

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 4394-J33WO1	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2018/012478	International filing date ( <i>day/month/year</i> ) 5 January 2018 (05-01-2018)	(Earliest) Priority Date ( <i>day/month/year</i> ) 9 January 2017 (09-01-2017)
Applicant  ZIMMER, INC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- the international application in the language in which it was filed  
 a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b.  This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2.  **Certain claims were found unsearchable** (See Box No. II)

3.  **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- the text is approved as submitted by the applicant  
 the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant  
 the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 6  
 as suggested by the applicant  
 as selected by this Authority, because the applicant failed to suggest a figure  
 as selected by this Authority, because this figure better characterizes the invention
- b.  none of the figures is to be published with the abstract

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2018/012478

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: 1-12  
because they relate to subject matter not required to be searched by this Authority, namely:  
**Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery**
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/US2018/012478

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. A61B17/84  
ADD.  
  
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)  
A61B

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

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 2015/150687 A1 (HOPKINS ANDREW [CH]) 4 June 2015 (2015-06-04) cited in the application figures 10-12	13-16, 19,20  17,18
Y	----- US 2014/277183 A1 (STALCUP GREGORY C [US] ET AL) 18 September 2014 (2014-09-18) paragraph [0041]; figures 4,5,18	13,14,20
Y	----- US 2014/030675 A1 (SANCHEZ RAMIRO [US] ET AL) 30 January 2014 (2014-01-30) paragraph [0035]; figure 2	13,14,19
Y	----- US 2007/233071 A1 (DEWEY JONATHAN [US] ET AL) 4 October 2007 (2007-10-04) paragraph [0033]; figure 10	13-16

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  16 April 2018	Date of mailing of the international search report  04/05/2018
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Hamann, Joachim
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2018/012478

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2015150687	A1	04-06-2015	AU 2014357337 A1	21-07-2016
			CA 2932585 A1	11-06-2015
			CN 105939682 A	14-09-2016
			EP 3079611 A1	19-10-2016
			JP 2016538929 A	15-12-2016
			KR 20160095059 A	10-08-2016
			US 2015150687 A1	04-06-2015
			WO 2015084791 A1	11-06-2015
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US 2014277183	A1	18-09-2014	CA 2896778 A1	25-09-2014
			EP 2967676 A1	20-01-2016
			JP 2016513535 A	16-05-2016
			US 2014277183 A1	18-09-2014
			US 2017252492 A1	07-09-2017
			WO 2014150904 A1	25-09-2014
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US 2014030675	A1	30-01-2014	EP 2877117 A1	03-06-2015
			US 2014030675 A1	30-01-2014
			WO 2014018166 A1	30-01-2014
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US 2007233071	A1	04-10-2007	AU 2007220001 A1	07-09-2007
			CN 101426444 A	06-05-2009
			EP 1996104 A1	03-12-2008
			KR 20080107449 A	10-12-2008
			US 2007233071 A1	04-10-2007
			WO 2007101267 A1	07-09-2007
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