

## CASE STUDY

*How the R. A. Ross team knowledge and experience can help you.*



**R. A. ROSS & ASSOCIATES, INC.**  
2231-A Ampere Drive, Louisville, KY 40299

## Power plant fire sprinkler water issue fixed with Tuthill Kinney vacuum pump package

### SITUATION:

Plant needed to remove excess water from piping of multiple fire suppression systems.

Our customer had several fire suppression (sprinkler) piping systems they needed to dry out. There were low spots where water collected and no drain point existed. The requirement was for us to provide an all-in-one mobile cart with a panel, power cord, vacuum pump, and inlet knock-out pot to catch slugs of water before entering the pump.

Our customer sent a bid request for (3) oil sealed vane pumps to achieve the requirements listed below. We presented a quote for 3 Kinney Oil Sealed Rotary model KVA250 Vacuum Pumps.

The additional items required included:

- Inlet piping
- Liquid separator/slug catcher for removal of liquid water and water mist
- Vacuum gauge, for verifying vacuum level is low enough for the drying process
- Hour meter—highly desired
- Site glass (with isolation and drain valves)—on separator tank
- Moisture meter—on inlet
- High level shutdown—in separator tank

Application/Customer requirements (See page 2)



*All-in-one mobile unit with control panel, Kinney KVA 250 pump and inlet knock-out pot.*

(Continued from page 1)

**Application/ Customer requirements:**

**• Application Data:**

- Drying process for piping of multiple fire suppression systems
- Estimated volume of typical piping system – 2000 gal
- Estimated leak rate – 20 CFM
- Pipe diameters – from 8” to 1”
- Estimated pipe/water temperature – 60 deg F
- Estimated water trapped in low points – 30 gal
- Acceptable drying time – 2 days



**The Kinney KVA 250 single-stage, oil-sealed rotary vane vacuum pump**

KVA oil-flooded, multi-vane vacuum pumps are single stage, air cooled and direct driven. This simple design ensures the reliability and the durability required in the vacuum industry.

The performance has been optimized to provide even deeper vacuum levels than before. Most models can achieve ultimate pressure levels near 0.1 mbar.

**Features:**

- Non-metallic vanes
- Oil level sight glass
- Vibration isolators
- Anti-suck back valve
- Integral exhaust filters
- TEFC high efficiency motor
- Models KVA 25-630 include spin-on oil filter

**Note:**

- Drop-in replacements for Busch R 5 Series™ Vane Pumps

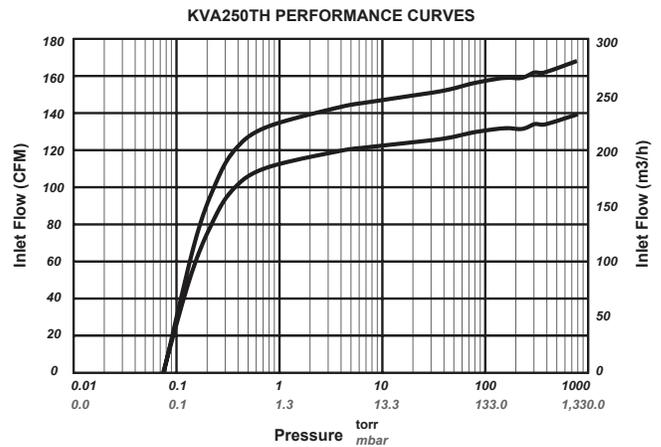


The heart of the package is the Kinney KVA 250 single stage, oil-sealed rotary vane vacuum pump.



Separator tank with Kinney KVA 250 pump and motor.

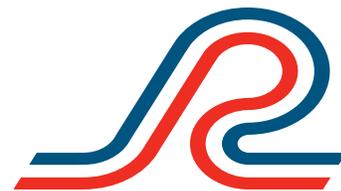
Control panel with hour meter and high-level shut down.



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- ▶ Filters
- ▶ Mixers
- ▶ Tanks
- ▶ Vacuum Pumps
- ▶ Mechanical Seals
- ▶ Heat Exchangers
- ▶ Repairs



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