

# Equipment Description

## LOOSE ITEMS

Includes: High-level alarm switch – storm sewer inlet

## VAPOR INLET HEADER

Includes: One 4" Vapor Inlet header with twelve 2" zones, each zone to contain:

- Ball valve
- Vacuum gauge – 0-100" WC-0-30"Hg Stainless Steel
- Sample port
- PVC piping

## HIGH VACUUM SEPARATOR – WELDED STEEL

Includes: **MLEE 240-gallon welded steel type moisture separator with:**

- *stand*
- high liquid volume configuration
- 6" clean out
- ½" sight glass
- High level alarm switch
- High level pump control switch
- Low level pump control switch
- 1" drain ball valve

Discharge of separator:

- Two ball valves
- ~~Two Moyno Model 367 Transfer pumps setup in parallel,~~  
each with 1 HP 230/460V/3P EXP motor capable of 50 GPM,  
for a total capacity of 100 GPM
- *One Moyno A1G CDQ3AAA with 5hp EXP motor capable of  
100gpm at 25psi*
- Two ball valves
- Two check valves
- Pressure gauge – 0-30 PSI liquid filled Stainless Steel
- Sample port
- Gate valve
- Check valve
- 3" ~~Galvanized steel~~ PVC piping (steel is not necessary for  
separator discharge)

**OIL SEAL LIQUID RING PUMP SYSTEM**

Includes: **Oil Sealed Liquid Ring Pump Dekker DV0451A-KA** with 30-hp  
230/460V/3P EXP motor to deliver 400 ACFM at 20" Hg

Inlet of Liquid Ring Pump to contain:

- Solberg inlet filter/silencer
- Sample port
- Vacuum gauge – 0-30" Hg liquid filled Stainless Steel
- Dilution valve with Solberg filter/silencer
- Vacuum relief valve
- Wafer check valve
- 4" PVC piping

Seal Oil separator Assembly to contain:

- ½" sight glass
- Demister element
- Oil fill port
- Sample port
- Pressure gauge – 0-15 PSI liquid filled Stainless Steel
- High differential pressure switch
- Temperature switch
- Temperature gauge
- High level alarm switch
- Low level alarm switch
- 1" drain all valve

Seal Oil Siphon line to contain:

- ¼" sight glass
- ¼" steel piping

Oil discharge from Seal Oil Separator to contain:

- Ball valve
- Wye strainer
- Gate valve
- Vacuum gauge – 0-30" Hg liquid filled Stainless Steel
- Seal Oil cooler assembly
- Temperature gauge – 0-250 F
- 1-1/2" Galvanized steel piping

Vapor discharge from Seal Oil Separator to contain:

- Secondary 25 G seal oil separator with seal oil suction line back to pump
- Flow indicator (Pitot tube & Magnahelic gauge)
- 4" Steel piping

### OIL/WATER SEPARATOR

Includes: **MLEE OWS-100 Oil Water Separator tank, 100 GPM with:**

- High level alarm switch
- Pump control switch
- Four 1" drain ball valves
- ~~1" drain ball valve~~ *(included in four above)*
- 1000 G integral water storage tank

Water discharge from Integral water storage tank:

- Ball valve
- **Gould's NPE 2ST discharge pump** with 2 HP 230/460V/3P EXP motor to deliver 100 GPM at 40' TDH
- Pressure gauge – 0-30 PSI liquid filled Stainless Steel
- Sample port
- Gate valve
- Check valve
- 3" piping

**Product Storage tank, 285G double wall steel storage tank with:**

- High level alarm switch
- 1" discharge ball valve

### AIR STRIPPER SYSTEM

Includes: **QED Model 16.4SS Air Stripper Package c/w New York Blower with 230/460/3P EXP motor (7.5hp)**

- 1/2" sight glass
- High level alarm switch
- Pump control switch
- 1" drain ball valve

Cleaning Circulation line to contain:

- Ball valve
- 1" piping

Water discharge from Stripper to contain:

- Ball valve
- **Gould's NPE 2ST discharge pump** with 2 HP 230/460V/3P EXP motor to deliver 100 GPM at 40' TDH

- Pressure gauge – 0-30 PSI liquid filled Stainless Steel
- Check valve
- Sample port
- Gate valve
- Turbine style totalizing water flow meter (no pulse)- Evans
- 3” piping

Air Inlet to Stripper to contain:

- Solberg inlet filter/silencer
- Pressure gauge – 0-60” WC liquid filled Stainless Steel
- Butterfly valve
- Flow switch
- Differential pressure switch
- 6” PVC piping

Air discharge from Stripper to contain:

- Sample port
- 6” PVC piping

Air Stripper water bypass line to contain:

- Ball valve
- 3” piping

### REMEDICATION SHIPPING CONTAINER

UL certified, built to NEC Class 1 Div 2 standards, all wiring intrinsically safe, with rigid conduits, and all equipment pre-piped factory tested and mounted in building.

Includes

Modified 40' 20' shipping container with 4' extension  
Exterior insulation covered with white industrial steel siding  
Side man door and rear barn style doors  
Interior to be rated hazardous and to contain the following:  
LRP System and influent manifold  
LRP exhaust piped to roof of building with 15' stack (stack to be installed by others)  
Water Treatment system (product storage tank located outside)  
Air Stripper exhaust piped to roof of building with 15' stack (stack to be installed by others)  
Controls will be mounted on the exterior of container  
Lifting eyes on upper corners  
Bolt down tabs on lower corners <-*typically not necessary for containers*  
Insulation  
Hazardous CL 1 DIV 2 lighting  
Hazardous CL 1 DIV 2 ventilation fan with thermostat

Hazardous CL 1 DIV 2 heater with thermostat  
Passive vent louvers  
Sump and sump switch  
Emergency shutoff switch

### CONTROL SYSTEM

Includes NEMA 4 control panel mounted to exterior of building  
Direct Logic DL230 PLC *DL05(x2) PLC (recommended)* control system  
Auto dialer for alarm notification  
Primary circuit protection using 200 amp fused main disconnect  
Branch circuit protection for all motors  
Surge and lightning protection  
Six (6) motor starters with thermal overloads, HOA switches & Green Run lights

- LRP motor
- VLS transfer pump motor
- Water retention tank transfer pump motor
- Air Stripper blower motor
- Air stripper transfer pump motor

Two (2) motor starter with thermal overload

- LRP Heat Exchanger motor – Oil recirculation line  
Building cooling fan motor

Sixteen (16) 20-1S barriers  
One alarm reset button  
One Red alarm indicator light for system alarm  
One user display screen  
PLC capabilities to log run time of all motors  
Control transformer  
3 KVA Transformer  
Wired and installed  
Factory tested prior to shipping  
Detailed manuals  
**ADDED OPTION: TELEMETRY AND COMMUNICATION PACKAGE**

### **ADDED OPTION: LIQUID PHASE BAG FILTRATION**

***Includes: One bag filter housing – FA 180 SE  
One box of extra 10 micron bag filters – Qty 40  
One pressure switch – 15-150 PSI  
One pressure gauge – 0-30 PSI Liquid filled Stainless Steel  
Two 2-1/2" 3" ball valves  
2-1/2" 3" PVC piping***

**INCLUDED**

Detailed manuals  
Shipping  
Assembly drawings and instructions  
Operating and maintenance manuals for  
all components

**NOT INCLUDED**

Electrical service and hook-up to system  
Federal, State/Provincial, or Local taxes  
unless otherwise stated  
Local approvals and certificates  
Options