

ABSTRACT**Converter for converting mechanical energy into hydraulic energy and robot implementing said converter**

The invention relates to a converter for converting mechanical energy into hydraulic energy and to a robot implementing said converter. The invention can particularly be used in the production of humanoid robots in which autonomy is to be improved. The converter includes a shaft (10) rotated by
5 mechanical energy about a first axis (13) relative to a casing (14), a hub (20) comprising a bore formed about a second axis, the shaft (10) rotating in the bore, the two axes (13) being parallel and a distance between the axes forming an excentricity (E), at least two pistons capable of movement in a radial housing of the shaft (10), the piston bearing against the bore.
10 According to the invention, the movement of the piston feeds a hydraulic fluid into two annular grooves of the casing (14) arranged in an arc of a circle about the first axis (13), the hydraulic energy being generated by a pressure difference of the fluid present between the two grooves (40, 41), and the hub (20) is capable of translation along a third axis perpendicular to the first two
15 axes (13) in order to modify the value of the excentricity (E) between two extreme values, one being positive and the other being negative, so as to generate an inversion of the fluid pressures in the grooves (40, 41), thereby reversing the inlet and discharge roles of these grooves while maintaining the same rotation direction for the shaft (10).

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Figure 1