
SH530
Respiratory Tract Humidifier for
Medical Use

Operating Manual

Revision D

1 Introduction

1.1 Intended Use

SH530 Respiratory Humidifier is designed for ventilators or other positive pressure systems to warm and humidify the airflow. The airflow is warmed and humidified by ventilating through the warm water's surface. Reducing the stimulation to the cardiopulmonary system produced by the mechanical ventilation, keeping the pulmonary alveolus moist, being beneficial to sputum aspiration, preventing the airway obstruction. The temperature is regulated by setting up temperature setting button, and it also can be monitored alone.

With temperature digital display and overheating alarm and error indication function. Increase the security and intuitiveness, in favor of doctor's wardship. The system is intended to be used in a hospital environment by trained healthcare providers. It is suitable to use with high-quality ventilators in all levels of hospital. It shall be used on children and adults. It also can be used on the patient whose upper respiratory tract is bypassed.

It is used with ventilators or other positive pressure systems to warm and humidify the airflow.

Contraindication: No

Applied part: all the breathing tubes connecting to the patient port

1.2 Main Functions

SH530 Respiratory Humidifier has 3 steps to control the temperature range with the function of overheating protection, room temperature compensation for system control, working in both heater wire and non-heater wire model. Used with the heater wire breathing circuit.

1.3 Classification

Product safety:	Comply with IEC60601-1&ISO8185
Type of Protection Against Electric Shock:	Class I
Degree of Protection Against Electric Shock:	Type BF
Degree of Protection Against Ingress of Water:	Drip-proof IPX1
Protection Against Inflammable Anesthetic Gases:	no Category AP/APG not intended for use in oxygen rich environment
Operation Mode:	Continuous Operation
Pollution degree:	2
Overvoltage category:	II
Altitude:	≤2000m

1.4 Structures

SH530 Respiratory Humidifier is composed of the main frame of humidifier,

3 Technical Characteristics

3.1 Working condition

Temperature	18°C~26°C
Relative humidity	≤80%
Atmospheric pressure	86kPa~106kPa
Operating gas inlet temperature	18°C~26°C

Attention: The operating ambient temperature is only recommended, out of range may affect the performance.

3.2 Range of temperature control:

a) Control Performance of Dynamic Temperature

We get data in table 3-1, table 3-2 under the following test conditions.

Test conditions:

- (1) The testing working Temperature: 18°C~26°C,
Temperature of input gas: 18°C~26°C.
- (2) Pipeline requirements:

Heater wire mode: Φ 22mm×1500mm silica gel tubes with heater wires,

Non-heater wire mode: Φ 22mm×600mm+Φ 22mm×900mm silica gel tubes.

- (3) Type of humidification chamber: SH360

Table 3-1 Heater wire mode

Temperature setting steps (vision state of indicators)	The range of continuous flow	Air temperature control range of the input port of patient
Low (● ○ ○)	5L/min~40L/min	25°C~29°C
Medium (● ● ○)	5L/min~40L/min	30°C~34°C
High (● ● ●)	5L/min~40L/min	35°C~39°C

Table 3-2 Non-Heater wire mode

Temperature setting steps (vision state of indicators)	The range of continuous flow	Air temperature control range of the input port of patient
Low (● ○ ○)	5L/min~40L/min	24°C~28°C
Medium (● ● ○)	5L/min~40L/min	28°C~32°C
High (● ● ●)	5L/min~40L/min	32°C~36°C

Attention: ● Indicator on ○ Indicator off

3.3 Humidification system output

The output shall meet the requirements in table 3-3.

Attention: the test condition is the same as the above one.