

Title (en)

Fluid pressure-operated locking cylinder for controlling cover plates, especially aerating blinds.

Title (de)

Druckmittelbetätigter Rastierungszylinder zur Betätigung von Abdeckorganen, insbesondere Be- und Entlüftungsjalousien.

Title (fr)

Cylindre de blocage à fluide sous pression pour commander des plaques de couverture, en particulier des jalousies de ventilation.

Publication

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Application

EP 85108122 A 19850701

Priority

DE 3428228 A 19840731

Abstract (en)

1. Pressure-means-operated, double-acting locking cylinder (1) for controlling at least one cover means, in particular ventilation shutters, with - two pressure means connections (47, 48) arranged on one end of the locking cylinder (1), - one working piston (3), able to be acted upon on both sides, displaceable between two end positions and - a device containing two axially spaced ball locking mechanisms (balls 12, 12' and 13, 13') for mechanically locking the working piston (3) in both its end positions and for release of the working piston (3) and its subsequent displacement from one of its end positions to the other or vice versa under the control of pressure means, whereby - both end positions of the working piston (3) are determined by mountings (4, 5) fixed to the cylinder housing and corresponding to the ball locking mechanisms (balls 12, 12' and 13, 13'), - and a central control rod (14) is provided passing through the working piston (3) in a displaceable manner, movable by a control piston (21) between two endpoints, on which rod inner locking rings (28, 29) are arranged in a displaceable manner opposite the mountings, which rings have radially bearing areas (37, 38) on the ball side, so that each locks one set of balls (12, 12' and 13, 13') of a ball locking mechanism distributed uniformly over the periphery in one end position of the working piston (3), the inner locking rings (28, 29) being oppositely spring-loaded (springs 40, 41) toward one another and pressed toward shoulders (32, 33) arranged on the control rod (14), characterized in that - on each side of the working piston (3) there is arranged a ball locking mechanism the balls of which (12, 12' and 13, 13') are held on the working piston (3), - the mountings are constructed as outer flanged rings (4, 5) which for locking the balls (12, 12' or 13, 13') of each ball locking mechanism in one end position of the working piston (3) have radially outer areas (35, 36) on the ball side, - the shoulders (32, 33) of the control rod (14) are arranged between both inner locking rings (28, 29), - the control rod (14) is guided, in a sealed and displaceable manner, in the working piston (3), and - one pressure means connection (47) is connected to the working cylinder chamber (24) on the far side of the pressure means connections (47, 48) and one side of the working piston (3) through the control rod (14), which is hollow, and the other pressure means connection (48) is connected in known manner to the other working cylinder chamber (25) on the other side of the working piston (3).

Abstract (de)

Der druckmittelbetätigte Rastierungszylinder (1) besitzt einen Arbeitskolben (3) mit zwei Ringansätzen (8 und 9) zur Aufnahme von Kugelgesperren (12, 12'; 13, 13'), die zur Rastierung des Kolbens (3) in seinen beiden Endlagen zwischen radial gegenüberliegenden Widerlagerflächen (35, 37; 36, 38) einrasten, von denen die radial äußeren Widerlagerflächen (35, 36) gehäusefest und die radial inneren Widerlagerflächen (37, 38) auf einer hohlen Steuerstange gelagert sind, die mit einem Steuerkolben (21) zur Überwachung der Lage der radial inneren Widerlagerflächen (37, 38) verbunden ist, welche jeweils in Löserichtung entgegen Federkräften (40, 41) verschieblich gelagert sind. Die Steuerstange dient zur Druckmittelführung, wodurch die Druckmittelanschlüsse (47, 48) gegenüberliegend zusammen mit der Handbetätigung (20) zur Lösung der Verriegelung am einen Zylinderende (17) angeordnet werden können.

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