



Product Bulletin

**Illusion
Concealed Type
Minisplit Air Conditioners
18,000 - 60,000 Btu/h
MCD Series 50 Hz R32**



Indoor Units

MCDE18DB
MCDE24DB
MCDE30DB
MCDE36DB
MCDE48DB
MCDE60DB

Outdoor Units

TTKE18SB5ECA
TTKE24SB5ECA
TTKE30SB5ECA
TTKE36SB5ECA
TTKE36SD5ECA
TTKE48SD5ECA
TTKE60SD5ECA

August 2022

Pending

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Features and Benefits

Outdoor unit TTKE

- Efficiency up to 13 EER @T1 , 9.8 EER @T3
- Casing constructed from zinc coated galvanized sheet metal
- Internal compressor protection features
- Copper tube mechanically bonded with aluminum fins
- Liquid line included a built-in refrigerant flow controller.
- Polyslategray cabinet with anthracite gray badge and cap
- Service valve cover
- Use lowest GWP refrigerant available - R32
- Outdoor low noise with compressor sound proof cover.
- 100% line run test



Features and Benefits

MCD Concealed Unit



Features:

- Compact Design
- Triple Layer Drain Pan*
- 4 Speed Fan Motor
- Optional Electric Heater

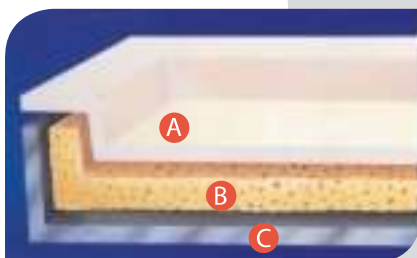
Benefits:

- Flexibility in installation locations.
- Protect against condensate leaks.
- Flexibility in airflow.
- Whisper quiet operation.
- Ease of installation

MCD Air Handler unit

- Complete family of concealed models- available in capacities ranging from 18,000 to 60,000 Btu/h.
- Compact height- only 304 mm. for 18,000 to 24,000 Btu/h models and 408 mm for 30,000 to 60,000 Btu/h
- The MCD Series is very compact for easy installation into tight ceiling locations.
- Triple protection drain pan of three layers provide maximum insulation and water integrity. First, a single piece of galvanized steel; next, a single piece of polystyrene; and finally, a vacuum formed plastic liner.

- A** Plastic
- B** Polystyrene foam
- C** Galvanized sheet



Triple protection drain pan

- Effectively prevents ceiling damage from drain pan leaks
- Decreases chance of mold
- Enhances indoor air quality

Illusion drain pans consist of three layers: a single piece of galvanized sheet, a single piece of polystyrene foam, and a vacuum formed plastic liner. It also features a high-quality, flexible drain hose which is suitable for PVC size.

Features and Benefits

Fan speed:
Four fan levels provide continuous, cool airflow

Temperature setting:
Set temperature range is from 15 °C to 30 °C.

Powercool (turbo) mode:
Cool off quicker (Turbo mode for LCD wired control)

Sleep mode:
Stay comfortable with automatic room temperature adjustment during the night

Econo mode:
Save energy while keeping cool

Dry mode:
provides effective humidity reduction with high efficient cooling capacity.

24 hours programmable timer:
Select on/off times to schedule even more energy and cost savings



Touch wired control
(ACYSTAT160AA cooling only)
(ACYSTAT260AA cool and heat)



LCD wired control
(ACYSTAT110AA cooling only)
(ACYSTAT210AA cool and heat)



LCD wireless remote control



Receiver
(ACYSTAT120AA cooling only)
(ACYSTAT220AA cool and heat)



LCD wireless remote control



Receiver

(ACYSTAT170AA Cooling Only)
(ACYSTAT270AA Cool & Heat)

Digital touch-control series

- Choose from wired or wireless control
- Touch-control switch
- Intelligent features add more convenience



Model Nomenclature

T T K E 1 8 S B 5 E C A
1 2 3 4 5 6 7 8 9 10 11 12

Digit No. 1 = Brand Name

T = Trane

Digit No. 2 = Functional Type

T = Cooling Only

Digit No. 3 = Refrigerant Circuit(s)/Compressor(s)

K = Single Refrigerant Circuit/Compressor, Horizontal Discharge

Digit No. 4 = Refrigerant Connection Type

E = Flared (Tubing) with R32

Digit No.5 and No.6 = Nominal Capacity

BTU/HOUR X 1000

(Note: Exact system capacities/performance when matched with selected indoor unit are specified in Product Catalogs.)

Digit No.7 = Major Development Sequence

Primary Design/ Form Series

**for domestic market-matched with Daikin indoor units

S = Trane Development Series

Digit No. 8 = Electric Power Supply characteristics

B = 220 - 240V/3PH/50Hz

D = 380 - 415V/3PH/50Hz

Digit No. 9 and 10 = Factory Alternate Constructions

5E = Hi Efficiency with expansion device at Outdoor

Digit No. 11 = Minor Design Sequence/Series - Design Change

Alphabetic Letter; " A " through " Z " .

Digit No. 12 = Service Parts

Alphabetic Letter; " A " through " Z " .



Model Nomenclature

M C D E 1 2 D B P H A A
1 2 3 4 5 6 7 8 9 10 11 12

Digit 1

M = Mini-split

Digit 2

C = Cooling only

Digit 3

D = Concealed

Digit 4- Refrigerant Connection

E = Flare type , R32

Digit 5, 6 – Nominal Capacity

18 = 18 MBH

24 = 24 MBH

30 = 30 MBH

36 = 36 MBH

48 = 48 MBH

60 = 60 MBH

Digit 7

D = High external static pressure

Digit 8 – Voltage

B = 220-240/50/1

Digit 9-Electric Heatand Refrigerant

0 = no heat, no return plenum, standard option

P = no heat, with return plenum

Digit 10– Option

0 = No option

H = High Efficiency with Filter

Digit 11

A = Design change A

B = Design change B

Digit 12

A = Service part

General Data

Product Specifications

Models	Indoor Unit		MCDE18DBPHAA	MCDE24DBPHAA	MCDE30DBPHAA	MCDE36DBPHAA
	Outdoor Unit		TTKE18SB5ECA	TTKE24SB5ECA	TTKE30SB5ECA	TTKE36SB5ECA
Performance Data [T1]	Nominal Capacity	Btu/h	19,000	25,000	32,000	36,000
	Input power	W	1473	1,984	2,623	2,835
	EER	Btu/h/w	12.9	12.6	12.2	12.7
Performance Data [T3]	Nominal Capacity	Btu/h	17,000	23,000	30,000	32,500
	Input power	W	1,809	2,473	3,061	3,457
	EER	Btu/h/w	9.4	9.3	9.8	9.4
Indoor Unit						
Electrical Data	Power Supply	V/ph/Hz	220-240/1/50			
Normal Airflow		CFM	600	800	1,000	1,200
Fan Motor	Type	Permanent Split Capacitor				
	RLA x Qty	A	0.82 x 1	1.09 x 1	1.98 x 1	2.2 x 1
Condensing Coil	Fin Coating Color	Blue Fin				
Dimension	H x W x D	mm	504x267x1251	555x267x1251	669x408x1098	
Weight	Uncrated (Net)	kg	36			47
Outdoor Unit						
Electrical Data	Power Supply	V/ph/Hz	220-240 / 1 / 50			
Expansion Device		Capillary tube				
Compressor	Type	Rotary				
	RLA	A	5.60	8.35	11.90	13.7
Fan Motor	Type	Permanent Split Capacitor				
	RLA x Qty	A	0.59 x 1	0.58 x 1		0.62 x 2
Condensing Coil	Fin Coating Color	Gold				
Dimension	H x W x D	mm	673 x 890 x 342	810 x 946 x 410		1333 x 952 x 415
Weight	Uncrated (Net)	kg	48	61	74	177
Piping Connection Type		Shut-off Valve - Flared Connection				
Refrigerant Pipe Size	Liquid	in (mm)	1/4 (6.35)		3/8 (9.52)	
	Suction	in (mm)	1/2 (12.70)		5/8 (15.88)	
	Max. piping length	m	25	25	30	30
	Max height difference	m	10	10	20	20
Refrigerant	type	R32				

- Note : 1. Capacity is rate at ARI T1 conditions 27 °DB / 19 °WB Indoor & 35 °DB / 24 °WB Outdoor.
T3 conditions 29 °DB / 19 °WB Indoor & 46 °DB / 24 °WB Outdoor.
2. Outdoor unit dimensions depth is not exclude the dimensions of units legs.
3. Product design and specification are subject to change without prior notice.



General Data

Product Specifications

Models	Indoor Unit		MCDE36DBPHAA	MCDE48DBPHAA	MCDE60DBPHAA
	Outdoor Unit		TTKE36SD5ECA	TTKE48SD0ECA	TTKE60SD0ECA
Performance Data [T1]	Nominal Capacity	Btu/h	36,000	48,000	55,000
	Input power	W	3,100	3,840	4,435
	EER	Btu/h/W	11.7	12.5	12.4
Performance Data [T3]	Nominal Capacity	Btu/h	31,800	42,500	51,500
	Input power	W	3,700	4,722	5,421
	EER	Btu/h/W	8.6	9.0	9.5
Indoor Unit					
Electrical Data	Power Supply	V/ph/Hz	220-240/1/50		
Normal Airflow		CFM	1,200	1,600	2,000
Fan Motor	Type	Permanent Split Capacitor			
	RLA x Qty	A	2.2 x 1	3.46 x 1	3.53 x 1
Condensing Coil	Fin Coating Color	Blue Fin			
Dimension	H x W x D	mm	669x408x1098	669x408x1251	
Weight	Uncrated (Net)	kg	47	59	
Outdoor Unit					
Electrical Data	Power Supply	V/ph/Hz	380-415 / 3 / 50		
Expansion Device		Capillary tube			
Compressor	Type	Rotary		Scroll	
	RLA	A	4.80	7.90	10.80
Fan Motor	Type	Permanent Split Capacitor			
	RLA x Qty	A	0.62 x 2		
Condensing Coil	Fin Coating Color	Gold			
Dimension	H x W x D	mm	1333 x 952 x 415		
Weight	Uncrated (Net)	kg	177	125	
Piping Connection Type		Shut-off Valve - Flared Connection			
Refrigerant Pipe Size	Liquid	in (mm)	3/8 (9.52)		
	Suction	in (mm)	5/8 (15.88)	3/4 (19.05)	
	Max. piping length	m	30	35	40
	Max height difference	m	20	20	20
Refrigerant	type	R32			

- Note : 1. Capacity is rate at ARI T1 conditions 27 °DB / 19 °WB Indoor & 35 °DB / 24 °WB Outdoor.
 T3 conditions 29 °DB / 19 °WB Indoor & 46 °DB / 24 °WB Outdoor.
 2. Outdoor unit dimensions depth is not exclude the dimensions of units legs.
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Performance Data

Fan coil Airflow (CFM) versus. External Static Pressure (in.wg)

Indoor Fan performance

SPEED	MCDE18DBPHAA					
	AIR FLOW (CFM)					
	200	300	400	500	600	700
LOW	0.26	0.13	0.00			
MED	0.30	0.21	0.10	0.00		
HIGH	0.33	0.26	0.17	0.07	0.00	
EXTRA HIGH	0.38	0.33	0.23	0.14	0.05	0.00

SPEED	MCDE24DBPHAA							
	AIR FLOW (CFM)							
	200	300	400	500	600	700	800	900
LOW	0.28	0.07	0.00					
MED	0.42	0.31	0.12	0.00				
HIGH	0.51	0.46	0.33	0.18	0.01	0.00		
EXTRA HIGH	0.58	0.51	0.44	0.37	0.29	0.19	0.07	0.00

SPEED	MCDE30DBPHAA							
	AIR FLOW (CFM)							
	300	400	500	600	700	800	900	1000
LOW	0.41	0.35	0.28	0.21	0.13	0.05	0.00	
MED	0.43	0.37	0.31	0.24	0.17	0.09	0.01	0.00
HIGH	0.45	0.39	0.33	0.27	0.19	0.12	0.04	0.00
EXTRA HIGH	0.47	0.41	0.36	0.30	0.24	0.16	0.07	0.00

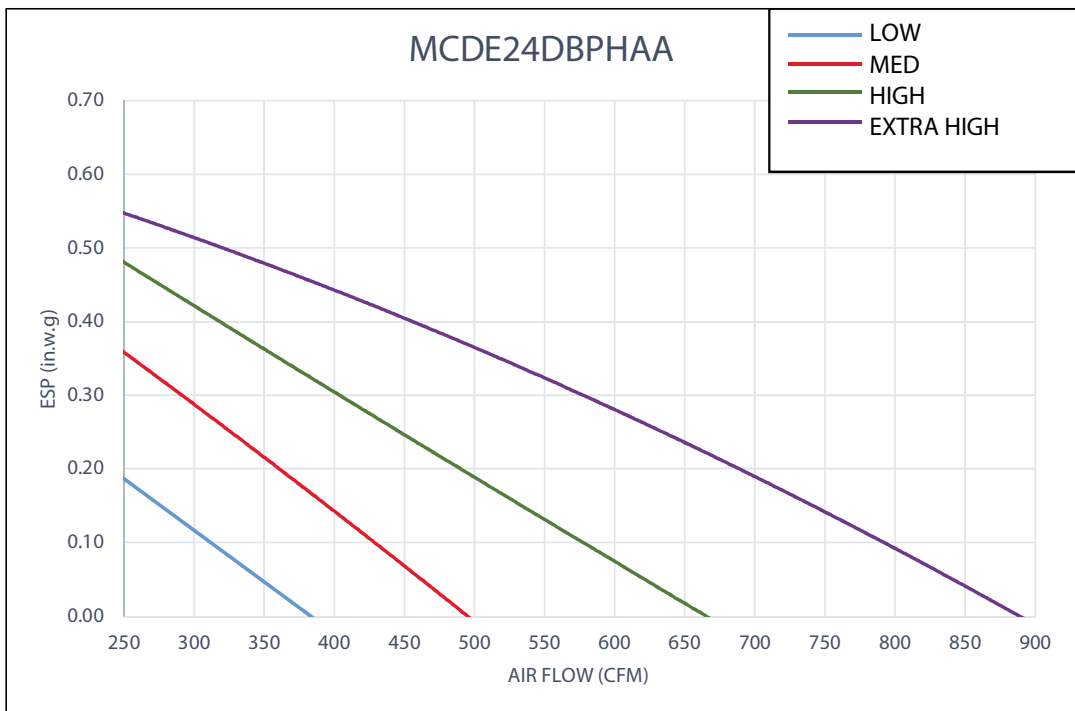
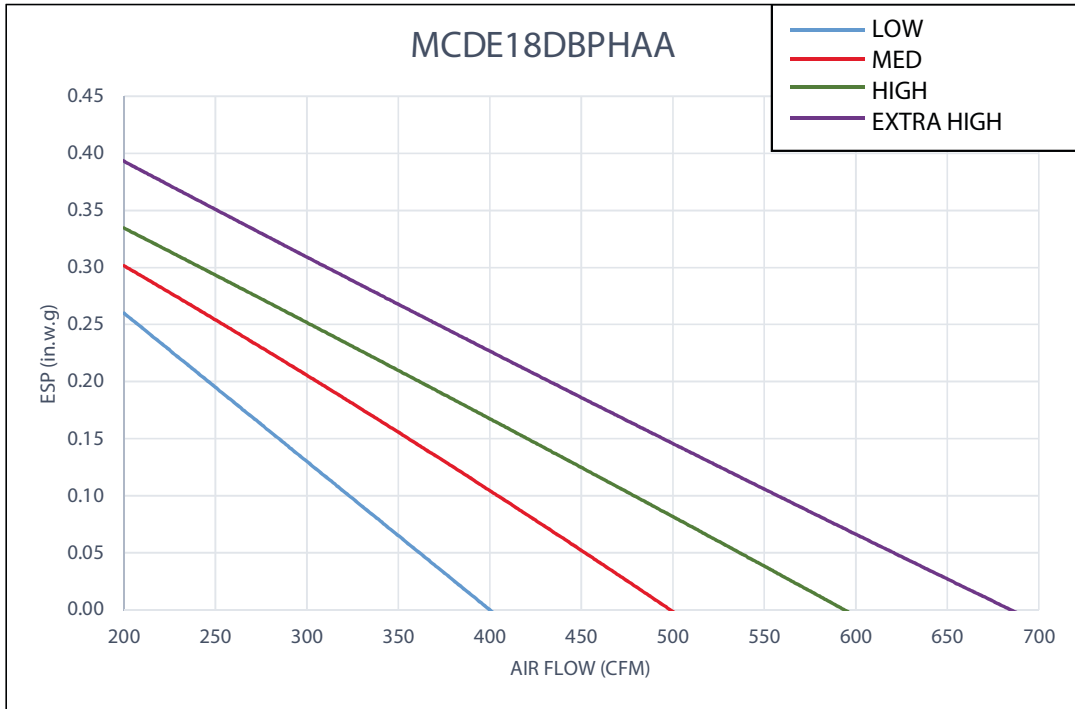
SPEED	MCDE36DBPHAA									
	AIR FLOW (CFM)									
	200	300	400	500	600	700	800	900	1000	1100
LOW	0.32	0.24	0.08	0.00						
MED	0.47	0.42	0.35	0.33	0.20	0.09	0.00			
HIGH	0.58	0.55	0.53	0.49	0.47	0.38	0.29	0.16	0.00	
EXTRA HIGH	0.66	0.64	0.59	0.57	0.54	0.49	0.40	0.31	0.19	0.00

SPEED	MCDE48DBPHAA								
	AIR FLOW (CFM)								
	1000	1100	1200	1300	1400	1500	1600	1700	1800
LOW	0.31	0.27	0.18	0.06	0.00				
MED	0.43	0.38	0.32	0.25	0.17	0.08	0.00		
HIGH	0.50	0.45	0.38	0.32	0.24	0.16	0.06	0.00	
EXTRA HIGH	0.59	0.53	0.46	0.39	0.32	0.24	0.15	0.07	0.00

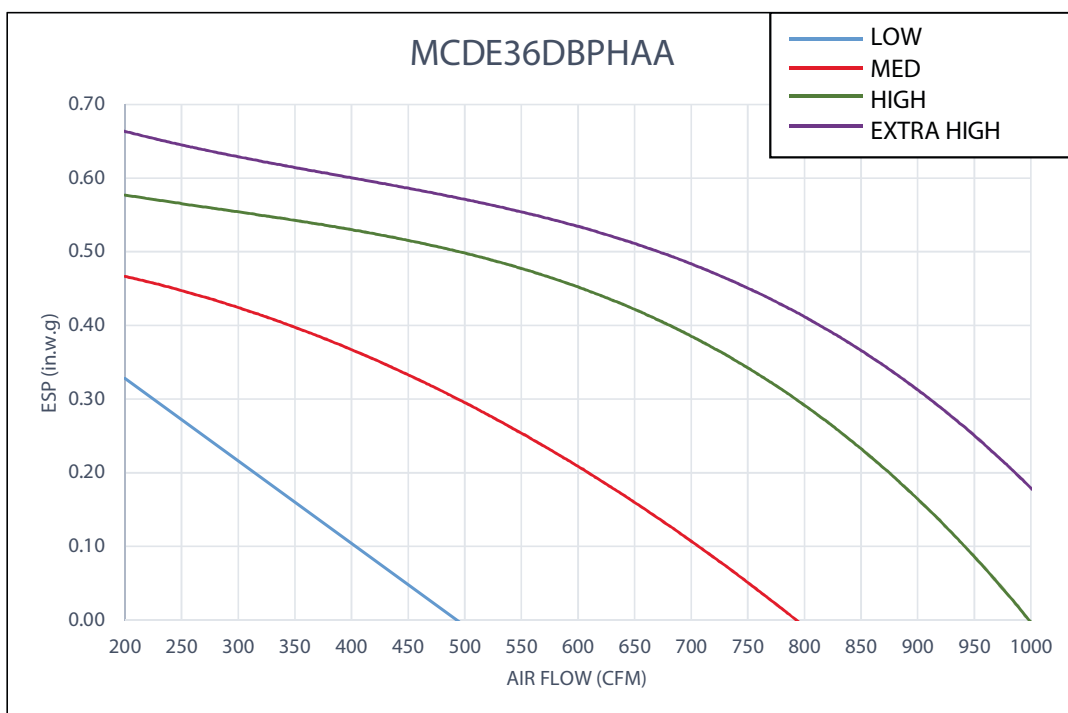
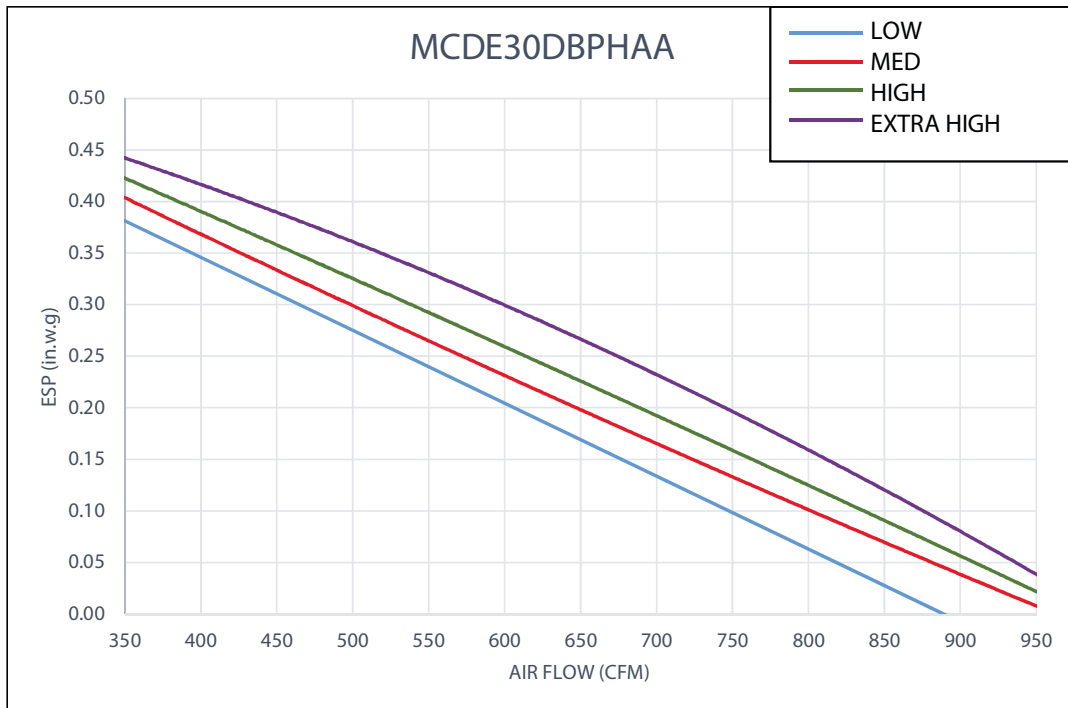
SPEED	MCDE60DBPHAA							
	AIR FLOW (CFM)							
	1000	1100	1200	1300	1400	1500	1600	1700
LOW	0.29	0.21	0.11	0.00				
MED	0.43	0.35	0.27	0.19	0.08	0.00		
HIGH	0.47	0.41	0.34	0.27	0.18	0.09	0.00	
EXTRA HIGH	0.55	0.48	0.41	0.34	0.25	0.16	0.08	0.00



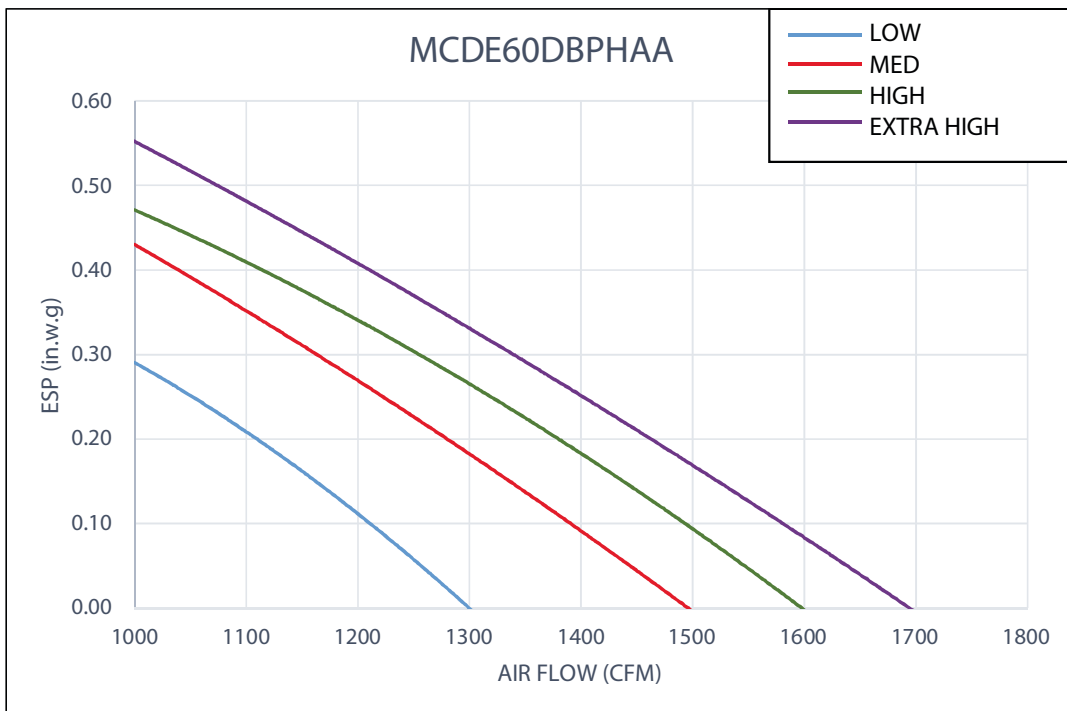
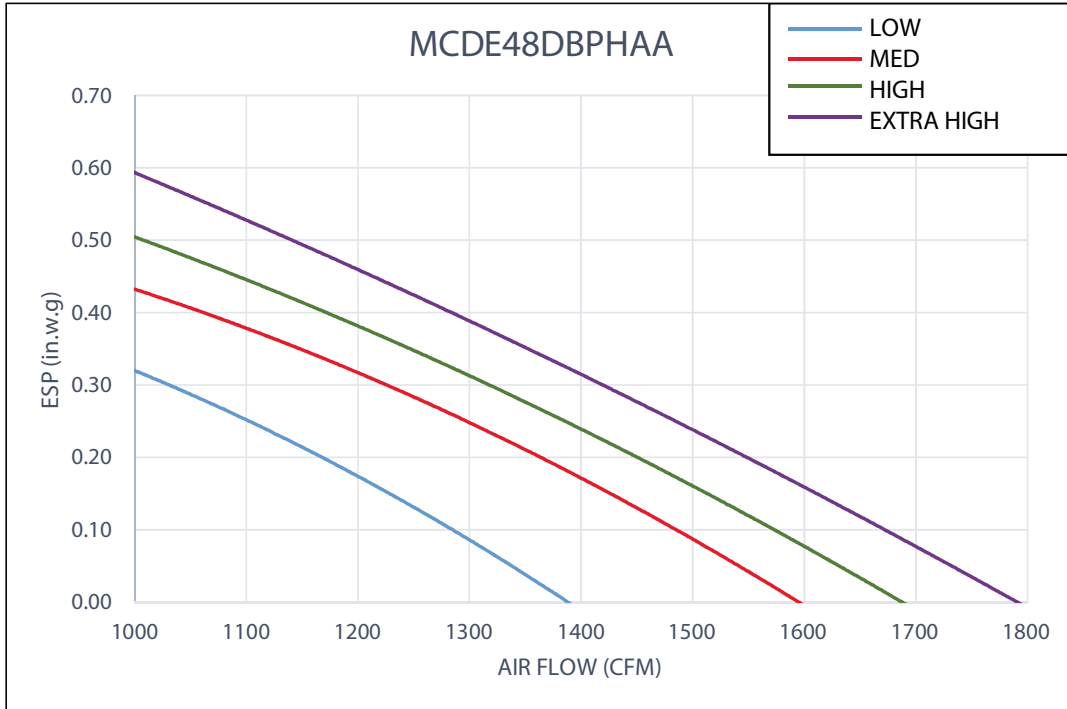
Fan Performance Data



Fan Performance Data



Fan Performance Data





Performance Data Cooling

MCDE18DBPHAA with TKE18SB5ECA

18K+MCD	OD DB [°C]		21									29									35								
	ID WB [°C]		15			19			23			15			19			23			15			19			23		
	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P		
500	21	4930	4435	1112	5564	5005	1121	6250	5622	1127	4583	4123	1263	5213	4689	1289	5915	5321	1314	4406	3963	1398	4990	4489	1437	5655	5087	1475	
	24	4932	4461	1112	5566	5035	1122	6272	5673	1127	4584	4147	1263	5214	4716	1289	5918	5353	1314	4407	3986	1398	4993	4491	1436	5657	5117	1475	
	27	4933	4512	1112	5567	5091	1121	6275	5739	1127	4587	4195	1263	5215	4770	1289	5919	5413	1314	4413	4036	1399	4994	4492	1436	5658	5175	1474	
	30	4998	4546	1113	5569	5065	1121	6280	5712	1127	4589	4174	1263	5220	4748	1289	5925	5389	1314	4439	4037	1400	4995	4498	1436	5659	5147	1474	
	33	5086	4601	1115	5572	5040	1121	6297	5696	1127	4591	4153	1263	5225	4726	1289	5930	5364	1314	4463	4227	1416	5000	4517	1436	5661	5121	1475	
550	21	5120	4606	1129	5794	5212	1137	6515	5860	1141	4785	4304	1285	5436	4890	1310	6130	5514	1334	4570	4111	1422	5187	4666	1461	5850	5262	1498	
	24	5125	4636	1129	5794	5241	1137	6513	5891	1141	4787	4330	1285	5438	4919	1310	6132	5546	1334	4574	4137	1422	5189	4668	1461	5838	5280	1498	
	27	5130	4692	1129	5796	5300	1137	6514	5958	1141	4789	4380	1285	5439	4974	1310	6133	5609	1334	4575	4184	1422	5190	4669	1460	5841	5342	1498	
	30	5223	4751	1130	5796	5271	1137	6515	5926	1141	4944	4497	1292	5441	4949	1310	6135	5580	1334	4779	4346	1435	5191	4672	1461	5845	5316	1498	
	33	5491	4967	1134	5802	5248	1137	6524	5901	1141	5209	4712	1302	5443	4923	1310	6139	5553	1334	5036	4556	1452	5200	4678	1461	5846	5288	1498	
600	21	5336	4880	1153	6020	5506	1160	6750	6173	1162	4969	4545	1314	5625	5144	1339	6332	5792	1361	4742	4337	1454	5368	3921	1493	6031	5516	1528	
	24	5345	4861	1153	6025	5480	1160	6752	6141	1162	4971	4521	1314	5626	5117	1339	6336	5763	1361	4746	4316	1455	5370	4009	1493	6032	5486	1528	
	27	5350	4840	1153	6030	5454	1159	6754	6109	1162	5039	4558	1317	5627	5090	1339	6337	5732	1361	4859	4395	1462	5375	4118	1492	6033	5457	1528	
	30	5632	5066	1156	6031	5425	1159	6757	6078	1162	5328	4792	1328	5642	5075	1339	6338	5701	1361	5139	4622	1479	5377	4850	1493	6033	5427	1529	
	33	5924	5358	1159	6032	5456	1159	6760	6115	1162	5619	5083	1339	5645	5106	1339	6339	5734	1361	5420	4902	1496	5378	5459	1495	6033	5457	1529	

MCDE24DBPHAA with TKE24SB5ECA

24K+MCD	OD DB [°C]		21									29									35								
	ID WB [°C]		15			19			23			15			19			23			15			19			23		
	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P		
600	21	6915	6220	1483	7861	7071	1506	8890	7997	1531	6491	5839	1722	7363	6623	1767	8330	7493	1811	6148	5530	1911	6969	6199	1969	7865	7075	2026	
	24	6923	6262	1483	7863	7112	1506	8892	8043	1531	6492	5872	1722	7364	6661	1767	8331	7536	1811	6149	5562	1911	6962	6298	1969	7870	7119	2027	
	27	6939	6346	1483	7865	7193	1506	8893	8133	1531	6517	5960	1722	7365	6736	1767	8332	7620	1811	6235	5702	1917	6949	6355	1969	7875	7202	2027	
	30	7240	6585	1491	7867	7155	1506	8893	8088	1531	6877	6254	1743	7367	6700	1767	8339	7584	1811	6583	5987	1943	6954	6185	1969	7879	7166	2027	
	33	7620	6893	1501	7831	7083	1506	8894	8045	1531	7245	6553	1761	7369	6666	1767	8341	7545	1811	6939	6276	1968	6958	6294	1969	7881	7129	2027	
700	21	7107	6393	1500	8050	7241	1523	9100	8186	1548	6654	5985	1743	7531	6775	1787	8507	7652	1832	6286	5655	1933	7118	6510	1991	8030	7223	2048	
	24	7114	6435	1500	8055	7286	1523	9102	8233	1548	6738	6094	1747	7531	6813	1787	8514	7702	1832	6401	5790	1942	7114	6328	1992	8032	7265	2049	
	27	7166	6554	1502	8066	7377	1523	9104	8326	1548	6821	6239	1752	7534	6890	1787	8514	7787	1832	6517	5960	1950	7103	6425	1992	8035	7349	2049	
	30	7597	6910	1513	8075	7344	1523	9104	8280	1548	7206	6554	1772	7540	6858	1787	8515	7745	1832	6888	6265	1977	7184	6570	1997	8036	7309	2049	
	33	8005	7241	1523	8088	7316	1523	9104	8235	1548	7601	6875	1791	7578	6854	1790	8519	7706	1832	7269	6575	2002	7264	6462	2002	8037	7270	2049	
800	21	7282	6660	1521	8249	7544	1544	9315	8519	1569	6801	6220	1767	7710	7051	1812	8703	7960	1856	6424	5875	1960	7170	4900	2017	8200	7499	2074	
	24	7297	6637	1521	8251	7505	1544	9323	8479	1569	6802	6187	1767	7710	7012	1812	8705	7917	1856	6425	5844	1960	7192	5045	2018	8201	7459	2075	
	27	7568	6845	1528	8255	7467	1544	9323	8433	1569	7160	6477	1785	7699	6964	1812	8796	7956	1856	6829	6177	1989	7198	5248	2029	8219	7434	2075	
	30	8000	7196	1539	8257	7427	1544	9333	8395	1569	7578	6817	1806	7848	7059	1819	8887	7994	1856	7229	6503	2016	7252	6375	2031	8222	7396	2075	
	33	8442	7636	1549	8436	7631	1549	9334	8443	1568	8002	7238	1826	7997	7234	1826	8889	8041	1856	7640	6910	2041	7635	6809	2041	8282	7491	2075	

Note : TC = Total Capacity : Watt
 SC = Sensible Capacity : Watt
 P = Power input : Watt
 All temperature in °C
 Air flow in Dry coil in CFM



Performance Data Cooling

MCDE30DBPHAA with TTKE30S5ECA

30K+MCD	OD DB [°C]		21												29												35													
	ID WB [°C]		15				19				23				15				19				23				15				19				23					
	ID Airflow [CFM]		TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC
700	21		8481	7629	1949	9598	8634	1971	10871	9779	1995	7961	7161	2250	9020	8114	2299	10212	9186	2350	7570	6809	2493	8573	7626	2559	9715	8739	2627											
	24		8482	7673	1949	9599	8682	1972	10873	9835	1995	7962	7202	2251	9036	8174	2300	10213	9238	2350	7584	6860	2493	8574	7756	2559	9720	8793	2628											
	27		8488	7761	1949	9603	8783	1972	10876	9947	1995	7979	7297	2251	9041	8268	2300	10234	9360	2351	7585	6937	2494	8587	7853	2560	9725	8894	2628											
	30		8760	7967	1955	9611	8741	1972	10878	9894	1995	8343	7588	2269	9042	8224	2300	10241	9314	2351	8013	7288	2523	8601	7651	2559	9731	8851	2628											
850	21		9208	8329	1964	9613	8695	1972	10878	9840	1995	8780	7942	2289	9064	8199	2301	10242	9264	2351	8439	7634	2551	8614	7792	2562	9735	8806	2629											
	24		8730	7853	1977	9889	8895	1999	11170	10048	2023	8194	7371	2284	9273	8341	2333	10480	9427	2384	7779	6997	2530	8801	8049	2596	9941	8942	2664											
	27		8731	7898	1977	9890	8946	1999	11171	10105	2023	8205	7422	2285	9274	8388	2334	10481	9481	2384	7779	7037	2530	8802	7830	2598	9942	8993	2664											
	30		9244	8408	1987	9897	9051	1999	11179	10224	2023	8282	7574	2288	9287	8494	2334	10505	9608	2385	7986	7303	2544	8822	7980	2598	9961	9110	2664											
1000	21		9244	8408	1987	9898	9002	2000	11181	10169	2023	8795	7999	2312	9293	8452	2333	10507	9556	2385	8437	7673	2573	8829	8075	2598	9963	9062	2666											
	24		9729	8800	1997	9899	8954	2000	11182	10115	2023	9269	8384	2333	9321	8431	2335	10514	9510	2385	8896	8047	2602	8846	7869	2598	9964	9013	2666											
	27		9061	8287	2020	10256	9380	2042	11582	10593	2066	8495	7769	2334	9625	8802	2389	10819	9895	2434	8047	7360	2584	9050	7558	2652	10245	9370	2718											
	30		9399	8502	2026	10245	9267	2042	11584	10478	2066	8915	8064	2353	9632	8760	2383	10821	9842	2434	8530	7758	2584	9058	7598	2652	10248	9320	2719											
30K+MCD	OD DB [°C]		43												46																									
	ID WB [°C]		15				19				23				15				19				23																	
	ID Airflow [CFM]		TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P											
	700	21		6988	6286	2833	7911	7116	2919	5943	5346	3006	7173	6452	2940	8120	7223	3033	9171	8249	3125																			
24		6988	6321	2833	7922	7166	2920	5945	5346	3006	7182	6496	2942	8137	7360	3033	9172	8296	3125																					
27		7109	6502	2844	7923	7246	2919	5965	5346	3007	7367	6737	2961	8141	7446	3034	9179	8395	3125																					
30		7516	6836	2883	7929	7212	2920	5975	5346	3007	7768	7065	3000	8145	7245	3033	9187	8356	3126																					
850	21		7165	6445	2873	8101	7287	2959	6125	5346	3045	7724	6948	2981	8307	7597	3072	9359	8419	3164																				
	24		7165	6481	2873	8102	7329	2960	6130	5346	3046	7348	6647	2981	8318	7399	3073	9365	8471	3164																				
	27		7465	6828	2901	8159	7462	2960	6142	5346	3048	7724	7065	3018	8350	7553	3073	9372	8572	3164																				
	30		7895	7180	2940	8258	7511	2975	6158	5346	3048	8153	7415	3058	8557	7826	3098	9380	8531	3165																				
1000	21		7393	6761	2930	8348	7635	3016	6401	5346	3102	7573	6926	3039	8515	7702	3130	9615	8794	3220																				
	24		7401	6731	2931	8357	7601	3017	6403	5346	3102	7582	6896	3040	8559	7805	3130	9618	8748	3220																				
	27		7970	7209	2983	8362	7564	3017	6410	5346	3103	8194	7412	3097	8567	7806	3131	9637	8717	3221																				
	30		8420	7574	3022	8564	7703	3018	6418	5346	3103	8684	7811	3141	8568	7815	3133	9637	8669	3221																				
33		8900	8050	3062	8895	8046	3062	6419	5346	3104	9184	8307	3184	9178	8256	3183	9646	8725	3222																					

MCDE36DBPHAA with TTKE36S5ECA

36K+MCD	OD DB [°C]		21												29												35											
	ID WB [°C]		15				19				23				15				19				23				15				19				23			
	ID Airflow [CFM]		TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P			
800	21		9409	8464	2149	10672	9600	2193	12204	10978	2241	8890	7997	2459	10110	9094	2529	11515	10358	2604	8470	7619	2707	9638	8574	2797	10954	9853	2886									
	24		9450	8548	2149	10695	9674	2193	12210	11044	2241	8915	8064	2460	10136	9168	2530	11519	10420	2605	8488	7678	2708	9640	8720	2797	10956	9910	2886									
	27		9455	8647	2151	10717	9802	2194	12215	11171	2242	8989	8221	2465	10145	9278	2530	11531	10546	2605	8613	7877	2718	9657	8832	2796	10965	10028	2888									
	30		9501	8642	2152	10725	9755	2195	12177	11075	2242	9087	8265	2470	10146	9228	2530	11532	10489	2605	8755	7963	2729	9658	8591	2795	10975	9982	2888									
1000	21		9992	9038	2170	10738	9713	2195	12193	11029	2242	9568	8654	2499	10147	9179	2531	11536	10435	2605	9223	8342	2764	9669	8746	2794	10980	9932	2888									
	24		9657	8687	2178	11050	9940	2225	12501	11245	2272	9146	8227	2493	10421	9373	2563	11795	10610	2638	8712	7837	2745	9900	9054	2837	11201	10076	2923									
	27		9675	8752	2178	11051	9996	2226	12506	11312	2272	9152	8278	2494	10463	9464	2566	11797	10671	2639	8715	7883	2745	9940	8842	2833	11203	10133	2925									
	30		9710	8880	2179	11060	10115	2226	12520	11451	2272	9257	8466	2495	10463	9569	2568	11811	10802	2640	8719	7974	2746	9880	8937	2836	11232	10272	2925									
1200	21		9973	9071	2189	11069	10067	2227	12529	11395	2273	9532	8669	2517	10478	9530	2568	11829	10759	2641	9173	8343	2780	9885	9041	2832	11247	10229	2925									
	24		10047	9189	2223	11430	10454	2269	12918	11814	2317	9487	8677	2546	10765	9846	2616	12205	11162	2689	8993	8225	2799	10250	7918	2890	11555	10568	2978									
	27		10060	9150	2223	11448	10412	2269	12921	11752	2317	9530	8668	2548	10775	9800	2616	12210	11105	2690	9001	8187	2799	10255	8055	2890	11560	10514	2978									
	30		10070	9109	2224	11466	10372	2270	12941	11706	2218	9574	8660	2551	10785	9756	2617	12215	11049	2692	9221	8340	2816	10262	8199	2890	11563	10459	2979									
36K+MCD	OD DB [°C]		43												46																							
	ID WB [°C]		15				19				23				15				19				23															
	ID Airflow [CFM]		TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P									
	800	21		7851	7062	3055	8909	8014	3161	10095	9081	3271	7635	6868	3272	8664	7707	3388	9805	8820	3506																	
24		7855	7105	3056	8920	8069	3162	10096	9132	3271	7646	6916	3272	8671	7843	3389	9807	8871	3506																			
27		7864	7192	3057	8927	8164	3163	10135	9269	3274	7664	7010	3272	8675	7934	3389	9851	9010	3508																			
30		8243	7497	3095	8950	8140	3163	10142	9224	3274	8072	7342	3276	8685	7725	3391	9855	8963	3510																			
1000	21		8690	7860	3140	8953	8098	3165	10156	9187	3276	8512	7700	3276	8694	7864	3392	9865	8923	3512																		
	24		8040	7233	3095	9134	8216	3203	10320	9283	3311	7814	7028	3314	8870	8112	3431	10014	9008	3547																		
	27		8052	7283	3096	9141	8268	3203	10325	9339	3314	7820	7074	3314	8875	7894	3433	10016	9060	3547																		
	30		8133	7439	3104	9150	8368	3203	10356	9471	3314	7972	7291	3332	8889	8041	3433	10052	9193	3550																		
1200	21		9097	8229	3199	9168	8293	3205	10375	9385	3316	8904	8054	3384	8921	7936	3436	10070	9109	3552																		
	24		8297																																			



Performance Data Cooling

MCDE48DBPHAA with TTKE48SD0ECA

48K+MCD	OD DB [°C]			21									29									35								
	ID WB [°C]			15			19			23			15			19			23			15			19			23		
	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P
1400	21	11880	10686	2679	13482	12127	2760	15319	13780	2858	11288	10154	3195	12828	11539	3305	14565	13102	3432	10825	9737	3579	12255	10901	3610	13990	12584	3859		
	24	11898	10762	2680	13483	12196	2760	15321	13859	2859	11297	10219	3196	12838	11612	3306	14578	13187	3432	10833	9799	3579	12310	10950	3610	14001	12665	3860		
	27	11901	10884	2681	13490	12338	2760	15345	14034	2859	11318	10351	3197	12840	11743	3306	14610	13362	3433	10853	9926	3581	12326	11149	3711	14004	12808	3861		
	30	11923	10884	2681	13501	12279	2761	15355	13966	2860	11335	10309	3199	12846	11684	3307	14615	13293	3433	10867	9884	3582	12327	11274	3711	14006	12739	3861		
1500	21	12012	10865	2728	13509	12220	2761	15378	13910	2860	11558	10454	3214	12861	11633	3307	14628	13232	3435	11185	10118	3610	12340	10977	3712	14015	12678	3862		
	24	12461	11209	2726	14141	12720	2812	16050	14437	2918	11819	10631	3251	13415	12067	3365	15201	13674	3498	11322	10184	3641	11903	10767	3692	14555	13092	3928		
	27	12476	11276	2727	14155	12800	2813	16060	14527	2919	11822	10693	3252	13431	12149	3365	15204	13752	3498	11333	10251	3643	12851	11753	3776	14571	13180	3928		
	30	12485	11356	2728	14165	12883	2814	16085	14630	2920	11843	10772	3253	13440	12224	3367	15229	13851	3499	11351	10324	3644	12879	11650	3778	14585	13265	3929		
1600	21	12841	11616	2745	14174	12821	2814	16093	14557	2920	12314	11139	3286	13455	12171	3368	15247	13792	3500	11903	10767	3692	12887	11786	3778	14594	13201	3930		
	24	13222	12092	2794	14972	13693	2887	16975	15525	3000	12511	11443	3330	14177	12966	3450	16040	14670	3590	11951	10930	3725	13540	11951	3725	13540	14022	4028		
	27	13239	12041	2795	14989	13633	2888	16977	15441	3000	12517	11385	3330	14193	12909	3451	16043	14591	3591	11968	10885	3728	13545	11968	3728	13545	13951	4028		
	30	13275	11941	2797	15005	13497	2889	16991	15284	3001	12701	11425	3343	14215	12787	3452	16063	14449	3592	12289	11054	3742	13552	11919	3868	13546	13881	4029		
48K+MCD	21	13988	12653	2834	15015	13582	2889	16993	15371	3002	13388	12110	3393	14220	12863	3454	16081	14546	3593	12921	11687	3812	13560	11864	3870	13563	13973	4030		

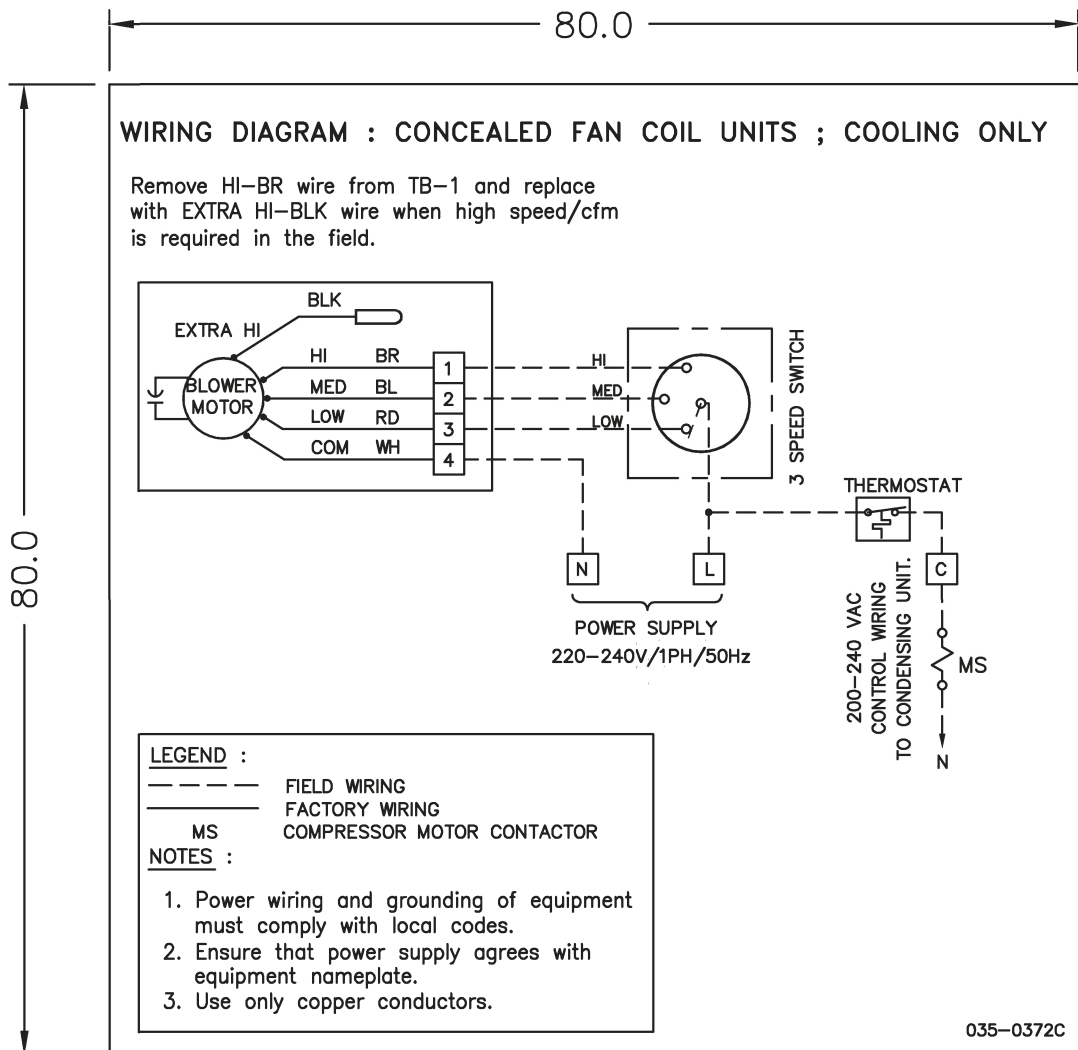
MCDE60DBPHAA with TTKE60SD0ECA

60K+MCD	OD DB [°C]			21									29									35								
	ID WB [°C]			15			19			23			15			19			23			15			19			23		
	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P	TC	SC	P
1500	21	13507	12150	2951	15363	13820	3042	17518	15758	3130	12927	11628	3498	14851	13359	3642	16752	15068	3789	12442	11192	3912	14314	12733	4094	16128	14508	4282		
	24	13526	12235	2952	15384	13916	3043	17530	15857	3131	12949	11713	3500	14702	13298	3644	16757	15157	3789	12467	11277	3915	14161	12809	4097	16138	14598	4283		
	27	13558	12400	2954	15386	14071	3043	17536	16038	3131	12987	11878	3503	14730	13472	3647	16767	15335	3789	12507	11439	3919	14190	12978	4097	16145	14766	4283		
	30	13610	12379	2957	15424	14029	3044	17545	15958	3131	13029	11850	3507	14764	13429	3649	16783	15265	3791	12551	11416	3924	14224	12853	4100	16153	14691	4283		
1650	21	13796	12479	2967	15440	13966	3045	17555	15880	3132	13333	12061	3533	14795	13382	3654	16790	15187	3791	12956	11719	3968	14263	12902	4100	16154	14612	4284		
	24	14216	12788	2989	16188	14561	3078	18435	16583	3165	13588	12223	3556	15453	13900	3700	17584	15818	3846	13105	11789	3987	14885	13613	4166	16883	15186	4352		
	27	14240	12881	2990	16203	14657	3079	18577	16804	3166	13666	12352	3566	15510	14029	3701	17585	15906	3846	13124	11871	3987	14889	13244	4166	16898	15285	4353		
	30	14314	13019	2994	16234	14765	3080	18610	16926	3170	13712	12471	3563	15542	14136	3706	17588	15997	3847	13194	12000	3996	14936	13660	4169	16913	15383	4354		
1720	21	14847	13429	3019	16269	14716	3082	18627	16849	3172	14325	12958	3615	15593	14105	3710	17606	15926	3848	13893	12567	4069	14997	13340	4172	16928	15312	4356		
	24	14806	13541	3020	16802	15367	3106	19108	17475	3191	14068	12867	3599	16006	14638	3743	18162	16611	3887	13510	12356	4035	15510	11110	4221	17404	15917	4402		
	27	14811	13471	3020	16815	15294	3106	19112	17383	3191	14104	12828	3602	16024	14574	3743	18170	16526	3888	13614	12382	4047	15380	11245	4221	17424	15847	4404		
	30	14907	13409	3025	16848	15155	3109	19210	17280	3194	14358	12915	3622	16100	14482	3747	18188	16360	3889	13902	12505	4076	15395	11302	4235	17444	15691	4406		
60K+MCD	21	15702	14023	3060	16943	15326	3112	19242	17406	3196	15119	13676	3679	16156	14614	3755	18193	16456	3889	14647	13249	4150	15399	15869	4235	17447	15782	4406		

Note : TC = Total Capacity : Watt
 SC = Sensible Capacity : Watt
 P = Power input : Watt
 All temperature in °C
 Air flow in Dry coil in CFM

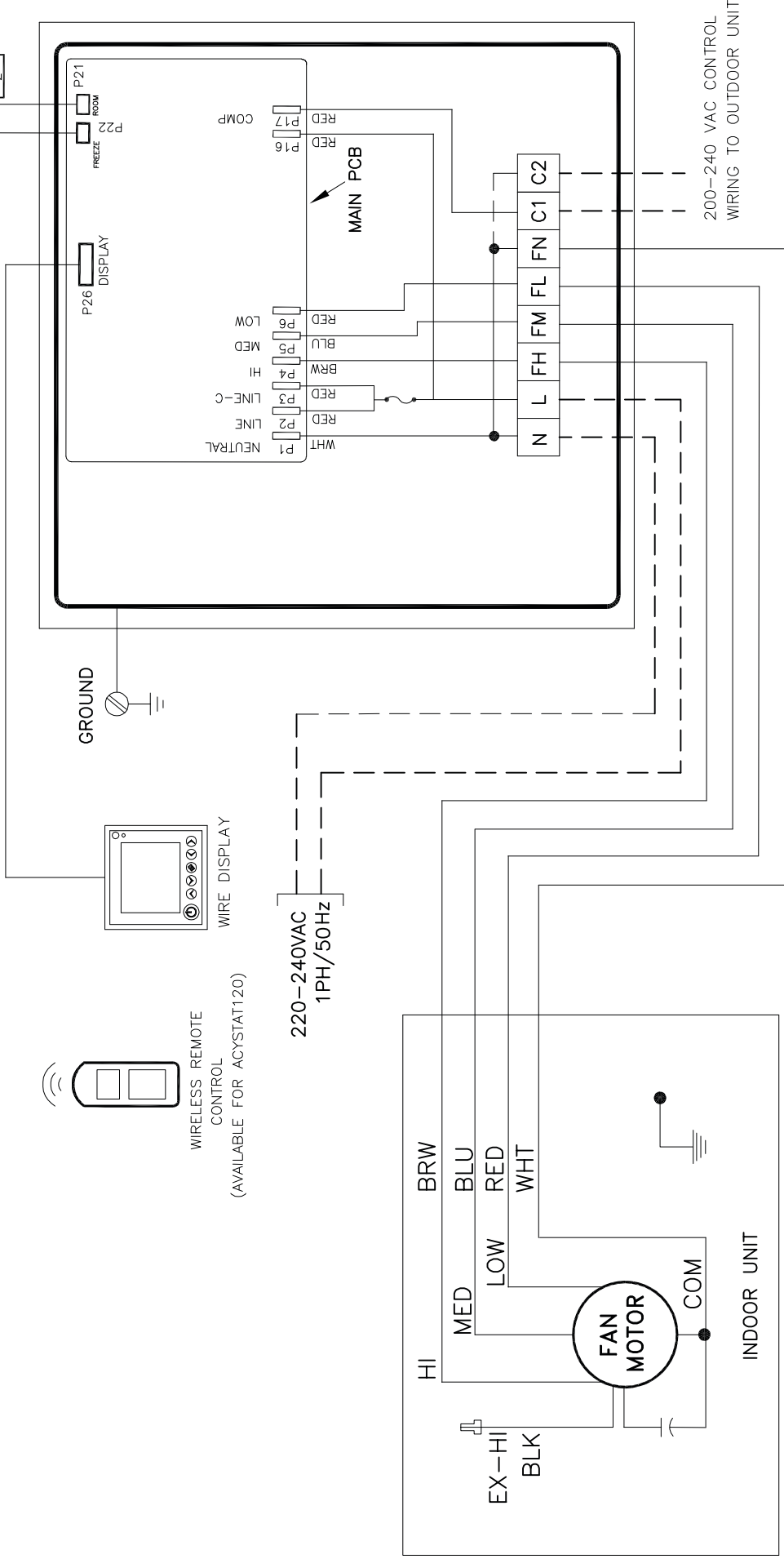
Indoor Wiring Diagram

COOLING ONLY
MCDE18-36
MCDE48-60



WIRING DIAGRAM LCD CONTROL SERIES : COOLING ONLY

1. FREEZE SENSOR LOCATED ON EVAPORATOR COIL (OPTION)
2. TEMPERATURE SENSOR LOCATED IN RETURN AIR STREAM



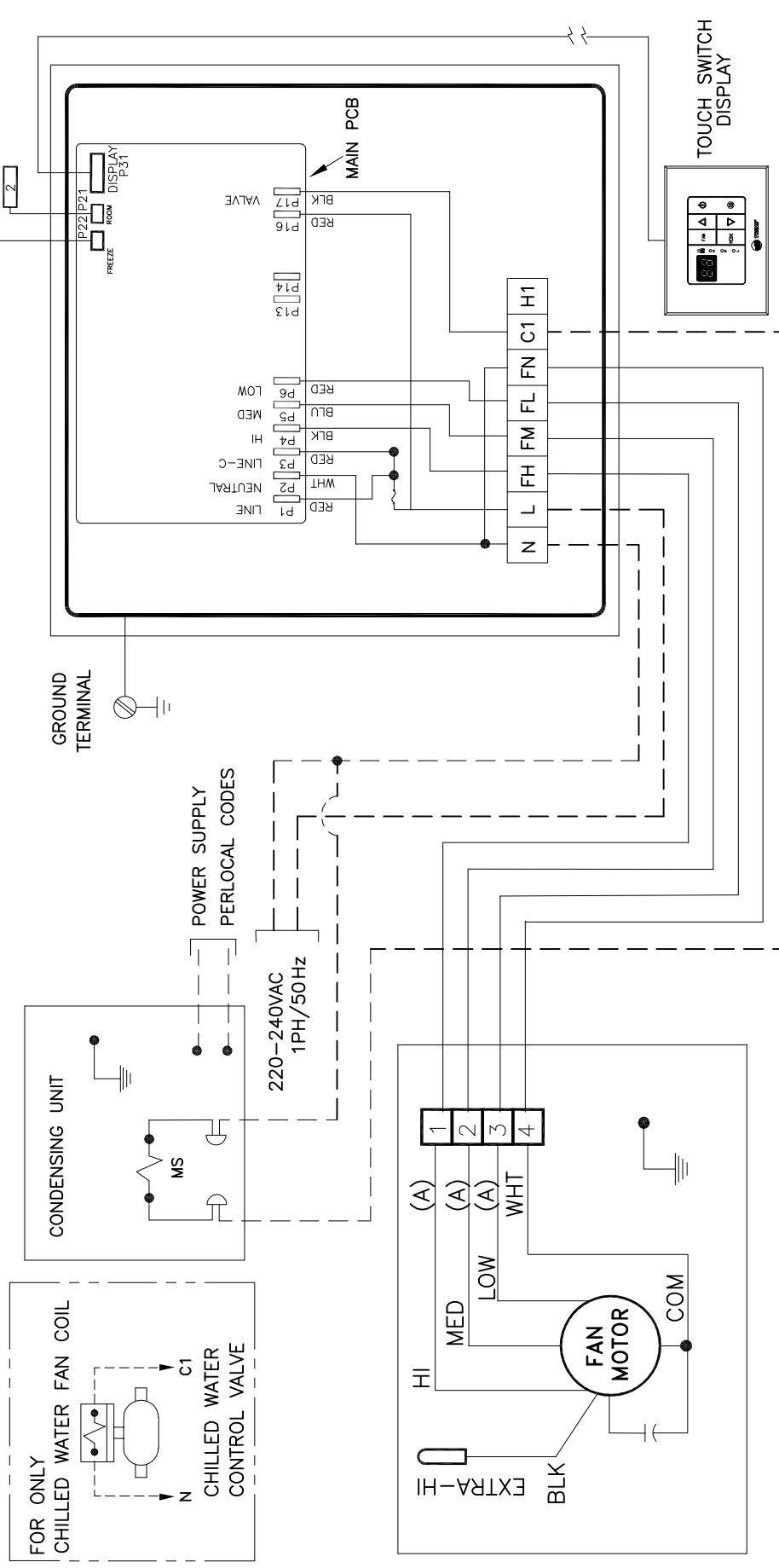
NOTES :

1. Power wiring and grounding of equipment must comply with local codes.
2. Ensure that power supply agrees with equipment nameplate.
3. Use only copper conductors.
4. Total fan motor running amperes must not exceed 2.25 AMPS.
5. Total amperes must not exceed 5.0 AMPS. (resistive)
2.25 AMPS. (inductive)

ACYSTAT110
ACYSTAT120

WIRING DIAGRAM TOUCH CONTROL SERIES : COOLING ONLY

1. FREEZE SENSOR LOCATED ON EVAPORATOR COIL
2. TEMPERATURE SENSOR LOCATED IN RETURN AIR STREAM



NOTES :

1. Power wiring and grounding of equipment must comply with local codes.
2. Ensure that power supply agrees with equipment nameplate.
3. Use only copper conductors.

(A) DETAILS(MOTOR WIRE COLORS)

MODELS	HI	MED	LOW
3 SPEED*	BLACK	BLUE	RED
4 SPEED	BROWN	BLUE	RED

*EXTRA-HI is unavailable for 3 speed models.

4. Total fan motor running amperes must not exceed 5 AMPS.
5. In each terminal, total amperes must not exceed
10 AMPS. (resistive)
5 AMPS. (inductive)

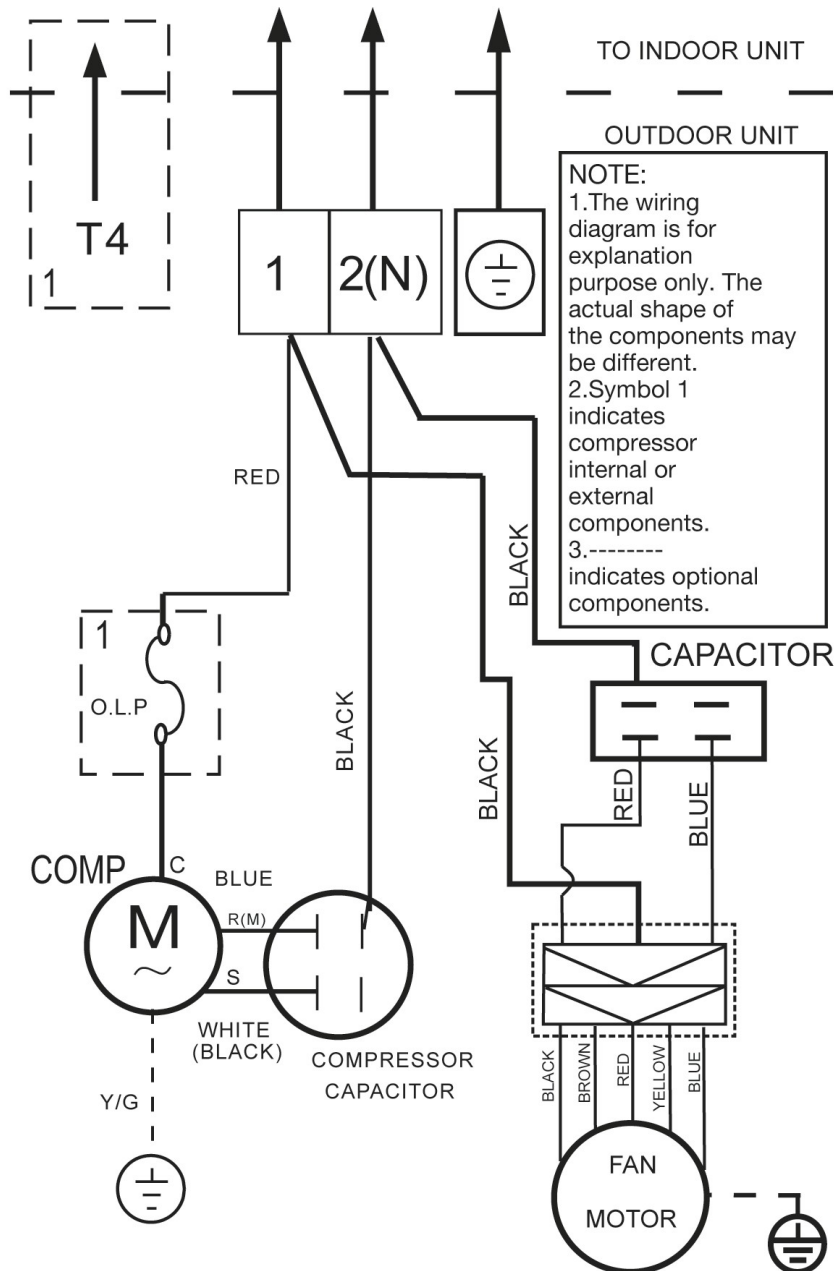
*REMOTE CONTROL COOLING ONLY FOR WIRELESS MODEL ONLY ACYSTAT170AA

LEGEND :
 _____ FACTORY WIRING
 - - - - - FIELD WIRING

ACYSTAT160AA/AB
ACYSTAT170AA/AB

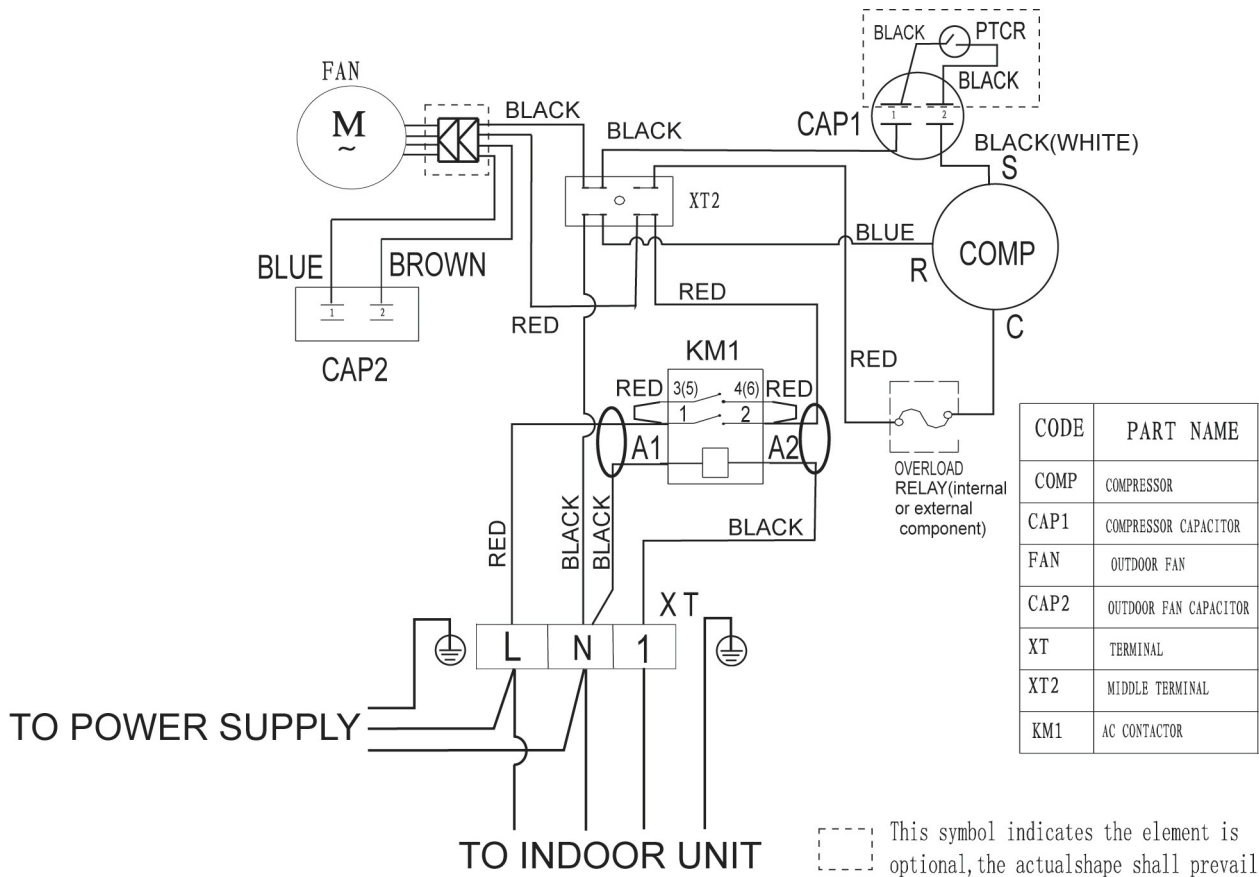
Outdoor Wiring Diagram

TTKE18SB5ECA



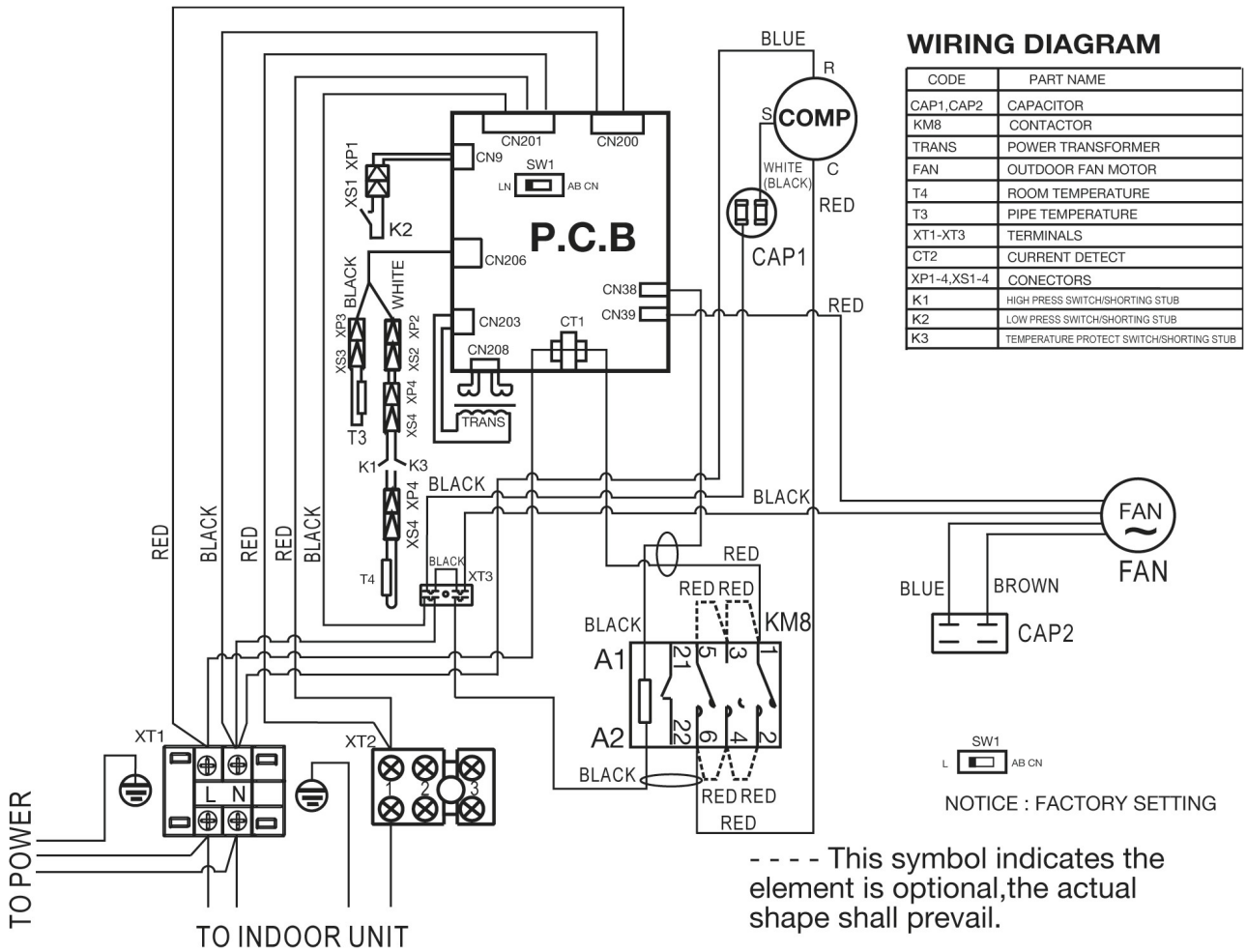
Outdoor Wiring Diagram

TTKE24SB5ECA



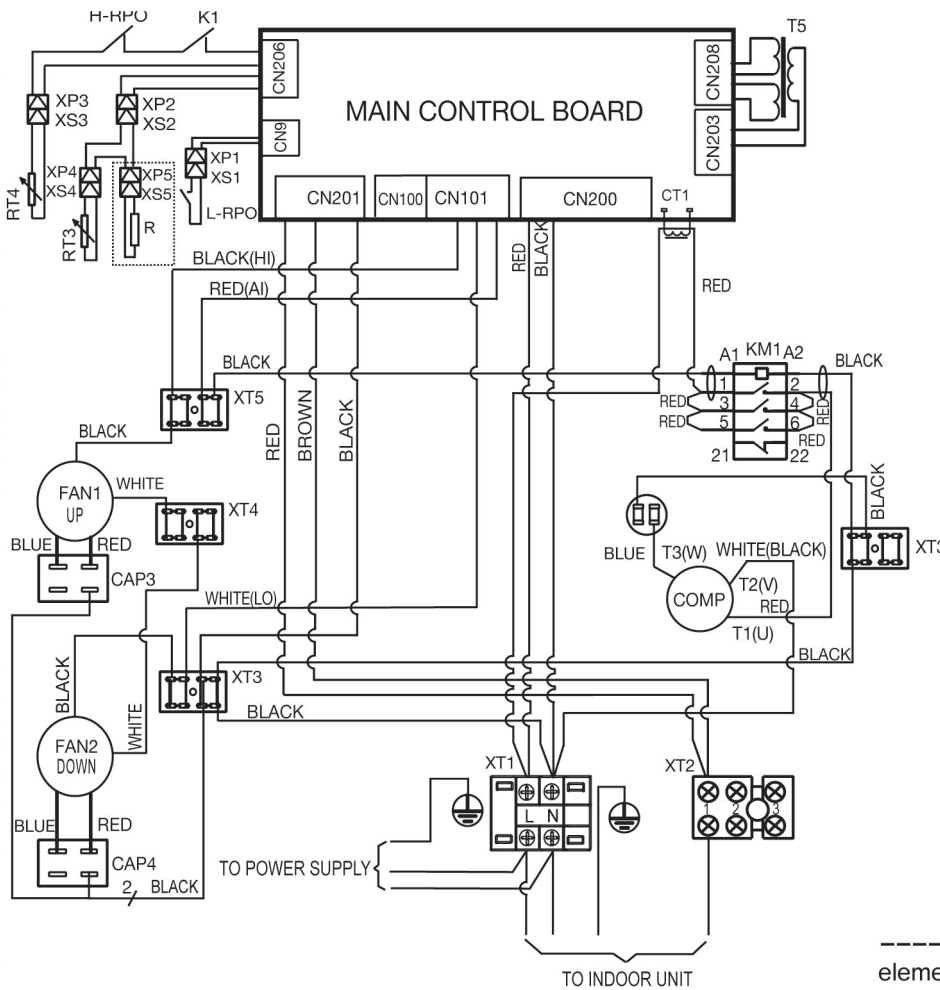
Outdoor Wiring Diagram

TTKE30SB5ECA



Outdoor Wiring Diagram

TTKE36SB5ECA



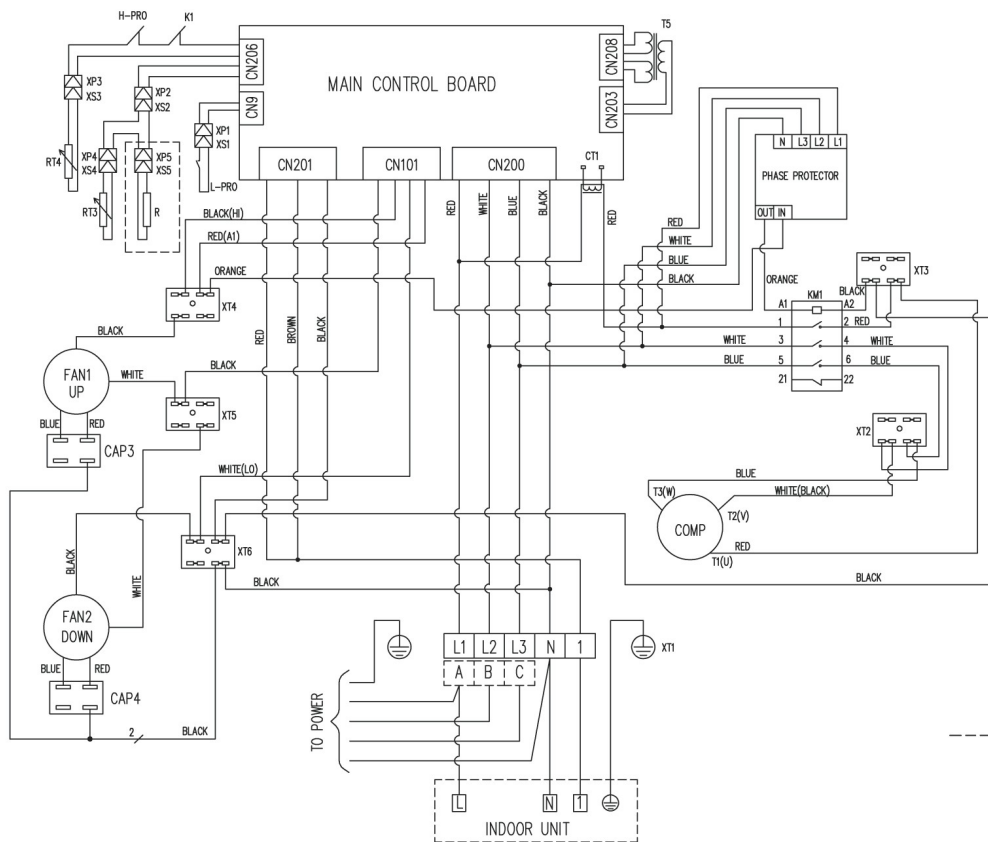
WIRING DIAGRAM
(OUTDOOR UNIT)

CODE	PART NAME
COMP	COMPRESSOR
FAN1 FAN2	OUTDOOR FAN
KM1	AC CONTACTOR
CAP3 CAP4	FAN CAP.
XT1/XT2	TERMINAL
XT3-5	CONNECTOR
H/L-PRO	HIGH/LOW PRESSURE SWITCH OR SHORTING STUB
RT3	PIPE TEMP. SENSOR
XS1-5	CONNECTORS
XP1-5	CONNECTORS
CN100-208	P.C. BOARD SOCKETS
K1	TEMP. PROTECT SWITCH OR SHORTING STUB
RT4	ROOM TEMP. SENSOR
R	RESISTOR
T5	TRANSFORMER
CT1	CURRENT DETECTOR

----- This symbol indicates the element is optional, the actual shape shall prevail.

Outdoor Wiring Diagram

TTKE36SD5ECA
 TTKE48SD5ECA
 TTKE60SD5ECA



WIRING DIAGRAM
 (OUTDOOR UNIT)

CODE	PART NAME
COMP	COMPRESSOR
FAN1 FAN2	OUTDOOR FAN
KM1	AC CONTACTOR
CAP3 CAP4	FAN CAP.
XT1	TERMINAL
XT2-6	CONNECTOR
H/L PRO	HIGH/LOW PRESSURE SWITCH
RT3	PIPE TEMP. SENSOR
XS1-5	CONNECTORS
XP1-5	CONNECTORS
CN100-208	P.C.BOARD SOCKETS
K1	TEMP. PROTECT SWITCH OR SHORTING STUB
RT4	ROOM TEMP. SENSOR
R	RESISTOR
T5	TRANSFORMER
CT1	CURRENT DETECTOR

----- This symbol indicates the element is optional, the actual shape shall prevail.



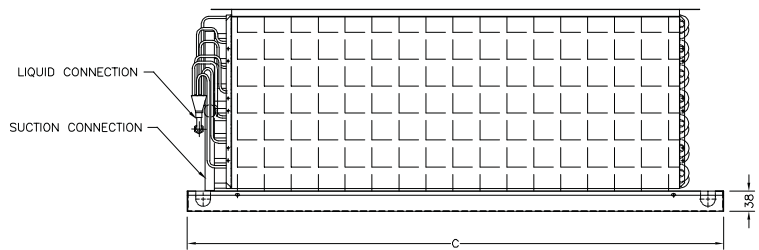
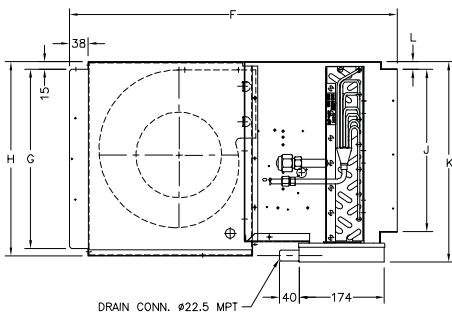
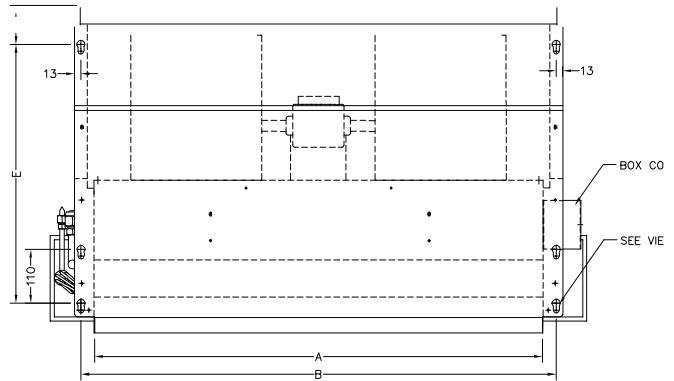
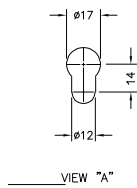
Outdoor Wiring Diagram

PCB diagnostic alarm table

	Mulfunction	LED1	LED2	LED3	Model
1	Phase sequence	Blink	Off	Off	36-60k - 380V/3Phase only
2	Stop phase (B,C)	Blink	Off	Off	36-60k 380V/3Phase only
3	Stop phase (A)	Off	Off	Off	36-60k 380V/3Phase only
4	Low pressure protect	Blink	Blink	Off	36-60k
5	Current protect	Off	Off	Blink	36-60k
6	T3 open, short circuit trouble	Off	Blink	Blink	36-60k
7	T4 open, short circuit trouble (high pressure protect)	Off	Blink	Off	36-60k
8	Condensor high pressure protect	Blink	Blink	Blink	36-60k

Indoor Dimension Data

OUTLINE DIMENSION MCDE18-60

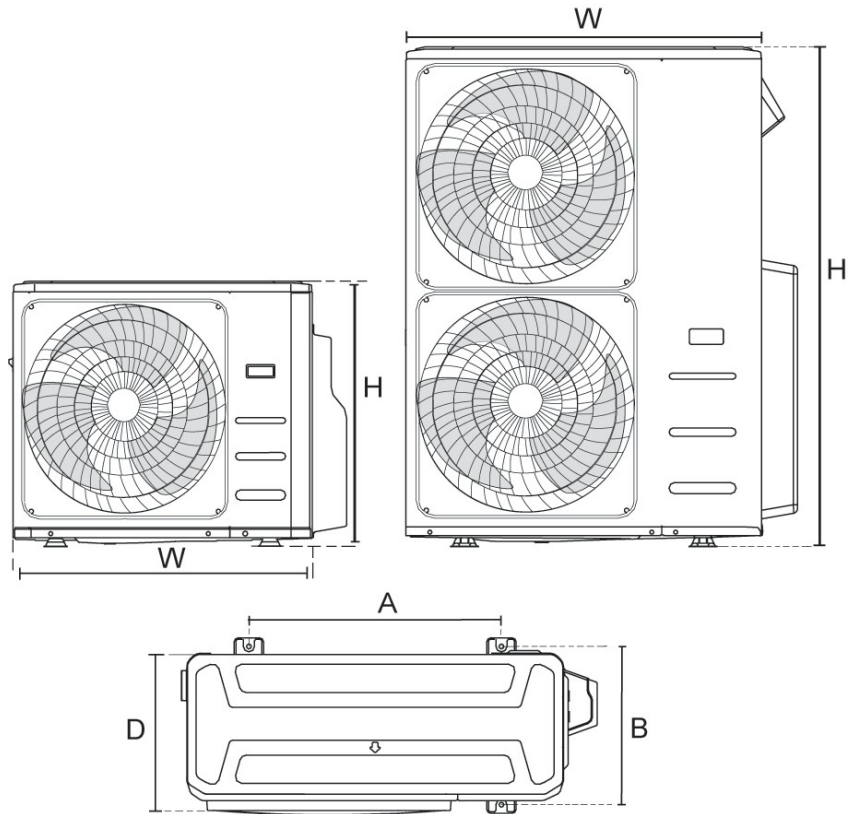


Refrigerant : R32-UAE

Model	All External Dimensions are in mm.											Refrig. Line		Conn. Sizes		Number Of	
	A	B	C	D	E	F	G	H	J	K	L	Liquid	Suction	Fan(s)	Motor(s)		
MCDE18DB	965	1021	1251	1025	370	504	235	267	195	260	26	1/4"(6.35)	1/2"(12.7)	2	1		
MCDE24DB	1067	1122	1251	1126	415	555	235	267	165	260	26	3/8"(9.53)	5/8"(15.87)	2	1		
MCDE30DB	915	970	1098	973	528	669	365	397	332	408	12	3/8"(9.53)	5/8"(15.87)	2	1		
MCDE36DB	915	970	1098	973	528	669	365	397	332	408	12	3/8"(9.53)	5/8"(15.87)	2	1		
MCDE48DB	1067	1122	1251	1126	528	669	365	397	332	408	12	3/8"(9.53)	3/4"(19.05)	2	1		
MCDE60DB	1067	1122	1251	1126	528	669	365	397	332	408	12	3/8"(9.53)	3/4"(19.05)	2	1		

Outdoor Dimension Data

OUTLINE DIMENSION TTKE18-60



(unit: mm)

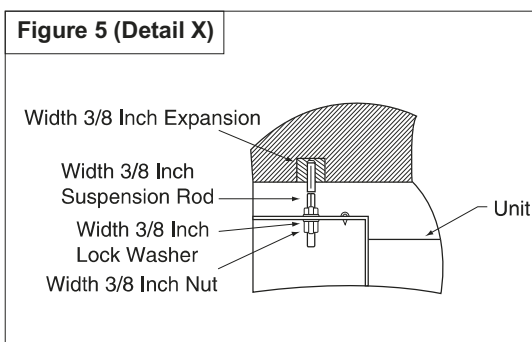
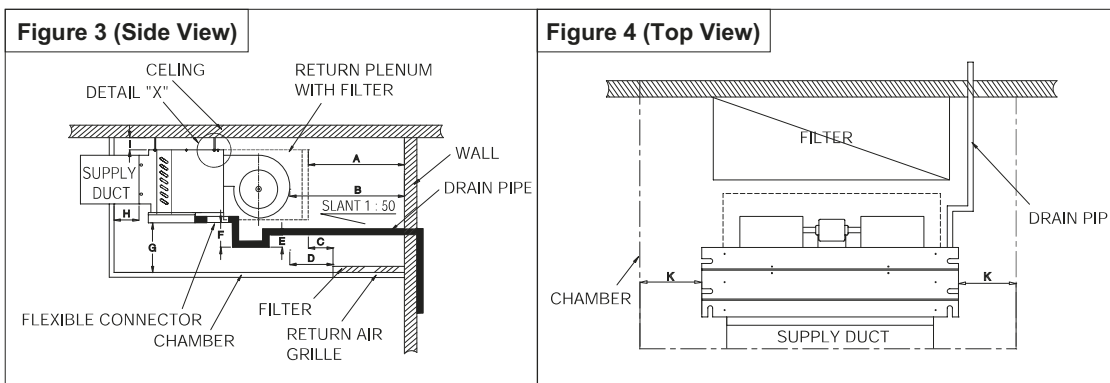
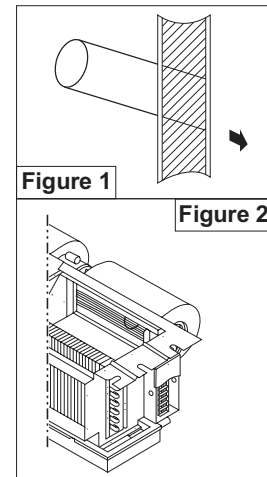
Model (Btu/h)	Unit Dimension (W×H×D)	Mounting Dimension	
		Distance A	Distance B
12k	805×554×330	514	340
18k	890×673×342	663	354
24k-30k	946×810×410	673	403
36k-60k	952×1,333×415	634	404

Indoor Unit installation

Unit Installation

After selection the location to place the unit, follow these steps:

1. Make a hole in the wall to route tubing and wiring through a locally purchased PVC pipe. The hole should slope downwards slightly, towards the outside (Figure 1)
2. Before cutting, check that no pipes or studs are directly behind the place to be cut. Avoid areas where electrical wiring or conduits are located.
3. Hang the unit on a solid and level roof. Noise, vibration or leakage could occur on an unstable foundation (Figure 3,4).
4. Support the unit solidly.
5. To have access to electrical terminals, remove the right side junction box (Figure 2).
6. Note that refrigerant tubing, interconnecting wiring and drain hose should go through the wall. Shape these items so that they will easily fit through the wall.



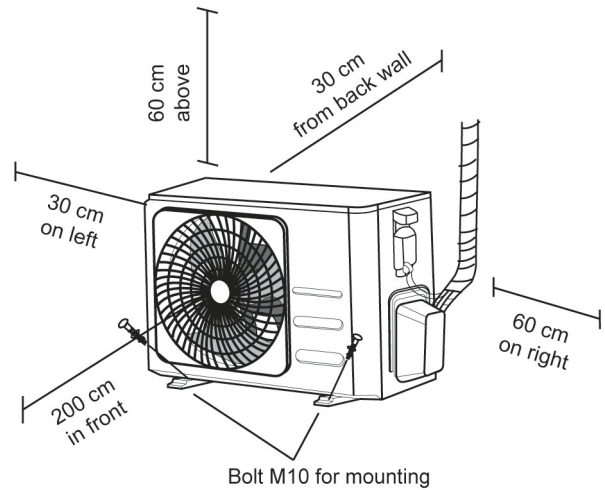
	A	B	C	D	E	F	G	H	I	J	K
DISTANCE (mm.)	Min. 750	Min. 800	100	150	50	900	Min. 200	Min. 100	Min. 50	Min. 300	Min. 300

NOTE : FOR DUCT LENGTH PLEASE SEE TABLE 2, 3, 4

Outdoor Unit Installation

Unit Installation

1. Should be mounted on a concrete platform. At least 100 mm. height and mounted on a concrete platform with bolts.
2. The base should strong enough to support weight and vibration.
3. In case of installing the machine on the roof make sure the roof can support the weight. Use a mounting-pad on the legs of the machine to prevent vibration transmitted to the building.
4. The installation location must not contain any objects obstruct the air inlet-outlet of the unit. And around condensing units must enough spaces for airflow.
5. The installation location is not close to the area where there is a dense combustible gas.
6. The installation location is sepearate. Enough distance to sound and heat will not affect users and neighbors.
7. The installation location that can be easily checked or repaired.

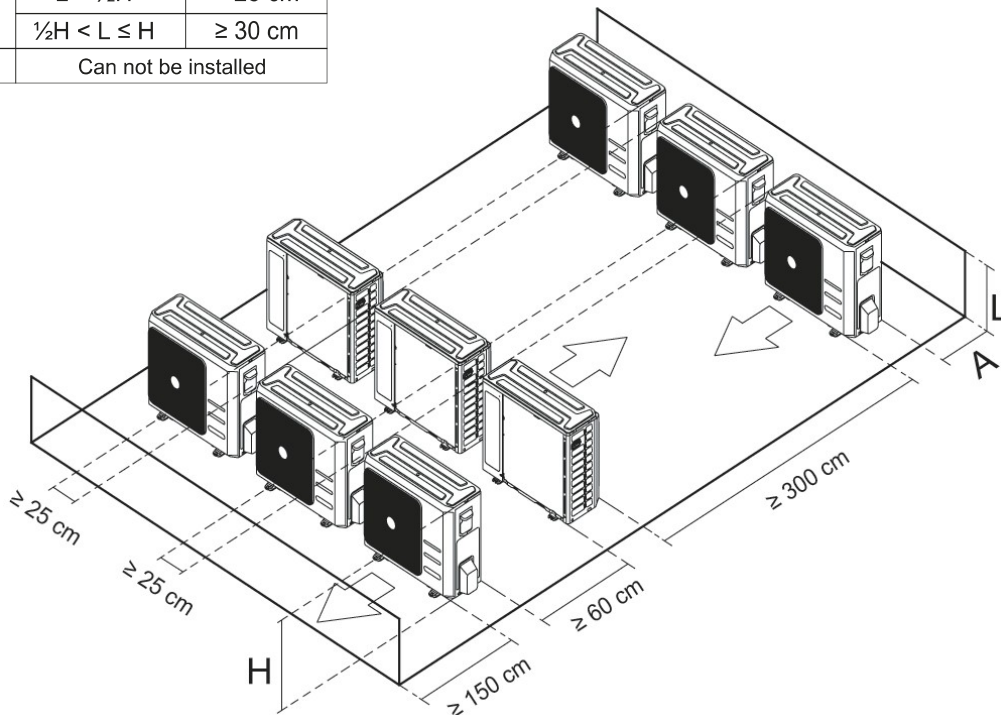


NOTE:

Install the unit by following local codes and regulations, there may be differ slightly between different regions.

Rows of series installation

	L	A
L ≤ H	$L \leq \frac{1}{2}H$	≥ 25 cm
	$\frac{1}{2}H < L \leq H$	≥ 30 cm
L > H	Can not be installed	



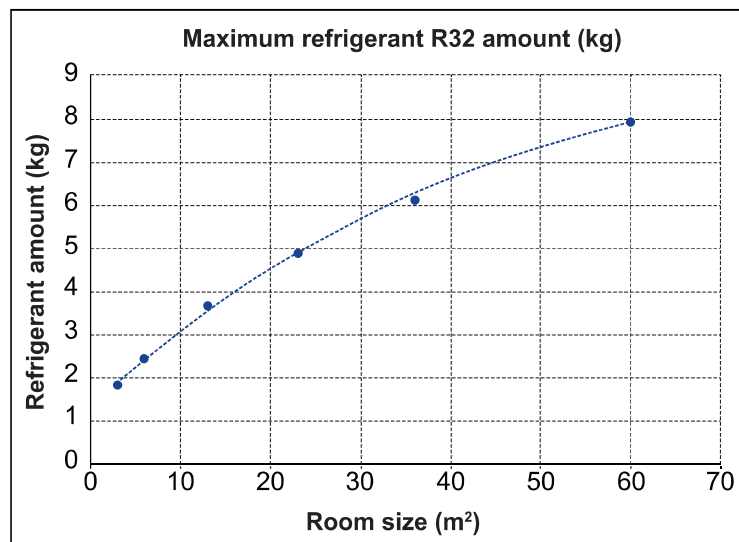
Air Evacuation and Refrigerant Charge

When the interconnecting line is longer than 7.5 m, additional charging is necessary. The refrigerant should be charged from the service port on the outdoor unit's low pressure valve. The additional refrigerant to be charged can be the following table belows.

Model (Btu/h)	Pipe size (mm/inche)		Maximum pipe length (m)	Refrigerant addition amount to the interconnection line that increase every 1 meter (grams/meter)
	Liquid side	Gas side		
18k	6.35 (1/4")	12.70 (1/2")	25	12
24k	9.52 (3/8")	15.88 (5/8")	25	24
30k	9.52 (3/8")	15.88 (5/8")	30	24
36k	9.52 (3/8")	15.88 (5/8")	30	24
42k	9.52 (3/8")	15.88 (5/8")	35	24
48k	9.52 (3/8")	19.05 (3/4")	35	24
60k	9.52 (3/8")	19.05 (3/4")	40	24

⚠ Caution : Charge with R32 refrigerant only. Do not mix refrigerant type.

Maximum R32 refrigerant amount with room size.



⚠ Caution

1. Installation should be 1.8 meters high from the floor.
2. R32 refrigerant amount must not exceed 8 kg.



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