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(54) **PALLET CHANGING SYSTEM FOR A MACHINE TOOL**

(57) The pallet changing system (1) comprises a pallet deposition and pick-up station (2) and a pallet loading and unloading station (3), horizontally spaced from one another along a first horizontal direction (A-A), as well as a pallet handling unit. The pallet handling unit includes: horizontal guide means (8) extending along the first horizontal direction (A-A) between the pallet deposition and pick-up station (2) and the pallet loading and unloading station (3); a pair of motorized uprights (11), which are jointly movable in a controlled manner in the first horizontal direction (A-A) between the pallet deposition and pick-up station (2) and the pallet loading and unloading station (3), each upright (11) being provided with a respective motorized lifting carriage (12) vertically movable in a controlled manner, each lifting carriage (12) being provided with a pair of gripping devices (14) which are horizontally spaced from one another and selectively or jointly controllable to engage a corresponding end of a

pallet (P) so as to allow rotation of the pallet (P) about a first horizontal axis; a pair of motorized auxiliary carriages (20), which are jointly movable in the first horizontal direction (A-A) between the pallet deposition and pick-up station (2) and the pallet loading and unloading station (3), and are provided each with a gripping device (21) arranged to engage a corresponding end of the pallet (P) facing the pallet deposition and pick-up station (2), so as to allow rotation of the pallet (P) about the first horizontal axis; and a motorized transporting carriage (30) which is arranged to transport, in a vertical attitude, the pallet (P) with the workpiece (WP) connected thereto, and is movable between the pallet loading and unloading station (3) and a working area (SW) of the machine tool (MT) in a second horizontal direction (B-B) forming an angle with respect to the first horizontal direction (A-A).

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