



Vacuum Pump System, the new Generation



SC 950 Vacuum Pump System with wireless remote Control, speed regulated

Features:

- Fast and precise evaporation/distillation and autom. sensing of the boiling point
- Ease of operation; the process parameters are entered using a touchscreen and a rotary knob
- Quiet operation
- integrated gas ballast valve
- Sensitive pressure control in the system
- Variable system pressure via speed regulation
- high recovery rates even with low boiling point solvents
- Environmentally friendly
- Low maintenance-free
- Capturing of particles in the system (suction side)

Enter process parameters via the hand terminal

Controller managed vacuum pump systems have become indispensable in the laboratory. They provide precise vacuum and offer many control functions for a wide variety of laboratory applications.

The new SC 950 speed-regulated vacuum pump system can be remotely operated from a portable terminal to ensure flexibility in the laboratory.

Other outstanding features:

- Short process times
- High accuracy
- High recovery rates even for low boiling point solvents

Thanks to RF remote control you no longer have to set up the vacuum pump system within sight of the process apparatus in order to operate the system. The pump system can for example be stowed beneath the work surface in the lab furniture or can be located in a safety cabinet with no annoying cable feed-throughs.

The intuitive user guidance on the portable terminal ensures ease of operation; the process parameters are entered using a touchscreen and a rotary knob.

The hand terminal can be called via vacuum pump system (paging); the hand terminal will answer with a signal tone.

Applications:

- Vacuum evaporation
- Vacuum desiccation
- Vacuum gel drying
- Vacuum filtration

Four operating modes

The vacuum pump system can be used in four different operating modes, selected on the hand terminal:

■ Evacuate:

The vacuum pump system evacuates a vacuum chamber with adjustable pump capacity.

■ Pressure control:

The vacuum pump system controls the system pressure to the set value (constant pressure).

■ Automatic:

The vacuum pump system automatically finds the vapor pressure of the sample. If there are any irregularities in the pressure curve, the vacuum pump system adjusts the process pressure accordingly.

■ Individual pressure function:

The vacuum pump system controls the process according to a user-defined pressure curve.



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At any time during an active process, you can switch to manual process control. Functions for Evacuate and Pressure control will be available simultaneously.

Intelligent control

A key feature of the SC 950 vacuum pump system is its intelligent control system. A pressure sensor measures the actual pressure in the system several times per second, and a microprocessor monitors any pressure drop over time. The pump speed is adapted according to this information constantly.

At the start of each process, the vacuum pump operates at low speed to avoid over-response in situations with a small vacuum chamber volume and a fast-boiling medium. If there is a large discrepancy between the actual pressure and the setpoint pressure, the pump speed, and thus the transferred volume, is increased in order to speed up the process. As soon as the actual pressure approaches the setpoint pressure, the pump speed is reduced. This ensures fast process times and high control accuracy.

Controlling via a PC

Included in delivery with the SC 950 is Windows®-based software, which also supports operation of the system over a PC. In addition to the options offered by the hand terminal, the software also supports the display of the pressure curves as a chart (setpoint/actual shown), setpoint can be saved, and the export of data to spreadsheets or text files. Communication with the PC is implemented over a USB interface.

Fast process times

Besides intelligent control, the diaphragm vacuum pump used in the SC 950 further contributes to short process times. The pump is fitted with the patented KNF diaphragm system that ensures high suction speeds even at low pressures.

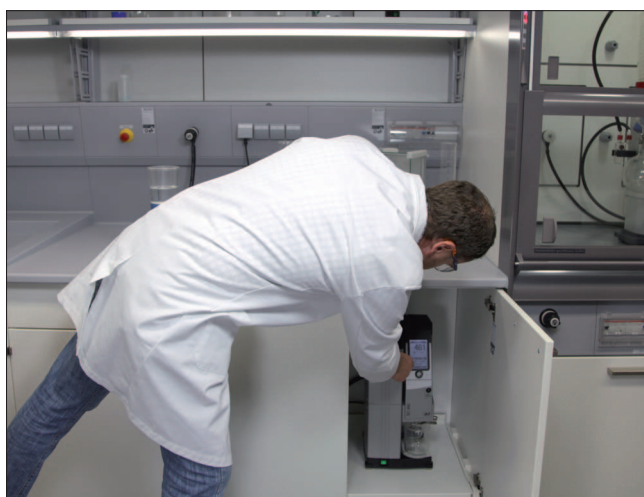
The vacuum pump system achieves an ultimate vacuum of 2 mbar absolute and delivers up to 50 liters of gas per minute. All gas carrying parts are manufactured from chemical resistant materials.

Extremely quiet operation

The integrated vacuum pump operates extremely quietly. Furthermore the system stops the pump completely as soon as the setpoint pressure of the system is reached and only starts up again intermittently in order to offset any slight drop in pressure due to leakages in the process equipment.

Perfectly matched components

This vacuum pump system SC 950 opens up a whole new range of options in the laboratory. This is due to new functions and technical solutions. Thanks to the coordinated development of the individual components it has been possible, for example, to adjust the sensitivity of the motor to suit the requirements of the control process.



The system SC 950 can be easily stowed away, i.e. in units under the work bench or in a fume hood.



The mobile hand terminal (wireless remote control) thus ensuring maximum flexibility in the laboratory.



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Technical data:

Delivery (l/min) ¹⁾ :	50
Ultimate vacuum (mbar abs.):	2
Control:	over hand terminal and/or Windows®- based software
Mains connection:	100 - 240 V, 50 - 60 Hz
Power consumption:	max. 150 W
Hose connections, pneumatic:	ID 10
Hose connections for coolants:	ID 8
Current consumption:	max. 1,7 A
Weight:	14,5 kg
Dimensions (mm) H x W x D:	487 x 246 x 313
With overcurrent protection and mains fuse	

¹⁾ at atm. pressure

Legend:

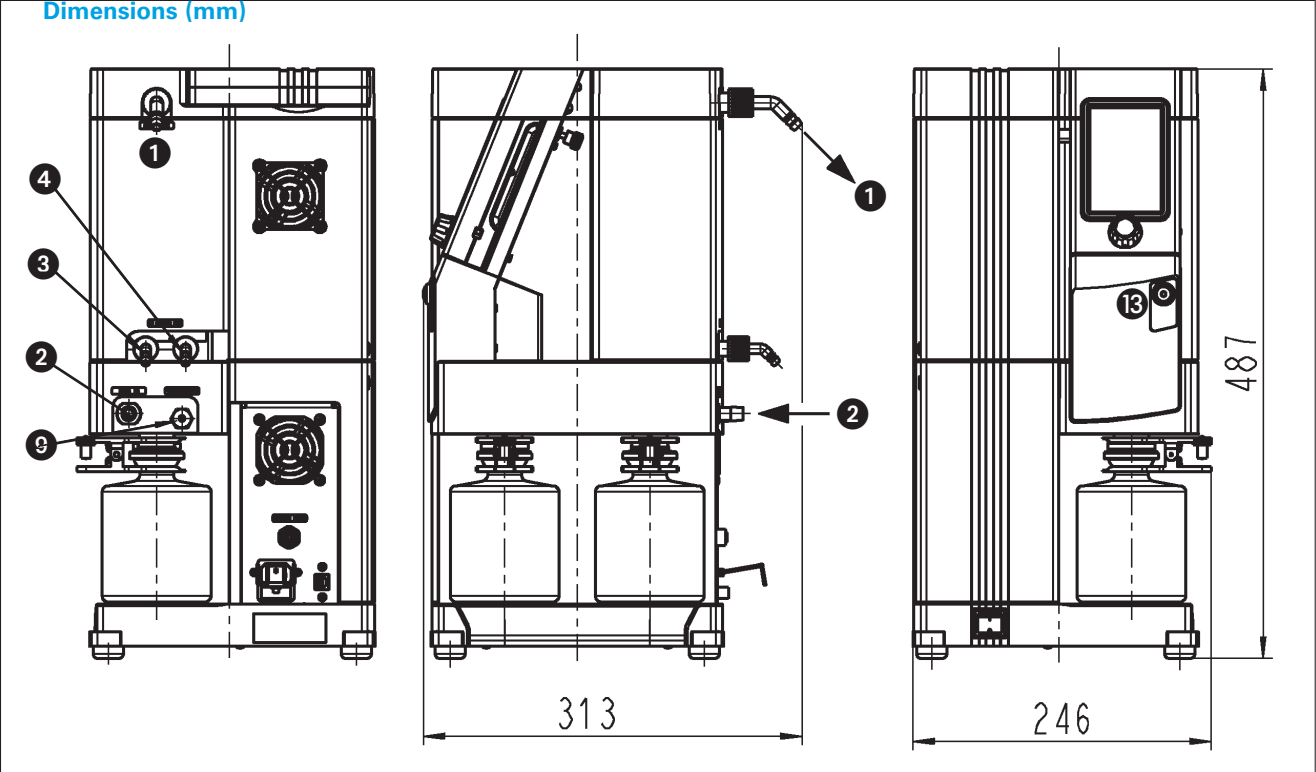
- ➊ Gas outlet
- ➋ Connection to vacuum chamber
- ➌ Coolant inlet
- ➍ Coolant outlet
- ➎ Wireless remote control
- ➏ Connection coolant valve
- ➐ USB connection
- ➑ Mains switch
- ➒ Inert gas connections
- ➓ Carry handle
- ➑ Mains connection
- ➒ Separator
- ➓ Gas ballast on/off
- ➒ Pressure-rotary knob





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Dimensions (mm)



Accessory

Order No.	Description	Details
117121	Coolant valve	G 1/2, ID 8

SC 950

KNF offers a wide range of high-quality pumps and systems for moving both liquids and gases. Whether they are used as built-in OEM pumps, in process applications or in laboratories, KNF products offer high performance, precision, and reliability. We offer all of our customers expert and personal advice. Contact us today to discuss how we can assist you with your next project!

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