WINTEK CORPORATION

Email Transmission

July 7, 2016

Providing Reliable Vacuum Systems to Customers for 25 YEARS – since 1986!

RE: Chiller Proposal for Solvent Recovery Vacuum System for Nutriati
Wintek Quotation 16Q114

Eberhard,
Per our meeting on June 22, it was requested Wintek provide a proposal for a packaged chiller to handle the solvent recovery vacuum system we are supplying for the Nutriati project.

Chiller: Max Peak Load:
Model GPWC-175 Indoor Chiller, water cooled condenser,

- **567,000 BTU/hr** at 8C leaving temperature; (Normal peak 190,000 BTU/hr)
- to provide 230 gpm cooling water (30/70 EG/water; to be split between the condenser and vacuum pump by local contractor),
- 3/60/575 volt power, cUL/CSA,
- two (2) 25 hp scroll compressors,
- brazed plate evaporator,
- shell/tube condenser, (150 gpm 18-29C cooling water required)
- R410a refrigerant,
- CAREL PLC w/ operator interface LCD display,
- hot gas bypass capacity control,
- 250 gallon SS reservoir with SS piping,
- 15 hp stamped SS circulation pump.
- Non-hazardous location.
- Footprint: 152" L x 45" W x 74"H; 2900 lbs shipping weight

Equipment GPWC-175 Indoor Chiller with Integral Water Cooled Condenser

Cooling Capacity	48	tons	(576,000 Btu/hr)
Inclusive Option	✓	☑	575/3/60 operation
		☑	45 °F LFT
		☑	85 °F condenser water temperature
		☑	LFT operating range between 20°F and 80°F
		☑	glycol is required with LFT below 45°F (consult the O & I manual for the recommended %)

Refrigeration	☒	(2) 25 hp hermetic scroll compressor
	☒	shell-and-tube condenser with cooling water regulating valve
	☒	stainless steel brazed plate evaporator
	☒	electronic hot gas bypass capacity control
	☒	R410a refrigerant
	☒	refrigerant filter dryer
	☒	high and low refrigerant pressure sensors
	☒	low pressure safety through suction pressure transducer
	☒	high pressure refrigerant safety switch
	☒	high pressure, spring actuated refrigerant relief valve
	☒	refrigerant sight glass
	☒	externally equalized thermal expansion valve
	☒	multiple refrigeration access ports
	☒	liquid line/refrigeration shut-off valves
	☒	liquid line solenoid valve

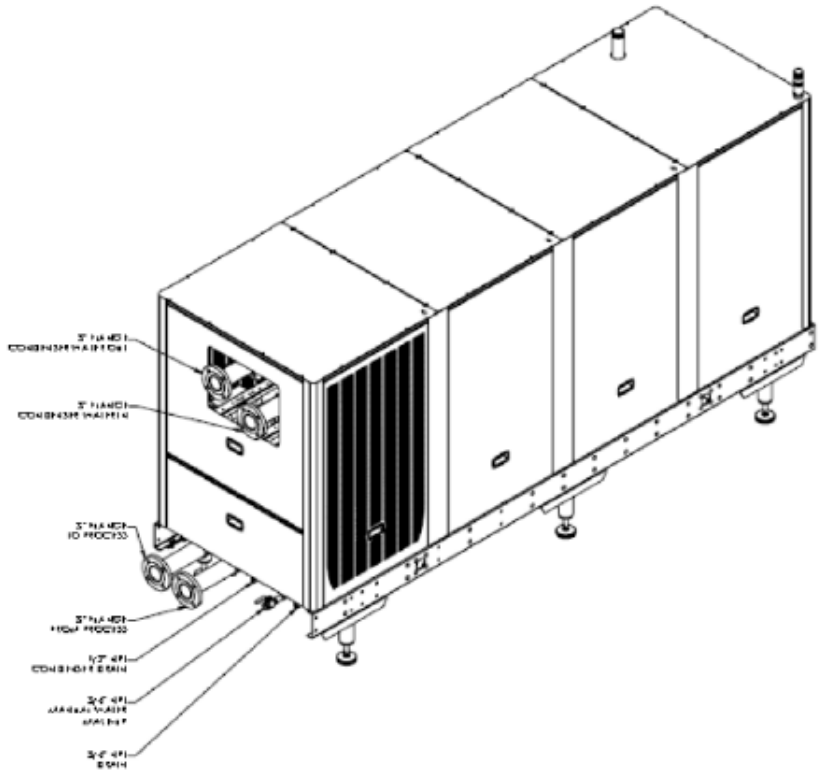
Water Circuit	☒	non-ferrous chilled water contact surfaces
Inclusive Option	✓	**250 gallon stainless steel reservoir with threaded connections as opposed to uni-seals**
Inclusive Option	✓	**close-coupled stamped SS centrifugal pump rated for 230 GPM @ 45 PSI**
	✓	**15 hp ODP pump motor**
Inclusive Option	✓	**replace all plastic piping with non-ferrous metal piping**
	☒	low process water thermal flow switch
	☒	internal manual chilled water bypass valve (for system protection only)
	☒	20 mesh Y-strainer (evaporator protection)
Electrical	☒	NEMA-12 electrical enclosure
	☒	non-fused, through-the-door, rotary power disconnect switch
	☒	branch circuit protection
	☒	control transformer with primary fusing
	☒	IEC compressor contactors
	☒	IEC pump motor starter(s)
Inclusive Option	✓	**CUL labeled electrical sub-panel**
Physical	☒	galvanized, structural steel frame with powder-coated sheet metal panels
	☒	two-tone grey paint
	☒	mounting rails
Inclusive Option	✓	**four-section cabinet to accommodate the 250-gallon reservoir**
Warranty	☒	1 year on compressor and labor
	☒	2 year on parts
	☒	3 year limited on temperature control module

Controls

- ☒ CAREL PCO1 off-the-shelf microprocessor based PID temperature controller
- ☒ PGD1 operator interface
  - operator screen information
    - entering fluid temperature (°F or °C)
    - leaving fluid temperature (°F or °C)
    - fluid set point (°F or °C)
    - pump pressure (PSI)
    - tank level (inches)
    - hot gas bypass (% open)
    - compressor suction pressure (PSI)
    - saturated suction temperature (°F or °C)
    - compressor discharge pressure (PSI)
    - saturated discharge temperature (°F or °C)
  - analog inputs
    - entering fluid temperature (°F or °C)
    - leaving fluid temperature (°F or °C)
    - pump pressure (PSI)
  - analog outputs
    - hot gas bypass (% open)
    - modulating valve temperature (°F or °C) [for optional fluid 3-way valve]
  - digital inputs
    - compressor fault (on/off)
    - high refrigerant pressure (on/off)
    - pump overload (on/off)
    - flow switch (on/off)
    - fan overload (on/off)
    - remote start/stop (on/off)
  - digital outputs
    - compressor "A" (on/off)
    - liquid line solenoid (on/off)
    - pump (on/off)
    - condenser fan (on/off)
    - alarm output (on/off)
  - supervisor set points
    - leaving fluid temperature
    - high fluid temperature fault
    - high temperature warning
    - high temperature delay
    - low temperature warning
    - low temperature fault
    - compressor ON differential (°F or °C)
    - compressor OFF differential (°F or °C)
    - pump stop delay (seconds)
    - tank % mark (inches)
    - low tank level fault (inches)
    - low tank level warning (inches)
    - automatic water make-up open (inches)
    - automatic water make-up closed (inches)
    - automatic water make-up time (seconds)

Equipment	Indoor Chiller with Integral Water Cooled Condenser		Minimum Circuit Ampacity (460/3/60)			
Model / Part Number	GPWC-175		unit with 15-hp pump			131
Cooling Capacity ①	46	tons	Running Amps (460/3/60)			
	552,000	Btu/hr	unit with 15-hp pump			66
	139,104	K-cal/hr	Dimensions			
	161.7	kW	Length	152	inches	
Chilled Water Flow	230	GPM	Width	45	inches	
Chilled Water Pressure	45	PSI	Height	74	inches	
Condenser Water Flow	150	GPM (85°F)				
Temperature Display	Fahrenheit		Weight			
Tower Water Connections	3.0 / 3.0	inch (flanged) supply / return	Shipping	2,880	pounds	
Chilled Water Connections	3.0 / 3.0	inch (flanged) supply / return	Operating	3,960	pounds	

① Cooling capacity based on operation with 46°F LFT, 85°F condenser water, specified pump and 60-hertz power.



Note: legs not included