



NEXT-GEN SPRING COLLAPSIBLE CORES
PREMIUM UNDERCUT SOLUTION

DURA COLLAPSIBLE CORES

ADVANCED SOLUTION FOR MOLDING THREADS

Introducing DURA CORE, an innovative collapsible core solution: a ground breaking two-piece spring collapsible core designed for precision and longevity. This advanced collapsible core features a unique sequential collapse mechanism, where the larger and smaller segments operate independently. **This distinct design ensures stress-free movement of the smaller segments, significantly enhancing the life-span of the DURA CORE.**

Our team of DME engineers will meticulously review each part model to tailor-design a DURA CORE that perfectly aligns with your unique application requirements. **Utilizing our exclusive patented design, every DURA CORE purposefully eliminates interaction between the larger and smaller segments throughout the collapsing process.** This ground breaking characteristic not only prolongs the core's durability but also promotes the production of premium quality parts.

DURA CORES, with their compact design and shorter safety ring, enable effortless cleaning and maintenance. The innovative construction enhances cooling, reduces the overall length, and results in a more compact footprint. Ultimately, the DURA CORES lead to the creation of smaller, simplified molds and elevate part quality. The DURA CORE's two-piece design drastically reduces collapsible core maintenance, a common challenge with traditional spring collapsible cores.

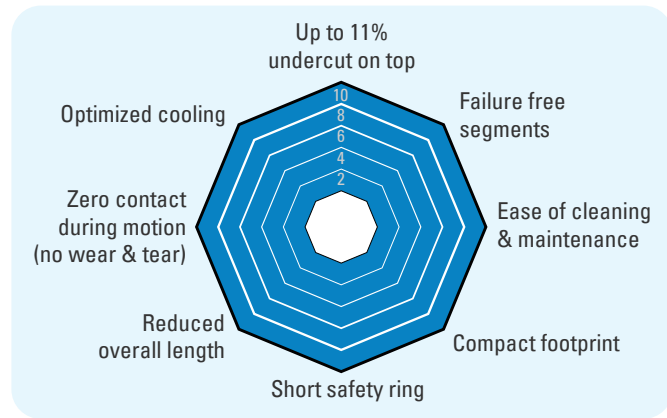
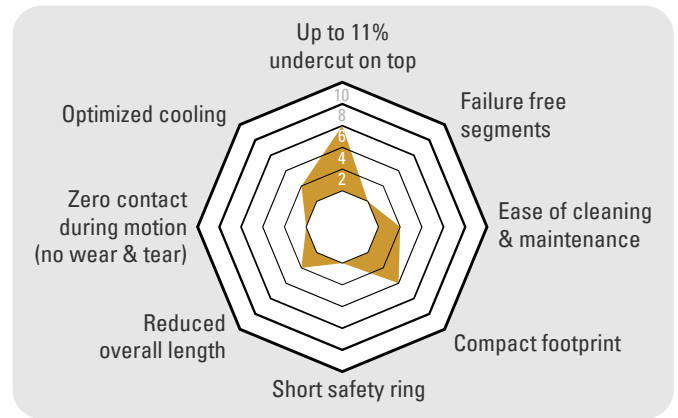
RESOLVING CHALLENGES WITH DURA CORE:

A COMPREHENSIVE APPROACH

- **Challenge: Segment / Finger Failures**
Sequential Opening - Prevents side wear between segments, reducing failure risks and enhancing durability.
- **Challenge: Laborious Cleaning and Maintenance**
Two-Piece Design - Simplifies the cleaning process, saving time and resources.
- **Challenge: Long Safety Ring**
Compact Safety Ring - A reduced size for improved safety without compromising functionality.
- **Challenge: Inefficient Cooling Processes**
Straight Core Pin Use - Features true diameter, non-tapered core pins for optimal cooling and enhanced product quality.
- **Challenge: Bulky Mold Base Design**
Minimized Core Length - Utilizes core pins ranging from 75mm to 150mm long, effectively reducing mold base stack height and improving mold design efficiency.

DURA COLLAPSIBLE CORES

SPRING COLLAPSE COMPARISON

DURA CORE

OTHER SPRING COLLAPSIBLE CORES


DURA CORES

ADVANTAGE - ZERO CONTACT DURING SEGMENT MOVEMENT

LARGE SEGMENTS LEAD

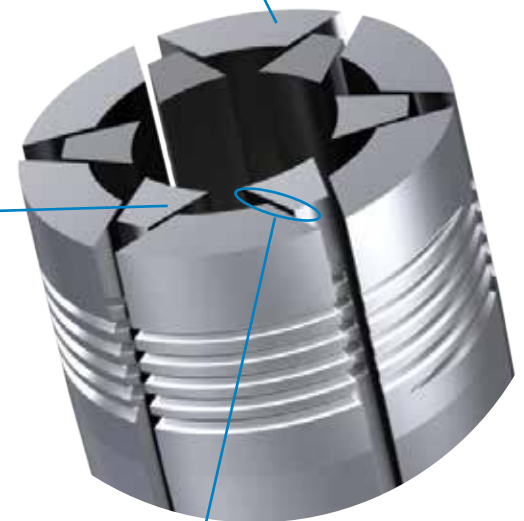
During the mold closing phase, the center core first engages larger segments, designed to make contact before the smaller ones. This allows larger segments to smoothly lead the opening, ensuring efficient and contact-free movement.

SMALL SEGMENTS FOLLOW

Following the larger segments, the center core smoothly engages the smaller ones, ensuring their synchronized and coordinated efforts. This design prevents contact and additional load on the smaller segments during the mold closing phase.

ZERO CONTACT DURING MOTION

In the DURA CORE, the absence of physical contact between large and small segments markedly decreases wear and tear. This essential innovation is key to ensuring a longer operational life for the DURA CORE.



DURA COLLAPSIBLE CORES

WITH PATENTED TWO-PIECE DESIGN

The two-piece design of the DURA CORE is an innovative feature that significantly enhances the usability and maintenance of the collapsible core in injection molding.

- **Effortless Disassembly:** Simplifies the process, enabling quick access to each component.
- **Easy Inspection and Cleaning:** Offers enhanced accessibility for thorough maintenance
- **Rapid, Secure Reassembly:** Ensures quick and correct reassembly after maintenance
- **Minimize Maintenance Downtime:** Reduces maintenance time, boosting production



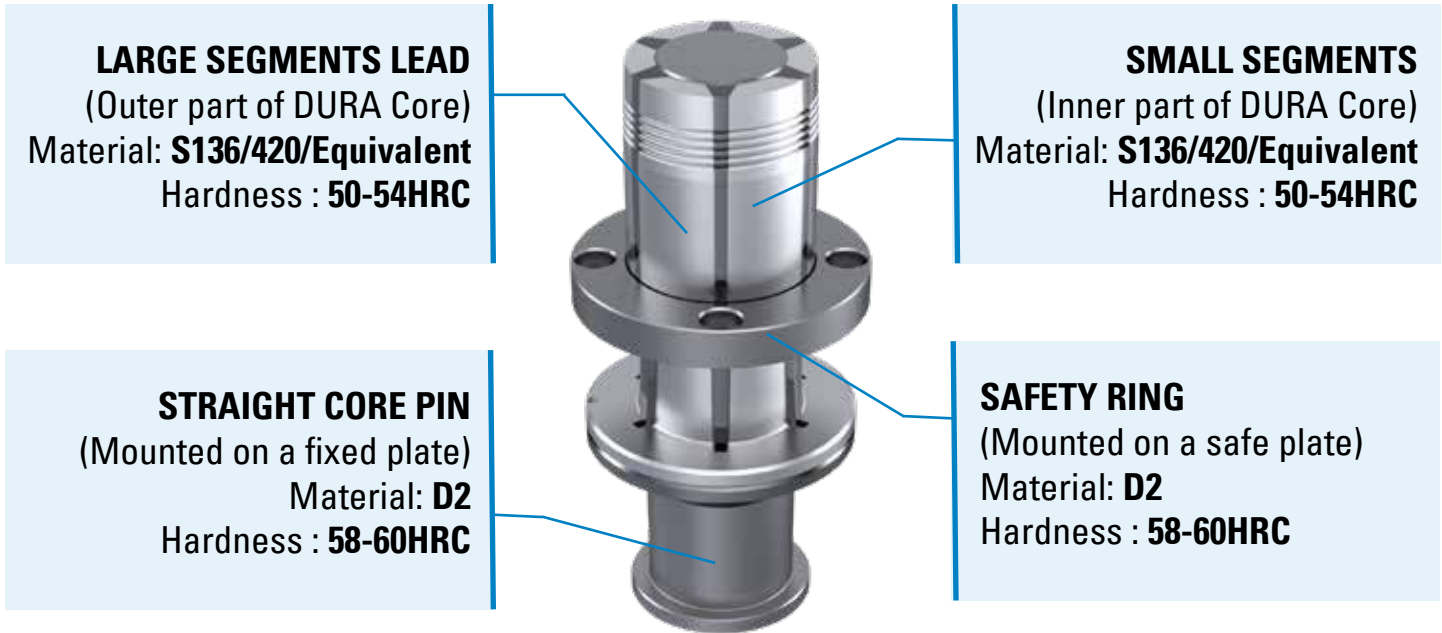
ADDITIONAL DESIGN FEATURES



- **Short Safety Ring:** A compact safety ring, securely mounted on a safe plate
- **Straight Core Pin:** The straight core pin design is a key element in optimizing both manufacturing and cooling. By facilitating more efficient cooling, it leads to improved overall performance of the core, enhancing the quality of the molded parts.
- **Reduced Overall Length:** The DURA CORE's reduced length offers considerable space-saving advantages. This design aspect is particularly beneficial in minimizing the mold base stack height, leading to more compact and efficient mold designs.
- **Compact Footprint:** The core's space-efficient design allows for more cavities in the same-sized molds or the same number of cavities in a smaller mold, thereby maximizing production output per cycle.

DURA COLLAPSIBLE CORES

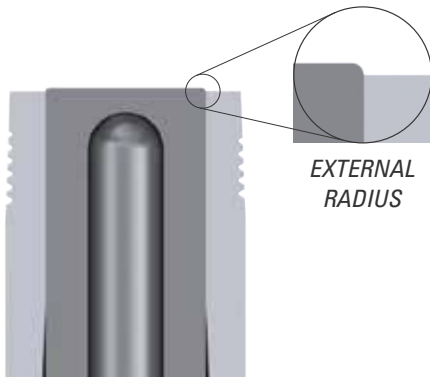
SPRING COLLAPSE COMPARISON



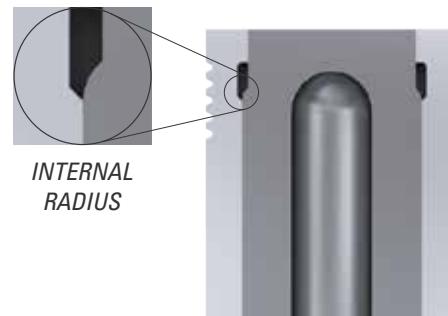
Note: **Safety ring is not necessary if the collapsible core diameter is equal to or greater than 40mm.** Omitting the safety ring in these cases simplifies the mold design and the ejection process.

DURA CORES CAN BE ORDERED WITH OR WITHOUT DLC COATING AND CORE MATERIAL CAN BE CHANGED BASED ON THE APPLICATION.

DESIGN OPTIONS:



ROUND HEAD DURA CORE



FLUSH HEAD DURA CORE

DURA CORES ARE AVAILABLE IN **ROUND OR FLUSH HEAD FORMS**

DURA COLLAPSIBLE CORES

MULTIPLE VERSIONS DEPENDING ON PART GEOMETRY

The DURACORE can be designed with diverse segment options, providing design flexibility to ensure sufficient collapse for undercuts. The number of segments required is determined by the part size, part shape and the undercut. We offer options of 8, 10, 12, and 16 segments to accommodate a broad spectrum of part sizes, with diameters ranging from 15mm to 150mm.



8 SEGMENTS



10 SEGMENTS

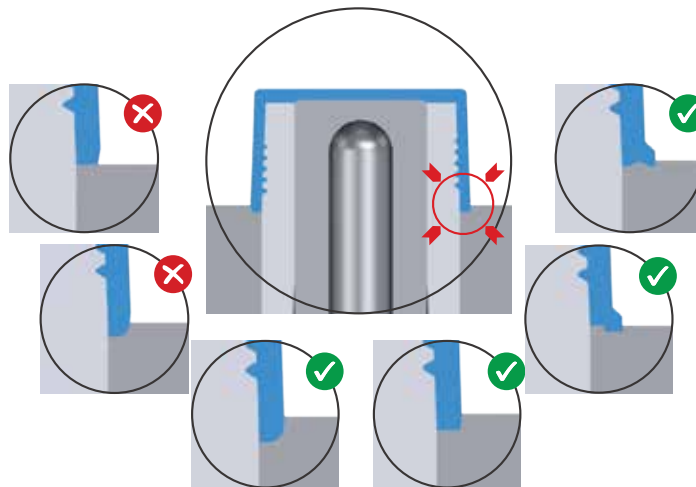


12 SEGMENTS



16 SEGMENTS

DESIGN TIPS FOR COLLAPSIBLE CORE MOLDS



LOCK THE PART SECURELY IN POSITION DURING COLLAPSE OF THE CORE

- Use tabs, ridges or indentations to lock parts in place, preventing movement during collapsing of the core.
- Sink parts into the B-side for increased hold area and stability.
- If the part has a radius at the bottom, avoid placing the parting line at the radius's tangent point. Instead, sink the part further to secure enough bearing surface.
- Unsecured parts may damage the core and result in defective molded parts.

Scan here to view the
DURA Core Collapsible
Animation



DURA COLLAPSIBLE CORES

COMPLETE YOUR DESIGN WITH OUR ALL NEW DURA CORE SYSTEM

Select the DURA CORE System which includes the DURA CORE, DC Mold Base and the DC Latch Locks, for a tailored and efficient injection molding solution.

DEDICATED MOLD BASE FOR COST-EFFICIENCY

Designed to incorporate the DURA CORE into the standard DC Mold Base eliminating a need for an ejector housing and plates.

COST-EFFECTIVE FOUR PLATE CONTROL

The DC Latch Lock achieves four-plate control without a hydraulic cylinder, streamlining the system and reducing costs.

AVAILABLE OPTIONS



DC MOLD BASE - 4P

4P VARIANT

(4 PLATE CONTROL REQUIRED)

4P Variant for Small Cores

Designed for cores under 40mm in diameter and includes a safety ring, requiring a 4-plate control latch lock.



DC MOLD BASE - 3P

3P VARIANT

(3 PLATE CONTROL REQUIRED)

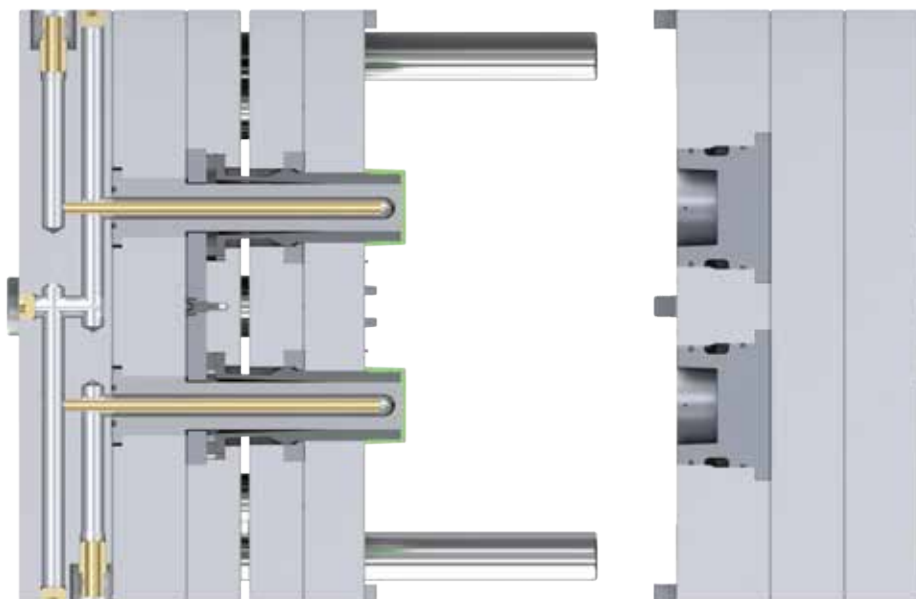
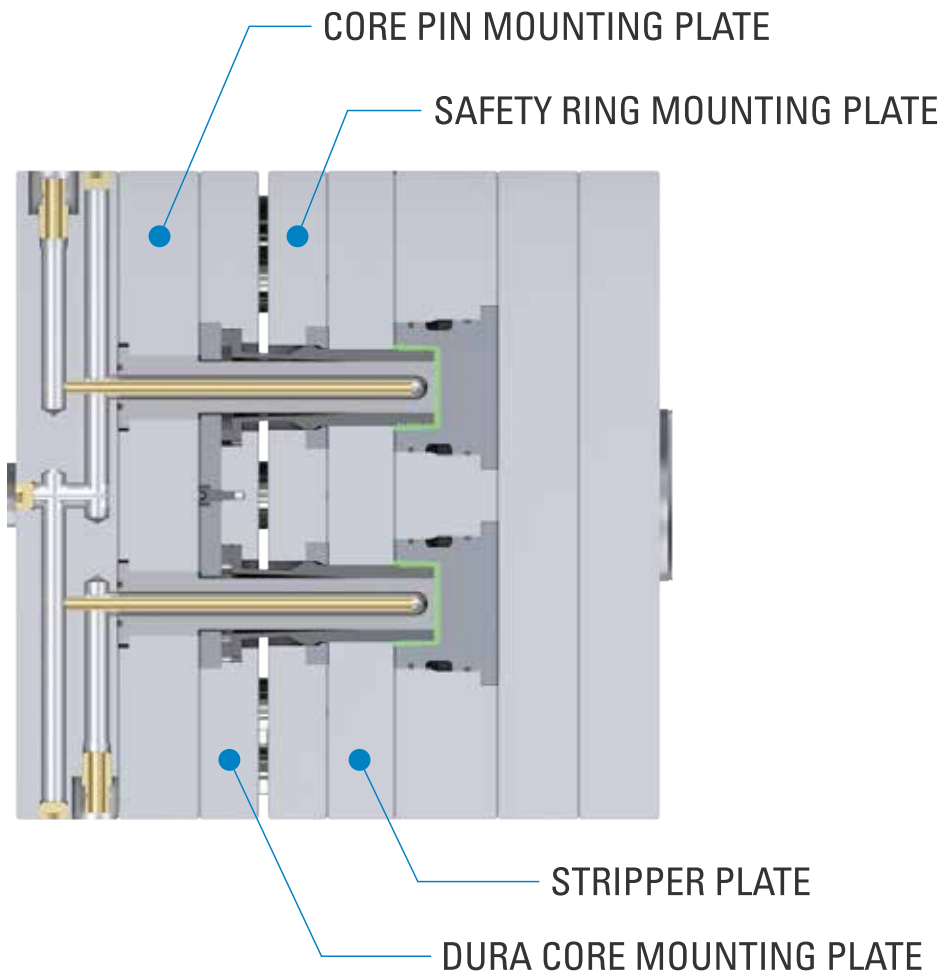
3P Variant for Large Cores

Designed for cores equal to or greater than 40mm in diameter, eliminating the need for a safety ring and utilizing a 3-plate control latch lock.



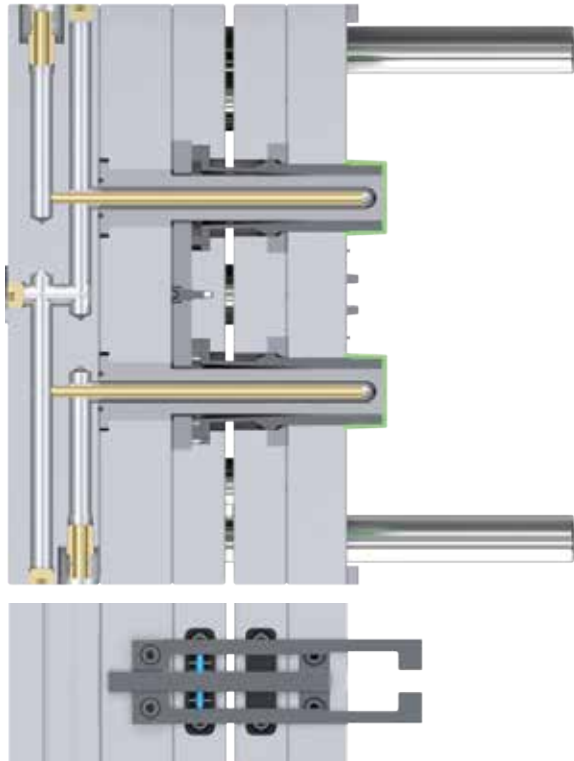
DURA COLLAPSIBLE CORES

INSTALLATION EXAMPLE

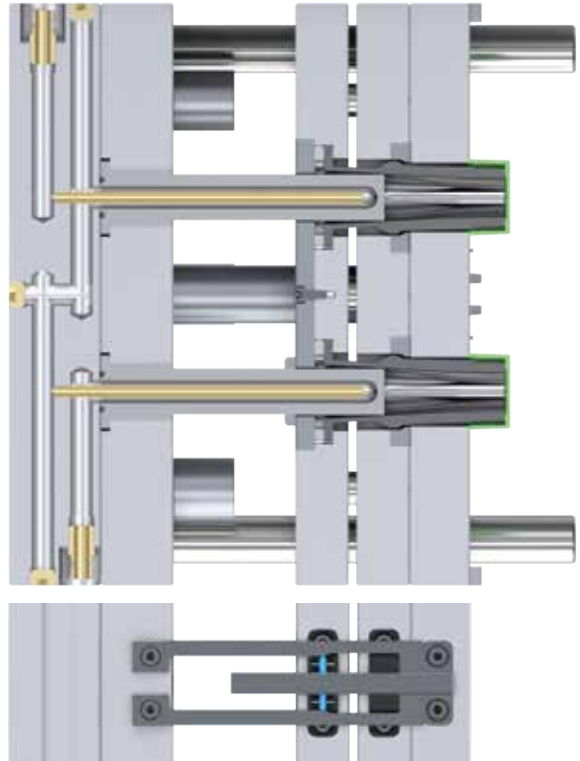


DURA COLLAPSIBLE CORES

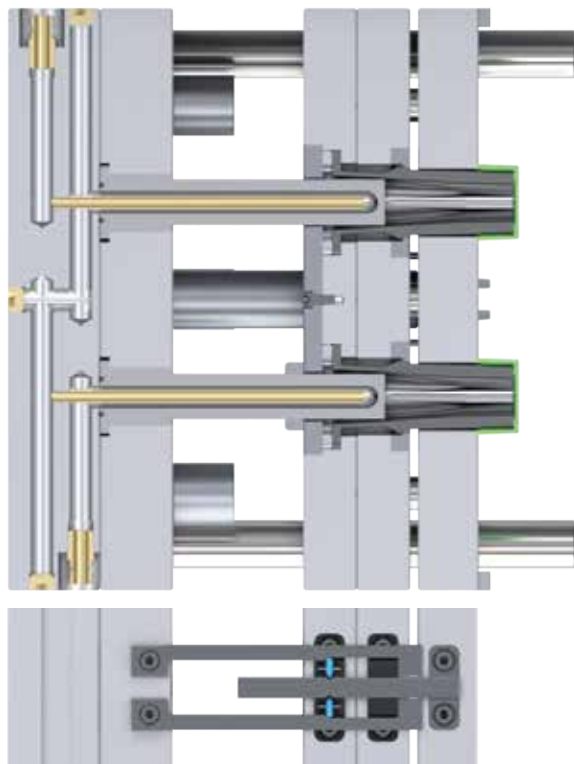
PART EJECTION



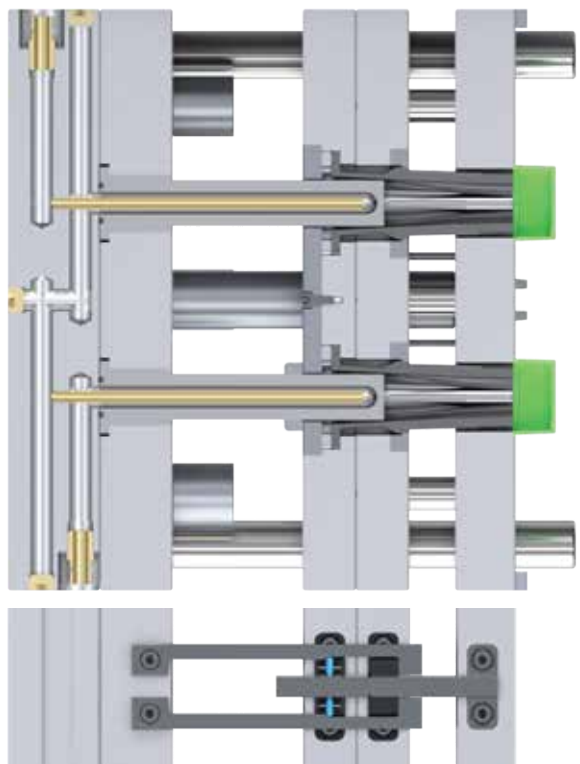
PARTING LINE OPEN



PART EJECTION - STAGE 1



PART EJECTION - STAGE 2



PART EJECTION - STAGE 3

With tens of thousands of products to choose from, DME is your one-stop shop for everything molding.

From complex undercuts solutions and plate control to standard pins, bushings and interlocks, the DME line of **Mold Components** will help you build or rebuild your mold base inside out, top to bottom.

Industrial Supplies, MUD Quick-Change, Control Systems, and Hot Runner solutions round out our extensive offering to truly be your one-stop shop.



www.STORE.DME.NET



**DURA
CORE**

For additional DURA Core information, feasibility assessments, or design inquiries, please reach out to your respective regional contact.

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