

Operating Instructions

ProMinent® Vario/gamma/Sigma/beta Simulator

ProMinent®



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Read the operating instructions before installation and use. The warranty does not cover damages due to faulty operation. Keep for reference and replacement information.

BA Vg/SIM 02 10/98 NA

Order no. 7750062

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OPERATING INSTRUCTIONS FOR THE PROMINENT® VARIO/gamma/Sigma SIMULATOR

UNPACKING

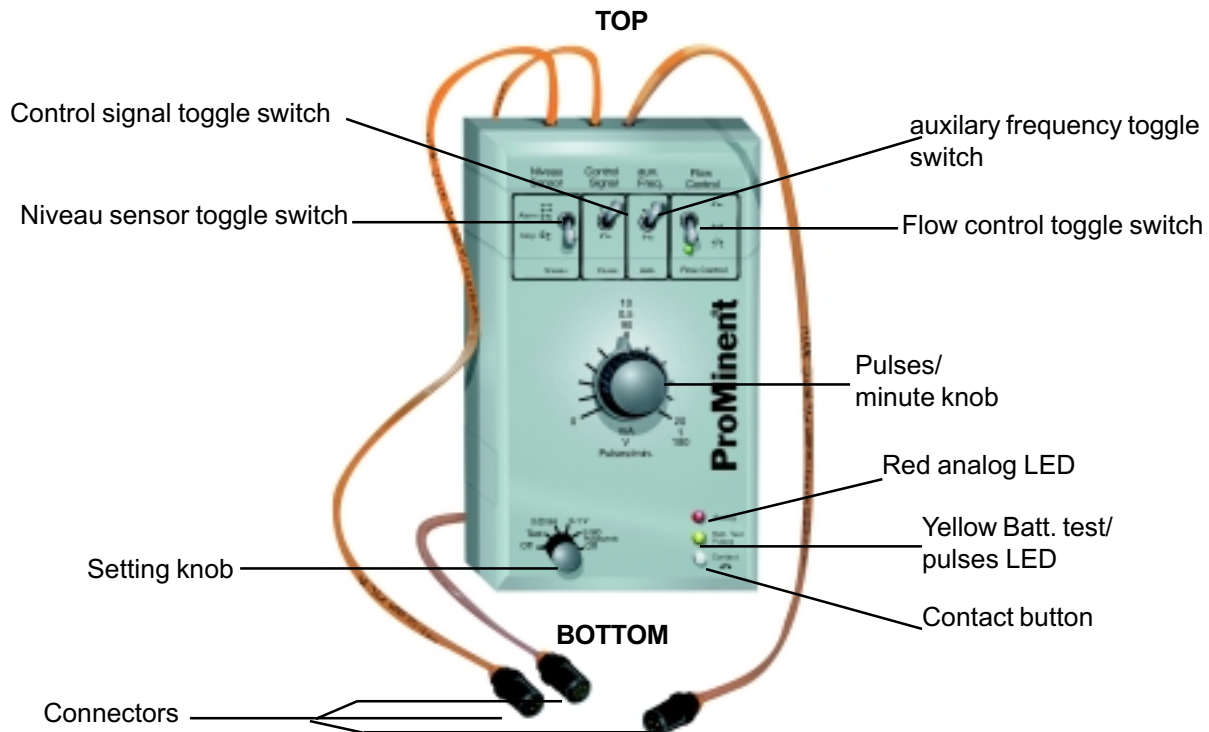
CHECK ALL EQUIPMENT FOR DAMAGE AND FOR COMPLETENESS AGAINST THE ORDER. REPORT INCORRECT ORDERS OR DAMAGES TO THE SELLER IMMEDIATELY.

The carton should contain:
One vario/gamma simulator with cables

INTRODUCTION

The ProMinent® (Vario/gamma/Sigma/beta) simulator is used to check the operation of the vario, sigma and gamma pump. It can simulate analog and contact control as well as simulating low flow, pause, two stage level switch input and an empty tank.

DESCRIPTION OF CONTROLS AND OPERATION



Note: Each connector is configured slightly different to reduce the possibility of connecting to the wrong pump input. Visually compare the connectors prior to connecting them to the pump.

Control Signal Wire

Attach the “control signal” connector of the simulator to the “control input” connection of the pump. Turn the aux. freq. toggle switch to the up position.

Analog

Set the pump on the **analog** setting.

Set the pump analog control to 0-20 mA, the 4-20 mA or the voltage range desired.

Turn the function knob on the simulator to the 0-20 mA setting (0-1 V if using a voltage range).

Red analog LED should light.

Turn the mA knob on the simulator to the desired mA or voltage setting.

Turn the Control Signal toggle switch to the **bottom** position.

Adjust the mA or the volt input as desired by turning the mA/V knob.

The pump will speed up as the mA or voltage input value is increased and slows down as it is decreased.

Contact

Set the pump on the **contact** setting.

Set the pulse multiplier/divider factor on the pump (this is only an option and may not be available on your pump).

Turn the function knob on the simulator to the 0-180 pulses/min.

Yellow Batt. Test/Pulses LED blinks.

Turn the Pulses/min. knob on the simulator to the desired pulses/min. setting (for pumps with the pulse multiplier/divider option).

Turn the Control Signal toggle switch to the **bottom** position.

Adjust the pulses/min. input as desired by turning the pulses/min. knob.

The pump will speed up as the pulses/min. input value is increased and slow down as it is decreased.

If the pump cannot keep up with the input pulses the pump keeps pumping after the simulator is turned off when used with the memory function on the pump, until it has stroked for the proper number of times per the number of input pulses.

The contact button can also be used to operate the pump when it is set on the contact setting.

Press the contact button on the simulator.

The pump will stroke the number of times one pulse is set to cause the pump to stroke.

Auxiliary Frequency (for beta)

Attach the “control signal” connector of the simulator to the “control input” connection of the pump. Turn the control toggle switch to the pause position.

Manual

Manual testing is done on the pump keypad. See the pump operating manual for information.

Flow Control

Attach the "flow signal" connector of the simulator to the "metering monitor" connection of the pump.
 Enable the flow monitor function on the pump.
 Turn the flow control toggle switch to the **middle** position.
 This simulates a low flow condition.
 The green LED will light. The pump should stroke 8 times, then display an error. This simulates the lack of chemical *flow*.

Turn the flow control toggle switch to the **bottom** position.
 This simulates constant flow.
 The green LED will blink. The pump should continue to stroke without an interruption.

Niveau Sensor (two level float switch)

Attach the "Niveau sensor" connector of the simulator to the "float switch" connection of the pump.

Turn the Niveau sensor toggle switch to the **top** position.
The pump operates normally.
 Turn the Niveau sensor toggle switch to the **middle** position.
Minimum blinks on the pump display, simulating the chemical tank volume being low.
 Turn the Niveau sensor toggle switch to the **bottom** position.
The pump immediately shuts off, simulating an empty chemical tank.

Pause Switch

Turn the pause toggle switch to the **top** position.
The pump operates normally.
 Turn the pause toggle switch to the **bottom** position.
The pump immediately shuts off.

MAINTENANCE

Keep the controller clean and free from dust. Clean with household cleaner. Take care not to bend pins in the connectors.

Battery Replacement

Remove gray caps from the function switch and simulating knob.
 Loosen the retaining nut on the shafts.
 Remove the 4 screws on the back.
 Pull the simulator apart.
 Replace the 9V battery.

REPAIR SERVICE

Repairs must be done by ProMinent® Fluid Controls. Call your distributor or ProMinent® at (412) 787-2484 for a return goods authorization. DO NOT return any goods without authorization. All returned items **must** be free of hazardous chemicals and clean when returned.

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