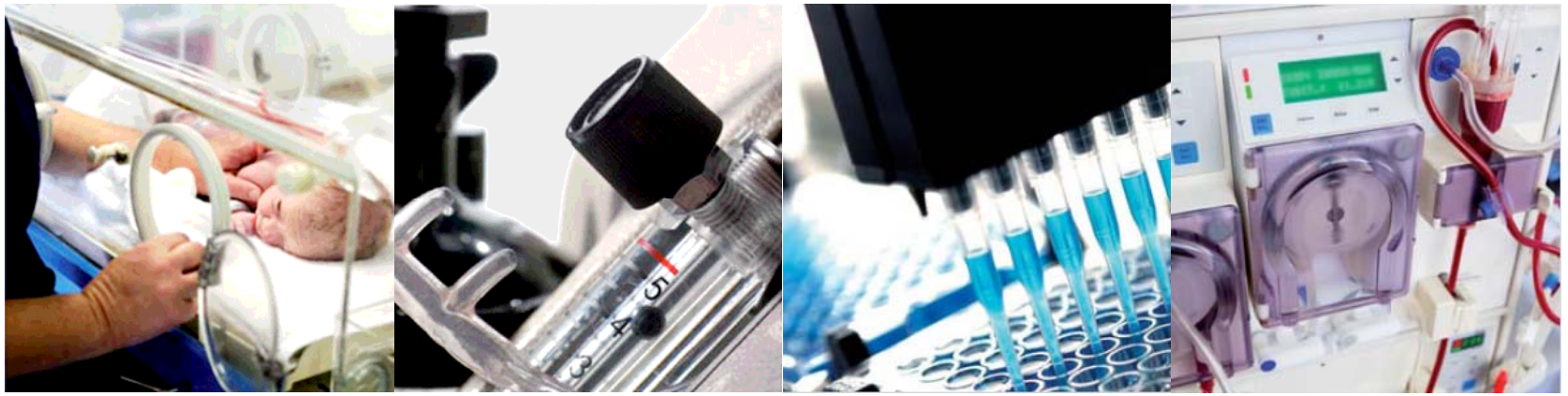
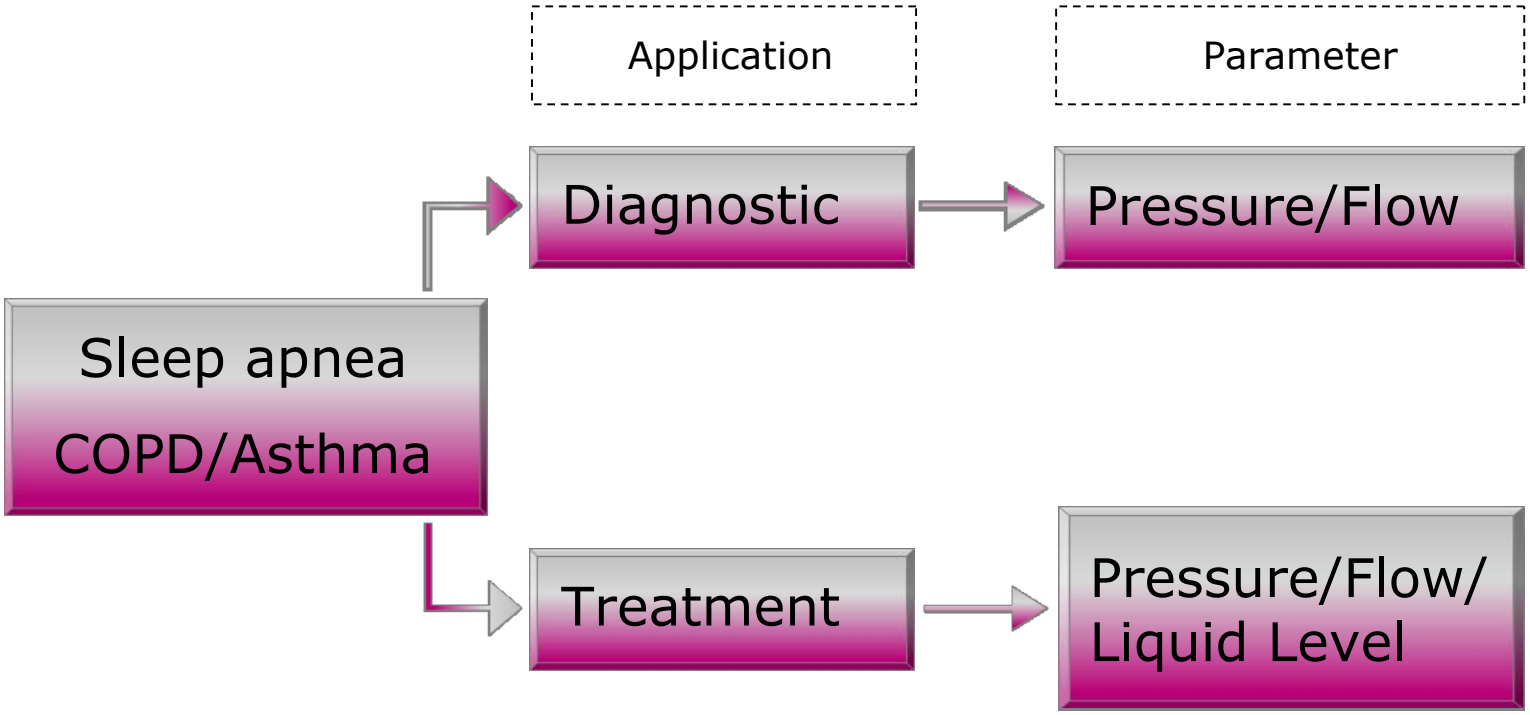
SENSORTECHNICS

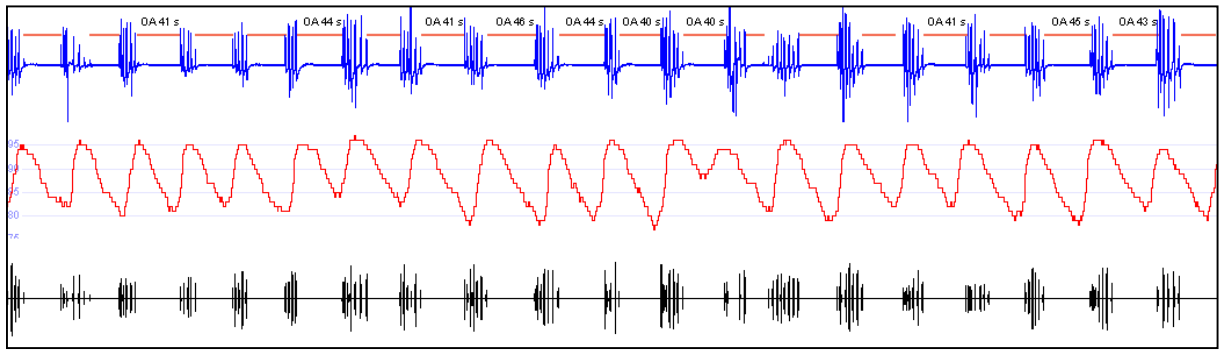
Innovative Sensing Solutions for Medical Applications



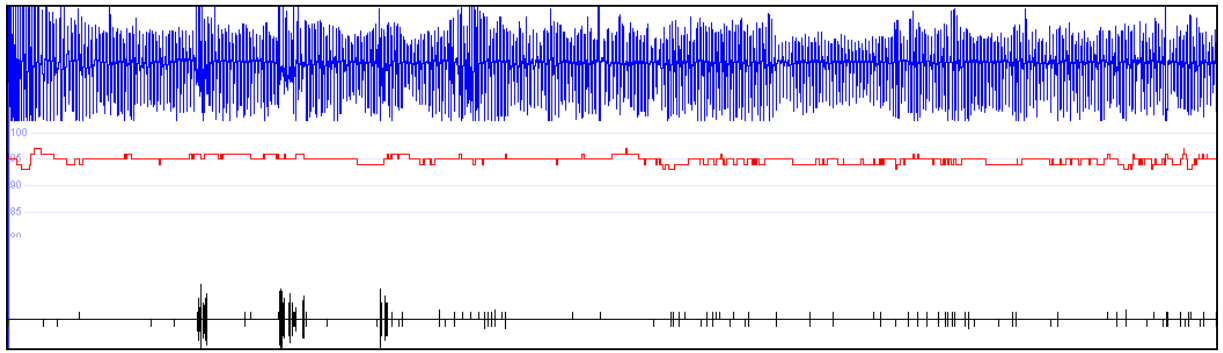
Sensors in ventilation



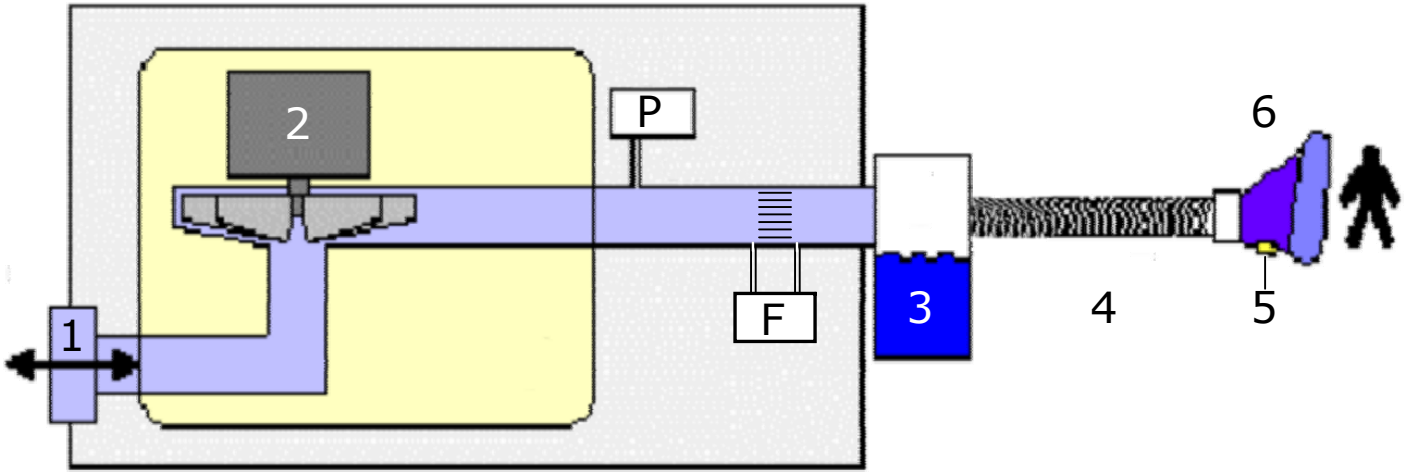
OSAS without treatment



OSAS treated with 9,5mbar CPAP



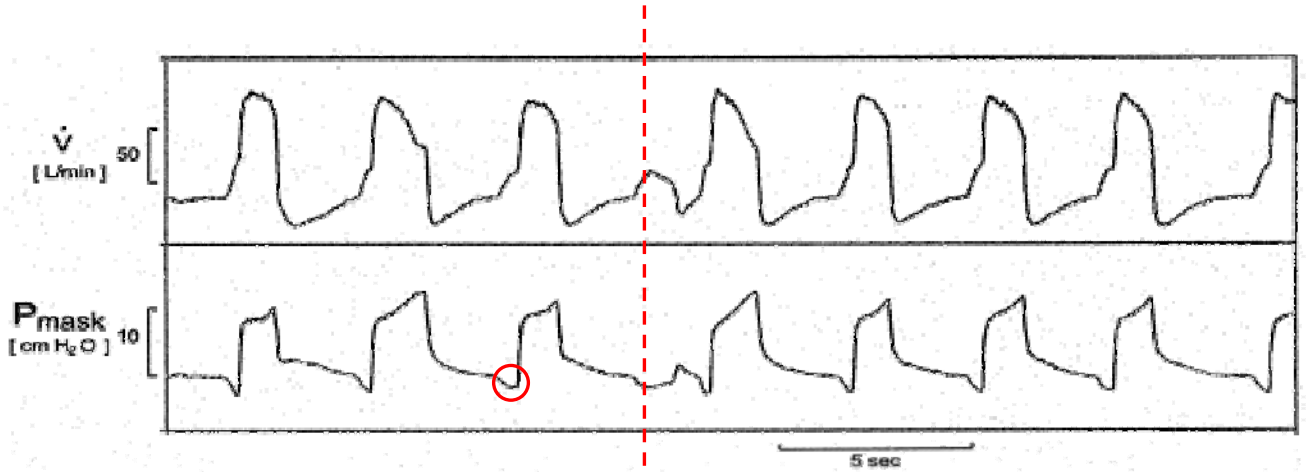
Basic principle CPAP / Ventilator



1 Room air filter
2 Blower
P Pressure Sensor
F Flow Sensor

3 Humidifier
4 Patient hose
5 Leakage opening
6 Ventilation Mask

Trigger point



- Exact detection of trigger point critical!
- Shortest possible response time of sensor determines ventilation efficiency

Diagnostic

Sensor requirements

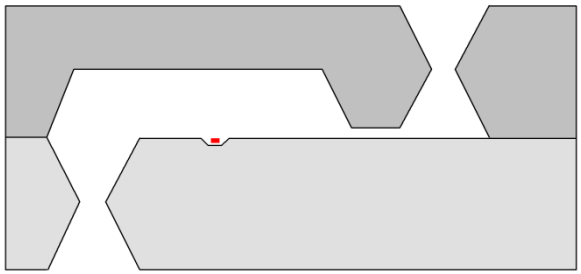
- No position dependency
- Short response time
- Suitable for battery-powered operation (mobile devices)
- Insensitivity to humid respiratory air
- Small package

Treatment

Sensor requirements

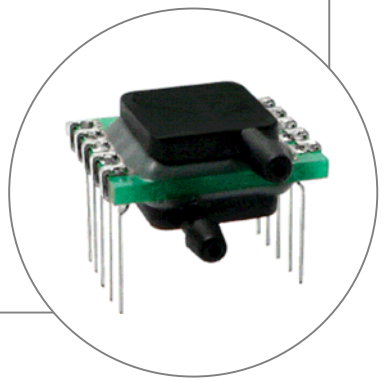
- High sensitivity
- Highest resolution in small flow range
- High dynamic range
- Short response time
- No interference with patient breathing through increase in resistance
- Insensitivity to humid respiratory air
- No contamination with infectious particles

LBA-Technology offers solutions

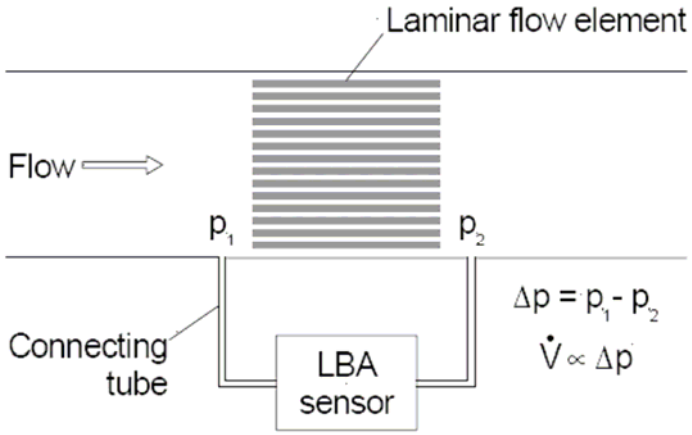


Flow channel integrated in MEMS-chip
(~1,7 x 2,5 mm)

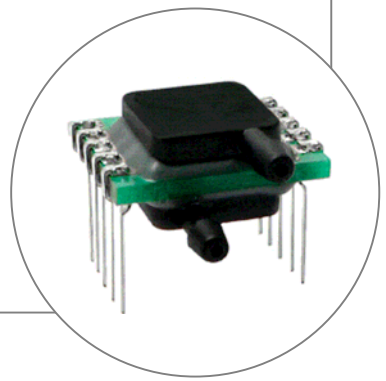
- Extremely high pneumatic impedance, therefore nearly equivalent to piezoresistive ΔP-sensors
- Small package
- Extraordinary robustness
- Very high sensitivity through calorimetric measurement principle



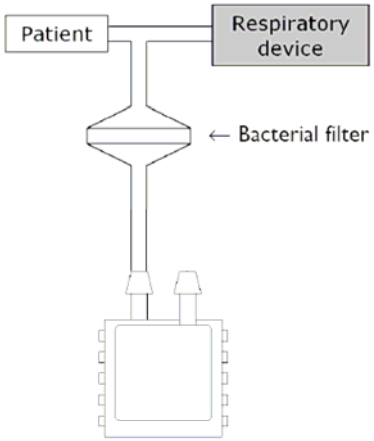
LBA-Technology offers solutions



- Extremely small flow through the sensor, therefore no impairment of main flow
- Immunity to both dust and humidity

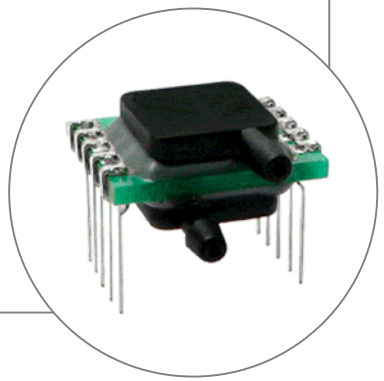


LBA-Technology offers solutions



Bypass-flow dominated by LBA flow channel

- No loss in sensitivity in case different tube lengths/ diameters resp. filters are used



Level measurement in medical applications

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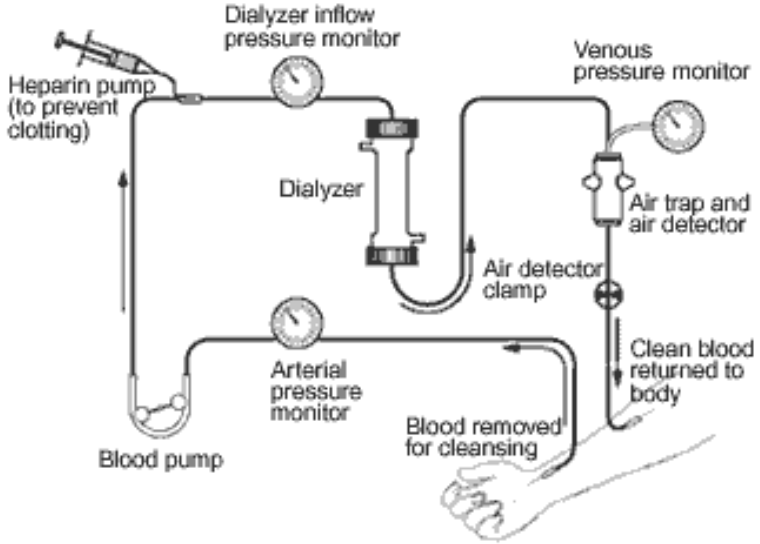
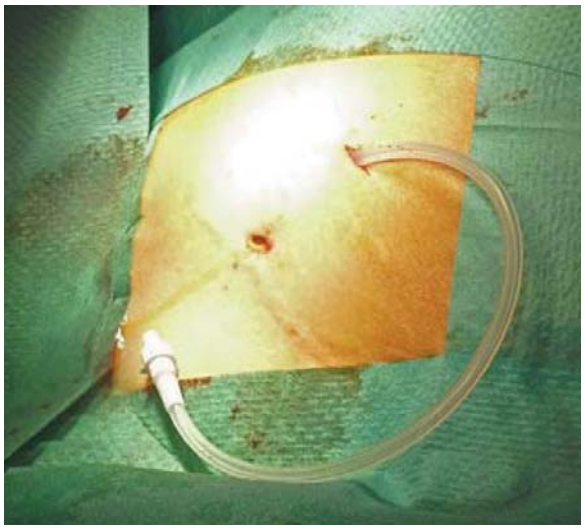
Hemodialysis



- Sensitive, sterile media

Suction devices



- Secretion with solid particles

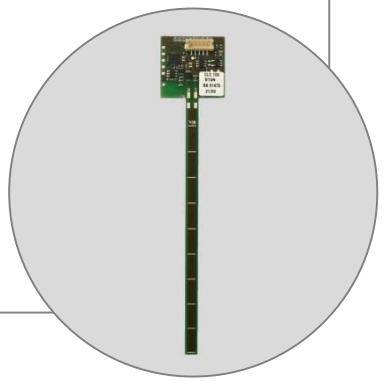
Level measurement in medical applications

Endoscope cleaning machines

- Calculation of trend for emptying of aggressive cleaning/ sterilization agents

CLC-Technology offers solutions

- Level sensor CLC continuously detects both liquids and solid substances contact-free
- Independent from shape of container
- Space-saving, flexible mounting



Thank you for your Attention!

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