



Attributes

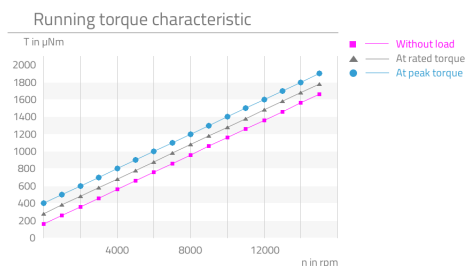
| Highlights | Description |
|--|---|
| <ul style="list-style-type: none">▪ Fast delivery▪ High repeatability▪ Zero backlash with optimised fit between speed and transmission ratio▪ Hollow shaft thru center of rotational axis▪ Preloaded ball bearing | <p>Thanks to the use of Fomblin as lubricant in the bearing and in the gear component set, the MaalonDrive® Hollow 10mm - type 6 micro gearbox has a very low outgassing behaviour, making it particularly well suited for applications in high-vacuum environments. In addition, the hollow shaft allows optical or electrical signals to be passed through the central rotary axis of the gear. At the heart of this precise and reliable micro gearbox is a zero-backlash MaalonDrive® gear with a reduction ratio of 160:1 and P-tooth profile. The preloaded ball bearings on both the input shaft as well as the output shaft result in precise guiding and allow the application to be directly connected.</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.

For further information please contact sales@micromotion.de.

P-029



| Nr. | Parameter | Symbol | Value | Hint |
|-------|------------------------------|--------|-------------------------|------|
| P-001 | Vacuum suitable | | HV | |
| P-003 | Ratio | i | 160 : 1 | |
| P-004 | Self-locking | | yes | |
| P-006 | Hollow shaft | | 1.2 | |
| P-008 | Repeatability unidirectional | | 15 arcsec | |
| P-009 | Repeatability bidirectional | | 30 arcmin | |
| P-010 | Accuracy | | 15 arcmin | |
| P-011 | Transmission accuracy | | 30 arcmin | |
| P-013 | Torsional stiffness | | 9.30 ^{Nm} /rad | |
| P-014 | Lost motion | | 30 arcmin | |
| P-015 | Backlash | | 0 arcmin | |
| P-016 | Rated torque | T | 12 mNm | |
| P-017 | Peak torque | T | 24 mNm | |
| P-018 | Momentary peak torque | T | 55 mNm | |
| P-021 | Rated input speed | n | 10000 rpm | |
| P-022 | Maximum input speed | n | 30000 rpm | |
| P-023 | Rated output speed | n | 62.5 rpm | |
| P-024 | Maximum output speed | n | 187.5 rpm | |
| P-026 | No-load starting torque | T | 240 µNm | |

Technical Supply Specifications: MaalonDrive® Hollow 10mm - Type 6



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| Nr. | Parameter | Symbol | Value | Hint |
|-------|--|--------|--|------|
| P-027 | No-load running torque | T | 160 µNm | |
| P-028 | Rated running torque | T | 1430 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 load) | 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 | 60 * 10 ⁻⁴ gcm ² | |
| P-056 | Weight | m | 6 g | |
| P-057 | Min. permissible ambient temperature (non-operating) | T | -80 °C | |

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| 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

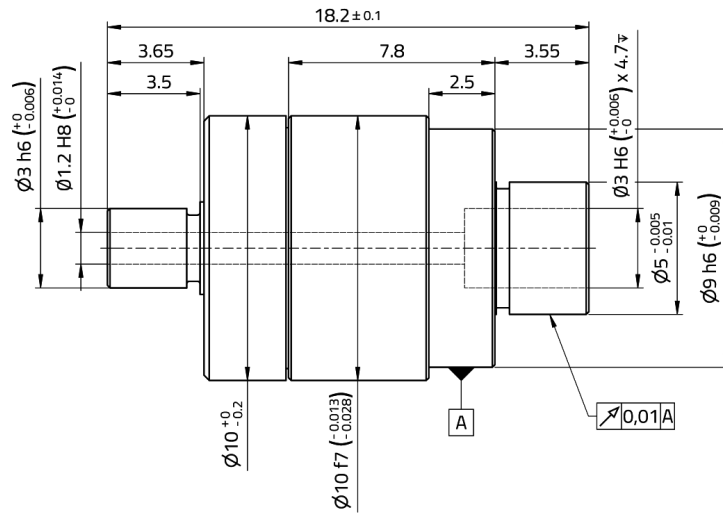
| Nr. | Parameter | Symbol | Value | Hint |
|-------|---------------------------------------|--------|---------------|------|
| P-900 | RoHS compliant | | yes | |
| P-901 | Lubrication of output bearing gearbox | | FomblinGRM60 | |
| P-902 | Lubrication of input bearing gearbox | | FomblinGRM60 | |
| P-903 | Lubrication of gear component set | | FomblinGRM60 | |
| 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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