FlexiCores

Product Description/Purpose:
FlexiCores provide a method to release undercuts, tabs and part features that cannot be ejected from the mold in a direction perpendicular to the parting line.

Speaking Points:
Often a small undercut is present on a medium production tool. FlexiCores are a space saving method which is economical to machine and fit.

1. Products similar to FlexiCore were introduced to the market over a decade ago from a European source, with limited success.
2. Progressive responded to the performance issues from the field and redesigned FlexiCores by utilizing better materials, closer tolerances, and complementing the product with innovative ancillary components.
3. Unique solid bronze guide block ensures smooth operation and maintains alignment during assembly process.
4. Heel plate design improvement evenly distributes ejector plate forces, eliminated twisting of the core caused when tightening the retaining screw and eases assembly.
5. Wear blocks enable FlexiCores to be used in molds using softer P-20 or Be Cu materials.
6. FlexiCores have no moving or locking parts like conventional slide or lifter systems.
7. Wear areas on systems are inexpensive, readily available and easily replaced/repaired.
8. Available in both inch and metric standards.
9. Stock shank extensions available for larger molds.

Comparisons to Competitive Products:
Cumsa is the most recognized competitor.

- Performance: Through the redesign process, performance issues with the Cumsa design have been eliminated.
- Double Actuation FlexiCore Assembly, which is only offered by Progressive provides a complete 'system' to release boss details.
- Shank lengths longer than competitions providing flexibility in mold design.

F.A.Qs:
Q. How long do these last? How many cycles?
A. These are for production tools. We have reports from the field of millions of cycles.

Q. Can these be welded and if so what precautions must be observed?
A. Yes, material is 4340, they can be welded. However, they are nitrided so re-nitriding may be necessary for optimal wear.

Q. What is the maximum temperatures FlexiCores can withstand?
A. 250ºF.

Q. Can they be used in Thermoset or Die Cast applications?
A. Not recommended due to higher operating temperature used in heated molds and dies.

Q. Are there limitations to the depth or shape of the detail that can be machined into the FlexiCore?
A. Our guidelines specify how deep an undercut can be released, this should be adhered to.

Q. After machining the detail, what re-hardening procedures or surface treatments are recommended?
A. Re-nitriding may be necessary depending on the surface being machined and the molding environment the cores will be used in.

Q. Can the size and shape of the FlexiCore head be altered in any way?
A. Yes, Nitriding may need to be re-applied on wear surfaces.

Q. Special sizes?
A. Currently, we do not offer special sizes.

Q. Are there any special considerations I should know about when designing the part to be molded and using a FC?
A. Yes, review our Design and realize some Draft for release is required in the Part Design. Contact Engineering team, we see and review many applications.