

## Micro gears

Gears at module 0.3 and 0.2 are available from **DIDEL**; they are well suited for motors 3 to 10 mm in diameter. With module 0.3, two pinion sizes (9 and 12 teeth) and four spur gear sizes (36, 48, 60 and 81 teeth with 12teeth pinions) are available. Slotted gears with 48 and 60 teeth allow to add photodiodes or use the H7001 mouse encoder and get precise angle and speed information. With Module 0.2, a 12-teeth pinion and a 60/12 spur gear are available now.

### Module and teeth number

The module is the quotient of the nominal diameter of a gear by the number of teeth. For instance, a module 0.3 gear of 60 teeth has a nominal diameter of  $0.3 \times 60 = 18$  mm. Add two teeth for the external diameter, which will be measured as 18.6 mm. The distance between the axis of two gears is simply the module multiplied by the total number of teeth, divided by 2. Add 0.02 to 0.04 mm to be sure the movement will be free. Distance has to be precise for long lasting gears and for reaching the efficiency of 90% one can expect for every stage.

### Plastic gears of module 0.3

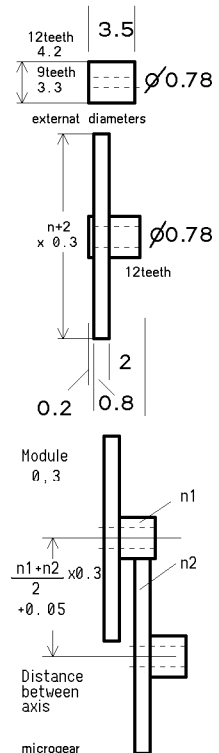
| Teeth number   | Weight g | Dia ext | Dia nom | Dia bore |
|----------------|----------|---------|---------|----------|
| 9              | 0.02     | 2.7     | 3.3     | note 1   |
| 12             | 0.04     | 3.6     | 4.2     | note 2   |
| 36/12          | 0.13     | 10.8    | 11.4    | 0.78     |
| 36/12 crown    | 0.17     | 10.8    | 11.4    | 0.78     |
| 48/12 light    | 0.15     | 14.4    | 15.0    | 0.78     |
| 48/12 36 slots | 0.19     | 14.4    | 15.0    | 0.78     |
| 60/12 light    | 0.18     | 18.0    | 18.6    | 0.78     |
| 60/12 60 Slots | 0.25     | 18.0    | 18.6    | 0.78     |
| 81/12 light    | 0.34     | 24.3    | 24.9    | 0.78     |

Note1: Bore diameters 0.61, 0.71, 0.81, and 0.98mm

Note2: Bore diameters 0.78 and 0.97mm

#### Distance between axis

|         |                      |          |                      |
|---------|----------------------|----------|----------------------|
| 9 to 36 | 6.75 mm (+ 0.02 mm)  | 12 to 36 | 7.2 mm (+ 0.03 mm)   |
| 9 to 48 | 8.55 mm (+ 0.02 mm)  | 12 to 48 | 9.0 mm (+ 0.03 mm)   |
| 9 to 60 | 10.35 mm (+ 0.02 mm) | 12 to 60 | 10.8 mm (+ 0.03 mm)  |
| 9 to 81 | 13.50 mm (+ 0.02 mm) | 12 to 81 | 13.95 mm (+ 0.03 mm) |



### Plastic gears of module 0.2

| Teeth number | Weight g | Dia nom | Dia ext | Dia bore |
|--------------|----------|---------|---------|----------|
| 12           | 0.04     | 2.4     | 2.8     | 0.63     |
| 60/12 light  | 0.18     | 18.0    | 18.6    | 0.78     |

#### Distance between axis

12 to 60 7.20 mm (+ 0.01 mm)

### Slow flyer gearboxes

Lightweight boxes for 4mm to 10mm motors are available for ratios 1:4 to 1:27. See [www.didel.com/slow/pricelist/index.html](http://www.didel.com/slow/pricelist/index.html)