

New concept - proven technology



4-cavity mould for closure caps, featuring collapsing core technology

Creation of high quality closing caps with a special focus on an energy efficient production environment as well as a simple construction and a maintenance friendly design.

TASK

HASCO were presented the challenge by Mike Smith of Plastic Closures Limited, to create a completely new concept of Closure Cap tool construction to meet the demands of his production facility. Quality of the moulded part was of paramount importance, but moreover he needed to reduce the cavity to cavity pitch of his cap tooling and significantly lower maintenance and production costs.

Creating an energy efficient production environment was the goal, coupled with simple construction and maintenance friendly design.

PROJECT MANAGEMENT

Due to our vast experience and the guarantee expectations of Plastic Closures Limited, HASCO handled the complete design and construction of the mould, and the adaptation of the component design to optimise the performance of the Z3600 collapsing core.

Development was carried out at the Technical Department at HASCO – Luedenscheid, Germany, which included Moldflow analysis to minimise cycle time and maximise product quality.

SIZE MATTERS

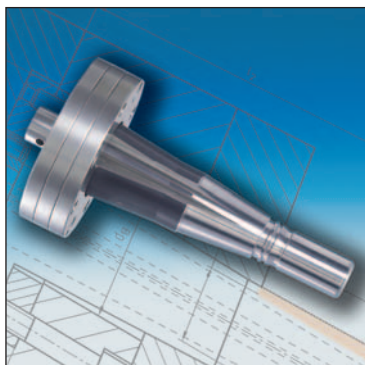
With its proven collapsing core technology, HASCO reached new boundaries for the Closure Cap Industry with the elimination of unscrewing devices for threads, and removal of external slides for creating the tamper ring slot details. Both features are now combined on the collapsing core, reducing the cavity to cavity pitch centres and providing a clear path for the moulded part to eject with a flat stripper plate surface without the protrusion of slides.

SIMPLICITY COUNTS

By removing unscrewing gears and mechanical slides, the effort to cycle the mould is dramatically reduced, creating big energy reductions in the effort needed to cycle the mould. This cost saving is significant when compared to hydraulic and mechanical solutions, especially when coupled with modern all electric moulding machines of today.

TOTAL MOVEMENT CONTROL

To compliment the simplicity of the collapsing core, the HASCO 2 stage ejector unit manages the accurate core movement and plate guiding, creating a fail safe condition. Control relies solely on the injection moulding machine ejector stroke forward and back position, without the need of position sensing devices attached to the mould.



Einfallkern Z3600/.../S



Value Shot Heißkanaldüse Z202/...

KEEPING IT COOL

The centre body of the core has a dedicated cooling channel, allowing the optimum temperature to be maintained. Chilled water can be applied for fast cycling thin wall components, or hot oil for optimum surface finish control in engineering applications.

BUILT TO LAST

Since its introduction in 2003, the Z3600 collapsing core has proven its reliability time and time again, generating consistent mould productivity in excess of 3 million cycles without any measurable indications of wear. Moulded components are consistently produced totally flash free due to the high accuracy and smooth running of the core segments.

The movement of the cores are unique, allowing a self cleaning action with each stroke ensuring a dust free environment when compared to other similar devices.

PERFORMANCE THAT MATTERS

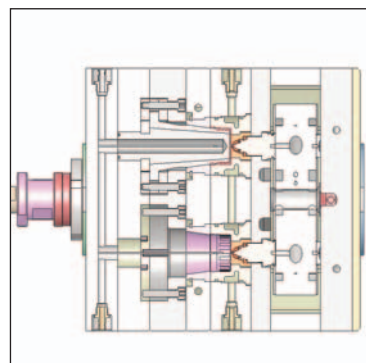
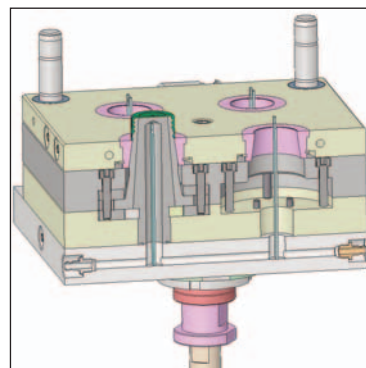
Each core is tailored to suit the application and polymer being processed, with great care and attention to steel grades, treatment and surface coatings. The cores can be lubricated or run totally dry for food and medical applications. Engineering polymers can also be processed, with many success stories for aggressive materials like POM, PA + GF and Peek.

IT'S A HASCO HOTRUNNER!

Using our very latest Z201 value shot nozzle, excellent gate quality and control was easily achieved, along with total serviceability due to its modular construction. The tip, heater and thermocouple can be quickly exchanged lowering maintenance costs.

TECHNICAL DATA

Product:	38N Cap
Dimensions:	42 mm outside diameter x 23.5 mm high
Material:	Polypropylene
Articel weight:	5.4 gram
Shot weight:	21.6 gram
Number of cavities:	4
Cycle time:	10.5 seconds
Pitch of cavities:	120 x 120 mm
Mould base size:	296 x 296 mm
Collasing core:	Z3600/S
2 Stage ejector:	Z169/30
Hot runner:	Z202/32 x 50 Value shot nozzle



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THE FUTURES BRIGHT

Already Plastic Closures are discussing the next project with HASCO technology, and continue to look ahead to new and exciting ways to optimise performance and efficiencies.

HASCO welcome the opportunity to discuss YOUR requirements in this or any other field of application which we can draw upon our global wealth of knowledge and experience to drive your business forward.

Your business success is important to HASCO, and we welcome the opportunity to assist your next project.



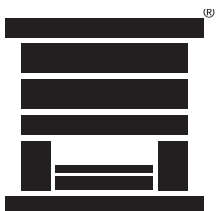
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