DME UNDERCUT SOLUTIONS

PREMIUM COLLAPSIBLE CORES, ELECTRO-MECHANICAL UNSCREWING SYSTEMS, AND UNDERCUT REMOVAL DEVICES

DURA CORE

UP TO 10% UNDERCUT WITH **DURA COLLAPSIBLE CORES**

COLLAPSIBLE DME S-CORE

UP TO 23% UNDERCUT WITH **TWO STAGE S-CORE**

UP TO 13% UNDERCUT WITH **SINGLE STAGE S-CORE**

AHP MERKLE®

servomold®

DME Undercut Solutions

KEY PARAMETERS TO DETERMINE THE BEST UNDERCUT SOLUTION FOR YOUR APPLICATION

DURA CORE	PARAMETER	S-CORE
Ø20 TO Ø60 mm	Component Diameter Range	Ø6 to Ø400 mm
Smaller	Footprint	Larger
Longer	Stroke	Shorter
Less	Surface Contact	Full Contact
Standard Design	Design Type	Customized Design
Available	Safety Stop	Available
Straight	Center Core Geometry	Tapered
Excellent	Cooling Efficiency	Good
Linear	Ejection Motion	Linear
Not Feasible	Front Insert Feasibility	Feasible
Up to 10%	Undercut Percentage	Up to 13% | Up to 23% (2-stage)
Feasible	Component Profile on Center Core	Limited

DURA Core is a spring collapsible core. The inner and outer segments only contact each other at full expansion, extending wear life.

8 Segments | 10 Segments | 12 Segments | 16 Segments

DME DURA core segments

- Determined by internal undercut design
- Influenced by number of undercut partitions inside the component
- More complex geometry → higher number of segments required

S-Cores are a dovetail design. The inner and outer elements drive each other to collapse and expand.

6 Segments | 8 Segments

Ready to Mold | Collapsed for Ejection | Ready to Mold | Collapsed for Ejection

DME S-Core segments

- Determined by internal undercut design
- Influenced by number of undercut partitions inside the component
- More complex geometry → higher number of segments required

DME Undercut Solutions

DME S-CORE COLLAPSIBLE CORES

SQUARE
REATINING RINGS

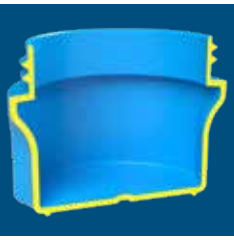
ROUND
RETAINING RINGS

RACK SYSTEM
RETAINING RINGS

Want to produce more parts in a smaller space?

- Produce more parts in limited mold space
- Ideal for space-constrained mold designs
- Enables smaller mold size → smaller machine requirement
- Supports up to 8 cores on a rack system
- Minimum spacing: 30mm (depends on part size & undercut depth)

Part Undecut: 6.3%
S-Core OD: 48mm
S-Core Type: 8 segment design



Part Undecut: 16.2%
S-Core OD: 68.7mm
S-Core Type: 2-Stage S-Core

SQUARE/RECTANGULAR S-CORE

UNDERCUT MORE THAN 13%

Scan for complete
S-Core information

DME UNDERCUT SOLUTIONS

DURA CORE COLLAPSIBLE CORES

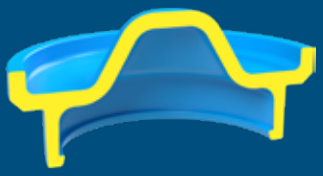
DURA CORE, an innovative collapsible core solution: a ground breaking two-piece spring collapsible core designed for precision and longevity. This advanced collapsible core features a unique sequential collapse mechanism, where the larger and smaller segments operate independently. This distinct design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

- Effortless disassembly, cleaning & inspection
- Rapid, secure reassembly reducing maintenance downtime
- Reduced overall length & compact footprint
- Straight core pin & short safety ring

DME DURA Core Safety Ring

- Ensures all segments are fully collapsed before ejection
- Prevents interference between segements and molded component
- Maintains proper ejection sequence and timing

Part Undecut: 9.1%
DURA Core OD: 24mm



Part Undecut: 5%
DURA Core OD: 29.7mm

COOLING LINES IN CENTER CORE

COOLING LINES IN CENTER CORE

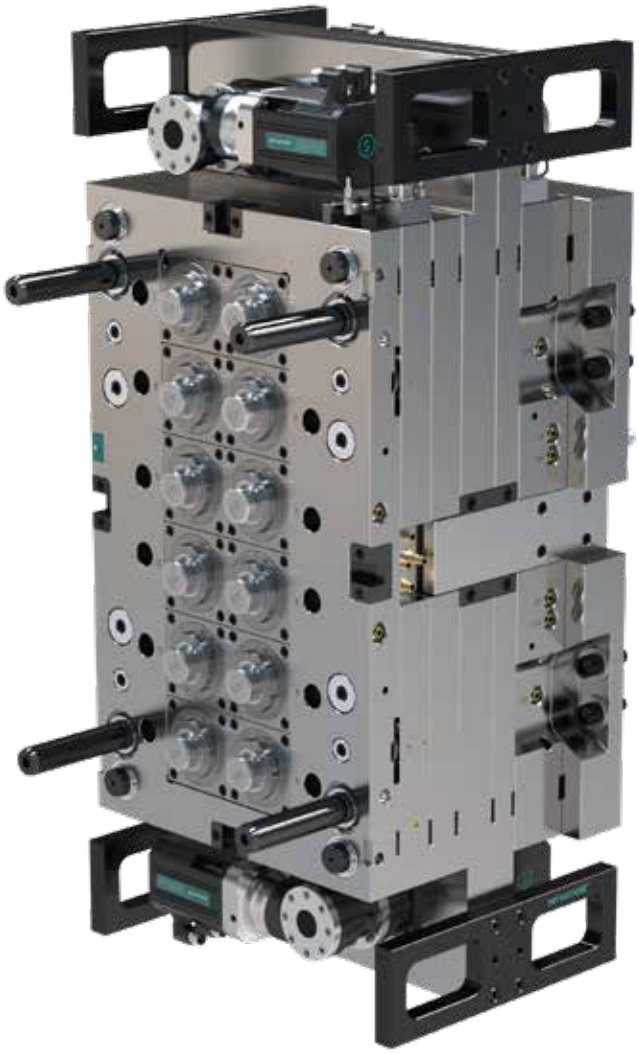
Scan for complete
DURA Core information

Undercut Solutions

SERVOMOLD® UNSCREWING DEVICES

The servo unscrewing device is our answer to the demands made on high performance injection molds with unscrewing function:

- Highest precision and process reliability
- Shortest cycle times and highest availability
- Clean and oil free operation –› Cleanroom suitable
- Long service intervals and maintenance friendly design
- Compact design - no protruding parts



servomold®

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Servomold information

Undercut Solutions

SERVOMOLD® Linear Actuators

SLA XS/S/M/L/XL | **SSA** M

- 100% position and high repeat accuracy
- Continuously high forces and speeds, independent of the process state
- Movement profiles can be freely and individually defined and called up
- Clean, oil-free and therefore optimal cleanroom suitability
- Easy maintenance due to replaceable ball and roller screws
- Different power classes from 4kN to 60kN
- Special solutions with forces up to 150kN as well as rust-proof designs

100% Control
Servomold linear actuators, together with Servomold control units, allow precise, powerful and safe linear motion.

The advantages over hydraulic or pneumatic systems are many but can be summed up in one point - 100% control through the complete movement.

This allows an optimaized design of the sequences in the injection molding process, but also the injection molds benefit from controlled and careful movements.

The results are less wear, lower maintenance requirements, and a significantly longer mold life.

Scan for complete Servomld SLA/SSA information

SMC SERVO CONTROL SYSTEMS

- 10.1" touch screen user panel w/ RFID user access
- 20/45/100 amp servo amplifiers
- Automatically switches between different encoder systems
- Active temperature controlled cabinets with adaptive cooling fans
- **SMC-Mini:** single drive control system 20 or 45 amps
- **SMC-Standard:** Up to (4) servo drives
- **SMC-Rack:** Up to (8) Servo Drives

Scan for complete Servomold SMC information

UNDERCUT SOLUTIONS

AHP MERKLE® CORE PULL SLIDE CARRIERS

STANDARD SIZES TO FIT YOUR APPLICATION

- **Max operating pressure 250 Bar**
- Linear roller bearing guides
- Mechanical limit switch (sold separately)
- During core pulling the full piston area is available
- Ground, hardened and hard chrome piston rods
- Forward return stroke cushion standard
- Additional mounting screws available for the top plate upon request

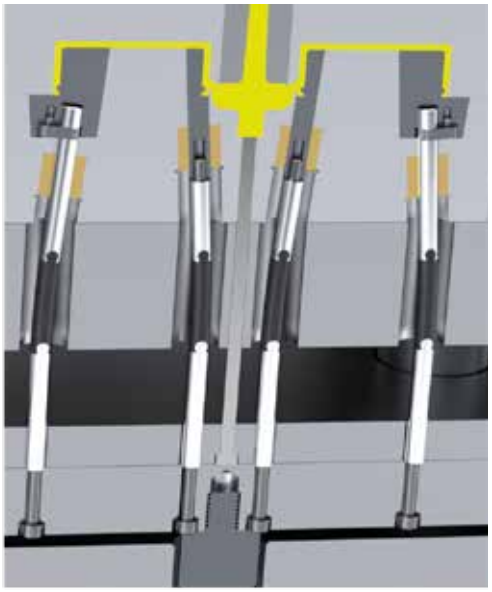
Scan for complete
Core Pull information

AHP MERKLE® MECHANICAL CHAIN LIFTERS

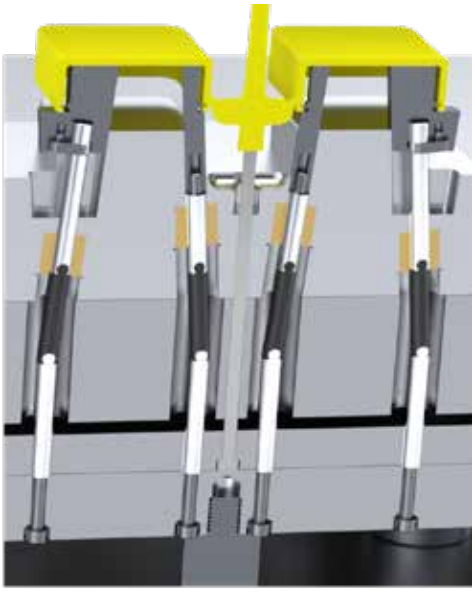
ELIMINATE SPRING STEEL PRODUCTS & EJECTOR STROKE LIMITATIONS

These lifters are entirely mechanical, utilizing a spline like "chain" technology to articulate and release the undercut without any angled machining to guide the lifter. The lifter does not use any spring steel to achieve articulation thereby eliminating problems associated with spring steel products. Angles can be increased or reduced simply by adding and removing chain segments. Furthermore, they are not limited in ejection stroke compared to other mechanical solutions in the market.

Number of Chains	Maximum Ejector Stroke
3	30mm
6	60mm
10	120mm



Mold Closed



Mold Open

Scan for complete
Chain Lifter information

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.

For additional undercut components, feasibility assessments, or design inquiries, please reach out to your respective regional contact.

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