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Attributes

Highlights	Description
▪ **Transmission ratio optimized to speed** ▪ **Vacuum suitable lubrication** ▪ **Preloaded ball bearing** ▪ **Hollow shaft thru center of rotational axis** ▪ **Use of high quality materials**	The CoograDrive® UHV 10mm - type 2 micro positioning gear, designed for high-vacuum environments and lubricated with Braycote, is a robust and reliable solution for extreme environmental conditions. Both the input shaft as well as the output shaft are precisely guided by preloaded ball bearings and thereby allow the application to be directly connected. At the heart of this robust and reliable micro gearbox is a low-backlash CoograDrive® gear with a reduction ratio of 40:1. In addition, the hollow shaft through the central rotary axis of the gear allows optical or electrical signals to be passed through.

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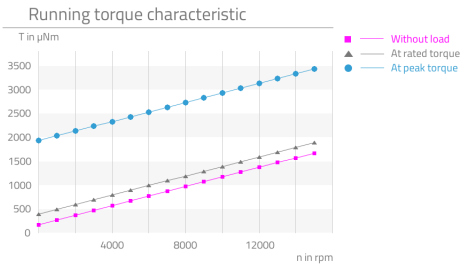
Technical parameter

The stated values are based on calculations and measurements by Micromotion GmbH, carried out according to the current state of the art. You can find our definitions at www.micromotion-drives.com. For further information please contact sales@micromotion.de.

P-029



Nr.	Parameter	Symbol	Value	Hint
P-001	Vacuum suitable		HV	
P-003	Ratio	i	40 : 1	
P-004	Self-locking		yes	
P-006	Hollow shaft		1.2	
P-008	Repeatability unidirectional		4.5 arcmin	
P-009	Repeatability bidirectional		45 arcmin	
P-010	Accuracy		30 arcmin	
P-011	Transmission accuracy		60 arcmin	
P-013	Torsional stiffness		2.50 $^{Nm}/_{rad}$	
P-014	Lost motion		45 arcmin	
P-015	Backlash		20 arcmin	
P-016	Rated torque	T	10 mNm	
P-017	Peak torque	T	80 mNm	
P-018	Momentary peak torque	T	100 mNm	
P-021	Rated input speed	n	10000 rpm	
P-022	Maximum input speed	n	30000 rpm	
P-023	Rated output speed	n	250 rpm	
P-024	Maximum output speed	n	750 rpm	
P-026	No-load starting torque	T	255 µNm	

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Nr.	Parameter	Symbol	Value	Hint
P-027	No-load running torque	T	170 µNm	
P-028	Rated running torque	T	1500 µNm	
P-034	Lifetime for rated operation		500 h	
P-035	Radial backlash output shaft		0 µm	
P-036	Axial backlash output shaft		0 µm	
P-037	Radial stiffness	c	2.3 N/µm	
P-038	Axial stiffness	c	40 N/µm	
P-039	Max. radial load on output shaft (non-operating, constant load)	F	55 N	
P-040	Max. radial load on output shaft (non-operating, impulsive load)	F	20 N	
P-041	Max. radial load on output shaft (operating, constant load)	F	7 N	
P-042	Max. radial load on output shaft (operating, impulsive load)	F	7 N	
P-043	Max. axial load on output shaft (non-operating, constant	F	150 N	
P-044	Max. axial load on output shaft (non-operating, impulsive load)	F	50 N	
P-045	Max. axial load on output shaft (operating, constant load)	F	380 N	
P-046	Max. axial load on output shaft (operating, impulsive load)	F	127 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	6 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	64 N	
P-052	Max. axial load on input shaft (non-operating, impulsive load)	F	20 N	
P-053	Max. axial load on input shaft (operating, constant load)	F	185 N	
P-054	Max. axial load on input shaft (operating, impulsive load)	F	66 N	
P-055	Moment of inertia	I	$75.03 * 10^{-4}$ gcm^2	
P-056	Weight	m	6 g	
P-057	Min. permissible ambient temperature (non-operating)	T	-80 °C	

Nr.	Parameter	Symbol	Value	Hint
P-058	Min. permissible ambient temperature (operating)	T	-10 °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		Braycote601EF	
P-902	Lubrication of input bearing gearbox		Braycote601EF	
P-903	Lubrication of gear component set		Braycote601EF	
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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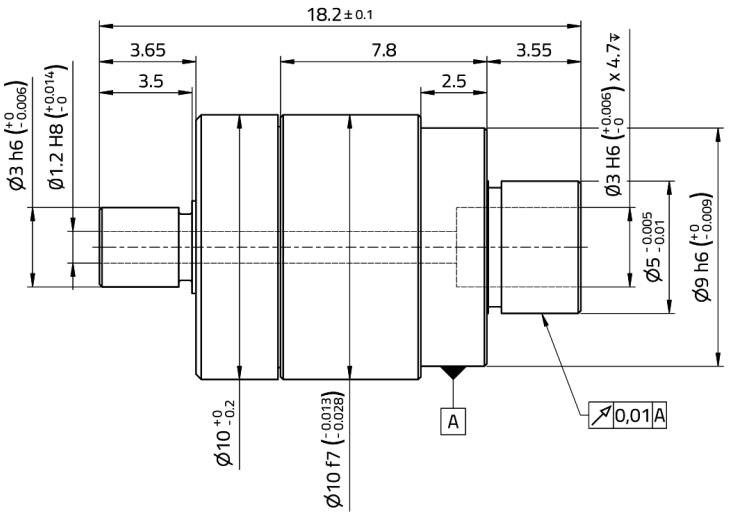
Technical drawing



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