

# LASER SAFETY CERTIFICATE



The laser processing system described hereunder has been classified regarding laser safety according to the stated norms and has been evaluated as described. Measurement techniques and test results are documented in the stated laser safety report.

**Laser Safety Report # 1708041442 GUT**

**Manufacturer / Distributor** Rittal GmbH & Co. KG  
**Street** Auf dem Stützelberg  
**Post Code / Town** Germany - 35745 Herborn

**Product / System**

**Designation** Perforex LC 3015 // Perforex LC 3030 and units identical in construction  
**Article No.** 4050.315 // 4050.330  
**Test unit S/N** 620005 (Art.-Nr. 4050.330)  
**Intended use** Cutting of metallic materials

**Laser source(s)**

**Manufacturer** IPG Photonics  
**Model & S/N** YLM-150/1500 QCW-MM-AC // # 16021427  
 YLM-300/3000 QCW-MM-AC  
**Lasertype / Wavelength** Fibre laser  $\lambda$  1.070 nm  
**Op. mode / Power** qcw  $P_{max}$  3.000 Watt

**Norms / Regulations**

**ISO IEC EN** 60 825-1 / 60 825-4 / 11 553-1  
**FDA ANSI** 21 CFR 1040 // Laser Notice No. 50  
**EU Optic Radiation Safety** EU directive 2006/25/EC // OStrV 2010-07  
**EU Machine Directive** EU directive 2006/42/EC

**Classification**

Operating mode / Condition Applies to	Normal operation Operator	Set up / Maintenance Operator	Service / Repair Manufacturer
Fulfils the conditions of laser class	1	1	4
Test class	T2	T2	N/A
Eye safety confirmed	YES	YES	only with PSE
Laser safety officer	NO	NO	YES
Laser safety goggles	NO	NO	YES
EC Directive 2006/42/EC §1.5.12	YES	YES	N/A

Our experts' report confirms that the terms of the stated laser classes comply with the specified audit classes for the three operating conditions as described above.

The optical radiation safety for the operator while operating the laser system in the intended operating modes as described above, in accordance with the instructions of the system manufacturer, referred to the original delivery status, was considered. All operation modes available for the operator fulfil the requirements as per § 1.5.12 of the EU machine directive (EU directive 2006/42/EC). The expert only made a risk analysis regarding laser protection; electrical and / or mechanical hazards were not part of this review.

Darmstadt, August 17, 2017

  
**Prof. Klaus R. Goebel**  
 Publicly appointed and certified expert  
 for laser technology by the Darmstadt Chamber  
 of Industry and Commerce



- Öffentlich bestellte und vereidigte Sachverständige für Lasertechnik
- Beratende Ingenieure der Kammer Hessen
- Akkreditiertes Prüflabor für optischen Strahlenschutz

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