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# *QUALITY MANAGEMENT SYSTEM FOR LASER EQUIPMENT: THE EXPERIENCE OF USL UMBRIA 2*

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## Purpose

The development process of USL Umbria 2 Quality Management System (QMS) led, from 2008, to the ISO9001:2008 Certification of Medical Physics Department (MPD) activities.



In this framework, in addition to the application of its own QMS, the MPD works in partnerships with all departments and structures which use ionizing and non-ionizing radiation facilities, included medical LASER equipment.

## Methods

QMS for LASER equipment consists of:

- ✓ design of work process & protocols, with related forms and safety signs;
- ✓ recognition of laser equipment and environmental and individual protection devices within all the departments;

### Documents

- ✓ LASER devices list
- ✓ Workerer exposed to Laser Risk list
- ✓ Individual LASER protection equipments list
- ✓ LASER risk assessment document
- ✓ LASER operating instructions
- ✓ LASER Quality Assurance document
- ✓ LASER Internal Rules

### Safety

- ✓ Individual LASER protection equipment checks
- ✓ LASER Signposting
- ✓ LASER Safety Course and Training
- ✓ LASER Safety Quality Controls

## Methods

- ✓ realization of a dedicated Quality Assurance program, with the implementation of technical protocol, planning and execution of quality and functional tests using calibrated measuring devices, recording and storage system for analyzed data;





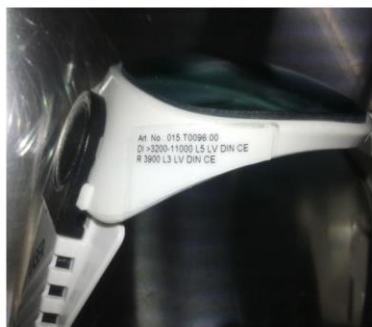
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## Results

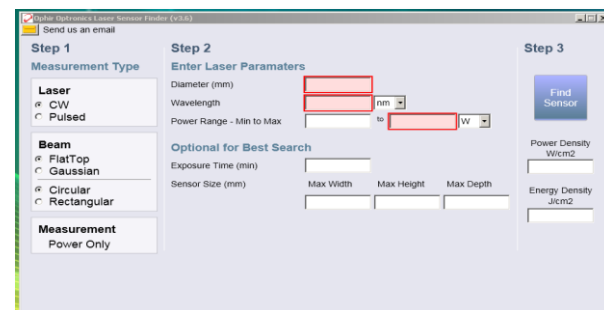
Our project has been performed over a period of about six years, its application led to an optimization of the distribution of the LASER equipment in all the USL Umbria 2 health facilities (17 structures, including hospitals and health districts), where classes 3B and 4 LASER equipment are installed and used for various applications.

**Individual LASER protection equipment are listed and checked in LASER Quality System**



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# Conclusions



The quality and functional checks, included staff training, have highlighted the need to continuous verification in order to provide the proper protection to patients and operators during clinical activities.



Sistema Gestione Qualità Certificato UNI EN ISO 9001:2008



Certificato N° 9122.ASL2 IT 26258

MPD is ISO 9001:2008 certified since 2010. In 2015 the system was improved thanks to the contribution of [Emanuela Lotti \(Scoffee Team\)](#).

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