

Dräger Savina 300 NIV ICU Ventilation and Respiratory Monitoring

As non-invasive as possible, as invasive as necessary. The Dräger Savina 300 NIV with automatic leak compensation in all ventilation modes supports the seamless transition from high-flow oxygen therapy to non-invasive ventilation and invasive ventilation. The built-in-turbine with rapid response time and external batteries allows operation independently from the central gas supply.

High non-invasive ventilation performance

Ease-of-use

High-Flow Oxygen Therapy

Independent from a central gas and external power supply



D-10160-2022

Benefits

High non-invasive ventilation performance

NIV leads to a reduced number of complications by 62 % and treatment errors by 50 %¹.

- Very quick response time to patient efforts in non-invasive ventilation (NIV)²
- Adapted responsiveness due to advanced NIV capabilities with sophisticated leak compensation in all modes²
- Stress-free spontaneous breathing with excellent trigger response time reduces the work of breathing²

High-Flow Oxygen Therapy

A comparison of high-flow nasal oxygen delivery vs Venturi mask oxygen therapy has shown improvements in oxygenation, comfort, and clinical outcomes. When using a high-flow nasal O₂ system, this study demonstrated a reduced need for non-invasive ventilation by approximately 80 %, less episodes of O₂ desaturation by an estimated 66 %, less need for reintubation by approximately 80 %, and a reduced length of stay in the ICU by an approximate average of 1.3 days³

- High-Flow Oxygen Therapy supports recovery after extubation and non-invasive ventilation: flushing of anatomical dead space due to high gas flow of 100 l/min, thereby functionally reducing dead space and improving respiratory efficiency⁴
- Time management for the caregiver is streamlined as one device can remain at the bedside of the patient simply by changing the patient-circuit interface: complete set-up for High-Flow nasal O₂-therapy
- Enhanced patient comfort due to the soft nasal prongs which ensures a comfortable fit. Skin lesions and other undesirable effects associated with masks are reduced⁵. Heating and humidification of the gas mix further improves both patient tolerance and therapeutic efficacy^{6, 7, 8}.

Ease-of-use

Operate the Savina 300 NIV ventilator with confidence in any situation, thereby lower education times and help to avoid human errors.

- Intuitive for simple operation and quick configuration
- Confidence in use and reduces training time due to Dräger-wide standardised user interface
- Automatic device check supports quick operational readiness
- Quick response to patient alarm situations with intelligent alarm handling
- Easy cleaning and disinfection due to smooth and sealed surfaces

Benefits

Independant from a central gas und external power supply

The Savina 300 NIV compresses ambient air for the breathing gas* allowing the device to operate independently from the central gas supply.

- Built-in-turbine with rapid response time and continuous high flow delivery of up to 250 l/min
- Five hours of independent ventilation due to built-in and external batteries

1 FSF Ram, et al. Non-invasive positive pressure ventilation for treatment of respiratory failure due to exacerbations of chronic obstructive pulmonary disease. *Cochrane Database Syst Rev* . 2004;(1):CD004104. doi: 10.1002/14651858.CD004104.pub2

2 Garnier M, et al. Multifaceted bench comparative evaluation of latest intensive care unit ventilators. *British Journal of Anaesthesia*, 2015, 110, doi: 10.1093/bja/aev028

3 Maggiore SM, et al. Nasal-High-Flow vs Venturi Mask Oxygen Therapy after Extubation: Effects on Oxygenation, Comfort, and Clinical Outcome. *Am J Respir Crit Care Med*. 1. Aug. 2014; 190 (3): 282-8

4 Dysart K, et al. Research in high flow therapy: Mechanisms of action. *Respiratory Medicine* 2009;103(10):1400-5. [PUBMED: 19467849], <https://www.ncbi.nlm.nih.gov/pubmed/19467849>

5 Brill AK. How to avoid interface problems in acute noninvasive ventilation, DOI:10.1183/20734735.003414, *Breathe*, September 2014, Volume 10, No 3

6 Vargas F, et al. Physiologic Effects of High-Flow Nasal Cannula Oxygen in Critical Care Subjects, *Respir Care*. 2015 Oct;60(10):1369-76. doi: 10.4187/respcare.03814. Epub 2015 May 5.

7 Roca O, et al. Current evidence for the effectiveness of heated and humidified high flow nasal cannula supportive therapy in adult patients with respiratory failure. *Crit Care*. 2016 Apr 28;20(1):109. doi: 10.1186/s13054-016-1263-z.

8 Cuquemelle E, et al. Heated and humidified high-flow oxygen therapy reduces discomfort during hypoxemic respiratory failure. *Respir Care*. 2012 Oct;57(10):1571-7. Epub 2012 Mar 12.

9 Frat JP, et al. High-flow nasal oxygen therapy and noninvasive ventilation in the management of acute hypoxemic failure. *Ann Transl Med*. Jul ;5(14):297

10 Schwabbauer N, et al. Nasal high-flow oxygen therapy in patients with hypoxic resp. failure: effect on functional and subjective resp. parameters comp. to conventional oxygen therapy and non-invasive ventilation. *BMC Anesthesiol*. 2014 Aug 7;14:66. doi: 10.1186/1471-2253-14-66. eCollection 2014.

11 Girault C, et al. Interface Strategy during non-invasive positive pressure ventilation for hypercapnic acute respiratory failure. *Crit. Care Med.*, 2009, 37(1): 124-131

* Oxygen must be provided from the central gas supply system, from oxygen cylinders or from a low-pressure oxygen source

System Components



D-24120-2020

Savina 300 Compact Trolley

The lighter weight and compact, slim design of the new Savina 300 Compact Trolley makes it easy to transport. Four handles at the front and rear improve handling and facilitate easy access to the breathing circuits. The hose bracket is equipped with a convenient locking mechanism. The well-known standard profile allows the attachment of various rails and holders. The Compact Trolley can be extended with a gas cylinder holder or two additional external batteries.

Accessories



D-3001-2018

HI-Flow Star nasal cannula

High-flow therapy is more comfortable for patients than NIV⁹. The soft nasal prongs of the HI-Flow Star system ensure a comfortable fit. Skin lesions and other undesirable effects associated with masks are reduced. Heating and humidification of the gas mix further improves both patient tolerance and therapeutic efficacy^{6, 7, 8}.



D-2799-2018

HI-Flow Star system – heated inspiratory breathing circuit

HI-Flow Star – nasal oxygen delivery system for adult patients. High-flow therapy can effectively deliver more oxygen to the patients than Venturi-based systems with a higher level of comfort. In addition it can help patients recover faster and avoid invasive respiratory therapy^{3, 10}.

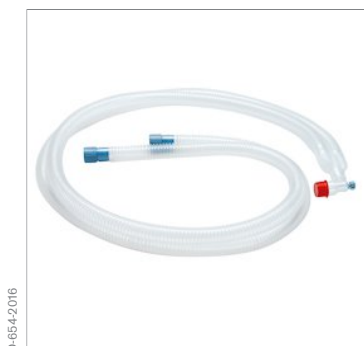
Accessories



D-2804-2018

Hi-Flow valve kit

The HI-Flow Star valve kit includes a pressure relief valve and a humidifier chamber connector. The preset pressure relief valve is used to prevent the system pressure becoming too high. The valve kit can be used for high-flow therapy in adults (optional).



D-654-2016

VentSet Basic 150

Reliable, convenient and designed for safety. Because the breathing circuit is the direct interface to the patient, the integrity of your entire anesthesia or ventilation system depends on it. With Dräger's portfolio of disposable breathing circuits, you can rest assured that each product is carefully designed to work as part of a complete solution.



MT-0581-2007

ClassicStar® NIV full-face mask

ClassicStar NIV full-face mask is designed for non-invasive ventilation therapy. Because the mask covers the nose and mouth, it provides effective therapy, even in case of mouth breathing. This portfolio supports premium comfort with anatomical fit and real seal.



D-6410-2009

ClassicStar® NIV nasal mask non-vented

More comfort with anatomical fit and effective seal. nasal masks are often chosen if non-invasive ventilation has to be prolonged due to the improved comfort and reduced complications associated with full-face masks. Nasal masks are mostly preferred for patients where mouth breathing is not a significant problem¹¹.

Accessories



D-6283-2018

ClassicStar® NIV total-face mask

The ClassicStar® NIV total-face mask is designed for non-invasive ventilation therapy. The mask covers the face, mouth, nose and eyes and thus ensures effective therapy, even during mouth breathing. The ClassicStar total-face mask eliminates nasal bridge challenges by sealing in facial areas that are less sensitive to pressure and have smoother contours. Also in the case of facial abnormalities the total-face mask is the first choice.



D-10386-2016

ClassicStar® plus mask, oronase NIV fullface SE

The NIV oronasal mask ClassicStar® plus features a soft and anatomically shaped silicone lip as the sealing interface to the patient's face. The mask is BPA- and PVC free. ClassicStar® plus NIV masks with standard elbow (SE) are compatible with all Dräger ventilators with NIV-option.

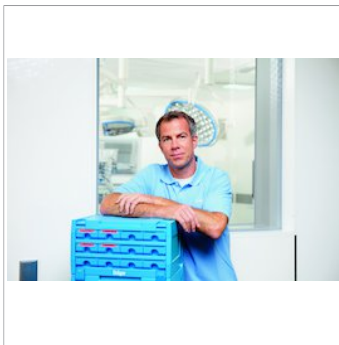


D-2303-2011

NovaStar® TS NIV oronasal mask

NovaStar® thermostable (TS) NIV mask is designed for non-invasive ventilation therapy. Because the mask covers the nose and mouth, it provides effective therapy, even in case of mouth breathing. This portfolio supports ultimate comfort and effective seal through customised fit and silicone-gel cushion.

Services



D-32436-2011

Drägerservice – because quality counts

For any requirement you have, we have the service contract that fits: from inspection- only and preventive maintenance to complete service packages. We have the answer for your individual needs. Regardless of the service package Savina 300 NIV comes with a manufacturer warranty of 8 years for the turbine*.

* Limited Manufacturer Guarantee subject to conditions specified in the Instructions for Use. Applies only to devices purchased after 1/1/2015.

Related Products



D-14953-2019

Dräger Savina® 300 Select

The Dräger Savina® 300 Select (in this configuration) combines the independence and power of a turbine-driven ventilation system with sophisticated ventilation modes. Its broad variety of features and accessories supports a patient range from babies* to adults. The large colour touch screen and intuitive operating system that concentrates on established high class features make configuration and operation very simple.



D-24035-2020

Dräger Savina® 300 Classic

The Dräger Savina® 300 Classic (in this configuration) combines the independence and power of a turbine-driven ventilation system with a wide range of ventilation modes. The large colour touch screen and intuitive operating system that concentrates on essential features make configuration and operation very simple.

Technical Data

Ventilation modes

Volume-controlled ventilation modes	<ul style="list-style-type: none"> - VC-CMV / VC-AC - VC-SIMV
Pressure-controlled ventilation modes	<ul style="list-style-type: none"> - PC-BIPAP 1/ PC-SIMV+ - PC-AC
Support of spontaneous breathing	<ul style="list-style-type: none"> - SPN-CPAP
Enhancements	<ul style="list-style-type: none"> - AutoFlow® – Automatic adaption of the inspiratory flow in volume orientated ventilation modes. - NIV – Non Invasive Ventilation with optimised alarm systems and automatic leakage compensation. - O₂-therapy – continuous flow is applied for patients with independent breathing
Patient type	Adult, paediatric
Respiratory rate	2/min to 80/min
Inspiration time	0.2 to 10 s
Tidal volume	50 to 2000 ml, BTPS ²
Inspiratory pressure	1 to 99 mbar (or hPa or cmH ₂ O) (1 mbar = 100 Pa)
PEEP/interm. PEEP	0 to 50 mbar (or hPa or cmH ₂ O)
Pressure support/ Δ P _{supp}	0 to 50 mbar (or hPa or cmH ₂ O) (relative to PEEP)
Flow acceleration	5 to 200 mbar/s (or hPa/s or cmH ₂ O/s)
O ₂ -concentration	21 to 100 Vol. %
Trigger sensitivity (Flow trigger)	1 to 15 l/min
Inspiratory termination criterion	5 to 75 % PIF (peak inspiratory flow)
O ₂ -therapy	Constant flow Flow (BTPS) 2 to 100 l/min in increments of 1 l/min O ₂ concentration FiO ₂ 21 to 100 Vol% in increments of 1 Vol%

Displayed measured values

Airway pressure measurements	Max. airway pressure, plateau pressure, mean airway pressure, PEEP 0 to 99 mbar (or hPa or cmH ₂ O)
Minute volume (MV)	Total MV, spontaneous MV 0 to 99 l/min, BTPS
Tidal volume (VT)	Inspiratory VT, expiratory VT _e , VT _{spon} 0 to 4000 ml, BTPS
Tidal volume per kg of body weight (VT / IBW)	0 to 99.9 ml/kg
Total respiratory rate	Total and spontaneous respiratory rate, 0 to 150/min
Inspiratory O ₂ -concentration	21 to 100 % Vol.
End-tidal CO ₂ concentration EtCO ₂	0 to 100 mmHg (or 0 to 13.2 Vol % or 0 to 13.3 kPa)
Breathing gas temperature	18 to 48 °C (64.4 to 118.4 °F)
Wave displays	Paw (t), tracheal pressure (t), Flow (t), Tidal volume (t)
Ventilation ratio (I:E)	1:150 to 150:1
Compliance C	0.5 to 200 ml/mbar (or ml/hPa or ml/cmH ₂ O)
Resistance R	3 to 300 mbar/l/s (or hPa/l/s or cmH ₂ O/l/s)
Leakage minute volume MV _{leak}	0 to 100 %
Rapid shallow breathing RSB	0 to 9999 (1/min/l)

Alarms

Airway pressures	high/low
Expiratory minute volume	high/low
Tidal volume	high/low
Apnoea-alarm time	15 to 60 sec

Technical Data

Spontaneous breathing frequency	high
Inspiratory O ₂ -concentration	high/low
Inspiratory breathing gas temperature	high
EtCO ₂	high/low

Performance data

Maximum (continuous) inspiratory flow	250 l/min, BTPS
Valve response time T0...90	≤ 5 ms
Control principle	time-cycled, volume-controlled, pressure limited
Safety valve opening pressure	120 mbar (or hPa or cmH ₂ O)
Emergency valve	automatically enables spontaneous breathing with filtered ambient air if air and O ₂ supply should fail.
Automatic gas switch-over function if O ₂ supply fails	
Output for pneumatic medication nebuliser	max. 2 bar (or 200 kPa or 29 psi), max. 10 l/min
Leak compensation	synchronised patient-ventilator synchrony adjusts the flow trigger and the inspiratory termination criteria for leaks. <ul style="list-style-type: none"> - tube application: up to 10 l/min - NIV VC-modes: up to 25 l/min - NIV PC-modes: unlimited

Operating data

Mains power connection	100 V to 240 V, 50/60 Hz
Current consumption	max. 1.3 A at 240 V, max. 3.4 A at 100 V
Battery internal	typically 45 min (optional extension up to 5 h)
Turbine exchange interval	8 years, with no limit in operating hours during this interval ⁴

Digital machine outputs

Digital output and input via an RS 232 C interface	
Dräger MEDIBUS and MEDIBUS.X	

Gas supply

Air	Turbine technology
O ₂ gas supply	2.7 bar to 6 bar (39 psi to 87 psi)

Dimensions and weights

Dimensions (W x H x D)	Basic device:
	460 x 383 x 364 ±2 mm (18,11 x 15,08 x 14,33 ±0,08 in)
Weight (basic device)	Device with Dräger Savina 300 trolley:
	577 x 1295 x 677 ±5 mm (22,72 x 50,98 x 26,65 ±0,20 in)
Diagonal screen size	Device with Dräger Savina 300 compact trolley:
	577 x 1295 x 677 ±5 mm (22,72 x 50,98 x 26,65 ±0,20 in)
	approx. 26 kg (57.3 lbs) without trolley
	12" TFT colour touch screen

1 BIPAP – Trademark used under licence

2 BTPS – Body Temperature Pressure Saturated. Measured values relating to the conditions of the patient lung (98.6 °F), steam-saturated gas, ambient pressure.

3 1 mbar = 100 Pa

4 Limited Manufacturer Guarantee subject to conditions specified in the Instructions for Use. Applies only to devices purchased after 1/1/2015.

Some functionalities are available as an option.

Notes

Not all products, features, or services are for sale in all countries.
Mentioned Trademarks are only registered in certain countries and not necessarily in the country in which this material is released. Go to www.draeger.com/trademarks to find the current status.

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