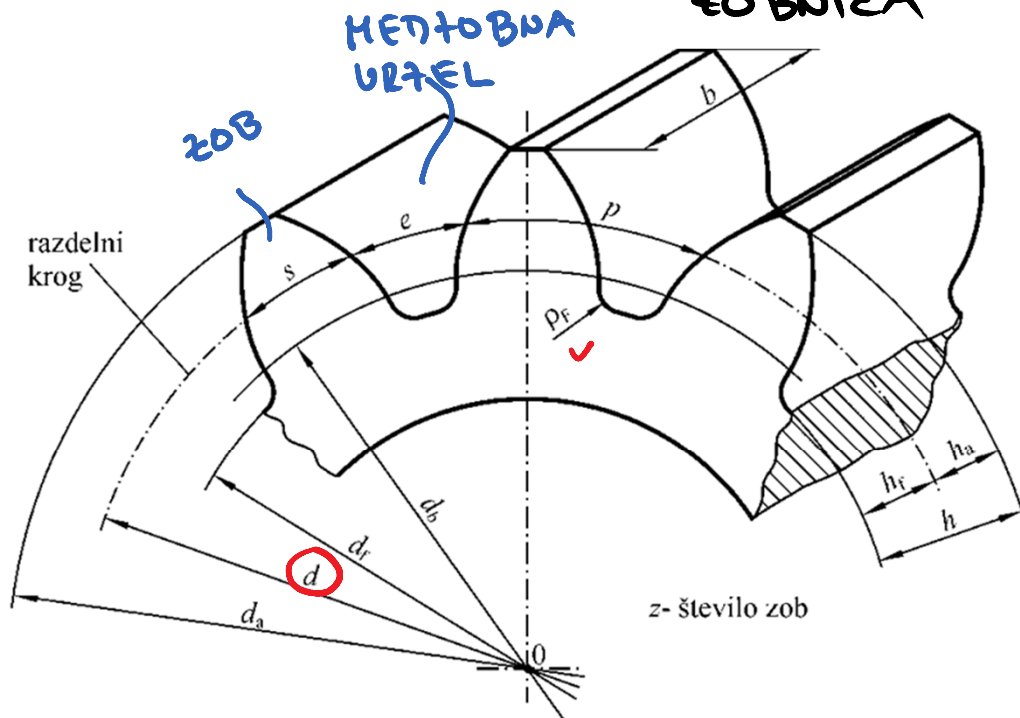


ŽOBNIŠYA GONILA

DELITEU ŽOBNIŠYI GONIL

- VALJASTE ŽOBNIŠYE DUOJICE
- STOŽČASTE ŽOBNIŠYE DUOJICE
- POLĀNA GONILA
- VIJAČNE ŽOBNIŠYE DUOJICE
- PLANETNA GONILA

OSNOVNE VELIČINE ZAUNOŽOBEGA VALJASTEGA ŽOBNIKA



- | | | |
|-------------------------------|-----------------------------|------------------------------------|
| d_b premer osnovnega kroga | b širina zoba | s debelina zoba |
| d_f premer vznožnega kroga | h višina zoba | e širina medzobne vrzeli |
| d premer razdelnega kroga | h_a višina zobnega vrha | p razdelek |
| d_a premer temenskega kroga | h_f višina zobnega korena | ρ_f zaokroženje v korenu zoba |

$$s + e = p$$

$$e = \pi d = p \cdot z$$

$$d = \frac{p}{\pi} z$$

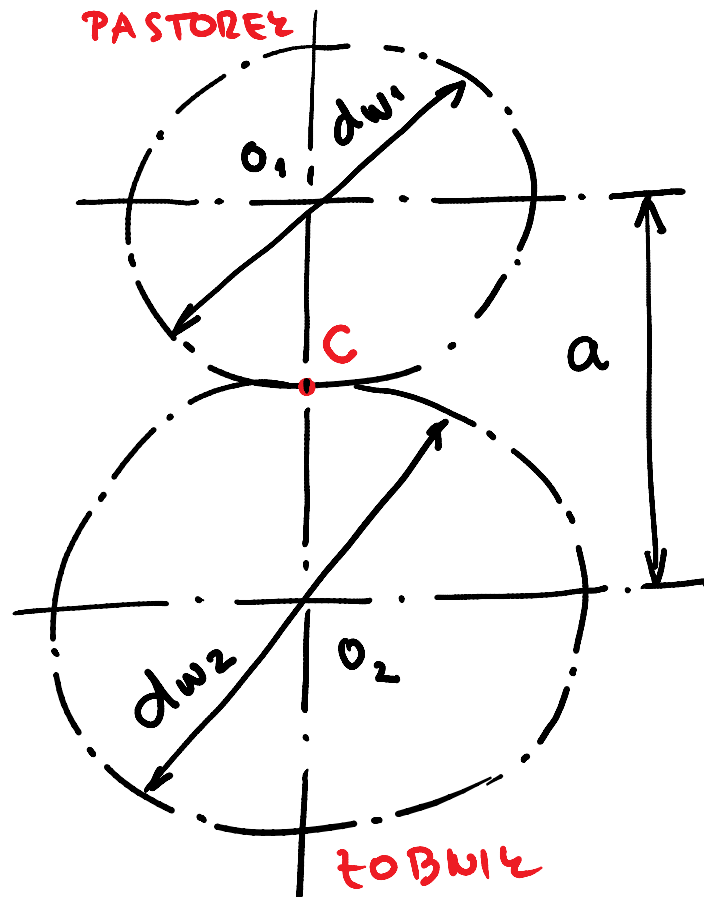
$$m = \frac{p}{z} \quad \text{MODUL ŽOBNIKA}$$

$$d_a = d + 2h_a$$

$$d_f = d - 2h_f$$

$$h = h_f + h_a$$

PREHER RAŽDELNEGA IN KINEMATIČNEGA ŽROGA



C : KINEMATIČNA TOČKA
 UBIJENA TOČKA

d_{w1}, d_{w2} : PREHERA KINEMATIČNIH
 ŽROGOV

$$d_1 = d_{w1} \wedge d_2 = d_{w2}$$



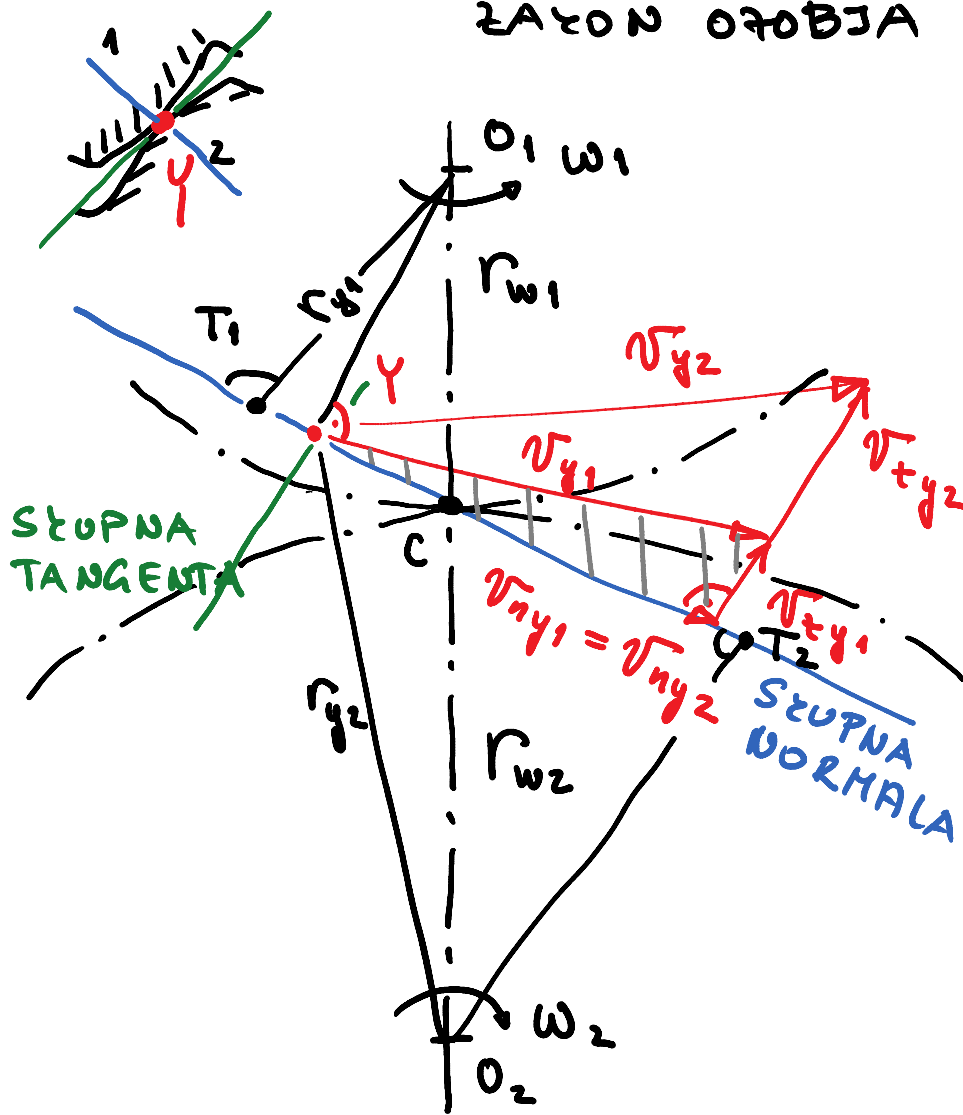
X-NIČTA ŽOBNIŠKA DUOJICA
 (NEORIGIRANO OŽOBTJE)

$$d_1 \neq d_{w1} \vee d_2 \neq d_{w2}$$

X-TA ŽOBNIŠKA DUOJICA
 (ORIGIRANO OŽOBTJE)

$$a = \frac{d_{w1} + d_{w2}}{2}$$

ΞΑΧΟΝ ΟΡΘΟΓΩΝΙΑ



Υ: ΟΒΙΡΝΑ ΤΟΪΕΑ

$$\omega_1 \checkmark r_{y1} \checkmark$$

$$v_{y1} = \omega_1 r_{y1}$$

$$\omega_2 = ? r_{y2} \checkmark$$

$$v_{y2} = \omega_2 r_{y2}$$

DA ΞΑΓΟΤΟΥΜΟ $i = \frac{\omega_1}{\omega_2}$
 = CONST ΜΟΡΑ ΣΕΥΡΝΑ
 ΝΟΡΜΑΛΑ ΝΑ ΒΟΡΕΑ ΤΟΒ
 V ΤΟΪΕΙ Υ ΡΟΤΕΞΑΤΙ
 ΣΧΟΤΙ ΤΟΪΕΟ C!

$$\Delta O_1 T_1 C \equiv \Delta O_2 T_2 C$$

$$\frac{O_1 T_1}{r_{w1}} = \frac{O_2 T_2}{r_{w2}}$$

$$\frac{v_{ny1}}{v_{y1}} = \frac{\overline{O_1 T_1}}{r_{y1}} \quad v_{ny1} = v_{y1} \frac{\overline{O_1 T_1}}{r_{y1}} = \omega_1 \overline{O_1 T_1}$$

||

$$\frac{v_{ny2}}{v_{y2}} = \frac{\overline{O_2 T_2}}{r_{y2}} \quad v_{ny2} = v_{y2} \frac{\overline{O_2 T_2}}{r_{y2}} = \omega_2 \overline{O_2 T_2}$$

$$i = \frac{\omega_1}{\omega_2} = \frac{\overline{O_2 T_2}}{\overline{O_1 T_1}} = \frac{r_{w2}}{r_{w1}} = \text{const} \quad \blacksquare$$

DRSNE ZAZMEDE PRI UBIRANJU TOBNIH BOLOV

$$v_{gy} = v_{ty1} - v_{ty2}$$

$$\frac{v_{ty1}}{v_{y1}} = \frac{\overline{T_1 Y}}{r_{y1}} \quad v_{ty1} = \omega_1 \overline{T_1 Y} = \omega_1 (\overline{T_1 C} - \overline{CY})$$

$$\frac{v_{ty2}}{v_{y2}} = \frac{\overline{T_2 Y}}{r_{y2}} \quad v_{ty2} = \omega_2 \overline{T_2 Y} = \omega_2 (\overline{T_2 C} + \overline{CY})$$

$$\begin{aligned} v_{gy} &= \omega_1 (\overline{T_1 C} - \overline{C Y}) - \omega_2 (\overline{T_2 C} + \overline{C Y}) \\ &= -\overline{C Y} (\omega_1 + \omega_2) + \omega_1 \overline{T_1 C} - \omega_2 \overline{T_2 C} \end{aligned}$$

$$\frac{\overline{T_1 C}}{r_{w_1}} = \frac{\overline{T_2 C}}{r_{w_2}}$$

$$\overline{T_1 C} \cdot r_{w_2} = \overline{T_2 C} r_{w_1} = \overline{T_1 C} \cancel{r_{w_1}} \frac{\omega_1}{\omega_2} = \overline{T_2 C} \cancel{r_{w_1}}$$

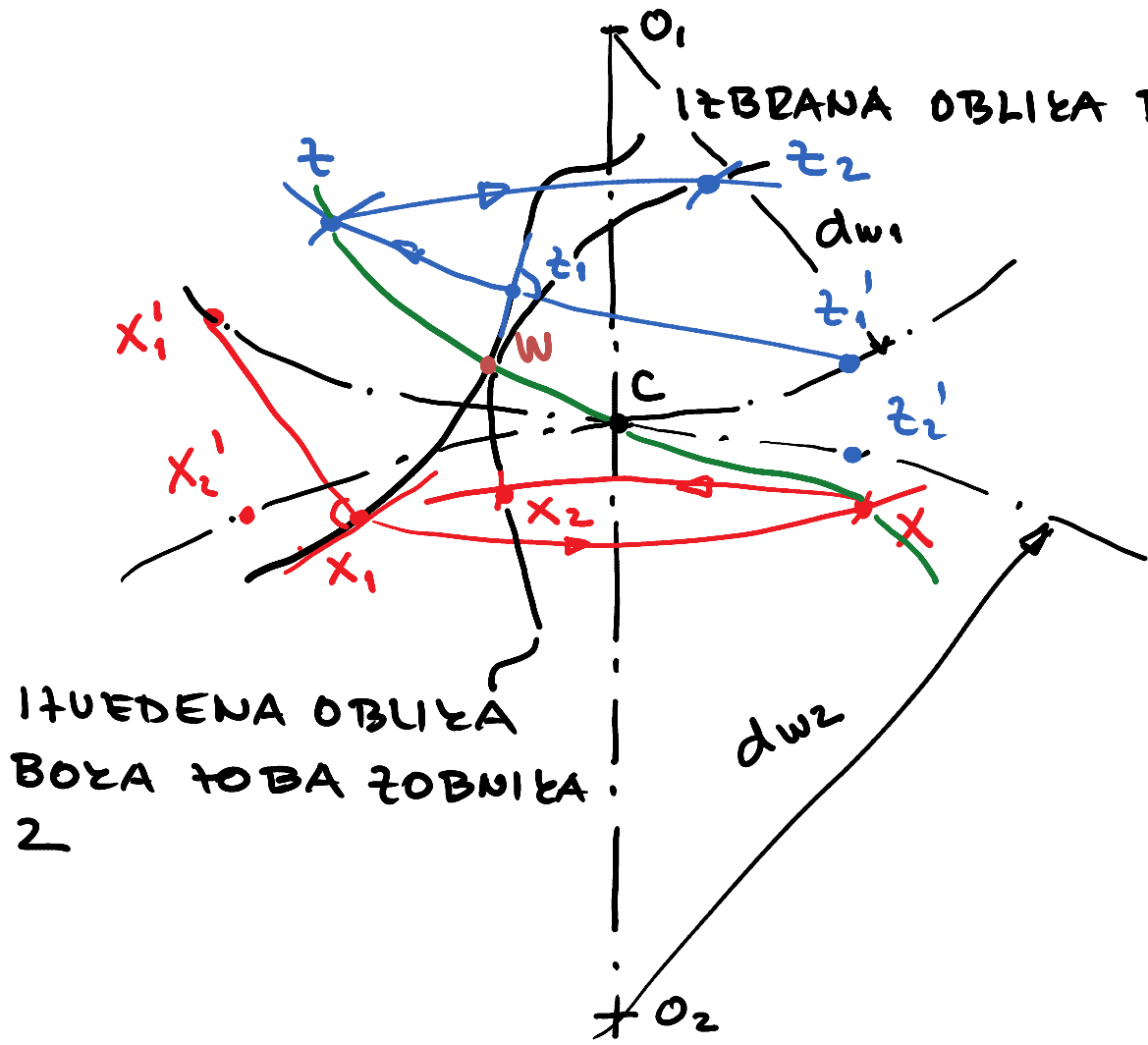
$$\frac{\omega_1}{\omega_2} = \frac{r_{w_2}}{r_{w_1}}$$

$$\omega_1 \overline{T_1 C} = \omega_2 \overline{T_2 C}$$

$$v_{gy} = -(\omega_1 + \omega_2) \overline{C Y} \quad \blacksquare$$

LE V TOČKI $Y=C$
 NASTANE ČISTO KOTAJE-
 VANJE!

ΚΟΝΣΤΡΟΥΚΤΙΟΝ ΠΡΟΤΙΒΟΛΕΑ ΙΝ ΟΒΙΡΝΙΣΕ



ΙΣΒΡΑΝΑ ΟΒΛΙΣΑ ΒΟΣΑ ΤΟΒΑ ΤΟΒΝΙΣΑ 1

ΙΣΒΡΕΝΑ ΟΒΛΙΣΑ ΒΟΣΑ ΤΟΒΑ ΤΟΒΝΙΣΑ 2

$$\overline{x_1 x_1'} = \overline{C x} = \overline{x_2 x_2'}$$

ΤΟΪΣΑ Χ ΛΕΪ ΝΑ ΟΒΙΡΝΙΣΙ

$$\widehat{C x_1'} = \widehat{C x_2'}$$

ΤΟΪΣΑ Χ₂ ΛΕΪ ΝΑ ΒΟΣΟ ΤΟΒΑ ΤΟΒΝΙΣΑ 2

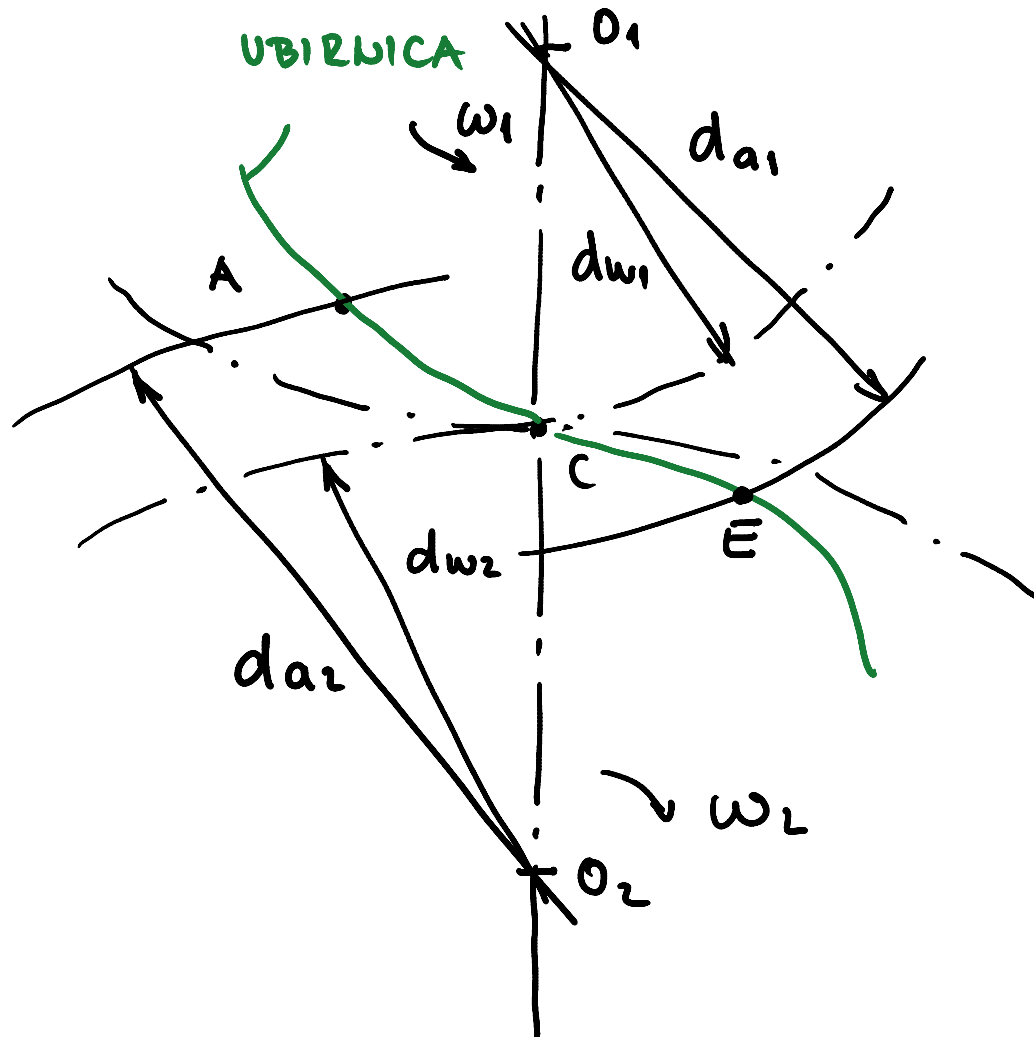
$$\overline{z_1 z_1'} = \overline{C z} = \overline{z_2 z_2'}$$

$$\widehat{C z_1'} = \widehat{C z_2'}$$

— ΟΒΙΡΝΙΣΑ

$$W = W_1 = W_2$$

DOLŽINA UBIRNICE



AE I DOLŽINA
UBIRNICE

A : ZAČETNA
TOČKA UBIRANJA

E : KONČNA
TOČKA UBIRANJA