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DeVilbiss
HEALTHCARE

DeVILBISS® 5-LITER COMPACT OXYGEN CONCENTRATOR
SERVICE MANUAL

⊘ DANGER – NO SMOKING



For Product Numbers:
S2205
S22K5

CAUTION—Federal (U.S.A.) law restricts this device to sale by or on the order of a physician.



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1025 Series
Série de 1025
Série 1025

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EN DeVilbiss® 10-Liter Oxygen Concentrator Instruction Guide

WARNING—Read instruction guide before operating this equipment.
ASSEMBLED IN USA

⊘ NO SMOKING

ES Guía de instrucciones del concentrador de oxígeno de 10-litros de DeVilbiss®

ADVERTENCIA—Lea la guía de instrucciones antes de poner a funcionar este equipo.
ENSAMBLADO EN EE. UU.

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FR Guide d'instructions du concentrateur d'oxygène 10-litres DeVilbiss®

AVERTISSEMENT—Lire le mode d'emploi avant d'utiliser ce dispositif.
ASSEMBLÉ AUX ÉTATS-UNIS

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1025 Series
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<p>EN DeVilbiss® 10-Liter Oxygen Concentrator Instruction Guide</p> <p>WARNING—Read instruction guide before operating this equipment. ASSEMBLED IN USA</p> <p>⊘ NO SMOKING</p>	<p>ES Guía de instrucciones del concentrador de oxígeno de 10-litros de DeVilbiss®</p> <p>ADVERTENCIA—Lea la guía de instrucciones antes de poner a funcionar este equipo. ENSAMBLADO EN EE. UU.</p> <p>⊘ NO FUMAR</p>
<p>FR Guide d'instructions du concentrateur d'oxygène 10-litres DeVilbiss®</p> <p>AVERTISSEMENT—Lire le mode d'emploi avant d'utiliser ce dispositif. ASSEMBLÉ AUX ÉTATS-UNIS</p> <p>⊘ NE PAS FUMER</p>	<p>DE DeVilbiss® 10-Liter Oxygen Concentrator Gebrauchsanweisung</p> <p>WARNUNG—Lesen Sie die Gebrauchsanweisung vor dem Betrieb dieses Geräts. ZUSAMMENGEBAUT IN DEN USA</p> <p>⊘ NICHT RAUCHEN</p>

High-flow nasal cannula oxygen therapy in adults

Matsuy Nishimura

Abstract

High-flow nasal cannula (HFNC) oxygen therapy comprises an air/oxygen blender, an active humidifier, a single heated circuit, and a nasal cannula. It delivers adequately heated and humidified medical gas at up to 60 L/min of flow and is considered to have a number of physiological effects: reduction of anatomical dead space, PEEP effect, constant fraction of inspired oxygen, and good humidification. While there have been no big randomized clinical trials, it has been gaining attention as an innovative respiratory support for critically ill patients. Most of the available data has been published in the neonatal field. Evidence with critically ill adults are poor, however, physicians apply it to a variety of patients with diverse underlying diseases: hypoxicemic respiratory failure, acute exacerbation of chronic obstructive pulmonary disease, post-extubation, pre-extubation oxygenation, deep sedation, acute heart failure, patients with do-not-intubate orders, and so on. Many published reports suggest that HFNC decreases breathing frequency and work of breathing and reduces needs of escalation of respiratory support in patients with diverse underlying diseases. Some important issues remain to be resolved, such as its indication, timing of starting and stopping HFNC, and weaning protocol. Despite these issues, HFNC oxygen therapy is an innovative and effective modality for the early weaning of adults with respiratory failure with diverse underlying diseases.

Keywords: Oxygen therapy, Physiological effects, Clinical trials, Anatomical dead space, PEEP effect

Introduction

The purpose of respiratory support is to maintain adequate ventilation and oxygenation. In that, ensuring adequate alveolar ventilation is essential for expelling carbon dioxide produced in the human body. Contrarily, to ensure adequate alveolar ventilation, minute ventilation is manipulated during invasive or noninvasive ventilatory support. For patients with acute exacerbation of chronic obstructive lung disease (COPD), noninvasive ventilation (NIV) has become the preferred primary modality for respiratory support because it enhances respiratory tidal volume (V_T) and maintains adequate alveolar ventilation [1]. Because of poor mask tolerance, however, NIV is sometimes inapplicable. High-flow nasal cannula (HFNC) oxygen delivery has been gaining attention as an alternative means of respiratory support for critically ill patients. The apparatus comprises an air/oxygen blender, an active heated humidifier, a single heated circuit, and a nasal cannula. At the active oxygen blender, the inspiratory fraction of oxygen (F_iO₂) is set

from 0.21 to 1.0 in a flow of up to 60 L/min. The gas is heated and humidified with the active humidifier and delivered through the heated circuit (Figure 1). Another major difference between NIV and HFNC is the interface. While interfaces for NIV increase anatomical dead space, those for HFNC actually decrease dead space. Since neither inspiratory push nor expiratory pull is effective in such an open circuit, HFNC cannot actively reduce V_T. Even so, it helps COPD patients mainly by decreasing anatomical dead space and secondarily by improving alveolar ventilation.

Administration of supplemental oxygen has been the traditional method of supplemental oxygen. Oxygen is generally provided via face masks and nasal cannula. Several drawbacks are associated with these devices, which may limit efficacy and tolerance of oxygen delivery. Usually oxygen is not humidified at low flow, and complaints, especially dryness, dry throat, and nasal pain, are common. Bubble humidifiers are commonly used for humidifying air delivered to spontaneously breathing patients, but when absolute humidity is low, patients still complain of dry-mucousitis [2,3]. Insufficient heating and humidification leads to poor tolerance to oxygen therapy. Using conventional

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Fortunately, I had another machine that could use meanwhile. They highly recommended! Rod McCool was on the holidays with my corner of Bi-Cap, after some of some Bob, the owner, came the next day and corrected them. A very professional follow-up of Altra was provided and a clear repair fund was provided, men will again use it when necessary. I had a new engine at my dream station. Wow, what a service. George Ortiz's workplace. Good and fast service. I asked Anthony to contact me so please take a second look. He did and did some tests and found the part he needed. Mickey's strain needed another oxygen concentrate and I contacted ASP through his Information tab. Go! Big company to do business. As I jumped to grab a dog that vomits on the bed, I pulled out my CPAP machine (Resmed AirSense 10) from my bedside table. Cheri Adams received a call back from Cassidy that was kind, helpful, understood my need to make a quick repair. Click Schedule the Service, complete the information and click Send. After a few days I received a message that it could be repaired and a payment was made through PayPal. Going this route saved me a lot of money and I'm very satisfied. So I used Altra and had a wonderful experience. Thanks, Bob for coming in during the holidays and talking about my problem. They haven't returned my calls yet to try a resolution. Update: They sent a replacement panel, but it was ill-colored by the smoke of the cigarette and had a broken clip. From here, William Grooms sent my sieve beds for a reconstruction for you. Mike McKenna Service very fast, excellent communication. Dave Zim, unfortunately, my POC had to be sent to the manufacturer for the repair of the deposit, during the Covid pandemic no less. His technology was called in a last-minute repair, but the boss touched my machine back to the store, completely checked it,the fan and the engine, and deserted the resign dreams. Altra has absolutely one. A great thank you! Robert Knorr after one week to contact two main suppliers of CPAP supplies, and they told him that I was no longer in guarantee. I !!! !!

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