



# Power Plant Vacuum System

## Innovative vacuum solutions for condenser deairing

**Power plants rely on efficient and reliable vacuum systems to maintain optimal condenser performance and maximize energy efficiency.** Leybold's Power Plant Vacuum System (PPVS) is an innovative vacuum system for the condenser deairing process that is critical to all power plants. It offers better cost of ownership and reduce environmental carbon footprint with intelligent vacuum solution



### Sustainability

Up to 75% lower energy consumption compared to liquid ring pumps



### Performance

Stable holding pressure independent of thermal load condition



### Efficiency

Delivers precise pumping speed on demand



### Cost of ownership

Impressive quick payback on investment compared to steam-jet ejectors

Leybold's vacuum systems are designed for the demanding needs of modern power plants. Our turnkey solution replaces conventional liquid ring pumps and steam jet air ejectors with a smart and energy -efficient vacuum pump system that delivers reliable performance. Complete system is designed with an electrical cabinet, auto drain separator tank and vapor control function enabling VFD driven screw pumps to offer pumping speeds in the range of 400 - 4800 m<sup>3</sup>/h. Leybold offers commissioning, training, service and software support for system integration.

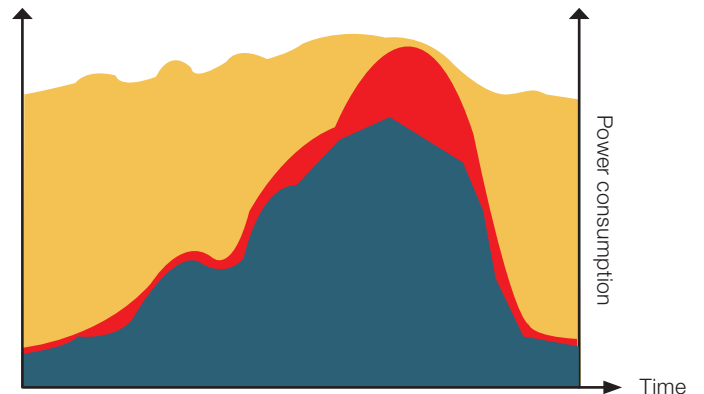
## Why choose Leybold's Power Plant Vacuum System

- ✓ **Reliable performance**  
Stable Condenser vacuum independent of thermal load.
- ✓ **Smart control**  
Built-in intelligence VSD drive operation based on vapor control function with optimized energy efficiency.
- ✓ **Energy savings**  
Up to 75% lower energy use compared to liquid ring pumps.
- ✓ **Robustness**  
Exceptional in handling water vapor, enabled by optimized temperature control.

# An integrated system for reliable performance

Our Power Plant Vacuum System is designed for reliable condenser performance and low energy use. At the heart of the system is the VACUBE oil-sealed screw vacuum pump which is included as an integrated pumping module, contributing intelligent control and efficient operation. The PPVS' performance is the result of smart integration, where every component, control element, and safety function is designed to work together, delivering a vacuum system that cannot be replicated by assembling individual parts.

In power-plant condenser de-aeration, the requirements are more complex. Leybold's power-plant vacuum solution automatically adjusts the pumping speed ensuring stable performance while reducing overall energy consumption.



- Actual vacuum demand
- Pump power consumption
- Power consumption fixed speed pump

