Blease900
Ventilator

PATIENT CENTERED VENTILATION

SPACELABS
Healthcare

PATIENT CENTERED VENTILATION

From the first Blease/Manley ventilator sixty years ago, Spacelabs Healthcare has built a heritage of innovative and intuitive products. Our ventilators are developed in partnership with our customers to address real-life clinical needs.

Key elements of our patient-centered anesthesia solution are;

PERFORMANCE   CHOICE   VENTILATION

Spacelabs Healthcare - *Connecting Innovation with Care.*

Performance

KEY FEATURES

Touchscreen technology

Active proportional exhalation valve

Rapid leak and compliance testing

Minimal maintenance

Just as no patient or surgical procedure is identical, neither are the clinicians that attend to them. Performance therefore is more than just technical capability.
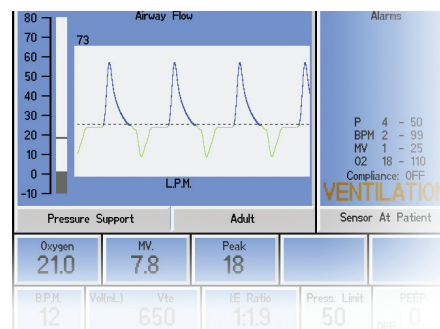
It is the ability of the ventilator to adapt to its users and their patients. Ease of use, consistency, familiarity and overall speed and safety of pre-use testing are all elements of performance, as they determine how clinicians will respond to, learn, test and train others on a ventilator.

Minimal layer menus and multiple methods of navigation (Touch and Trak™) provide quick interaction allowing maximum focus on the patient. Gliding through the options and advanced ventilation modes, it is easy to understand why many clinicians choose Spacelabs Healthcare .

Performance is also in the capability and precision by which the ventilator matches the clinical settings with delivery to the patient. Active proportional flow valves provide precise ventilation delivery regardless of mode.

Safety determines performance. Clear and concise grouping of controls, one touch alarm access and settings reflect this. With an automated leak and compliance test taking less than one minute, the Blease900 delivers accurately even in an emergency.

Minimal spare parts and maintenance requirements further support the long term performance and reduction in cost of ownership of the ventilator.
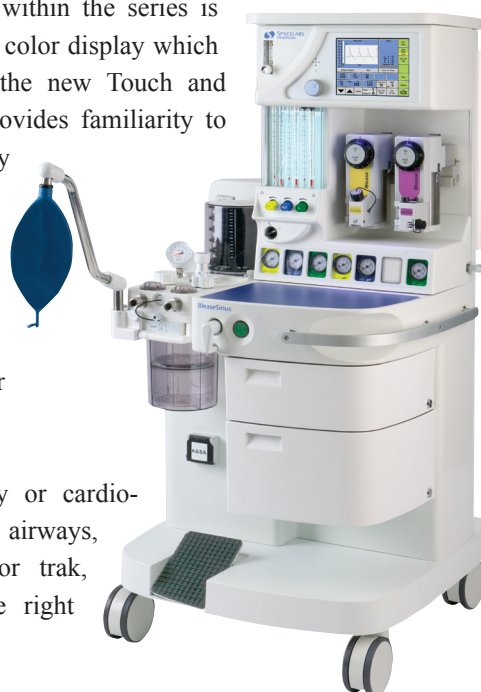
Choice

Choice is having options. Options and expertise allow informed decisions.

In the Blease900 series, configuration and interactions are determined by you. Three ventilator models designed to grow with your practice, providing precision and expansion capabilities, cost effectively. Your initial choice of ventilator configuration doesn't have to be final. The Blease900 series integrates smoothly with the robust BleaseFocus or innovative BleaseSirius platforms.

A range of ventilation modes, waveform displays and spirometery loops are available to upgrade your ventilator to meet your changing patient's requirements. Each ventilator within the series is equipped with a large 8.4" full color display which can be easily navigated via the new Touch and Trak™ user interface. This provides familiarity to users of touch screen technology and those familiar with rotary wheel type systems. The ability to program up to 14 individual screen settings and preferences is also offered, which can be retrieved for future cases.

So whether it is day surgery or cardio-thoracic, neonates or restricted airways, volume or pressure, touch or trak, Spacelabs Healthcare has the right choice for you.

KEY FEATURES

Three ventilator models

Choice of platform

Choice of user interaction, touch or trak wheel

Upgrade path available

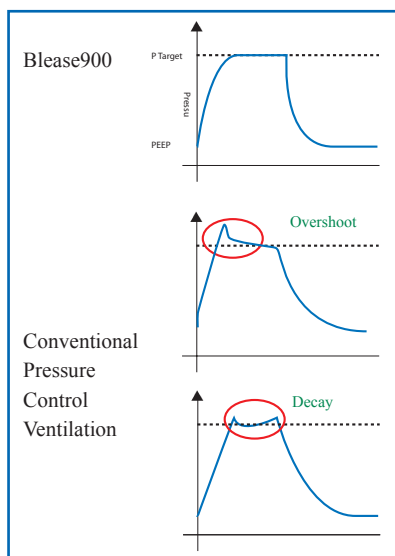# Ventilation

The Blease900 offers Volume Control, Precision Pressure Control™, SIMV with Pressure Support and Advanced Pressure Support™. Accurate control is maintained in all modes using not only dynamic compliance and fresh gas flow compensation but also through active control of the inspiratory and expiratory flow valves of the ventilator.

Measurement at the Patient Y-piece enhances delivery and allows for the display of pressure and flow volume loops. Spirometery loops present complex data in a graphical format for easier interpretation of ventilation effectiveness, in the presence of changes within the patient.

Introducing Precision Pressure Control Ventilation™ (PPCV™)

Ventilating to a set pressure rather than a volume is not new to anesthesia, but its usage is increasing as more complex and diverse cases are being treated.

Current challenges with pressure control ventilation include potential overshoot of pressure that could result in patient injury, and lack of integrated volume monitoring to indicate changes in patient and ventilator status. Compliance changes in the patient, and an inability to track these changes through out the breath, can result in decay in the pressure if the ventilator lacks real time compliance measurement and variable flow capabilities. This could lead to insufficient volumes and inadequate gaseous exchange. Similar results may occur with ventilators with fixed flow rates where the patient's demand is higher than the flow during the inspiratory phase.

The Blease900 ventilator uniquely meets these challenges. During the entire inspiratory time, the Blease900 uses variable inspiratory flow, as well as an active proportional exhalation valve. Both valves working together to precisely control delivery and maintenance of the target pressure.

Blease900 — P Target, Pressu, PEEP

Conventional Pressure Control Ventilation — Overshoot, Decay
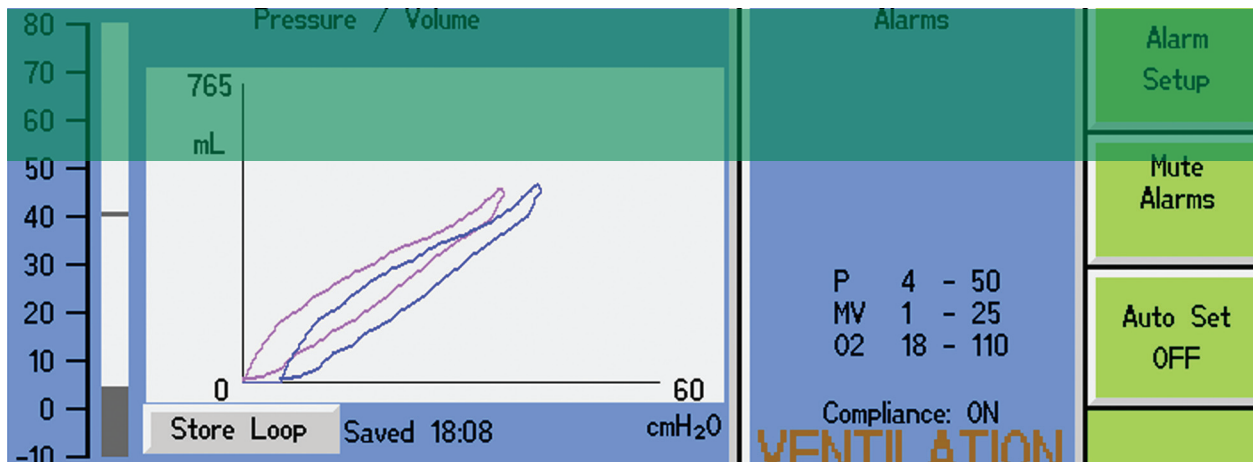
Introducing Advanced Pressure Support™ (AdPSV™)

The patient breathes comfortably, with the ventilator matching demand.

Comfort and success in pressure support is dependent on the patient-ventilator interaction, and requires the ventilator to closely match the patient's breathing cycle.

The Blease900 ventilator uniquely meets these challenges in both PPCV™ and AdPSV™.

During the entire inspiratory time, the Blease900 uses variable inspiratory flow, as well as an active proportional exhalation valve. Both valves work together to precisely control delivery and maintenance of the target pressure. Measuring patient ventilator dynamics at the patient and using this information during ventilation provides excellent sensitivity and responsiveness.

During Advanced Pressure Support™, flow and the end of inspiration are all determined by the patient rather than fixed time cycling. A visual marker displayed on screen also provides indication of patient effort.

Ventilation Monitoring

Ventilation, as with any therapy, needs to be monitored and adjusted according to individual patient response. Monitoring should take place as close to the target organ or system as possible to ensure accuracy. Monitoring should provide information on the effectiveness of therapy delivered and track resultant changes in the patient.

The Blease900 offers Pressure Volume and Flow Volume loops with the ability to store and review past loops for comparison during ventilation. Review of the spirometry loops can show changes in patient compliance, the presence of leaks, and clearly shows how your different ventilator settings can have an impact on your patient's ventilation.

KEY FEATURES

Advanced Pressure Support™

Adjustable flow trigger

Clear indicator of patient effort

View, save and review spirometry loops

Measurements and compensation at the patient.

Technical Specifications

Model	990	970	950
Fresh gas compensation	✓	✓	✓
Compliance compensation (Option of pre-set or measured)	✓	✓	✓
Adult, pediatric & neonate	✓	✓	✓
Ventilation Mode			
Volume control	✓	✓	✓
Pressure control	✓	✓	✓
SIMV + PSV	✓	✓	✓
Pressure support	✓	✓	
Ventilation Monitoring			
Oxygen	✓	✓	✓
Inspired and expired volumes	✓	✓	✓
PAW	✓	✓	✓
Pressure waveform	✓	✓	✓
Flow waveform	✓	✓	✓
Spirometry loops	✓		

Parameters	
I:E ratio	2.0:1 - 1:5
Frequency	2 - 99 bpm
Set tidal volume	20 -1500 ml
Minute volume	0.3 - 25 lpm
Pressure limit	adult: 10 - 70 cmH_2O · pediatric & neonate: 10 - 50 cmH_2O
PEEP	3 - 20 cmH_2O
Inspiratory pause	0 - 50%
Sigh function	The delivered total volume is increased by 10% every 10 breaths
Patient trigger	1 - 15 lpm
Pressure inspired	10- 50 cmH_2O
Max inspiratory flow	100 lpm
Support pressure	5 - 30 cmH_2O

User Set Alarms	
Pressure high	10 - 70 cmH_2O (equal to pressure limit in volume control or pressure inspired + 25% in pressure control)
Pressure low	5 - 50cmH_2O
MV high	1 - 25 lpm
MV low	0 - 24 lpm
High bpm	3 - 99 bpm
Low bpm	0 - 98 bpm
High oxygen	19 - 110%
Low oxygen	18 - 109%

Static Alarms		
Apnea	Sensor error	Vent in operative
Inspiratory flow transducer error	Setting error	Peep error
Under pressure	Low supply gas pressure	No charge
Power fail	Battery low	Comms fail
Apnea alarms in bag mode	Sustained pressure	Fresh gas too high