

ENGEL Shaping Tomorrow

Advancements and Trends in Polyurethane Injection Molding



THE ART OF PERFECTION

TechDay 2025

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Market Trends // Design

From interior...



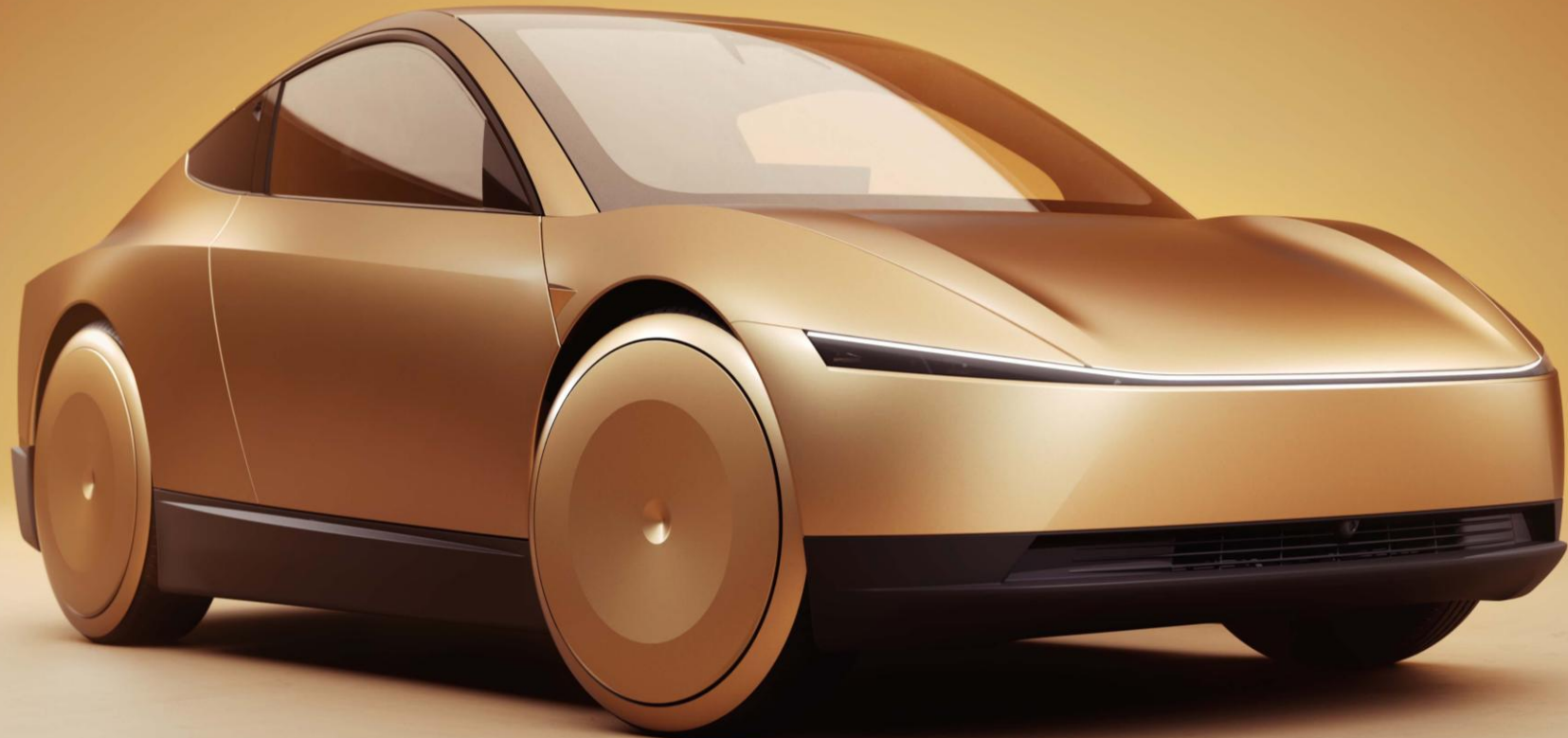
Market Trends // Design

... to exterior – Smart panels



Market Trends // Design

... to exterior – Large surfaces



<https://www.teslarati.com>

Market Trends // Design

... to exterior – Lighting



Be the first with **ENGEL clearmelt**

What's new?



ENGEL has ... Experience with all

Rich expertise and flexibility



Hennecke
GROUP



Asia-Pacific
ISOTHERM
Polyurethane Processing Equipment



Krauss Maffei
Pioneering Plastics

Cannon



ENGEL
be the first

ENGEL has... the CCC

Concentrated expertise in the clearmelt Competence Center

- **Established in 2025**
- 20 years of experience
- Interdisciplinary task force
- **One face to the customer!**
 - Full project handling by CCC
 - From RFI to after sales
- **ENGEL as solution provider**



ENGEL has... the CCC

Concentrated expertise in the clearmelt Competence Center

- **Full scale test equipment**
 - duo700 combi (vertical rotary table)
 - duo1500 combi-m
 - duo5500 combi-m
- CANNON PUR equipment
- CANNON Color unit



ENGEL has... the right Interface

Universal interface for plug and play

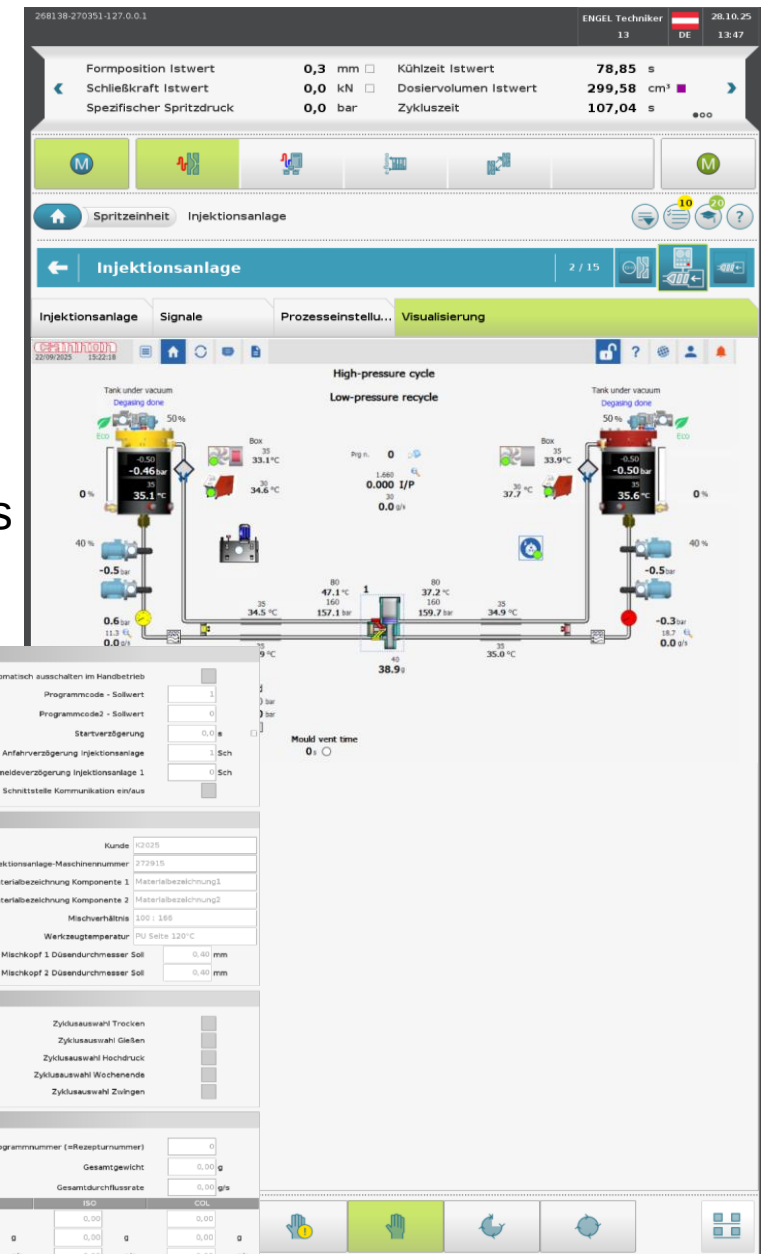
Integration **OLD:**

Once done for Hennecke

Integration **NEW:**

Universal interface

- Plug and Play for different PUR devices
- Collection of process data
- Monitoring in PD protocol



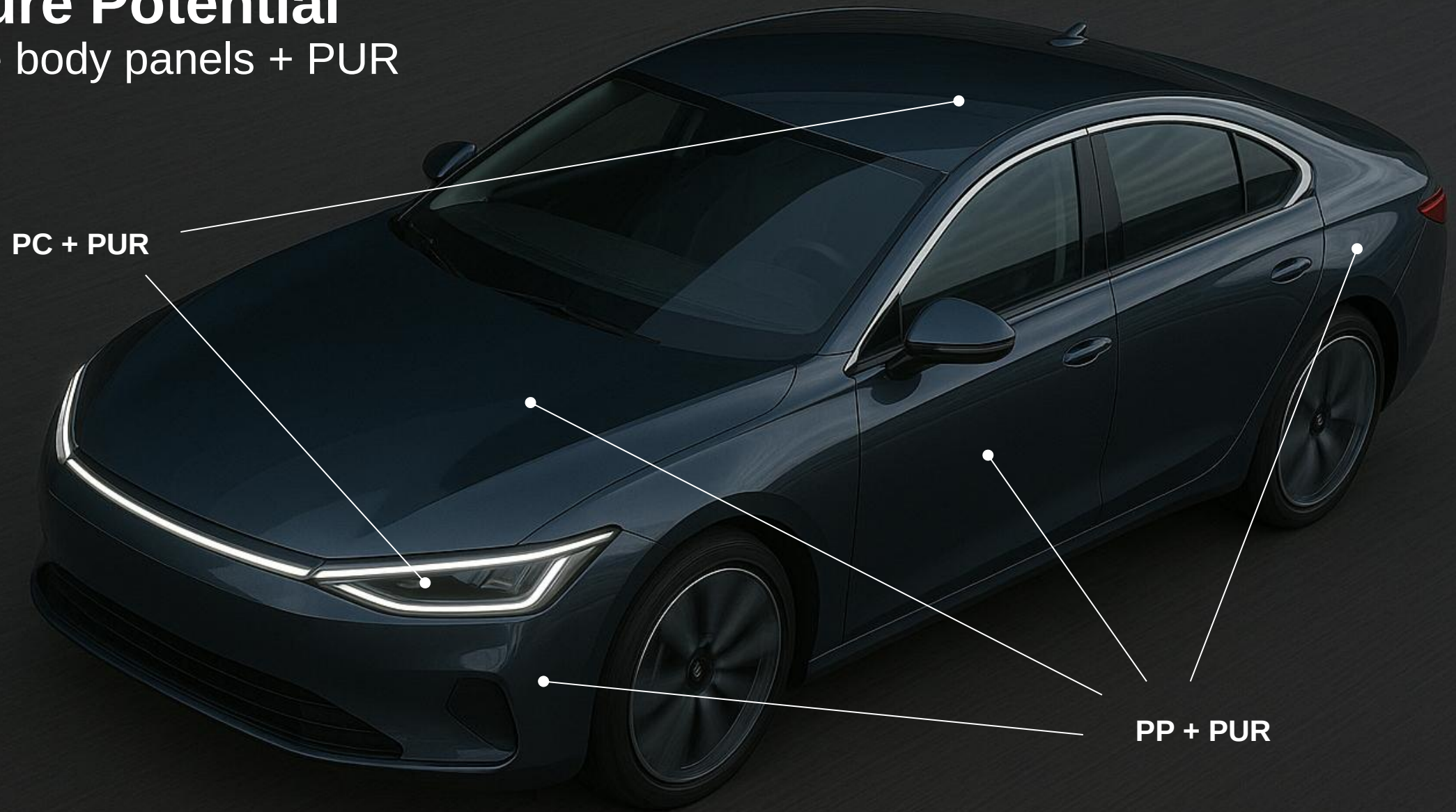
Be the first
with
ENGEL clearmelt

The future will be big and colorful!



Future Potential

Large body panels + PUR



ENGEL has... a strong Partnership with CANNON

The best out of two worlds

2 family-owned companies



▪ Comon mindset:

- Quality
- Innovation
- Long-term vision
- Sustainable progress



▪ Seamless integration in ENGEL control



▪ Global presence



▪ Overlapping areas of comfort

- Solutions for small knobs and large car roofs



ENGEL has... a strong Partnership with CANNON

The best out of two worlds

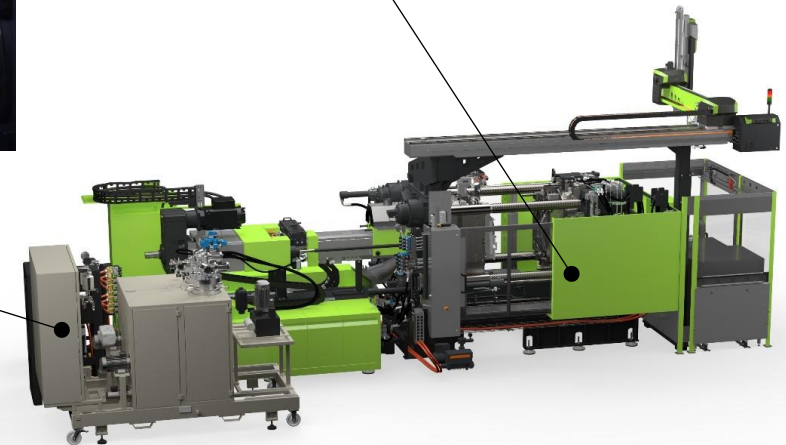
Rear Lamp Concept

- Vertical rotary table
- Compact footprint
- Retrofitting possible
- Moulding concept in line with lighting standard



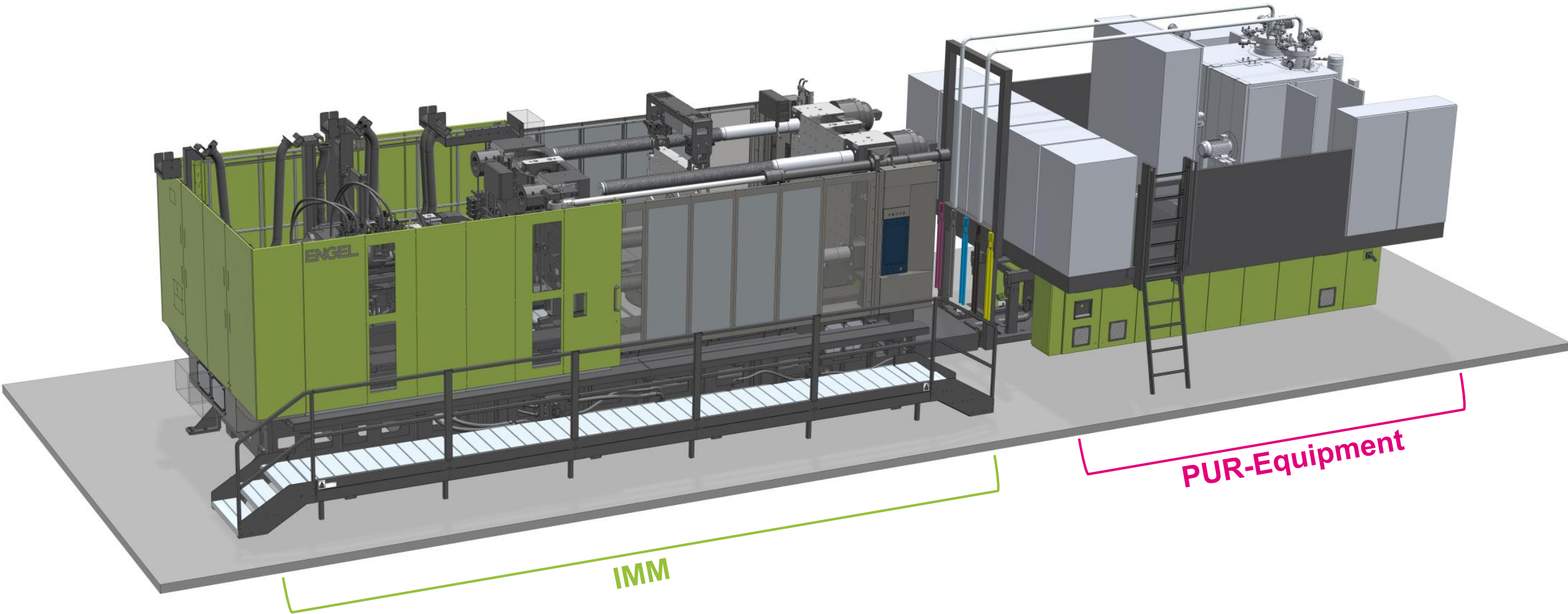
Integrated CANNON
dosing unit for PUR

ENGEL duo 5160/700 tech
+ Automation



ENGEL... is innovative

Solutions for colour change / multi-colour



ENGEL has... the largest



The ENGEL Strategy

Be ready for the future – ENGEL duo 5500 tech center machine

Production Solution for

- Complete roofs
- Bumpers
- Hoods
- ... every body panel

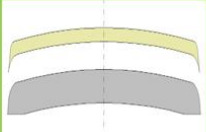
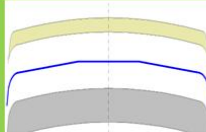
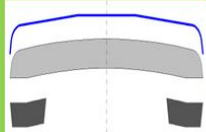
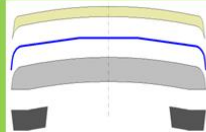
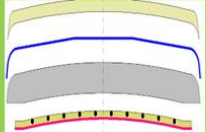
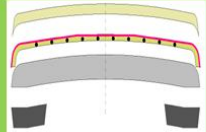
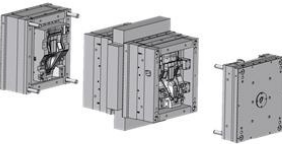
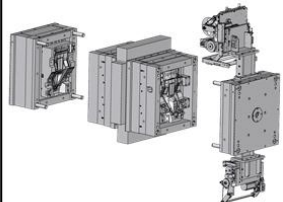
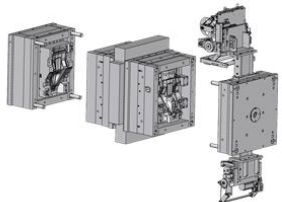
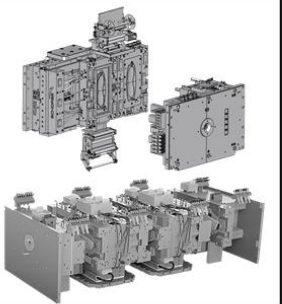
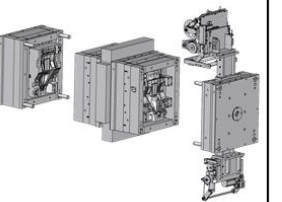
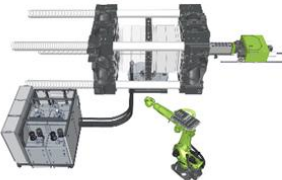
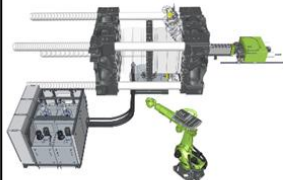
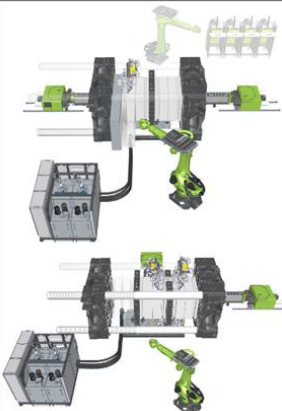
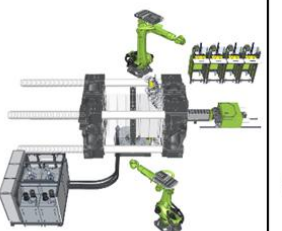
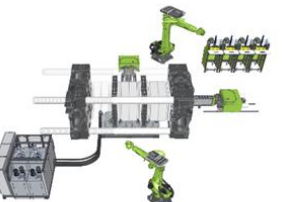
OEM benefit

- Up to 60% less CO₂ emission
- 99% VOC reduction
- 30% lower production cost



PUR Solution Toolbox

The right concept for every application

Structure						
Layers	PUR Thermoplast	PUR IMD Thermoplast	IMD Thermoplast 1 Thermoplast 2	PUR IMD Thermoplast 1 Thermoplast 2	PUR IMD Thermoplast IME	PUR IME Thermoplast 1 Thermoplast 2
Tool Technology						
Application Cell						



Purposefully combined processing technologies



Contact



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Cannon Group

Key figures



Founded in **1962**



30 companies



1400+ talents



Presence in **5** continents
and **40+** countries through
subsidiaries and agencies

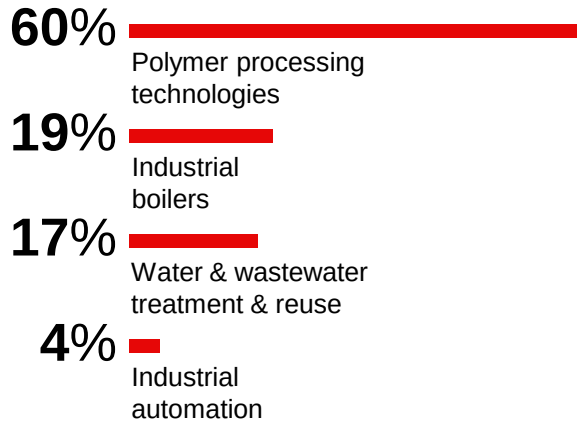


Global leader in liquid
reactive polymer
equipment



Cannon Group

CANNON
acts globally



Americas

- Cannon USA
- MexiCannon
- Cannon do Brasil

Europe

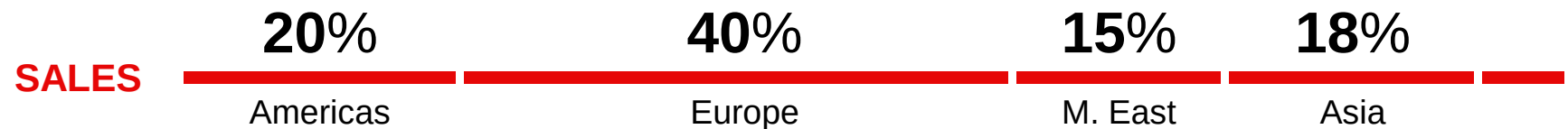
- Cannon SpA (Italy, HQ)
- Cannon Afros
- Cannon Artes
- Cannon Automata
- Cannon Bono Energia
- Cannon Ergos
- Cannon Legos
- Cannon Micromec
- Cannon Tipos
- Cannon Deutschland
- Cannon France
- Cannon Shelley (UK)
- Cannon Viking (UK)
- Cannon Istanbul (Turkey)
- Cannon Eurasia (Russia)

Middle East

- Cannon Middle East (UAE)

Asia

- Cannon Indikos (India)
- Cannon Far East – China, Singapore, Thailand, Vietnam, Malaysia, Indonesia (6 locations)
- Shinnon (China)
- Cannon Korea
- Nippon Cannon (Japan)



Dosing system for Sankt Valentin LAB



Dosing Unit:

- Model: A-Compact 40 FC HT
- Flowrate: 50 – 450 g/s
- Three mixing heads: two on fixed platen, one on the movable platen, two possible sizes (LN 5/3 and LN 10/3)

Color Units:

- Two color units: CCS 1 HT and CCS 5 HT
- Flowrate: 2 – 70 g/s
- Any type of color
- Colors available at both platens



Cannon
DEDICATED INDUSTRIAL SOLUTIONS

Dosing system sizes



High pressure pumps dimensions:

- 2 cc/rev
- 6 cc/rev
- 12 cc/rev
- 30 cc/rev

Total flowrates (ratio I:P 2:1):

- A-Compact 10 FC HT: 15 – 140 g/s
- A-Compact 20 FC HT: 30 – 270 g/s
- A-Compact 40 FC HT: 30 – 470 g/s
- A-Compact 60 FC HT: 70 – 950 g/s

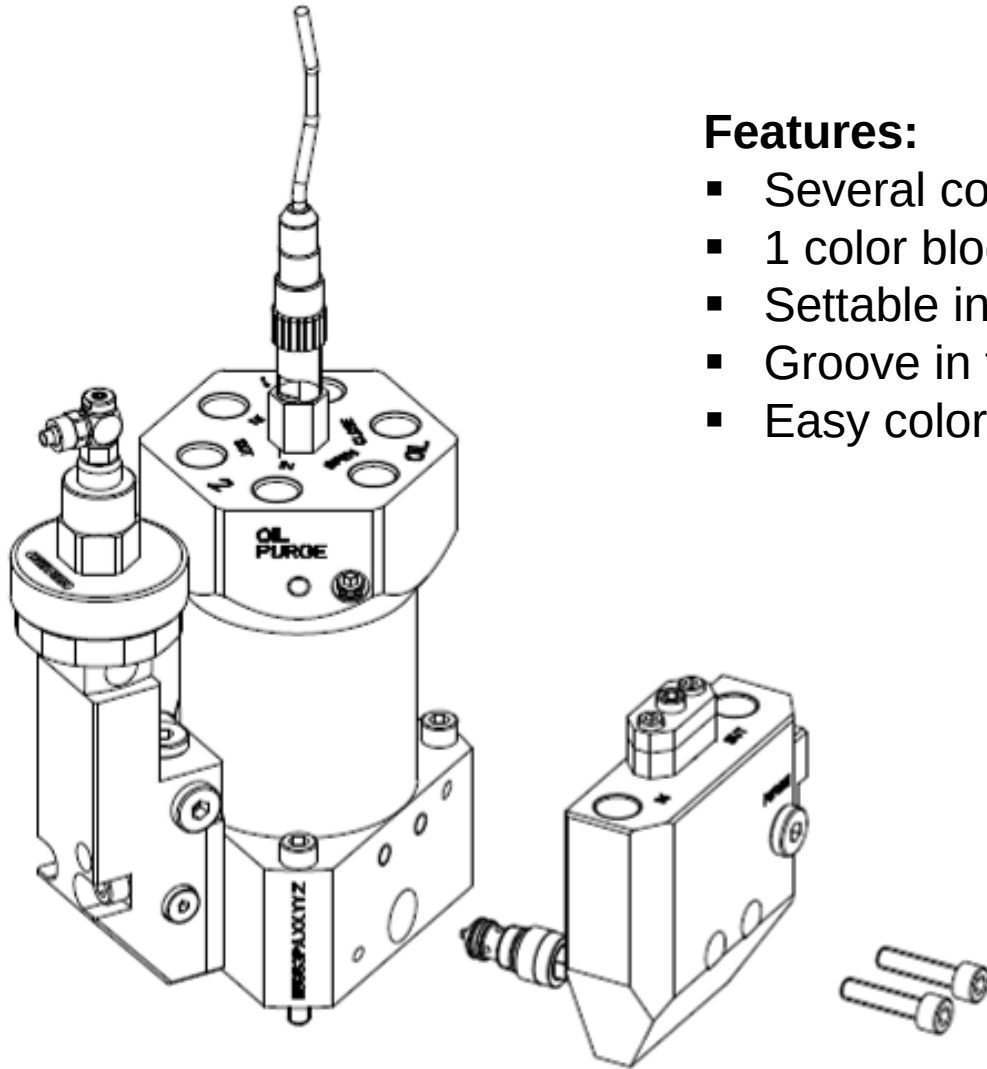
Mixing head sizes:

- LN 5/3: 15 – 130 g/s
- LN 10/3: 50 – 450 g/s



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DEDICATED INDUSTRIAL SOLUTIONS

Color at the mixing head



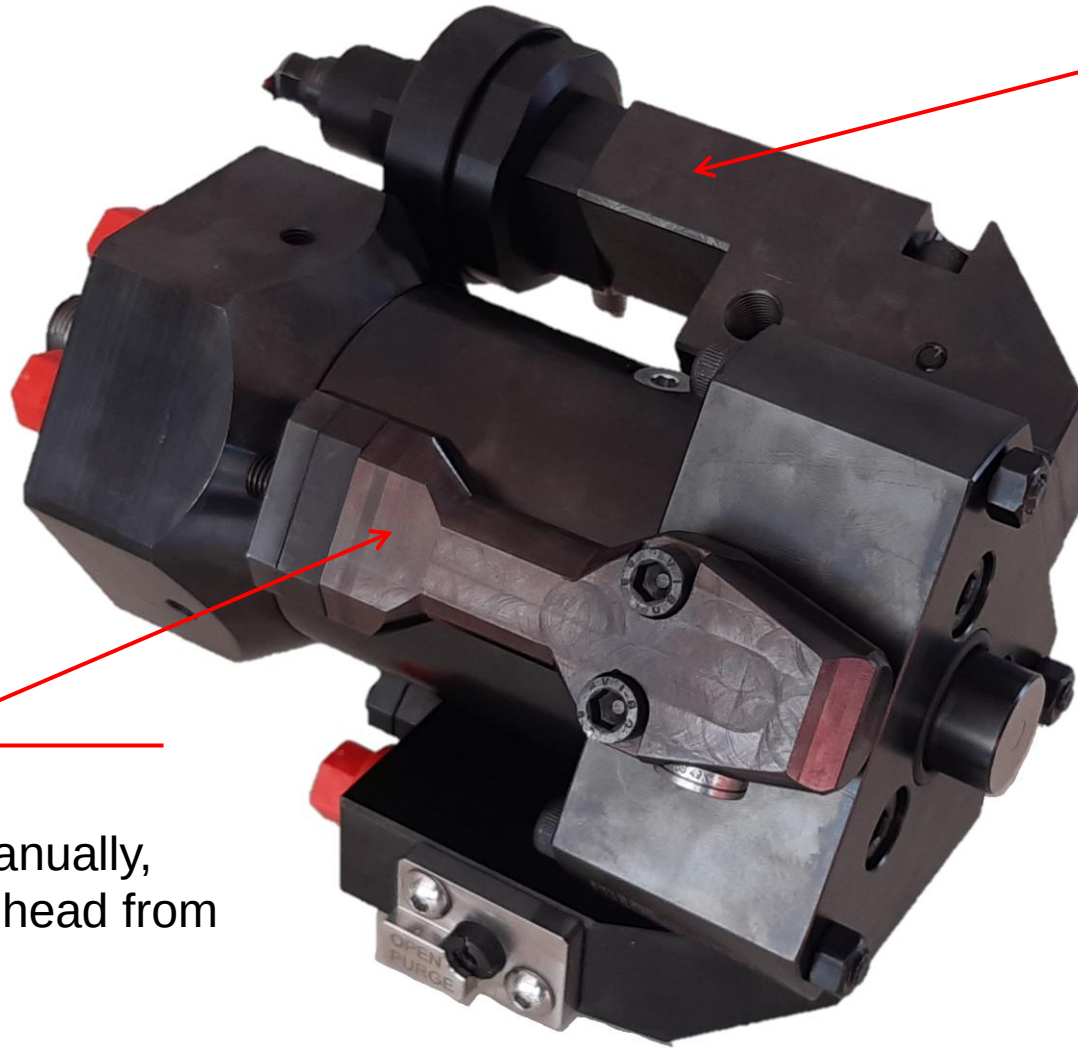
Features:

- Several colors with just one mixing head
- 1 color block for each color
- Settable injectors
- Groove in the piston for best mixing quality
- Easy color change



Cannon
DEDICATED INDUSTRIAL SOLUTIONS

Actuators configuration for injectors



ReCo Air:

Remote Control:
Automatic adjustment of
the pressure, via HMI of
the dosing machine

Easy Adjustable Injector:

Pressure can be adjusted manually,
without removing the mixing head from
the mold

Latest improvements

DOS



Characteristics:

- De-coupling mixing-dosing
- Control of mold backpressure
- Control of shrinkage
- Position controlled
- Pressure controlled
- Variable speed
- Thermoregulation system
- Integrated in the hydraulic system of the dosing unit