AIR HANDLING UNITS

Sr#	Description	Qty
1	**Horizontal Draw-Thru Air Handling Unit with Following Specifications:**	
i.	**AHU#1:** • Flow Rate: 38000 CFM • Available Static Pressure: 2-1/2" (Available static pressure is in addition to the static pressure losses occurred in the AHU i.e. Pressure losses during filtrations, in coils, etc.) • Cooling Capacity: 520 kW • Heating Capacity: 460 kW • Steam Discharge Capacity Humidifier: 500 lb/hr	4
ii.	**AHU#2:** • Flow Rate: 12000 CFM • Available Static Pressure: 2-1/2" (Available static pressure is in addition to the static pressure losses occurred in the AHU i.e. Pressure losses during filtrations, in coils, etc.) • Cooling Capacity: 170 kW • Heating Capacity: 150 kw • Steam Discharge Capacity Humidifier: 150 lb/hr	1
	Rest of the Specifications for both AHUs are as follows: **Type:** • Modular type with separate coil section, filtration section, fan and humidistat section, which will be assembled on-site. **Fan:** • Centrifugal Type • Belt Driven **Motor and VFD:** • Power Supply: 380-415 V, 3 Phase, 50Hz • Motor Make: Siemens, ABB or Equivalent • Insulation Class: F • Protection Class: IP 55 • Cooling Method: TEFC • Build-in VFD Compatible with Motor for Fan Speed Control **Cooler/Heater Coils:** • Fluid Type: Chilled/Hot Water • Chilled Water Temperature In: 7°C • Chilled Water Temperature Out: 12°C • Hot Water Temperature In: 71°C • Hot Water Temperature Out: 76°C • Pressure Drop: Suitable Pressure Drop to be Mentioned in Quotation • Same coils will be used for both heating and cooling under respective seasons	

	Humidistat:
	• Humidistat Type: Electrically Modulated, Direct Steam Injection, Steam Separator Type Humidifier
	• The Unit must include following components:
	  ○ Humidifier with Integral Control Valve
	  ○ Electrical Motorized Operator
	  ○ Distribution Manifold
	  ○ Strainer
	  ○ Steam Trap
	• Steam Pressure: 12 psig
	• Steam Discharge Pressure: 500 lbs/hr
	• Make: Armstrong or Equivalent
	
	Filtration:
	• Dust filtration at the inlet shall conform to F7 as per EN779:2012 or ISO ePM1 55% as per ISO 16890
	• Filters should be washable
	
	Controls and Sensors:
	• Humidity and Temperature Sensor for Outlet Duct
	• Humidity and Temperature Sensor at Inlet
	• Pressure Difference Sensor Indicating Choking of Inlet Dust Filters
	• LED Display and Control of all functions i.e. Temperature, Humidity, Fan Speed, Separate Heating and Cooling Logic, etc.
	• Provision of connection to the Computer for External Display of Controls
	• 3-Way Mixing Valve for Cooling/Heating Circuit
	• Provision of Built-in VFD for Fan Speed Control	

	Notes: a. Modular type with separate coil section, filtration section, fan and humidistat section, which will be assembled on-site. b. The supply must include all the necessary documents regarding AHU operation and installation i.e. Operation and Maintenance Manuals, Installation Manuals, etc. c. The mentioned "Available" static pressure is in addition to the pressure drop that occurs in coils section, filter section, etc. d. Please mention AHU's physical dimensions in the quote.	