

MotionTek Drive Systems

Global Motion technology Inc.

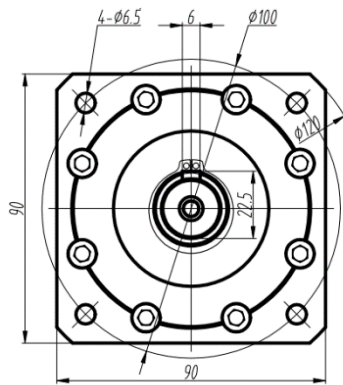
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PLF080 Planetary Gearbox Reducer — Technical Specifications & Catalogue

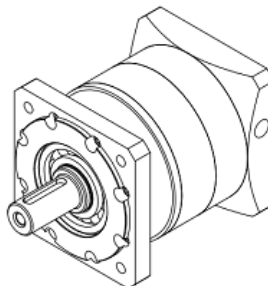
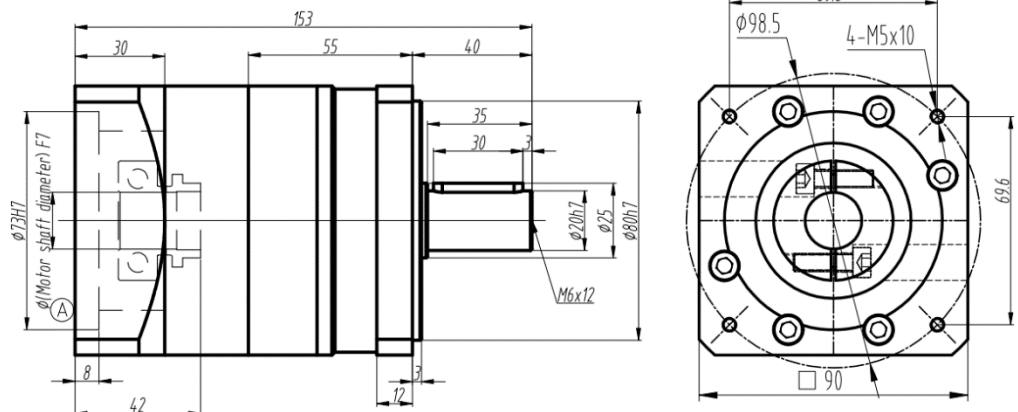
- PLF080 series planetary gearbox reducer (PLF080-L1 profile), a single-stage precision planetary reducer for servo and stepper motor applications, available in 5 reduction ratios from 3:1 to 10:1.
- Output flange is a 90mm square pattern with a $\varnothing 25h7$ output shaft; input side accepts a motor shaft selectable between $\varnothing 15.87\text{mm}$, $\varnothing 14\text{mm}$, $\varnothing 12.7\text{mm}$, or $\varnothing 12\text{mm}$ bore — confirm bore selection at time of order.
- Rated for 3000 rpm continuous input speed (6000 rpm maximum), IP65 protection, and a 20,000-hour average life span under synthetic grease lubrication, with substantially higher radial/axial load capacity than the PLF060 frame.

PLF080 — DIMENSIONAL SPECIFICATIONS (ALL DIMENSIONS IN mm)

Output terminal



Input terminal



PLF080 — DIMENSIONAL SPECIFICATIONS (ALL DIMENSIONS IN mm)

Dimension	Value
Output Flange (Square)	90mm (□ 90)
Output Flange Bolt Circle	69.6 x 69.6mm
Output Mounting Holes	4× Ø6.5
Output Pilot Diameter	Ø100mm
Output Shaft Diameter	Ø25h7
Output Shaft Bearing Bore	Ø73H7
Overall Length	153mm
Input Flange (Square)	90mm (□ 90)
Input Flange Bolt Circle	69.6 x 69.6mm
Input Mounting Holes	4× M5x10
Input Pilot Diameter	Ø98.5mm
Motor Shaft Bore (Selectable)	Ø15.87 / Ø14 / Ø12.7 / Ø12 — confirm selection when ordering
Input Coupling Bore (Sleeve)	Ø20h7 / Ø75h7 sleeve, M6x12 set screw
Distribution / Motor Shaft Size	Ø(Motor shaft diameter) x40 / Ø73x3.5 / 4-Ø5.5-Ø98.5

Motor shaft bore is selectable (Ø15.87 / Ø14 / Ø12.7 / Ø12mm) — specify required bore when ordering ("Call if you choose" option on manufacturer drawing). Non-standard reducer configurations are for reference only.

PLF080 — GENERAL SPECIFICATIONS

Parameter	Value
Fault Stop Torque	2 × Rated Output Torque (2TN Nm)
Full Load Efficiency	96%
Rated Input Speed	3000 min ⁻¹ (rpm)
Maximum Input Speed	6000 min ⁻¹ (rpm)
Working Temperature	-25°C to +90°C
Lubrication Mode	Synthetic grease lubrication
Installation Mode	Arbitrary orientation
Protection Level	IP65
Average Life Span	20,000 hours
Flange Accuracy	DIN 42955-R
Maximum Output Radial Force (Fr)	1020N (at rated service life, 100 rpm output speed, stress point at 1/2 output shaft length)
Maximum Output Axial Force (Fa)	850N (at rated service life, 100 rpm output speed, stress point at 1/2 output shaft length)
Output Shaft Key Standard	Round head plain key (Type A), GB1096-79

PLF080 — REDUCTION RATIO & RATED TORQUE			
Model	Speed Ratio	Rated Output Torque (Kgcm ²)	Rated Output Torque (Nm)
PLF080-L1-3-S2-P2	3:1	0.4	60
PLF080-L1-4-S2-P2	4:1	0.309	86
PLF080-L1-5-S2-P2	5:1	0.291	94.5
PLF080-L1-7-S2-P2	7:1	0.285	64
PLF080-L1-10-S2-P2	10:1	0.283	39.5

Rated output torque (TN) is the continuous-duty torque rating; fault stop torque allows up to 2× the rated value for momentary stops. Torque figures shown are read directly from the manufacturer drawing.