Section 1. System / Equipment Description

This manual contains important information about the equipment H2K Technologies, Inc has supplied for this project. Specific operation and maintenance information for individual components or systems can be found in the numbered sections. If additional information is required, please call.

The appendices contain the original equipment manufacturers' operation and maintenance manuals, specification sheets, modeling, etc.

Equipment Description:

The below is a list of equipment supplied by H2K Technologies Inc. for this project, more specific information on most of these items can be found in numbered sections of the manual.

SVE

- (1) SVE manifold with 4" main and (14) 2" takeoffs (13 to wells, 1 bleed) includes:
 - Schedule 80 PVC header and fittings, thread adapters as required
 - (13) Vacuum monitoring ports with ¹/₄" ball valve
 - (13) 2" PVC ball or gate valve
 - (13) Teed sample ports
 - (1) Magnehelic vacuum gage (0-40"WC) with tubing to monitor vacuum at each point
 - (1) 2" Bleed valve with 1.5" silencer on separator inlet (Solberg element P/N 19 or 19P)

(1) Moisture separator, Rotron MS-350B, Part #038277

4" PVC piping between manifold and MS
55 gallon steel drum with epoxy finish inside and out
Tangential inlet for 95%+ moisture removal
17" Hg vacuum design rating
55 gallon total capacity, 40 gallon holding capacity
PVC site glass with ss Low (6"), High (14") & High/high (17") level switch and union for easy

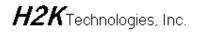
removal

heights are from floor to switch middle

1" Drain valve Integral vacuum relief valve Vacuum gage, on separator inlet (0-100"WC) Sample port on separator inlet Temp gage on inlet (0-250 deg F)

 (1) Rotron EN505 Regenerative SVE blower (SVE2 – new one) Model EN505AX58ML, P/N 038177: 2hp 115/230 VAC, 1 phase, 22/11 Amp, Baldor EXP motor Aluminum impeller and casing Integral inlet and outlet silencers Vacuum gage on blower inlet (0-100"WC) Sample port on blower discharge

- (1) 2.5" inline filter, Solberg model CSL-851-250HC with 10 micron replaceable element (element P/N 851) Vacuum gage on filter inlet and outlet (0-100"WC)
- (1) Vacuum transmitter, United electric series One Local LCD display, 4-20mADC output, NEMA 4X enclosure
- (Lot) Mounting, piping & wiring of 2 hp single phase regen and 1 hp single phase regen blowers



Piped in parallel, to include:

(2) 2" check valves

(2) 2" brass ball valves for isolation

(1) Discharge temp gage (0-250 deg F)

(1) 2" pitot tube on common blower exhuast with magnehelic gage (0-20"WC)

(Lot) Mounting, piping and wiring of ½ hp single phase end suction centrifugal pump and flow meter Includes check valve, throttle valve, sample port and pressure gage on pump discharge ¾" water flow totalizer on pump discharge

(Lot) Used SVE components

(1) Rotron EN404 SVE blower 1hp, 115/230V, 12/6A, 1 phase, Model EN404AR58ML, P/N 038173 s/n FE37930, with Doerr Electric EXP motor

(1) Price transfer pump 1/2hp, 115/230V, 1 phase, Model CD100BF (series)-350(imp dia)-6A212(seal config)-050(HP)-36(rpm)-1X6, s/n 99121791720-01

(1) Badger meter ³/₄" RecordAll Model 35 (initial reading 226,949.8 gal)

(1) Fostoria Model FEP18241R EXP, 1800 watt, 240V, 7.5A, 1 phase building heater

- (1) New York Blower Model 142N 1/4hp, 115/230V, 4.4/2.2A (wired for 115V), 1 phase, EXP
- exhaust fan and thermostat (shop#U01175100)

(2) Incandescent EXP light and EXP light switch

(1) 1 ¹/₂" Threaded bleed inlet filter (teed off of manifold with 2" valve and piped to inlet louver area) Note the above equipment was supplied by Terracon

Controls

(1) Control System

For operation on 220 VAC, 1Ø, 3 wire incoming electrical service. To control 2HP single phase SVE blower, 1 HP single phase SVE blower, and ½ HP transfer pump. Furnished mounted and wired on the trailer exterior wall. To include:

QTY DESCRIPTION

- 1 Enclosure, NEMA 4, 36"h, 36"w, 12"d with inner door for switches and indicators
- 1 Motor starter: Contactor 23A FLA (Telemecanique LC1D25)/Overload relay 5.5-8A, 1Ø; SVE blower (1hp SVE1)
- 1 Motor starter: Contactor 23A FLA (Telemecanique LC1D25)/Overload relay 9-13A, 1Ø; SVE blower (2hp SVE2)
- 1 Motor starter: Contactor 23A FLA (Telemecanique LC1D25)/Overload relay 4-6A, 1Ø; transfer pump
- 1 Panel board 220VAC 1phase in NEMA 3R enclosure mounted next to control panel, includes: 1 Circuit breaker 230V 2P100A: main disconnect
 - 3 Circuit breaker 230V 1P15A 10K; vent fan, lighting, control power
 - 1 Circuit breaker 230V 2P15A 10K; heater
 - 1 Circuit breaker 230V 1P20A 10K; receptacle(s)
 - 2 Circuit breaker 230V 2P15A 10K; SVE (1hp), transfer pump
 - 1 Circuit breaker 230V 2P20A 10K; SVE (2hp)
- EOS Research ProControl Series 2+, Type B2 programmable controller/telemetry unit with 10 AI, 22 DI, 14 RO, 5 AO and ProView software. Programmed for manual reset after power failure.
- 3 Switch; three position; Hand-Off-Auto with integral Run (green/LED) indication
- 1 Light (red/LED); alarms
- 1 Pushbutton (red/NO); alarm Reset
- 2 Intrinsically safe barriers, discrete, 2 channel
- Motor run time meters
 Engraved laminated legends for all door mounted devices
 Terminal blocks for external connections and fusing as required
 Color-coded wiring with wire markers at all terminations
 Fully documented, assembled, wired, programmed and pre-shipment test
- 1 UL 698A serialized label
- 1 GFIC 20A outlet with and weatherproof cover; mounted adjacent to control panel



Trailer

(1) Trailer enclosure system, 8' wide x 12' long x 6.5' high

6" steel I beam frame Plywood floor decking, aluminum & fiberglass exterior R-5 fiberglass wall and ceiling insulation with plywood interior Tandem 3,500 lb axles, 7,000lb GVWR, radial tires Double rear doors with cam lock 2 5/16 " coupler with jack stand (2) scissor jack, frame mounted on rear Electric brakes, ICC lighting

(Lot) Trailer install vent /heat components, equipment piping, install and wiring, to include:

(Lot) Mount and wire explosion proof electric convection heater & thermostat supplied by others (Lot) Mount and wire explosion proof light with vapor globe and wall switch supplied by others

(Lot) Mount and wire explosion proof vent fan & thermostat supplied by others

H2K will provide inlet & outlet louvers

Includes equipment installation and wiring

SVE system will be installed, piped and wired in trailer, control panel will be mounted and wired on outside of trailer. Piping will be schedule 40 galvanized for SVE discharge, Schedule 80 PVC for SVE inlet. Wiring will be per NEC for Class I, Div 2 Group D hazardous environment inside trailer, outside trailer shall be considered non-classified beyond 3' from any opening.