

Projeto e computação gráfica I



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Sala 119 – Bloco 3

Leitura recomendada

- NBR 10126 – Cotagem em desenho técnico;
- GIESECKE, F. E., et al, Comunicação Gráfica Moderna
 - Capítulo 9

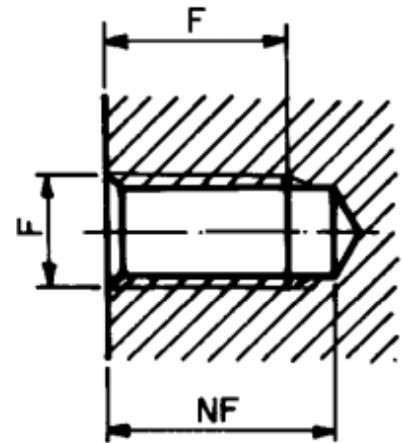
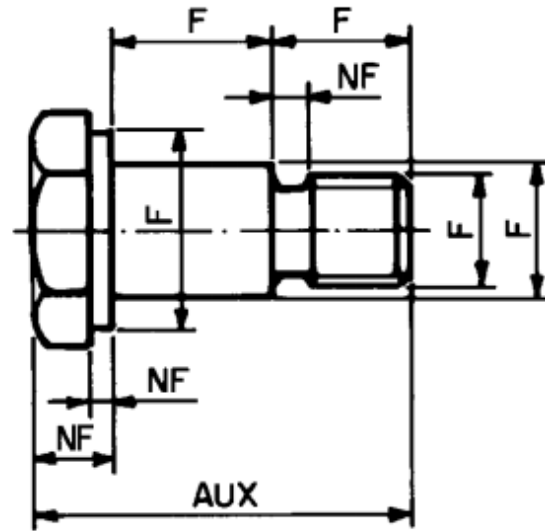
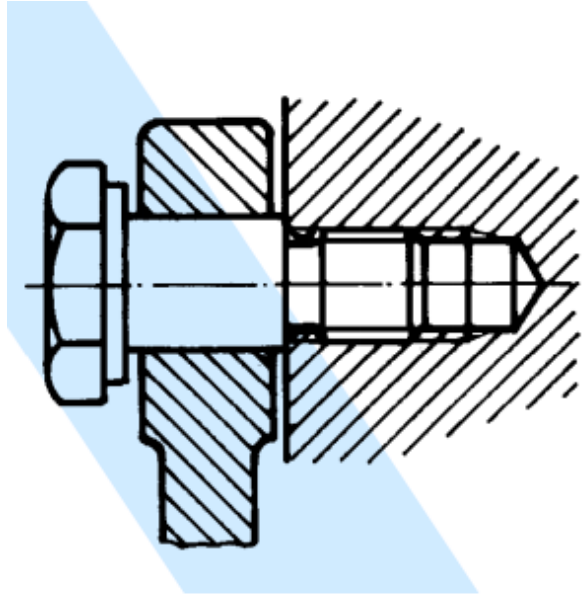
Elementos

- Cota:
 - Indica forma, tamanho ou posição;

Elementos

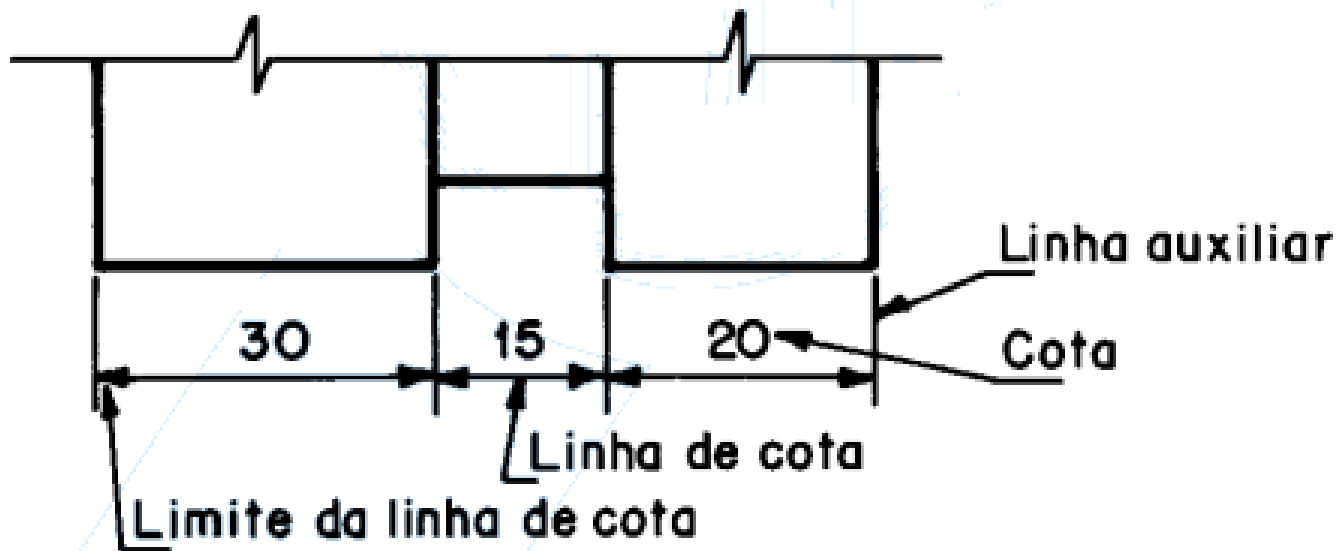
- Cota funcional:
 - Indica uma parte essencial do objeto
- Cota não-funcional:
 - Indica uma parte não essencial ao funcionamento do objeto
- Cota auxiliar:
 - Cota que pode ser extraída a partir de cotas funcionais e não-funcionais. Usada para facilitar cálculos.

Elementos



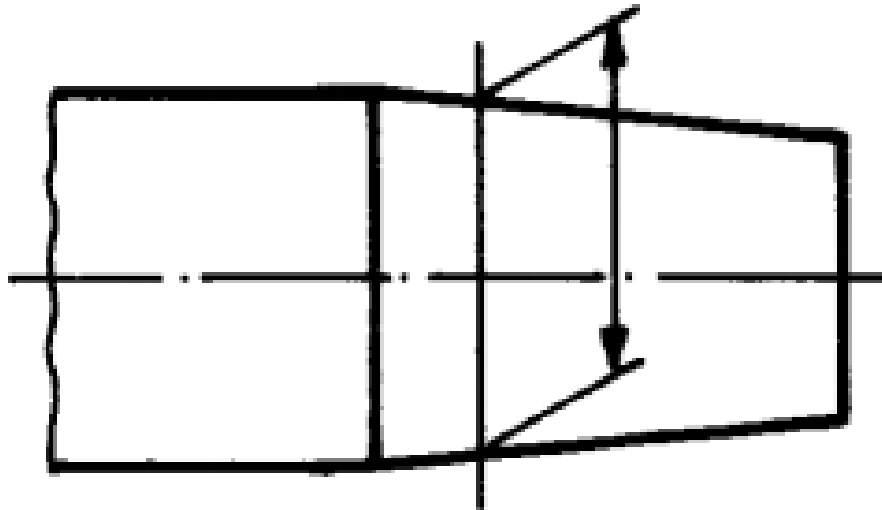
Elementos

- Linha de cota;
- Linha auxiliar;



Elementos

- Linhas auxiliares geralmente são perpendiculares ao objeto, mas podem ser oblíquos também



Cotas

- Cota serve para ser medida:
 - Não inserir cotas em locais de difícil acesso;
- Tenha em mente o processo de fabricação:
 - Use cotas convenientes para a fabricação;
- Cotas não devem ser duplicadas ou supérfluas;
- Valor da cota têm precedência sobre medida do desenho;

Tipos de cotas

- Distância vertical / horizontal
- Distância 2 pontos
- Ângulo (2 retas)
- Raio
- Diâmetro

Recomendações

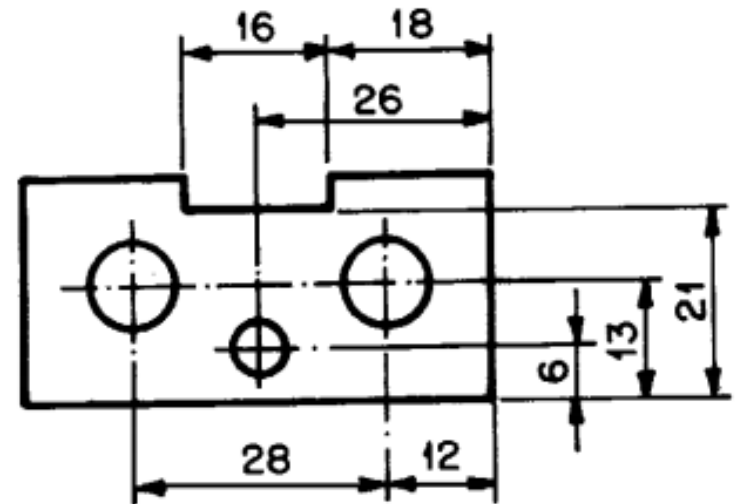
- Linhas de cota não cruzam linhas de chamada;
- Linhas de chamada podem cruzar-se;
- Medidas mais curtas ficam mais próximas;
- Linhas de cota não devem coincidir ou ser continuação de linhas do desenho;
- Agrupe cotas sempre que possível;

Recomendações

- Evite cotar linhas oclusas;
- Evite cotar, se possível, dentro do desenho;
- Coloque a cota na vista que melhor representa o contorno;
- Coloque as cotas entre as vistas;

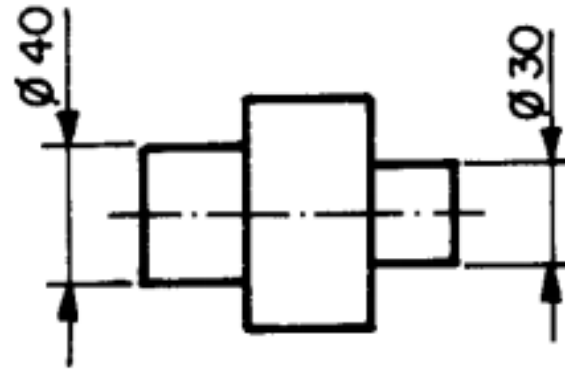
Recomendações

- Linhas de centro e de contorno não podem ser usadas como linhas de cota
- Linhas de centro podem ser usadas como linhas auxiliares
 - Neste caso, ela deve continuar até o contorno do objeto

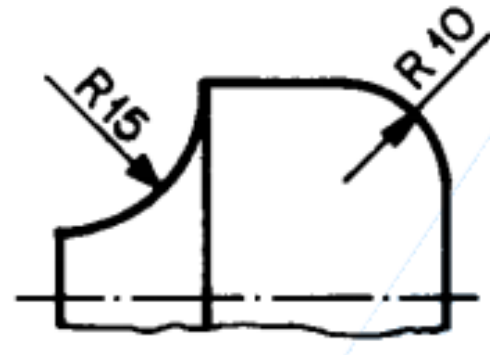


Símbolos especiais

- Diâmetro

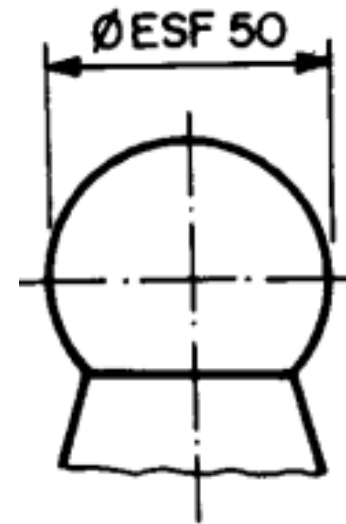


- Raio:

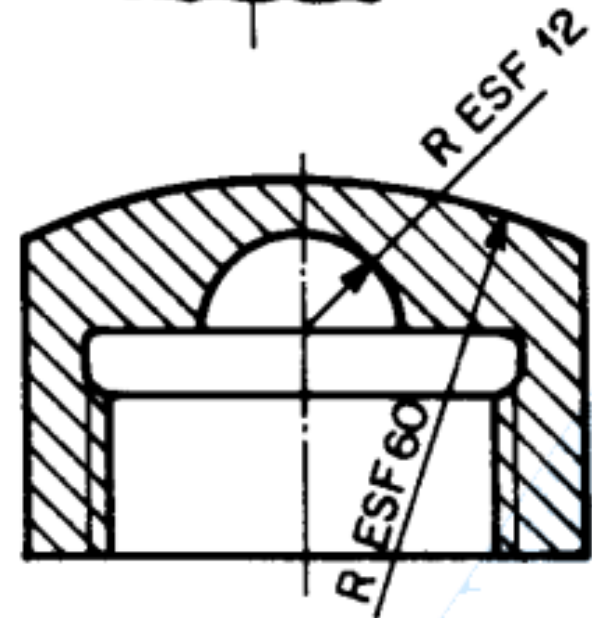


Símbolos especiais

- Diâmetro esférico

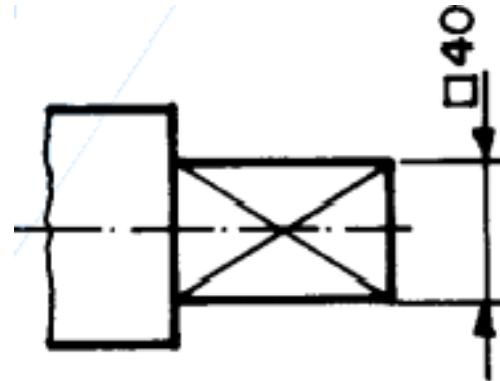


- Raio esférico:



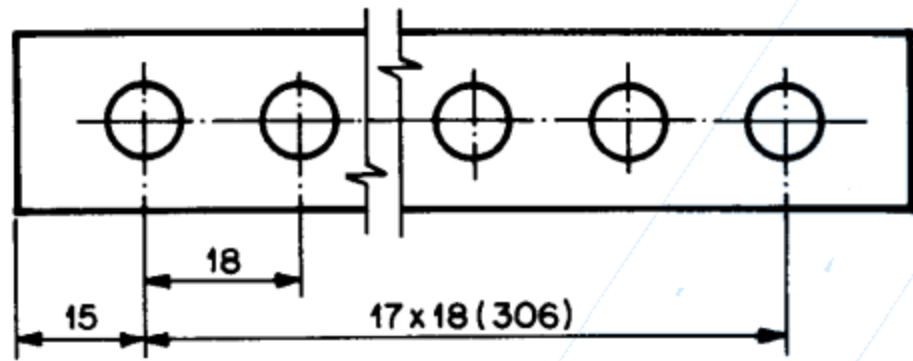
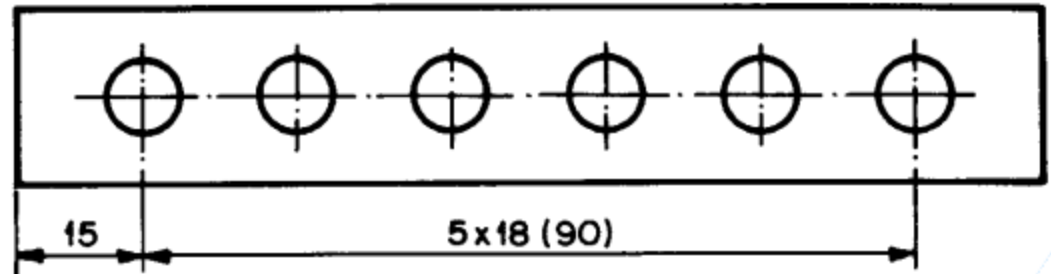
Símbolos especiais

- Quadrado



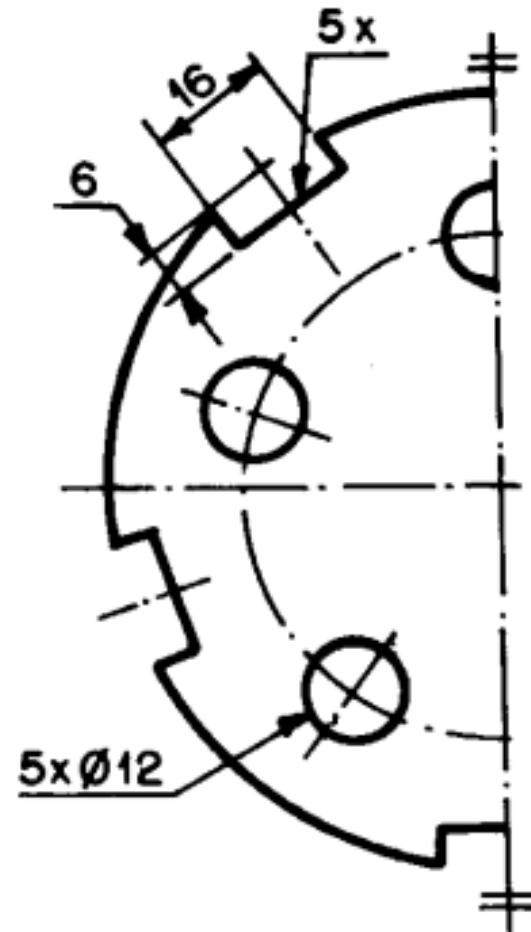
Elementos equidistantes

-



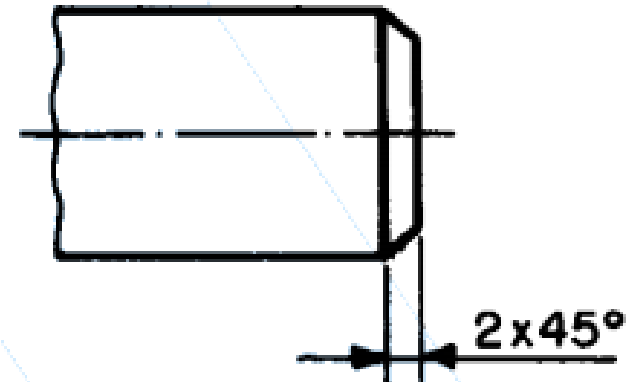
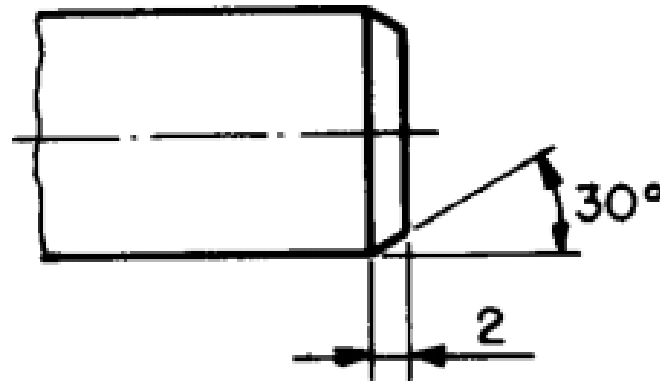
Elementos equidistantes

- Obs.: Objeto simétrico pode ser representado apenas usando uma das metades

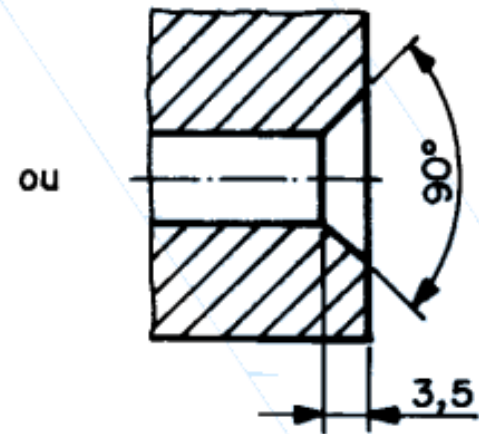
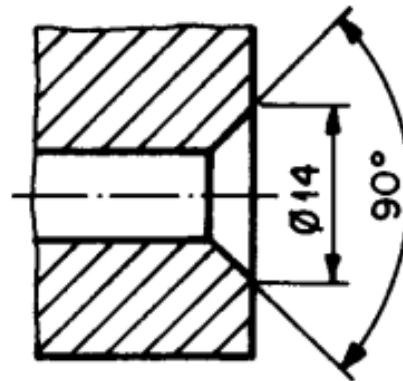


Chanfros e escareados

- Chanfros:

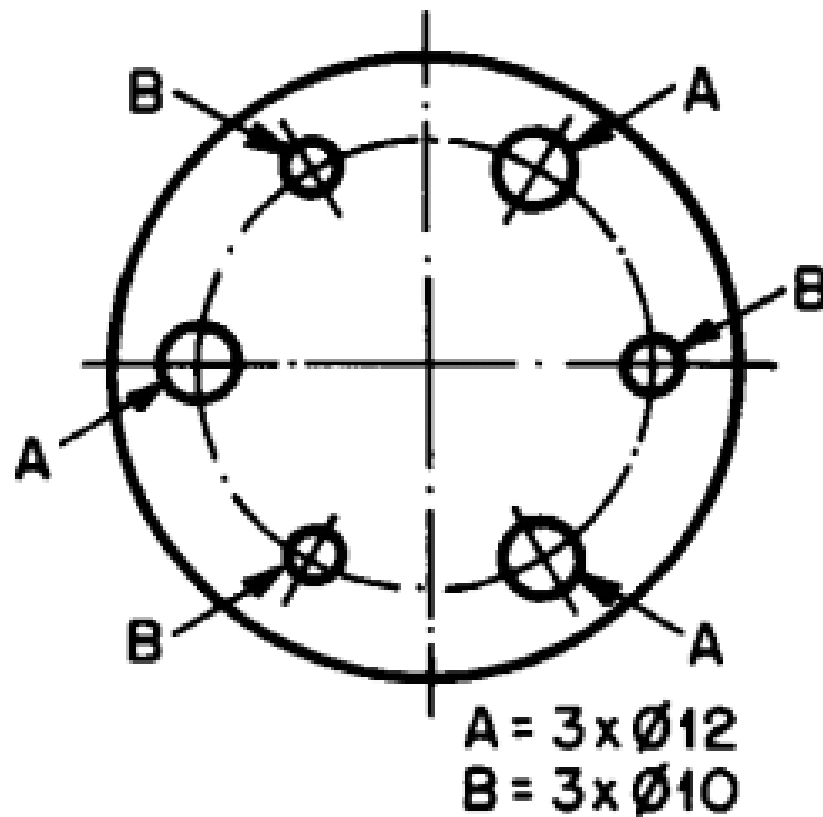


- Escareados:

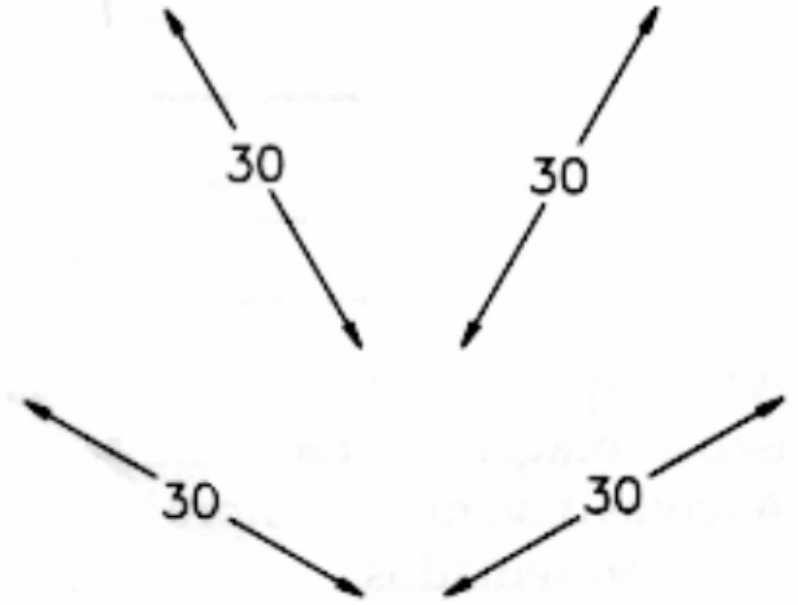
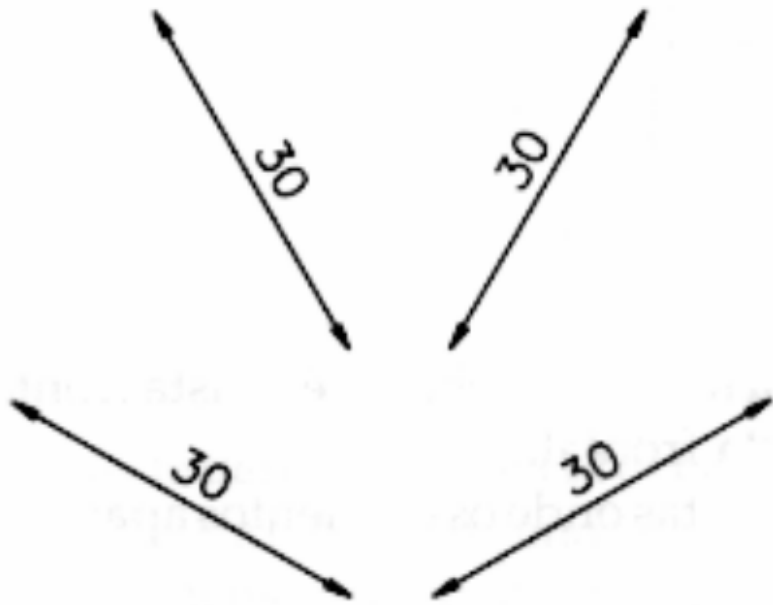


Referência

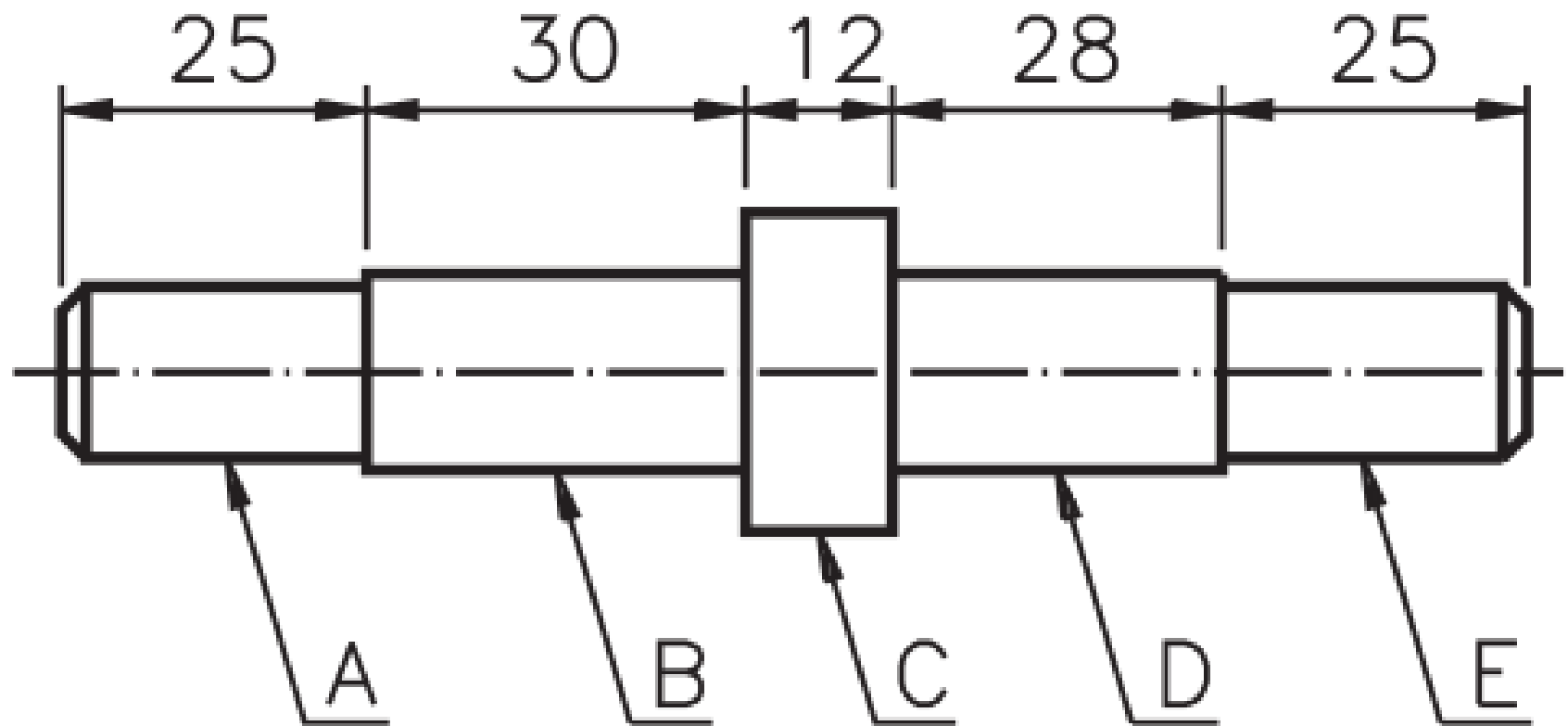
- É possível evitar a repetição da mesma cota usando letras de referência



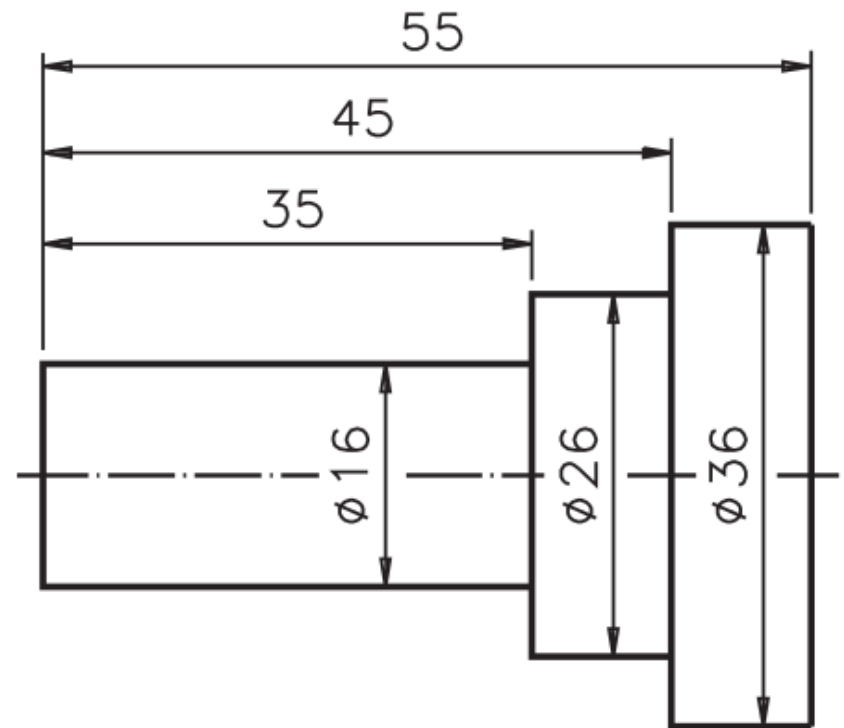
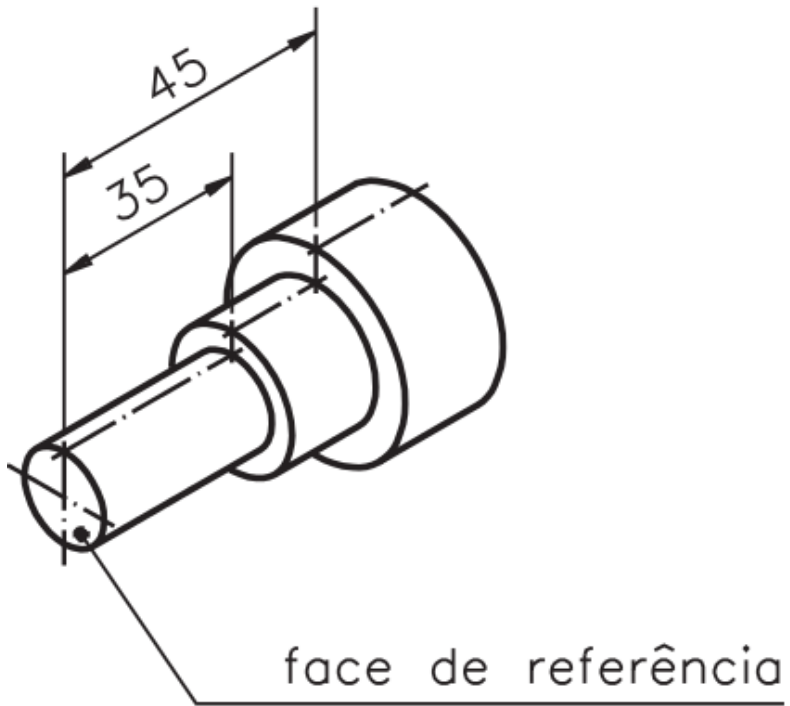
Cotagem



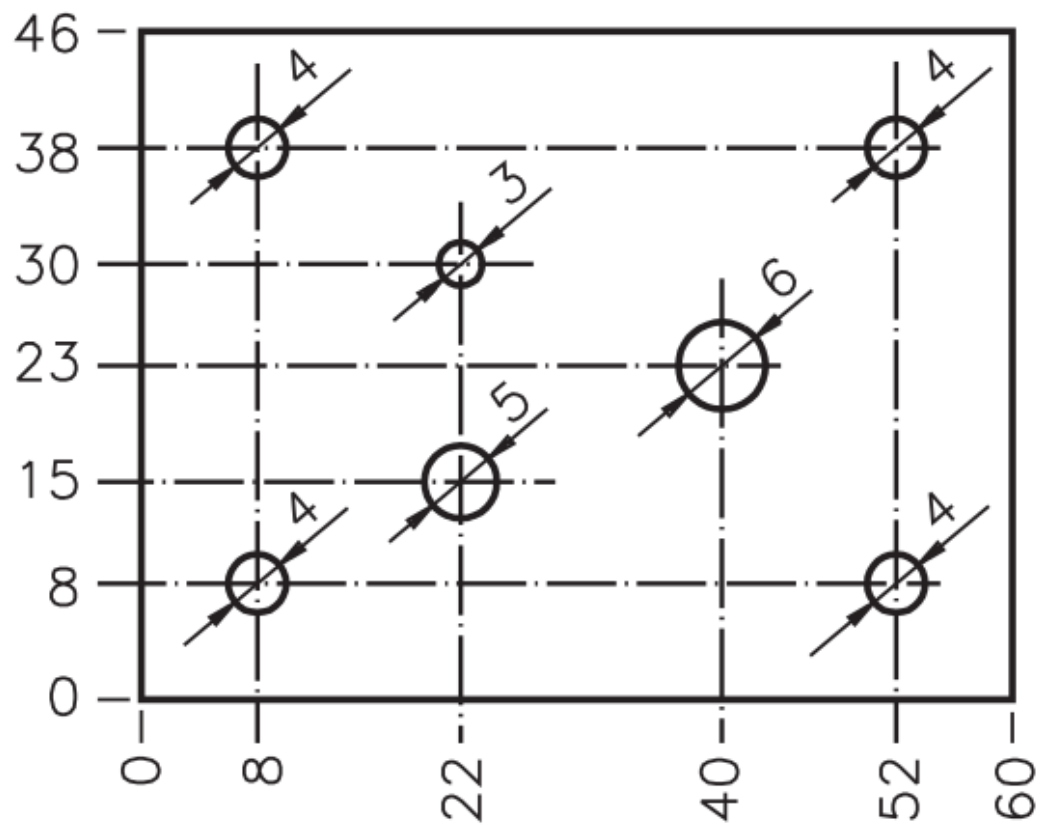
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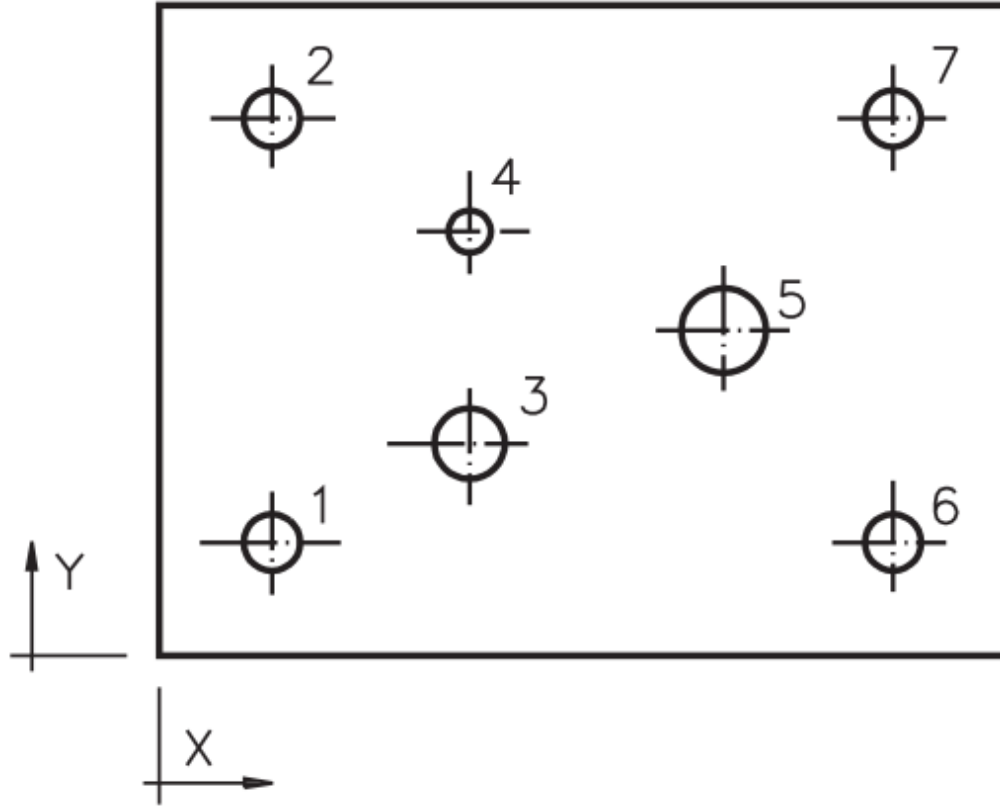
Cotagem



Cotagem

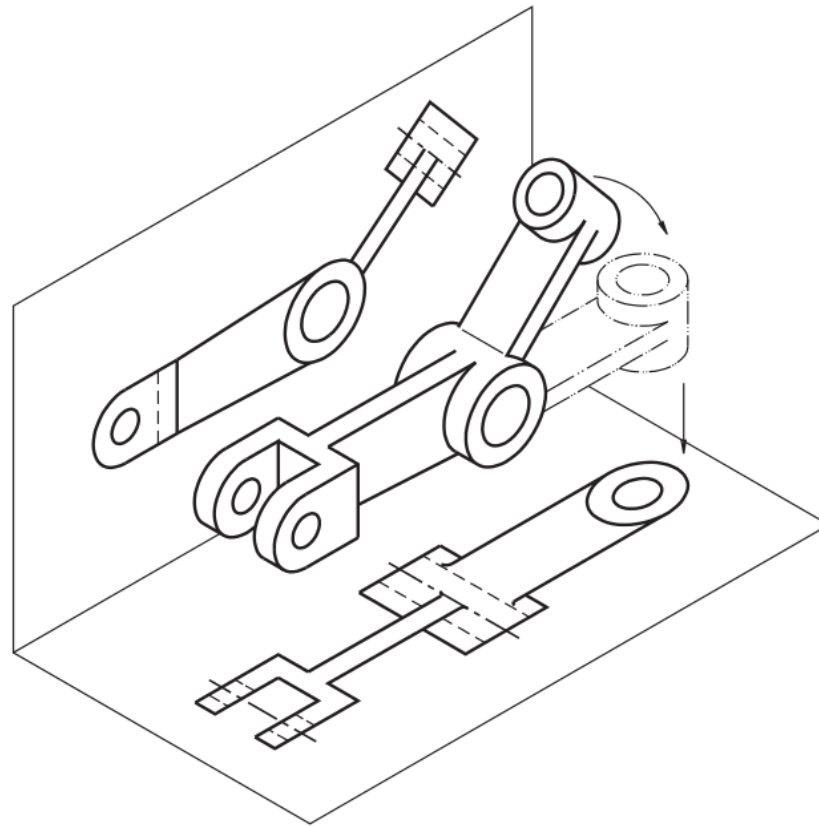


Cotagem

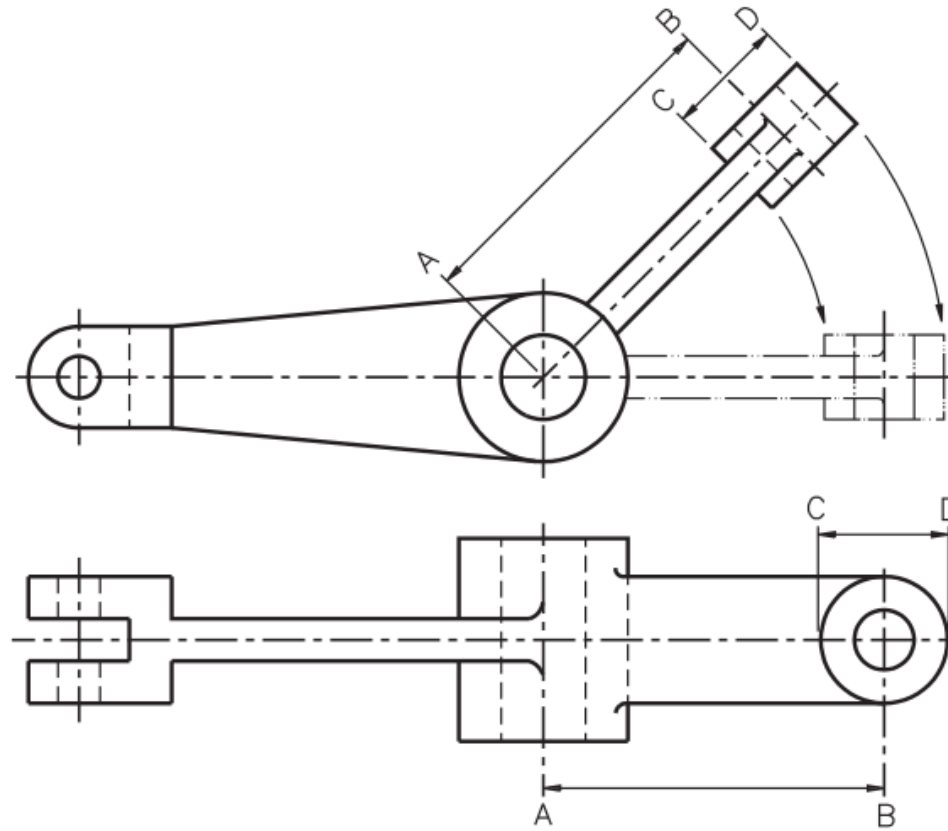


Nº	X	Y	∅
1	8	8	4
2	8	38	4
3	22	15	5
4	22	30	3
5	40	23	6
6	52	8	4
7	52	38	4

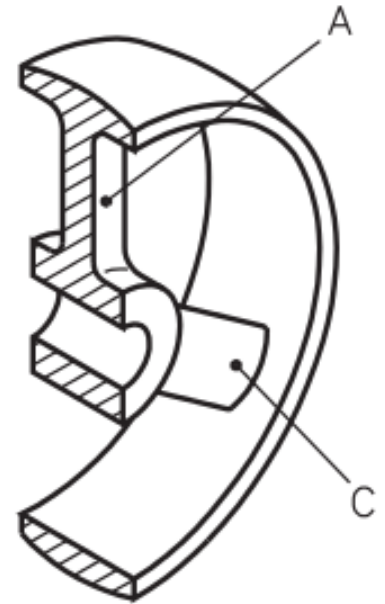
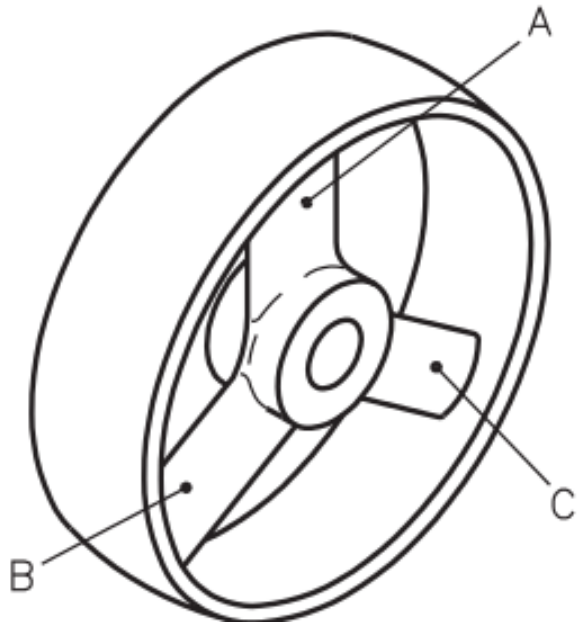
Projeção com rotação



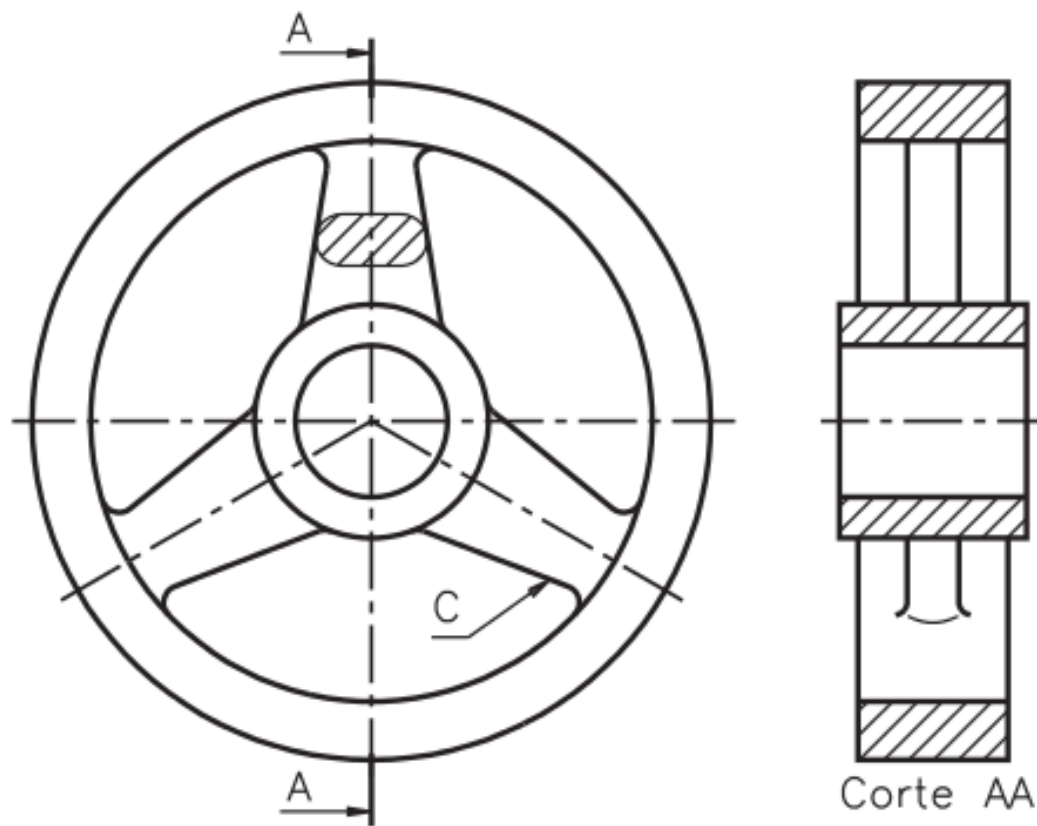
Projeção com rotação



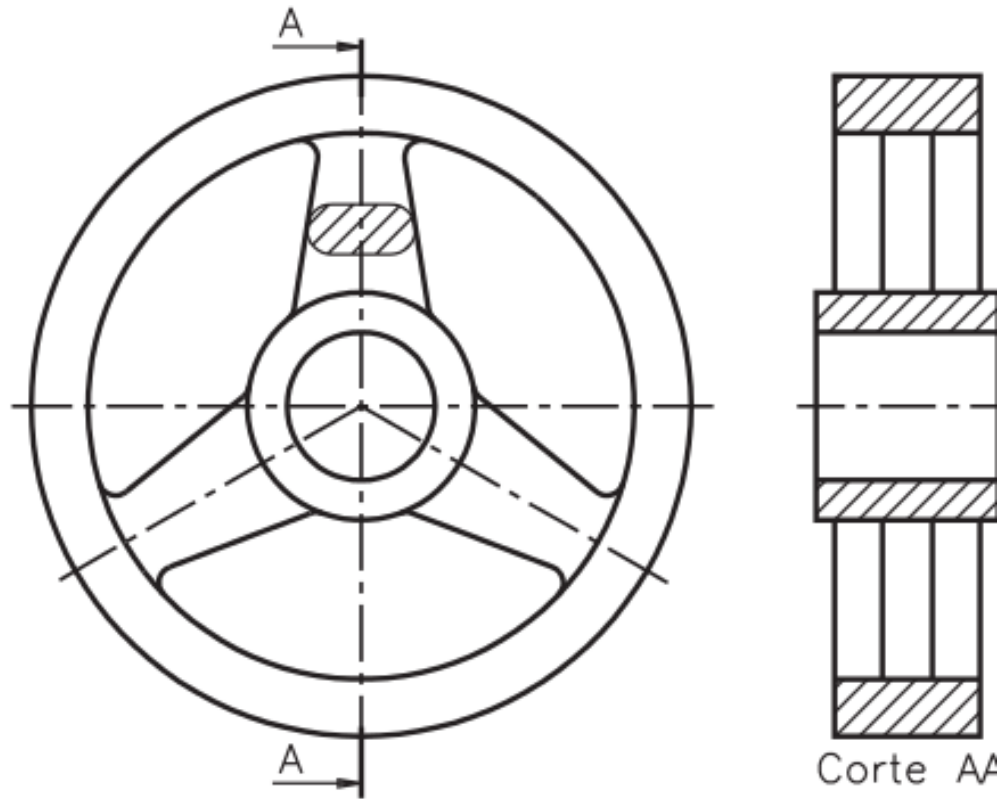
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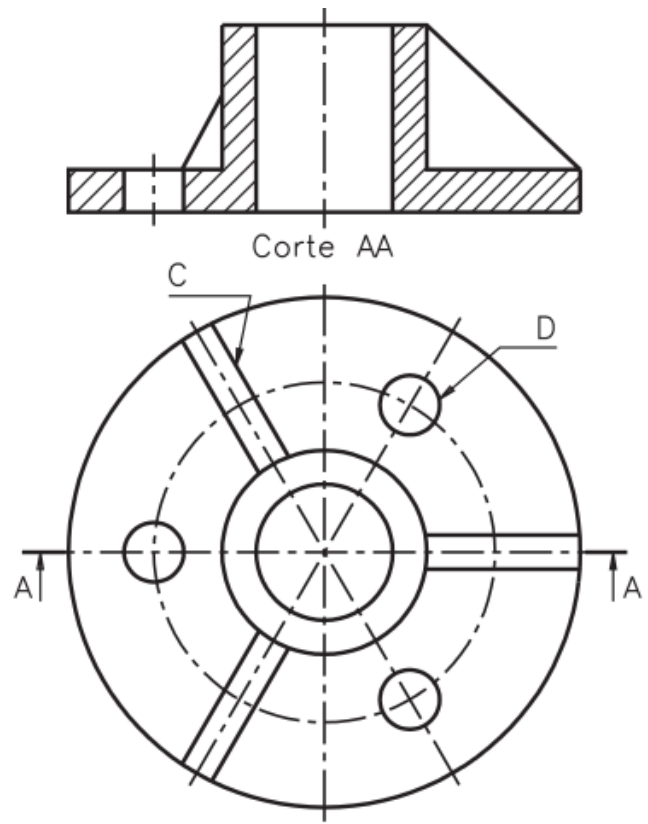
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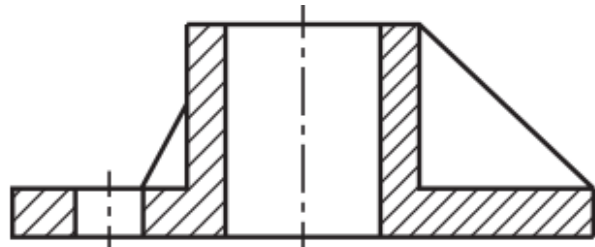
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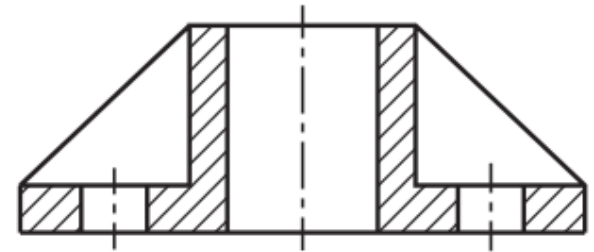
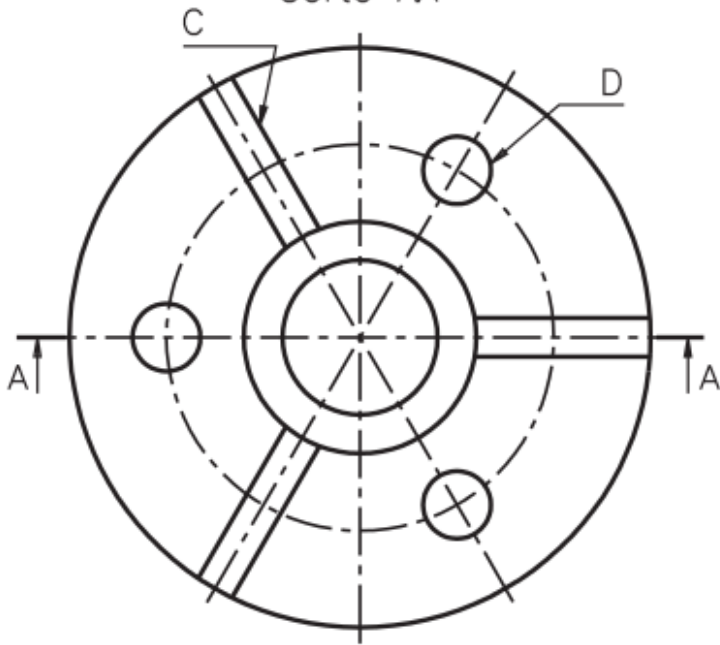
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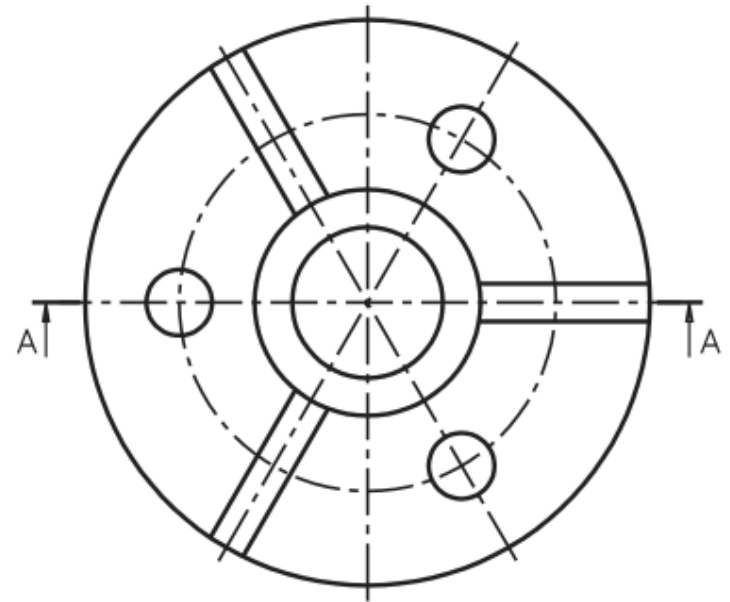
Projeção com rotação



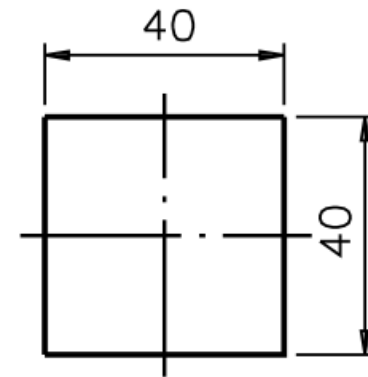
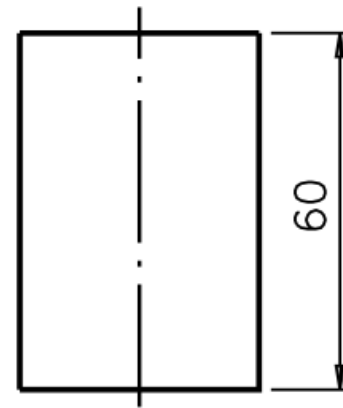
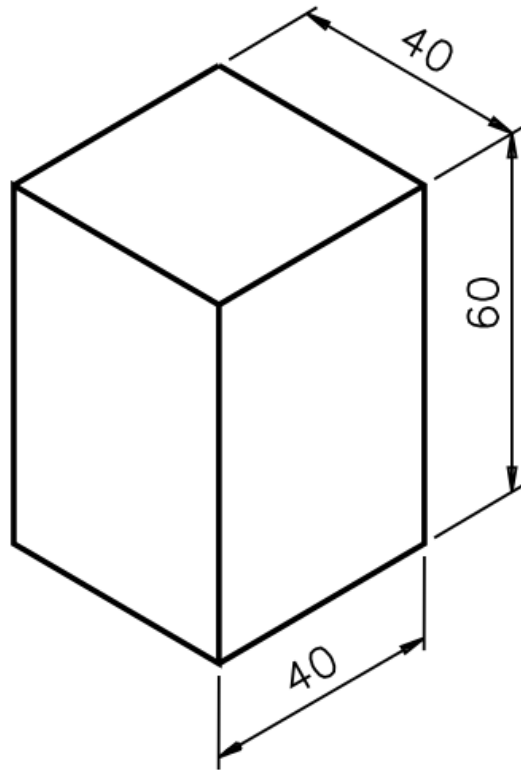
Corte AA



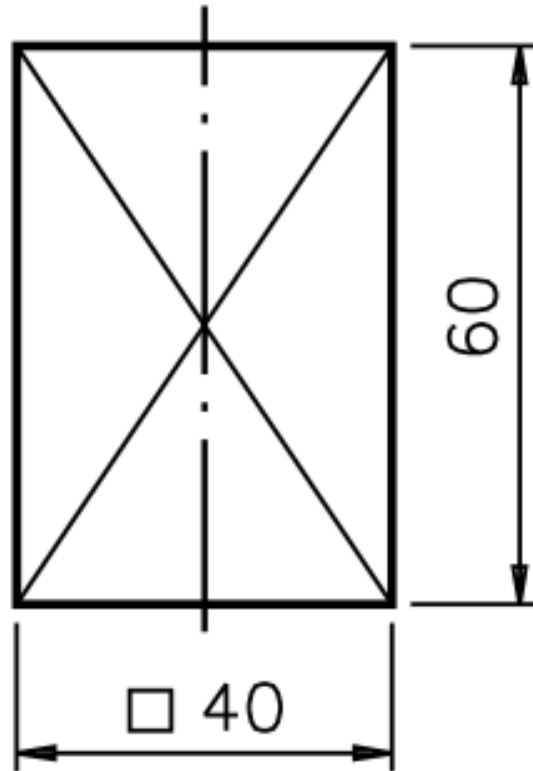
Corte AA



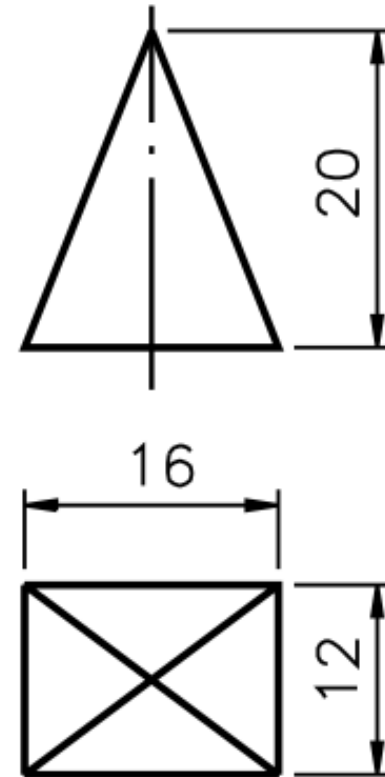
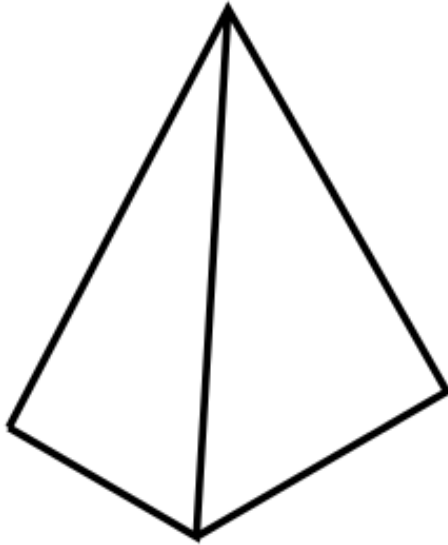
Supressão de vistas



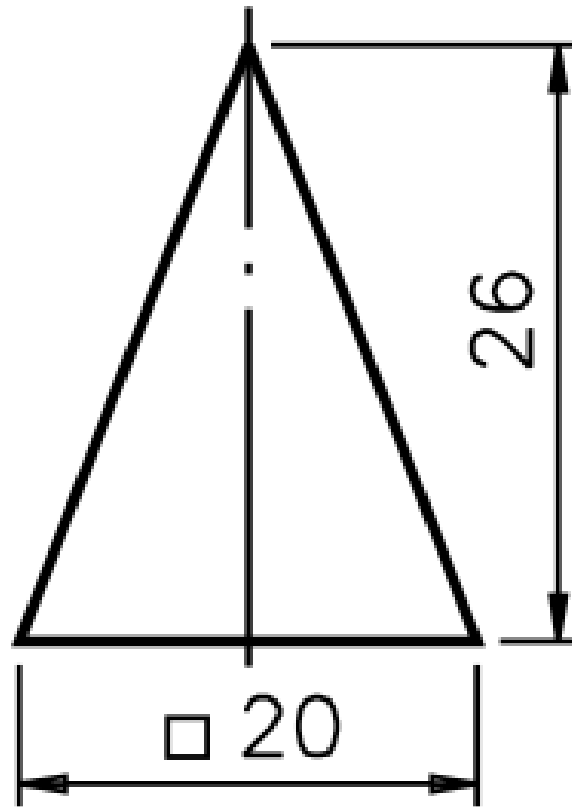
Supressão de vistas



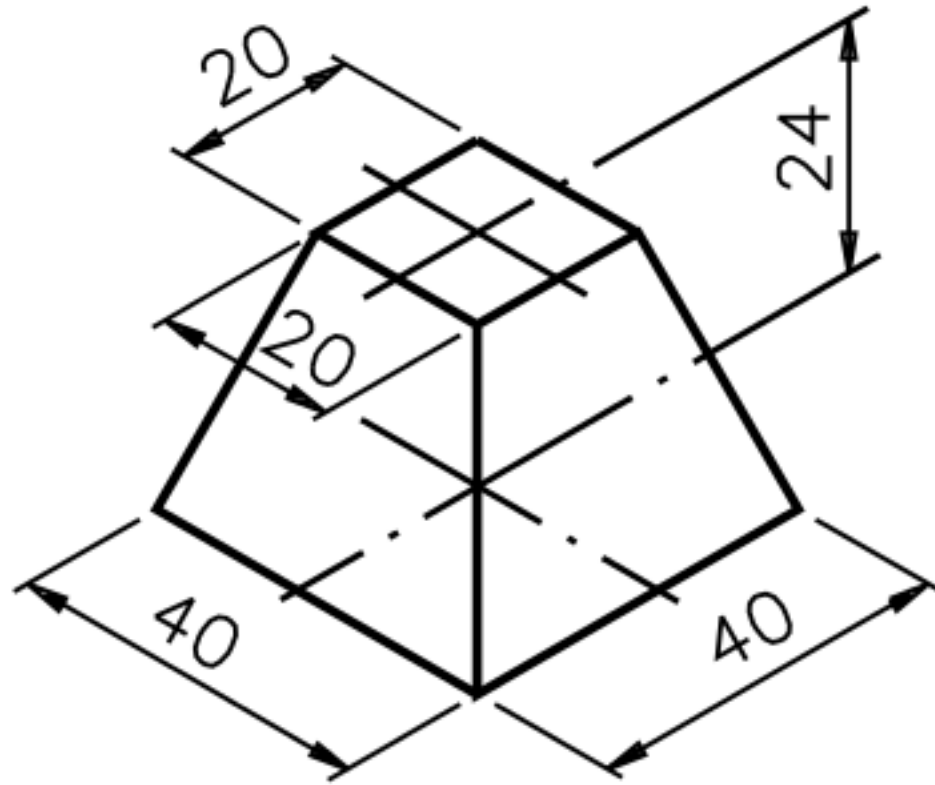
Supressão de vistas



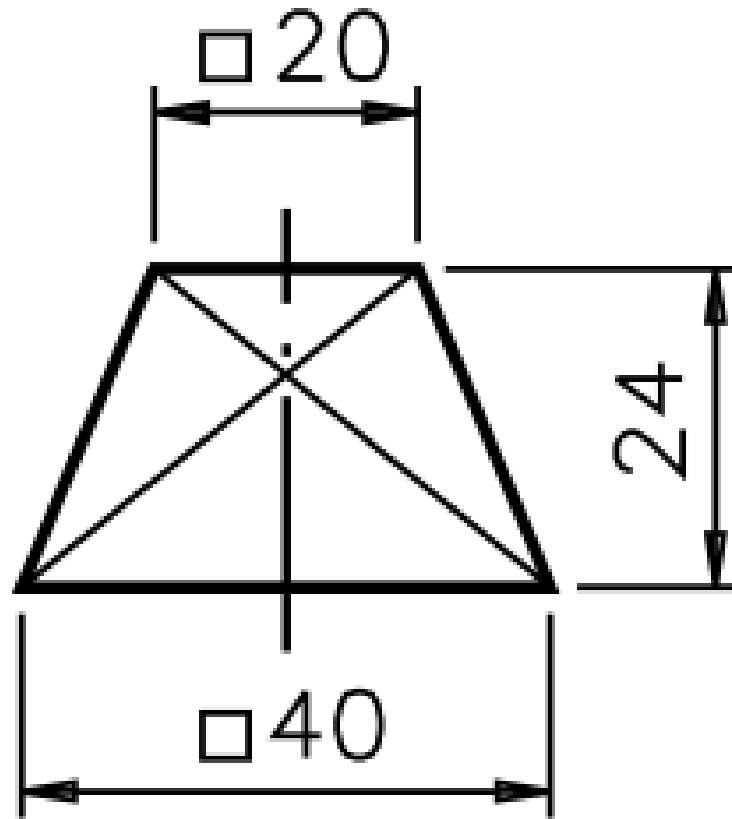
Supressão de vistas



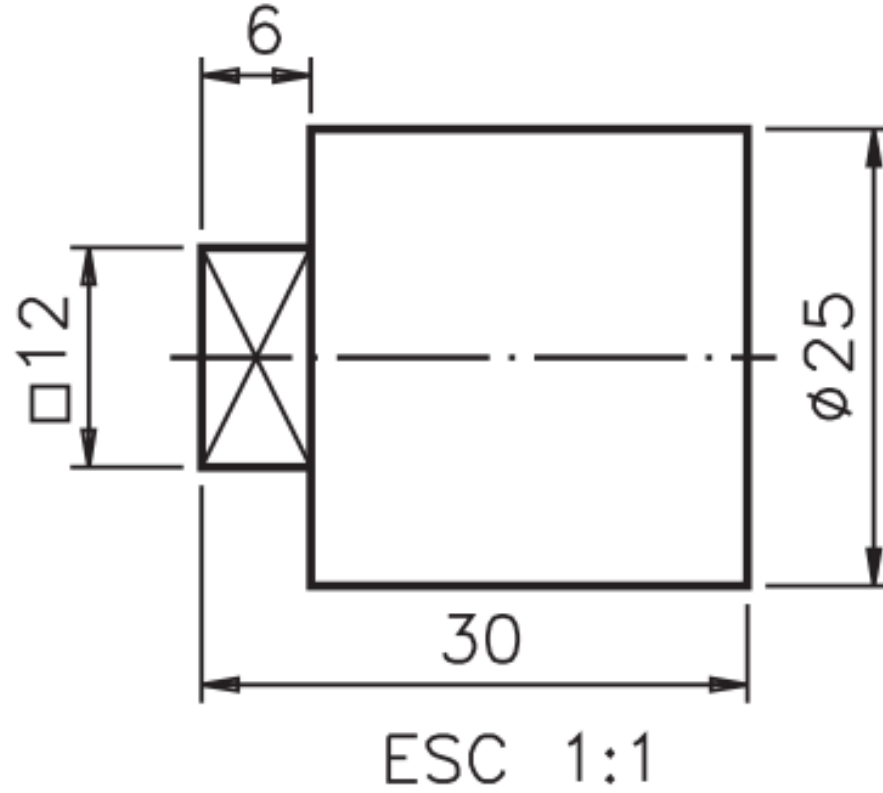
Supressão de vistas



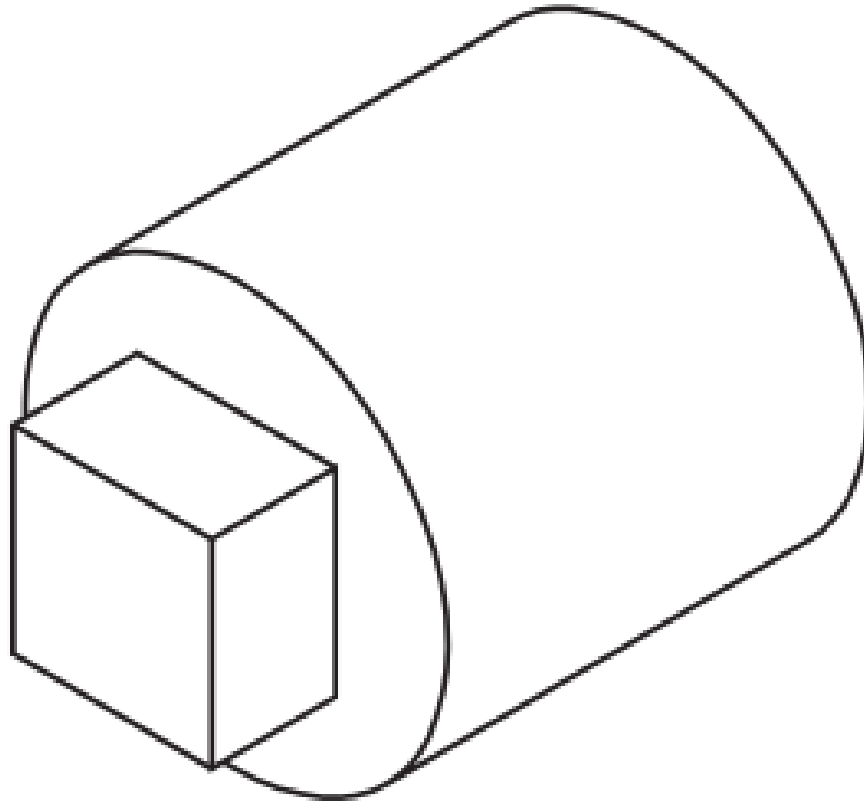
Supressão de vistas



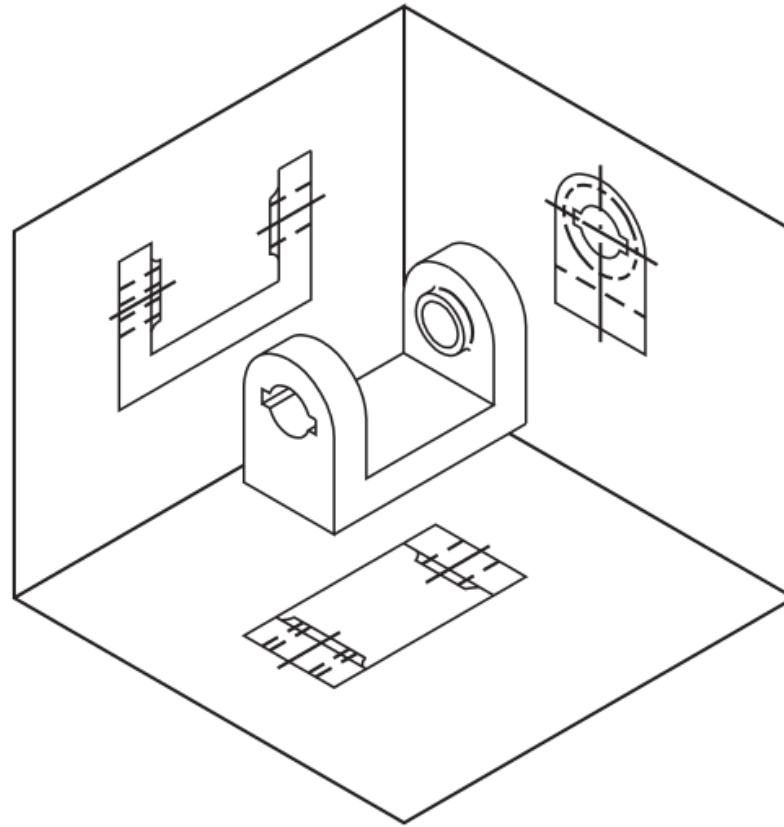
Supressão de vistas



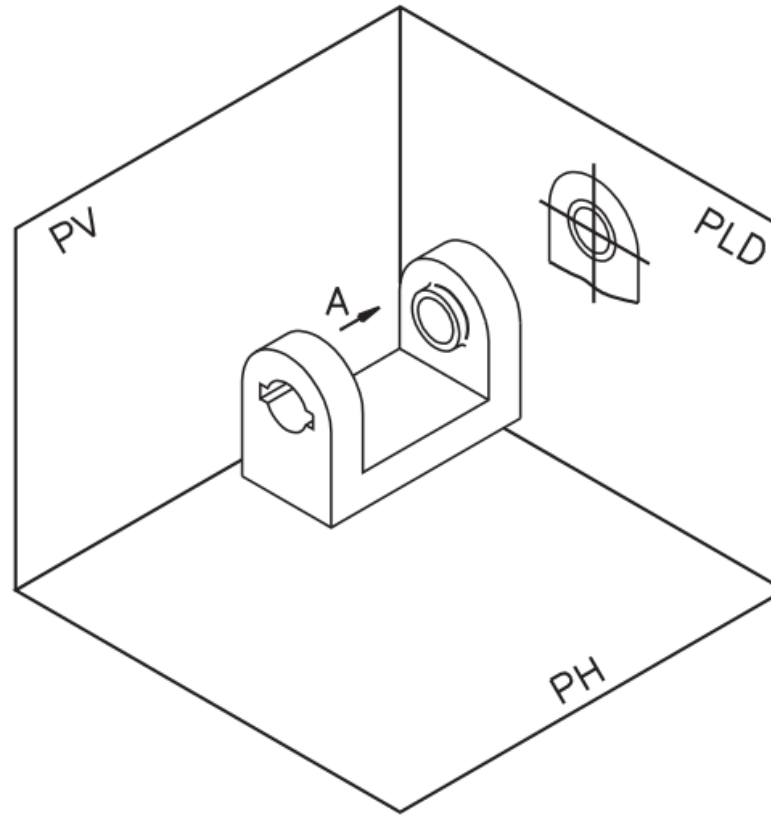
Supressão de vistas



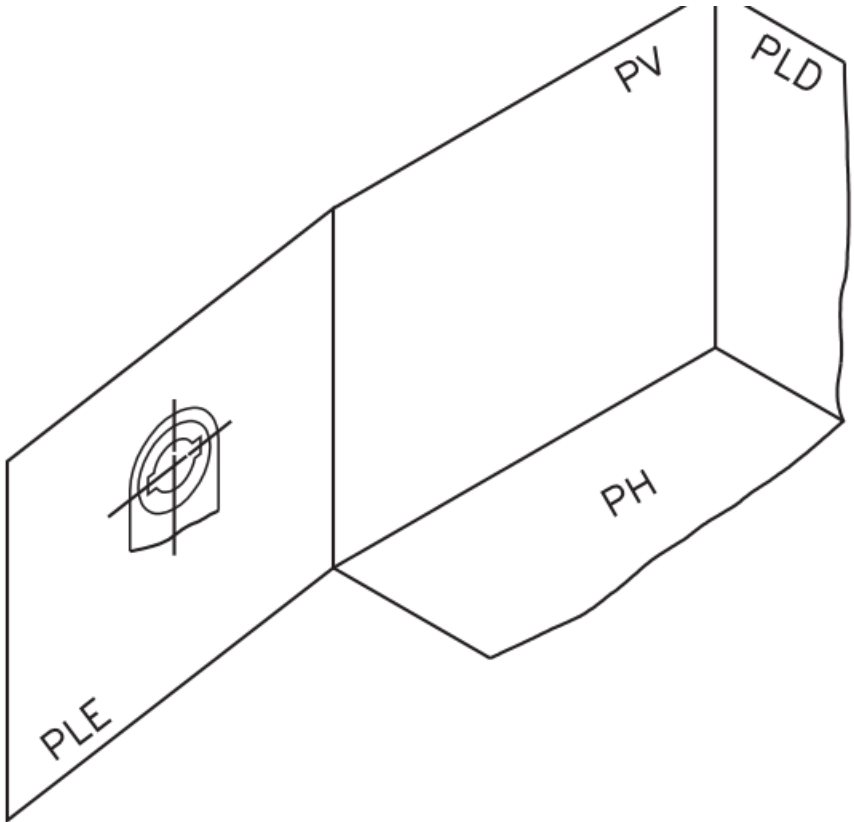
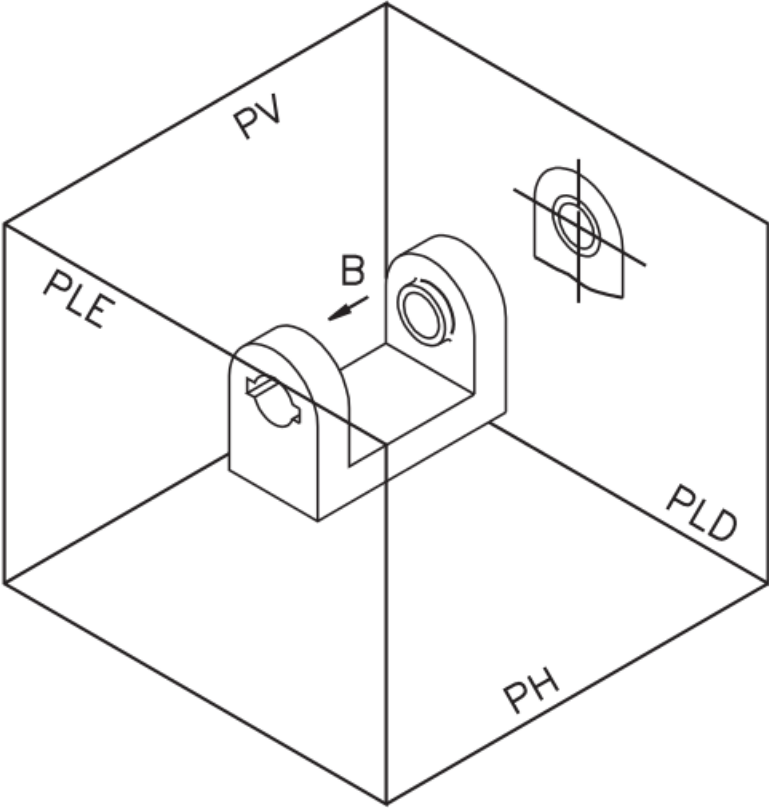
Vistas especiais



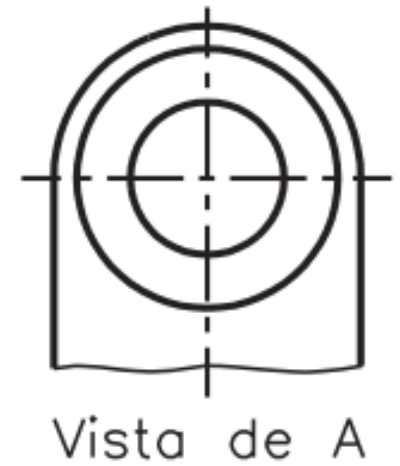
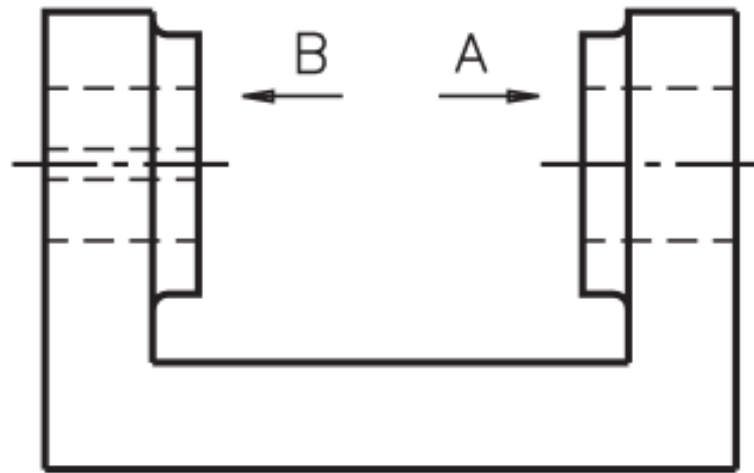
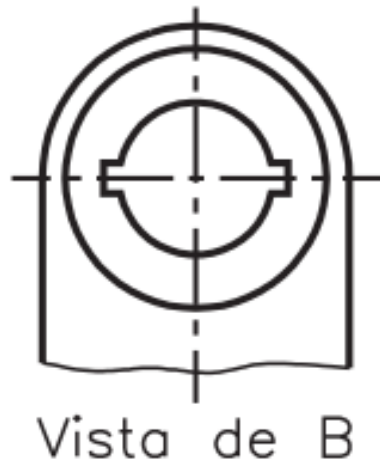
Vistas especiais



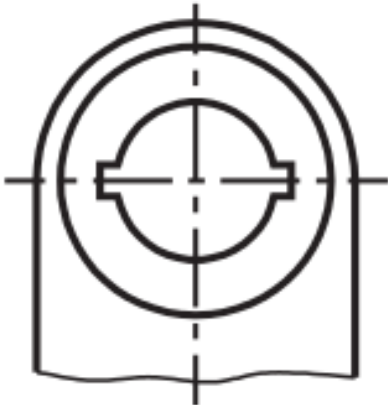
Vistas especiais



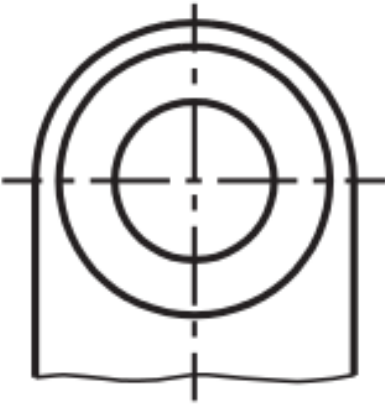
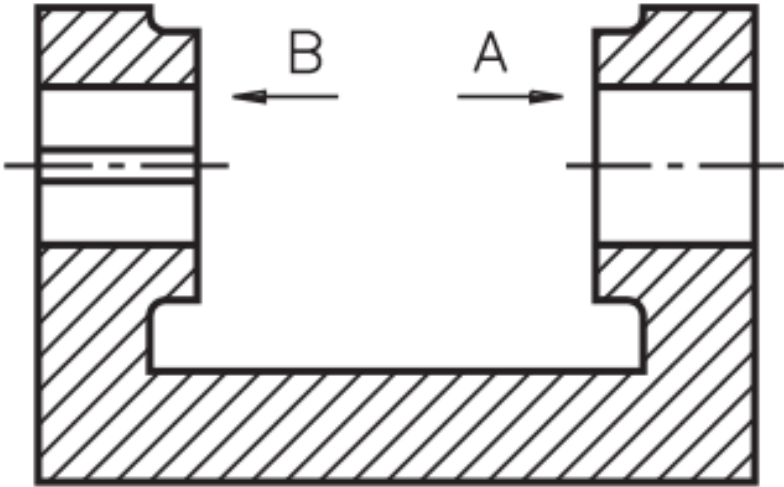
Vistas especiais



Vistas especiais



Vista de B



Vista de A

Vistas especiais

