

EQUIPMENT SPECIFICATION

GENERAL OVERVIEW – ARTICULATED ARM ROBOT

An **articulated robot** is a robot with rotary joints. Articulated robots can be used to pick up and place the payload, using a gripper, with great accuracy. They are also known as a jointed-arm.

Certain applications favour this type of robot over a gantry style robot, they are more flexible to changes of product, and frequent stacking and layer pattern changes

The articulated robot arm has a trunk, shoulder, upper arm, forearm, and wrist. With the ability to rotate all the joints, a majority of these robots have six degrees of freedom.

- Axis 1 - Arm sweeps from side to side
- Axis 2 - Shoulder moves forward and backward.
- Axis 3 - Elbow moves up and down.
- Axis 4 - Middle of forearm pivots up and down.
- Axis 5 - Wrist moves up and down.
- Axis 6 - Wrist sweeps from side to side.

Movement is made in three ways: pitch is up and down movement, yaw is right and left movement, and roll is rotation. This mobility allows articulated robots to be used for tasks such as welding, painting, and assembly.

Simpler palletising systems require a robot with only 4 axis, each application should be assessed and the correct robot application proposed by your robot partner based on their knowledge and experience.

