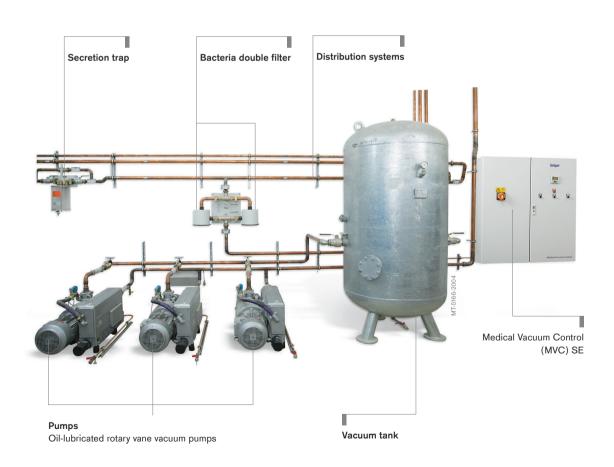


# Medical vacuum systems Gas Management Systems

Dräger plans, installs, certifies and services top quality medical vacuum systems. At the heart of these systems lies the Dräger Medical Vacuum Control (MVC SE) unit, which ensures the medical grade of the vacuum system and enables reliable and efficient operation.



### **Benefits**

#### More than 50 years of experience

Vacuum generation is an essential component of medical gas supply in any hospital. Whether in surgery, anaesthesia or intensive care, a reliable vacuum supply is indispensable in everyday clinical routine. Dräger has more than 50 years' experience and offers its customers advice, planning, project management, installation and service from a single source. We use only certified high-quality products that conform to all relevant statutory regulations and standards.

### Uncompromising reliability

Dräger vacuum systems are consistently designed for uninterrupted supply. A combination of high-quality components and intelligent system configuration ensures reliable operation even in the case of component malfunctions. All key components, such as the control elements, pumps and filters, are backed up with identical reserve units in a redundant design. The highly reliable system concepts also ensure uninterrupted supply even if entire system rooms fail in the event of a fire, for example. This redundancy is based on relevant standards and is the result of comprehensive risk assessments. It also allows maintenance of the system without interrupting the vacuum supply.

Built-in safety features can counter critical incidents, such as short circuits, overloads or cable breaks. Comprehensive monitoring functions give the operator constant feedback on the status of the system and instant alerts in the event of a fault.

### Top quality

At Dräger, quality and reliability are top priorities for our gas management systems. That is why we emphasise absolute compliance with all pertinent regulations and quality guidelines during the project planning and installation phases of our medical systems. Dräger vacuum systems meet the requirements of ISO 7396-1. This quality approach is also applied to every single component of the system.

Dräger vacuum systems offer maximum flexibility and can be adapted to the individual requirements of the hospital thanks to their modular design. In addition to the specific vacuum requirement, the system design can also take infrastructural conditions into account. A conventional system in a central room is just as possible as highly reliable system concepts with supply sources at separate locations.

At the core of the system, three or four oil-lubricated pumps with a power consumption ranging from 1.1 to 18.5 kW provide the required vacuum. The other components, such as the vacuum tanks, bacteria filters and secretion traps, are dimensioned to match the capacity of the pumps used. The PLC-based Dräger MVC SE unit is programmed according to the system configuration and operational demands. This individual adaptation of the system to suit the needs of the hospital ensures optimal and efficient system operation.

### Ease of use

Thanks to the Medical Vacuum Control SE unit, Dräger vacuum systems are extremely user-friendly. The constant control of the vacuum supply using special sensors combined with PLC ensure fully automatic

### **Benefits**

operation. An integrated, multilingual touch display makes convenient, intuitive operation possible and provides a graphical overview of the system parameters, alarm status and history, operating hours and service intervals. You can always tell the system status at a glance.

### **Alarm integration**

The Medical Vacuum Control SE ensures that the vacuum system is constantly monitored and alerts you immediately in the event of a malfunction or uneven load distribution. Control signals and alarm signals can be transferred to external systems via potential-free contacts, or be forwarded directly to the optional Dräger Alarm Management System (AMS). The AMS manages all the Gas Management System alarms and can display these alarms locally, such as directly integrated in the MVC SE, or transfer the alarms to centrally monitored points. It is also possible to integrate the MVC SE in your existing building management system via the AMS.

### **Technical Data**

Oil-lubricated or	dry-running r	otary vane	vacuum numne	=

Suction capacity at 70% vacuum	197–3,670 L/min 1.1 – 18.5 kW		
Motor output			
MVC (Medical Vacuum Control)			
Operating voltage	220-240 V / 380-400 V		
Frequency	50 Hz / 60 Hz		
Number of pumps	2, 3, 4		
Protection class	IP55		
EMC	EN 61000-6-X		
Electrical safety	EN 60204-1		
Vacuum tank			
Capacity	500-3,000 litres		
Bacteria double filters	prevent soiling of the pumps, tank and waste air.		
	Interchangeable class H13 HEPA filter, in an aluminium housing		
	with quick-release fastener;		
	penetration degree < 0.04% as per EN 1822-1		
Secretion traps	protect vacuum systems from secretions or liquids that may get		
	into the distribution system inadvertently.		

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