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arranging the compressor directly upstream of said breathing mask or breathing tube with no intermediary between said compressor and said user interface with respect to the gas flow; and

controlling a respiration pressure on the basis of the speed of rotation of the rotary compressor with a control unit connected to the drive motor.

12. A method in accordance with claim 11, wherein said rotary compressor is provided as one of a radial compressor, an axial compressor, a drum-type compressor or a cross flow compressor.

13. A method in accordance with claim 11, wherein a speed-dependant or time-dependent respiration pressure curve is used by the control unit to set a speed of rotation of the drive motor of the compressor and the speed-dependent or the time-dependent respiration pressure curve is stored in the control unit.

14. A method in accordance with claim 11, further comprising providing a respiratory flow sensor connected to the control unit and arranged in the user interface part, the control unit being actuated as a function of said measured signals of said respiratory flow sensor.

15. A method in accordance with claim 11, wherein said filter is formed of a nonwoven or fiber material.

16. A method in accordance with claim 11, wherein the breathing tube is provided as an endotracheal tube or a tracheometry tube.

17. A method in accordance with claim 11, further comprising providing a feed line and using the feed line for feeding an auxiliary gas or an aerosol simultaneously with ambient air, said feed line being provided in said inflow area of said compressor facing away from a high pressure side.

18. A method in accordance with claim 11, wherein said respiratory flow sensor is a pressure sensor with a measuring transducer containing a piezo crystal or a strain gauge.

19. A method in accordance with claim 11, wherein said breathing mask is provided with a heating means.

20. A method in accordance with claim 11, further comprising connecting each of the rotary compressor with the electric drive motor and the filter arranged directly upstream of the rotary compressor with respect to a direction of flow and the control unit to a patient for mobile, autonomous, pressure-supported patient respiration.

21. A respiration support apparatus, the apparatus comprising:

- a rotary compressor actuated by an electric drive motor;
- a filter arranged directly upstream of said rotary compressor with no intermediary with respect to a direction of gas flow;

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a user interface part including one of a breathing mask, an endotracheal tube, a tracheometry tube, and a truncated tubular mouthpiece, said compressor being arranged directly upstream of said user interface part with no intermediary with respect to a direction of gas flow.

22. A method of delivering a gas flow to a user, the method comprising:

providing a user interface part including one of a breathing mask, an endotracheal tube, a tracheometry tube, and a truncated tubular mouthpiece;

providing a compressor connected directly to said user interface part with no intermediary between said compressor and said user interface with respect to the gas flow;

providing a filter connected directly to said compressor with no intermediary between said compressor and said user interface with respect to the gas flow; and

providing a gas through said filter, said compressor, and through said user interface to the user.

23. A method in accordance with claim 22, the method further comprising:

adapting said user interface to be connected to a patient for mobile, autonomous, pressure-supported patient respiration in medicine.

24. A respiration support apparatus according to claim 21, said apparatus further comprising:

a control unit for setting a respiration pressure on the basis of the speed of rotation of said rotary compressor, said control unit being connected to said electric drive motor;

a respiratory flow sensor connected to said control unit and arranged in said user interface part, said control unit being actuated as a function of measured signals of said respiratory flow sensor.

25. A method according to claim 22, said method further comprising:

providing a rotary compressor with an electric drive motor;

controlling a respiration pressure on the basis of the speed of rotation of said compressor with a control unit connected to said electric drive motor;

providing a respiratory flow sensor connected to said control unit and arranged in said user interface part, wherein said control unit is actuated as a function of measured signals of said respiratory flow sensor.

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