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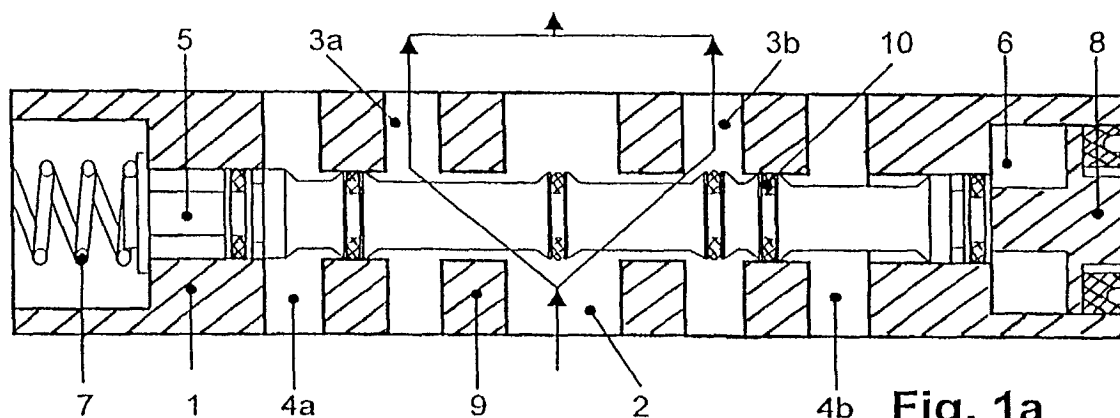
(54) **Multiway valve**

(57) This invention relates to a multiway valve for controlling the flow of a pressure medium from a fluid supply conduit or an exhaust conduit to a fluid delivery conduit comprising

a valve housing (1) with a substantially cylindrical axial hole which has a plurality of annular steps (9) forming inner chambers with corresponding outer ports (2, 3a, 3b, 4a, 4b) for connecting said conduits,

means for switching the fluid flow between said ports (2, 3a, 3b, 4a, 4b) guided axially movable in said hole and
means for moving said switching means relative to said valve housing (1) disposed on at least one end of said switching means.

According to the invention said steps (9) form at least two inner chambers for the delivery port (3a, 3b) and also at least two inner chambers for the exhaust port (4a, 4b).





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 25 0229

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 598 871 A (MASSEY STEVEN ET AL) 4 February 1997 (1997-02-04) * column 1, line 27-53 * * column 2, line 31 - column 3, line 33; figures 1-3 *	1,2,4,9	F15B13/04
Y	---	5-8	
X	US 3 563 272 A (MERCIER JEAN) 16 February 1971 (1971-02-16) * column 5, line 30-75; figure 3 *	1,3	
A	US 4 718 451 A (KOSUGI SEIJI) 12 January 1988 (1988-01-12) * column 4, line 3-7 * * column 5, line 24-28 * * column 5, line 44-49; figure 1 *	1,4	
Y	---	5-8	
A	US 4 587 991 A (CHORKEY WILLIAM J) 13 May 1986 (1986-05-13) * column 3, line 3-33; figures 1,4 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F15B F16K
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 16 May 2003	Examiner Busto, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 25 0229

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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16-05-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5598871 A	04-02-1997	US 5640987 A	24-06-1997
		AU 3596095 A	29-03-1996
		DE 69527976 D1	02-10-2002
		EP 1211449 A2	05-06-2002
		EP 0795088 A1	17-09-1997
		GB 2308175 A ,B	18-06-1997
		HK 1012694 A1	25-08-2000
		JP 10508927 T	02-09-1998
		WO 9608656 A1	21-03-1996
		AU 2241095 A	30-10-1995
		DE 19580307 T0	17-04-1997
		GB 2301655 A ,B	11-12-1996
		HK 1009345 A1	28-05-1999
		JP 10504873 T	12-05-1998
		WO 9527865 A1	19-10-1995
		US 6308690 B1	30-10-2001
		US 2002023626 A1	28-02-2002
US 3563272 A	16-02-1971	US 3477472 A	11-11-1969
US 4718451 A	12-01-1988	DE 3530019 A1	26-06-1986
US 4587991 A	13-05-1986	NONE	