TRANSFER TOOLING

MECHANICAL AND ELECTRONIC TRANSFERS

COMPLETE LINES

SERVO FEEDERS

DIGIEMME®

SOLUTIONS

METAL PRESSWORK AND STAMPING

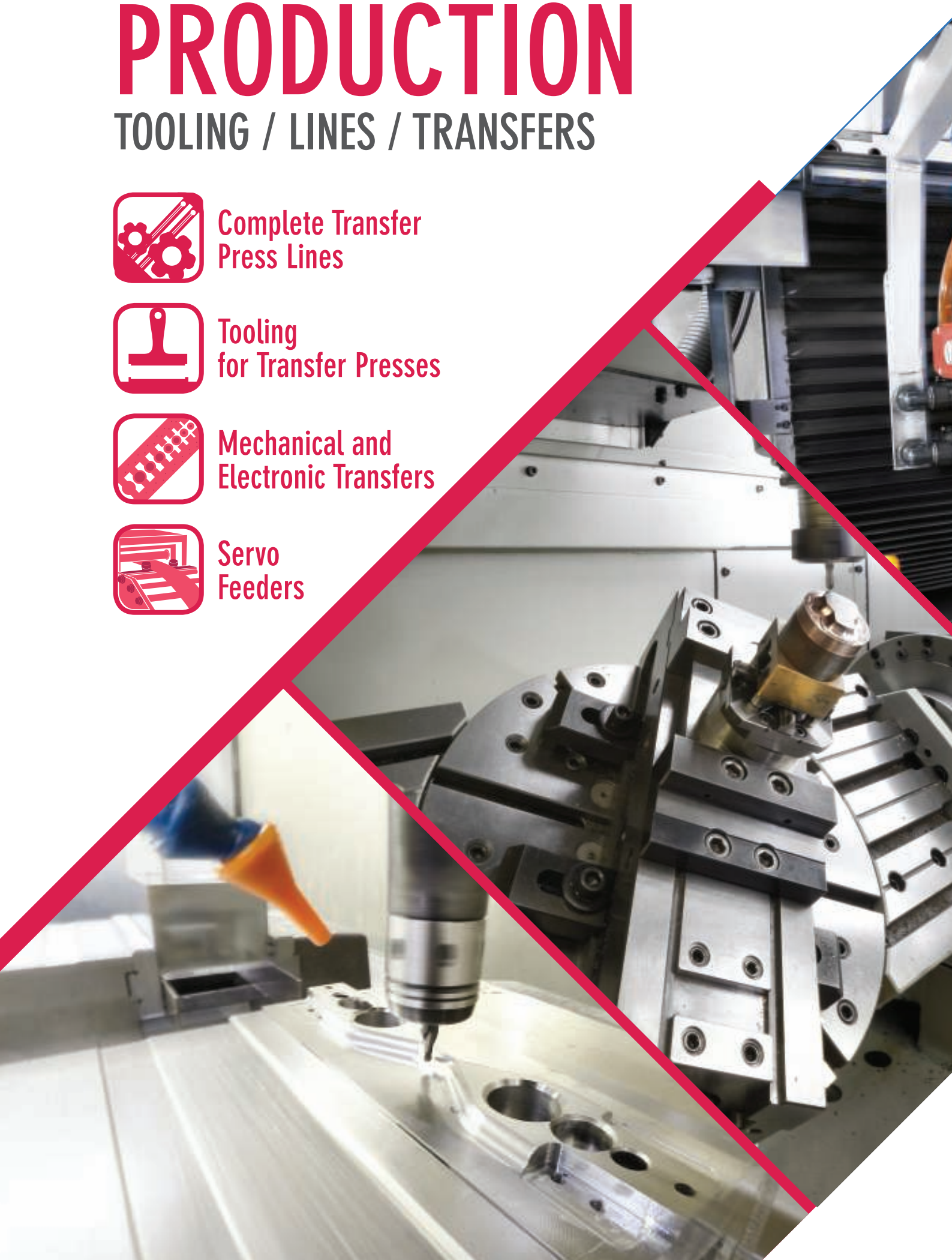
DI.GI.EMME designs and produces complete turn-key transfer systems and lines, mechanical and electronic transfers and press feed systems for all markets and materials. We also provide presswork services, through to manufacture of the finished component.

Decades of experience– the company was founded in 1974 – and the continual evolution of the market have led us to produce extremely high quality equipment and components and to explore new paths to optimize production, reducing the time, labor, and materials required, while supplying the best technical solution for each specific need. Over the years we have developed close-knit relationships with highly qualified partners with the objective of creating a supply network that allows us to take on the challenge of large projects while guaranteeing our customers consistent, high quality and cost-effective solutions.

PRODUCTION

TOOLING / LINES / TRANSFERS

- Complete Transfer Press Lines
- Tooling for Transfer Presses
- Mechanical and Electronic Transfers
- Servo Feeders



Top Quality Transfer Tooling and Lines

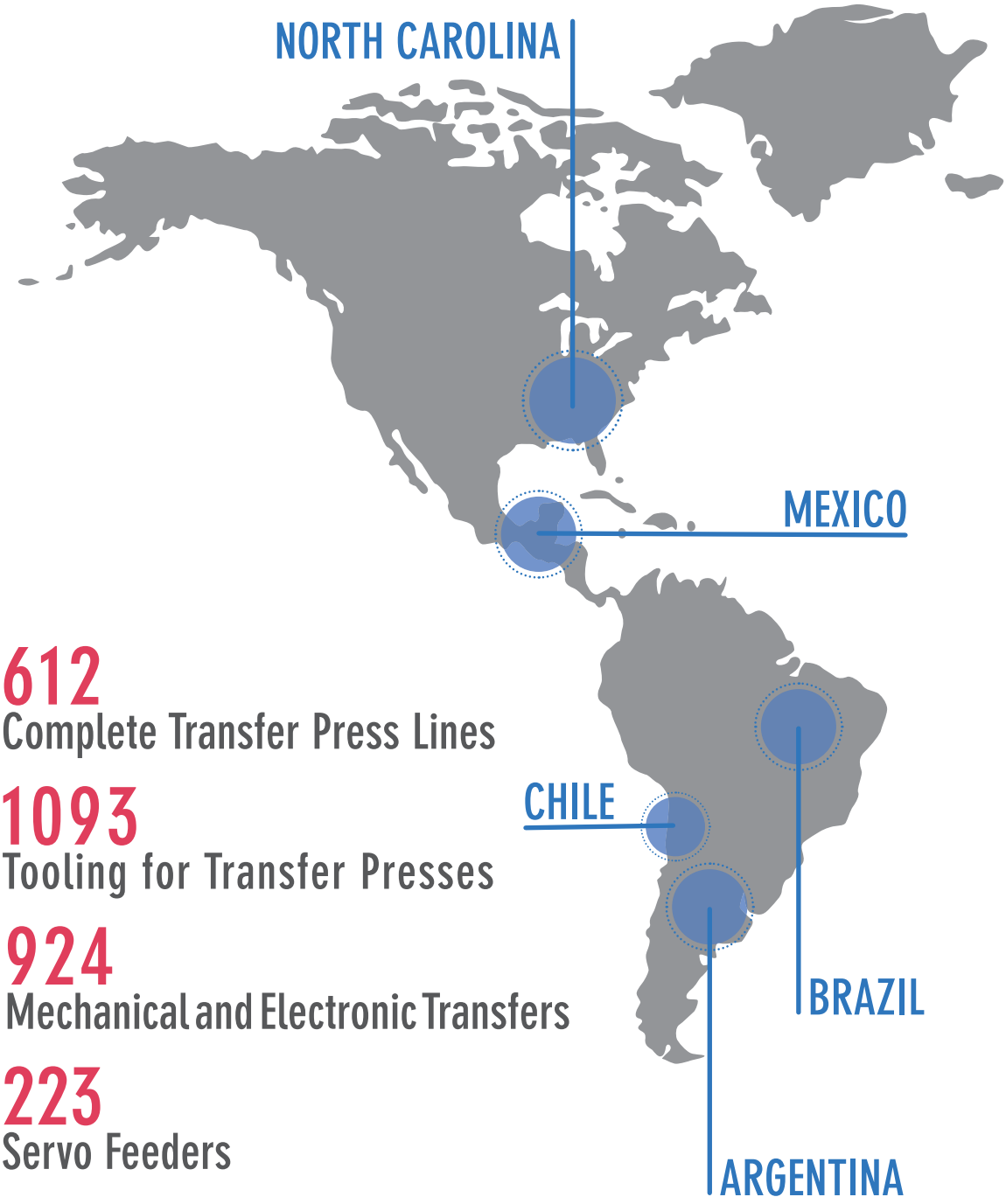
DI.GI.EMME's extensive experience in transfer technology allows us to offer our customers the latest state-of-the-art technology available on the market: complete transfer press lines, mechanical and electronic transfers, feeders, tools complemented by the production of finished components, from any material and to all sizes.

In the design phase, our Engineering and R&D departments focus on exploring and identifying the best technical solutions, combining flexibility with optimization of time and cost.

Quality control and final inspection are performed in areas specially equipped for setting up complete lines and for producing trial production runs, thus guaranteeing the perfect operation of the machine. We pay special attention to training in co-working during the final inspection phase.

COMPONENTS AROUND THE WORLD

INNOVATIVE, CUTTING-EDGE SOLUTIONS



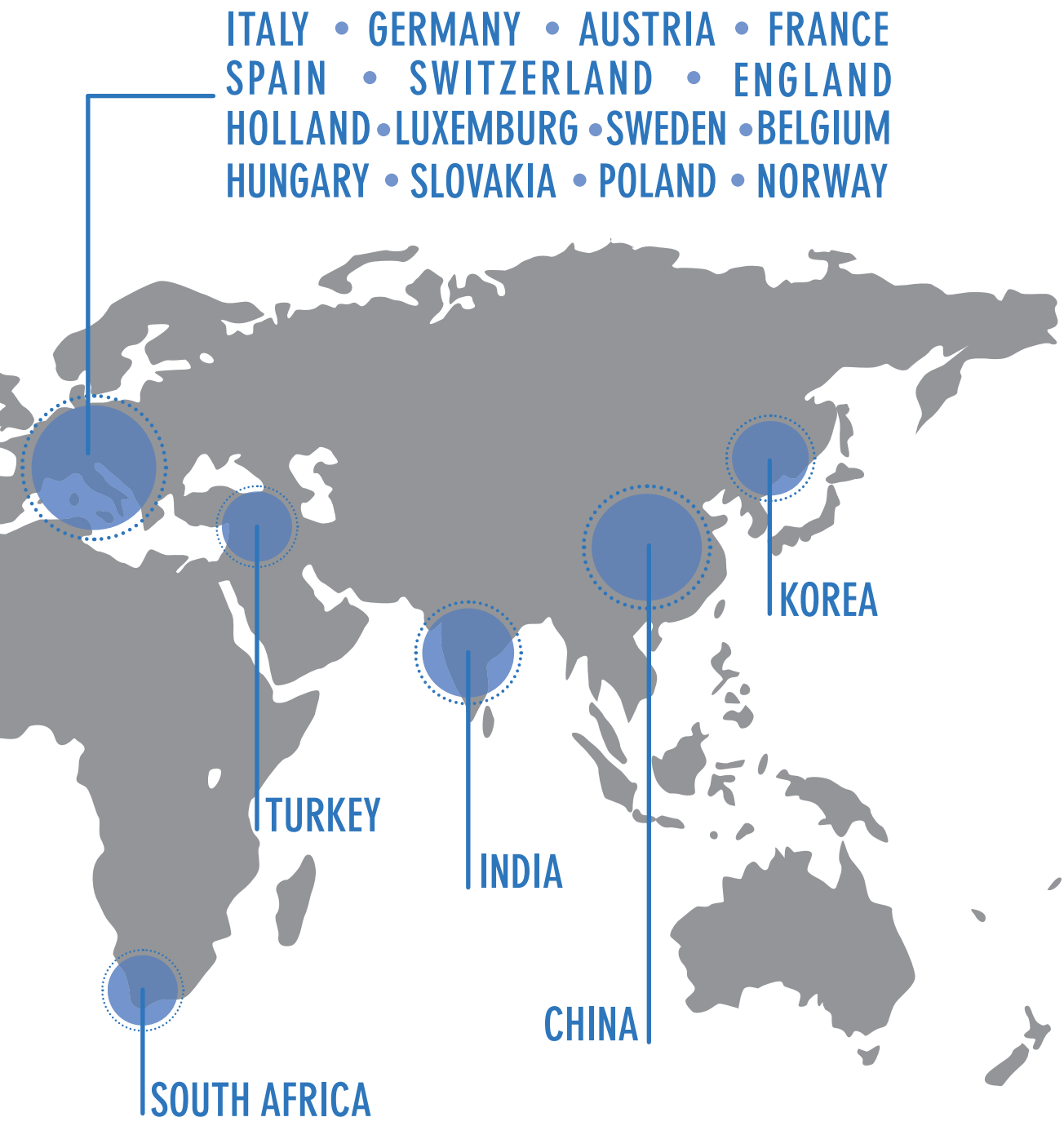
612
Complete Transfer Press Lines

1093
Tooling for Transfer Presses

924
Mechanical and Electronic Transfers

223
Servo Feeders

Experience, innovative technology, cutting-edge lines and custom solutions have contributed to the success of DI.GI.EMME's lines and tooling around the world. Their reliability, careful design, and attention to details - such as the true interchangeability of parts subject to wear - are also key factors to our success.



! WORLD-RENOWNED QUALITY

THE ADVANTAGES

TEN GOOD REASONS FOR CHOOSING TRANSFER TECHNOLOGY

1	**Significant material savings:** only the material needed for piece production is used (no carrier strip is required to move parts through the press)
2	**Parts can be rotated or turned over** between stations
3	**Robust dies, punches, and blank holders** are independent from all upstream and downstream operations
4	**Simple, rapid maintenance** as the individual stations can be removed
5	**Blank optimization** for bent-drawn parts using the final tooling; no trial tools are required
6	**Single stroke blanking** with the burr on the side desired
7	**Rapid changes to parts** as the blank and/or intermediary operations can be modified independently
8	Tapping, welding, washing and other processes can be performed **in-line with the press**
9	**Naturally better quality** since no carrier strip is required for drawing and each die station is independent
10	Edge trimming after final blanking **with no secondary operations**

Thanks to transfer technology, extremely high quality parts can be obtained by combining a wide range of in-press operations, minimizing the floor space occupied, machinery, labor and costs.

The advantages of this technique are well-known and appreciated as its increasingly widespread use proves.

The versatility of this technology, the compact lines, the tight tolerances that can be obtained, and the possibility to have finished parts off the press – by integrating a variety of processes eliminating the need for secondary operations - are just a few of the advantages of the tooling manufactured by DI.GI.EMME. These and many other technical features combine to facilitate, speed, and improve the quality of the individual operations.

LESS
MATERIAL
LESS
MAINTENANCE
LONGER
LIFE

MARKETS

PRODUCTS FOR ALL FIELDS OF APPLICATION

Over the years our highly skilled design and engineering team has produced lines, tooling and parts for all market segments, always with the final part application, the required mechanical characteristics, the production requirements, and all of the little details that make each part unique in mind throughout the entire process. This has led DI.GI.EMME to register numerous patented solutions.

1  AUTOMOTIVE

2  APPLIANCES

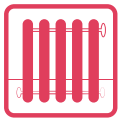
3  COSMETICS

4  METAL PACKAGING

5  FURNITURE HARDWARE

6  BICYCLES AND MOTORCYCLES

7  CONSTRUCTION

8  HEATING

MATERIALS

LINES AND TOOLING FOR ALL METALS

DI.GI.EMME lines and tooling are designed to perfectly process any metal, ranging from the most commonly used - including steel, cooper, brass and aluminum - to valuable metals such as gold and silver through to materials that require experience and special processing technology, such as stainless steel, molybdenum, niobium and tinplate.

In-depth knowledge of the materials, the specific processing requirements and the techniques give DI.GI.EMME engineers the expertise to always develop solution-oriented tooling for extremely high quality parts.

! ALL MATERIALS
EVEN MOLYBDENUM AND STAINLESS STEEL

TURN-KEY SOLUTIONS
FOR ALL JOBS

Relying on experts for your complete line means not only guaranteeing a quality result but not having to worry about design- or management-related aspects: you only have to give us the drawing of the part you want to make, tell us what material you want to use, and what volume you need to produce in order to receive your very own turn-key, tailor-made solution: tested, inspected, and commissioned prior to leaving our factory.

01 SMALL AND LARGE PRODUCTION RUNS

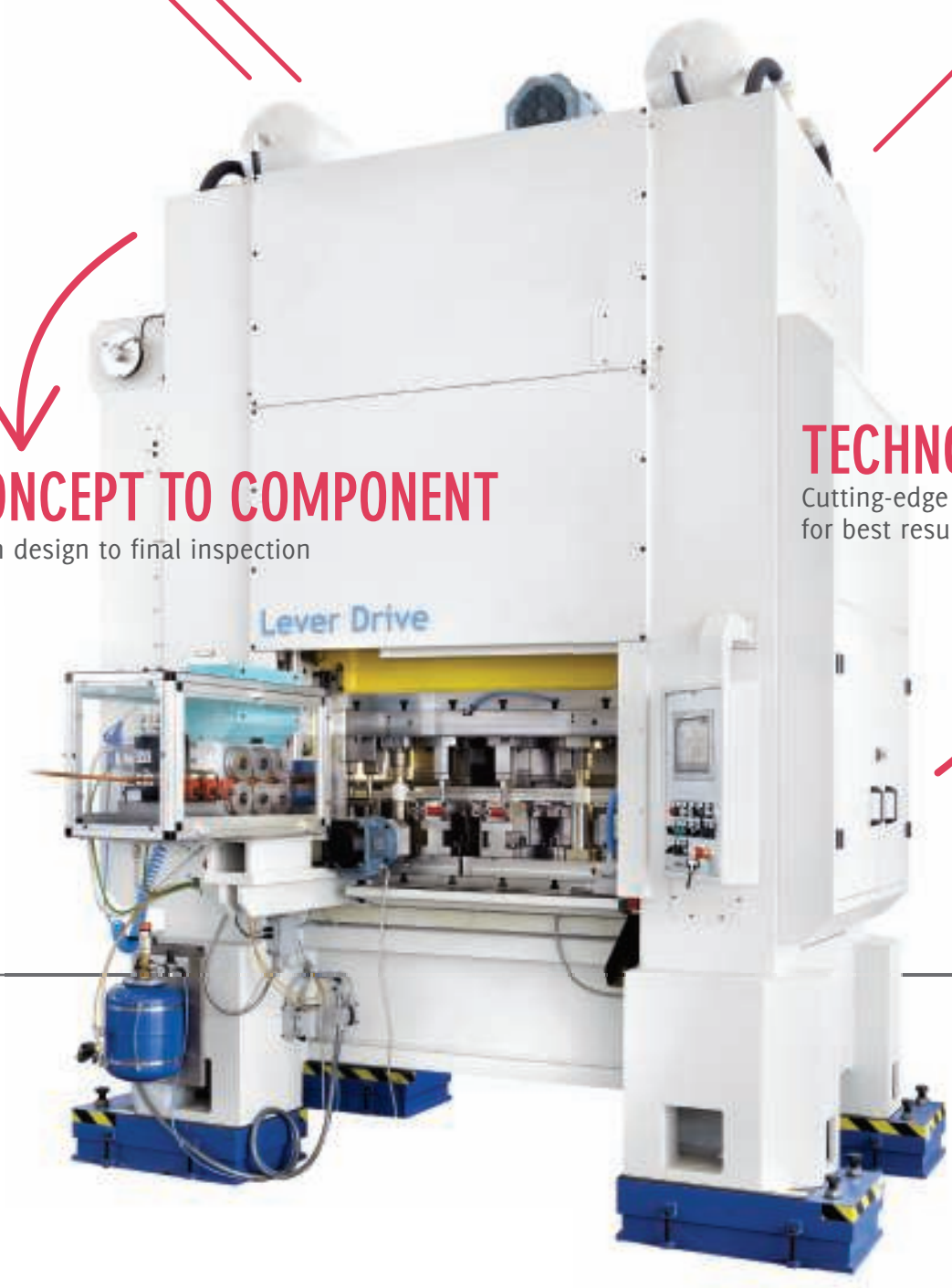
Complete lines for all production volumes, sized for the number of parts required

02 CUSTOM MADE

Lines are custom made to your specific production needs

03 NO HEADACHES

We take care of everything, from concept and design through construction and commissioning of the line



CONCEPT TO COMPONENT

From design to final inspection

TECHNOLOGY

Cutting-edge technology for best results

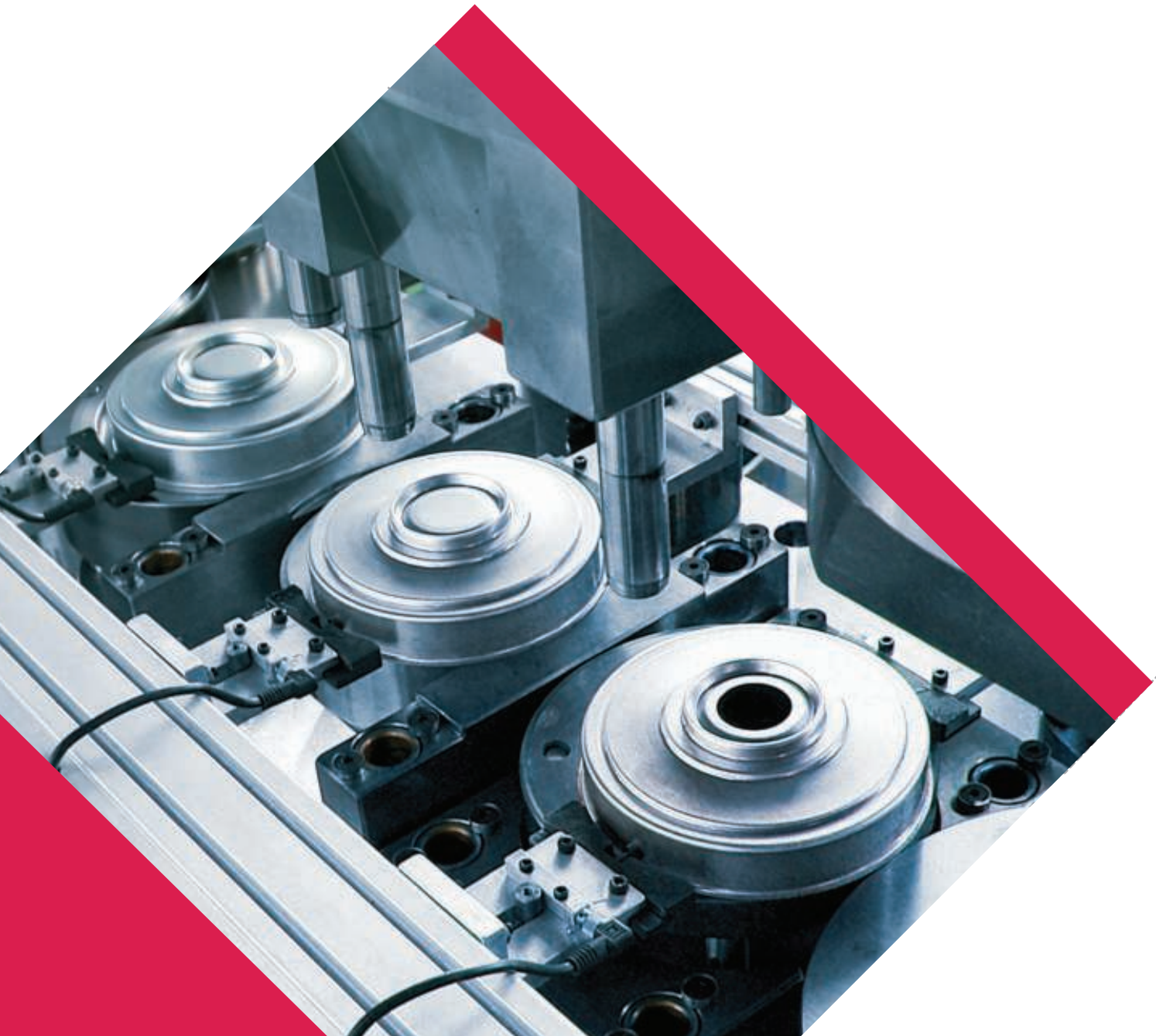
MORE THAN 400 PARTS PER MINUTE!

OUR TOOLING

CUTTING-EDGE PRODUCTS FOR TRANSFER PRESS LINES

DI.GI.EMME tooling are extremely flexible and cover a wide range of operations: for large or small parts and for a variety of production volumes.

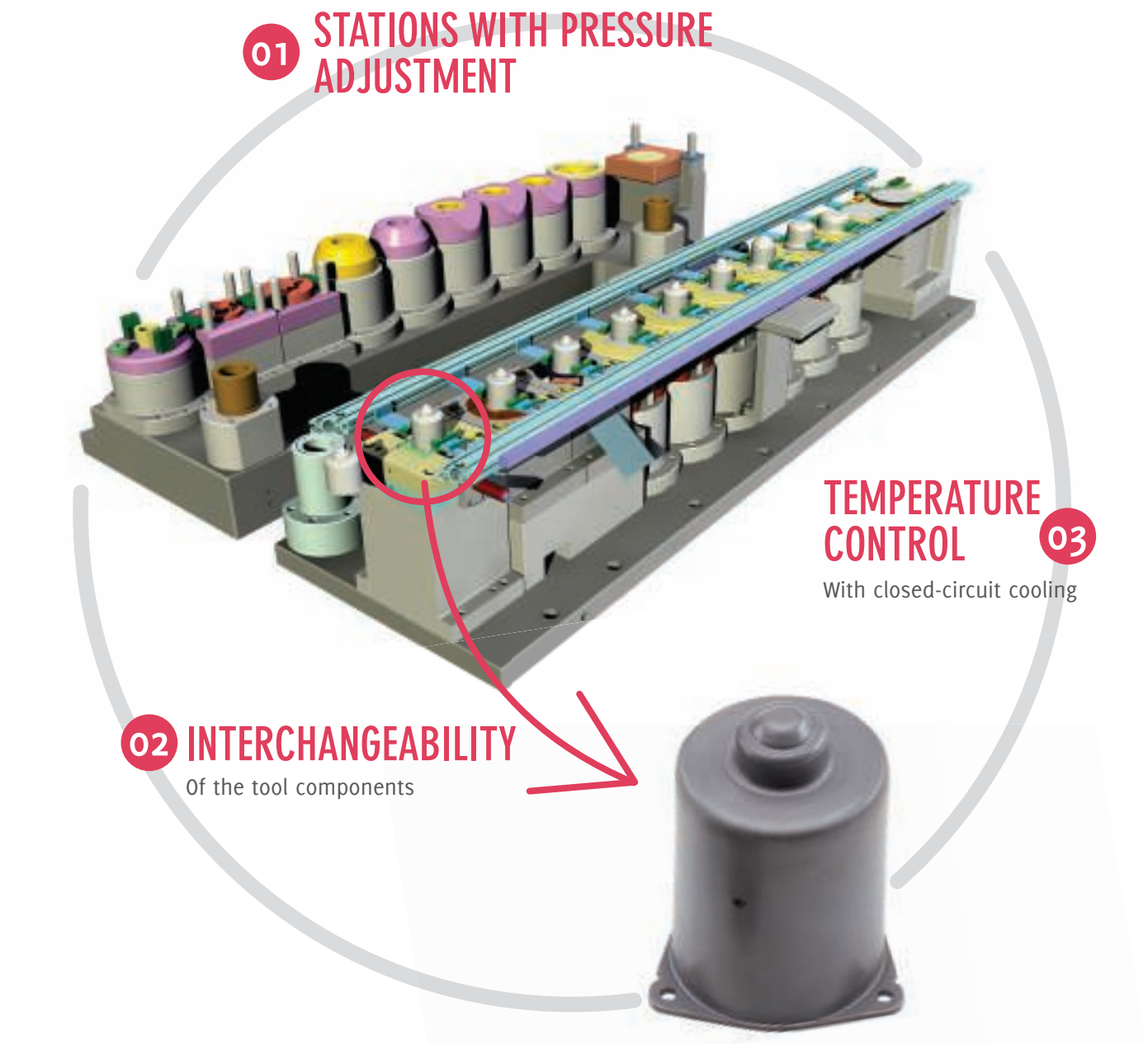
We manufacture tooling for volumes that vary from small runs to millions of parts per year, dedicating the same effort to tool design, combining efficiency, quality and cost-effectiveness based on the individual customer's needs.



TOOLS

MOTORS

ELECTRIC MOTOR CASING



High speed tool, suitable for large volume production runs: high-precision deep drawing as well as adjustable pressure at the individual stations.

Lubrication and temperature control help increase speed, and therefore the production volumes.

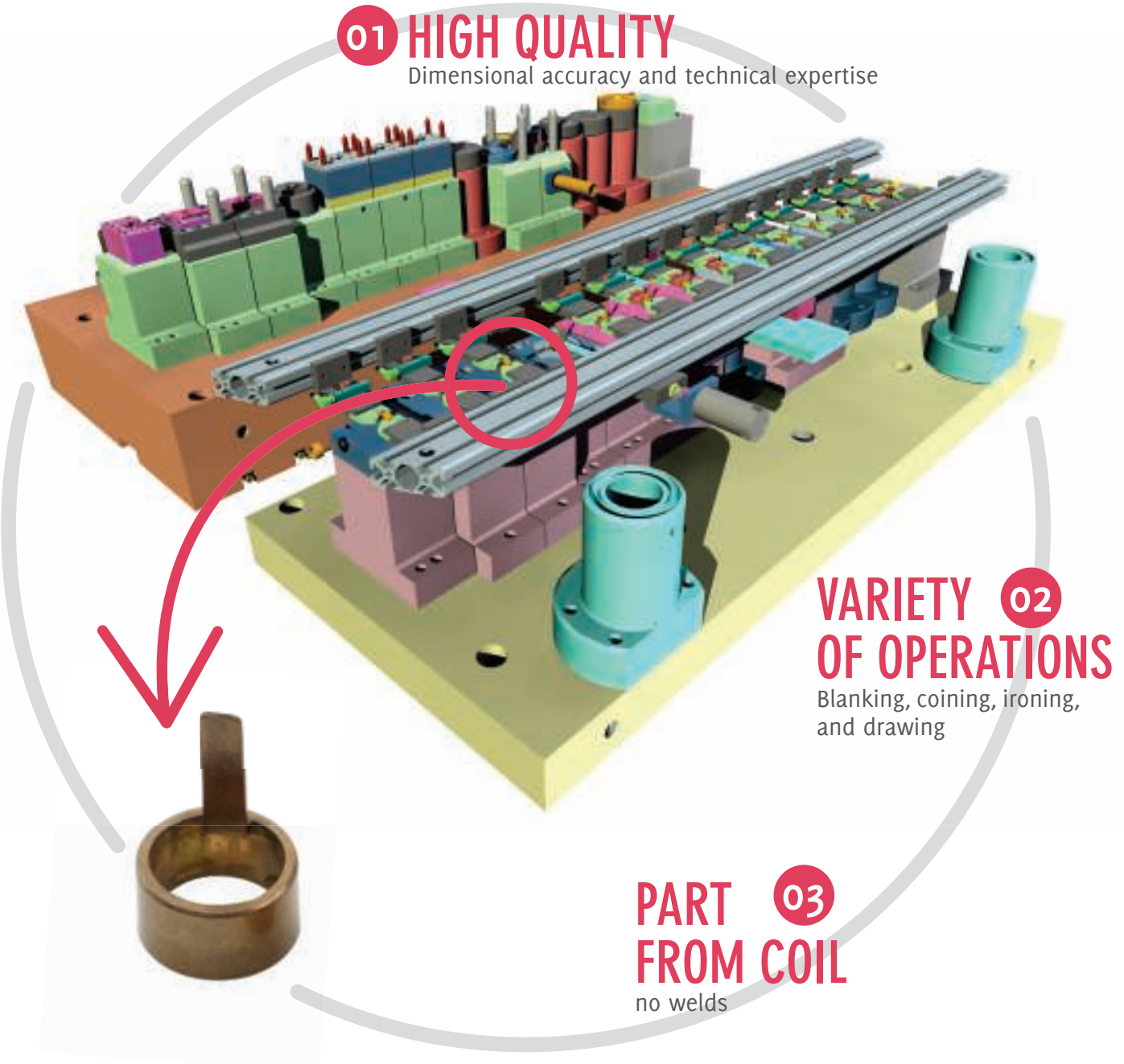
TOOLS

COPPER STAMPING

ONE PIECE CONSTRUCTION, NO WELDS

Tool for the production of a one-piece copper component previously produced from a tube with a number of secondary operations: thanks to this tooling, the part is produced directly from coil using a single machine for blanking, coining, ironing, and drawing.

The absence of welds on the tongue increased the electrical conductivity of the part - an automotive manifold– and the maximum compression of the metal enhanced the performance of the copper.



01 HIGH QUALITY
Dimensional accuracy and technical expertise

VARIETY 02 OF OPERATIONS
Blanking, coining, ironing, and drawing

PART 03 FROM COIL
no welds

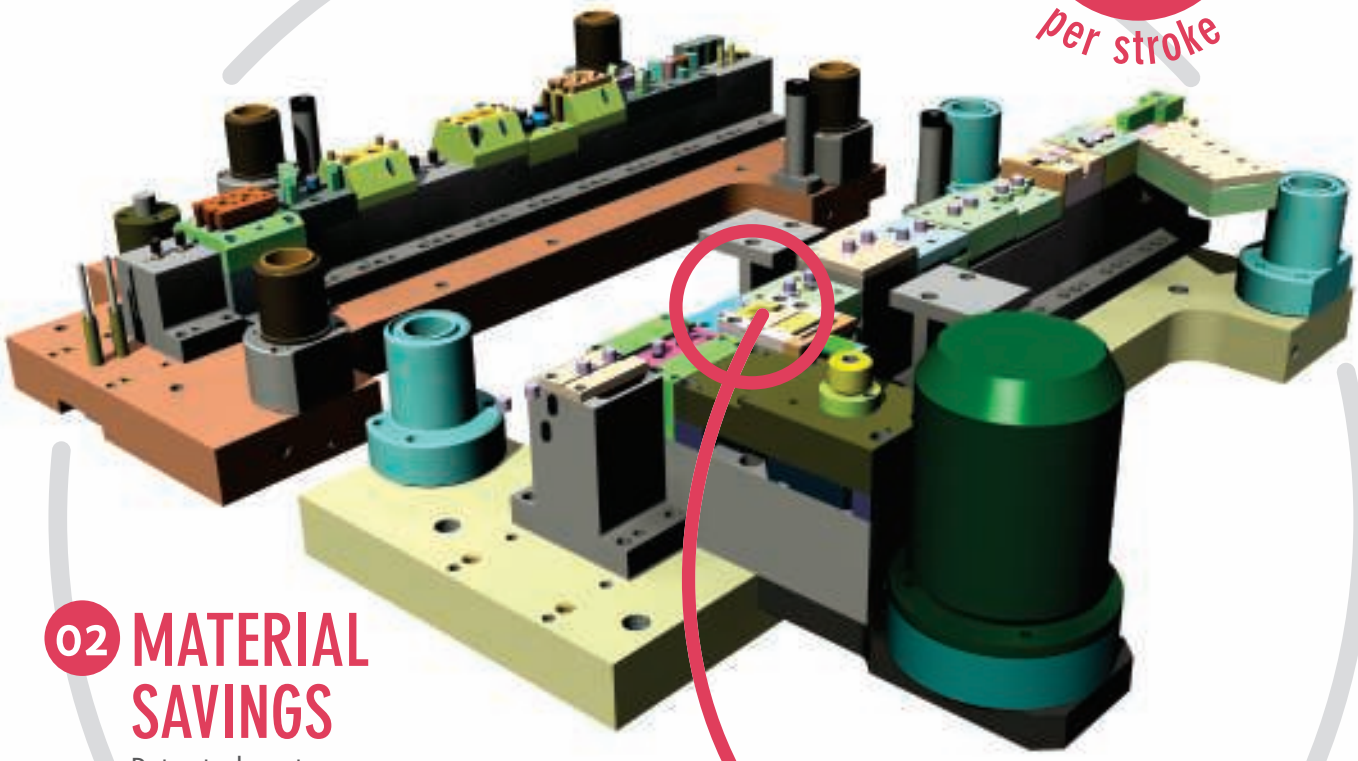
TOOLS

COSMETIC PARTS

ORBITAL CUTTING FOR HIGH QUALITY

01 HIGH RATE
350 parts per minute

2 PARTS *per stroke*



02 MATERIAL SAVINGS
Patented system

03 ORBITAL CUTTING
In tool for maximum flatness

Tooling for the production of technical components with high-quality cosmetic finish, in this example a sprayer cap. This tool offers extremely high production rates and volumes, thanks to the possibility of producing two parts per stroke. Orbital cutting is performed in the tool leaving exceptionally high quality cleanly sheared– edge eliminating the need for secondary machining operations.

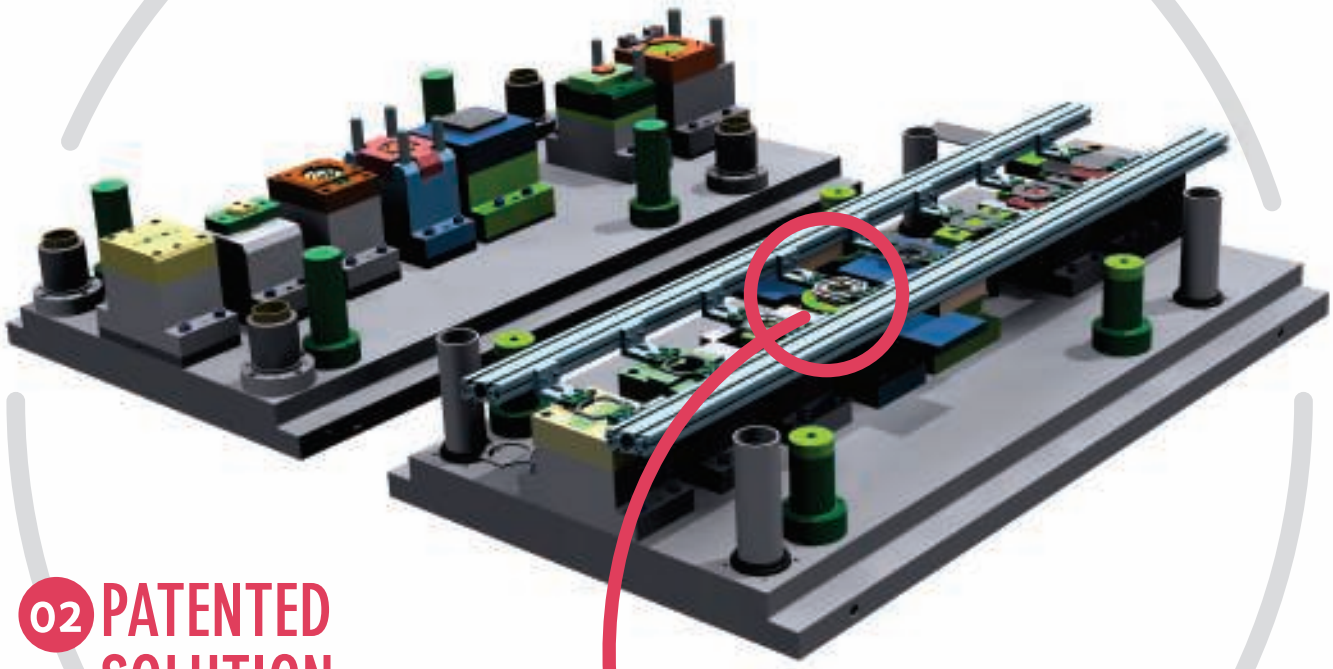
TOOLS

AUTOMOTIVE

FINE BLANKING WITH TRANSFER TOOLING

This tooling allows tight tolerances to be maintained for highest part quality and precision. All operations necessary to complete the part are performed right inside the press. No secondary operations required, including cross-hatched serrated finish. This high-precision blanking is 100% comparable to that obtained in dedicated fine blanking presses.

01 FINISHED PARTS
Off the press



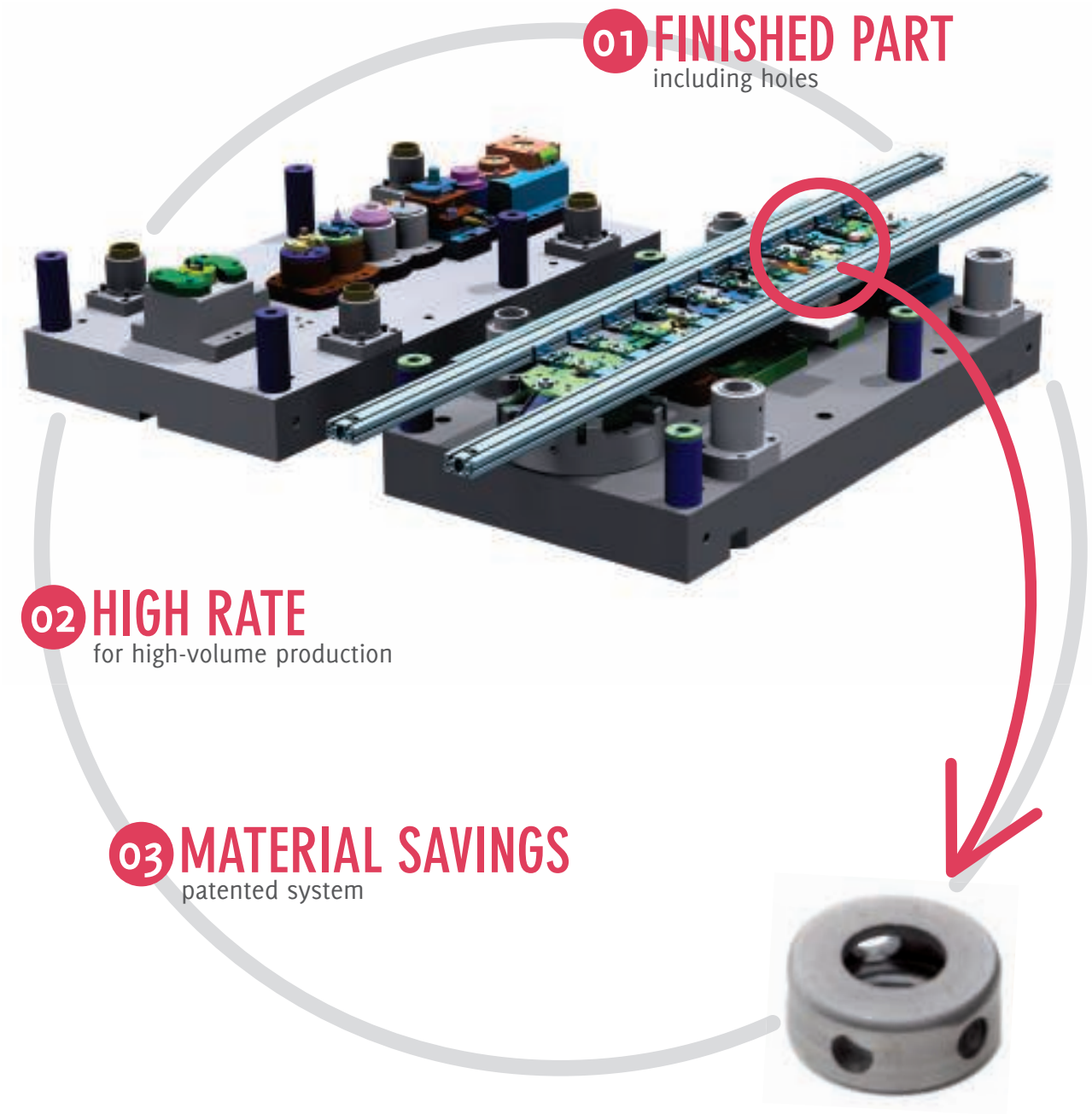
02 PATENTED SOLUTION

03 BLANKING
Just like a fineblanking press

TOOLS

BUSHING

PANEL RADIATOR COMPONENT



High speed tooling for large volume production of parts which exit the press completely finished, including the holes: a single press is used to perform all operations from coil to finished part.

A patented system allows significant material savings.

TOOLS

STAINLESS STEEL

IN-TOOL TAPPING

This tooling processes stainless steel for extremely high precision parts, in terms of size and geometry.

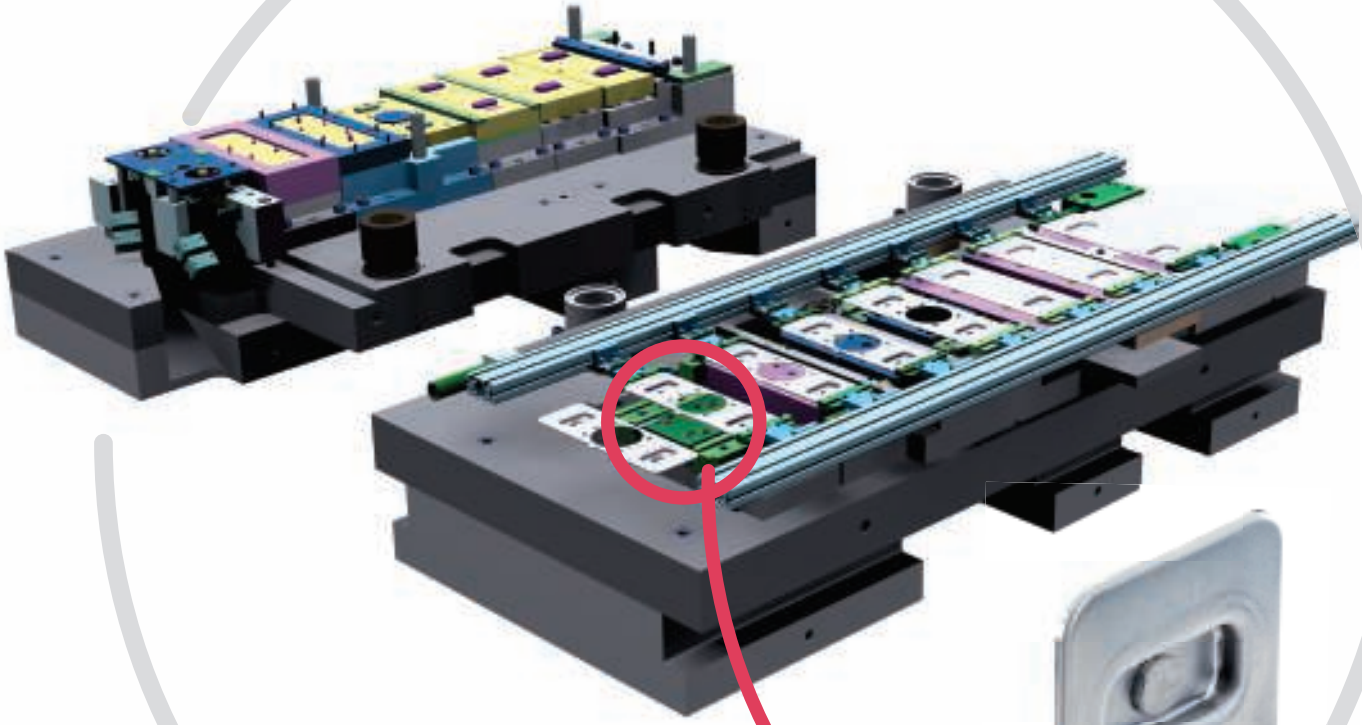
Part tapping is performed directly in the tool and does not require any secondary operations.

TOOLS

AIRBAG PLATE

IN-PRESS ASSEMBLY

01 STUD INSERTION
in-press



02 SPACE SAVINGS

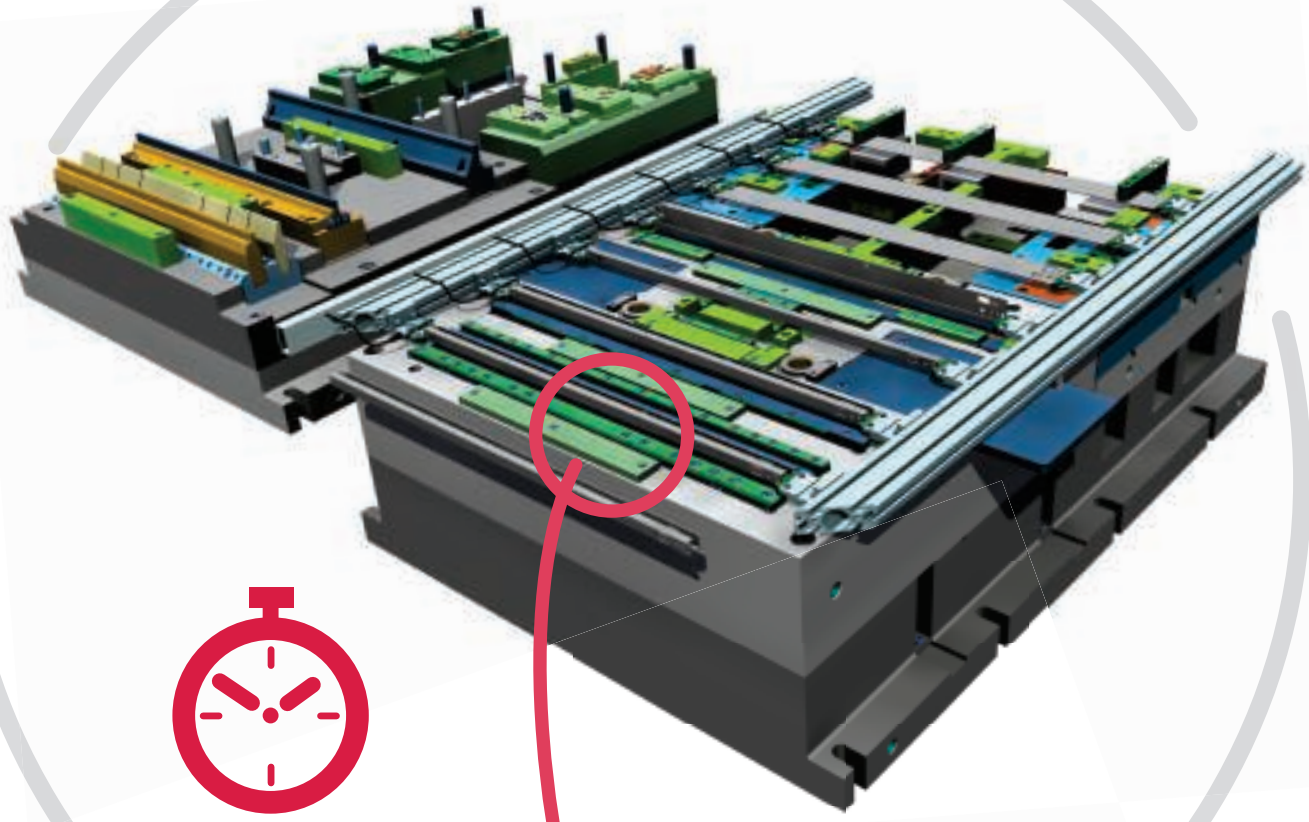
The tooling for this airbag component was designed to occupy the least possible space while reducing costs: stud insertion in-press, eliminating secondary operations and downstream equipment.

TOOLS

DRAWER SLIDES

TOOLING FOR LONG, NARROW PARTS

01 PRECISION PARTS



60 STROKES /MINUTE

FLEXIBILITY 02

A number of lengths with a single tool

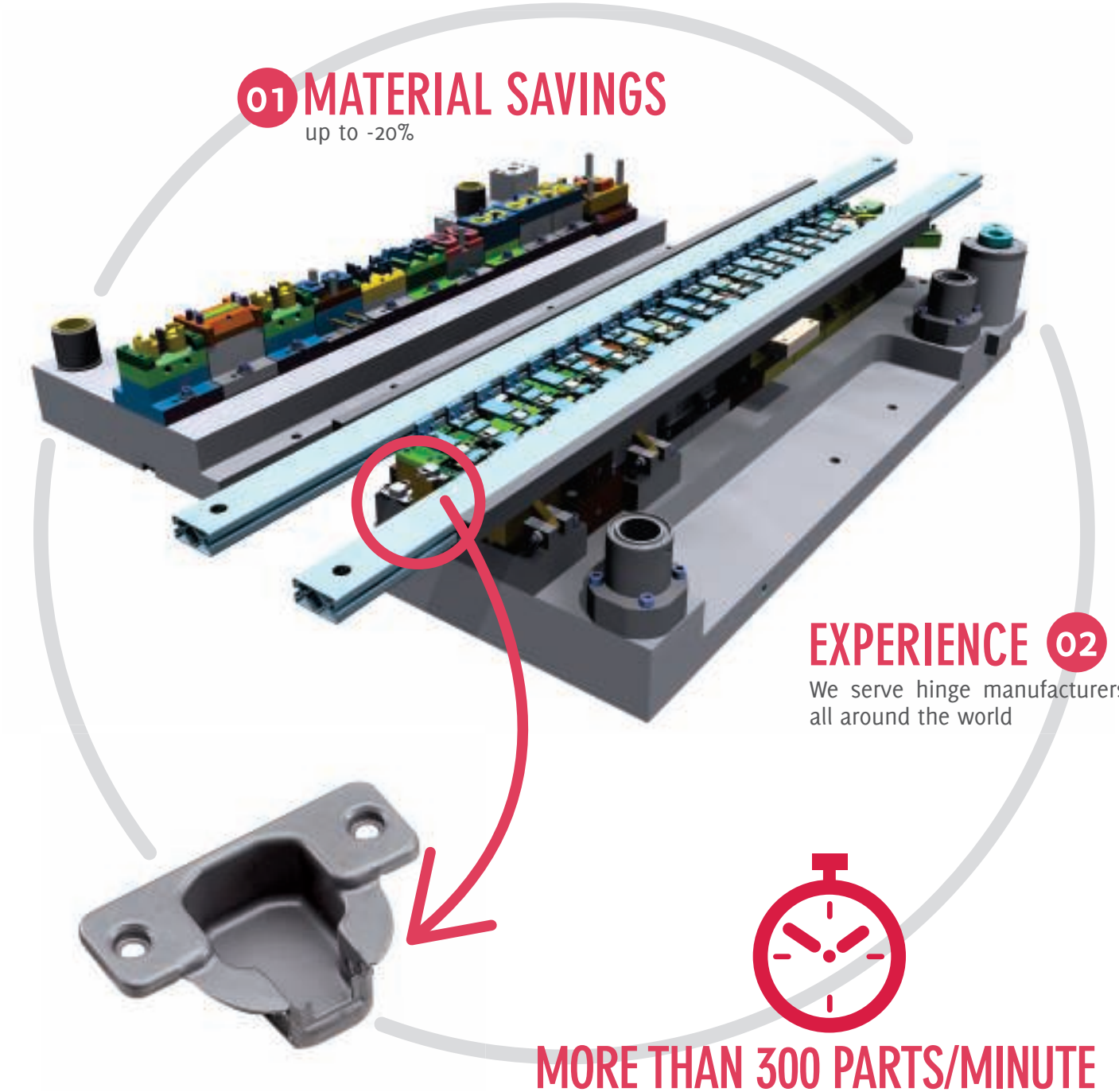
Tooling for the production of long narrow parts such as drawer slides. The tool can run right- and left-hand parts and can be set-up for lengths from 200 to 700 mm in just a few steps. This tool can produce high precision parts at a speed of 60 strokes per minute.

TOOLS

HINGES

PATENTED SYSTEMS AND WORLD-WIDE REPUTATION

DI.GI.EMME hinge tools are renowned at manufacturers around the world: the company's extensive experience has led to a number of patents, that allow up to a 20% material saving. Parts can be produced one or two per stroke at up to 250 strokes per minute. The calibrated embosses around the stud holes are formed in the tool.



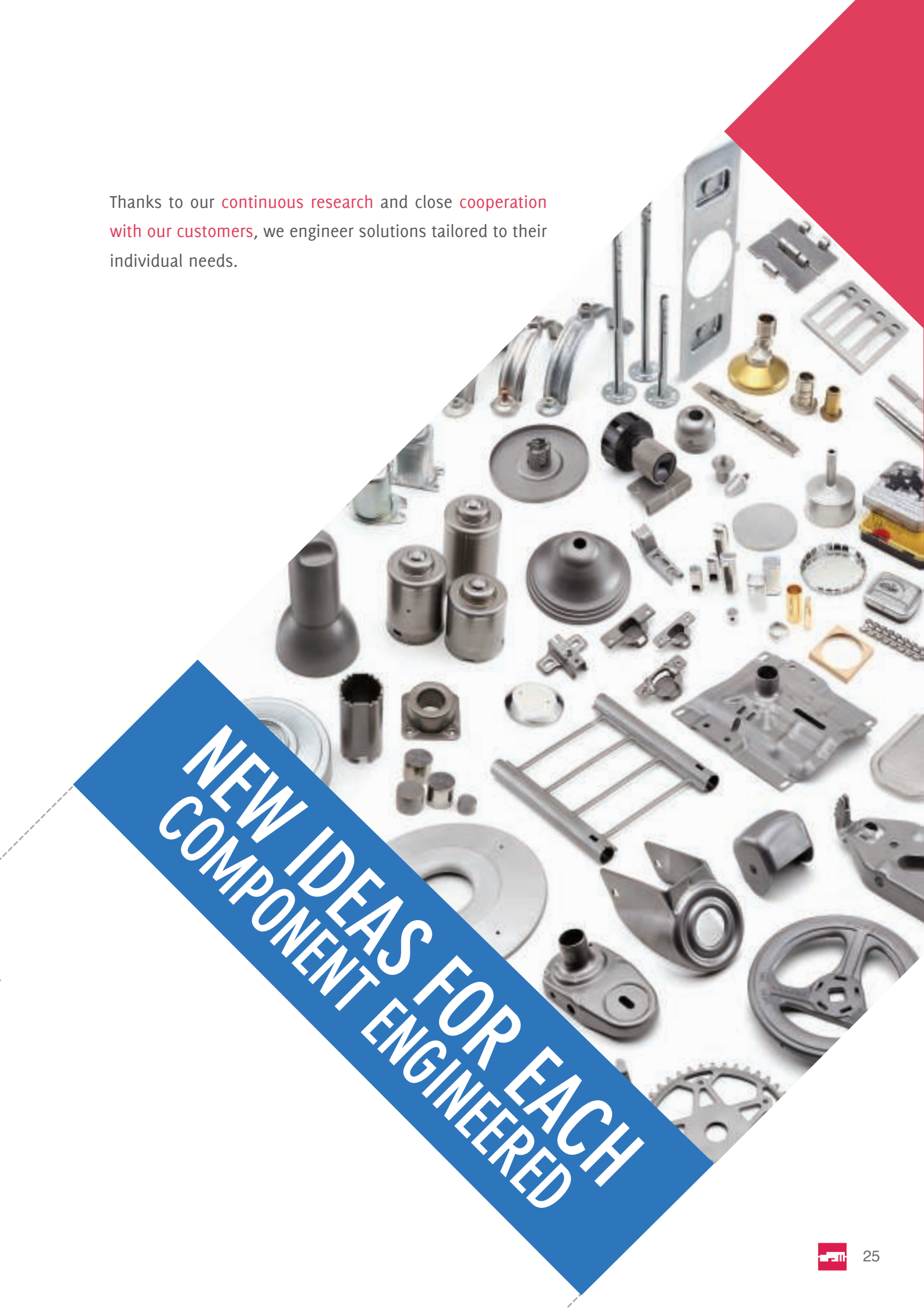
Di.Gi.Emme LINES

COUNTLESS APPLICATIONS FOR ALL INDUSTRIES

DI.GI.EMME tooling innovates processes where post-production machining and other operations are necessary to meet the quality requirements.

Patents and avant-garde solutions allow DI.GI.EMME to always provide customers with the best answer, combining functionality and savings while improving the quality of the product manufactured.

Thanks to our continuous research and close cooperation with our customers, we engineer solutions tailored to their individual needs.

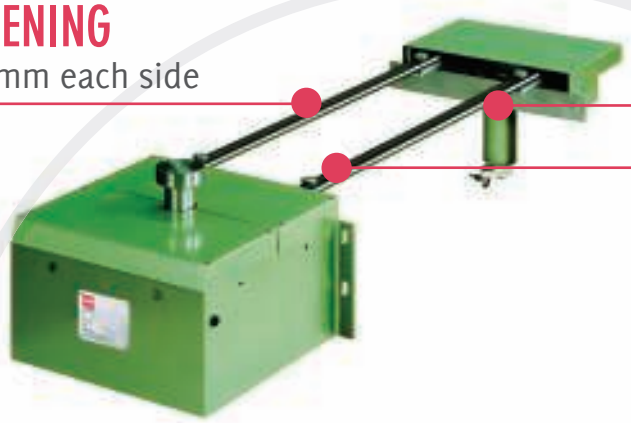


NEW IDEAS FOR EACH COMPONENT ENGINEERED

TRANSFER

T200 - T300

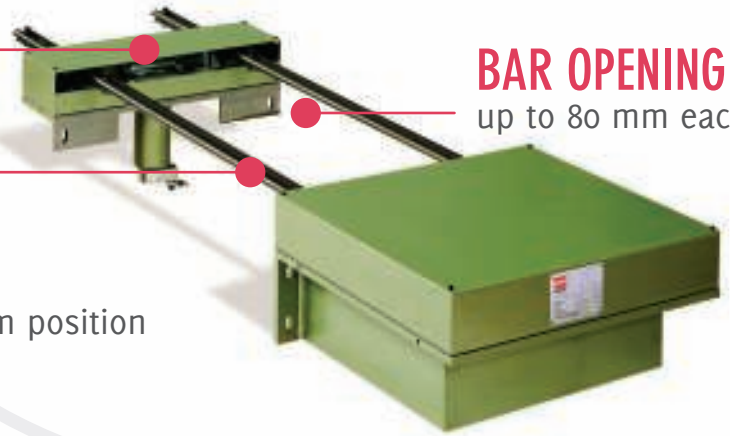
FOR SMALL AND MEDIUM SIZED PARTS



BAR OPENING
up to 60 mm each side

PITCH
up to 200 mm

ADJUSTABLE BAR POSITION
with 500 mm maximum position



PITCH
up to 300 mm

BAR OPENING
up to 80 mm each side

ADJUSTABLE BAR POSITION
With 700 mm maximum position

UP TO 150 STROKES/MINUTE!

Compact, high-speed, modular mechanical transfer unit for all mechanical presses. Suitable for the transfer of small and medium sized parts.

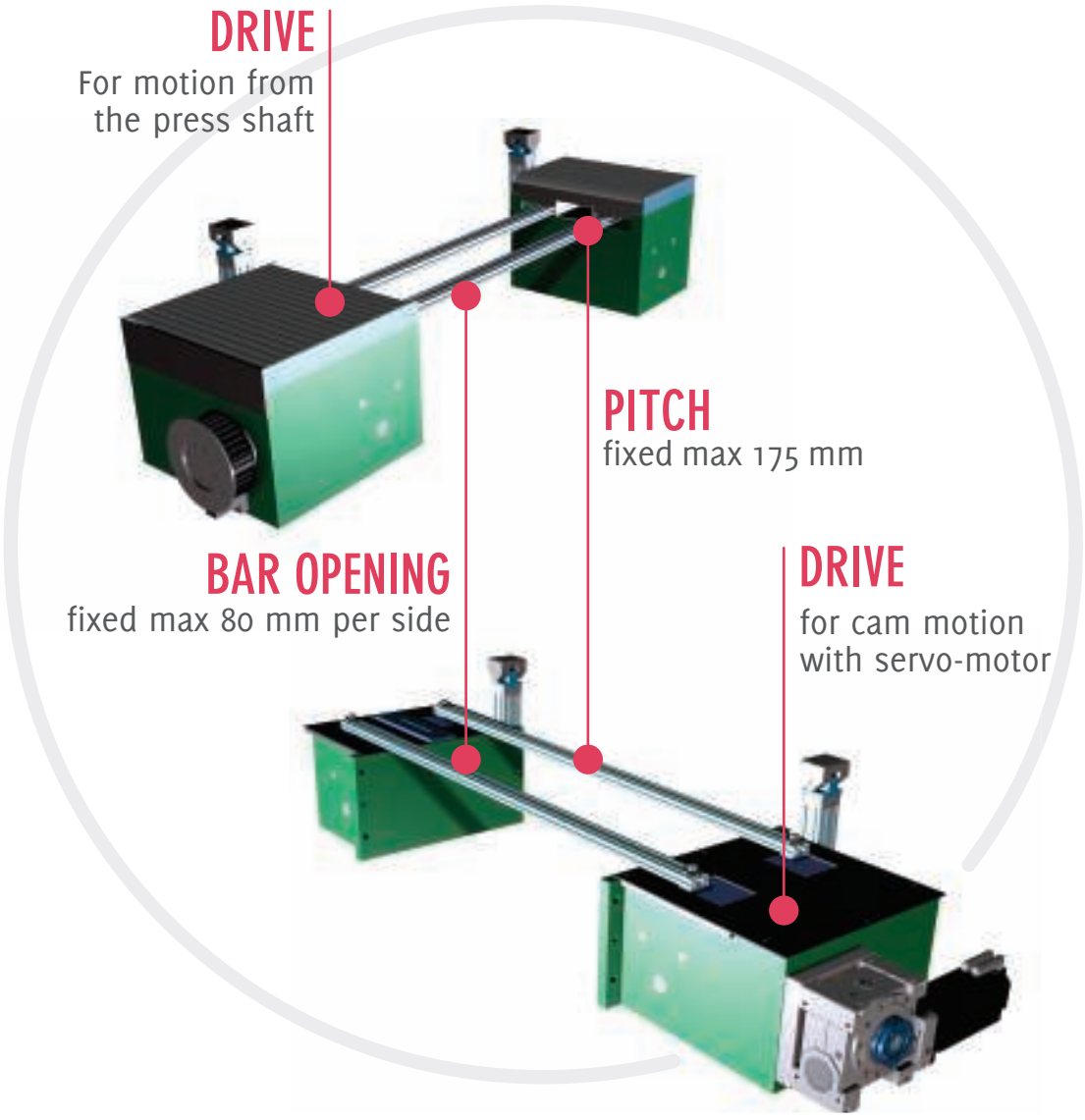
The two units are coupled using a torsion bar that does not interfere with the tooling. Movement is taken from the press through a safety coupling.

Transfer motion profiles are custom designed for each specific application. Drives can be central, to one side, on top or bottom

TRANSFER

T150 R2S/R2S-M

FOR HIGH-SPEED AND LARGE PRODUCTION RUNS



Compact, high-speed, modular mechanical transfer unit for all mechanical presses. Designed for small and medium parts and high stroke rates. Provides heavy duty service and offers high speed performance.

The bar opening is guaranteed by the direct connection to the ram. No transmission parts interfere with the tooling or the press.

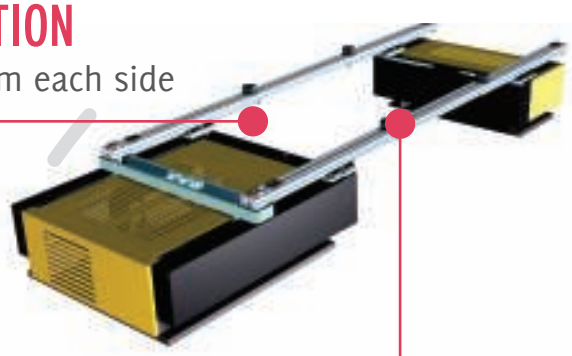
UP TO 250 STROKES/MINUTE!

TRANSFER

TE 2A-700/1000

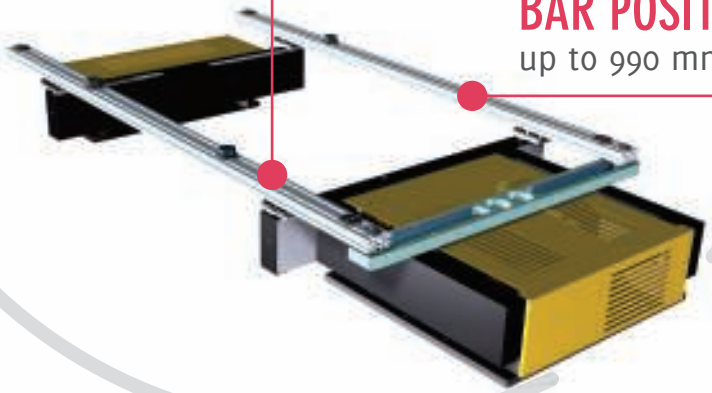
ELECTRONIC, COMPACT, RUGGED

ADJUSTABLE BAR POSITION
up to 690 mm each side



PITCH
up to 450 mm

ADJUSTABLE BAR POSITION
up to 990 mm



Intermediate solutions from 600 to 1100 mm also available

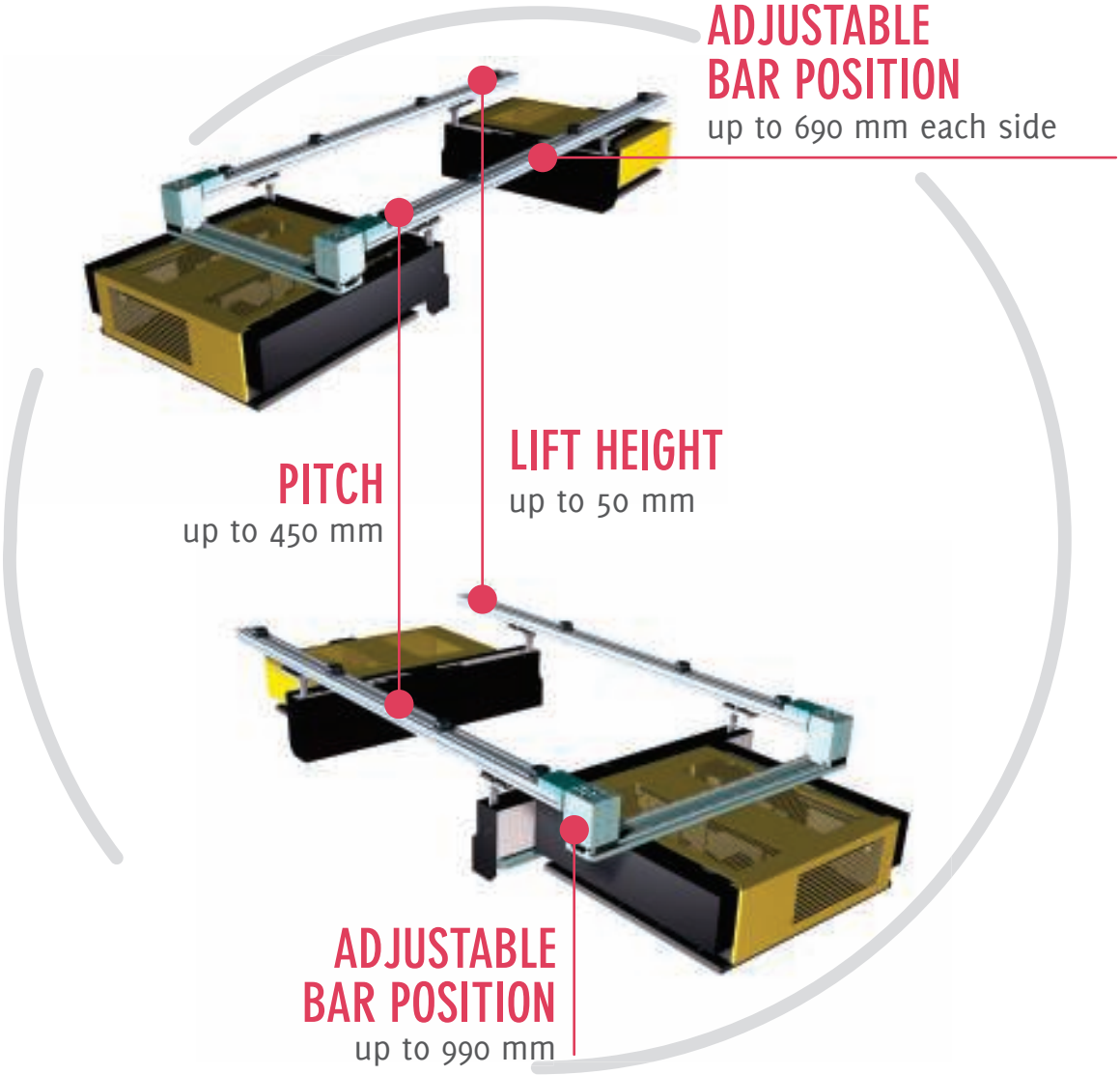
Transfer unit designed for a large range of applications. As it has no mechanical connections, it can be used on hydraulic presses as well as most mechanical presses. Pitch and bar opening can be adjusted continuously.
Electronic adjustment control makes this a versatile, rapid unit for a wide range of processing. Brushless motors, absolute encoders and recirculating ball guides provide outstanding motion accuracy. Electronic control guarantees absolute safety during operation. These units are designed to be as space efficient as possible and can be positioned anywhere inside the press.

MORE THAN 100 STROKES/MINUTE!

TRANSFER

TE 3A-700/1000

THREE-AXES, ELECTRONIC DRIVE



The TE3A series of transfer units combine the features of the TE2A series with the possibility for bar lift motion up to 50 mm. This makes them highly suitable for the production of medium sized parts that require the piece to be lifted during transfer from one station to the next. Just like the TE2A series, the transfer can be located anywhere: installed between the press uprights, set on the press bed, or attached to the upper frame, upside-down.

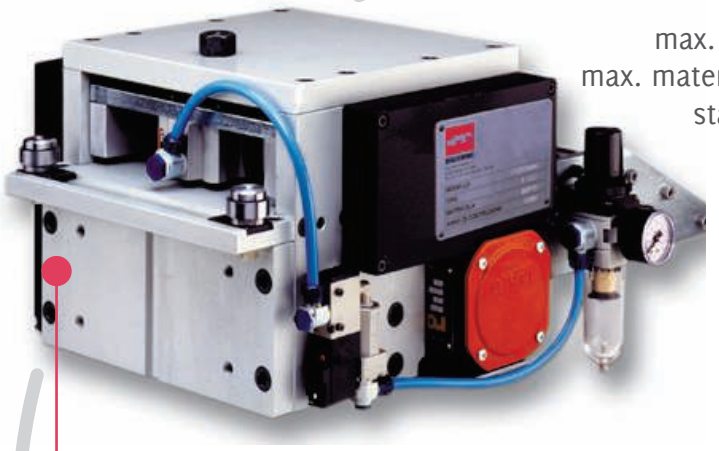
FEEDERS

COMPACT, HIGH SPEED

To feed coil to transfer press lines DI.GI.EMME has created the BF2002 and BF 1502-Z servo feeders. Compact, high-speed, they occupy little space and are easy to use as they have been designed based on the experience of daily use.

BF 1502-Z STAGGER FEEDER

max. coil size: 150 mm
max. material thickness: 2 mm
max. material cross-section:150 mm²
stagger movement: 100 mm



BF2002 FEEDER

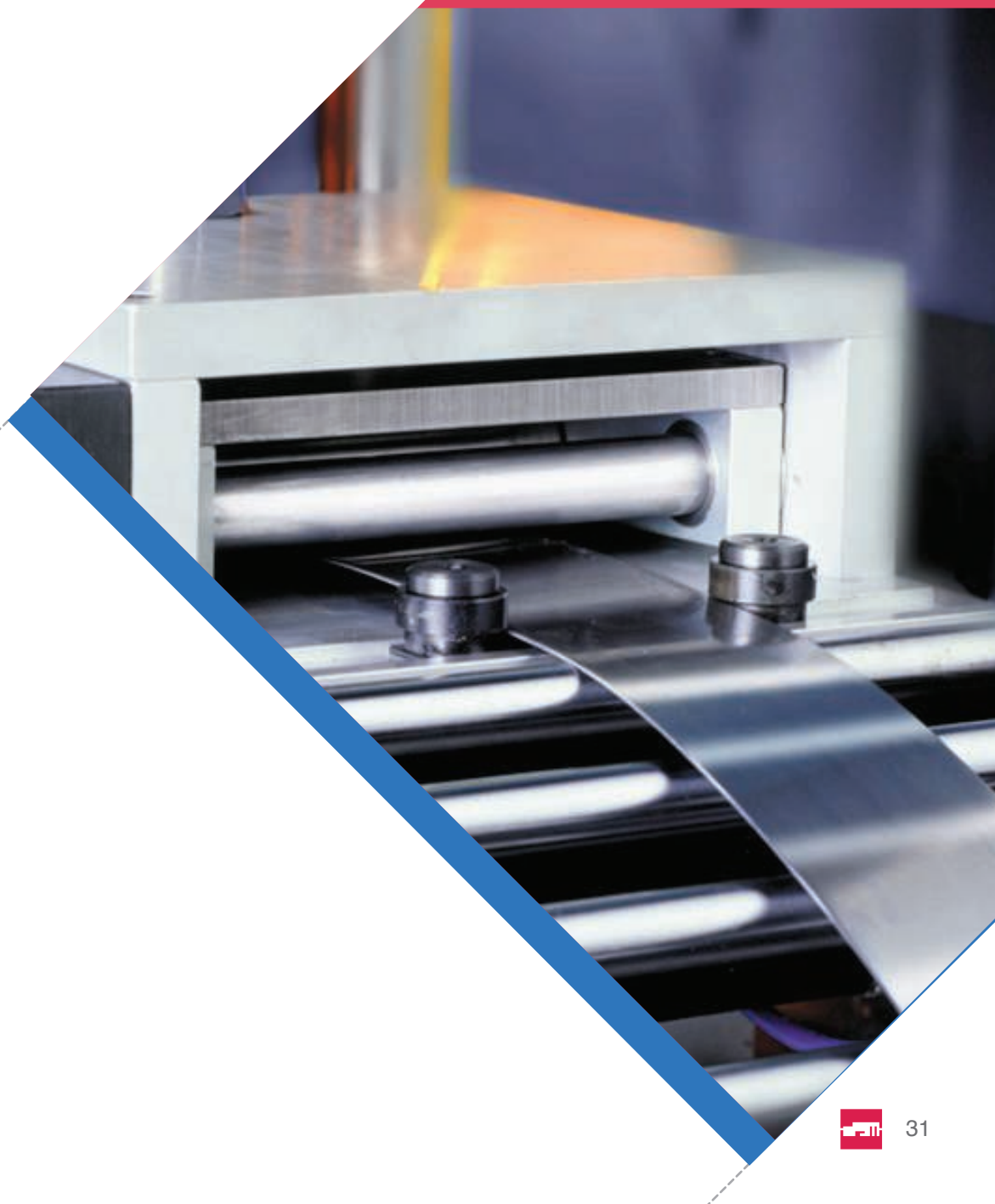
max. coil size: 200 mm
max. material thickness: 2 mm
max. material cross-section: 300 mm²

BF2002 FEEDER

Both rollers are driven by a belt transmission and a servo motor. The top roller is moveable and governed by a mechanism that guarantees the parallelism with the bottom roller. The pressure on the rolls can be eliminated without moving them, avoiding excess noise and marks on the sheet metal.

BF 1502-Z STAGGER FEEDER

This feed is designed for unparalleled material savings. The traversing unit is driven by a ball screw for accurate, repeatable positioning.



EXPERIENCE

PROCESSING ALL MATERIALS, EVEN STAINLESS STEEL

You need lots of experience to handle special materials.
DI.GI.EMME can provide tooling designed for use with screen printed metal or coated materials, stainless steel or molybdenum, as well as with all standard materials.

EXCELLENT APPEARANCE

no protective film required

IN-LINE ASSEMBLY

Hinges are produced, chamfered and calibrated, and can be assembled in-line

QUALITY

FINISHES EQUAL TO THOSE PRODUCED ON FINE BLANKING PRESSES

110 PARTS/MINUTE
precision parts, including holes

BICYCLE PARTS

Thanks to DI.GI.EMME tooling, you can blank high precision quality parts even using conventional presses.

HIGH PRECISION = TIGHT TOLERANCES

AUTOMOTIVE

alloy steel, drawn, extruded and chamfered with no secondary operations

QUALITY BLANKING

the finished part exits the tool with exceptional edge quality like fine blanking, with all bending operations performed in the same press.

HIGH PRECISION

QUALITY RESULTS FOR EVEN THE TINIEST PARTS

HIGH PRECISION

part with rounded edges eliminating the need for secondary tumbling

ONE-PIECE

no welds

INNOVATION

turned parts can now be stamped thanks to tooling that enables internal, external and height calibration with the tightest of tolerances

SLOTTING

performed in a single direction thanks to part rotation. The tooling is optimized for all processes performed where there is limited space available

Small and tiny parts that were previously turned now can be produced using high precision tooling; complex parts with no welds, just change out a few die inserts to cater to different versions: these innovative technological solutions lead to high quality and increased productivity.

SOLUTION

a “tiny” solution for a seemingly unsolvable problem

FLEXIBLE TOOLING

Change versions and sizes by just changing-out a few die inserts

TINY PARTS

from 3 to 7 mm

FLEXIBILITY

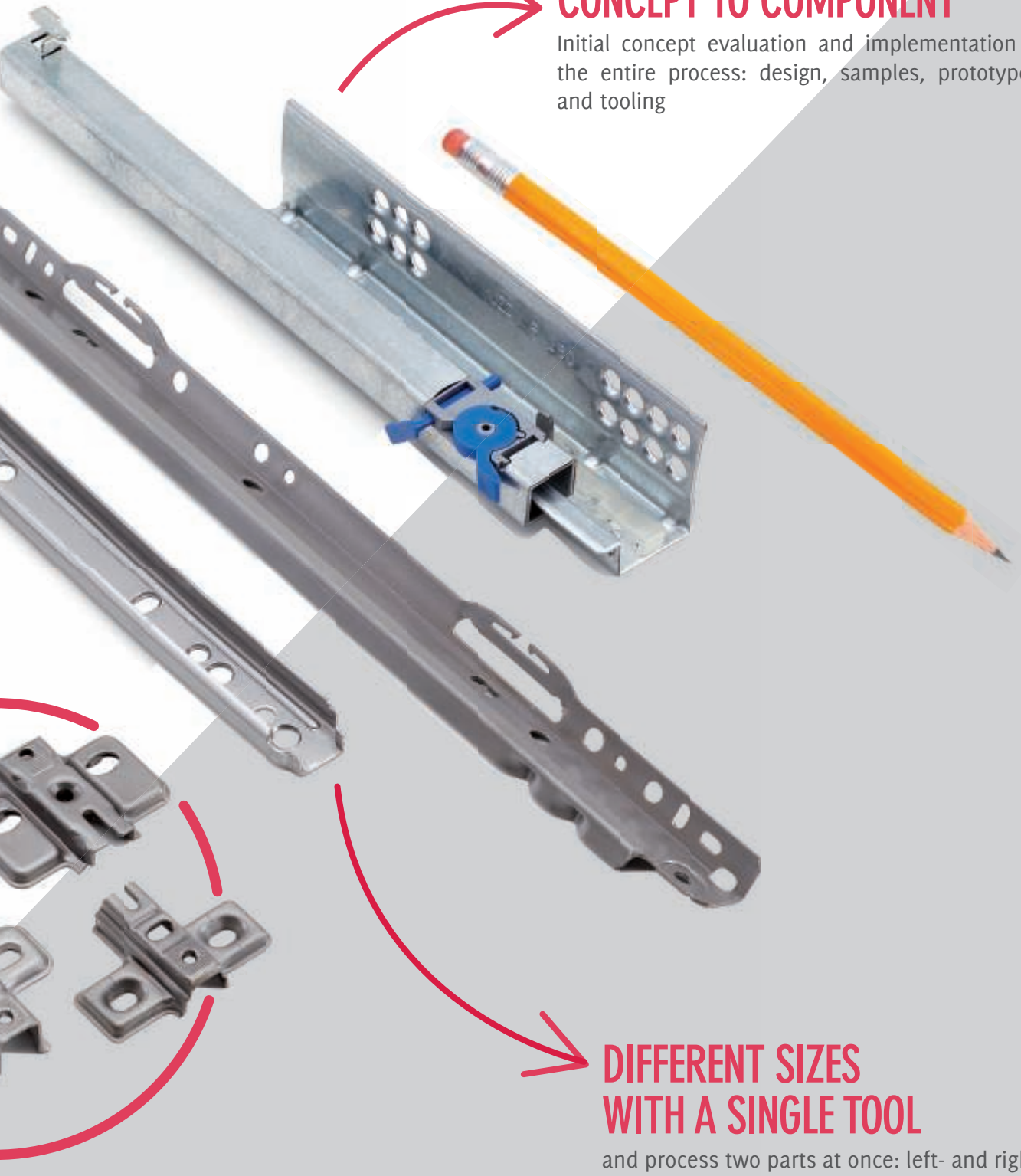
ONE MACHINE - LOTS OF PROCESSES

UP TO 200 PARTS per MINUTE

UP TO 250 STROKES/MINUTE

patented solutions for material savings, one or two parts per stroke

DI.GI.EMME tooling can perform a wide range of processes on a variety of materials.
Our tools are designed to produce different versions of the same part in a single die set. You can manufacture different lengths and sizes, reducing downtime and costs.



CONCEPT TO COMPONENT

Initial concept evaluation and implementation of the entire process: design, samples, prototypes, and tooling

DIFFERENT SIZES WITH A SINGLE TOOL

and process two parts at once: left- and right-hand parts produced simultaneously in the same tool

EFFICIENCY

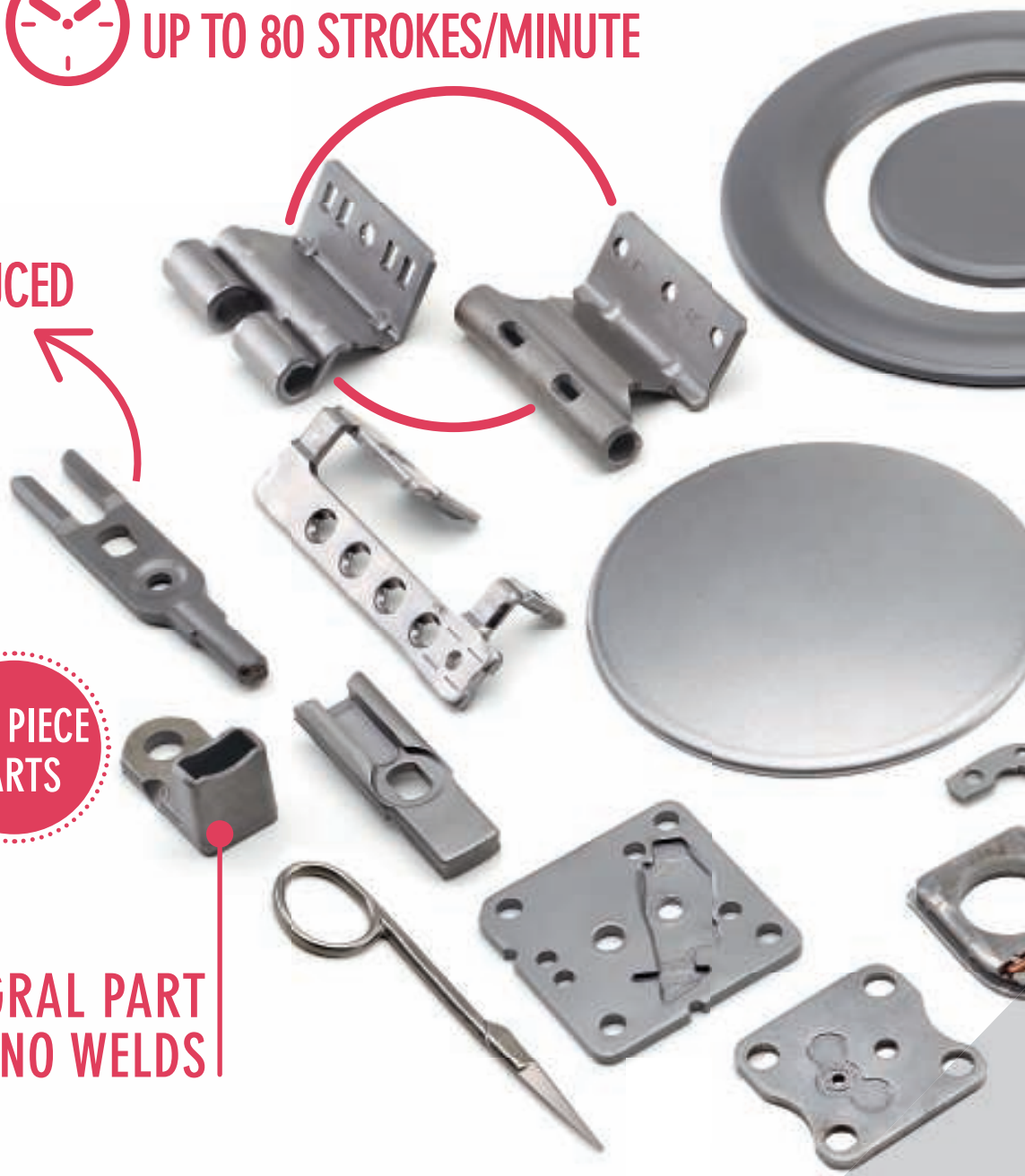
PARTS COINED AND BLANKED IN THE SAME TOOL

UP TO 80 STROKES/MINUTE

PART PRODUCED FROM WIRE

ONE PIECE PARTS

INTEGRAL PART NO WELDS



! PART BLANKED AND COINED IN THE SAME TOOL

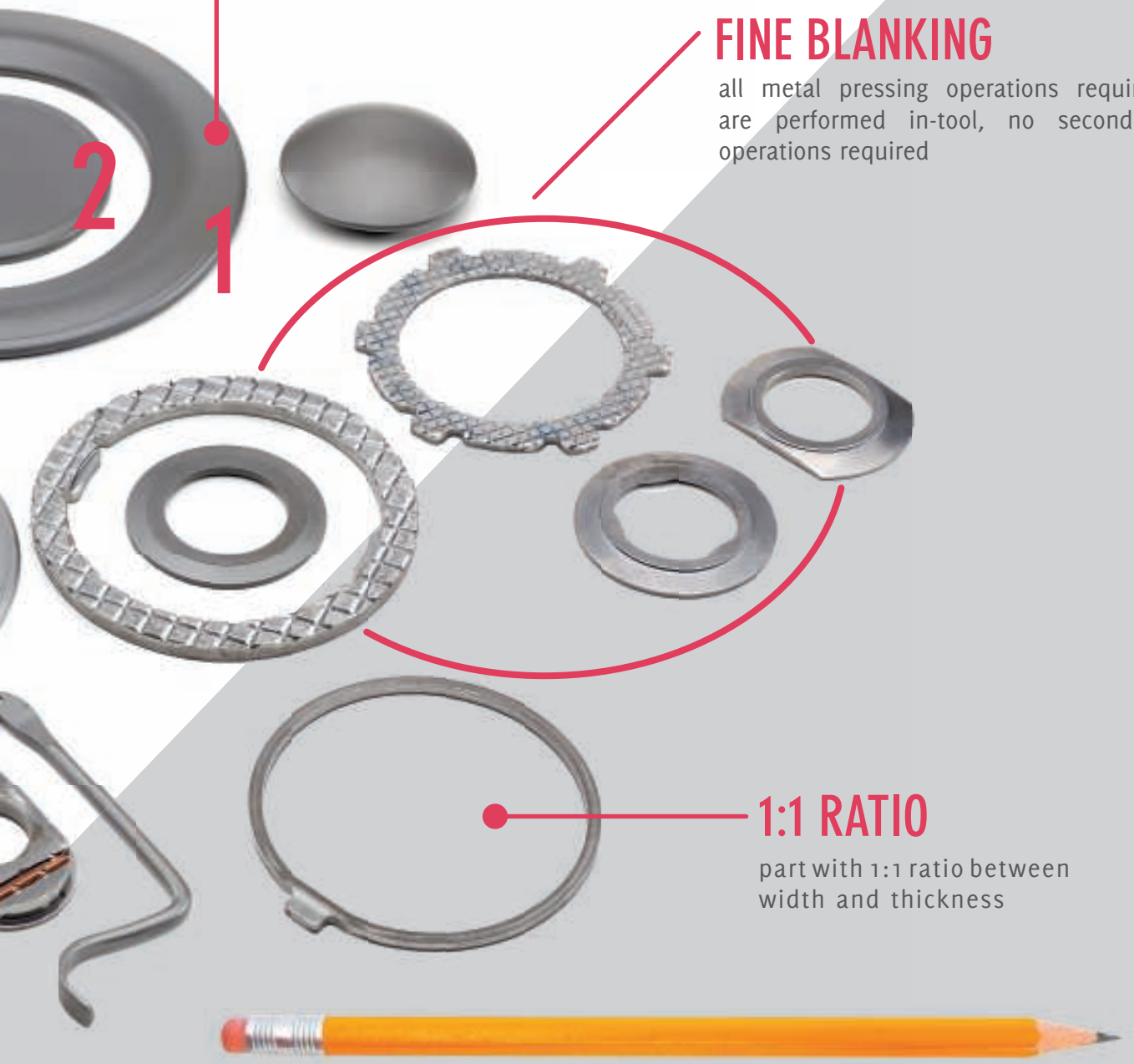
Blank and coin in the same tool for maximum efficiency obtaining finished parts: this is truly innovative.

TWO PARTS IN ONE

these two parts are produced simultaneously in the same tool. The inner one is nested to optimize the use of the slug from the outer one

FINE BLANKING

all metal pressing operations required are performed in-tool, no secondary operations required

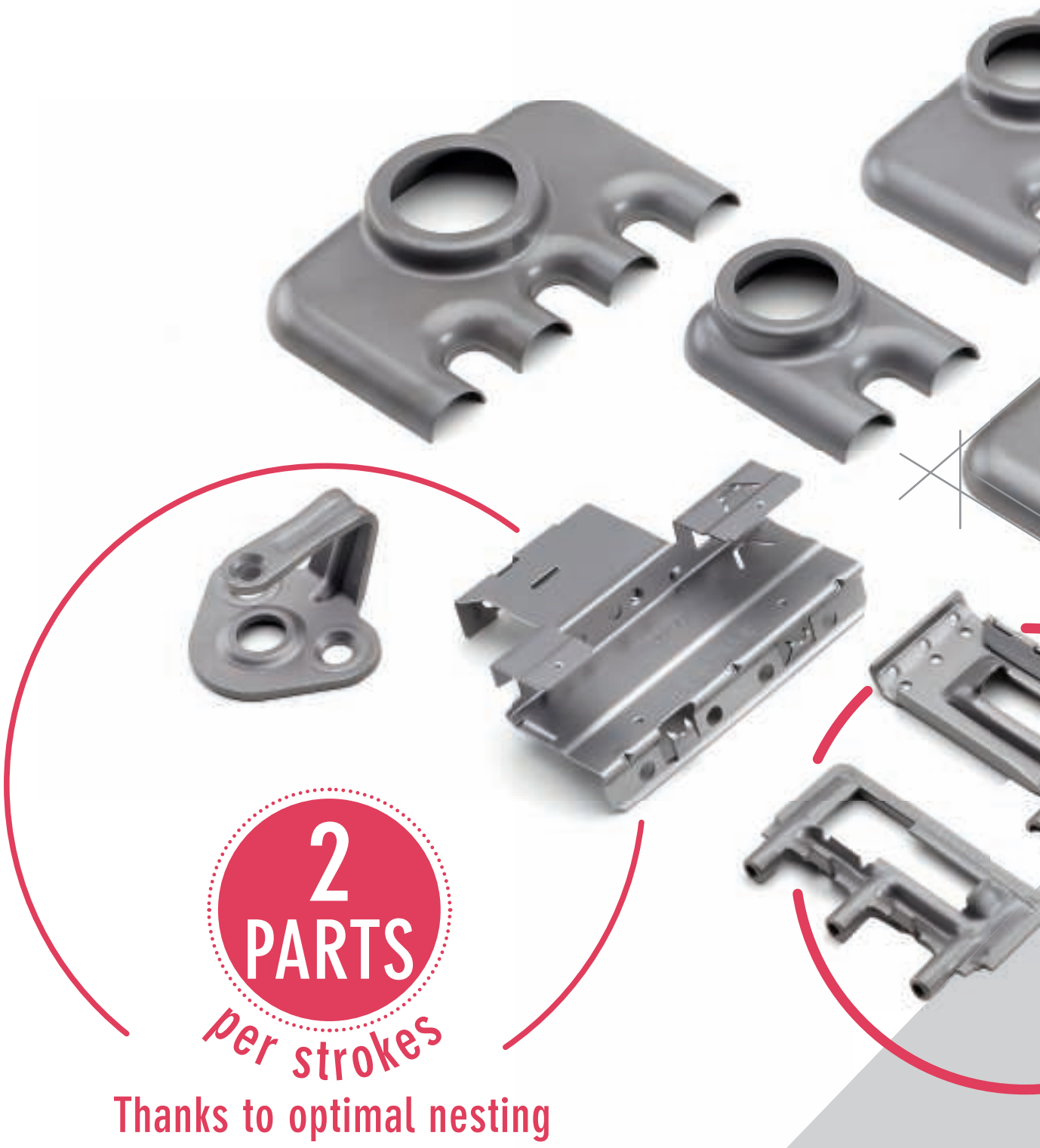


1:1 RATIO

part with 1:1 ratio between width and thickness

PRODUCTIVITY

LARGE VOLUME PRODUCTION, INNOVATIVE PROCESSES



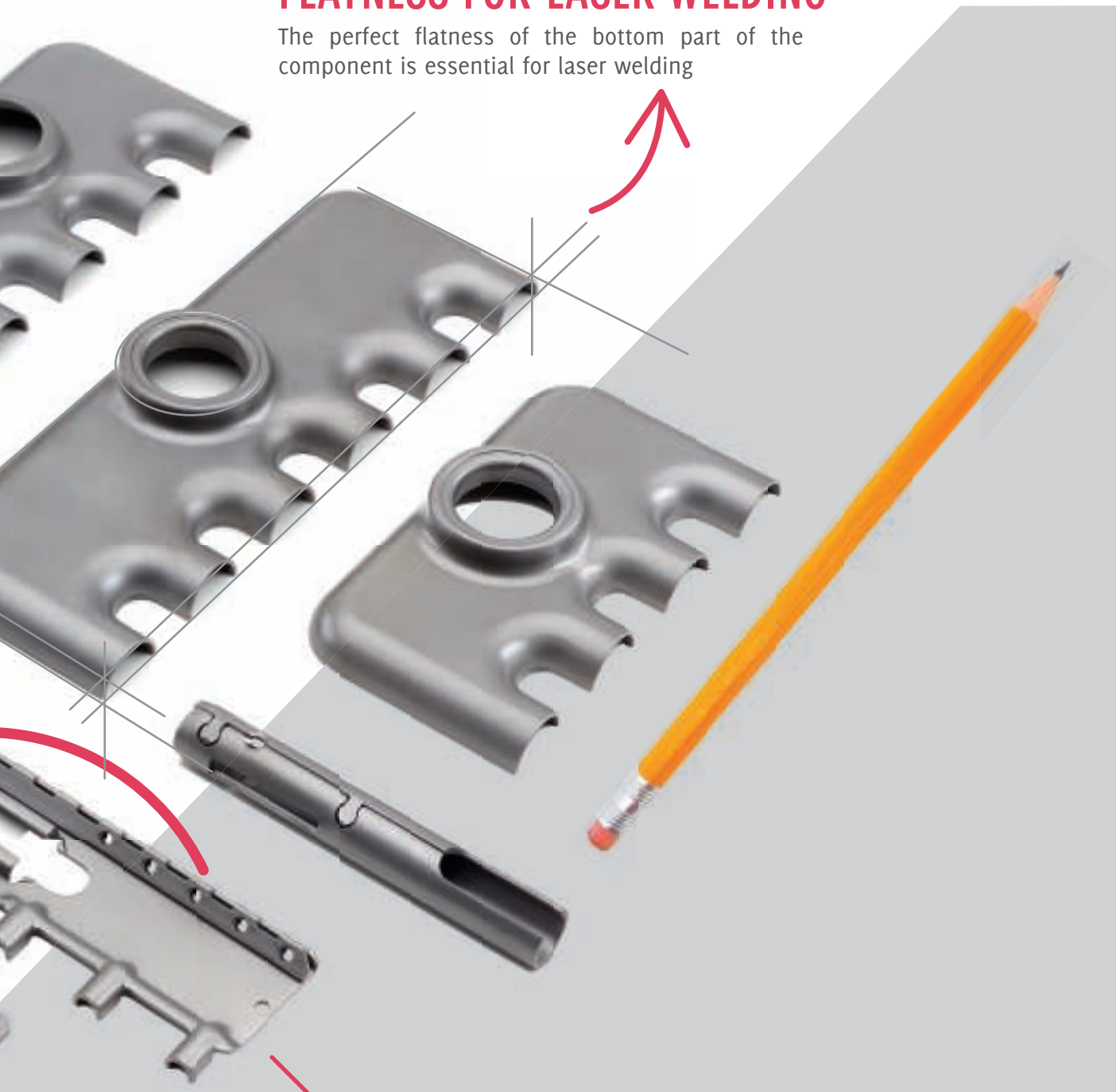
2 PARTS
per strokes

Thanks to optimal nesting

Waste-efficient solutions for high volume production runs: multiple parts produced per stroke, best nesting layout to optimize material use, and innovative patented solutions.

FLATNESS FOR LASER WELDING

The perfect flatness of the bottom part of the component is essential for laser welding



ONE SINGLE TOOL FOR SIMULTANEOUS PRODUCTION OF LEFT AND RIGHT HAND PARTS

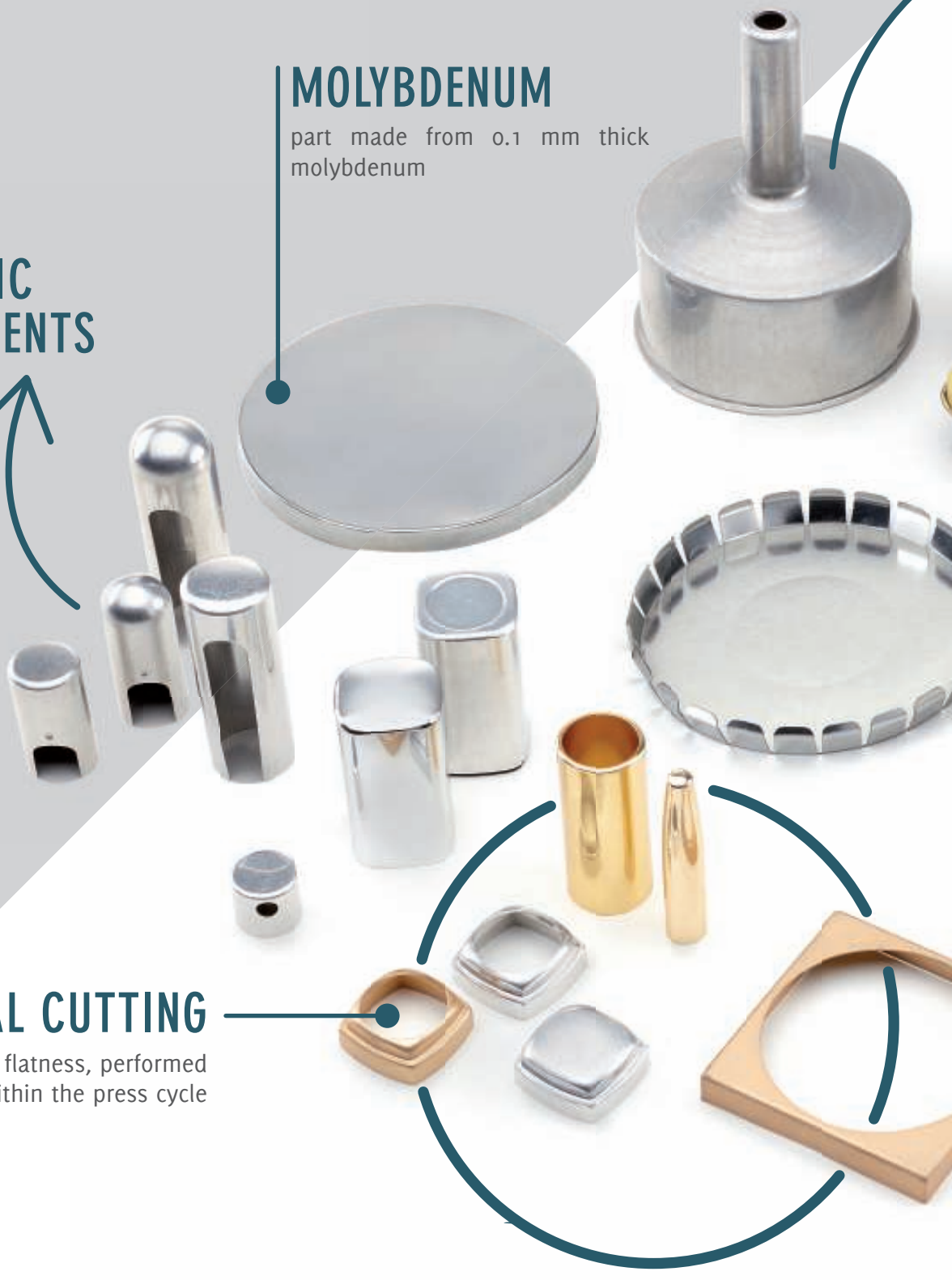
COSMETIC FINISH

ORBITAL CUTTING FOR PERFECT PARTS

MOLYBDENUM

part made from 0.1 mm thick molybdenum

COSMETIC COMPONENTS



ORBITAL CUTTING

for perfect flatness, performed within the press cycle

Parts that will be released to the market without any additional finishing or components made from screen printed materials, require maximum precision and a high quality appearance, free of marks and scratches.

COFFEE MAKER FILTER

Filter blanked and assembled in-line

SCREEN PRINTED MATERIAL

Precision stamping of screen printed materials with no damage to appearance

CO-DESIGN

TAILORED-MADE SOLUTIONS

COSMETIC COMPONENT

housing for an adjustable spotlight: the process satisfies the cosmetic requirements

IN-LINE ASSEMBLY

The internal sleeve is assembled in-line

ZINC PLATED MATERIALS

plated materials can be processed thanks to specially engineered features

For DI.GI.EMME optimizing the production phase means analyzing the component based on its function to enhance manufacturability. This facilitates production, reduces manufacturing costs, and makes the part more competitive.

MOTOR CASINGS

various models and versions are possible owing to the experience and tooling developed over the years

CURLED, CALIBRATED AND SEAMED

INNOVATION

COMPACT TOOLING FOR LONG PARTS

NESTED PAIRS

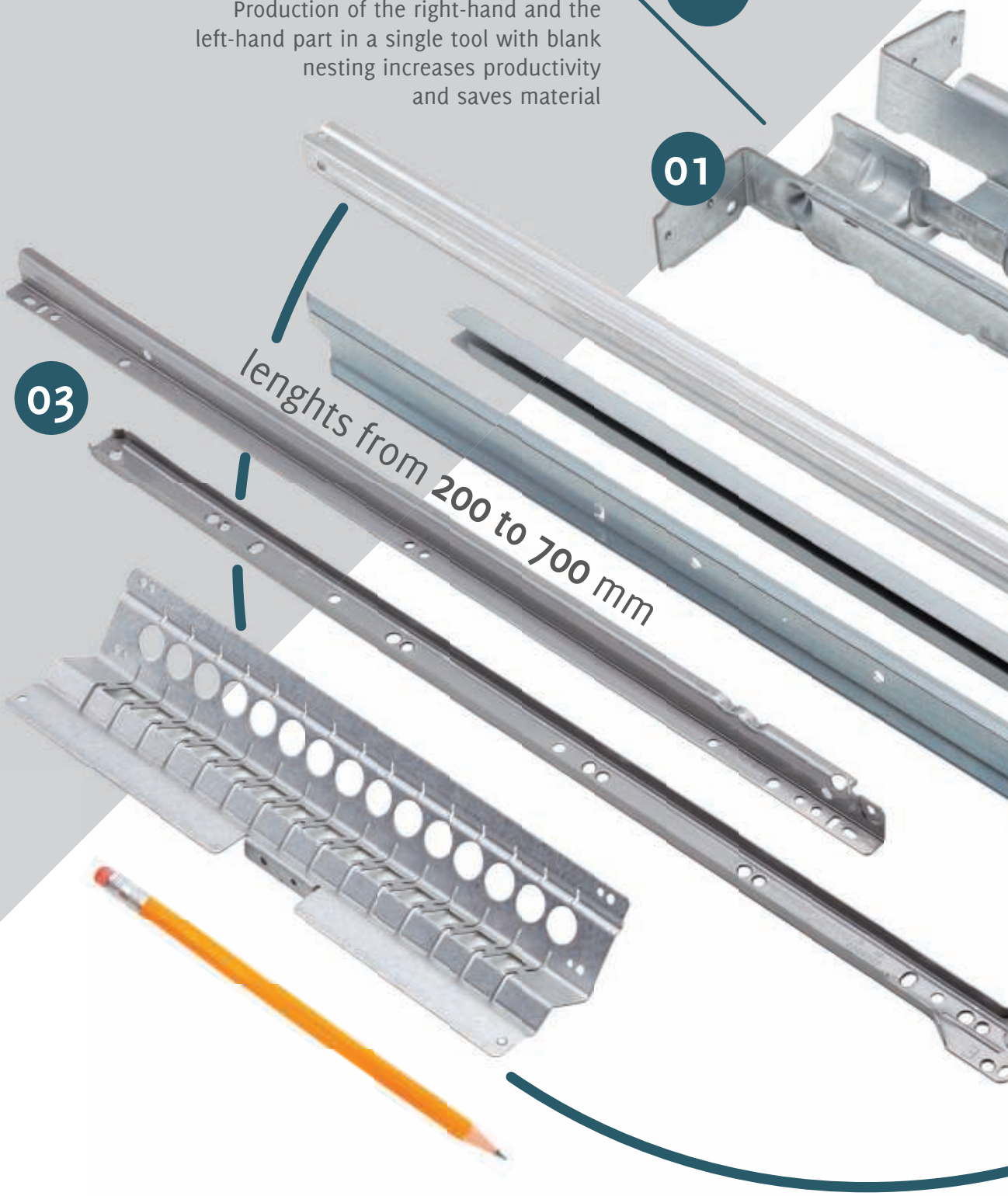
Production of the right-hand and the left-hand part in a single tool with blank nesting increases productivity and saves material

01

01

03

lenghts from 200 to 700 mm



This is a single tool for right- and left-hand parts that can be adjusted for different production lengths and multiple parts without requiring a tooling change. By analyzing the shape of the parts to be manufactured, we optimize the process and can combine other processes, such as welding.

02 EASY WELDING

thanks to an automatic part unloading system specially designed to serve the welding line

03 COMPACT TOOLING

Even for the production of very long parts: the same tool can be adjusted from 200 to 700 mm

SOLUTIONS FOR ALL MARKETS

FROM AUTOMOTIVE TO FURNITURE

LARGE PARTS FROM COMPACT MACHINES

Using a 1200 mm tool, you can program lengths up to 6000 mm

ALLUMINIUM

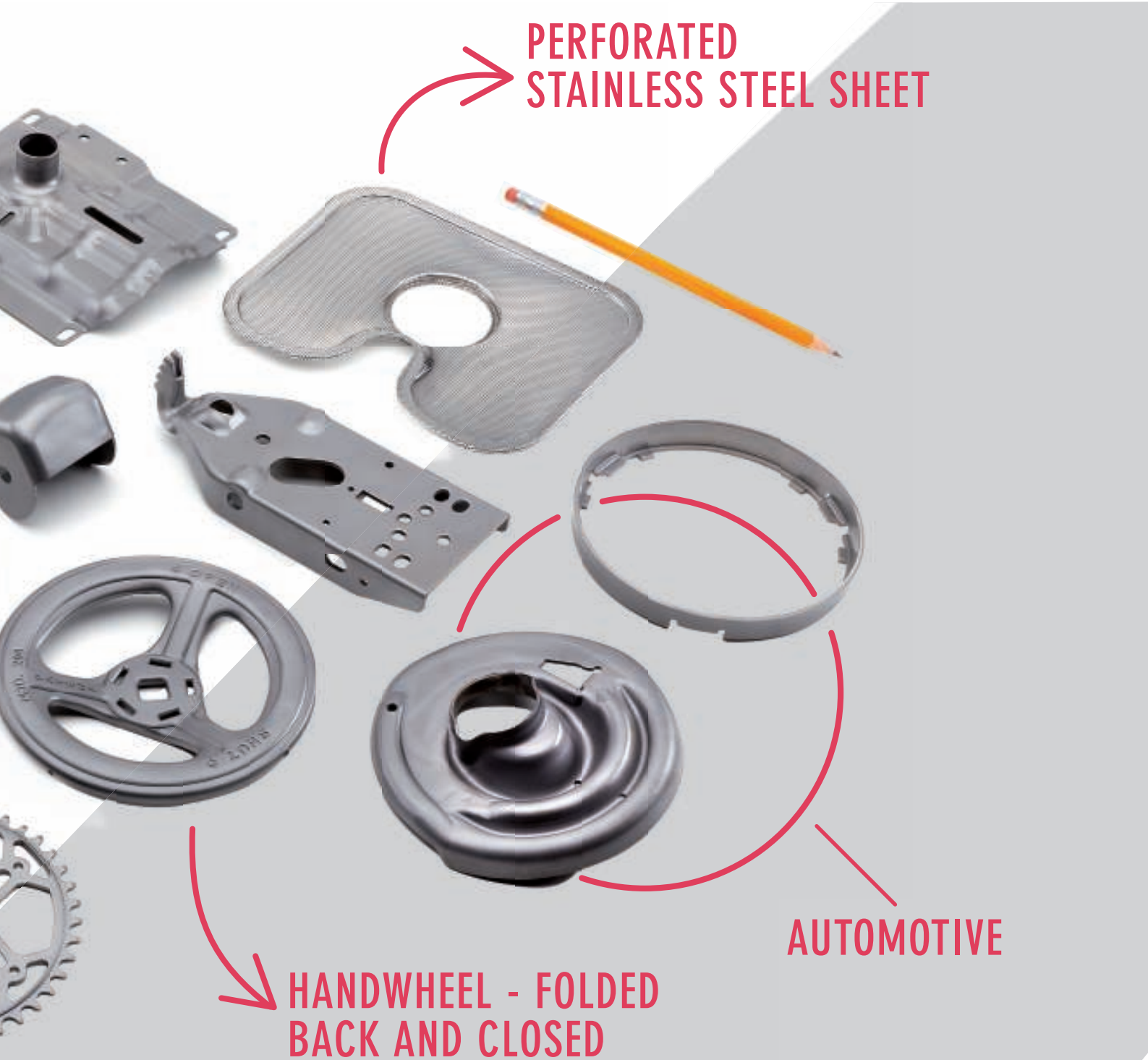
AUTOMOTIVE

REINFORCED FOR GREATER STABILITY

MAXIMUM PRECISION

This processing guarantees perfect alignment of the gear teeth with the central hub

DI.GI.EMME manufactures tooling and complete lines, and produces for all markets: from parts for home appliances and furniture hardware to components for the automotive, a more demanding sector in terms of quality and certification requirements.



OTHER OPERATIONS

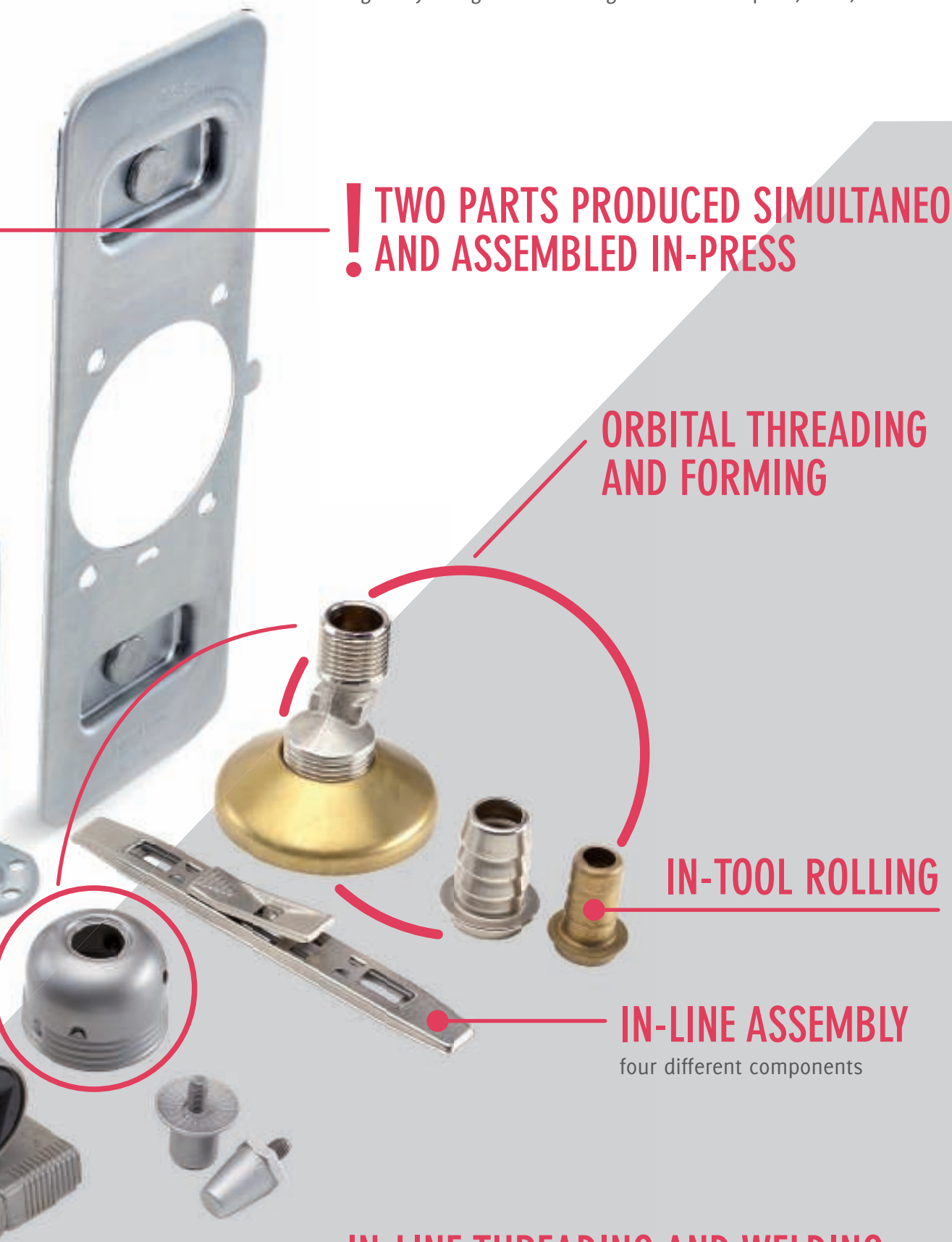
IN-LINE ASSEMBLY AND PRESSING OPERATIONS

IN-LINE THREAD ROLLING AND TAPPING

IN-LINE ASSEMBLY

Two parts produced from coil, assembled with a spring and a gasket

DI.GI.EMME tooling allows you to perform in-line operations eliminating secondary downstream processes and part loaders for assembly machines. This gives you significant savings in terms of space, time, and labor.



! TWO PARTS PRODUCED SIMULTANEOUSLY AND ASSEMBLED IN-PRESS

ORBITAL THREADING AND FORMING

IN-TOOL ROLLING

IN-LINE ASSEMBLY

four different components

IN-LINE THREADING AND WELDING

Sett. 2012 - rev. 01

Di.Gi.Emme S.r.l
Carugo (CO) Italy
Via V. Veneto, 51 - 22060
Ph. +39 031 758300
Fax +39 031 758280
inform@digiemme.it
www.digiemme.it

DIGIEMME®