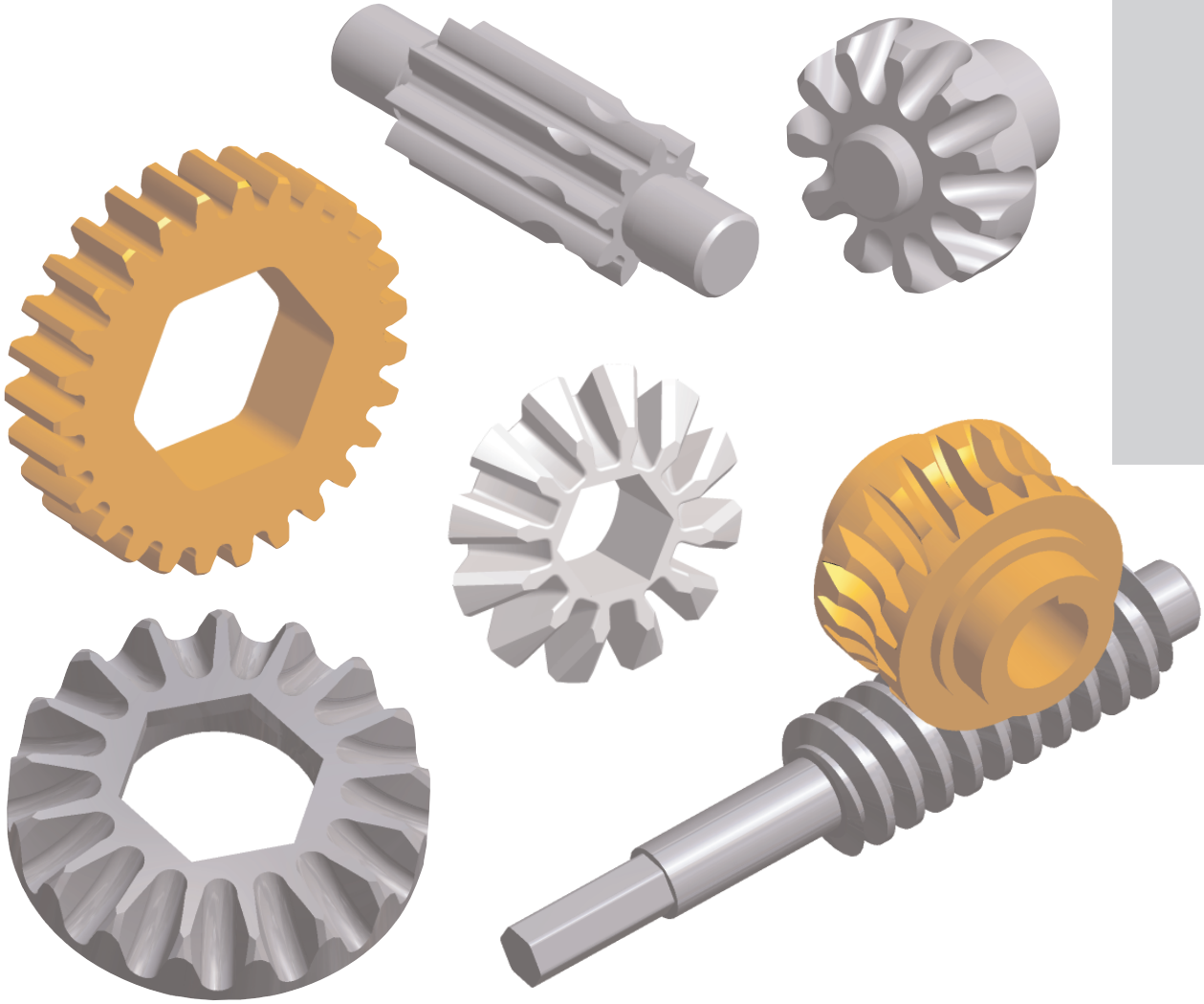
Ketterer GEARS

Spur gears, bevel gears worm gear pairs

accessories



Description:

Our standard, “toothing to customer requirements” no “catalog toothed gears”.

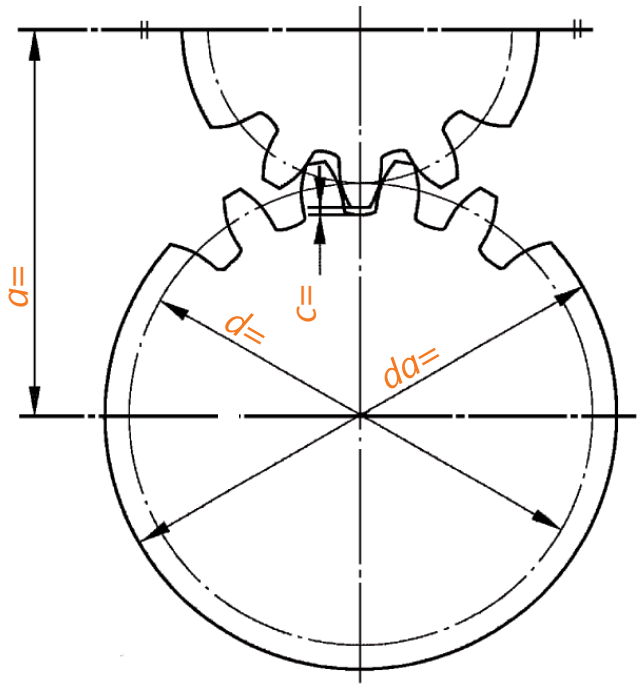
Special features:

- Spur gears, straight and helical geared up to module 2,5
- Bevel gears, straight and special geared up to module 2
- Worm and worm wheels as gear pairs up to module 2,5
- Tooth belt pulleys in different profiles

Application areas of our toothing parts:

- Medical technology
- Automotive engineering
- Railed vehicles
- Buses
- Drive units in clean rooms (chip production/solar cells)
- Sun protection
- Sport + leisure
- Modelbuilding
- Rehabilitation, health care
- Food industry

Spur gears, bevel gears, worm gear pairs

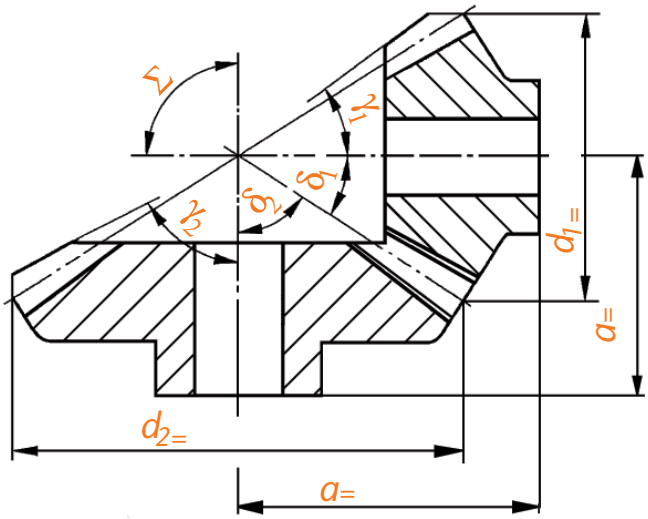


Spur gears with straight gearing

Gear dimensions

Module	$m = \frac{p}{\pi} = \frac{d}{z}$
Number of teeth	$z = \frac{d}{m} = \frac{da - 2 \cdot m}{m}$
Bottom clearance	$c = 0{,}1 \cdot m$ bis $0{,}3 \cdot m$ up to often $c = 0{,}167 \cdot m$
Reference diameter	$d = m \cdot z = \frac{z \cdot p}{\pi}$
Tip diameter	$da = d + 2 \cdot m = m\,(z + 2)$

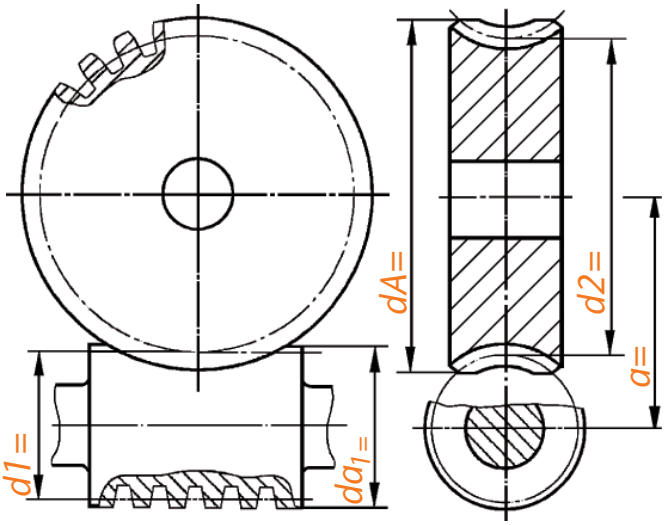
m = Module
d = Reference diameter
da = Tip diameter
z = Number of teeth
c = Bottom clearance
a = Centre distance



Bevel gears with straight gearing

	driving gear	driven gear
Reference diameter	$d1 = m \cdot z1$	$d2 = m \cdot z1$
Taper angle	$\tan\gamma 1 = \frac{z1 + 2 \cdot \cos\delta_1}{z1 - 2 \cdot \sin\delta_1}$	$\tan\gamma 1 = \frac{z2 + 2 \cdot \cos\delta_2}{z1 - 2 \cdot \sin\delta_2}$
Reference angle	$\tan\delta 1 = \frac{d1}{d2} = \frac{z1}{z2} = \frac{1}{i}$	$\tan\delta 1 = \frac{d2}{d1} = \frac{z2}{z2} = i$
Shaft angle	$\Sigma = \delta 1 + \delta 2$	

Bottom clearance, tooth height, addendum etc. see spur gears



Worm gear

	worm	worm wheel
Reference diameter	$d1 =$ nominal size	$d2 = m \cdot z2$
Tip diameter	$da_1 = d_1 + 2 \cdot m$	
Outer diameter		$dA \sim da_2 + m$
Centre distance	$a = \frac{d1 + d2}{2}$	

Bottom clearance, tooth height, addendum etc. see spur gears