

Title (en)
Single-stage and multi-stage roots pump

Title (de)
Ein- und mehrstufige Roots Pumpe

Title (fr)
Pompe Roots avec un et plusieurs étages

Publication
EP 0953771 A1 19991103 (EN)

Application
EP 99108156 A 19990426

Priority
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• JP 11706598 A 19980427

Abstract (en)
In the single-stage roots pump, in order to increase the compression ratio, three or more rotors (8,9,10) among 1st to n-th rotors forming one set, at least one of the air suction port (2b,2e) defined by the (n-2)th and (n-1)th rotors and the air suction port defined by the (n-1)th and n-th rotors being opened, the air discharging port (2d) defined by the (n-2)th and (n-1)th rotors being communicated with the air suction port (2e) defined by the (n-1)th and n-th rotors at the same side of an imaginary surface (FF) including the plurality of shafts, and the air discharging port defined by the (n-1)th and n-th rotors being opened. In the multi-stage roots pump, in order to communicate the discharging port of the preceding stage pumping chamber and the air suction port of the succeeding stage pumping chamber, three or more rotors among the 1st to n-th rotors forming one set in the same set, in the pumping chamber of a frontmost stage, at least one of air suction port defined by the (n-2)th and (n-1)th rotors, and the air suction port defined by the (n-1) and n-th rotors being opened, and the air discharging port defined by the (n-1)th and n-th rotors being communicated with the air suction port defined by the (n-2)th and (n-1)th rotors of the pumping chamber of a succeeding step at the same side of an imaginary surface including the plurality of shafts, in the pumping chamber of each stage except for the frontmost stage and the rearmost stage, the air discharging port defined by the (n-2)th and (n-1)th rotors being communicated with the air suction port defined by the (n-1)th and n-th rotors at the same side of the imaginary surface, and in the pumping chamber of the rearmost stage the air discharging port defined by the (n-1)th and n-th rotors being opened.
<IMAGE> <IMAGE>

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CPC (source: EP KR)
F04C 18/14 (2013.01 - EP); **F04C 23/00** (2013.01 - KR); **F04C 23/001** (2013.01 - EP); **F01C 1/126** (2013.01 - EP)

Citation (search report)
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