SERVO-U® ventilation
The new power of you

MAQUET
GETINGE GROUP

PEEP
15
cmH2O
Ppeak
28
cmH2O
Pmean
18
cmH2O
RR
26
b/min
Ti/Ttot
0.44
O2 conc.
21
VTe
298
ml
VTi
MVe
6.0
l/min
VT/PBW
5.7
ml/kg
Edipeak
9.1
4.0 cmH2O/µV
MORE ASSIST

SERVO-U®
The new power of you

SERVO-U delivers many effective options for protective ventilation—all of them more accessible, understandable and easy to implement. This means more patients in all phases of ventilation: controlled, supported, non-invasive and during spontaneous breathing trials, can benefit from advanced lung protective strategies. Welcome to the new power of you.

- Tools to support protective ventilation strategies, such as ARDSNet[1] and NAVA®
- Context-based guidance, therapeutic workflows and intuitive user interaction for all functions
- Upgradable platform that grows with your needs

Innovation inspired by you: SERVO development has always been based on collaboration with intensive care users from around the world. SERVO-U took this tradition even further—never before have so many users been involved to such a high degree at all stages of development. The quantity and quality of feedback at every stage has had a significant impact on development of the user-friendly advantages of SERVO-U, inspiring a design that makes it possible for more clinical staff to access and use advanced lung protective strategies.

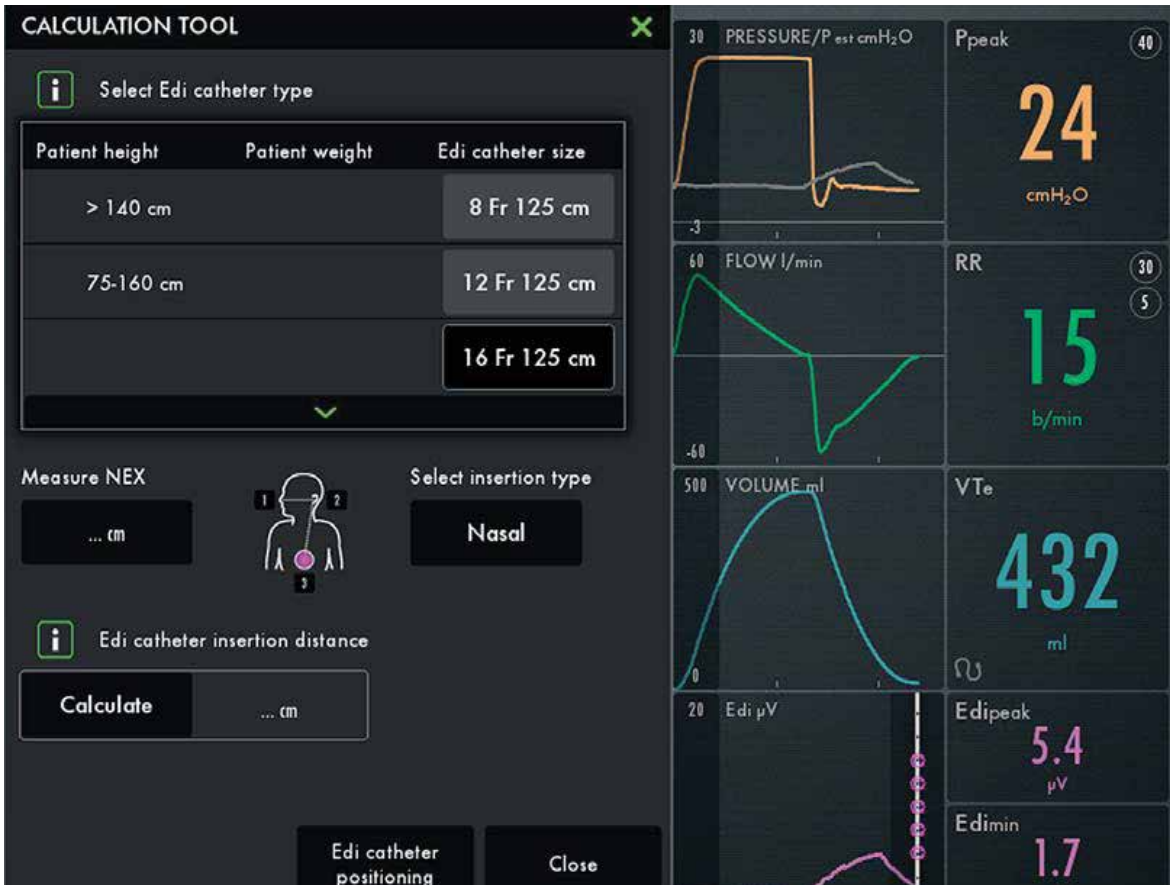
Multiple protective ventilation options

The significance of protective tidal volumes is well documented[1,2,3]. The automatic calculation of tidal volume per kilogram of predicted body weight (VT/PBW) is a dynamic guide when changing volume settings to facilitate adherence to ARDSNet protocol strategies. This time-saving new core value is continuously measured and trended, facilitating adjustment of ventilation parameters in all modes.

NAVA® is the only ventilation mode where ventilation is conducted by instant biofeedback, synchronized by the patient's brain. It is proportional to effort, thus reducing regional lung overdistension and inflammatory activity [4].

The NAVA therapeutic workflow helps the clinician during all stages of NAVA therapy. It includes support for choice of Edi catheter, calculation of insertion length, catheter positioning and NAVA preview, and dynamic images and information texts to facilitate adjustment of NAVA mode settings.

The Edi respiratory vital sign helps clinicians track spontaneous breathing efforts and supports sedation management in all ventilation modes as well as in standby. This accurate onscreen information allows an appropriate and timely response to changing breathing conditions[5,6].



Inspiring confidence

SERVO-U® is designed to make ventilation easier and more accessible. The highly intuitive touch screen provides dynamic images and visual feedback, for example trigger settings and end inspiration, that enhance user confidence in being able to tailor treatments to the individual patient condition.

The SAFETY SCALE™ tool enables you to set ventilation parameters in a quick, intuitive and safe way. With SERVO-U, you have easy access to support tools such as context-based views, recommendations and prompts, with shortcuts to make the interaction more direct and time saving.

Alarm management that makes sense: SERVO-U® provides an intuitive overview and setting of alarm limits, including Autoset in controlled modes, to help minimize stress due to unnecessary alarms. When an alarm activates, the value is highlighted and the light frame on the user interface makes it easy to spot from a distance with 360° visibility. The highlighted value is a shortcut to changing the alarm limit. Onscreen recommendations help you in management of each active alarm.

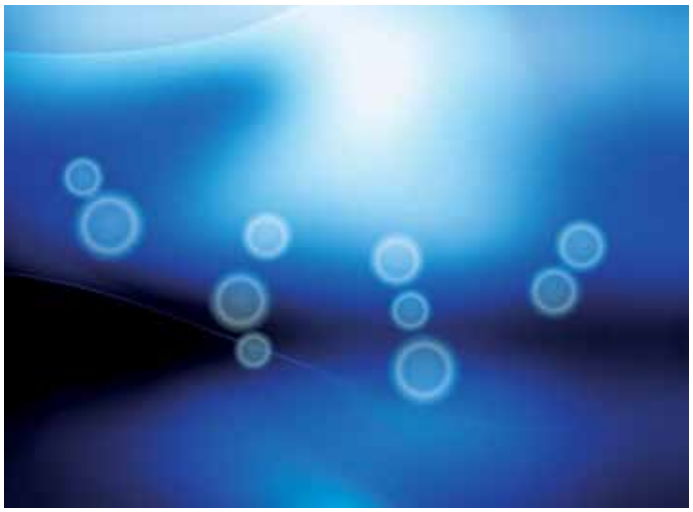
SERVO-U lets you access up to 72 hours of respiratory history with full freedom to organize trend values for evaluating the patient's condition. This means you can analyze changes between spontaneous and controlled ventilation, the weaning progress and other clinical improvements throughout treatment. The media library allows you to record actual events in real time, with a 15 second capture pre- and post-initiation of recording, as well as store full screenshots. Library content can be reviewed at bedside or elsewhere when exported by USB, providing the clinical team unique opportunities for review, discussion, education or research.

Have it your way

Views and configurability: With SERVO-U®, you choose the view that supports your workflow best: views with basic waveforms and values, advanced views with a comprehensive set of measured values, waveforms and loops and the new *DISTANCE View* and *FAMILY View*. The *DISTANCE View* is useful for monitoring outside the immediate patient environment, and the *FAMILY View* provides a soothing visual while the patient's family is bedside. The presentation can be further customized, and all screens are available in more than 20 languages, to make the information more accessible to you.

As flexible as you need it to be: The ergonomic design means the system can be placed to the left or right of the bed, providing 360° access in the patient environment. It can also be mounted on a ceiling supply unit, trolley or shelves. If your patient needs to move outside of the ICU, the SERVO-U can easily accompany with its compact size, low weight, gasholder design and accessory details.

DISTANCE View



FAMILY View

Securing your investment

Solid foundation for the future: The SERVO-U® is designed to grow with you. Because it is a modular system, you can configure the features that best serve your patients now. When those needs change, or as future functionality becomes available, you can upgrade easily and cost-effectively.

Interchangeable modules: Interchangeable hardware modules and components mean that the same feature can be used at different times on mixed SERVO ventilator fleets, lowering overall costs.

Streamlined staff education and training: SERVO-U has been developed with involvement from hundreds of ICU staff, to ensure user-friendliness. The intuitive screen and help menus, recommendations and prompts, will facilitate quick learning and adaptation for ICU physicians, respiratory therapists, nurses and Biomedical Engineers. Training can be performed at bedside and the screen can be projected via VGA output for larger groups. Trends and values are easily transported by USB for off-site educational opportunities.

Maquet MCare Services: MCare scalable services adds value from day one and help ensure that your system operates at peak performance throughout its lifecycle, so that your staff can take advantage of all its features in the best possible way.

Maquet | the Gold Standard

Leading the way: Maquet is a premier international provider of medical technology. Focused on the OR and ICU, we are committed to developing solutions that improve patient care.

Maquet draws on many years' experience in supplying state-of-the-art ventilator systems. Since the introduction of the first SERVO ventilator in 1971, we have delivered more than 100,000 units and SERVO has become a world-renowned ventilation brand.

SERVO-U® is the next step in the evolution of protective ventilatory care. Its new future-proof platform is designed to grow with your needs, combining the best of the SERVO heritage with significant advantages in user-friendliness.

SERVO-U is designed to ensure that clinicians can access its full range of effective tools, and implement them across a wide patient spectrum as easily as possible. It is the latest example of how Maquet is leading the way in protective ventilation.

PRVC

O_2 conc.	PEEP	RR	Tidal volume
40	5.0	15	410

I:E	Insp. rise (%)	Trigger (l/min)
1:2	5	1.6

Ti 1.33 s (33 %

Minute volume 6.2

Trigger

FLOW l/min

PRESSURE cmH_2O

1.4

Less patient effort

More patient effort

Trigger - Flow

1.4 l/min

FLOW 1.0 l/min

LESS PATIENT EFFORT

MORE PATIENT EFFO

-2 cmH_2O PRES

1.4

1.8

References:

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3. Rosenberg AL, Dechert RE, Park PK, et al. Review of a large clinical series; association of cumulative fluid balance on outcome in acute lung injury: a retrospective review of the ARDSNet tidal volume study cohort. *J Intensive Care Med.* 2009 Jan-Feb;24(1):35-46.
4. Brander L, Sinderby C, Lecomte F, et al. Neurally adjusted ventilatory assist decreases ventilator-induced lung injury and non-pulmonary organ dysfunction in rabbits with acute lung injury. *Intensive Care Med.* 2009 Nov;35(11):1979-89.
5. Bellani G, Mauri T, Coppadoro A, et al. Estimation of patient's inspiratory activity of the diaphragm. *Crit Care Med.* 2013 Jun;41(6):1483-91.
6. Dres M, Schmidt M, Ferre A, et al. Diaphragm electromyographic activity as a predictor of weaning failure. *Intensive Care Med.* 2012 Dec;38(12):2017-25.

All user statements from product development and validation: Data on File, Maquet Critical Care, Solna, Sweden.

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GETINGE GROUP

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