.2	16.7	13.0/11.9	0.79	39.8	16.7	12.5	12.6/11.7	0.56	21.8	34.2	22.0	16.1/14.8	1.16	13.5
			7	20.8	15.6	13.9/12.7	0.71	32.4	14.6	11.5	13.4/12.5	0.50	16.9	31.6	21.0	17.0/15.6	1.08	11.7
YECAH05	1250	4	8	18.6	14.7	14.7/13.4	0.64	26.7	12.5	10.6	14.2/13.2	0.43	12.7	29.1	20.0	17.9/16.3	0.99	10.0
			9	16.5	13.7	15.5/14.1	0.56	21.4	10.6	9.6	15.0/13.8	0.36	9.3	26.6	19.0	18.7/17.1	0.90	8.4
		6	5	22.2	16.7	15.8/13.7	0.76	23.9	15.9	12.5	14.7/13.1	0.54	12.9	36.0	23.5	18.9/16.4	1.22	18.6
			6	19.9	15.6	16.5/14.3	0.68	19.2	14.0	11.6	15.3/13.6	0.48	10.3	33.2	22.4	19.6/17.1	1.13	15.6
			7	17.9	14.7	17.1/14.8	0.61	16.1	11.9	10.5	16.0/14.1	0.41	7.5	30.7	21.4	20.3/17.7	1.05	13.7
			8	15.9	13.8	17.8/15.3	0.54	12.7	10.1	9.5	16.7/14.6	0.34	5.5	28.1	20.3	21.0/18.3	0.96	11.5
			9	14.1	12.8	18.4/15.8	0.48	10.2	8.7	8.5	17.3/14.9	0.29	4.1	25.5	19.3	21.7/18.9	0.87	9.5
			5	30.1	21.2	12.8/11.6	1.02	61.0	22.8	16.4	12.1/11.2	0.78	39.1	43.9	27.9	15.8/14.4	1.50	21.9
			6	27.4	20.0	13.6/12.3	0.93	53.3	20.0	15.1	13.0/12.0	0.68	30.5	40.8	26.6	16.8/15.3	1.39	18.9
YECAH06	1500	4	7	24.8	18.8	14.4/13.1	0.85	45.0	17.4	13.9	13.8/12.7	0.59	23.8	37.6	25.3	17.7/16.0	1.27	16.1
			8	22.0	17.6	15.2/13.8	0.75	35.9	14.9	12.8	14.5/13.3	0.51	17.9	34.8	24.2	18.4/16.7	1.19	14.1
			9	19.6	16.5	15.9/14.4	0.66	28.8	12.8	11.7	15.2/13.9	0.44	13.5	31.7	23.0	19.2/17.5	1.08	11.7
		6	5	28.0	20.7	15.4/13.4	0.95	55.6	21.0	15.9	14.2/12.7	0.72	34.1	47.0	30.3	17.7/15.7	1.60	44.0
			6	25.3	19.5	16.1/14.0	0.86	46.6	18.2	14.6	14.9/13.3	0.62	25.8	44.0	29.1	18.3/16.3	1.50	39.0
			7	22.8	18.3	16.7/14.5	0.78	39.4	15.9	13.5	15.6/13.8	0.54	20.3	40.7	27.8	19.1/16.9	1.38	33.4
			8	20.4	17.2	17.4/15.1	0.69	31.6	13.7	12.3	16.2/14.2	0.47	15.4	37.6	26.5	19.9/17.5	1.29	29.2
			9	18.2	16.1	18.0/15.5	0.62	25.5	11.7	11.1	16.9/14.7	0.39	11.1	34.7	25.3	20.5/18.1	1.18	25.6
			5	36.5	25.9	12.5/11.5	1.24	40.2	27.2	19.9	12.0/11.2	0.93	23.7	56.8	35.6	14.7/13.5	1.92	33.2
			6	33.0	24.3	13.4/12.3	1.12	33.5	23.8	18.3	12.9/12.0	0.82	18.4	53.2	34.0	15.5/14.3	1.81	28.8
			7	29.6	22.8	14.2/13.1	1.01	27.3	20.5	16.8	13.7/12.8	0.70	13.7	49.5	32.5	16.5/15.1	1.69	25.4
			8	26.4	21.4	15.0/13.8	0.89	21.6	17.6	15.4	14.5/13.4	0.60	10.3	45.9	31.0	17.3/15.9	1.57	22.2
			9	23.4	20.1	15.8/14.4	0.79	17.4	14.9	13.9	15.3/14.0	0.50	7.3	42.0	29.4	18.2/16.7	1.43	18.4

Note: The temperature difference of inlet/outlet water is 7°C

Performance Data

PERFORMANCE RATINGS

HEATING COIL

Model	Airflow	Rows	Inlet Hot Water Temp	Air Inlet Temp (Dry Bulb)											
				21°C				15°C				7°C			
				Total Heating Capacity	Air Off Temp	Water Flow Rate	Water Pressure Drop	Total Heating Capacity	Air Off Temp	Water Flow Rate	Water Pressure Drop	Total Heating Capacity	Air Off Temp	Water Flow Rate	Water Pressure Drop
				kW	°C	L/S	kPa	kW	°C	L/S	kPa	kW	°C	L/S	kPa
YECAH03	750	1	80	9.9	31.9	0.12	2.0	11.3	27.3	0.14	2.6	13.2	20.9	0.16	3.53
		2	80	21.6	44.8	0.27	2.5	24.8	41.8	0.30	3.2	29.1	37.7	0.36	4.36
YECAH04	1000	1	80	15.5	33.8	0.19	7.5	17.6	29.3	0.21	9.6	20.4	23.1	0.25	12.67
		2	80	34.2	49.3	0.42	9.3	39.0	46.7	0.48	12.0	45.5	42.9	0.56	15.93
YECAH05	1250	1	80	16.9	32.2	0.21	8.8	19.3	27.5	0.23	11.3	22.4	21.1	0.28	15.09
		2	80	38.6	46.6	0.47	11.7	44.0	43.6	0.54	14.9	51.3	39.4	0.63	20.03
YECAH06	1500	1	80	20.6	32.4	0.25	15.0	23.4	27.7	0.29	19.2	27.2	21.3	0.33	25.38
		2	80	47.0	46.9	0.58	19.7	53.5	43.9	0.66	25.1	62.3	39.8	0.76	33.75

Acoustics

SOUND POWER LEVEL

4 Rows Cooling Coil+1 Row Heating Coil

Model	ESP (Pa)	Air Flow (L/S)	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dB(A)
YECAH03	175	550	46.3	63.3	57.4	58.2	57.0	52.0	48.1	45.4	66.1
		750	52.1	59.9	67.5	63.4	62.7	58.9	51.6	50.2	70.7
YECAH04	175	800	39.3	58.6	56.7	61.1	64.4	60.8	55.8	51.8	68.4
		1000	41.2	51.9	61.7	64.8	66.9	62.9	57.7	53.4	70.9
YECAH05	175	1050	40.3	58.5	56.5	58.2	57.2	50.7	45.7	42.9	64.0
		1250	43.3	61.2	59.9	61.7	60.5	53.4	47.4	44.2	67.2
YECAH06	175	1300	37.8	59.6	56.1	55.4	55.0	46.6	41.4	39.0	63.1
		1500	39.0	64.1	58.2	58.2	57.3	48.8	42.8	40.7	66.6

SOUND POWER LEVEL

6 Rows Cooling Coil+1 Row Heating Coil

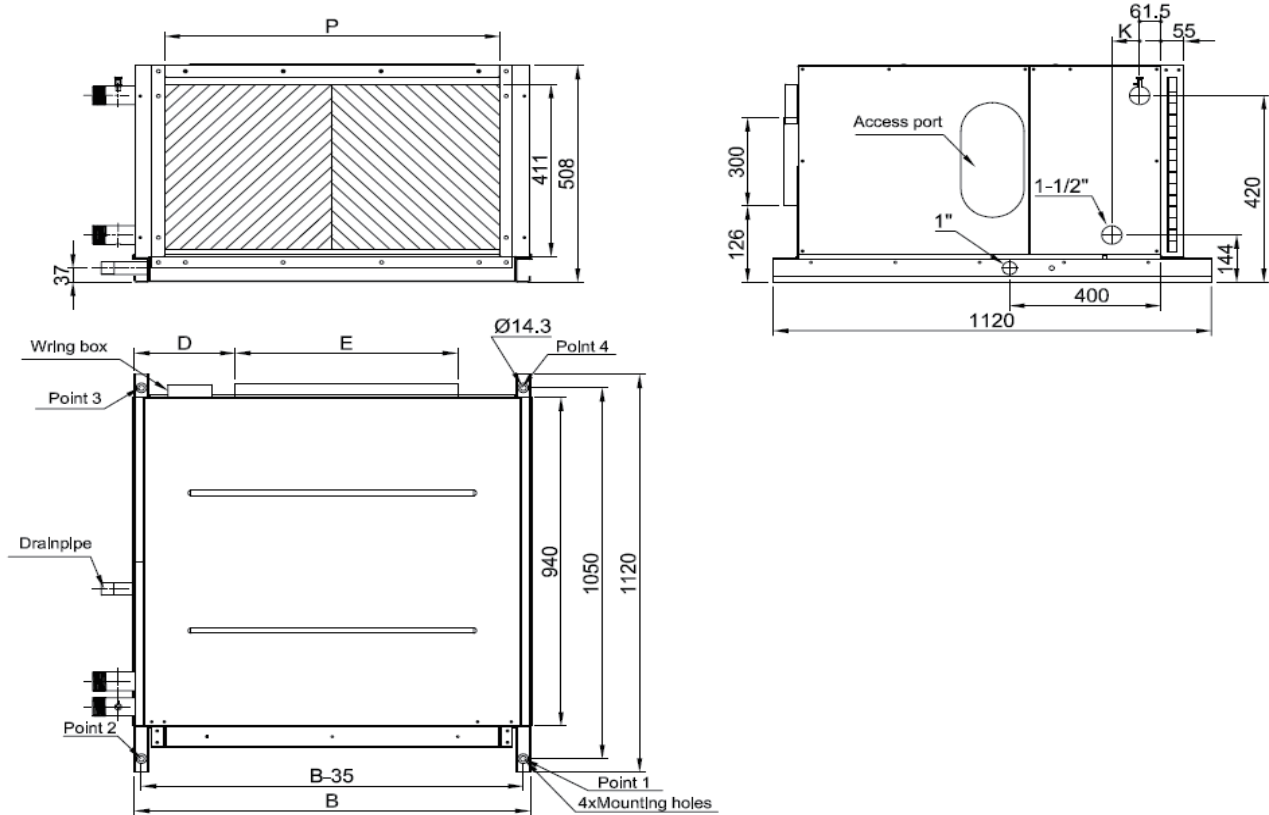
Model	ESP (Pa)	Air Flow (L/S)	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dB(A)
YECAH03	175	550	48.3	57.6	63.5	62.1	62.3	59.6	52.8	48.9	68.7
		700	51.3	59.6	67.6	64.4	64.8	61.7	55.2	50.2	71.6
YECAH04	175	800	41.4	60.6	59.5	62.7	64.0	61.1	53.7	48.7	69.1
		1000	45.0	54.9	67.6	67.1	67.2	62.8	54.9	51.2	72.8
YECAH05	175	1050	48.8	66.3	63.4	61.5	60.8	51.7	43.2	38.3	69.7
		1250	49.9	67.4	69.0	64.4	63.7	55.1	47.5	40.8	72.8
YECAH06	175	1300	40.3	62.1	58.6	57.9	57.5	49.1	43.9	41.5	65.6
		1500	41.5	66.6	60.7	60.7	59.8	51.3	45.3	43.2	69.1

Casing Radiated Sound Power Test:

According to JBT4330-1999 and ISO3744, casing radiated sound power level is tested in hemi-anechoic room. Unit tested with 3 meters of inlet and 3 meters of outlet ductwork.

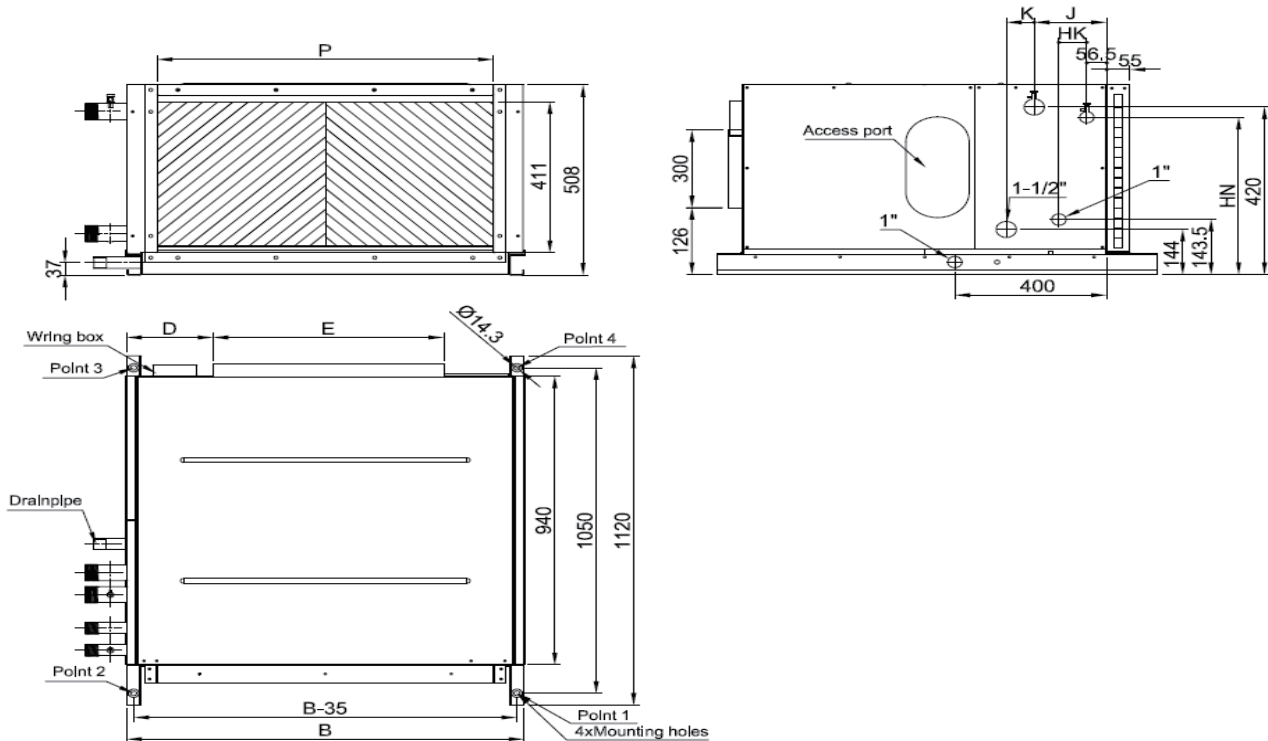
Unit Drawings

Cooling Only



Unit Drawings

Cooling and Heating



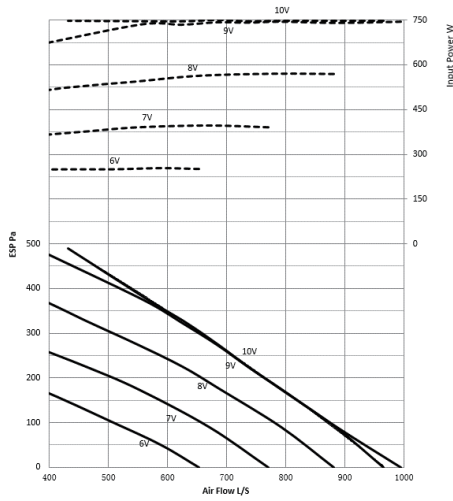
Model	Width	Outlet flange size		Inlet flange size	Piping position							
	B	D	E	P	J		K		HK		HN	
					with 1R HC	with 2R HC	4 rows	6 rows	1 row	2 rows	1 row	2 rows
YECAH03	950	326	450	804	160.5	182.5	66	110	44	66	407	420
YECAH04	1500	451	600	1360	160.5	182.5	66	110	44	66	407	420
YECAH05	1500	329	950	1360	160.5	182.5	66	110	44	66	407	420
YECAH06	1750	376	1200	1610	160.5	182.5	66	110	44	66	407	420

Notes:

- The coil pipe connections use male threads (thread code R2)
1" - OD 34mm 1 1/2" - 48mm
- The condensate pipe connections use 34mm O.D. male threads (thread code R2)
- All dimensions are SI unit (mm)

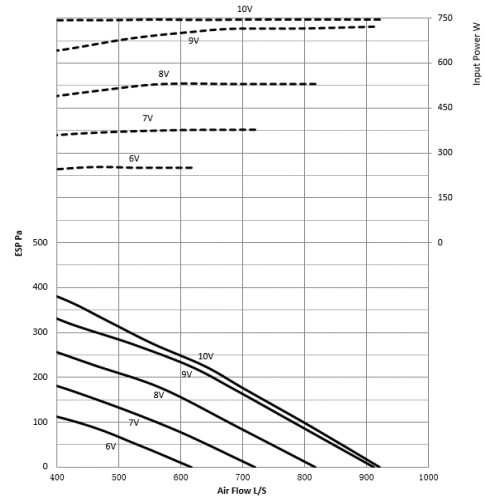
Fan Performance Curves

YECAH03 4R Cooling+1R Heating



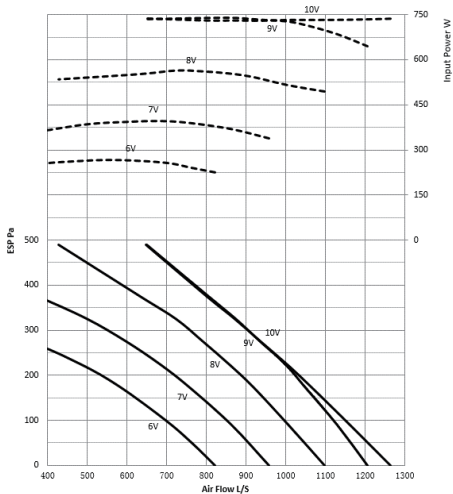
Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

YECAH03 6R Cooling+1R Heating



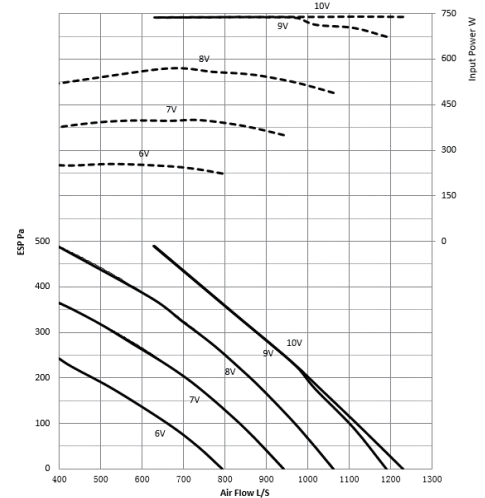
Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

YECAH04 4R Cooling+1R Heating



Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

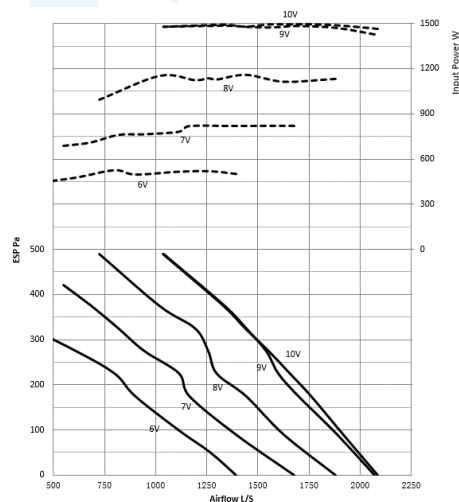
YECAH04 6R Cooling+1R Heating



Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

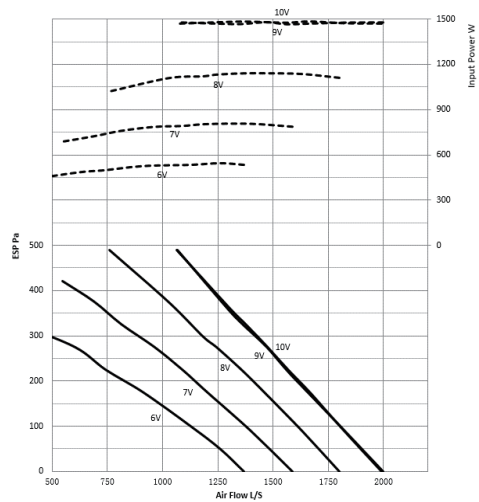
Fan Performance Curves

YECAH05 4R Cooling+1R Heating



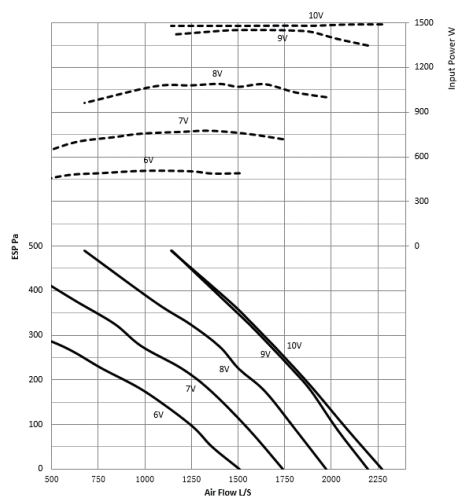
Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

YECAH05 6R Cooling+1R Heating



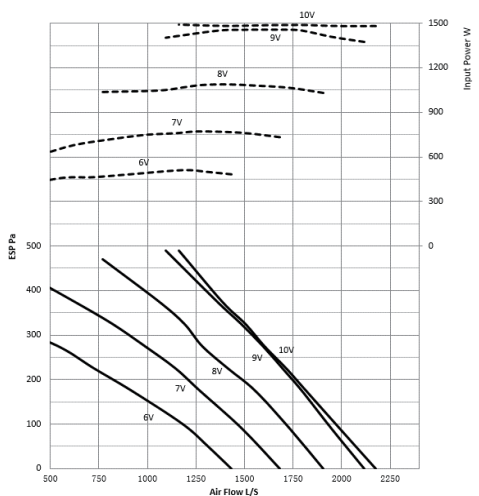
Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

YECAH06 4R Cooling+1R Heating



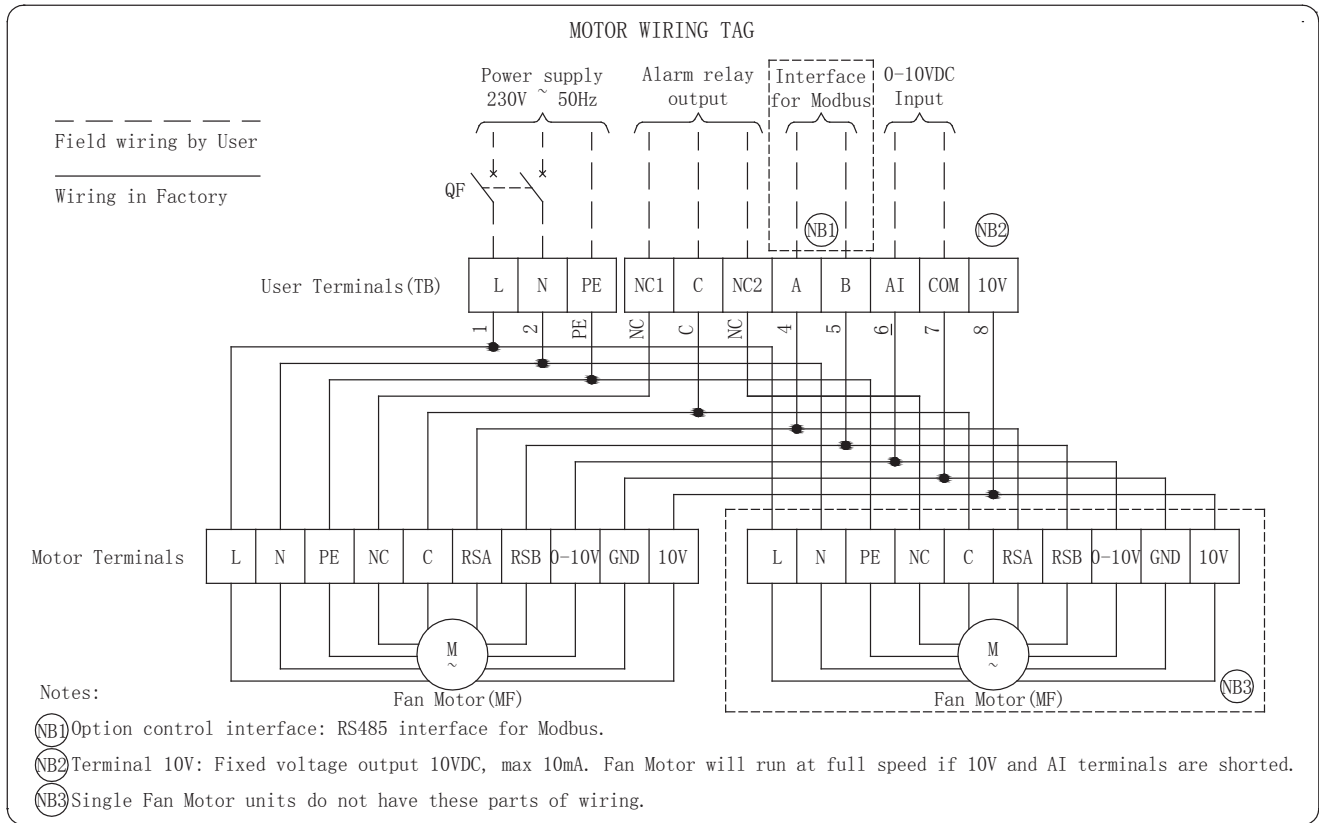
Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

YECAH06 6R Cooling+1R Heating



Note: Airflows are for dry coil and without filter. Reduce airflow by 10% in high moisture removal conditions.

Electrical Data and Wiring



TEC3000 Series Thermostat Controllers

TEC3000 Series Thermostat Controllers are stand-alone and field-selectable BACnet® Master-Slave/Token-Passing (MS/TP) or N2 networked devices that provide on/off, floating, and proportional control of two or four-pipe fan coils with variable-speed EC motors (0 to 10 VDC control).

The networked models feature a field-selectable Building Automation System (BAS) BACnet MS/TP or N2 communication capability that enables remote monitoring and programming for efficient space temperature control.

All models include a USB port configuration that reduces installation time by allowing simple backup and restore features from a USB drive, which enables rapid cloning of the configuration between like units.

All models feature an intuitive user interface with backlit display that makes setup and operation quick and easy. The Backlit Liquid Crystal Display (LCD) offers real-time control status of the environment in easy-to-read, plain text messages with adjustable backlight that brightens during user interaction.

Some models have occupancy sensing capability built into the device. These thermostat controllers can deliver further energy savings of up to 30% by using additional standby set-points.

These thermostats feature two configurable binary inputs that provide for advanced functions such as remote night setback, service or filter alarms, motion detector, and key switch or window status, and configures the application to respond accordingly.

A full line of remote TE-6300 Series Temperature Sensors supports a wide range of applications.



Guide Specifications

GENERAL

Furnish and install ceiling-mounted compact air handling units not exceeding 508mm height as indicated and scheduled in the plans. Units shall be factory assembled with coils that are pressure tested individually to 400 psi (2.8 MPa). The unit shall incorporate one or two 355mm diameter directly driven EC plug fans with integral variable speed drive(s). The units shall be suitable for operation on 240 volt single phase 50 hz power.

BASIC UNIT

The unit panels shall be fabricated out of 1mm galvanized steel. The unit shall be lined with 15 mm Class 1 PE thermal insulation. The fan motor(s) shall be easily removable for serviceability. A terminal box with terminal strip shall be provided for terminating the wiring. An inspection panel with sash catches shall be provided for easy inspection of coil and drain pan.

COILS

Copper tube with corrugated aluminium hydrophilic fins. Aluminium fins shall be 0.110mm thick and the coil shall have maximum spacing of 2.3mm between the fins. The coil shall be pressure tested under water to 2.8 MPa (For a working pressure of 1600 kpa) and dehydrated

before assembly. Coil shall be provided with a manual air vent on the top. The coil assembly shall be protected on the side on which piping is to be fitted with a cover made of GI sheet. A full drain pan shall be provided to the base of the unit manufactured of stainless steel to prevent corrosion.

MOTORS

High efficiency electronically commutated (EC) motors shall be fitted as standard on all units. Motor can be regulated by 0-10V DC signal supplied by a BMS, thermostat or DDC controller. The motor is resiliently mounted, self aligning and oiled for life. A MODBUS high level connection shall be provided.

FANS

The unit shall utilize one or two 355mm diameter EC plug fan(s), dynamically balanced, incorporating backward curved impellers each with a direct drive EC motor. The fan motor assembly shall be designed for low-noise, variable speed operation from a 0-10V DC control input. EC fan assemblies shall be installed in an insulated plenum section with large removable access panels fitted to both sides of the air handling unit for ease of service and replacement.

TERMINAL BOX

All units shall be provided with factory installed terminal box with the fan motor wired to the box. The terminal box shall include a DIN rail type terminal strip that has connections for incoming 240V power, 0-10V DC speed control, a common fault contact, and a MODBUS high level data interface. Where multiple fans are provided they shall be factory wired to the common terminal strip.

FILTER

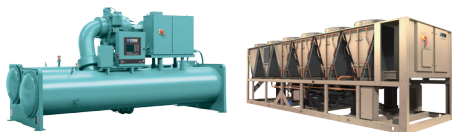
As an option, panel filters shall be provided to a 25mm channel frame mounted on the air inlet of the unit.

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High Efficiency Chiller



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Variable Air Volume



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EC Motor AHUs



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EC Motor Ceiling AHUs



Service Solutions



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INSTALL CONFIDENCE

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