KNUTH MACHINE TOOLS

Laser Cutting Machines
ACE Laser Compact 1313 2.0 R

SKU : 141102

As part of the ACE laser machine family, which sets new standards in price and performance, these models are optimized for a highly efficient cutting process. With high quality components and powerful software options, you are offered all the necessary tools and features to change your designs in production centers. Additionally, the compact design, makes this series suitable also for smaller workshops, which they also benefit from the small footprint.

- Compact design with small footprint
- Powerful built-in nesting and cutting software from Cypcut
- Highly energy efficient laser sources from Raycus
- High quality cutting head with auto-focus

TECHNICAL SPECS

WORKING AREA

Table size (length x width)	1300 mm x 1300 mm
Maximum workpiece weight	250 kg
Axis acceleration X- / Y-axis	5 m/s²

TRAVELS

Travel X-axis	1320 mm
Travel Y-axis	1320 mm
Travel Z-axis	80 mm

RAPID FEED

Rapid feed	40 m/min

ACCURACIES

Positioning accuracy X- / Y-axis	± 0,03 mm
Repeatability X- / Y-axis	± 0,02 mm

LASER

Fiber laser	2000 W
Laser source	Raycus
Shaft length	1,08 ± 10% µm
Power consumption	7 kW
Cutting capacity in structural steel	14 mm
Cutting capacity in stainless steel	5 mm
Cutting capacity in aluminum	4 mm

MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	2.52 m x 2.17 m x 1.88 m
Weight	2040 kg

PRODUCT DETAILS

- The machine frame is made of a rigid steel weldment, ensuring production-related stress on the material is eliminated
- The gantry is an aluminum die-cast construction with low weight, high rigidity, and servo-drives on both sides for excellent dynamics
- The linear guides on all axes require minimal maintenance and are designed for long-lasting precision and high cutting speeds
- High-quality preloaded ball drives on all axes ensure above-average positioning accuracy
- A central lubrication system supplies lubricant to all guide components, simplifying maintenance and extending machine life
- The cutting system is fully enclosed to protect operators and the environment
- A safety glass window in the door allows direct monitoring of the cutting process

Control

- The powerful PC-based control is easy to operate via an application-specific user interface
- A technology database includes cutting parameters and pre-set cycles for various metals
- The efficient processing of all cutting jobs is further supported by user-friendly software for the selection of process parameters
- Solenoid and proportional valves regulate the gas pressures (set in the control) during the cutting process

Nesting Software

- The Cypcut software provides all functions needed for the machining of cutting contours, and displays the current operating status
- Automatic nesting saves much time, allows custom adjustments and ensures minimal material waste
- The software includes predefined nesting patterns that cover a wide variety of practical applications

Cutting head

- The proven RayTools cutter head features an integrated collision guard, automatic focus positioning, and height control
- Focus lenses can automatically change the position in the range of 25 mm (+10 ~ -10 mm) with an adjustment accuracy of 0.05 mm
- The laser beam focus continuously adjusts itself based on material conditions during program execution
- The drawer-type lens holder allows for quick and easy replacement of protective lenses

Laser Sources

- ACE Laser Compact R models are equipped with powerful Raycus laser sources
- Raycus laser sources are known for their high reliability, electro-optical conversion efficiency at high energy density and wide modulation frequency
- Low-maintenance beam guide is provided by a flexible fiberoptic cable and ensures long tool life

STANDARD EQUIPMENT

CypCut CNC controler
Ytterbium fiber laser by Raycus
Fibre optics
High pressure cutting head with automatic focus adjustment
Automatic focus position adjustment
Full protective housing
Automatic gas console with electrovelves for Oxygen and Nitrogen
Recirculating water cooling system for the laser source
CAD/CAM software (CypCut)
Operating manual and programming instructions
Voltage stabiliser