



## Attributes

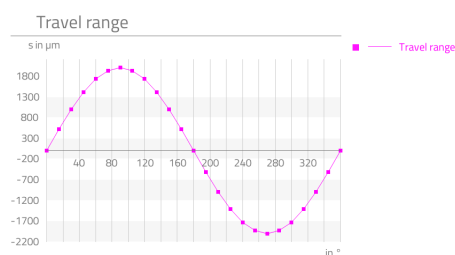
Highlights	Description
<ul style="list-style-type: none"> <li>▪ <b>High adjustment force</b></li> <li>▪ <b>Easy controllability</b></li> <li>▪ <b>High load capacity of output bearing</b></li> <li>▪ <b>Extreme power density</b></li> <li>▪ <b>Lifetime lubrication</b></li> </ul>	<p>The KeevoDrive® HighAcc 10mm - type 2 is a micro positioning system based on an eccentric with eccentricity of 2000 <math>\mu\text{m}</math> and travel range of up to 4000 <math>\mu\text{m}</math>. The micro positioning system can easily be operated in an open loop control, as it is driven by a stepper motor with 20 steps per rotation. At the heart of this highreduction and reliable micro system is a low-backlash CoograDrive® gear with a reduction ratio of 80:1.</p>

## Technical parameter

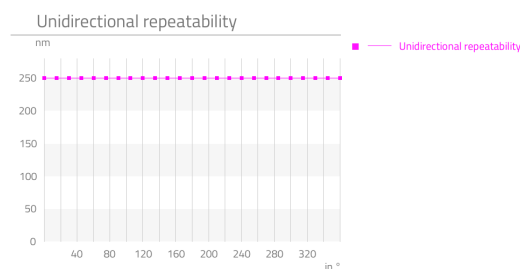
The stated values are based on calculations and measurements by Micromotion GmbH, carried out according to the current state of the art. You can find our definitions at [www.micromotion-drives.com](http://www.micromotion-drives.com).

For further information please contact [sales@micromotion.de](mailto:sales@micromotion.de).

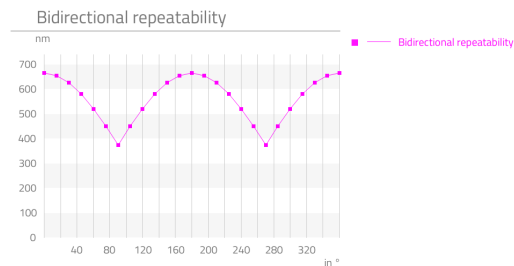
P-005



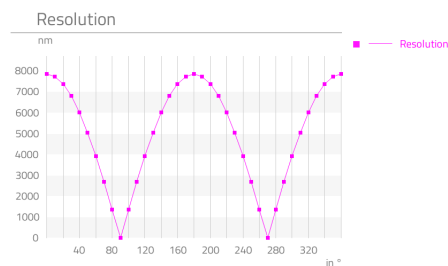
P-008



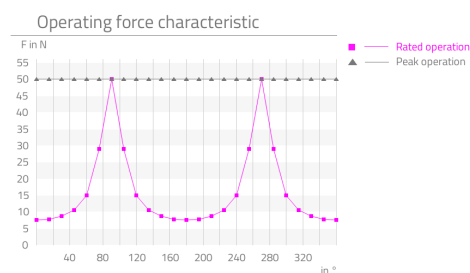
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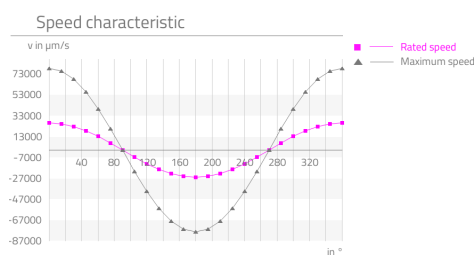
P-012



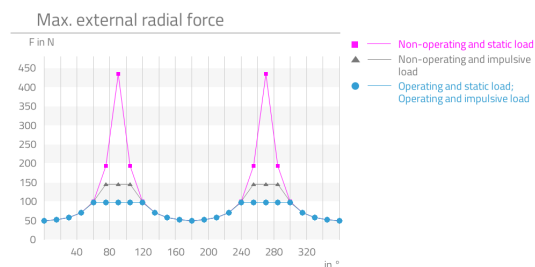
P-016



P-502



P-512



Nr.	Parameter	Symbol	Value	Hint
P-003	Ratio	i	80 : 1	
P-004	Self-locking		yes	
P-005	Max. travel range	s	4000 µm	
P-015	Backlash		0 µm	
P-016	Rated force	F	7.5 N	
P-017	Peak force	F	50 N	
P-018	Momentary peak force	F	60 N	
P-034	Lifetime for rated operation		1000 h	
P-035	Radial backlash output shaft		0 µm	
P-036	Axial backlash output shaft		0 µm	

# Technical Supply Specifications: KeevoDrive® HighRange 10mm - Type 2



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Nr.	Parameter	Symbol	Value	Hint
P-037	Radial stiffness	c	69.13 N/μm	
P-038	Axial stiffness	c	40 N/μm	
P-039	Max. radial load on output shaft (non-operating, constant load)	F	435 N	
P-040	Max. radial load on output shaft (non-operating, impulsive load)	F	145 N	
P-041	Max. radial load on output shaft (operating, constant load)	F	98 N	
P-042	Max. radial load on output shaft (operating, impulsive load)	F	98 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-055	Moment of inertia	I	938.01 * 10 <sup>-4</sup> gcm <sup>2</sup>	
P-056	Weight	m	15 g	
P-057	Min. permissible ambient temperature (non-operating)	T	-35 °C	
P-058	Min. permissible ambient temperature (operating)	T	-20 °C	
P-059	Max. permissible ambient temperature (non-operating)	T	130 °C	
P-060	Max. permissible ambient temperature (operating)	T	70 °C	

## Motor data: Stepper AM 1020-2R-A0.25

(Data are provided by the manufacturer or are based on the data sheets of the manufacturer)

Nr.	Parameter	Symbol	Value	Hint
P-100	Motortype		Stepper	
P-102	Maximum speed of motor	n	21000 rpm	
P-103	Resonance frequency of motor	f	140 Hz	
P-105	Holding torque of motor (unpowered)	T	0.2 mNm	
P-109	Rated current of motor	I	250 mA	
P-111	Rated voltage of motor	U	2 V	
P-112	Phase resistance of motor	R	8 ohm	
P-113	Inductance of motor	L	2.4 mH	
P-114	Amplitude BEMF of motor	U	0.6 mV/rpm	

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Nr.	Parameter	Symbol	Value	Hint
P-115	Full step angle of motor		18 °	
P-116	Angular accuracy of step of motor		±1.8 °	
P-117	Electrical time constant of motor	t	0.32 ms	
P-118	Max. coil temperature of motor	T	130 °C	
P-119	Thermal resistance of motor between coil and housing	R <sub>th1</sub>	3.9 <sup>K</sup> /W	
P-120	Thermal resistance of motor between housing and air	R <sub>th2</sub>	53.8 <sup>K</sup> /W	
P-121	Thermal time constant of the coil of the motor	T <sub>w1</sub>	3200 ms	
P-122	Thermal time constant of the housing of the motor	T <sub>w2</sub>	200000 ms	
P-123	Insulation voltage of motor	U	200 V	

## Excenter data

Nr.	Parameter	Symbol	Value	Hint
P-501	Eccentricity		2000 µm	
P-504	Max. radial load on eccentric bearing (non-operating, constant load)	F	50 N	
P-505	Max. radial load on eccentric bearing (non-operating, impulsive load)	F	50 N	
P-506	Max. radial load on eccentric bearing (operating, constant load)	F	50 N	
P-507	Max. radial load on eccentric bearing (operating, impulsive load)	F	50 N	
P-508	Max. axial load on eccentric bearing (non-operating, constant load)	F	150 N	
P-509	Max. axial load on eccentric bearing (non-operating, impulsive load)	F	50 N	
P-510	Max. axial load on eccentric bearing (operating, constant load)	F	380 N	
P-511	Max. axial load on eccentric bearing (operating, impulsive load)	F	127 N	
P-513	Eccentricity error		20 µm	

## Material information

Nr.	Parameter	Symbol	Value	Hint
P-900	RoHS compliant		yes	
P-901	Lubrication of output bearing gearbox		Longtime PD2	

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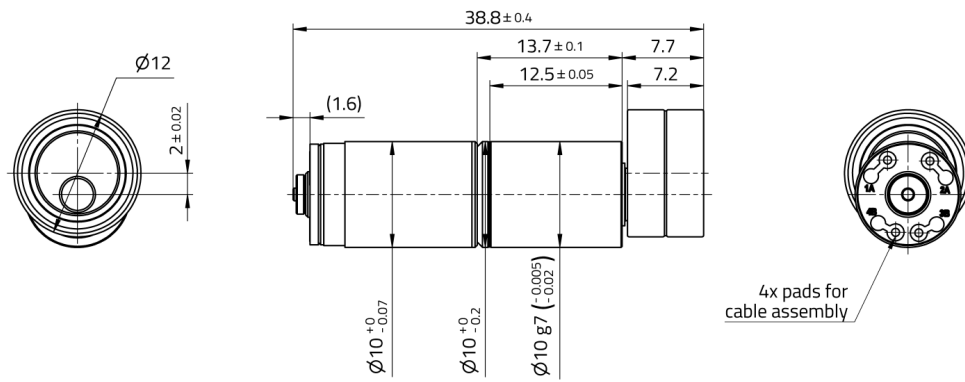
Nr.	Parameter	Symbol	Value	Hint
P-903	Lubrication of gear component set		Molykote BR 2 plus	
P-904	Lubrication of bearing motor		Synthetic light ester oil	
P-908	Material of gear component set		NiFe	
P-909	Material of output bearing gearbox		1.4108 DIN EN	
P-911	Material of bearing motor		Stainless steel	
P-912	Material of gearbox output side		1.4305 DIN EN	
P-914	Material of motor housing		Anodized aluminum	
P-915	Material of eccentric bearing		1.4108 DIN EN	

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## Technical drawing



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