



# TruLaser Operator (for All TruLaser Machines except TruLaser 2025/2030)



## COURSE DESCRIPTION

The TruLaser Operator Course is intended for customer operators who have limited or no laser operating experience. The goal of this course is to provide students with essential knowledge and skills to successfully run the laser machine and cut parts. Students will develop a working knowledge of material cutting by performing fundamental operations and working with processing parameters. Upon completion of this course, students will possess the skills to operate the laser in a safe manner, evaluate cut quality, improve cut quality, and carry out basic preventative maintenance tasks.

## PREREQUISITES

A general knowledge of Windows software, familiarity with hand measuring tools, and good mechanical aptitude.

## COURSE DURATION

5 days

## OBJECTIVES

- Demonstrate laser safety work practices and operate the laser in a safe manner.
- Identify various machine hardware component locations and functions.
- Discuss TRUMPF's laser principles and design.
- Identify the laser cut process.
- Identify MMC operator interface components and control keyboard.
- Perform machine start-up, warm-up, and shut-down operations.
- Perform removing, disassembling, and reassembling of the laser cutting head and inspect and clean the cutting lens.
- Perform nozzle alignment and focus test.
- Import, split, and edit cutting programs.
- Modify technology tables.
- Perform slow lead-in, vaporization, SprintLine, and etching as required.
- Identify additional maintenance points.
- Discuss CatEye setup.

**TRUMPF**



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## OUTLINE

- Introduction to laser hazards and laser safe work practices
- Introduction to TRUMPF laser principles and design
  - Laser characteristics
  - RF excitation principles
- Machine hardware components and their characteristics
- MMC control panel components
- DIAS III, five major processors, and FocusLine
- Basic machine operations
  - Starting up the machine
  - Warming up the machine
  - Shutting down the machine
- Introduction to the cutting head
  - Components inside the cutting head
  - Removing and reassembling the cutting head
- Operator duties
  - Cleaning the cutting lens
  - Aligning the nozzle
  - Performing a focus test
- Cutting processes
- Technology tables and processing parameters
- Introduction to fundamental part programming
  - Importing/calling up a program from a different source
  - Editing, splitting, and storing part programs
  - Modifying technology tables
- Additional maintenance points
  - Lubrication points
  - Mechanical components
  - Pneumatic components
  - Optical components
  - Electrical components
  - Hydraulic components
- Practicing cutting skills
- Introduction to specific cutting techniques
  - Slow lead-in vaporization
  - SprintLine
  - Etch
  - CatEye setup

CUSTOMER SERVICES

COURSE OUTLINE