



**COVIDIEN**  
Sandman



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## Sandman Duo™/DuoST™ Bi-level Devices

### FEATURES

#### COMPACT SIZE

- 2.64 lbs. (1.20 kg) with humidifier;  
2.2 lbs. (1.1kg) without humidifier
- 6.9" wide, 7.5" deep, 4.7" high

#### COMPLIANCE CAPABILITIES

- Events detection capabilities (apneas, hypopneas, leaks) and AHI index
- 150 sessions of embedded memory with "on time" pressure (150 x 8 hours) downloadable via USB port
- 38 sessions of memory stored on external card (38 x 8 hours)
- Sandman therapy software provides:
  - Comprehensive patient efficacy data
  - Customizable reports
  - A PDF file converter

#### PERFORMANCE INFO

- Improved flow generation for full face mask capability through a DSP microcontroller
- Excellent automatic altitude/barometric compensation
- I/E ratio DuoST only
- Inspiratory / expiratory sensitivity settings and rise time management (1-5 settings)
- Back-up rate on Sandman DuoST™
- Patient comfort enhanced with patented FlowSens technology

#### EASE OF USE

- Front-facing display screen
- Large, backlit buttons
- Fluid-resistant display screen
- Automatic patient reminders
- Automatic light dimmer
- Only one cord for Bi-level and heated humidifier
- Ability to run on an external battery

### COMFORT AND PERFORMANCE

The Sandman Duo™ Bi-level device was designed with your patients in mind to help them comply with their therapy comfortably and consistently. The Sandman Duo device's Adaptive Pressure Stability means the device responds quickly and accurately to your patient's demands throughout the night, to greatly reduce common pressure spikes and drops during the breathing cycle. It also employs our unique Humid Control+ which provides consistent humidification levels for increased sleeping comfort. This is just another example of our committed focus to work together to improve patient compliance.

### ACCURATE PRESSURE AT THE MASK

At Covidien, we realize that the patient's interface is a very personal decision and can be the key to continuing therapy. We also realize the patient can receive large pressure variances depending on the combination of interface and device. The Sandman Duo™ device compensates for this variance with True Circuit Calibration and accurately delivers the prescribed pressure to virtually any interface and tubing combination at the end of the circuit, where accuracy counts.

### EACH PATIENT IS DIFFERENT

Since all patients are not alike, they require individual adjustment to meet their therapy needs. As an answer to this, the Sandman Duo and DuoST devices are equipped with Rise Time adjustment and our patented FlowSens technology, which allows for Inspiratory and Expiratory Sensitivity adjustments to meet this challenge. With clinician support, the devices can be adjusted to match the patient's ventilatory needs even in the presence of potential unwanted leaks.

## ORDERING INFORMATION

PRODUCT	ORDER NUMBER
Sandman Duo Bi-level	M-114803-US
Sandman Duo Bi-level with HH	M-114823-US
Sandman DuoST Bi-level	M-114804-US
Sandman Duo ST Bi-level HH	M-114824-US
Sandman CPAP cover	M-314830-06
Carrying case	M-814805-00
Water chamber kit (includes base, cover and gasket)	M-314810-00
Air intake filter (foam, reusable)	M-414840-06
High efficiency filter (disposable)	M-414841-07
Filter Holder Kit	M-314820-02
Memory card	M-214830-00
Memory Card Reader	M-214830-03
Sandman CPAP/Bi-level Software	M-214830-12
Sandman CPAP/Bi-level Clinical Kit	M-214830-13
Power supply cord	M-660601-43
Cigarette lighter cable	M-214530-01
Back-up battery	Y-CGVP7120
RS232 Cable, 2m (6.56ft) (Not for use with Sandman Intro)	M-214831-05
RS232 Cable, 15m (49.21ft) (Not for use with Sandman Intro)	M-214831-04
USB Cable, 2m (6.56ft) (Not for use with Sandman Intro)	M-214831-06
Oxygen adapter	Y-616155-03B
Patient tubing, 22mm 1.8m (6ft)	M-261000-04
Patient tubing, 22mm 2.6m (8ft)	S-776274-00C
Patient manual	M-148DFU04-00
Practitioner manual	M-148DFU04-10
<b>BREEZE SLEEPGEAR™ CPAP INTERFACE W/ NASAL PILLOWS</b>	
Breeze SleepGear interface w/ M and L Nasal Pillows	Y-101400-00
Breeze SleepGear interface w/XL Nasal Pillows	Y-101400-XL
<b>BREEZE SLEEPGEAR INTERFACE W/ DREAMSEAL™ MASK</b>	
Breeze SleepGear interface w/ standard DreamSeal mask	Y-102616-00
Breeze SleepGear interface w/ large DreamSeal mask	Y-103059-00A
Breeze SleepGear interface w/ shallow DreamSeal mask	Y-103074-00A
<b>DREAMFIT™ NASAL MASK</b>	
DreamFit mask large	DF301
DreamFit mask standard	DF302
DreamFit mask shallow	DF303

## SPECIFICATIONS

### PERFORMANCE

**CPAP PRESSURE AND FLOW GENERATION PROCESS:** Air pressure and flow

generated by a centrifugal blower with dynamic pressure regulation

**IPAP PRESSURE OUTPUT:** 3 cm H<sub>2</sub>O to 25 cm H<sub>2</sub>O (+/- 0.6 cm H<sub>2</sub>O)

**EPAP PRESSURE OUTPUT:** 3 cm H<sub>2</sub>O to 20 cm H<sub>2</sub>O (+/- 0.6 cm H<sub>2</sub>O)

**FLOW OUTPUT:** 190 LPM @ 20 cm H<sub>2</sub>O with all leak flow included w/out humidifier

### OUTLET GAS TEMPERATURE:

Maximum gas temperature at the patient outlet: 106°F (41°C)

**NOISE LEVEL:** 26 dB measure with ISO 17510-1:2002

**OPERATIONAL MODE:** Bi-level, constant pressure

**RAMP DURATION:** 0, 5, 10, 15, 20, 25, 30, 35, 40, 45 minutes

**RAMP STARTING PRESSURE:** 3 cm H<sub>2</sub>O to Expiratory pressure level (EPAP)

**HUMIDIFIER TYPE:** Heated or pass-over, passive vapor-phase transfer of water into the inspiratory airflow

### HUMIDIFIER WATER CHAMBER CAPACITY:

350 ml (11.75 oz) at maximum water level

### HEATER ADJUSTABLE RANGE AND WATTAGE:

0-10 adjustable, ≈3.8 watts at setting 1, 38 watts at setting 10

### PHYSICAL CHARACTERISTICS

**SIZE:** 6.9" wide x 7.5" deep x 4.7" high (17.5 cm x 19cm x 12cm)

**WEIGHT:** 2.64 lbs. (1.20 kg) with humidifier; 2.2 lbs. (1.1kg) without humidifier

**FILTERS:** Cleanable and high-efficiency

### POWER CHARACTERISTICS

**POWER SUPPLY:** Input range 100-240 V, 50-60 Hz

**POWER CONSUMPTION:** 50 VA max without humidifier

90 VA max with humidifier at maximum setting

### ENVIRONMENTAL REQUIREMENTS

**OPERATING TEMPERATURE:** 41°F to 95°F (5°C to 35°C),

10% to 95% relative humidity (RH), non-condensing

**STORAGE TEMPERATURE:** -4°F to 140°F (-20°C to 60°C),

≤95% relative humidity (RH), non-condensing

**OPERATING ALTITUDE:** 0 to 9000 feet (2,743 meters)

For more information, please contact your local sales representative or visit our website at

[www.covidien.com/sleepapnea](http://www.covidien.com/sleepapnea)

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