

AnaConDa[®]

Anaesthetic Conserving Device

A unique high capacity miniature vaporizer not bigger than it fits into a small plastic housing and a high efficiency conserving medium, weighing a few grams is creating....

**....a revolution
in delivery of volatile anaesthetic agents,**



**breaking the last barrier to use anaesthetic
agents wherever you want.**

SEDANAMEDICAL

Clinical use

The use of volatile anaesthetic agents like isoflurane and sevoflurane is today common practice for general anaesthesia. To be able to administer the agents safely anaesthesia machines are being used. These have been developed to reduce the amount of volatile agents needed and to make them environmentally safe by including a circle system with a carbon dioxide absorber and a valve system that re-circulates the agents.

AnaConDa can because of its miniature vaporizer and conserving medium be combined with a normal ventilator and a monitoring system to create a low cost, low flow anaesthesia machine with the same performance characteristics (1) as a modern anaesthesia machine.

During the last decade several publications are suggesting volatile agents as more optimal sedative drugs in the ICU (2,3,4,5,6,7). The advantages suggested are: shorter wake-up times, more reliable route of administration, few side effects and no development of tolerance. Sedation with isoflurane or sevoflurane also makes the sedation level easy to control. The limitation of use has been the possibility to administer volatile anaesthetic agents in an easy way outside the operation room. AnaConDa is eliminating the last barrier to use volatile anaesthetic agents wherever you want.

Clinical set-up

AnaConDa is easy to use. A syringe pump, a gas monitor and a standard ventilator are needed. To fill the AnaConDa Syringe special adaptors with valves are available. We also recommend connecting the gas monitor exhaust and ventilator exhaust to a scavenging system.

"It has been shown that using isoflurane is an environmentally safe method of sedation when used together with AnaConDa."

Sackey et al Crit Care Med 2005; Vol. 33:585-590

Always read the Instructions for Use before using the product.

Features

The high efficiency conserving media consists of active carbon with a very large surface. Its efficiency depends on the tidal volume of the patient and the desired concentration of the volatile agent. With clinically relevant concentrations >90 % is reused.

The high capacity miniature vaporizer can because of its big surface and its place close to the patient using the heat from the patient vaporize any clinically relevant volume of anaesthetic agents.

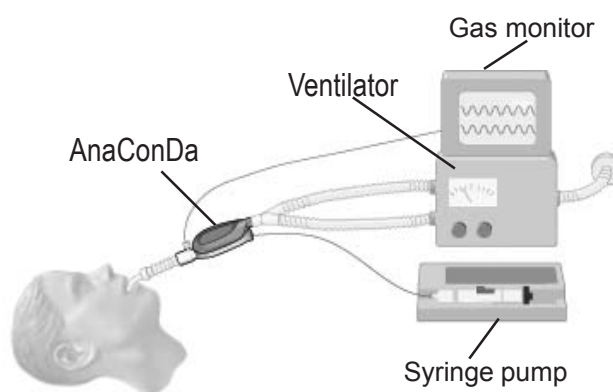
Because of small volume in the AnaConDa, 100 ml, it is easy to change the concentration.

"The Anaesthetic Conserving Device allows titratable administration of isoflurane without costly equipment and can safely be managed by the nursing staff."

Sackey et al: Crit Care Med 2004; 32: 2241-2246.

References:

1. Tempia A, et al: The Anesthetic Conserving Device compared with conventional circle system used under different flow conditions for inhaled anesthesia. *Anesthesia & Analgesia* 2003; 96: 1056-1061.
2. Tanigami H, et al: Long-term sedation with isoflurane in postoperative intensive care in cardiac surgery. *Artificial Organs*; 1997; 21-23.
3. Appleyard TN et al: Isoflurane sedation-a multi-centre study of 55 patients. *Clinical Intensive Care*; 1994; 5: 212-216.
4. Spencer E et al: Isoflurane for prolonged sedation in the intensive care unit; efficacy and safety. *Intensive Care Med*; 1992; 18: 415-421.
5. Arnold JH et al: Prolonged administration of isoflurane to paediatric patients during mechanical ventilation. *Pediatric Anesthesia*; 1993; Vol. 76: 520-526.
6. Williatts SM, et al.: Sedation for ventilation in the critically ill. A role for isoflurane? *Anaesthesia*; 1994; Vol. 49: 422-428.
7. Kong KL: Sedating patients undergoing mechanical ventilation in the intensive care unit-winds of change? *British Journal of anaesthesia*; 2003; 90: 267-269

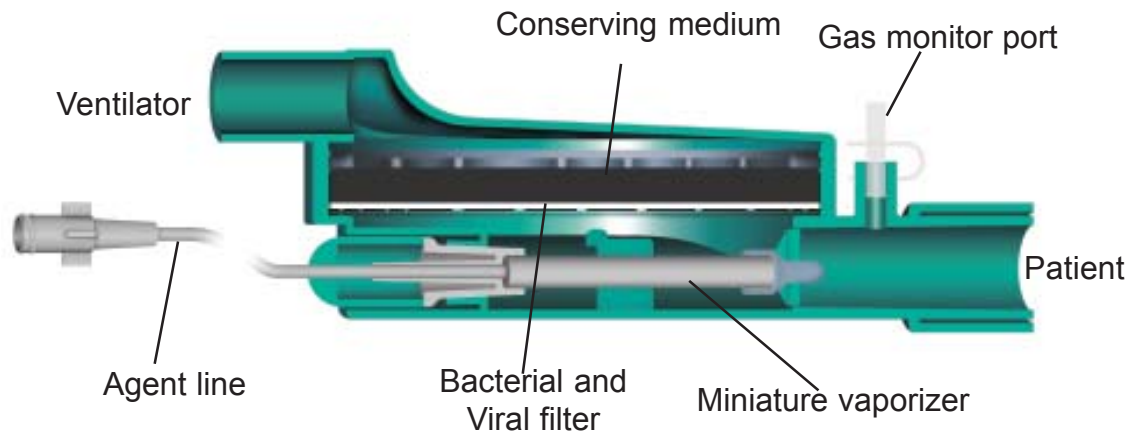


AnaConDa is a small compact unit and contains when used very little anaesthetic agent making it environmentally safe.

It is easier and faster to regulate the concentration with an AnaConDa compared to a circle system in an anaesthesia machine since the volume in the AnaConDa is so small, 100 ml compared to approximately 5 l.

Now you can use anaesthetic agents wherever you want!

Cross section of the AnaConDa Housing



Principle of operation

Start of expiration



Patient exhaling Air/Oxygen, CO₂ and Anaesthetic agent

End of expiration



The Anaesthetic agent exhaled adsorbs in the high efficiency conserving medium. CO₂ passes through the medium.

- Air/Oxygen
- CO₂
- Anaesthetic agent

Start of inspiration



Anaesthetic agent in the media ready to be released

End of inspiration



Anaesthetic agent released and re-cycled back to the patient

Operating conditions

Anaesthetic agents:

Tidal Volume working range:

Resistance to gas flow @ 60 l/min.:

Moisture loss at 0.75 l x 12 breaths/min.:

Corresponding moisture output (calc.):

Moisture loss at 1.0 x 10 breaths/min.:

Corresponding moisture output (calc.):

Bacterial Filtration:

Viral Filtration:

Dead space:

Weight:

Connectors, according to ISO 5356:

Gas sampling port:

Syringe tubing length:

Isoflurane or Sevoflurane

minimum 350 ml

2.5 cm H₂O (250 Pa)

5 mg/l

30 mg/l

7 mg/l

29 mg/l

99.999%

99.98%

approx. 100 ml

50 g

15F/22M - 15 M

Female Luer lock

2200 mm

Composition of materials

Product/Part	Material	Residue after incineration
AnaConDa System		
Housing	Polypropylene	CO ₂ , H ₂ O
Evaporator	Polypropylene	CO ₂ , H ₂ O
Carbon filter	Carbon	CO ₂
Microorganism & Particle filter	Polypropylene	CO ₂ , H ₂ O
Tubing	Polyethylene	CO ₂ , H ₂ O
Tubing connectors	Polyethylene	CO ₂ , H ₂ O
Hot melt adhesive	Olefin co-polymer	CO ₂ , H ₂ O
Luercap	Polyethylene	CO ₂ , H ₂ O
Locking plug	Polycarbonate	CO ₂ , H ₂ O
Labels	Polypropylene	CO ₂ , H ₂ O
Syringe		
Barrel	Polypropylene	CO ₂ , H ₂ O
Plunger	Polypropylene	CO ₂ , H ₂ O
Piston	Rubber	CO ₂ , H ₂ O
Adhesive	Acrylic U.V.	CO ₂ , H ₂ O
Lubricant	Silicone	SiO ₂
Label	Polypropylene	CO ₂ , H ₂ O
Single unit packing		
Over layer	Paper	CO ₂ , H ₂ O
Tray	Polyethyleneterephthalate	CO ₂ , H ₂ O

Ordering information

REF	Item	Qty.
26000	AnaConDa System with syringe	6
26022	AnaConDa Syringe	15
26064	Filling Adapter 26064 Isoflurane	1
26042	Filling Adapter 26042 Sevoflurane	1
3000010	AnaConDa Training Manual	1

About AnaConDa and Sedana Medical

Innovations are made every day by creative and competent people but very few of those become wellknown products.

Sedana Medical is founded on the premise that AnaConDa is an innovation and that it will become a much used and wellknown product. With the help of the AnaConDa the administration of anaesthetic agents will become much simpler and safer. That simplicity and safety will also make it possible to routinely use anaesthetic agents in other settings than an operating room.

AnaConDa was developed in Sweden in the middle of the 90s and tested in a clinical setting for the first time in 1999. It was presented for the European Society of Intensive Care Medicine in Amsterdam in October, 2003 and at the 13th World Congress of Anaesthesiologists in Paris in April, 2004. AnaConDa has been very well received. Several studies have been published and many more are on their way.

Sedana Medical is a newly started company that will spend all its resources introducing AnaConDa and developing other products facilitating the use of anaesthetic agents. Sedana Medical is based outside Stockholm in Sweden, has subsidiaries in Germany and France, and a large network of distributors.

SEDANA MEDICAL

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