

Title (en)
Multi-stage piston compressor

Title (de)
Mehrstufiger Kolbenkompressor

Title (fr)
Compresseur à piston à plusieurs étages

Publication
EP 2133568 A1 20091216 (DE)

Application
EP 08010771 A 20080613

Priority
EP 08010771 A 20080613

Abstract (en)
The compressor has dry-running piston-cylinder units (2, 4, 6) including separate linear drives (14, 16, 18) e.g. ball and screw spindles, for moving a piston. A control device (28) is designed such that the linear drives are controllable individually in speed and stroke. The control device changes a stage pressure ratio of the piston-cylinder units by the individual control of the linear drives. The piston-cylinder units are designed such that cylinders of the respective piston-cylinder units have differently large inner cross sections.

Abstract (de)
Die Erfindung betrifft einen mehrstufigen Kolbenkompressor mit zumindest zwei Kolben-Zylinder-Einheiten, welche jeweils einen separaten Linearantrieb zur Bewegung des Kolbens aufweisen, sowie einer Steuereinrichtung, welche derart ausgestaltet ist, dass die Linearantriebe individuell in Geschwindigkeit und Hub steuerbar sind.

IPC 8 full level
F04B 25/00 (2006.01); **F04B 25/02** (2006.01)

CPC (source: EP US)
F04B 9/02 (2013.01 - EP US); **F04B 25/00** (2013.01 - EP US); **F04B 25/02** (2013.01 - EP US); **F04B 35/01** (2013.01 - EP US)

Citation (applicant)
• DE 1228023 B 19661103 - BORSIG AG [DE]
• US 5863186 A 19990126 - GREEN JOHN S [US], et al

Citation (search report)
• [XY] DE 1228023 B 19661103 - BORSIG AG [DE]
• [XA] US 5863186 A 19990126 - GREEN JOHN S [US], et al
• [YA] DE 681653 C 19390929 - KNORR BREMSE AG
• [YA] US 2005042111 A1 20050224 - ZAISER LENOIR E [US], et al
• [YA] DE 669154 C 19381217 - SUETH MASCHF, et al

Cited by
EP3981983A1; DE102009020973A1; EP2253845A3; CN105971842A; EP3981982A1; EP2253845A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA MK RS

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EP 08010771 A 20080613; ES 08010771 T 20080613; PL 08010771 T 20080613; US 47727209 A 20090603