

## 1.) Operating Procedure

The machine is fitted with a tooling consisting of a special safety hook for the repetitive handling of the customer-provided tooling head with mechanical units.

## 2.) Technical Data:

<b>Product:</b>	Mechanical parts
- Weight:	25 - 100 kg
<b>Manipulator:</b>	POSIFL, column mounted <b>PFC</b> according to drawing no. 18 0810 767
- Maximal range:	3.000 mm      refer to the axis of hook
- Vertical lift:	min. 50 mm      lower edge hook max. 1.850 mm      lower edge hook
- <b>Max. weight capacity:</b>	<b>max. 100 kg</b>
- Existing ceiling height:	5.000 mm
- Existing air pressure:	0,5 MPa
- Required air pressure:	<b>0,7 MPa constant</b> (clean, dry, oil free air)
- Weight of the manipulator:	approx. 230 kg
- Consumption in resting position:	5 NI/min
- Air consumption:	83 NI per working cycle
- Noise level:	<73 dB(A)

### 3.) **Dalmecc balancer unit:**

Pneumatic Manipulator POSIFIL column mounted type version with base-plate to be fixed to the floor.

The manipulator has a working arrangement offering 360° of rotation through the inverted column, 360° of rotation between first and second arm of the unit.  
Fixed on a steel column

The unit has a unique system of two distinct pneumatic circuits: the first circuit balances the weight of the arm and tooling, the second balances arm, tooling and load.

Switch over from the unload weight to the adjusted weight and effects through a control lever or push button after lifting up the products.

After releasing the product the unload weight circuit has to be activated by control lever or push button.

The handling and lifting up of the products effects easily.  
For up- and down movements are no buttons or control levers to activate  
The manipulator is dependent from the operators speed only.

All Dalmecc units are fitted with pneumatically disc brakes to effectively “freeze” the main body of the machine. The braking system will prevent the Manipulator from rotating around its principal vertical axis, the rotating joint located between principal and secondary arm. In order to activate the braking system the operator simply presses a pneumatic push button.

#### 3.1) **Painting:**

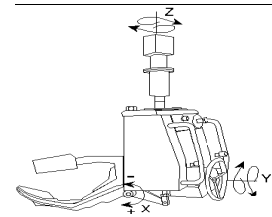
The painting process consists of surface phosphate degreasing, two coats of acrylic water-based primer and dual coats of two components water-based acrylic enamel (tot. min. thickn. 90µ - approx.. resistance capability 200 hours in saline mist – ISO 7253) with our standard colours.

Standards colours:	manipulator:	yellow	RAL 1023
	tooling:	red	RAL 3020
	column:	blue	RAL 5010

### 3.2) Description of Tooling

- Lifting up the product effects with an special safety hook or customer-provided tooling head, which is fixed in the safety hook
- push button for extra pulling-force is integrated in the tooling head
- regulator for unload balancing is installed on the Manipulator's column

- Z-Axis: rotate throughout 360 degree manually



- The operating panels are placed in an ergonomically position on the control box on the tooling head



photo of almost similar tooling

### 3.3) **Guideline:**

An Instruction Manual will be supplied for the Manipulator in **English and Spanish** language upon the specific norms mentioned in the European Standard 2006/42/EG “Directives on Machinery”, containing the following chapters:

- general instructions and regulations
- description and technical data
- transport and installation
- tuning and operating instructions
- safety devices
- maintenance
- trouble shooting
- pneumatic scheme
- design of the Manipulator scale 1:20

Other documentation may be provided upon extra charge.

Please note that in any case documentation does not include the supply of constructive drawings, due to reserved industrial reasons.

The Manipulator will be complete with CE Mark, upon chapter. 1.7.4 – encl. I – of the European Standard 2006/42 “Directives on Machinery”.

The EC Certificate of Conformity upon the enclosure II to the above mentioned Norm will also be supplied.

The Manipulator will be manufactured upon the essential safety provisions mentioned in chap. 1 and 4 – enc. I – of the European Standard 2006/42 “Directives on Machinery”.

### 4.) **Safety Systems of the Manipulator:**

The Dalmeccan unit has three special pneumatic safety systems, that operate in case of handling error or loss of air. The first circuit decreases the speed of the lift if the operator commands balancing without load.

The second relates to the load release. If the Manipulator senses that the load is not on a firm surface when the operator is requesting release, it will not release the product.

The third is Dalmeccan built - in reservoir within the column of the manipulator. If the air supply is suddenly lost, the reservoir holds sufficient air for the handling cycle to be completed. Under no circumstances will the load drop uncontrollably.