

FATEC Itaquera - Profº Miguel Reale

Curso Superior de Tecnologia em Refrigeração,
Ventilação e Ar Condicionado

Disciplina: Desenho Técnico

Tema: Cortes

Profº Milton

2014

Definição

NBR 12298: Representação de Área de Corte por Meio de Hachuras em desenho técnico

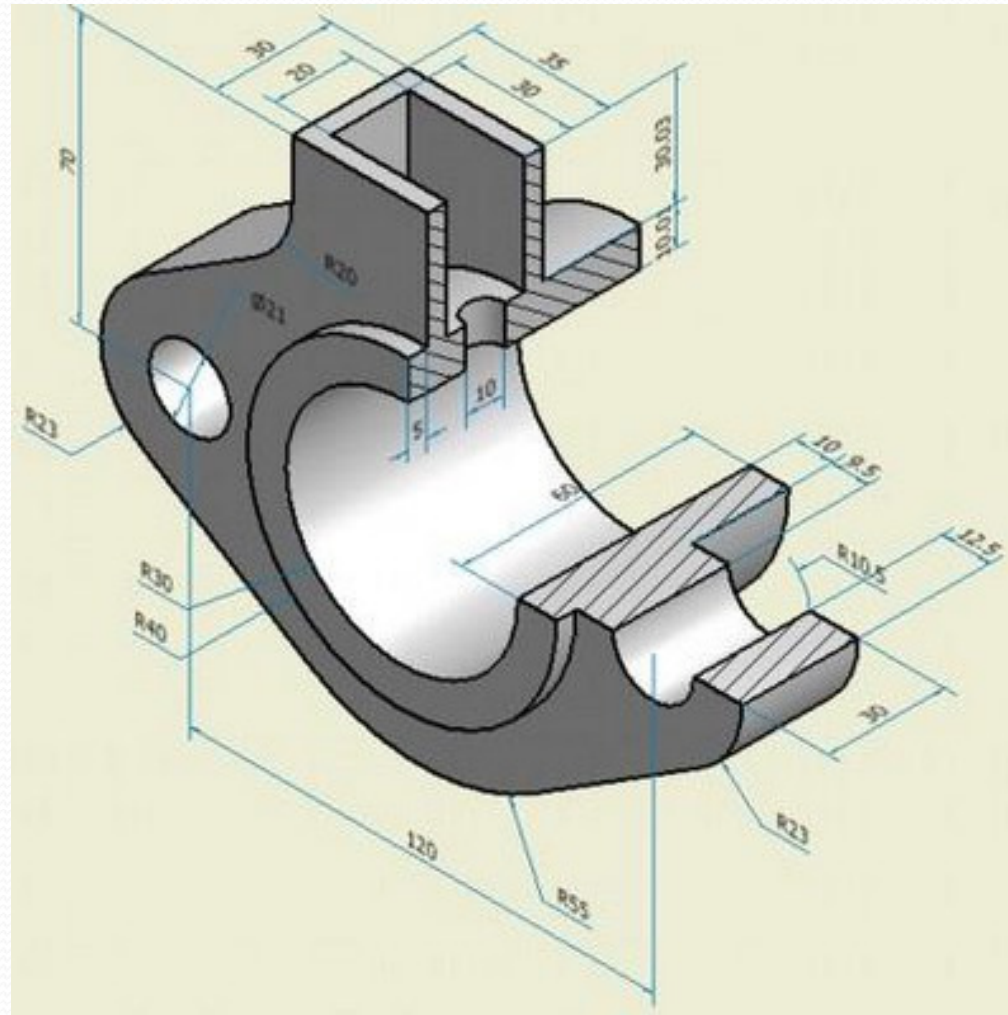
👉 Esta norma fixa as condições exigíveis para a representação de áreas de corte em desenho técnico.

Complementos:

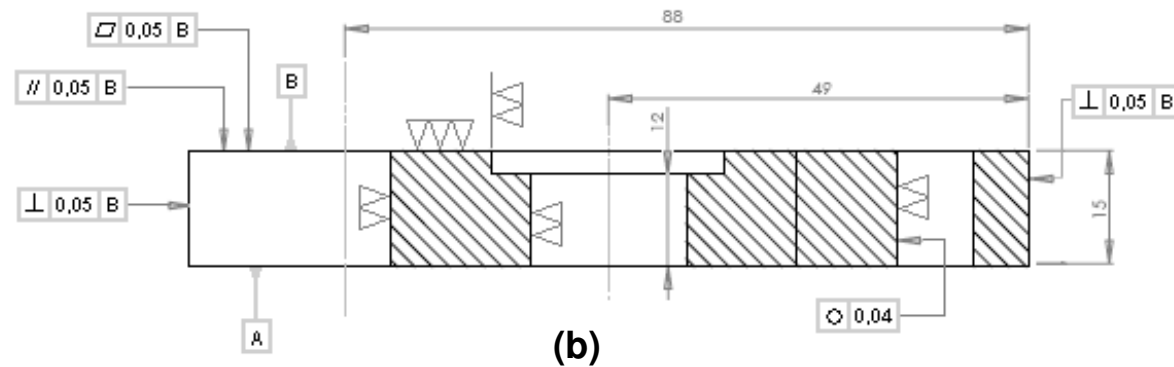
NBR 8403 – Aplicação de linhas em desenho técnico – procedimento.

NBR 10067 – Princípios gerais em desenho técnico.

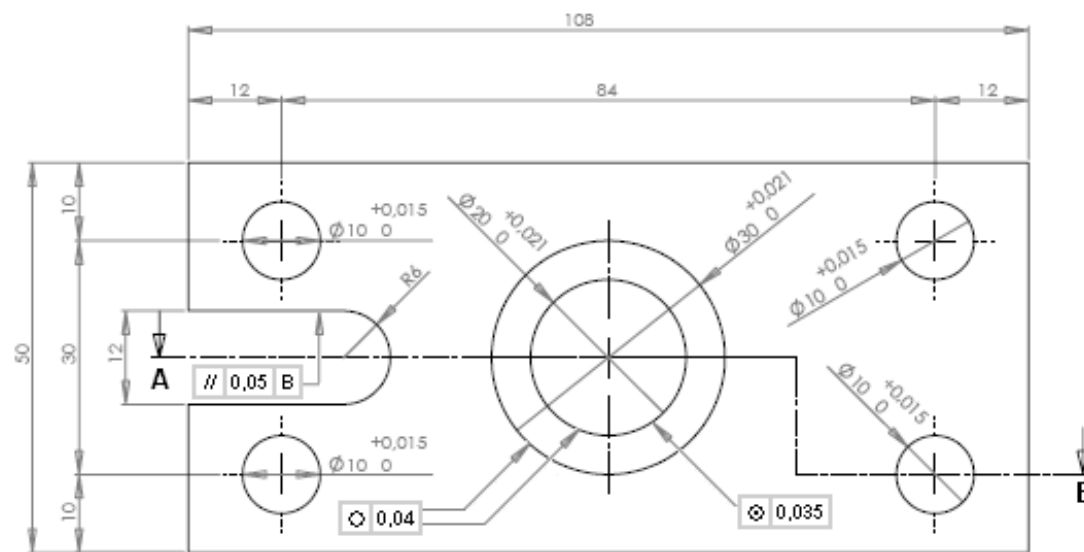
Exemplo de corte em desenho isométrico



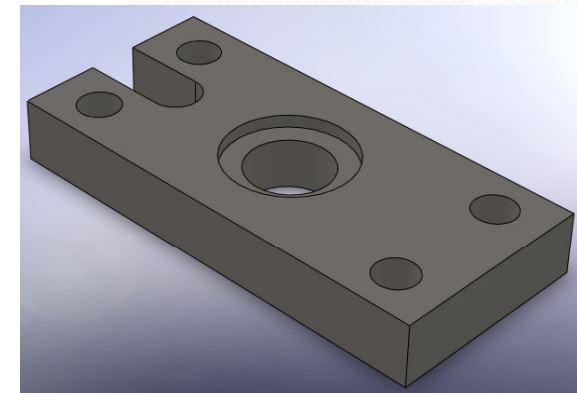
Exemplo de corte em desenho ortográfico



COORTE A-B



(c)



(a) Modelo 3D, (b) e (c) representação das tolerâncias geométricas.

$\nabla(\nabla, \nabla \nabla)$

Linha para representação de cortes:

H



Traço e ponto estreita, larga nas extremidades e na mudança de direção

H1 planos de cortes

Tipos comuns de hachura:

Elastômeros, vidros
cerâmica e rocha



concreto



Líquido



Madeira



Metais



Terra



Outras hachuras podem ser utilizadas, desde que identificadas.

Hachuras:



Figura 1

Na representação geral, de qualquer material, deve ser usada a hachura mostrada na Figura 1.

As hachuras devem ser traçadas em linha estreita, conforme a NBR 8403.

As hachuras são formadas por linhas inclinadas a 45° em relação às linhas principais do contorno ou eixos de simetria (ver Figuras 2, 3 e 4).



Figura 2

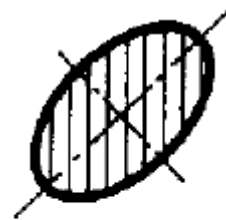


Figura 3



Figura 4

Hachuras:

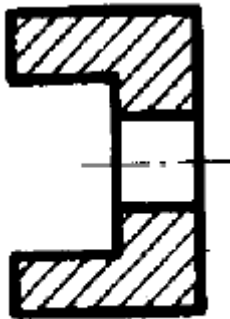


Figura 5

As hachuras, em uma mesma peça, são feitas sempre numa mesma direção (ver Figura 5).

O detalhe desenhado separadamente de sua vista deve ser hachurado na mesma direção.

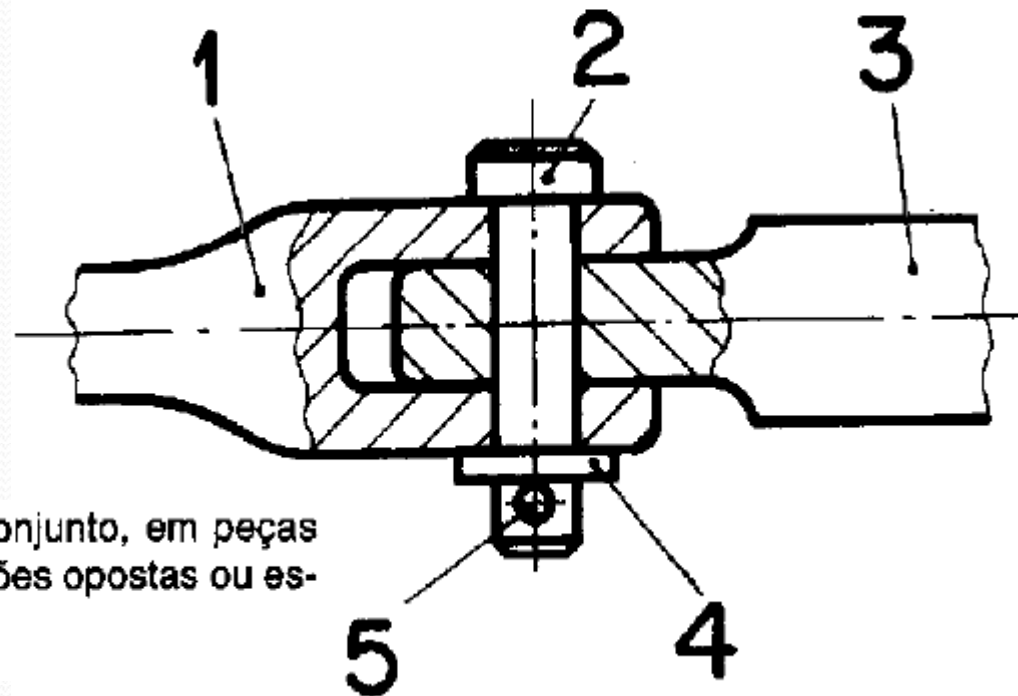


Figura 6

As hachuras, nos desenhos de conjunto, em peças adjacentes, devem ser feitas em direções opostas ou espaçamentos diferentes (ver Figura 6).

Hachuras:

As hachuras, em uma mesma peça composta (soldada, rebitada, remanchada ou colada), são feitas em direções diferentes (ver Figuras 7 e 8).

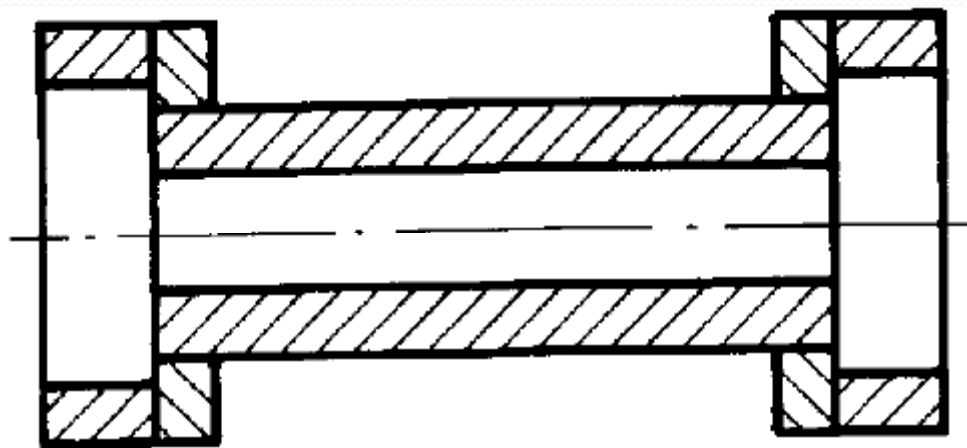


Figura 7

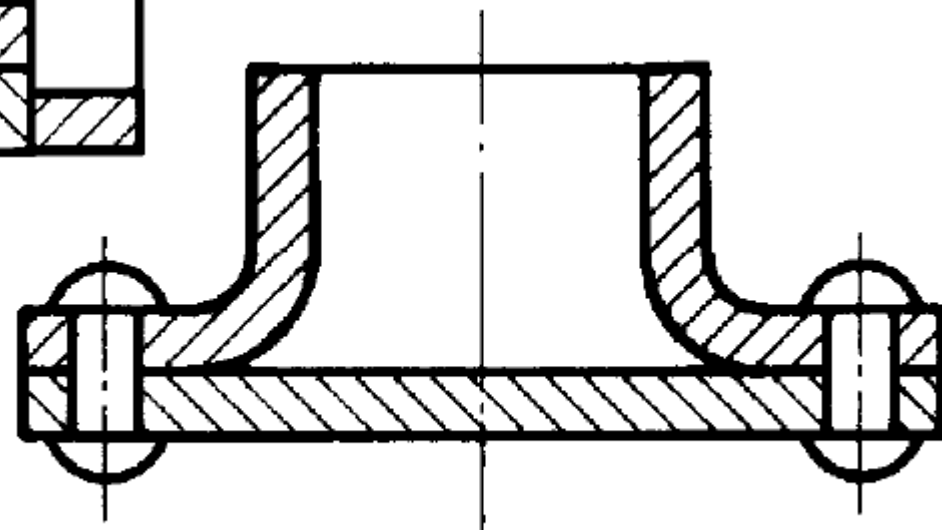
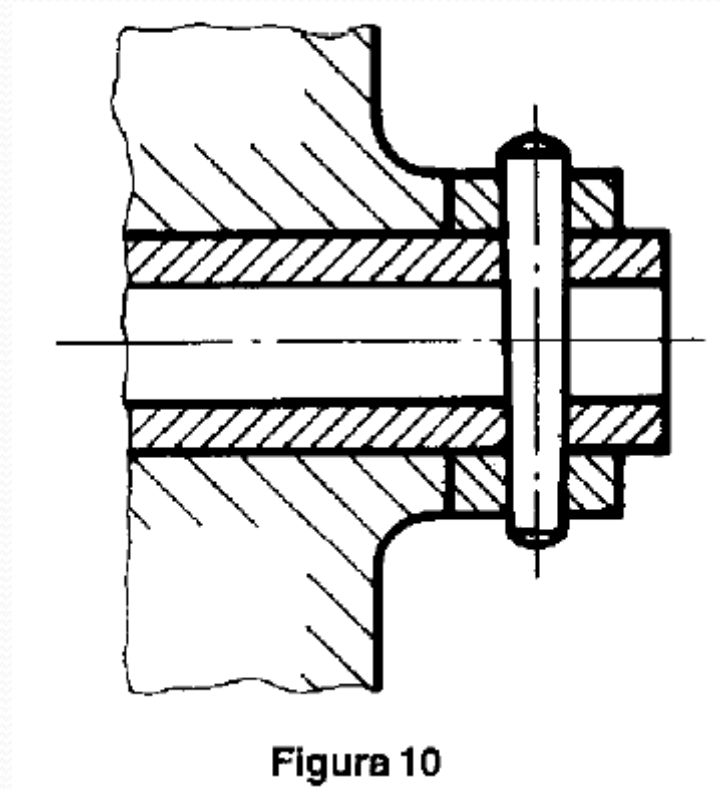


Figura 8

O espaçamento mínimo para as hachuras é de 0,7 mm, conforme a NBR 8403.

Hachuras:

As hachuras, em área de corte muito grande, podem ser limitadas à vizinhança do contorno, deixando a parte central em branco (ver Figura 10).



Hachuras:

As hachuras têm sempre a mesma direção, mesmo quando o corte de uma peça é executada por vários planos de corte paralelos (ver Figura 11).

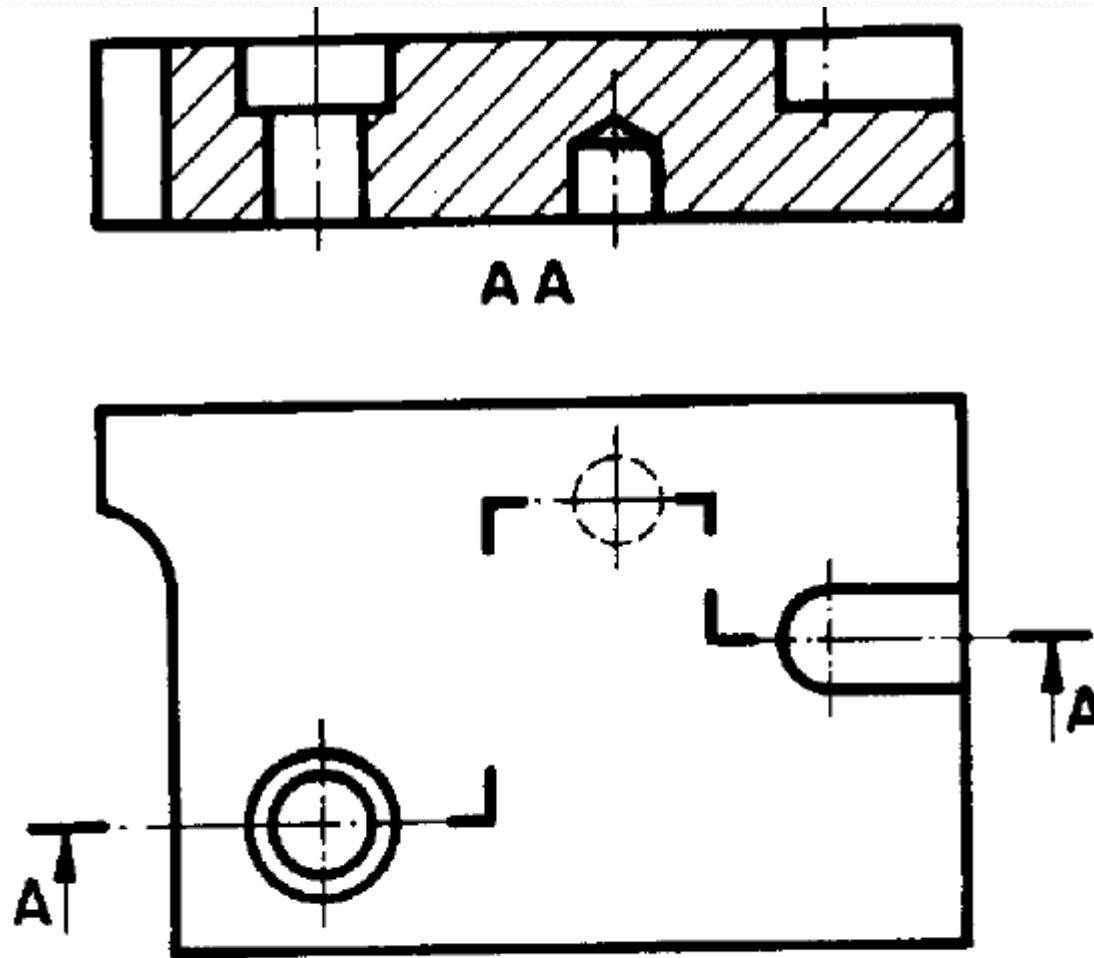


Figura 11

Hachuras:

Quando houver necessidade de representar dois elementos alinhados, manter a mesma direção das hachuras, porém com linhas desencontradas (ver Figura 12).

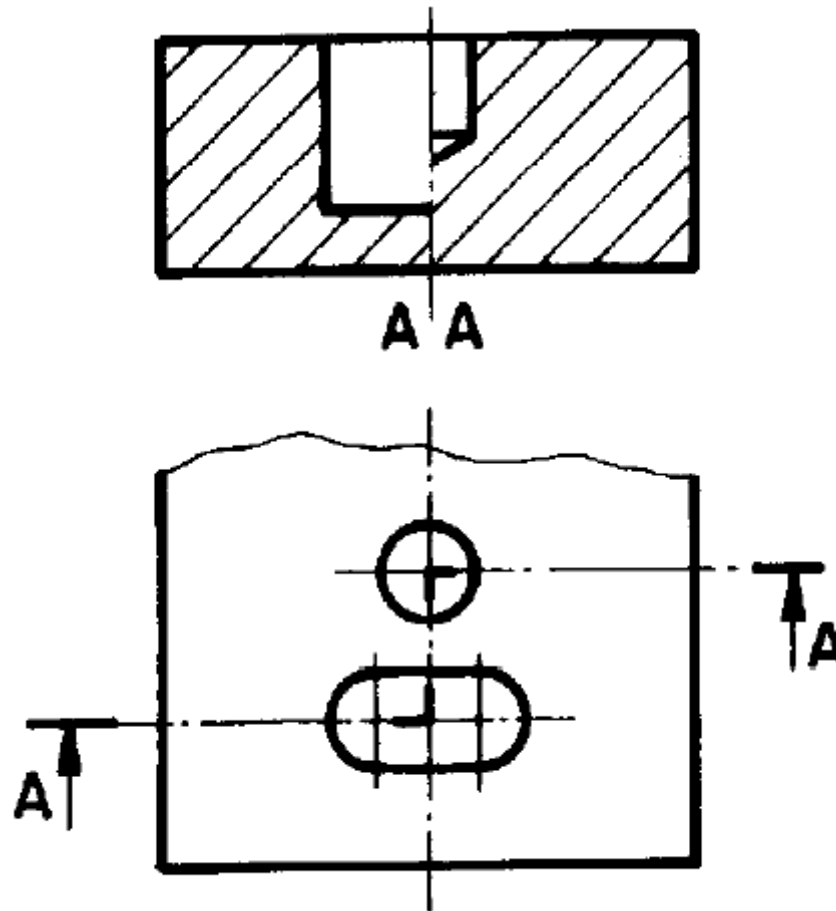


Figura 12

Hachuras:

As hachuras devem ser interrompidas quando da necessidade de se inscrever na área hachurada (ver Figura 13).

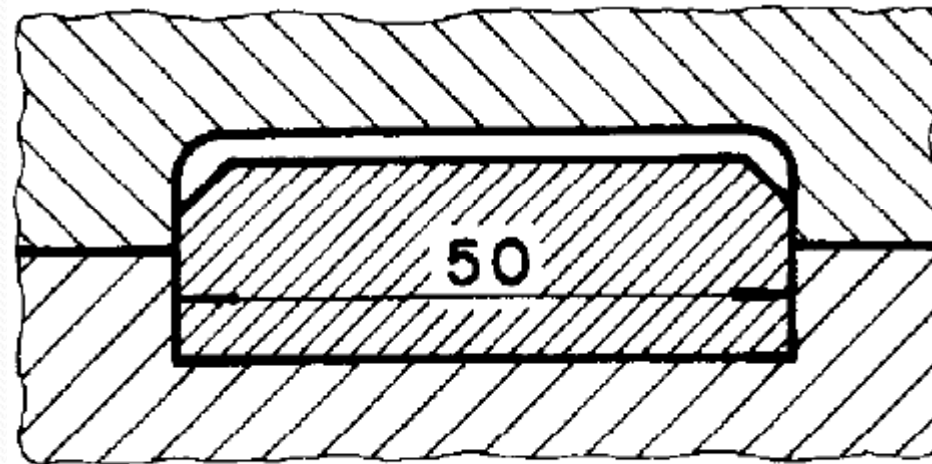


Figura 13

Hachuras:

As hachuras podem ser omitidas em seções de peças de espessuras finas. Neste caso, a seção deve ser enegrecida.

No desenho do conjunto, peças adjacentes devem ter um espaçamento em branco de no mínimo 0,7 mm (ver Figura 14).

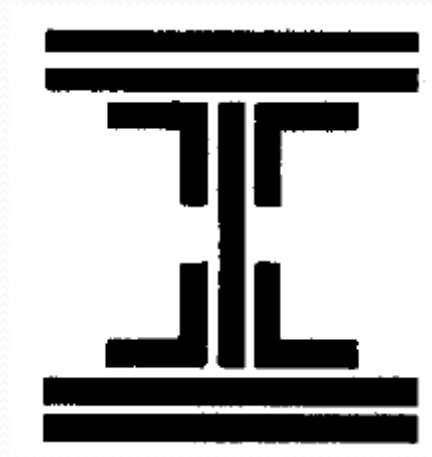
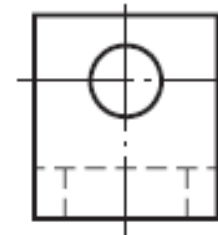
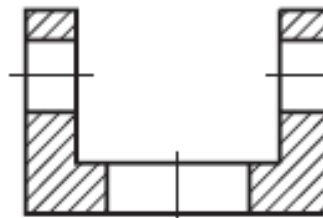
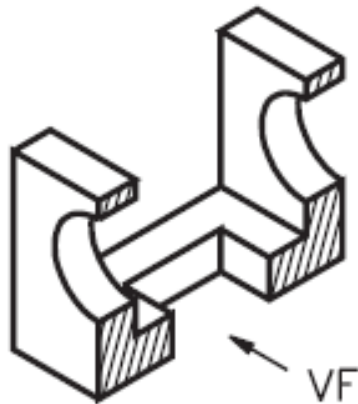
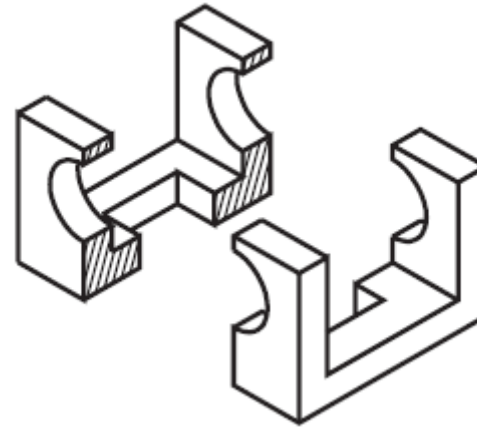
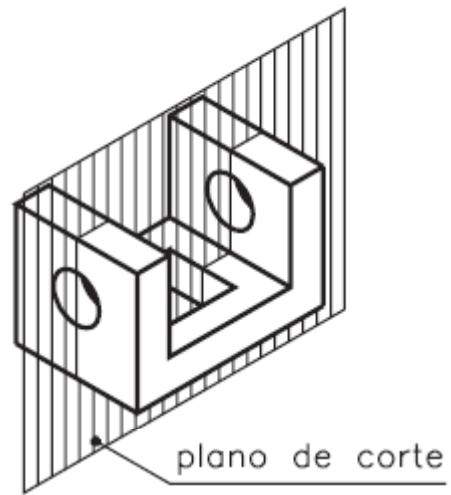
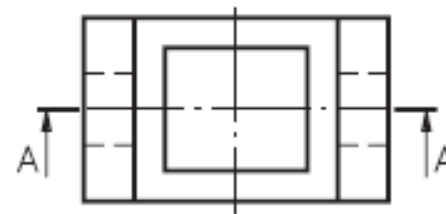


Figura 14

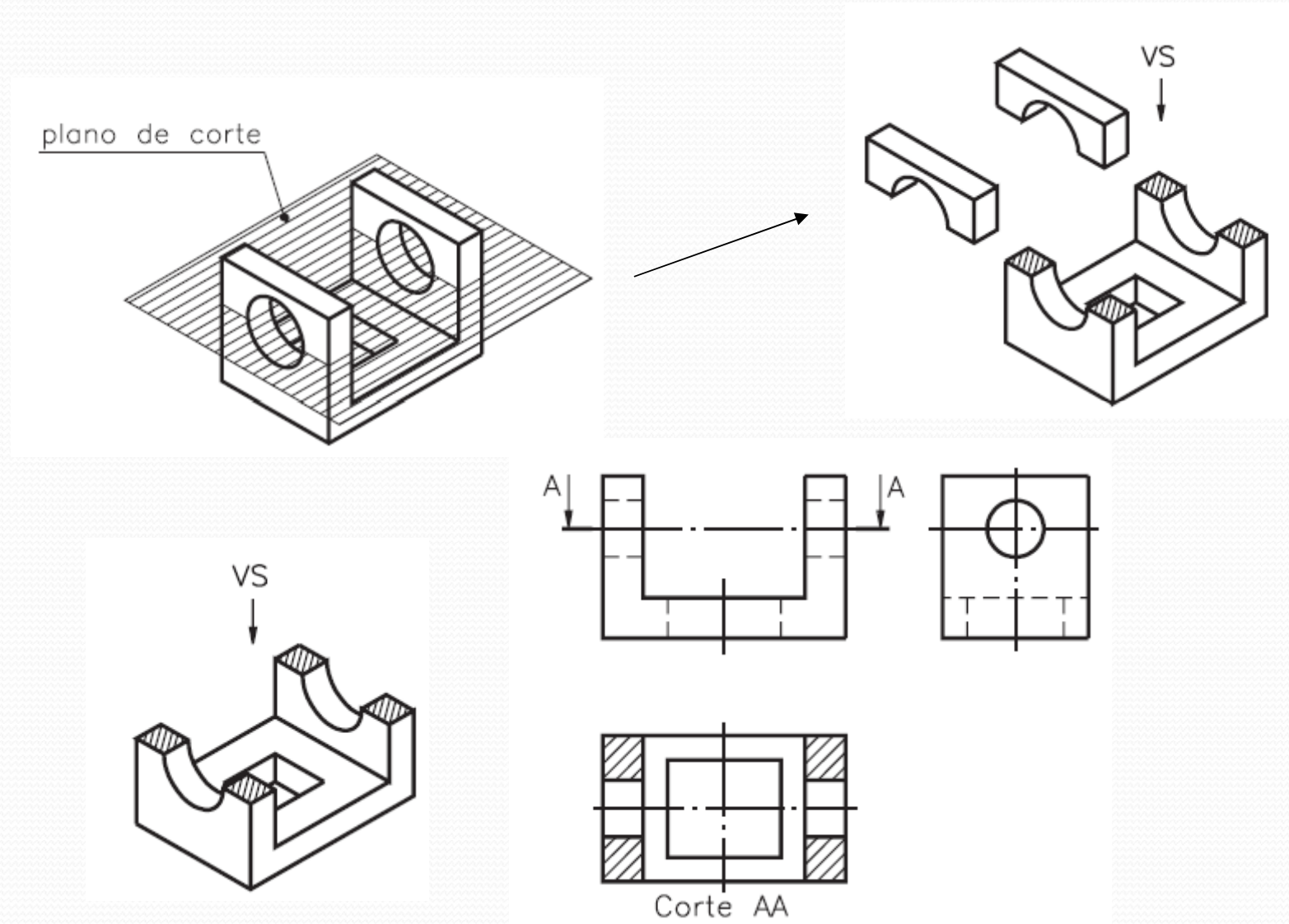
Tipos de corte: Corte Pleno ou Total



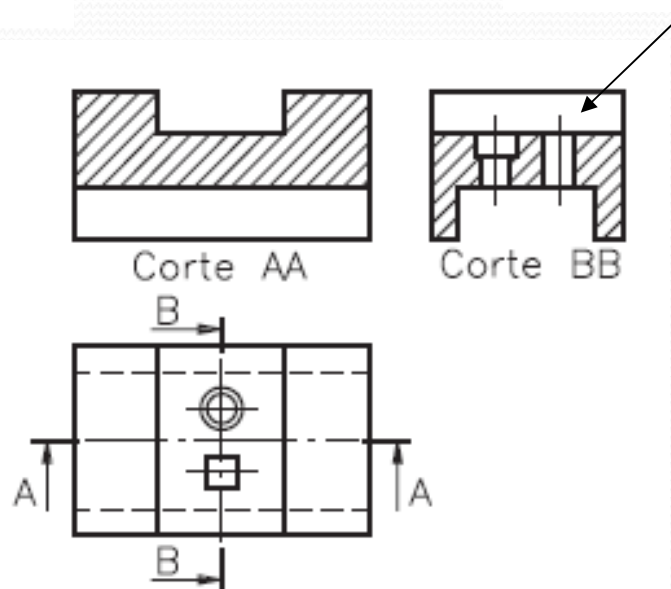
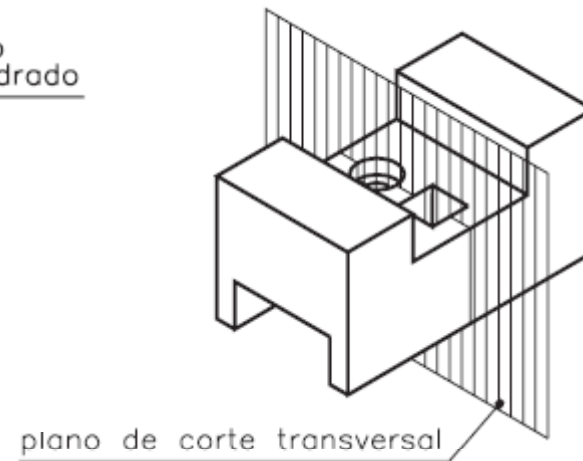
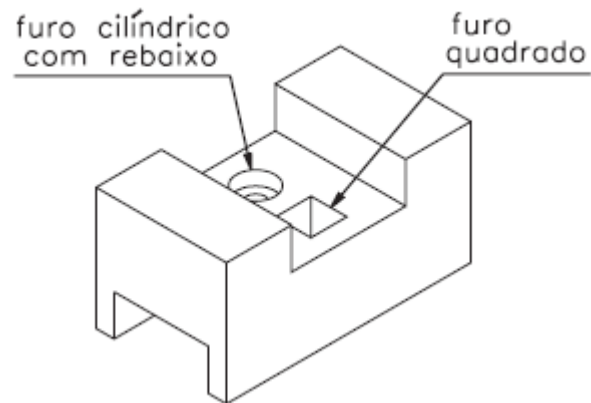
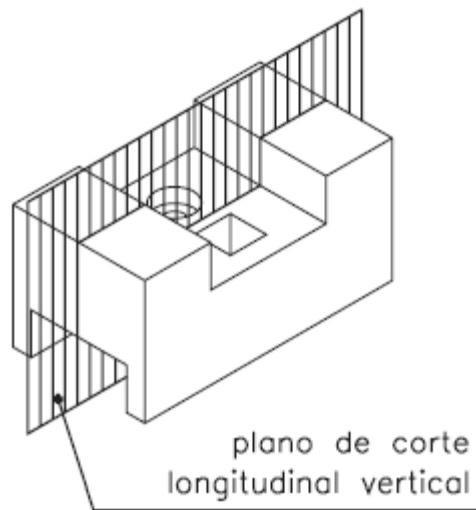
Corte AA



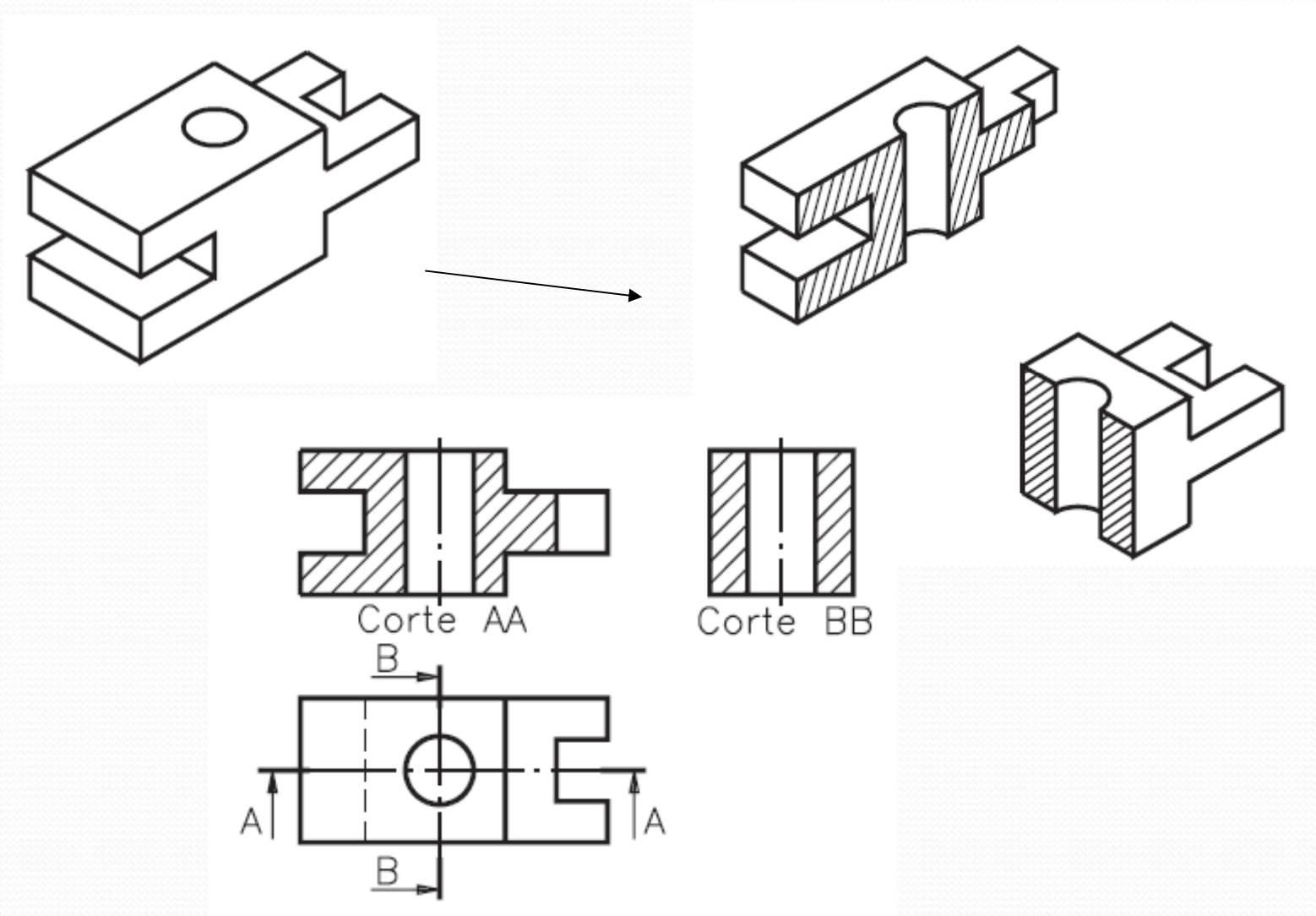
Tipos de corte: Corte Pleno ou Total



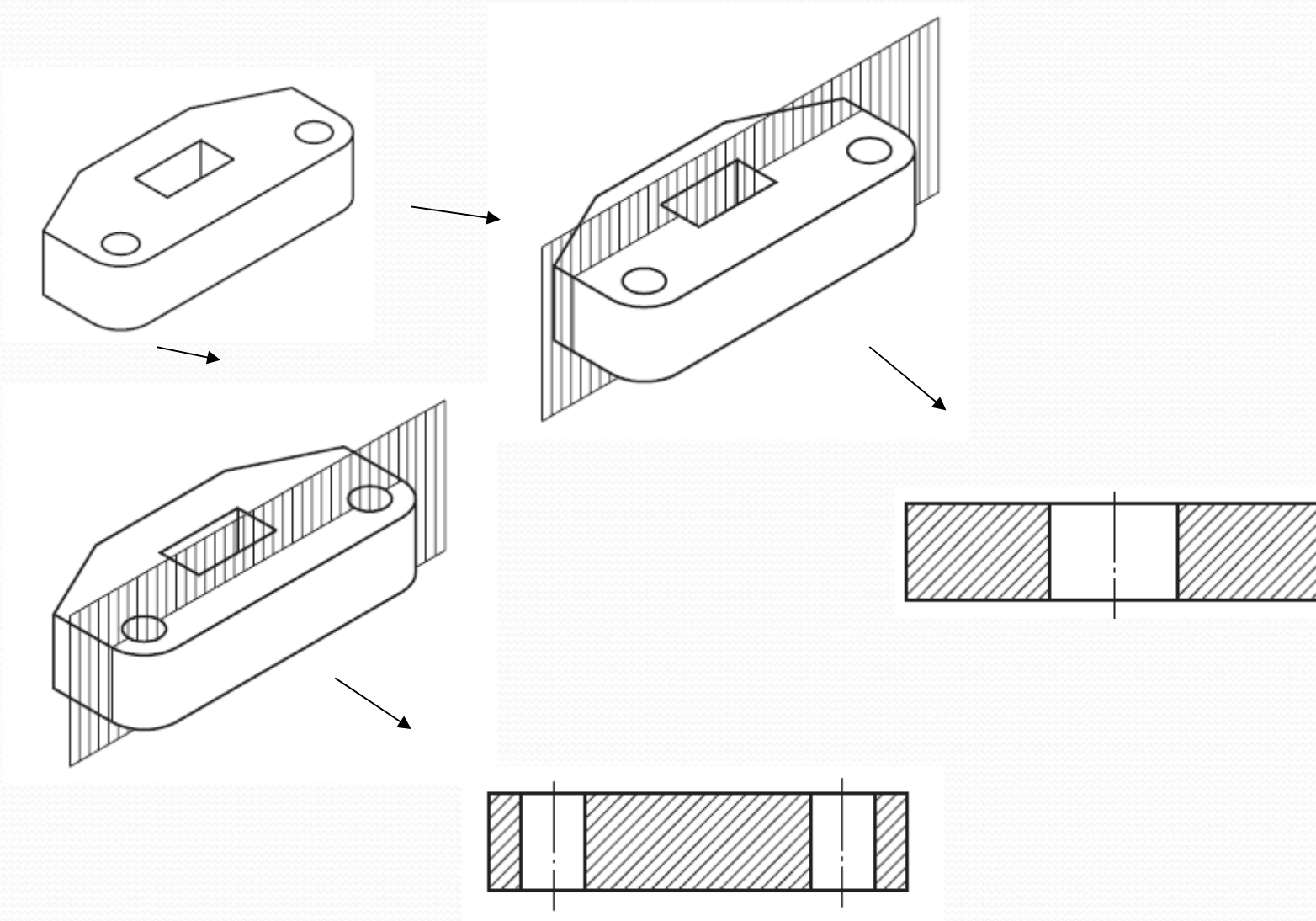
Tipos de corte: Mais de um corte em uma mesma vista



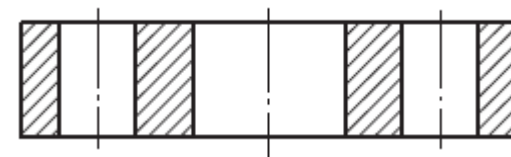
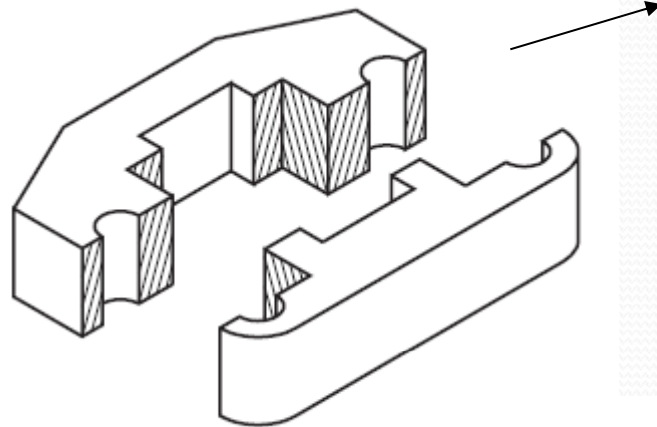
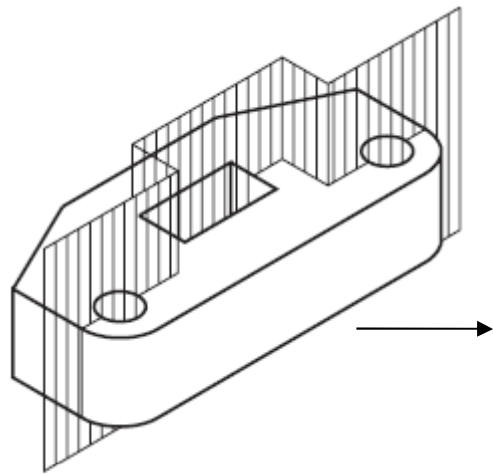
Tipos de corte: Mais de um corte em uma mesma vista



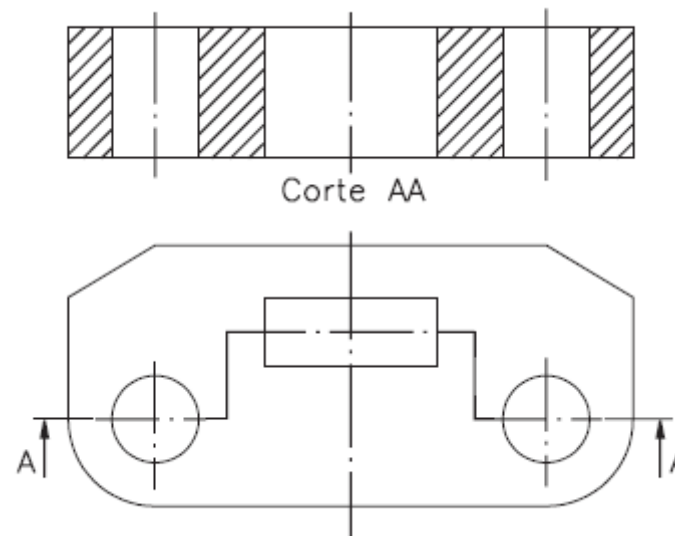
Tipos de corte: Corte Composto ou com Desvio



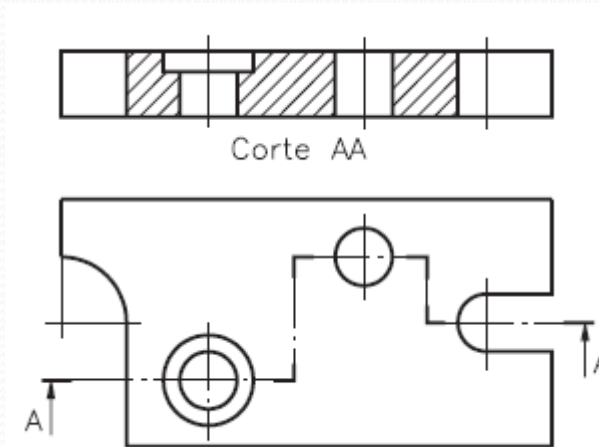
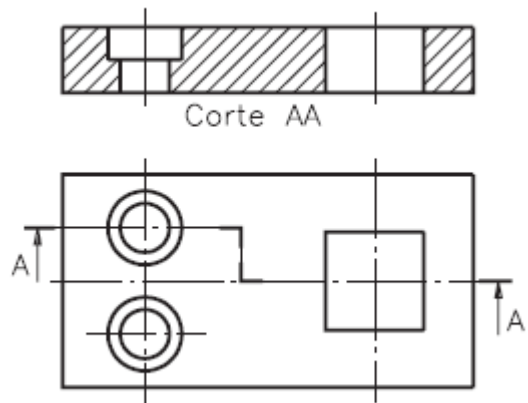
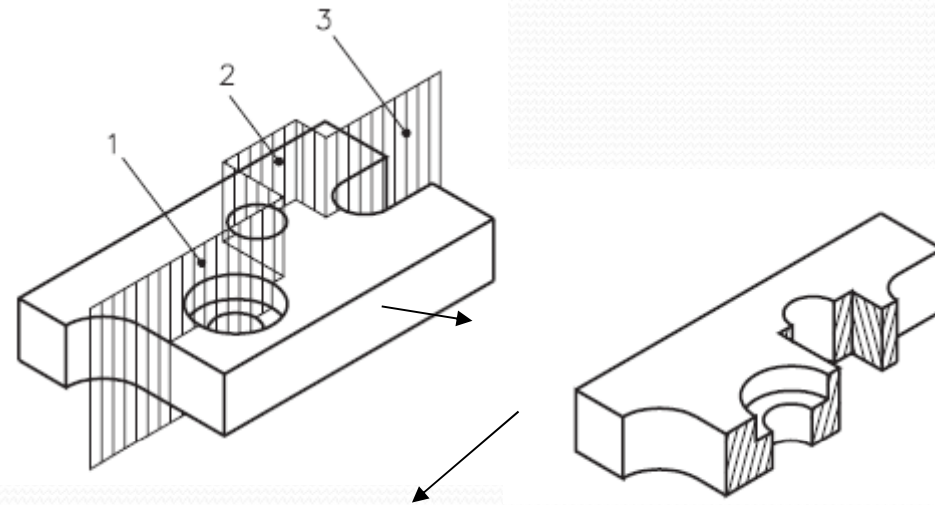
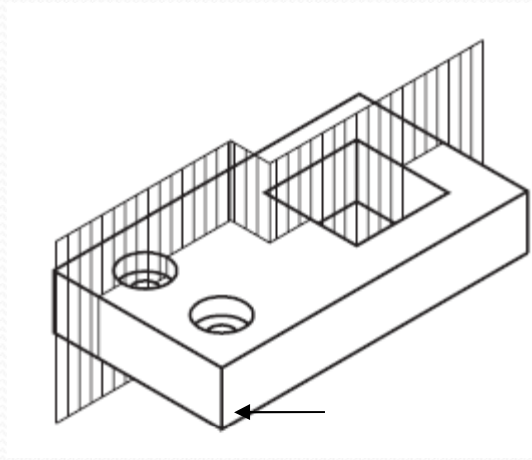
Tipos de corte: Corte Composto ou com Desvio



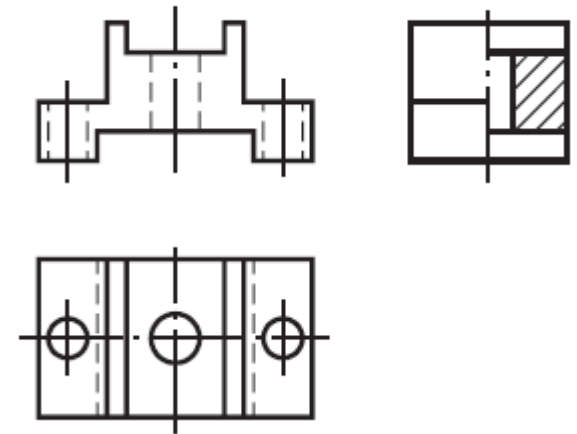
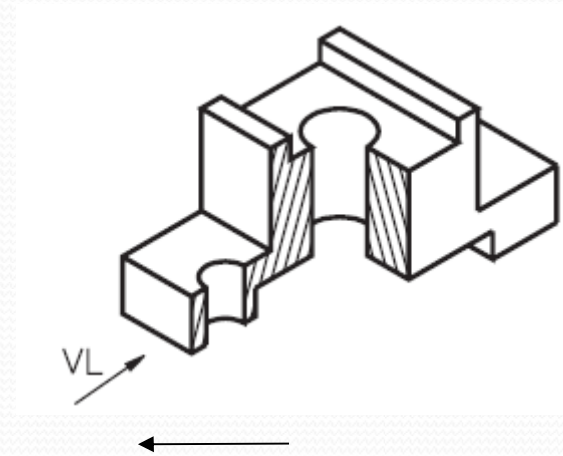
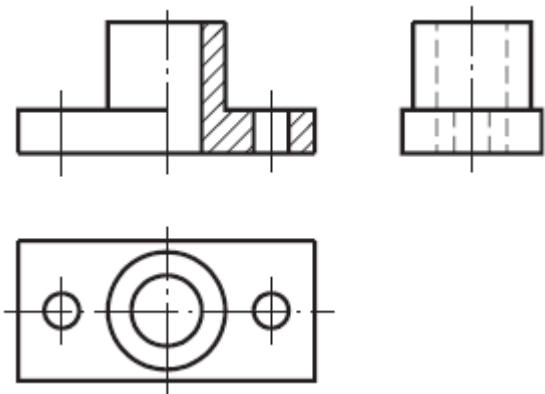
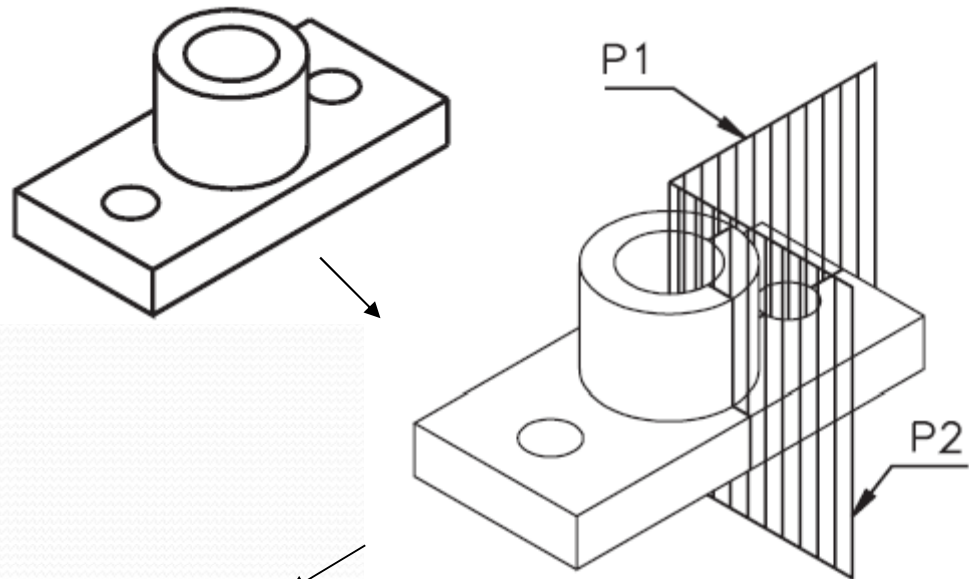
Representação das
vistas ortográficas



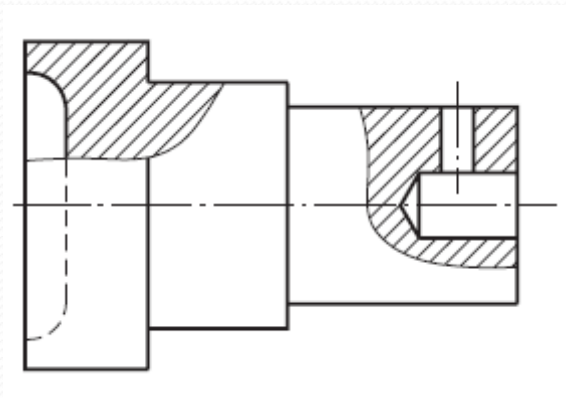
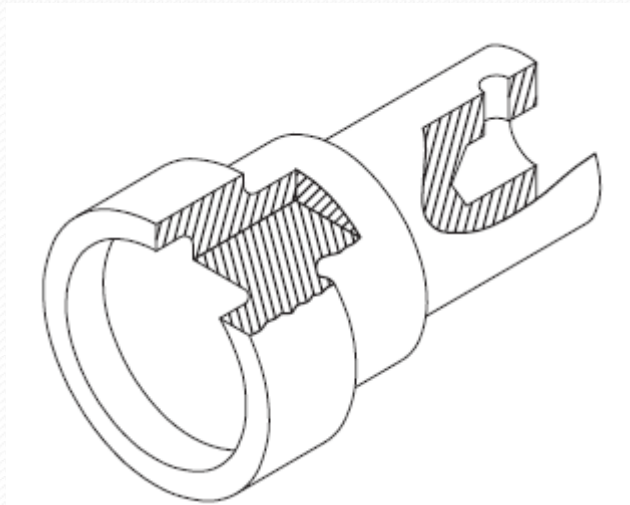
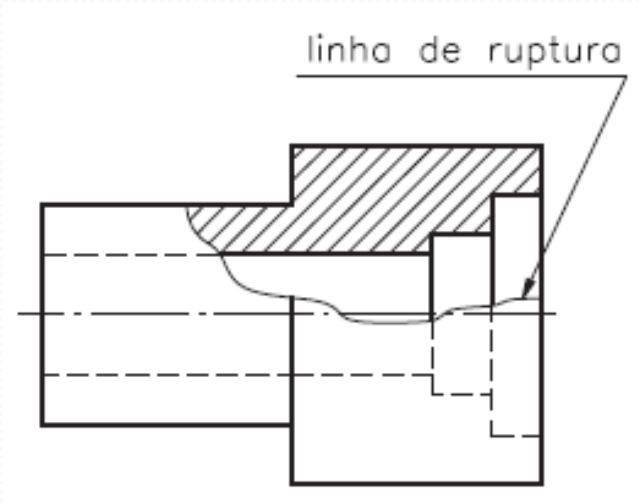
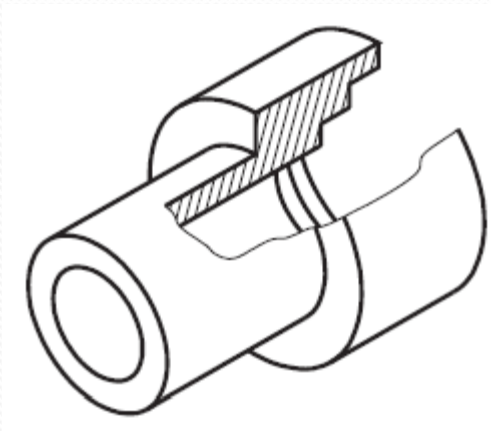
Tipos de corte: Corte Composto ou com Desvio



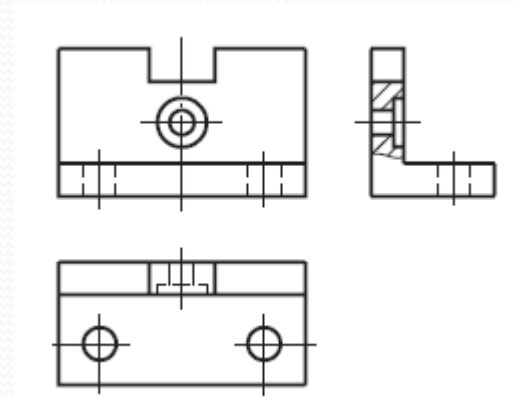
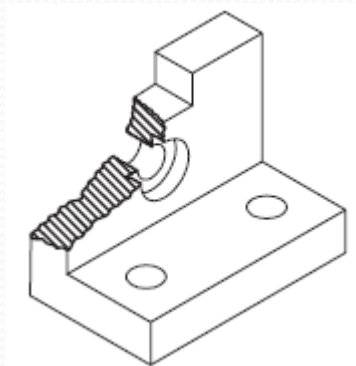
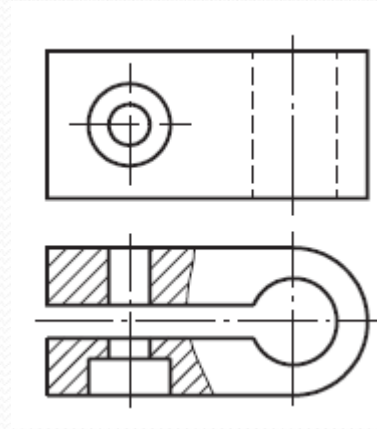
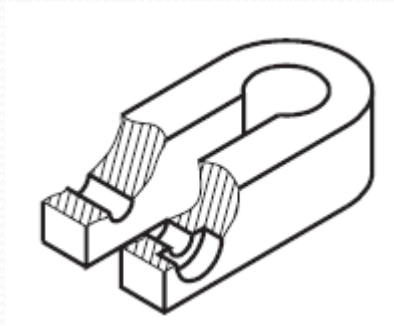
Tipos de corte: Meio Corte



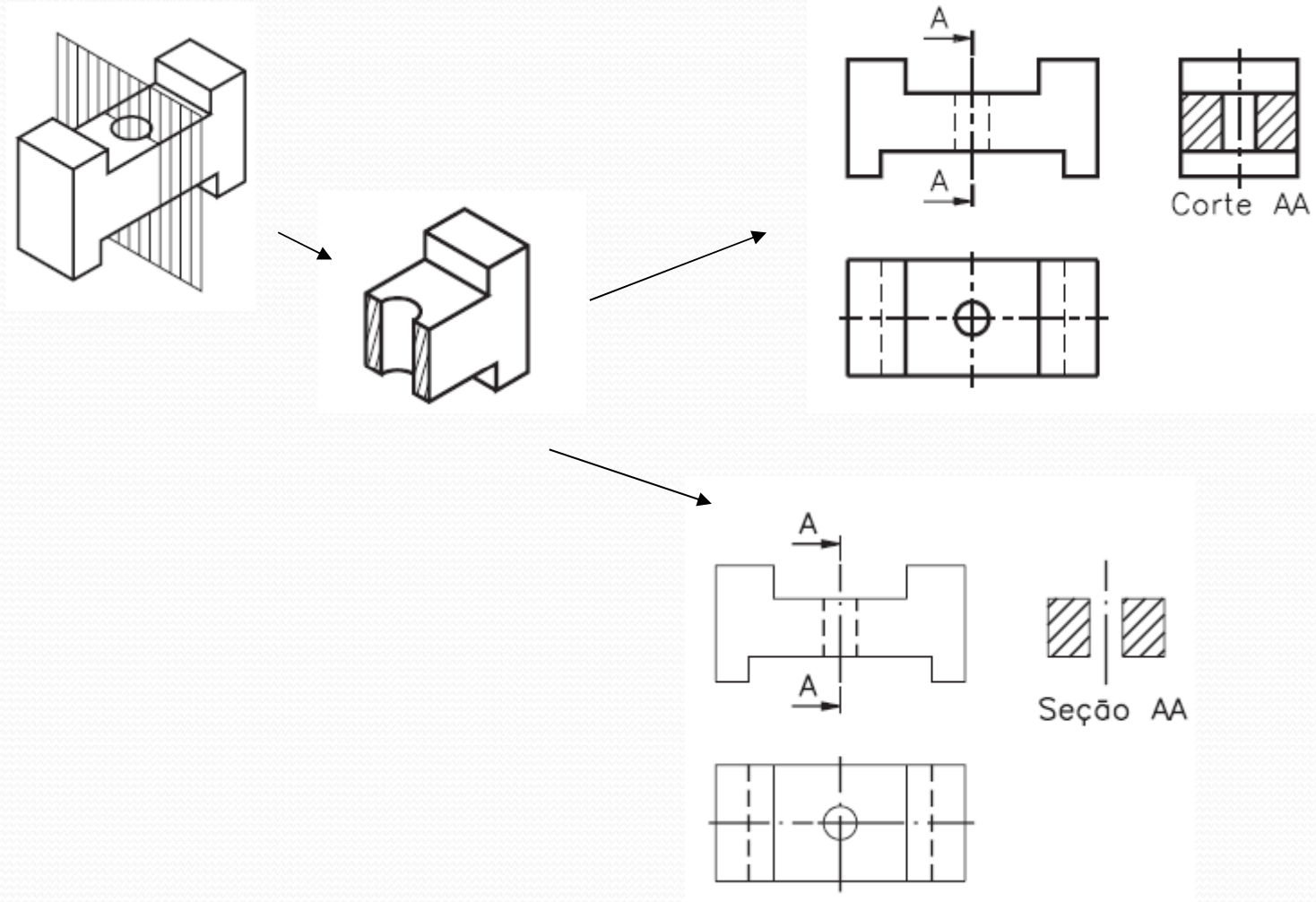
Tipos de corte: Corte Parcial



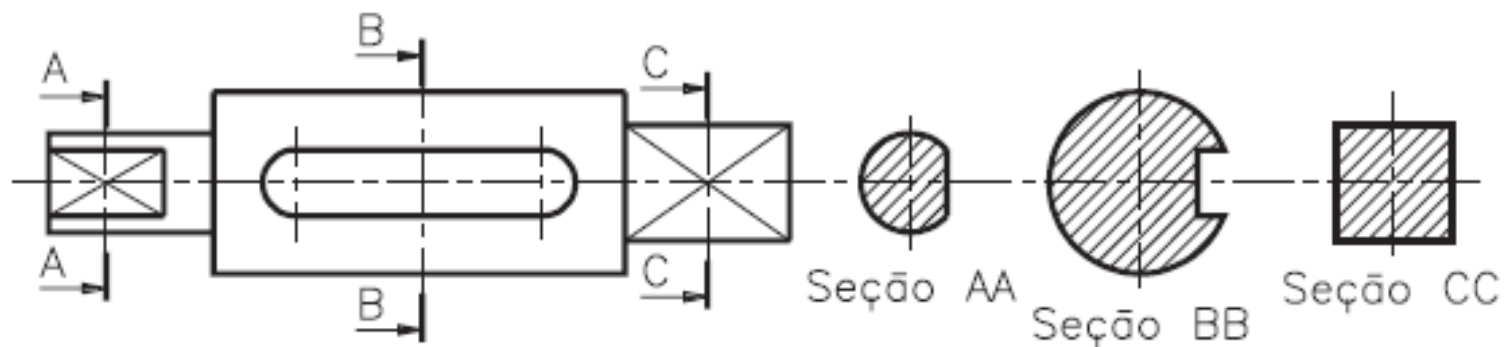
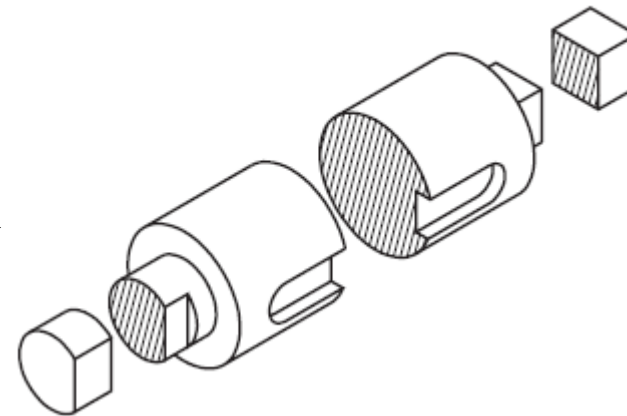
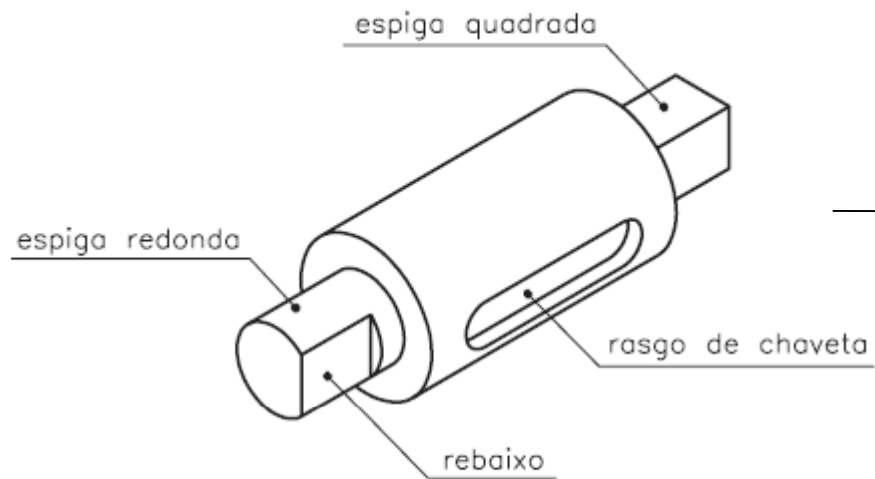
Tipos de corte: Corte Parcial



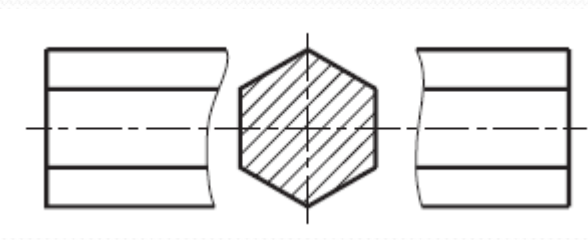
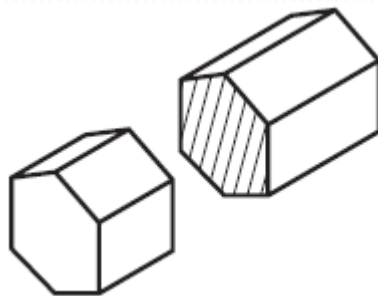
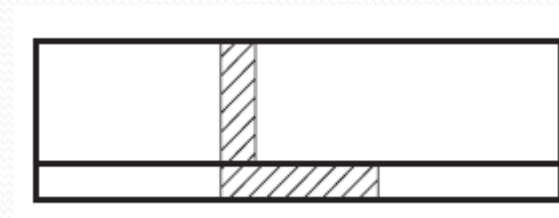
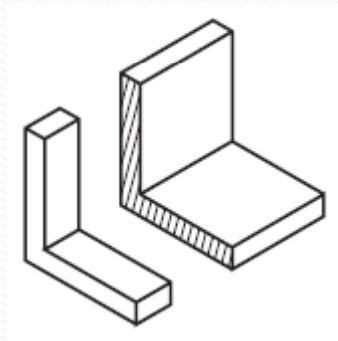
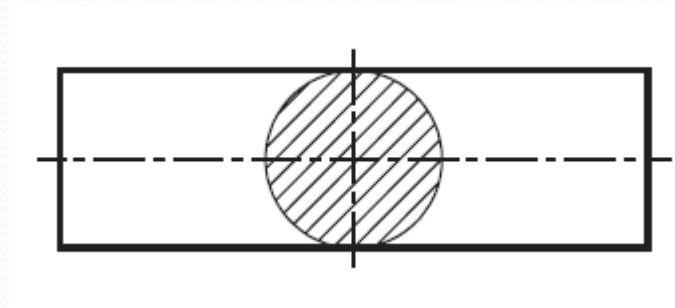
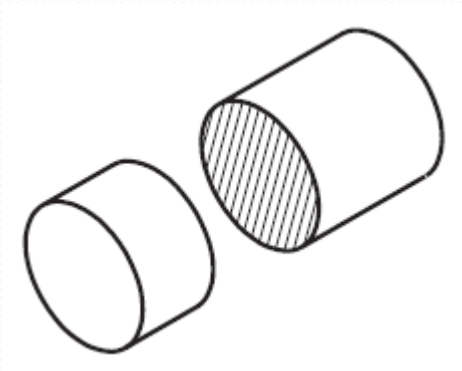
Tipos de corte: Seção



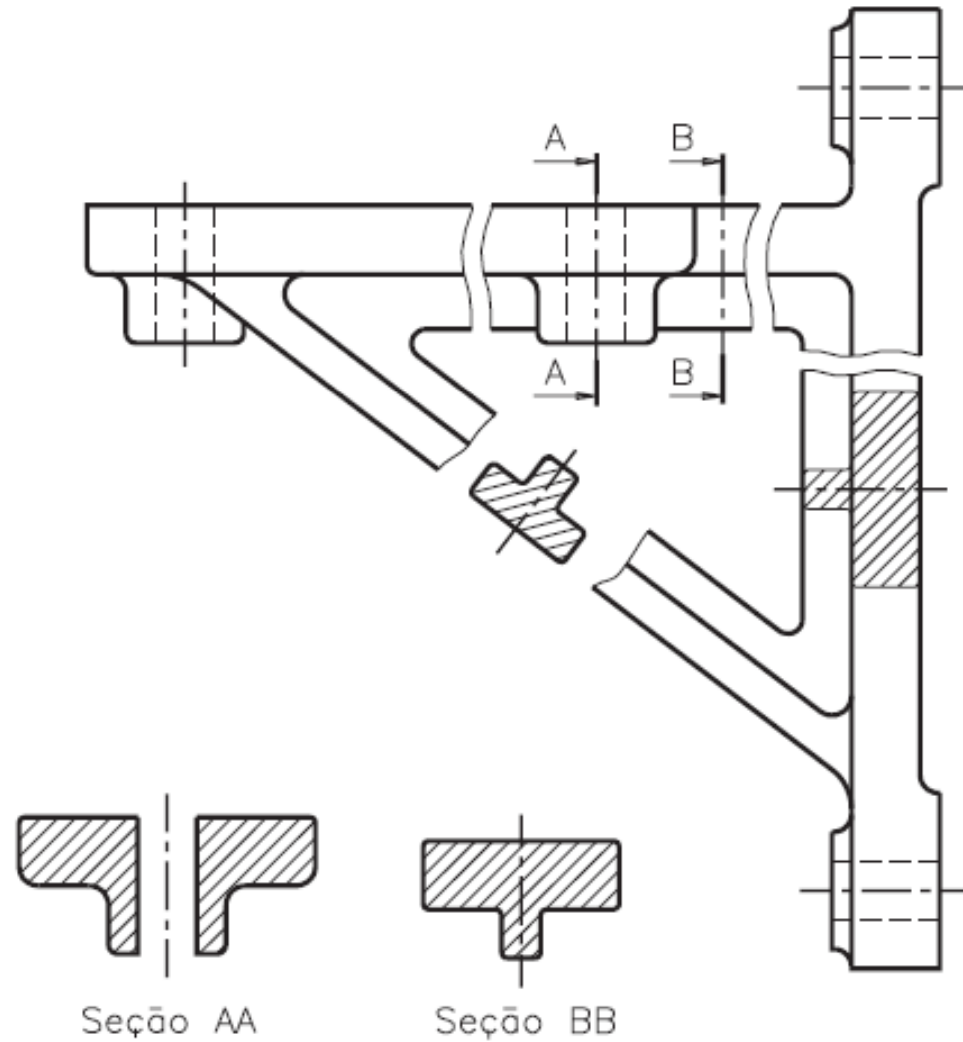
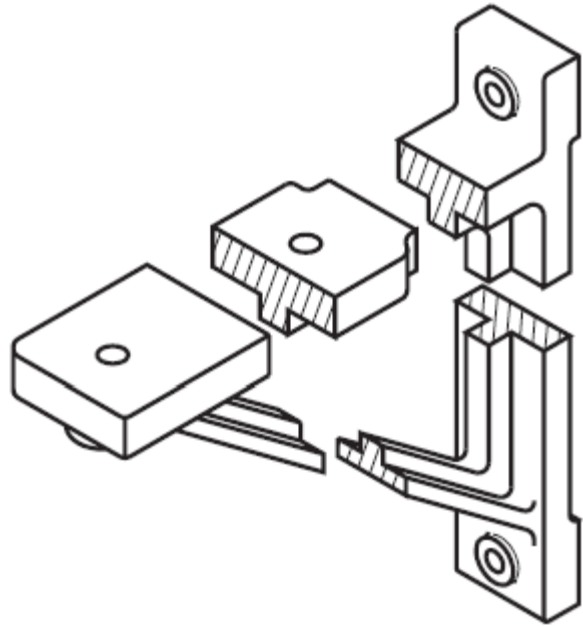
Tipos de corte: Seção



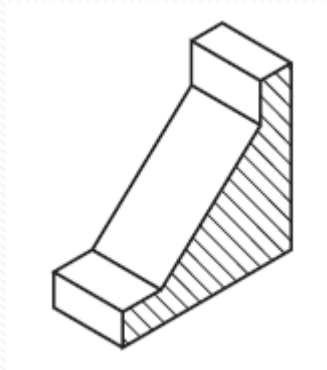
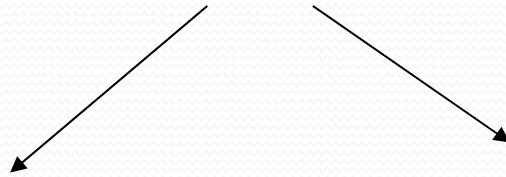
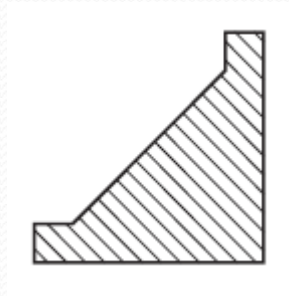
Tipos de corte: Seção dentro da vista e interrompendo a vista



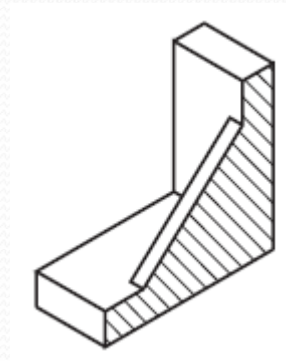
Tipos de corte: Seções Combinadas



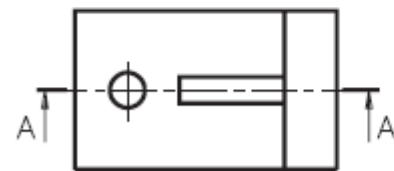
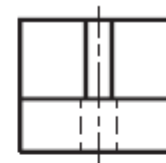
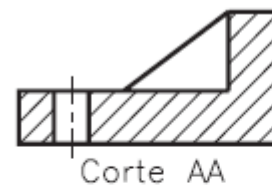
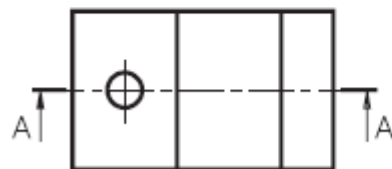
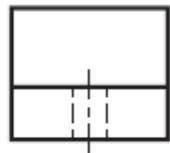
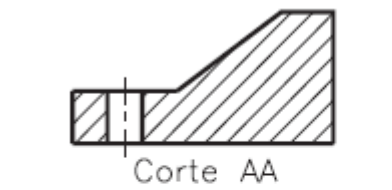
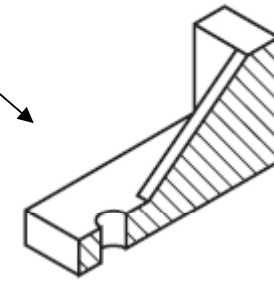
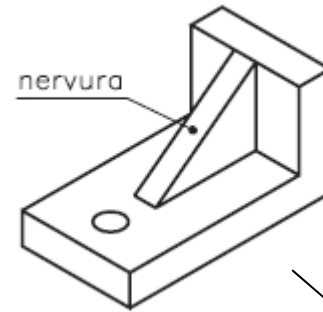
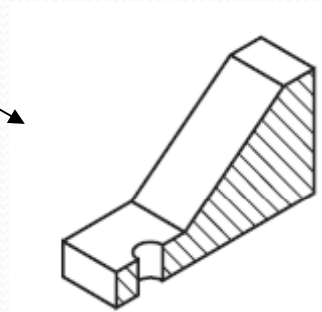
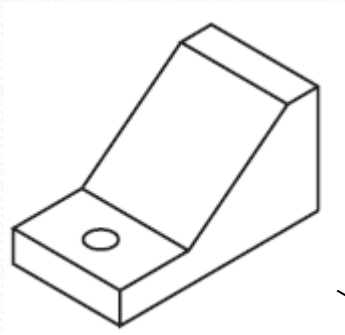
Tipos de corte: Omissão de Corte

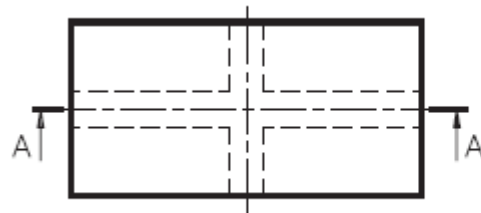
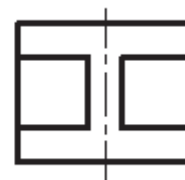
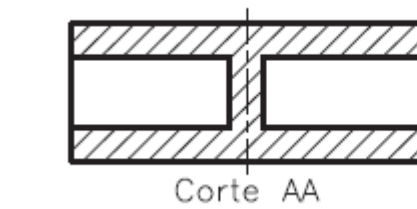
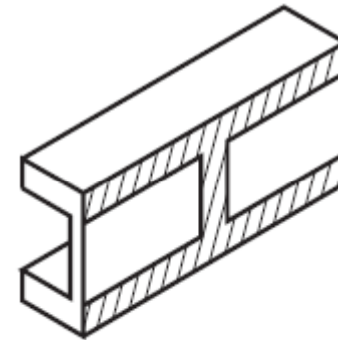
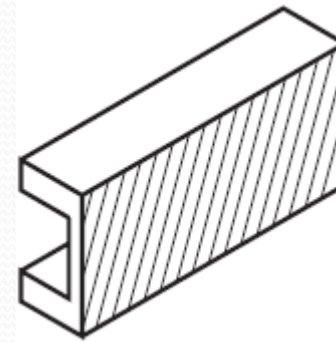
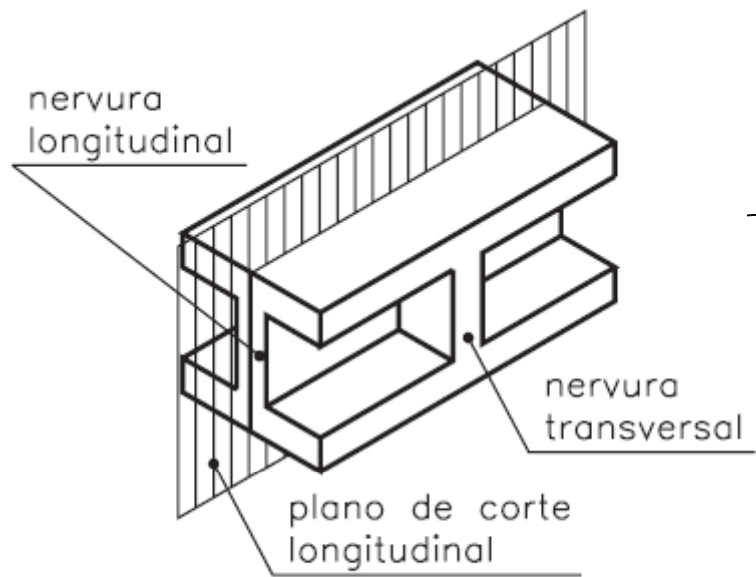


?

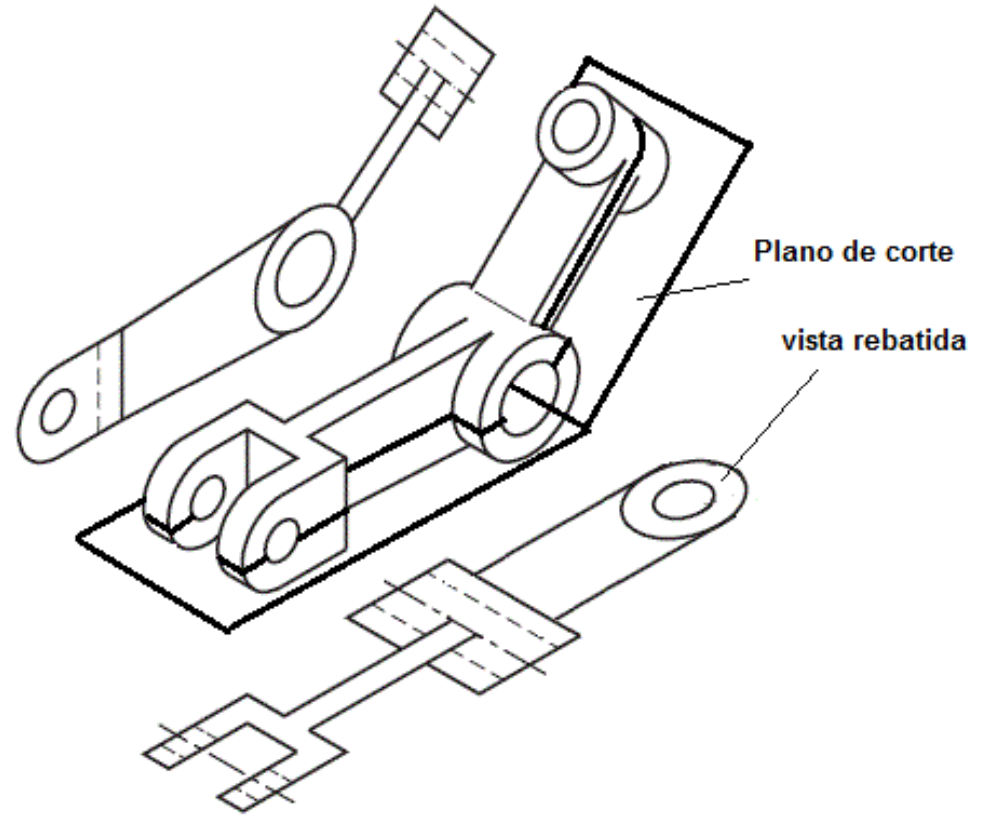
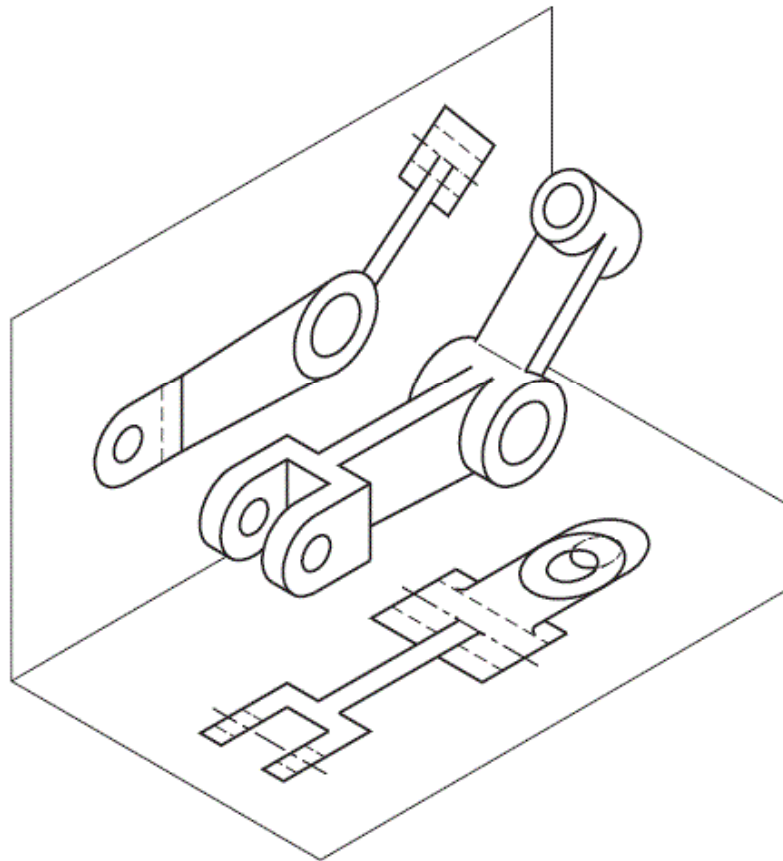


Tipos de corte: Omissão de Corte





Tipos de corte: Planos de corte rebatidos



Exercício: Represente, através de um desenho preliminar ou croqui, as vistas ortográficas necessárias do 1º ou 3º diedro necessárias para o completo e suficiente entendimento do objeto. Utilizar regras de cotagem e um corte com desvio para representar a geometria interna dos furos.

