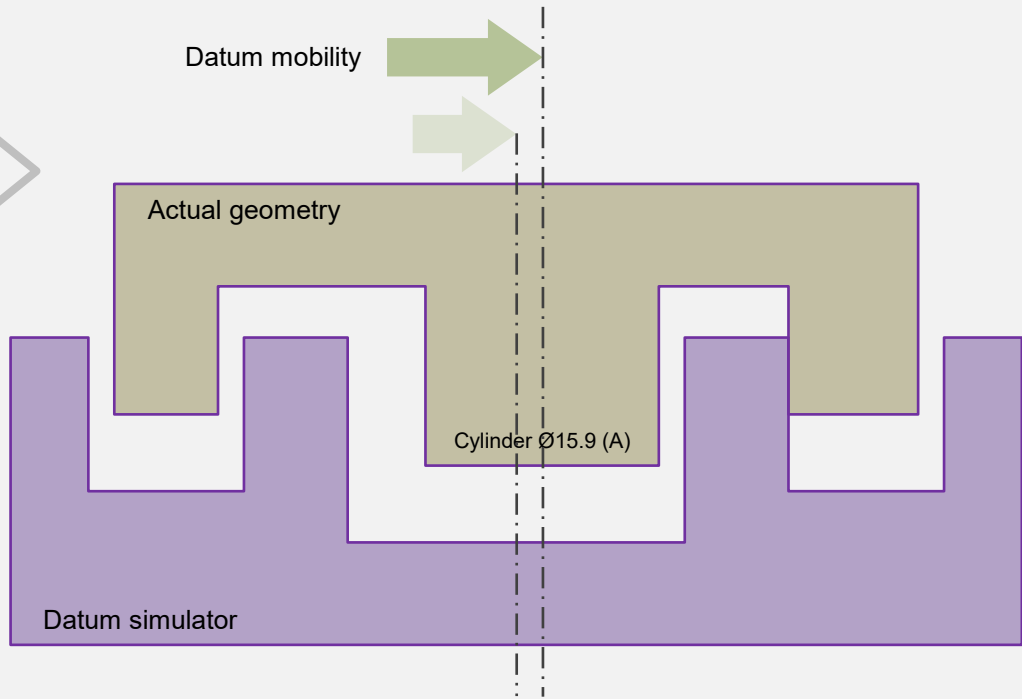
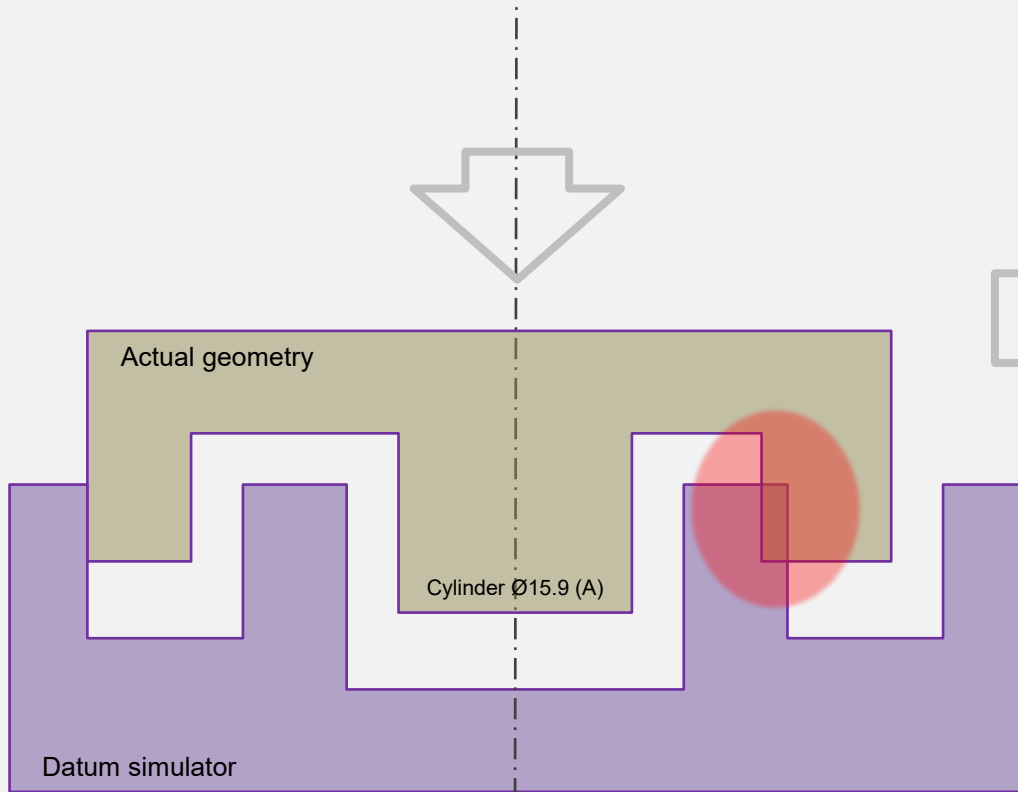
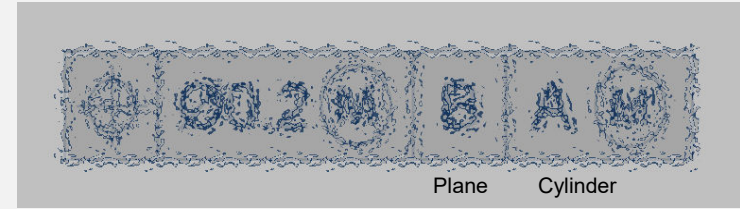
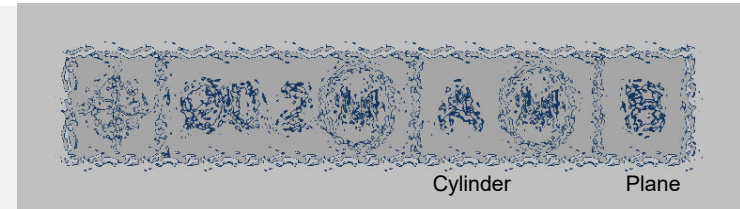
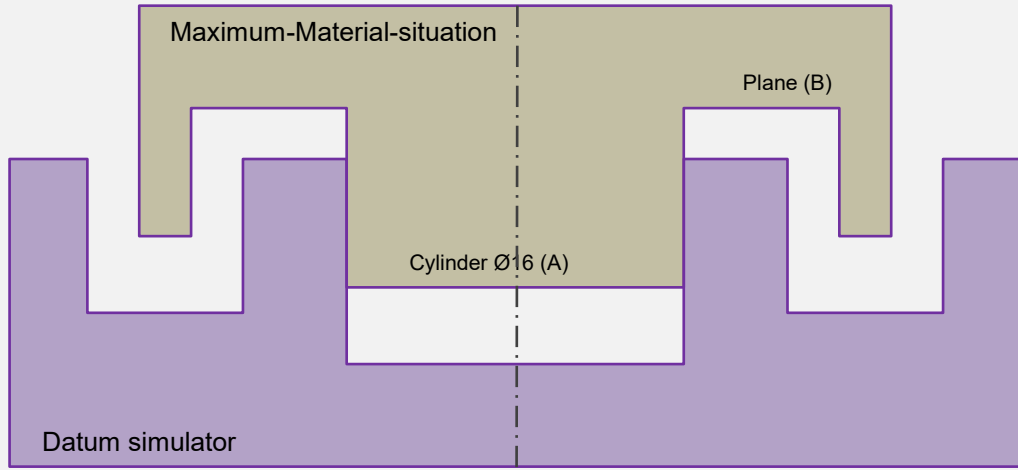
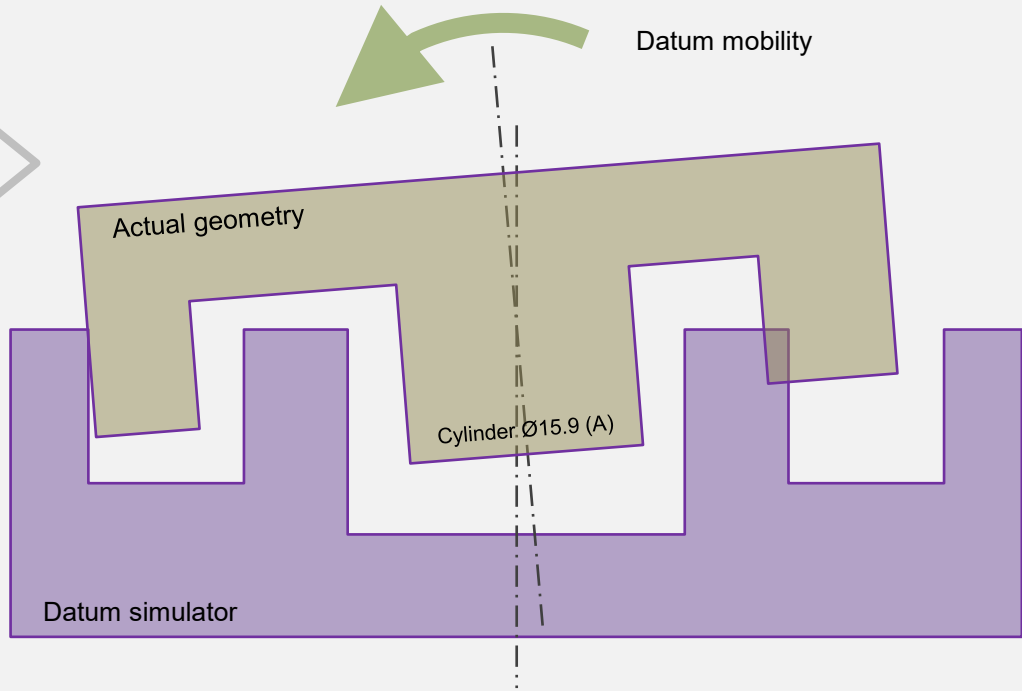
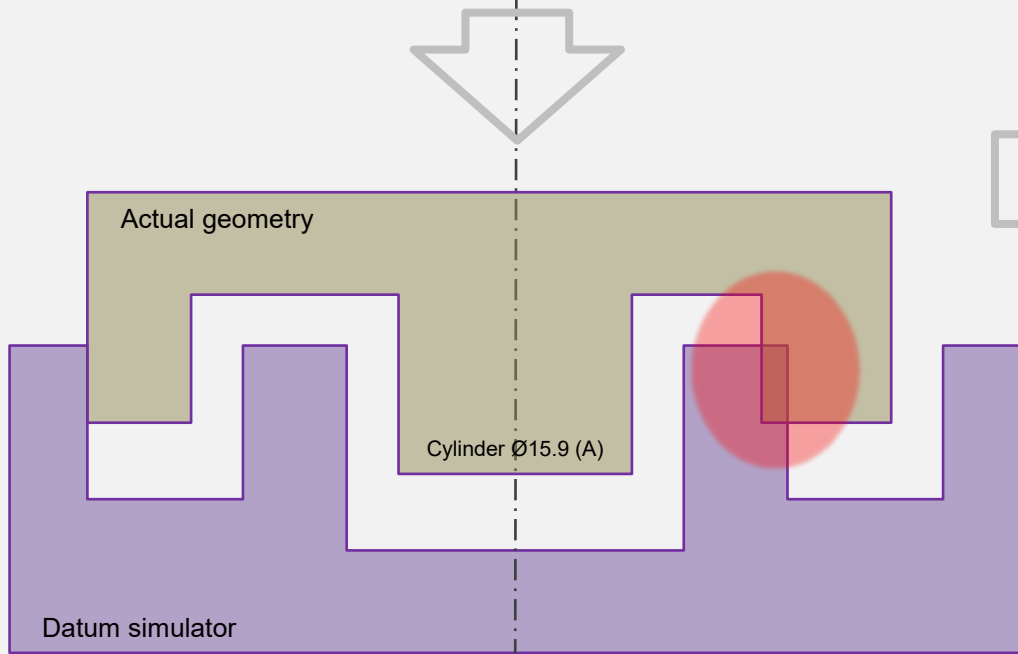


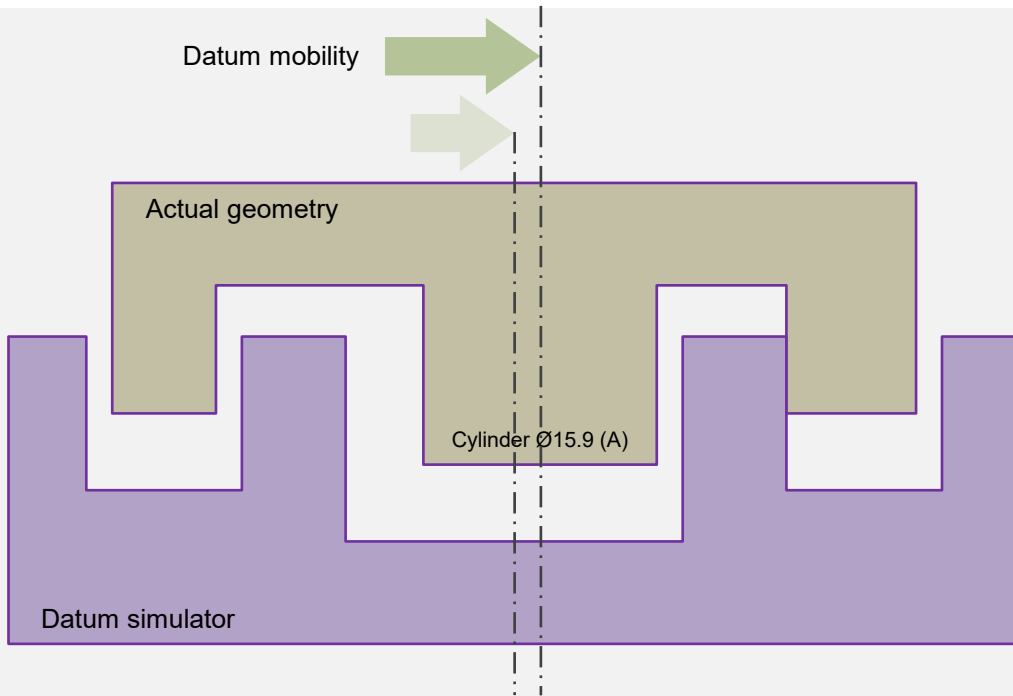
"Datum-Benefit" in the sense of translation



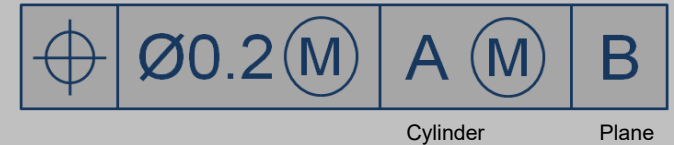


"Datum-Benefit" in the sense of rotation





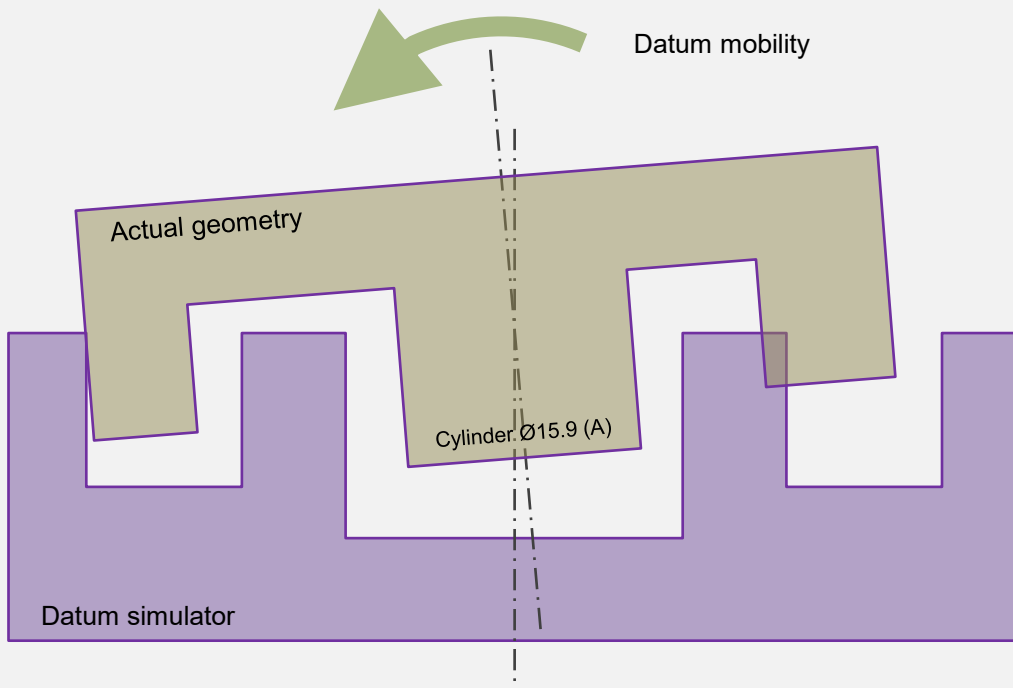
Dimensioning #1



The cylinder as a primary datum stops four degrees of freedom. Datum A(M) releases two translatory degrees of freedom.

The datum mobility works always translatory !

Bringing in the idea of "rotation" reduces the meaning of the primary cylinder significantly. It automatically maximizes the meaning of datum plane B.



If it is the intention to have also unstopped rotatory degrees of freedom then the situation is completely different.

The designer then has to change the dimensioning as shown below:

Primary datum: Plane B

Secondary datum: Cylinder A

Datum A stops two degrees of freedom.

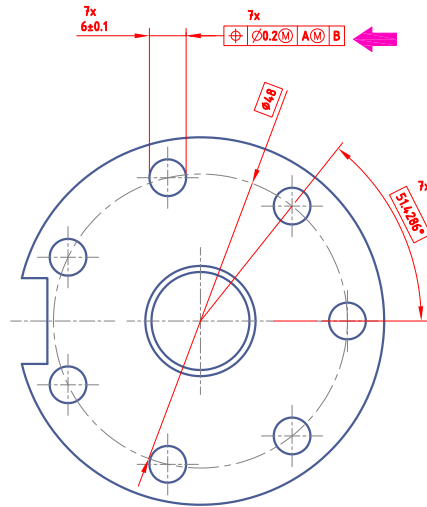
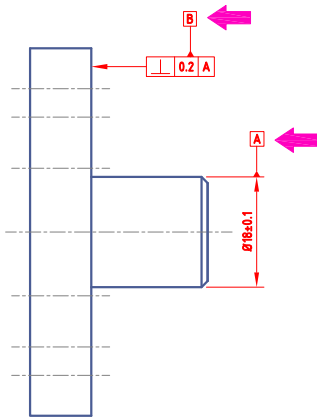
Dimensioning #2



Dimensioning #1

Pic. #1

Primary datum is a cylinder
Secondary datum is a plane



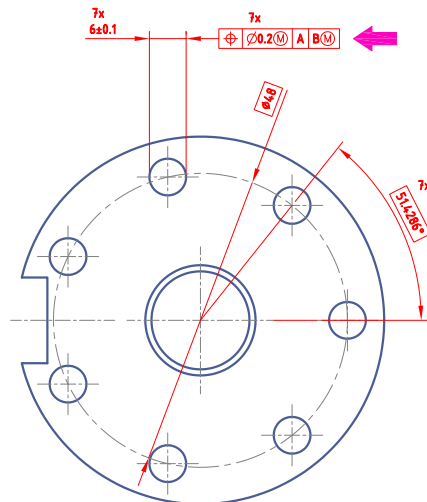
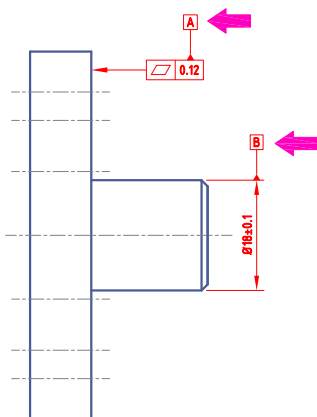
Datum mobility:

Datum shift allowed
Datum rotation not allowed

If the designer thinks about a kind of "datum-rotation" then datum-change is absolutely required. See the picture below.

Dimensioning #2

Primary datum is a plane
Secondary datum is a cylinder



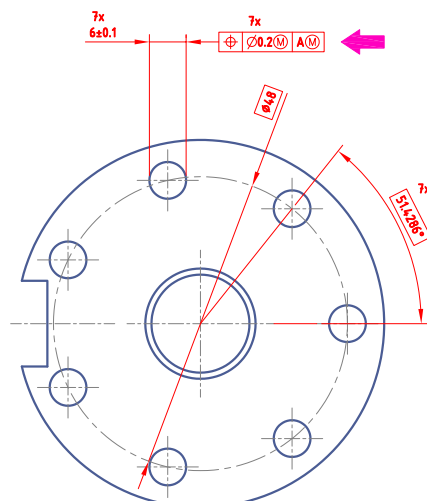
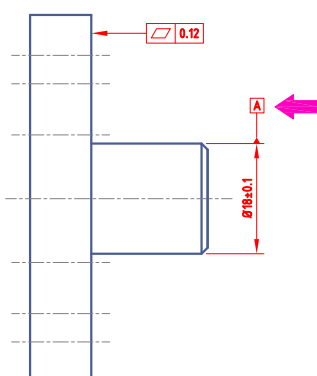
Datum mobility:

Datum shift allowed
Datum rotation not allowed

The datum features have changed in comparison with the picture above.

Dimensioning #3

Primary datum is a cylinder
Secondary datum is missing

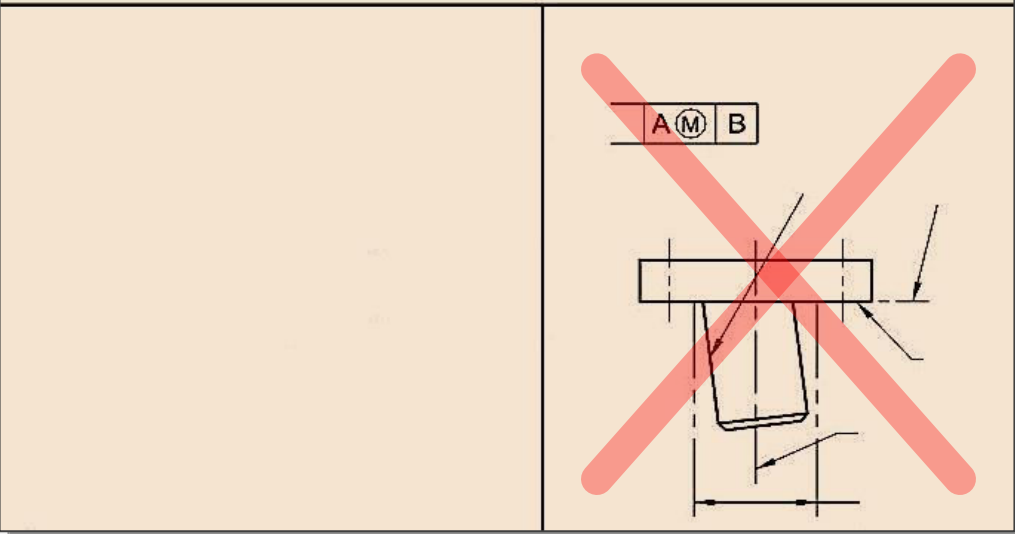
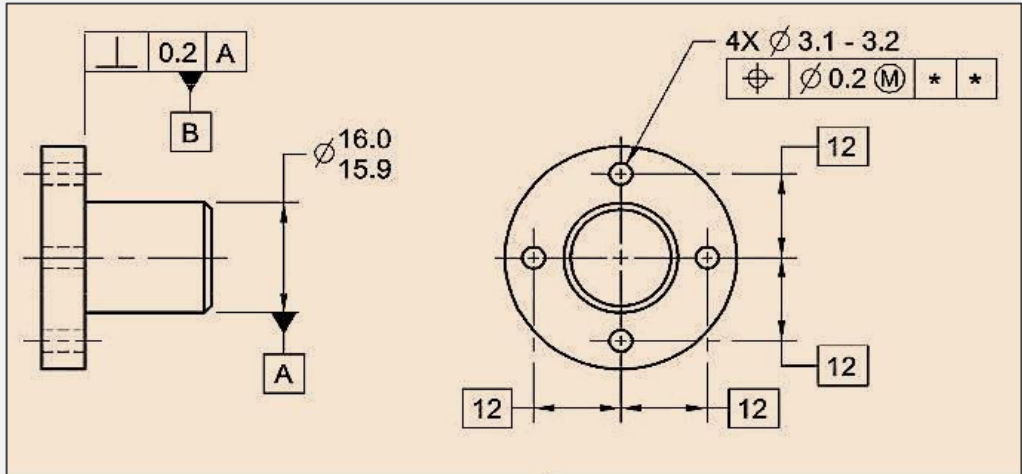


Datum mobility:

Datum shift allowed
Datum rotation allowed

The missing datum B allows full mobility. (shift or rotation or both)

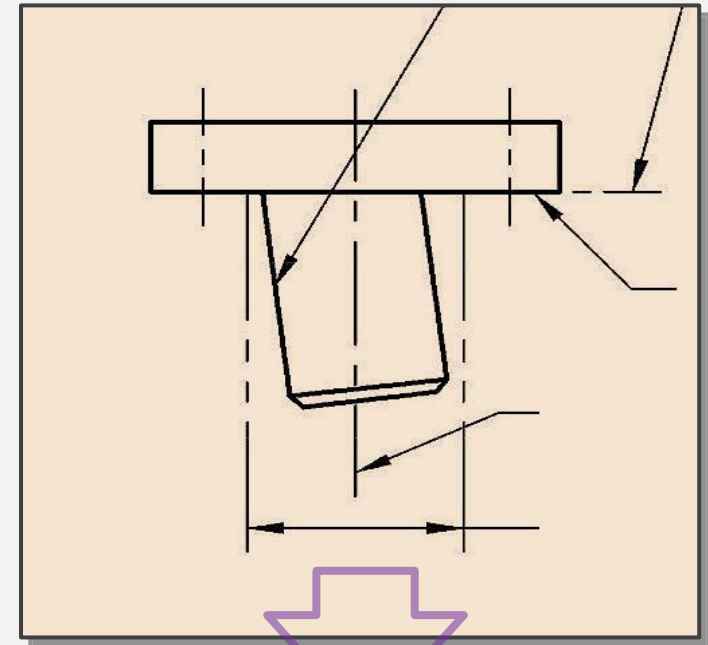
	$\varnothing 0.2$ (M)	A (M)	B
	Cylinder	Plane	



	$\varnothing 0.2$ (M)	A (M)	B
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If the designer wants a situation as shown below, then he has to change the dimensioning.

Gravity is no criterion!



	$\varnothing 0.2$ (M)	B	A (M)
	Plane	Cylinder	

new dimensioning