Carrier

United Technologies

turn to the experts

42CT

Fan Coil Unit

Airflow: 340~2380m^3/h

Turn To The Experts

Inheriting a rich legacy of innovation including inventing modern air-conditioning, Carrier has been a global leader in innovations for Heating Ventilation Air Conditioning (HVAC) and refrigeration solutions. Carrier is a part of UTC Climate, Controls & Security, a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide.

With a broad portfolio of advanced technical patent awards, our global R&D center in Shanghai develops innovative heat, ventilation and air-conditioning (HVAC) solutions.

In 1998, Time magazine named Dr. Carrier oneof its 20 most influential builders and titans of the 20th century.

Model number Nomenclature

0 — Product Re-design Key
0: Initial design

A — Return Air Plenum & Filter
0: Without
A: Unit with rear return air plenum
B: Unit with bottom air plenum
C: Unit with rear return air plenum & nylon filter
D: Unit with bottom return air plenum & nylon filter

1 — Customer Source & Power
1: Export to HongKong220V-1Ph-50Hz, IP54
2: Export 220V-1Ph-50Hz, IP20
3: Export 230V-1Ph-50Hz, IP20
4: Export 220V-1Ph-60Hz, IP20
5: Export 230V-1Ph-60Hz, IP20
6: Export 115V-1Ph-60Hz, IP20
7: Export 240V-1Ph-50Hz, IP20

L — Unit Connection Direction (Face to discharge air)
L: Left
R: Right

A — Drainpan
A: Standard drainpan
B: Lengthen drainpan
C: Stainless drainpan
D: Lengthen stainless drainpan

0 — External Static Pressure
0: 12Pa Standard
3: 30Pa With static pressure
5: 50Pa High static pressure

20 — Coil Rows
20: 2 Pipe 2 Rows (002-008)
30: 2 Pipe 3 Rows (002-014)
31: 4 Pipe 3 Rows cooling + 1 Row heating (002-014)
40: 2 Pipe 4 Rows (002-014)

002 — Unit size (Air Volume =size X 170 m^3/h)
002: 340m^3/h
003: 510m^3/h
……

CT — Model
CT : Horizontal ceiling FCU

↑ 42 — Product Series
42 : Fan Coil Unit

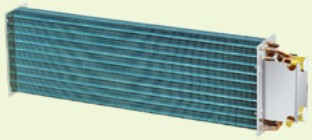
Air Flow

340~2380m^3/h

Features

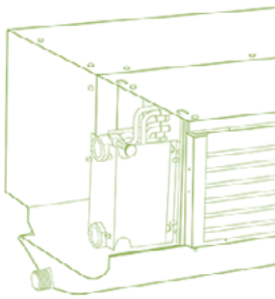
High Efficiency

- Unit coil using the latest developed double-flanging structure of wide seam blue hydrophilic aluminum fin, advanced mechanical tube-expanding process, ensure copper tube optimally contacts with aluminum fin. Wide seam hydrophilic aluminum fin provide sufficient heat transfer channel for heat exchange, wide impeller provide uniformly air velocity environment for heat transfer. It makes the heat transfer more complete, which ensures the cooling capacity per input power of 42CT outperforms other similar products.



Ultra Low Noise

- 42CT unit equipped with newly designed wide and large diameter impeller, low speed forward multi-blade blade. The fan casing is strengthened with reinforcing ribs for additional strength.
- It adopts NSK bearings, ensuring small vibration and low noise in operation.



High Strength V type Drain Pan

- Newly designed V type drain pan, produced with forming integral molding process, drain outlet located at lowest position of the unit, condensate can be drain out smoothly. V type design enhance the strength of drain pan, avoid drain pan deformation in transportation.

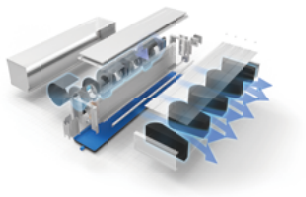
Integrated Air Plenum Box (Option)

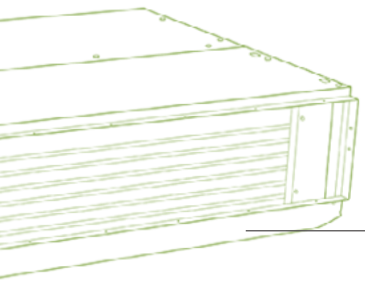
- Factory mounted integrated air plenum box, ensure better quality and appearance, reduce labor cost on jobsite. Along with the air plenum box, filter options can be offered to improve indoor air quality.

Patented Design Silencer (Option)

- Carrier patented design silencer absorb the noise generated by air outlet dynamic pressure, with build-in wing shape sound-absorbing sponge column, optimizing the system simulation through CFD tool. Sound level of unit can be greatly reduced ~3dB(A) without other performance impact, Silencer can be easy installed at FCU outlet, without any influence for unit air volume and ESP

FCU Model	Silencer	ESP(Pa)	Air Volume (m^3/h)	Sound Level (dB(A))	Noise Decrease (dB(A))
Unit 1 (2 fans)	without	30	1005.0	45.6	↓3.4
	with	30	1011.6	42.2	
Unit 2 (4 fans)	without	30	1333.1	46.0	↓3.5
	with	30	1351.4	42.5	
Unit 3 (4 fans)	without	12	1973.0	46.7	↓3.0
	with	12	1954.0	43.7	





Diversified Options

- 2 Pipe: 2row / 3row / 4row
  4 Pipe: 3+1row
- Thermostat
- Motorized 2-way or 3-way valves
- Drain pan option: cold roll steel with powder coating or stainless steel, all with 6mm PEF insulation
- Drain pan length option: standard or extended design
- Bottom or rear plenum box with or without filter options
- Filter options: nylon filter (10mm) or aluminum filter (10mm or 25mm)
- Patented design silencer

3-way valve

2-way valve

V type drainpan

Aluminum filter

Thermostat TMS810/ TCT100

Technical Parameter

Technical Data (2R Coil)

Performance	Model	002	003	004	005	006	007	008
Air Volume m^3/h	High	340	510	680	850	1020	1190	1360
	Med	270	400	530	670	800	940	1070
	Low	200	300	400	500	600	700	800
Cooling Capacity W	Total	1900	2950	3600	4500	5400	6300	7200
	Sensible	1440	2190	2770	3450	4130	4790	5520
Heating Capacity W		3050	4750	5800	7200	8600	10100	11500
Power Input W	12 Pa	34	45	58	75	94	112	130
	30 Pa	41	55	72	83	102	120	140
	50 Pa	44	63	78	95	108	130	155
Sound Level dB(A)	12 Pa	34	37	39.5	42	44	47	44
	30 Pa	37.5	39.5	42	44	45.5	48	46.5
	50 Pa	41.5	43	44	47	47	49	48.5
Water Flow l/min		5.4	8.5	10.3	12.9	15.5	18.1	20.6
Water Pressure Drop kPa		12	28	20	28	30	36	30
Fan	Type	Centrifugal, forward multi-blade						
Motor	Type	Permanent Split Capacitor						
Coil	Rows	2						
	Working Pressure	1.6 MPa						
Connecting	In-Out	3/4" FPT						
	Drain Connection	3/4" MPT						
Net Weight kg		10.8	13.3	14.7	16	17.6	19.1	24.8
Options		Thermostat, 2Way / 3Way Valve, Plenum box						

Note: 1. The data is the performance in high speed with relevant static pressure.
2. Cooling conditions: inlet water 7℃, temperature rise 5℃, entry air temperature DB 27℃, WB 19.5℃
Heating conditions: inlet water 60℃, same water flow as the cooling conditions, entry air temperature DB 21℃
3. Sound level is tested in the anechoic test room, measured with a fine audiometer located 1 meter away from the unit front panel and the unit bottom panel

Technical Parameter

Technical Data (3R Coil)

Performance	Model	002	003	004	005	006	007	008	010	012	014
Air Volume m^3/h	High	340	510	680	850	1020	1190	1360	1700	2040	2380
	Med	270	400	530	670	800	940	1070	1340	1610	1890
	Low	200	300	400	500	600	700	800	1000	1200	1400
Cooling Capacity W	Total	2300	3350	4300	5250	6300	7250	8450	9850	11500	13000
	Sensible	1630	2390	3110	3810	4580	5280	6140	7300	8610	9830
Heating Capacity W		3650	5250	6900	8300	10080	11520	13100	15600	17900	20800
Power Input W	12 Pa	34	45	58	75	94	112	130	152	180	228
	30 Pa	41	55	72	83	102	120	140	172	210	250
	50 Pa	44	63	78	95	108	130	155	185	225	298
Sound Level dB(A)	12 Pa	34	37	39.5	42	44	47	44	47	49	51
	30 Pa	37.5	39.5	42	44	45.5	48	46.5	50	50.5	52.5
	50 Pa	41.5	43	44	47	47	49	48.5	51	51.5	54
Water Flow l/min		6.6	9.5	12.3	15.0	18.2	20.8	24.2	28.2	33.0	37.3
Water Pressure Drop kPa		22	24	22	30	32	35	33	40	40	45
Fan	Type	Centrifugal, forward multi-blade									
Motor	Type	Permanent Split Capacitor									
Coil	Rows	3									
	Working Pressure	1.6 MPa									
Connecting	In-Out	3/4" FPT									
	Drain Connection	3/4" MPT									
Net Weight kg		11.3	13.8	15.4	16.6	18.4	19.5	25.6	27.4	30.8	31.6
Options		Thermostat, 2Way / 3Way Valve, Plenum box									

Note: 1. The data is the performance in high speed with relevant static pressure.
2. Cooling conditions: inlet water 7℃, temperature rise 5℃, entry air temperature DB 27℃, WB 19.5℃
Heating conditions: inlet water 60℃, same water flow as the cooling conditions, entry air temperature DB 21℃
3. Sound level is tested in the anechoic test room, measured with a fine audiometer located 1 meter away from the unit front panel and the unit bottom panel

Technical Parameter

Technical Data (3+1R Coil)

Performance	Model	002	003	004	005	006	007	008	010	012	014
Air Volume m^3/h	High	340	510	680	850	1020	1190	1360	1700	2040	2380
	Med	270	400	530	670	800	940	1070	1340	1610	1890
	Low	200	300	400	500	600	700	800	1000	1200	1400
Cooling Capacity W	Total	2300	3200	4150	5200	6200	6800	8150	9850	11500	13000
	Sensible	1620	2310	3020	3760	4510	5030	5960	7260	8590	9730
Heating Capacity W		1980	3000	3500	4500	5200	5700	6600	7800	8800	10300
Power Input W	12 Pa	34	45	58	75	94	112	130	152	180	228
	30 Pa	41	55	72	83	102	120	140	172	210	250
	50 Pa	44	63	78	95	108	130	155	185	225	298
Sound Level dB(A)	12 Pa	34	37	39.5	42	44	47	44	47	49	51
	30 Pa	37.5	39.5	42	44	45.5	48	46.5	50	50.5	52.5
	50 Pa	41.5	43	44	47	47	49	48.5	51	51.5	54
Water Flow l/min	Cooling	6.6	9.2	11.9	14.9	17.8	19.5	23.4	28.2	33.0	37.3
	Heating	2.8	4.3	5.0	6.4	7.5	8.2	9.5	11.2	12.6	14.8
Water Pressure Drop kPa	Cooling	22	24	22	30	32	35	33	40	40	45
	Heating	13	15	20	25	28	30	35	40	40	45
Fan	Type	Centrifugal, forward multi-blade									
Motor	Type	Permanent Split Capacitor									
Coil	Rows	3+1									
	Working Pressure	1.6 MPa									
Connecting	In-Out	3/4" FPT									
	Drain Connection	3/4" MPT									
Net Weight kg		12	14.7	16.4	17.7	19.6	20.4	26.7	28.9	32.4	33.2
Options		Thermostat, 2Way / 3Way Valve, Plenum box									

Note: 1. The data is the performance in high speed with relevant static pressure
2. Cooling conditions: inlet water 7℃, temperature rise 5℃, entry air temperature DB 27℃, WB 19.5℃
Heating conditions: inlet water 60℃, temperature drop 10℃, entry air temperature DB 21℃
3. Sound level is tested in the anechoic test room, measured with a fine audiometer located 1 meter away from the unit front panel and the unit bottom panel

Technical Parameter

Technical Data (4R Coil)

Performance	Model	002	003	004	005	006	007	008	010	012	014
Air Volume m^3/h	High	340	510	680	850	1020	1190	1360	1700	2040	2380
	Med	270	400	530	670	800	940	1070	1340	1610	1890
	Low	200	300	400	500	600	700	800	1000	1200	1400
Cooling Capacity W	Total	2660	3690	4680	5600	6900	7780	9300	11220	13000	15200
	Sensible	1810	2560	3300	4010	4890	5560	6550	7980	9400	10960
Heating Capacity W		4260	5900	7490	8960	11040	12450	14900	17950	20800	24320
Power Input W	12 Pa	34	45	58	75	94	112	130	152	180	228
	30 Pa	41	55	72	83	102	120	140	172	210	250
	50 Pa	44	63	78	95	108	130	155	185	225	298
Sound Level dB(A)	12 Pa	34	37	39.5	42	44	47	44	47	49	51
	30 Pa	37.5	39.5	42	44	45.5	48	46.5	50	50.5	52.5
	50 Pa	41.5	43	44	47	47	49	48.5	51	51.5	54
Water Flow l/min		7.6	10.6	13.4	16.1	19.8	22.3	26.7	32.2	37.3	43.6
Water Pressure Drop kPa		20	18	18	18	22	30	26	36	35	48
Fan	Type	Centrifugal, forward multi-blade									
Motor	Type	Permanent Split Capacitor									
Coil	Rows	4									
	Working Pressure	1.6 MPa									
Connecting	In-Out	3/4" FPT									
	Drain Connection	3/4" MPT									
Net Weight kg		11.7	14.3	16	17.2	19.2	20	26.3	28.1	31.6	32.4
Options		Thermostat, 2Way / 3Way Valve, Plenum box									

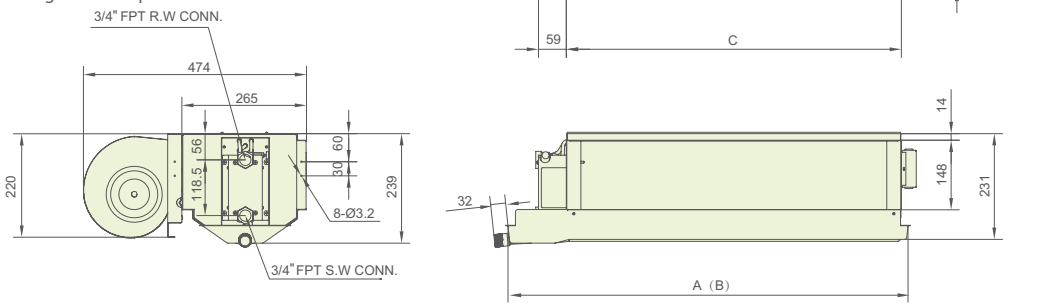
Note: 1. The data is the performance in high speed with relevant static pressure
2. Cooling conditions: inlet water 7℃, temperature rise 5℃, entry air temperature DB 27℃, WB 19.5℃
Heating conditions: inlet water 60℃,same water flow as the cooling conditions, entry air temperature DB 21℃
3. Sound level is tested in the anechoic test room, measured with a fine audiometer located 1 meter away from the unit front panel and the unit bottom panel

Dimensions

2 Pipe

UNIT	A	B	C	D	H
42CT002	642	742	492	460	488
42CT003	782	882	632	600	628
42CT004	862	962	712	680	708
42CT005	942	1042	792	760	788
42CT006	1102	1202	952	920	948
42CT007	1182	1282	1032	1000	1028
42CT008	1422	1522	1272	1240	1268
42CT010	1472	1572	1322	1290	1318
42CT012	1672	1772	1522	1490	1518
42CT014	1832	1932	1682	1650	1678

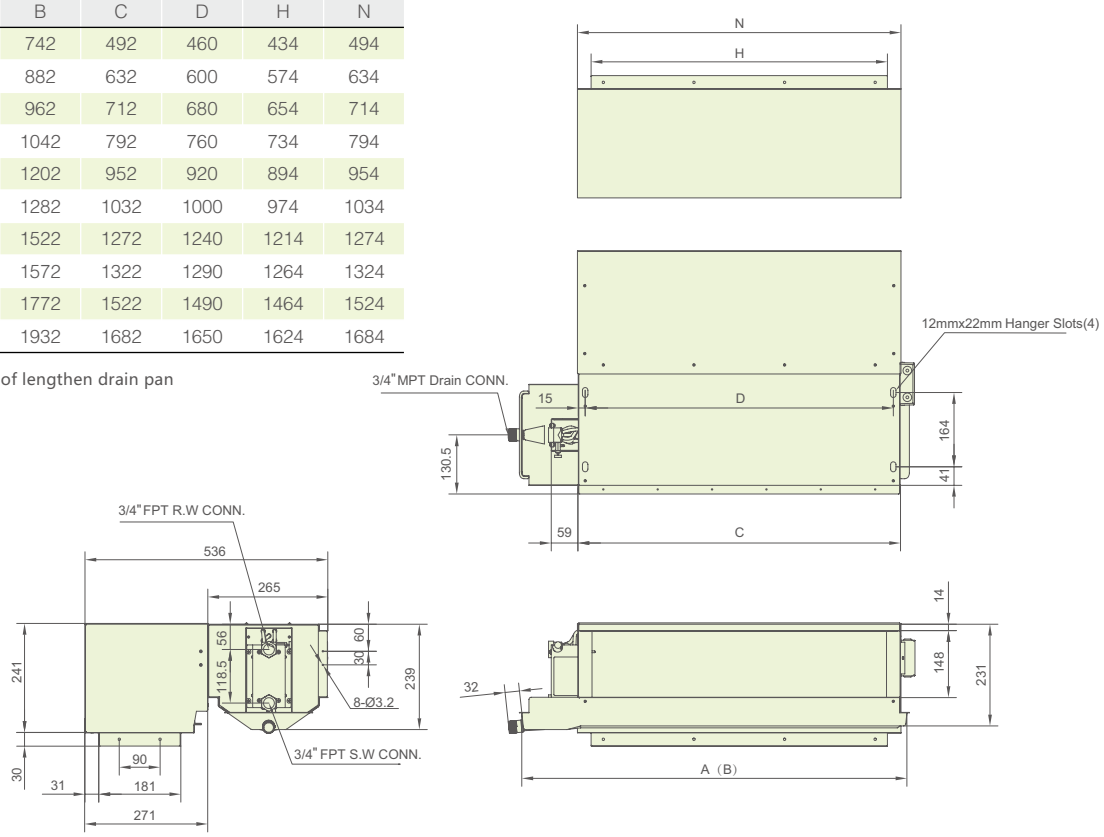
Note: B is the dimension of lengthen drain pan



2 Pipe with bottom air plenum

UNIT	A	B	C	D	H	N
42CT002	642	742	492	460	434	494
42CT003	782	882	632	600	574	634
42CT004	862	962	712	680	654	714
42CT005	942	1042	792	760	734	794
42CT006	1102	1202	952	920	894	954
42CT007	1182	1282	1032	1000	974	1034
42CT008	1422	1522	1272	1240	1214	1274
42CT010	1472	1572	1322	1290	1264	1324
42CT012	1672	1772	1522	1490	1464	1524
42CT014	1832	1932	1682	1650	1624	1684

Note:B is the dimension of lengthen drain pan

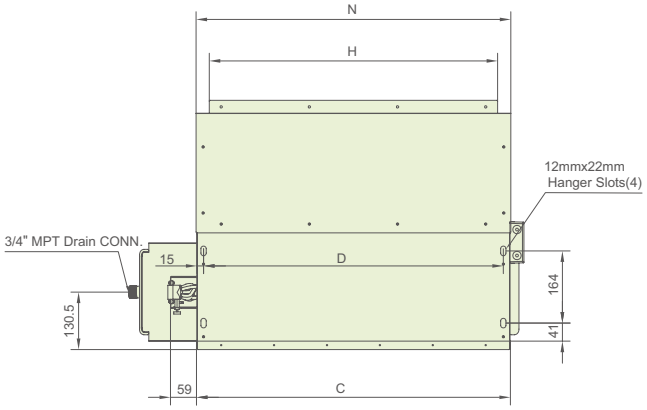


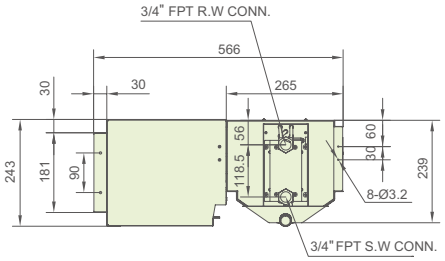
Dimensions

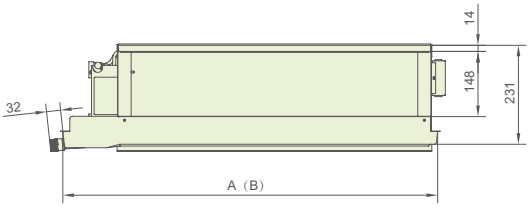
2 Pipe with rear air plenum

UNIT	A	B	C	D	H	N
42CT002	642	742	492	460	434	494
42CT003	782	882	632	600	574	634
42CT004	862	962	712	680	654	714
42CT005	942	1042	792	760	734	794
42CT006	1102	1202	952	920	894	954
42CT007	1182	1282	1032	1000	974	1034
42CT008	1422	1522	1272	1240	1214	1274
42CT010	1472	1572	1322	1290	1264	1324
42CT012	1672	1772	1522	1490	1464	1524
42CT014	1832	1932	1682	1650	1624	1684

Note: B is the dimension of lengthen drain pan



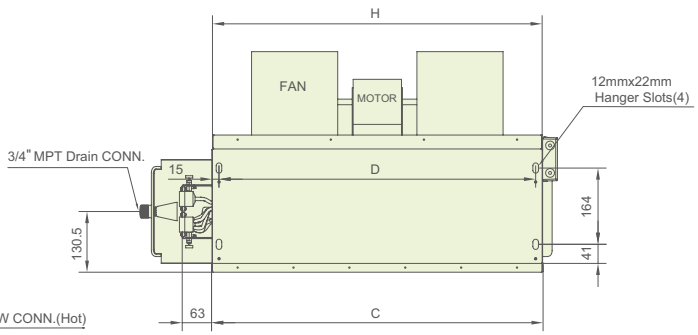


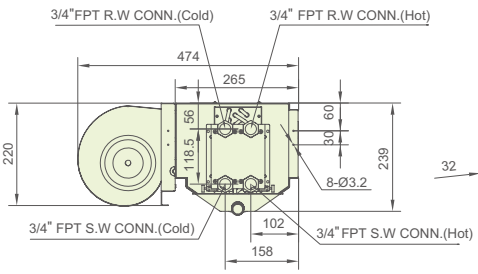


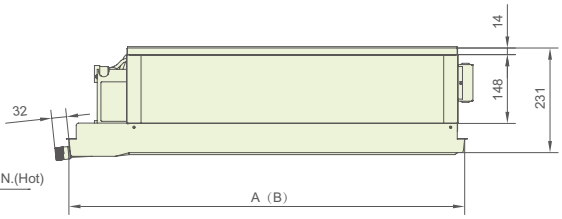
4 Pipe

UNIT	A	B	C	D	H
42CT002	642	742	492	460	488
42CT003	782	882	632	600	628
42CT004	862	962	712	680	708
42CT005	942	1042	792	760	788
42CT006	1102	1202	952	920	948
42CT007	1182	1282	1032	1000	1028
42CT008	1422	1522	1272	1240	1268
42CT010	1472	1572	1322	1290	1318
42CT012	1672	1772	1522	1490	1518
42CT014	1832	1932	1682	1650	1678

Note: B is the dimension of lengthen drain pan





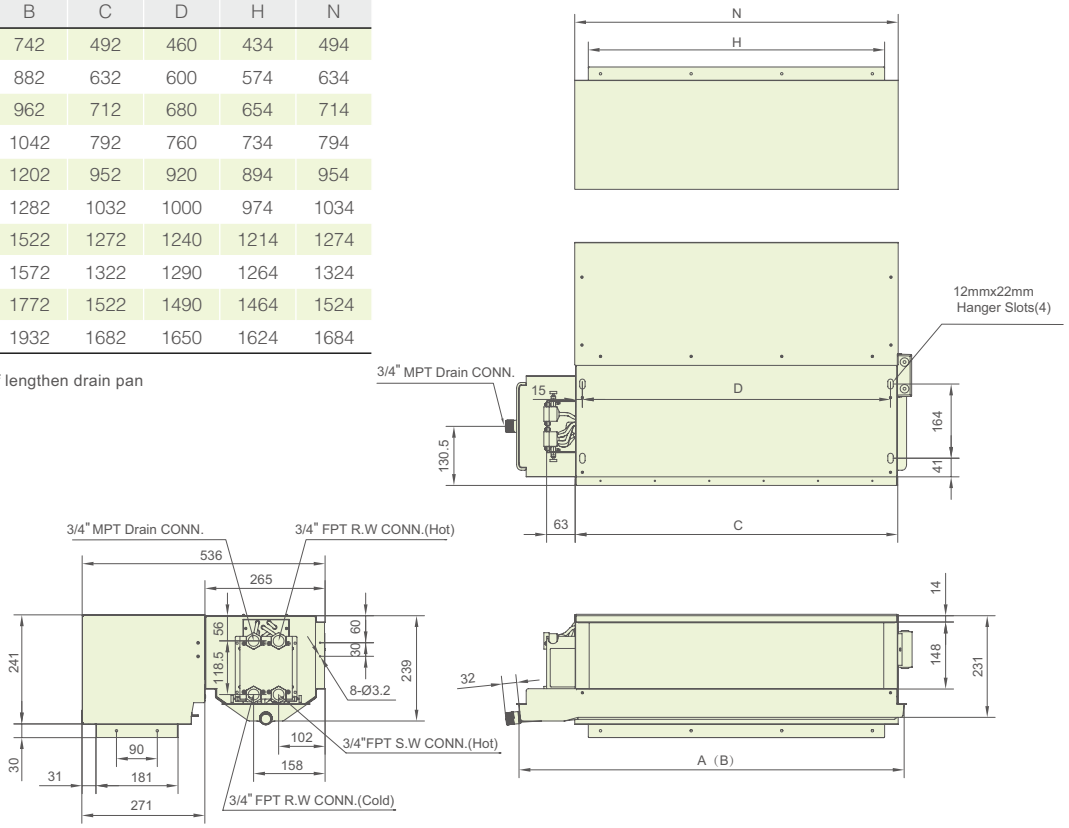


Dimensions

4 Pipe with bottom air plenum

UNIT	A	B	C	D	H	N
42CT002	642	742	492	460	434	494
42CT003	782	882	632	600	574	634
42CT004	862	962	712	680	654	714
42CT005	942	1042	792	760	734	794
42CT006	1102	1202	952	920	894	954
42CT007	1182	1282	1032	1000	974	1034
42CT008	1422	1522	1272	1240	1214	1274
42CT010	1472	1572	1322	1290	1264	1324
42CT012	1672	1772	1522	1490	1464	1524
42CT014	1832	1932	1682	1650	1624	1684

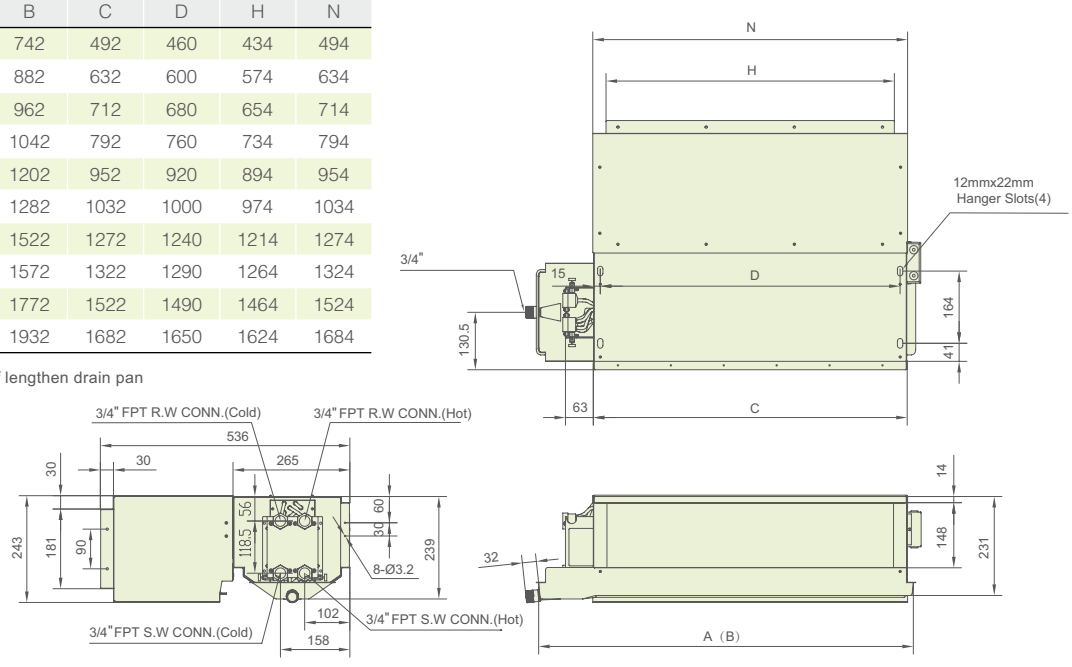
Note: B is the dimension of lengthen drain pan



4 Pipe with rear air plenum

UNIT	A	B	C	D	H	N
42CT002	642	742	492	460	434	494
42CT003	782	882	632	600	574	634
42CT004	862	962	712	680	654	714
42CT005	942	1042	792	760	734	794
42CT006	1102	1202	952	920	894	954
42CT007	1182	1282	1032	1000	974	1034
42CT008	1422	1522	1272	1240	1214	1274
42CT010	1472	1572	1322	1290	1264	1324
42CT012	1672	1772	1522	1490	1464	1524
42CT014	1832	1932	1682	1650	1624	1684

Note: B is the dimension of lengthen drain pan

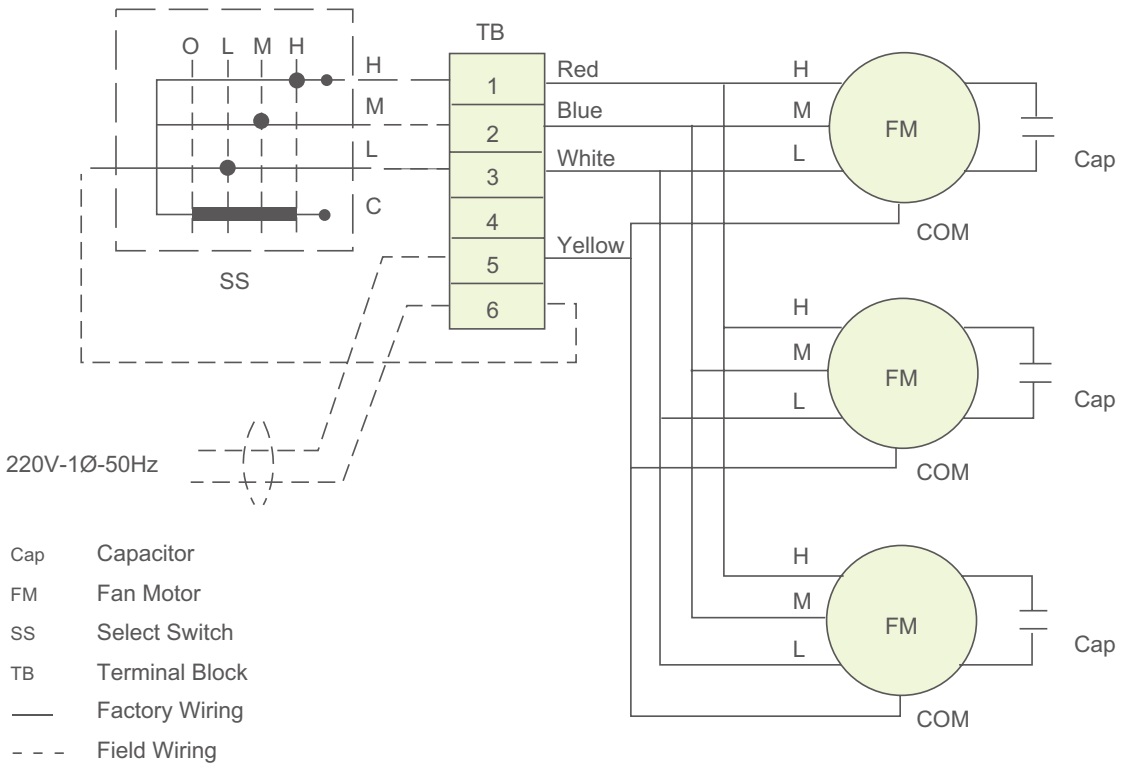


Electrical Data

Power supply：220V-1Ph-50Hz

Model		002	003	004	005	006	007	008	010	012	014
Power input (W)	12Pa	34	45	58	75	94	112	130	152	180	228
	30Pa	41	55	72	83	102	120	140	172	210	250
	50Pa	44	63	78	95	108	130	155	185	225	298
Current (A)	12Pa	0.15	0.20	0.26	0.34	0.43	0.51	0.59	0.69	0.82	1.04
	30Pa	0.19	0.25	0.33	0.38	0.46	0.55	0.64	0.78	0.95	1.14
	50Pa	0.20	0.29	0.35	0.43	0.49	0.59	0.70	0.84	1.02	1.35

Electric Diagram



improve buildings™

Carrier improves the world around us; Carrier improves people's lives; our products and services improve building performance; our culture of improvement will not allow us to rest when it comes to the environment.

Carrier
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Version:	CAT_42CT_E-1608-1
Supersede:	
Effective Date:	