



> MaalonDrive®

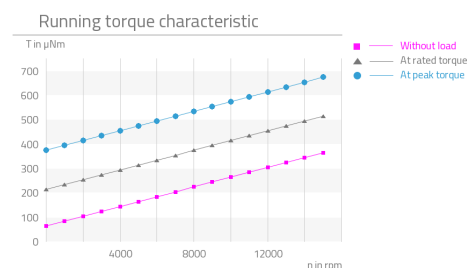
ZeroBacklash 6mm - Type 1

Attributes

Highlights	Description
<ul style="list-style-type: none"> ▪ Fast delivery ▪ High repeatability ▪ Zero backlash with speed optimised transmission ratio ▪ Compact build up ▪ Preloaded ball bearing 	<p>Minimal outer dimensions of just 6 mm yet with speed-optimised reduction ratio characterise the MaalonDrive® ZeroBacklash 6mm - type 1 micro positioning gear. A zero-backlash MaalonDrive® gear component set with a reduction ratio of 120:1 forms the heart of this precise and high-reduction gear. The gear component set is integrated in a gearbox with preloaded ball bearings on both the input shaft as well as the output shaft. As a result, they are guided precisely and the application can be directly connected.</p>

Technical parameter

P-029



Technical Supply Specifications: MaalonDrive® ZeroBacklash 6mm - Type 1



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Nr.	Parameter	Symbol	Value	Hint
P-003	Ratio	i	120 : 1	
P-004	Self-locking		yes	
P-008	Repeatability unidirectional		20 arcsec	
P-009	Repeatability bidirectional		30 arcmin	
P-010	Accuracy		20 arcmin	
P-011	Transmission accuracy		30 arcmin	
P-013	Torsional stiffness		2.17 $\frac{\text{Nm}}{\text{rad}}$	
P-014	Lost motion		30 arcmin	
P-015	Backlash		0 arcmin	
P-016	Rated torque	T	15 mNm	
P-017	Peak torque	T	31 mNm	
P-018	Momentary peak torque	T	77 mNm	
P-021	Rated input speed	n	15000 rpm	
P-022	Maximum input speed	n	50000 rpm	
P-023	Rated output speed	n	125 rpm	
P-024	Maximum output speed	n	416.667 rpm	
P-026	No-load starting torque	T	96 μNm	
P-027	No-load running torque	T	64 μNm	
P-028	Rated running torque	T	409 μNm	
P-034	Lifetime for rated operation		1000 h	
P-035	Radial backlash output shaft		0 μm	
P-036	Axial backlash output shaft		0 μm	
P-037	Radial stiffness	c	0.48 N/ μm	
P-038	Axial stiffness	c	10 N/ μm	
P-039	Max. radial load on output shaft (non-operating, constant load)	F	10 N	
P-040	Max. radial load on output shaft (non-operating, impulsive load)	F	5 N	
P-041	Max. radial load on output shaft (operating, constant load)	F	2 N	
P-042	Max. radial load on output shaft (operating, impulsive load)	F	2 N	
P-043	Max. axial load on output shaft (non-operating, constant load)	F	30 N	
P-044	Max. axial load on output shaft (non-operating, impulsive load)	F	10 N	
P-045	Max. axial load on output shaft (operating, constant load)	F	100 N	

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Nr.	Parameter	Symbol	Value	Hint
P-046	Max. axial load on output shaft (operating, impulsive load)	F	38 N	
P-047	Max. radial load on input shaft (non-operating, constant load)	F	15 N	
P-048	Max. radial load on input shaft (non-operating, impulsive load)	F	6 N	
P-049	Max. radial load on input shaft (operating, constant load)	F	9 N	
P-050	Max. radial load on input shaft (operating, impulsive load)	F	6 N	
P-051	Max. axial load on input shaft (non-operating, constant load)	F	30 N	
P-052	Max. axial load on input shaft (non-operating, impulsive load)	F	10 N	
P-053	Max. axial load on input shaft (operating, constant load)	F	100 N	
P-054	Max. axial load on input shaft (operating, impulsive load)	F	38 N	
P-055	Moment of inertia	I	$17.5 \cdot 10^{-4}$ gcm ²	
P-056	Weight	m	2 g	
P-057	Min. permissible ambient temperature (non-operating)	T	-80 °C	
P-058	Min. permissible ambient temperature (operating)	T	-20 °C	
P-059	Max. permissible ambient temperature (non-operating)	T	150 °C	
P-060	Max. permissible ambient temperature (operating)	T	120 °C	

Material information

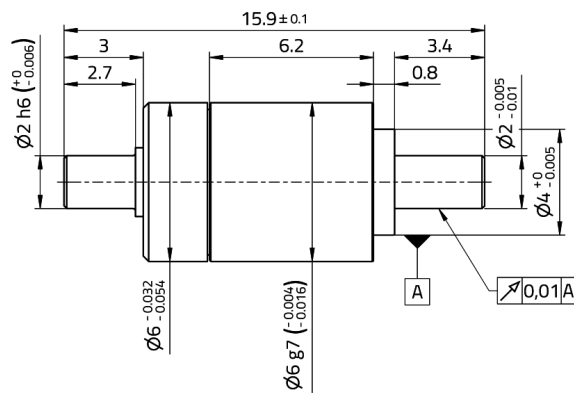
Nr.	Parameter	Symbol	Value	Hint
P-900	RoHS compliant		yes	
P-901	Lubrication of output bearing gearbox		Longtime PD2	
P-902	Lubrication of input bearing gearbox		Longtime PD2	
P-908	Material of gear component set		NiFe	
P-909	Material of output bearing gearbox		1.4108 DIN EN	
P-910	Material of input bearing gearbox		1.4108 DIN EN	
P-912	Material of gearbox output side		1.4305 DIN EN	
P-913	Material of gearbox input side		1.4305 DIN EN	

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Technical drawing



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