ABSTRACT

EXOSKELETON

The present invention discloses an exoskeleton which comprises a force balance back-carrying unit composed of a back-carrying assisting unit and a front-carrying assisting unit, a hip unit and a lower limb supporting unit, wherein the force balance back-carrying unit transfer the weight of a back-carrying load and/or a front-carrying load to the lower limb supporting unit through the hip unit to achieve the effort of assisting for the back-carrying load and/or the front-carrying load, wherein the length of the hip unit can be adjusted on the left-right plane and the upper-lower plane to adapt to wearers with different body types. On the other hand, the exoskeleton of the present invention is also provided with a buffer device to reduce the impact of the loads on the exoskeleton. The exoskeleton of the present invention also adopts quick-release joints, so as to modularize each part and standardize a docking interface of each module. The present invention can adapt to wearers with different hip shapes, and can transfer the weight of the back-carrying load and the front-carrying load to the lower limb supporting unit separately and simultaneously, so as to increase the weight-bearing efficiency and reduce the injuries to the back, the hands and the ankle joint.

Figure. 1a