

IPallet Palletiser



Collaborative Robot Solutions

Safety, footprint and mobility are some of the benefits of the IPallet palletiser that sets this system apart.

The IPallet does not require fenced guarding around the unit, a standard system can take up as little as 2500 x 1500mm of space.

The **collaborative robot** (cobot) comes with a user friendly HMI that does not need programming by the operator. The software will store the various box orientations, box sizes, number of layers and rows, it only requires the operator to select the set up they need. A new App allows for easy programming to create a new layout.

Safety

It is critical that safety be at the forefront of the design and build, especially when you can create a system without the need for guarding/cages.

Firstly the cobot arm has force sensors that are located on all the joints. The sensors act to restrict the impact force when coming into contact with something or someone. A cushioned 'halo' around the gripper unit both protects the gripper head and whatever it may knock into.



It is important to understand that a force limited collaborative robot on it's own is not sufficient to meet the requirements of EN ISO 10218, the harmonised safety standard used to achieve CE conformity for robotic applications. Even though the robot itself has a CE mark of conformity, this is merely an indication that the equipment is CE certified as a component part and not a complete system. An OEM such as ourselves have a responsibility to make sure the complete machine is designed and built to not only perform the required function, but that it does so safely within the scope of the machinery directive as a CE compliant machine. As such, additional safety features are generally required as a means to ensure the machine is fully compliant.

One solution is to add sensors at various points on the machine. The sensors detect movement, when something or someone is approaching the machine various functions can be put in place to determine what the machine is to do, slow down or completely stop for example.



Versatility

Stacking Formats

Whilst some processes will be very simple, for example; one sized box to be picked and placed onto one sized pallet. There will be many operations that will require picking a number of different sized boxes and placing them on different pallets.

The latter process will require the Palletiser to have a vision system fitted that can identify the box for it to be picked and placed on the correct pallet. Identification of the box can come from reading a barcode among other methods of recognition.



Reaching the heights

Manually loading a pallet has many challenges, being limited on the height someone can physically stack a pallet is one. A standard IPallet can reach up to 1.2m, anything beyond this would need a lifter unit, we integrate lifter units to heights up to 2.4m.

The lifter unit can also be used in scenarios where you only need to stack up to 1.2m, but the factory layout may require the cobot to pick from a high point.

AIV

Working in conjunction with cobots, we supply Autonomous Intelligent Vehicles (AIV) that can, among other things, transport pallets from a loading area to an unloading area.

The AIV systems can self-navigate around a warehouse/factory and avoid hitting obstacles, whilst automatically picking the quickest route to complete a task.



Bringing efficiency
to your lines

Mobility

The standard palletiser is a mobile system that can be easily moved and set up in a new area very quickly. The frame was designed to have the arms fold inwards to make it more compact for moving the unit about. The IPallet accepts standard pallet trucks.

An optional vacuum pump integrated within the cobot offers more freedom in its mobility, there is no external compressed air required.



**Contact us for a
free project consultation**

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