



Modular⁺

SPECIFICATIONS

General Specifications

Dimensions (H x W x D)	1530 x 690 x 740 mm
Weight (basic unit)	approx. 95 kg (without evaporator)
Storage temperature	-5° – +50° C
Operating temperature	+10° – +35° C

Electrical Connection Data

Power supply	230V – ±10% / 115V – ±10% / 50/60 Hz
Power input	210 VA
Battery supply	approx. 30 min
Additional sockets	2
Data Interface	IR

Pneumatic Connection Data

Central Gas supply:	NIST, DISS or others
Oxygen (O ₂)	280 – 600 kPa
Compressed Air (AIR)	280 – 600 kPa
Nitrous Oxide (N ₂ O)	280 – 600 kPa
Cylinders (Option)	2 x 2 l, PIN Index or DIN; O ₂ , N ₂ O and / or AIR

Fresh Gas Dosing

Fresh Gas Dosing	6-fold flowmeter block:
O ₂	0,1 – 1 / 1,5 – 10 l/min
N ₂ O	0,1 – 1 / 1,5 – 10 l/min
Air	0,1 – 1 / 1,5 – 10 l/min
Ratio System	integrated (min. 25 Vol% O ₂ in fresh gas)

Breathing Circuit

Temperature	35° C (± 2° C)
Max. Sterilization Temperature	134° C
System Compliance	automatically compensated
Fresh Gas Decoupling	automatically during inspiration
Internal Volume	approx. 2,5 l
Absorber Volume	approx. 1,4 l; 1,6 kg

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Ventilation and Monitoring Parameters

Type	Time controlled, pressure limited, constant volume
Ventilation modes	manual, spontaneous CMV Child, CMV Adult.
Optional ventilation modes	20 – 1400 ml CMV Child: 20 – 400 ml CMV Adult: 300 – 1400 ml
Ventilation frequency	4 – 60 l/min Child: 10 – 60 l/min Adult: 4 – 30 l/min
I:E-ratio normal	1:1; 1:1,5; 1:2; 1:2,5; 1:3; 1:4; 1:5
I:E-ratio inverse	2:1; 3:1; 4:1 (PCV)
Plateau (end insp.)	20% or 30% of insp. time
PEEP	0 – 15 mbar (± 2 mbar)
Max. insp. pressure	80 mbar
Manual pressure control	4 – 60 mbar
Compliance test	automatically
Leak test	automatically
Oxygen monitor	type fuel cell FiO ₂ -display 0 – 99 Vol %
Pressure monitor	Real time graphics, numerical values for: PEEP, Pmean, Ppeak, Pplateau
Flow monitor	Numerical values for tidal volume, breathing frequency, minute volume
Display	Touch Screen EL-Display

Modular⁺

THE FLEXIBLE ANESTHESIA SYSTEM



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HEYER
 MEDICAL AG

Modular⁺

A PRODUCT THAT MEETS YOUR DEMANDS



The HEYER MODULAR⁺ anesthesia system was developed to meet special customer wants.

Permanent further product development enables the system to be adapted to the latest requirements, at any time during the daily routine.

The new MODULAR⁺ is a cost-effective, flexible anesthesia workstation for carrying out and monitoring inhalation anesthesia. The use of low-flow techniques for minimized gas and anesthetic consumption guarantees economical operation.

The highest standard of ergonomic design, safe and easy operation and reliable respiratory characteristics are standard. The especially slim design and a patient module which can be turned through 90° guarantee optimum service, even in limited space.

Combined with a monitoring system for vital and gas monitoring the HEYER MODULAR⁺ becomes a modern anesthesia workstation that leaves nothing to be desired. We guarantee for our sophisticated technology permanent service, fast, customer-focused support and continuous training of technical personnel in clinic and doctor's practice.



Everything with one look

Flexible, reliable and easy to operate: The new MODULAR⁺ is a flexible and ergonomic anesthesia workplace for the administration and monitoring of inhalation anesthesia. It is safe and easy to operate and offers a high working comfort. Furthermore, the use of low-flow techniques for minimized gas- and anesthetic agent consumption ensures an economical operation.

- ergonomic and comfortable
- safe and easy to operate
- multifunctional and reliable
- small and compact design
- pivoting breathing circuit



The compact Breathing Circuit

The complete breathing circuit is incorporated in an anodized aluminum housing. It is warmed up to a temperature of 35°C to avoid condensation and to climatize the breathing gas.

Additionally integrated are:

- a controlled room air valve
- an APL-valve
- a fresh gas reservoir (manual ventilation bag)
- an expiratory flow sensor
- a fresh gas decoupling valve
- "Bag in Bottle" unit
- Control membranes
- O₂ sensor
- Respiration pressure gauge

The breathing circuit is pivoting and has an integrated CO₂ absorber. Additionally mounted on the right side of that module is the O₂-Flush and a protected fresh-gas outlet port for the connection of semi-open circuits.



The flexible Ventilator Unit

The MODULAR⁺ offers various applications:

- Ventilation modes: CMV, PCV, Manual, Spontaneous
- Inspiratory freshgas decoupling for a constant volume ventilation
- Measurement and compensation of the compliance of the breathing circuit
- Self test routine with the automatic calibration of all sensors
- Quick and ergonomic operation via a touch screen display
- Display of all readings and settings via a high contrast EL-display
- Displayed readings: tidal volume, minute volume, frequency, PEEP, mean pressure, peak pressure, airway pressure (via a waveform with numerical display), set alarms and operation advices in text form



- 1 Patient module
- 2 Touch-Screen-Display with Selector switch
- 3 Adapted patient module
- 4 Display and Gas mixing unit
- 5 Vaporizer unit
- 6 Feed pressure gauge and injector connection

Combined with a monitor system of your choice, the MODULAR⁺ is a flexible anesthesia workstation for almost all applications.

We will be glad to help you with the configuration of your components!