1. Ranges of parameters visible on UI

Table 1 UI parameters

Name	Symbol	Range			
		(mm)	(in)	(°)	-
module	m	0.5 … 20	0.03125 … 1		
pressure angle	α			14.5 … 25	
clearance factor	f_c				0.1 … 0.25(4)
thickness(1)	t	0.5 … 1000	0.03125 … 40		
helix angle	β			10 … 40	
groove width	g_w	0.5 … 960(2)	0.03125 … 38(2)		
groove depth (gear)	g_{dg}	0.1 … 10000(2)	0.00781 … 400(2)		
groove depth (rack)	g_{dr}	0.1 … 1000(2)	0.00781 … 40(2)		
teeth number (gear)	z_g				8 … 200
teeth number (rack)	z_r				8 … 300
height of pitch line	H	0.15 … 2000	0.09375 … 80		
profile shift factor	x				0 … 1(4)
taper factor	f_t				0 … 0.5(4)
backlash (gear, rack)(3)	j_g, j_r	-0.2 … 0.2	-0.01563 … 0.01563		
chamfer width factor	f_{cw}				0.1 … 0.25(4)
chamfer height factor	f_{ch}				0.1 … 0.25(4)

(1) both for gear and rack,

(2) range can be also limited by thickness, root diameter and height of pitch line,

(3) normal backlash,

(4) related to module.

2. Parameters visible in 3rd mode of preview

Table 2 3rd mode parameters

Symbol	Meaning
z	number of teeth
d_w	working pitch diameter(1)
d_b	base diameter
d_f	root diameter
d_a	outside diameter
α_w	working pressure angle
a	center distance
H	height of pitch line
$dir.$	teeth direction(2)

(1) the same as pitch diameter,

(2) right/left, only for non-straight teeth.

3. Parameters saved in components

Table 3 Components' parameters

Component	Symbol	Meaning
Gear	d	pitch diameter
	d_w	working pitch diameter
	d_b	base diameter
	d_f	root diameter
	d_a	outside diameter
	x	profile shift factor
	f_t	taper factor
	j	backlash
	α_w	working pressure angle
	a	center distance
	α_a	pressure angle at outside diameter
	θ	half of top land angle at outside diameter
	s_a	top land thickness
	δ	angle of rotation around gear's axis
Rack	j	backlash
	α_w	working pressure angle
	a	center distance
	H	height of pitch line
	s_a	top land thickness