

Humanoid Robots are Moving Fast. Your Manufacturing Partner Should Too.



Precision machining solutions for actuator and gearbox components - from single machines to fully automated production lines.

The humanoid robotics market is accelerating. The companies that win won't just have the best robot design - they'll have the manufacturing infrastructure to produce it reliably and at scale. **EMAG builds that infrastructure: integrated machining systems designed for the complexity, precision, and production demands of humanoid robot mobility components.**



Flexspline

Planetary Gear

Circular Spline



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THE COMPONENTS THAT MAKE ROBOTS MOVE



Humanoid robot actuators and gearboxes rely on components that leave no margin for error - **flexsplines, circular splines, planetary gears, cycloidal components, rollers screws and planetary roller screws**. Each one demands tight tolerances, consistent surface quality, and repeatable accuracy across the entire production run.



ONE-STOP TECHNOLOGY SOLUTIONS

Producing these components requires multiple machining technologies working in sequence: **turning, grinding, gear cutting, power skiving, and gear hobbing - plus automation, measurement and inspection**. EMAG integrates them into a single production line, reducing supplier complexity and giving your team one accountable partner from component design to full-rate output.



Type of Gearbox part	Turning	Hobbing	Power skiving	Profile Grinding	Profile Grinding	Generating grinding
Planetary Gear	VL 2 / VL 3 DUO	HLC 150 H/K 160	-	G 375 H	-	G 160
Sun Gear	VL 2 / VL 3 DUO	HLC 150 H/K 160	-	G 375 H	-	G 160
External ring	VL 2 / VL 3 DUO	-	VSC 400 PS/ VL 200/350 GT	G 375 H	-	-
Flexspline	VL 2 / VL 3 DUO	HLC 150 H/K 160	VSC 400 PS/ VL 200/350 GT	G 375 H	-	-
Cycloid Gear	VL 2 / VL 3 DUO	-	-	G 375 H	-	G 160
Roller Screw	VT 2	HLC 150 H/K 160	-	G 375 H	G 160/GR 250	-
Planetary Screw	HSC 1/ VT 2	HLC 150 H/K 160	-	G 375 H	G 160/GR 250	-
Nut	VL 3 DUO	-	VSC 400 PS/ VL 200/350 GT	G 375 H	G 160 I	-