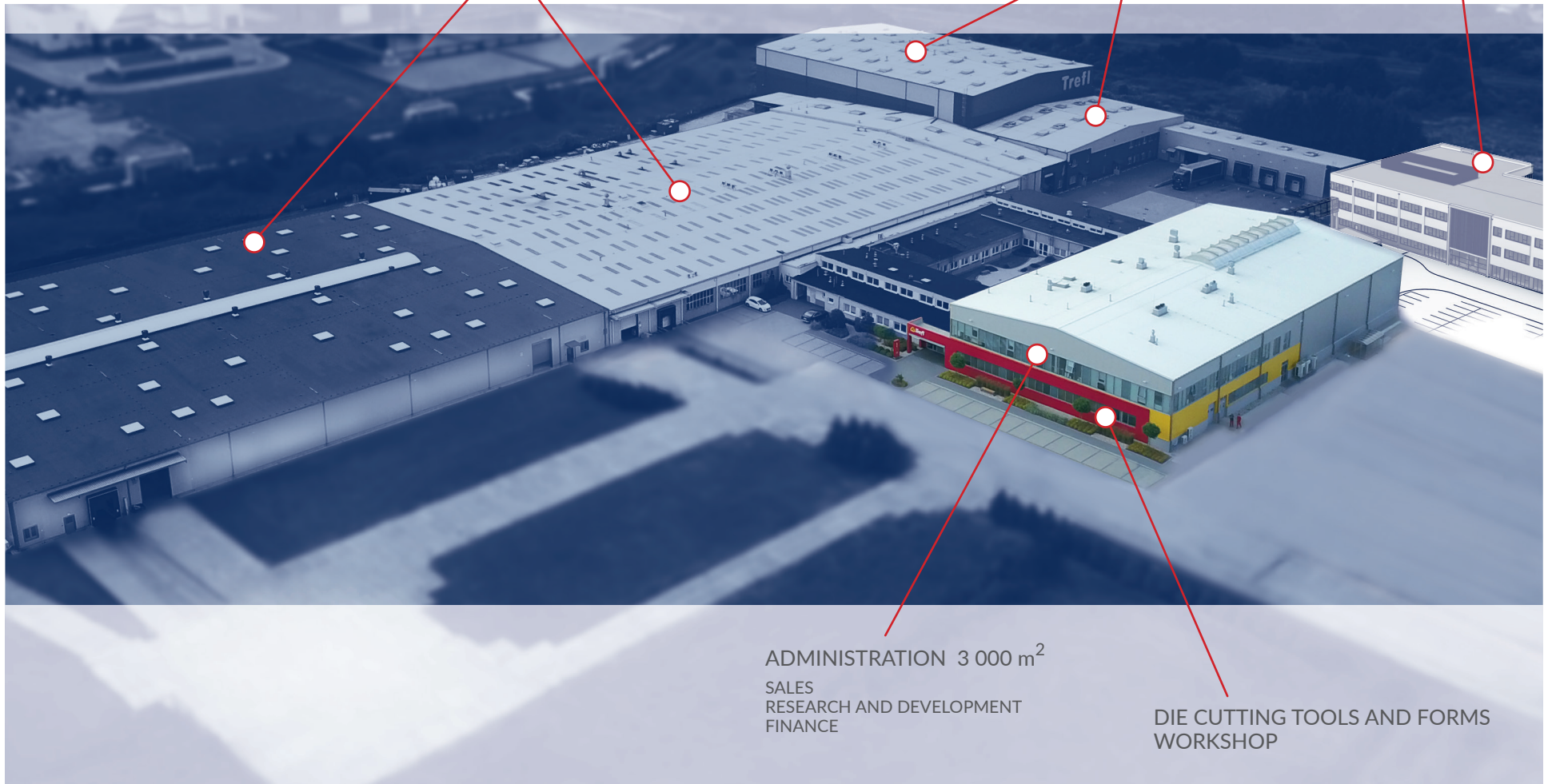


FACTORY
12 000 m²

LOGISTICS CENTER
8 000 PALLETS

NEW INVESTMENT
RESEARCH & DEVELOPMENT
CENTER
NEW TOOLS DEPARTMENT



Benefit from our experience, develop with us!



Trefl SA is the biggest company that manufactures puzzles and games in the CEE region and one of the biggest manufacturers in the entire Europe.

Trefl SA is a family company. Since founded in 1985, the company consistently builds the position and constantly expands its offer and production capabilities.

We manufacture over 20 million puzzles and games yearly and publish hundreds of new titles every year. We offer them to customers in 50 countries.

We've been successfully offering our factory's services to customers in the B2B model for years. We work with over 50 game and puzzle publishers all over Europe, offering them our experience in the product development process. What we contribute to the development of our partners is the technical optimisation of projects, the design and manufacture of the tools and effective production process that guarantees the expected quality while maintaining a proper cost structure.

Our employees' experiences and technical capabilities became a foundation for the **Trefl Factory** brand. We would like it to become associated with cooperation and the exchange of experience aimed at co-development and success. Our designers, engineers and assembly-line factory workers are ready to face their next challenges.

You are welcome to cooperate with us!



FACTORY

DESIGN AND DEVELOPMENT

You supply the ideas, we give you the finished product

- ▶ Comprehensive development of the project technology according to the requirements of the highest standards of execution along with cost control and optimisation.
- ▶ Wide selection of materials from certified vendors and a wide range of cardboard, wood and plastic components.
- ▶ Construction design and manufacturing game and puzzle prototypes; we go beyond standard solutions, as our engineers offer original forms and solutions tailor-made to the needs of our customers.
- ▶ Comprehensive support with graphic materials in a modern DTP studio.
- ▶ The products are manufactured according to the EU standards and regulations, and we offer the possibility to check our materials for heavy metals content and mineral oils migration. On customer's request our materials comply with the requirements of the FSC® certificate (games and puzzles).
- ▶ The manufacture of die cutting tools and box forming stamping dies, which guarantees flexible time availability and cost control.
- ▶ A convenient option to use one of our 200 ready-made box moulds or create your own shape with us.



FACTORY

IMPLEMENTATION STAGE

Manufacturing process

- ▶ All the production processes occur in-house.
- ▶ We use Heidelberg press for offset printing; AXIS CONTROL system guarantees the repetitiveness of the printing from the first to the last sheet.
- ▶ We offer a variety of refinements: UV coating, hot stamping, laminating, glitter and more.
- ▶ Die cutting machines and presses with pressure strength up to 1000 T cut board up to 4 mm of thickness and manufacture up to 6000-element puzzles.
- ▶ Game boards of any given shape, folded up to 8 pieces, up to 1000x700 mm in size, laminated both sides with Lamina, Perondi or Tunkers devices.
- ▶ Automatic lines for rigid set-up boxes from Emmece produce over 20 million units every year.
- ▶ We use our modern production halls with an area of 12000 sqm to put together our product mixes and efficiently process high volume orders.



Each piece matters

We manufacture puzzles in a wide variety of dimensions and number of elements. We offer a ready-made base of die cutting tools and moulds. We manufacture new patterns tailor-made to our contractors' needs.

We offer puzzles

- ▶ made of 1.2 to 4 mm thick board
- ▶ in a rigid box - lid and bottom
- ▶ in a one-piece box with flaps
- ▶ arranged on a pad
- ▶ in a sealed polybag
(the bag can be printed on)
- ▶ frame and contour
- ▶ magnetic
- ▶ laminated to art paper or linen paper
(canvas effect)
- ▶ printed on one or both sides
- ▶ refined with matte/glossy UV coating, glitter, fluorescent inks, matte/glossy foil, effect varnish, hot stamping

PUZZLES

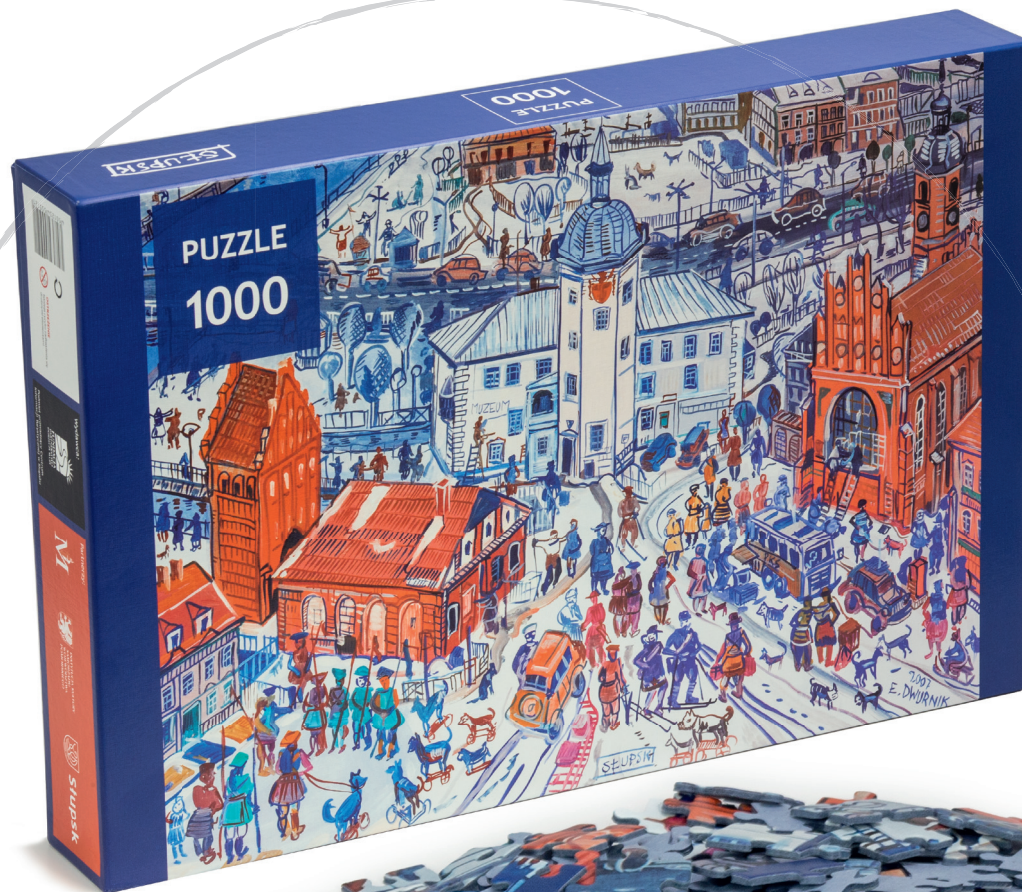
1000 el.

PUZZLES

640x480 mm
blue board 1.75 mm
linen paper 100 gsm

BOX

400x270x60 mm
grey board 1.2 mm
linen paper 100 gsm



PUZZLES



3 posters

glitter

3in1
12, 15, 18 el.

PUZZLES
250x200 mm
grey board 2.0 mm
linen paper 100 gsm

BOX
290x240x50 mm
grey board 1.2 mm
linen paper 100 gsm

PUZZLES

6in1 SHAPE PUZZLES

PUZZLES

grey board 2.0 mm
linen paper 100 gsm

BOX

235x155x47 mm
grey board 1.2 mm
linen paper 100 gsm

wooden
element

PUZZLES

FRAME 24

blue board 1.75mm
linen paper 100 gsm

MINI 54

PUZZLES
197x131mm
blue board 1.75mm
linen paper

BOX
92x66x36 mm
cardboard GC2 250 gsm



PUZZLES IN A BOX

PUZZLES	BOX / POSTER DIMENSIONS
MINI 54 EL.	92 x 66 x 36 mm / 197 x 131 mm
30 EL.	210 x 140 x 40 mm / 270 x 200 mm
60 EL.	210 x 140 x 40 mm / 330 x 220 mm
100/160 EL.	285 x 189 x 39 mm / 410 x 275 mm
260 EL.	330 x 227 x 39 mm / 600 x 400 mm
500 EL.	395 x 265 x 45 mm / 480 x 340 mm
1000 EL.	400 x 270 x 61 mm / 680 x 480 mm
1000 EL. PANORAMIC	400 x 135 x 67 mm / 970 x 340 mm
1500 EL.	400 x 270 x 61 mm / 580 x 850 mm
2000 EL.	400 x 270 x 61 mm / 960 x 680 mm
3000 EL.	395 x 265 x 87 mm / 1160 x 850 mm
4000/6000 EL.	398 x 266 x 98 mm / 1360 x 960 mm

PUZZLES ON A PAD

PUZZLES	POSTER DIMENSIONS
54 EL.	197 x 131 mm
30 EL.	200 x 270 mm

FRAME PUZZLES

PUZZLES	DIMENSIONS
12 EL.	183 x 135 mm
15 EL.	330 x 230 mm



Play with us

We **manufacture** simple and complex board, card, spatial and memo games according to our customers' ideas and specifications. The minimum quantity of the order is 1000 pcs.

Our games include

- ▶ game boards in a variety of shapes, with or without wrapped edges, folded to 2, 4 or 8 pieces
- ▶ magnetic boards
- ▶ plastic elements (e.g. coins, pawns, tokens, sand timers and more)
- ▶ wooden elements (dice, pieces figurines etc.)
- ▶ cardboard punch boards in any shape and up to 4 mm thickness
- ▶ professional and children cards
- ▶ cloth bags
- ▶ inlays of corrugated board or solid board
- ▶ PET/PS inlays
- ▶ folded, stitched or glued instructions
- ▶ a variety of different, complex components

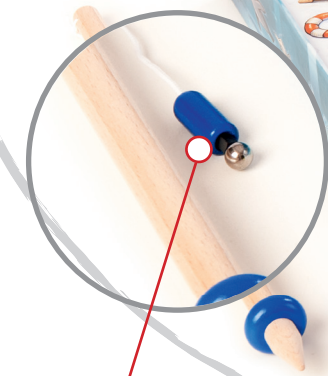
GAMES



board
with holes



cardboard
tokens



magnetic
wooden element

wooden containers
with marbles



BOX

370x270x50 mm
grey board 1.2 mm
linen paper 100 gsm

BOARD WITH HOLES

grey board 2.0 mm
linen paper 100 gsm

INLAY

grey board 2.0 mm
linen paper 100 gsm

TOKENS

grey board 2.0 mm
linen paper 100 gsm

Kayanak - game ordered by Habermas GmbH

GAMES



two-chamber
box inlay



BOX

337x325x70 mm
grey board 1.2 mm
art paper 130 gsm
glossy foil

BOARD

841x570 mm
grey board 2.0 mm
art paper 130 gsm
glossy foil

INLAY

corrugated board
art paper 130 gsm

CARD BOXES

cardboard GC1 300 gsm

CARDS

63x88 mm
mono cardboard 350 gsm



card
box

cloth
bag

wooden dice
and pieces

board folded
in 8 parts

*Gwiezdny Express — game ordered by the European
Commission Representation in Poland*

GAMES



BOX

240x330x50 mm
grey board 1.2 mm
linen paper 100 gsm

BOARD

folded in 4 parts
grey board 2.0 mm
linen paper 100 gsm

INLAY

cardboard GC2 300 gsm

TOKENS

grey board 1.2 mm
linen paper 100 gsm

Barnas Trafikk - game ordered by
Egmont Kids Media Nordic AS

GAMES



elements
in specific
shapes



BOX

265x265x60 mm
grey board 1.2 mm
linen paper 100 gsm

INLAY

cardboard GC2 300 gsm

INSTRUCTIONS

art paper 130 gsm

CARDS

59x92 mm
mono cardboard 250 gsm

FORM WITH ELEMENTS

grey board 2.0 mm
art paper 150 gsm

instructions

card deck
50 pcs.



bell



The Pfannen game — ordered by
Hutter Trade GmbH

GAMES

BOX

230x310x150 mm
grey board 1.2 mm
linen paper 100 gsm

BOARD

560x860 mm
(folded in 8 parts)
grey board 2.0 mm
art paper 130 gsm
glossy foil

INLAY

bleached corrugated board

TOKENS

grey board 1.2 mm
art paper 150 gsm

TOKENS

cardboard GC2 300 gsm

CARDS

104x152 mm
art paper 300 gsm

CARDS

58x88 mm
mono cardboard 300 gsm

booklets



500-element
puzzles



big box

Antek – game ordered by the Institute of National Remembrance Warsaw division

GAMES



BOX

145x145x35 mm
grey board 1.2 mm
linen paper 100 gsm

MEMO BLOCKS

50x50 mm
grey board 1.2 mm
linen paper 100 gsm

memo blocks
with glossy UV coating

*Meine geburtstags party game
ordered by McDonald's*

Game ordered by
Sweet November

Instructions



plastic dice
with print

die cut cards
58x88 mm

cardboard
tokens

GAMES

CARD GAME

Cards are integral part of the games. They are manufactured of high-quality materials and in modern technology. We offer many opportunities for tailoring our product to the individual needs of the customer and our professional support in managing the specifications.

Most common card dimensions

44 x 68 mm
56 x 100 mm
58 x 88 mm

63 x 88 mm
66 x 100 mm
70 x 120 mm

Recommended materials

Single-layer mono cardboard:
250 g / 300 g / 350 g

Double-layer duplex cardboard:
280 g / 305 g / 320 g (linen cardboard)
350 g / 390 g

We offer two types of back sides

- ▶ no die cut (with a frame)
- ▶ die cut

Finishing

- ▶ glossy or matte dispersion varnish
- ▶ matte or glossy UV coating
- ▶ glitter
- ▶ metallising
- ▶ embossing
- ▶ hot stamping



DESIGNING

Good ideas, fast implementation

We design puzzles and games for publishing houses, advertising agencies, public bodies, charities and individual customers.



Educational game for high school and university students and teachers aimed at introducing how the European Parliament operates.

DESIGNING

The comprehensive service includes

- ▶ developing the concept and scenario of the game,
- ▶ preparing and testing game mechanics,
- ▶ choosing materials and components, preparing models,
- ▶ creating artwork,
- ▶ comprehensive manufacturing of all the elements,
- ▶ completion of the games and puzzles and delivery to the customer's warehouse.

Memory game ordered by Radio Eska for a holiday event.

BOXES



Original solutions, good quality

We specialise in rigid boxes

We manufacture boxes

- ▶ from solid board and corrugated board
- ▶ laminated to art paper, offset or linen paper

We offer refinements

- ▶ glossy or matte UV coating
- ▶ glossy or matte metallic or transparent foil
- ▶ glitter effect
- ▶ hot stamping and embossing

We offer over 200 kinds of ready-made tools for boxes set-up.

BOXES



Our choice of boxes:

- ▶ rigid boxes made of grey or bleached 1.2 mm or 2.0 mm board laminated both inside and outside
- ▶ laminated to linen paper or art paper
- ▶ boxes made of corrugated board E and F flute
- ▶ folded solid board / cardboard boxes from 250 gsm up to 400 gsm
- ▶ boxes in a variety of shapes and with different methods of closing
- ▶ boxes with a magnetic closing
- ▶ any individual type of box tailor-made to fit the customer's needs.

TOOLS



Tailor-made projects

- ▶ We have 20 years of experience in manufacturing die cutting tools and box set-up tools for the printing and processing industry
- ▶ 6000 tools every year
- ▶ more than 50 regular customers – printing houses and processing industry manufacturers
- ▶ rich and modern machine park including devices from **Lasercomb** or **Serviform**
- ▶ team of more than 20 professionals from the design and manufacturing industry

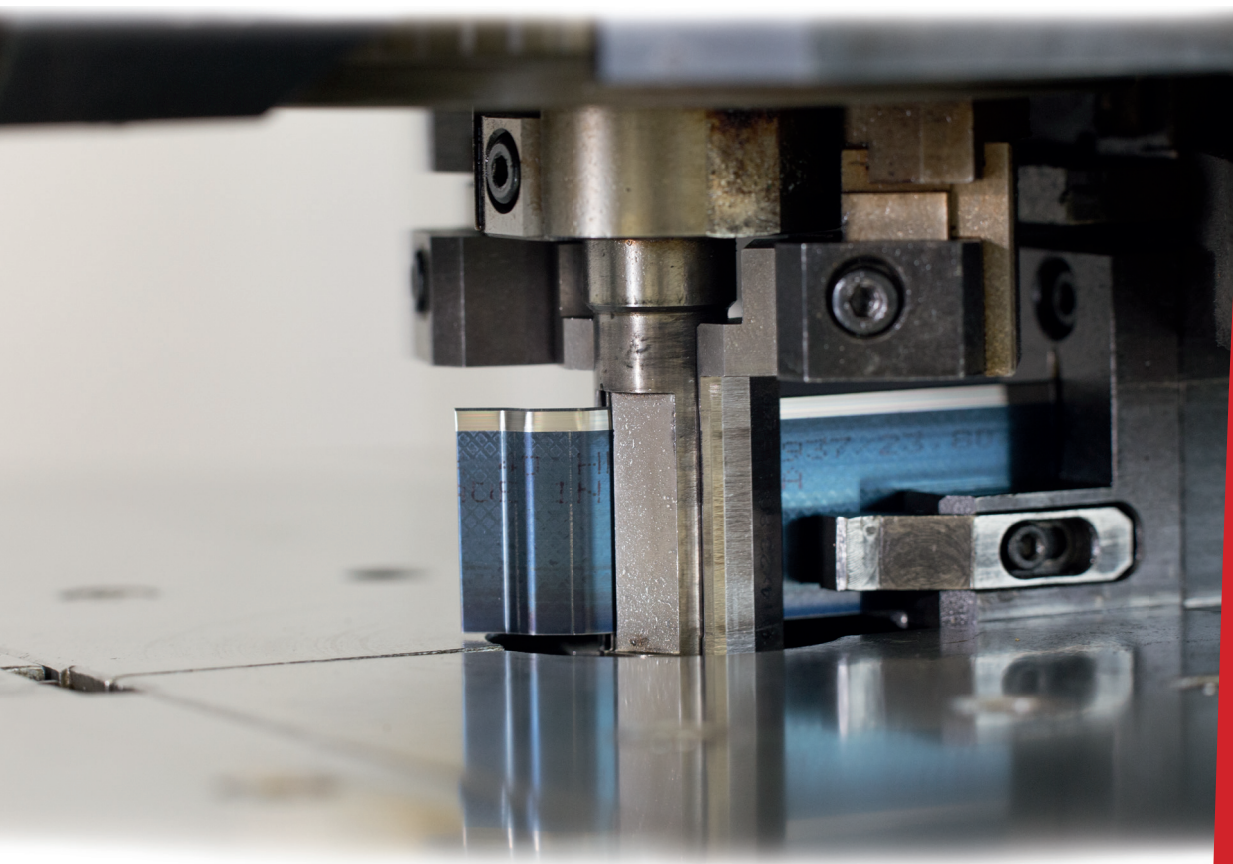


DIE CUTTING TOOLS

We offer our customers

- ▶ construction development
- ▶ technology and materials consulting
- ▶ manufacturing of prototypes using industrial materials
- ▶ precise and correct implementation of the design
- ▶ sustainable tools allowing for long time of use
- ▶ functionality up to 1 million punches
- ▶ providing help with mounting the tools on presses and automatic die-cutters
- ▶ just-in-time delivery

DIE CUTTING TOOLS



We manufacture and deliver

- ▶ flat die cutting tools for all kinds of cutting machines, presses and crucibles
- ▶ stripping forms and blanking sections
- ▶ tools for cutting paperboard, cardboard, foils, plastics, foam, leather, gum etc.
- ▶ die cutting tools equipment, e.g. rillmas, embossing matrices, including Braille matrices
- ▶ tools for rigid boxes forming

We specialise in die-cutters for jigsaw puzzles



NEW OPPORTUNITIES

Injection moulding

In 2017, to meet the expectations of our customers, we started manufacturing plastic elements in-house.

Our KraussMaffei and Engel injection moulding machines are efficient devices designed for mass production. We are currently under construction of the new plastics processing division as a next step in our Trefl Factory strategy aiming at providing comprehensive services. To take a step forward, we offer design engineering and manufacturing injection moulds for individual needs.

Benefit from our new capacities



Contact us

TREFL FACTORY

ul. Kontenerowa 25
81-155 Gdynia, Poland
www.factory.trefl.com

GAMES, PUZZLES, BOXES

Tel. +48 58 66 67 215
+48 58 66 67 165
+48 58 66 67 210
e-mail: factory@trefl.com

DIE CUTTING TOOLS

Tel. +48 58 66 67 190
+48 58 66 67 192
e-mail: wykrojniki@trefl.com