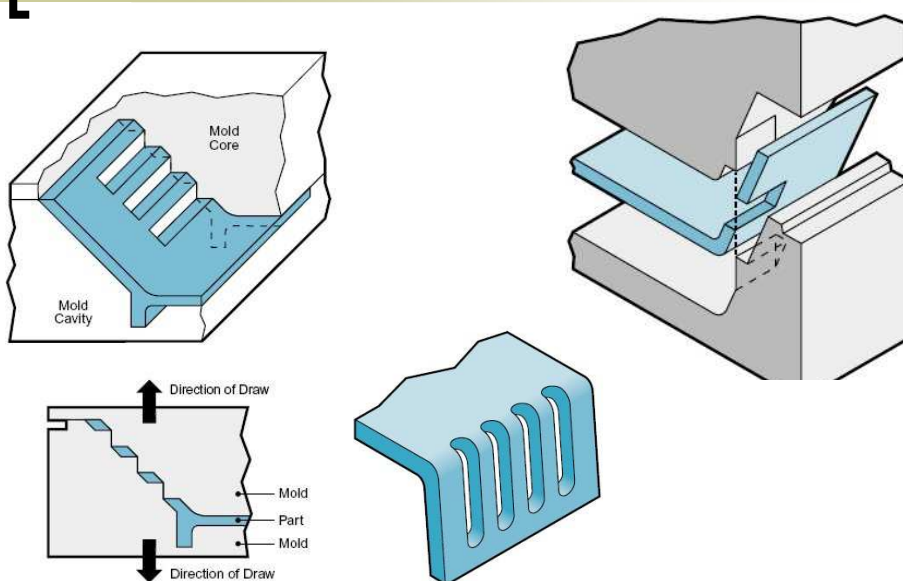


Dr. Mikó Balázs
miko.balazs@bgk.bmf.hu

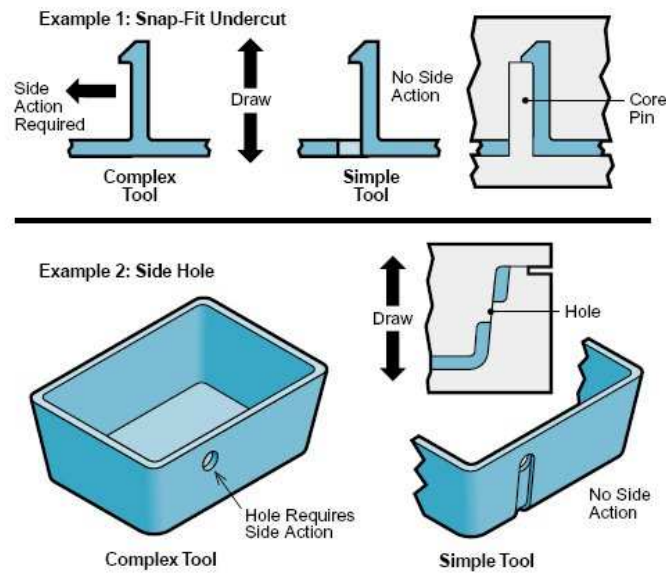
Műanyag fröccsöntő szerszámok tervezése és gyártása

Fröccsöntés helyes
konstrukció

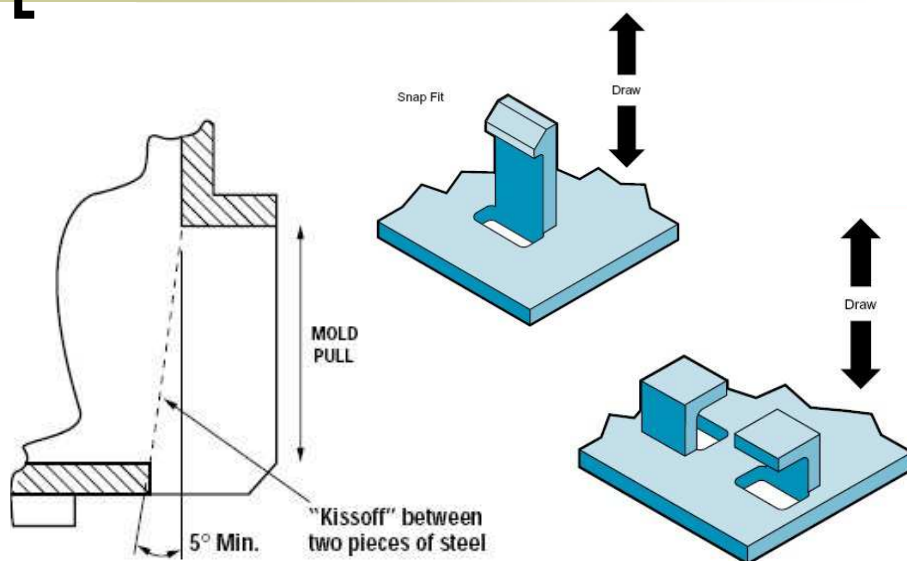
Alámetszések elkerülés



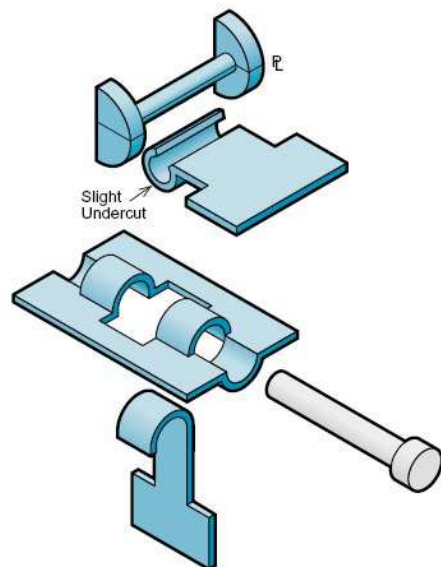
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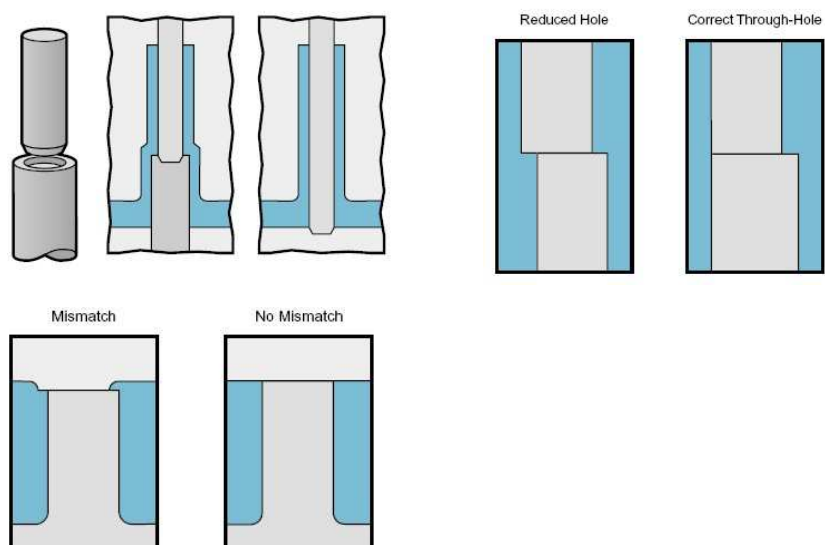
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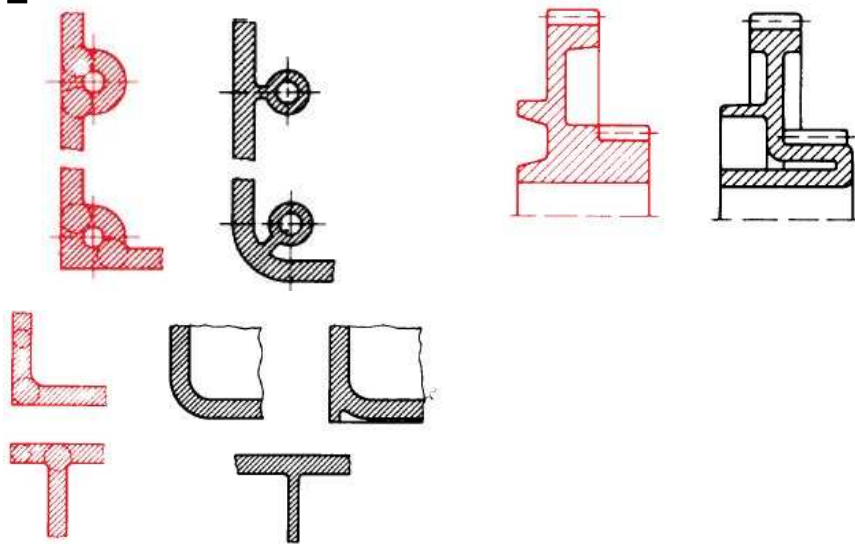
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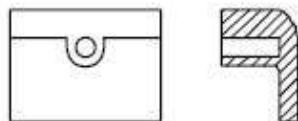
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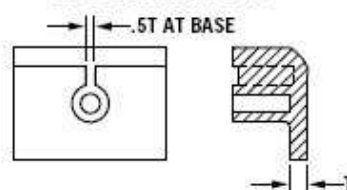
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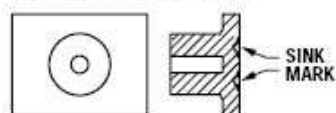
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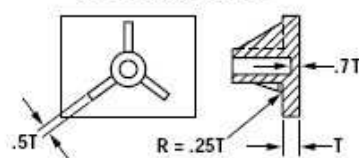
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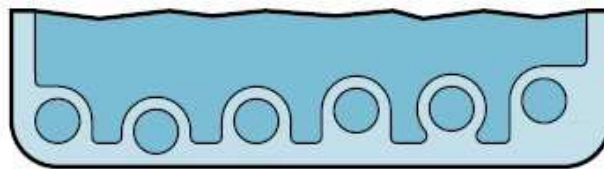


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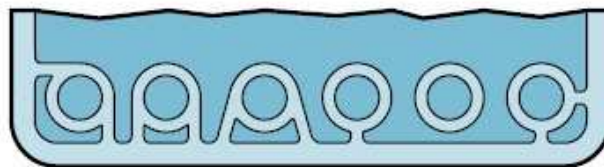


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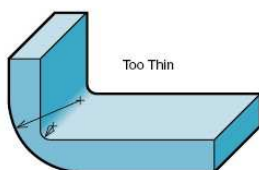
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Correct



Rádus



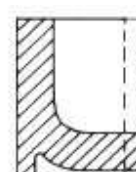
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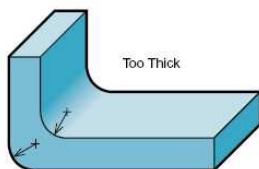
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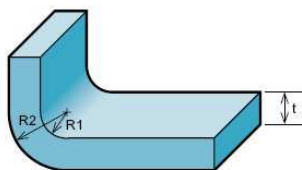
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YES

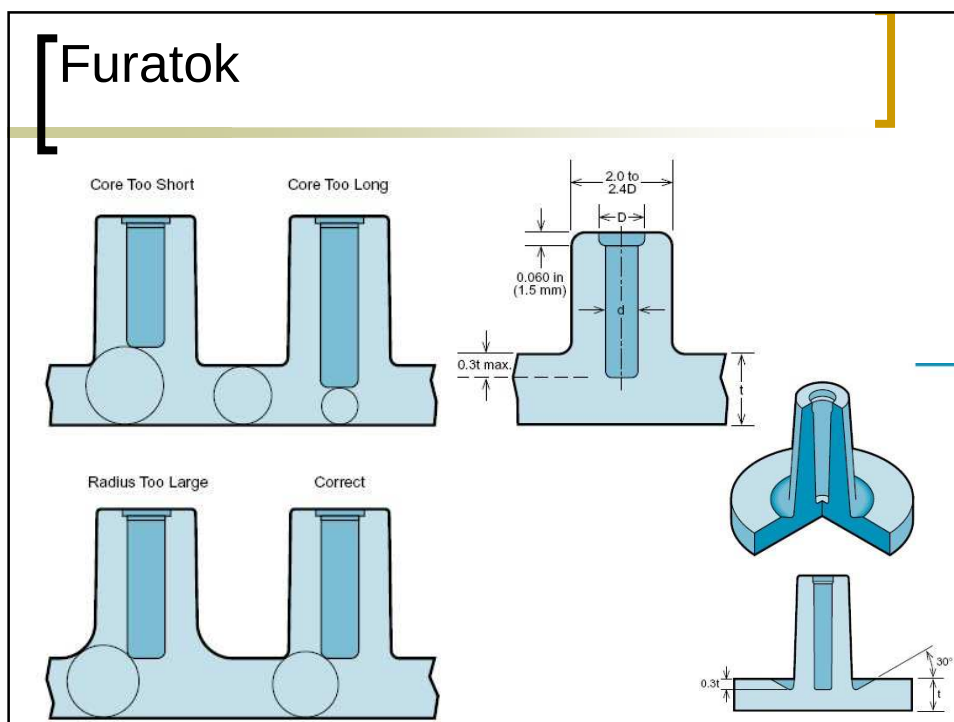


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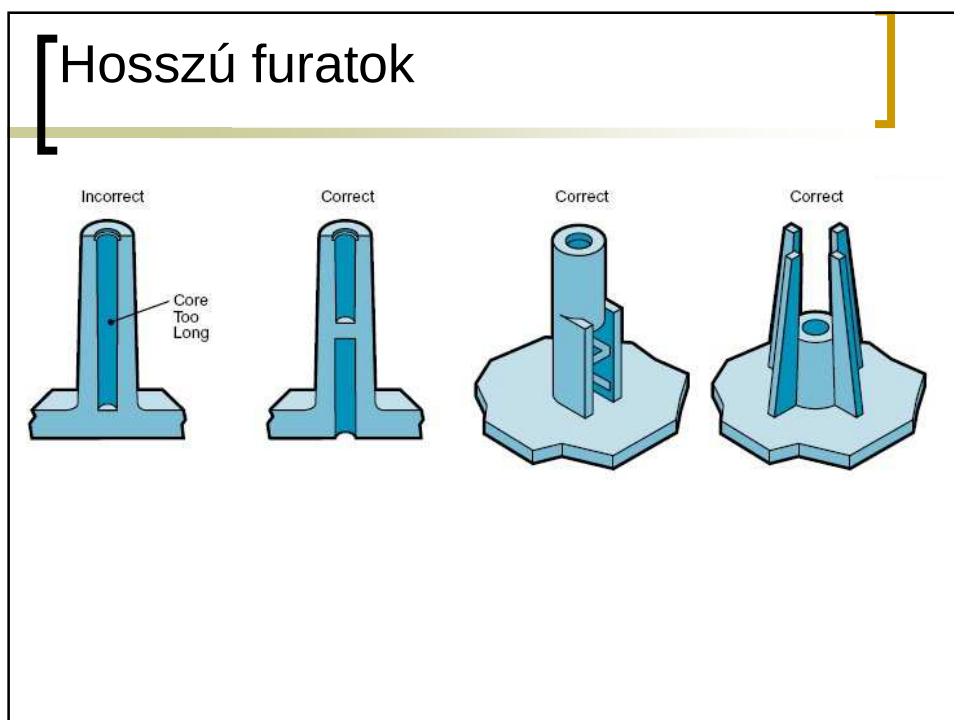


$$R2 = R1 + t$$

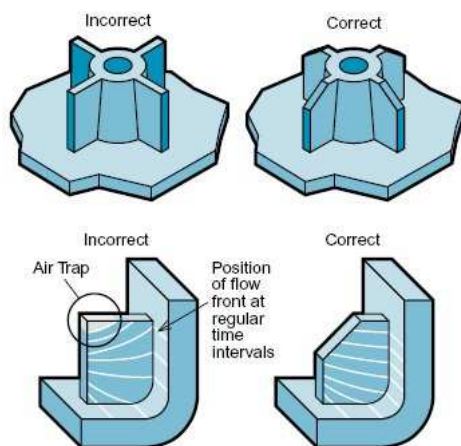
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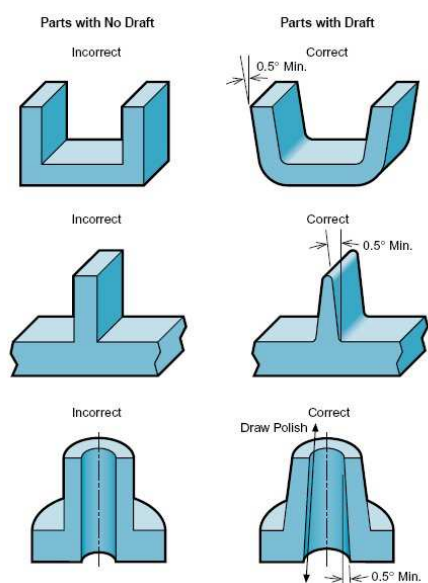
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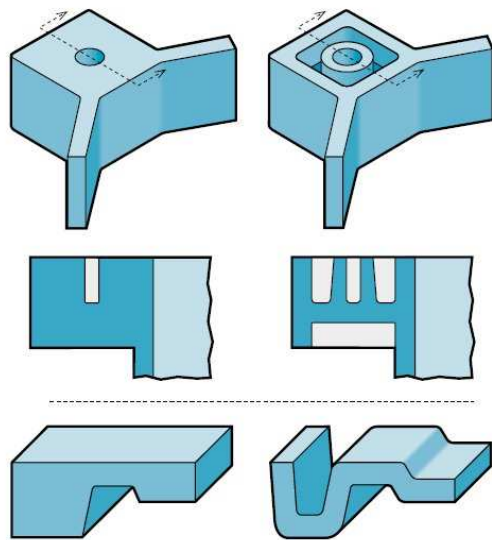
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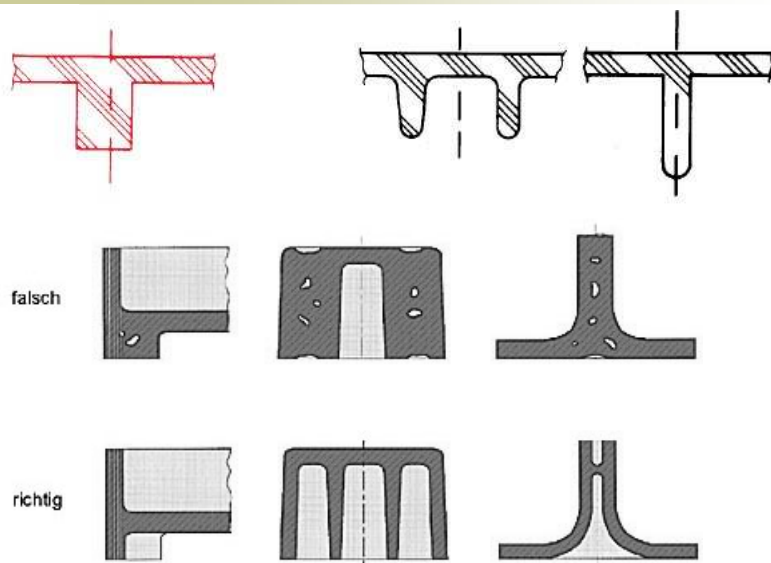
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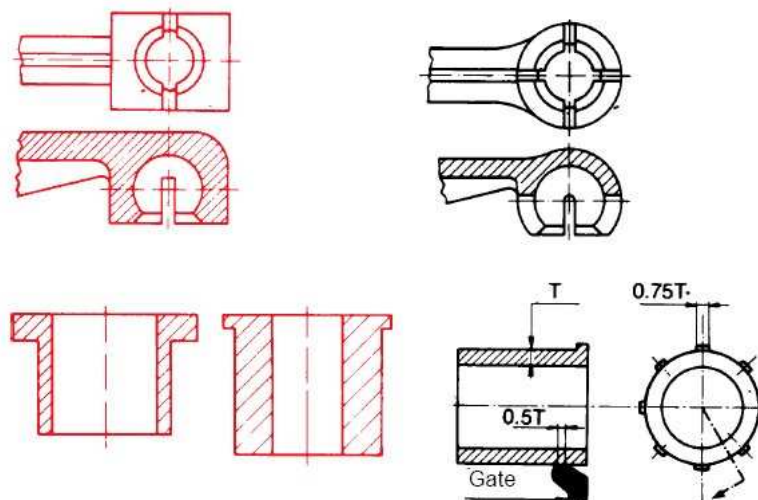
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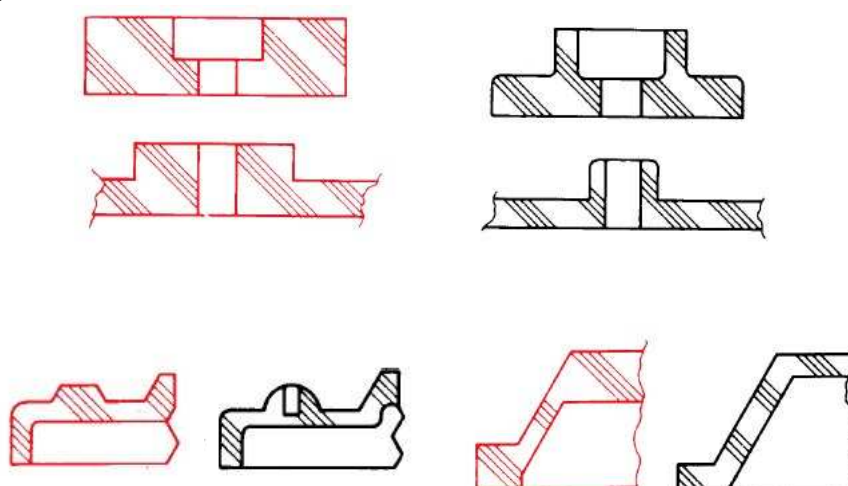
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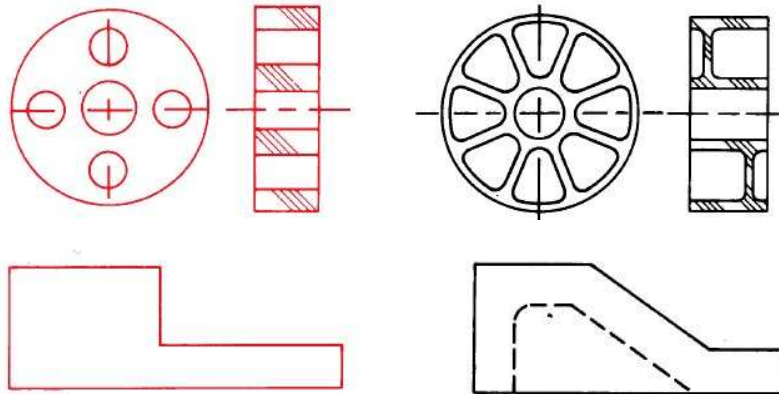
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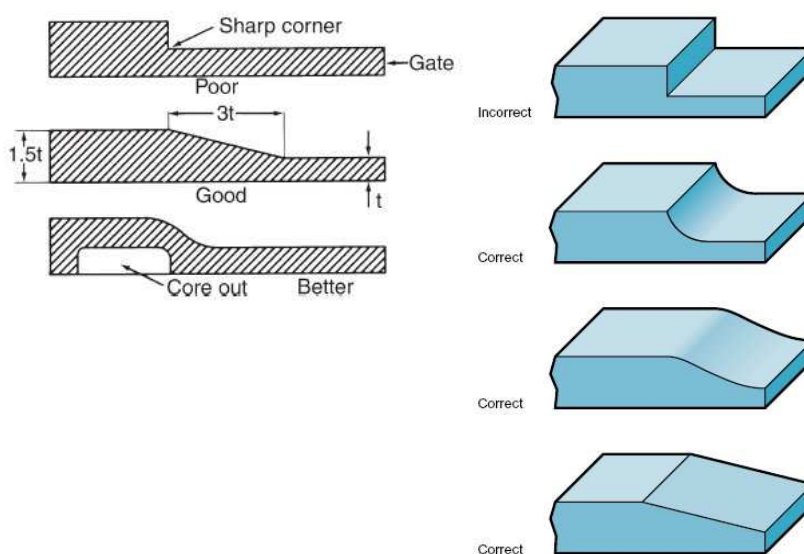
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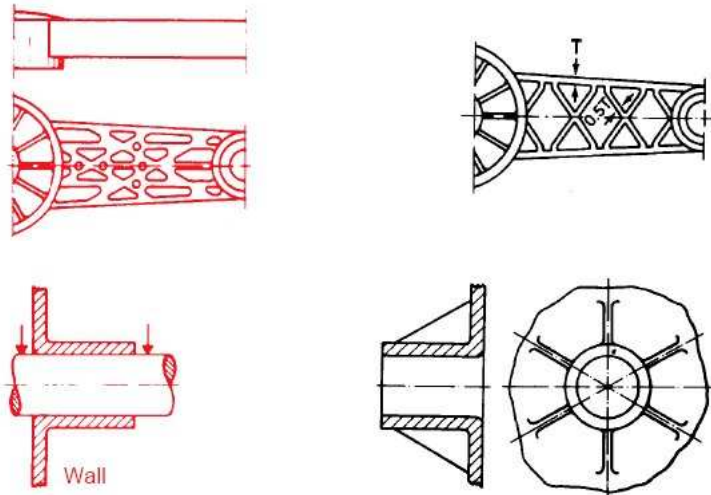
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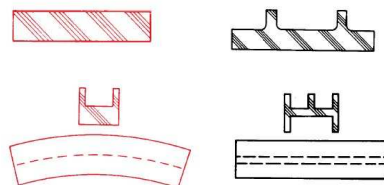
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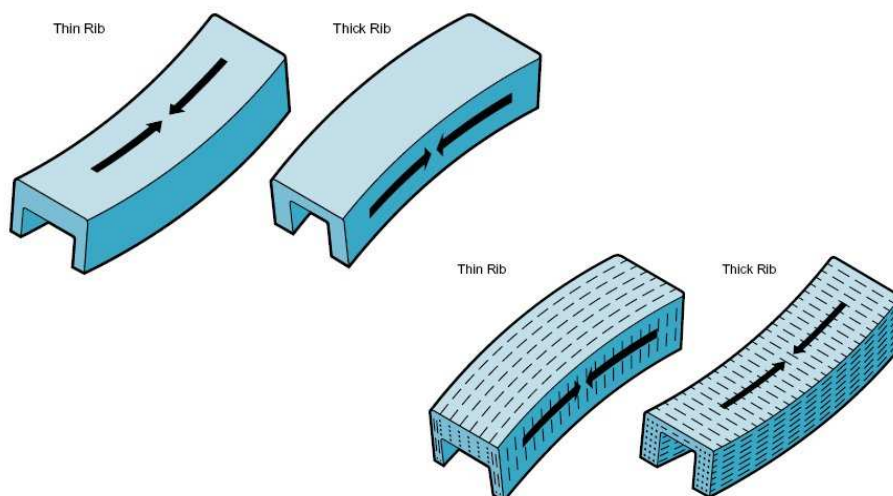
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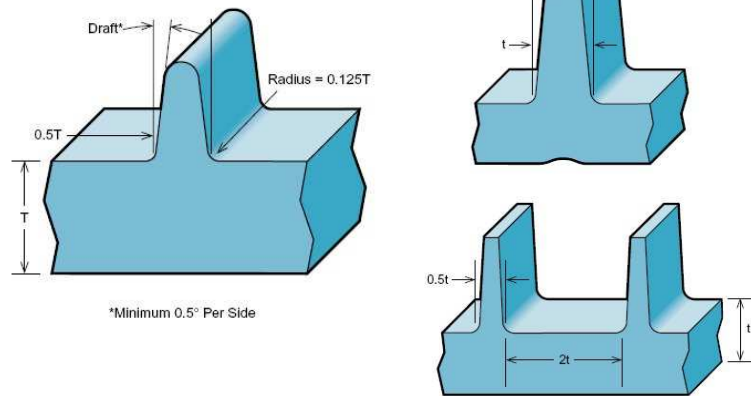
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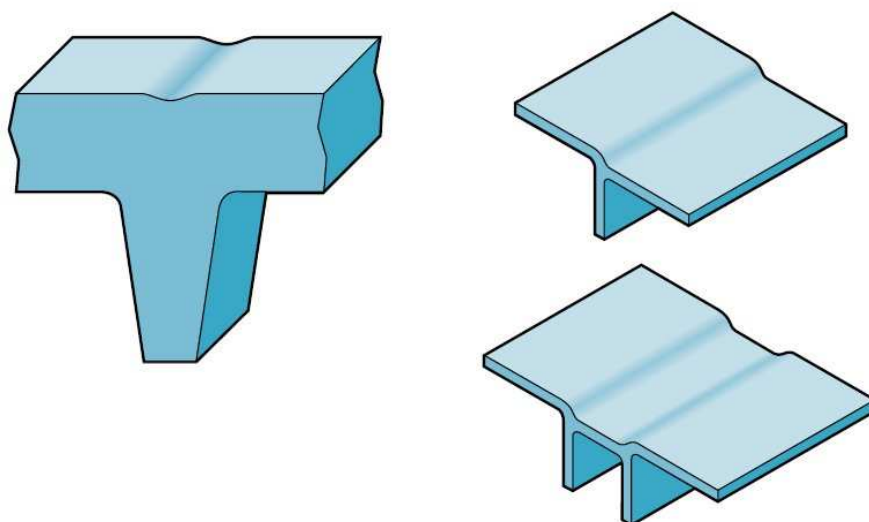
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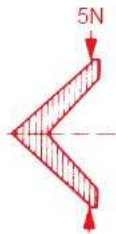
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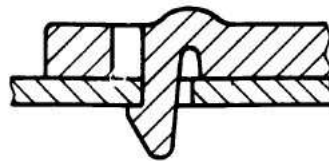
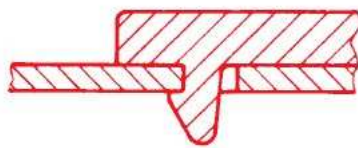
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Feszültség csökkentés

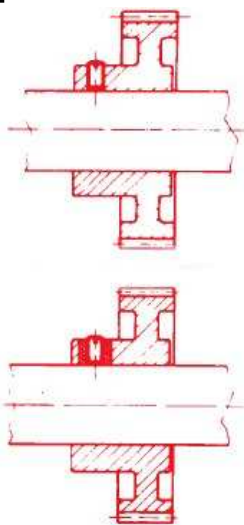


Stressed parts in a transparent material show, under polarized light, the stress concentration effect of sharp corners.

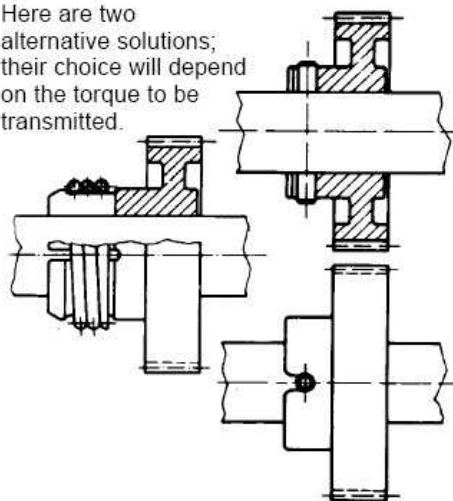


Redesign has reduced high stress concentration in snap-fit area.

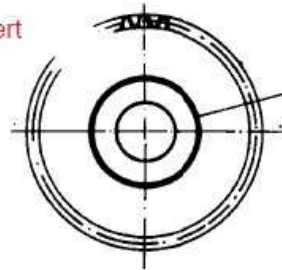
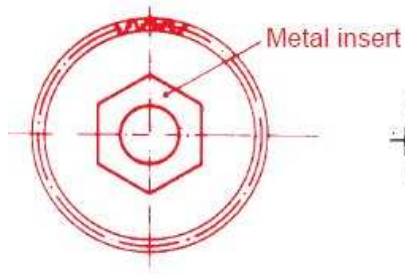
Feszültség csökkentés



Here are two alternative solutions; their choice will depend on the torque to be transmitted.



[Feszültség csökkentés]



Circular inserts with fine rounded knurling are preferred. They should not have sharp edges. Installing inserts after molding may also be a solution.

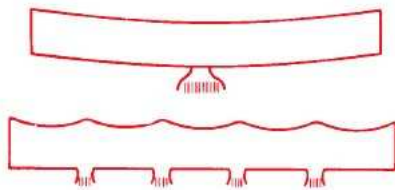
[Gát elhelyezése]

The two ways to solve this problem are:

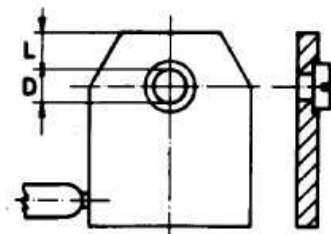
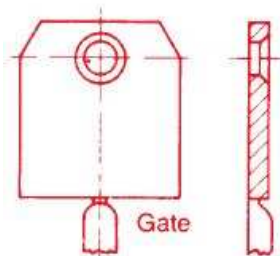
A) Locate the gate in the thicker section (a long cycle may however be necessary to pack the cavity properly).



B) Core out the part.

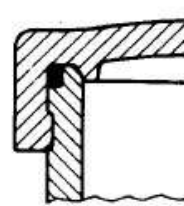


[Gát elhelyezése

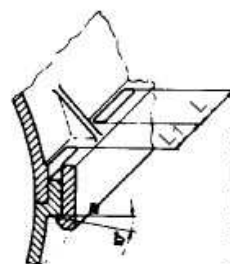
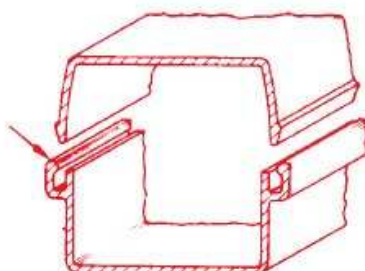


"L" should be kept larger (at least $\approx D$), and a flat head screw would eliminate tangential stresses. A change in gate location could also help.

[Szerelési helyesség

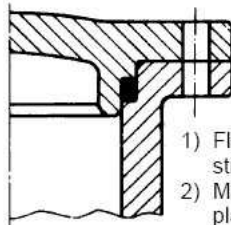
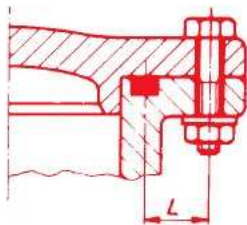
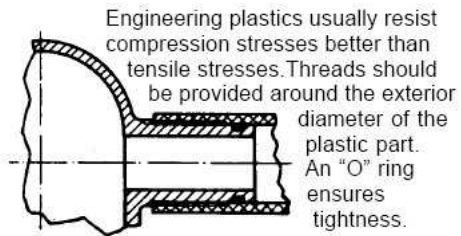
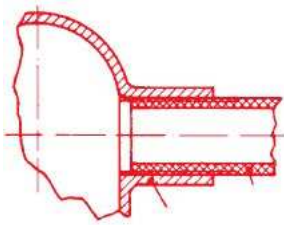


Redesigned exterior snap-fit cap and addition of "O" ring eliminate leakage.



No undercut in the mold. If the ratio $L:L_1$ increases, some ribs can be added.

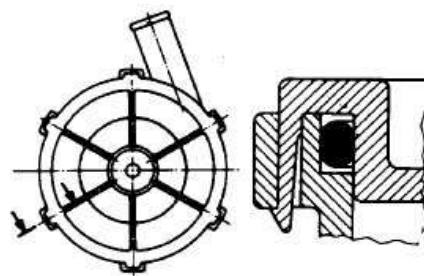
Szerelési helyesség



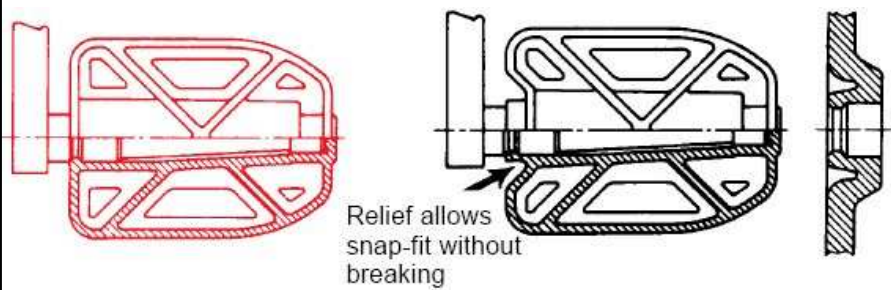
The "O" ring is compressed radially. Additional ways to control creep could be:

- 1) Flanges may be stiffened by ribs, or
- 2) Metal rings all around, placed under the bolts.

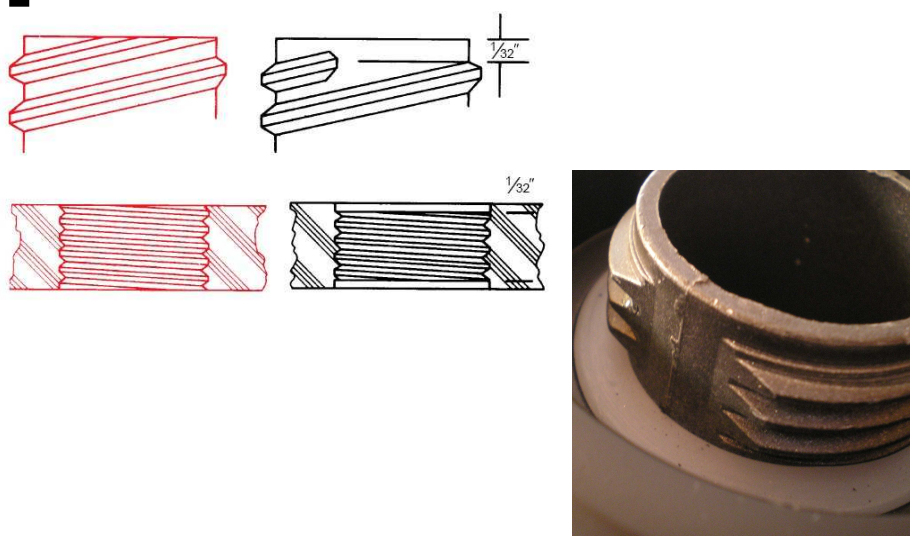
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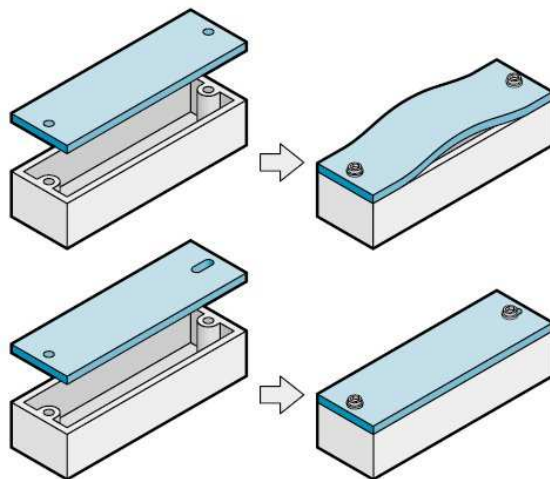
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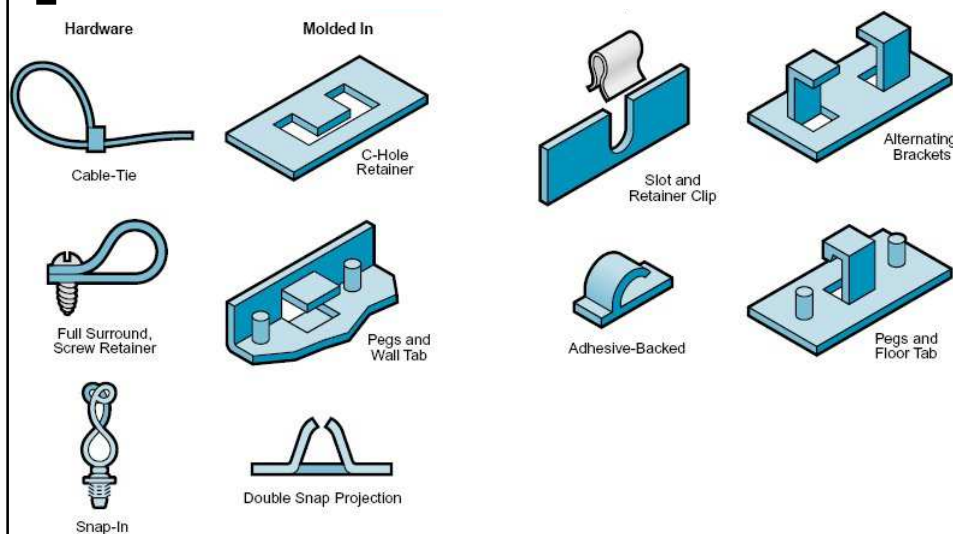
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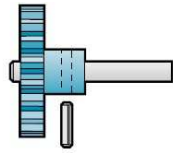


Gyártási pontosság



Kábelrögzítések

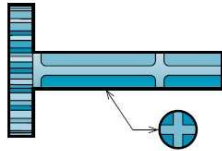




Three-Piece Assembly with Roll Pin

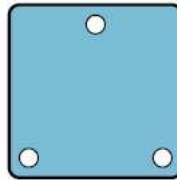


Two-Piece with Snap-On Gear



One-Piece Molded Gear and Shaft

One-Way Assembly



Four-Way Assembly

