SIMOTICS S-1FG1 servo geared motors are specifically designed for applications with positioning such as for storage and retrieval machines, cyclic motion such as for packaging machines and path control such as for machine tool applications. These applications have one thing in common, which is the motion must be extremely precise with high dynamic performance. The SIMOTICS S-1FG1 servo geared motors combine the SIMOTICS S-1FK7 Generation 2 servo motors and SIMOGEAR gearbox via direct coupling technology. Direct coupling technology eliminates the traditional adapter plate, which enables smoother running properties, more compact design and minimum weight.

The gearbox types/sizes are available as helical, parallel shaft, bevel and worm gearboxes with up to 25 transmission ratios to support applications with a wide range of torque and speed requirements. Based upon the rotor version, motors are available for standard (compact) or dynamic (high dynamic) load cycles.

Please inform your customers, colleagues and partners of the new SIMOTICS S-1FG1 servo geared motors.
# Servo geared motors

<table>
<thead>
<tr>
<th>Designation</th>
<th>Helical</th>
<th>Parallel shaft</th>
<th>Bevel</th>
<th>Helical worm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Z29 ... Z129</td>
<td>FZ29 ... FZ129</td>
<td>B29 ... B49</td>
<td>C29 ... C89</td>
</tr>
<tr>
<td>Frame sizes</td>
<td>9</td>
<td>8</td>
<td>3 (B)</td>
<td>5</td>
</tr>
<tr>
<td>Speed range [rpm]</td>
<td>72 ... 1,279 (Z)</td>
<td>63 ... 1,218 (FZ)</td>
<td>75 ... 1,254 (B)</td>
<td>44 ... 726 (C)</td>
</tr>
<tr>
<td>Max. output torque [Nm]</td>
<td>14 ... 5,200 (Z)</td>
<td>17 ... 5,140 (FZ)</td>
<td>15 ... 465 (B)</td>
<td>46 ... 1,480 (C)</td>
</tr>
<tr>
<td>Range of transmission ratios</td>
<td>3.4 ... 62.5 (Z)</td>
<td>3.6 ... 70.7 (FZ)</td>
<td>3.5 ... 59.3 (B)</td>
<td>6.2 ... 102.5 (C)</td>
</tr>
</tbody>
</table>

**Mechanical options (selection)**

- (Higher rating) holding brake
- Spring-actuated brake (only shaft heights 80/100) with increased brake work for each braking operation in comparison to a holding brake and high overall brake work
- Version with reduced backlash
- Radially reinforced output shaft bearings
- Various shaft options and gearbox flange diameters
- Shaft sealing rings for a longer service life and/or increased levels of environmental stress
- Mineral and synthetic oils can be selected
- Connector position can be selected
- Primer, topcoat and color
- Version for increased resistance to chemicals

*Speed range at the gearbox output.

Values for orientation, as the reference speed—depending upon the selected motor—is the maximum gearbox input speed.