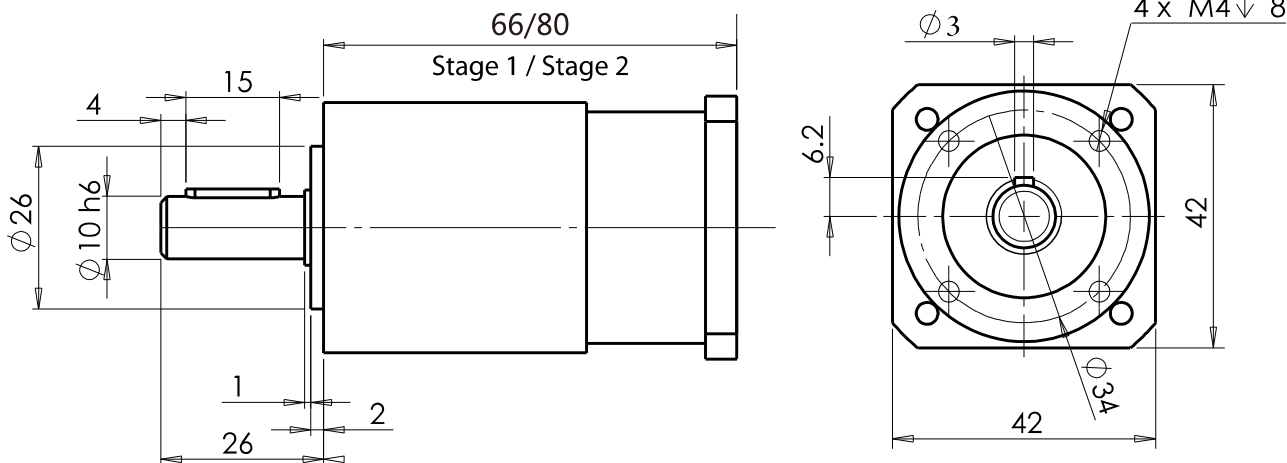


Planetary Gearbox for NEMA17 Motor

Vacuum Version



Vacuum planetary Gearbox Dimensional Drawing with attached motor on request.

Shaft Axial Load (N)	30
Shaft Radial Load (N)	45
Lifetime	5000-hour Continuous Work
Full Load Efficiency	90%
Protection	IP54

Vacuum Gearbox available Gear Ratios

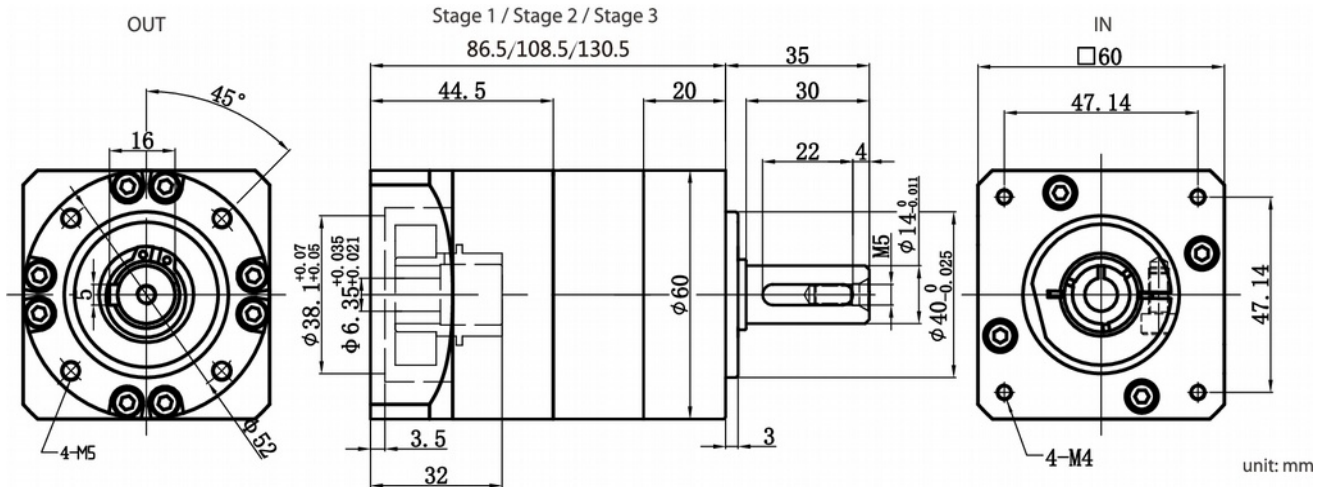
Ratio	3, 5, 8, 10	15, 25, 40	80, 120, 200
Stage	1	2	3
Rated Holding Torque (Nm)	5	7.5	10
Max Holding Torque (Nm)	10	15	20
Rated Rotational Speed (rpm)	2000	2000	2000
Max Rotational Speed (rpm)	3500	3500	3500
Gear Backlash (arc-min)	20	30	40
Gear Inertia (kg m ² 10 ⁻⁴)	0.031	0.019	0.029
Approx Weight (kg)	0.35	0.44	0.54

Possible Vacuum Motors for Planetary Gearbox:

- Vacuum rated Stepper Motor
- Vacuum rated Servomotor Motor with Vacuum Rated Resolver Feedback

Planetary Gearbox for NEMA23 Motor

Vacuum Version



Vacuum planetary Gearbox Dimensional Drawing with attached motor on request.

Shaft Axial Load (N)	60
Shaft Radial Load (N)	80
Lifetime	5000-hour Continuous Work
Full Load Efficiency	90%
Protection	IP54

Vacuum Gearbox available Gear Ratios

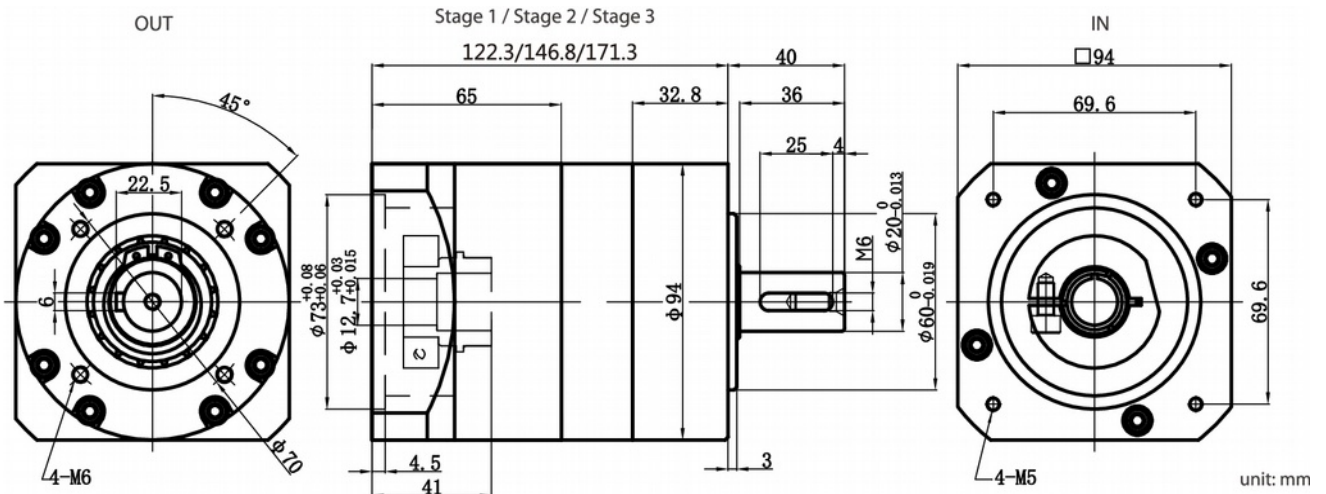
Ratio	3, 5, 8, 10	15, 25, 40	80, 120, 200
Stage	1	2	3
Rated Holding Torque (Nm)	10	18	25
Max Holding Torque (Nm)	20	36	50
Rated Rotational Speed (rpm)	2000	2000	2000
Max Rotational Speed (rpm)	3500	3500	3500
Gear Backlash (arc-min)	20	30	40
Gear Inertia (kg m ² 10 ⁻⁴)	0.13	0.064	0.064
Approx Weight (kg)	0.92	1.13	1.32

Possible Vacuum Motors for Planetary Gearbox:

- Vacuum rated Stepper Motor
- Vacuum rated Servomotor Motor with Vacuum Rated Resolver Feedback

Planetary Gearbox for NEMA34 Motor

Vacuum Version



Vacuum planetary Gearbox Dimensional Drawing with attached motor on request.

Shaft Axial Load (N)	110
Shaft Radial Load (N)	150
Lifetime	5000-hour Continuous Work
Full Load Efficiency	90.00%
Protection	IP54

Ratio	3, 5, 8, 10	15, 25, 40	80, 120, 200
Stage	1	2	3
Rated Holding Torque (Nm)	30	50	50
Max Holding Torque (Nm)	60	100	100
Rated Rotational Speed (rpm)	2000	2000	2000
Max Rotational Speed (rpm)	3500	3500	3500
Gear Backlash (arc-min)	20	30	40
Gear Inertia (kg m ² 10 ⁻⁴)	0.77	0.72	0.49
Approx Weight (kg)	2.2	2.7	3.2

Vacuum Classes

Class Code	Ambient Temperature Celsia	Vacuum Class (Pa)	Temperature Sensor
Vacuum Class 01	-20...+85	-	Optional
Vacuum Class 02	-40...+85	-	Optional
Vacuum Class 03	-60...+85	10 ¹	Optional
Vacuum Class 04	-20...+150	10 ³	Optional
Vacuum Class 05	-20...+200	10 ⁷	Optional
Vacuum Class 06	-100...+40	10 ⁷	Optional
Vacuum Class 07	-200...+40	10 ⁷	Optional
Vacuum Class 08	Customized	Customized	Optional