Carrier

United Technologies

turn to the experts

39CNE[2,000~100,000 m³/h]

AIR HANDLING UNIT

FEATURES - 39CNE OFFERS

The New, Versatile and Flexibility in Commercial Air Conditioning System

- Units are rated in accordance to AHRI Standard 430 whereas the coil performance shall be rated in accordance to AHRI Standard 410.
- Double-skin casing with 50mm(2") 40kg/m^3 CFC-Free PU insulation which isolates insulation exposure to the air stream.
- Wide range of coils offering:

Chilled Water	- 1, 2, 3, 4, 5, 6, 7, 8 rows with 8, 10, 12, 14 fin per inch.
Hot Water	- 1, 2, 3, 4, 5, 6, 7, 8 rows with 8, 10, 12, 14 fin per inch.
DX Coil	- 4 and 6 rows with 8, 10, 12, 14 fin per inch.

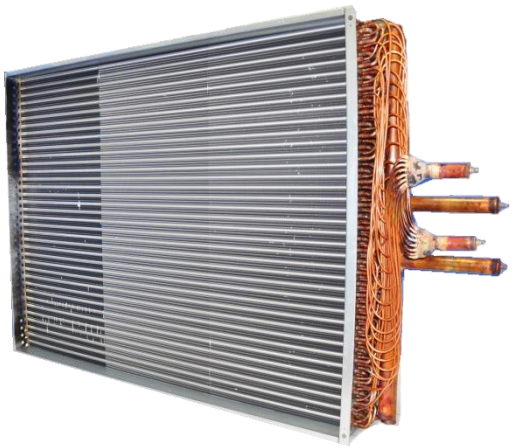
- All coils are factory pressure tested at 400 psig under water as standard with Nitrogen (N_2) compressed dry air.
- Coil tracks enable easy coil removal for complete cleaning and assurance of a dry unit interior.
- Powder painted sloped galvanized steel drain pan with side drainage as standard (optional stainless steel drain pan).
- Optimized fan impeller size to meet performance criteria:

  Forward curved blade - sizes 160mm to 1000mm.

  Backward curved / Air foil blade - sizes 225mm to 1000mm.

  Plug fan - sizes 315mm to 1400mm.
- Low leak construction with hexagonal socket compression, latch type and nitrile gasket on mating panel parameter.
- Factory installed unit base of 100mm height, constructed of 10 gauge galvanized steel (optional 125mm height for marine application).
- Optional factory supplied Heat Recovery Wheel (HRW) or Horizontal Heatpipe for energy management application.
- Optional factory installed UVC lamp.
- AHU selection software for easy unit selection (please refer to the Carrier's representative for more details).

FEATURES - 39CNE OFFERS



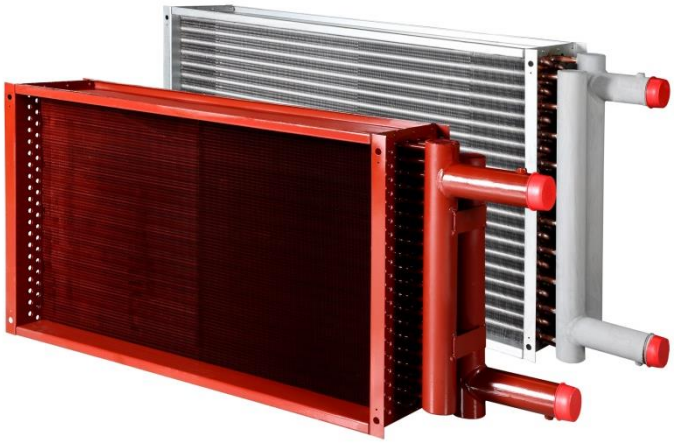
Direct Expansion Coil (DX Coil)

Coils are aluminum/copper with belled collars and bonded 12.7mm OD copper tubes by mechanically expansion. The coils have galvanized steel casing and provided with brass distributors with sweat type connections.

Chilled Water Coil

Coils are of aluminum/copper plate fins with belled collars and bonded to 12.7mm OD copper tubes by mechanically expansion. The coils have galvanized steel frame and steel headers with male threaded connections.

Option: Copper header with brazing type connection.

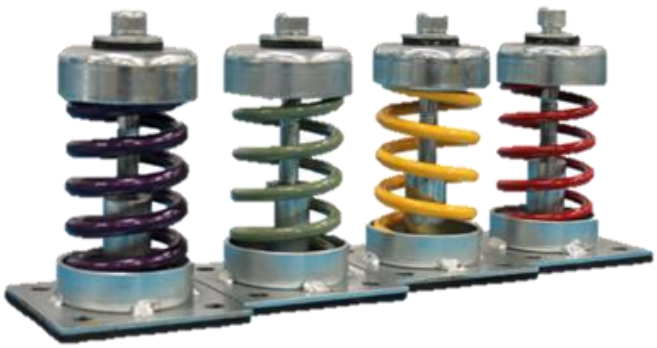


Assembly Fan Housing Motor and Base (FMB)

FMB are made of painted heavy gauge mild steel (for fan size 450 and above) or power strut type (for fan size 160 to 400) to ensure proper and easy installation fan housing and motor.

Spring Isolator

As standard from the factory, the fan and motor assembly are mounted on a common base with color-coded internally mounted helical spring isolators, which saves site installation cost.



FEATURES - 39CNE OFFERS

Drain Pan and Drain Outlet

New drain pan assembly for better drainage, side access drain and sloping for rapid water flow and better Internal Air Quality (IAQ). Ready to couple with male connection.

Bearing Arm

Self aligning double row ball bearings mounted within a cast iron housing supported on tubular bearing arm assembly.

Taper Lock Pulley

Flexibility to change diameter of pulley according to fan shaft. Pulleys with taper lock bush allows for convenient dismantling and maintenance of drive package.

Fan Discharge Collar

Flanged discharge collar to provide easy duct connection.

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Accessory High Velocity Filter (HVF) Frame

For fresh air application, factory supplied 75mm HVF track is an option instead of one module casing resulting in shorter overall unit length.

Dampers

Mixing boxes are equipped with opposed blades interconnected outside with return air dampers.

Carrier offers you three easy quick selection steps for 39CNE:

1) Determine the unit size based on air flow or coil face area.
   a. 1.5m/s minimum velocity (cooling or heating).
   b. 2.65m/s maximum velocity for cooling coil without drift eliminator.
   c. 4.5m/s maximum velocity for heating coil only.

2) Use estimated dimensions to find approximate size of base unit or necessary sections.

3) Quick selection of weights of base casing unit and motor drive package weight (if applicable).

STANDARD COIL

Unit Model	Coil Face Area (m^2)	Coil Tube Diameter (in)	Air Volume (ℓ/s) x 1000			
			2 m/s	2.5 m/s	3 m/s	3.5 m/s
39CNE0608	0.216	1/2"	0.43	0.54	0.65	0.76
	0.265	3/8"	0.53	0.66	0.80	0.93
39CNE0609	0.302	1/2"	0.60	0.76	0.91	1.06
	0.311	3/8"	0.62	0.78	0.93	1.09
39CNE0610	0.347	1/2"	0.69	0.87	1.04	1.21
	0.357	3/8"	0.71	0.89	1.07	1.25
39CNE0711	0.447	1/2"	0.89	1.12	1.34	1.56
	0.447	3/8"	0.89	1.12	1.34	1.56
39CNE0712	0.498	1/2"	1.00	1.24	1.49	1.74
	0.498	3/8"	1.00	1.24	1.49	1.74
39CNE0811	0.559	1/2"	1.12	1.40	1.68	1.96
	0.536	3/8"	1.07	1.34	1.61	1.88
39CNE0813	0.686	1/2"	1.37	1.71	2.06	2.40
	0.658	3/8"	1.32	1.65	1.98	2.30
39CNE0912	0.685	1/2"	1.37	1.71	2.05	2.40
	0.697	3/8"	1.39	1.74	2.09	2.44
39CNE0913	0.754	1/2"	1.51	1.89	2.26	2.64
	0.768	3/8"	1.54	1.92	2.30	2.69
39CNE0914	0.824	1/2"	1.65	2.06	2.47	2.88
	0.839	3/8"	1.68	2.10	2.52	2.94
39CNE1015	1.057	1/2"	2.11	2.64	3.17	3.70
	1.040	3/8"	2.08	2.60	3.12	3.64
39CNE1016	1.139	1/2"	2.28	2.85	3.42	3.99
	1.122	3/8"	2.24	2.80	3.36	3.93
39CNE1117	1.372	1/2"	2.74	3.43	4.11	4.80
	1.317	3/8"	2.63	3.29	3.95	4.61
39CNE1317	1.646	1/2"	3.29	4.11	4.94	5.76
	1.609	3/8"	3.22	4.02	4.83	5.63
39CNE1318	1.760	1/2"	3.52	4.40	5.28	6.16
	1.721	3/8"	3.44	4.30	5.16	6.02
39CNE1320	1.989	1/2"	3.98	4.97	5.97	6.96
	1.945	3/8"	3.89	4.86	5.83	6.81
39CNE1322	2.217	1/2"	4.43	5.54	6.65	7.76
	2.168	3/8"	4.34	5.42	6.50	7.59

Note:
For cooling application of face velocity more than 2.65m/s, drift eliminators is recommended to avoid moisture carry over under normal operating condition.

STANDARD COIL (Con't)

Unit Model	Coil Face Area (m^2)	Coil Tube Diameter (in)	Air Volume (ℓ/s) x 1000			
			2 m/s	2.5 m/s	3 m/s	3.5 m/s
39CNE1418	1.860	1/2"	3.72	4.65	5.58	6.51
39CNE1420	2.100	1/2"	4.20	5.25	6.30	7.35
39CNE1421	2.220	1/2"	4.44	5.55	6.66	7.77
39CNE1422	2.340	1/2"	4.68	5.85	7.02	8.19
39CNE1518	2.050	1/2"	4.10	5.13	6.15	7.18
39CNE1521	2.450	1/2"	4.90	6.13	7.35	8.58
39CNE1522	2.590	1/2"	5.18	6.48	7.77	9.07
39CNE1524	2.850	1/2"	5.70	7.13	8.55	9.98
39CNE1525	2.990	1/2"	5.98	7.48	8.97	10.47
39CNE1621	2.570	1/2"	5.14	6.43	7.71	9.00
39CNE1622	2.710	1/2"	5.42	6.78	8.13	9.49
39CNE1624	2.990	1/2"	5.98	7.48	8.97	10.47
39CNE1625	3.130	1/2"	6.26	7.83	9.39	10.96
39CNE1822	3.080	1/2"	6.16	7.70	9.24	10.78
39CNE1824	3.400	1/2"	6.80	8.50	10.20	11.90
39CNE1825	3.560	1/2"	7.12	8.90	10.68	12.46
39CNE2025	3.983	1/2"	7.97	9.96	11.95	13.94
39CNE2125	4.125	1/2"	8.25	10.31	12.37	14.44
39CNE2226	4.606	1/2"	9.21	11.52	13.82	16.12
39CNE2230	5.394	1/2"	10.79	13.48	16.18	18.88
39CNE2234	6.181	1/2"	12.36	15.45	18.54	21.63
39CNE2330	5.568	1/2"	11.14	13.92	16.70	19.49
39CNE2334	6.380	1/2"	12.76	15.95	19.14	22.33
39CNE2434	6.779	1/2"	13.56	16.95	20.34	23.73
39CNE2634	7.377	1/2"	14.75	18.44	22.13	25.82
39CNE2636	7.847	1/2"	15.69	19.62	23.54	27.47

Note:
For cooling application of face velocity more than 2.65m/s, drift eliminators is recommended to avoid moisture carry over under normal operating condition.

COIL WITH HEATPIPE

Unit Model	Coil Face Area (m^2)	Coil Tube Diameter (in)	Air Volume (ℓ/s) x 1000			
			2 m/s	2.5 m/s	3 m/s	3.5 m/s
39CNE0608	0.213	1/2"	0.43	0.53	0.64	0.75
	0.219	3/8"	0.44	0.55	0.66	0.77
39CNE0609	0.258	1/2"	0.52	0.64	0.77	0.90
	0.265	3/8"	0.53	0.66	0.80	0.93
39CNE0610	0.302	1/2"	0.60	0.76	0.91	1.06
	0.311	3/8"	0.62	0.78	0.93	1.09
39CNE0711	0.396	1/2"	0.79	0.99	1.19	1.39
	0.396	3/8"	0.79	0.99	1.19	1.39
39CNE0712	0.447	1/2"	0.89	1.12	1.34	1.56
	0.447	3/8"	0.89	1.12	1.34	1.56
39CNE0811	0.495	1/2"	0.99	1.24	1.49	1.73
	0.475	3/8"	0.95	1.19	1.43	1.66
39CNE0813	0.622	1/2"	1.24	1.56	1.87	2.18
	0.597	3/8"	1.19	1.49	1.79	2.09
39CNE0912	0.615	1/2"	1.23	1.54	1.84	2.15
	0.626	3/8"	1.25	1.56	1.88	2.19
39CNE0913	0.685	1/2"	1.37	1.71	2.05	2.40
	0.697	3/8"	1.39	1.74	2.09	2.44
39CNE0914	0.754	1/2"	1.51	1.89	2.26	2.64
	0.768	3/8"	1.54	1.92	2.30	2.69
39CNE1015	0.974	1/2"	1.95	2.44	2.92	3.41
	0.959	3/8"	1.92	2.40	2.88	3.36
39CNE1016	1.057	1/2"	2.11	2.64	3.17	3.70
	1.040	3/8"	2.08	2.60	3.12	3.64
39CNE1117	1.276	1/2"	2.55	3.19	3.83	4.47
	1.225	3/8"	2.45	3.06	3.68	4.29
39CNE1317	1.532	1/2"	3.06	3.83	4.59	5.36
	1.498	3/8"	3.00	3.74	4.49	5.24
39CNE1318	1.650	1/2"	3.30	4.13	4.95	5.78
	1.609	3/8"	3.22	4.02	4.83	5.63
39CNE1320	1.870	1/2"	3.74	4.68	5.61	6.55
	1.833	3/8"	3.67	4.58	5.50	6.42
39CNE1322	2.100	1/2"	4.20	5.25	6.30	7.35
	2.056	3/8"	4.11	5.14	6.17	7.20

Note:
For cooling application of face velocity more than 2.65m/s, drift eliminators is recommended to avoid moisture carry over under normal operating condition.

COIL WITH HEATPIPE (Con't)

Unit Model	Coil Face Area (m^2)	Coil Tube Diameter (in)	Air Volume (ℓ/s) x 1000			
			2 m/s	2.5 m/s	3 m/s	3.5 m/s
39CNE1418	1.740	1/2"	3.48	4.35	5.22	6.09
39CNE1420	1.980	1/2"	3.96	4.95	5.94	6.93
39CNE1421	2.100	1/2"	4.20	5.25	6.30	7.35
39CNE1422	2.220	1/2"	4.44	5.55	6.66	7.77
39CNE1518	1.920	1/2"	3.84	4.80	5.76	6.72
39CNE1521	2.320	1/2"	4.64	5.80	6.96	8.12
39CNE1522	2.450	1/2"	4.90	6.13	7.35	8.58
39CNE1524	2.720	1/2"	5.44	6.80	8.16	9.52
39CNE1525	2.850	1/2"	5.70	7.13	8.55	9.98
39CNE1621	2.430	1/2"	4.86	6.08	7.29	8.51
39CNE1622	2.570	1/2"	5.14	6.43	7.71	9.00
39CNE1624	2.850	1/2"	5.70	7.13	8.55	9.98
39CNE1625	2.990	1/2"	5.98	7.48	8.97	10.47
39CNE1822	2.920	1/2"	5.84	7.30	8.76	10.22
39CNE1824	3.240	1/2"	6.48	8.10	9.72	11.34
39CNE1825	3.400	1/2"	6.80	8.50	10.20	11.90
39CNE2025	3.805	1/2"	7.61	9.51	11.41	13.32
39CNE2125	3.941	1/2"	7.88	9.85	11.82	13.79
39CNE2226	4.409	1/2"	8.82	11.02	13.23	15.43
39CNE2230	5.197	1/2"	10.39	12.99	15.59	18.19
39CNE2234	5.984	1/2"	11.97	14.96	17.95	20.94
39CNE2330	5.364	1/2"	10.73	13.41	16.09	18.78
39CNE2334	6.177	1/2"	12.35	15.44	18.53	21.62
39CNE2434	6.563	1/2"	13.13	16.41	19.69	22.97
39CNE2634	7.142	1/2"	14.28	17.86	21.43	25.00
39CNE2636	7.612	1/2"	15.22	19.03	22.84	26.64

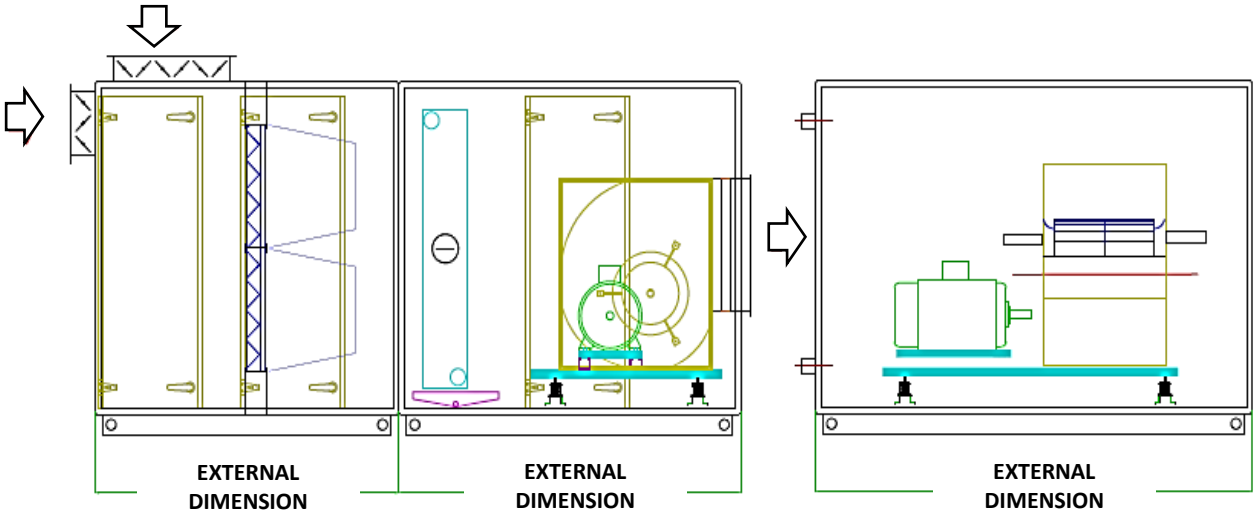
Note:
For cooling application of face velocity more than 2.65m/s, drift eliminators is recommended to avoid moisture carry over under normal operating condition.

AHU SELECTION PROGRAM

We have made available a computer selection for your application program. Please contact your nearest Carrier Representative for a assistance. Selection based on your *"Quick Selection"* plus the design parameters on your application.

UNIT DIMENSION CALCULATION

Horizontal Schematic



External AHU Length

External AHU Length = (Section Length + K)

where, K = 100mm (50mm casing thickness)

If the AHU module length is more than 2000mm, section will be split into several casing for shipping purpose .

For Example:

39CNE1522, MXB-BF-CCS-FS, Fan Size 500, Horizontal AHU with 50mm casing thickness

Unit will be split into two section:-

1) MXB-BF: 800mm + 600mm = 1400mm + K(100) = 1500mm
2) CCS-FS: 600mm + 1100mm = 1700mm + K(100) = 1800mm

Total AHU Length = 3300mm

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External AHU Width

External AHU Width = (Module Width + K)mm

where, K = 100mm (50mm casing thickness)

For Example:

39CNE1522, MXB-BF-CCS-FS, Fan Size 500, Horizontal AHU with 50mm casing thickness

AHU Width = 2200mm + K(100mm) = 2300mm

External AHU Height

Horizontal AHU Height = (Module Height + K + 100)mm

where, K = 100mm (50mm casing thickness)

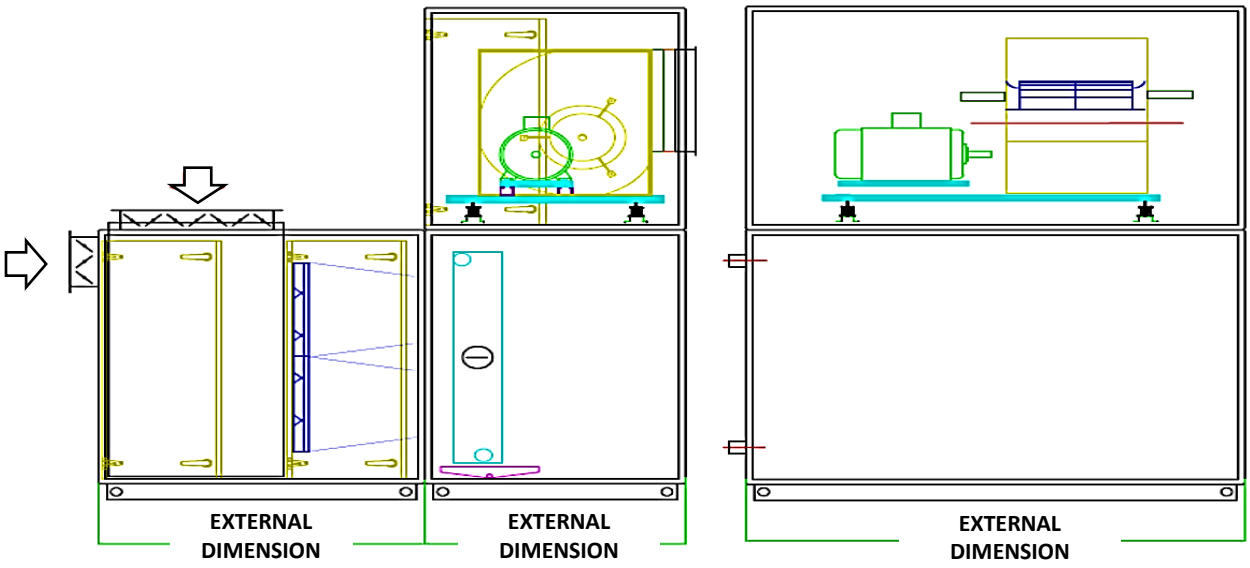
For Example:

39CNE1522, MXB-BF-CCS-FS, Fan Size 500, Horizontal AHU with 50mm casing thickness

AHU Height = (1500mm + 100mm + 100mm) = 1700mm

UNIT DIMENSION CALCULATION

Vertical Schematic



External AHU Length

External AHU Length = (Section Length + K)

where, K = 100mm (50mm casing thickness)

If the AHU module length is more than 2000mm, section will be split into several casing for shipping purpose .

For Example:

39CNE1522, MXB-BF-CCS-FS, Fan Size 500, Vertical AHU with 50mm casing thickness

Unit will be split into two section:-

1) MXB-BF: 800mm + 600mm = 1400mm + K(100) = 1500mm
2) FS: 1100mm = 1100mm + K(100) = 1200mm

Total AHU Length = 2700mm

Note:

1) **The fan is on top of the coil section, just apply the fan section length for calculation.**
2) **Add 100mm incase of external filter track.**

External AHU Width

External AHU Width = (Module Width + K)mm

where, K = 100mm (50mm casing thickness)

For Example:

39CNE1522, MXB-BF-CCS-FS, Fan Size 500, Horizontal AHU with 50mm casing thickness

AHU Width = 2200mm + K(100mm) = 2300mm

External AHU Height

Vertical AHU = (Module Height + Fan Section Vertical Height + 2K + 100)mm

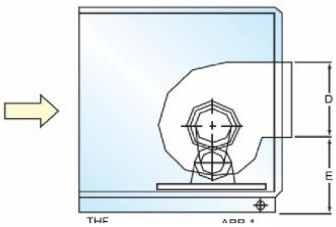
where, K = 100mm (50mm casing thickness)

For Example:

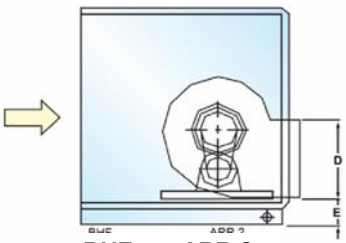
39CNE1522, MXB-BF-CCS-FS, Fan Size 500, Vertical AHU with 50mm casing thickness

AHU Height = (1500mm + 1200mm + 200mm + 100mm) = 3000mm

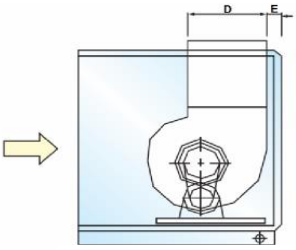
FAN ARRANGEMENT



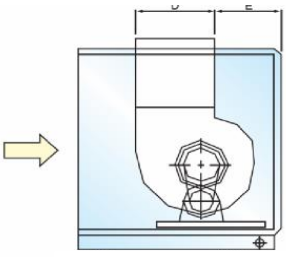
THF ARR 1



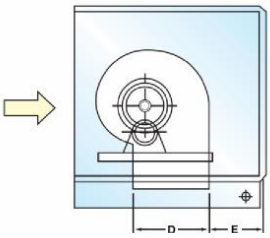
BHF ARR 2



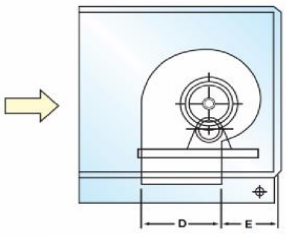
UBF ARR 3



UBR ARR 4

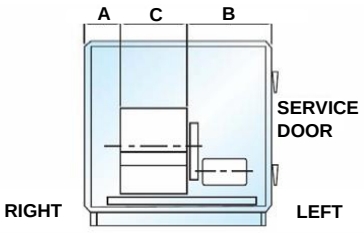


DBF ARR 5

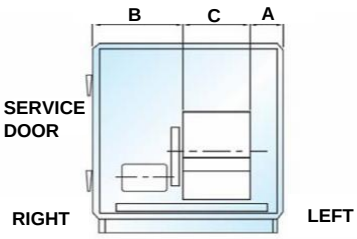


DBR ARR 6

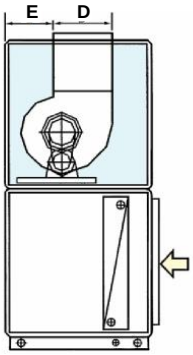
SIDE ELEVATION

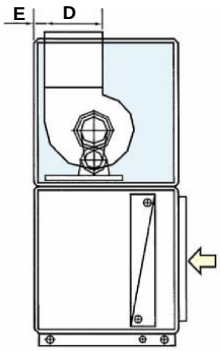


LEFT HAND



LEFT HAND

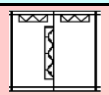
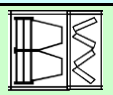




FRONT ELEVATION

BASE UNIT COIL WEIGHT (50mm SECTION WEIGHT)

Carrier
Turn to the Experts.

		Mixing Box Section			Filter Section			Coil Section		Heater Section	Fan Section		Diffuser Section	Discharge Section with Damper	Plenum Access
		Mixing Box	Double Mixing Box	Economized Mixing Box	Bag Filter / LVF	HVF Filter	HEPA Filter	Cooling/ Dual (Horizontal)	Hot Water (Horizontal)		Horizontal	Vertical			
		MXB	DBL MXB	ECN MXB	BF / LVF	HVF	HEPA	CW	HW	HTR	FCF or BCF	FCF or BCF	DIF	DISC	ACS
39CNE AHU Size	Fan Size														
50mm Section weight (kg)															
0608	160	38	68	38	45	23	78	41	22	23	50	69	25	44	45
	180	38	68	38	45	23	78	41	22	23	50	69	25	44	45
0609	180	41	71	41	47	24	82	44	22	24	54	72	26	46	47
	200	41	71	41	47	24	82	44	22	24	62	72	26	46	47
0711	200	49	82	49	55	28	96	52	27	28	75	84	31	56	55
	225	49	82	49	55	28	96	52	27	28	75	84	31	56	55
0811	225	52	86	52	57	29	101	53	27	29	78	88	32	60	57
	250	52	86	52	57	29	101	53	27	29	78	88	32	60	57
0912	250	57	92	57	62	31	107	57	29	31	86	93	34	67	62
	280	57	92	57	62	31	107	57	29	31	97	93	34	67	62
0913	280	69	95	69	64	33	112	60	31	33	101	97	36	80	64
	315	69	95	69	64	33	112	60	31	33	101	97	36	80	64
0914	315	71	113	71	66	34	115	61	31	34	104	99	37	82	66
	355	71	113	71	66	34	115	61	31	34	114	99	37	82	66
1015	355	78	121	78	70	35	122	65	33	35	124	106	39	90	70
	400	78	121	78	70	35	122	65	33	35	124	106	39	90	70
1117	400	89	133	89	76	39	137	70	36	39	143	118	43	104	76
	450	89	133	89	76	39	137	70	36	39	166	141	43	104	76
1317	400	98	142	98	81	41	144	74	37	41	153	124	45	116	81
	450	98	142	98	81	41	144	74	37	41	178	149	45	116	81
1418	450	131	148	105	85	43	151	77	39	43	189	156	47	154	85
	500	131	148	105	85	43	151	77	39	43	189	156	47	154	85
1420	500	140	154	112	89	45	158	81	41	45	202	164	99	165	89
	560	140	154	112	89	45	158	81	41	45	229	191	99	165	89
1621	560	157	169	128	97	49	172	89	45	49	253	208	108	185	97
	630	157	169	128	97	49	172	89	45	49	269	224	108	185	97
1822	560	185	181	141	104	53	184	94	48	53	274	-	115	220	104
	630	185	181	141	104	53	184	94	48	53	291	-	115	220	104
1825	630	202	194	153	111	56	201	102	51	56	319	-	124	240	111
	710	202	194	153	111	56	201	102	51	56	336	-	124	240	111
2025	630	214	294	164	115	58	207	105	53	58	334	-	128	256	115
	710	214	294	164	115	58	207	105	53	58	351	-	128	256	115
2125	710	250	301	169	117	59	211	106	53	59	360	-	130	299	117
	800	250	301	169	117	59	211	106	53	59	401	-	130	299	117
2226	710	263	312	179	122	62	219	110	56	62	377	-	135	315	122
	800	263	312	179	122	62	219	110	56	62	419	-	135	315	122
2230	800	286	327	199	134	68	234	122	62	68	455	-	149	344	134
	900	286	327	199	134	68	234	122	62	68	495	-	149	344	134
2234	800	315	359	220	148	74	258	137	69	74	504	-	166	378	148
	900	315	359	220	148	74	258	137	69	74	549	-	166	378	148
2634	900	347	383	246	156	78	273	142	71	78	590	-	173	420	156
	1000	347	383	246	156	78	273	142	71	78	614	-	173	420	156

Note: Estimated weight in kg.

POWER		2P				4P				6P				8P			
kW	HP	FRAME	RPM (50Hz)	EFF	WEIGHT (kg)	FRAME	RPM (50Hz)	EFF	WEIGHT (kg)	FRAME	RPM (50Hz)	EFF	WEIGHT (kg)	FRAME	RPM (50Hz)	EFF	WEIGHT (kg)
0.4	0.5	71	2810	75.0		71	1395	71.5		80	925	66.0		90S	710	64.5	
0.6	0.8	71	2755	75.0		80	1405	71.5		80	915	68.0		90L	695	70.0	
0.8	1.0	80	2805	78.0		80	1405	76.5		90S	940	74.0		100L	700	68.0	
1.1	1.5	80	2810	80.5		90S	1415	74.5		90L	940	75.0		100L	690	74.5	
1.5	2.0	90S	2825	81.0		90L	1400	77.0		100L	930	75.0		112M	705	75.5	
2.2	3.0	90L	2840	83.5		100L	1425	81.0		112M	950	81.0		132S	705	81.5	
3.0	4.0	100L	2865	85.0		100L	1435	83.5		132S	955	85.0		132M	715	82.5	
3.7	5.0	112M	2870	85.5		112M	1445	84.5		132M	955	83.0		160M	720	84.0	
4.0	5.5	112M	2870	86.0		112M	1445	86.0		132M	950	85.0		160M	720	84.5	
5.5	7.5	132S	2905	87.0		132S	1445	86.0		132M	960	87.5		160M	720	85.5	
7.5	10.0	132S	2880	88.0		132M	1450	88.5		160M	975	88.0		160L	720	86.0	
11.0	15.0	160M	2940	89.0		160M	1455	89.5		160L	970	89.0		180LC	730	89.0	
15.0	20.0	160M	2925	90.5		160L	1460	90.5		180LC	970	90.0		200LC	730	89.5	
18.5	25.0	160L	2930	91.5		180MC	1450	91.0		200LC	970	91.0		225SC	730	90.0	
22.0	30.0	180MA	2930	92.0		180LC	1460	91.5		200LC	975	92.5		225MC	730	91.0	
30.0	40.0	200LA	2960	92.0		200LC	1470	92.5		225MC	980	91.5		250SC	730	90.5	
37.0	50.0	200LA	2950	92.5		225SC	1470	92.5		250SC	980	92.5		250MC	730	91.0	
45.0	60.0	225MA	2950	93.0		225MC	1470	92.5		250MC	980	92.5		280SC	725	92.0	
55.0	75.0	250SA	2960	92.0		250SC	1480	93.4		280SC	970	92.4		280MC	730	92.4	
75.0	100.0	250MA	2950	94.0		250MC	1480	94.5		280MC	975	93.0		315SC	730	93.0	

Notes:

- Motor weight is based on 415V/3Ø/50Hz induction type TEFC foot-mounted motor.
- Motor is suitable for direct on-line / reduced voltage starting mechanism (except STAR-DELTA).
- Motors 3hp and smaller are STAR connected and motor 4hp and larger are DELTA connected.
- Standard motor shall be as per IEC standard IP55 enclosure with TEFC Class F insulation and B temperature rise complying with BS2757.
- Maximum ambient temperature 40°C.
- For derivation of motor kW from fan BkW use.
- Motor kW = Fan BkW x A, where A = 1.20 if BkW< 10kW
  A = 1.15 if BkW> 10kW
- Please refer to your nearest Carrier representatives for special motor voltages or application.

MOTOR DATA

MAXIMUM HP AND MOUNTING POSITION

HORIZONTAL AIR HANDLING UNIT			
AHU Model Name	Fan Size mm	Max Motor Power (4 pole) HP	Motor Mounting Position
39CNE0608	160	1.5	SIDE
	180	1.5	SIDE
39CNE0609	180	4.0	SIDE
	200	4.0	SIDE
39CNE0610	180	5.5	SIDE
	200	5.0	SIDE
39CNE0711	200	7.5	SIDE
	225	5.5	SIDE
39CNE0712	225	10.0	SIDE
	250	10.0	SIDE
39CNE0811	225	5.5	SIDE
	250	5.5	SIDE
	280	7.5	REAR
	315	7.5	REAR
39CNE0813	280	10.0	SIDE
	315	10.0	SIDE
39CNE0912	250	7.5	SIDE
	280	7.5	SIDE
	315	7.5	REAR
39CNE0913	280	10.0	SIDE
	315	10.0	SIDE
	355	10.0	REAR
39CNE0914	315	20.0	SIDE
	355	15.0	SIDE
39CNE1015	355	20.0	SIDE
	400	15.0	SIDE
39CNE1016	355	20.0	SIDE
	400	20.0	SIDE
39CNE1117	400	20.0	SIDE
	450	25.0	SIDE
39CNE1317	400	20.0	SIDE
	450	25.0	SIDE
	500	20.0	REAR
	560	20.0	REAR
39CNE1418	450	30.0	SIDE
	500	25.0	SIDE
	560	20.0	REAR
39CNE1420	500	30.0	SIDE
	560	30.0	SIDE
	630	25.0	REAR
39CNE1518	450	30.0	SIDE
	500	25.0	SIDE
	560	25.0	REAR
	630	25.0	REAR
39CNE1522	500	25.0	SIDE
	560	25.0	SIDE
	630	40.0	SIDE

HORIZONTAL AIR HANDLING UNIT			
AHU Model Name	Fan Size mm	Max Motor Power (4 pole) HP	Motor Mounting Position
39CNE1621	560	30.0	SIDE
	630	30.0	SIDE
	710	30.0	REAR
39CNE1622	560	25.0	SIDE
	630	40.0	SIDE
	710	25.0	SIDE
	710	30.0	REAR
39CNE1822	560	25.0	SIDE
	630	40.0	SIDE
	710	25.0	SIDE
	710	40.0	REAR
	800	40.0	REAR
39CNE1824	630	40.0	SIDE
	710	50.0	SIDE
	800	40.0	REAR
39CNE1825	630	40.0	SIDE
	710	60.0	SIDE
	800	40.0	REAR
39CNE2025	630	40.0	SIDE
	710	60.0	SIDE
	800	40.0	SIDE
39CNE2125	710	60.0	SIDE
	800	40.0	SIDE
	900	50.0	REAR
39CNE2226	710	60.0	SIDE
	800	60.0	SIDE
	900	50.0	REAR
39CNE2230	800	60.0	SIDE
	900	75.0	SIDE
	1000	60.0	REAR
39CNE2234	800	60.0	SIDE
	900	75.0	SIDE
	1000	75.0	SIDE
39CNE2330	800	60.0	SIDE
	900	75.0	SIDE
	1000	60.0	REAR
39CNE2334	800	60.0	SIDE
	900	75.0	SIDE
	1000	75.0	SIDE
39CNE2434	900	75.0	SIDE
	1000	75.0	SIDE
39CNE2634	900	75.0	SIDE
	1000	75.0	SIDE
39CNE2636	900	75.0	SIDE
	1000	75.0	SIDE
-	-	-	-
-	-	-	-

VERTICAL AIR HANDLING UNIT			
AHU Model Name	Fan Size mm	Max Motor Power (4 pole) HP	Motor Mounting Position
39CNE0608	160	1.5	SIDE
	180	1.5	SIDE
39CNE0609	180	4.0	SIDE
	200	4.0	SIDE
39CNE0610	180	5.5	SIDE
	200	5.0	SIDE
39CNE0711	200	7.5	SIDE
	225	5.5	SIDE
39CNE0712	225	10.0	SIDE
	250	10.0	SIDE
39CNE0811	225	5.5	SIDE
	250	5.5	SIDE
39CNE0813	280	10.0	SIDE
	315	10.0	SIDE
39CNE0912	250	7.5	SIDE
	280	7.5	SIDE
39CNE0913	280	10.0	SIDE
	315	10.0	SIDE
39CNE0914	315	20.0	SIDE
	355	15.0	SIDE
39CNE1015	355	20.0	SIDE
	400	15.0	SIDE
39CNE1016	355	20.0	SIDE
	400	20.0	SIDE
39CNE1117	400	20.0	SIDE
	450	25.0	SIDE
39CNE1317	400	20.0	SIDE
	450	25.0	SIDE
39CNE1418	450	30.0	SIDE
	500	25.0	SIDE
39CNE1420	500	30.0	SIDE
	560	30.0	SIDE
39CNE1518	450	30.0	SIDE
	500	25.0	SIDE
39CNE1522	500	25.0	SIDE
	560	25.0	SIDE
	630	40.0	SIDE
39CNE1621	560	30.0	SIDE
	630	30.0	SIDE
39CNE1622	560	25.0	SIDE
	630	40.0	SIDE
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

FAN BLOWER SPECIFICATION

FORWARD CURVED TYPE

Fan Model	Weight (Kg)	Fan Max RPM	Shaft Dia (mm)	Width, W (mm)	Height, H (mm)	Length, L (mm)	Maximum BkW
ADH 160 R	6.6	4,200	20 h7	245	300	259	3.0
ADH 180 R	7.8	4,000	20 h7	269	336	294	3.0
ADH 200 R	9.1	3,800	20 h7	306	370	306	4.0
ADH 225 R	10.7	3,400	20 h7	338	415	345	4.0
ADH 250 R	13.0	2,800	20 h7	372	461	381	4.0
ADH 280 R	18.0	2,500	25 h7	421	518	429	5.5
ADH 315 R	22.0	2,100	25 h7	464	578	480	5.5
ADH 355 R	29.0	1,800	30 h7	533	655	544	7.5
ADH 400 R	38.0	1,600	30 h7	587	736	609	7.5
ADH 450 R	50.0	1,400	35 h7	649	827	679	11.0
ADH 500 R	65.0	1,200	35 h7	718	918	748	11.0
ADH 560 R	86.0	1,100	40 h7	815	1,030	839	15.0
ADH 630 R	106.0	900	40 h7	901	1,157	940	15.0
ADH 710 R	135.0	750	50 h7	998	1,303	1,050	18.5
ADH 200 K	12.6	3,800	20 h7	306	370	306	4.0
ADH 225 K	14.5	3,400	20 h7	338	415	345	4.0
ADH 250 K	18.0	3,000	25 h7	372	461	381	7.5
ADH 280 K	24.0	2,600	30 h7	421	518	429	11.0
ADH 315 K	29.0	2,300	30 h7	464	578	480	11.0
ADH 355 K	41.0	2,000	35 h7	531	655	544	15.0
ADH 400 K	52.0	1,800	35 h7	587	736	613	15.0
ADH 450 K	66.0	1,500	40 h7	649	827	679	15.0
ADH 500 K	85.0	1,300	40 h7	718	918	748	15.0
ADH 560 K	134.0	1,200	50 h7	815	1,030	839	18.5
ADH 630 K	170.0	1,000	50 h7	901	1,157	940	18.5
ADH 710 K	201.0	900	50 h7	998	1,303	1,050	22.0
ADH 800 K	249.0	800	50 h7	1,107	1,468	1,181	22.0
ADH 900 K	306.0	700	60 h7	1,230	1,648	1,319	30.0
ADH 1000 K	333.0	650	60 h7	1,367	1,810	1,451	37.0
ADH 315 K1	30.0	2,300	30 h7	464	578	480	18.5
ADH 355 K1	42.0	2,000	35 h7	531	655	544	22.0
ADH 400 K1	53.0	1,800	35 h7	587	736	613	22.0
ADH 450 K1	67.0	1,500	40 h7	649	827	679	30.0
ADH 500 K1	86.0	1,300	40 h7	718	918	748	30.0
ADH 560 K1	142.0	1,200	50 h7	815	1,030	839	30.0
ADH 630 K1	175.0	1,000	50 h7	901	1,157	940	30.0
ADH 710 K1	208.0	900	60 h7	998	1,303	1,050	37.0
ADH 800 K1	261.0	800	60 h7	1,107	1,468	1,181	37.0
ADH 900 K1	316.0	700	60 h7	1,230	1,648	1,319	45.0

Fan Model	Weight (Kg)	Fan Max RPM	Shaft Dia (mm)	Width, W (mm)	Height, H (mm)	Length, L (mm)	Maximum BkW
ADH 500 K2	105	1,300	50 h7	718	918	748	37.0
ADH 560 K2	150	1,200	50 h7	815	1,030	839	45.0
ADH 630 K2	180	1,000	50 h7	901	1,157	940	45.0
ADH 710 K2	225	900	60 h7	998	1,303	1,050	55.0
ADH 800 K2	278	800	60 h7	1,107	1,468	1,181	55.0
ADH 900 K2	320	700	60 h7	1,230	1,648	1,319	75.0
ADH 1000 K2	360	650	60 h7	1,367	1,810	1,451	75.0
FDA CM 180	9.5	3,700	20g6	268	336	294	2.0
FDA CM 200	10.5	3,300	20g6	306	370	306	2.5
FDA CM 225	12	2,900	20g6	338	415	348	3.0
FDA CM 250	15	2,700	20g6	372	460	383	3.0
FDA CM 280	20	2,400	25g6	420	518	432	4.0
FDA CM 315	24	2,100	25g6	464	578	480	5.5
FDA CM 355	32	1,800	30g6	532	654	548	5.5
FDA CM 400	41	1,600	30g6	586	736	612	7.5
FDA CM 450	51	1,400	35g6	648	827	681	7.5
FDA CM 500	74	1,200	35g6	718	918	750	11.0
FDA CM 560	93	1,100	40g6	814	1,030	844	11.0
FDA CM 630	104	900	45g6	900	1,157	945	15.0
FDA CM 710	127	800	50g6	998	1,302	1,057	18.5
FDA TM 250	21	3,000	25g6	372	460	383	7.5
FDA TM 280	27	2,700	30g6	420	518	432	11.0
FDA TM 315	30	2,200	30g6	464	578	480	11.0
FDA TM 355	45	2,000	35g6	532	654	548	15.0
FDA TM 400	55	1,800	35g6	586	736	612	15.0
FDA TM 450	61	1,600	40g6	648	827	681	18.5
FDA TM 500	81	1,300	45g6	718	918	750	18.5
FDA TM 560	110	1,200	45g6	814	1,030	844	22.0
FDA TM 630	140	1,000	50g6	900	1,157	945	22.0
FDA TM 710	192	900	55g6	998	1,302	1,057	25.0
FDA TM 800	240	750	55g6	1,106	1,468	1,180	25.0
FDA TM 900	293	650	60g6	1,230	1,648	1,319	30.0
FDA TM 1000	340	600	70g6	1,366	1,810	1,450	37.0
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

FAN BLOWER SPECIFICATION

BACKWARD CURVED TYPE

Fan Model	Weight (Kg)	Fan Max RPM	Shaft Dia (mm)	Width, W (mm)	Height, H (mm)	Length, L (mm)	Maximum BkW
BDB CM 200	13	5,200	20g6	306	370	306	2.0
BDB CM 225	16	4,500	20g6	338	415	348	2.2
BDB CM 250	20	4,000	20g6	372	460	383	2.5
BDB CM 280	24	3,500	25g6	420	518	432	3.0
BDB CM 315	27	3,100	25g6	464	578	480	4.0
BDB CM 355	41	2,700	30g6	532	654	548	5.0
BDB CM 400	45	3,200	30g6	586	736	612	6.0
BDB CM 450	62	2,900	35g6	648	827	681	8.0
BDB CM 500	81	2,500	35g6	718	918	750	10.0
BDB CM 560	110	2,200	40g6	814	1,030	844	12.0
BDB CM 630	141	2,000	45g6	900	1,157	945	14.0
BDB CM 710	199	1,800	50g6	998	1,302	1,057	18.0
BDB TM 315	40	4,100	30g6	464	578	480	8.0
BDB TM 355	53	3,500	35g6	532	654	548	11.0
BDB TM 400	67	3,200	35g6	586	736	612	14.0
BDB TM 450	89	2,900	40g6	648	827	681	18.0
BDB TM 500	118	2,500	45g6	718	918	750	20.0
BDB TM 560	158	2,200	45g6	814	1,030	844	25.0
BDB TM 630	197	2,000	50g6	900	1,157	945	30.0
BDB TM 710	251	1,800	55g6	998	1,302	1,057	40.0
BDB TM 800	299	1,200	55g6	1,106	1,468	1,180	22.0
BDB TM 900	368	1,050	60g6	1,230	1,648	1,319	30.0
BDB TM 1000	474	1,000	70g6	1,366	1,810	1,450	35.0
BDB XM 800	323	1,600	65g6	1,106	1,468	1,180	50.0
BDB XM 900	397	1,400	70g6	1,230	1,648	1,319	60.0
BDB XM 1000	512	1,300	80g6	1,366	1,810	1,450	80.0
AIRFOIL							
RZR 12-225	15	6,640	20k6	350	433	366	7.5
RZR 12-280	23	5,235	25k6	423	532	449	7.5
RZR 12-315	27	4,418	25k6	465	596	502	7.5
RZR 12-355	36	3,200	25k6	515	669	562	7.5
RZR 15-400	61	3,600	30k6	580	750	632	30.0
RZR 15-450	73	3,360	30k6	644	840	708	30.0
RZR 15-500	94	2,920	30k6	713	930	780	30.0
RZR 15-560	125	2,400	40k6	789	1,046	884	37.0
RZR 15-630	149	1,880	40k6	876	1,173	980	37.0
RZR 15-710	201	2,000	50k6	973	1,324	1,104	55.0
RZR 15-800G1	250	1,470	50k6	1,092	1,522	1,244	55.0
RZR 15-900G1	358	1,430	60k6	1,225	1,706	1,386	75.0
RZR 15-1000	416	1,140	60k6	1,362	1,869	1,510	75.0
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Fan Model	Weight (Kg)	Fan Max RPM	Shaft Dia (mm)	Width, W (mm)	Height, H (mm)	Length, L (mm)	Maximum BkW
RDH 180 R	7.1	6,800	20 h7	269	336	294	2.2
RDH 200 R	8.5	6,000	20 h7	306	370	306	3.0
RDH 225 R	9.9	5,800	20 h7	338	415	345	4.0
RDH 250 R	15.7	4,600	20 h7	372	461	381	4.0
RDH 280 R	21.0	4,000	25 h7	421	518	429	5.5
RDH 315 R	25.0	3,500	25 h7	464	578	480	5.5
RDH 355 R	34.0	3,300	30 h7	533	655	544	7.5
RDH 400 R	42.0	2,700	30 h7	587	736	609	7.5
RDH 450 R	57.0	2,500	35 h7	649	827	679	11.0
RDH 500 R	70.0	2,100	35 h7	718	918	748	11.0
RDH 560 R	92.0	1,950	40 h7	815	1,030	839	15.0
RDH 630 R	119.0	1,600	40 h7	901	1,157	940	15.0
RDH 710 R	165.0	1,300	50 h7	998	1,303	1,050	15.0
RDH 200 K	11.8	6,800	20 h7	306	370	306	3.0
RDH 225 K	13.6	6,000	20 h7	338	415	345	4.0
RDH 250 K	21.0	5,400	25 h7	372	461	381	5.5
RDH 280 K	28.0	4,700	30 h7	421	518	429	7.5
RDH 315 K	32.0	4,100	30 h7	464	578	480	7.5
RDH 355 K	46.0	3,800	35 h7	531	655	544	11.0
RDH 400 K	57.0	3,100	35 h7	587	736	613	15.0
RDH 450 K	73.0	2,800	40 h7	649	827	679	15.0
RDH 500 K	90.0	2,350	40 h7	718	918	748	15.0
RDH 560 K	141.0	2,100	50 h7	815	1,030	839	18.5
RDH 630 K	173.0	1,700	50 h7	901	1,157	940	18.5
RDH 710 K	220.0	1,500	50 h7	998	1,303	1,050	22.0
RDH 800 K	270.0	1,200	50 h7	1,107	1,468	1,181	22.0
RDH 900 K	343.0	1,100	60 h7	1,230	1,648	1,319	30.0
RDH 1000 K	415.0	1,000	60 h7	1,367	1,810	1,451	37.0
RDH 315 K1	34.0	4,500	30 h7	464	578	480	11.0
RDH 355 K1	47.0	4,000	35 h7	531	655	544	15.0
RDH 400 K1	58.0	3,500	35 h7	587	736	613	22.0
RDH 450 K1	75.0	3,200	40 h7	649	827	679	30.0
RDH 500 K1	92.0	2,650	40 h7	718	918	748	30.0
RDH 560 K1	148.0	2,400	50 h7	815	1,030	839	30.0
RDH 630 K1	180.0	200	50 h7	901	1,157	940	30.0
RDH 710 K1	240.0	1,700	60 h7	998	1,303	1,050	37.0
RDH 800 K1	297.0	1,400	60 h7	1,107	1,468	1,181	37.0
RDH 900 K1	355.0	1,250	60 h7	1,230	1,648	1,319	45.0
RDH 500 K2	90.0	2,350	50 h7	718	918	748	37.0
RDH 560 K2	141.0	2,100	50 h7	815	1,030	839	37.0
RDH 630 K2	173.0	1,700	50 h7	901	1,157	940	45.0
RDH 710 K2	220.0	1,500	60 h7	998	1,303	1,050	55.0
RDH 800 K2	270.0	1,200	60 h7	1,107	1,468	1,181	55.0
RDH 900 K2	343.0	1,100	60 h7	1,230	1,648	1,319	75.0
RDH 1000 K2	415.0	1,000	60 h7	1,367	1,810	1,451	75.0

AHU Model Name	Nicotra Fan Size (single)				Kruger Fan Size(single)				Plug Fan
	THF, BHF	DBF,DBR	UBF, UBR	Plug Fan	THF, BHF	DBF,DBR	UBF, UBR	Plug Fan	
39CNE0608	|160|180|	|160|180|	|160|180|	N/A	|160|180|	|160|180|	|160|180|	N/A	N/A
39CNE0609	|180|200|	|180|200|	|180|200|	N/A	|180|200|	|180|200|	|180|200|	N/A	N/A
39CNE0610	|180|200|	|180|200|	|180|200|	N/A	|180|200|	|180|200|	|180|200|	N/A	N/A
39CNE0711	|200|225|	|200|225|	|200|225|	|2528|2831|	|200|225|	|200|225|	|200|225|	N/A	N/A
39CNE0712	|225|250|	|225|250|	|225|250|	|2528|2831|	|225|250|	|225|250|	|225|250|	N/A	N/A
39CNE0811	|225|250|280|315|	|225|250|280|315|	|225|250|280|315|	|2528|2831|3135|3540|	|225|250|280|315|	|225|250|280|315|	|225|250|280|315|	|BNB315|BNB355|	|ANA315|ANA355|BNA315|BNA355|
39CNE0813	|280|315|	|280|315|	|280|315|	|2528|2831|3135|3540|	|280|315|	|280|315|	|280|315|	|BNB315|BNB355|	|ANA315|ANA355|BNA315|BNA355|
39CNE0912	|250|280|315|	|250|280|315|	|250|280|315|	|2528|2831|3135|3540|4045|	|250|280|315|	|250|280|315|	|250|280|315|	|BNB315|BNB355|BNB400|	|ANA315|ANA355|ANA400|BNA315|BNA355|BNA400|
39CNE0913	|280|315|355|	|280|315|355|	|280|315|355|	|2831|3135|3540|4045|	|280|315|355|	|280|315|355|	|280|315|355|	|BNB315|BNB355|BNB400|	|ANA315|ANA355|ANA400|BNA315|BNA355|BNA400|
39CNE0914	|315|355|	|315|355|	|315|355|	|2831|3135|3540|4045|	|315|355|	|315|355|	|315|355|	|BNB315|BNB355|BNB400|	|ANA355|ANA400|BNA355|BNA400|
39CNE1015	|355|400|	|355|400|	|355|400|	|3135|3540|4045|4550|	|355|400|	|355|400|	|355|400|	|BNB315|BNB355|BNB400|BNB450|	|ANA400|ANA450|BNA400|BNA450|
39CNE1016	|355|400|	|355|400|	|355|400|	|3135|3540|4045|4550|	|355|400|	|355|400|	|355|400|	|BNB355|BNB400|BNB450|	|ANA400|ANA450|BNA400|BNA450|
39CNE1117	|400|450|	|400|450|	|400|450|	|3540|4045|4550|5056|	|400|450|	|400|450|	|400|450|	|BNB355|BNB400|BNB450|BNB500|	|ANA450|ANA500|BNA450|BNA500|
39CNE1317	|400|450|500|560|	|400|450|500|560|	|400|450|500|560|	|4045|4550|5056|5663|6371|	|400|450|500|560|	|400|450|500|560|	|400|450|500|560|	|BNB400|BNB450|BNB500|BNB560|BNB630|	|ANA450|ANA500|ANA560|ANA630|BNA450|BNA500|BNA560|BNA630|
39CNE1418	|450|500|560|	|450|500|560|	|450|500|560|	|4550|5056|5663|6371|7180|	|450|500|560|	|450|500|560|	|450|500|560|	|BNB400|BNB450|BNB500|BNB560|BNB630|	|ANA500|ANA560|ANA630|BNA500|BNA560|BNA630|
39CNE1420	|500|560|630|	|500|560|630|	|500|560|630|	|4550|5056|5663|6371|7180|	|500|560|630|	|500|560|630|	|500|560|630|	|BNB450|BNB500|BNB560|BNB630|	|ANA500|ANA560|ANA630|BNA500|BNA560|BNA630|
39CNE1518	|450|500|560|630|	|450|500|560|630|	|450|500|560|630|	|4550|5056|5663|6371|7180|8090|	|450|500|560|630|	|450|500|560|630|	|450|500|560|630|	|BNB450|BNB500|BNB560|BNB630|BNB710|	|ANA500|ANA560|ANA630|ANA710|BNA500|BNA560|BNA630|BNA710|
39CNE1522	|500|560|630|	|500|560|630|	|500|560|630|	|5056|5663|6371|7180|8090|	|500|560|630|	|500|560|630|	|500|560|630|	|BNB500|BNB560|BNB630|BNB710|	|ANA560|ANA630|ANA710|BNA560|BNA630|BNA710|
39CNE1621	|560|630|710|	|560|630|710|	|560|630|710|	|5056|5663|6371|7180|8090|	|560|630|710|	|560|630|710|	|560|630|710|	|BNB500|BNB560|BNB630|BNB710|BNB800|	|ANA560|ANA630|ANA710|ANA800|BNA560|BNA630|BNA710|BNA800|
39CNE1622	|560|630|710|	|560|630|710|	|560|630|710|	|5056|5663|6371|7180|8090|	|560|630|710|	|560|630|710|	|560|630|710|	|BNB500|BNB560|BNB630|BNB710|BNB800|	|ANA560|ANA630|ANA710|ANA800|BNA560|BNA630|BNA710|BNA800|
39CNE1822	|560|630|710|800|	|560|630|710|800|	|560|630|710|800|	|5663|6371|7180|8090|9010|	|560|630|710|800|	|560|630|710|800|	|560|630|710|800|	|BNB560|BNB630|BNB710|BNB800|BNB900|	|ANA630|ANA710|ANA800|ANA900|BNA630|BNA710|BNA800|BNA900|
39CNE1824	|630|710|800|	|630|710|800|	|630|710|800|	|5663|6371|7180|8090|9010|	|630|710|800|	|630|710|800|	|630|710|800|	|BNB560|BNB630|BNB710|BNB800|BNB900|	|ANA630|ANA710|ANA800|ANA900|BNA630|BNA710|BNA800|BNA900|
39CNE1825	|630|710|800|	|630|710|800|	|630|710|800|	|6371|7180|8090|9010|	|630|710|800|	|630|710|800|	|630|710|800|	|BNB630|BNB710|BNB800|BNB900|	|ANA710|ANA800|ANA900|BNA710|BNA800|BNA900|
39CNE2025	|630|710|800|	|630|710|800|	|630|710|800|	|6371|7180|8090|9010|1011|	|630|710|800|	|630|710|800|	|630|710|800|	|BNB630|BNB710|BNB800|BNB900|BNB1000|	|ANA710|ANA800|ANA900|ANA1000|BNA710|BNA800|BNA900|BNA1000|
39CNE2125	|710|800|900|	|710|800|900|	|710|800|900|	|6371|7180|8090|9010|1011|1112|	|710|800|900|	|710|800|900|	|710|800|900|	|BNB630|BNB710|BNB800|BNB900|BNB1000|	|ANA710|ANA800|ANA900|ANA1000|BNA710|BNA800|BNA900|BNA1000|
39CNE2226	|710|800|900|	|710|800|900|	|710|800|900|	|6371|7180|8090|9010|1011|1112|	|710|800|900|	|710|800|900|	|710|800|900|	|BNB630|BNB710|BNB800|BNB900|BNB1000|	|ANA710|ANA800|ANA900|ANA1000|BNA710|BNA800|BNA900|BNA1000|
39CNE2230	|800|900|1000|	|800|900|1000|	|800|900|1000|	|7180|8090|9010|1011|1112|	|800|900|1000|	|800|900|1000|	|800|900|1000|	|BNB710|BNB800|BNB900|BNB1000|	|ANA800|ANA900|ANA1000|BNA800|BNA900|BNA1000|
39CNE2234	|800|900|1000|	|800|900|1000|	|800|900|1000|	|8090|9010|1011|1112|	|800|900|1000|	|800|900|1000|	|800|900|1000|	|BNB710|BNB800|BNB900|BNB1000|	|ANA900|ANA1000|BNA900|BNA1000|
39CNE2330	|800|900|1000|	|800|900|1000|	|800|900|1000|	|7180|8090|9010|1011|1112|1214|	|800|900|1000|	|800|900|1000|	|800|900|1000|	|BNB710|BNB800|BNB900|BNB1000|BNB1120|	|ANA900|ANA1000|ANA1120|BNA900|BNA1000|BNA1120|
39CNE2334	|800|900|1000|	|800|900|1000|	|800|900|1000|	|8090|9010|1011|1112|1214|	|800|900|1000|	|800|900|1000|	|800|900|1000|	|BNB800|BNB900|BNB1000|BNB1120|	|ANA900|ANA1000|ANA1120|BNA900|BNA1000|BNA1120|
39CNE2434	|900|1000|	|900|1000|	|900|1000|	|8090|9010|1011|1112|1214|	|900|1000|	|900|1000|	|900|1000|	|BNB800|BNB900|BNB1000|BNB1120|	|ANA900|ANA1000|ANA1120|BNA900|BNA1000|BNA1120|
39CNE2634	|900|1000|	|900|1000|	|900|1000|	|9010|1011|1112|1214|	|900|1000|	|900|1000|	|900|1000|	|BNB800|BNB900|BNB1000|BNB1120|BNB1250|	|ANA1000|ANA1120|ANA1250|BNA1000|BNA1120|BNA1250|
39CNE2636	|900|1000|	|900|1000|	|900|1000|	|9010|1011|1112|1214|	|900|1000|	|900|1000|	|900|1000|	|BNB900|BNB1000|BNB1120|BNB1250|	|ANA1000|ANA1120|ANA1250|BNA1000|BNA1120|BNA1250|

Access Plenum	Fan Model	Motor Frame Size	Height A (mm)	Length L (mm)	Fan Section Length
200	RLM56-2528	D71	390	486	6
		D80		514	7
		D90		551	7
		D100		584	8
200	RLM56-2831	D80	430	534	7
		D90		571	7
		D100		604	8
		D112		606	8
200	RLM56-3135	D80	470	554	7
		D90		591	8
		D100		624	8
		D112		643	8
200	RLM56-3540	D80	514	694	8
		D90		621	8
		D100		654	8
		D112		656	8
		D132		723	9
300	RLM56-4045	D90	582	646	8
		D100		679	8
		D132		748	9
300	RLM56-4550	D90	645	673	9
		D100		706	9
		D112		708	9
		D132		775	10
		D160		833	11
300	RLM56-5056	D100	715	716	10
		D112		718	10
		D132		785	10
		D160		880	11
400	RLM56-5663	D112	790	759	11
		D132		826	11
		D160		921	12
400	RLM56-6371	D132	875	869	12
		D160		964	12
		D180		993	12
400	RLM56-7180	D132	975	914	13
		D160		1,009	13
		D180		1,084	13
500	RLM56-8090	D160	1,095	1,063	15
		D180		1,138	15
		D200		1,194	15

Access Plenum	Fan Model	Motor rame Size	Height A (mm)	Length L (mm)	Fan Section Length
500	RLM56-9010	D160	1,230	1,121	16
		D180		1,196	16
		D200		1,252	16
		D225		1,290	16
600	RLM56-1011	D180	1,360	1,266	18
		D200		1,321	18
		D225		1,360	18
		D250		1,453	18
		D280		1,530	19
700	RLM55-1112	D200	1,520	1,462	20
		D225		1,488	20
		D250		1,576	20
		D280		1,608	20
700	RLM55-1214	D250	1,700	1,654	23
		D250		1,736	23
300	BNB315D	D71-D90	490	586	8
		D100-D112		635	8
400	BNB355D	D80-D100	530	643	8
		D112-D132	530	740	10
400	BNB400D	D90-D112	580	693	9
		D132-D160		903	12
500	BNB450D	D90-D112	630	743	10
		D132-D160	630	953	12
500	BNB500D	D90-D112	700	784	10
		D132-D160	700	994	13
600	BNB560D	D100-D132	790	900	11
		D160-D180	790	1,088	14
700	BNB630D	D100-D132	890	945	13
		D160-D180	890	1,133	14
700	BNB710D	D112-D132	1,000	1,008	14
		D160-D200	1,000	1,256	16
800	BNB800D	D132-D180	1,120	1,248	15
		D200-D225	1,120	1,349	17
900	BNB900D	D160-D200	1,240	1,375	17
		D225-D250	1,240	1,496	18
1,000	BNB1000D	D160-D200	1,390	1,462	19
		D225-D250	1,390	1,583	19
1,100	BNB1120D	D180-D200	1,550	1,560	21
		D225-D280		1,852	22
1,200	BNB1250D	D180-D200	1,700	1,650	23
		D225-D280		1,942	23

Access Plenum	Fan Model	Motor Frame Size	Height A (mm)	Length L (mm)	Fan Section Length
1,400	BNB1400D	D180-D200	1,900	1,740	26
		D225-D280	1,900	2,032	26
300	ANA/BNA 315D	D71-D80	450	539	7
		D90-D100		611	8
		D112		628	8
400	ANA/BNA 355D	D71-D90	490	603	8
		D100-D112		652	9
		D132		732	10
400	ANA/BNA 400D	D90-D112	530	759	10
		D132-D160		889	11
500	ANA/BNA 450D	D90-D112	580	713	9
		D132-D160		923	12
500	ANA/BNA 500D	D90-D112	630	760	10
		D132-D160		970	12
600	ANA/BNA 560D	D90-D112	700	798	10
		D132-D160		1,008	13
		D180		1,066	13
700	ANA/BNA 630D	D100-D132	790	928	12
		D160-D180		1,116	14
		D200		1,176	15
700	ANA/BNA 710D	D100-D132	890	974	12
		D160-D180		1,162	14
		D200		1,222	15
800	ANA/BNA 800D	D160-D200	1,000	1,276	16
		D225		1,317	16
900	ANA/BNA 900D	D132-D180	1,120	1,278	16
		D200-D225		1,379	17
1,000	ANA/BNA 1000D	D160-D200	1,240	1,406	17
		D225-D250		1,527	19
1,100	ANA/BNA 1120D	D160-D200	1,390	1,502	18
		D225-D250		1,623	20
1,200	ANA/BNA 1250D	D180-D200	1,550	1,571	19
		D225-D280		1,863	22
1,400	ANA/BNA 1400D	D180-D200	1,700	1,702	20
		D225-D280		1,994	24

HEAT WHEEL QUICK SELECTION

AHU Size	AHU Size (Top)	Section Length	Heatwheel Model
39CNE0608	39CNE0608	4	ECW244
39CNE0609	39CNE0609	4	ECW244
39CNE0610	39CNE0610	6	HRW700
39CNE0711	39CNE0711	4 6	HRW900/ECW324
39CNE0712	39CNE0712	4 6	HRW1000/ECW364
39CNE0811	39CNE0811	6	HRW900
39CNE0813	39CNE0813	4 6	HRW1100/ECW424
39CNE0912	39CNE0912	4 6	HRW1000/ECW364
39CNE0913	39CNE0913	4 6	HRW1100/ECW424
39CNE0914	39CNE0914	4 6	HRW1200/ECW424 HRW1300/ECW484
39CNE1015	39CNE1015	5 6	ECW486
39CNE1016	39CNE1016	5 6	HRW1400/ECM544
39CNE1117	39CNE1117	5 6	HRW1500/ECM544
39CNE1317	39CNE1117 39CNE1317	6 6	HRW1500
39CNE1318	39CNE1318	5 6	HRW1600/ECW604
39CNE1320	39CNE1320	5 6	HRW1800/ECW664
39CNE1322	39CNE1322	5 6	HRW2000/ECW784
39CNE1418	39CNE1318 39CNE1418	5 6 5 6	HRW1600/ECM604
39CNE1420	39CNE1320 39CNE1420	5 6 5 6	HRW1800/ECW664
39CNE1421	39CNE1421	5 6	HRW1900/ECW724
39CNE1422	39CNE1322 39CNE1422	5 6 5 6	HRW2000/ECW784
39CNE1518	39CNE1318 39CNE1418 39CNE1518	5 6 5 6 5 6	HRW1600/ECW604

AHU Size	AHU Size (Top)	Section Length	Heatwheel Model
39CNE1521	39CNE1421 39CNE1521	5 6 5 6	HRW1900/ECW724
39CNE1522	39CNE1322 39CNE1422 39CNE1522	6 6 6	HRW2000/ECW786
39CNE1524	39CNE1524	5 6	HRW2000/ECW844
39CNE1525	39CNE1525	6 7	HRW2200/ECW906
39CNE1621	39CNE1421 39CNE1521 39CNE1621	5 6 5 6 5 6	HRW1900/ECW726
39CNE1622	39CNE1422 39CNE1522 39CNE1622	6 6 6	HRW2000/ECW786
39CNE1624	39CNE1524 39CNE1624	6 6	HRW2000/ECW846
39CNE1625	39CNE1525 39CNE1625	6 6 6 7	HRW2200/ECW906
39CNE1822	39CNE1422 39CNE1522 39CNE1622 39CNE1822	6 6 6 6	HRW2000/ECW786
39CNE1824	39CNE1524 39CNE1624 39CNE1824	6 6 6	ECW846
39CNE1825	39CNE1525 39CNE1625 39CNE1825	6 7 6 7 6 7	HRW2200/ECW906
39CNE2025	39CNE1525 39CNE1625 39CNE1825	6 7 6 7 6 7	HRW2200/ECW906

Note:
Please refer to the nearest Carrier Representative for more details.

ELECTRICAL HEATER

Model Name	Total no. of Stage	Max kW per Stage	Max kW for Section
39CNE0608	2	5.7	11.4
39CNE0609	2	6.8	13.5
39CNE0610	2	8.4	16.8
39CNE0711	2	9.0	18.0
39CNE0712	2	10.2	20.4
39CNE0811	3	9.0	27.0
39CNE0813	3	11.3	33.8
39CNE0912	3	10.2	30.6
39CNE0913	3	11.3	33.8
39CNE0914	3	12.3	36.9
39CNE1015	4	13.5	54.0
39CNE1016	4	14.7	58.8
39CNE1117	4	15.6	62.4
39CNE1317	5	15.6	78.0
39CNE1318	5	19.5	97.5
39CNE1320	5	19.5	97.5
39CNE1322	5	19.5	97.5
39CNE1418	6	16.8	100.8
39CNE1420	6	19.5	117.0
39CNE1421	6	19.5	117.0
39CNE1422	6	19.5	117.0
-	-	-	-

Model Name	Total no. of Stage	Max kW per Stage	Max kW for Section
39CNE1518	6	16.8	100.8
39CNE1521	6	19.5	117.0
39CNE1522	6	19.5	117.0
39CNE1524	6	19.5	117.0
39CNE1525	6	19.5	117.0
39CNE1621	7	19.5	136.5
39CNE1622	7	19.5	136.5
39CNE1624	7	19.5	136.5
39CNE1625	7	19.5	136.5
39CNE1822	8	19.5	156.0
39CNE1824	8	19.5	156.0
39CNE1825	8	19.5	156.0
39CNE2025	9	19.5	175.5
39CNE2125	9	19.5	175.5
39CNE2226	10	19.5	195.0
39CNE2230	10	19.5	195.0
39CNE2234	10	19.5	195.0
39CNE2330	11	19.5	214.5
39CNE2334	11	19.5	214.5
39CNE2434	11	19.5	214.5
39CNE2634	12	19.5	234.0
39CNE2636	12	19.5	234.0

FILTER TYPE, DIMENSION QUANTITY

Carrier
Turn to the Experts.

TYPE	DIMENSION (mm)	PART NO.	39CNE Unit Size																																														
			0608	0609	0610	0711	0712	0811	0813	0912	0913	0914	1015	1016	1117	1317	1318	1320	1322	1418	1420	1421	1422	1518	1521	1522	1524	1525	1621	1622	1624	1625	1822	1824	1825	2025	2125	2226	2230	2234	2330	2334	2434	2634	2636
HEPA Filter EU13P/brd	H289 X W595	3GA509-904	-	-	-	2	3	2	-	-	-	-	2	3	-	2	2	-	2	-	-	-	2	-	-	2	2	-	3	5	5	4	2	2	4	-	-	4	4	8	7	8	8	4	4
	H391 X W495	3GA509-943	-	2	2	-	-	-	-	2	2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	3GA509-944	1	-	-	1	-	1	-	2	2	4	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	3	3	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	3GA509-902	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
HEPA Filter EU13P/Alum	H289 X W595	3GA509-920	-	-	-	2	3	2	-	-	-	-	2	3	-	2	2	-	2	-	-	-	2	-	-	2	2	-	3	5	5	4	2	2	4	-	-	4	4	8	7	8	8	4	4
	H391 X W495	3GA509-951	-	2	2	-	-	-	-	2	2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	3GA509-952	1	-	-	1	-	1	-	2	2	4	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	3	3	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	3GA509-918	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
HEPA Filter EU14P/brd	H289 X W595	3GA509-925	-	-	-	2	3	2	-	-	-	-	2	3	-	2	2	-	2	-	-	-	2	-	-	2	2	-	3	5	5	4	2	2	4	-	-	4	4	8	7	8	8	4	4
	H391 X W495	3GA509-953	-	2	2	-	-	-	-	2	2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	3GA509-954	1	-	-	1	-	1	-	2	2	4	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	3	3	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	3GA509-923	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
HEPA Filter EU14P/Alum	H289 X W595	3GA509-941	-	-	-	2	3	2	-	-	-	-	2	3	-	2	2	-	2	-	-	-	2	-	-	2	2	-	3	5	5	4	2	2	4	-	-	4	4	8	7	8	8	4	4
	H391 X W495	3GA509-961	-	2	2	-	-	-	-	2	2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	3GA509-962	1	-	-	1	-	1	-	2	2	4	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	3	3	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	3GA509-939	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
1" Bag Filter EU5	H289 X W595	39GA509-373	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	4	-	-	4	-	-	4	4	5	4	5	5	-	-
	H391 X W495	39GA509-375	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	39GA509-376	1	-	-	-	-	-	-	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-
	H495 X W391	39GA509-630	-	2	2	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H595 X W289	39GA509-631	-	-	-	2	3	2	-	-	-	-	-	1	-	2	2	-	2	-	-	-	2	-	-	2	2	-	-	2	2	-	2	2	-	-	-	-	-	3	3	3	3	4	4
	H595 X W391	39GA509-632	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	39GA509-378	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
1" Bag Filter EU6	H289 X W595	39GA509-230	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	4	-	-	4	-	-	4	4	5	4	5	5	-	-
	H391 X W495	39GA509-232	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	39GA509-233	1	-	-	-	-	-	-	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-
	H495 X W391	39GA509-621	-	2	2	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H595 X W289	39GA509-622	-	-	-	2	3	2	-	-	-	-	-	1	-	2	2	-	2	-	-	-	2	-	-	2	2	-	-	2	2	-	2	2	-	-	-	-	-	3	3	3	3	4	4
	H595 X W391	39GA509-623	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	39GA509-235	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
1" Bag Filter EU7	H289 X W595	39GA509-208	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	4	-	-	4	-	-	4	4	5	4	5	5	-	-
	H391 X W495	39GA509-210	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	39GA509-211	1	-	-	-	-	-	-	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-
	H495 X W391	39GA509-618	-	2	2	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H595 X W289	39GA509-619	-	-	-	2	3	2	-	-	-	-	-	1	-	2	2	-	2	-	-	-	2	-	-	2	2	-	-	2	2	-	2	2	-	-	-	-	-	3	3	3	3	4	4
	H595 X W391	39GA509-620	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	39GA509-213	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
1" Bag Filter EU8	H289 X W595	39GA509-240	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	4	-	-	4	-	-	4	4	5	4	5	5	-	-
	H391 X W495	39GA509-242	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	39GA509-243	1	-	-	-	-	-	-	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-
	H495 X W391	39GA509-264	-	2	2	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H595 X W289	39GA509-625	-	-	-	2	3	2	-	-	-	-	-	1	-	2	2	-	2	-	-	-	2	-	-	2	2	-	-	2	2	-	2	2	-	-	-	-	-	3	3	3	3	4	4
	H595 X W391	39GA509-626	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	39GA509-245	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
1" Bag Filter EU9	H289 X W595	39GA509-270	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	4	-	-	4	-	-	4	4	5	4	5	8	-	-
	H391 X W495	39GA509-615	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	39GA509-271	1	-	-	-	-	-	-	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-
	H495 X W391	39GA509-627	-	2	2	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H595 X W289	39GA509-628	-	-	-	2	3	2	-	-	-	-	-	1	-	2	2	-	2	-	-	-	2	-	-	2	2	-	-	2	2	-	2	2	-	-	-	-	-	3	3	3	3	4	4
	H595 X W391	39GA509-629	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	39GA509-272	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
2" HVF Filter G03	H289 X W595	39GA509-038	-	-	-	2	3	2	-	-	-	-	2	3	-	2	2	-	2	-	-	-	2	-	-	2	2		3	5	5	4	2	2	4	-	-	4	4	8	7	8	8	4	4
	H391 X W495	39GA509-040	-	2	2	-	-	-	-	2	2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	39GA509-041	1	-	-	1	-	1	-	2	2	4	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	3	3	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	39GA509-043	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20
2" HVF Filter G04	H289 X W595	39GA509-026	-	-	-	2	3	2	-	-	-	-	2	3	-	2	2	-	2	-	-	-	2	-	-	2	2		3	5	5	4	2	2	4	-	-	4	4	8	7	8	8	4	4
	H391 X W495	39GA509-028	-	2	2	-	-	-	-	2	2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H391 X W595	39GA509-029	1	-	-	1	-	1	-	2	2	4	-	-	-	-	-	-	-	2	-	10	-	2	10	-	-	-	-	-	-	-	3	3	-	-	-	-	3	-	-	-	-	-	-
	H595 X W595	39GA509-031	-	-	-	-	-	-	2	-	-	-	2	2	-	4	4	6	6	4	6	-	6	4	-	6	6	8	6	6	6	8	6	6	8	12	12	12	12	15	12	15	15	20	20

GENERAL

1. Furnish and install central air handling units of the type, size and capacity shown on the equipment schedule.
2. The design of the air handling unit is based on the use of modular panels and extruded aluminum perimeter frames with composite corner piece (based on Carrier 39CNE series).
3. Units shall be horizontal/vertical draw-through type or horizontal blow-through type as shown on the certified drawings. In general, the unit shall consists of:
    - Mixing box section
    - Filter section
    - Coil section
    - Access or Plenum section
    - Heater section
    - Fan section

CASING

1. Unit shall be constructed of a complete frame with easily removable panels. Removal of any panel shall not affect the structural integrity of the unit.
2. All 39CNE unit sections shall be supplied with 10-gage G60 galvanized (100mm height) steel structural unit baseframe (optional 125mm c-channel baseframe is available if required). Lifting holes are provided for rigging purposes and are positioned to suit optimum hoisting stability.
3. The casing panels shall be solid double wall of 50mm nominal construction with injection foam insulation in between. The outer panel shall be painted 0.5mm thick galvanized steel (sky blue color– RAL 5012) and inner panel shall be unpainted 0.5mm thick galvanized steel as standard. The panel coating shall meet ASTM B117 Standard for 500-hour salt spray test.
4. The casing panels shall be insulated with injected cast-in-situ CFC-Free Polyurethane insulation foam with thermal conductivity of 0.020W/mK and a density of 40kg/m^3 in between. The insulation shall be sandwiched and encapsulated between the inner and outer panel. Exposed insulation is not acceptable.
5. Casing panels shall have no exterior exposed raw edges that could lead to rust formation. All casing corners shall be radiused or chamfered.
6. All panels shall seal against a full casing perimeter with nitrile gasket to ensure a tight seal.
7. Mixing Box section shall be solid double wall, insulated casing (as mentioned in clause 3) and complete with necessary dampers for return and fresh air mixing. Accessibility options shall be with hinged access door on hand side or hinged access doors on both sides.
    a) Viewports shall be available as a factory-installed option on the door of this section.
    b) Marine lights shall be available as a factory-installed option.
8. Filter section shall be solid double wall, insulated casing (as mentioned in clause 3) and complete with necessary tracks or filters installation. Accessibility options shall be with hinged access door on hand side or hinged access doors on both sides.
    a) Pressure gages (or pressure switches) shall be available as a factory-installed option.
    b) Filter sections shall be designed and constructed to contain one of the following filter types:
        - Face/side loading 25mm or 50mm pre-filters
        - Side loading 50mm angle filters
        - Face loading 529mm bag filters with 50mm pre-filters
        - Side loading 529mm bag filters
        - Face loading HEPA filters

CASING (cont'd)

9. Coil section shall have solid double wall, insulated casing (as mentioned in clause 3) and complete with necessary fittings for coil installation. Accessibility options shall be with hinged access door (applicable for vertical AHU) or removable access doors (applicable for Heatpipe option).
10. Access and Plenum section shall have solid double wall and insulated casing (as mentioned in clause 3). Accessibility options shall be hinged access door on hand side or hinged access doors on both sides.
    a) Viewports shall be available as a factory-installed option on the door of this section.
    b) Marine lights shall be available as a factory-installed option.
11. Heater section shall have solid double wall, insulated casing (as mentioned in clause 3) and complete with necessary fittings for heater installation. Accessibility option shall be with removable access door on the hand side.
12. Heat Recovery Wheel (HRW) section shall have solid double wall, insulated casing (as mentioned in clause 3) and complete with necessary fittings for HRW installation. Accessibility option shall be with removable access door on the hand side.
13. Fan section have solid double wall double, insulated casing (as mentioned in clause 3) and complete with necessary base for fan/motor installation. Accessibility options shall be with hinged access door on hand side or hinged access doors on both sides.
    a) Viewports shall be available as a factory-installed option on the door of this section.
    b) Marine lights shall be available as a factory-installed option.
    c) Blow-thru sections shall have a diffuser plate as an integral part of the fan section if used immediately downstream of the fan section.
    d) The fan discharge shall be square in area and isolated from the casing by flexible canvas connection.

FANS

A. General

1. Forward-curved fans shall have double width double inlet (DWDI) fan impeller and scroll. They shall be constructed of galvanized steel and shall be designed for continuous operation at the maximum rated fan speed and motor horsepower. Completed fan assembly shall be statically and dynamically balanced in accordance to ISO 1940.
2. Backward inclined fans shall have double width double inlet (DWDI) fan impeller and scroll. The fan assembly shall be cleaned, primed and painted with epoxy paint and shall be designed for continuous operation at the maximum rated fan speed and motor horse-power. Completed fan assembly shall be statically and dynamically balanced in accordance to ISO 1940.
3. Airfoil fan sections shall have one double width double inlet (DWDI) airfoil fan impeller and scroll. The fan assembly shall be cleaned, primed and painted with epoxy paint and shall be designed for continuous operation at the maximum rated fan speed and motor horse-power. Completed fan assembly shall be statically and dynamically balanced in accordance to ISO 1940.
4. Plenum/Plug fan sections shall have one single width single inlet (SWSI) fan impeller and scroll. The fan assembly shall be cleaned, primed and painted with epoxy paint. Completed fan assembly shall be statically and dynamically balanced in accordance to ISO 1940. Plug fan shall be direct driven.
5. Fan wheels shall be keyed to the shaft and shall be designed for continuous operation at maximum rated fan speed and motor horsepower. Fan wheels and shafts shall be selected with a maximum operating speed 25% below the first critical speed.
6. Fan shafts shall be solid carbon steel, turned, ground, polished and coated with protective paint. Hollow shafts are not acceptable.
7. Recommended fan discharge outlet velocity is between 10~12 m/s.
8. For variable air volume control, variable frequency drive (VFD) shall be supplied as indicated on the equipment schedule.

FANS (cont'd)

B. Performance Ratings

Air performance ratings of the fans shall be rated and certified in accordance with AMCA Standard 210.

C. Sound Ratings

Manufacturer shall publish first through eight octave sound power for fan inlet, fan discharge and airborne.

D. Mounting

Fan scroll, impeller, shaft, bearing, drives and motor shall be mounted on a common base assembly. The base assembly shall be isolated from the outer casing with factory-installed 2" helical spring deflector and flexible canvas connection.

E. Bearing

Fan bearings are with nominal 200,000hrs average life (L_{50}) as standard for all fans.

MOTOR

1. The motor size, type, speed and its electrical characteristics shall be as per the equipment schedule.
2. Fan motors shall be mounted within the fan section casing on slide rails to aid in belt tightening.
3. Fan motors shall be IP55 enclosure, totally enclosed fan cooled (TEFC) with class F insulation (optional with class H insulation) and class B temperature rise complying with BS2757.
4. Fan motors shall be standard efficiency (IE1) type. Optional high efficiency (IE2) or premium efficiency (IE3) motors shall be available, if specified. Motor efficiency class shall be based on IEC 60034-30:2008 Standard.
5. The motors shall be suitable for operation at ambient temperature of 40^{o}C (max) with ±10% voltage utilization range and a 1.15 minimum service factor. For operation > 40^{o}C please check with factory representative.

DRIVES

1. The drive assembly shall consist of V-belts and a set of fan and motor pulleys adequately sized to meet the specified performance.
2. The V-belts shall be SPZ, SPA, SPB or SPC grades, oil and heat resistance and having anti-static characteristic which prevent electrical discharge.

DRIVES (cont'd)

3. The motor and fan pulley dimension shall conform to ISO 4183 and shall be using taper-lock bush with set screws for easy and quick assemble and disassemble process. The pulley shall be phosphated and coated with a layer of rust prohibitive paint for protection against corrosion.
4. Drive shall be designed for a minimum 1.5 service factor as standard with a 2.0 service factor as option. Drives shall be fixed pitch with variable pitch as an option. All drives shall be factory mounted with sheaves properly aligned and balanced.

COILS

A. General

1. All cooling, heating and refrigerant (DX) coils shall be provided to meet the scheduled performance.
2. All coil performances shall be rated in accordance with AHRI 410 Standard and shall be tested at 400 psig air pressure while submerged under water.
3. All coils shall have minimum 12.7mm (1/2-in.) OD seamless copper tubes mechanically expanded into fins to ensure high thermal performance. Optional is with 9.5mm (3/8") OD copper tubes (applicable for cooling coil only).
4. All coils shall be with aluminum fin with belled collars. Optional copper fins or fins with protective coatings shall be supplied, if specified. Protective coatings shall be post coated and sprayed type only.
5. All aluminum fin coils shall be supplied with galvanized casing and steel tube sheets. Optional stainless steel or aluminum tube sheet shall be supplied, if specified. Copper fin coils shall be supplied with stainless steel casing and tube sheets.
6. All water coils shall be with 1 – 8 rows and 8,10,12,14 fin per inch (fpi) whereas refrigerant coils shall be with 4 ,6 rows and 8,10,12,14 fin per inch (fpi).
7. Moisture eliminator shall be provided, if specified on the equipment schedule to trap moisture droplets. The moisture eliminator material shall be aluminum, mesh aluminum or PVC type as specified.

B. Cooling and Heating

1. Headers shall be constructed of seamless steel pipe material with threaded (MPT) connections. Headers shall have drain and vent connections accessible from the exterior of the unit. Optional copper headers with sweat connection shall be supplied if specified.
2. Coils shall be drainable, with non-trapping circuits and without turbulence promoting devices. Coils will be suitable for a design working pressure of 300 psig at 93^{o}C (cooling coils) or 175 psig at 205^{o}C (heating coils).
3. Coil shall be designed for counter flow arrangements (chilled water/hot water flow against airflow direction).

C. Direct Expansion (DX)

1. Headers shall be constructed of seamless copper pipe material with brazed joints.
2. DX coil circuiting shall include dual distributors arrangement for all sizes (optional single distributor arrangement for 39CNE0608 – 39CNE0813). Brass nozzles and distributors are factory supplied to ensure uniform flow. Thermal expansion valves shall be provided if specified.
3. DX coils shall have full face active area with row-split intertwined circuits for equal loading (optional face-split if specified). Suction and thermal valve connection shall be on the same side.
4. DX coils shall be designed for counter flow arrangements (refrigerant flow against airflow direction).

COILS (cont'd)

D. Drain Pans

1. Drain pans shall be single wall, 1.5mm thick galvanized (and powder painted) or SS304 stainless steel construction as specified. The drain pan depth shall be 40mm with 500mm width and insulated with 3mm PE closed cell insulation underneath to prevent condensation.
2. The drain pan shall be sloped toward the drain fitting to ensure positive condensate drainage and shall extend downstream of the coil to provide sufficient amount of space to contain moisture carry-over. Drain pan shall allow no standing water and design in accordance to ASHRAE Standard 62.
3. Drain pan shall have a side drainage design with MPT connection (43mm OD) for side discharge and trapping. One drain outlet shall be supplied for each cooling coil section unless otherwise indicated.
4. Where 2 or more coils are stacked in a coil bank, intermediate drain pans shall be provided and the condensate shall be piped to the bottom drain pan. The bottom coil shall not serve as a drain path for the upper coil.
5. The coil shall not sit in the drain pan and shall be removable via a coil track.

ELECTRICAL HEATERS

1. Electric heater capacity and steps shall be as indicated on the equipment schedule. See electrical table for details.
2. The electric heater element shall be constructed from 80/20 nickel chrome resistance wire which is connected to terminal pins and centered in SS304 stainless steel sheath tubes by compressed magnesium oxides.
3. The manufacturer shall furnish a control box (if required) containing contactor, thermostat and circuit breaker. Heater control box shall be mounted on the designated hand side of the unit.

FILTER

1. Provide the type and efficiency of the filters as per the equipment schedule.
2. High velocity filter sections shall accept 25mm or 50mm (G3 or G4) washable or throw-away filters.
3. Angle filter sections shall accept 50mm (G3) washable filters of standard flat filter sizes, arranged in a horizontal V formation.
4. Bag filter sections shall be capable of accepting (F5 - F9) bag filters with length up to 529mm with 22mm header.
5. Blow-thru HEPA filter sections shall contain a face loading filter frame and be capable of accepting standard size 300mm deep HEPA filters (H13-H14).
6. Optional Magnehelic/ Minihelic filter gages (or filter switches) complete with necessary tubing to measure the pressure drop across the filters shall be provided if specified.

European Efficiency Guide	Filter Details	Media	Frame Material	MERV rating
G3	Panel - Pimary Filter	Pleated type : Synthetic fibre	Galvanize Iron / Aluminium	MERV 5
G4	Panel - Pimary Filter	Pleated type : Synthetic fibre	Beverage Board / Aluminium	MERV 7
F5 - F9	Bag - Secondary Filter	Pocket type : Synthetic fibre	Galvanize Iron / Aluminium	MERV 10 - 15
H13 - H14	HEPA	Water resistance fiberglass	Particle Board	-

Arrestance and Dust Spot Efficiency ratings are based on the ASHRAE 52 test method.
Minimum Efficiency Reporting Value (MERV) ratings are based on the ASHRAE 52 test method.
European Efficiency Classes are based on European Standards EN 779 and EN 1882.

MXB DAMPERS

1. Provide factory installed opposed acting dampers as per the approved drawings.
2. Damper frame shall be made of extruded and anodized aluminum. Damper blades shall also be extruded and anodized aluminum airfoil shape to withstand high velocity and static pressure. Dampers shall be provided with flexible synthetic blade edge seals for low leakage application.
3. Damper shall be sectionalized to limit blade length to be less than 1800mm in order to prevent excessive blade warping. Outdoor air and return air damper size shall be of the same area for equal air mixing.

ACCESSORIES

A. Viewports

1. Viewports shall be available as factory installed option on access doors. The viewports shall be fabricated from round, double plane, clear and rigid polycarbonate with a minimum diameter of 200mm and installed with screws that do not come into direct contact with the internal surface of the air handling unit.
2. The viewport shall be gasketed on the internal and external surface with thermoplastic elastomer (TPE) gaskets to ensure air-tightness. The viewport shall be capable of withstanding unit operating pressures.

B. Marine Lamp

1. Marine lamps shall be available as factory installed option on the mixing box, empty and fan sections of the air handling unit. The construction shall be vapor tight and rated to IP44.
2. The marine lamps shall consist of a structural light fitting base with aluminum reflector receptacle and structural glass globe protected by wire mesh.
3. The marine lamps shall come fitted with a light bulb complete with factory installed wiring and terminated with an IP55 rated switch located external to the unit.

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JAN	**2018**