

Title (en)
VACUUM LIFTER

Title (de)
VAKUUMHEBER

Title (fr)
DISPOSITIF DE LEVAGE SOUS VIDE

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Application
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Abstract (en)
[origin: WO2019030735A1] A vacuum plate lifting system for lifting sheet material articles comprises a vacuum lifter apparatus (4) for lifting sheet material articles, a lifter actuation system configured to lift and/or move the vacuum lifter apparatus (4) during use and a control system (8), the control system being configured to control the lifter actuation system during said movement. The vacuum lifter apparatus comprises: a substantially horizontal suction plate (10) comprising a perforated suction lifting surface (11), said surface being downwardly oriented for making contact with an upper surface of said articles to be lifted, an airflow suction system for conveying vacuum air pressure to said perforated suction lifting surface; and at least one mount (100) for connection of the suction plate to at least one actuator of the lifter actuation system for lifting and/or moving the suction plate during use. There is at least one suction lifter (28, 28', 28'') proximate an edge of the suction plate, said suction lifter comprising a downwardly oriented suction cup (87), said cup being movably mounted in a substantially vertical direction relative to the suction plate and being connected to a source of air pressure for providing air suction to said cup for plucking upwards a local area of said articles to be lifted. A suction cup actuation system is configured to drive said movement of the suction cup between a raised orientation in which the suction cup is raised relative to a level of said suction lifting surface and a lowered orientation in which the suction cup is substantially at or below the level of said suction lifting surface whereby, in use, said air suction is directed substantially downwardly towards a sheet material article to be lifted when said suction cup is in the lowered orientation. The control system is operable to control the operation of the lifter actuation system and the operation of the suction cup actuation system to initially pluck said local area of said article to be lifted prior to applying said vacuum air pressure to said perforated suction lifting surface to lift the remainder of said article.

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