


CASE STUDY

Problem: Small non-electric pump needed to remove water from mine shafts.

MINE SHAFT WATER



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



Ross & Associates solves problem of high cost of removing water from mine shafts

SOLUTION:

A western KY coal mine was looking for a small, portable, non-electric pump to remove water from mine shafts. The electric pumps that they would typically use for dewatering were cost prohibitive due to the IMSHA explosion proof safety guidelines that all mine operations must adhere to. Since air lines were already in the mine for drilling tools and other equipment, an ARO air operated diaphragm pump was an easy choice. We were able to supply a small 1" ARO pump that suited the customer's needs perfectly. Word quickly spread to other mining operations in the area which generated more sales of the ARO product.

- ▶ Our job is to help keep you up and running.
- ▶ R. A. Ross & Associates offers over 150 years combined experience.



1" ARO air operated diaphragm pump model PD10A-AAP-AAA

PERFORMANCE

Air Inlet Pressure Range
20 - 120 PSI
Maximum Material Inlet Pressure 10 PSI
Fluid Pressure Range
20 - 120 PSI
Maximum Flow Rate (flooded inlet) 52.2 GPM
Maximum Discharge Head 250'
Displacement / Cycle @ 100 p.s.i. . 0.232 gal.
Maximum Particle Size
1/8" dia.

Ingersoll Rand ARO offers a wide range of fluid technologies for today's demanding industries and applications.

Diaphragm Pumps

- Aluminum, Cast Iron, Stainless Steel, Hastelloy-C
- Groundable Acetal, PVDF (Kynar), Polypropylene
- 1/4" to 3" ported
- Flow rates up to 275 gpm
- Santoprene, Hytrel, PTFE, Viton, Nitrile Diaphragms



Piston Pumps

- Carbon Steel, Stainless Steel
- 2-Ball, 4-Ball, Chop-Check, Oil & Grease Pumps
- Pressure ratios up to 65:1 (100:1 for grease pumps)
- Flow rates up to 32.8 gpm
- UHMW-PE, PTFE, and Leather Packing seals available



Specialty Application Pumps

- Pit Boss™ Dewatering Pumps (1 1/2" – 3" ports)
- Powder Transfer Pumps (2" & 3" ports)
- Flex-Check™ Pumps (3/8" ports)
- Sanitary Transfer Pumps (1" – 3" ports)



Pneumatic Valves & Cylinders

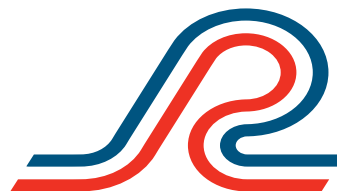
- 2 way, 3 way, & 4 way valves
- Up to 1" ports
- Pilot, solenoid, and/or mechanical actuators & returns
- Single- and double-acting cylinders
- Up to 10" bore, various stroke lengths available
- Aluminum, Stainless Steel



CONTACT US

Call us for information on how we can help solve your problems in any of the following areas:

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



R. A. ROSS & ASSOCIATES, INC.

Keeping process flowing since 1985

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