



Figure 2-35 • Free breathing valve

2.13.12 Breathing circuit flow sensors

Two flow sensors (18) are used to monitor inspiratory and expiratory gas flow:

- The inspiratory flow sensor is located at the input of the breathing system inspiratory check valve.
- The expiratory flow sensor is located at the input to the breathing system expiratory check valve.

Feedback from both the inspiratory and expiratory transducers is used to:

- supply tidal volumes that make allowances for the effects of fresh gas flow and circuit compressibility.
- supply signals for expiratory tidal volume monitoring and the breath rate.

The breathing circuit flow sensors include two flex boards (one for each sensor). Each flex board contains a heating circuit and an EEPROM.

Each flex board has an I2C interface for communication with SIB. The SIB provides +12.5 VDC power with a minimum of 200 mA supply current to each flex board for flow sensor heating circuit, and provides +5 VDC with a minimum of 200 mA supply current to each flex board for EEPROM.