

Atlas Copco develops vacuum controller for industrial processes 4.0

HEX@ controller: smart functions, optional HMI features

Köln, November 2021: In HEX@, Atlas Copco has developed the industrial vacuum controller of the future. It serves as an enhanced control centre for vacuum pumps and systems. Ensuring higher vacuum performance and functionality as well as increased user empowerment across a large range of applications. By also offering increased connectivity and system integration, HEX@ brings convenient remote access to their vacuum system with increased control anywhere.

Only selected values are displayed

HEX@ has a clean and intuitive user interface. This is vital. HEX@ users access key data directly on the home screen and can access further settings and controls easily using the on-display menu. Relevant pump data is displayed quickly and legibly. "The controller can be individually configured by our customers so that only selected values, such as discharge temperature, power consumption or inlet pressure are displayed" explains the responsible product manager at Atlas Copco, Alistair Darroch.

Connectivity to suit all

The communication options for HEX@ enabled pumps are also diverse, users can access the unit remotely using smartphones, tablets, laptops or PC; alternatively, access can be via the onboard HMI interface or a local device connected to the machine using wired or WiFi based connections.

"Customers can choose to connect fully to their local network and also the cloud to take complete advantage of a fully connected pump including automatic updates to software and functionality as well as remote support from Atlas Copco in the event support is required. If this level of connectivity is not desired, HEX@ can connect only to the customers network or even not at all" informs Alistair Darroch. Further, HEX@ will also support other communication protocols such as Ethernet/IP, EtherCat, Profinet, Modbus TCP, Profibus and OPC UA.

Atlas Copco Vacuum Solutions

Focus on four core areas

The HEX@ controller is continuously collecting and processing a wide range of pump data. When it comes to making use of this data, Atlas Copco have defined four elementary yet powerful vacuum system attributes we can use to evaluate a vacuum system: Uptime, Performance, ECO and Health.

These indicators allow customers to quickly assess the status of their vacuum pump, to understand the impact of any changes made on their vacuum system and ultimately, their process.

- The uptime is the indicator for the availability of the pump. It documents how long the pump runs without failures.
- In the case of performance, HEX@ considers if the pump is achieving the required vacuum targets set by the customer.
- The so-called ECO status provides information about the efficiency potential of the vacuum pumps. By comparing the targeted set-point pressure with the current operating pressure, users receive feedback if vacuum pump is using more energy than necessary.
- Finally, the health status evaluates failures and key measurements to assess the pumps current status and also takes into account when services are due. Informing the customer if their pump health can be improved.

Summary on HEX@ Insight Cards

"These four key performance indicators (KPI) are used to draw conclusions about the current conditions on what we introduce with HEX@ as Insight Cards, which provide feedback on the status of the vacuum system as well as optimization recommendations," says Alistair Darroch. In addition, they include recommendations for increasing pump life, reducing energy consumption, improving the carbon footprint and extending maintenance intervals.

Pump settings can be recalled at any time

The configured pump settings can be saved as a "mode" and then recalled at any time. The appropriate mode ensures that the pump also calls up the required performance.

These HEX@ modes can be accessed easily and quickly by the user by pressing a button on the control panel or by accessing the pump remotely. This is not all, the HEX@ has additional smart functionalities, such as Trends: Trends showcase historic data to give valuable overviews of various measured parameters, including data on inlet pressure, engine speed, power consumption oil temperature and more. By comparing the current and historic data, users can better understand the consequences of changes in process or pump settings.

There is no doubt that HEX@ puts the customer in the driving seat when it comes to monitoring, controlling and optimizing their vacuum installation and vacuum using processes.

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Atlas Copco Vacuum Technique

Great ideas accelerate innovation. At Atlas Copco Vacuum Technique we collaborate with our customers to turn industrial ideas into leading edge technology in vacuum and abatement solutions. Our passionate people, expertise and service bring sustainable value to industries everywhere. Atlas Copco is based in Stockholm, Sweden with customers in more than 180 countries and about 40 000 employees. Revenues of BSEK 100/ 10 BEUR in 2020.

At Atlas Copco **Industrial Vacuum**, we have revolutionized vacuum technology. Our state-of-the-art vacuum pumps and systems exemplify today's connected and digitalized industry. Our teams of exceptional and passionate people engineer customer-centric vacuum solutions that offer better energy efficiency, consumer safety, improved productivity and a sustainable future. Our products are the invisible force that drive all industrial applications and manufacturing.

Captions:



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