

## MD012012

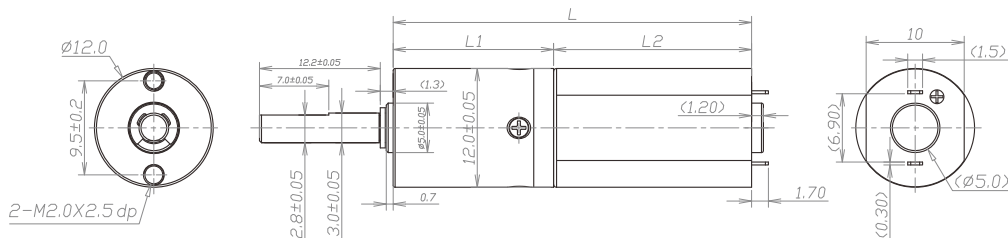
### Gearbox Specifications

|                       |          |                                |                |
|-----------------------|----------|--------------------------------|----------------|
| Outer diameter        | 12mm     | Bearing                        | Porous bearing |
| Material              | Metal    | Axial endplay                  | ≤0.3mm         |
| Direction of rotation | cw & ccw | Radial loading on output shaft | ≤10N           |
| Gear backlash         | ≤3°      | Operating temperature range    | -20 ~ +85°C    |

### Gearbox Stages

|                                     | 1     | 2            | 3                   | 4                            |
|-------------------------------------|-------|--------------|---------------------|------------------------------|
| Reduction ratio                     | 4 / 6 | 16 / 24 / 36 | 64 / 96 / 144 / 216 | 256 / 384 / 576 / 864 / 1296 |
| Max rated torque of gearbox (gf.cm) | 300   | 1000         | 1500                | 2000                         |
| Instant torque of gearbox (gf.cm)   | 1000  | 3000         | 4500                | 5000                         |
| Gearbox efficiency (%)              | 87    | 74           | 63                  | 56                           |
| Gearbox length L1 (mm)              | 12.4  | 16.2         | 20                  | 23.8                         |

### Technical Drawing



### Motor Specifications

|                       |   |             |           |
|-----------------------|---|-------------|-----------|
| Motor type (optional) | Brushed DC motor, Brushless DC motor, Coreless motor, Stepper motor | Input speed | ≤3000rpm  |
| Voltage (optional)    | 3-24V   | Current     | 250mA max |

| Model         | Rated Speed | Max Speed | Max Rated Torque | Max Instant Torque | Reduction Ratio | Gearbox Length | Overall Length |
|---------------|-------------|-----------|------------------|--------------------|-----------------|----------------|----------------|
|               | rpm         | rpm       | gf.cm            | gf.cm              |                 | mm             | mm             |
| MD012012-4    | 1875        | 7500      | 300              | 1000               | 4               | 12.4           | 32.4           |
| MD012012-6    | 1250        | 5000      | 300              | 1000               | 6               |                |                |
| MD012012-16   | 469         | 1875      | 1000             | 3000               | 16              | 16.2           | 36.2           |
| MD012012-24   | 313         | 1250      | 1000             | 3000               | 24              |                |                |
| MD012012-36   | 208         | 833       | 1000             | 3000               | 36              |                |                |
| MD012012-64   | 117         | 469       | 1500             | 4500               | 64              | 20             | 40             |
| MD012012-96   | 78          | 313       | 1500             | 4500               | 96              |                |                |
| MD012012-144  | 52          | 208       | 1500             | 4500               | 144             |                |                |
| MD012012-216  | 35          | 139       | 1500             | 4500               | 216             |                |                |
| MD012012-256  | 29          | 117       | 2000             | 5000               | 256             | 23.8           | 43.8           |
| MD012012-384  | 20          | 78        | 2000             | 5000               | 384             |                |                |
| MD012012-576  | 13          | 52        | 2000             | 5000               | 576             |                |                |
| MD012012-864  | 9           | 35        | 2000             | 5000               | 864             |                |                |
| MD012012-1296 | 6           | 23        | 2000             | 5000               | 1296            |                |                |

\*Please contact us for customized products