

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2019/083100

A. CLASSIFICATION OF SUBJECT MATTER		
<i>F15B 13/02</i> (2006.01)i; <i>F15B 19/00</i> (2006.01)i; <i>F16K 17/06</i> (2006.01)i; <i>E02F 9/22</i> (2006.01)n		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) F15B; F15D; F16K; E02F; F16H		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2886877 A1 (CNH IND ITALIA SPA [IT]) 24 June 2015 (2015-06-24) paragraph [0024] - paragraph [0026]; figure 4	1,2
X A	CN 2854265 Y (LUO CHENGHAN [CN]) 03 January 2007 (2007-01-03) figures 1,2	1 2-7
X A	FR 2547665 A1 (OUTILLAGE AIR COMPRIME [FR]) 21 December 1984 (1984-12-21) figures 3-5	1 2
X A	DE 10136416 A1 (BRUENINGHAUS HYDROMATIK GMBH [DE]) 13 February 2003 (2003-02-13) paragraph [0043]; figure 1	1 2
A	WO 2011079891 A1 (BOSCH GMBH ROBERT [DE]; SPIELVOGEL CHRISTIAN [DE]; ZUG MARTIN [DE]) 07 July 2011 (2011-07-07) figures	1-7
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 19 February 2020		Date of mailing of the international search report 04 March 2020
Name and mailing address of the ISA/EP European Patent Office p.b. 5818, Patentlaan 2, 2280 HV Rijswijk Netherlands Telephone No. (+31-70)340-2040 Facsimile No. (+31-70)340-3016		Authorized officer Laurer, Michael Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
EP	2886877	A1	24 June 2015	BR	102014031393	A2	09 May 2017
				EP	2886877	A1	24 June 2015
				US	2015167276	A1	18 June 2015

CN	2854265	Y	03 January 2007	NONE			

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DE	10136416	A1	13 February 2003	DE	10136416	A1	13 February 2003
				EP	1409873	A1	21 April 2004
				US	2005029484	A1	10 February 2005
				WO	03014570	A1	20 February 2003

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				DE	102009060755	A1	07 July 2011
				EP	2519750	A1	07 November 2012
				US	2013092250	A1	18 April 2013
				WO	2011079891	A1	07 July 2011
