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(54) Pneumatic cylinder with cushioning means disposed in an end cover

(57) A pneumatic cylinder comprising a cylinder tube (1) with end covers (2), a piston (3) sliding within the cylinder tube (1),

- at least one piston packing ring (4) disposed on the outer peripheral surface of the piston (3) for defining at least one pressure chamber (7), and
- at least one outer port (8) for supplying and discharging compressed air to and from said pressure chamber (7) separated by the piston (3),
- a respective air outlet (6) positioned with an axial cushioning distance (X) to the end of the cylinder tube (1) for connecting the pressure chamber (7) with the corresponding outer port (8) via a wall channel () at least partly arranged along in the cylinder tube (1), whereby
- at least one end cover channel (10) with an integrated cushioning nozzle (9) is arranged in the end cover (2) for connecting the pressure chamber (7) with the corresponding outer port (8) in order to discharge compressed air within the pressure chamber (7) only through the cushioning nozzle (9) when the piston packing ring (4) passes over the air outlet (6) on the discharge side just before the piston (3) reaches the end of its stroke during the discharge cycle, wherein
- a check valve (11) is inserted in the wall channel (12) for stopping air flow to the air outlet (6) during the supply cycle of the corresponding pressure chamber (7).

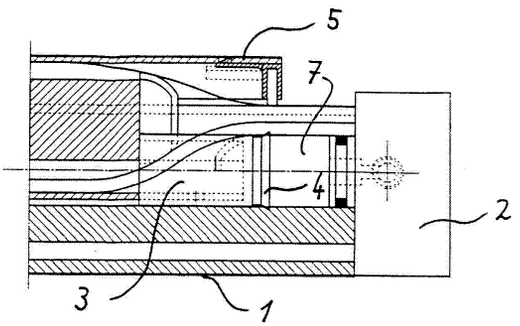

Fig.1

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EUROPEAN SEARCH REPORT

Application Number
EP 05 10 0708

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F15B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	23 June 2005	Rechenmacher, M

CATEGORY OF CITED DOCUMENTS

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