

PG42 and PG57 Planetary Gearhead

UHV Planetary Gearhead for use with D42 Series Stepper Motors

The PG42 series gearheads couple directly to AML D42 stepper motors and are suitable for use in UHV environments. Primarily used for increasing resolution, torque multiplication and inertia matching. They are designed for maximum torque capacity, high efficiency and low backlash.

The PG57 series gearheads couple directly to the AML D57 stepper motor and are suitable for use in UHV environments. Primarily used for increasing resolution, torque multiplication and inertia matching. They are designed for maximum torque capacity, high efficiency and low backlash.



FEATURES

- Suitable for use below 1×10^{-10} mBar
- Operating temperature -65 to +175
- Multiple ratio options, 4:1 through 100:1
- Multiple ratio options, 3:1 through 100:1
- High efficiency, >94%
- Low inertia
- High precision, low backlash
- Service life >10,000 Hrs
- Bakeable to 200°C
- RoHS compliant



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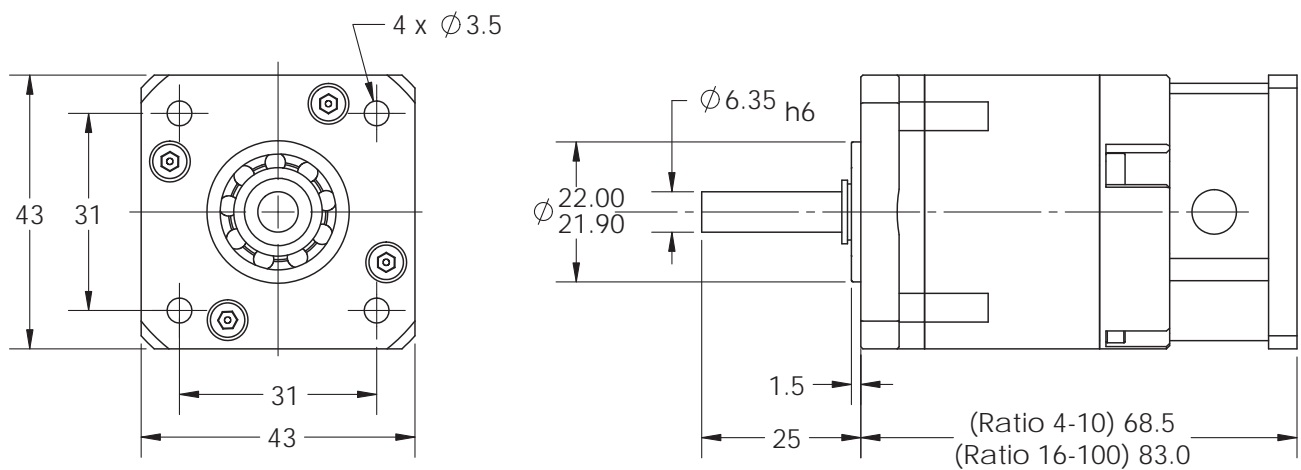
SPECIFICATIONS -PG42

Reduction Ratio (:1)	Nominal Output Torque Nm	Maximum Acceleration Torque Nm	Gear Inertia kg-cm ²	Backlash ¹⁾ arc-min	Efficiency at nominal torque %	Radial Load ²⁾ N	Axial Load ²⁾ N	Mass kg	Lubrication
4	5.9	11.8	0.020	<15	96	200	196	0.60	Nyetorr 6300
5	6.2	11.8	0.018						
7	5.5	11.0	0.016						
10	3.5	7.0	0.016						
16	6.5	13.0	0.019	<18	94			0.90	
20	6.5	13.0	0.017						
25	6.7	13.0	0.017						
35	6.7	13.0	0.016						
40	6.5	13.0	0.016						
50	6.7	13.0	0.016						
70	5.5	11.0	0.016						
100	3.5	7.0	0.016						

Nominal input speed: 4500 rpm
 Maximum input speed: 8000 rpm
 Direction of rotation: Same as input
 Vacuum environment: $<1 \times 10^{-10}$
 Max. temperature: +200°C

(1) Measured at 2% of rated torque
 (2) @ 100rpm, radial load applied at centre of shaft

DIMENSIONS



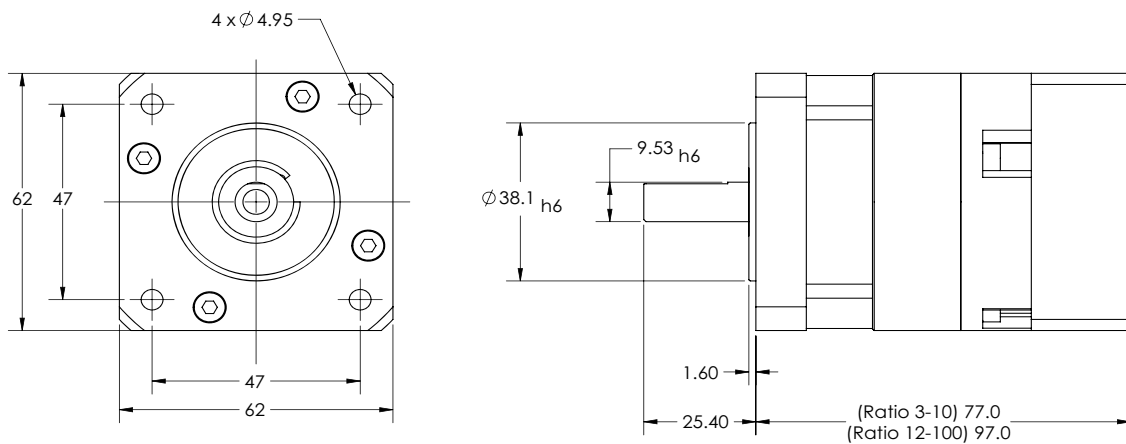
SPECIFICATIONS -PG57

Reduction Ratio (:1)	Nominal Output Torque Nm	Maximum Acceleration Torque Nm	Gear Inertia kg-cm ²	Backlash ⁽¹⁾ arc-min	Efficiency at nominal torque %	Radial Load ⁽²⁾ N	Axial Load ⁽²⁾ N	Mass kg	Lubrication
3	12.0	24.0	0.140	<12	96	665	765	1.2	Nyetorr 6300
4	18.9	36.4	0.100						
5	19.6	36.4	0.084						
7	16.7	33.4	0.075						
10	10.6	21.2	0.007						
12	18.2	36.4	0.097	<16	94	665	765	1.6	
15	19.4	36.4	0.083						
20	21.5	40.0	0.083						
25	20.0	40.0	0.083						
30	22.5	40.0	0.070						
40	21.5	40.0	0.070						
50	20.0	40.0	0.070						
70	16.7	33.4	0.070						
100	10.6	21.2	0.070						

Nominal input speed: 4500 rpm
 Maximum input speed: 8000 rpm
 Direction of rotation: Same as input
 Vacuum environment: $<1 \times 10^{-10}$
 Max. temperature: +200°C

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 (2) @100rpm, radial load applied at centre of shaft

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