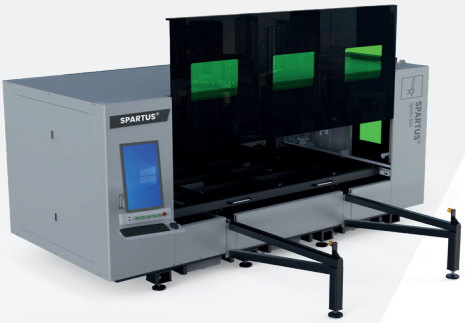
SPARTUS®

LASER CUTTING MACHINES

APOLLO 500

CUTTING PRECISION
FOR MODERN PRODUCTION



» COMPACT POWER AND HIGH QUALITY

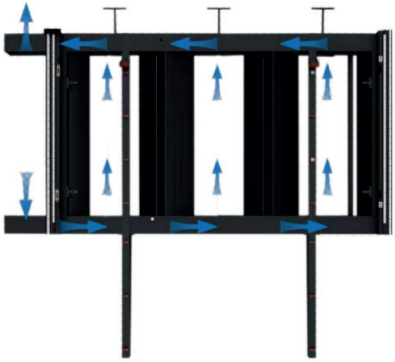
SPARTUS Apollo 500 is a modern fiber laser cutter with a power output of 3 kW, designed for precise sheet metal cutting. The integrated Raycus laser source and Raytools BM110 cutting head with autofocus ensure not only excellent cutting quality but also long service life and stable operation even under intensive production conditions.

» DURABLE AND STABLE STRUCTURE

The Apollo 500 is built on a reinforced welded frame, precision-machined to the highest standards. Its gantry-style design with rack-and-pinion drive provides rigidity, vibration resistance, and excellent dynamics. The crossbeam made of cast aerospace-grade aluminum ensures durability and resistance to deformation.

EFFICIENT EXTRACTION SYSTEM AND ENCLOSED HOUSING

The enclosed design features a zoned extraction system – air is blown in from one side and extracted from the other. This setup allows effective removal of smoke and dust directly from the cutting area, ensuring cleanliness, safety, and protection of optical components.

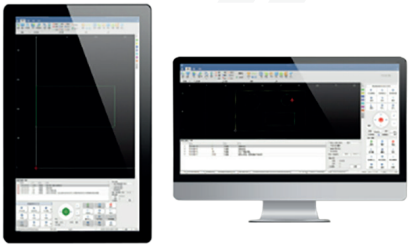


ADVANCED OPTICS FOR DEMANDING APPLICATIONS

Raytools BM110 is a cutting head designed for intensive use, featuring autofocus, advanced lens cooling, and four protective lenses.

INTUITIVE CONTROL AND FULL MANAGEMENT

Raytools X3S is an industrial-grade control system offering full CAD/CAM/NEST integration. It enables automatic drawing error correction, cutting optimization, and advanced production planning. The 21" screen provides quick access to all functions, while built-in statistical tools and motion error compensation ensure repeatable results.



VOLTAGE STABILIZER – POWER SAFETY AND RELIABILITY

The SPARTUS Apollo 500 is equipped with a 40 kVA voltage stabilizer, which plays a key role in ensuring the machine's safe and stable operation. It automatically adjusts the power supply to local electrical conditions, regardless of the country or re-

gion. Voltage stabilization and regulation protect electronic systems from spikes and interference, increasing component durability and overall laser system reliability.

ENGINEERED FOR PERFORMANCE AND USER CONVENIENCE

The Apollo 500 is designed for ease of use: the working table with side-slide functionality allows convenient loading and unloading, while the built-in automatic lubrication system and visual monitoring support continuous operation. Electrical components from Schneider Electric, PEK guides, Atlanta racks, and Leitesen gear racks ensure high durability and reliability.

PERFECT CUTTING SAMPLES

The Apollo 500 excels in cutting thin-walled parts, sharp corners, and micro-holes. It delivers shiny and clean edges. This solution meets the needs of demanding industrial applications, where not only speed but also top-tier quality matter.

TECHNICAL DETAILS

Work area	3000 x 1500mm
Laser power	3000W (Raycus)
X-axis range	1500mm
Y-axis range	3000mm
Z-axis range	100mm
Maximum positioning speed (XY)	100m/min
Maximum positioning speed (total)	100m/min
Positioning accuracy	±0.02mm/m
Maximum acceleration	1.3G
Positioning repeatability	±0.03mm/m
Laser source	Raycus

Automatic lubrication	yes
Display	21-inch vertical display
Control system	Raytools X3S
Beam	aluminum
Cutting head	Raytools BM110 Autofocus
Cooling	chiller
Gear racks	LEITESEN
Linear guides	PEK
Maximum table load capacity	1500kg
Total machine weight	3800kg
Dimensions	5125x3975.8x2871.45mm

SPARTUS APOLLO 500 CUTTING PARAMETERS

Material	Thickness [mm]	Speed [m/min]	Power [W]	Gas	Pressure [bar]	Nozzle [mm]	Focal Position [mm]	Cutting height [mm]
Carbon steel	1	28-35	3000	N_2/Air	10	1.5S	0	1
Carbon steel	2	16-20	3000	N_2/Air	10	2.0S	0	0.5
Carbon steel	2	3.8-4.2	2100	O_2	1.6	1.0D	+3	0.8
Carbon steel	3	3.2-3.6	2100	O_2	0.6	1.0D	+4	0.8
Carbon steel	4	3-3.2	2400	O_2	0.6	1.0D	+4	0.8
Carbon steel	5	2.7-3	3000	O_2	0.6	1.2D	+4	0.8
Carbon steel	6	2.2-2.5	3000	O_2	0.6	1.2D	+4	0.8
Carbon steel	8	1.8-2.2	3000	O_2	0.6	1.2D	+4	0.8
Carbon steel	10	1-1.3	3000	O_2	0.6	1.2D	+4	0.8
Carbon steel	12	0.9-1	2400	O_2	0.6	3.0D	+4	0.8
Carbon steel	14	0.8-0.9	2400	O_2	0.6	3.0D	+4	0.8
Carbon steel	16	0.6-0.7	2400	O_2	0.6	3.5D	+4	0.8
Carbon steel	18	0.5-0.6	2400	O_2	0.6	4.0D	+4	0.8
Carbon steel	20	0.4-0.55	2400	O_2	0.6	4.0D	+4	0.8
Carbon steel	22*	0.45-0.5*	2400*	O_2*	0.6*	4.0D*	+4*	0.8*
Stainless steel	1	28-35	3000	N_2	10	1.5S	0	0.8
Stainless steel	2	18-24	3000	N_2	12	2.0S	0	0.5
Stainless steel	3	7-10	3000	N_2	12	2.5S	-0.5	0.5
Stainless steel	4	5-6.5	3000	N_2	14	2.5S	-1.5	0.5
Stainless steel	5	3-3.6	3000	N_2	14	3.0S	-2.5	0.5
Stainless steel	6	2-2.7	3000	N_2	14	3.0S	-3	0.5
Stainless steel	8	1-1.2	3000	N_2	16	3.5S	-4.5	0.5
Stainless steel	10*	0.5-0.6*	3000*	N_2*	16*	4.0S*	-6*	0.5*
Aluminum	1*	25-30*	3000*	N_2*	12*	1.5S*	0*	0.8*
Aluminum	2*	15-18*	3000*	N_2*	12*	2.0S*	0*	0.5*
Aluminum	3*	7-8*	3000*	N_2*	14*	2.0S*	-1*	0.5*
Aluminum	4*	5-6*	3000*	N_2*	14*	2.5S*	-2*	0.5*
Aluminum	5*	2.5-3*	3000*	N_2*	16*	3.0S*	-3*	0.5*
Aluminum	6*	1.5-2*	3000*	N_2*	16*	3.0S*	-3.5*	0.5*
Aluminum	8*	0.6-0.7*	3000*	N_2*	16*	3.5S*	-4*	0.5*

*The parameters are for test production only and are not recommended for mass production. For thicker materials, it is recommended to use a higher power laser.