

Pick-and-Place System with Pneumatic Grippers

Article No. 0A01129B

The Datron pick-and-place system is ideal for applications requiring integrated automation for small parts. The system mounts to the side of the Z axis and pneumatically descends to pick up and deposit parts as needed. It then can be retracted when performing any machining operations. On the end of the pneumatic slide arm is a pneumatically controlled finger style gripper system designed to pick up small parts. Some of the advantages of this system are: many multiple blanks can be stored within the machines work area so the machine can run continuous lights out production, one program is required to both machine and perform the automation, less risk for errors and complications compared to interfacing with external automation systems and the pick-and-place system is very simple to operate and maintain.

The high precision system comes with a pneumatically controlled slide. This arm is directed on small linear guideways for smooth, precise movements. It measures approximately 14" long x 4 3/4" wide x 2 1/2" thick and weighs approximately 2 1/2 pounds. Adjustable air regulators on the unit can adjust the speed and force of the movement. The slide operating pressure is 0.2 to 0.6 MPa. At the bottom of the slide are pneumatically controlled grippers. This also has a regulator to adjust the speed of the gripper. The gripper operating pressure is 0.1 to 0.6 MPa. Mounting surfaces are provided on the gripper face so the user can customize their own contact grippers for the application. Sensors are mounted on the slide so it can be programmed such that if the slide does not drop or retract properly, you can stop the machine and alarm the operator. Sensors are also on the grippers in case they did not open or close properly. For example it does not pick up the part properly. There is also an air nozzle provided near the grippers that can be programmed to turn on and off to blow off machined parts before picking them up. The required air flow for the unit is 70 inches per minute at 0.6 MPa.

In order to control the pick-and-place system, you need the I/O option (article no. 0A01076). This is quoted separately because some customers already have this option and want to retrofit the automation system in the field. For any automation installation, we recommend at least one additional day of training.

