

Atlas Copco

HEX@™



HEX@™

Next-generation vacuum controller  
with complete connectivity and  
enhanced control

# Next-generation vacuum controller with complete connectivity and enhanced control

Atlas Copco's HEX@ is the new evolution in vacuum control. Not only allowing your pumps to be truly plug and play, but also allowing you to integrate and connect them to the level you require.

Designed with customer empowerment in mind, you can configure your interface, receive the information you desire and adjust your vacuum system to your own needs. Providing insights and recommendations based on live and historic data, HEX@ really gives a level of vacuum control like no other.

Whether you are considering vacuum uptime, pump performance, economy or health, HEX@ gives you the information and understanding to optimize according to your priority.

With regular software updates and optimizations, by investing in a HEX@ enabled pump from Atlas Copco, you really are making your vacuum system future-proof.



# Standard features



## Plug and play

- Simple connection via ethernet cable
- No complicated wiring or installation required
- No need for specialized software to configure pumps



## KPIs for process optimization

Develop pump configurations to safeguard your priority:

- Vacuum uptime
- Vacuum performance
- Vacuum economy
- Pump health



## Insight cards

Real time recommendations include:

- Reductions in energy consumption
- Increasing service intervals
- Increasing the lifetime of your pump
- Performance optimization
- Reducing downtime



## Configurable interface and modes

- Select the information you want to monitor
- Save pump configurations to one of the four-mode slots
- Two modes pre-set from the factory: Force max speed and PI control



## Automatic software updates

- Updated pumps run more efficiently
- Improved software and optimized performance
- Additional features added in regular updates
- Bug fixes



## Access management and security

- Allow two access levels for your vacuum system: Controller and Operator
- Safeguard your process from unwanted changes
- Reliable and dependable security using the highest standard protocols and top-tier hardware with intrinsic safety



## Intelligent scheduling

- Ensure that no pump actions interrupt your process – safeguard production
- Purge cycles, auto clean, set-point adjustments can be scheduled during downtime
- Actions can be set up to repeat continually based on your time table and the process demand



## Vacuum pump trends

- View trends of all measured pump parameters both historical and real time
- Consider how one change in your vacuum system impacts other factors over time
- Make powerful comparisons such as inlet pressure vs consumed energy or outlet temperature

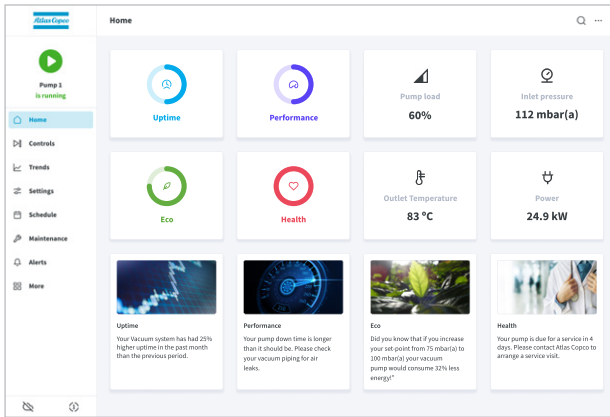



## Notifications and alerts

- Can be configured to appear:  
On pump, In web UI, Via email notifications with a Genius subscription

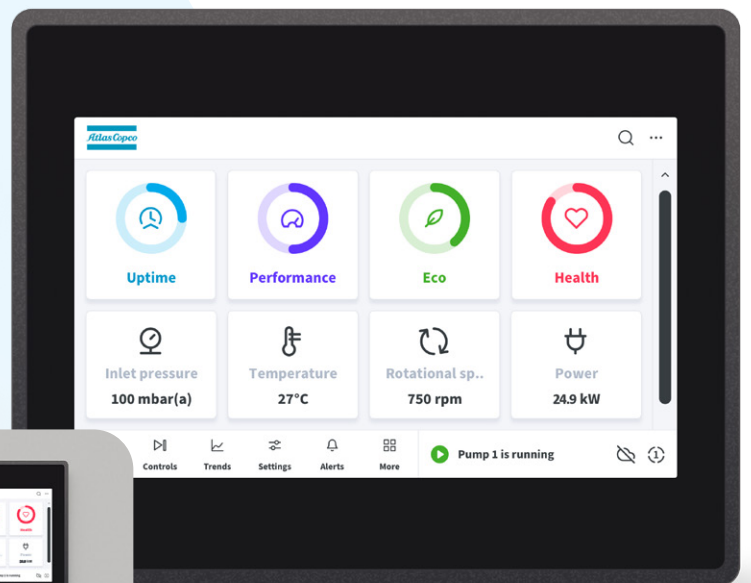
# HEX@™: Sixth sense intelligence through connectivity and control


With HEX@ you can both monitor and control your pump from anywhere and at any time. You can receive feedback and review pump operating status, vacuum levels and upcoming scheduled events for your vacuum system.



 Home screen showing key pump metrics, vacuum KPIs and dynamic insight cards

 Access and configure pump trends to make powerful comparisons and assessments

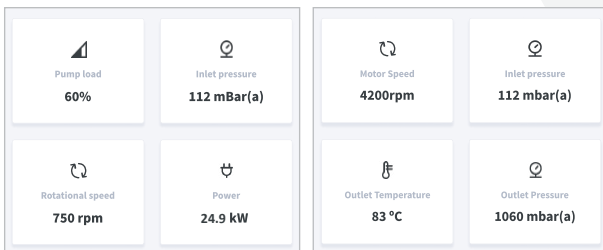
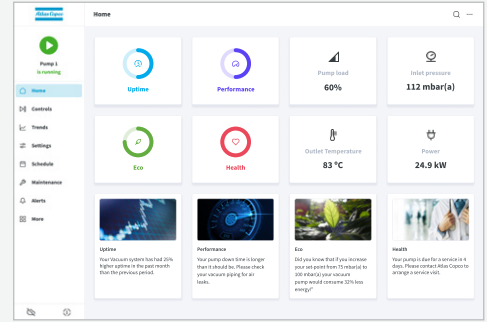


 User-friendly interface options (above and right) by which to access HEX@'s functionalities



## Automated insights and updates

HEX@ offers the benefits of having a connected device such as automatic software updates, access to future released functionality and increased understanding of vacuum performance. HEX@ will also provide insights, recommendations and feedback based on pump performance both now and historically. Perhaps the energy efficiency of the vacuum pump can be improved, or your maintenance interval can be extended. HEX@ will empower you to take proactive steps to optimize your vacuum system, maximize your production and minimize downtime!



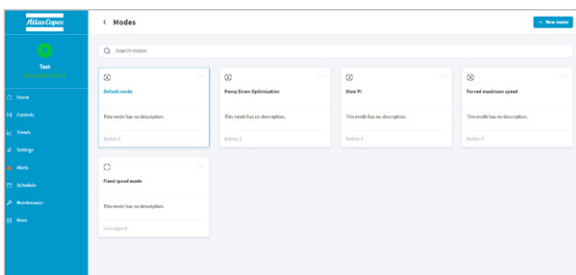
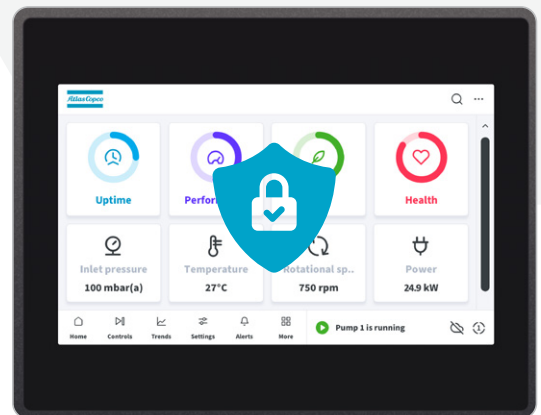
## Configurable interface

With clear presentation and intuitive layout, the HEX@ ergonomic interface is quick and straightforward to navigate. Unlike traditional control interfaces, HEX@ allows you to configure parts of the home screen to display the information that is most important and relevant to you.



## Secure web-based interface

By accessing your secure, web-based user interface to connect directly to your pump (or fleet of pumps), you can monitor and control your production from your web-enabled device. This could be a PC, laptop, tablet, or smartphone. Using highest level security protocols, remote access is only possible for the people you chose. HEX@ hardware is also tamper proof, so that the infrastructure integrity is not a concern. Safely and securely control and monitor your pump like you were standing right next to it.



## Smart functionalities

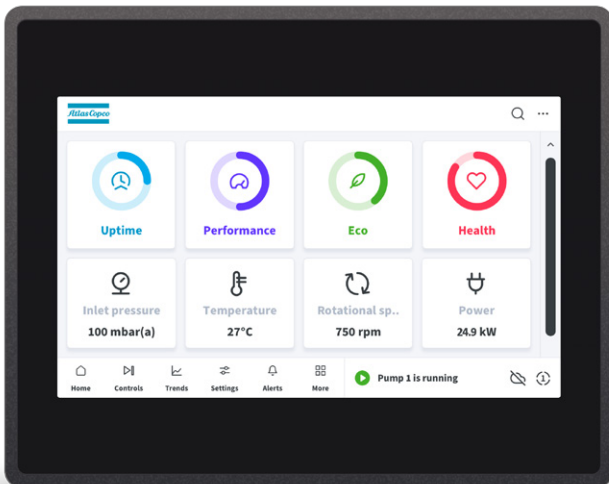
HEX@ also has smart functionalities that let you, for example, plan specific functions outside the production time – this can be set either on calendar day or running hours. You can also switch between operating modes, which means you can save your operation settings for future convenience, moving between setting profiles according to production needs.

# The power of trends



## Multiple metrics

- View trends of multiple measured metrics over a period of time that you chose
- Compare different metrics to understand what is happening in relation to your process
- Can include: Inlet pressure, motor speed, power consumption, oil temperature, and more!



## Optional HMI features



### 7" Touch HMI

- Market-leading interface



### Access pump control without additional hardware



### Configurable home screen

- Display the parameters you choose and prioritize
- Flexible software means you can display different parameters over time. See what you want, when you want



## Flexible connectivity

- HEX@ allows you to integrate your vacuum pump into your system to the level YOU desire. Using the protocols you prefer. Whether using an ethernet cable, a WiFi module or another communication protocol to integrate your vacuum system, HEX@ can support you. You even have the option to connect using our GENIUS cellular network.
- To ensure no customer is left behind, HEX@ fully supports the latest and most common protocols found in industrial markets today. Rest assured, we can offer you an option to connect to your vacuum pump.

**Modbus-RTU**

**Modbus TCP**

**EtherNet/IP**

**OPC UA**

**PROFI BUS**

**PROFI NET**

**EtherCAT**

# Multi-pump controller



HEX@GRID is the central brain of your central vacuum system. Equipped with the latest HEX@ controller, HEX@GRID enables you to stay connected and control all of your vacuum pumps as a single system. As a result, you can ensure optimum production, reduced maintenance costs and lower energy consumption. With extra functionalities and connectivity, HEX@GRID opens your world to new possibilities.



## HEX@GRID™ box



### Energy saving

- VSD smart control



### Truly connected

- Simple connect and control using any smart device
- Secured



### Intelligent scheduling

- Add schedules and actions
- Secure your process



### Plug and play

- Connect and control your system irrespective of technology, type or brand of pump



### New interface

- Clear, intuitive and modern
- Customizable
- Accessible on any device (mobile friendly)



### Equal wear

- Reduce and combine the maintenance of your pump with equal wear
- Back-up pumps can be included

## There's MORE



### HEX@GRID optimizer algorithm

Unlike traditional intelligent multi-pump controllers, using combinations of pumping speeds to achieve total pumping performance, Optimizer adds an extra dimension by taking into account the actual power consumed by each individual vacuum pump at every operating point.

Optimizer not only finds the best combination of pumping speeds to meet the demand, But considers all combinations pumping speeds and the total energy consumed.

- Compatible with HEX@, MK5 and Fixed Speed machines
- Revolutionary Algorithm
- Possibility to save 20% or more vs basic sequencers
- Connect up to 20 vacuum pumps



### Dual network control

- Control two different vacuum networks using a single HEX@GRID with optimizer
- Unified monitoring
- Flexible control – including valves



Atlas Copco AB  
[atlascopco.com/vacuum](http://atlascopco.com/vacuum)

