# medinCNO®mini

## Technical specifications


The medinCNO®mini CPAP driver is used in combination with the Medijet® nCPAP generator to administer CPAP therapy or with a suitable Nuflow® nasal cannula to administer High Flow therapy to premature infants, and newborns. The medinCNO®mini must be used under the supervision of expert, specially trained staff in a clinical setting, and the patient's oxygen saturation must be monitored at the same time.

### Specification

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| Dimensions (L x W x H) | 29 x 23.5 x 18.5 cm |
| Weight | 4.75 kg |
| Gas feed system | Computer-controlled electronic gas mixer with integrated oxygen sensor; flow-controlled<br>Setting range: 0 l/min to 15 l/min<br>Working range: 4 l/min to 10 l/min<br>Accuracy: ±1 l/min (in working range)<br>±2 l/min (outside of the working range) |
| Gas feed | Air supply: 300 to 600 kPa (= 3.0 to 6.0 bar)<br>Oxygen: 300 to 600 kPa (= 3.0 to 6.0 bar) |
| Gas connection | Connector standard: DISS or NIST (as preferred) |
| Patient flow outlet | Dimensions M22 (OD) or F15 (ID) |
| CPAP pressure meter connection | Luer-type – 4.3 mm ID |
| Power supply | 1x internal battery, 14.4 V DC, approx. 3 hours run time, rechargeable<br>External power supply 100 to 240 V AC / 50 to 60 Hz |
| Display | 7.0" – color, 800 x 480 pixel |
| Data | Patient pressure (diagram and measurement)<br>Trend: CPAP, flow, $FiO_2$, RR, push frequency (among other things, up to 28 days) |
| CPAP | Measurement range 0 to 18 mbar (in 0.1 mbar increments)<br>Verification: Redundant measurement by two sensors<br>Accuracy: ± 1.3 mbar |
| Push (inspiration support) | Setting range<br>Additional flow during the inspiration push:<br>Min: 0 l/min<br>Max: 17.5 l/min<br>(Basic flow + push flow) Duration 200 ms to 2 seconds<br>Manual and automatic triggering of pushes<br>Accuracy<br>± 1 l/min (if the total flow = basic flow + additional inspiration flow - is within the flow working range)<br>± 2 l/min (if the total flow = basic flow + additional inspiration flow - is outside of the flow working range) |
| Leak-Assist | Leakage compensation (±2 L/min to maintain the target pressure) in CPAP mode |
| RR (respiration rate) | Display of the measured respiratory rate, no breaths up to 120 breaths per minute, in CPAP and Apnea CPAP mode |
| Apnea time | 2 to 30 s (in 0.1 s increments) |
| $T_{insp}$. | 0.2 to 2.0 s (in 0.1 s increments) |

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| Triggering | Pressure trigger, based on the CPAP pressure sensitivity, ±0.2 to ±2.0 mbar (in 0.1 mbar increments) |
| $FiO_2$ | Oxygen concentration<br>Setting range: 21 to 100% (in 1% increments, in the flow working range)<br>Measurement range: 21 to 100%<br>Alarm settings: ± 2-5% difference<br>$O_2$ flush (level: +5, +10, +15% (vol.) above set target oxygen concentration) for 60 s<br>Accuracy: ± 3% (vol.) |
| Alarms | Visual (LED & display) and acoustic (adjustable push alarm settings)<br>Alarm countdown<br>Interface to external alarm system |
| Safety | Mechanical overpressure valve (opening pressure 4 kPa (= 40 mbar))<br>Electronic shut-off valve (in the event of an error, interrupts the flow supply to the patient and opens the tubing system to the atmosphere) |
| External data | USB/RS232 port, export of live and trend data |
| Operating time | The medinCNO®mini can be used for continuous, long-term operation up to 4 weeks without a restart in the interim. |

## Environmental Conditions

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| Operation | Temperature: | 15 to 35°C |
| | Relative humidity: | 20 to 80% (not condensing) |
| Storage | Short-term/transport: | Temperature: -20 to +50°C<br>Relative humidity: 20 to 80% (not condensing) |
| | Long-term: | Temperature: Room temperature (about 20°C)<br>Relative humidity: 20 to 80% (not condensing) |

## Description of modes

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| CPAP | Standard CPAP; additional function: Leak-Assist |
| Apnea CPAP | CPAP with apnea detection (automatically generated pushes); additional function: Backup (backup rate: 5 to 120 1/min as a function of $T_{insp.}$ (minimum 0.2 s) |
| NIPPV | Bi-level CPAP with measurement of the I:E ratio as a function of the set rate and inspiration time (minimal I:E ratio 1:1.5) |
| High Flow | Flow emission for Nuflow® nasal cannulas in flow range of 0 to 12 l/min, adjustable $O_2$ flush |
| Standby | No flow, deactivated alarms, settings made are saved, keeps medinCNO®mini ready for use |

## Software settings

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| Languages | EN, DE, FR, IT, NL, ES, EL, CS, PL, NO, DA, SV, RU, LT, ZH, TR, JA, RO |
| Pressure units | mbar or $cmH_2O$ |
| Pressure scale | Three settings: 0 to 10, 0 to 15 and 0 to 20 mbar |

## Standards and certifications

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| Declaration | The medinCNO®mini is manufactured within an EN ISO 13485 and EN ISO 9001, Council Directive 93/42/EEC, Annex II excluding Section 4 certified quality management system. The nCPAP device meets the Essential Requirements of Council Directive 93/42/EEC, Annex I. |
| Classification to EC directive 93/42/EEC | Class IIb |
| Certifications of IEC | 60601-1, 60601-1-2, 60601-1-8 |
| Class of protection | Class II equipment |
| IP class | IP20 |

## Warranty

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| Period | 24 months |

## Humidification (recommended)

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| Hamilton Medical | HAMILTON-H900 humidifier |

## Accessories and configurations

Suitable accessories and possible configurations of the device can be found in the corresponding configuration sheet.

Manufacturer:

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