

Title (en)
END-OF-STROKE CUSHIONING DEVICE FOR A PISTON OF A DOUBLE-ACTING CYLINDER

Publication
EP 0060412 B1 19850508 (DE)

Application
EP 82101329 A 19820222

Priority
DE 3110132 A 19810316

Abstract (en)
[origin: EP0060412A1] 1. Device for braking the final part of the stroke of the working piston (21) of a double-action working cylinder, which piston is provided with a piston rod (1, 36), having the following features : a) one of the pressure-medium chambers (19) of the working cylinder is connected via a non-return valve (15, 14) to the associated pressure-medium connection (13) for the input and output of the pressure medium, the non-return valve (15, 14) being arranged in such a manner that it can be brought into the open position in the direction towards the pressure-medium chamber (19) ; b) the pressure-medium chamber (19) is additionally connected directly to the pressure-medium connection (13) via a bore (8) provided with a restriction (6) ; c) the non-return valve (15, 14) is arranged and designed in such a manner that, when the pressure medium is output from the pressure-medium chamber (19), initially the non-return valve (14, 15) is opened and, after a predetermined position of the working cylinder (21) has been reached, before the end of the stroke, the non-return valve (14, 15) is closed in order that the pressure medium displaced by the working piston (21) can initially flow substantially unhindered out through the open non-return valve (15, 14) and has to pass through the restriction (6) when the non-return valve is closed ; characterised by the following features : d) the valve-closing member (15) of the non-return valve (15, 14) is loaded in the closing direction by a spring (18) ; e) with the valve-closing member (15) is associated a permanent magnet (17) which cooperates with a structural unit (1, 36), which is associated with the working piston (21) and has different magnetic properties in the axial direction, in such a manner that, during the stroke, initially the spring-loaded valve-closing member (15) is held open by the magnetic force and the magnetic force is relieved as soon as the working piston (21) reaches the predetermined position before the end of the stroke.

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IPC 8 full level
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CPC (source: EP)
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WABCO EUROPA-KATALOG, TÜRZYLINDER 422802, Ausgabe 10.79

Cited by
US6633015B2; EP0662568A1; US5507218A; WO2009147405A1

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