

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2018/068049

A. CLASSIFICATION OF SUBJECT MATTER*A61M 37/00*(2006.01)i; *A01K 11/00*(2006.01)i; *H01L 41/12*(2006.01)i; *A61M 5/30*(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)

A61M; A01K; H01L; H02N; F03G

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 Y	US 6515382 B1 (ULLAKKO KARI M [FI]) 04 February 2003 (2003-02-04) column 3, lines 52-66 column 6, line 60 - column 7, line 4 column 11, lines 7-30 column 13, lines 13-39 column 14, lines 33-41 column 16, lines 5-21 column 24, lines 25-67 column 33, lines 32-54 figures 23-25	1-4,9,17,20-24 5-8,10-15,25
Y	US 2008009788 A1 (HUNTER IAN W [US] ET AL) 10 January 2008 (2008-01-10) paragraphs [0002], [0003], [0005] - [0008], [0032] - [0034], [0036] - [0039], [0059], [0061], [0064] - [0067] figures 1,8	5-8,10-15,25

 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

12 October 2018

Date of mailing of the international search report

22 October 2018

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

Jankowska, M

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2018/068049

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 102006046400 A1 (BOSCH GMBH ROBERT [DE]) 03 April 2008 (2008-04-03) paragraphs [0001], [0002], [0022] - [0024], [0026] claims 1,4,6-8,11,12 figure 1	1,9-11,15,16,18,20-24
X	DE 10196450 B3 (CONTINENTAL AUTOMOTIVE SYSTEMS [US]) 06 November 2014 (2014-11-06) paragraphs [0001], [0005], [0011], [0035] figure 2	1,9-16,18-20,23,24
X,P	WO 2017167684 A1 (ETO MAGNETIC GMBH [DE]) 05 October 2017 (2017-10-05) page 1, lines 1-10 page 3, lines 13-18 page 3, line 24 - page 4, line 2 page 4, lines 11-27 page 5, lines 4-10 page 5, line 31 - page 6, line 4 page 6, line 19 - page 7, line 2 claims page 1	1-5,9-11,16, 17,20,23-25
A	US 2012089114 A1 (HEMOND BRIAN D [US] ET AL) 12 April 2012 (2012-04-12) the whole document	1-16,23-25

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/EP2018/068049

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
US 6515382 B1	04 February 2003	AU 2627699 A CA 2288885 A1 EP 0980600 A2 JP 2001525159 A US 6515382 B1 WO 9945631 A2	20 September 1999 10 September 1999 23 February 2000 04 December 2001 04 February 2003 10 September 1999
US 2008009788 A1	10 January 2008	AT 485852 T BR PI0607934 A2 BR PI0608202 A2 CA 2597561 A1 CN 101128230 A CN 101132821 A EP 1848480 A1 TW 200640523 A US 2008009788 A1 WO 2006086719 A1 WO 2006086720 A2	15 November 2010 20 October 2009 01 December 2009 17 August 2006 20 February 2008 27 February 2008 31 October 2007 01 December 2006 10 January 2008 17 August 2006 17 August 2006
DE 102006046400 A1	03 April 2008	NONE	
DE 10196450 B3	06 November 2014	DE 10196450 B3 DE 10196450 T1 JP 3827307 B2 JP 2004505192 A US 2002030118 A1 WO 0209205 A1	06 November 2014 21 August 2003 27 September 2006 19 February 2004 14 March 2002 31 January 2002
WO 2017167684 A1	05 October 2017	DE 102016003599 A1 WO 2017167684 A1	28 September 2017 05 October 2017
US 2012089114 A1	12 April 2012	CN 103269737 A CN 107096101 A EP 2621564 A2 EP 2915552 A1 HK 1212265 A1 JP 6338624 B2 JP 2013539689 A JP 2016221309 A US 2012089114 A1 US 2014257236 A1 US 2017065769 A1 WO 2012048277 A2	28 August 2013 29 August 2017 07 August 2013 09 September 2015 10 June 2016 06 June 2018 28 October 2013 28 December 2016 12 April 2012 11 September 2014 09 March 2017 12 April 2012