

— ANESTHESIA · VENTILATION · MONITORING

# Veterinary Anesthesia & Monitoring Equipment

Anesthesia machine, vaporizer, ventilator and multi-parameter monitor for pet hospitals, research institutions and teaching laboratories.



**VET-60**



**VAPOR-600**



**VT-800**



**KP-700**

**01**

**VET-60**

Animal Anesthesia Machine

**02**

**VAPOR-600**

Anaesthetic Vaporizer

**03**

**VT-800**

Veterinary Anesthesia Ventilator

**04**

**KP-700**

Multi-parameter Animal Monitor

## — PRODUCT RANGE

# Contents

Anesthesia delivery, ventilation and patient monitoring for pet hospitals, research institutions, school laboratories and training centres.

**01 · ANESTHESIA MACHINE****VET-60**

Gas-driven, computer-controlled anesthesia workstation with VCV, PCV, SIMV-VC and SPONT modes and a 10.1" display.

**03-04****02 · ANAESTHETIC VAPORIZER****VAPOR-600**

Pressure-, flow- and temperature-compensated vaporizer for halothane, enflurane, isoflurane and sevoflurane.

**05****03 · ANESTHESIA VENTILATOR****VT-800**

Compact ventilator with an 8" touch screen, weight-based setup and a built-in battery for 2-3 hours of operation.

**06-07****04 · PATIENT MONITOR****KP-700**

12.1" multi-parameter monitor with ECG, NIBP, SpO2, respiration and temperature as standard; EtCO2 optional.

**08-09**

## 01 — ANESTHESIA MACHINE

## VET-60

## Animal Anesthesia Machine



An ergonomically designed, gas-driven and computer-controlled anesthesia workstation for pet hospitals, research institutions and teaching laboratories. Enter the animal's weight and the built-in database suggests tidal volume, I:E ratio, respiratory rate and pressure — every value can still be adjusted by hand.

## KEY FEATURES

- **Six working modes:** VCV, PCV, SIMV-VC and SPONT, plus Manual and ACGO.
- **10.1" display (1280×800)** with real-time pressure and flow waveforms, tidal volume, minute volume, EtCO<sub>2</sub> and respiratory rate.
- **Configurable alarms** for peak pressure, tidal volume, minute volume, rate, PEEP, O<sub>2</sub> concentration, EtCO<sub>2</sub> and apnea — three-level color-coded, adjustable volume, searchable log.
- **Interchangeable bellows**, small (0–300 mL) and large (0–1500 mL), for patients of every size.
- **Compensated vaporizer** for isoflurane (0.2–6%) or sevoflurane (0.2–8%) on a Selectatec-type bypass mount.
- **Battery backup** of not less than 150 minutes.

## DESIGN DETAILS



Ergonomic handle for one-hand absorbent removal



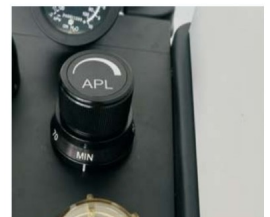
One-key switching between open and closed circuit



Large and small bellows are interchangeable



One-key switching between manual and machine



APL valve with precise pressure scale

## 01 — VET-60 ANIMAL ANESTHESIA MACHINE

# Technical Specifications

## MAIN SPECIFICATIONS

|                     |                        |
|---------------------|------------------------|
| Display             | 10.1" (1280 × 800)     |
| Power supply        | AC 100–240 V, 50/60 Hz |
| Battery             | ≥ 150 min              |
| Gas supply pressure | 0.28–0.6 MPa           |
| O2 flush            | 25–75 L/min            |
| Flowmeter           | 0–4 L/min              |
| APL valve           | 1–70 cmH2O             |
| CO2 absorbent       | 1200 mL                |
| Airway pressure     | –20 to 100 cmH2O       |
| ACGO                | One-key switching      |
| Bellows             | 0–300 mL / 0–1500 mL   |

## VENTILATOR

|                   |                                               |
|-------------------|-----------------------------------------------|
| Tidal volume (VT) | 20–1500 mL                                    |
| Rate              | 2–60 bpm                                      |
| I:E               | 4:1 to 1:8                                    |
| PEEP              | OFF / 3–30 cmH2O                              |
| Pinsp             | 5–50 cmH2O                                    |
| Inspiratory hold  | ≤ 30 s                                        |
| Tinsp             | 0.2–10 s                                      |
| Plimit            | 10–60 cmH2O                                   |
| Flow trigger      | OFF / 1–20 L/min                              |
| Apnea time        | 15–30 s                                       |
| Monitored values  | VT, MV, Ppeak, PEEP, Rate, EtCO2, FiCO2, FiO2 |
| Ventilation modes | VCV, PCV, SIMV-VC, SPONT, Manual, ACGO        |

## STANDARD CONFIGURATION

|                      |                                            |
|----------------------|--------------------------------------------|
| Anesthetic vaporizer | Pressure, flow and temperature compensated |
| Isoflurane           | 0.2–6%                                     |
| Sevoflurane          | 0.2–8%                                     |
| Mount                | Single mount                               |

## STANDARD ACCESSORIES

|                        |                   |
|------------------------|-------------------|
| Oxygen hose            | NIST              |
| Breathing circuit tube | 22 mm / 15 mm     |
| Breathing bags         | 0.5 / 1 / 2 / 3 L |

## OPTIONS

|                         |                                      |
|-------------------------|--------------------------------------|
| Flowmeter               | Two gas sources (O2, Air), 0–5 L/min |
| CO2 module              | 0–100 mmHg                           |
| O2 sensor               | 21–100%                              |
| Endotracheal tubes      | 2# – 10#                             |
| Animal laryngoscope     | 2#, 3#, 4# (LED)                     |
| Anesthesia masks        | 4#, 5#, 6#                           |
| Non-rebreathing circuit | Available                            |



Alarm settings: limits can be enabled or disabled at any time

02 — ANAESTHETIC VAPORIZER

# VAPOR-600

Anaesthetic Vaporizer



A high-precision vaporizer built from imported materials, available in agent-specific, color-coded versions for halothane, enflurane, isoflurane and sevoflurane.

|                                                                        |                                                                                      |                                                                                    |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>Accurate output</b><br>Pressure, flow and temperature compensation. | <b>Low-flow performance</b><br>Stable delivery, particularly at low fresh-gas flows. | <b>Flexible fitting</b><br>Selectatec or cagemount; pour, key or Quik-Fil filling. |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|

| CONCENTRATION RANGE |        |
|---------------------|--------|
| ● Halothane         | 0.2–5% |
| ● Enflurane         | 0.2–5% |
| ● Isoflurane        | 0.2–5% |
| ● Sevoflurane       | 0.2–8% |

| TEMPERATURE RANGE         |              |
|---------------------------|--------------|
| Operation                 | 10–40 °C     |
| Storage (empty, dry wick) | –20 to 60 °C |

| MOUNTING & FILLING |                                                   |
|--------------------|---------------------------------------------------|
| Mounting           | Selectatec (Tec 7 type) or Cagemount (Tec 3 type) |
| Filler type        | Pour fill, Key-fill, Quik-Fil                     |

| CAPACITY   |        |
|------------|--------|
| Dry wick   | 360 mL |
| Moist wick | 300 mL |

## 03 — ANESTHESIA VENTILATOR

## VT-800

## Veterinary Anesthesia Ventilator



An intelligent, ergonomically designed animal ventilator for pet hospitals, research institutions and teaching laboratories — built to make mechanical ventilation simple and safe.

## KEY FEATURES

- **Four modes:** VCV, PCV, SIMV and SPONT.
- **Weight-based setup** from a built-in standards database.
- **8" HD touch screen** for easy operation.
- **Digital breathing sensor** for accurate monitoring.
- **Three-level alarms** (color, sound, light) for airway pressure, tidal volume, apnea and circuit occlusion.
- **Apnea backup:** SPONT switches to mechanical ventilation automatically.
- **Two standard bellows** for animals of different sizes.
- **Lithium battery**, 2–3 hours of operation.
- **International-standard** connection interfaces.



Main screen: real-time pressure and flow waveforms with peak, PEEP, VT, MV and rate



Enter the animal's weight to load suggested parameters, then fine-tune as needed

# Ventilation Modes & Specifications

## VENTILATION MODES

### VCV Volume Control Ventilation

Tidal volume is the target: inspiration ends once the animal has received the set volume.

### PCV Pressure Control Ventilation

Peak inspiratory pressure is the target: inspiration ends once airway pressure reaches the set value.

### SIMV Synchronized Intermittent Mandatory

Mandatory breaths at preset parameters. Inside the trigger window they synchronise with the animal's own effort; outside it, spontaneous breaths receive pressure support.

### SPONT Spontaneous Ventilation

Supports spontaneous breathing. If breathing stops or stays weak for a set time, assisted ventilation starts automatically and ends when spontaneous breathing resumes.

The same four modes are available on the VET-60 anesthesia machine.

## PARAMETER RANGES

|                                           |                  |
|-------------------------------------------|------------------|
| Animal weight                             | 2–100 kg         |
| Tidal volume (VT)                         | 20–1500 mL       |
| Breath rate                               | 2–60 bpm         |
| I:E ratio                                 | 4:1 to 1:8       |
| PEEP                                      | OFF / 3–30 cmH2O |
| Inspiratory pressure (P <sub>insp</sub> ) | 5–50 cmH2O       |
| Inspiratory plateau time                  | ≤ 30 s           |
| Inspiratory time (T <sub>insp</sub> )     | 0.2–10 s         |
| Pressure limit (P <sub>limit</sub> )      | 10–60 cmH2O      |
| Flow trigger                              | OFF / 1–20 L/min |
| Apnea time                                | 15–30 s          |

## GENERAL

|                  |                         |
|------------------|-------------------------|
| Display          | 8" HD touch screen      |
| Battery          | Built-in lithium, 2–3 h |
| Bellows          | Two standard sizes      |
| Breathing sensor | Built-in, digital       |
| Interfaces       | International standard  |

## ALARM COVERAGE

|                   |              |       |
|-------------------|--------------|-------|
| Airway pressure   | Tidal volume | Apnea |
| Circuit occlusion |              |       |

Three-level color, sound and light alarms.

## 04 — PATIENT MONITOR

## KP-700

## Multi-parameter Animal Monitor



A 12.1" bedside monitor on an embedded Linux platform, with full ECG analysis and long-term trend storage.

## STANDARD CONFIGURATION

12.1" display

3/5-lead ECG

NIBP

SpO2

Pulse rate

Temperature

Respiration

## OPTIONS

EtCO2

Masimo SpO2

Touch screen

Central monitoring station

Wall mounting

## PLATFORM &amp; DATA

- ARM9 main board on embedded Linux
- 720 h trend and graph review
- 2 h waveform review
- 1000 NIBP groups and 200 alarm events
- Data export via USB

## ALARMS

- Three-level audible and visual alarms
- Voice alarm prompts
- Sensor-off and paper-out alarms
- Alarm review
- Alarm pause

## DISPLAY

- 12.1" high-resolution LCD
- Up to 9 waveforms on screen
- 7-channel ECG displayed simultaneously
- Multiple display modes
- Multi-language interface

## CLINICAL TOOLS

- 13 types of arrhythmia analysis
- Real-time ST-segment analysis and pacemaker detection
- Drug calculation and titration table
- Hemodynamic calculation
- NIBP self-test mode

## DISPLAY MODES



Standard



Big font



ECG full lead



Trend table



NIBP trend



OxyCRG

## 04 — KP-700 MULTI-PARAMETER ANIMAL MONITOR

## Performance Specifications

## ECG

|                 |                                                            |
|-----------------|------------------------------------------------------------|
| Lead mode       | 3 / 5 leads                                                |
| Lead selection  | 3-lead: I, II, III<br>5-lead: I, II, III, aVR, aVL, aVF, V |
| Gain            | ×0.25, ×0.5, ×1, ×2                                        |
| Sweep speed     | 12.5, 25, 50 mm/s                                          |
| Signal range    | ±5 mV p-p                                                  |
| Heart rate      | 15–350 bpm; accuracy ±1%;<br>resolution 1 bpm              |
| Bandwidth       | Monitor 0.5–40 Hz<br>Diagnostic 0.05–130 Hz                |
| Protection      | Breakdown voltage 4000 VAC, 50/60 Hz                       |
| Leakage current | < 10 µA                                                    |

## RESPIRATION

|             |                                      |
|-------------|--------------------------------------|
| Method      | Impedance, RA-LL / RA-LA             |
| Gain        | ×0.25, ×0.5, ×1, ×2, ×4              |
| Range       | 0–150 BrPM                           |
| Resolution  | 1 BrPM                               |
| Accuracy    | ±2 BrPM or ±2%, whichever is greater |
| Sweep speed | 6.25, 12.5, 25 mm/s                  |
| Apnea alarm | 10–40 s                              |

## TEMPERATURE

|                |                            |
|----------------|----------------------------|
| Technique      | Thermistor probe (2.25 kΩ) |
| Channels       | 1                          |
| Range          | 0–50 °C                    |
| Resolution     | 0.1 °C                     |
| Measuring time | < 10 s (average)           |

## GENERAL

|              |                           |
|--------------|---------------------------|
| Display      | 12.1" high-resolution LCD |
| Power supply | AC 100–240 V, 50/60 Hz    |
| Battery      | 4 h working time          |
| Environment  | 5–40 °C, 15–90% RH        |
| Safety       | IEC 60601-1               |

## NIBP

|                 |                                                              |
|-----------------|--------------------------------------------------------------|
| Method          | Oscillometric                                                |
| Modes           | Manual, Auto, STAT                                           |
| Auto intervals  | 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120,<br>180, 240, 480 min |
| STAT cycle      | 5 min                                                        |
| Systolic        | 40–280 mmHg                                                  |
| Mean            | 20–240 mmHg                                                  |
| Diastolic       | 10–220 mmHg                                                  |
| Static accuracy | ±3 mmHg                                                      |
| Resolution      | 1 mmHg                                                       |
| Accuracy        | Max. mean error ±5 mmHg<br>Max. standard deviation 8 mmHg    |
| Overpressure    | Dual protection                                              |

## SPO2

|                |                                    |
|----------------|------------------------------------|
| Range          | 0–100%                             |
| Resolution     | 1%                                 |
| Accuracy       | ±2% (70–100%)<br>0–69% unspecified |
| Audio          | Pitch tone, multi-level volume     |
| Waveform speed | 12.5, 25 mm/s                      |

## PULSE RATE

|            |            |
|------------|------------|
| Range      | 20–250 bpm |
| Accuracy   | ±3 bpm     |
| Resolution | 1 bpm      |

## ETCO2 (OPTIONAL)

|             |                                                                                 |
|-------------|---------------------------------------------------------------------------------|
| Range       | 0–100 mmHg                                                                      |
| Resolution  | 0.1 mmHg                                                                        |
| Accuracy    | 0–40 mmHg: ±2 mmHg<br>41–70 mmHg: ±5% of reading<br>71–100 mmHg: ±8% of reading |
| Resp. rate  | 3–150 BrPM                                                                      |
| RR accuracy | ±1 BrPM                                                                         |

## — CONTACT

# Talk to us about your clinic or lab

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