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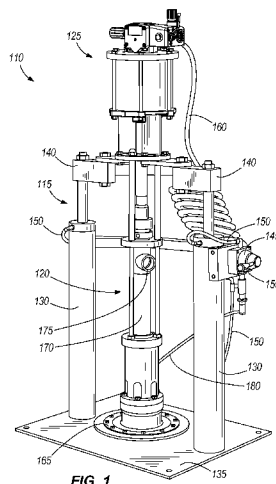


FIG. 1

(57) Abstract: A pump assembly including an air motor includes a modular relief valve assembly connected to a motive fluid inlet of the air motor. The modular relief valve assembly has a housing that contains an actuator assembly, a ball valve assembly, a bleed valve, a first pressure adjustment assembly, and a second adjustment assembly. The housing includes a motive fluid inlet port, a pressure regulator outlet, a bleed valve port, an actuator support, a pressure adjustment chamber, and a ball valve chamber. The pressure regulator assembly includes at least one gauge that displays at least one measurement parameter.



WO 2011/094603 A3

**A. CLASSIFICATION OF SUBJECT MATTER***F04B 17/00(2006.01)i, F01B 23/08(2006.01)i, F04B 49/22(2006.01)i, F04B 39/00(2006.01)i, F04B 49/00(2006.01)i*

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &amp; Keywords: air, motor, piston, pump, drop, tube, D-valve, pilot, and valve

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 04181066A A (KITCHEN; CLARENCE E. et al.) 01 January 1980 See columns 2-3, figs. 1-3.	1-2
A	US 06123008A A (SCHERER; OSWALD) 26 September 2000 See columns 4-5, figs. 1-2.	1-2
A	US 6722256 B2 (ROBERTS; CHARLES O. et al.) 20 April 2004 See column 2, fig. 2.	1-2
A	US 6736612 B2 (GIBBONS; GRAHAM W.) 18 May 2004 See column 2, figs. 1-2.	1-2

 Further documents are listed in the continuation of Box C. See patent family annex.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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