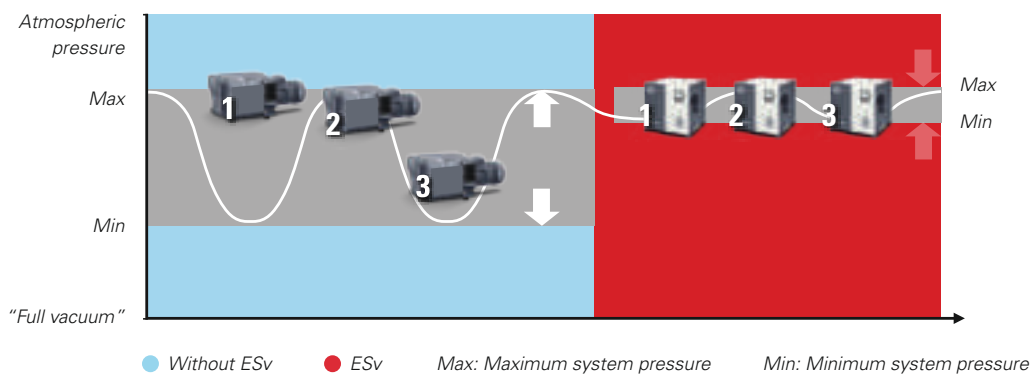
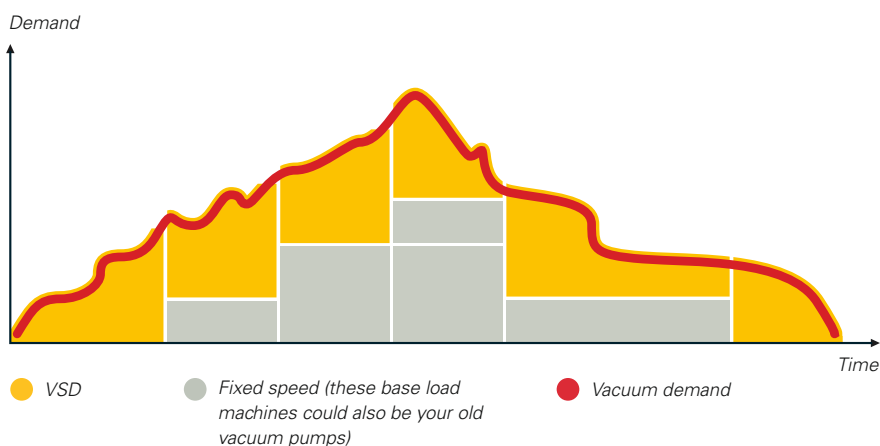


# ES CENTRAL CONTROLLERS

Atlas Copco's ES central controllers allow you to monitor and control multiple Atlas Copco GHS VSD+ vacuum pumps simultaneously. Four ES controller models are available; two integrated system and two of which even enable competitive vacuum pump brands to be controlled. The operating principle is simple: one GHS VSD+ in your multi-pump installation regulates, while the other GHS VSD+ units are in base load, running at a certain percentage of the maximum speed.

## Save energy & cut costs

Thanks to smart control, the ES gives you the most suitable product mix at all times. It does this by allowing many pumps – whether fixed or variable speed – to work together. Base load GHS VSD+ can react quickly to demand. This maximizes energy savings and reduces costs. The ES controller also allows you to run your vacuum net within a narrow, predefined pressure band. This increases the stability of the process and optimizes overall energy consumption.



## Reduce maintenance

The task of regulating your multi-pump installation never falls to the same GHS VSD+ vacuum pump. This spreads the running hours of each unit equally amongst all of them, thereby reducing maintenance time and costs.



## Optimize operation

Priority management and sequencing is possible with the ES controller. By specifying different priority settings of each machine, you can find the most economically efficient way to match demand. For example, you could set two different sequences such as one for daytime operation, and the other for night-time operation.

# Overview of the ES range

	 ES4iv	 ES6iv	 ES6v	 ES16v
Up to ... GHS VSD+ standard or humid version	4	6	6	16
Possibility to switch on/off up to ... competitor machines	-	-	5	14
Single pressure point of measurement	✓	✓	✓	✓
Remote pressure sensor	•	•	✓	✓
Multiple VSD @ optimum speed	✓	✓	✓	✓
Priority management	✓	✓	✓	✓
Running hours equalization	✓	✓	✓	✓
Virtual machine control	-	-	-	✓

✓ : Standard    • : Optional    - : Not available



## ES4iv, ES6iv

These central controllers are installed on the GHS VSD+ master unit. With the ES4iv you can connect up to four GHS VSD+ vacuum pumps, while the ES6iv connects up to six. Each controller offers the possibility to combine a remote pressure transducer option on the master unit for greater reactivity to demand fluctuations.



## ES6v

As long as at least one of the pumps in your vacuum net is a GHS VSD+ pump, the ES6v extends control to competitive vacuum pumps. If this precondition is met, then one ES6v can control up to six GHS VSD+ vacuum pumps and up to five competitive brands. An external pressure transducer is provided as standard with the ES6v for greater reactivity to fluctuating demand. A special feature of the ES6v is equal wear mode, which balances load over different pumps.



## ES16v

The top of the range controller is the ES16v. It can control up to 16 GHS VSD+ vacuum pumps and up to 14 competitive brands, providing at least one of the pumps in your vacuum net is a GHS VSD+. The base load GHS VSD+ can be configured to run between 20% and 100% of the maximum speed. The base load machine reacts faster than with any controller, making a more tight pressure band possible.

The ES16v uses virtual machine control. This allows you to use the ES16v in maintenance optimization mode or energy saving mode. What's more, you don't need to choose between the two extremes: you can select a compromise in the middle. This enables you to get the best of both modes.

Maintenance optimization  
**100%**

Energy savings  
**100%**

The base load GHS VSD+ can be authorized to run between 20% and 100% of the max speed.

