SPARTUS®

LASER CUTTING MACHINES

APOLLO 700

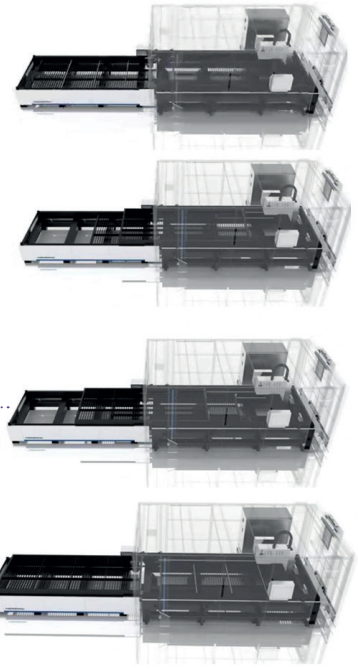
CUTTING PRECISION
AT THE HIGHEST LEVEL

POWER, PRECISION AND PERFORMANCE

The SPARTUS Apollo 700 is an advanced laser cutter with 6 kW of power, combining outstanding cutting capabilities with top-tier build quality. Thanks to the fiber Raycus laser source and the intelligent Raytools BM06K cutting head, the machine delivers perfectly smooth edges even when cutting thick materials. The fast autofocus system and lens cooling ensure continuous, efficient operation.

INDUSTRY-READY DESIGN

At the heart of the machine is a reinforced frame welded from steel profiles, whose precision is ensured through multi-stage heat and mechanical processing. The crossbeam made from aerospace-grade aluminum offers exceptional rigidity and dynamic performance. The entire structure runs on PEK linear guides and high-precision racks from Atlanta and toothed racks Leitesen — trusted European brands.



AUTOMATION THAT MAKES A DIFFERENCE

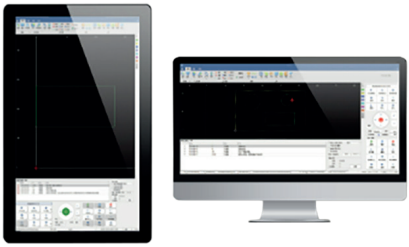
The automatic table exchange system allows uninterrupted cutting — the swap occurs in the background while the machine's axis returns to its home position, ensuring full operational safety.

PREMIUM-CLASS INTELLIGENT CUTTING HEAD

Raytools BM06K is more than just an autofocus head — it's a system featuring intelligent cooling, four protective lenses, and temperature monitoring. All data can be viewed in real time via a mobile app. This level of control protects the optics from overheating and contamination.

USER-ORIENTED CONTROL SYSTEM

Raytools X3S is an advanced control system that integrates design CAD, NEST, CAM and cutting parameterization into a single software. Users can automatically correct imported drawings, configure piercing points and micro joints, and monitor production statistics in detail.



VOLTAGE STABILIZER – POWER SUPPLY SAFETY AND RELIABILITY

The SPARTUS Apollo 700 cutter is equipped with a 80 kVA voltage stabilizer, which plays a key role in ensuring the machine's safe and stable operation. The device automatically adjusts the power supply parameters to local energy conditions, regardless of the country or region. The voltage stabilization and regulation function protects electronic systems from surges and interference, increasing the durability of components and the overall reliability of the laser system.

ECOLOGY AND WORKPLACE SAFETY

The Apollo 700 has been designed with a clean working environment in mind. Its fully enclosed construction, sealed top cover, and zoned fume extraction system—combined with an optional filtration and ventilation unit—make it a user-friendly solution that meets occupational health and safety standards. Additionally, the internal camera system enables process monitoring without the need to open the protective covers.

PERFECT CUT QUALITY

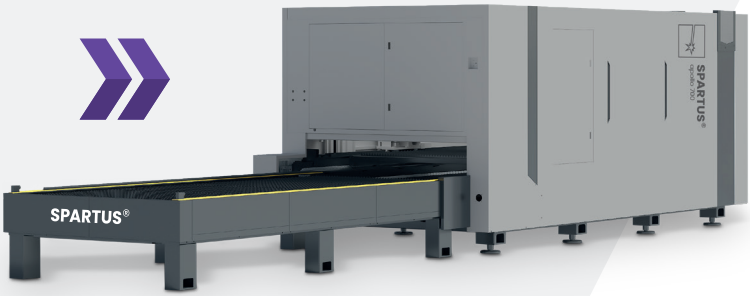
The SPARTUS Apollo 700 delivers top-tier edge quality. With the optimal combination of laser power, intelligent control, and a high-rigidity structure, the machine meets the demands of even the most precision-focused industries.

- **Glossy edges** in carbon steel, free of burns and melt marks,
- **Components with micro-holes and sharp corners** cut without deformation,
- **Perfect cut quality** of various materials,
- **Consistent cutting** of thin-walled elements, with flawlessly smooth lines.

TECHNICAL DETAILS

Work area	3050 x 1520mm
Laser power	6000W (Raycus)
X-axis range	1520mm
Y-axis range	3050mm
Z-axis range	300mm
Maximum positioning speed (XY)	100m/min
Maximum positioning speed (total)	120m/min
Positioning accuracy	±0.02mm/m
Maximum acceleration	1.3G
Positioning repeatability	±0.03mm/m
Laser source	Raycus

Automatic lubrication	yes
Display	27-inch vertical screen
Control system	Raytools X3S
Beam	aluminum
Cutting head	Raytools BM06K Autofocus
Cooling	chiller
Gear racks	LEITESEN
Linear guides	PEK
Maximum table load capacity	2150kg
Total machine weight	6000kg
Dimensions	9687x2970x2323mm



SPARTUS APOLLO 700 CUTTING PARAMETERS

Material	Thickness [mm]	Speed [m/min]	Power [W]	Gas	Pressure [bar]	Nozzle [mm]	Focal Position [mm]	Cutting height [mm]
Carbon steel	1	45-60	6000	N_2/Air	6	1.5S	0	1
Carbon steel	2	35-40	6000	N_2/Air	6	2.0S	-1	0.5
Carbon steel	3	22-27	6000	N_2/Air	6	2.0S	-1.5	0.5
Carbon steel	4	15-20	6000	N_2/Air	8	2.0S	-2	0.5
Carbon steel	5	9-12	6000	N_2/Air	8	3.0S	-2.5	0.5
Carbon steel	6	8-10	6000	N_2/Air	8	3.5S	-3	0.5
Carbon steel	3	3.6-4.2	2400	O_2	0.6	1.2E	+3	0.8
Carbon steel	4	3.2-3.4	2400	O_2	0.6	1.2E	+3	0.8
Carbon steel	5	3-3.2	3000	O_2	0.6	1.2E	+3	0.8
Carbon steel	6	2.7-2.9	3000	O_2	0.6	1.2E	+3	0.8
Carbon steel	8	2.2-2.4	4500	O_2	0.6	1.2E	+5	0.8
Carbon steel	10	2.0-2.2	6000	O_2	0.6	1.2E	+7	0.8
Carbon steel	12	0.9-1	2400	O_2	0.6	3.0D	+4.5	0.8
Carbon steel	12	1.9-2.1	6000	O_2	0.6	1.2E	+9	0.8
Carbon steel	14	0.8-0.9	2400	O_2	0.6	3.5D	+5	0.8
Carbon steel	14	1.4-1.6	6000	O_2	0.6	1.4E	+12	0.8
Carbon steel	16	0.7-0.8	2400	O_2	0.6	4.0D	+5.5	0.8
Carbon steel	16	1.2-1.4	6000	O_2	0.6	1.4E	+13	0.8
Carbon steel	18	0.55-0.65	2400	O_2	0.6	4.0D	+5.5	0.8

Carbon steel	18	0.8	6000	O_2	0.6	1.4E	+13	0.3
Carbon steel	20	0.5-0.6	2400	O_2	0.6	4.0D	+5.5	0.8
Carbon steel	20	0.6-0.8	6000	O_2	0.75	1.4E	+13.5	0.3
Carbon steel	22	0.45-0.5	2400	O_2	0.6	4.5D	+5.5	0.8
Carbon steel	22	0.5-0.6	6000	O_2	0.75	1.5S	+13.5	0.3
Carbon steel	25*	0.55*	2700*	O_2*	0.6*	5.0D*	+5.5*	0.8*
Carbon steel	25*	0.4-0.5*	6000*	O_2*	0.75*	1.5S*	+14*	0.3*
Carbon steel	30*	0,3*	6000*	O_2*	1*	1.5S*	+14*	0.3*
Stainless steel	1	45-60	6000	N_2	10	1.5S	0	0.8
Stainless steel	2	35-45	6000	N_2	12	2.0S	-1	0.5
Stainless steel	3	22-27	6000	N_2	12	2.5S	-1.5	0.5
Stainless steel	4	15-20	6000	N_2	14	2.5S	-2	0.5
Stainless steel	5	9-12	6000	N_2	14	3.0S	-2.5	0.5
Stainless steel	6	8-11	6000	N_2	15	3.0S	-3	0.5
Stainless steel	8	3.5-4.5	6000	N_2	15	3.0S	-4	0.5
Stainless steel	10	2-2.5	6000	N_2	15	3.5S	-6	0.5
Stainless steel	12	1.5-1.8	6000	N_2	16	3.5S	-7.5	0.5
Stainless steel	14	1-1.5	6000	N_2	16	4.0S	-9	0.5
Stainless steel	16	0.5-0.6	6000	N_2	18	4.0S	-14	0.5
Stainless steel	18	0.3-0.5	6000	N_2	20	5.0S	-15	0.3
Stainless steel	20*	0.2-0.25*	6000*	N_2*	20*	5.0S*	-16*	0.3*
Aluminium alloy	1*	45-60*	6000*	N_2*	12*	1.5S*	0*	1*
Aluminium alloy	2*	35-40*	6000*	N_2*	12*	2.0S*	-1*	0.5*
Aluminium alloy	3*	22-27*	6000*	N_2*	14*	2.5S*	-1.5*	0.5*
Aluminium alloy	4*	14-17*	6000*	N_2*	14*	2.5S*	-2*	0.5*
Aluminium alloy	5*	9-11*	6000*	N_2*	14*	3.0S*	-3*	0.5*
Aluminium alloy	6*	4-6*	6000*	N_2*	16*	3.0S*	-3*	0.5*
Aluminium alloy	8*	2.5-3*	6000*	N_2*	16*	3.0S*	-7*	0.5*
Aluminium alloy	10*	1.5-1.8*	6000*	N_2*	18*	3.5S*	-8*	0.5*
Aluminium alloy	12*	0.8-1*	6000*	N_2*	18*	4.0S*	-8*	0.5*
Aluminium alloy	14*	0.6-0.7*	6000*	N_2*	18*	4.0S*	-9*	0.3*
Aluminium alloy	16*	0.35-0.45*	6000*	N_2*	20*	5.0S*	-12*	0.3*
Aluminium alloy	20*	0.2-0.3*	6000*	N_2*	20*	5.0S*	-13*	0.3*

*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.