



ML1000-17-90

HOLLOW SHAFT PRECISION ROBOTIC TRANSMISSION



Description

The Motus Labs ML1000-17-90 precision drive offers higher torque density than competing strain wave gearing with no compromise in performance. Motus Labs' patented design utilizes a series of cam-driven blocks that engage over 80% of the output ring surface area at all times. This design distributes load stresses over a much larger surface area, permitting the Motus M-DRIVE transmission mechanism to deliver much greater torque per unit size and volume than other technologies.

Key Specifications (ML-1000-17-90)

Specification	ML1000-17-90
Mass	770 g
Gear ratio	90:1
Rated torque	45 Nm
Repeated peak torque	90 Nm
Momentary peak torque	180 Nm
L ₁₀ lifetime at rated torque	10,000 hrs
Length	64.3mm
Width	86 mm
Hollow shaft diameter	10 mm
Power efficiency at rated torque	55%
Backlash	< 9 arcsec
No load running torque	30 Ncm
No load starting torque	32 Ncm
Positional accuracy	1.5 arcmin
Torsional Stiffness	5.64 Nm/arcmin
Hysteresis loss	1 arcmin
Ambient temperature range (Subject to limitations of type of grease used)	-5°C to 45°C
Continuous operating time (Based on maximum internal grease temperature of 80°C and oil seal temperature of 100°C)	120 minutes

Motus Labs reserves the right to change the M-DRIVE specifications representations.

About Motus Labs

Motus Labs, LLC., located in Dallas, TX, designs, manufactures and markets robot drive transmissions. The Motus M-DRIVE is a new gearless drive technology that uses mating surfaces instead of traditional gear teeth. The Motus Labs M-DRIVE technology is protected under several U.S. and International patents.