

STOP WASTING

money

Elastomer Molds & Colddecks for LSR, HCR & Rubber.

Exploring the World of HCR Injection Molding



Patrick Malfent

Nexus is innovations- & technology leader in elastomer industry.

- Founded in 2007
- > 75 employees
- Headquarter in Austria (Eberstalzell) 



300+
molds on the market

20+
turnkey systems successfully running

30+
years of elastomer expertise



company



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NEXUS Elastomer Molds GmbH

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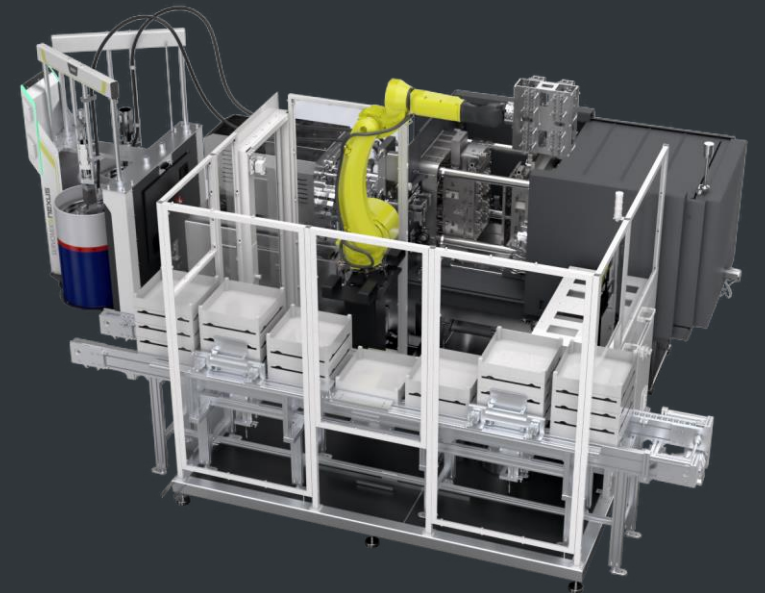
People describe me as passionate,
not only about skiing but about elastomer molds.



dosing

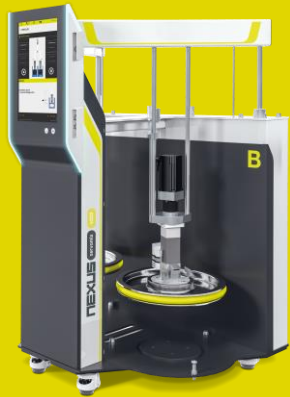


molds



turn key

Dosing systems



Z200

The flagship of the Nexus Dosing systems.

X200

The most economical LSR dosing system.

X20

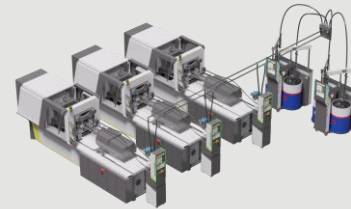
Compact and efficient at the same time.

X1

The unique system for small production quantities.

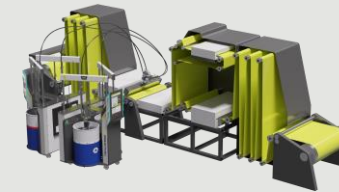
The most efficient LSR dosing systems on the market.

Advanced technologies



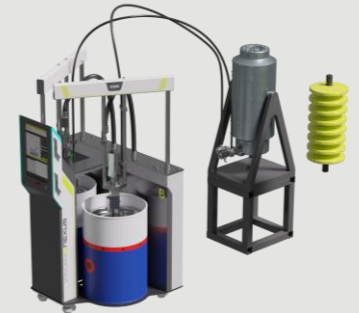
Central feeding

- Space saving
- Efficient
- User-friendly



Coating

- Guaranteed air-free
- Precise and consistent
- Extended functionality



Direct inject

- Less waste
- Efficiency increase
- Safety and cleanliness

LSR.
HCR.
Rubber.

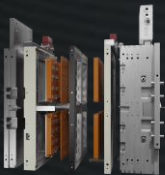
NEXUS molds

Molds

Customized molds



Modular molds

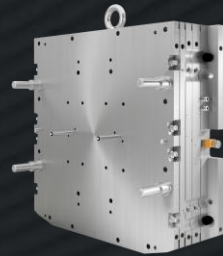


Multicomponent molds



Colddecks & Base Molds

Colddecks

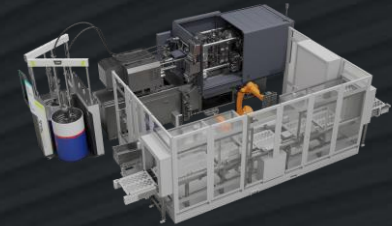


Base molds

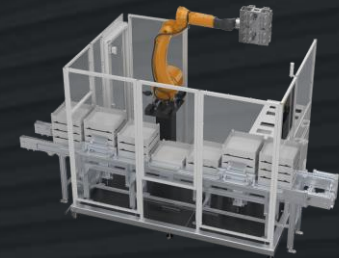


Turnkey

Turnkey cells



Automation



LSR
liquide silicone rubber



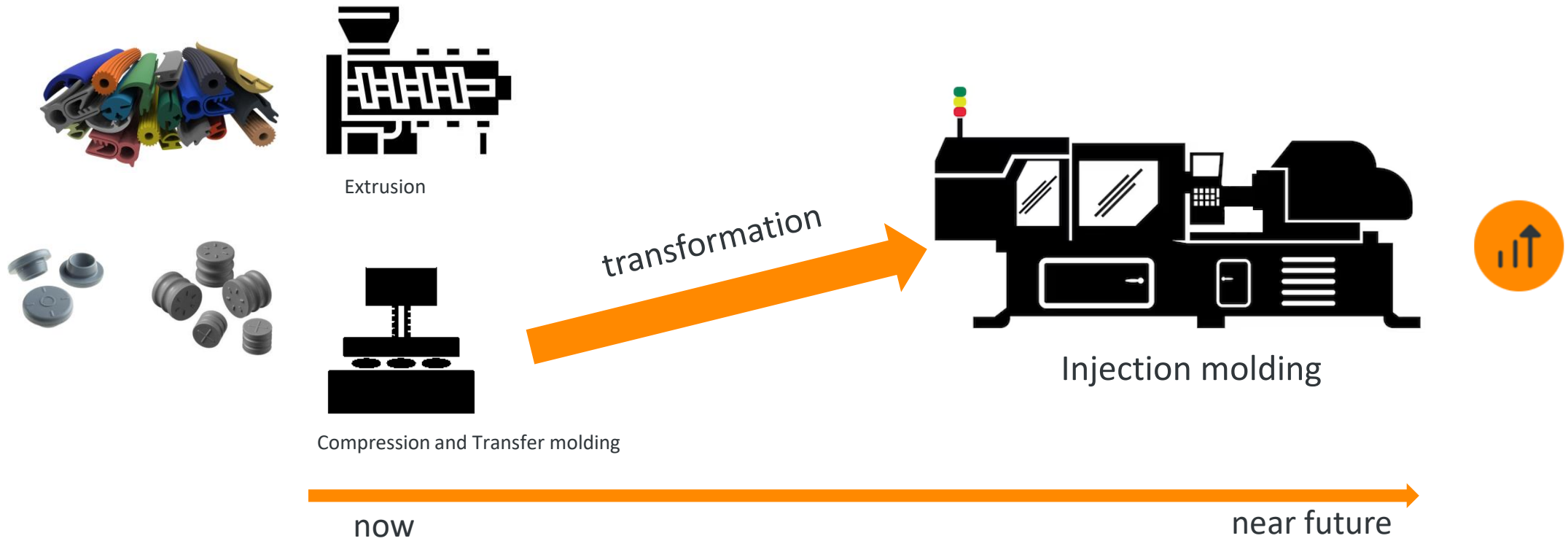
HCR
high consistency rubber



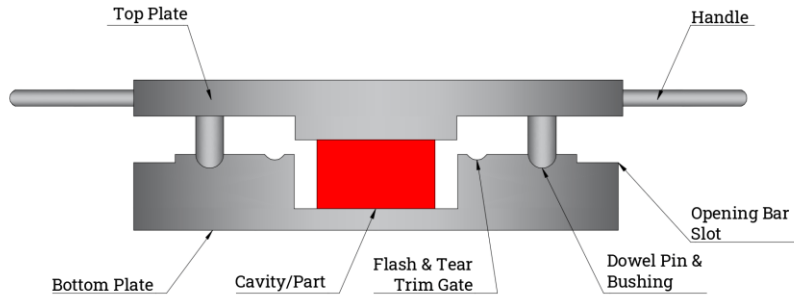
Rubber



Manufacturing Processes in HCR

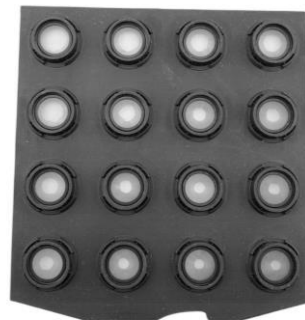
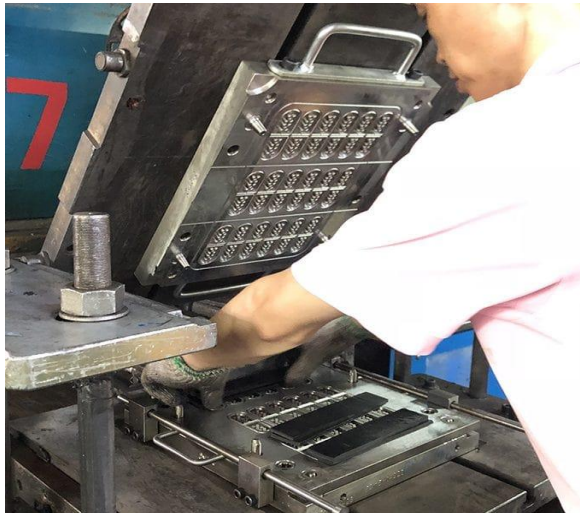


Compression Molding Process



IQSdirectory.com

transformation



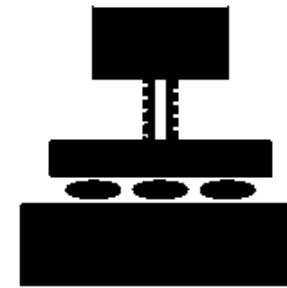
#HCR part Injection molded

Injection molding



- Automated and continuous processes
- Shorter cycle times
- Best part quality
- Flashless parts (no post processing)
- Complex part geometries possible
- Direct gating, no waste

Compression and transfer molding



- Low investment costs
- Higher cavitations possible
- Labour intense
- Dangerous operation
- Variable production and process
- Higher reject rates

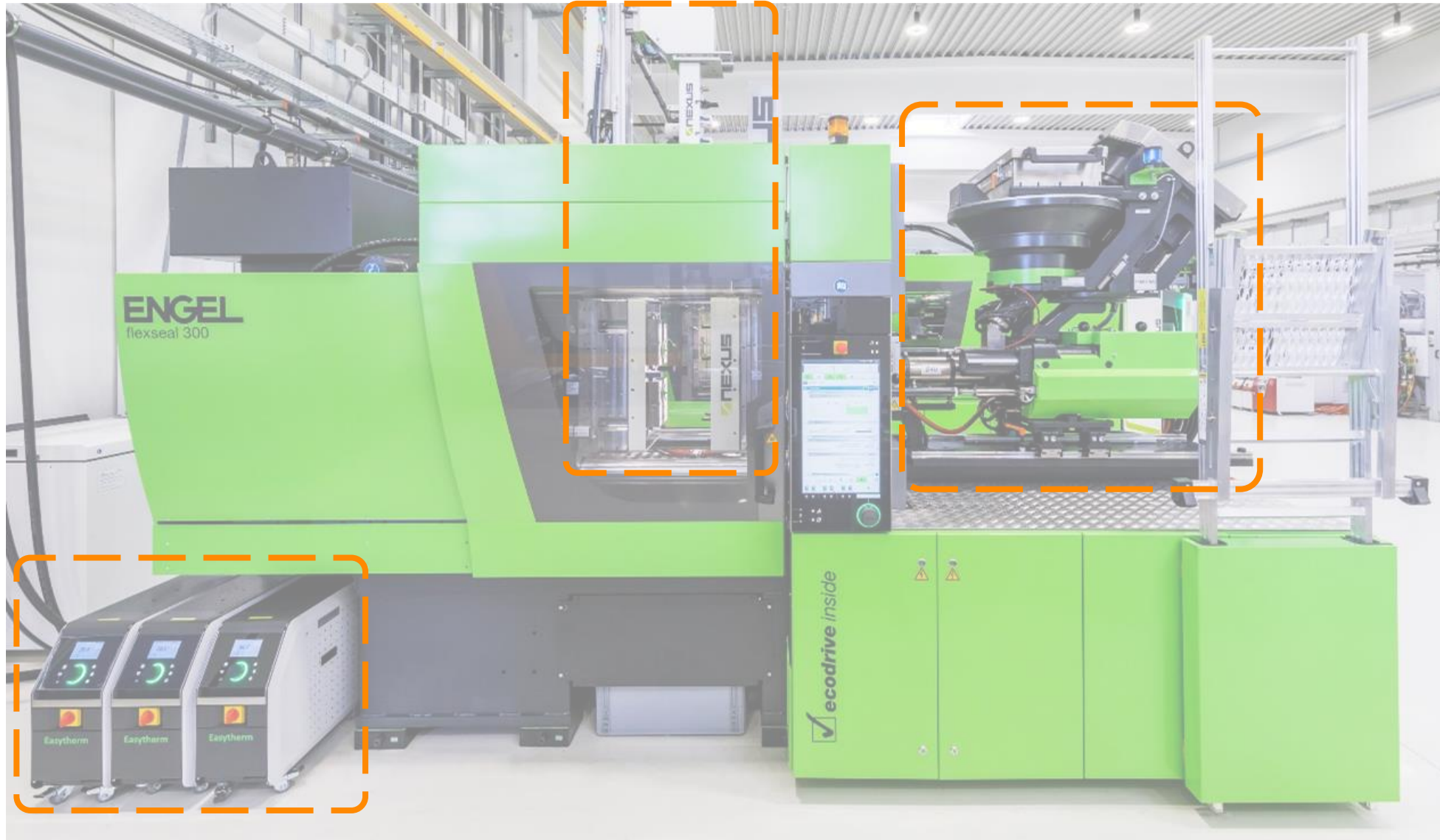
Challenges in HCR injection molding:

- Feeding the raw material to the process
- Higher injection pressures bases on viscosity
- Provide constant process surroundings
- Deairing / venting the molds and cavities

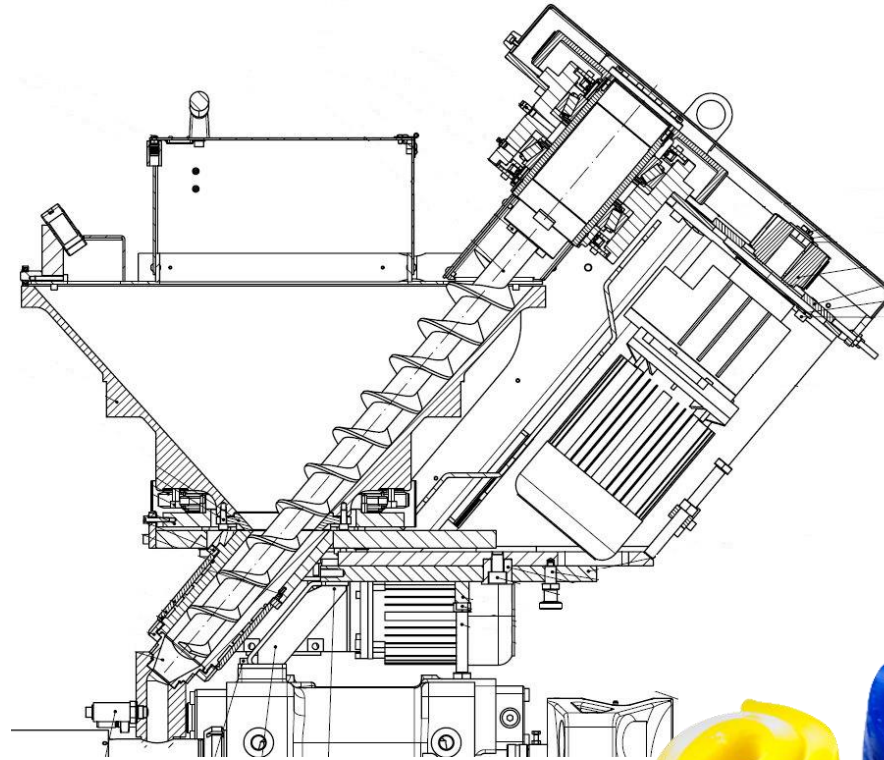
Biggest possible process window !



Technology for HCR Injection Molding:

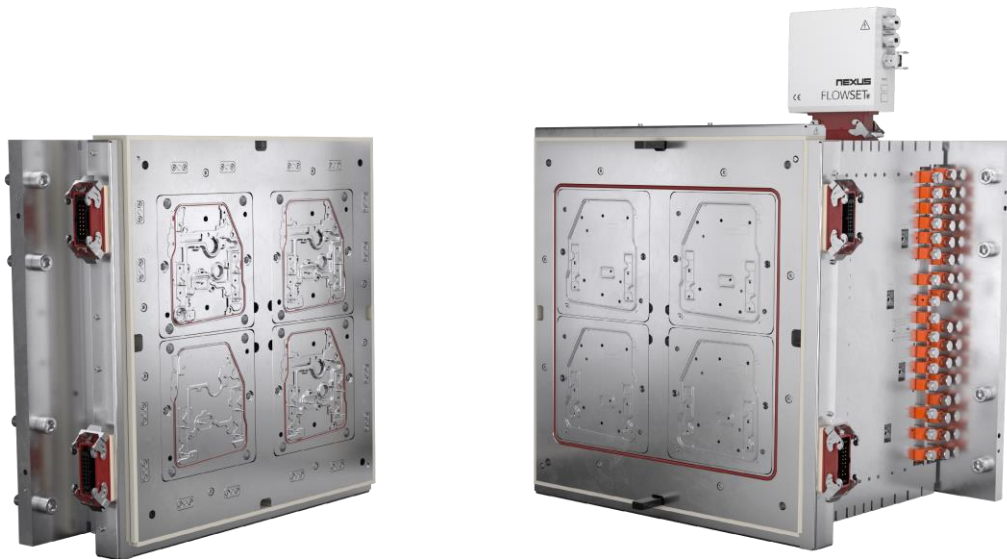


Technology HCR Injection Molding: Feeding

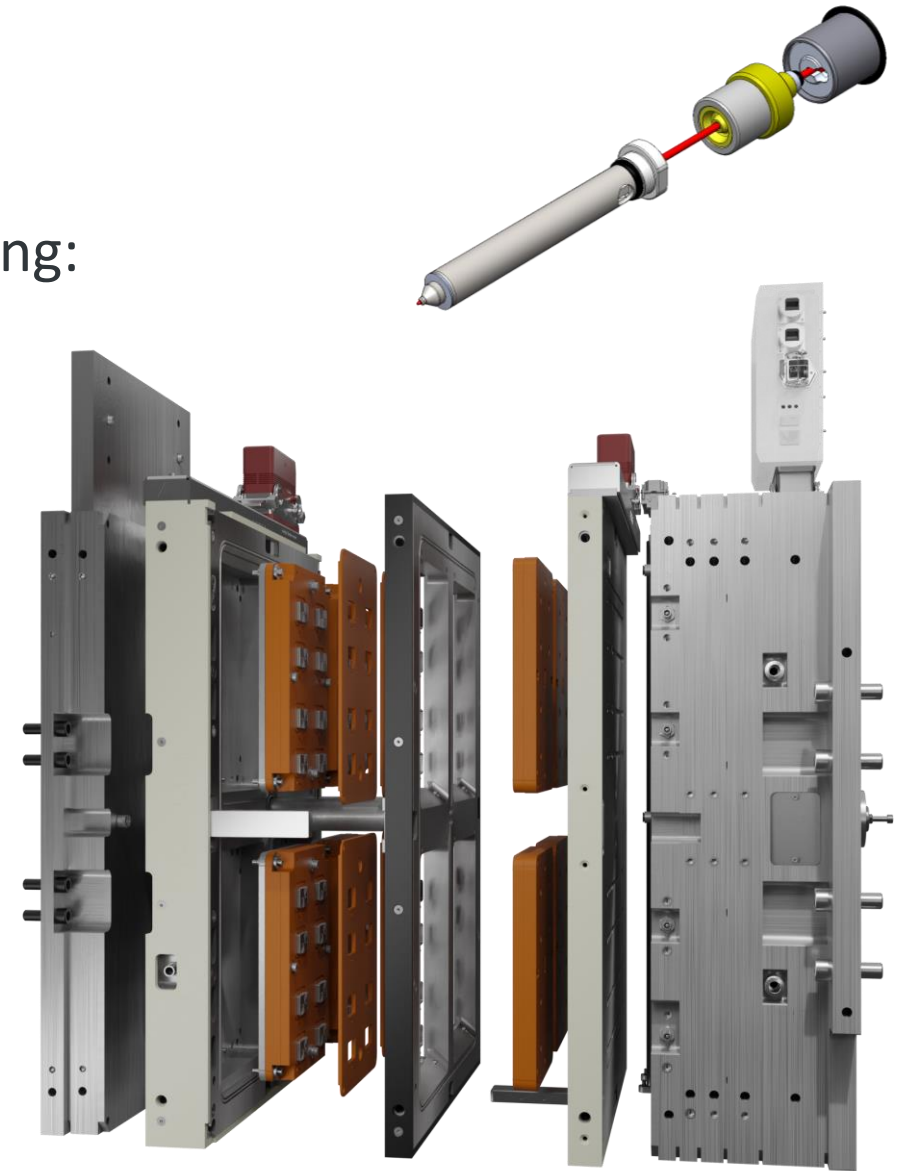


The Nexus Approach to Success in HCR Injection molding:

- Direct gating
- Optimized Valve gate
- Balancing system for best Processing
- Modular mold design to reduce costs



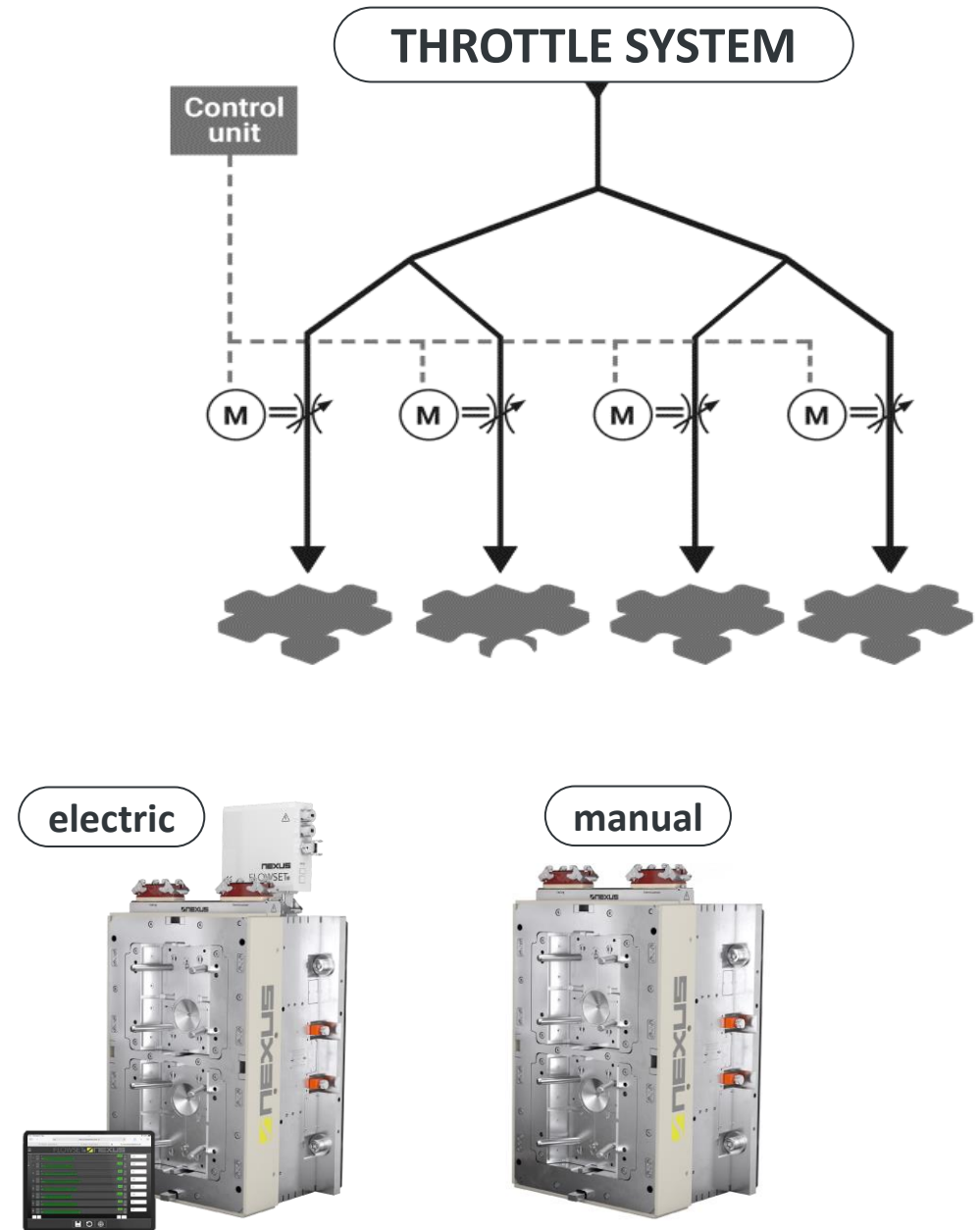
elastomer molds. colddecks. automation. turnkey.



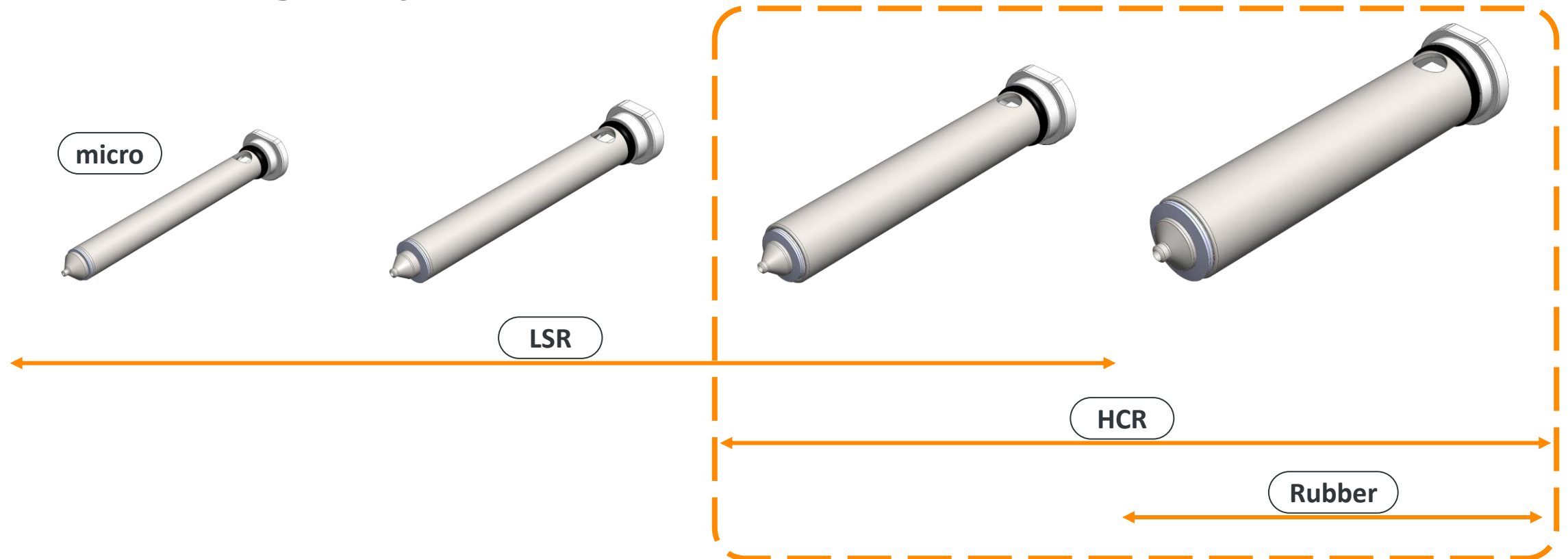
FLOWSET/FLOWSET-E

Balance the filling quantity via the **material flow**.

- Direct injection via valve gate systems
- Individual regulation of each individual cavity (2 to 32)
- Ideal for medium to big part sizes and low cavity numbers
- Optimal when each nozzle has to deliver a different volume (e.g. multiple-gated parts with different flow lengths)



The wide range of possibility with NEXUS valve gate system.



NEXUS molds

Silicone lemon squeezer

elastomer molds. colddecks. automation. turnkey.



The Product

Lemon squeezer

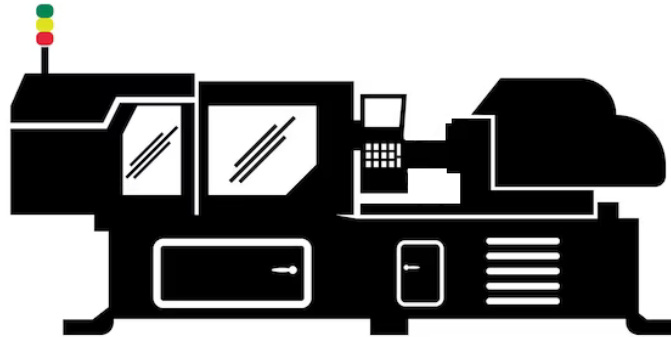
- Material: Platinum cured Silicone / 40 shore
- Color: Light green
- Piece weight: 25,31g
- Post cure: 200°C / 4h



NEXUS molds

Lemon press

HCR



WACKER

ENGEL



NEXUS molds



SIGMASOFT[®]
Virtual Molding

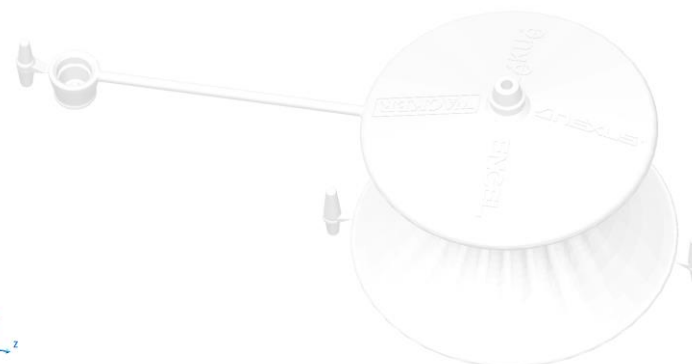
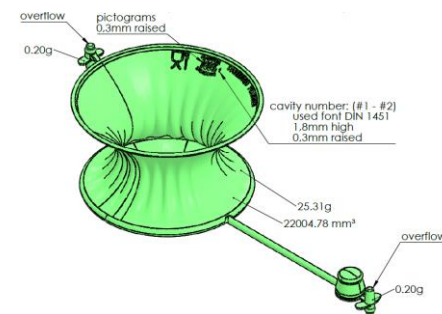
The Mold

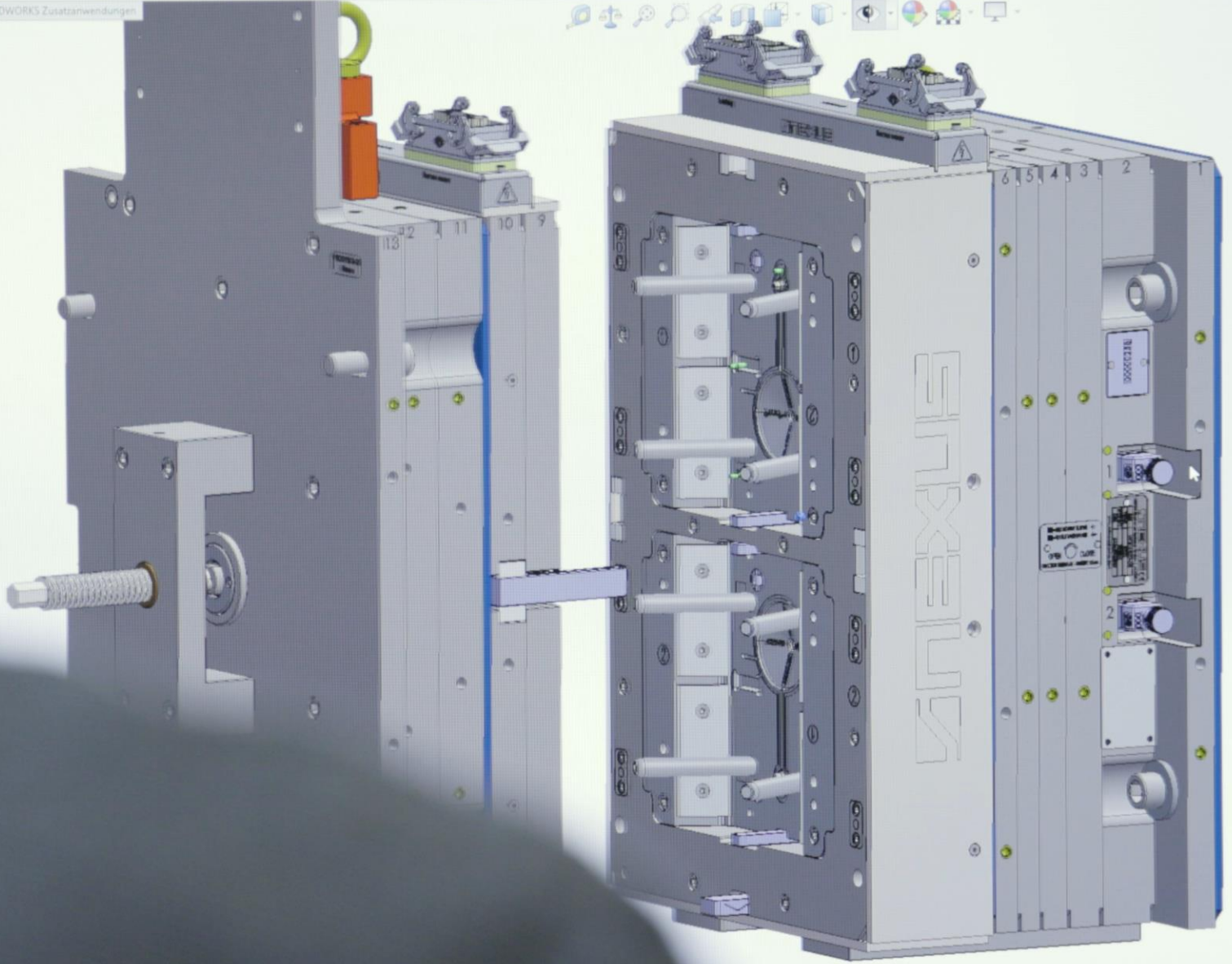
Lemon squeezer

- 2 cavity slider mold
- Flowset balancing system
- Moveable corepins
- Demolding EOAT to demold parts and overflows

Fully automated rework free production mold

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- 13
 - 12
 - 11
 - 10
 - 9
 - 8
 - 7
 - 6
 - 5
 - 4
 - 3
 - 2
 - 1
- Beschriftungen
- Ebene vorne
 - Ebene oben
 - Ebene rechts
 - Ursprung
- W201823-05-010

Thank you for your attention

Chinaplas



2024 4-23 / 4-26

Shanghai
National Exhibition & Convention Center

The graphic features a large circular image of a robotic arm holding a tablet. To the right are several smaller circular icons: a car interior, a pair of headphones, and a person using a laptop. The background is orange with green and red accents.

NPE 2024 | May 6–10, 2024
The Plastics Show | Orlando, Florida



29. Fakuma

International trade fair for
plastics processing

15 to 19 October 2024 in Friedrichshafen