

# small size, big power



# Vaporizers & Anesthesia Machines

### **Advantages**

- can be used in either DRAW-OVER (with Air) and plenum modes (OUT of circle)
- · delivered concentration is virtually independent of:
  - » flow rate  $(0.2 \div 10 \text{ l/min})$
  - » ambient temperature (15 ÷ 35 °C) and atmosphere pressure (70 ÷ 110 kPa)
  - » positions (vertical and overturned)
  - » anesthetic level (from 5 ml)
- · minimal weight of "MINIVAP-20" (0.4 kg)
- maximum concentration (12 vol.%) and anesthetic output (0.12 x 20 L/min) of "MINIVAP-200"
- body material: Stainless Steel,
   Titan (for magnetic resonance tomography)

### **Fields of Application**

- · general & district hospitals
- pediatric
- · stomalogy
- veterinary
- · remote areas
- · ambulance & emergency situations
- · military & disaster areas







### **Co-operation Proposal**

A – Supply AM elements & units (mini- O2, CO2 and anesthetic analyzers; mini- O2 generators (oxygenates) and CO2 absorbers (preferably membrane mode); mini-ventilators; Ambu elements & units, adapters etc.)

**B** – Penetration of our mini-vaporizers in a world anesthesia market (veterinary, urgent situations & remote areas, military, district hospitals)

**C** – patent licenses, manufactor cooperation (micro-bellows, testing and certification) and R&D novel mini-Vaporizers & Anesthesia Machines.

miniVAP Ltd. was established in March 2007 and is a scientific successor of "Laminar Technology" Ltd. (2001-2003 Israel)

Scientific & Manufacture Venture Firm

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### The first Anesthesia on the Earth:

«And the LORD God caused a deep sleep to fall upon Adam, and he slept; and He took one of his ribs, and closed up the flesh instead there of» **GENESIS 2:21** 

### general & district hospitals



Anesthesia Machine (AM) "Colibri" with reprocessable (left) and "Intersurgical" absorbers

### pediatric



Adenotomy under sevoflurane anesthesia with AM "Colibri"; Filatov Children's Hospital, Moscow

### stomatology



AM "Colibri" with Mapleson A breathing circle

### veterinary anesthesia

Surgery, Magnetic-Resonance Tomography, Stomatology



AM with "MINIVAP-20" Vaporizer (Y.S. Dorodnih model, veterinary clinic «White canine», Moscow)

# ambulance & emergency situations military, disaster and remote areas



Vaporizer "MINIVAP-20" (DRAW-OVER ANESTHESIA)



Amby Bag + Vaporizer "MINIVAP-20"



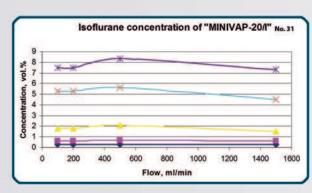
# **Technical Data Sheet**

# **MINIVAP 20**





left - parts of "MINIVAP-20/I» vaporizer, right - "MINIVAP-20/S» assembly

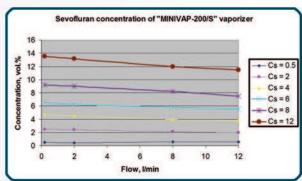


Output concentration of "MINIVAP-20" vaporizer at the mini- and low carrier gas flow

Technical Data	"MINIVAP-20"	"MINIVAP-200"
Concentration Range of 5 or I or H or E, vol.%	0 - 6	0 - 12
Gas Flow Range, L/min	0.2 - 10	0.2 - 20
Resistance to flow 10 L/min, mm H <sub>2</sub> O	~ 10 (20 for 5)	- 5
Temperature Range, °C	5 - 35	15-35
Atmosphere Pressure Range, kPa	70 - 110	70 - 110
Anesthetic volume, ml	50	150
Wick Anesthetic Volume, ml	3	3
Maximum Angle of Tilt during operation (1/2 anesthetic volume)	180°	90°
Weight, kg	0.4	1.5
Inlet/Outlet	15F/15M	22F/22M

# **MINIVAP 200**





### References

- 3. Clinical Anesthesiology (Moscow). 2007, 4, No 5, 66-71; 2006, 3, No 5: 46-49. 4. RU Patents No 2329069, 2372947, 2383362 and
- Patent Applications No 2010123403, 2011121371.

- 5. Methodical recommendations and the Summary. A network of veterinary clinics «White canine». 2011.
- 6. www.minivap.net; www.rusanesth.com; www.medcom.ru; www.feldsher.ru; www.mitk-m.ru

<sup>1.</sup> Sidorov V.A., Tcipin L.E., Grebennicov V.A. Pediatric Inhalation Anesthesia. M.,  $2010-184~\mathrm{p.p.}$ 

<sup>2.</sup> Pediatric Surgery (Moscow). 2008; No 4: 51-56.



# What we are looking for

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