

Alimak Hek Rack & Pinion Elevators For Utility Power Boilers

Alimak Hek installs a new Alimak SE 4400 lb capacity elevator at Portland General Electric's Boardman Power Station.

Historically, thermal utility power plants have incorporated a traditional wire rope (traction) elevator in the boiler house. Recently, power plant operators have found it useful to add an additional high capacity industrial elevator to supplement these aging traction units. Investment paybacks can be very short just in the quicker movement of personnel, tools and materials during major plant outages.

At PGE's Boardman station, their decision-making process began by noticing that personnel during outages frequently spent significant time waiting at the existing traction elevator to gain access to perform outage work. Upon evaluation, utility management found it advantageous to add an Alimak high capacity industrial elevator to improve access to their boiler house.

They made their investment decision by considering several factors:

- They estimated on major outages that, on average, workers (over 30 in-house personnel and over 200 contractors) had to wait an hour a day to gain access to the elevator.
- The total savings on major outages in man-hours was equivalent to 2 days of outage time labor.
- Total savings just in labor costs, including straight time and overtime, resulted in a single outage savings of over \$300,000.
- Including PGE's site interface costs for installation of the elevator, The project resulted in an economic payback of between 2 and 3 years.*

* This fast payback was despite the fact that PGE chose not to include in their analysis the additional power generation revenue that might be obtained in returning the unit to service up to 2 days earlier – a potentially several hundred thousand dollar additional positive cash flow.



Details

Location	Portland General Electric's Boardman Power Station
Lift type	Alimak SE
Capacity	4,400 lbs
Installed	2003

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The elevator investment was purchased mainly for the economic benefit of minimizing outage labor. In a short time after installation, though, the new elevator caused plant personnel traffic patterns to begin to change during day-to-day operation. Plant personnel believe there may be productivity improvements during normal operation as well.

Other utility operators have also been making the investment decision to add Alimak rack & pinion industrial elevators to improve access and operate more efficiently. This can be a powerful part of an operator's competitive strategy in the deregulated world of generation.

Adding an elevator to an existing structure is possible using an Alimak rack & pinion unit due to the fact that:

- An Alimak lift can be installed onto the existing structure in a number of places – it requires no hoist way or machine room.
- It is self-supporting and imposes only relatively small tie-in loads on the existing structure.
- The elevator can be installed inside or outside, with or without a below grade pit.
- Alimak's newest SE Series industrial grade elevator comes in many sizes and capacities and can be tailored to fit nearly any situation.

Alimak Hek Inc, with its Alimak elevator and hoist products and HEK mast climbing work platforms, is the world leader in rack & pinion driven vertical access solutions. Alimak elevators and hoists have been installed in over 1000 power plants worldwide on a variety of structures. In the US, over 700 such installations exist, many on chimneys, silos, and other structures.

Alimak Hek, Inc., has many years of experience in installing Alimak elevator equipment in industrial environments, and can provide technical assistance in evaluating the best location and solution for your installation. After installation, Alimak Hek's USA team of nationwide service professionals remains committed to satisfaction and can provide a range of parts, service, and maintenance solutions tailored to any operator's needs.



*For more information, please contact Doug Ingenthron, National Sales Manager, Alimak Hek Inc.
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