



# QUICKLUNG® PRECISION TEST LUNG

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When exposing the QuickLung to large pressure fluctuations (air travel), always keep resistor selector on one of the Rp settings, and not on OFF.

The following spring combinations result in the recommended Compliance settings (QuickLung Jr. in parenthesis).

- All springs disengaged → C = 50 (15)
- Both outer springs engaged → C = 20 (6)
- All 3 springs engaged → C = 10 (3) [ml/cm H<sub>2</sub>O]

**Calibration**

Calibrated QuickLung information is shown in “Technical Data” below. Please contact IngMar Medical for information on purchasing a calibrated version of the QuickLung. IngMar Medical recommends annual re-calibration.

**Maintenance**

This device is maintenance-free. Please contact IngMar Medical for information on replacement parts.

**Technical Data and Performance Specifications**

- Maximum Total Volume – 1,200ml (400ml for Junior) **\*\*Do Not Exceed\*\***
- QuickTrigger Tidal Volume – 200 to 250ml (200 to 250mL for Junior)

**Compliance:**



Static compliance is measured as the change in unit Volume per change in unit Pressure in steady-state, isothermal condition of a ventilation cycle, including compliance resulting from gas compressibility. (QuickLung Jr. in parenthesis)

|           |                                                       |
|-----------|-------------------------------------------------------|
| C50 (C15) | 0.5 (0.15) L/kPa +/- 10% at 500 (200) ml tidal volume |
| C20 (C6)  | 0.2 (0.06) L/kPa +/- 10% at 500 (200) ml tidal volume |
| C10 (C3)  | 0.1 (0.03) L/kPa +/- 10% at 300 (100) ml tidal volume |

**Resistance\*:**



Parabolic (orifice) resistor pressure drops selected from ASTM F1100 (K values), for inspiratory flows at 2, 1, and 0.5 L/s, respectively.

|      |                                                                                            |
|------|--------------------------------------------------------------------------------------------|
| Rp5  | K 2.70 +/- 20% (equivalent orifice size = 8.48mm)<br>pressure drop 10.80 cmH2O at 2 L/s    |
| Rp20 | K 17.61 +/-20% (equivalent orifice size = 5.31mm)<br>pressure drop 17.61 cmH2O at 1 L/s    |
| Rp50 | K 108.70 +/-20% (equivalent orifice size = 3.37mm)<br>pressure drop 27.20 cmH2O at 0.5 L/s |

\* pursuant definitions of ASTM F1100 and IEC 60601-2-12

Weight: 3 lbs 8 oz (1.6 kg)  
Dimensions 11 x 7.3 x 2 inches (280 x 185 x 52 mm)

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## LEGAL INFORMATION

### Product Warranty

Products manufactured or distributed by IngMar Medical Ltd., are fully warranted, covering materials and workmanship, for a period of one year from the date of shipment, except for products with stated warranties other than one year. IngMar Medical reserves the right to perform warranty service(s) at its factory, at an authorized repair station, or at the customer's installation.

IngMar Medical's obligations under this warranty are limited to repairs, or at IngMar Medical's option, replacement of any defective parts of our equipment, except fuses and batteries, without charge, if said defects occur during normal service. Claims for damages during shipment must be filed promptly with the transportation company. All correspondence concerning the equipment must specify both the model name and number, and the serial number as it appears on the equipment. Improper use, mishandling, tampering with, or operation of the equipment without following specific operating instructions will void this warranty and release IngMar Medical from any further warranty obligations.

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### Intended Use

The QuickLung test lung may be used for ventilator performance verification. The user has to bear in mind, however, that the design of modern ventilators is complex and these devices incorporate a great variety of features and performance parameters.

The purpose of the lung simulator within the context of ventilator performance verification is solely to assist in implementing test procedures mandated or recommended by the ventilator manufacturer.



It is mandatory to always follow ventilator manufacturer's instructions and recommendations regarding performance verification procedures. IngMar Medical, Ltd. does not recommend any specific ventilator test or calibration procedures.

### Principle of Operation

QuickLung is a precision lung simulator that operates with a combination of springs and orifices to represent a number of different settings for the respiratory parameters Resistance and Compliance. The maximum volume is limited by a mechanical limit to the opening angle of the bellow panels. Resistances are parabolic, by virtue of their design as simple orifices. Compliance is linear since extension springs and a torsion bar are used to create recoil forces. Optionally, leaks are created by an orifice venting to atmosphere and controlled through a stopcock.

### Operation

Always ensure that the elbow connector is fully inserted into the connector port on top of the QuickLung. You will feel a snap action when it is properly engaged. To remove the elbow, pull straight out (vertically) while holding down the QuickLung with your other hand.

To change the setting of Resistance, either

- turn the elbow connector so that its **black triangle** is aligned with the arrows on the QuickLung panel
- or
- turn the leak adapter connector so that the **stopcock attachment** is aligned with the respective arrows on the QuickLung panel.

It is the responsibility of the user to use only 90° positions; in-between positions will yield undefined results.



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## > CONTACT INFORMATION



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