



## Technical data

# MAGLIFE RT-1

### System

#### Device

**Dimensions:** 1310 × 620 × 520 mm (h × l × w)

**Weight:** 46 kg

**Power supply:** 100 - 240 VAC, 150 VA, 50/60 Hz

**Protection case:** IP21

**Battery:** Lithium/ion 14.6 V, 6.4 Ah, 93.44 Wh

- Autonomy between 6 to 8 hours depending on built-in options
- Recharging duration: 5 hours

**Environmental conditions:** 10 °C ... 40 °C relative humidity at 20 - 90 % (non condensing) Atmospheric pressure 700...1060 hPa

**Charging bay:** 2 × ECG sensors, 2 × SpO2 sensors

**Connections:** NIBP, Temperature, IBP, breathing gases, Gating in/out and gas sample exhaust, Ventilation

**Network:** WLAN for communication with MAGSCREEN RT-1

**Display:** High-resolution TFT colour LCD capacitive touch screen, protected by tempered glass, 15.6 " (1366 × 768 pixels; 344 × 194 mm)

#### MRI rating:

- 3.0 T
- 50 cm distance for an active shielded 3 T magnet
- 5000 Gauss
- 4 W/kg SAR

#### MAGSCREEN RT-1 (remote display)

**Dimensions:** 364 × 195 × 422 mm (h × l × w)

**Weight:** 7.9 kg

**Power supply:** 100 - 240 VAC, 50/60 Hz, 84 VA

**Display:** High-resolution TFT colour LCD capacitive touch screen, protected by tempered glass, 15.6 " (1366 × 768 pixels; 344 × 194 mm)

#### Alarms

Visual and audible for each parameter

Quick set, All alarms off, Standard

#### Trigger

2x adjustable optical trigger outputs

#### Trends

24 hours for all parameters

Highest resolution without data loss

#### Network

Ethernet

#### Memory

Logfile

#### MAGLINK (Network equipment)

**Dimensions:** 115 × 205 × 160 mm (h × l × w) excl. antennas

**Weight:** 2.8kg

**Power supply:** 100 - 240 VAC, 50/60 Hz, 84 VA

**Interface:** WLAN, Ethernet, Optical

**MRI rating:** 10 mT (100 Gauss)

### Measured values

#### ECG

##### Wireless sensor

- Battery capacity: 4 hours
- Recharging duration: 4 hours

Simultaneous, synchronous recording of all 4 active electrodes giving 6 leads

Patented for gradient suppression, highest ECG quality

Filter settings for accurate QRS detection under MRI conditions:

- Monitoring
- MRI Default
- MRI Basic
- MRI Research

Defibrillation protection

##### Bandwidth:

- Monitoring: 0.5 Hz - 42.25 Hz (0.6 Hz - 42.25 Hz if BLW filter is on)
- MRI Default/Basic: 0.5 Hz - 25 Hz

**HR:** 30 - 350 bpm

**Sensitivity:** 0.25 / 0.5 / 1 / 2 cm/mV

**Speed:** 25 / 50 mm/s

#### SpO2 / pulse

##### Wireless sensor

- Battery capacity: 10 hours
- Recharging duration: 4 hours

Photo-spectrometry measurement with following sensors: W-SA (adult), W-SP (paediatric), W-SVS (Universal & Very Small patient)

##### Measurement range:

- SpO2: 1 - 100 %
- PP: 30 - 240 bpm
- PI: 0.1 - 20

##### Accuracy:

- Saturation: 70 to 100 % ± 2 Arms (no motion)
- Pulse rate: ± 2 BPM over the full range (no motion)

#### NIBP

Oscillometric measurement automatic or manual

##### Measuring range:

- Adults/child: Sys 30...255 mmHg, dia 15...220 mmHg
- Neonates: Sys 30...135 mmHg, dia 15...110 mmHg

**Accuracy:** ± 3 mmHg

#### IBP

Disposable and reusable sensors (non-magnetic). Adjustable for standard disposable sensors

**Measurement range:** -100 to 400 mmHg

**Accuracy:** 1 mmHg or ± 1% (whichever is greater)

#### Temperature

Direct method by optical interferometry

External/skin temperature measurement

**Measuring range:** 25 to 45 °C, without calibration

**Accuracy:** 0.3 °C from 25 to 45 °C

**Resolution:** 0.1 °C



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The Art of Diagnostics



# MAGLIFE RT-1

## Capnography

**Type:** Multigas analyser, sidestream via infrared photo-spectrometry

CO<sub>2</sub>, O<sub>2</sub> (permanent cell), N<sub>2</sub>O and auto ID (any two of the five anaesthetic agents SEV, ISO, ENF, DES and HAL)

Inspiratory and expiratory data for CO<sub>2</sub>, N<sub>2</sub>O, O<sub>2</sub>, anaesthetic agents

### Respiration Rate accuracy:

- RR 2 - 60 bpm,  $\pm 1$  bpm
- RR 60 - 100 bpm, unspecified

### Range:

- CO<sub>2</sub>: 0 to 30 %
- O<sub>2</sub>: 0 to 100 %
- N<sub>2</sub>O: 0 to 100 %
- DES/SEV/ENF/ISO/HAL: 0 to 30 %

### Accuracy:

As full accuracy gas specifications, but derated as follows:

- Add  $\pm 0.3$  %<sub>ABS</sub> to inaccuracy for CO<sub>2</sub>
- Add  $\pm 8$  %<sub>REL</sub> to inaccuracy for all agents
- N<sub>2</sub>O accuracy is  $\pm (8$  %<sub>REL</sub> + 2 %<sub>ABS</sub>)

For a single halogenated anaesthetic gas in a gas mixture that is concealed when the anaesthetic concentration falls:

- 0.15 % (Full accuracy)
- 0.3 % (ISO accuracy)

## Basic ventilation

**Type:** Respiratory mechanics, flow, volume

**Condition of use:** Endotracheal tube 5.5 - 10 mm (adults) and 3 - 6 mm (paediatric)

### Sampling line:

- Flow sensor adult (tidal volume above 150 ml)
- Flow sensor neonatal (tidal volume below 300 ml), 3.3 m

**Measuring mode:** Continuous differential pressure spirometry with fixed orifice flow sensor type. Automatic compensation for ambient pressure, side-stream gas sampling flow and gas composition

### Measuring parameters:

- Airway pressure [cmH<sub>2</sub>O]
- Airway flow (both direct.) [l/min]
- Tidal volume (insp. and exp.) [ml]
- Minute volume (insp. and exp.) [l/min]

