Technical data: **BLS Fiber Laser Cutting Machine**				
Working area	2.000x6.000 mm			
Laser Power	4 kW			
Cutting Head	Precitec ProCutter 2.0 (Optionally ProCutter Zoom 2.0)			
Focusing Lenses	150 mm			
CNC Control Unit	Beckhoff CNC (21,4" TFT-Windows 10)			
Motors/Drivers	Rack and Pinion	Beckhoff (Rotary Servo)	Linear Motion	Beckhoff (Linear Servo)
Motion System		Rack and Pinion (Wittenstein)		Linear Rails (Bosch Rexroth)
Rapid Traverse		115 m/min.		150 m/min
Vector Speed		165 m /min		215 m/min
Acceleration		2.2G (22m/s2)		3.0 G (30m/s2)
Absolute Positioning Accuracy		± 0.02 mm		± 0.01 mm
Repeatability		± 0.02 mm		± 0.01 mm
Programmable Feed Rate		Up to 100 m/min		Up to 125 m/min
Transfer Table Motorized	Motorized - Automatic Exchange			
Max. Load Capacity	4450 kg for 2000x6000 mm			
Nesting Software	LANTEK Expert Cut II / Metalix AutoNest PRO			
Nozzle Cleaning and Calibration	Automatic			
Fume extractor	include 1000 m^3/h			

Accessories included in the price:
- High performance and precision linear system Beckhoff CNC controller
- Double circulation water cooling
- Fiber optic beam yield/delivery/dosing system Windows-based operating system
- 360-degree freely rotatable, positionable CNC control panel
- 21.4" touch screen monitor - 320 GB program data storage
- Automatic pallet changer (double loading tray) with hydraulic lift, integrated motorized drive system
- Programmable auxiliary gas (air / oxygen / nitrogen) selection 1-25 bar Advanced Precitec cutting head (air with cross blowing)
- 5" and 7.5" lenses Lens protection window
- Automatic nozzle cleaning and calibration system Standard smoke extraction system
- Lantek CAD/CAM system - Built-in safety systems
- light barrier protection, full cover as standard equipment

Area of use: The BLS-NL model allows the processing of large and special-sized materials and can be used in many areas of production, while still offering competitive performance in all areas of laser cutting.
- automotive industry (heavy trucks and tractors) agricultural and
- construction equipment railway vehicle industry
- shipbuilding industry
- steel industry suppliers (for cutting the customer's workpieces)
- steel construction industry
- machine manufacturing (conveyor belts, etc.)

Laser cutting head.
• BAYKAL uses a Precitec laser head, which allows for the best results and constant peak performance on the material surface of the final product.
• Thanks to the capacitive sensor, the distance between the laser head and the workpiece is constant.
• To quickly change the lens, the laser head is equipped with a cassette system.
• The cutting head also includes a lens protection mirror. The mirror protects the cutting lens, thus ensuring its long life. The easy-to-replace and inexpensive protective mirror allows trouble-free operation without any problems with the lenses.
• The cutting head is equipped with a collision protection system. In the event of a collision with the workpiece, the head easily detaches to avoid further damage.

Automatic nozzle cleaning - and adjustment
In the case of a predetermined number of punches, the CNC-controlled function enables cleaning and quick adjustment of the nozzle. With the automatic nozzle cleaning function, you can avoid problems caused by continuous spraying and ensure the accuracy of height tracking.

Gas control and delivery system
The machine is equipped with an automatic gas selection system. Depending on the cutting process, the machine automatically selects and adjusts the cutting and auxiliary gases. The low- and high-pressure nitrogen, oxygen and air cutting, and auxiliary gas lines are all connected. Features:
• extremely dynamic servo valves
• fast auxiliary gas control (servo valves, short pipe length)

Twincat CNC control software for Beckhoff controls PC-based control software with full CNC functionality covers the entire range of classic CNC functions.

IPG photonics fiber laser
The laser beam is created inside the fiber and reaches the cutting head without interruption, except for the beam coupler or switch (if available). Thanks to this monolithic structure, IPG produces lasers that do not require scheduled maintenance or consumable costs. There are no parts in IPG lasers that need to be replaced during their lifetime. The laser consists of a power supply unit that is used to operate the modules for approx. It generates a DC voltage of 70V. The modules have a single mode and a 9-micron radius and M2<1.1 (BPP<0.37 mm*mrad) core. Each unit is connected via an optical fiber to a unique feeder section with a minimum 50-micron radius core, which amplifies the laser to 5kW. Above 5kW, the feeding fiber has a core with a radius of at least 100 microns. IPG fibers terminate in the industry standard QBH connector or, if available, in the QD automated connector.