

### M 0.5 Gears

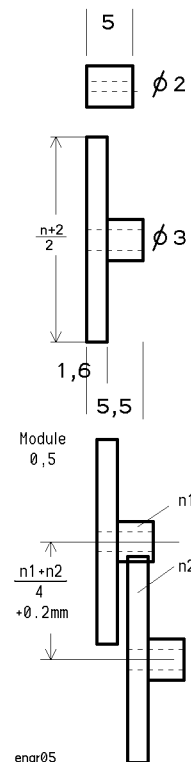
The module is the quotient of the nominal diameter of a gear by the number of teeth. For instance, a module 0.5 gear of 62 teeth has a nominal diameter of 31 mm. Add two teeth for the external diameter, which will be measured as 32mm. The distance between the axis of two gears is simply the module multiplied by the total number of teeth. Add 0.2 to 0.4 mm to be sure the movement will be free. The distance has to be precise for reducing the noise and wear, and for reaching the efficiency of 90% one can expect for every stage.

Module 0.5 plastic gears are cheap and can be obtained from Opitec, Traudel-Riess and Conrad. They can carry forces on teeth of up to several Newtons. Module 1 gears are used by Lego and are also available from the same addresses. Modules smaller than 0.5 are very expensive: M 0.25 9 and 32 teeth gears are available from Wes Technik, M 0.3 12, 36, 48, 60 teeth gears are available from Didel ([www.didel.com/doc/actu/Engr03.pdf](http://www.didel.com/doc/actu/Engr03.pdf)).

#### Plastic gears of module 0.5

These gears have a hole of 1.9 or 2.9 mm. They are available from several sources, for a price of 10 to 20 cts per piece. [www.opitec.ch](http://www.opitec.ch) [www.traudl-riess.de](http://www.traudl-riess.de) [www.conrad.ch](http://www.conrad.ch)

Teeth number	Dia ext	Dia hole	Opitec	Traudel	Conrad	LAMI-LAP
10	6	1,9	x	x	S2	XX
10	6	2,3			S1	X
10	6	2,9	x			
12	7	1.9		x		XX
12	7	2.4		x		x
30	16	2.5			S1	x
30/10	16	2.9	x	x		XX
30/10	16	3.1	x	x		X
30/12	16	2,9			S1	x
40	21	2,9			S1	x
40/12	21	2,9			S1	x
48/12	25	2.9		x		
48/12	25	3.1		x		x
50/10	26	2.9	x	x	S2	XX
50/10	26	3,1	x		S2	X
50/12						
62/10	32	2.9		x		XX
60/12	31	2.9		x		X
60/12	31	3.1		x		
U 20	11,7	2,9			S1	X
U 30	16,5	2.9		x	S1	X
Vis s. fin	5	1.9		x	S1	X
Adaptateur	3	2	x			
Axe 15mm	3					XX
Axe 50mm	3			x		XX
Axe 70mm	3		x	x		XX
Axe 95mm	3		x			
Axe 120mm	3		x	x		XX



x Several pieces at LAMI-LAP - X small stock - XX important stock