



Designed for non-invasive ventilation

DRÄGER CARINA®

# The direct route to less invasive therapy







# Answering the challenge

Whether it's in the emergency room, in the ICU or in an intermediate care setting, caregivers throughout today's hospitals are using non-invasive ventilation (NIV) to avert re-intubation in cooperative patients who meet the necessary criteria. When patients understand the potential advantages of non-invasive ventilation, the first step has been successfully taken. Mechanical ventilation comes with considerable disadvantages - and these need to be reduced or eliminated to ensure the best possible results. Air leaks due to factors such as atypical facial anatomy can result in asynchrony and increased work of breathing which may cause significant patient discomfort. Optimal compensation strategies for leakages is therefore a core challenge in non-invasive ventilation.







# SPECIALIZING IN NON-INVASIVE VENTILATION

Since 1907, Dräger has been developing and building mechanical ventilators. Years of continuous communication with the users of our products is the basis for all our developments – and it's no different for our non-invasive ventilators. The Carina was especially designed for non-invasive ventilation. Featuring a wide range of ventilation modes, it offers your patients individualized therapy.

Our SyncPlus® technology compensates even widely varying leakage rates automatically. This means that your patient can breathe easily together with the device without expending unnecessary energy. Leakage-dependent trigger sensitivity correction reduces the need for manual trigger adjustments. Its compact design helps to ensure simple and reliable ventilation therapy during patient transport. The Carina provides comprehensive support and helps you put your patients on the road to recovery quickly.

# SyncPlus® - Enhanced patient comfort

- Continuous adjustment of inspiratory and expiratory triggers
- Recognition of patient breathing pattern with automatic reduction of the trigger threshold to the expected level
- Multi-sense trigger which combines flow, pressure and flow gradient triggers
- Automatic leakage compensation even for constantly varying leakage rates

# Carina - Comfortab≠ convenient

#### **COMFORTABLE: FOR YOU AND YOUR PATIENTS**

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- Auto wake-up: Commences ventilation directly from standby mode with the first patient breath
- AutoAdapt™: Lets patients slowly adapt to ventilation assist pressures
- AutoFlow®: Volume guarantee ventilation with pressure correction for changes in compliance
- Anti Air Shower: Flow reduction during disconnect and automatic resumption of ventilation

#### COMPACT: DESIGNED FOR EASY HANDLING

- Lightweight, 5.5 kg (12,1 lbs) design ideal for mobilization and intra-hospital transport
- Internal battery life of 1 hour
- High performance yet quiet turbine
- Independent from central gas supply
- Individual workflow adaptation thanks to flexible mounting options
- Latex-free, single-hose system

# **CONVENIENT: CARINA SUPPORTS YOU**

- Excellent mask ventilation through SyncPlus®
- Volume- and pressure-controlled ventilation as well as spontaneous modes with freedom to breathe at any time
- Pressure support even in controlled ventilation modes
- Switch to invasive ventilation possible
- Ventilation of adult and pediatric patients with tidal volumes down to 100 ml
- Proven Dräger operating philosophy



# High-performance non-invasive ventilation in every phase

Non-invasive ventilation	Prevent		Recover
Invasive ventilation	Stabilize	Wean	

Carina supports workflow optimization in your clinical routine. Its excellent non-invasive ventilation features and SyncPlus technology support you and your patients during the entire course of ventilation therapy.

## **PREVENT**

- Reliable ventilation even with varying leakage rates
- Avoids asynchrony through automatic trigger correction
- Spontaneous breathing possible at any time, even during controlled ventilation
- High-quality, non-invasive ventilation from the emergency room on
- Simple intra-hospital transport without interruption of ventilation therapy

# STABILIZE

- Spontaneous and mandatory ventilation modes for individual invasive or non-invasive therapy
- Safe apnea ventilation with automatic return to the previous mode without distracting alarms
- Comfortable secretion management through flow reduction on disconnect

#### **WEAN**

- Volume guarantee even during spontaneous breathing for safer ventilation
- Controlled ventilation with pressure support for gradual weaning of patients
- More comfort and safety through NIV-adapted alarm management

#### **RECOVER**

- Reduction of the work of breathing through inspiratory and expiratory synchronization
- Earlier mobilization is supported by the unit's compact design
- More patient comfort thanks to the very quiet turbine operation

# **Accessories**



# **NOVASTAR® NIV-VENTILATION MASK**

Maximum comfort and effective seal through silicone gel cushion: The NovaStar NIV-facemask was developed for non-invasive ventilation therapy. The masks cover mouth and nose and support effective therapy.

# Knowledge

MT-0583-2007



# DRÄGER ACADEMY - THE BASICS OF BREATHING AND VENTILATION

What actually has to happen so that people can breathe? What happens when a person literally "runs out of air" and has to be ventilated? These and other questions on breathing and ventilation are answered by the Dräger eLearning program.

# **Training**



# CARINA PRODUCT TRAINER (ALSO AVAILABLE AS AN APP!)

Dräger supports your clinical routine with innovative training programs. With our interactive product trainer "Discover Carina", you can simulate the ventilation of a patient and learn how to operate the Carina either online or with the Carina App for iPhone, iPod touch or iPad.

# **Service**

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# DRÄGERSERVICE® - BECAUSE QUALITY DECIDES

You'll find the right contract whatever the challenge: from simple inspection to preventative maintenance all the way to full service. We have the answer to fit your individual needs.

For more information and downloads, visit us at www.draeger.com.

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