



Because Life Demands the Best.

# Simply Sechrist...

## The Sechrist IV-100B Infant and Pediatric Ventilator

The Sechrist IV-100B Infant Ventilator addresses the infant's ventilation needs simply and reliably. The easy-to-use controls permit rapid setting of ventilation parameters and

allow the clinician to fine tune to great accuracy. The built-in displays provide easy-to-read continuous ventilation parameter information. The alarm system is comprehensive, but avoids information overload during alarm conditions. To prevent

inadvertent PEEP when higher flow rates are required, a special exhalation valve block and pediatric circuit are available. Sechrist... responding to the infant's ventilatory needs, simply.



# The Features & Benefits of the Sechrist IV-100B

## Built-in Digital Display

A comprehensive display shows the selected Inspiratory and Expiratory Times. I: E Ratio and Rate are simultaneously calculated and displayed. Thus, all time parameters are continuously available.

## Air-Oxygen Mixer

The Air-Oxygen Mixer delivers  $\text{FiO}_2$  from 0.21 to 1.0 with an accuracy of  $\pm 3\%$  of full scale. The calibrated flow is 2 to 32 liters per minute (LPM) which is sufficient to ventilate a wide range of patients from neonatal to pediatric.

## Exhalation Valve

Interchangeable exhalation valve blocks are a key feature in the versatility of the IV-100B. Newborn, pediatric and anesthesia blocks are available, depending on the flow rate requirement and application. The blocks are positively keyed so they cannot be mounted incorrectly on the ventilator and they utilize a minimum number of components to prevent incorrect assembly.

## Ambient Baseline Capability

The IV-100B incorporates a feature to eliminate inadvertent PEEP caused by resistance to gas flow. When used with the standard patient circuit, the IV-100B can achieve a zero baseline with patient circuit flows up to 24 LPM. Ambient baseline can also be achieved at higher breathing rates.

## Control Panel: Alarm Delay

This control sets the time delay before the LO limit pressure alarm is audibly and visually activated. The time is adjustable from 3 to 60 seconds.

## Select (Reset)

This button allows the clinician to select either the LO or HI pressure alarm limit setting. This dual-purpose button is also used to cancel the HI limit alarm when it is activated.

## Up and Down Buttons

After the LO or HI alarm parameter has been selected, the desired alarm limit value is selected by pressing either the Up or Down button.

## Alarm Mute

Depression of the button silences the audible alarm for  $30 \pm 5$  seconds. This feature is useful during ventilator set-up or suctioning procedures.

## Test

The microprocessor continually self-tests each program cycle. Activation of this feature allows the clinician to initiate a manual test program, which also tests the alarm system and digital displays. The test sequence will not interrupt normal operation of the ventilator.

## Time Preset

While in the CPAP mode, this feature allows the clinician to preview and select the desired Inspiratory and Expiratory Times before switching to the VENT mode.

## Precision Time Controls

Controls for Inspiratory and Expiratory Times permit selection of the desired parameters with precision of 0.01 second. The microprocessor control system utilizes quartz crystal accuracy to generate the selected times within 0.005%.

## Mode Selector Switch

This control enables the clinician to select the CPAP or VENT mode and is capable of providing CMV or IMV with normal or inverse I: E ratios, inspiratory pressure plateau and PEEP. In the CPAP or VENT mode, the alarm system is functional.

## Manual Breath Button

Unique to the Sechrist IV-100B, this feature allows the clinician to deliver manual breaths in any mode and to operate the unit manually in the event of a loss of electrical power.

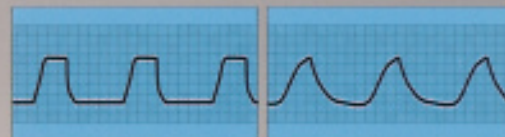
## Non-interacting Pressure Controls

These controls have been designed to provide independent selection of peak inspiratory pressure and PEEP/CPAP.

## Pressure Waveform Control

This unique feature allows the clinician to adjust the airway pressure waveform to achieve optimum

ventilation. The pressure waveform is adjustable from square to a modified sine pattern, independent from adjusting flow, time, or pressure limits.



## Safety Pressure Relief Valve

This pressure relief valve is a backup feature intended to limit the pressure in the patient circuit in the event that the tubing becomes kinked or occluded. Relief pressures between 15 and 85 cm  $\text{H}_2\text{O}$  can be obtained.

## Optional Features

### Digital Electronic Manometer

The easy-to-read backlit analog LCD electronic manometer incorporates several comprehensive features. A digital display of the Mean Airway Pressure is updated with every breath. A simple-to-use High and Low Pressure Alarm System ensures patient protection. By pressing the Up and Down buttons, the clinician can easily set the HI and LO pressure limits to audibly and visually warn of changes in patient status, patient disconnect, leaks, occluded patient circuit, loss of supply gas, or failure to cycle. The alarm system is independent of the microprocessor system and features a self-charging battery backup.

### Mechanical Manometer

For those who prefer, a mechanical manometer remains an option. The mechanical manometer provides for full range traditional pressure monitoring. Incorporated into the manometer is a low-pressure alarm providing an audible and visual alert if inspiratory pressures fall below desired levels.

### 12VDC Battery Operation

This 12-volt battery input for power backup allows portability in certain transport situations.

# Designed with You in Mind

The philosophy at Sechrist Industries, Inc. is to design and manufacture the highest quality medical devices to meet your respiratory care needs. The Model IV-100B Infant Ventilator accomplishes this goal with advanced technology and time proven safety and reliability.

## Intensive Care Unit

The IV-100B is capable of meeting the most demanding requirements of the intensive care unit. You can ventilate newborn to pediatric patients with precise control of oxygen concentration, at respiratory rates of 1 to 150 breaths per minute.

The Inspiratory and Expiratory Pressure controls are non-interactive. A simple, yet comprehensive alarm system monitors the parameters you have set up and notifies you of significant changes.

## Specifications

**Recommended Applications:** Neonatal, Infant, and Pediatric Ventilation

**Flow:** 0-32 LPM, Flush 40 LPM

**FiO<sub>2</sub>:** 0.21 to 1.00

**Mode:** OFF, CPAP, VENT

**Inspiratory Time:** 0.10 to 2.90 sec.

**Expiratory Time:** 0.30 to 60.0 sec.

**I: E Ratio:** 10:1 to 1:600 (Readout 1:0.1 to 1:99)

**Rate:** 1 to 150 BPM

**Expiratory Pressure:** 2 to 20 cm H<sub>2</sub>O; Zero Baseline possible at 24 LPM and higher rates

**Inspiratory Pressure:** 5 to 70 cm H<sub>2</sub>O

**Manual Breath:** Yes

**Alarm:** Independent for Microprocessor; Low Airway Pressure, Leaks, Patient Disconnect, Fail to Cycle, Apnea, Prolonged Inspiration, and Peak Overpressure

**Alarm Delay Time:** 3 to 60 sec.

**Alarm Mute:** 30 sec. ± 5 sec.

**Safety Pressure Relief Valve:** Yes (adjustable)

**Indicators:** Inspiratory Time, Expiratory Time, I: E Ratio, Rate, Inspiratory Phase, Inverse I: E Ratio, Mode Selection, Alarm, High and Low Alarm Set Points, and Mean Airway Pressure

**Manual Test:** Checks microprocessor function, displays, alarm function

**Safety Auto Lock-Out Circuit:** Yes, Inspiratory Phase terminated at 4 sec. even if microprocessor fails

**Timing Pre-Set:** Yes

**Dimensions:** Height: 13" (33.02 cm)  
Width: 14" (35.56 cm)  
Depth: 9" (23.00 cm)

**Weight:** Model IV-100B  
Net: 21 lbs. (9.54 Kg)  
Shipping: 30 lbs. (13.63 Kg)

**Power Requirements:** 117 VAC 50/60 Hz, Circuit Breaker Protected, 3-Wire SJT Power Cord Provided, Hospital-Grade Plug, Current leakage less than 20 micramps when tested per UL 544

**Transport Power Requirements:** 12 VDC 1.2 amps

*Overseas voltage requirements available. Specifications are subject to change.*

Part Number	Electronic Manometer	Mechanical Manometer	115 VAC	220 VAC	Comments
IV-100B-M		•	•		
IV-100B-MI		•		•	
20123	•		•		
20129	•			•	
20125		•		•	IEC-601-1 No 12 volt
20135	•			•	IEC-601-1 No 12 volt



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