CLAIMS:

1. A humidification system comprising:

a main gases flow path,

a humidification source comprising a humidification chamber,

wherein the main gases flow path comprises a first portion and a second portion,

wherein the first portion comprises a larger cross-sectional area than the second portion so that with a flow of gases through the main gases flow path a high pressure region is generated in the first portion and a low pressure region is generated in the second portion,

wherein the main gases flow path further comprises a structure configured to vary a cross-sectional area of a portion of the main gases flow path, and

an inlet aperture, the inlet aperture being positioned at or near the low pressure region to allow a gases flow from the humidification chamber to the main gases flow path.

2. The humidification system of claim 1, wherein the gases flow through the main gases flow path from the first portion to the second portion.

3. The humidification system of claim 1 or claim 2, further comprising an additional portion that comprises a larger cross-sectional area than the second portion so that with a flow of gases through the main gases flow path a high pressure region is generated in the additional portion and a low pressure region is generated in the second portion.

4. The humidification system of claim 3, wherein the gases flow through the main gases flow path from the second portion to the additional portion.

5. The humidification system of claim 3 or claim 4, wherein the main gases flow path further comprises a transition portion pneumatically connecting the second portion and the additional portion.

6. The humidification system of any one of claims 1 to 5, wherein the main gases flow path further comprises a transition portion pneumatically connecting the first portion and the second portion.

7. The humidification system of claim 5, wherein the inlet aperture is provided at the transition portion.

8. The humidification system of any one of claims 1 to 5, wherein the first portion tapers from a larger cross-section to a smaller cross-section at or adjacent to the second portion.

9. The humidification system of any one of claims 3 to 8, wherein the first portion is an inlet portion and the additional portion is an outlet portion, and wherein the second portion is a neck portion in between the inlet and outlet portions, the neck portion having a smaller cross-sectional area than the inlet and outlet portions, and with a flow of gases through the main gases flow path a high pressure region is generated in the inlet and outlet portions and a low pressure region is generated in the neck portion.

10. The humidification system of claim 9, wherein the structure configured to vary a cross-sectional area of a portion of the main gases flow path is configured to vary a cross-sectional area of a part of the neck portion, inlet portion and/or outlet portion.

11. The humidification system of any one of claims 1 to 10, wherein the structure configured to vary a cross-sectional area of a portion of the main gases flow path comprises a valve.

12. The humidification system of any one of claims 1 to 10, wherein the structure configured to vary a cross-sectional area of a portion of the main gases flow path is configured to compress or deform the flow path.

13. The humidification system of any one of claims 1 to 10, wherein the structure configured to vary a cross-sectional area of a portion of the main gases flow path comprises a malleable material.

14. The humidification system of any one of claims 1 to 10, wherein the structure configured to vary a cross-sectional area of a portion of the main gases flow path comprises part of the main gases flow path that is deformable under an externally applied force

15. The humidification system of claim 13, wherein the outlet portion increases from a smaller cross-section at or adjacent to the neck portion to a larger cross-section.

16. The humidification system of any one of claims 1 to 15, further comprising an outlet aperture at or near the high pressure region to allow a flow of gases from the main gases flow path into the humidification chamber.

17. The humidification system of claim 16, wherein the outlet aperture is adjacent to an inlet or an outlet of the main gases flow path.

18. The humidification system of any one of claims 15 to 17, wherein the outlet aperture is located downstream of the inlet aperture along the main gases flow path.

19. The humidification system of any one of claims 15 to 17, wherein the outlet aperture is located upstream of the inlet aperture along the main gases flow path.

20. The humidification system of any one of claims 1 to 15, wherein the humidification source comprises a valve or an aperture allowing gas exchange with an external environment.