

Title (en)

VARIABLE INNER VOLUME RATIO-TYPE SCREW COMPRESSOR CONTROLLED BY A FREQUENCY CONVERTER

Title (de)

SCHRAUBENVERDICHTER MIT VARIABLEM INNENVOLUMENVERHÄLTNIS MIT STEUERUNG DURCH EINEN FREQUENZUMRICHTER

Title (fr)

COMPRESSEUR À VIS À RAPPORT VOLUMIQUE INTERNE VARIABLE CONTRÔLÉ PAR UN VARIATEUR DE FRÉQUENCE

Publication

**EP 1553300 A1 20050713 (EN)**

Application

**EP 03751474 A 20031014**

Priority

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- JP 2002301870 A 20021016

Abstract (en)

Regulating compression capability to a load is performed by an inverter (15) that regulates revolution number of an electric motor (11). This makes unload control in capability regulation unnecessary, preventing operational efficiency from lowering. Further, a capacity control valve for capacity control is eliminated for a simplified valve control mechanism. Regulating a variable inner volume ratio achieves the highest compressor efficiency corresponding to operating condition (capability). When a low inner volume ratio command is issued, a slide valve (19) is moved by a compression section controller (27) in an axial direction toward the electric motor (11). This advances completion time of a compression step to advance discharge of a compressed gas. When a high inner volume ratio command is issued, the slide valve (19) is moved in an axial direction toward a piston (25), which delays time of completion of compression step to delay discharge of a compressed gas. <IMAGE>

IPC 1-7

**F04C 18/16**; **F04C 29/10**

IPC 8 full level

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CPC (source: EP US)

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Cited by

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