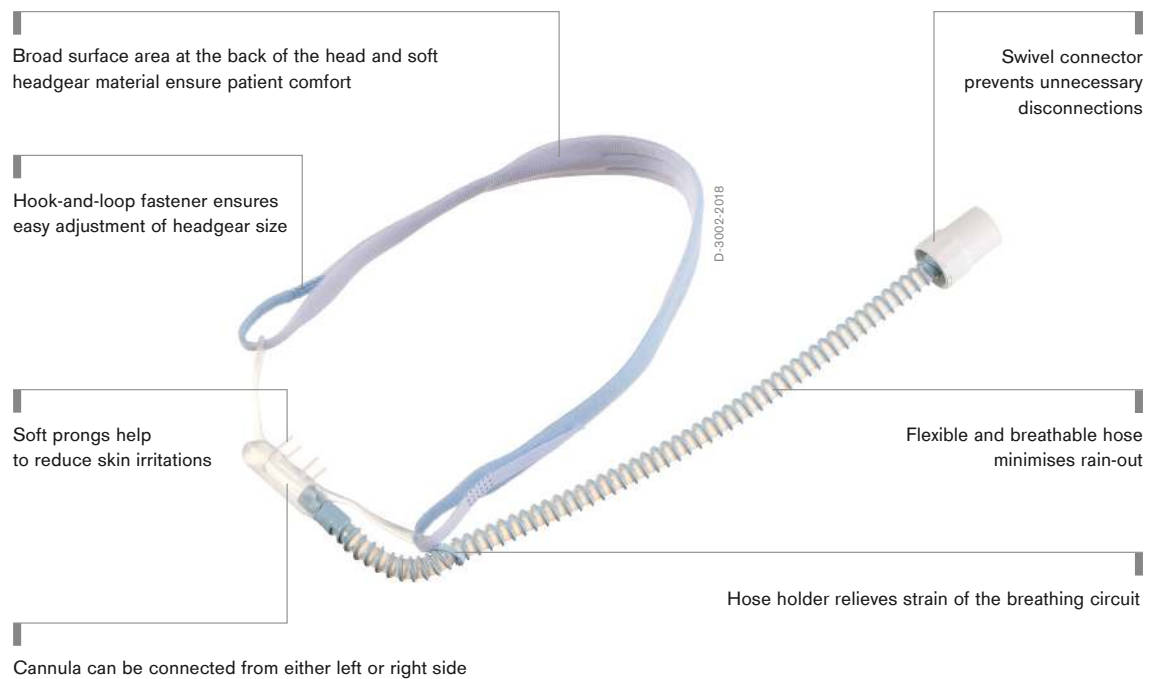


## HI-Flow Star

Improving the delivery of life-saving high-flow oxygen therapy. Because not every patient has the same ventilation needs, our nasal oxygen delivery system for adult patients "Dräger HI-Flow Star" helps you to effectively give the precise flow conditions and O<sub>2</sub> needed — supporting them to recover faster and avoid possible invasive respiratory therapy.<sup>1,3</sup>



## Benefits

---

### Enhance patient safety and comfort with our HI-Flow Star System

Non-invasive respiratory support should be just that — non-invasive. For spontaneously breathing patients, who need specific conditions of flow rates, it is essential to deliver safe doses of continuous ventilation therapy, helping them to recover quickly and healthily. When using our HI-Flow Star respiratory support system, you can ensure continuous oxygen therapy that is both gentle and healing to your patient.

To achieve maximum patient safety, our newly designed **swivel connector** helps prevent unnecessary disconnections, giving your patient a constant flow of air. Moreover, we have **integrated clips** into our high-flow nasal cannula to provide the patient with effective breathing circuit tension relief, where one clip is assigned for the nasal tubing and the other for the hose. This significantly reduces tension your patient may experience when they try to move and helps to keep them more comfortable during physical therapy sessions.

An additional health concern for clinical staff is the collection of water inside the circuit due to the fact that air flow needs to be warmed and humidified. To **minimise internal condensation**, our HI-Flow Star nasal cannula is made of a flexible and breathable material that also includes a **valve kit**, which includes a pressure relief valve and a humidifier chamber connector. You can use the pre-set pressure relief valve to prevent the system pressure from becoming too high. The valve kit is required for high-flow therapy with a blender, like the Oxymer. When using a ventilator, the valve kit is optional.

### Fits the needs for all

**Patient comfort** is a central issue with any interface. For effective ventilation, it must be worn continuously for hours at a time, which can cause pressure marks on the skin resulting in patient discomfort. Alternating interfaces is therefore essential in promoting improved patient outcomes. Designed to provide an exact fit and be freely adjustable, our HI-Flow Star headgear is made of soft, lightweight materials, which firmly and comfortably hold the interface in place. In addition, its **unique design and soft materials** also help to reduce possible skin lesions in the highly sensitive nostril area.

As patients begin to breathe easier on their own, supporting them with added comfort can give them greater independence to eat, drink, and move. This is why high-flow therapy is more comfortable for patients than conventional NIV<sup>7</sup>.

The soft nasal prongs of the HI-Flow Star System ensure that your patients have a comfortable fit, thus reducing skin lesions and other undesirable effects associated with masks. Additionally, the heating and humidification of the gas mix further helps to improve both patient tolerance and therapeutic efficacy<sup>8,9,10</sup>.

Flexibility, versatility, usability: Having quick and convenient access to your patient for care can significantly **save staff time and effort**. Thanks to its **symmetrical design**, you can connect the nasal cannula from both sides of the patient's bed, either the left or the right—saving you just that—precious time and effort. No need to move a bed or equipment to connect the nasal cannula to the patient. The HI-Flow nasal cannulas are available in three different sizes, which make the patient feel more comfortable. Equally important, to support you with your hospital's infection prevention protocols, our HI-Flow Star nasal patient interface is fully disposable, thus reducing the possibility of cross contamination.

## Benefits

---

### Supporting patients to recover quickly

The transition from invasive to non-invasive ventilation is critical for your patients' recovery. As a possible therapeutic solution, clinical studies have demonstrated that high-flow oxygen therapy can be successfully used to avoid both conventional mask-based non-invasive and invasive ventilation therapy in patients with compromised respiratory function.<sup>1</sup> This can substantially aid patients to recover faster following extubation.<sup>1</sup> As a result, you can stabilise your patients' respiration better, which in turn can encourage patients to breathe easier on their own.

Our HI-Flow Star nasal oxygen delivery system helps to improve oxygenation therapies — this leads to improved outcomes and potential reduction of the length of hospital stay.<sup>2</sup>

---

### Positive influence on functional parameters

For patients to breathe easier with less obstructions, proper parameters need to be set. One positive factor is the therapeutic benefit of the administration of high-flow oxygen, which can do more than just increase O<sub>2</sub> saturation levels. Clinical observations reveal that it can also improve mucus clearance<sup>4,11</sup> while increasing tidal and end-expiratory lung volume<sup>5,6</sup>.

---

### Compatibility and simplicity

All from one source: Optimising your workflows saves you both time and effort. As a result, we have designed our HI-Flow Star System to be compatible with a range of Dräger ventilators, which include the Savina and Evita family. In combination with our Dräger Oxymixer, you can rely on complete compatibility. The HI-Flow Star System together with our family of ventilation solutions offer you a fast setup and easy application that helps you to minimise workloads and give you more time to care for your patients' needs.

## Details



D-3000-2018

HI-Flow Star Nasal Cannula



D-2999-2018

HI-Flow Star Nasal Cannula is available in size S, M, L



D-3007-2018

Bed clip



D-2799-2018

HI-Flow Star System – Heated inspiratory breathing circuit for humidifier MR850



D-2476-2022

HI-Flow Star Kit Aquapor A – Heated inspiratory breathing circuit for humidifier Aquapor H300



D-2804-2018

HI-Flow Star Valve Kit

## Technical Data

### HI-Flow Star Nasal Cannula

#### Material

Connector	PP, TPC-ET
Hose	TPC-ET
Hose holder	MABS
Adapter	TPC-ET
Prongs	Silicone
Strap	PES, PA
Valve Kit	MABS, silicone, Stainless steel
Not made with DEHP, PVC, and natural rubber latex	

Performance characteristics	MP05511	MP05512	MP05513
Insp. resistance at 40 L/min	<15 mbar (or cmH <sub>2</sub> O) 1 bar = 1 kPa x 100	<10 mbar (or cmH <sub>2</sub> O)	<5 mbar (or cmH <sub>2</sub> O)
Flow range*	<60 L/min when a pressure relief valve is used: <50 L/min	<60 L/min	<60 L/min

Heated inspiratory breathing circuit	HI-Flow Star System	HI-Flow Star Kit Aquapor A
	<b>MP05601</b>	<b>MP17090</b>
Length of breathing hose	1.6 m (62.99 in) ±10 %	1.6 m (62.99 in) ±10 %
<b>Material</b>		
Breathing hose	PP, TPO	EVA, PE, TPE
Humidifier chamber	PP, SBC, PVC, ABS, silicone, aluminium	PP, SBC, PVC, ABS, silicone, aluminium
Pressure relief valve (optional)	MABS, silicone, stainless steel	MABS, silicone, stainless steel
O <sub>2</sub> hose	PVC (DEHP-free)	PVC (DEHP-free)
Connector	PP	PP
<b>Performance characteristics</b>		
Resistance	at 30 L/min: <1.8 mbar* (or hPa or cmH <sub>2</sub> O)	at 15/30/60 L/min: <0.2/0.5/2.0 mbar* (or hPa or cmH <sub>2</sub> O)
Compliance at 60 mbar	<5 mL/hPa (or mL/mbar)	<5 mL/hPa (or mL/mbar)
Leakage at 60 mbar**	<50 mL/min	<50 mL/min
Electrical connection data	22V, 16,5 Ohm, 60W	22 V, 14 Ohm, 30 W
Warm-up time	30 min	30 min
Humidifier output at 6 to 60 L/min	>16 mg/L	>16 mg/L
Sound pressure level***	<50 dB(A)	<50 dB(A)
Volume (air) of humidifier chamber with water/without water	260/450 mL ± 10%	260/450 mL ±10 %
Maximum operating pressure	60 mbar	60 mbar
Pressure relief valve (optional)		
Opening pressure at 25 L/min	26 ±2 mbar	26 ±2 mbar

\*1 bar = 1 kPa x 100

\*\*Body Temperature Pressure Saturated (BTPS), measured values based on the condition of the patient's lungs, body temperature 37 °C (98.6 °F), water vapor saturated gas, ambient pressure

\*\*\*Measured in accordance with ISO 80601-2-74

## Ordering Information

### HI-Flow Star Nasal Cannula

consists of: prong, breathable hose with swivel connector, hose holder, headgear

HI-Flow Star Adult S	25 pieces	MP05511
HI-Flow Star Adult M	25 pieces	MP05512
HI-Flow Star Adult L	25 pieces	MP05513

### HI-Flow Star System – Heated inspiratory breathing circuit

consists of: heated inspiratory hose (blue), humidifier chamber, breathing hose when used with a ventilator, O<sub>2</sub> hose when used with an O<sub>2</sub> blender, bed clip

HI-Flow Star System	10 pieces	MP05601
---------------------	-----------	---------

### HI-Flow Star Kit Aquapor – Heated inspiratory breathing circuit

For use with the humidifier Dräger Aquapor H300.

Set consists of: heated inspiratory hose (blue), humidifier chamber, breathing hose when used with a ventilator, O<sub>2</sub> hose when used with an O<sub>2</sub> blender, bed clip

HI-Flow Star Kit Aquapor A	10 pieces	MP17090
----------------------------	-----------	---------

### HI-Flow Star Accessories & System components

HI-Flow Star Valve Kit	15 pieces	MP05507
Multi-P trolley including 3 rail holders and basket	1 piece	MP13020
Multi-P trolley (base with 5 castors and pole)	1 piece	MP13021
Aquapor H300 configuration	1 piece	MP01000
Aquapor H300 Heater wire adapter; insp	1 piece	MP07106
Aquapor H300 Temp.sensor cable 160 cm	1 piece	MP07108/MP07109
Oxymixer configuration	1 piece	MP04200
Oxymixer High Flow; NIST	1 piece	MP04201
Oxymixer High Flow with Monitor; NIST	1 piece	MP04202

### Literature

<sup>1</sup> Nasal high-flow versus Venturi mask oxygen therapy after extubation. Effects on oxygenation, comfort, and clinical outcome, Maggiore SM, Idone FA, Vaschetto R, Festa R, Cataldo A, Antonicelli F, Montini L, De Gaetano A, Navalesi P, Antonelli M., Am J Respir Crit Care Med. 2014 Aug 1;190(3):282-8. doi: 10.1164/rccm.201402-0364OC.

<sup>2</sup> Can high-flow nasal cannula reduce the rate of reintubation in adult patients after extubation? A meta-analysis, BMC Pulm Med. 2017; 17: 142. Yue-Nan Ni, Jian Luo, He Yu, Dan Liu, Bin-Miao Liang, Rong Yao, and Zong-An Liang

<sup>3</sup> 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, Schwabbauser N, Berg B, Blumenstock G, Haap M, Hetzel J, Riessen R, BMC Anesthesiol. 2014 Aug 7;14:66. doi: 10.1186/1471-2253-14-66. eCollection 2014.

<sup>4</sup> Domiciliary humidification improves lung mucociliary clearance in patients with bronchiectasis. Chron Respir Dis. 2008;5(2):81-6. Hasani A1, Chapman TH, McCool D, Smith RE, Dilworth JP, Agnew JE.

<sup>5</sup> High-flow nasal cannula therapy for adult patients Jian Zhang, Ling Lin, Konghan Pan, Jiansang, Zhou, Xiaoyin Huang: Journal of International Medical Research 2016, Vol. 44(6) 1200–1211

<sup>6</sup> Oxygen delivery through high-flow nasal cannulae increase end-expiratory lung volume and reduce respiratory rate in post-cardiac surgical patients Corley A, Caruana LR, Barnett AG, Tronstad O, Fraser JF: Br J Anaesth. 2011;107(6):998–1004

<sup>7</sup> High-flow nasal oxygen therapy and noninvasive ventilation in the management of acute hypoxemic failure Frat JP, Coudroy R, Marjanovic N, Thille AW: Ann Transl Med. Jul;5(14):297

<sup>8</sup> Physiologic Effects of High-Flow Nasal Cannula Oxygen in Critical Care Subjects, Vargas F, Saint-Leger M, Boyer A, Bui NH, Hilbert G, *Respir Care*. 2015 Oct;60(10):1369-76. doi: 10.4187/respcare.03814. Epub 2015 May 5.

<sup>9</sup> Current evidence for the effectiveness of heated and humidified high flow nasal cannula supportive therapy in adult patients with respiratory failure, Roca O, Hernández G, Díaz-Lobato S, Carratalá JM, Gutiérrez RM, Masclans JR; *Crit Care*. 2016 Apr 28;20(1):109. doi: 10.1186/s13054-016-1263-z.

<sup>10</sup> Heated and humidified high-flow oxygen therapy reduces discomfort during hypoxemic respiratory failure, Cuquemelle E, Pham T, Papon JF, Louis B, Danin PE, Brochard L., *Respir Care*. 2012 Oct;57(10):1571-7. Epub 2012 Mar 12.

<sup>11</sup> A Systematic Review of the High-flow Nasal Cannula for Adult Patients. *Critical Care*201822:71 Published: 20 March 2018

---

## 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](http://www.draeger.com/trademarks) to find the current status.

**CORPORATE HEADQUARTERS**  
Drägerwerk AG & Co. KGaA  
Moislinger Allee 53–55  
23558 Lübeck, Germany  
[www.draeger.com](http://www.draeger.com)

**Manufacturer:**  
Drägerwerk AG & Co. KGaA  
Moislinger Allee 53–55  
23542 Lübeck, Germany

**REGION DACH**  
Drägerwerk AG & Co. KGaA  
Moislinger Allee 53–55  
23558 Lübeck, Germany  
Tel +49 451 882 0  
Fax +49 451 882 2080  
[info@draeger.com](mailto:info@draeger.com)

**REGION EUROPE**  
Drägerwerk AG & Co. KGaA  
Moislinger Allee 53–55  
23558 Lübeck, Germany  
Tel +49 451 882 0  
Fax +49 451 882 2080  
[info@draeger.com](mailto:info@draeger.com)

**REGION MIDDLE EAST, AFRICA**  
Drägerwerk AG & Co. KGaA  
Branch Office  
P.O. Box 505108  
Dubai, United Arab Emirates  
Tel +971 4 4294 600  
Fax +971 4 4294 699  
[contactuae@draeger.com](mailto:contactuae@draeger.com)

**REGION ASIA PACIFIC**  
Dräger Singapore Pte. Ltd.  
61 Science Park Road  
The Galen #04-01  
Singapore 117525  
Tel: +65 6872 9288  
Fax: +65 6259 0398  
[asia.pacific@draeger.com](mailto:asia.pacific@draeger.com)

**REGION CENTRAL AND SOUTH AMERICA**  
Dräger Indústria e Comércio Ltda.  
Al. Pucurui - 51 - Tamboré  
06460-100 - Barueri - São Paulo  
Tel. +55 (11) 4689-4900  
[relacionamento@draeger.com](mailto:relacionamento@draeger.com)

Locate your Regional Sales Representative at:  
[www.draeger.com/contact](http://www.draeger.com/contact)

