



INJECTION MOLDED PART DEVELOPMENT AND PRODUCTION

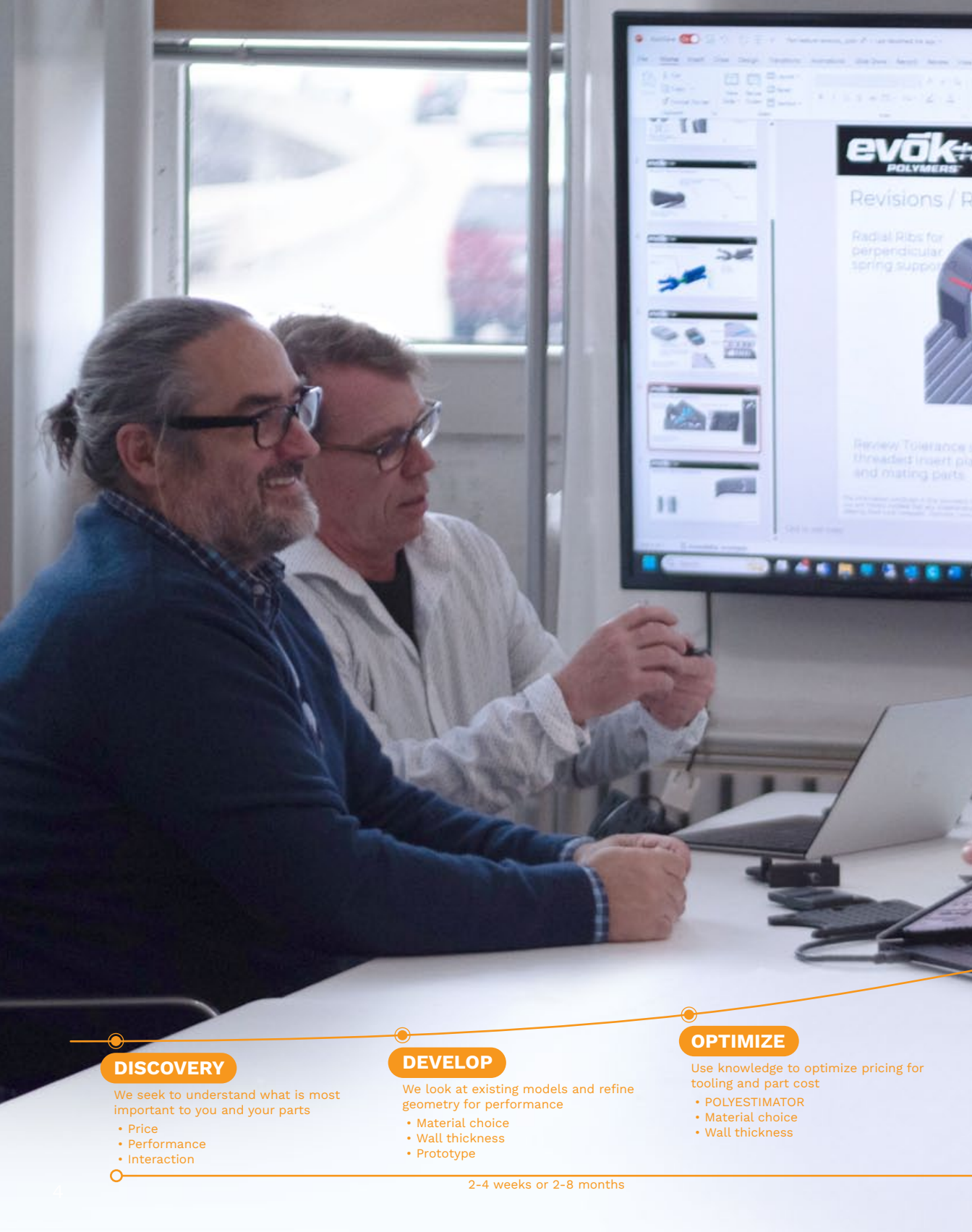


OPTIMIZED PART PRICE • LOWEST COST P20 TOOLING
WHITE GLOVE CUSTOMER SERVICE



WELCOME

At Evök Polymers, we embrace the challenges of every product development journey, immersing ourselves in the intricacies to sculpt a collective, inspiring mission that paves the way for successful mass production component launches. Our goal is clear: to revolutionize cost efficiency and lifetime part quality in injection molded part manufacturing. With steadfast dedication, we transform your visions into reality, delivering jewelry-grade parts at an optimized part price. Through a deep understanding of your unique product needs, we tailor resourceful solutions, optimizing processes to elevate your business with a definitive competitive advantage.



THE PERFECT PART PROCESS

OUR WORK AT A HIGH LEVEL

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DISCOVERY

We seek to understand what is most important to you and your parts

- Price
- Performance
- Interaction

DEVELOP

We look at existing models and refine geometry for performance

- Material choice
- Wall thickness
- Prototype

OPTIMIZE

Use knowledge to optimize pricing for tooling and part cost

- POLYESTIMATOR
- Material choice
- Wall thickness

TOOLING

We develop the mold for the business model and qualify all aspects of the design

- DFM
- Mold flow analysis
- Shirk rate

QUALIFY

Setup and qualify first article with the best fit USA molder

- Process at the press
- Material drying
- Gate freeze study

PRODUCTION

Run production lot with blanket orders and projected release dates

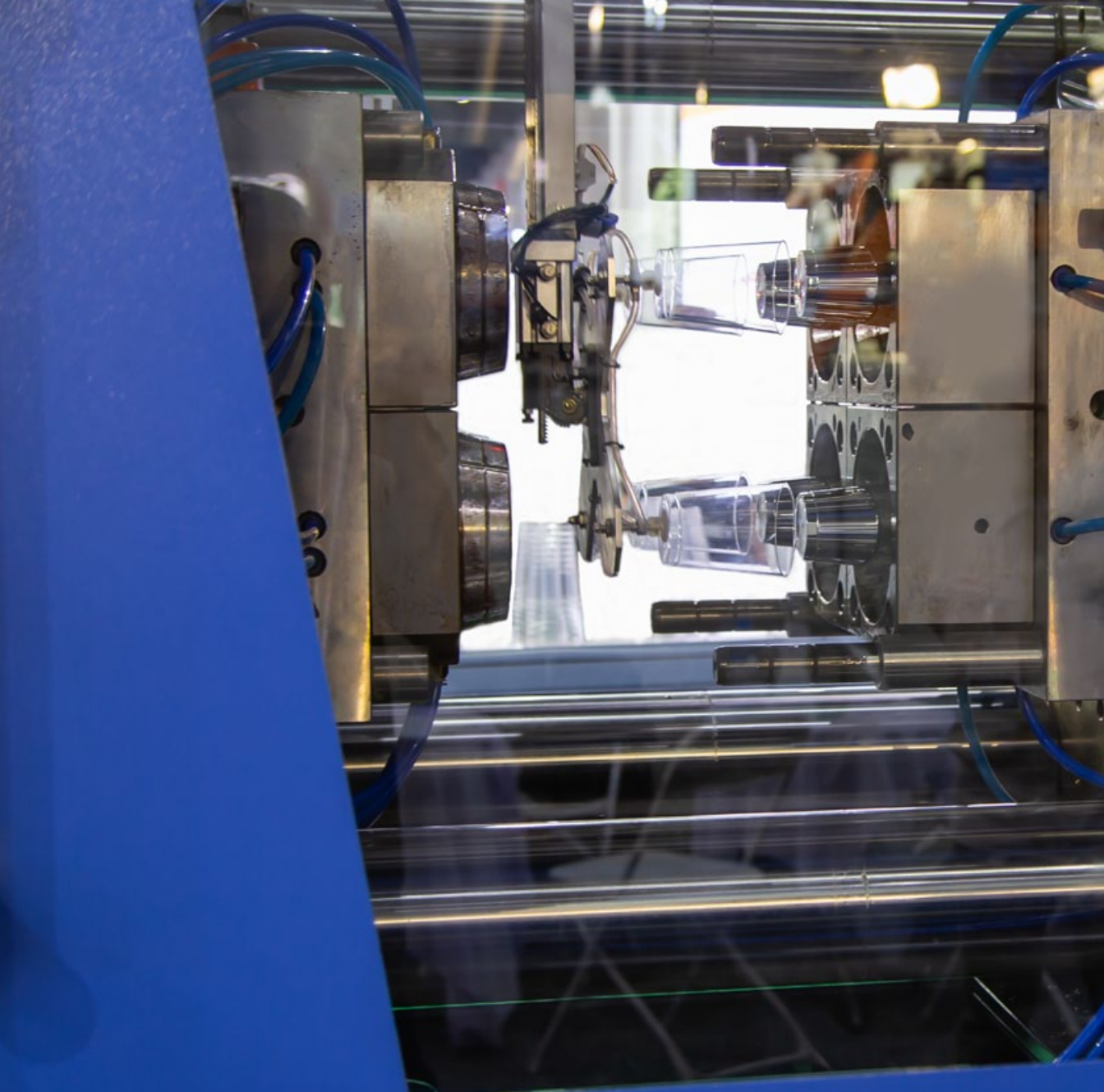
- Material ordering
- Forecasting
- Open press time planning

2-4 weeks or 2-8 months

8-12 weeks

4-6 weeks

Ongoing



DISCOVERY

WE SEEK TO UNDERSTAND WHAT IS MOST IMPORTANT TO YOU AND YOUR PARTS

At Evök, our enthusiasm ignites as we embark on the journey of discovering new parts through injection molding. We thrive on understanding every facet of your design, delving into its functionality, and probing into its intended purpose. Has a previous iteration failed to meet expectations? We're eager to dissect the intricacies and uncover areas for improvement. Understanding how your part interacts within its environment, be it with other components or with human users, fuels our curiosity further. The depth of our knowledge directly correlates with our ability to provide the ultimate design solution tailored to your needs.

- Price
- Performance
- Interaction
- Geometry
- Materials
- Timing
- UV protection
- Impact resistance
- Fastening methods
- Part strength
- Business targets



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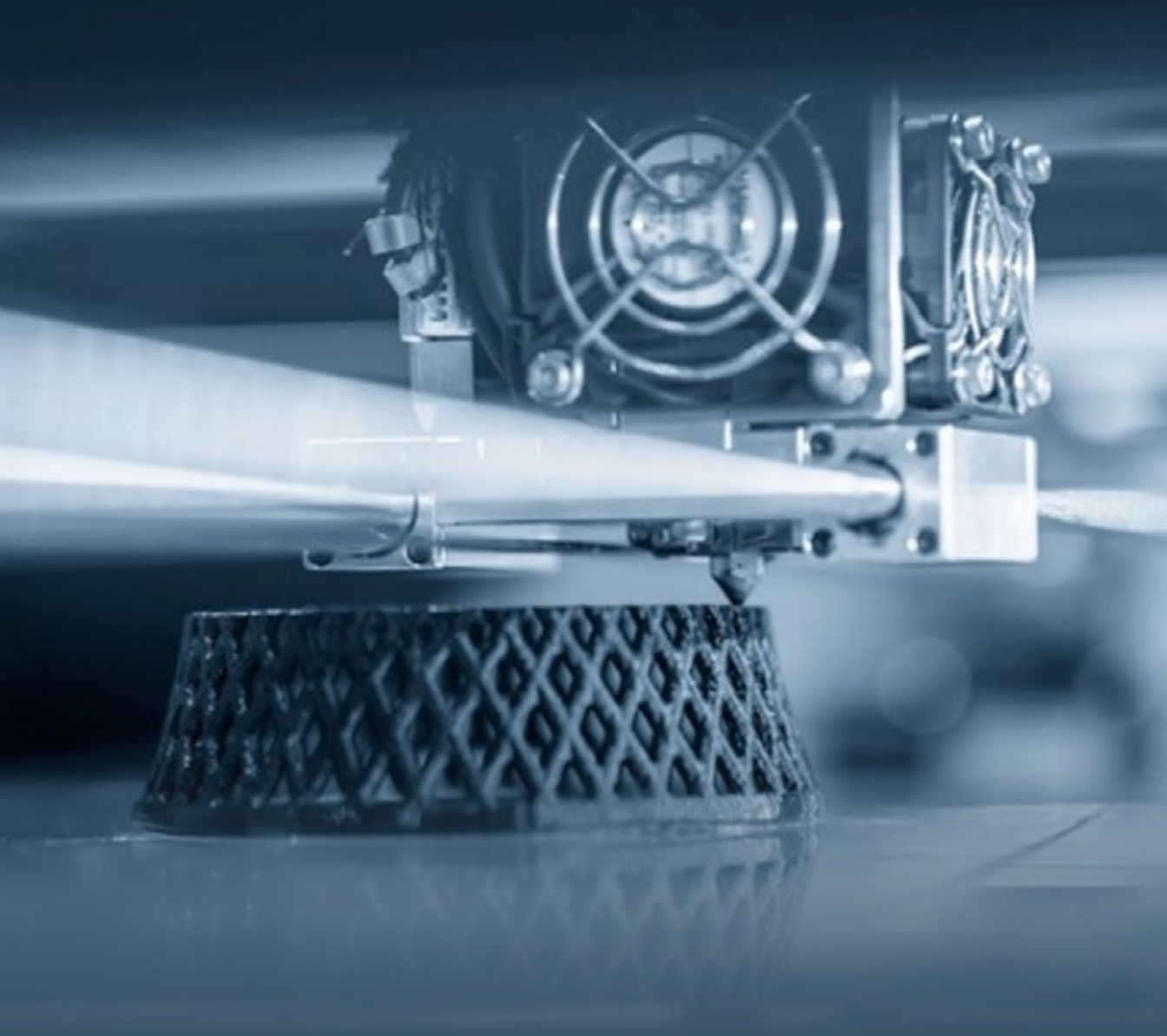
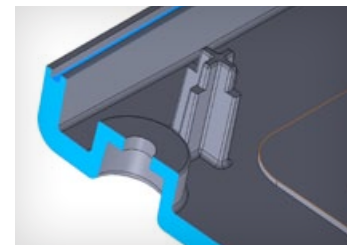
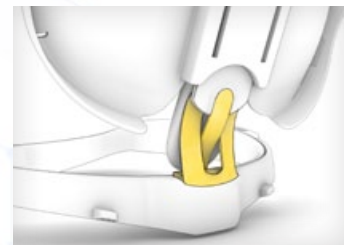
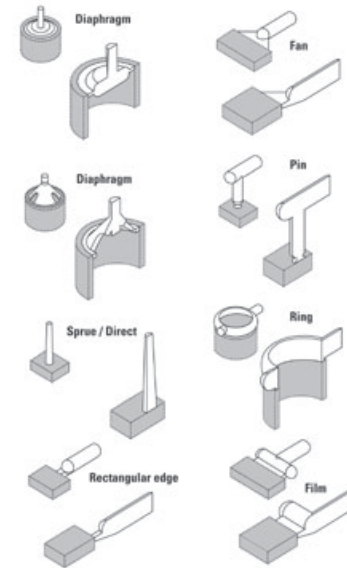
WE LOOK AT EXISTING MODELS AND REFINE GEOMETRY FOR PERFORMANCE

TYPICAL MECHANICAL PROPERTIES

Tensile Modulus	2600 MPa
Yield stress, 50mm/min	58 MPa
Yield strain, 50mm/min	4%
Nominal strain at break	30%
Flexural Modulus	2400 MPa
Flexural Strength	85 MPa
Tensile creep modulus, 1h	2600 MPa
Tensile creep modulus, 1000h	1800 MPa
Charpy impact strength, 23°C	N kJ/m ²
Charpy impact strength, -30°C	N kJ/m ²
Charpy notched impact strength, 23°C	4 kJ/m ²

- Material selection
- Wall thickness uniformity
- Eliminate undercuts
- Consideration for overmolding
- Prototypes testing

GATING CONSIDERATIONS



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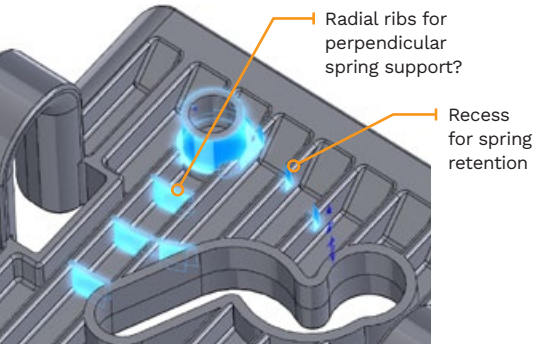
4-6 weeks

Ongoing



DEVELOPMENT CONT.

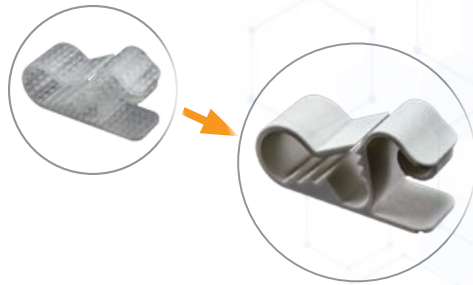
REVISIONS / RECOMMENDATIONS



In our development process, our expertise shines brightest in communicating both possibilities and limitations inherent in your part design. We specialize in pinpointing locations where additional value can be seamlessly integrated, whether through reducing part count, elevating aesthetics, or streamlining assembly processes. Once we grasp the intended functionality of your part, we meticulously analyze its geometry, offering concrete recommendations on design enhancements that optimize performance and efficiency.

MATERIAL SELECTION CONSIDERATIONS

PE POLYETHYLENE 	POM ACETAL 	PA NYLON
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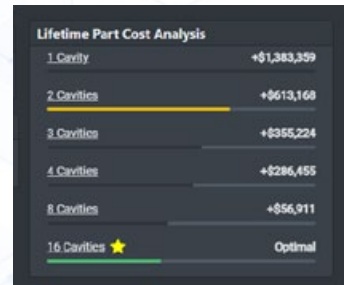
PATENT PENDING

OPTIMIZE PRICING FOR TOOLING AND PART COST USING OUR PROPRIETARY SOFTWARE WE CALL THE POLYESTIMATOR™.

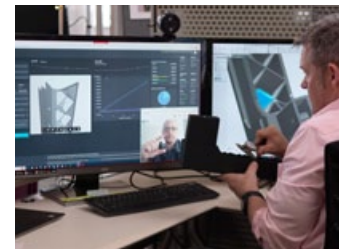
At Evök we excel in optimizing injection molded part prices through a multifaceted approach. By carefully considering material price and specific gravity choices, we ensure cost-efficiency without compromising quality. Fine-tuning wall thickness based on structural requirements and material characteristics allows us to minimize material usage while maintaining

durability. Analyzing expected volumes enables us to leverage economies of scale for bulk orders, driving down per-unit costs. Our expertise in cavitation optimization ensures optimal tooling

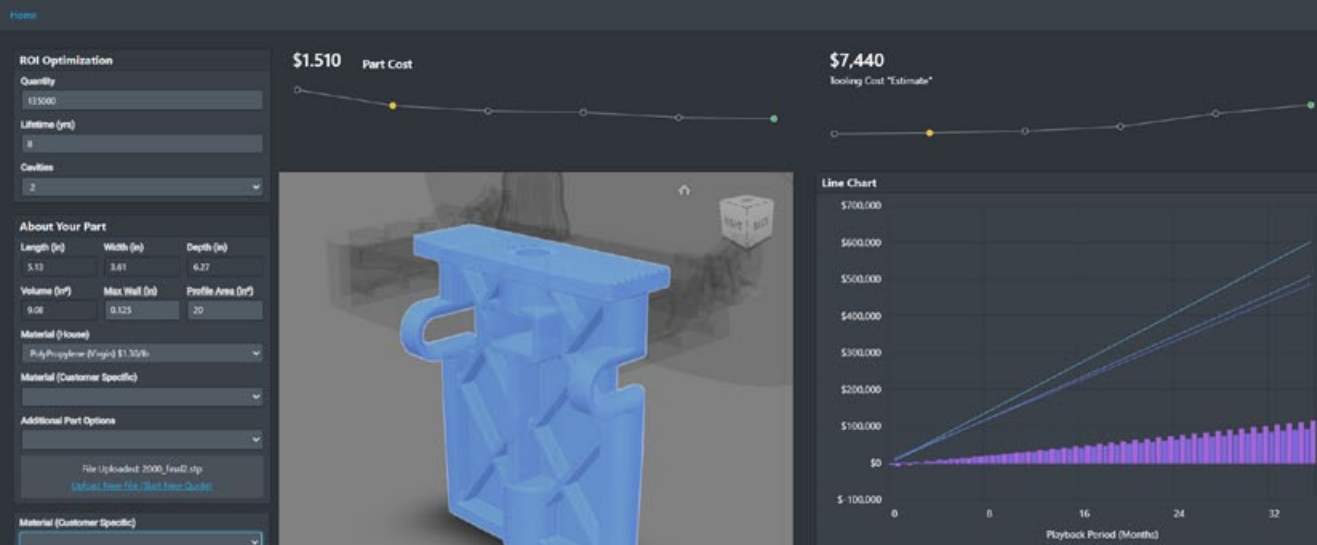
configurations, maximizing production efficiency and reducing tooling costs. Moreover, meticulous attention to cycle time optimization and press selection further enhances productivity and cost-effectiveness. With our comprehensive approach, we deliver competitively priced injection molded parts without sacrificing quality or performance.



- Capital vs part cost
- Material choice
- Wall thickness
- Instant cycle time estimates
- Clamping force requirement
- Instant press size minimums
- Instant labor vs material costs
- Instant optimized cavitation according to your annual volumes



Free 1 hr Teams/Zoom meeting consult



PATENT PENDING

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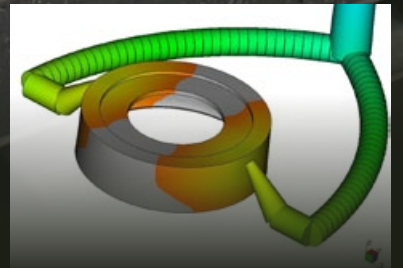
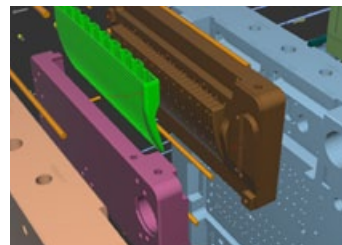
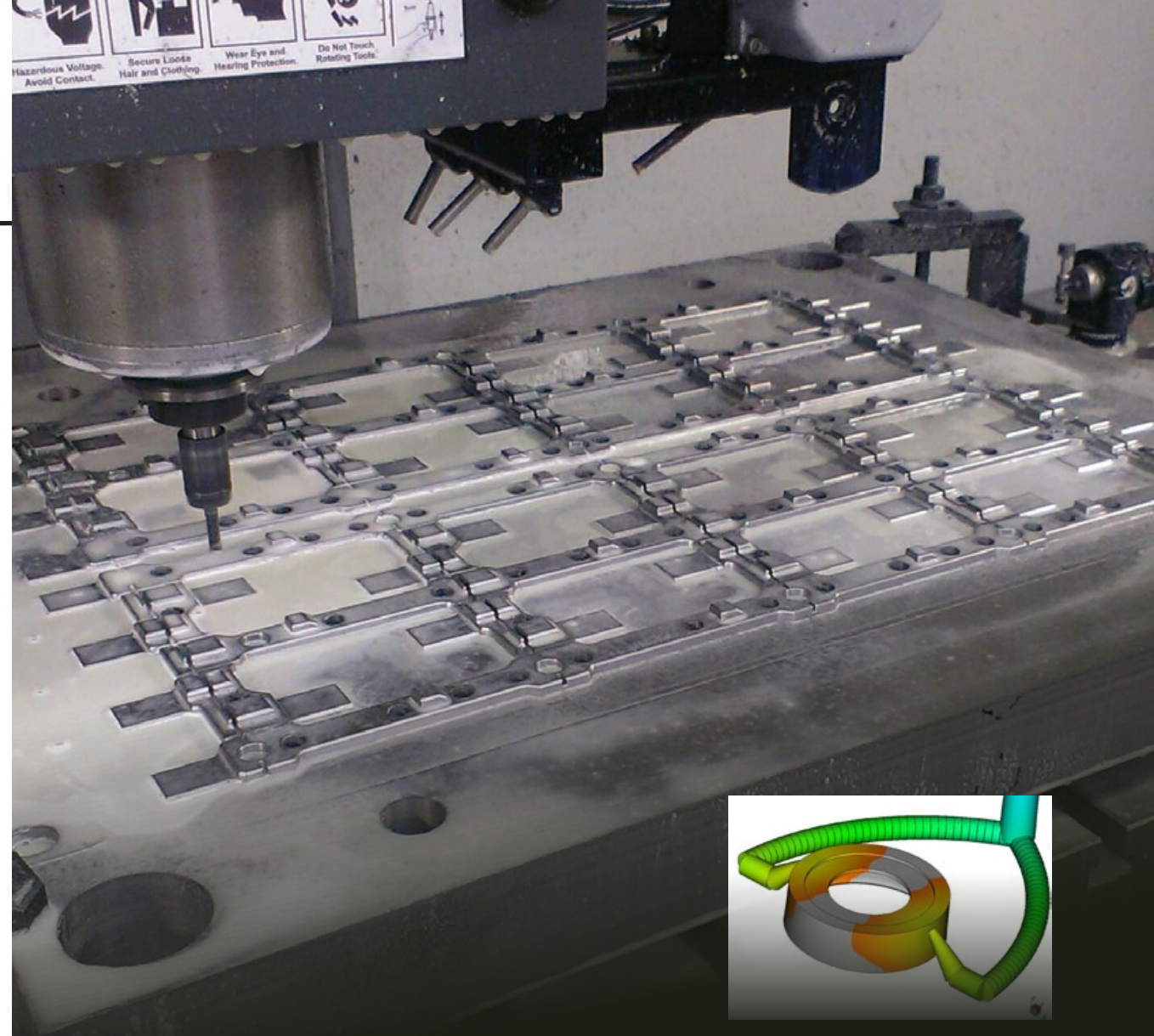
Our production tooling quotes are generally 30-50% lower than our competitors. We will match or beat any price.



WE DEVELOP THE MOLD FOR THE BUSINESS MODEL AND QUALIFY ALL ASPECTS OF THE DESIGN

Having a grasp of the intricacies involved in mold building is crucial for both Evök and our valued customers. We recognize the inherent timeline risks associated with crafting a high-quality mold, therefore we prioritize transparency throughout the process to keep you informed should any delays or engineering adjustments arise. While we strive to mitigate risks during the quoting stage, it's essential to acknowledge that each part presents unique challenges, resulting in distinct mold requirements. Rest assured, we provide weekly updates encompassing every stage of the timeline. Presently, we are maintaining a 94% on-time track record, with a production tooling lead time ranging from 6 to 8 weeks.

- DFM
- Mold flow analysis
- Shirk rate
- Cooling
- Gating
- Texture
- T1 sampling
- Delivery
- Slides/Actions
- Hardened cores and cavities
- Hot runner systems
- Hot tip and hot manifold



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QUALIFY

SETUP AND QUALIFY FIRST ARTICLE WITH THE BEST FIT USA MOLDER

Upon the completion of your tooling, we initiate a meticulous sampling process dedicated to optimizing part quality and efficiency. Our approach is thorough, encompassing a range of analyses including gate optimization, gate freeze studies, puddle temperature assessments, and experimentation with various parameters such as material temperatures, mold temperatures, fill velocities, pack pressures, cooling times, and more. Through these tests, we gain valuable insights into performance sensitivities, striving to elevate overall part quality. Our first article inspections are rigorous, covering 30 measurements for critical dimensions and 5 non-critical with a target exceeding 1.33cpk. Additionally, we meticulously examine insert strengths, knit lines, overmold adhesion, parting line dimensions, texture intricacies, tool venting, and numerous other factors. This is where Evök truly shines, ensuring that you receive the highest quality parts at the most competitive price.

- Process at the press
- First article inspection
- Material drying
- Gate freeze study
- Puddle temp
- Temp zones
- Part measurements
- Field performance testing



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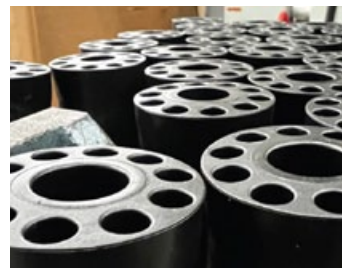
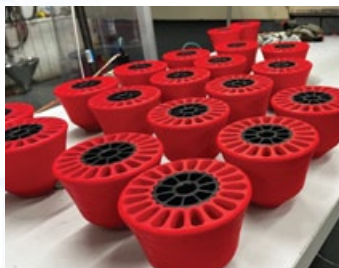
Ongoing

PRODUCTION

RUN PRODUCTION LOT WITH BLANKET ORDERS AND PROJECTED RELEASE DATES

Once your first article parts are qualified, we diligently prepare to meet your ongoing production requirements. We highly recommend utilizing blanket purchase orders with scheduled release dates, enabling us to secure the most competitive prices for compounded plastic by volume. This proactive approach also ensures that we have ample press time available to maintain a flawless fulfillment rate. Ensuring you never face a shortage of parts is our top priority, as we understand that your success directly impacts our own. In the event of increased demand, we swiftly prioritize the reactivation of your mold, often keeping 2-3 runs in stock for immediate emergency shipments. Our commitment to punctual delivery remains steadfast, even in the face of the most challenging circumstances.

- Raw material ordering
- Forecasting
- Shipping
- Packaging specifications
- Managing open press time
- Stocking agreements
- Release dates
- Labor and press price management
- Alternative material changes



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COLLABORATION

STRENGTH IN UNITY: COLLABORATE FOR SUCCESS



PAUL DATHE

SR. SALES ENGINEER AND FOUNDER

Paul Dathe has a passion for helping people with the manufacturing of plastic parts. He founded Evök Polymers to supply customers with the highest quality injection molded components at the lowest possible price, using proprietary technology, deep industry knowledge, and white-glove customer service. Paul has over 25 years of injection molding experience with leading consumer product manufacturers.

DEDICATION

DRIVEN BY DEDICATION: DEFINED BY EXCELLENCE



JEFF WEBER

PARTNER AND FOUNDER

Jeff is an award-winning product designer dedicated to improving the human condition by designing products that enhance people's lives. He is an industrial designer and principal at SWA and Evök. While his interest in design can be attributed to his grandfather, a visual artist and midcentury adman, who inspired him to think creatively and stay open to the unknown.

VISION

VISIONARIES UNITE: MOLDING TOMORROW, TODAY



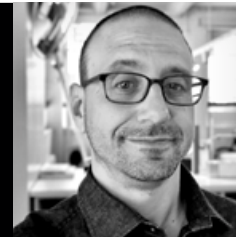
JASON HOLT

SR. INDUSTRIAL DESIGNER

Jason is passionate about integrating design into American popular culture. He actively follows trends in sustainable design and its practical applications. His design journey began as an intern in 1998, evolving over the years with Studio Weber. Working alongside industry legends like the late William Stumpf and Jeff Weber for over 25 years has profoundly shaped Jason's personal and professional growth.

EMPOWER

EMPOWERMENT EVÖK'S POTENTIAL: TOGETHER WE RISE



SHAWN MONITOR

SR. INDUSTRIAL DESIGNER

Shawn is ever curious and has been a vital creative force on some of the most advanced seating projects of the last two decades. He is particularly adept at graphically and physically communicating evolving design concepts and part features, he does this by building complex mechanical and visual prototypes in a variety of materials.

GROWTH

NURTURING GROWTH, BUILDING FUTURES TOGETHER



DANIEL D. HOYT, PH.D.

BUSINESS DEVELOPMENT MANAGER

Daniel's expertise in system and process design, coupled with his ability to cultivate strategic partnerships, sets him apart in the industry. His passion for innovation and collaboration shines through in his work, as he is dedicated to creating Lean Partnership-Based Organizations that empower small and mid-sized businesses.

TRUST

TRUST: OUR FOUNDATION, YOUR ASSURANCE



NATALIE WEBER

APPRENTICE

Natalie, a dedicated apprentice in product design and management, she embodies the harmonious blend of creativity and sustainability. Natalie possessing an innate curiosity and a discerning eye for innovation, she tirelessly explores the junctures where design converges with environmental consciousness.

EVOK POLYMERS

Corporate Office

128 N 3rd St.
Minneapolis, MN 55401

Website

<https://evokpoly.com>

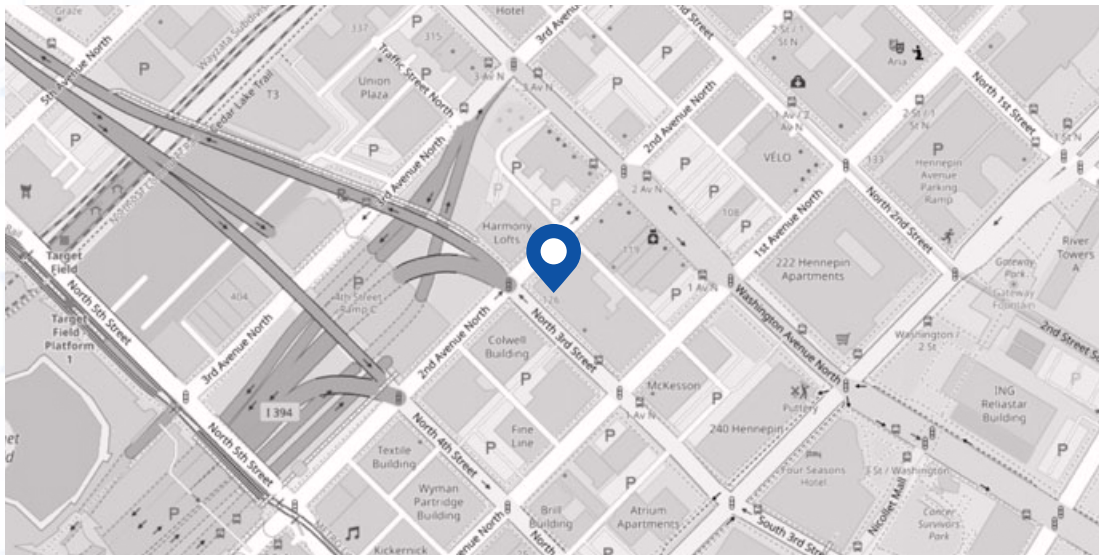
Social Media

Linkedin: Evok Polymers

General Inquiries

info@evokpoly.com

OUR NEIGHBORHOOD



evök 
POLYMERS™

