

Highlight

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Three Laser welding prototype machines

PolyBright's main topic is to break new paths in the field of laser polymer welding using high-brilliance laser sources, and work package 5 covers the corresponding machinery. Out of six experimental setups, based on different technical laser polymer welding concepts, three have been selected to be transformed into a prototype machine.

Three prototype machines for fiber laser polymer welding have been set up:

1. Quasi-simultaneous welding machine prototype (Cencorp)
2. TWIST welding machine prototype (ILT)
3. Mask welding machine prototype (Leister)

Figure 1 : Cencorp's Quasi-Simultaneous prototype machine with 1070nm fiber laser (YLR-200, IPG) and scanner (Superscan-10, Raylase) - drawings.

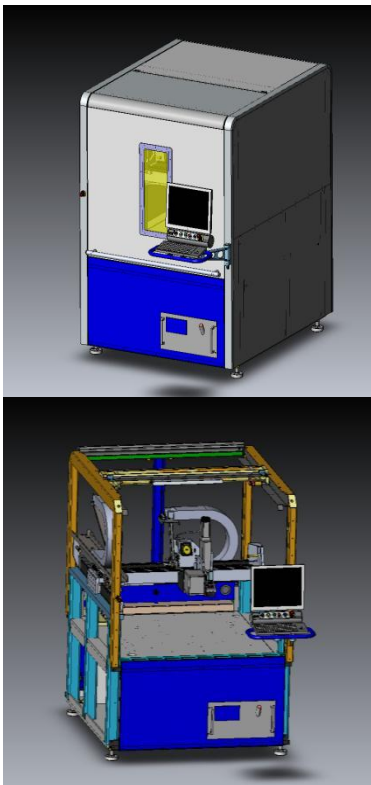


Figure 2: ILT's TWIST prototype machine with 1567nm fiber laser (ELR120, IPG) and scanner (Fiber Rhino 8.5, Arges).



Figure 3: Leister's Dynamic Mask prototype machine with 1070nm fiber laser (YLR-100, IPG) and scanner (MiniScan 20, Raylase)



Technical specifications:

Quasi-Simultaneous welding prototype machine (Cencorp):

Dimensions (BDH) 1330 x 1440 x 1770 mm

Fiber laser power 200 W

Max. working area x=844mm, y=900mm z=200 mm (working area of scanner head + xyz travel path)

Machine loading: manually

TWIST prototype machine (ILT):

Dimensions 2100 x 1100 x 900 mm

Laser power 120 W

Working area 210 x 210 mm

Machine loading: manually

Dynamic Mask prototype machine (LEISTER):

Dimensions (BDH) 860 x 1240 x 1860 mm

Laser power 100 W

Working area 200 x 200 mm

Machine loading: manually

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