

Operation Manual for Anaesthesia Machine NarkoVet

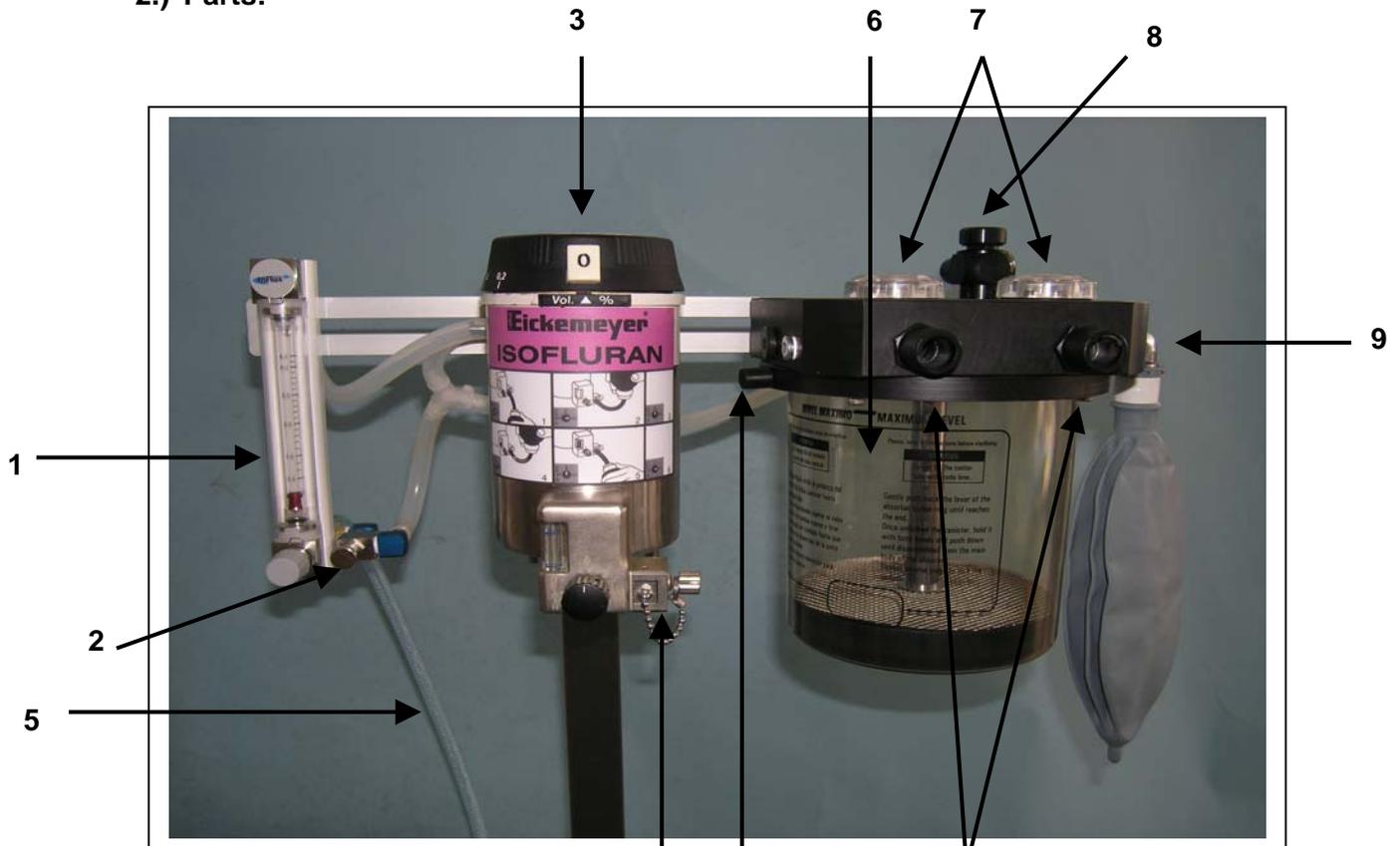
1.) Description:

The Anaesthesia Unit NarkoVet is a half open anaesthesia circuit. It can also be used as an open circuit (with bain circuit) or closed circuit. The unit is suited for small animals up to a weight of 80 kg. For patients with a weight of less than 7 kg, it is recommended to use the included Bain Circuit system.

Further advantages of the NarkoVet are:

- large valves which are easy to check
- easy to fill (quick change) soda lime canister with a capacity to use up to 10 hours
- convenient adaptable tubes
- easy to read and adjustable flowmeter, 0,2 to 5 l / min
- Oxygen bypass with Flush-button

2.) Parts:



- | | | |
|---------------------------------|--------------------------|--|
| 1. Flowmeter | 4. Safety Key Filling | 10. Patient tube connections |
| 2. Oxygen-Bypass | 5. Fresh gas tube | 12. Closing Soda Lime Canister mechanism |
| 3. Vaporizer | 6. Soda Lime canister | |
| 7. Valves | 8. Pressure relief valve | |
| 9. Connection for breathing bag | | |

3.) Installation

Connect the oxygen supply tube to the oxygen supply either by:

Oxygen bottle with pressure gauge (Code. 212705 or 21270501)

or

Oxygen Concentrator (Code.213180)

or

Connector for central oxygen supply (Code.212503)

The incoming pressure should be appx. 3 bar. If a oxygen concentrator is used, the incoming pressure is less. Due to the less pressure volume, the time for filling the breathing bag is extended. Please take care of that at the time you press the Flush-Button (Oxygen-Bypass (2)).



NarkoVet with 10l Oxygen Bottle and pressure gauge (not included)

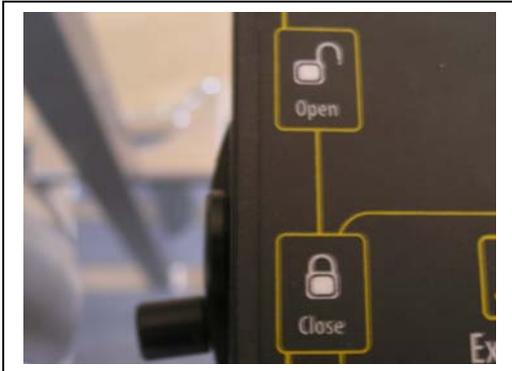
Fill ISOFLURANE into the vaporizer.

Please check on the vaporizer on instruction on how to fill.

1. Attach Safety Key Filler for Isoflurane (Code. 213246)
2. Open screw on the right side of the safety filling system on the vaporizer, remove the closing mechanism, plug-in the safety key filler in the filling port and close the screw.
3. Turn the black filling screw on the 12:00 o'clock position.
4. Refill the vaporizer to max of the filling display.
5. Turn the black filling screw on the 03:00 o'clock position
6. Remove the safety key filler, put in the closing mechanism and close the screw.

Soda Lime

Open the closing mechanism on the soda lime canister (12). Remove the canister by pulling the canister with both hands.



Fill in the soda lime into the canister. The filling sign gives you the max. quantity, do not exceed this line. Plug on the canister and move the closing mechanism to close it. Please take care that no soda lime is in the centre-tube.

Attach the breathing tubes and the breathing bag to the machine.



Attach the exhaust tube on the pressure relief valve.



4.) Operation of the Bain Circuit

The Bain Circuit completes your anaesthesia unit especially for patients with less than 7 kg. It contains small breathing valves. The anaesthesia gas is transported in the inner tube off the coaxial breathing tube. This assures that the anaesthesia gas is transported directly to the patient. The exhalation gas is transported in the outer tube and breathing bag into the exhaust tube. Please make sure that the pressure relief valve is open during spontaneous breathing.

(Open System) Recommended fresh gas volume: 800 ml...1000 ml / min
Isoflorane concentration: 2,5 % ... 3,5 %

4.) Preparation of the unit / Leakage test :

Check the oxygen supply (pressure, enough oxygen, etc....)

Connect the patient tube and breathing bag to the unit and close the pressure relief valve.

Close the patient tube (patient side) with your thumb and fill the breathing bag by pressing the oxygen-bypass until the breathing bag is firmly filled. The circuit is leakproof if the you do not require more than 200 ml of fresh gas to keep the inner pressure. by opening slowly the pressure relief valve, you can check the operation of the pressure relief valve.

There is a leakage in the circuit, if the inner pressure is not kept. The cause of this has to be evaluated and eliminated in any case before anaesthesia is started. Check the volume of anaesthetic at the vaporizer.

Leakages often occur at the vaporizer, especially at the filling port. The sealings are getting brittle. The result is the loss of anaesthetic. Another reason can be, that the closing parts at the vaporizer are not proper tightend. Generally Due to the internal pressure compensation of the vaporizer there can be a loss of anaesthetic of appx. 0,5 cm³ per day.

5.) Cleaning and Maintenance:

Remove the breathing bag, patient tube and all other tubes and dry them.

As well remove the cover of the valves for drying. If you take out the valve plates, you can quicken the procedure. Please take care to put in the valve plates again, before the next use of the machine. Otherwise there is no proper gas exchange assured.



Please exchange the soda lime after appx. every 10 hours of anaesthesia even if the color is the same.

Please check on wastage and lubricate (with vaseline or teflon) all accessible sealings after every 20 hours.