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**Air Conditioners**

**CFM RANGE FROM 600 TO 2,000**  
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**NRFH**

**FAN COIL UNIT**

District Cooling





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Construction Solutions



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Nehmeh is recognized as one of the leading integrated manufacturing & trading companies headquartered in Doha, Qatar. Nehmeh is engaged in every aspect of the automotive, construction, heat transfer, service and the woodworking industries, including manufacturing, distribution, marketing, sales and after sales, and in addition to investing in renewable and advanced technologies.

The original company name, Anton Nehmeh, has roots which can be traced back to 1955 in Doha, Qatar. As years went by and experiences were gained, Nehmeh developed other businesses, namely Nehmeh Enterprises & Industries and Nehmeh Corporation. Subsequently, Nehmeh were appointed authorized dealers for many world renowned brands and has made those brands leaders in the Qatari market.

Our Vision have been set out to put on us o course to becoming a regional player in providing innovative & quality solutions by our People to our valued customers.

Today, the quality-endorsed Group is recognized as one of the leading provider of award-winning industrial solutions and offering a broad spectrum of products and services to the government, municipalities, the business community at large and above all the industrial sector and operates in the State of Qatar & the Kingdom of Bahrain and is continuously undergoing transformation for providing markets with a choice of quality. Nehmeh's sustainability initiatives include various commitments and outreach programs, some of which include community service as part of our gratitude and great pride in contributing to the local communities where we live and work as well our care to the environment and are proud of the many ways in which our family of dedicated staff and management and selected products & services work hard to safeguard and protect our planet.

As an integrated global organization, we provide sustained value to our local customers and deliver consistent profitability as well as solid cash flow to our shareholders.

We are environmentally-balanced and committed to continuous performance improvement through innovation, quality, organizational efficiency and employee development.



## ORGANIZATION, INNOVATION, QUALITY, EFFICIENCY AND DEVELOPMENT

### Performing Excellence

Nehmeh Group is an integrated global organization. As an international team, we work on the common objective to continuously exceed our performance, and thereby sustain competitiveness through consistent profitability and growth.

### Leadership & Team Spirit

We value the diversity of our organization, always treating each other and our business partners with integrity and respect. The fundamental principles of our leadership are listening, communication, and people development.

### Innovation & Quality

We are committed to continuously exceeding our product range and services, product quality and reliability, as well as our internal processes, while remaining flexible to quickly respond to changing customer requirements.

# EFFICIENT SERVICES FOR QUALITY FOLLOW-UP

To answer to all questions that can ask our customers, from installation, start-up and maintenance of all our ranges of machines, Nehmeh activity has implemented service with a high level of quality.

Customer's satisfaction and an answer to all his requests about our products represent our first priority. In this way, Nehmeh activity is committed to a continuous improvement of its service to professional customers, actions oriented around 3 main axes: training, spare parts and technical support.

# RESEARCH & DEVELOPMENT

## Innovation & Quality

Innovation and Quality are one important parts of Nehmeh's philosophy. Spending all our energy to continuously develop innovative products for our customer will ensure our market position. More than 130 people are devoted to study products with a special are to the energy efficiency and acoustic emission issues for a better quality of life.

## Certifications

The company plants are ISO 9001 certified by most recognized certification bodies and a voluntary initiative which will ensure that capacity ratings and design properties have been verified by independent laboratories according to international standards.

## Technology & Environment

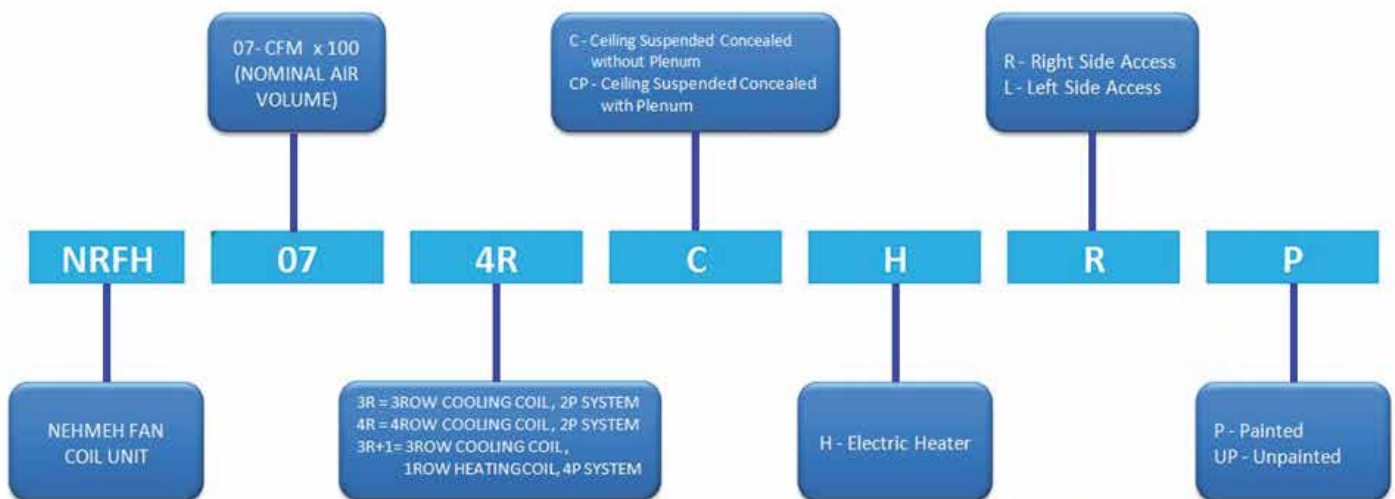
Nehmeh's primary objective is to design and offer air conditioning systems that meet both the highest standards of environmental protection and users' legitimate expectations in terms of comfort and wellbeing.

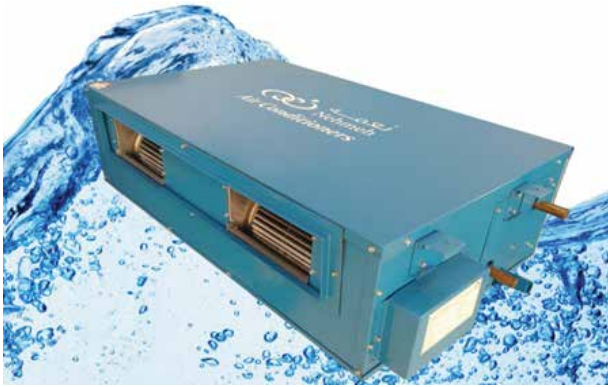
For Nehmeh, innovation has to be linked tightly to a respect for the environment and must include stringent requirements in terms of quality levels. This ongoing concern governs all our actions and involves all our human and technological resources. Moreover, with a constant care for participating in preserving the environment, Nehmeh designs and markets high efficiency products that reduce CO<sub>2</sub> emissions into the atmosphere and minimize our contribution to global warming.

With the new and wide range of NRFH Series Fan Coil Units, Nehme has diversified its current range of products to meet customer requirement in HVAC field. Nehme’s products follow stringent policy of research and development. With safety as a priority during production, all products use top quality components that meet the relevant standards.

Our total Quality policy is ensured by standard working procedures, with tests and inspections during all production phases.

Our Fan Coil Units are suitable for commercial and residential applications.





The NRFH fan coil is a terminal with a centrifugal fan. It is characterized by its modern design and can be installed in any environment.

### MAIN FEATURES

- Cooling capacities ranging from 7 to 17.5 kW
- Can be combined with all the STANDARD and ADVANCE chilling unit range
- Horizontal configuration
- 3 installation versions:  
 NRFH 3R: with 2 tubes  
 NRFH 4R: with 2 tubes

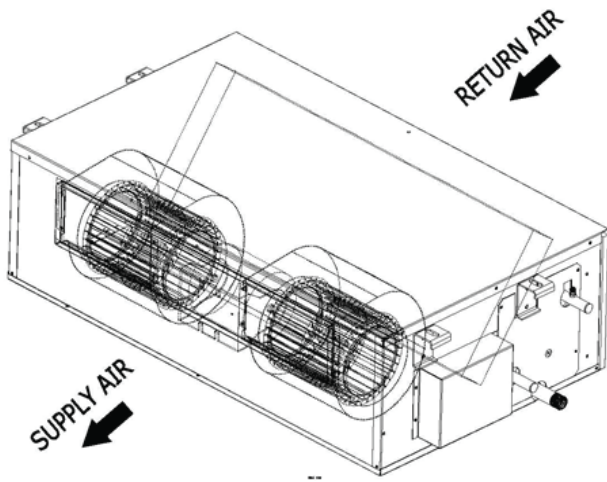
NRFH 3R+1: with 4 tubes



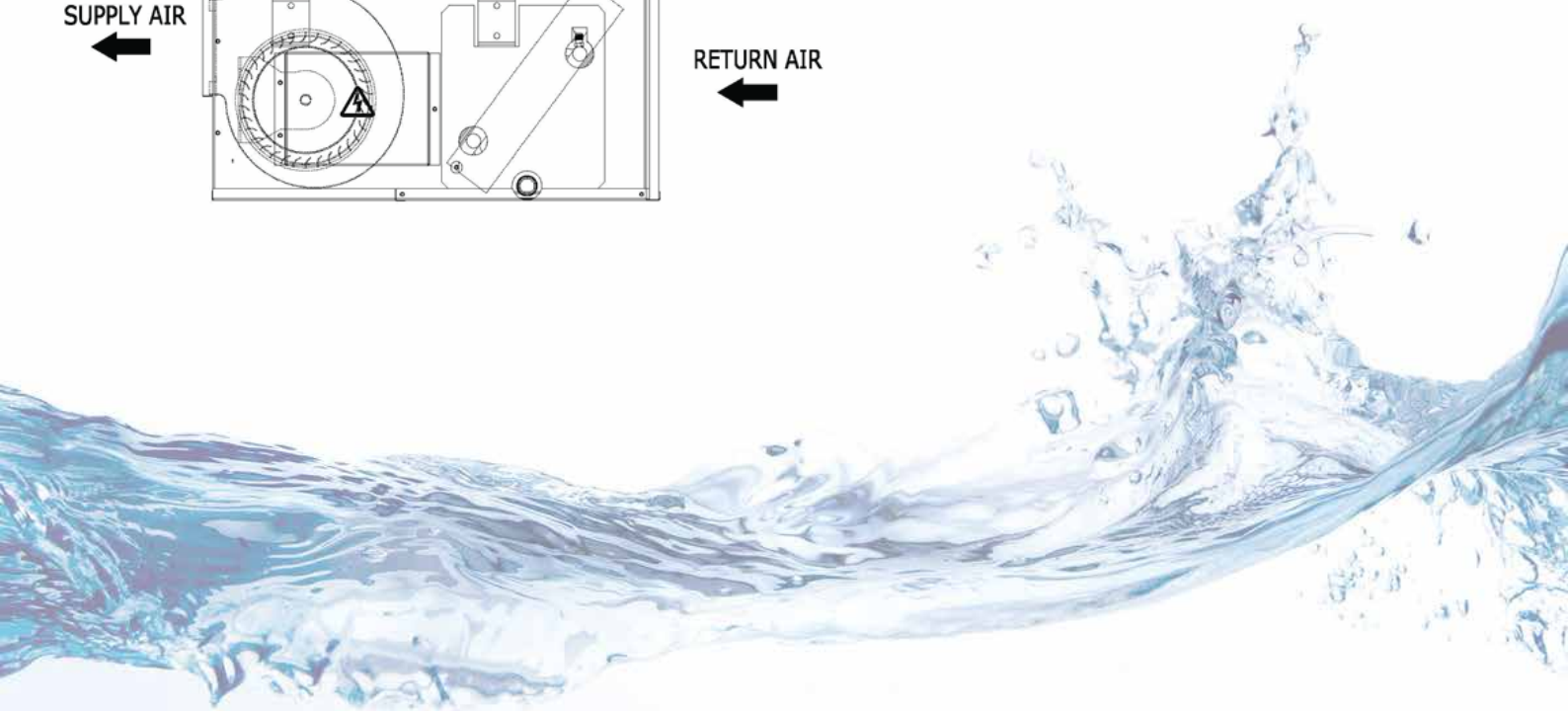
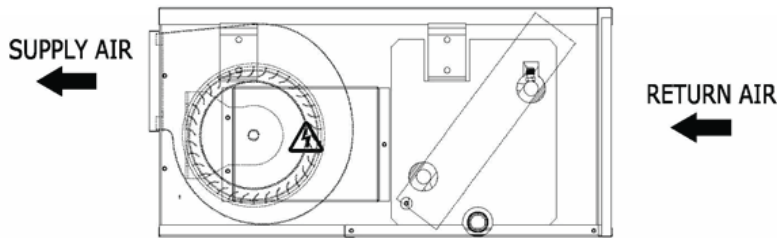
- Access Side:  
 NRFH: horizontal version with RH Access (Facing from Air Flow Direction).  
 NRFH: horizontal version with LH Access (Facing from Air Flow Direction).



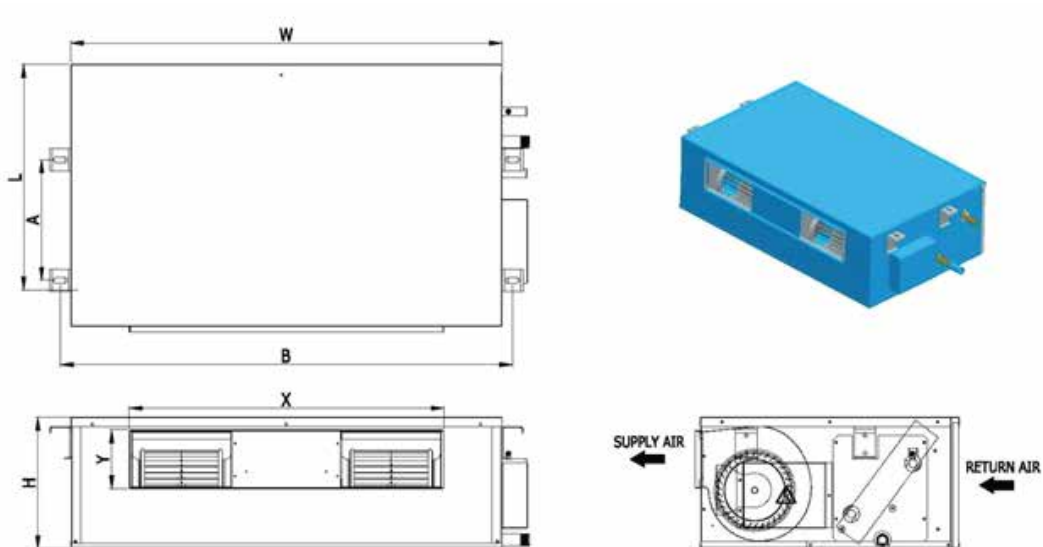
# AIR SUPPLY / RETURN CONFIGURATIONS



Rear Air Intake and Front Discharge



## CEILING SUSPENDED CONCEALED UNIT



### Application:

Ceiling suspended, concealed application with chilled water coils. Units casing shall be thermally and acoustically insulated with 8 mm Self Adhesive insulation.

Model		NRF <sub>H</sub> -06	NRF <sub>H</sub> -08	NRF <sub>H</sub> -10	NRF <sub>H</sub> -12	NRF <sub>H</sub> -14	NRF <sub>H</sub> -16	NRF <sub>H</sub> -20
<b>Application</b>		District Cooling						
<b>COILS</b>	No. of Rows	4						
	Face Area, ft <sup>2</sup> (m <sup>2</sup> )	2.79 (0.26)	2.79 (0.26)	2.79 (0.26)	3.50 (0.33)	3.50 (0.33)	4.59 (0.43)	4.59 (0.43)
	Connections, Sweat Type	3/4"						
	Fin Thickness, Inch (mm)	0.006 (0.152)						
	Air Vent	Manual and Furnished on All Coils						
	Fin Material	Phenolic Coated Blue Aluminum						
	Fin Spacing, FPI	12						
	Tube Material	Copper						
	Test Pressure	450 psig						
<b>FANS</b>	Number Per Unit	2						
	Type	Double Width Double Inlet Forward Curved Directly Driven						
	Construction	Galvanized Steel - Dynamically Balanced						
	Housing	Galvanized Steel						
<b>MOTORS</b>	Watt (hp) <b>Premium Efficiency</b>	250 (1/3)	250 (1/3)	373 (1/2)	373 (1/2)	373 (1/2)	560 (3/4)	560 (3/4)
	No. of Speed	3						
	Quantity	1	1	1	1	1	1	1
	Optional	EC Motors						
<b>Finish</b>		Galvanized Steel with Paint Finish						
<b>Optional</b>	Thermostat	Optional						
	2 Way / 3 Way Valves	Optional						
	Stainless Steel Drain Pan	Optional						
	Duct Heater	Optional						
	Thread Type Coil Connection	Optional						
Unit Operating Weight, kg		40	41	41	57	57	60	63

## SUPPLY AIR PERFORMANCE

Model	Speed	External Static Pressure (Inch WG)								
		0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Air Flow (CFM)										
<b>NRF<sub>H</sub>-06</b>	High	881	838	795	767	739	711	682	655	629
<b>NRF<sub>H</sub>-08</b>	High	956	906	857	820	783	748	713	686	658
<b>NRF<sub>H</sub>-10</b>	High	1235	1204	1172	1138	1105	1072	1039	999	959
<b>NRF<sub>H</sub>-12</b>	High	1350	1320	1291	1257	1222	1178	1135	1091	1047
<b>NRF<sub>H</sub>-14</b>	High	1477	1437	1396	1349	1302	1249	1197	1150	1103
<b>NRF<sub>H</sub>-16</b>	High	2010	1958	1905	1854	1803	1761	1719	1652	1585
<b>NRF<sub>H</sub>-20</b>	High	2072	2019	1966	1909	1853	1799	1746	1678	1610
<b>NRF<sub>H</sub>-06</b>	Med	771	731	692	662	632	603	574	552	530
<b>NRF<sub>H</sub>-08</b>	Med	793	755	716	685	654	624	594	570	547
<b>NRF<sub>H</sub>-10</b>	Med	1070	1049	1027	1002	976	947	917	881	846
<b>NRF<sub>H</sub>-12</b>	Med	1221	1186	1152	1109	1066	1020	975	937	899
<b>NRF<sub>H</sub>-14</b>	Med	1270	1235	1200	1152	1104	1053	1002	963	924
<b>NRF<sub>H</sub>-16</b>	Med	1784	1743	1701	1653	1605	1555	1506	1447	1389
<b>NRF<sub>H</sub>-20</b>	Med	1796	1760	1724	1681	1638	1589	1539	1479	1419
<b>NRF<sub>H</sub>-06</b>	Low	596	568	540	517	495	472	450	432	415
<b>NRF<sub>H</sub>-08</b>	Low	606	579	551	531	511	488	466	448	430
<b>NRF<sub>H</sub>-10</b>	Low	866	847	828	811	794	775	756	727	698
<b>NRF<sub>H</sub>-12</b>	Low	965	940	916	879	843	804	765	735	705
<b>NRF<sub>H</sub>-14</b>	Low	977	954	931	897	863	825	786	756	725
<b>NRF<sub>H</sub>-16</b>	Low	1453	1423	1394	1365	1336	1300	1264	1215	1166
<b>NRF<sub>H</sub>-20</b>	Low	1454	1421	1389	1360	1332	1301	1270	1221	1171

### Notes:

1. CFM values are for Dry Coil conditions. Wet coils are 92% of Dry Coil CFM. Wet coil conditions occur when SH/TH ratio is 0.91 or less.
2. The above values include 4 Rows Cooling coil & Nylon Air Filter.
3. For ESP other than listed in the above tables, contact manufacturer's representative.

PERFORMANCE DATA TABLE (4ROW COIL) - ENGLISH SYSTEM

ESP (In.Wg)		0.1					0.2					0.3				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		CFM	Btuh	Btuh	GPM	FT.WG	CFM	Btuh	Btuh	GPM	FT.WG	CFM	Btuh	Btuh	GPM	FT.WG
6	High	881	25822	18740	3.26	9.50	795	23305	16913	2.94	8.57	739	21667	15724	2.73	7.97
8	High	956	28016	20332	3.53	11.59	857	25110	18223	3.17	10.39	783	22936	16645	2.89	9.49
10	High	1235	33703	24772	4.25	14.98	1172	31979	23505	4.03	14.21	1105	30144	22156	3.80	13.40
12	High	1350	35980	26554	4.54	14.55	1291	34412	25397	4.34	13.92	1222	32574	24040	4.11	13.17
14	High	1477	39381	29063	4.97	15.93	1396	37218	27467	4.69	15.05	1302	34705	25612	4.38	14.04
16	High	2010	52293	38758	6.59	21.67	1905	49550	36725	6.25	20.54	1803	46900	34761	5.91	19.44
20	High	2072	52865	39311	6.67	22.33	1966	50160	37299	6.32	21.19	1853	47280	35157	5.96	19.97
6	Med	771	22593	16397	2.85	8.31	692	20267	14708	2.56	7.46	632	18513	13436	2.33	6.81
8	Med	793	23245	16870	2.93	9.62	716	20988	15231	2.65	8.69	654	19154	13901	2.42	7.93
10	Med	1070	29206	21466	3.68	12.98	1027	28035	20606	3.53	12.46	976	26642	19582	3.36	11.84
12	Med	1221	32536	24012	4.10	13.16	1152	30694	22653	3.87	12.41	1066	28418	20973	3.58	11.49
14	Med	1270	33859	24988	4.27	13.69	1200	31990	23609	4.03	12.94	1104	29417	21710	3.71	11.90
16	Med	1784	46401	34391	5.85	19.23	1701	44253	32799	5.58	18.34	1605	41736	30933	5.26	17.30
20	Med	1796	45830	34079	5.78	19.36	1724	43993	32713	5.55	18.58	1638	41807	31087	5.27	17.66
6	Low	596	17466	12675	2.20	6.42	540	15811	11474	1.99	5.82	495	14511	10531	1.83	5.34
8	Low	606	17772	12898	2.24	7.35	551	16135	11709	2.03	6.68	511	14967	10862	1.89	6.19
10	Low	866	23642	17377	2.98	10.51	828	22587	16601	2.85	10.04	794	21670	15927	2.73	9.63
12	Low	965	25711	18975	3.24	10.40	916	24415	18018	3.08	9.87	843	22470	16583	2.83	9.09
14	Low	977	26031	19211	3.28	10.53	931	24816	18315	3.13	10.04	863	23007	16979	2.90	9.30
16	Low	1453	37785	28005	4.76	15.66	1394	36265	26878	4.57	15.03	1336	34745	25752	4.38	14.40
20	Low	1454	37100	27588	4.68	15.67	1389	35443	26356	4.47	14.97	1332	33983	25270	4.28	14.36

ESP (In.Wg)		0.4					0.5				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		CFM	Btuh	Btuh	GPM	FT.WG	CFM	Btuh	Btuh	GPM	FT.WG
6	High	682	19984	14503	2.52	7.35	629	18430	13375	2.32	6.78
8	High	713	20904	15170	2.64	8.65	658	19277	13990	2.43	7.98
10	High	1039	28364	20847	3.58	12.61	959	26157	19226	3.30	11.63
12	High	1135	30249	22324	3.81	12.23	1047	27896	20587	3.52	11.28
14	High	1197	31894	23538	4.02	12.90	1103	29412	21707	3.71	11.89
16	High	1719	44711	33138	5.64	18.53	1585	41232	30560	5.20	17.09
20	High	1746	44553	33129	5.62	18.82	1610	41086	30552	5.18	17.36
6	Med	574	16827	12212	2.12	6.19	530	15518	11262	1.96	5.71
8	Med	594	17394	12624	2.19	7.20	547	16041	11641	2.02	6.64
10	Med	917	25025	18394	3.16	11.12	846	23078	16963	2.91	10.26
12	Med	975	25980	19174	3.28	10.51	899	23959	17682	3.02	9.69
14	Med	1002	26708	19711	3.37	10.80	924	24630	18177	3.11	9.96
16	Med	1506	39172	29033	4.94	16.23	1389	36124	26774	4.55	14.97
20	Med	1539	39270	29201	4.95	16.59	1419	36215	26929	4.57	15.30
6	Low	450	13173	9560	1.66	4.85	415	12148	8816	1.53	4.47
8	Low	466	13659	9913	1.72	5.65	430	12596	9142	1.59	5.21
10	Low	756	20642	15172	2.60	9.17	698	19036	13991	2.40	8.46
12	Low	765	20391	15048	2.57	8.25	705	18804	13878	2.37	7.60
14	Low	786	20955	15465	2.64	8.47	725	19324	14262	2.44	7.82
16	Low	1264	32880	24370	4.15	13.63	1166	30322	22474	3.82	12.57
20	Low	1270	32413	24103	4.09	13.69	1171	29892	22227	3.77	12.63

Note: Data is based on 78/65°F (25.5/18.3°C) air on-coil DBT/WBT and 42/58 °F (5.5/14.4°C) entering/leaving water temperature

## PERFORMANCE DATA TABLE (4ROW COIL) - ENGLISH SYSTEM

ESP (In.Wg)		0.1					0.2					0.3				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		CFM	Btuh	Btuh	GPM	FT.WG	CFM	Btuh	Btuh	GPM	FT.WG	CFM	Btuh	Btuh	GPM	FT.WG
6	High	881	31455	21012	3.97	9.50	795	28389	18964	3.58	8.57	739	26393	17631	3.33	7.97
8	High	956	34128	22798	4.30	11.59	857	30587	20433	3.86	10.39	783	27939	18663	3.52	9.49
10	High	1235	41072	27755	5.18	14.98	1172	38971	26335	4.91	14.21	1105	36734	24823	4.63	13.40
12	High	1350	43156	29348	5.44	14.55	1291	41275	28069	5.20	13.92	1222	39070	26570	4.93	13.17
14	High	1477	45305	31017	5.71	15.93	1396	42817	29314	5.40	15.05	1302	39926	27334	5.03	14.04
16	High	2010	65881	44625	8.31	21.67	1905	62426	42285	7.87	20.54	1803	59087	40023	7.45	19.44
20	High	2072	62684	43005	7.90	22.33	1966	59476	40804	7.50	21.19	1853	56061	38461	7.07	19.97
6	Med	771	27522	18385	3.47	8.31	692	24688	16492	3.11	7.46	632	22552	15065	2.84	6.81
8	Med	793	28316	18915	3.57	9.62	716	25566	17078	3.22	8.69	654	23333	15586	2.94	7.93
10	Med	1070	35591	24051	4.49	12.98	1027	34165	23087	4.31	12.46	976	32467	21940	4.09	11.84
12	Med	1221	39025	26539	4.92	13.16	1152	36815	25037	4.64	12.41	1066	34086	23180	4.30	11.49
14	Med	1270	38953	26668	4.91	13.69	1200	36802	25196	4.64	12.94	1104	33842	23169	4.27	11.90
16	Med	1784	58458	39597	7.37	19.23	1701	55752	37764	7.03	18.34	1605	52581	35616	6.63	17.30
20	Med	1796	54342	37282	6.85	19.36	1724	52164	35788	6.58	18.58	1638	49571	34009	6.25	17.66
6	Low	596	21276	14212	2.68	6.42	540	19260	12866	2.43	5.82	495	17677	11808	2.23	5.34
8	Low	606	21649	14462	2.73	7.35	551	19654	13129	2.48	6.68	511	18231	12179	2.30	6.19
10	Low	866	28812	19470	3.63	10.51	828	27525	18600	3.47	10.04	794	26408	17845	3.33	9.63
12	Low	965	30839	20972	3.89	10.40	916	29284	19915	3.69	9.87	843	26951	18328	3.40	9.09
14	Low	977	29947	20503	3.78	10.53	931	28550	19546	3.60	10.04	863	26468	18121	3.34	9.30
16	Low	1453	47603	32244	6.00	15.66	1394	45688	30947	5.76	15.03	1336	43774	29650	5.52	14.40
20	Low	1454	43990	30180	5.55	15.67	1389	42026	28833	5.30	14.97	1332	40294	27644	5.08	14.36

ESP (In.Wg)		0.4					0.5				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		CFM	Btuh	Btuh	GPM	FT.WG	CFM	Btuh	Btuh	GPM	FT.WG
6	High	682	24344	16262	3.07	7.35	629	22450	14997	2.83	6.78
8	High	713	25464	17010	3.21	8.65	658	23483	15687	2.96	7.98
10	High	1039	34565	23358	4.36	12.61	959	31876	21541	4.02	11.63
12	High	1135	36282	24674	4.57	12.23	1047	33459	22754	4.22	11.28
14	High	1197	36692	25120	4.63	12.90	1103	33837	23166	4.27	11.89
16	High	1719	56329	38154	7.10	18.53	1585	51946	35186	6.55	17.09
20	High	1746	52827	36243	6.66	18.82	1610	48717	33423	6.14	17.36
6	Med	574	20498	13693	2.58	6.19	530	18903	12628	2.38	5.71
8	Med	594	21189	14154	2.67	7.20	547	19540	13053	2.46	6.64
10	Med	917	30497	20609	3.85	11.12	846	28124	19005	3.55	10.26
12	Med	975	31162	21192	3.93	10.51	899	28737	19543	3.62	9.69
14	Med	1002	30726	21035	3.87	10.80	924	28335	19399	3.57	9.96
16	Med	1506	49351	33428	6.22	16.23	1389	45511	30827	5.74	14.97
20	Med	1539	46564	31946	5.87	16.59	1419	42941	29460	5.41	15.30
6	Low	450	16047	10719	2.02	4.85	415	14798	9885	1.87	4.47
8	Low	466	16639	11115	2.10	5.65	430	15344	10250	1.93	5.21
10	Low	756	25155	16999	3.17	9.17	698	23198	15676	2.92	8.46
12	Low	765	24457	16632	3.08	8.25	705	22554	15338	2.84	7.60
14	Low	786	24107	16504	3.04	8.47	725	22232	15220	2.80	7.82
16	Low	1264	41424	28059	5.22	13.63	1166	38201	25876	4.82	12.57
20	Low	1270	38434	26368	4.85	13.69	1171	35443	24316	4.47	12.63

Note: Data is based on 80/67°F (26.7/19.4°C) air on-coil DBT/WBT and 45/55 °F (7.2/12.78°C) entering/leaving water temperature

## PERFORMANCE DATA TABLE (4ROW COIL) - METRIC SYSTEM

ESP (Pa)		25					50					75				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		l/s	kW	kW	l/s	kPa	l/s	kW	kW	l/s	kPa	l/s	kW	kW	l/s	kPa
6	High	416	7.56	5.49	0.21	28.40	375	6.82	4.95	0.19	25.63	349	6.34	4.60	0.17	23.83
8	High	451	8.20	5.95	0.22	34.67	404	7.35	5.34	0.20	31.07	369	6.72	4.87	0.18	28.38
10	High	583	9.87	7.25	0.27	44.79	553	9.36	6.88	0.25	42.50	521	8.83	6.49	0.24	40.06
12	High	637	10.54	7.78	0.29	43.51	609	10.08	7.44	0.27	41.61	577	9.54	7.04	0.26	39.39
14	High	697	11.53	8.51	0.31	47.62	659	10.90	8.04	0.30	45.00	614	10.16	7.50	0.28	41.97
16	High	949	15.31	11.35	0.42	64.80	899	14.51	10.75	0.39	61.40	851	13.73	10.18	0.37	58.12
20	High	978	15.48	11.51	0.42	66.77	928	14.69	10.92	0.40	63.36	874	13.84	10.29	0.38	59.72
6	Med	364	6.62	4.80	0.18	24.85	326	5.93	4.31	0.16	22.29	298	5.42	3.93	0.15	20.36
8	Med	374	6.81	4.94	0.18	28.76	338	6.15	4.46	0.17	25.97	308	5.61	4.07	0.15	23.70
10	Med	505	8.55	6.29	0.23	38.81	485	8.21	6.03	0.22	37.26	461	7.80	5.73	0.21	35.40
12	Med	576	9.53	7.03	0.26	39.34	543	8.99	6.63	0.24	37.12	503	8.32	6.14	0.23	34.36
14	Med	599	9.91	7.32	0.27	40.94	567	9.37	6.91	0.25	38.68	521	8.61	6.36	0.23	35.57
16	Med	842	13.59	10.07	0.37	57.50	803	12.96	9.60	0.35	54.84	757	12.22	9.06	0.33	51.72
20	Med	847	13.42	9.98	0.36	57.89	814	12.88	9.58	0.35	55.57	773	12.24	9.10	0.33	52.81
6	Low	281	5.11	3.71	0.14	19.21	255	4.63	3.36	0.13	17.39	234	4.25	3.08	0.12	15.96
8	Low	286	5.20	3.78	0.14	21.99	260	4.72	3.43	0.13	19.96	241	4.38	3.18	0.12	18.52
10	Low	409	6.92	5.09	0.19	31.42	391	6.61	4.86	0.18	30.02	375	6.35	4.66	0.17	28.80
12	Low	455	7.53	5.56	0.20	31.09	432	7.15	5.28	0.19	29.52	398	6.58	4.86	0.18	27.17
14	Low	461	7.62	5.63	0.21	31.48	439	7.27	5.36	0.20	30.01	407	6.74	4.97	0.18	27.82
16	Low	686	11.06	8.20	0.30	46.82	658	10.62	7.87	0.29	44.94	630	10.17	7.54	0.28	43.06
20	Low	686	10.86	8.08	0.30	46.86	656	10.38	7.72	0.28	44.77	628	9.95	7.40	0.27	42.92

ESP (In.Wg)		100					125				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		l/s	kW	kW	l/s	kPa	l/s	kW	kW	l/s	kPa
6	High	322	5.85	4.25	0.16	21.98	297	5.40	3.92	0.15	20.27
8	High	337	6.12	4.44	0.17	25.87	310	5.64	4.10	0.15	23.85
10	High	491	8.31	6.10	0.23	37.69	453	7.66	5.63	0.21	34.76
12	High	535	8.86	6.54	0.24	36.58	494	8.17	6.03	0.22	33.73
14	High	564	9.34	6.89	0.25	38.57	521	8.61	6.36	0.23	35.57
16	High	811	13.09	9.70	0.36	55.40	748	12.07	8.95	0.33	51.09
20	High	824	13.05	9.70	0.35	56.27	760	12.03	8.95	0.33	51.90
6	Med	271	4.93	3.58	0.13	18.51	250	4.54	3.30	0.12	17.07
8	Med	280	5.09	3.70	0.14	21.52	258	4.70	3.41	0.13	19.85
10	Med	433	7.33	5.39	0.20	33.26	399	6.76	4.97	0.18	30.67
12	Med	460	7.61	5.61	0.21	31.42	424	7.02	5.18	0.19	28.97
14	Med	473	7.82	5.77	0.21	32.30	436	7.21	5.32	0.20	29.78
16	Med	711	11.47	8.50	0.31	48.54	656	10.58	7.84	0.29	44.76
20	Med	726	11.50	8.55	0.31	49.60	670	10.60	7.89	0.29	45.74
6	Low	212	3.86	2.80	0.10	14.49	196	3.56	2.58	0.10	13.36
8	Low	220	4.00	2.90	0.11	16.90	203	3.69	2.68	0.10	15.59
10	Low	357	6.04	4.44	0.16	27.43	329	5.57	4.10	0.15	25.30
12	Low	361	5.97	4.41	0.16	24.66	333	5.51	4.06	0.15	22.74
14	Low	371	6.14	4.53	0.17	25.34	342	5.66	4.18	0.15	23.37
16	Low	596	9.63	7.14	0.26	40.74	550	8.88	6.58	0.24	37.57
20	Low	599	9.49	7.06	0.26	40.94	553	8.75	6.51	0.24	37.76

Note: Data is based on 78/65°F (25.5/18.3°C) air on-coil DBT/WBT and 42/58 °F (5.5/14.4°C) entering/leaving water temperature

PERFORMANCE DATA TABLE (4ROW COIL) - METRIC SYSTEM

ESP (Pa)		25					50					75				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		l/s	kW	kW	l/s	kPa	l/s	kW	kW	l/s	kPa	l/s	kW	kW	l/s	kPa
6	High	416	9.21	6.15	0.25	28.40	375	8.31	5.55	0.23	25.63	349	7.73	5.16	0.21	23.83
8	High	451	9.99	6.68	0.27	34.67	404	8.96	5.98	0.24	31.07	369	8.18	5.46	0.22	28.38
10	High	583	12.03	8.13	0.33	44.79	553	11.41	7.71	0.31	42.50	521	10.76	7.27	0.29	40.06
12	High	637	12.64	8.59	0.34	43.51	609	12.09	8.22	0.33	41.61	577	11.44	7.78	0.31	39.39
14	High	697	13.27	9.08	0.36	47.62	659	12.54	8.58	0.34	45.00	614	11.69	8.00	0.32	41.97
16	High	949	19.29	13.07	0.52	64.80	899	18.28	12.38	0.50	61.40	851	17.30	11.72	0.47	58.12
20	High	978	18.35	12.59	0.50	66.77	928	17.42	11.95	0.47	63.36	874	16.42	11.26	0.45	59.72
6	Med	364	8.06	5.38	0.22	24.85	326	7.23	4.83	0.20	22.29	298	6.60	4.41	0.18	20.36
8	Med	374	8.29	5.54	0.23	28.76	338	7.49	5.00	0.20	25.97	308	6.83	4.56	0.19	23.70
10	Med	505	10.42	7.04	0.28	38.81	485	10.00	6.76	0.27	37.26	461	9.51	6.42	0.26	35.40
12	Med	576	11.43	7.77	0.31	39.34	543	10.78	7.33	0.29	37.12	503	9.98	6.79	0.27	34.36
14	Med	599	11.41	7.81	0.31	40.94	567	10.78	7.38	0.29	38.68	521	9.91	6.78	0.27	35.57
16	Med	842	17.12	11.59	0.47	57.50	803	16.32	11.06	0.44	54.84	757	15.40	10.43	0.42	51.72
20	Med	847	15.91	10.92	0.43	57.89	814	15.27	10.48	0.41	55.57	773	14.51	9.96	0.39	52.81
6	Low	281	6.23	4.16	0.17	19.21	255	5.64	3.77	0.15	17.39	234	5.18	3.46	0.14	15.96
8	Low	286	6.34	4.23	0.17	21.99	260	5.75	3.84	0.16	19.96	241	5.34	3.57	0.15	18.52
10	Low	409	8.44	5.70	0.23	31.42	391	8.06	5.45	0.22	30.02	375	7.73	5.23	0.21	28.80
12	Low	455	9.03	6.14	0.25	31.09	432	8.57	5.83	0.23	29.52	398	7.89	5.37	0.21	27.17
14	Low	461	8.77	6.00	0.24	31.48	439	8.36	5.72	0.23	30.01	407	7.75	5.31	0.21	27.82
16	Low	686	13.94	9.44	0.38	46.82	658	13.38	9.06	0.36	44.94	630	12.82	8.68	0.35	43.06
20	Low	686	12.88	8.84	0.35	46.86	656	12.31	8.44	0.33	44.77	628	11.80	8.09	0.32	42.92

ESP (In.Wg)		100					125				
Size	Speed	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD	Air Flow	Total capacity	Sensible Capacity	Water Flow	WPD
		l/s	kW	kW	l/s	kPa	l/s	kW	kW	l/s	kPa
6	High	322	7.13	4.76	0.19	21.98	297	6.57	4.39	0.18	20.27
8	High	337	7.46	4.98	0.20	25.87	310	6.88	4.59	0.19	23.85
10	High	491	10.12	6.84	0.27	37.69	453	9.33	6.31	0.25	34.76
12	High	535	10.62	7.22	0.29	36.58	494	9.80	6.66	0.27	33.73
14	High	564	10.74	7.36	0.29	38.57	521	9.91	6.78	0.27	35.57
16	High	811	16.49	11.17	0.45	55.40	748	15.21	10.30	0.41	51.09
20	High	824	15.47	10.61	0.42	56.27	760	14.26	9.79	0.39	51.90
6	Med	271	6.00	4.01	0.16	18.51	250	5.54	3.70	0.15	17.07
8	Med	280	6.20	4.14	0.17	21.52	258	5.72	3.82	0.16	19.85
10	Med	433	8.93	6.03	0.24	33.26	399	8.24	5.56	0.22	30.67
12	Med	460	9.12	6.21	0.25	31.42	424	8.41	5.72	0.23	28.97
14	Med	473	9.00	6.16	0.24	32.30	436	8.30	5.68	0.23	29.78
16	Med	711	14.45	9.79	0.39	48.54	656	13.33	9.03	0.36	44.76
20	Med	726	13.63	9.35	0.37	49.60	670	12.57	8.63	0.34	45.74
6	Low	212	4.70	3.14	0.13	14.49	196	4.33	2.89	0.12	13.36
8	Low	220	4.87	3.25	0.13	16.90	203	4.49	3.00	0.12	15.59
10	Low	357	7.37	4.98	0.20	27.43	329	6.79	4.59	0.18	25.30
12	Low	361	7.16	4.87	0.19	24.66	333	6.60	4.49	0.18	22.74
14	Low	371	7.06	4.83	0.19	25.34	342	6.51	4.46	0.18	23.37
16	Low	596	12.13	8.22	0.33	40.74	550	11.19	7.58	0.30	37.57
20	Low	599	11.25	7.72	0.31	40.94	553	10.38	7.12	0.28	37.76

Note: Data is based on 80/67°F (26.7/19.4°C) air on-coil DBT/WBT and 45/55 °F (7.2/12.78°C) entering/leaving water temperature



## Casing:

The Casing is made of Galvanized Sheet metal to ensure rigidity, efficiency and optimum performance.

The Fan Coil unit consists of the Fan and Motor assembly and Coil Assembly securely mounted on a Painted GI Drain Pan.

The ½” Aluminum or Nylon Filter is provided in the Factory mounted plenum.

1” Filter is supplied as an Optional if required.

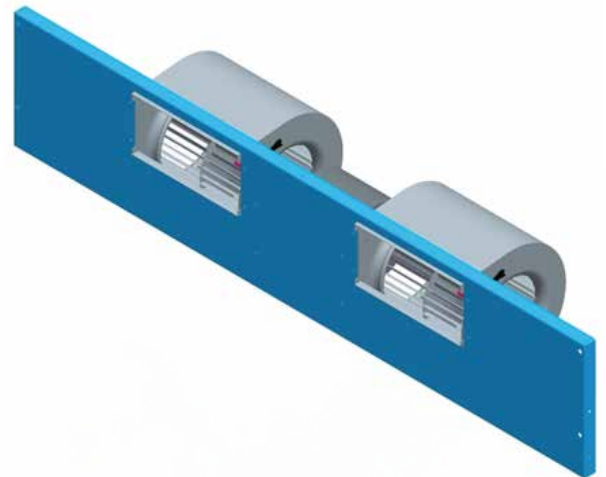
## Fan and Motor Assembly:

Fans are statically & dynamically balanced and directly coupled to a Direct Drive single phase and 3 Speed motor.

The motor is capacitor-run induction Class B type with long life high performance ball bearing

The Fan and Motor assembly is mounted on a welded deck panel assembly to ensure the high performance and eliminate the vibration.

Power Supply: 220-240 V / 1 Ph / 50-60 Hz.



## Chilled Water Coil:

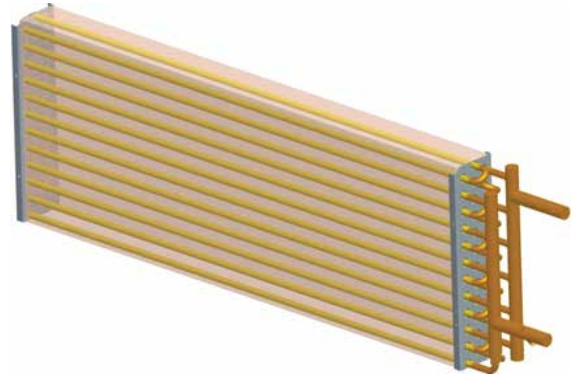
Air temperature is very important for a pleasant climate. Therefore, air heaters and coolers play a significant role in room ventilation units. Chiefly, finned heat exchangers are used as heaters or coolers.

Coil constructed with aluminum corrugated fins and seamless copper tubes. The copper tubes are mechanically bonded into aluminum fin collars and GI End Sheets. Coils leak tested at 350 psi air pressure.

The fins are designed purposely for better heat transfer efficiency and moisture carry-over limit performance. Capacity, Water pressure drop and section procedure is designed in accordance with AHRI standard 410.

Options:

- Tinned Copper Fins
- Pre-coated Blue Fins
- Anti Corrosive Coating

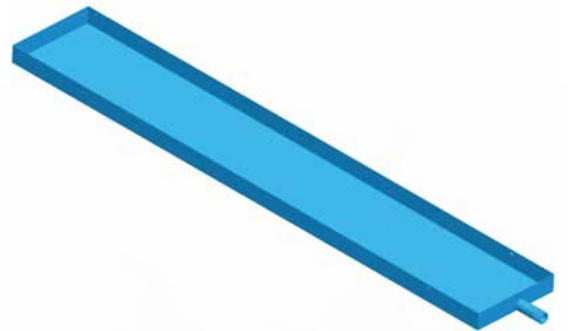


## Drain Pan:

Drain Pan is constructed from a one piece Painted galvanized sheet metal welded carefully to protect from leakage. The insulation shall be special designed to be perfect

Options:

- Stainless Steel Drain Pan

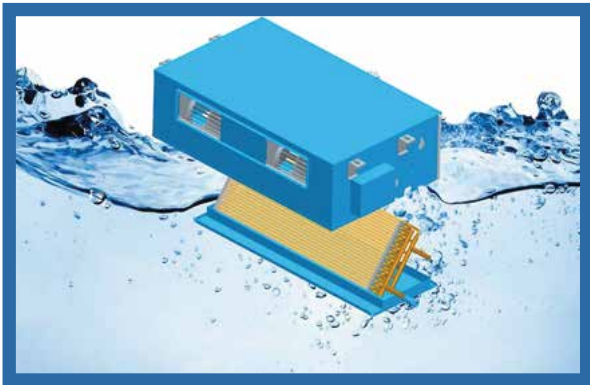


## SERVICE ACCESSIBILITY

Filter Access:



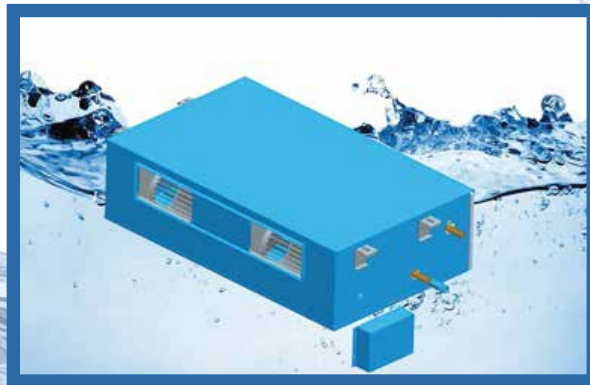
Coil Access:



Blower Access:

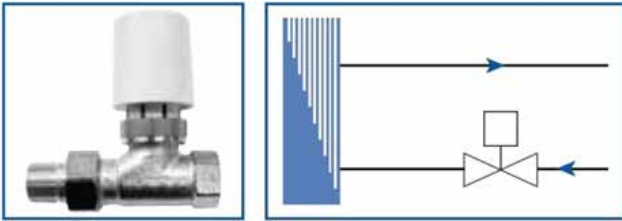


Electrical Access:

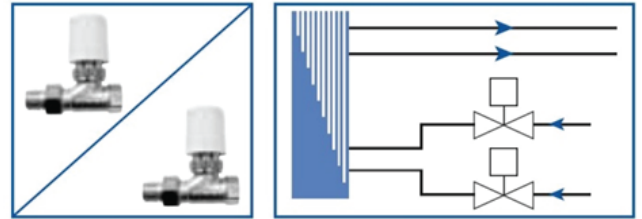


## AVAILABLE OPTIONAL VALVES

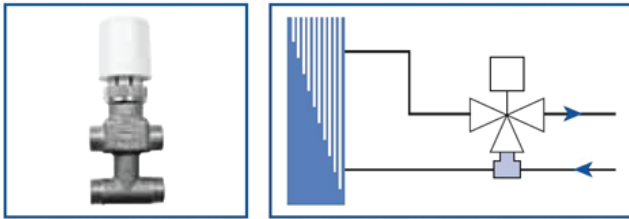
2-way Control Valve - 2-pipe System - 230 Volt  
(Or Optional 24 Volt) Thermal Actuator



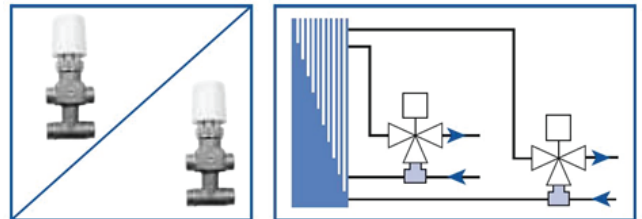
2-way Control Valve - 2-pipe System - 230 Volt  
(Or Optional 24 Volt) Thermal Actuator



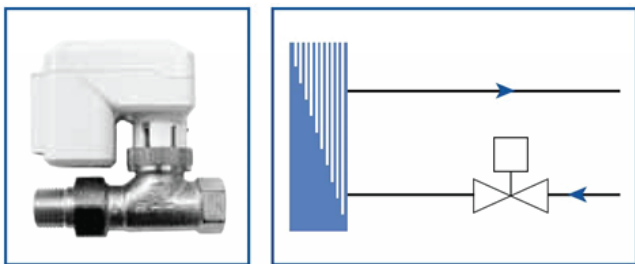
2-way Control Valve - 2-pipe System - 230 Volt  
(Or Optional 24 Volt) Thermal Actuator



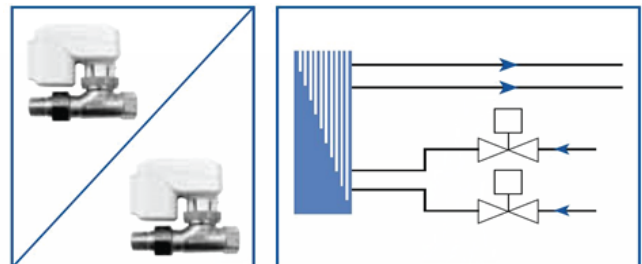
4-way control valve - 4-pipe system - 230 Volt  
(or optional 24 Volt) thermal actuator



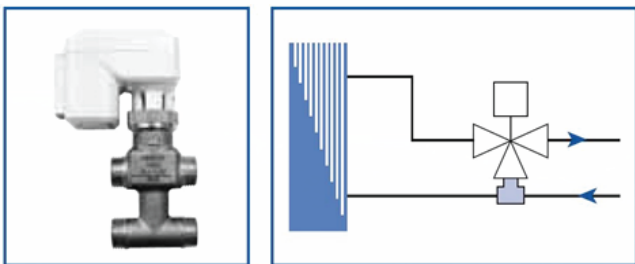
2-way control valve - 2-pipe system -  
3-point modulating actuator\*



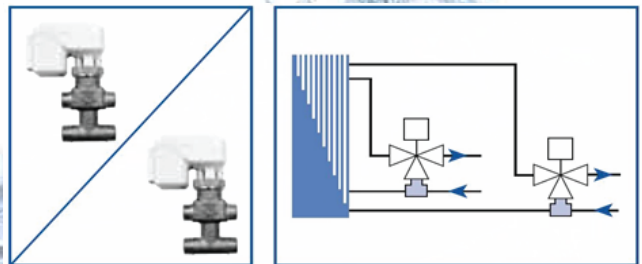
2-way control valve - 4-pipe system -  
3-point modulating actuator\*



4-way control valve - 2-pipe system -  
3-point modulating actuator\*



4-way control valve - 4-pipe system -  
3-point modulating actuator\*



(\* ) Actuator available with Honeywell or similar digital controllers (consult factory)

## Thermostats

Decorative wall mounted type Operating mode: cooling or heating Controlling valve packages & Electric heater

Micro-processor controlled thermostat with intelligent control algorithm (PID) Consequently, apart from the display of the room applications. Temperature, the control quality is greatly enhanced in all applications



## LH / RH Access Side Orientation

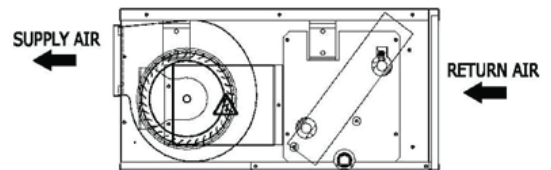
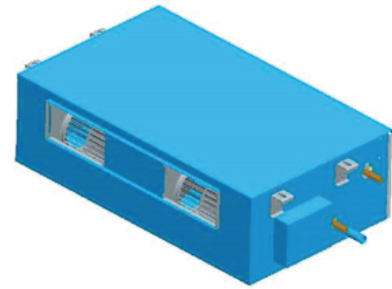
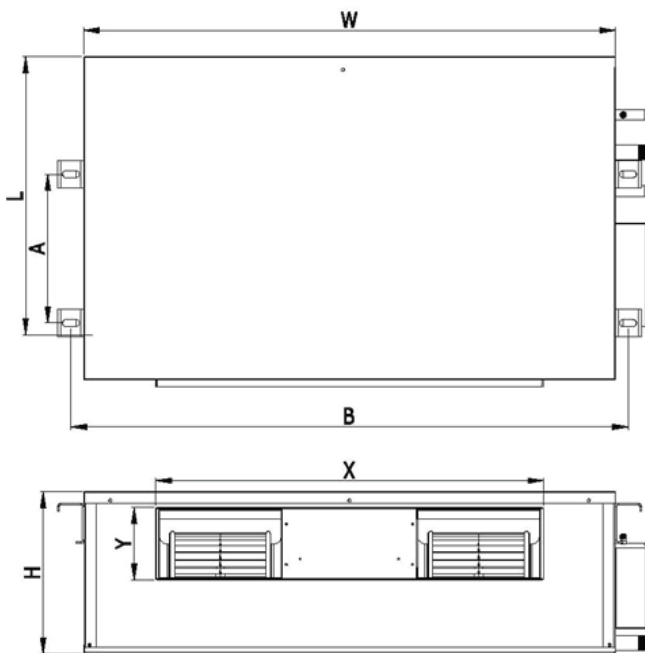


LH Access when Facing from Air Flow Direction



RH Access when Facing from Air Flow Direction

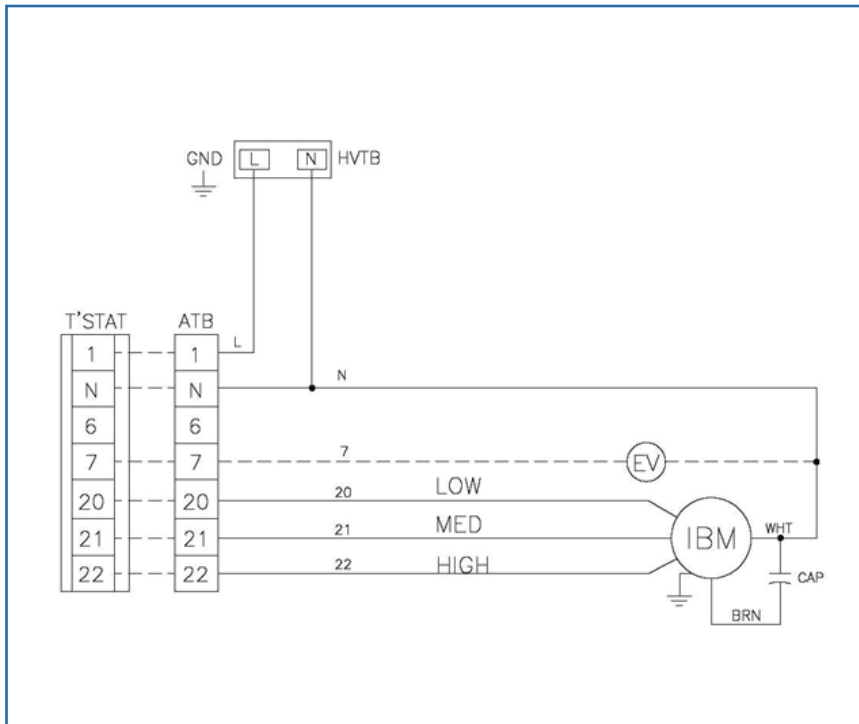
## UNIT DIMENSIONAL DETAILS



MODEL	DIMENSIONS					
	L	W	H	A	B	DUCT CONN. (X x Y)
NRF <sub>H</sub> -08	600	1000	300	275	1048	759.9 X 160
NRF <sub>H</sub> -10	600	1000	300	275	1048	759.9 X 160
NRF <sub>H</sub> -12	620	1064	355	295	1112	824 X 161
NRF <sub>H</sub> -14	620	1064	355	295	1112	824 X 161
NRF <sub>H</sub> -16	620	1349	355	295	1397	824 X 161
NRF <sub>H</sub> -20	710	1349	355	385	1397	824 X 161

ALL DIMENSIONS ARE IN mm

## WIRING DIAGRAM



### LEGEND

ATB	- AUXILIARY TERMINAL BLOCK
CAP	- CAPACITOR
EV	- ELECTRIC VALVE
CND	- LUC GROUND
HVTB	- HIGH VOLTAGE TERMINAL BLOCK
IBM	- INDOOR BLOWER MOTOR
T'SAT	- THERMOSTAT
—	- FACTORY WIRING
- - -	- FIELD WIRING

### NOTES:

1. MOTOR IS THERMALLY PROTECTED
2. USE COPPER CONDUCTORS ONLY

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WORLD-CLASS AIR HANDLING (AHU) AND  
FAN COIL UNITS (FCU) IN QATAR

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العالمي المصنعة لوحدات مناولة الهواء ،  
وحدات تبريد ولفائف (كويل) مراوح في قطر

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