



Plastics Systems

Plastic Handling for the „Smart Car“

- Project:** Downstream automation in the production process of SMART Car components
- Customer:** Peguform Oldenburg for 5-Door SMART Car (photo above) in cooperation with Plastal Hambach (formerly Dynamit Nobel) for production of 3-Door SMART Car (photo below).
- Technology:** KUKA KR 150L110 K bis KR 180 L 100 K

Exterior skin components of the SMART Car are produced on injection molding machines with clamping forces of between 2300KN and 4000KN. Molded parts are “peeled” out of the complex core-pulling and matrix tools by 6-axis industrial robots. While mold opening times are limited to 8 to 12 seconds per cycle, the complete cycle time is only 40 to 60 seconds per finished part.

Fixed blades and rolling blades are used to separate the sprue from the part. Deflashing and deburring is done by means of cutters and flaming. Labels are automatically applied.



Special characteristics:

De-molding by 6-axis robotic systems ensures fast cycling and damage-free takeouts of even highly complex matrix dies due to the ability to “peel” parts out of the mold. and to “rotate” parts in the mold

To reduce stress on the hot molded part, the 6-axis robot can de-flash the part immediately after de-molding.

Runners can be removed by simple peripheral devices as the 6-axis robot is capable of performing the necessary motions.

Better efficiency of the robot system due to simplified peripheral devices.



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