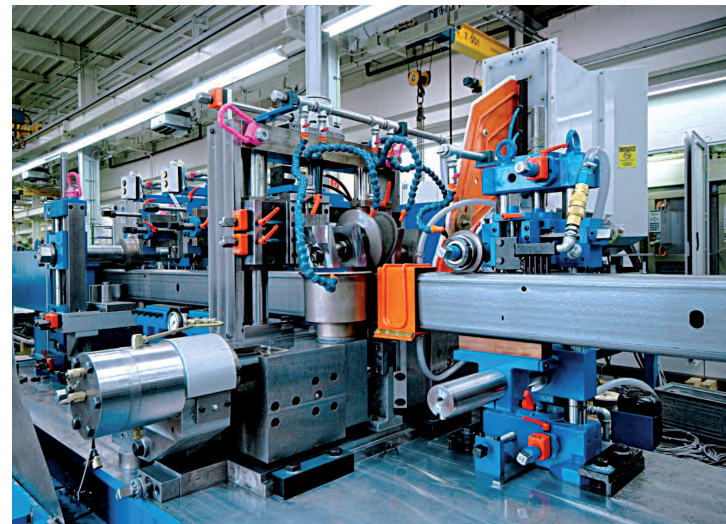




Pre-punch system with integrated mechanical press

- ✓ **Integrated Stamping Press**
 - High performance pre-punch systems with integrated high-speed presses
 - rapid change pre-punch dies

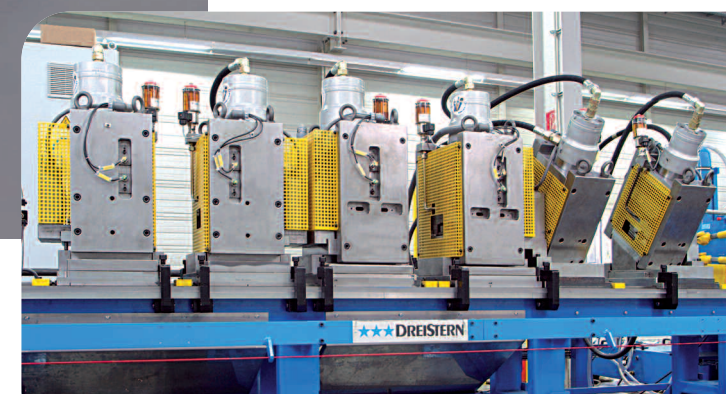
- ✓ **High Frequency Welding**
 - Induction weld process
 - high welding speeds



HF welding zone



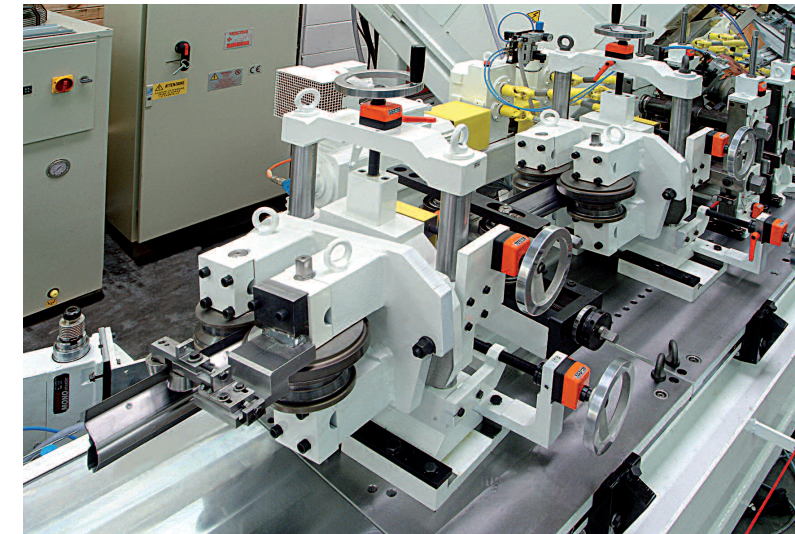
Rollforming system for automotive seat tracks



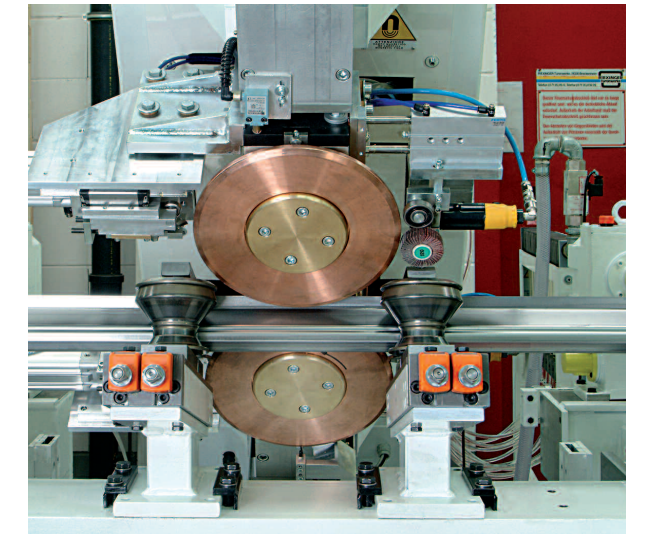
Hydraulically operated mid-punch dies

1 Rollforming System for Door Reinforcement Profiles

- reliable processing of ultra high strength steels
- RH and LH parts with the same rollform tooling
- swept and compound swept profiles
- highly flexible laser weld-seam configuration (Butt-joint, fillet joint, lap joint, double flange joint)



Sweep and compound sweep in-line



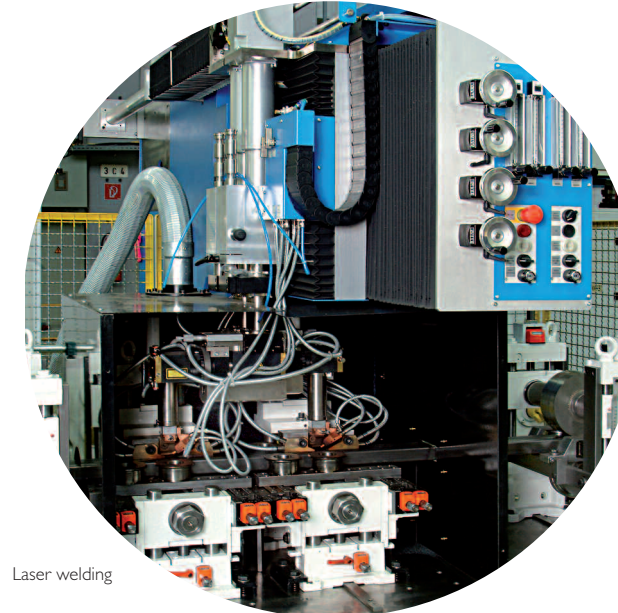
Roller seam welding of door reinforcement profiles

2 Rollforming System for B-Pillars

- surface critical outer profile
- swept and compound swept profiles
- high output
- four versions with one rollform tooling (2 each, drivers and passenger side)
- higher speeds as compared to extruded products
- better tolerances as compared to extruded profiles

3 Rollforming Systems for Automotive Seat Tracks

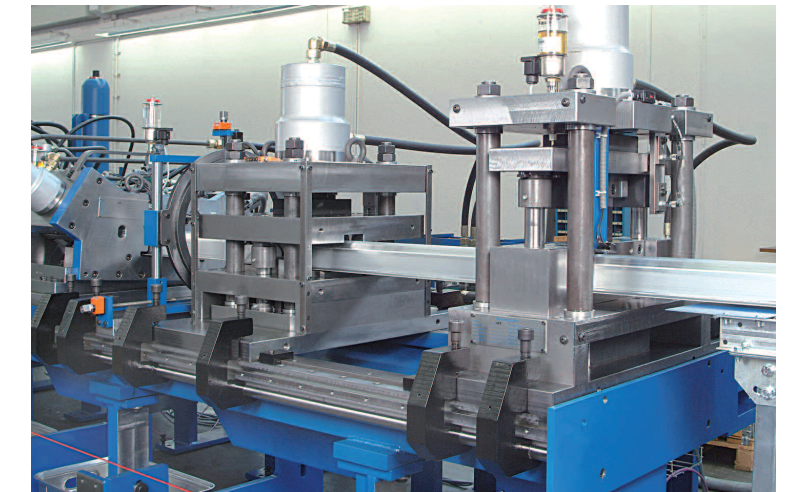
- no material waste
- very high output
- required to maintain 1.67 Cpk
- RH and LH parts with the same rollform tooling
- integration of auxiliary operations (embossing, piercing, bending)



Laser welding

4 Rollforming System for Bumpers

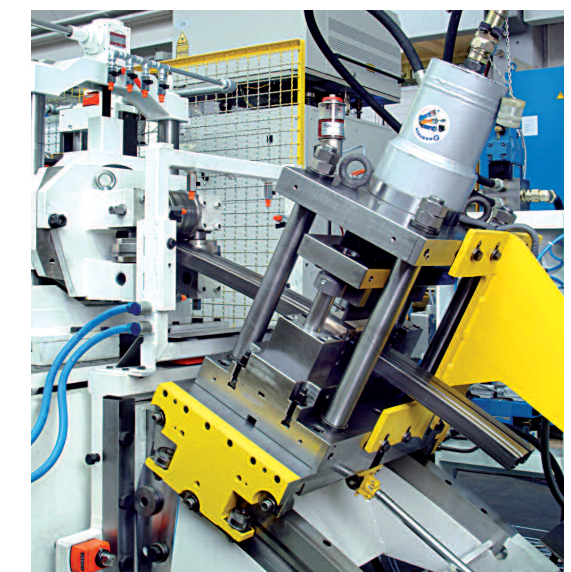
- Bumpers bent (swept) in-line
- reliable processing of ultra high strength steels (e.g. DPI1000, DPI200)
- higher speeds as compared to extruded products
- better tolerances as compared to extruded profiles



Post-punch tools for sill-reinforcement production

5 Rollforming System for Sill Reinforcements

- low tooling costs
- very high output
- easy to compensate for different material spring-back



Post bend and cut-off of bumper profiles

