

Production of Laser-Welded Profiles using START-STOP® Technology



■ Laser-Welding with Start-Stop® Technology

30 years ago Dreistern built the 1st rollforming lines using START-STOP® Technology. Since its' introduction, this technology has been a success without comparison. START-STOP® Technology allows for the integration of virtually unlimited numbers of post-rollforming operations, e.g. punching, embossing, clinching, bending, tapping etc. into the rollforming line. Results of this technology are finished profiles in one primary line process. Secondary, expensive post processing operations are not required, substantially simplifying assembly and joining operations. In START-STOP®, the rollforming process is stopped at a precisely defined position for a short instance, and the required operation is performed. Immediately after a defined operation is completed, the profile is accelerated by the rollformer to top speed. With integration of Laser-Welding into the Start-Stop® rollforming process, Dreistern has taken another quantum leap in the evolution of this Technology. Laser-welded profiles can now be produced using START-STOP® Technology.

■ Applications

- Ultra light profiles for the automotive industry
- Car body parts with defined crash protection characteristics
- System profiles for multiple applications
- Ball bearing drawer slide profiles / frame profiles / shelf posts

■ Benefits

- Integration of virtually unlimited numbers of operations into the rollforming process
- High average rollforming speed, even with short part lengths
- Exact positioning of the (START-STOP®) line resulting in high tolerance post-rollforming operations
- Secondary "prep" operations eliminated, resulting in assembly process simplification
- Subassemblies can be completed in-line without additional labor
- Cost savings: flying cut-off machine eliminated

■ We Deliver

- Prototypes, 1st series and small series of parts
"Turn-Key" Design, manufacture and installation of:
- Semi automatic lines for cost effective production of small and medium profile quantities
- Fully automated lines for large profile quantities

■ Technical Specifications	
Welding equipment	robust, low-maintenance CO ² Laser made by TRUMPF Lasertechnik
Welding power	up to 10 kW depending on strip thickness and required welding speed
Welding speed	up to 25 m/min depending on material and strip thickness
Output rate	up to 60 parts per min (double part cycle)
Material	all sheet metals suitable for welding
Strip thickness	0.2 – 3.0 mm
Positioning accuracy	up to ± 0,2 mm