CLAIMS

1. A hermetic compressor comprising:

a cylinder block forming a cylinder having a bore, the cylinder being configured to house a piston movable in the cylinder in a reciprocating manner;

a valve plate disposed at an opening end of the cylinder, the valve plate having a suction hole; and

a valve sheet comprising a plurality of reeds, the plurality of reeds comprising a primary reed having an end portion configured to open and close the suction hole, the plurality of reeds further comprising a secondary reed arranged on the valve sheet the secondary reed overlaps with an edge of the bore and movement of the secondary reed is constrained by the cylinder block.

2. A hermetic compressor according to claim 1, wherein the secondary reed comprises an end portion and the end portion of the secondary reed is arranged vertically below the end portion of the primary reed.

3. A hermetic compressor according to claim 2, wherein the secondary reed comprises a first arm portion and a second arm portion arranged on respective first and second sides of the primary reed.

4. A hermetic compressor according to claim 2 or claim 3, wherein the end portion of the secondary reed has a greater area than the end portion of the primary reed.

5. A hermetic compressor according to any preceding claim wherein the primary reed and the secondary reed are configured to have different natural frequencies.

6. A hermetic compressor according to claim 1, wherein the plurality of reeds comprises a first secondary reed and a second secondary reed arranged on respective first and second sides of the primary reed.

7. A hermetic compressor according to claim 5, wherein each of the first secondary reed and the second secondary reed overlap with an edge of the bore and

movement of each of the first secondary reed and the second secondary reed is constrained by the cylinder block.

8. A hermetic compressor according to claim 6 or claim 7, wherein the primary reed is configured to have a different natural frequency from the first secondary reed and the second secondary reed.

9. A valve sheet for hermetic compressors, the valve sheet comprising a plurality of reeds, the plurality of reeds comprising a primary reed and a secondary reed, the valve sheet being configured to form part of a valve assembly to be mountable on a first cylinder block of a first hermetic compressor having a first bore size and configured to form part of a valve assembly to be mountable on a second cylinder block of a second hermetic compressor having a second bore size, smaller than the first bore size, the plurality of reeds being arranged on the valve sheet such that respective end portions of the plurality of reeds open and close respective suction holes of the valve assembly when mounted on the first cylinder block of the first hermetic compressor , and an end portion of the primary reed opens and closes a suction hole and the movement of the secondary reed is constrained when mounted on the second cylinder block of the second hermetic compressor.

10. A valve sheet according to claim 9, wherein the secondary reed comprises an end portion and the end portion of the secondary reed is arranged vertically below the end portion of the primary reed.

11. A valve sheet according to claim 10, wherein the secondary reed comprises a first arm portion and a second arm portion arranged on respective first and second sides of the primary reed.

12. A valve sheet according to claim 10 or claim 11, wherein the end portion of the secondary reed has a greater area than the end portion of the primary reed.

13. A valve sheet according to any one of claims 9 to 12, wherein the primary reed and the secondary reed are configured to have different natural frequencies.

14. A valve sheet according to claim 9, wherein the plurality of reeds comprises a first secondary reed and a second secondary reed arranged on respective first and second sides of the primary reed.

15. A valve sheet according to claim 14, wherein the primary reed is configured to have a different natural frequency from the first secondary reed and the second secondary reed.