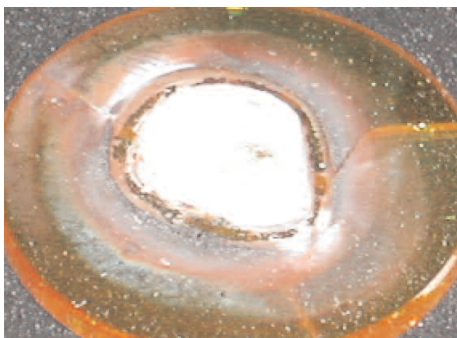
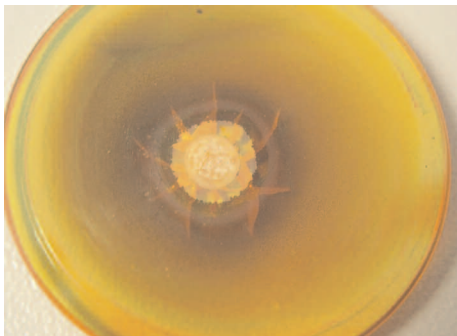


## Lens control unit for CO<sub>2</sub> laser optics (LCU)



For CO<sub>2</sub> laser applications up to a capacity of several hundred watts, ZnSe lenses are preferred.

The risk of contamination of lenses is especially high with plastics applications since cutting dusts and vapors might deposit on the lens surface.

Despite provisions against contamination e.g. by crossjets or rinsing of cutting nozzles, interruptions in the gas supply can result in rapid contamination of the lens.

Once a lens is contaminated it can become damaged and then break due to thermal tensions after just a short period of laser operation. Further operation can then cause the lens to chemically decompose at temperatures of around 400 °C as the damaged lens absorbs laser energy instead of transmitting.

The decomposed lens contains substances which present significant health hazards.

This necessitates extensive cleaning of the beam guiding system - resulting in long downtimes.

The LCU from Reis Lasertec offers an effective protection through permanent monitoring of the lens.

The LCU is supplied with 24 V constant voltage and sends two analog output signals through which the system PLC can evaluate the lens condition. If a critical degree of contamination is reached, the PLC can switch off the laser early enough and request maintenance of the lens from the operator.

As standard, the LCU is available for 1.1" and 1.5" lens diameters. On request, integration into customer-specific designs is possible.

We are always at your disposal for any questions or further information.

### Contact

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