

## **INDEVA Industrial Manipulators for handling paper or plastic bags Chemical Industry**

Workers of a Company manufacturing mixtures for soaps must handle plastic or paper bags weighing about 25 kg in very frequent and repetitive work cycles. Manual load handling without any lift assist device is not allowed as it can be harmful for the operator and would imply possible slowdown or stops of the work flow. It is also necessary to avoid that the powder contained in the bags come in contact with the workers' hands to avoid skin irritation.; powder is also present in small amounts also on the surface of the bags, therefore picking and holding the bags with bare hands is not allowed.

A [hoist is not the right solution](#), due to its fixed speed for the up/down movements and the need for the operator to keep a button pressed all the time. Such features make this device a non- ergonomic nor productive solution.

A pneumatic manipulator is not the right solution as well, because it does allow to lift and position loads in a fast and smooth way as it is, instead, required for these repetitive handling work cycles. In fact the inertia forces typical of a pneumatic manipulator in the direction change, in speed increase/decrease of load displacement along the vertical axis, as well as in load positioning, adversely affect the level of ergonomics and safety for the operator.

The only solution that could fully satisfy all the above mentioned requirements is the installation of column mounted [INDEVA manipulators](#) , [Liftronic model](#) with a high vacuum pump.

An INDEVA industrial manipulator, thanks to its electronic control which eliminates all inertia forces, allows for smooth, quick yet precise movements and load positioning.

Very important as well the fact that an INDEVA Liftronic L80 allows a vertical excursion of about 3 meters, making it suitable for reaching different pick/release heights.

The INDEVAs feature anti-load release safeties, which prevent the load to fall in case of power failure and consequently prevent risks for the operator and for the integrity of the bag. In case of power failure, the bag won't be abruptly released, but it will remained firmly gripped by the suction cups, while the gripping tool slowly descends down until the load reaches a stable support.

A Indeva is a truly auto weight sense and auto balancing lift device and gets adjusted to different weights in an automatic and continuous mode; This allows the operator to work with lots of bags of different weights without having to adjust the system to the new weight or to pre-select a different setting each time.

These features, which make the INDEVA manipulators unique, allow levels of [ergonomics](#), safety and productivity unmatched and unrivaled by other manual load handling systems.

The 4 manipulators supplied to this Company are complete with 3 filters that protect also the vacuum production unit and capable of collecting all suctioned powder even in the case of bag rupture.

For cost and space optimization a large size air tank for feeding 2 manipulators was supplied.

All operators say their life has changed since they are using the INDEVAs and the Company Administrator registered increase of productivity within a short time period since the installation of the four INDEVA units.



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**INDEVA**  
INTELLIGENT DEVICES FOR HANDLING