

One of the most crucial aspects in ensuring that a robotic palletizing system works correctly is the choice of gripper. This is a critical component to carrying out the project, as it is responsible for moving and positioning the products during the palletizing process.

There are several types of grippers in the industry: pressure grippers, suction grippers, and comb grippers (attachment from below). The following table shows which types of boxes can be palletized with each type of gripper:

	BUSHEL BOX	BOX B1	BOX EXHIBITOR	PACK WITH TRAY	SHRINK-WRAPPING PACK	MASTER PACK	ENCASTRABLE CARTON BOX	ENCASTRABLE PLASTIC BOX
Kinds of gripper used in palletizing robots			7					
SUCTION GRIPPER		\bigcirc				\bigcirc		
CLAMP		\bigcirc				\bigcirc	\bigcirc	\bigcirc
COMB GRIPPER	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		



For SPS's palletizing robots, we always work with **comb grippers** due to the advantages they offer in key aspects compared to other alternatives. These advantages include **versatility**, **quality**, **efficiency**, **and safety**.

VERSATILITY

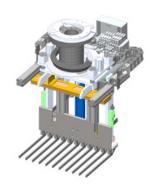
The comb gripper stands out for its versatility in a robotic palletizing system. Its design allows operators to work with **different types and sizes of boxes**, from 5"x5"x4" to 48"x16"x16", ensuring that future changes in the customer's packaging will not require any modification of the gripper. This is made possible by the lower and upper clamping of this type of gripper.

QUALITY

Each box on the pallet is precisely positioned due to the palletizer's design and its reference plate, which ensures the exact positioning of the boxes in their corresponding place. This allows for **orderly and uniform palletization**, which guarantees the stability of the loads and facilitates their handling and transport.

EFFICIENCY

The SPS gripper does not require any modifications when there is a format change, which maximizes your production efficiency. This means that it is not necessary to stop the palletizing process to make adjustments or adaptations to the gripper. In addition, the boxes will be properly placed on the pallet thanks to the use of comb grippers.



SAFETY

Bottom and top clamping provides a degree of safety during the palletizing process. This prevents the B1 boxes from breakage or unintentional opening, as long as they are adequately sealed. It also **minimizes the risk of falling or damage to the products** during the entire process.

DURABILITY

These features of the comb gripper result in greatly increased durability in the palletizing system. In addition, SPS grippers are designed to be highly durable and withstand demanding working conditions. Thanks to their robust construction and quality materials, they are guaranteed to lend optimal performance for many years. This ensures a good **long-term investment**, as the machines can work efficiently and adapt to any type of box for an extended period of time, usually between 15 and 25 years.

