

## MANIPULATORS FOR LARGE AREAS

Solaut realizes manipulation systems for packaging and production departments and for loading and unloading products.

Due to the large areas enslaved, Solaut manipulators are able to carry objects weighing up to 100 kg of portions of space for up to 8 meters wide and with a length of 10 meters up to several tens of meters.



**Manipulators for large areas**

The manipulator consists of the following essential elements:

- Two longitudinal runways: constituted by a pair of steel beams double "T" supported by a series of uprights also made with beams double "T". On the streets of race runs the crane. Flanked to one pathway there is a support guide of the cables to festoon feeding the bridge crane.

Two motorized carts to support the crane. Each cart has 4 wheels driving on the runways and two longitudinal sliding wheels. The two wheels are a neutral and a motorized. The motorized wheels are driven by a pair of worm geared motors with three-phase asynchronous motors. The motors are powered by an inverter that allows fine-tuning of speed.

- Finish racing for stopping the longitudinal motion of the carriages.



**Gripping element**



**Example of application in a department**

- Bridge crane consisting of a beam with a rectangular section on which runs the lifting group and a truss that supports the cables in festoons of electrical and pneumatic power of the lifting assembly.
- Cart support of the lifting group that envelops the beam with a rectangular section and by means of a series of wheels and rollers allows the translation of the lifting group with low friction. The translation is carried out by the operator thrust exerted directly on the gripping element.
- Group lifting constituted by a body driven by a gear motor worm screw and a servomotor. The servomotor guarantees extreme precision in the control of speed. An electromagnetic brake is used to stop the load in case of emergency. The brake is calibrated on the maximum load lifting so as to avoid damage in case the system is hooked an excessive load. A microprocessor controls all lift functions.
- A gripping element realized according to the specific needs of lifting.
- Features common to all the gripping means is the presence of a load cell that limits the load lifted to the nominal value. If the load increases for any outdoor event, the gripping element is lowered to the ground at a controlled speed and at the same time you hear an alarm tone.
- Control console with a joystick to control the longitudinal slide forward or backward and simultaneous adjustment of speed. To control the lifting you can have a second joystick or a handle sensitive to drive the lifting speed. On the console there are also commands of the organ of the press.



**Front view of the bridge crane**



**Side view of bridge crane**

TECHNICAL SPECIFICATIONS	
FEEDING	380V - 50Hz
ABSORPTION	1 KW
WORKING TEMPERATURE	5 - 50°
WEIGHT	
PROTECTION	IP54
DIMENSIONS	8000 x 2000 x 3000 mm.
PRESSURE - AIR CONSUMPTION	6 bar
LIFTED MASS	100 Kg



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