# SCARA Robots Feature Highly Rigid Gears

An industry first for SCARA robots, Toshiba Machine's TH-A Series is equipped with highly rigid gears for each axis. Proven successful in 6-axis robots, these gears provide quicker acceleration/deceleration, a longer life span, and easier maintenance.

Toshiba Machine offers three TH-A SCARA robot models, the TH650A, the TH850A, and the TH1050A. TH-A Series robots are nearly identical to the company's TH Series robots, with the exception of the gears and the robot's working envelope. Axis one and axis two of the TH-A combine to provide an unprecedented near 360º working area.

The TH-A's arms are rigidly constructed of aluminum casting, and span from 650 to 1,200 mm. Payloads range from 10 to 20 kg. The TH650A achieves minimum 0.2 mm deflection with the maximum payload. Deflection for the TH850A and the TH1050A is less than 1.0 mm when handling the maximum payload (20 kg). Longer arm lengths and higher payloads make the TH850A and the TH1050A ideal for use in production lines and for handling large material. Vertical vibration from the rebound of these heavier materials is minimized. The speed and productivity of all three models from the TH-A Series make them suitable for a range of industries, including medical.

The rigid construction and reduced vibration of the TH-A Series result in a longer robot life. Piping positions are flexible, and may easily be changed by the end-user. Internal wiring harnesses reduce wear and tear, and protect against the passage of external contaminants.

Maximum payload mass for the TH650A is 10.0 Kg and maximum composite speed is 7.52 m/s, while the TH850A and TH1050A can each carry 20.0 Kg (TH850A maximum speed is 8.13 m/s and TH1050A reaches up to 9.15 m/s).

The TH-A Series features a sealed labyrinth structure as standard, making it ideal for cleanroom applications. Cleanroom specification, IP65 (waterproof design), ceiling mount design, and protective bellows for the Z-axis are among the options available.

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