



## PG42 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.



### FEATURES

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

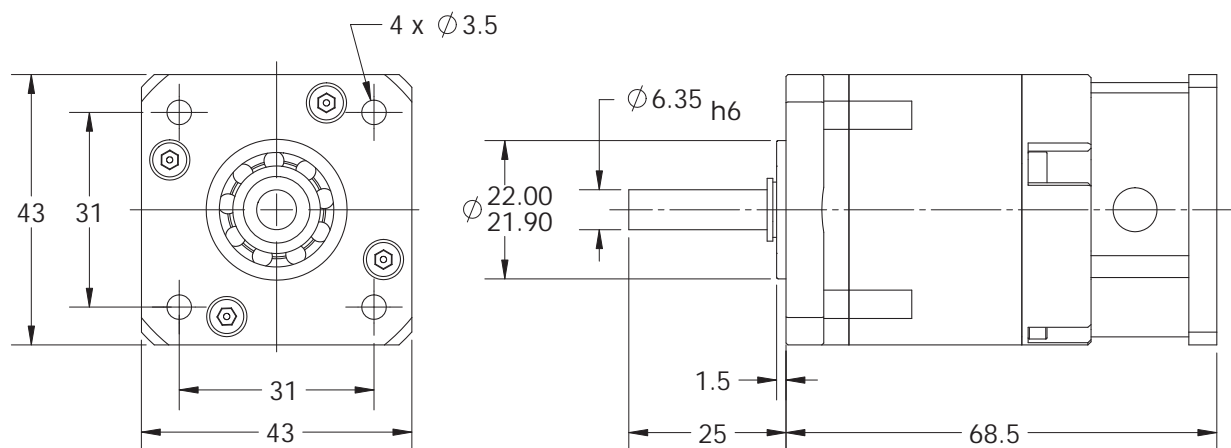
## SPECIFICATIONS

Reduction Ratio (:1)	Nominal Output Torque Nm	Maximum Acceleration Torque Nm	Gear Inertia kg-cm <sup>2</sup>	Backlash <sup>1)</sup> arc-min	Efficiency at nominal torque %	Radial Load <sup>2)</sup> N	Axial Load <sup>2)</sup> 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



## ORDERING INFORMATION

Order Code	
PG42-xx	Precision Planetary Gearhead
Related products	
D42.1	180mNm UHV Stepper Motor
D42.2	360mNm UHV Stepper Motor
D42.3	480mNm UHV Stepper Motor

Order code format	
PG42-	10
Order Code	
Ratio	



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AML pursues a policy of continuous improvement and reserves the right to make detail changes to specifications without consultation. E and OE.



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