



ESCOLA POLITÉCNICA DA UNIVERSIDADE DE SÃO PAULO

**PMR 3203**

Laboratório 3

## **Ensaio de torneamento**

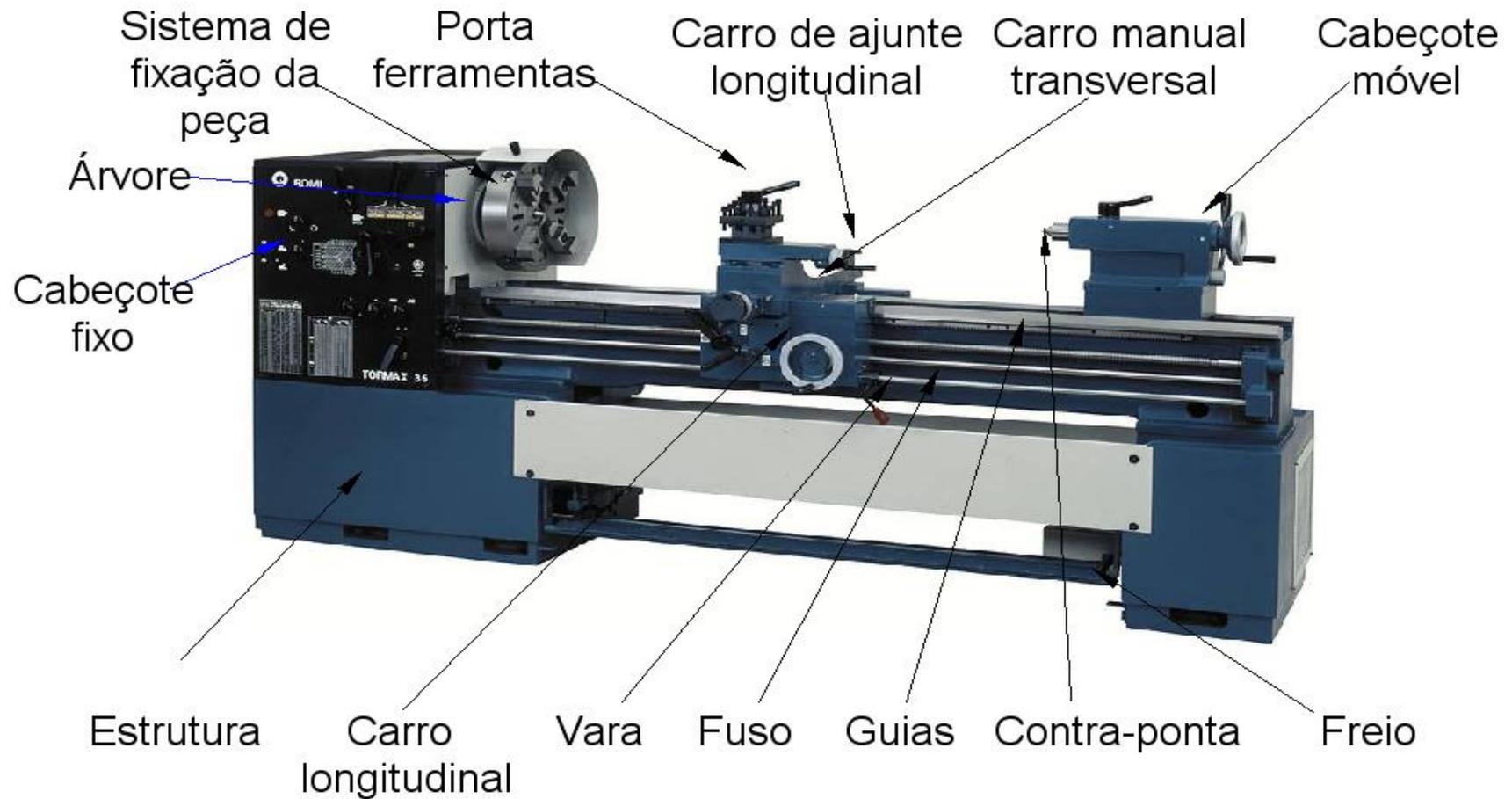
Nome:

NUSP:

**2020.1**



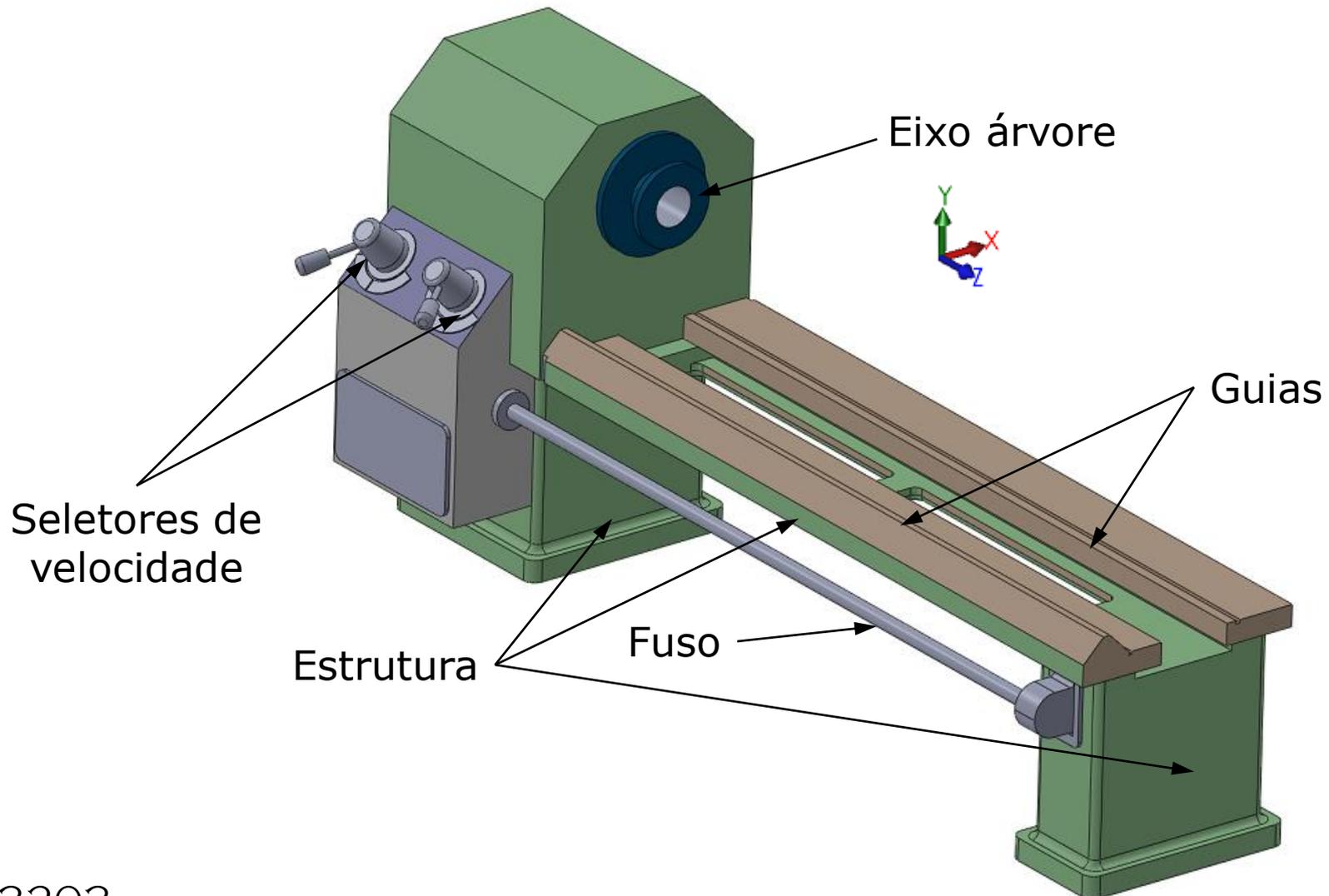
## Torno convencional





## Torno de bancada

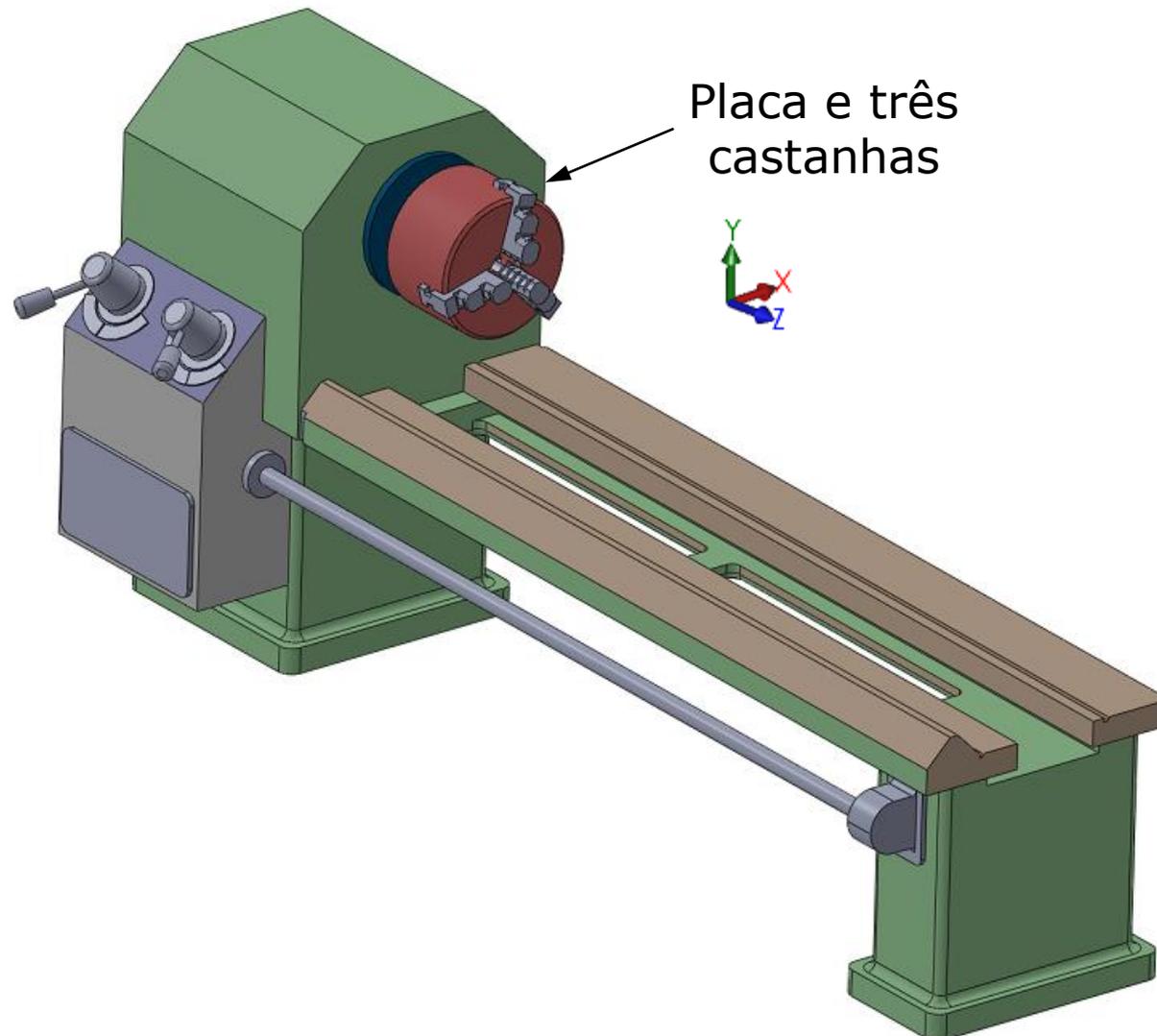
### Constituintes





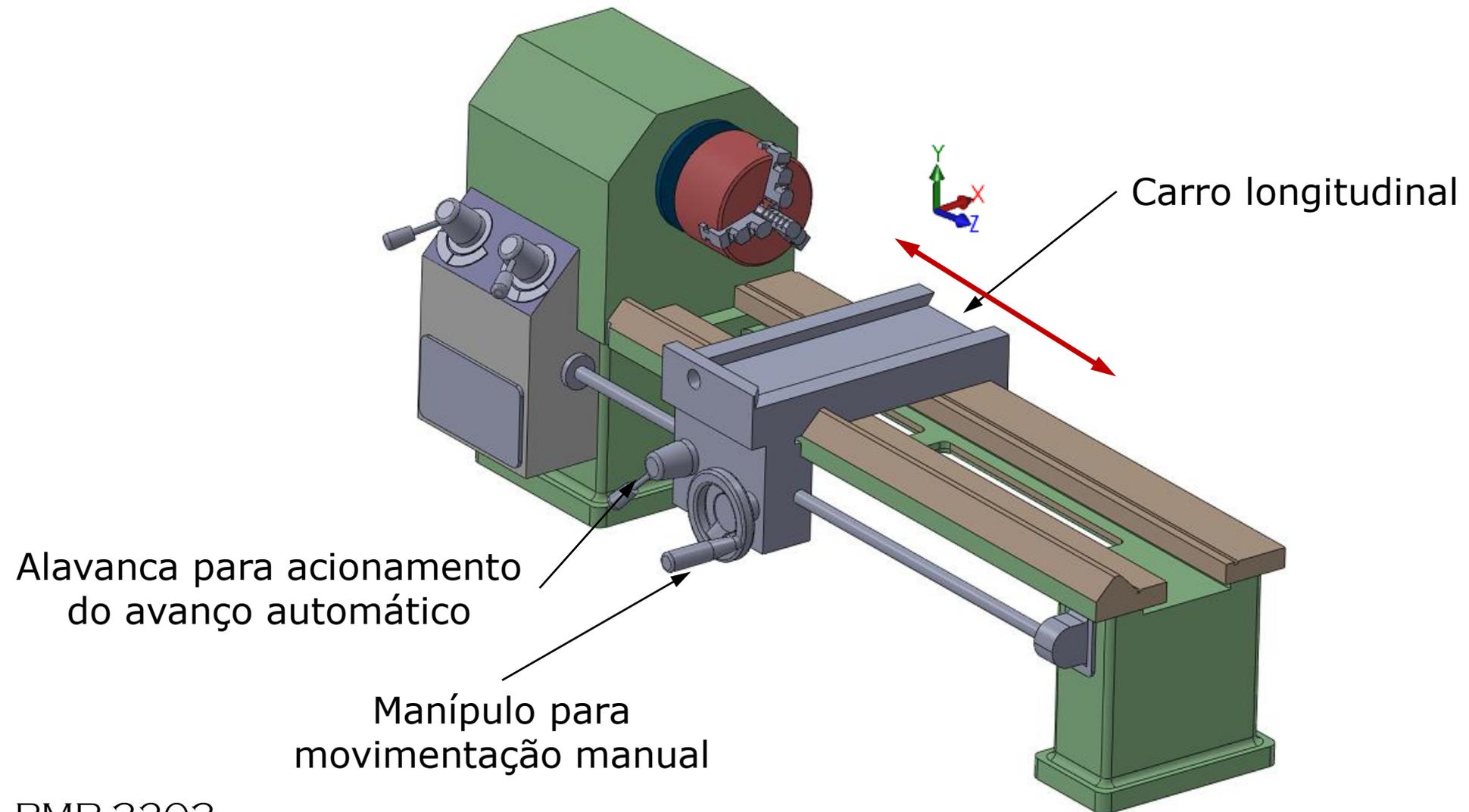
## Torno de bancada

### Constituintes





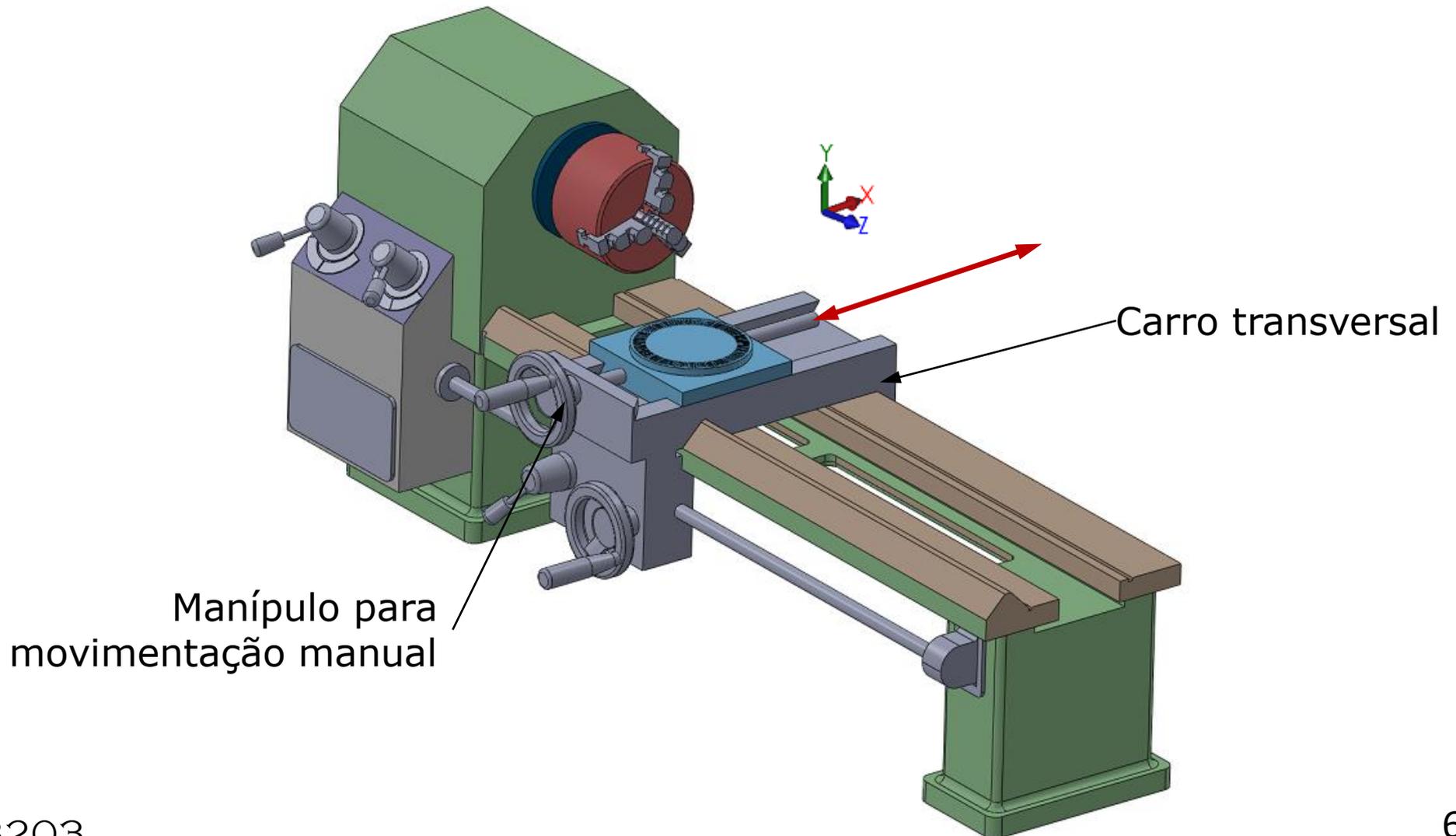
## Torno de bancada Constituintes





## Torno de bancada

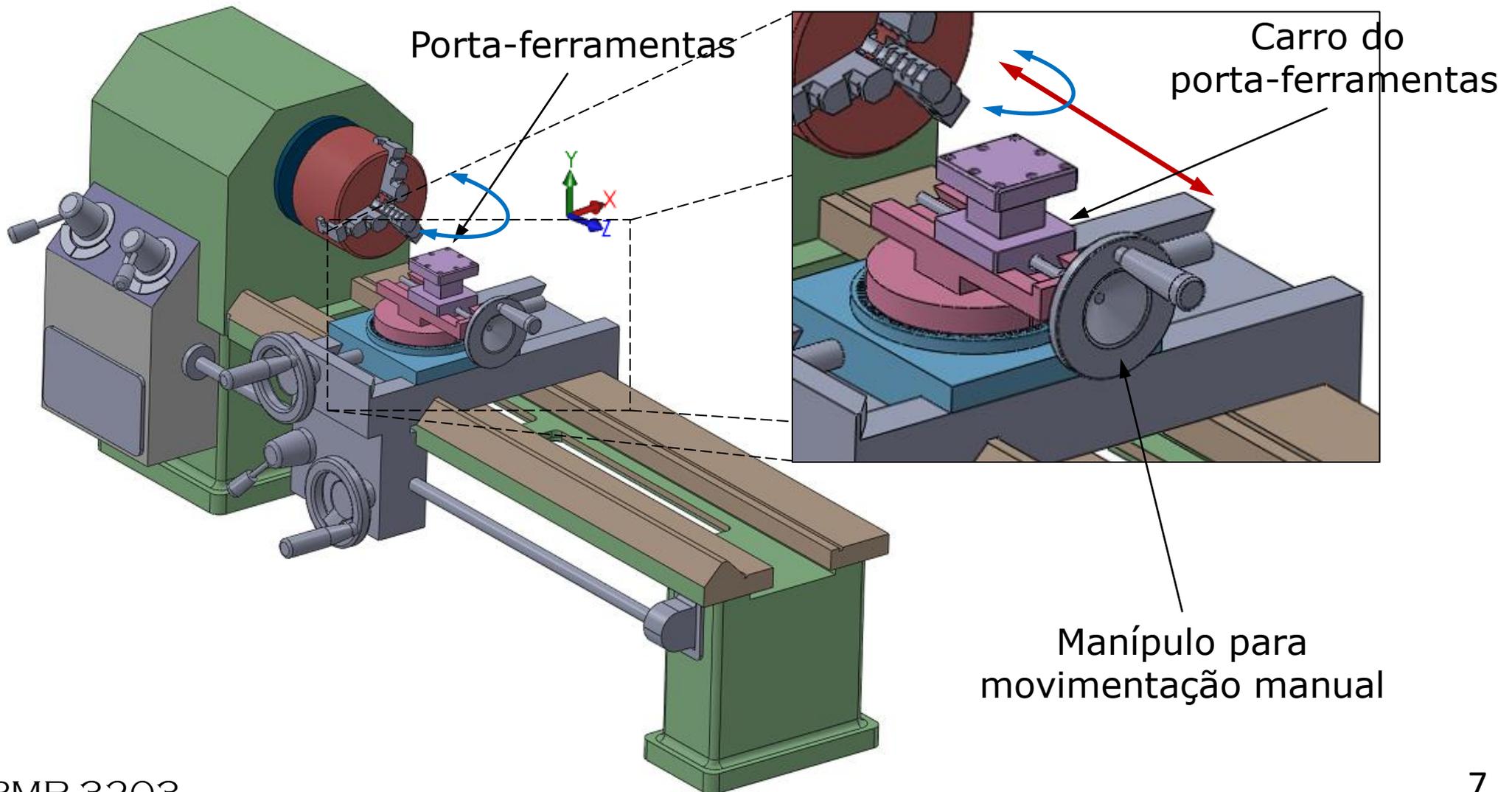
### Constituintes





## Torno de bancada

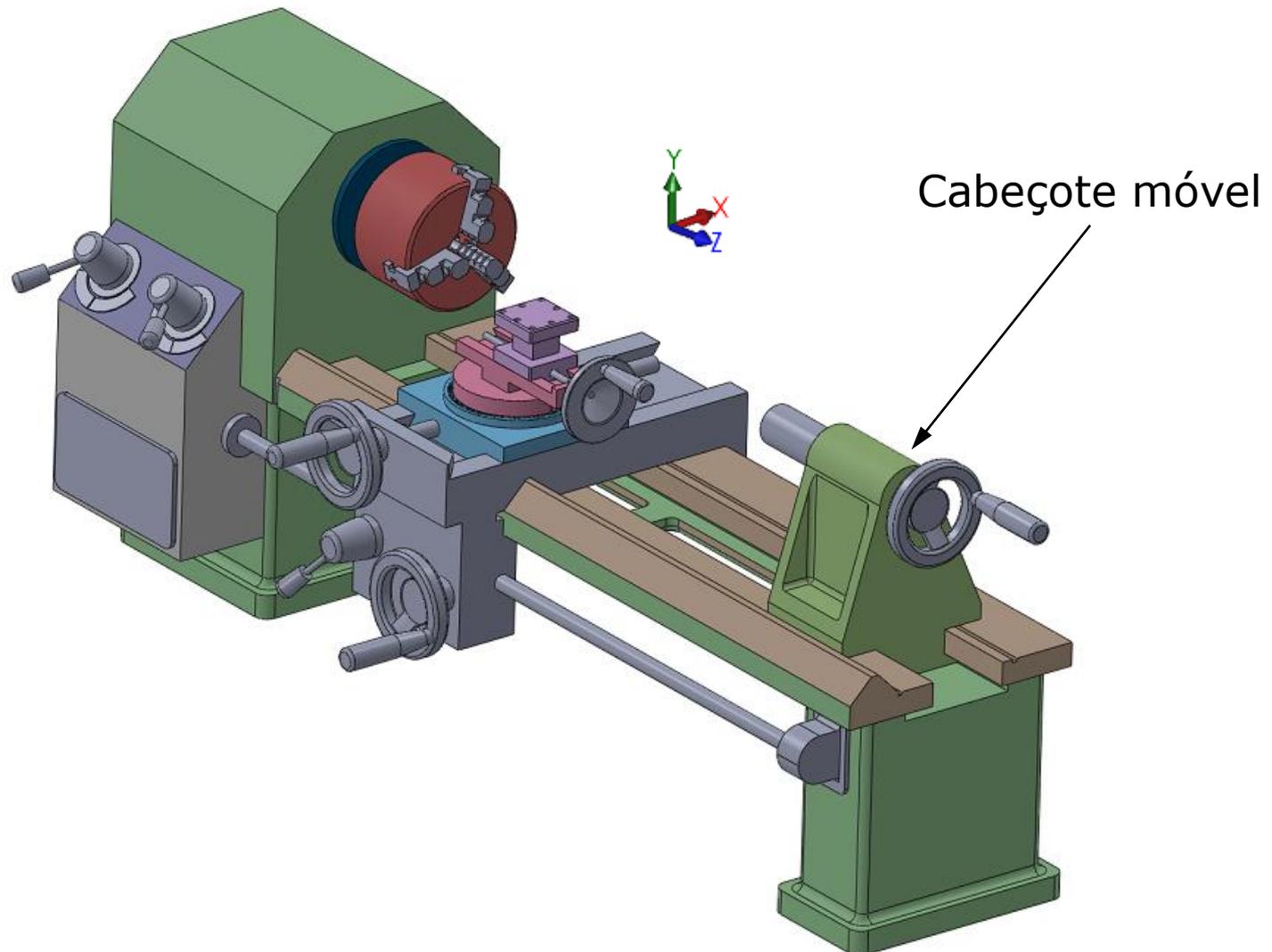
### Constituintes





## Torno de bancada

### Constituintes



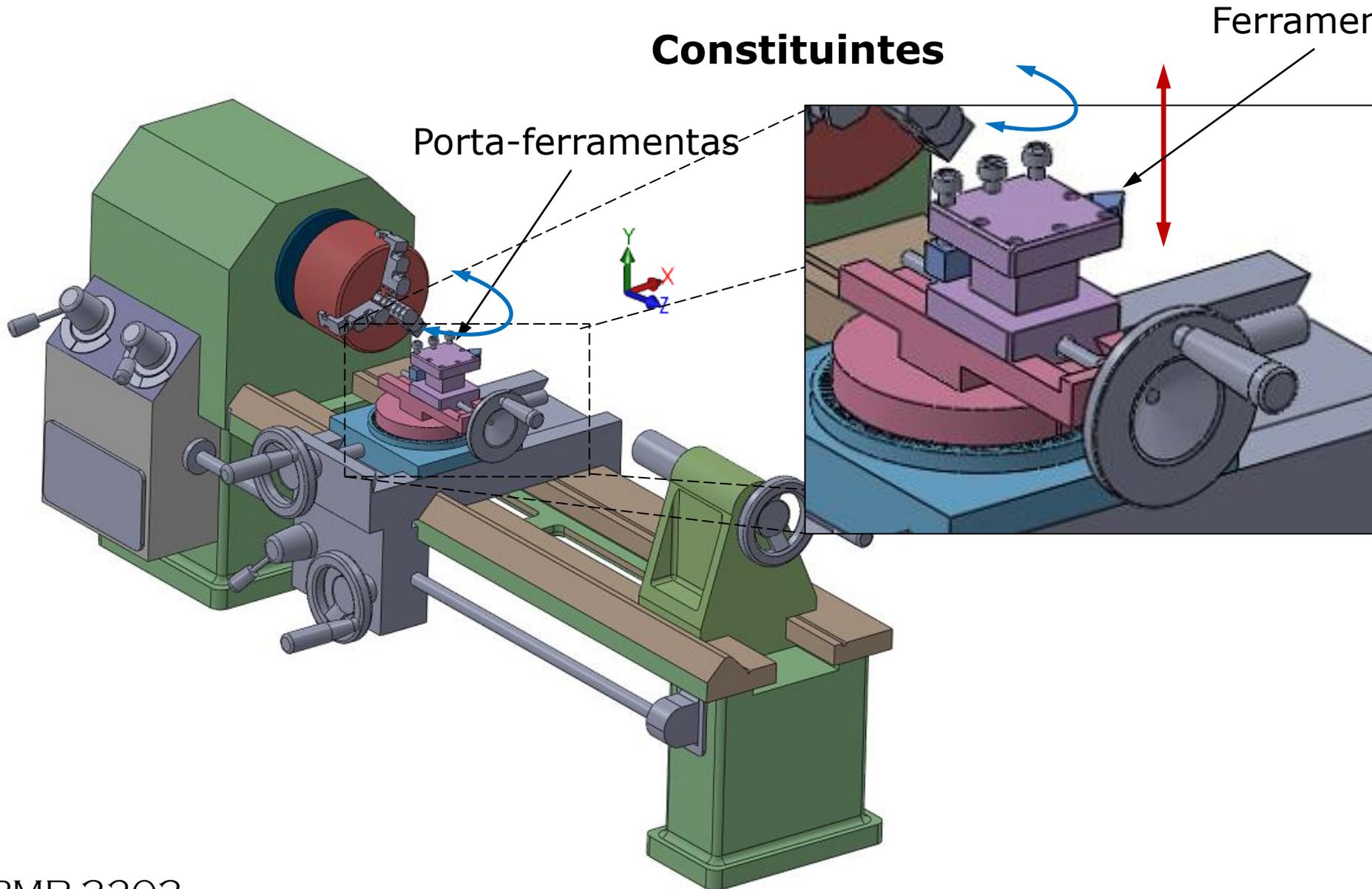


## Torno de bancada

### Constituintes

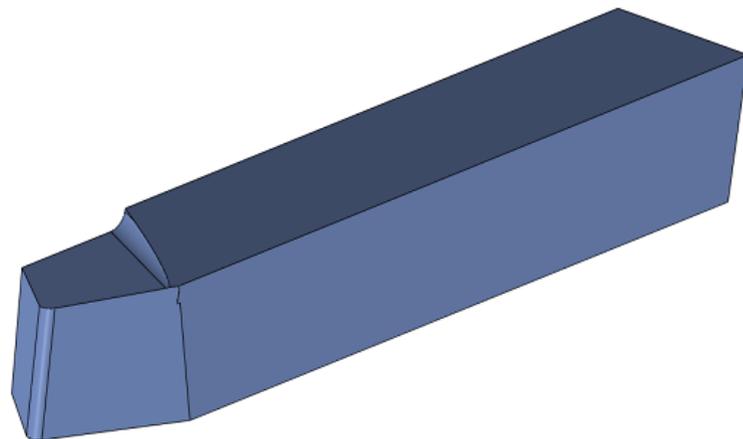
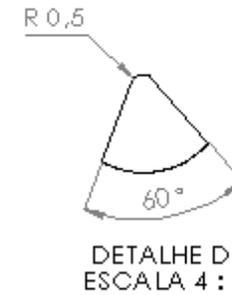
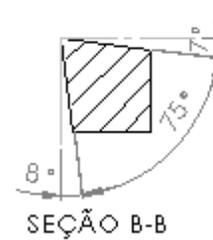
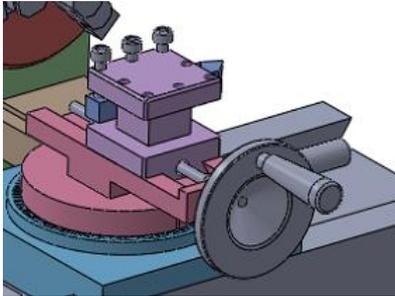
Ferramenta

Porta-ferramentas

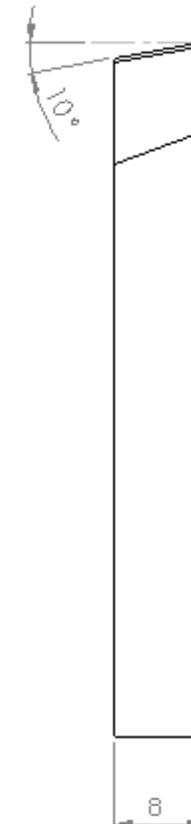
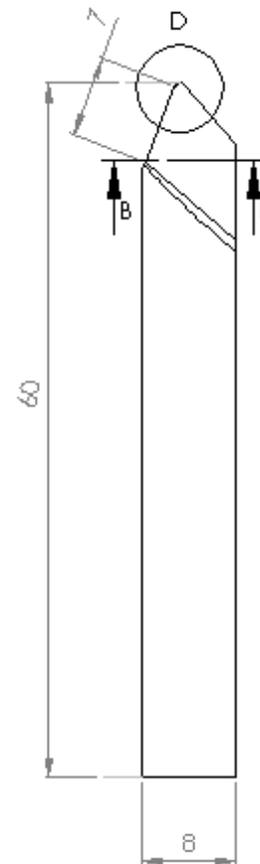




## Ferramenta

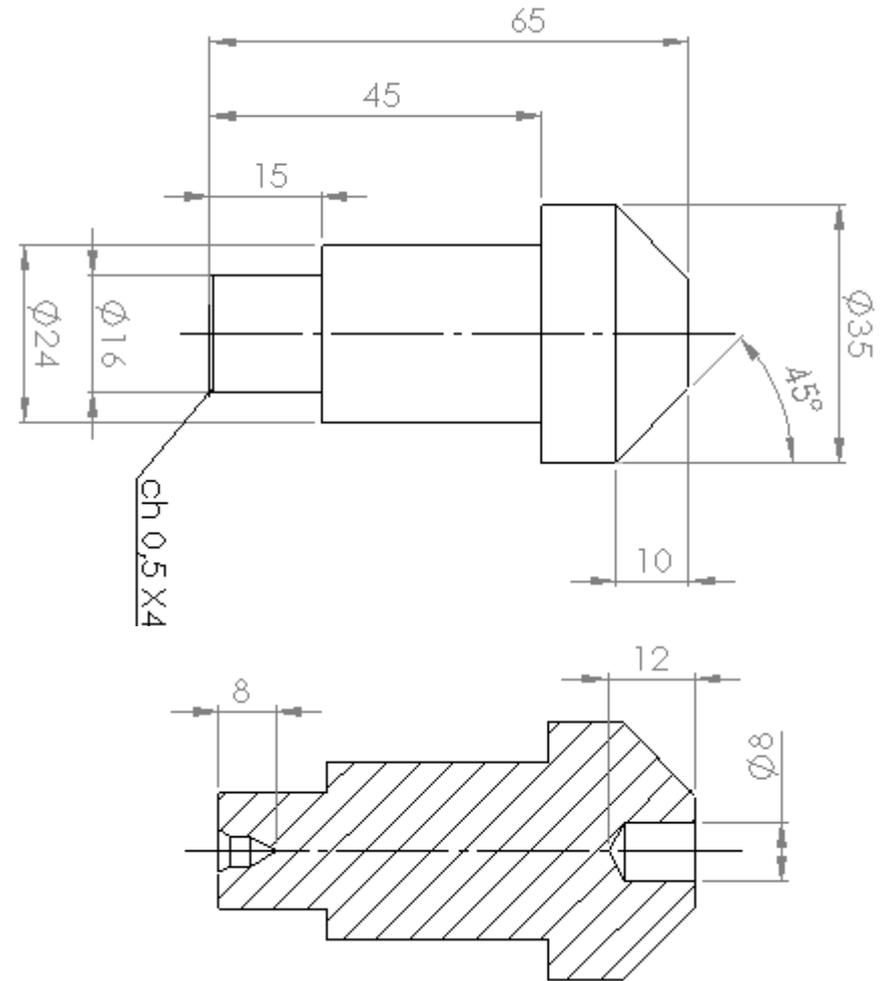
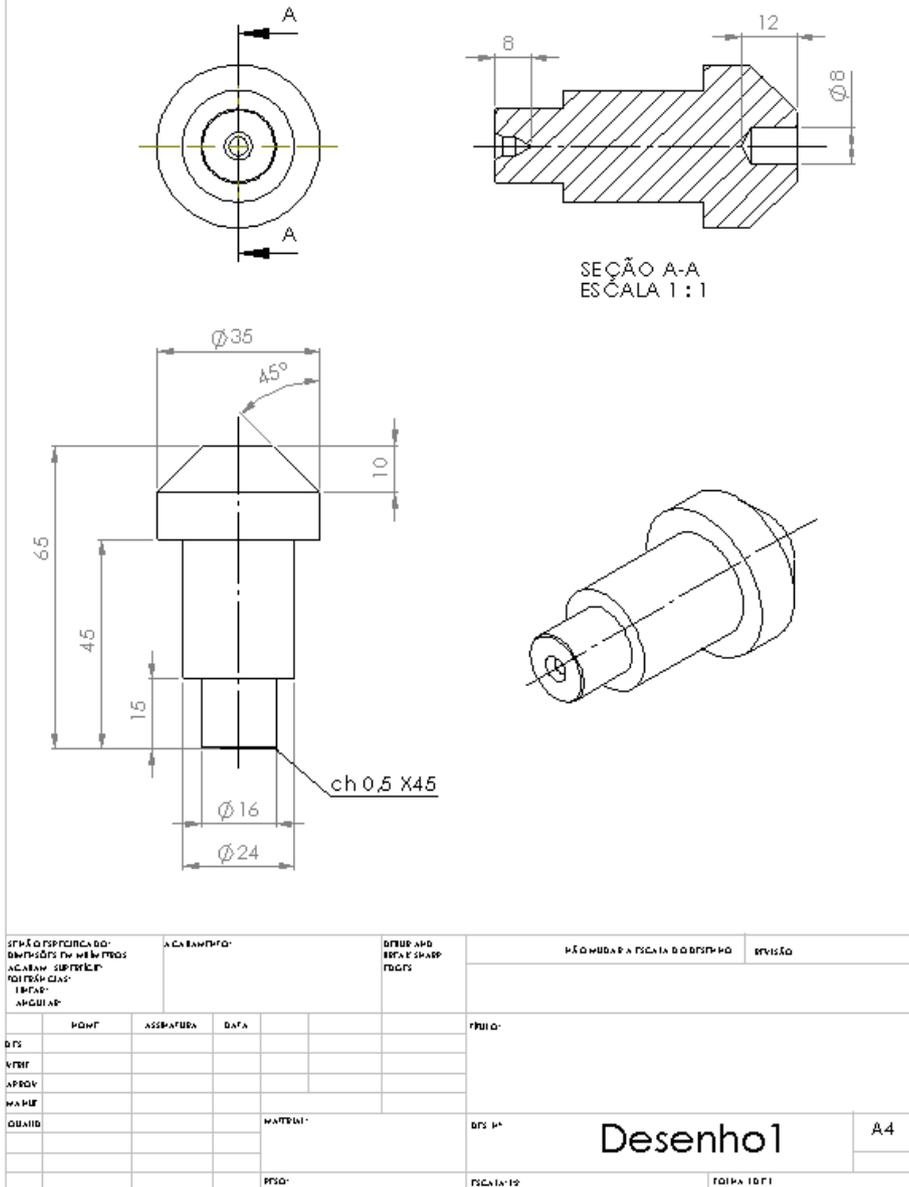


Ferramenta: Aço rápido 1841 (HSS)





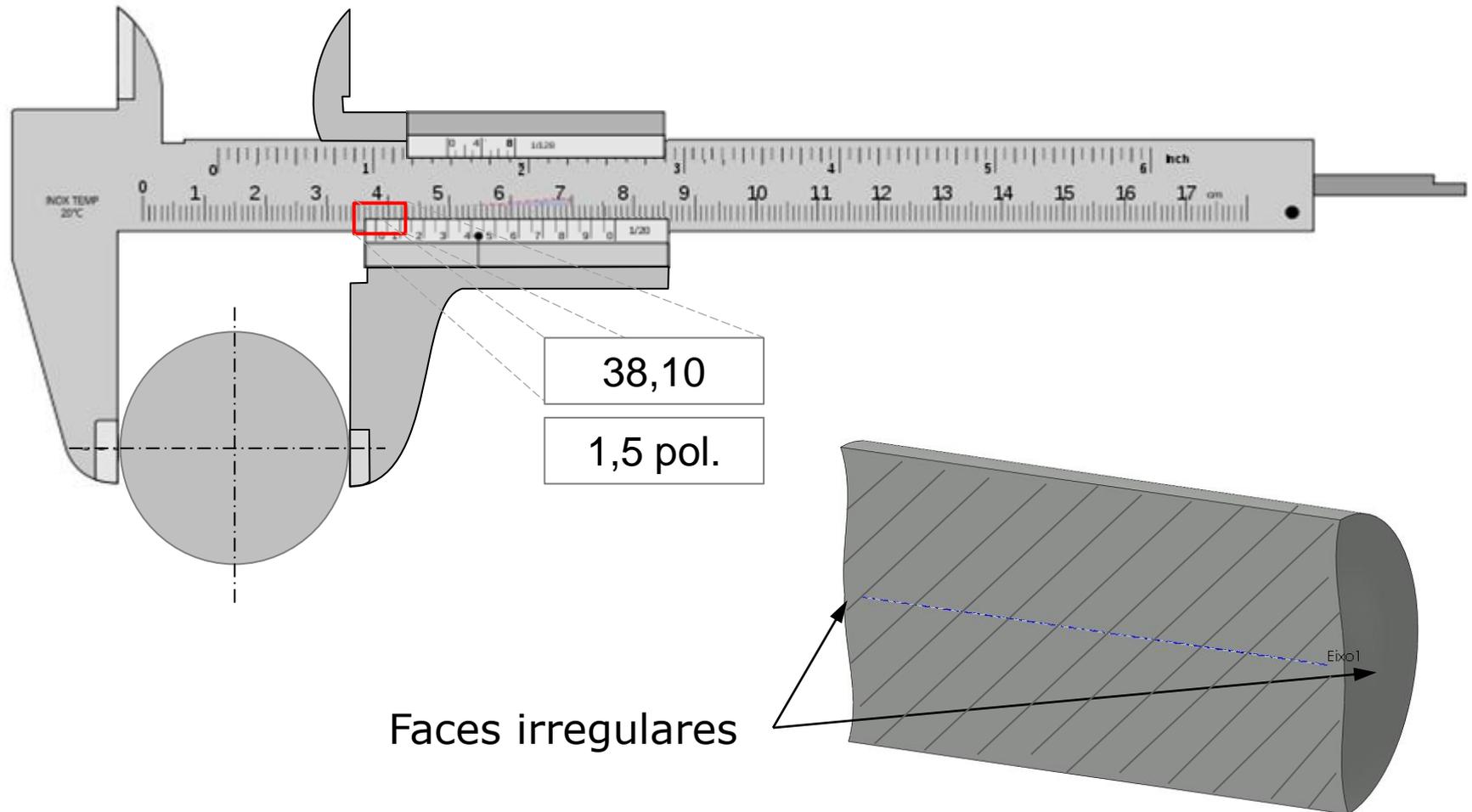
# Desenho da Peça#1



Material: Nylon

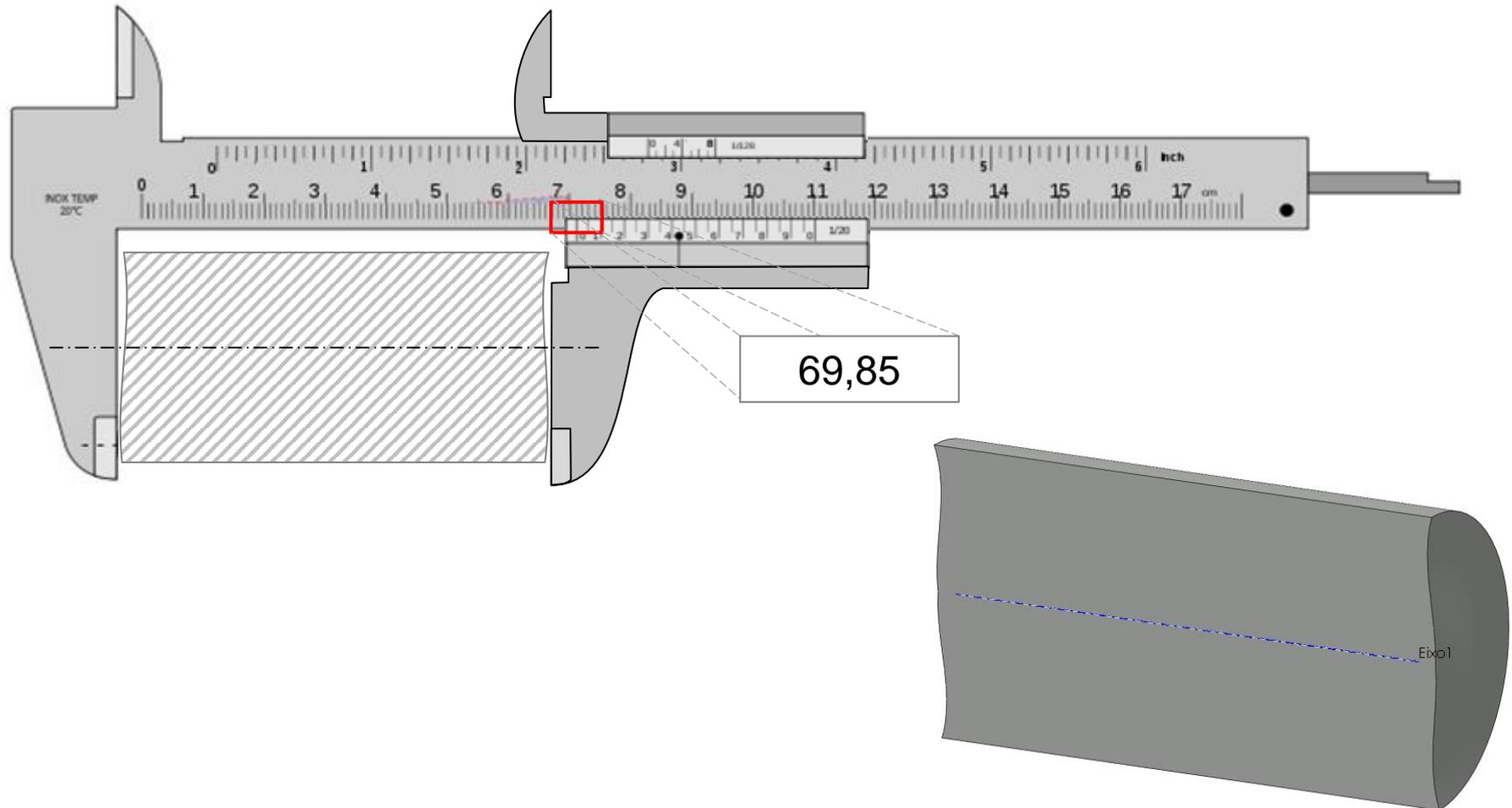


## Dimensões da matéria prima



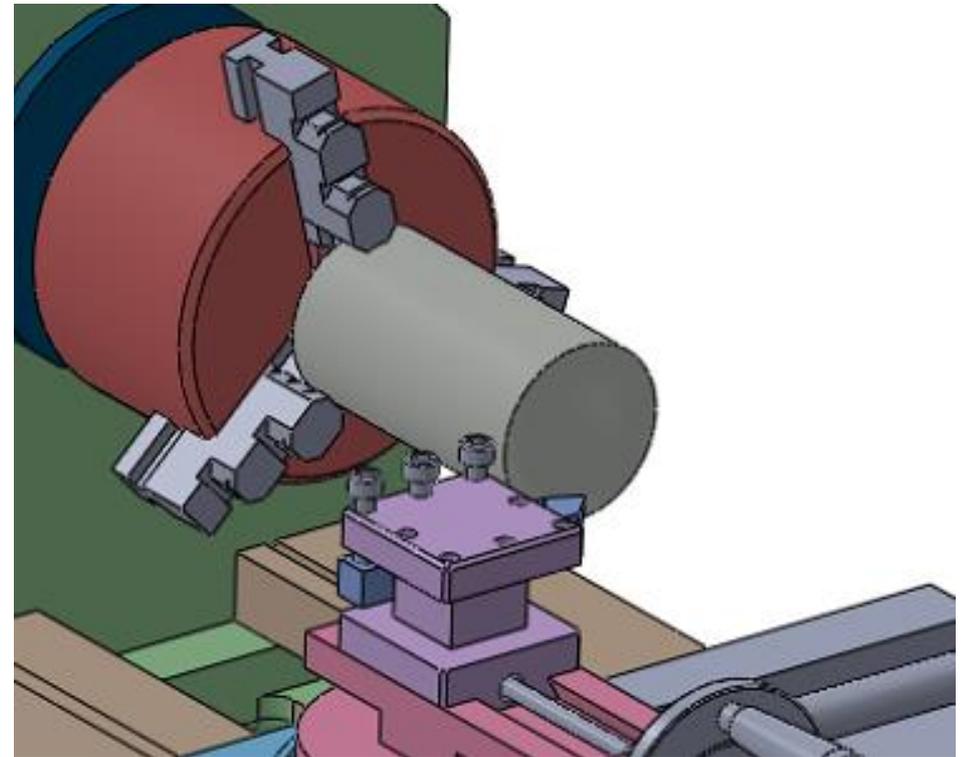
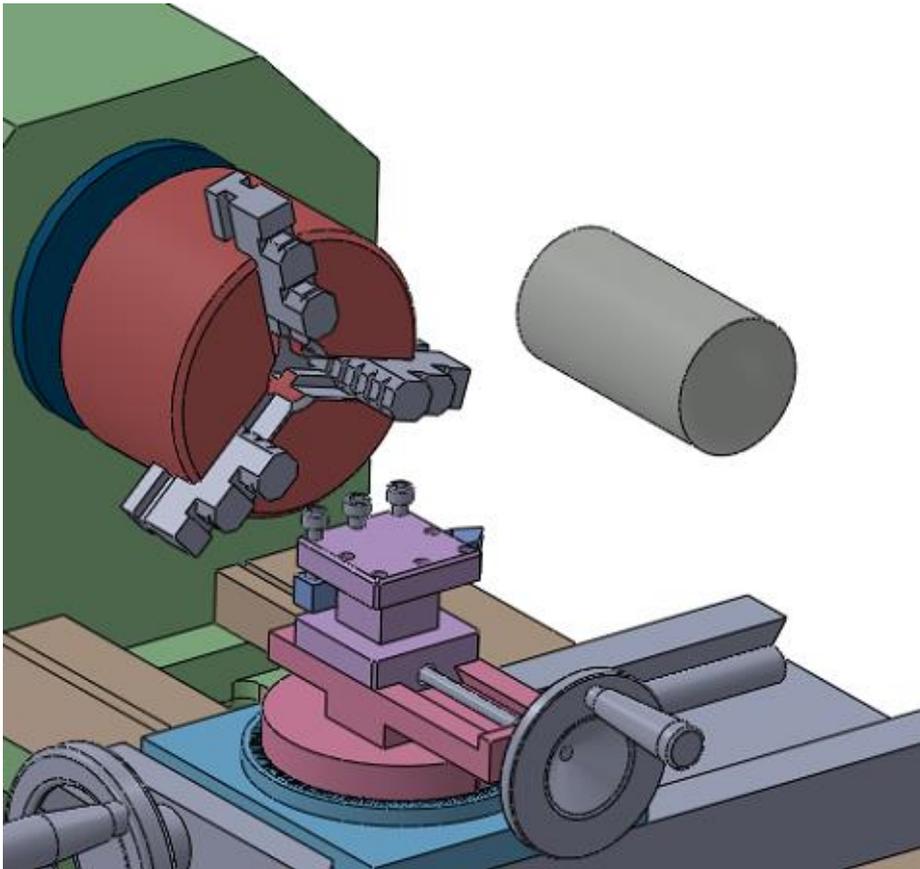


## Dimensões da matéria prima





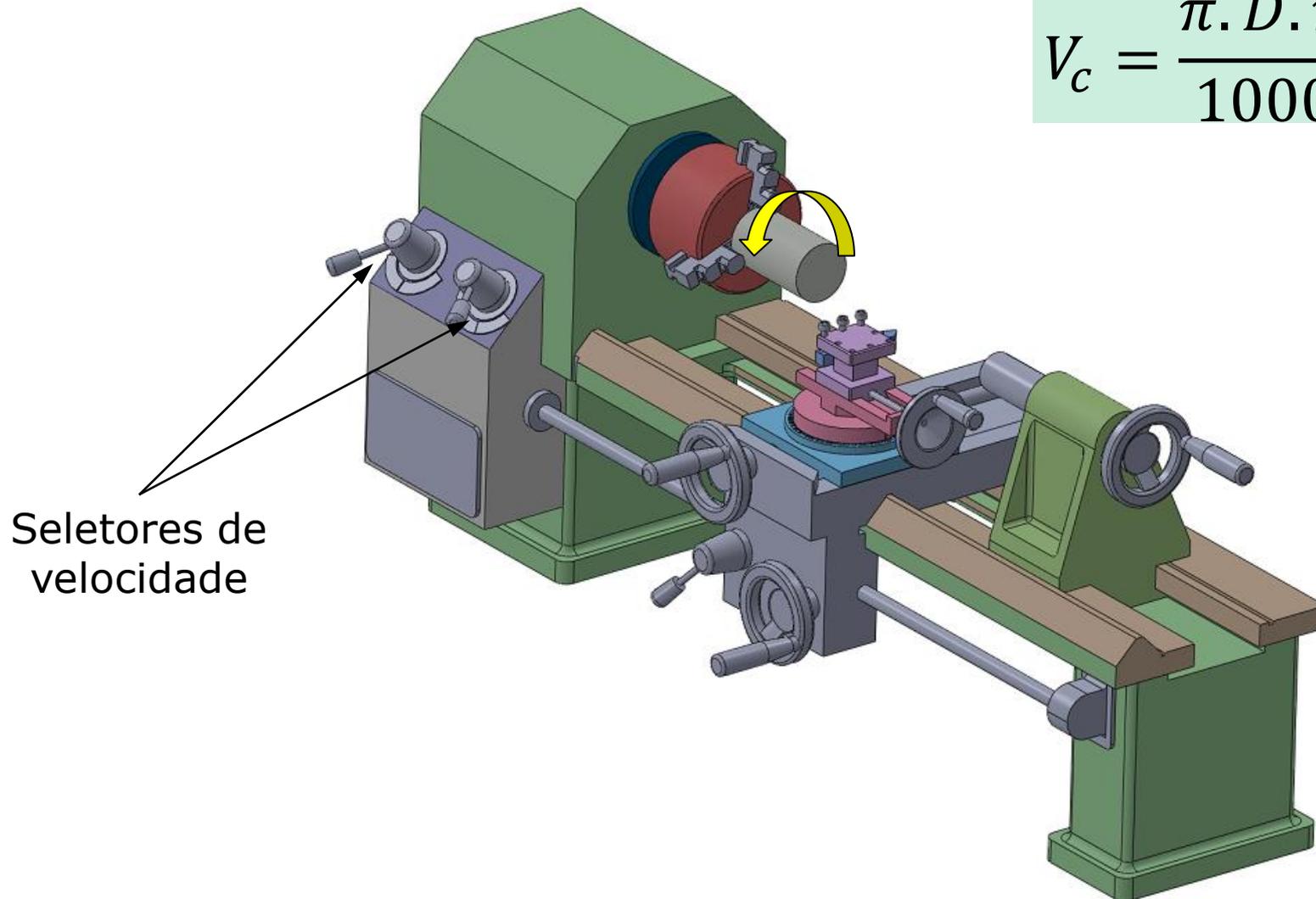
## Fixar a matéria prima





## Ajuste da velocidade da árvore (rpm)

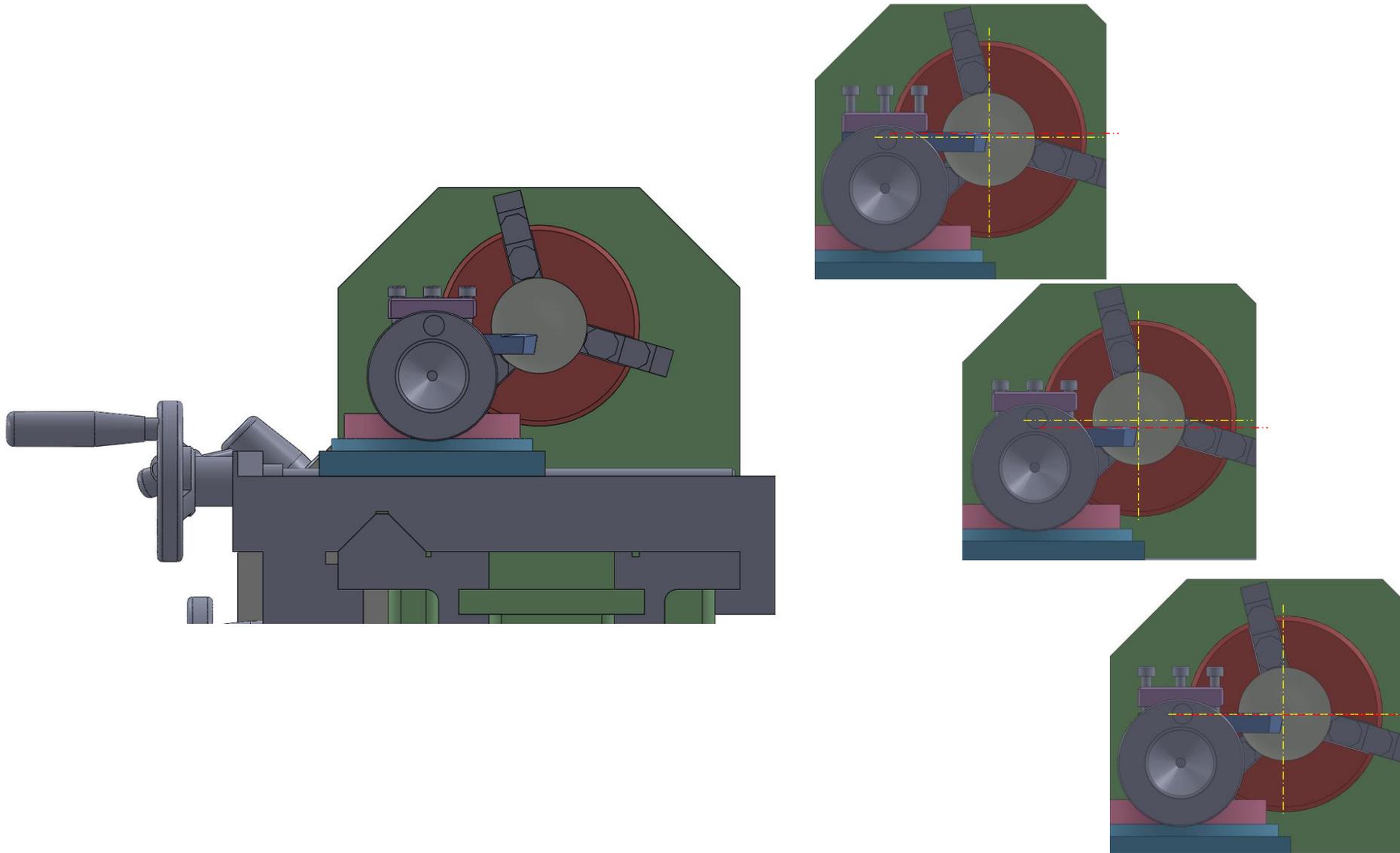
$$V_c = \frac{\pi \cdot D \cdot n}{1000}$$



Seletores de  
velocidade

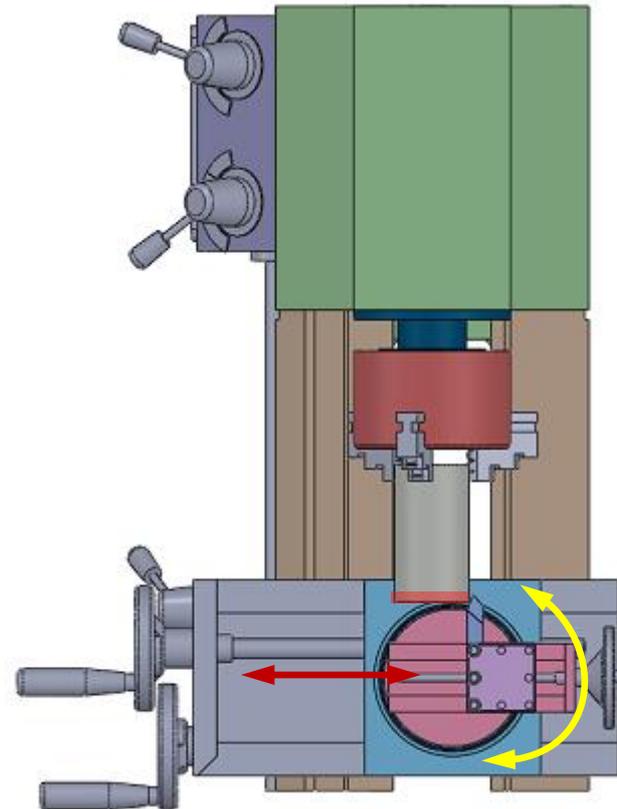
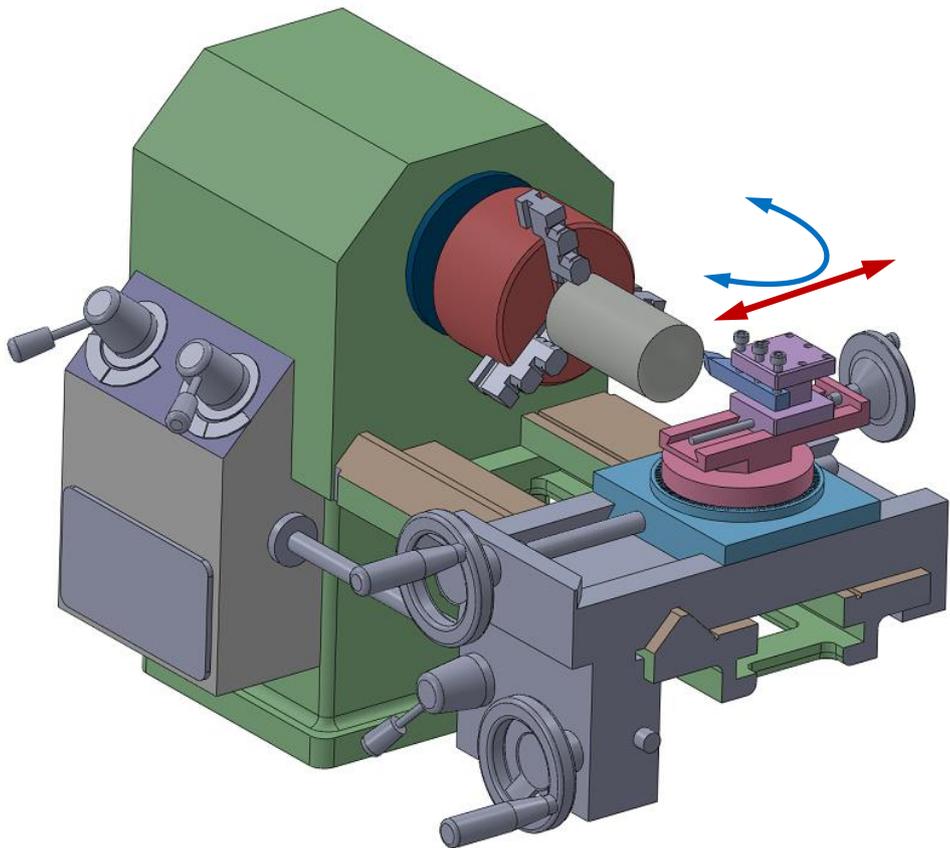


## Ajuste do centro da ferramenta





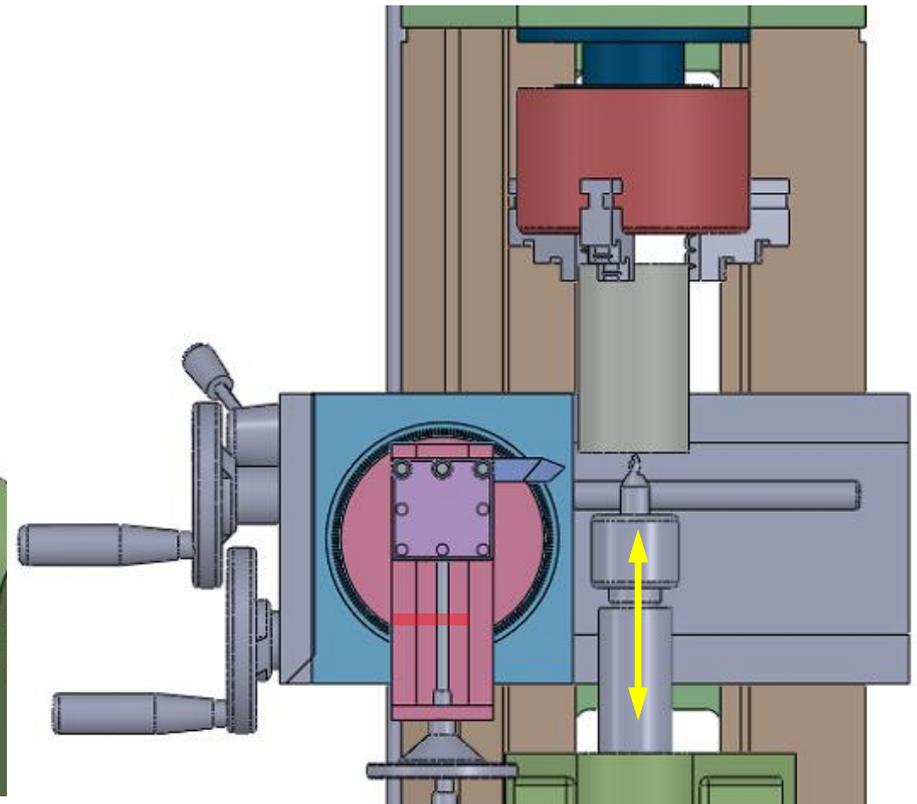
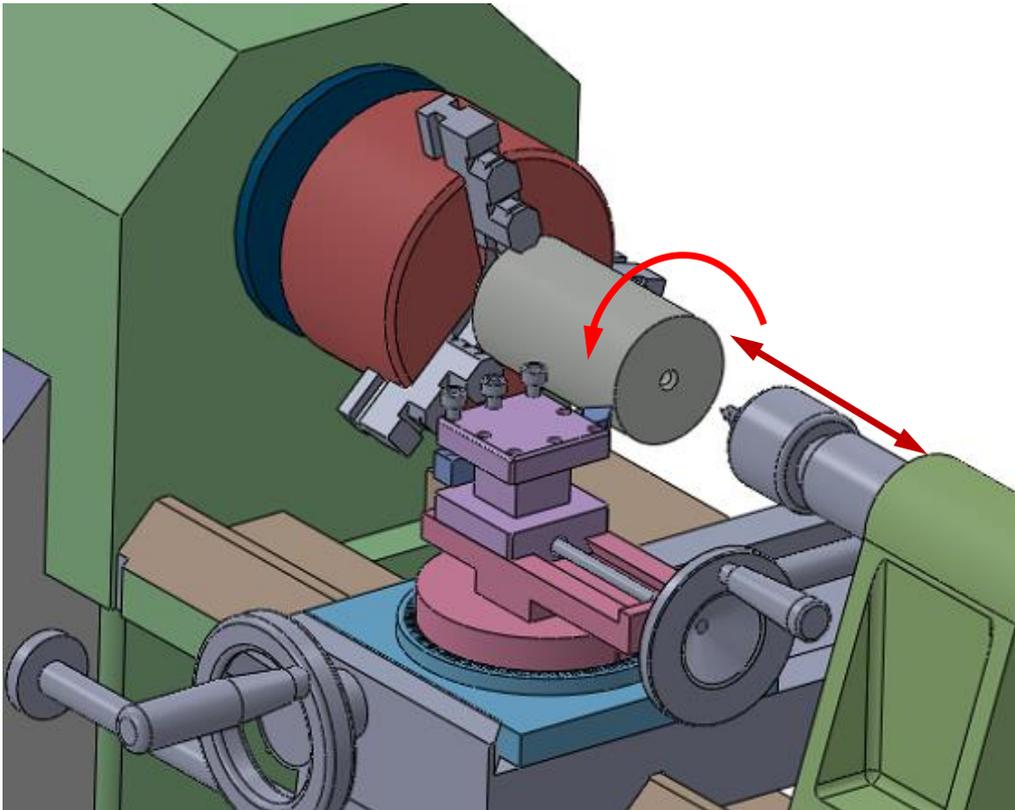
## Faceamento Acerto da dimensão longitudinal L=65mm





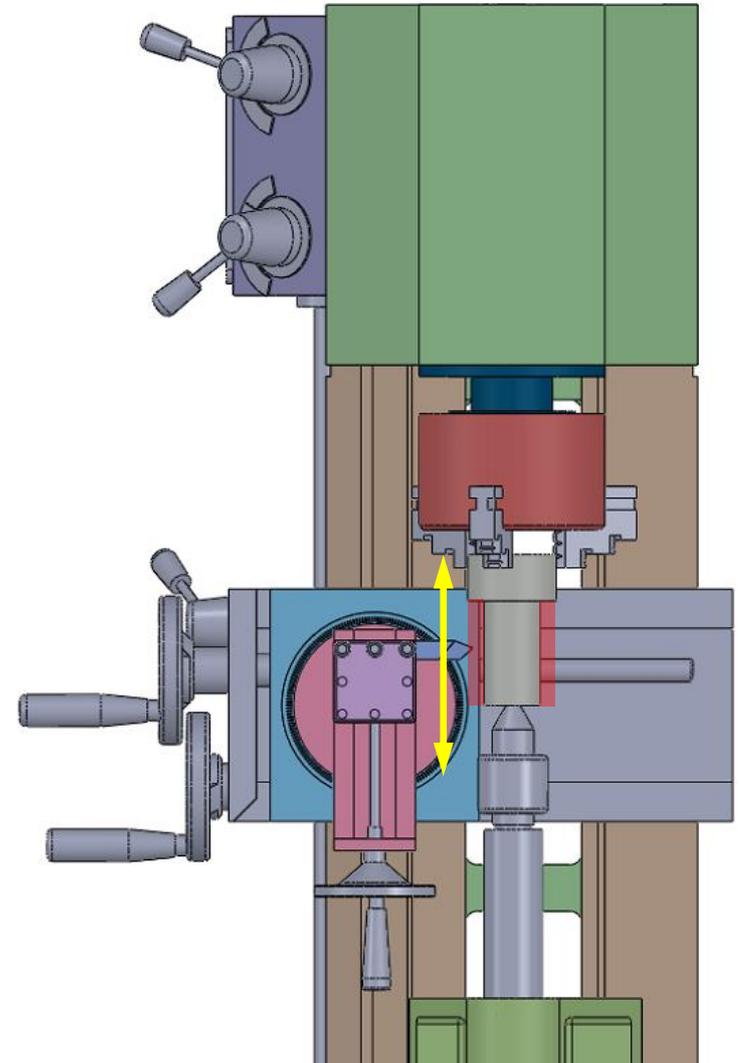
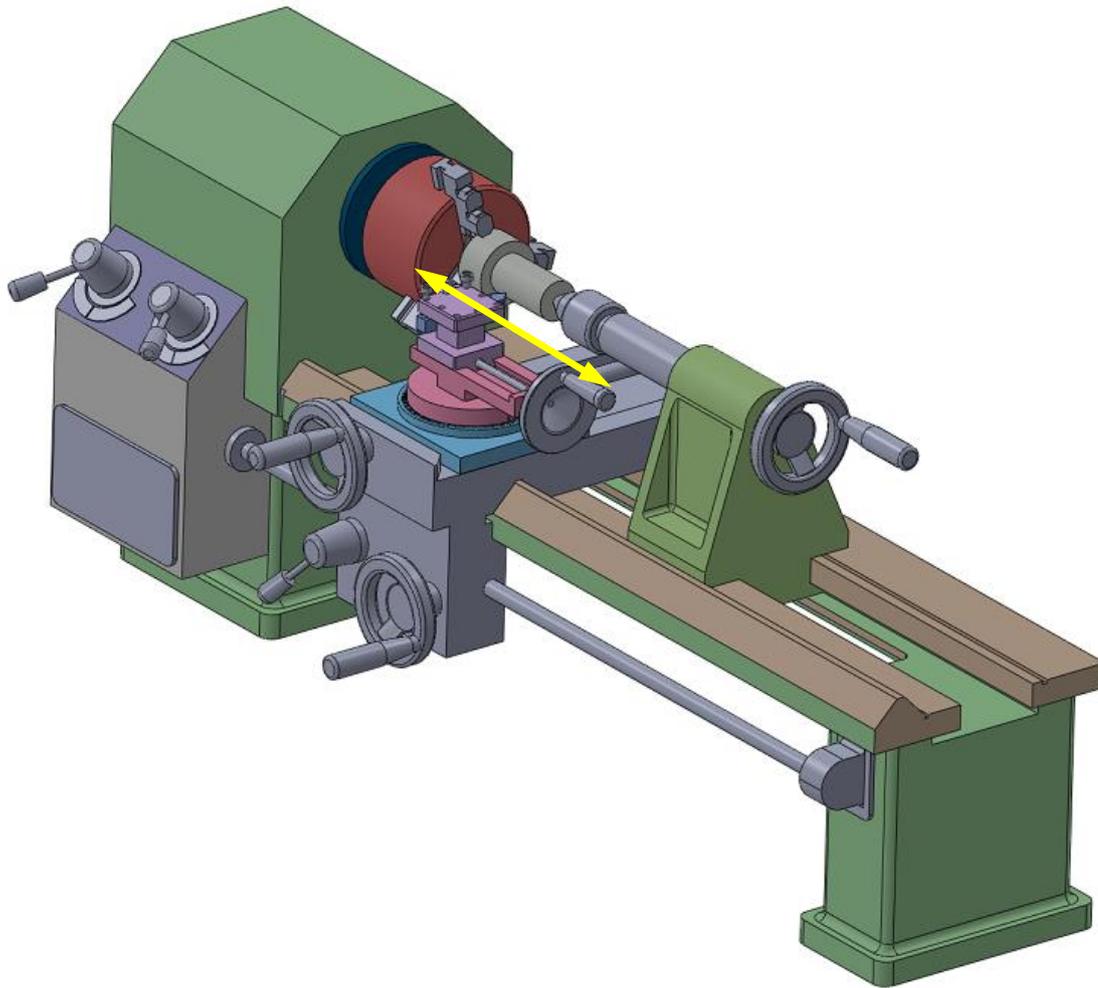
## Execução do furo de centro

$L/D > 1,5$



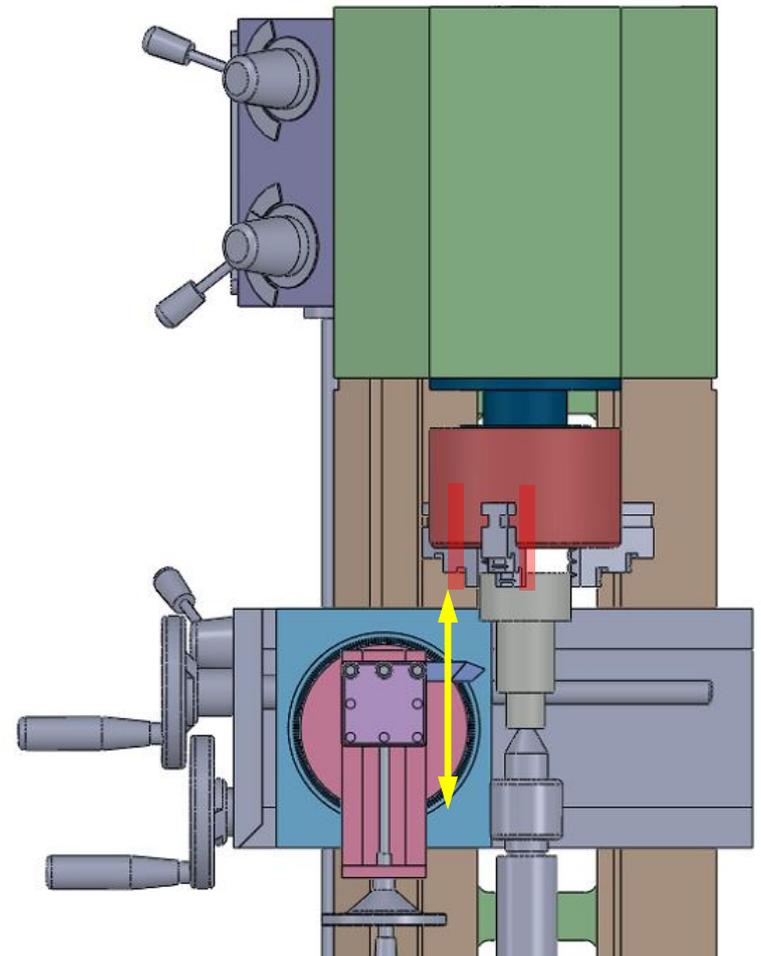
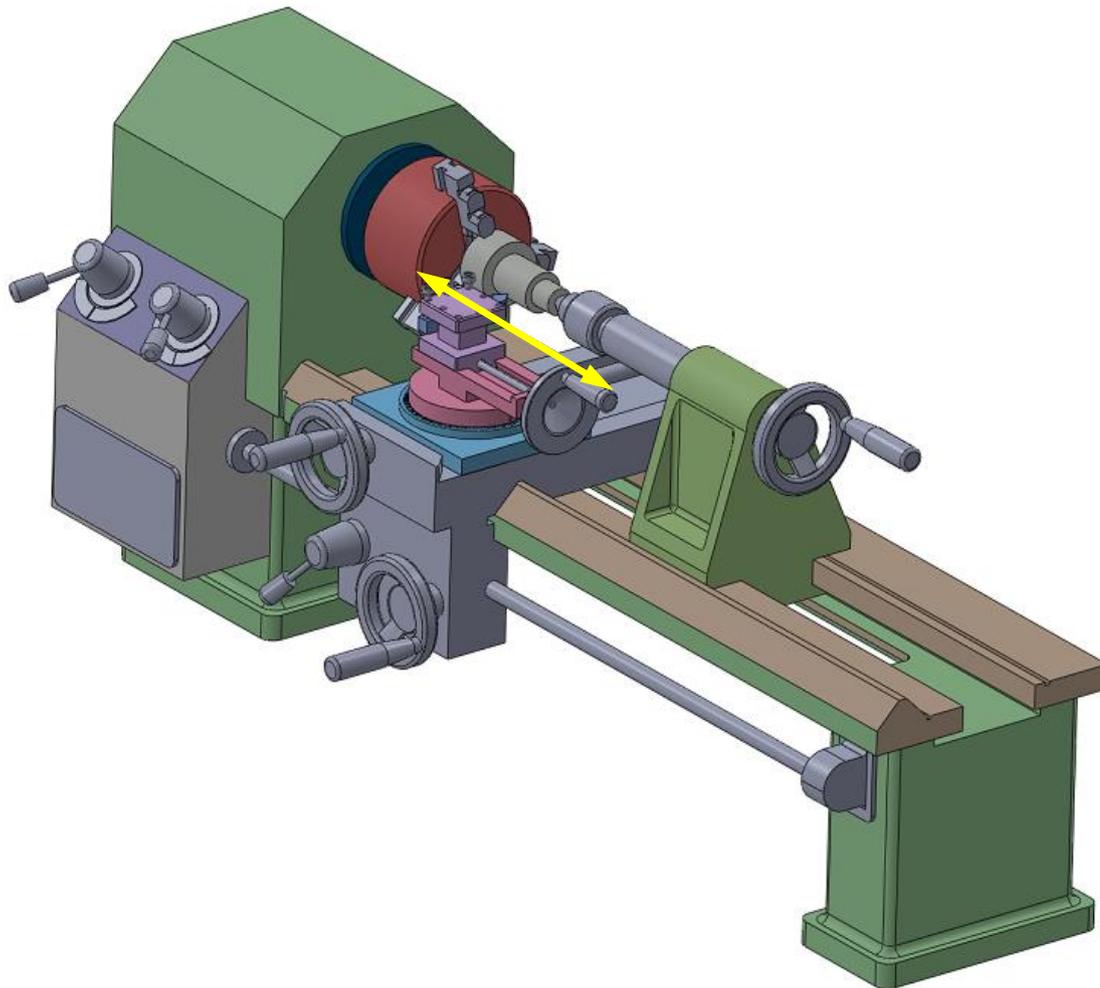


## Torneamento diâmetro 24mm



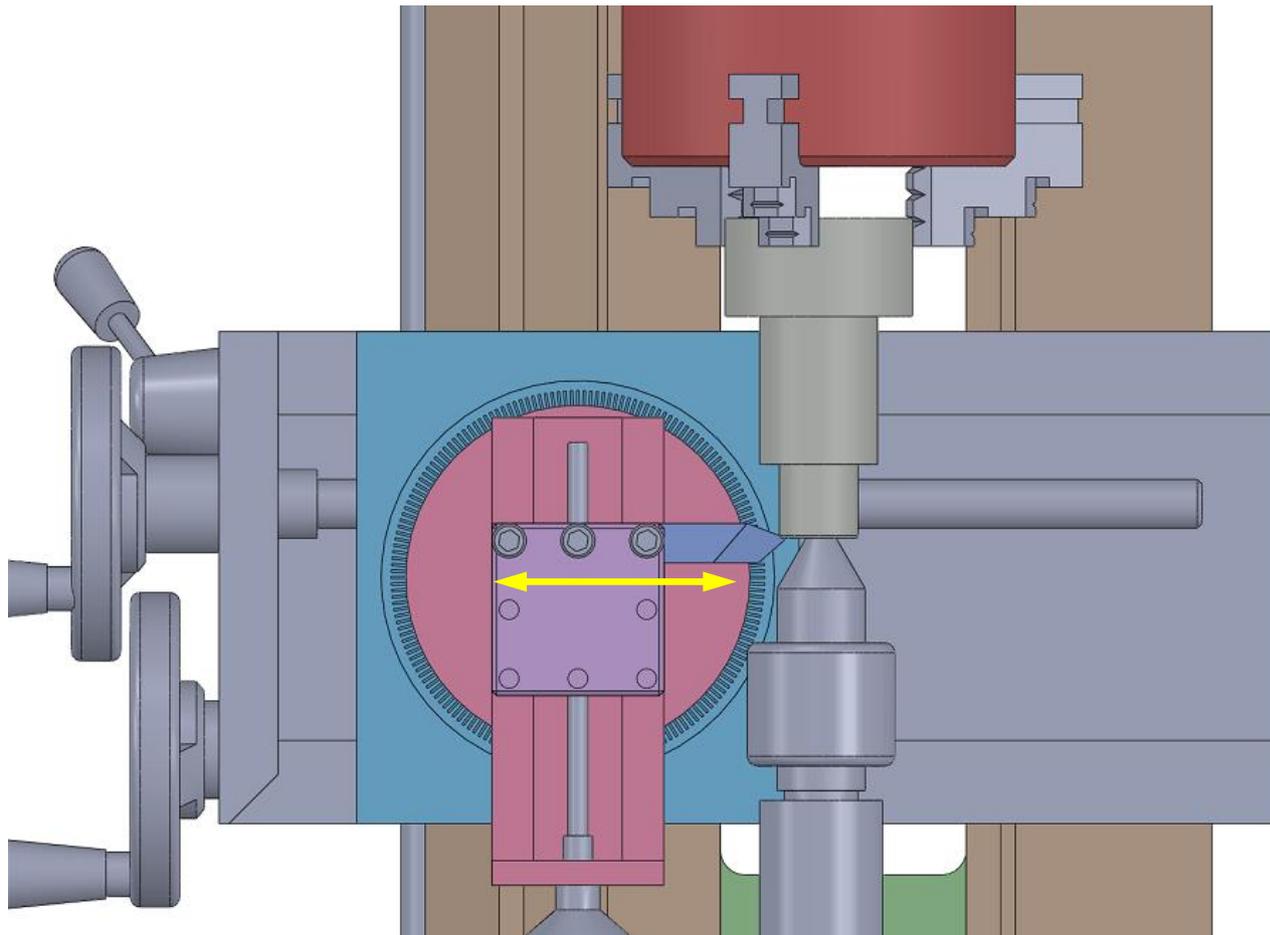


## Torneamento diâmetro 16mm



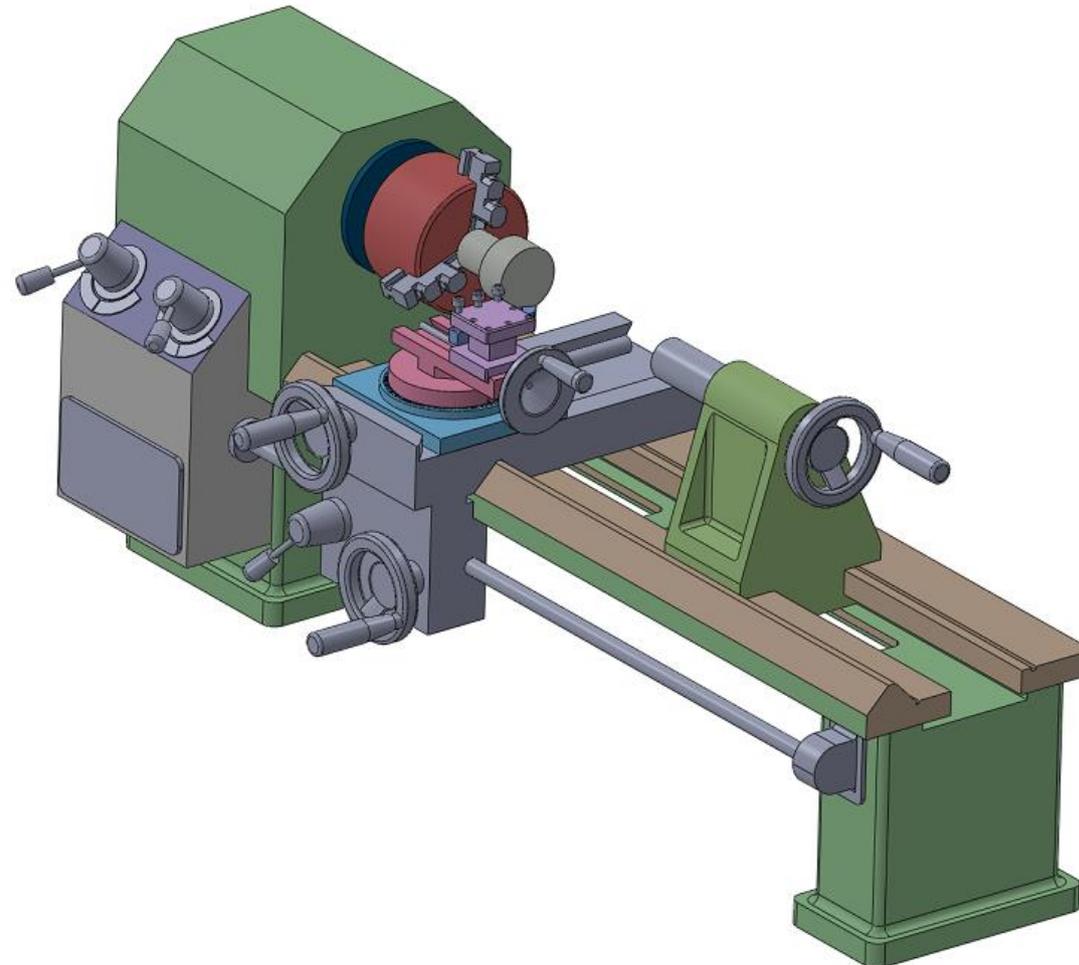


## Chanfro 0,5X45°



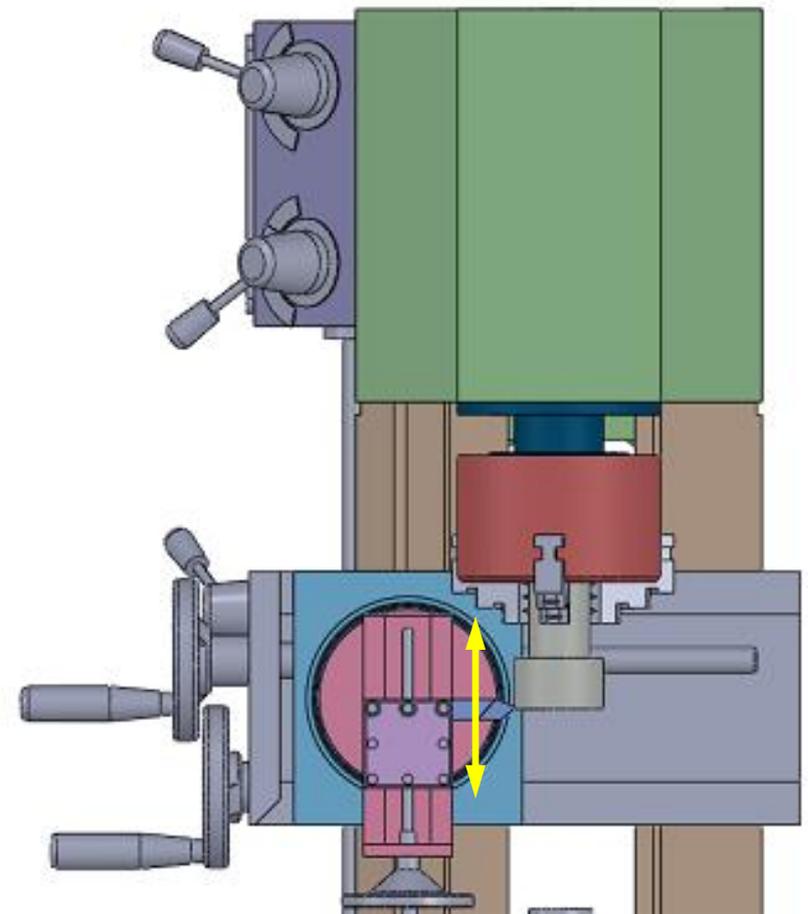
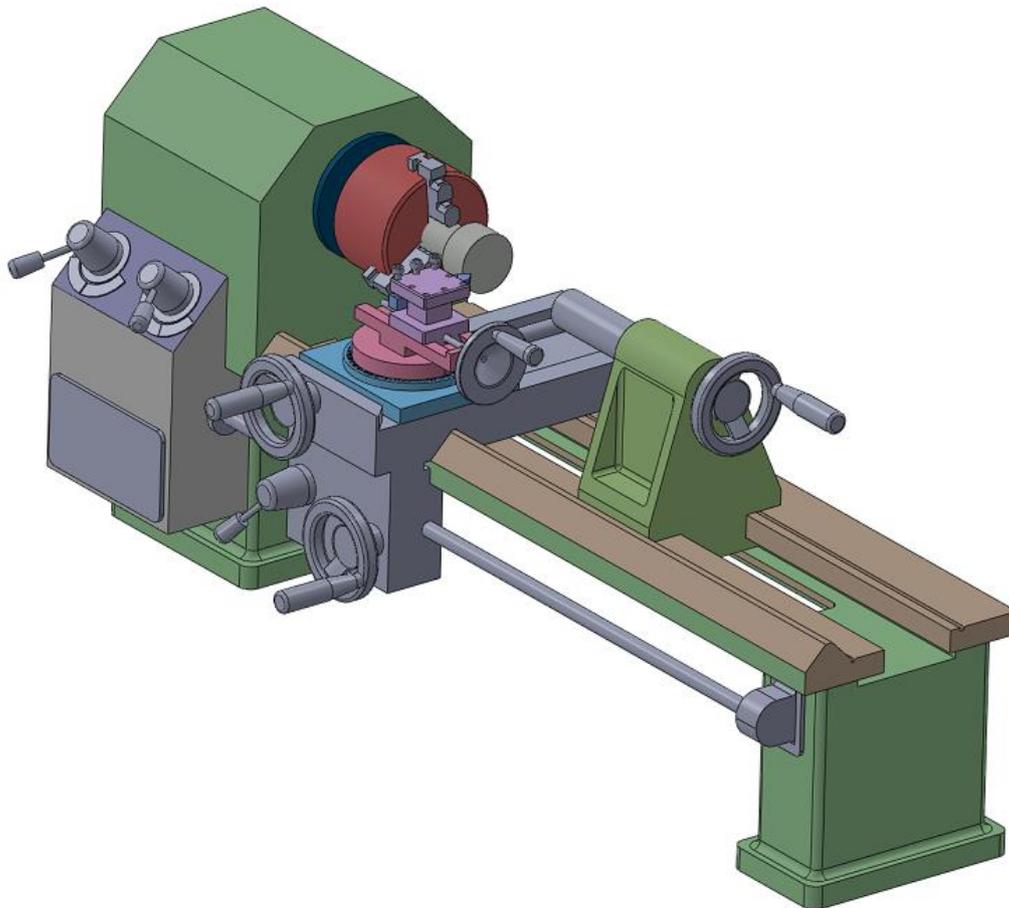


## Reposicionar a peça para usinar o outro lado



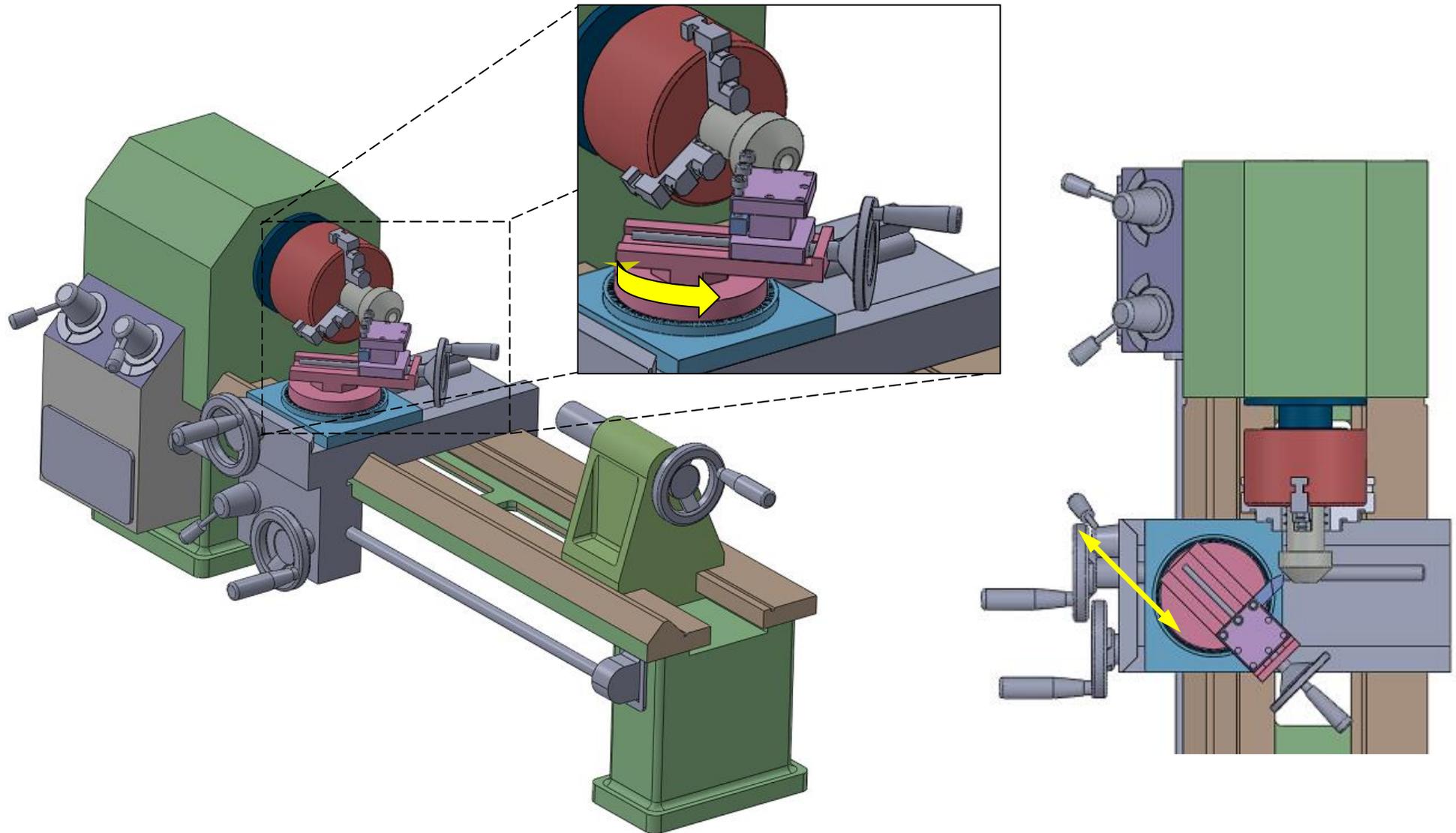


## Torneamento diâmetro 35mm



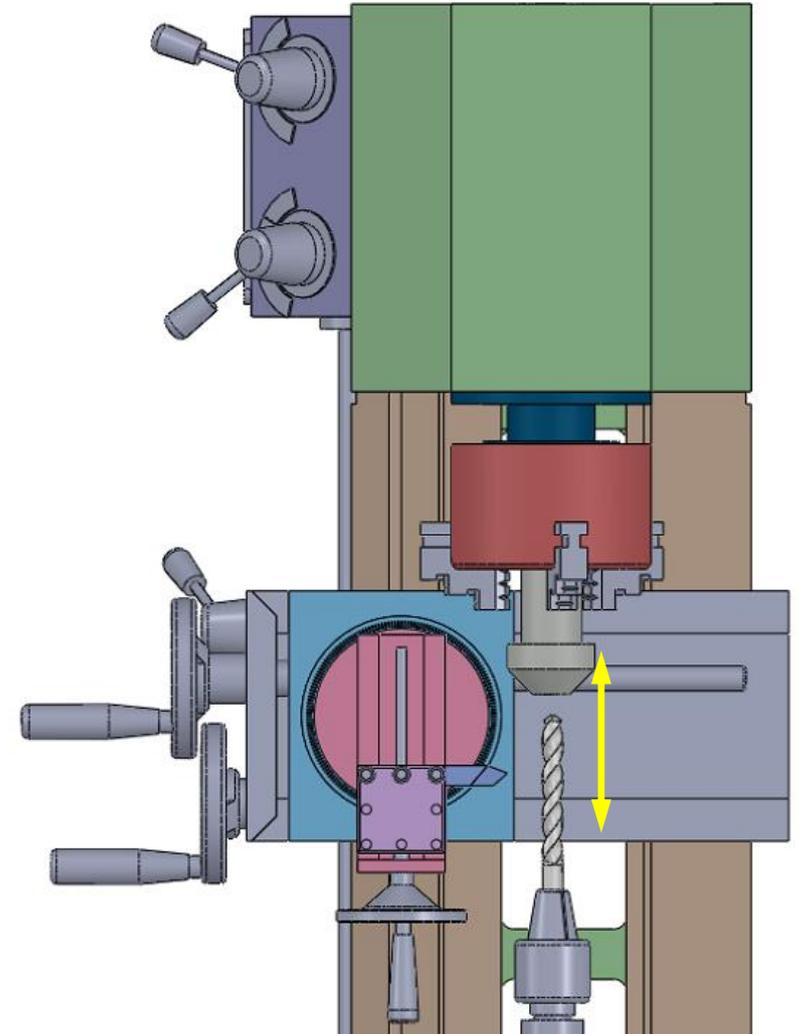
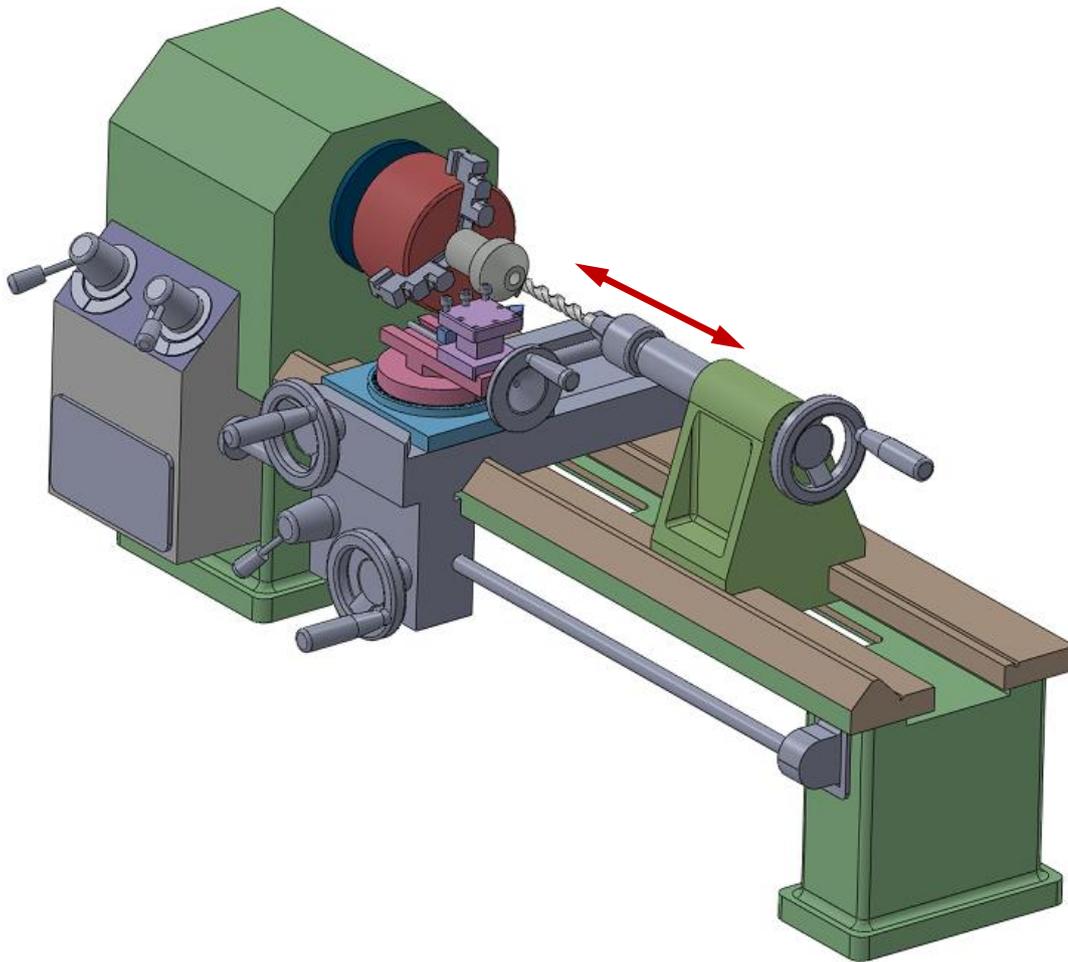


## Chanfro 10X45°



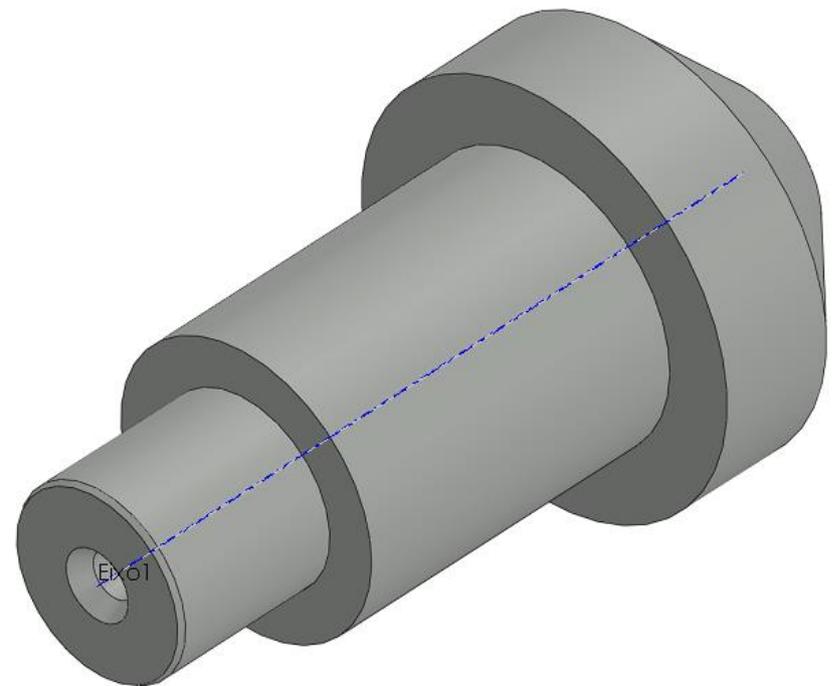
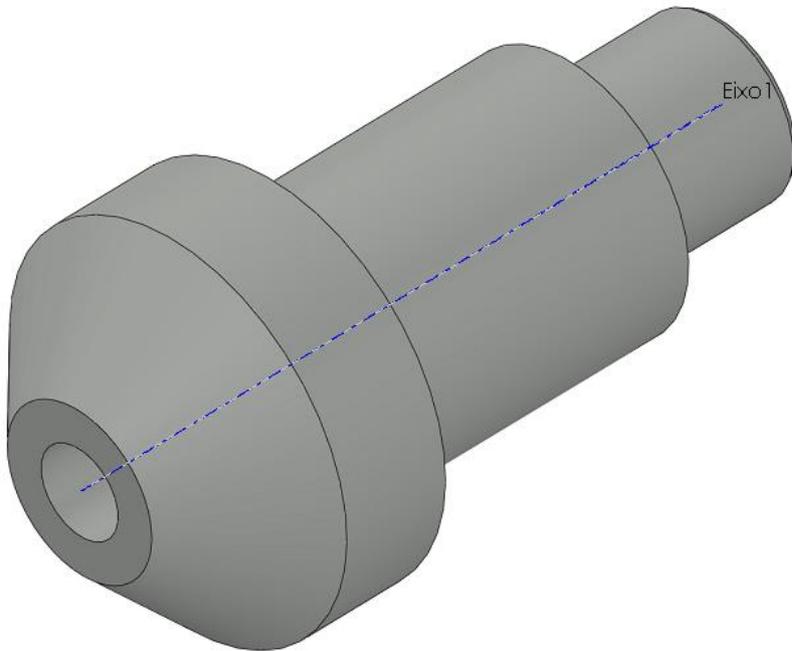


## Furação diâmetro 8mm





## Peça pronta





**- Fim -**