

6 CLAIMS

1. A blower, comprising:
 - a rotor;
 - a motor adapted to drive the rotor;
 - at least one bearing to rotatably support the rotor;
 - a stationary component; and
 - a bearing sleeve provided to the stationary component, the bearing sleeve structured and arranged to support and retain the bearing to the stationary component,wherein the bearing sleeve comprises an elastomeric material, and
wherein the bearing sleeve comprises one or more bumps or ribs configured to engage along an outer race of the bearing.
2. The blower according to claim 1, wherein the elastomeric material comprises TPE.
3. The blower according to any one of claims 1 to 2, wherein the bearing sleeve comprises a cylindrical side wall and a retaining structure structured and arranged to form a mechanical connection to the stationary component, and the one or more bumps or ribs are provided to the cylindrical side wall.
4. The blower according to any one of claims 1 to 3, wherein the bearing sleeve comprises an overmolded connection to the stationary component.
5. The blower according to any one of claims 1 to 4, wherein the stationary component comprises stator vanes.
6. The blower according to any one of claims 1 to 5, wherein the bearing sleeve comprises at least two bumps or ribs arranged between the stationary component and the bearing to isolate vibrations, reduce noise, and provide shock absorption.
7. A blower, comprising:

a rotor;
a motor adapted to drive the rotor;
at least one bearing to rotatably support the rotor;
a stationary component; and
a bearing sleeve provided to the stationary component, the bearing sleeve structured and arranged to support and retain the bearing to the stationary component,
wherein the bearing sleeve comprises an elastomeric material,
wherein the bearing sleeve comprises an overmolded connection to the stationary component, and
wherein the bearing sleeve comprises a retaining structure structured and arranged to form a mechanical connection to the stationary component.

8. The blower according to claim 7, wherein the elastomeric material comprises TPE.

9. The blower according to any one of claims 7 to 8, wherein the retaining structure includes one or more threads adapted to engage within respective grooves provided to the stationary component.

10. The blower according to any one of claims 7 to 9, wherein the retaining structure is structured to wrap around a support wall of the stationary component.

11. The blower according to any one of claims 7 to 10, wherein the retaining structure protrudes through one or more holes provided to the stationary component.

12. The blower according to any one of claims 7 to 11, wherein the stationary component comprises stator vanes.

13. A blower, comprising:
a rotor;
a motor adapted to drive the rotor;

at least one bearing to rotatably support the rotor;
a biasing element to provide a pre-load force to the at least one bearing;
a stationary component; and
a bearing sleeve provided to the stationary component, the bearing sleeve structured and arranged to support and retain the bearing to the stationary component,
wherein the bearing sleeve comprises an elastomeric material, and
wherein the bearing sleeve is structured to protrude past the bearing and provide a space for enclosing and positioning the biasing element.

14. The blower according to claim 13, wherein the elastomeric material comprises TPE.

15. The blower according to any one of claims 13 to 14, wherein the biasing element comprises a spring.

16. The blower according to any one of claims 13 to 15, wherein the bearing sleeve comprises one or more bumps or ribs configured to engage along an outer race of the bearing.

17. The blower according to any one of claims 13 to 16, wherein the bearing sleeve comprises a retaining structure structured and arranged to form a mechanical connection to the stationary component.

18. The blower according to any one of claims 13 to 17, wherein the bearing sleeve comprises an overmolded connection to the stationary component.

19. The blower according to any one of claims 13 to 18, wherein the stationary component comprises stator vanes.

20. The blower according to any one of claims 13 to 19, wherein the biasing element is configured to provide the pre-load force to an inner race of the bearing.

21. A CPAP system for providing gas at positive pressure for respiratory therapy to a patient, the CPAP system comprising:

an RPT device configured to supply a flow of gas at a therapeutic pressure, the RPT device comprising the blower according to any one of claims 1 to 20;

a patient interface; and

an air delivery conduit configured to pass the flow of gas at the therapeutic pressure from the RPT device to the patient interface.