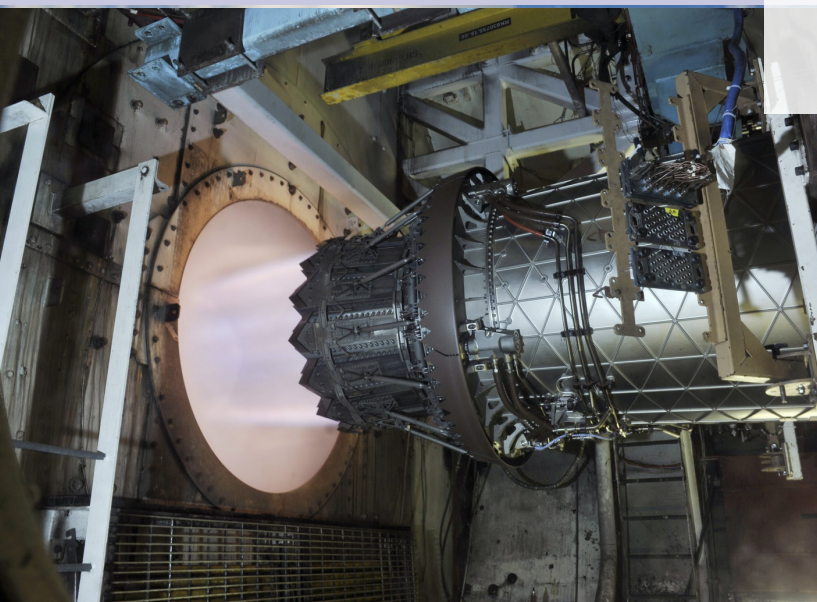


CASE STUDY

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



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



Jet engine test cell Jet fuel/water pit pump issue solved

SITUATION:

Jet engines are tested in a very specialized, custom designed Test Cell. The heat from these engines can reach 2,500°F and the test cell thrust frame must withstand up to 150,000 lb of thrust.

Our customer had a mixture of Jet-A fuel and water that needed to be pumped from a sump after testing.

They wanted a pump that would kick on when the liquid in the pit reached a high level point and to shut off when the liquid dropped to a designated low level.

The additional requirements included:

- Multiple duty operating points
- Self-priming
- Capable of handling a suction lift of up to 25 ft
- Explosion Proof
- Compatible with Jet-A fuel
- Static head: 25 ft
- Flows: 50-70 Gallons Per Minute
- Total dynamic head at flow conditions: 45-62 ft
- Pump should drain sump in 30-45 minutes

See our solution on page 2

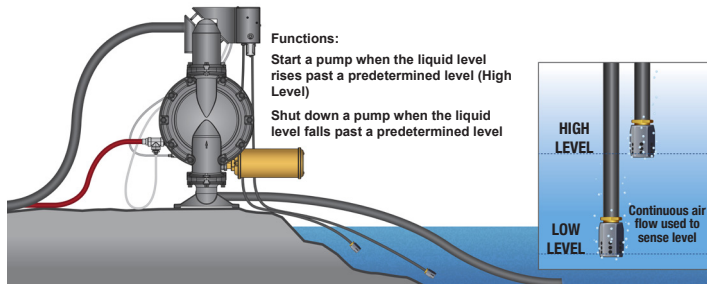


ARO UL-Approved fuel transfer 2" diaphragm pump with automatic dewatering kit and inlet filter/regulator

SOLUTION:

We recommended the ARO UL-Approved Fuel 2" Diaphragm pump (Model 650719-C) ([click for product information](#)) for up to 75 GPM along with the ARO Automatic Dewatering KIT (SCD501BN08-V1D) ([click for product information](#)). As it is all pneumatic, there is no electrical ignition source!

Working Principle



To filter and regulate the air supply, we recommended the ARO-Flo 2000 Series piggyback filter/regulator with metal bowl (P/N P39344-614) which provides 5 micron filtration, 1/2" NPT connection, a 0-140 psi gauge and automatic drain to remove water as needed. ([click for product information](#))



Customer also purchased an ARO MaxAir 2-Way Solenoid/Pilot acting valve, normally closed, (P/N TB04EB-120-A) to control the inlet air flow to the pump for simple on/off controls. ([click for product information](#))

[Click here for the Operators Manual for 650719-C pump](#)

Looking for a submersible pump solution for your sump?

ARO offers a completely submersible air operated double diaphragm 1.5", 2" or 3" pump, the **PIT-BOSS** that can provide up to 217 GPM.

[For specs and details, click here](#)



Or, if you're looking for an air driven, lighter weight, centrifugal submersible pump, ARO has that as well:

ARO offers a Centrifugal Dewatering Pump weighing just 48 lbs. or 79 lbs. for pumping to 230 gallons per minute.

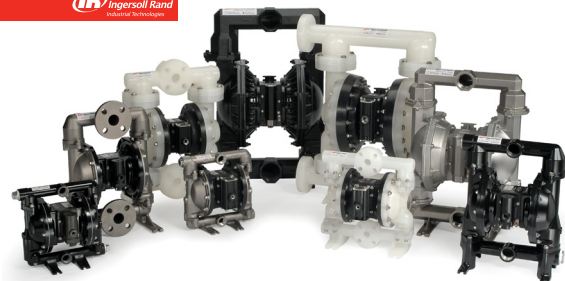
[For specs and details, click here](#)



**Call us
for any of your
submersible pump needs!**

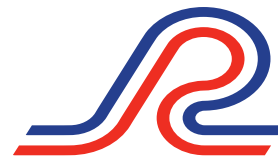


**We carry a complete line
of ARO pumps**



The ARO pump line includes: Air operated piston and double diaphragm, sealless, with options for sanitary, powder, and fully automatic with electronic interface. Both bolted and band-clamp options. And now 1&2" electric diaphragm pumps in metallic and no-metallic materials.

ARO also offers a full range of accessories compatible with other diaphragm pumps and systems including: Filter-Regulator-Lubricators; Shock Blocker™ pulsation dampeners; and system controls options.



R. A. ROSS & ASSOCIATES, INC.

Keeping process flowing since 1985

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