

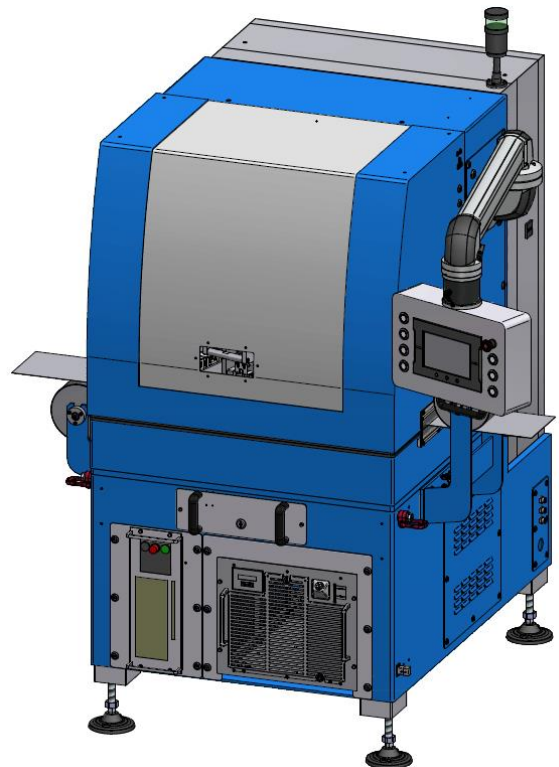
Communication – February 2022

THE NEW LASER CROSS WELDER SLT 200

The new laser cross welding machine type SLT 200 of THE Machines is specifically designed to connect metal tapes with a width up to 200 mm. It is ideally suited for the metal-plastic multilayer pipe production for dimensions of the diameter range from 10 mm to 63 mm.



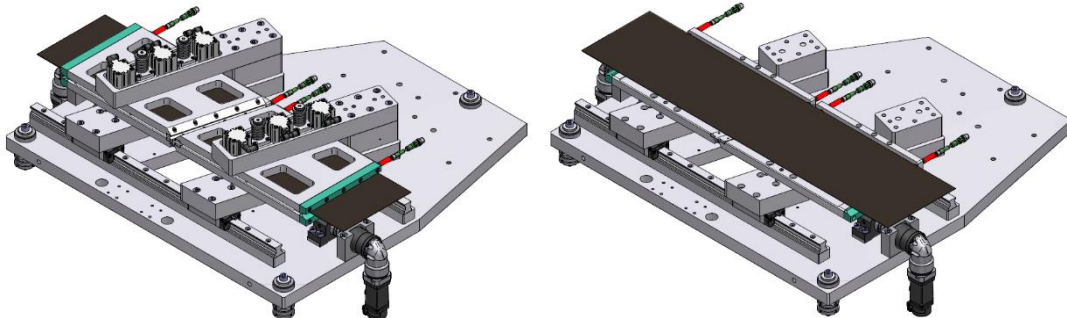
SLT 200 with 500 Watts, air cooled laser source



SLT 200 with 1500 Watts, water cooled laser source

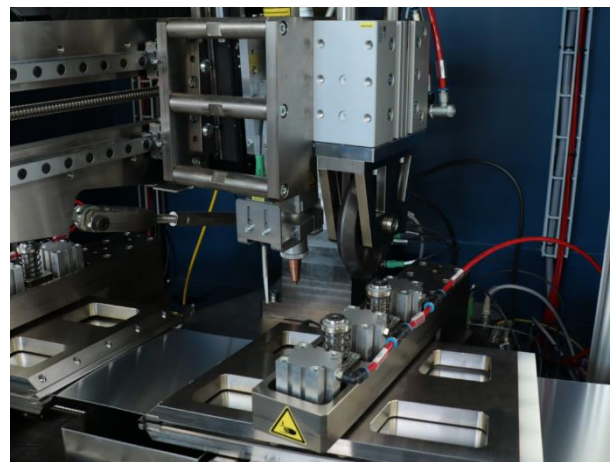
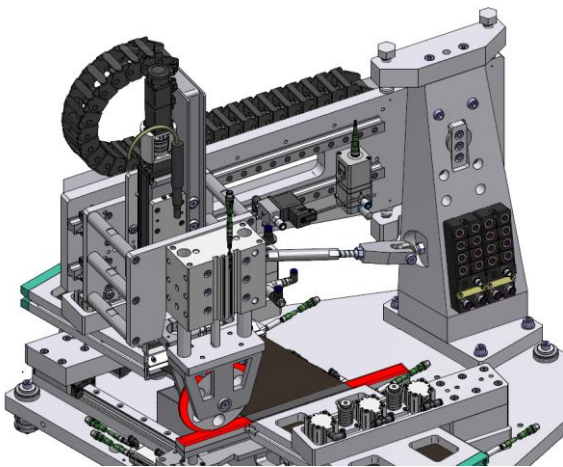
New features of the SLT 200

Two precision sensors fully integrated into both tape clamping systems allows to close the clamps only if the metal tapes are perfectly aligned. This feature guarantees the most accurate positioning of both tapes and avoids any kind of misalignment. No individual or manual adjustment is necessary.



Since the metal tape edge trim size has become smaller in past years, a perfect welding edge alignment on both sides is mandatory. To achieve repeatable welding results with perfect edges, the actual welding for each tape size can be optimized by means of a laser welding power ramp function. This means that the power at entry and exit of the weld can be chosen specifically and becomes part of each individual welding receipt. Weld notches or over-welds are avoided.

In the event of weld bulge, a new tape flattening system can be used optionally, realized by a material-friendly roll pressing process. For each alloy and tape size, a specific pressing process can be chosen within the recipe management system. This process option is designed to work fully automatically, no operator manual intervention or tape manipulation is required, all movements are done in a fully automated sequence by the clamping system.



The result is an even tape thickness in the welding zone and avoids any lateral tape movement during the roll forming process, which results very often in welding errors of the longitudinally welded metal pipe. The cold working on the cross welded zone is very low and will not influence negatively the metal properties. The strength and physical properties of this weld connection can remain in the end product and reduces the average scrap resulting from metal coil changes.

Also in our new SLT 200, the THE process is non-contact, based on a laser cut for both edges, no knife needs to be replaced and there is no deformation of the edges. This is an important preparation for the welding step with constant high quality and security.

The proven high weld repeatability and known cycle time enables the actual SLT size range to be accommodated to each production line layout, with shortest tape accumulators, thus reducing the footprint drastically, an important detail for lines with high outputs.

The SLT's as autonomous units, yet interlinked with all safety features, can be easily integrated in any kind of line, also in existing installations.

The SLT distinguishes itself with few wear and tear parts, the fiber laser is maintenance free, for laser power higher than 500 Watts a cooling chiller is fully integrated into the machine.

For further more detailed information, please don't hesitate to contact us.