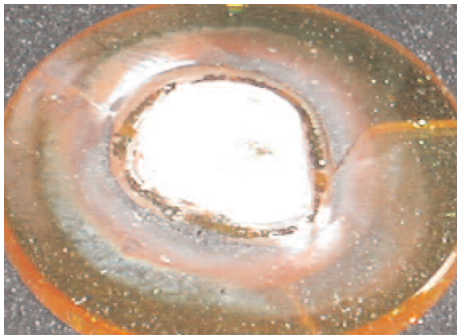
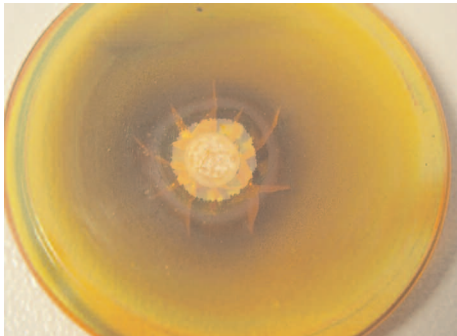


## Lens control unit for CO<sub>2</sub> laser optics (LCU-M)



For plastics applications the LCU has already been successfully used for monitoring of ZnSe lenses. With the further development of LCU-M the lens control monitoring can now be used for metal applications up to several kilowatts.

In metal applications the lenses are endangered by process dusts and vapours and by sputter that sticks to the lens surface. Despite protections 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-M from Reis Lasertec offers an effective protection through permanent monitoring of the lens.

The LCU-M is supplied with 24 V constant voltage and sends two analog output signals. These signals the system PLC can evaluate for 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-M is available for 1.5" lens diameter. 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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