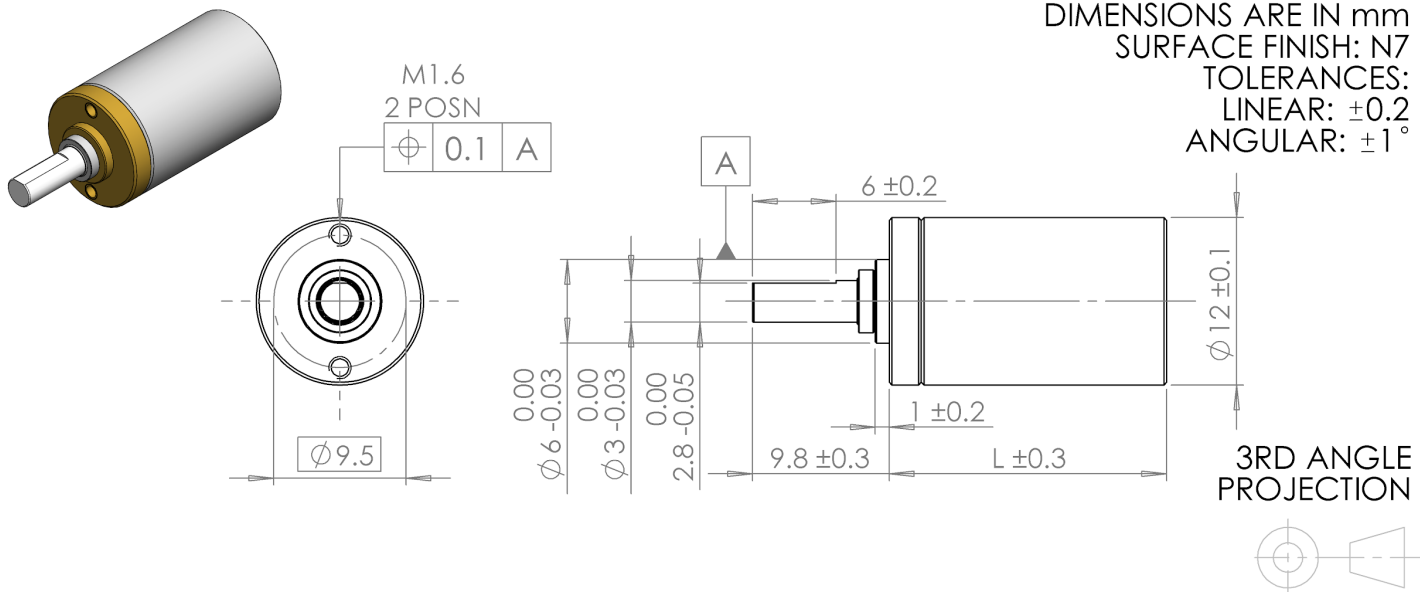


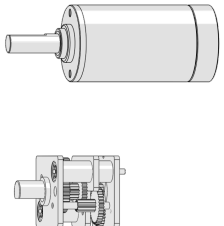
412-MP Gearbox (metal planetary)
Ø12mm / with custom reduction ratios / shafts / mounting interfaces



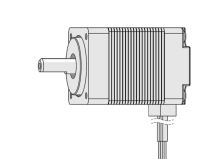
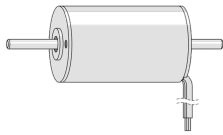
				Standard version				Custom design				
Key data		Units										
A	Bearing type				Ball bearing				Customizations (including torque capability) available on request. Please contact support@pmdri.com			
B	Axial play	mm	max		0.2							
C	Max. force for press fits	N			10							
D	Max. axial load (dynamic)	N			8							
E	Max. radial load	N			10							
F	Ambient temperature	°C	min		-30							
		°C	max		+100							
G	Reduction ratio				See table below				Others on request			
Specifications		Units	Number of reduction stages									
1	Number of stages		1		2		3		4		5	
2	Max. continuous torque	Nm	0.2		0.2		0.3		0.3		0.35	
3	Max. intermittent torque	Nm	0.3		0.3		0.45		0.45		0.5	
4	Max. efficiency	%	90		81		73		65		59	
5	Length	mm	13.3		16.1		18.9		21.7		24.5	
6	Weight	g	7		10		13		16.5		20	
			Reduction Ratios									
7	Reduction ratios (approximate)		3.47	3.94	12.07	16.03	41.92	61.05	145.6	281.8	649.9	1,344.7
				4.62	13.68	18.17	47.51	63.13	165.0	291.4	736.6	1,660.7
					15.50	21.30	55.69	71.56	187.1	330.3	946.5	2,094.3
							53.86	83.88	212.1	341.5	1,147.2	2,586.5
								98.32	219.3	387.1		3,194.3
									240.4	453.8		
									248.6	560.4		

Combinations - contact support@pmdri.com for details

Planetary Gearbox
Ø10 – 28mm
10-500mNm Continuous Torque



Spur Gearbox
Ø12 – 20mm
5-200mNm Continuous Torque



Available motors

- DC and DC coreless,
- bi-polar stepper, or
- BLDC motors

Magnetic or Optical encoders
outputs: A,B,N or Hv, Hw
(up to 2048 CPT)

