

Technical Specification

SUPPLY AIR SIDE - Coastal Areas																		
Unit Reference	AHU Model no.	Supply Airflow		Cooling Capacity		Air On Coil Temperatures °C		Air Off Coil Temperatures °C		Electric Heater	Steam Humidifier	External Static Pressure (1)	Dimensions W x H x L (m)		Ambient Temp. DB	Condensing Unit Power supply	Air Cooled Condensing Unit Model	Nomial Cooling Capacity
		cfm	LPS	Kw	DB	WB	DB	WB	Kw				AHU	**CU				TR
NPUH-DX-SA0800	39HQM0404	800	378	28.5	46	30	9.7	9.7	9	Optional		250	0.74x0.74x 5.1	1.2x1.4x1.5	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD12	10
NPUH-DX-SA1000	39HQM0504	1000	472	35.6	46	30	9.7	9.6	12	Optional		250	0.90x0.74x 5.1	1.2x1.4x1.5	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD14	12.5
NPUH-DX-SA1350	39HQM0604	1350	637	47.2	46	30	10.3	10.2	18	Optional		300	1.06x0.74x 5.2	1.2x1.4x2.2	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD16	15
NPUH-DX-SA2000	39HQM0704	2000	944	72.4	46	30	9.2	9.2	24	Optional		400	1.2x0.74x 5.2	1.7x1.5x2.2	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD28	25

Note:
1. External Static Pressures are estimated. Customers to provide actual.
2. Air Handling Unit power supply shall be 3Ph, 50/60hz, 400V +/- 10%.
3.Carrier reserves the right to change features and/or specifications without any notice and also, without incurring any liability.

SUPPLY AIR SIDE - Dry Areas																		
Unit Reference	AHU Model no.	Supply Airflow		Cooling Capacity		Air On Coil Temperatures °C		Air Off Coil Temperatures °C		Electric Heater	Steam Humidifier	External Static Pressure (1)	Dimensions W x H x L (m)		Ambient Temp. DB	Condensing Unit Power supply	Air Cooled Condensing Unit Model	Nomial Cooling Capacity
		cfm	LPS	Kw	DB	WB	DB	WB	Kw				AHU	**CU				TR
NPRU-DX-SA0800	39HQM0404	800	378	14.2	46	22	10.7	9.6	12	5	150	0.74x0.74x 5.7	1.2x1.4x1.5	46	1Ph, 50/60hz, 230V +/- 10%	38PK030 (2 Nos)	2.5 (ea)	
NPRU-DX-SA1000	39HQM0504	1000	472	18.3	46	22	11.1	9.5	12	5	200	0.90x0.74x 5.7	1.2x1.4x1.5	46	1Ph, 50/60hz, 230V +/- 10%	38PK036 (2 Nos)	3 (ea)	
NPRU-DX-SA1400	39HQM0504	1400	661	23.7	46	22	12	10.3	18	8	300	0.90x0.74x 5.9	1.2x1.4x1.5	46	1Ph, 50/60hz, 230V +/- 10%	38PK048 (2 Nos)	4 (ea)	
NPRU-DX-SA1600	39HQM0604	1600	755	28.8	46	22	11.8	9.8	24	8	300	1.06x0.74x 5.9	1.2x1.4x1.5	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD12	10	
NPRU-DX-SA2000	39HQM0704	2000	944	34.6	46	22	11.5	10	27	8	300	1.2x0.74x 5.9	1.2x1.4x1.5	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD14	12.5	
NPRU-DX-SA2800	39HQM0904	2800	1321	48.1	46	22	11.6	10.1	36	15	400	1.6x0.74x 5.9	1.2x1.4x2.2	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD16	15	
NPRU-DX-SA4000	39HQM0906	4000	1888	70.9	46	22	10.9	9.6	60	15	400	1.6x0.74x 5.1	1.7x1.5x2.2	46	3Ph, 50/60Hz, 400V +/- 10%	38AUMD28	25	

Note:
1. External Static Pressures are estimated. Customers to provide actual.
2. Air Handling Unit power supply shall be 3Ph, 50/60hz, 400V +/- 10%.
3.Carrier reserves the right to change features and/or specifications without any notice and also, without incurring any liability.

EXHAUST AIR SIDE				
Unit Reference	AHU Model no.	Exhaust Airflow	Dimensions W x H x L (m)	External Static Pressure (1)
		cfm		Pa
NPRU-EA-1000	39HQM0404	1000	0.74x0.74x2.8	200
NPRU-EA-1250	39HQM0504	1250	0.90x0.74x3.0	200
NPRU-EA-1700	39HQM0604	1700	1.06x0.74x3.0	200
NPRU-EA-2500	39HQM0804	2500	1.2x0.74x3.0	200



The Carrier Advantage:

- 1

100% Fresh Air System with all features to meet requirements of Airborne Infection Isolation (AII) rooms.
- 2

Eurovent and DIN 1946 compliant air handling unit.
- 3

Meet or Exceed ANSI/ASHRAE/ASHE Standard 170 latest requirements.
- 4

Designed for high ambient Middle Eastern weather conditions.
- 5

Full Solution including 100% Fresh air AHU, Condensing Unit and integrated Controls.
- 6

FAHU Cooling coil is available in DX and Chilled water as an option.
- 7

Flexibility to install exhaust unit based on the site requirement.
- 8

Microprocessor based controls with all features to control and monitor including room pressure differential.

CARRIER MIDDLE EAST LIMITED

Riyadh +966 11 2180 022	Jeddah +966 12 2375 000	Dammam +966 13 8577 710	Dubai +971 4 4199 100	Abu Dhabi +971 2 4486 900	Al Ain +971 3 7553 514	Kuwait +965 2206 6300
----------------------------	----------------------------	----------------------------	--------------------------	------------------------------	---------------------------	--------------------------



HEALTHYBUILDINGS

Breathe better air

The COVID-19 pandemic has gripped the entire world and the healthcare industry has never been more focused on preventing the spread of the disease.

Carrier with more than a century of expertise in Indoor Air Quality (IAQ) is offering a range of engineered solutions and advanced technologies covering air filtration, DX cooling, humidification and Ultraviolet (UV) air purifiers to reduce airborne contaminants while at the same time targeting patient's thermal comfort with cleaner and healthier IAQ.



Carrier Controls

Carrier i-Vu Negative Pressure Control System (CIV-NPCS) is fully equipped to achieve the negative pressure requirement of the Isolation room. The system is comprised of Air Valves/VAVs combined with a state-of-the-art controller and sensor to read the critical parameters such as Temperature, Relative Humidity, Room DP and ACH of the Isolation room. A 10" LED touchscreen with color provides data monitoring and displays a graphical representation of the Isolation Room Unit.

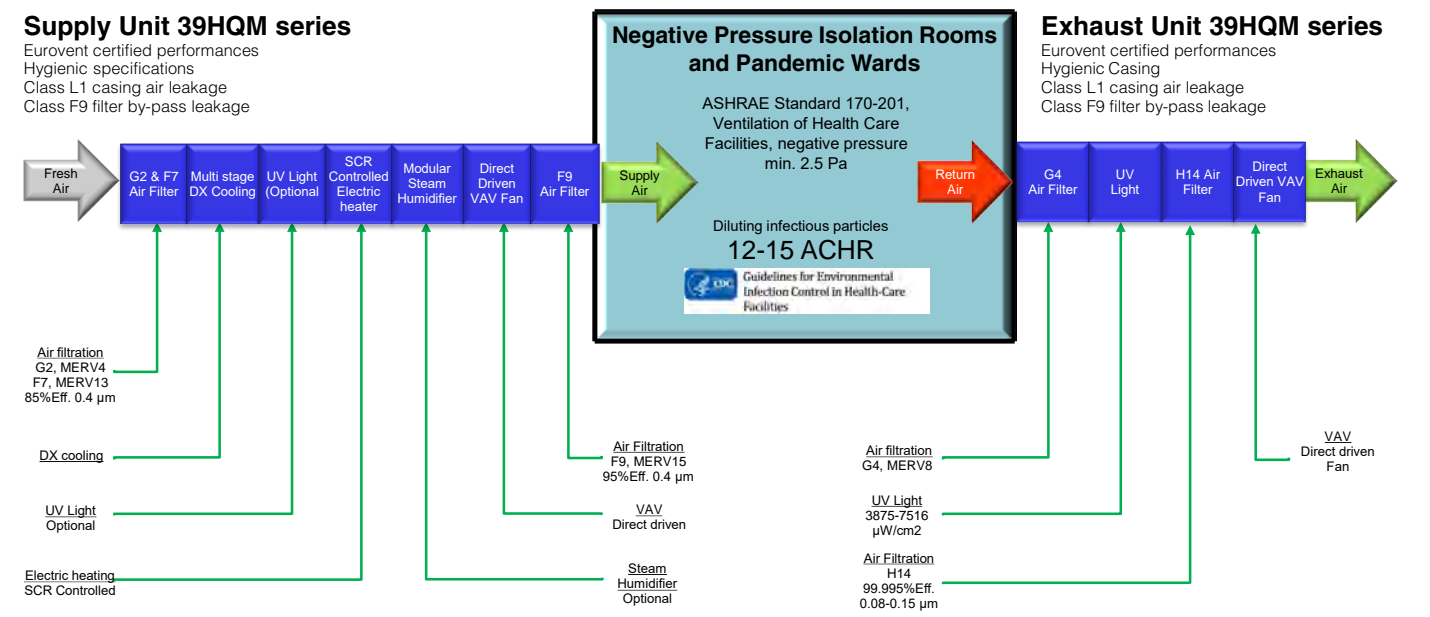


Isolation Room Units

Carrier's isolation room units have been designed to significantly reduce the presence of airborne contaminants including biological contaminants from the air, at the same time targeting patient's thermal comfort with cleaner and healthier air to breathe.

The Carrier isolation room unit offers air conditioning besides ventilation to provide proper IAQ in the room. The system comprises of a supply unit, a DX Condensing unit and an exhaust unit. Both the supply and exhaust unit is built using the hygienic specifications as per VDI 6022 and DIN 1946-4. Both casings will be having L1 casing leakage and F9 filter bypass leakage class with certified Eurovent performances. The supply unit has a direct driven plenum fan while the exhaust system has a belt driven fan to drive the air volume. The system is designed to maintain a negative pressure in the patient's room to avoid the air contaminants from being transmitted from the patient's room to outside.

In short, the negative pressure units provide required cooling, humidification, dehumidification, filtering and air movement in AII (Airborne Infection Isolation) rooms and achieve required temperature and RH% with the help of integrated controls.



Applications

- Isolation rooms
- Pandemic wards
- New health care centers
- Portable patient rooms
- Quarantine centers
- Porta cabin solutions

Features

- Air Handling Units are designed in accordance with DIN 1946-4 (2018-08) and VDI 6022-1 (2018-01).
- Filtration and ACH (Air Changes Per Hour) exceeding ANSI/ASHRAE/ASHE Standard 170.
- MERV-13 and MERV-15 filters on supply side.
- Double protection of 99.99% Efficiency H-14 HEPA and UV lights on Exhaust Unit- best to eliminate chances for virus/bacteria's to get released in a free atmosphere.
- Direct Drive Plug Fan with VFD for high energy efficiency and hygiene requirement.
- Steam Humidifier (for dry areas) to maintain humidity between (40%-60%) in AII (Airborne Infection Isolation) rooms. This feature is optional for Coastal areas.
- Electric Heater with SCR controller for reheat or full heating in winter and also to maintain required RH in AII rooms.
- FAHU with dual circuit Cu/Al Dx Coil (Anti-corrosive coating on Cu/Al or Cu/Cu coil in humid/corrosive environment). CHW coil is available as an option.
- The AHU floor, drain pan, filters and coil frames have been built on high quality stainless steel.
- 60mm double skin panels – painted inside and outside.
- View Ports, internal lights, pressure gauges.
- 160mm base frame for U-trap positive drainage of condensate.
- Condensing Unit (for DX cooling coil) shall be utilizing scroll compressors using R410A environment friendly refrigerant.
- Compressors with built-in safeties, low and high pressure switches.
- Condenser coils are Cu/Al (Cu/Cu coil in humid/corrosive environment - available for 38AUM condensing units).
- Suitable to operate up to 52C ambient.



Negative pressure unit - the assemble



Display unit



38AUM