

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2018/072233

**A. CLASSIFICATION OF SUBJECT MATTER****B65G 47/52**(2006.01)i; **B65G 47/76**(2006.01)i; **B65G 47/82**(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)

B65G

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	US 5135101 A (DUDLEY DAVID E [US]) 04 August 1992 (1992-08-04) column 1, line 45 - column 4, line 48; claims; figures	1-9
A	US 4369873 A (HEUFT BERNHARD [DE]) 25 January 1983 (1983-01-25) the whole document	1-8
A	US 5810516 A (OUELLETTE JOSEPH F [US]) 22 September 1998 (1998-09-22) the whole document	1-8

 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

20 November 2018

Date of mailing of the international search report

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

International application No.

**PCT/EP2018/072233**

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
US	5135101	A	04 August 1992	EP	0535298	A1	07 April 1993
				US	5135101	A	04 August 1992
US	4369873	A	25 January 1983	AT	372356	B	26 September 1983
				CA	1120433	A	23 March 1982
				DE	2801387	A1	19 July 1979
				DK	13479	A	14 July 1979
				EP	0003111	A1	25 July 1979
				EP	0029614	A1	03 June 1981
				ES	476817	A1	01 November 1979
				JP	H0217444	B2	20 April 1990
				JP	H0541525	B2	23 June 1993
				JP	S54108362	A	24 August 1979
				JP	S62171819	A	28 July 1987
				US	4369873	A	25 January 1983
US	5810516	A	22 September 1998	AT	192407	T	15 May 2000
				CA	2197752	A1	22 February 1996
				DE	69516696	D1	08 June 2000
				EP	0776311	A1	04 June 1997
				US	5611647	A	18 March 1997
				US	5628588	A	13 May 1997
				US	5810516	A	22 September 1998
				US	5896977	A	27 April 1999
				WO	9605127	A1	22 February 1996