

A packaging apparatus (1) for heat sealing packages (P) comprising a vacuum chamber (4) having an elongated opening (5) extending along or parallel to a longitudinal axis (L) of the vacuum chamber (4) and a conveyor (8) configured for receiving semi-sealed packages (P) and for moving the semi-sealed packages (P) relative to the vacuum chamber (4) along a main movement direction (M) such that each semi-sealed package (P) positioned on the conveyor (8) may have, during the relative movement of the semi-sealed package (P) with respect to the vacuum chamber (4), a terminal portion (TP) passing through the elongated opening (5) with its opening relatively moving within the vacuum chamber (4), while the main portion (MP) relatively moves outside the vacuum chamber (4). The packaging apparatus (1) further comprises evacuation means (9) fluidly communicating with the vacuum chamber (4) for evacuating gas present in the semi-sealed packages (P) and forming evacuated semi-sealed packages (P). The packaging apparatus (1) further comprises a heat sealer (13) configured for heat sealing the terminal portion (TP) of each evacuated semi-sealed package (P) thereby forming heat sealed packages (P). The packaging apparatus (1) is provided with at least one pre-heating unit (39, 40) arranged along the main movement direction (M) upstream of the heat sealing station (14) for pre-heating at least a band of the terminal portion (TP) of each evacuated semi-sealed package (P). A packaging process is also disclosed. The packaging process may use the packaging apparatus (1).