

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2019/084410

**A. CLASSIFICATION OF SUBJECT MATTER****H01T 13/20**(2006.01)i; **H01T 13/36**(2006.01)i

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)

H01T

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.
Y	DE 2542293 A1 (LINDSAY MAURICE EUSTACE) 24 March 1977 (1977-03-24) page 9, paragraph 2 - page 13, paragraph 1; figures 1-4	1-14
Y	DE 102015207886 A1 (BOSCH GMBH ROBERT [DE]) 03 November 2016 (2016-11-03) paragraph [0004] paragraph [0025] - paragraph [0038]; figures 1-4	1-14
A	US 2012240890 A1 (JOHNG IN TAE [KR]) 27 September 2012 (2012-09-27) paragraph [0032] - paragraph [0040]; figure 1	1-14

 Further documents are listed in the continuation of Box C.
  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

27 February 2020

Date of mailing of the international search report

09 March 2020

Name and mailing address of the ISA/EP

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**INTERNATIONAL SEARCH REPORT**  
**Information on patent family members**

International application No.

**PCT/EP2019/084410**

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
DE	2542293	A1	24 March 1977	NONE			
DE	102015207886	A1	03 November 2016	DE	102015207886	A1	03 November 2016
				FR	3035748	A1	04 November 2016
US	2012240890	A1	27 September 2012	KR	100990206	B1	29 October 2010
				US	2012240890	A1	27 September 2012
				WO	2011046364	A2	21 April 2011