

Application Handbook

Industrial Robots

Harmonic Drive LLC SCARA Robot Elbow Axis

- Integrated output bearing
- Special Circular Spline

As already mentioned in an earlier example, the low weight and high precision of Harmonic Drive® strain wave gears are ideal for applications in SCARA robots. The high accuracy and high dynamic performance are also prerequisites for demanding assembly tasks. The CSF-2UH unit enables a particularly compact and elegant design as shown in this design example. The Circular Spline is located in the upper arm segment and acts as a fixed element. The Circular Spline has a special design to make integration into the robot joint easier. The Wave Generator features an Oldham coupling to compensate for run-out error of the motor shaft. The Flexspline acts as an output element and drives the lower arm segment via the flange of the output bearing.

