

# SMART AIR HANDLING UNITS

EXPERIENCE A TRANSFORMATION  
IN COOLING SYSTEMS





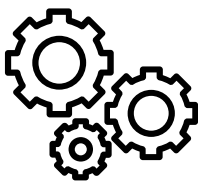




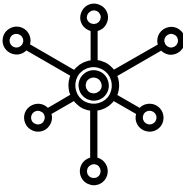
# CARRIER INTERNATIONAL SDN BHD(CISB)

A state-of-the-art manufacturing facility, Carrier International Sdn Bhd (CISB) leverages best-in-class technologies to deliver comprehensive HVAC solutions for your spaces. CISB's factory presence extends beyond Malaysia, including the Asia Pacific and Middle East regions.

We are proud to say that our unwavering commitment to excellence and innovation has garnered multiple recognitions and accolades from across the industry.



**Operations**  
Since 1962



**Regional**  
Multi-purpose Training Hub  
and Experience Centre




**Eurovent Certification**  
AHU & FCU



**AHRI Certification**  
AHU coils: AHRI 410

## CARRIER SMART AHU AND ITS ADVANTAGES

Open your spaces to our advanced air handling unit (AHU) designed to deliver easy integration and efficiency in operations. A smart building solution to conserve energy, uplift spaces, reduce operational costs and lessen the impact on the environment — with Carrier Smart AHUs, the future of efficiency is truly in your hands.

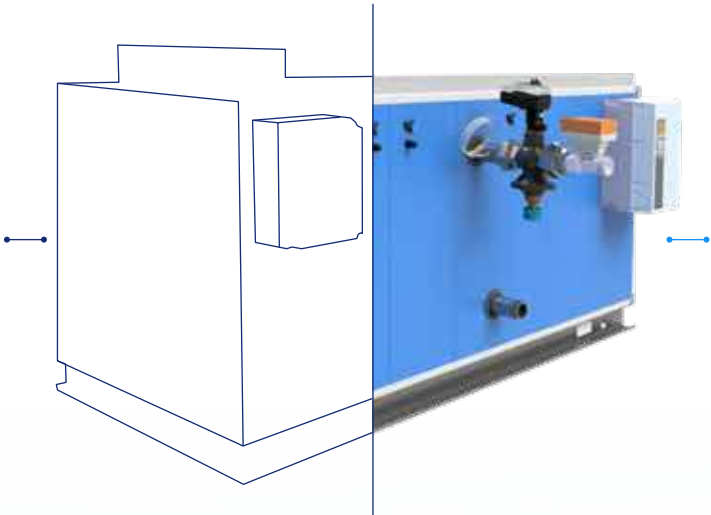
PARAMETERS	NORMAL AHUs	CARRIER SMART AHUs
 Easy Setup	Increased setup time due to manual adjustments	Quick and efficient setup with user-friendly controls
 Smart Monitoring	Periodic manual checks leading to delay in issue identification	Close loop system with constant comparison of preset values with real-time data using sensors and feedback
 Temperature Control	Valves-based control	Inbuilt controller with control logic to actuate PICV valve and fan speed to meet supply air temperature
 Performance Validation	Relying on periodic manual performance validation	Real-time performance (KW/RT)
 Real-Time Display	Limited or no real-time data, requiring additional tools for assessment	Instant feedback on cooling capacity and system status to third party BMS
 Smart Service	Relying on periodic manual inspections, with potential delays in maintenance	Alerts and alarms for need-based predictive maintenance



# FAST-TRACKING SOLUTIONS FOR SITE CHALLENGES

## Before

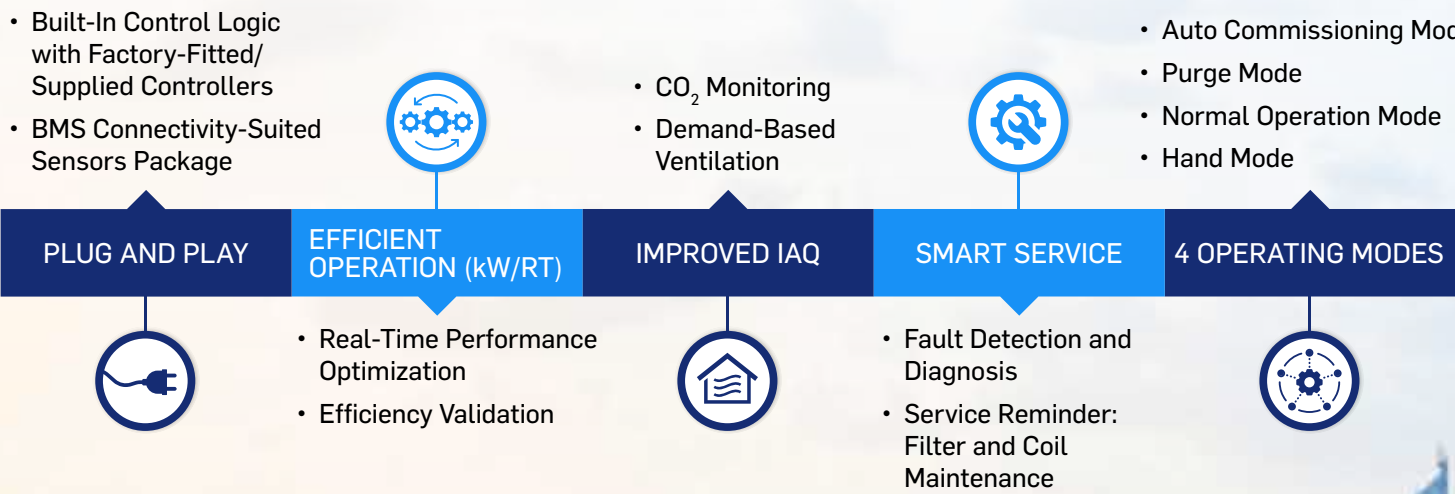
- Water carryover
- Airflow issue
- Cooling load issue
- Excessive noise and vibration
- Choked filters and coils
- High electricity bills



## After

- Maintains design coil face velocity
- Auto regulate airflow via feedback
- Maintains temperature through closed loop operation
- Operates AHU in optimum condition
- Alerts and alarms for filters and coils cleaning
- Optimum operation with real-time display of energy efficiency (kW/RT)

# THE FEATURES AND FUNCTIONALITY OF CARRIER SMART AHU



## OPERATING MODES OF CARRIER SMART AHU

### COMMISSIONING MODE BY COMMISSIONING TEAM

- Enter design parameters from data sheets
- Compare design value with actual condition value differences

### HAND MODE BY SERVICE TEAM

- Manually control the AHU functions via AHU controller
- BMS override

### NORMAL OPERATION MODE

#### Non-CO<sub>2</sub> operation mode

- Air dampers will actuate to meet the on-coil air temperature
- Water valve will actuate to meet the off-coil air temperature
- Unit will operate to meet desired airflow requirement

#### CO<sub>2</sub> operation mode

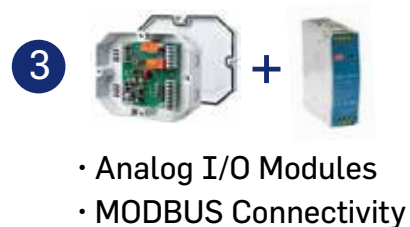
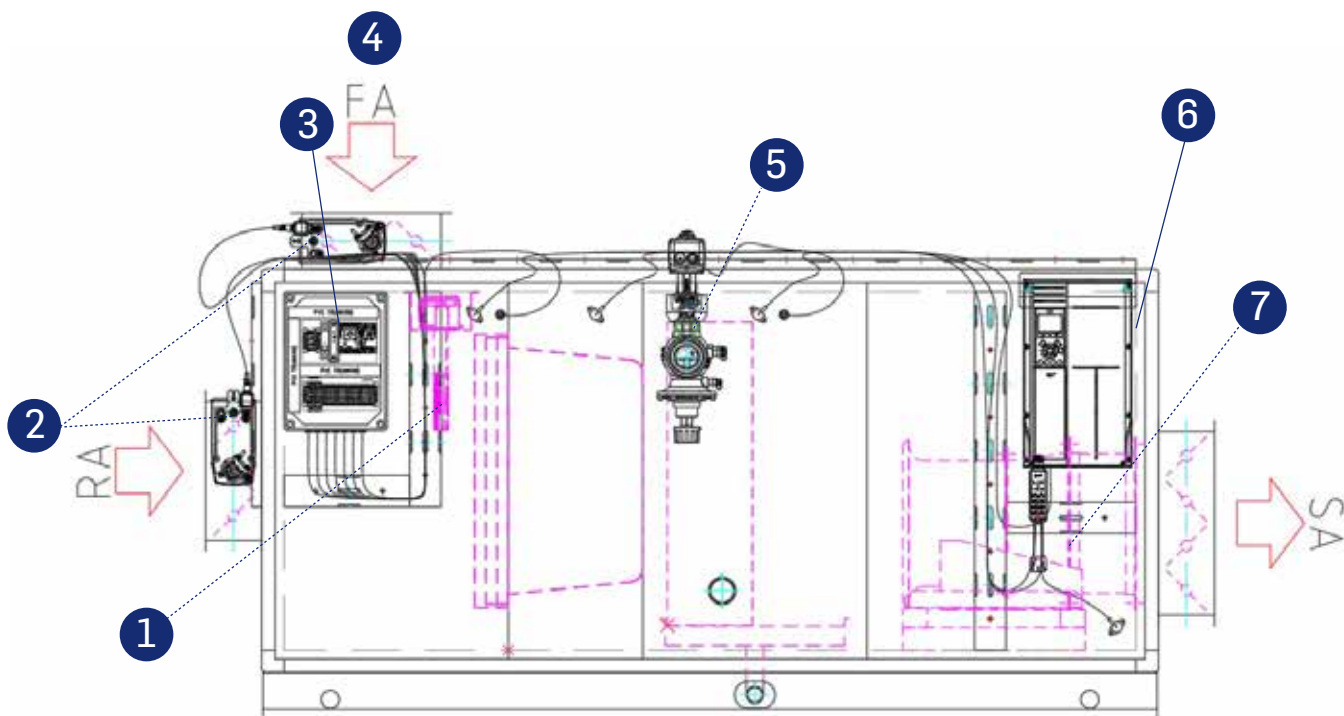
- Air dampers will actuate to meet desired CO<sub>2</sub> PPM
- Unit will operate to meet desired airflow
- Off-coil temperature requirement

### PURGE MODE

- AHU will expel ~3x air volume of the system by scheduled timetable
- Clears up the dirty ambient air/building construction debris
- Can be set to run at intermittent time



## THE CARRIER SMART AHU CONTROLLER



### Fan options include:

- High-Efficiency Axial Fan (AC / PM Motor)
- Centrifugal Fan (AC Motor)
- Plenum Fan (AC Motor)

Please contact your regional Carrier Sales Representative for more information.



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