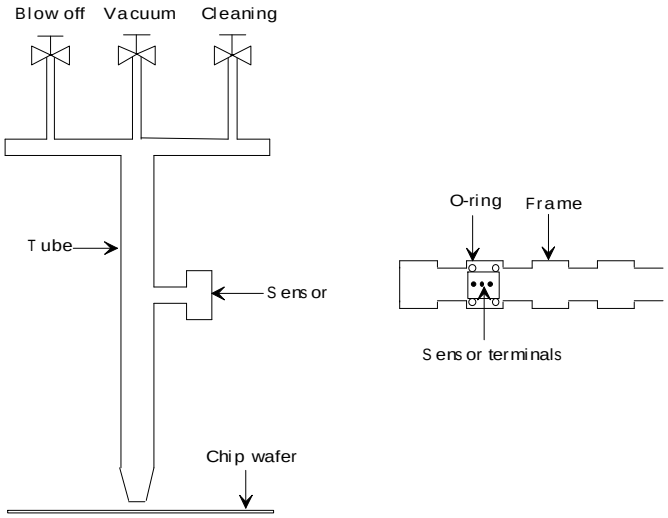
Pick and Place Automation

PRESSURE
AP 00268



PRODUCT
180PC pressure sensor

APPLICATION DESCRIPTION
Pressure sensors are used to detect the presence or absence of a chip or a surface mountable component that has to be picked up. Three valves are used.

a) A blow off valve which blows the component off the tube when positioned above its final spot.
b) A vacuum valve which has to pick up
the chip from the moulding spot.
c) A 2 bar cleaning valve for cleaning the tube from any dirt or glue sticking to it.

Action is as follows: the frame (with up to 32 pressure sensors) is positioned above the tapes, so that each tube is exactly above one component. The vacuum valve is opened and the required vacuum pulled so the component is lifted from the tape and sticks to the tube. This is seen by the pressure sensor because when the component is stuck to the tube, a little pressure drop is seen. Then the total frame is lifted and positioned above the PCB, and the blow off valve is opened which blows the component off the tube

on the dot of conductive glue which holds the component. Again the total frame is lifted and positioned above the cleaning spot. After a certain amount of cycles the cleaning valve is opened and blows a 2 bar pressure through the tube which cleans it from all dirt and possible residual glue. Above sequences are performed in a very short period of time since the machine capacity is 36000 components/hour.