

<div style="background-color: black; width: 100px; height: 20px; margin: 5px;"></div>	Title: Mechanical Facility Equipment Operation & Maintenance	Effective Date: <div style="background-color: black; width: 100px; height: 20px; margin: 5px;"></div>
	Document Number: <div style="background-color: black; width: 100px; height: 20px; margin: 5px;"></div>	Version: <div style="background-color: black; width: 20px; height: 20px; margin: 5px;"></div>

Attachment 1: PM Checklist – Twenty (20) Ton RTU

Equipment Identification: _____

Type of PM: ☐ Quarterly (Q) ☐ Semi-Annual Pre-Cool months (SAC) ☐ Semi-Annual Pre-Heat Months (SAH) ☐ Annual (A)

PM Frequency				Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
Q	SAC	SAH	A		As Expected	Not As Expected		
X				Inspect return filters. Clean or replace as necessary				
X				Inspect the smoke detector for proper operation.				
	X			Check Drain Pans and Condensate piping for damage and/or blockages				
	X			Inspect evaporator and condenser coils for dirt blockage, damaged/bent fins, etc. Clean coils, as necessary				
	X			Inspect the fresh-air and return-air damper hinges, pins and linkages for binding or resistance to movement. Clean/lubricate damper blades and linkages, as necessary.				
	X			Check supply fan motor bearings				
	X			Check the fan shaft and shaft bearings for wear or visible misalignment. Repair or replace, as necessary				
	X			Check the fan supply belt tension and condition. Re-tension or replace, as necessary				
	X			Check Sheaves grooves for excess wear. Replace, as necessary				
	X			Verify control wiring/terminals are tight. Tighten, as necessary				
	X			Remove corrosion on exterior of unit; touch-up paint as required				

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Attachment 1: PM Checklist – Twenty (20) Ton RTU					Equipment Identification: _____			
Type of PM: <input type="checkbox"/> Quarterly (Q) <input type="checkbox"/> Semi-Annual Pre-Cool months (SAC) <input type="checkbox"/> Semi-Annual Pre-Heat Months (SAH) <input type="checkbox"/> Annual (A)								
PM Frequency				Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
Q	SAC	SAH	A		As Expected	Not As Expected		
	X			Verify access panels are secure				
	X			With unit operating, record ambient temperature, compressor suction/discharge pressures in equipment log. Refill with refrigerant, as necessary				
		X		Check supply fan motor bearings				
		X		Inspect main unit control panel and heat section control box for loose electrical connections. Tighten, as necessary				
			X	Clean condenser coil				

Performed By: _____

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Attachment 2: PM Checklist – Exhaust Fans			Equipment Identification: _____			
Type of PM: <input type="checkbox"/> Quarterly (Q) <input type="checkbox"/> Semi-Annual Pre-Cool months (SAC) <input type="checkbox"/> Semi-Annual Pre-Heat Months (SAH) <input type="checkbox"/> Annual (A)						
PM Frequency		Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
Q	A		As Expected	Not As Expected		
X		Check motor for cleanliness and lubrication. Clean, lubricate, and/or replace, as necessary				
X		Check tightness of mounting bolts to ensure the motor is not loose				
X		Check Belt tension and for signs of wear. Re-tension and replace, as necessary				
X		Check Sheaves grooves for excess wear. Replace, as necessary				
	X	Lubricate the pillow-block bearings. Only one or two shots of lubrication with a <div style="background-color: black; width: 10px; height: 10px; display: inline-block;"></div> psi max handgun. Wipe grease fitting clean after lubrication				

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Attachment 3: PM Checklist – Fan-powered HEPA Filter Units				Equipment Identification: _____		
Type of PM: <input type="checkbox"/> Semi-Annual (SA) <input type="checkbox"/> Annual (A)						
PM Frequency		Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
SA	A		As Expected	Not As Expected		
	X	Replace the pleated pre-filter				

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Attachment 4: PM Checklist – Gas Fired Humidifier			Equipment Identification: _____			
Type of PM: <input type="checkbox"/> Semi-Annual (SA) <input type="checkbox"/> Annual (A)						
PM Frequency		Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
SA	A		As Expected	Not As Expected		
X		Verify vent adapter and flue gas inspection port are in place. Verify vent pipe is seated/secured properly.				
X		Verify the unit and support frame are in good condition and no signs of corrosion or other types of damage.				
X		Check burner flame color: primarily orange. under low demand; primarily blue under high demand.				
X		Inspect control panel alarm and messages through the alert log. Troubleshoot and repair, as necessary.				
X		Check the ignition sequence				
		Perform system operational inspection:				
	X	<ul style="list-style-type: none"> Measure CO, CO₂%, O₂%, flue temperature and burner efficiency at 100% demand with the tank at a boil. 				
	X	<ul style="list-style-type: none"> CO: Must be less than <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> ppm (<div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> ppm typical) 				
	X	<ul style="list-style-type: none"> CO₂: <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> % is typical for Natural Gas Fired Units 				
	X	<ul style="list-style-type: none"> O₂: <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> ± <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> % 				
	X	<ul style="list-style-type: none"> Flue Temperature: Less than <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> °F (<div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> °C) 				
	X	<ul style="list-style-type: none"> Thermal Efficiency: Greater than <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> % 				
	X	<ul style="list-style-type: none"> NOx: <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div> ppm max 				

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Type of PM: <input type="checkbox"/> Semi-Annual (SA) <input type="checkbox"/> Annual (A)						
PM Frequency		Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
SA	A		As Expected	Not As Expected		
	X	Verify flue passageway is sealed and free of any obstructions.				
	X	Upgrade <div></div> -logic Software to latest version.				
	X	Inspect the ventilation apparatus and ensure vent connector is in place and sloped upward				

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Attachment 5: PM Checklist – Electric Fired Humidifier

Equipment Identification: _____

Type of PM: ☐ Semi-Annual (SA) | ☐ Annual (A)

PM Frequency		Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
SA	A		As Expected	Not As Expected		
X		Inspect the Cylinder for Lime Scale build up, or any damage/anomalies				
X		<ul style="list-style-type: none"> Replace cylinder if excess lime-scale, dark color appearing through the plastic tank, or another anomaly as indicated in the operations manual (section <div style="background-color: black; width: 30px; height: 15px; display: inline-block;"></div>) is identified during the inspection. 				
X		Remove the solenoid valve and inspect the inlet filter for cleanliness. Clean with water and soft brush, as necessary.				
X		Inspect the manifold with drain pump for signs of damage to the hose, O-ring, or pump. Replace the O-ring or hose, as necessary				
X		Inspect the pump for cleanliness. Clean with water or a solution of <div style="background-color: black; width: 20px; height: 15px; display: inline-block;"></div> % acetic acid, as necessary.				
X		Inspect the tank for cleanliness. Clean with water or a solution of <div style="background-color: black; width: 20px; height: 15px; display: inline-block;"></div> % acetic acid, as necessary.				
X		Inspect the internal tubing kit (pipes and hoses) for cleanliness. Clean with water or a solution of <div style="background-color: black; width: 20px; height: 15px; display: inline-block;"></div> % acetic acid, as necessary.				
X		Inspect all connections for security and tightness.				

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Attachment 5: PM Checklist – Electric Fired Humidifier			Equipment Identification: _____			
Type of PM: <input type="checkbox"/> Semi-Annual (SA) <input type="checkbox"/> Annual (A)						
PM Frequency		Preventive Maintenance Check	Results		Performed by (initials)	Performed by Date
SA	A		As Expected	Not As Expected		
X		Once reassembled, run <div></div> to <div></div> fill/drain cycles to ensure proper function of humidification unit; verify there are no leaks from the tank or component assembly of the fluid path.				
X		Inspect the <div></div> Fan Pack (Room <div></div>) to ensure proper operation; verify air-flow path is clear of obstructions and fan/motor operating without excessive noise (Excessive noise is a sign of unusual bearing/bushing wear)				
	X	Replace the cylinder				

Performed By: _____

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