

Palletizing and Packaging

Turn Key systems for Palletizing and Packaging

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Regardless of whether and how work pieces are machined, they have to be packaged and/or palletized at the end. According to the **versatile automation solutions** of CIMOTEC, a comprehensive **modular system** also arose here, which has an answer for almost all requirements through the **variability** of CIMOTEC systems.

Continuous processes demand also continuous material flow in order to be able to produce **rationally and cost-effectively**. This capacitates the CIMOTEC systems to palletize and package by **Space- and function optimized automation**. A perpetually same gripper and depositing of products/work pieces by robot or Automaton facilitates a similarly continuous precision of packing structure, which ultimately is also the **figurehead** for the manufacturer company.

Especially in CIMOTEC Systems, a regulating and/or supporting effect of operators is reduced to a minimum. Personnel capacities can be shifted to essentially more challenging stations.

In volume and design, the total system in CIMOTEC is not only put together to the task to be carried out, but also to all other general conditions **individually** in appropriate manner.

Highest reliability, highest servicing-friendliness and thus also the **highest plant availability and operating efficiency** are present on the top rung in all solutions and products of CIMOTEC.



CIMOTEC was always confronted with the functions before and after the machining in course of projection of **CIMOTEC processing devices**, and has developed from these requirements **space-saving, variably shapeable solutions** also for the tasks for palletizing and packaging.

For the supply of products/work pieces, the most different techniques (such as belt conveyors with isolation, camera recognition systems, mechanical and/or pneumatic stopper systems) are used, in order to be able to receive the products/work pieces aligned. According to products, total pallet devices are sorted and processed here.

Much **know-how** are put in the **CIMOTEC gripper technique**, which not only grabs the parts, but also facilitates a gap-free piling, and are packed regardless of form-locking, friction-locking or by means of vacuum.

As manipulator, robots are not exclusively used by CIMOTEC, but also linear and/or pivoting automatons are built and integrated. Combinations of various technologies are also nothing exceptional for CIMOTEC.

Also for the supply of empty pallets or other package containers (pallet cages or similar), CIMOTEC offers different **system components** such as pallet stations, pallet dispenser, manually loadable pallet centering devices from our product program. As requisite for special solutions, this is **individually** constructed and built.

With Pallet positioning devices, conveyors and/or secondary packaging stations, regardless of what should pass with the finished package-goods, CIMOTEC supplies in an appropriate manner on demand.

Tricky boundary conditions are fulfilled by **genial detailed solutions**, in order to set up cartons on edge of pallets, such as the case of the above example.

All functions are supervised over **most modern sensor techniques**, in order to prevent interruption to the process and not only to recognize. The total process is of course under consideration of **protection techniques conforming to standards**.

To summarize, CIMOTEC has considered supplying completely conclusive solutions, for which you do not have to worry any more, if your product/work pieces were safely brought on the way.

Application Examples



Palletizing cell with duplex gripper for stacking of system plates from the interior design technique. Ground plates are taken up by pairs by intermediate conveyors and stacked by robot. The cell is mounted directly on the outlet conveyor of the assembly line, and integrated to the safety fence connection of the total plant.



The robot removes engine blocks from a steel pallet, hangs this on a radiation chamber during reception, and packages the engine blocks after removal from the machine finally into a transport pallet. The preparation of the empty- and full pallets is carried out manually by the operator. For this, appropriate shutters with operator panels are integrated in the safety fence.



Palletizing- and packaging systems arranged on a robot cell. The robot removes in one cycle up to two different die-cast work pieces with a gripper from a press and puts the work piece non-mixed in separate cassette-pallets. The pallet system takes over two delivery chains of 12 pallet stacks running outwards and delivers the full pallet stacks to two inner chains again. With the mounted grab handling, the empty pallets are bit by bit stacked on the inner chains. The full stack is transported for removal after last die-cast part is put by the robot.

Application Examples

Palletizing cell with sophisticated supply and removal technique. With a cushion-vacuum system, the robot takes up the cartons without damage and stacks it on the pallets, which are delivered from the CIMOTEC pallet dispenser. The conveyors, including the swiveling belt has the specialty that holds the partially vertical cartons on the pallet. After swiveling, the full pallets run to a foil packaging station, before it is delivered to the removal area.



Pallet cages are supplied over a chain conveyor with transfer stations and muting area. Two pallet places are resulted from the transfer station in availability of the robots. The robot puts big ring-diaphragms made of cast aluminum by pairs on intermediate liner on the pallet cage on the removal strand. The attraction is that at starting of the device, an empty pallet cage is run up to the loading place. The further pallet cages are loaded with the intermediate layers, which are necessary for a filled pallet cage. The robot takes an intermediate layer from a box alternately with the same gripper into the other and the ring-diaphragms by pair. Thus, an additional feeding technique is omitted, as well as corresponding manipulator.



At the end of a finishing line, the work pieces are positioned in tiers to six and aligned. The robot takes up a position and puts it in boxes. The base pallets with empty boxes are brought manually respectively to left and right by robot through loading doors in positioning stations. Beside that, an empty base pallet is positioned respectively, on which the robot moves the empty boxes in order to fill them there. The transfer of boxes occurs with the same gripper, which fills it.



This is only a small excerpt from the voluminous pallets on implemented solutions. We also find the appropriate solution for your automation challenge, contact us!

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