

CLAIMS

1. A drag pump for pumping fluid from an inlet to an outlet said drag pump, comprising:
- 5 a stator and a rotor;
one of said stator or rotor comprising a disc comprising a plurality of channels, each of said channels extending from an inlet portion of said disc at or close to an inlet edge towards an outlet portion at or close to an outlet edge, said plurality of channels each comprising walls for guiding fluid flow from said inlet
- 10 edge to said outlet edge of said disc in response to relative motion between said stator and said rotor;
said disc further comprising a plurality of protrusions extending from said channels towards said other of said rotor or said stator, each of said protrusions being arranged to divide a channel at said inlet or said outlet end of said channel,
- 15 into sub-channels that extend for a portion of a length of said channel and do not extend for a whole length of said channel.
2. A drag pump according to claim 1, wherein said protrusions do not extend along a mid portion of said channel.
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3. A drag pump according to claim 1 or 2, wherein said protrusions have a length that is less than 60% of a length of one of said walls which said protrusion is adjacent to,
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4. A drag pump according to any preceding claim, wherein said plurality of protrusions are arranged in each channel at an inlet end of said channels.
5. A drag pump according to any preceding claim, wherein said plurality of protrusions are arranged in each channel at an outlet end of said channels.
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6. A drag pump according to any one of claims 1 to 4, wherein said plurality of protrusions arranged at said inlet end of said channels extend from an inlet

edge of said channel to a point beyond a line extending perpendicularly from a trailing wall of said channel.

7. A drag pump according to claim 6, wherein 50% or less of said protrusion
5 extends beyond a line perpendicular to said trailing wall of said channel.

8. A drag pump according to any preceding claim, wherein said plurality of
protrusions are arranged such that said sub-channels have substantially the
same cross section.
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9. A drag pump according to any one of claims 1 to 7, wherein said plurality
of protrusions are arranged such that said sub-channels each have a different
cross sectional area.

10. A drag pump according to any preceding claim, said drag pump
15 comprising a plurality of protrusions arranged between each of said channel walls
such that said plurality of protrusions divides said channel into a plurality of three
or more sub-channels.

11. A drag pump according to any preceding claim, wherein said protrusions
20 have a thickness that varies along a length of said protrusions.

12. A drag pump according to claim 11, wherein said protrusions are
configured to be thicker at an end adjacent to an edge of said disc and thinner
25 towards a middle of said disc.

13. A drag pump according to any preceding claim, said inlet portion of said
disc comprising an outer circumference of said disc.

14. A drag pump according to any preceding claim, wherein said drag pump
30 comprises a Siegbahn drag pump, said channels being formed on a surface of a
disc shaped stator.