



Problema Manipuladores Robóticos

Dobragem e Colocação de Tampa em Caixas de Embalagens de Vinagre

V001 – 2023 / 03 / 24

O problema consiste em pegar em tampas para caixas de cartão, que se encontram num dispensador, dobrá-las e colocá-las nas respetivas caixas. Na Figura 1 podemos observar as tampas ainda na sua forma plana (como estarão no dispensador) e a caixa já com uma tampa colocada. Na Figura 2 mostra-se a tampa plana e dobrada e as suas dimensões. O processo de colocação da tampa pode ser compreendido observando a Figura 3, onde na Figura 3 a) é mostrada a fase inicial da colocação da tampa e na Figura 3 b) a tampa já colocada na caixa. As caixas de cartão estarão dispostas numa palete, como é apresentado na Figura 4. Nesta Figura são também mostradas as dimensões de implantação e das caixas de cartão.



Figura 1 – Caixa com tampa e tampas antes da dobragem

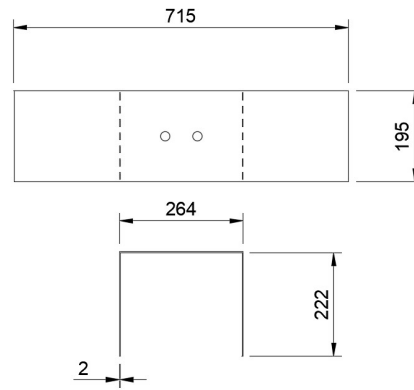
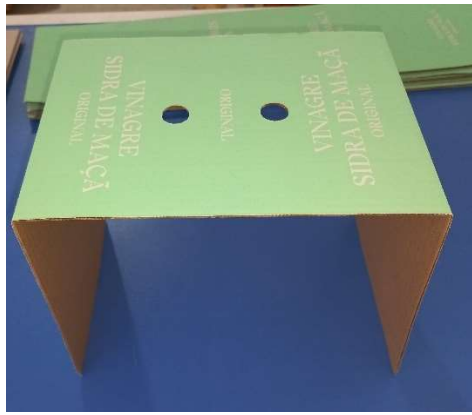


Figura 2 – a) Tampa dobrada; b) Dimensões da tampa



Figura 3 – a) Tampa antes de ser colocada; b) Tampa colocada na caixa

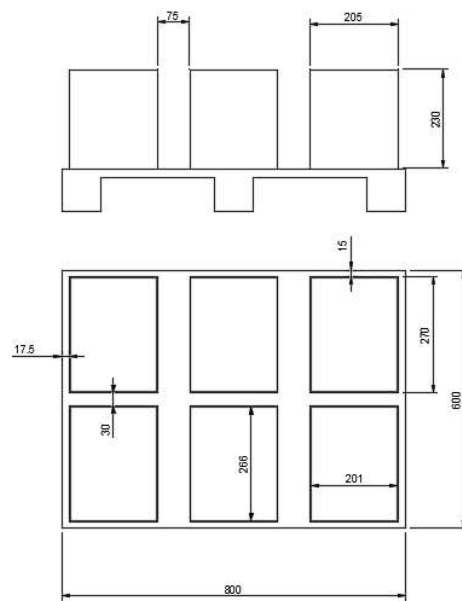
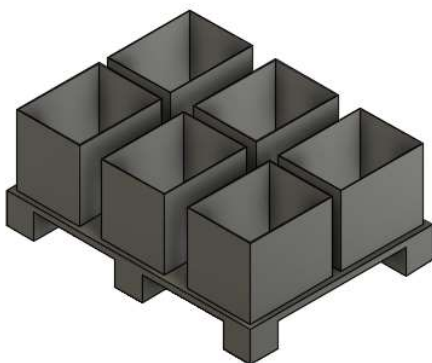


Figura 3 – a) Palete com as 6 caixas b) Dimensões da caixa e da palete



Industrial Robotic Challenge

Folding and Covering Vinegar Packaging Boxes

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The challenge consists of taking covers for cardboard boxes placed on a dispenser, folding them and placing in the cardboard boxes. In Figure 1 it is possible to see the cardboard lids in their flat form (as they will be in the dispenser) and the cardboard box already with the cover in place. Figure 2 shows the flat and folded cardboard lids and its dimensions. The placing of the cardboard lid can be understood observing Figure 3, where Figure 3 a) shows the initial phase of placing the cardboard lid and Figure 3 b) the cardboard lid already placed on the box. The cardboard boxes will be arranged on a pallet, as shown in Figure 4. This Figure also shows the dimensions and organization of the cardboard boxes on the pallet.



Figure 1 – Box with lid and lids before folding

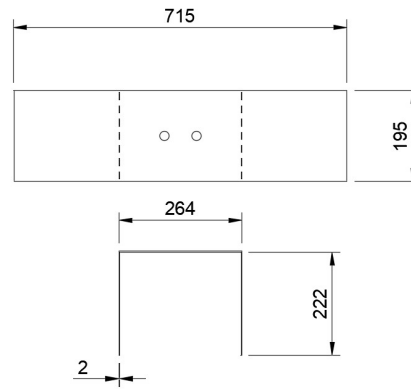
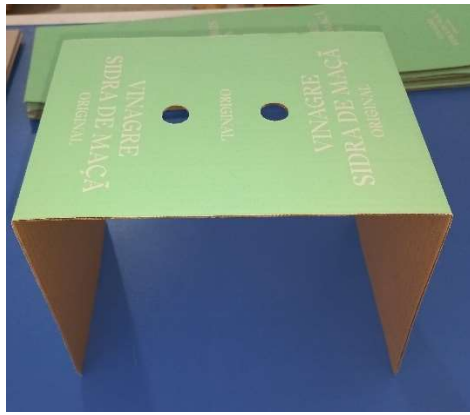


Figure 2 – a) Folded cardboard lid; b) Dimensions



Figura 3 – a) Cardboard lid before being placed; b) Cardboard lid placed on the box

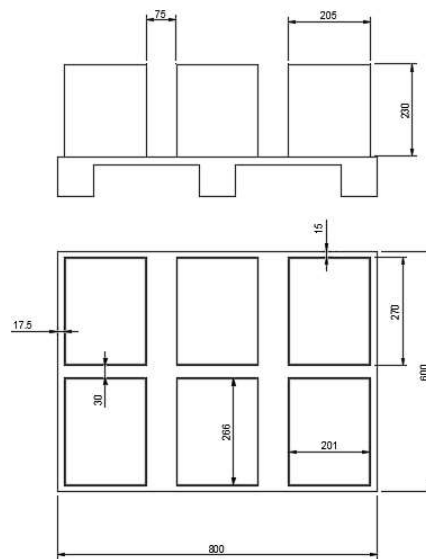
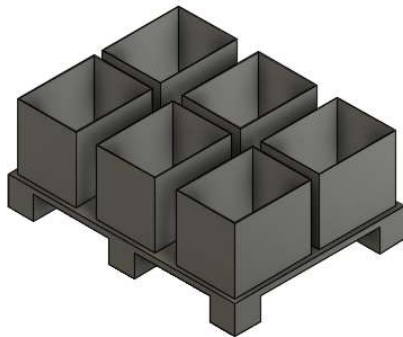


Figura 3 – a) Pallet with 6 cardboard boxes b) Carton boxes and pallet dimensions