

TECHNICAL SPECIFICATION OF PNEUMATIC MANIPULATOR

Type	Pillar mounted articulated arm balancer
Capacity	80 kg
Are to be covered	2500 mm (radius)
Min height for loading/unloading	500 mm
Max height for loading/unloading	1200 mm
Arm rotation	270 deg
Lift required	500 mm
Total height in extended position	3000 mm
Pneumatics	Shall be provided by the supplier
Working pressure	Shall be specified by the supplier
Electrical/Electronics (optional)	Shall be provided by the supplier
Dimensions are indicative	

Other features

- The manipulator pillar shall be grouted to the floor using fasteners
- The balancing control shall be precise & sensitive. It will take the load to a perfect weightless condition throughout the lifting stroke to enable lifting & lowering with minimal forces
- It shall automatically put into balance any load range from 10 kg to 50 kg with out settings
- All the rotary joints shall be provided with special bearings to have light movement to help operator to move the fully loaded equipment with minimal effort all over its working range
- The equipment shall be designed for safe operation in case of Electrical/pneumatic failure
- The body shall be painted yellow
- A name plate showing all important features shall be provided on the equipment

TECHNICAL SPECIFICATION OF GRIPPER

PNEUMATIC MANIPULATOR-I

Unloading assembled insulator from RMT conveyor and place it on RET conveyor

After Mechanical test, the insulators are directly delivered to the Electrical test area by means of a conveyor below the test bed. The insulator is decoupled from the string on the conveyor, lifted vertically, transferred & placed on the Electrical test conveyor with ball pin pointing upwards.

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Suitable gripper shall be designed for performing the operation described. The gripper can hold the porcelain shell, cap or ball pin during handling. Suitable number of cylinders & actuators with positive clamping shall be provided. Clamping force shall not damage the porcelain which is brittle. The gripper shall be pneumatically operated & shall be interfaced with the standard manipulator. It shall be designed for SWL of 40 kg.

PNEUMATIC MANIPULATOR-II

Unloading tested insulator from RET conveyor and place on floor for Visual inspection.

After Electrical test, the insulators are directly delivered to the packing area by means of a conveyor. The insulator is lifted vertically, transferred & placed on the ground for Quality inspection.

Suitable gripper shall be designed for performing the operation described. The gripper can hold the porcelain shell, cap or ball pin during handling. Suitable number of cylinders & actuators with positive clamping shall be provided. Clamping force shall not damage the porcelain which is brittle. The gripper shall be pneumatically operated & shall be interfaced with the standard manipulator. It shall be designed for SWL of 40 kg.

Note:

1. Detailed Drawings indicating the material construction, dimensions of the Manipulator, the gripper and the stroke lengths to be submitted.
2. List of bought out components/accessories to be submitted.
3. Installation and proving of the system at site is the responsibility of the suppliers. Suitable modifications if any at site shall be carried out for satisfactory operation of the system.
3. The design should take care in the optimizing the cycle time.
4. Operator safety to be ensured with built in safety gadgets.
5. Bidders shall visit the site and assess the requirement completely before submitting their tenders.

QUALIFICATION CRITERION

Bidders shall have the experience of manufacture and supply of similar Pneumatic manipulator and working satisfactorily in the last Three years. Reference of supplies made shall be provided in the part-A Technical bid, Bidders not having the reference will not be considered.

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