

NEXT™ Air Handling Unit (NEXT-AHU™) with Heat /Energy Recovery, up to 50% outdoor air



The NEXT-AHU™ Heat and Energy Recovery Outdoor Air Handling Unit range is designed to be used when high air volumes are required with only partial fresh air quantities. They are designed to handle up to 50% of outdoor air with built-in Economy Cycle dampers as standard to optimise energy efficiency and significantly improve indoor air quality.

Energy Efficient Construction

- Cabinets are constructed of 50 mm BHP Colourbond Sandwich panel, for best practice insulation.
- Purpose built UV treated polymer joiners are used to eliminate heat loss through the body of the unit.
- The Counter flow Enthalpy heat exchanger that will be incorporated into the unit will reclaim up to 75% of the energy from the exhaust stale air, therefore saving up to 75% of the cost to heat or cool outdoor air. Counter flow Sensible heat exchanger with up to 80% efficiency on sensible only is available at no additional cost.
- Air Change units are designed with extremely large access doors to ensure that all parts are accessible for servicing and replacement.



Features

- Built-in Economy Cycle as standard for energy saving optimisation
- Two staged or fully modulating Return Air Bypass (RABP) damper to satisfy return air-outdoor air proportion requirement
- 4 row chilled water coil
- Slope drain tray for positive gravity drainage eliminating the need to tilt the unit on installation
- A choice of top or bottom discharge for plant room / roof space fitting optimisation
- Incorporates direct coupled fans and motor (no belts or pulleys required)
- All fans are spring mounted and canvas connected to fully eliminate vibration being transmitted into the unit
- Supply and exhaust air three phase fan motors are controlled with separate VSD controllers with benefits including;
 - i. Ramped starting of fan motors, leading to a prolonged life of all fan and motor components and eliminate starting power / amperage spikes.
 - ii. Dramatically reduced commissioning times as airflow is tuned simply by adjusting fan speed through VSD control panel or by analogue inputs for modulating fan speed.
 - iii. Easy integration to a BMS system
 - iv. BACNet Module for high level interface
 - v. Saves running costs by precisely controlling power needed to the motor
 - vi. Built in fan power data logging

Options

6 or 8 Rows Cold Water coil

Maximise cooling capacity to a fully customized 6 or 8 row cold water coils

Hot Water Coil

Fully custom made hot water coil for heating or reheat requirement

High Static Fan Upgrade

Fan upgrades available for high flow or high external static pressure drops.

Backward Curved Fans

Backward curved fans for optimised fan efficiency and quietness

Vertical Discharge

Choice of horizontal or vertical discharge to suit plant room / roof space and ducting requirement

Corrosion Resistant

Corrosion resistant packaging available for harsh and corrosive environments

Sensible Only Heat Exchanger

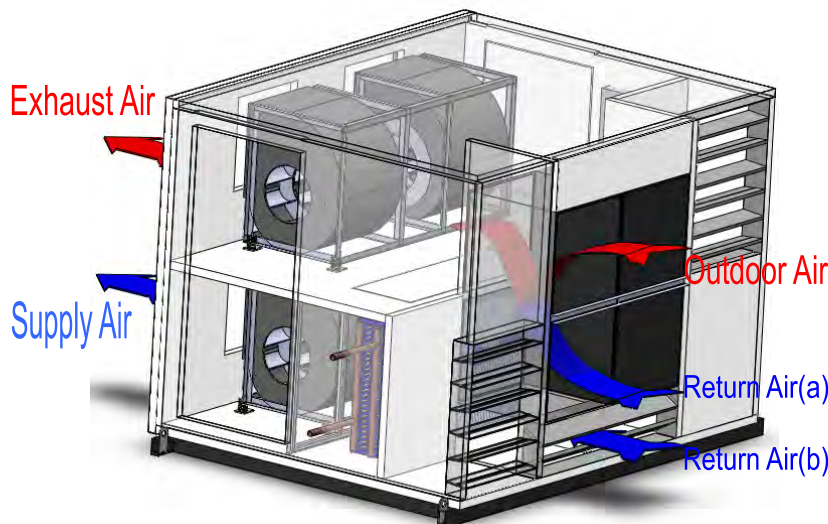
Up to 80% sensible transfer efficiency for dry climates or any specialist applications

Contact Air Change for assistance with options.



NEXT-AHU 2000

HEAT / ENERGY RECOVERY OUTDOOR AIR HANDLING UNIT



- High Efficiency Counter Flow Air-Air Heat Exchangers
- 0-50% OA Application
- Built-In Economy Cycle as Standard
- Choice of Staged or Modulating RABP Damper
- 4 Rows Chilled Water Coil as Standard
- Direct Drive Fan & Motor
- Independent SA & EA VSD Driven Fans
- HVAC-series VSD's for BMS High Level Interface
- Choice of Horizontal or Vertical Discharge
- 50mm Double Skin Sandwich Panel Cabinets with Purpose built UV treated polymer joiners for maximum thermal insulation
- Large access doors for servicing

Return Air(a) – Return Air to Heat Exchanger
 Return Air(b) – Return Air bypass Heat Exchanger

AIRFLOW	
Outdoor Air	0 - 1000 L/S
Supply Air - Nominal	2000 L/S
Exhaust Air	0 - 1000 L/S
Supply Air Fan ESP	200 Pa
Exhaust Air Fan ESP	200 Pa

ELECTRICAL POWERING	
Voltage / Phase / Hz	415 / 3 / 50
Running Current in Amps (L1 / L2 / L3)	
Full Load Amps	12.4 / 12.4 / 12.4
Starting Current	N/A (Soft Start)

HEAT EXCHANGER		
	Sensible	Latent
Enthalpy Type Efficiency	75%	75%
Sensible Type Efficiency	80%	0

SOUND POWER LEVEL		
	In Duct (Supply)	External (Supply)
Hz	dB	dB
63	88.5	75.2
125	84.5	76.3
250	87	82.9
500	79.7	78.2
1000	79.7	79.2
2000	78.7	78.6
4000	76.4	76.3
8000	71	71
Lw – tot	92.6	87.4
LwA-tot	85.8 dBA	84.8 dBA

CHILLED WATER COIL	
Number of Rows	4
FH / FL	571mm / 1600mm
Fin / m	Up to 550
Capacity	Designed to Duty
Max Water Pressure Drop	40 kPa

SUPPLY AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1500 RPM
Motor Power	3.0 kW
Motor Poles	4

EXHAUST AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1500 RPM
Motor Power	3.0 kW
Motor Poles	4

OPTIONAL:

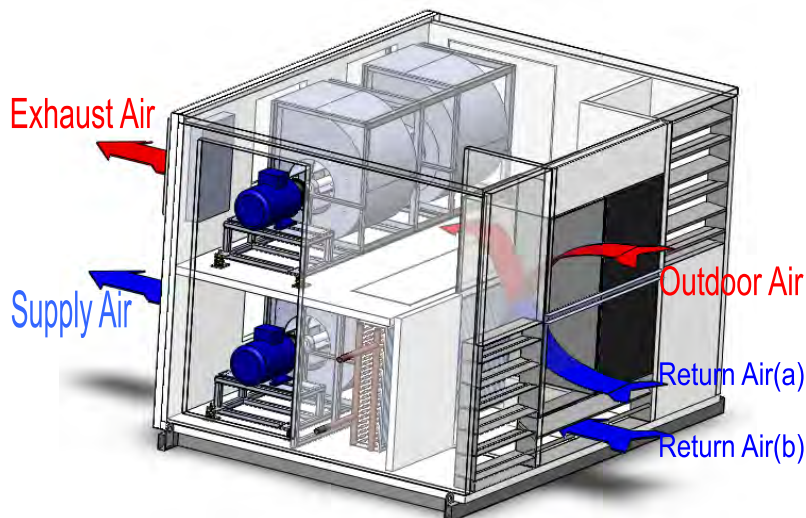
- Custom design Hot Water Coil
- 6 or 8 Rows Chilled Water Coil
- Corrosion Resistant Unit
- Backward Curved Centrifugal Fan
- CO₂ Sensors
- Vertical Discharge

NOTES:

- All Return & Outdoor Air Filters are to be supplied by installing contractor.

NEXT-AHU 4000

HEAT / ENERGY RECOVERY OUTDOOR AIR HANDLING UNIT



- High Efficiency Counter Flow Air-Air Heat Exchangers
- 0-50% OA Application
- Built-In Economy Cycle as Standard
- Choice of Staged or Modulating RABP Damper
- 4 Rows Chilled Water Coil as Standard
- Direct Coupled Fan & Motor
- Independent SA & EA VSD Driven Fans
- HVAC-series VSD's for BMS High Level Interface
- Choice top or bottom Vertical Discharge
- 50mm Double Skin Sandwich Panel Cabinets with Purpose built UV treated polymer joiners for maximum thermal insulation
- Large access doors for servicing

Return Air(a) – Return Air to Heat Exchanger
 Return Air(b) – Return Air bypass Heat Exchanger

AIRFLOW	
Outdoor Air	0 - 2000 L/S
Supply Air - Nominal	4000 L/S
Exhaust Air	0 - 2000 L/S
Supply Air Fan ESP	300 Pa
Exhaust Air Fan ESP	300 Pa

ELECTRICAL POWERING	
Voltage / Phase / Hz	415 / 3 / 50
Running Current in Amps (L1 / L2 / L3)	
Full Load Amps	28.4 / 28.4 / 28.4
Starting Current	N/A (Soft Start)

HEAT EXCHANGER		
	Sensible	Latent
Enthalpy Type Efficiency	75%	75%
Sensible Type Efficiency	80%	0

SOUND POWER LEVEL		
	In Duct (Supply)	External (Supply)
Hz	dB	dB
63	90.3	78.8
125	95.4	88.7
250	89.2	86.2
500	86.4	85.4
1000	83.6	83.3
2000	83.6	83.5
4000	82.3	82.2
8000	77.9	77.9
Lw – tot	98.1	93.5
LwA-tot	90.8 dBA	90 dBA

CHILLED WATER COIL	
Number of Rows	4
FH / FL	762mm / 2400mm
Fin / m	Up to 550
Capacity	Designed to Duty
Max Water Pressure Drop	40 kPa

SUPPLY AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1400 RPM
Motor Power	7.5 kW
Motor Poles	4

EXHAUST AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1400 RPM
Motor Power	7.5 kW
Motor Poles	4

OPTIONAL:

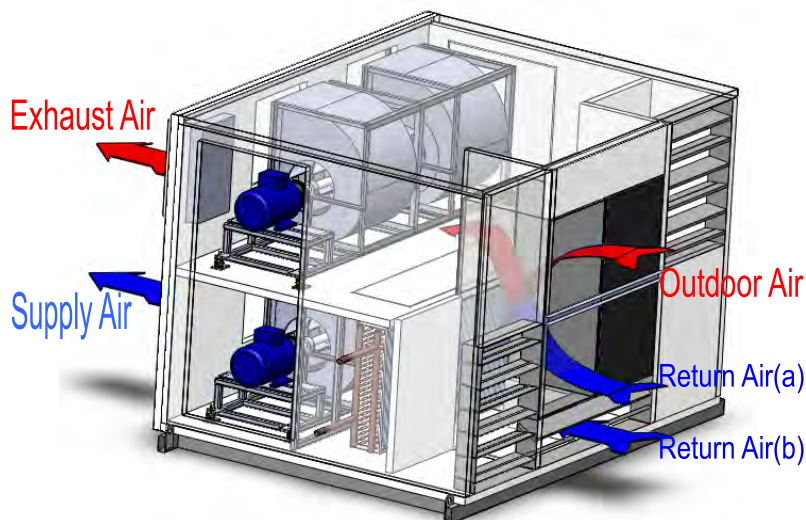
- Custom design Hot Water Coil
- 6 or 8 Rows Chilled Water Coil
- Corrosion Resistant Unit
- Backward Curved Centrifugal Fan
- CO₂ Sensors
- Vertical Discharge

NOTES:

- All Return & Outdoor Air Filters are to be supplied by installing contractor.

NEXT-AHU 6000

HEAT / ENERGY RECOVERY OUTDOOR AIR HANDLING UNIT



- High Efficiency Counter Flow Air-Air Heat Exchangers
- 0-50% OA Application
- Built-In Economy Cycle as Standard
- Choice of Staged or Modulating RABP Damper
- 4 Rows Chilled Water Coil as Standard
- Direct Coupled Fan & Motor
- Independent SA & EA VSD Driven Fans
- HVAC-series VSD's for BMS High Level Interface
- Choice of Horizontal or Vertical Discharge
- 50mm Double Skin Sandwich Panel Cabinets with Purpose built UV treated polymer joiners for maximum thermal insulation
- Large access doors for servicing

Return Air(a) – Return Air to Heat Exchanger
 Return Air(b) – Return Air bypass Heat Exchanger

AIRFLOW	
Outdoor Air	0 - 3000 L/S
Supply Air - Nominal	6000 L/S
Exhaust Air	0 - 3000 L/S
Supply Air Fan ESP	350 Pa
Exhaust Air Fan ESP	350 Pa

ELECTRICAL POWERING	
Voltage / Phase / Hz	415 / 3 / 50
Running Current in Amps (L1 / L2 / L3)	
Full Load Amps	42.4 / 42.4 / 42.4
Starting Current	N/A (Soft Start)

HEAT EXCHANGER		
	Sensible	Latent
Enthalpy Type Efficiency	75%	75%
Sensible Type Efficiency	80%	0

SOUND POWER LEVEL		
	In Duct (Supply)	External (Supply)
	dB	dB
63	95.4	85
125	96.4	90.7
250	92.4	90
500	86.5	85.7
1000	85.2	85
2000	84.4	84.4
4000	84.3	84.3
8000	79	79
Lw – tot	100.4	95.8
LwA-tot	92.3 dBA	91.5 dBA

CHILLED WATER COIL	
Number of Rows	4
FH / FL	825mm / 3400mm
Fin / m	Up to 550
Capacity	Designed to Duty
Max Water Pressure Drop	40 kPa

SUPPLY AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1200 RPM
Motor Power	11 kW
Motor Poles	6

EXHAUST AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1200 RPM
Motor Power	11 kW
Motor Poles	6

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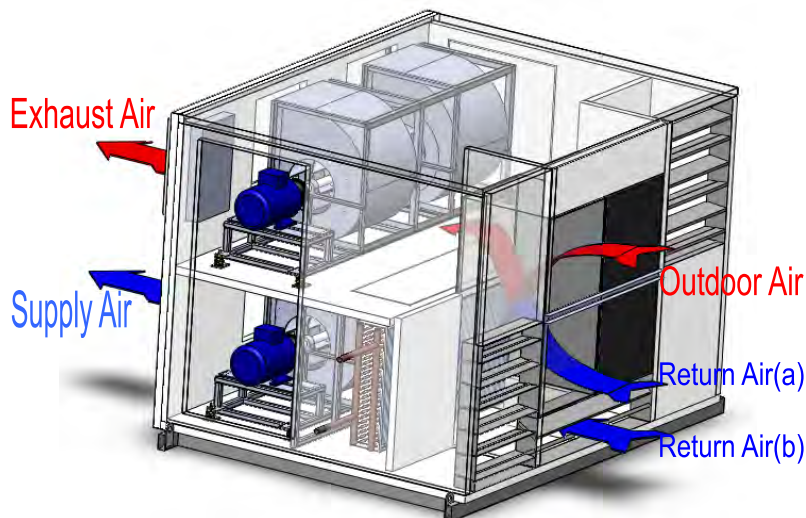
- Custom design Hot Water Coil
- 6 or 8 Rows Chilled Water Coil
- Corrosion Resistant Unit
- Backward Curved Centrifugal Fan
- CO₂ Sensors
- Vertical Discharge

NOTES:

- All Return & Outdoor Air Filters are to be supplied by installing contractor.

NEXT-AHU 8000

HEAT / ENERGY RECOVERY OUTDOOR AIR HANDLING UNIT



- High Efficiency Counter Flow Air-Air Heat Exchangers
- 0-50% OA Application
- Built-In Economy Cycle as Standard
- Choice of Staged or Modulating RABP Damper
- 4 Rows Chilled Water Coil as Standard
- Direct Coupled Fan & Motor
- Independent SA & EA VSD Driven Fans
- HVAC-series VSD's for BMS High Level Interface
- Choice of Horizontal or Vertical Discharge
- 50mm Double Skin Sandwich Panel Cabinets with Purpose built UV treated polymer joiners for maximum thermal insulation
- Large access doors for servicing

Return Air(a) – Return Air to Heat Exchanger
 Return Air(b) – Return Air bypass Heat Exchanger

AIRFLOW	
Outdoor Air	0 - 4000 L/S
Supply Air - Nominal	8000 L/S
Exhaust Air	0 - 4000 L/S
Supply Air Fan ESP	400 Pa
Exhaust Air Fan ESP	400 Pa

ELECTRICAL POWERING	
Voltage / Phase / Hz	415 / 3 / 50
Running Current in Amps (L1 / L2 / L3)	
Full Load Amps	57.4 / 57.4 / 57.4
Starting Current	N/A (Soft Start)

HEAT EXCHANGER		
	Sensible	Latent
Enthalpy Type Efficiency	75%	75%
Sensible Type Efficiency	80%	0

SOUND POWER LEVEL		
	In Duct (Supply)	External (Supply)
	dB	dB
63	94.6	85.8
125	95.3	90.8
250	90	88.3
500	88.6	88.1
1000	84.2	84
2000	82.4	82.4
4000	80.6	80.6
8000	76.9	76.9
Lw – tot	99.3	95.4
LwA-tot	91.1 dBA	90.4 dBA

CHILLED WATER COIL	
Number of Rows	4
FH / FL	953mm / 3600mm
Fin / m	Up to 550
Capacity	Designed to Duty
Max Water Pressure Drop	40 kPa

SUPPLY AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1300 RPM
Motor Power	15 kW
Motor Poles	6

EXHAUST AIR FAN	
Fan Type	Forward Curve Centrifugal
Max Fan Speed	1300 RPM
Motor Power	15 kW
Motor Poles	6

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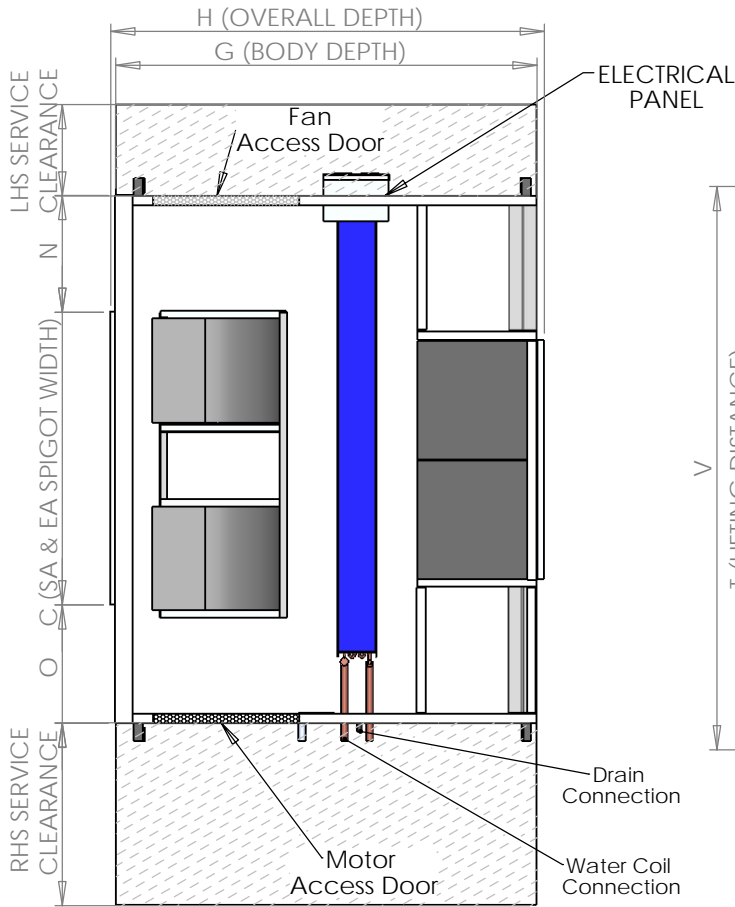
- Custom design Hot Water Coil
- 6 or 8 Rows Chilled Water Coil
- Corrosion Resistant Unit
- Backward Curved Centrifugal Fan
- CO₂ Sensors
- Vertical Discharge

NOTES:

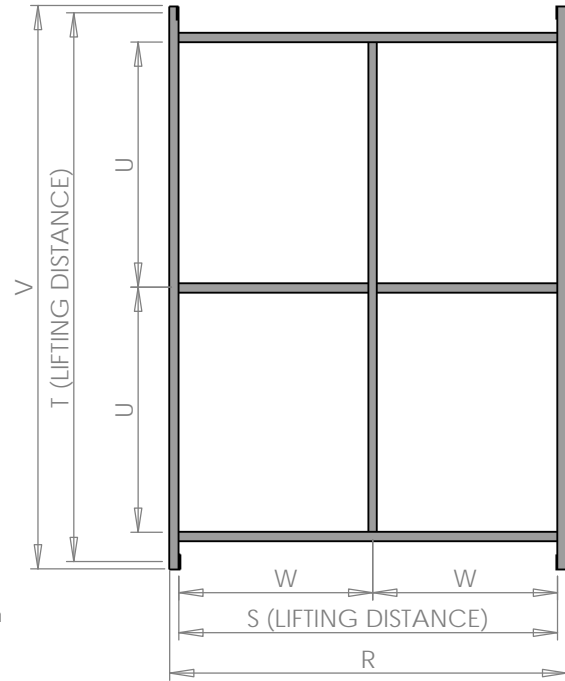
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DIMENSIONS (mm) & WEIGHT (kg)

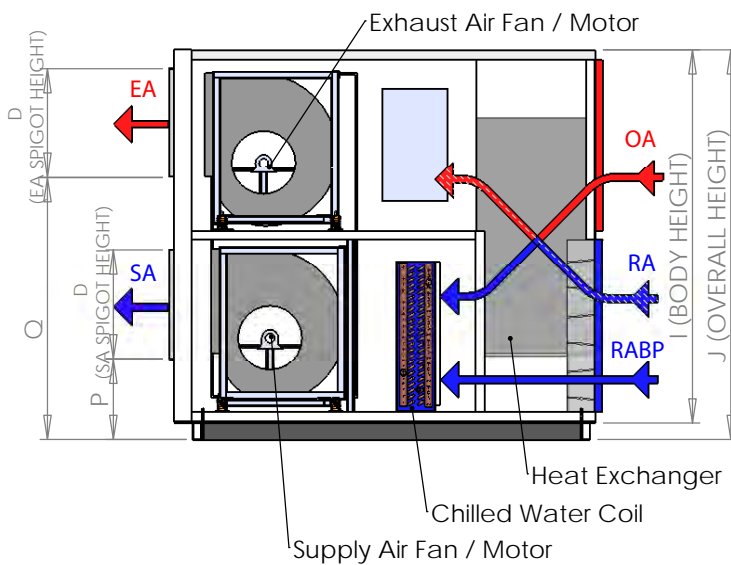
NEXT-AHU 2000



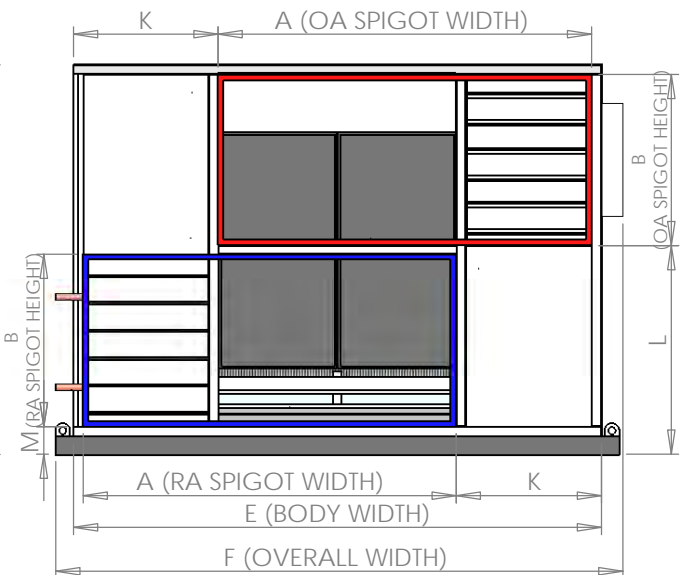
PLAN VIEW



BASE FRAME



SIDE VIEW

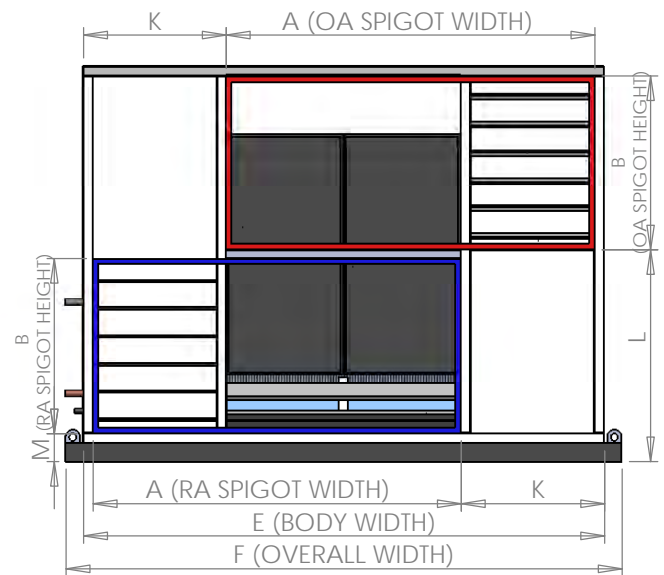
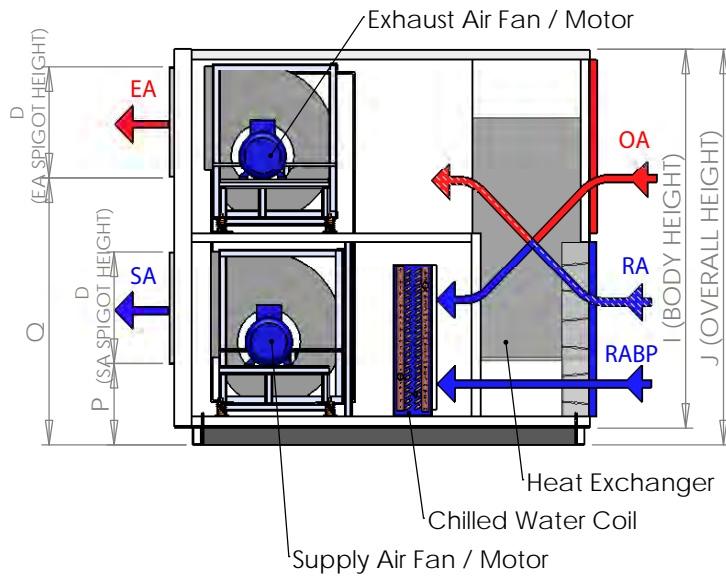
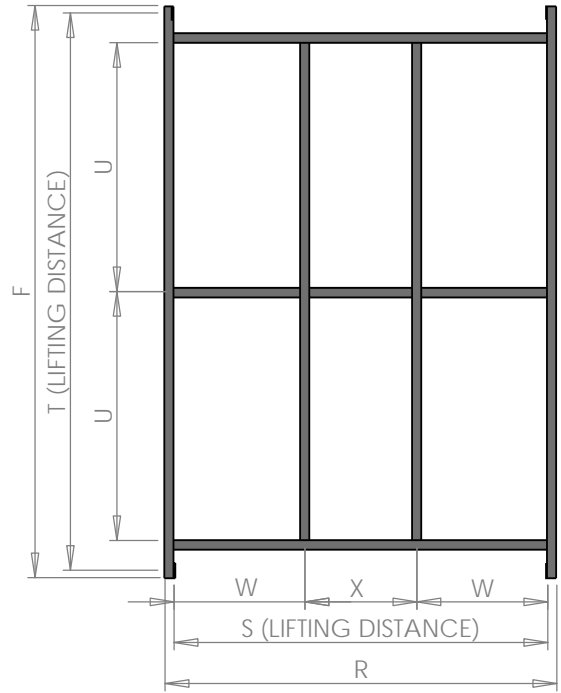
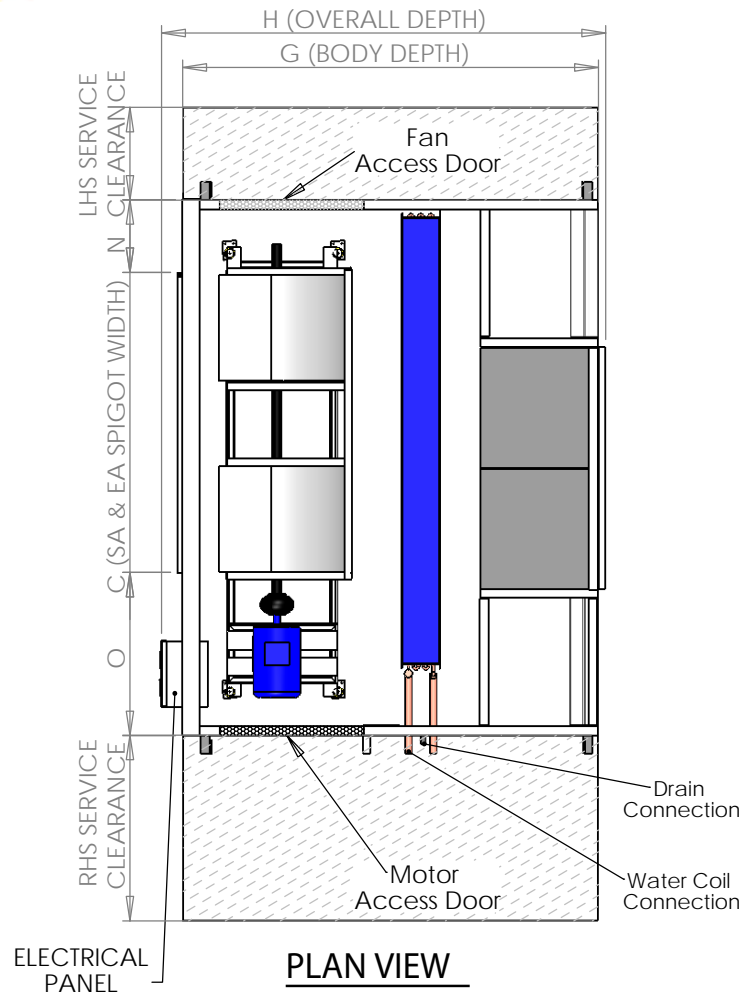


BACK VIEW

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1325	700	900	400	1800	2020	1640	1720	1550	1650	425	900	150	400	500
P	Q	R	S	T	U	V	W	X	LHSCLEARANCE	RHSCLEARANCE	WEIGHT			
330	1080	1510	1410	1920	800	2000	705	-	500	1500	590			

DIMENSIONS (mm) & WEIGHT (kg)

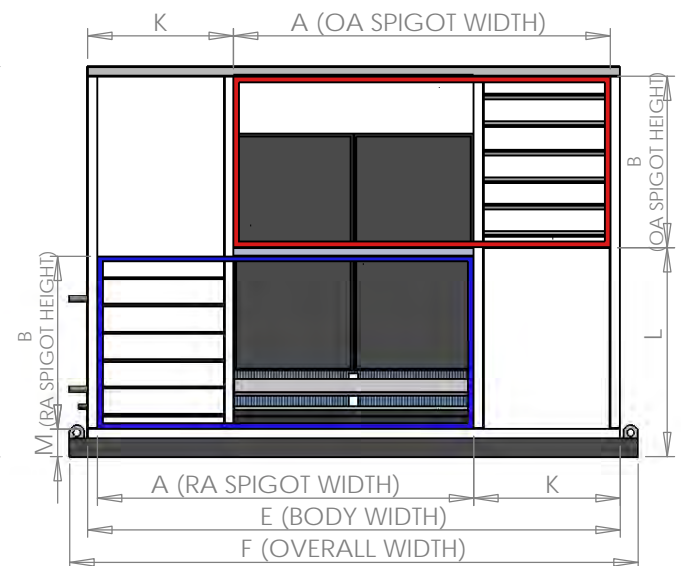
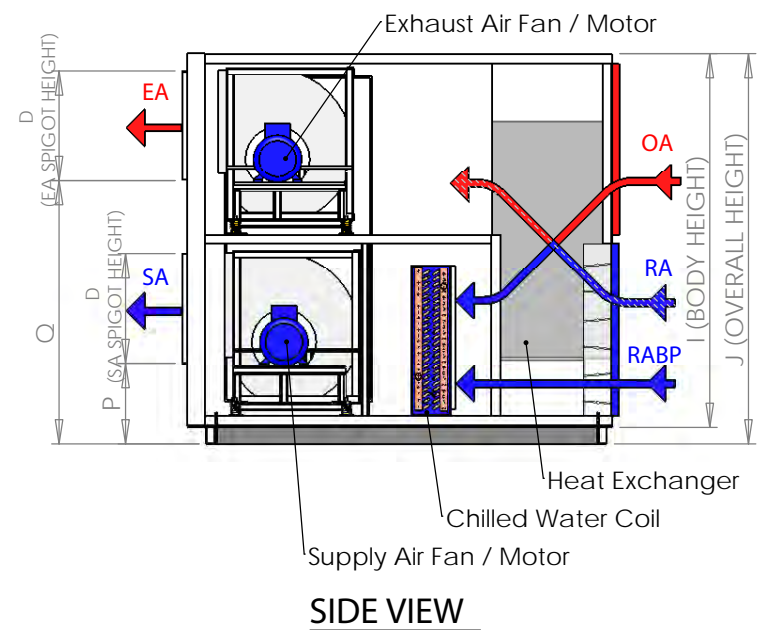
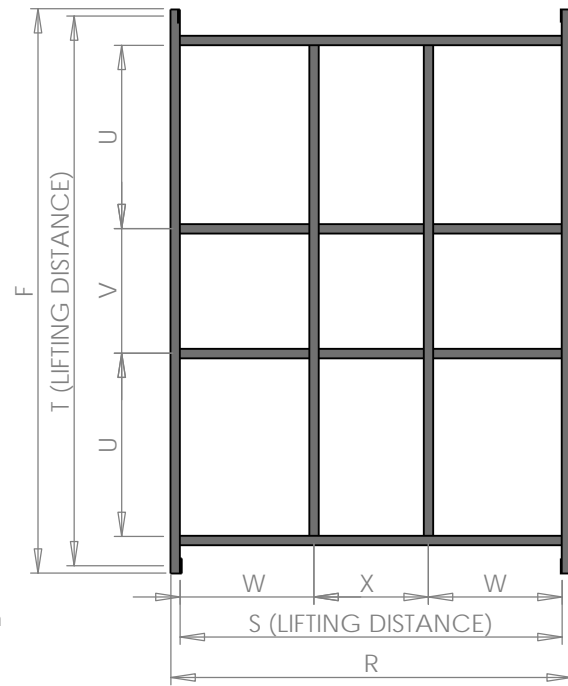
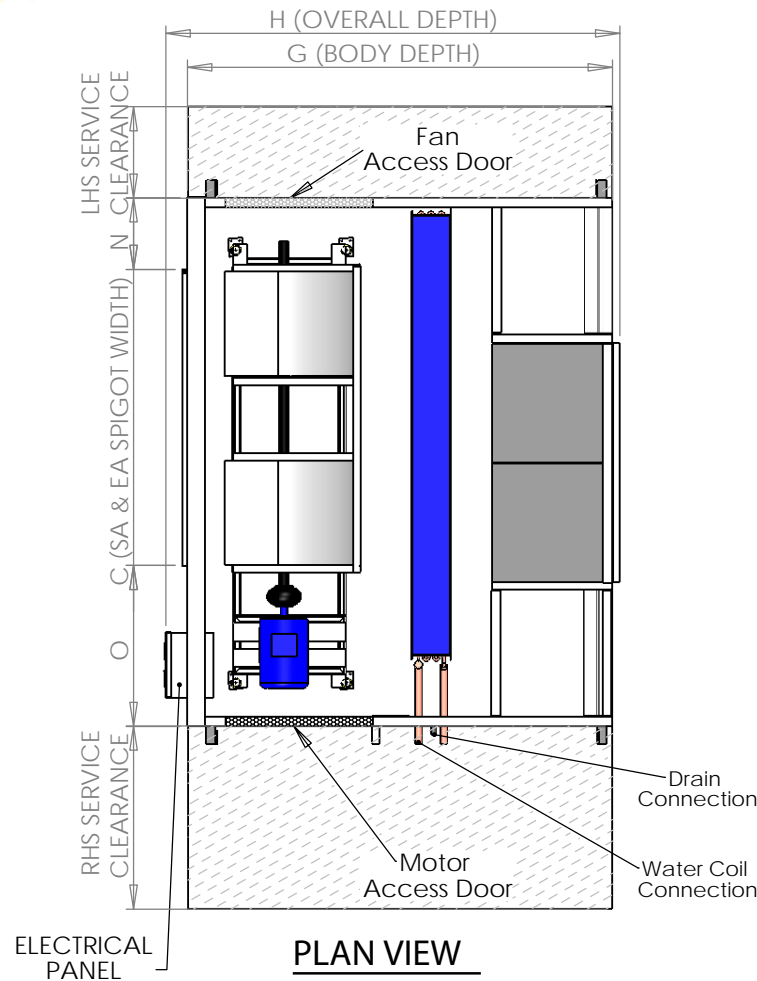
NEXT-AHU 4000



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2040	940	1100	500	2880	3080	2260	2420	2030	2130	790	1140	150	890	890
P	Q	R	S	T	U	V	W	X	LHS CLEARANCE		RHS CLEARANCE		WEIGHT	
355	1345	2130	2030	3000	1340	-	675	680	500		1500		1050	

DIMENSIONS (mm) & WEIGHT (kg)

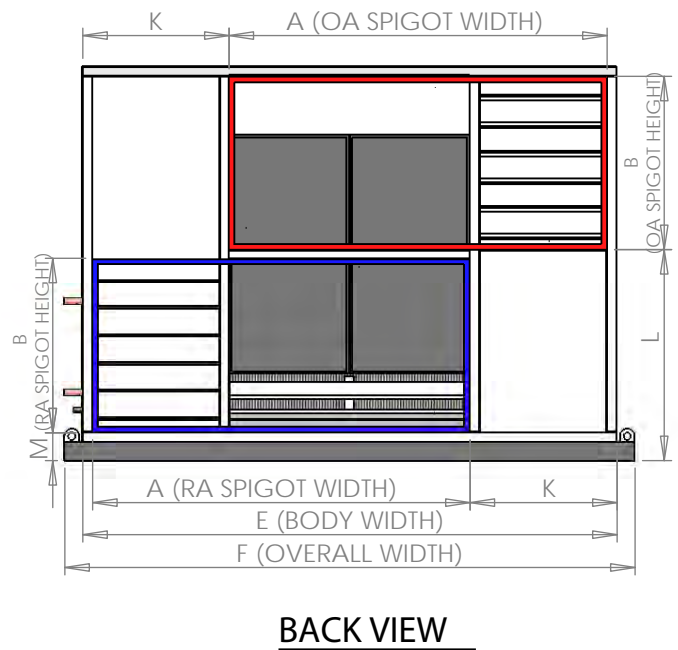
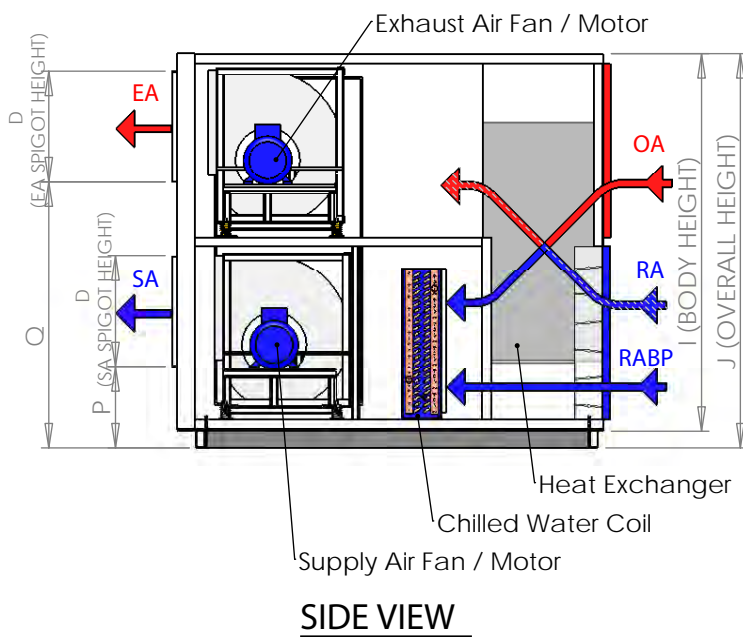
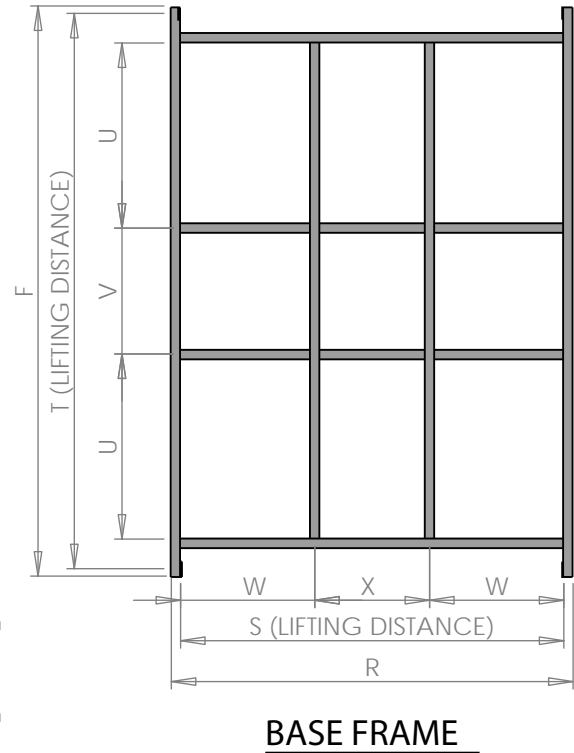
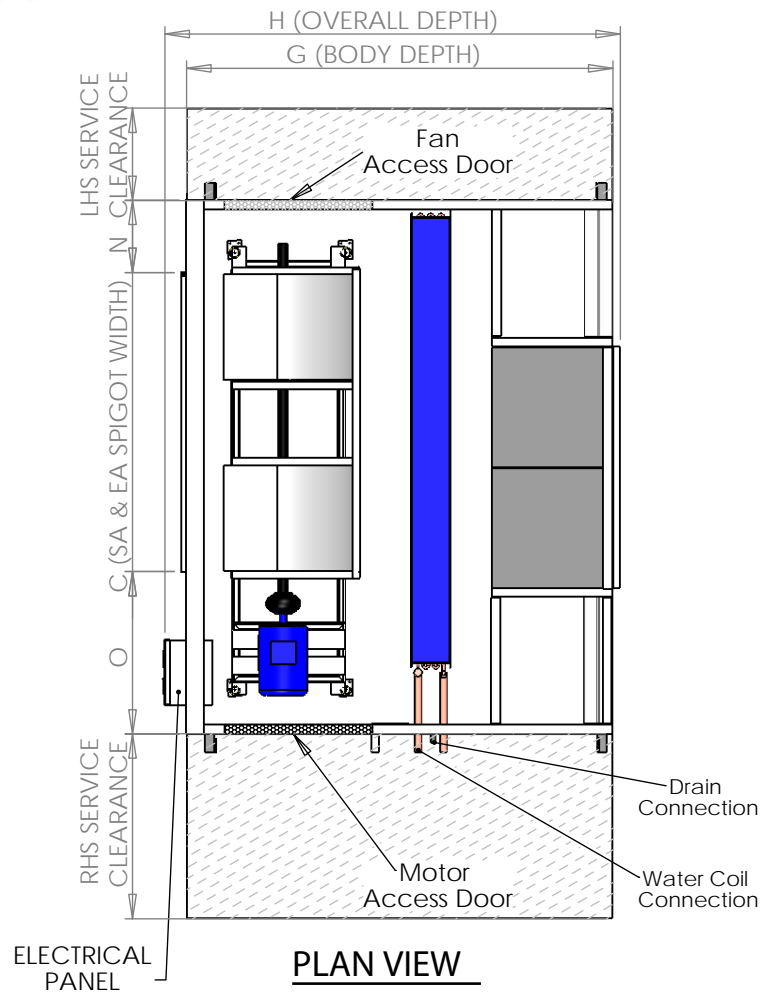
NEXT-AHU 6000



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2925	1000	1250	600	4000	4200	2340	2500	2150	2250	1025	1200	150	1375	1375
P	Q	R	S	T	U	V	W	X	LHS CLEARANCE		RHS CLEARANCE		WEIGHT	
425	1475	2210	2110	4120	1260	1280	705	700	500		2000		1540	

DIMENSIONS (mm) & WEIGHT (kg)

NEXT-AHU 8000



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
3400	1200	1400	730	4300	4500	2340	2500	2550	2650	850	1400	150	1450	1450
P	Q	R	S	T	U	V	W	X	LHS CLEARANCE		RHS CLEARANCE		WEIGHT	
460	1710	2210	2110	4420	1360	1380	705	700	500	2000		2060		