PEAT PACKAGE PALLETIZING CELL
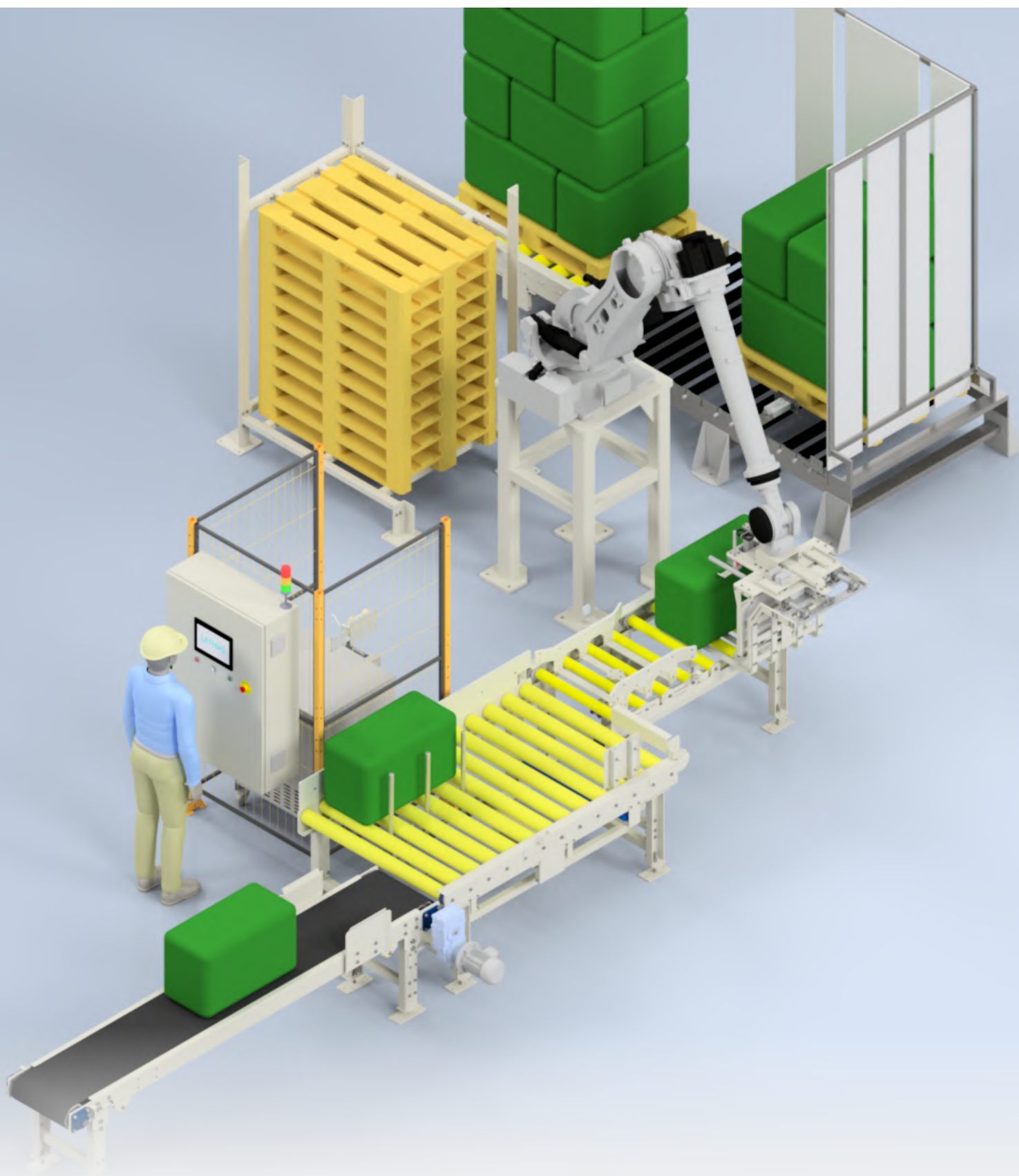
The automated cell palletizes peat bags into multi-layered, transport-ready stacks. The system gives the end-user a wide variety of functionality with customizable parameters, while retaining all the benefits of an easy-to-use, compact system. The cell consists of two incoming peat bag-positioning conveyors, pallet stock, a placement tower, a human-machine interface screen, a robot, and its claw, and a mounting platform, as well as its controller.

Flipping conveyor

The first conveyor either flips the peat bags on their side or simply pushes them towards the second conveyor, depending on how the operator has configured the system.

Rotating conveyor

The second conveyor rotates the peat bags 180 degrees, if necessary, and then, at the end of the conveyor, positions them accurately so that the robot can pick them up.

Claw

Multifunctional robot claw can pick up peat bags as well as pallets. During pallet or peat bag handling, they are fixed in place within the claw by pneumatic safety cylinders.

Pallet stock

The frame of the pallet stock acts as a place for storing the pallets that will be used for palletizing.

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Using the HMI screen, cell operators can not only monitor the current state of the cell, but also create multiple peat bag orientation and offset configurations and then save them in the system's database. The screen provides additional functionality such as manual control of the cell and work mode selection.
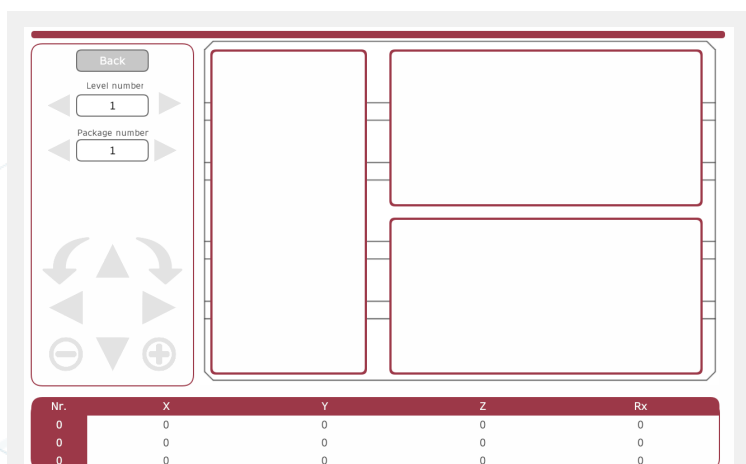
Main screen

The main screen gives a general overview of the system and enables to monitor all the current information as well as toggle between several work modes.
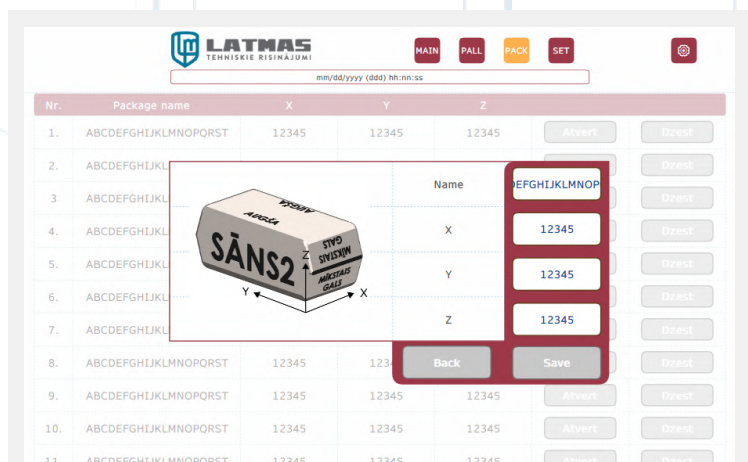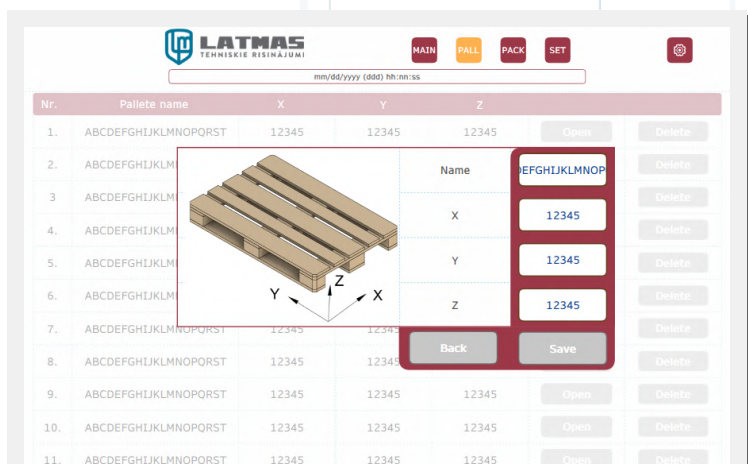
Package editor

The peat bag information editor allows the operator to input new entries in the peat bag database, including all the nominal dimensions as well as a designation.
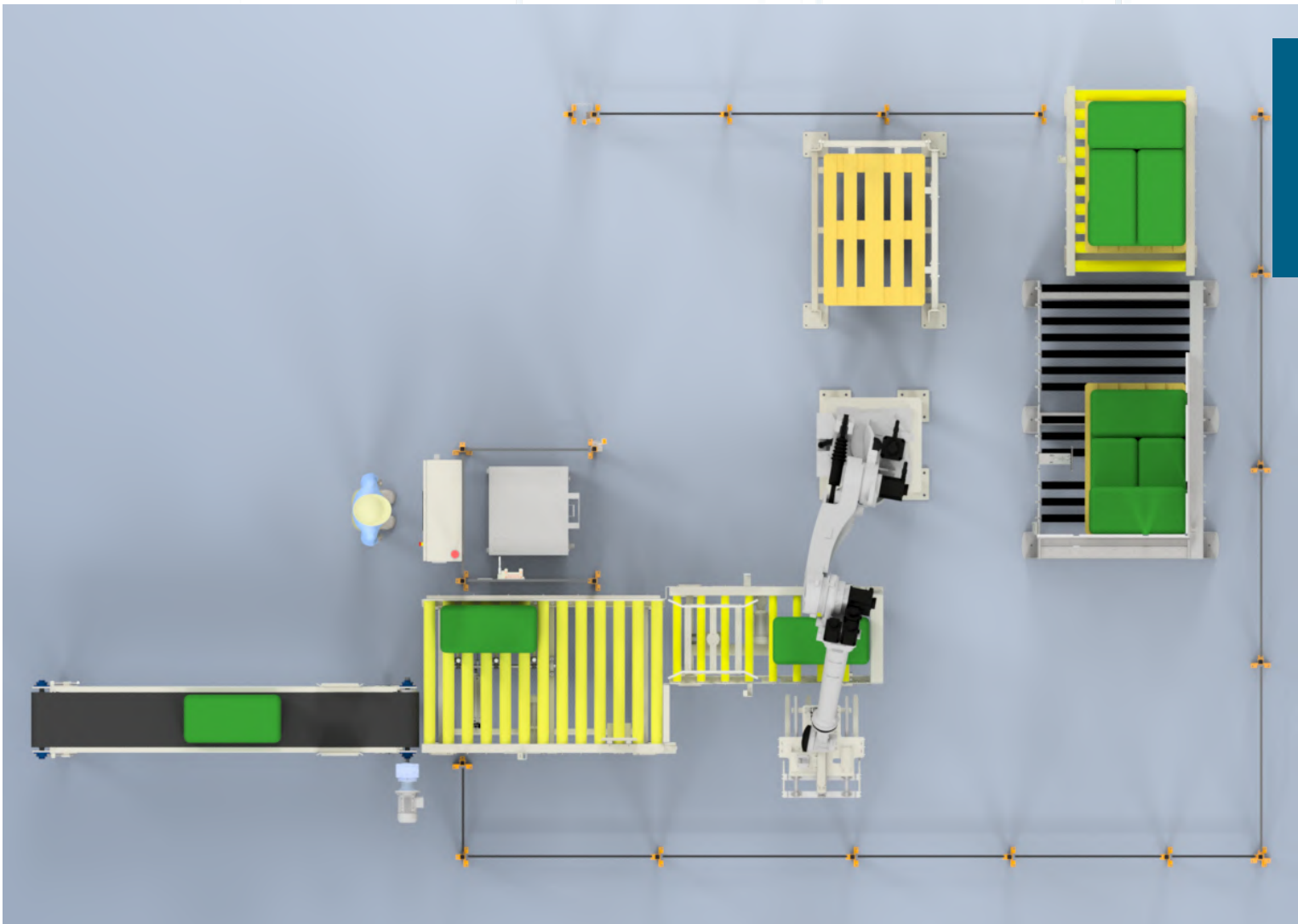
Offset editor

The offset editor provides the ability to make minor adjustments to the peat bag placement, allowing to create a tighter or more loose-fitting stack.

Pallet editor

The pallet information editor operates the same way as the peat bag editor. The operator can input or edit entries within the database.

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Technical information

Robot parameters

Payload..160 kg

Max reach...3036 mm

Degree of freedom...6 axes

Repeatability...+- 0.15 mm

Ambient temperature.....................................0-45 C

Approximate weight......................................985 kg

Max rated power..8 kVA

Controller model...Hi5a

Cell parameters

Size...4000 x 5500 mm

Cell speed..up to 10 packages / min

Max package size..400 x 400 x 800

Max package weight...80 kg

Max pallet size...800 x 1200 x 90 mm

Required air pressure..6-7 Bar

Required voltage...3 x 400 VAC