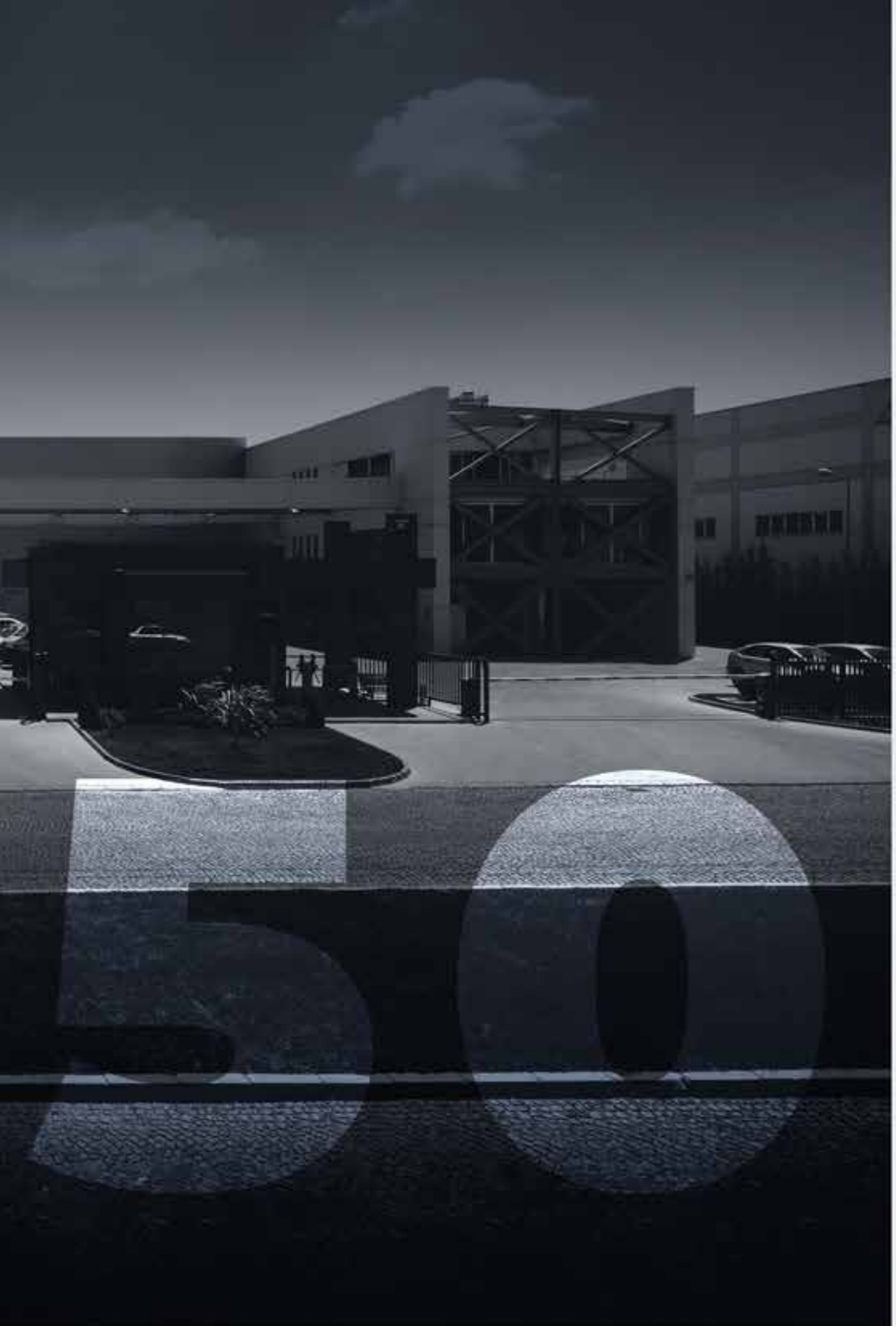
CUTTING TECHNOLOGIES

Baykal

THINK BIG, WE DO.

“THINK BIG, WE DO.”

Excellence in Every Detail



From Past to ***Future***

With a foundation history going back to the early 1950s, Baykal today is placed as a leading manufacturer and global supplier of sheet metal working machinery specializing in the production of press brakes, shears, notchers, punching machines, laser cutting systems, plasma cutting machines, and Vertical Machining Centers.

For its manufacturing operations, Baykal utilizes three factories which together combine a production area of 70,000 square meters, making it one of Europe's largest facilities for sheet metalworking and fabricating machinery. The total workforce at Baykal is currently numbered at 650 employees and is composed of highly trained and qualified machine operators and assembly technicians supported by a staff of 80 engineers. All the machines offered by Baykal are designed, manufactured, assembled, and finished wholly at Baykal's purpose-built plants in a CAD environment with extensive use of CNC machining and modern workshop equipment.

Baykal company is accredited for the ISO 9001 Certification issued by the German TÜV NORD institution. Also, since 1995, Baykal has been building machines in conformity with the European CE regulations for safety, being the first Turkish machine-tool manufacturer certified eligible to bear the CE Mark on its products. In addition, all Baykal products are manufactured with the TSE and TSEK quality certificates issued by the Turkish Standards Institution.

Since the last 50 years, Baykal has progressed to become a major exporter of sheet metal working machines to the world markets with customers located in all the machine-tool consuming countries of the global geography from the Americas to Australasia. Baykal is currently represented in over 100 countries worldwide through appointed dealers. In the base market of Turkey, Baykal sheet metal working machines have traditionally commanded a leading market share thanks to the company's pioneering role in the development of Turkey's machine industry and its never-lessening emphasis on quality and service. Here, with a long engineering experience behind it, Baykal wishes to present itself as a quality-conscious, professional machine-building company serving the industry.

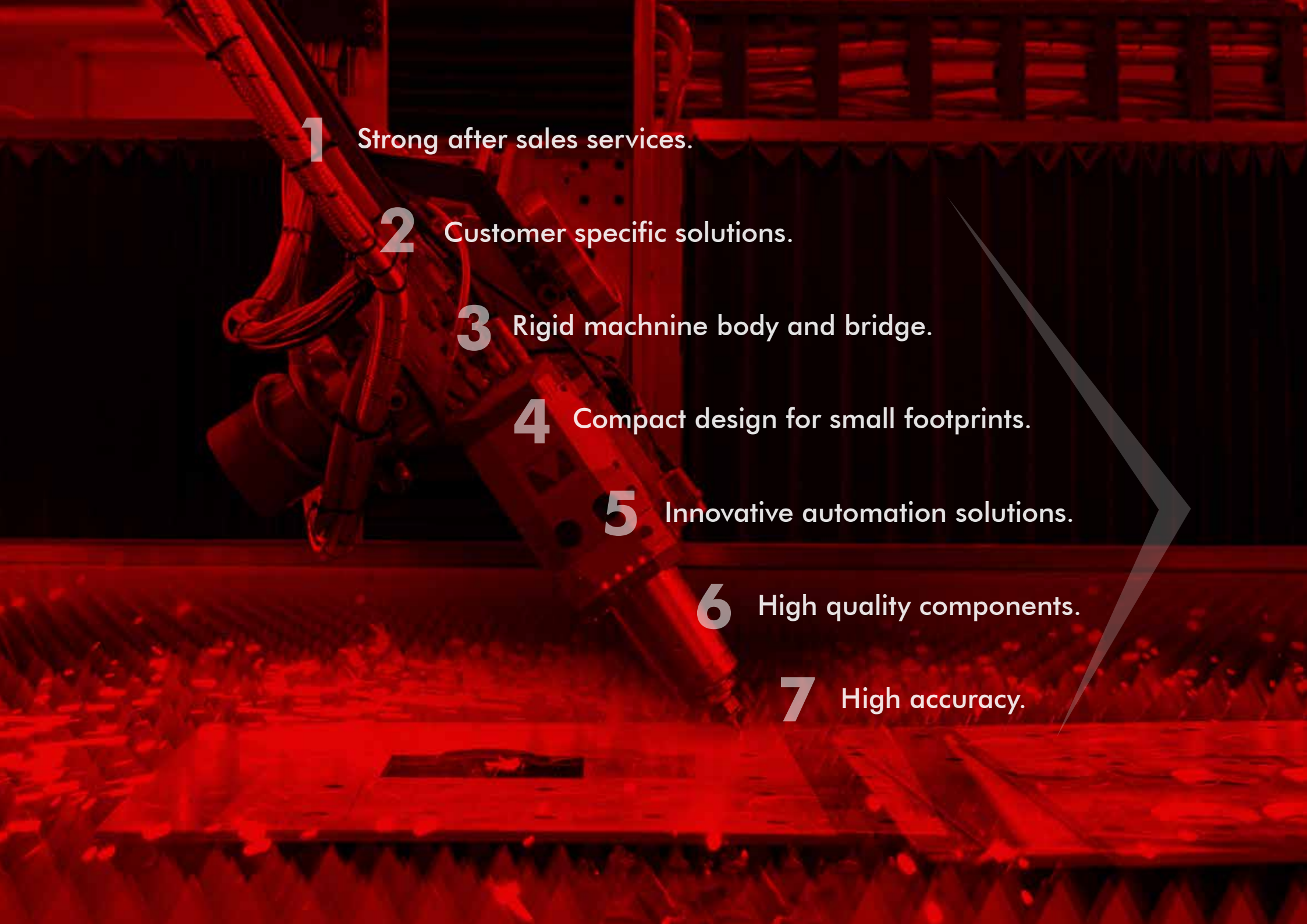
FIBER LASER CUTTING

INTRODUCTION

Fiber laser cutting is a revolutionary technology that has transformed the landscape of industrial manufacturing and metal fabrication. This innovative method utilizes high-powered fiber lasers to precisely cut through various materials with remarkable speed, accuracy, and efficiency.

ADVANTAGES

- Less energy consumption.
- Quick and easy installation.
- Long life operation with minimum maintenance requirement.
- A wide variety of materials and thicknesses can be processed with excellent beam quality.


1 Strong after sales services.
2 Customer specific solutions.
3 Rigid machnine body and bridge.
4 Compact design for small footprints.
5 Innovative automation solutions.
6 High quality components.
7 High accuracy.

BLU

Ultra high power fiber laser cutting machine.

01

ULTRA HIGH POWER RANGE

Up to 30kW

02

HIGH PRODUCTIVITY

03

REINFORCED BODY

04

HIGH ACCURACY

05

FLEXIBLE DESIGN

BLU		
Working Area	Width	1500 to 3000 mm
	Length	3000 to 15000 mm
Laser Power		20-30 kW
Resonator		IPG - nLIGHT - Max Photonics
Cutting Head		Precitec ProCutter 2.0 (Standard)
CNC Control Unit		Beckhoff CNC (18.5" TFT - Windows 10)
Motion System		X Axis Rack and Pinion Y Axis Linear
Motors & Drivers		Beckhoff
Rapid Traverse		115 m/min.
Vector Speed		165 m/min.
Acceleration		2.2G (22m/s^2)
Absolute Positioning Accuracy		±0.02 mm
Repeatability		±0.02 mm
Programmable Feed Rate		Up to 100 m/min.
Transfer Table Motorized		Motorized - Automatic Exchange
Max. Load Capacity		2500 kg for 2000x4000 mm / 3500 kg for 2000x6000 mm
Nesting Software		LANTEK Expert Cut II or Metalix AutoNest Pro
Nozzle Cleaning & Calibration		Automatic
Bevel Cutting Head		Optional
Automatic Nozzle Changer		Optional
Automatic Nozzle Centering		Optional
Fume Extractor		Optional

Design and specifications are subject to change without notice by Baykal.

BLP

Extremely fast fiber laser cutting machine

01

LINEAR MOTION

02

ACCURACY

03

HIGHER SPEEDS

Speeds up to 170 mt./min.
Acceleration 4G

04

COST EFFICIENCY

Low operating costs thanks to energy efficiency and reduced maintenance.

05

HIGH POWER RANGE

Up to 15 kW

BLP		
Working Area	Width	1500mm
	Length	3000mm
Laser Power		6kW - 15kW
Resonator		IPG- nLIGHT - Max Photonics
Cutting Head		Precitec Procutter 2.0
CNC Control Unit		Beckhoff CNC (21.5'' TFT-Windows 10)
Motion System		X + Y Axis Linear
Linear Motors & Drivers		Beckhoff
Rapid Traverse		170 m/min.
Vector Speed		240 m/min.
Acceleration		4.0G (40m/s^2)
Absolute Positioning Accuracy		± 0.01 mm
Repeability		± 0.01 mm
Feed Rate		Programmable up to 150 m/min.
Transfer Table Motorized		Motorized - Automatic Exchange
Max. Load Capacity		1500 kg for Each Table
Nesting Software		LANTEK Expert Cut II or Metalix AutoNest PRO
Nozzle Cleaning & Calibration		Automatic
Automatic Nozzle Changer		Optional
Automatic Nozzle Centering		Optional
Fume Extractor		Optional

BLM

Unique modular design with extra large capacity.

01

MODULAR DESIGN

Up to 24 meters.

02

HIGH-QUALITY RESULTS

03

MULTIPLE PARTS CUTTING

04

HIGH POWER RANGE

Up to 15 kW

05

HIGH DYNAMICS

With movable cabinet.

06

BEVEL CUTTING

Bevel Cutting head can rotate +/-45 degrees.

BLM		
Working Area	Width	2000mm / 2500mm / 3000mm
	Length	up to 24000mm (min: 12000mm)
Laser Power		4 kW - 15 Kw
Resonator		IPG - nLIGHT - Max Photonics
Cutting Head		Precitec ProCutter 2.0 (Standard)
CNC Control Unit		Beckhoff CNC (18.5" TFT - Windows 10)
Motors & Drivers		Beckhoff
Motion System		X Axis Rack and Pinion Y Axis Linear
Rapid Traverse		45 m/min.
Vector Speed		65 m/min.
Acceleration		1.2G (12 m/s^2)
Absolute Positioning Accuracy		± 0.02 mm
Repeatability		± 0.02 mm
Max. Load Capacity		400 kg/m^2
Nesting Software		LANTEK Expert Cut II or Metalix AutoNest Pro
Nozzle Cleaning and Calibration		Automatic
Bevel Cutting		Optional
Automatic Nozzle Changer		Optional
Automatic Nozzle Centering		Optional
Fume Extractor		Optional

BLE CFS

24/7 operation opportunity could be achieved with coil feed system according to your requirements.

01
SMART AUTOMATION

02
SMALL FOOTPRINT

03
MAXIMUM PRODUCTIVITY

04
MID POWER SOURCE
Up to 4 kW

05
CUSTOMIZABLE

06
EFFICIENCY

BLE		
Working Area	Width	1500 mm
	Length	1500 mm
Laser Power		1 kW - 6 kW
Resonator		IPG - nLIGHT - Max Photonics
Cutting Head		Precitec ProCutter Thunder (Standard) Raytools BS Series Precitec ProCutter 2.0 (Optional)
CNC Control Unit		Beckhoff CNC (18.5" TFT-Windows 10)
Motors and Drivers		Beckhoff
Motion System		Rack and Pinion
Rapid Traverse		95 m/min.
Vector Speed		135 m/min.
Acceleration		1.5G (15m/s^2)
Absolute Positioning Accuracy		± 0.03 mm
Repeatability		± 0.04 mm
Programmable Feed Rate		Up to 50 m/min.
Transfer Table		Single Table
Max. Load Capacity		750 kg for Each Table
Nesting Software		LANTEK Expert Cut II / Metalix AutoNest PRO
Nozzle Cleaning & Calibration		Automatic
Fume Extractor		Optional

CFS DECOILER	
Coil Loading Capacity	6000 kg
Drum Type	Hydraulic Expansion
Hydraulic Unit	Yes
Drum Number	Single
Coil Hold Down Arm	Hydraulic
Coil Hold Up Arm	None
Coil Inner / Outer Diameter	480 ~ 520 / 1300
AC Motor Power	3.0 kW
Gearbox Type	Conical Type, Helicat Geared, Low Backlash
Power Transfer Type	Sprocket
Speed Control	Yes
Breake System	Magnetic Brake
Loop Control	Distance Controlled Laser Sensor
Coil Loading Car	Yes
Coil Centering	Manuel

CFS STRAIGHTENER FEEDER	
Openable Rolls Group	~ 20 Degrees Crocodile Openable Hydraulic Driven
Straightener Drive Type	Gear Driven
Straightener Adjustment Gearbox	Hand Wheel With Indicator / 3 Pieces
Straightener Rolls Pressure Gearbox	3 Pair - Shaft Fitted
Straightener Rolls Arrangement	4 Bottom / 3 Top
Number of Straightener Rolls	7
Diameter of Straightener Rolls	100 mm
Number of Feeder Rolls	2
Diameter of Feeder Rolls	125 mm
Feeder Rolls Pressure Adjustment	Pneumatic
Servo Motor Power	24 nm
Gearbox Type	Conical Type, Helical Gearedi Keyless, Shrink Disc, Low Backlash
Piloting System	None
Sheet Positioning Inside Die	Push Button

BLT

Tube processing with laser technology.

01

FLEXIBILITY

Unload short or long parts, while scrap is automatically managed.

02

RELIABLE

Optimized quality and cutting speed even on thick materials.

03

PRECISION

Change section, material, and thickness without sacrificing cut quality.

04

ACCURACY

Accurate cut geometries even on difficult designs.

05

PRODUCTIVITY

The highest productivity at the lowest cost per part.

06

EFFICIENCY

Automatic. Technological. High-performing

BLT		
BLT Series	6220	8220
Laser Power	1 kW - 6 kW	
Resonator	IPG- nLIGHT - Max Photonics	
Cutting Head	Precitec LightCutter 3D Raytools 3D	
CNC Control Unit	Beckhoff CNC (18.5" TFT-Windows 10)	
Bevel Cutting	Optional	Optional
Max. Tube Lenght	6100 mm	8100 mm
Max. Part Lenght	4000 mm	
Min. Auto Loading Lenght	2000 mm	
Acceleration of Driver Chuck	7000 Deg/s^2	
Speed of Driver Chuck	560°/s	
Types of Profiles	Round, Rectangular H, I, Custom Shapes	
Min. / Max. Round Diameter	Ø16 to Ø220 mm	
Min. / Max. Square Diamater	16x16 mm to 220x220 mm	
Lenght of Last Part	110 mm	
Max. Tube Weight	240 kg	
Min. Material Thickness	0.8 mm	
Rapid Speed	90 m/min.	
Vector Speed	130 m/min.	
Acceleration	1.0G (10m/s)	
Absolute Positioning Accuracy	± 0.01 mm	
Repeatability (X & Y Axis)	± 0.02 mm	
Programmable Feed Rate	Up to 50m/min. Actual feed rate depends on material and thickness	
Automatic Loading	Optional	
Automatic Unloading	Optional	
Fume Extractor	Optional	

Design and specifications are subject to change without notice by Baykal.

BLT LOADING & UNLOADING

01

INCREASE PRODUCTIVITY

03

24/7 OPERATION

04

USER FRIENDLY

02

FULLY AUTOMIZABLE

BLT LOADING & UNLOADING	
Min. Loadable Length (mm)	2500mm
Max. Loadable Length (mm)	6100mm
Beam Loading Capacity (kg)	75 kg/m2
Unloading Length (mm)	4000mm (Optional 6100mm)
Number of loading stations	4

BLC

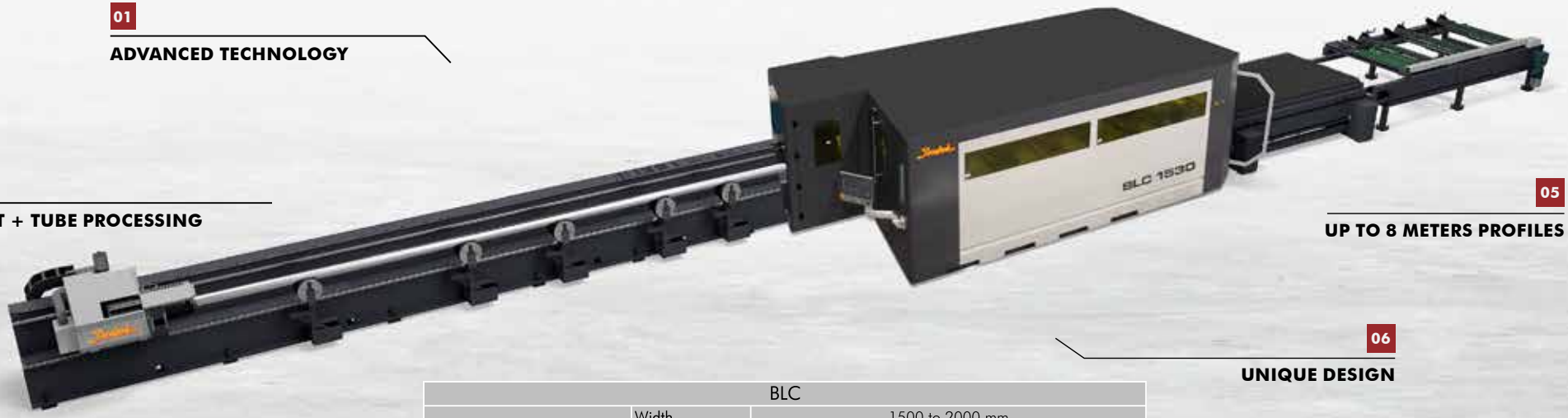
High performance and high quality in one feature

01
ADVANCED TECHNOLOGY

02
SHEET + TUBE PROCESSING

03
MAXIMUM PRODUCTIVITY

04
VERSATILE APPLICATION



05
UP TO 8 METERS PROFILES

06
UNIQUE DESIGN

BLC		
Working Area	Width	1500 to 2000 mm
	Length	3000 - 4000 - 6000 mm
Laser Power		1 kW - 15 kW
Resonator		IPG - nLIGHT - Max Photonics
Cutting Head		Precitec ProCutter 2.0
For Tubes / Profiles	Max. Tube Length	6100 mm (8100 mm Optional)
	Max. Part Length	4000 mm
	Min. Auto Loading Length	2000 mm
	Acceleration of Driver Chuck	7000 Deg/s^2
	Speed of Driver Chuck	560 °/s
	Types of Profiles	Round, Rectanguar,H, I, Custom Shapes
	Min. / Max. Round Diameter	Ø16 to Ø220 mm
	Min. / Max. Square Diameter	16x16 mm to 220x220 mm
	Length of Last Part	110 mm
	Max. Tube Weight	240 kg
	Min. Material Thickness	0.08 mm
CNC Control Unit		Beckhoff CNC (18.5" TFT-Windows 10)
Rapid Traverse		115 m / min.
Vector Speed		160 m / min.
Acceleration		2.2G (22 m / s^2)
Absolute Positioning Accuracy		± 0.01 mm
Repeatability (X & Y Axis)		± 0.02 mm
Programmable Feed Rate		Up to 50 m/min. Actual feed rate depends on material and thickness
Shuttle Table		Standard
Automatic Loading		Optional

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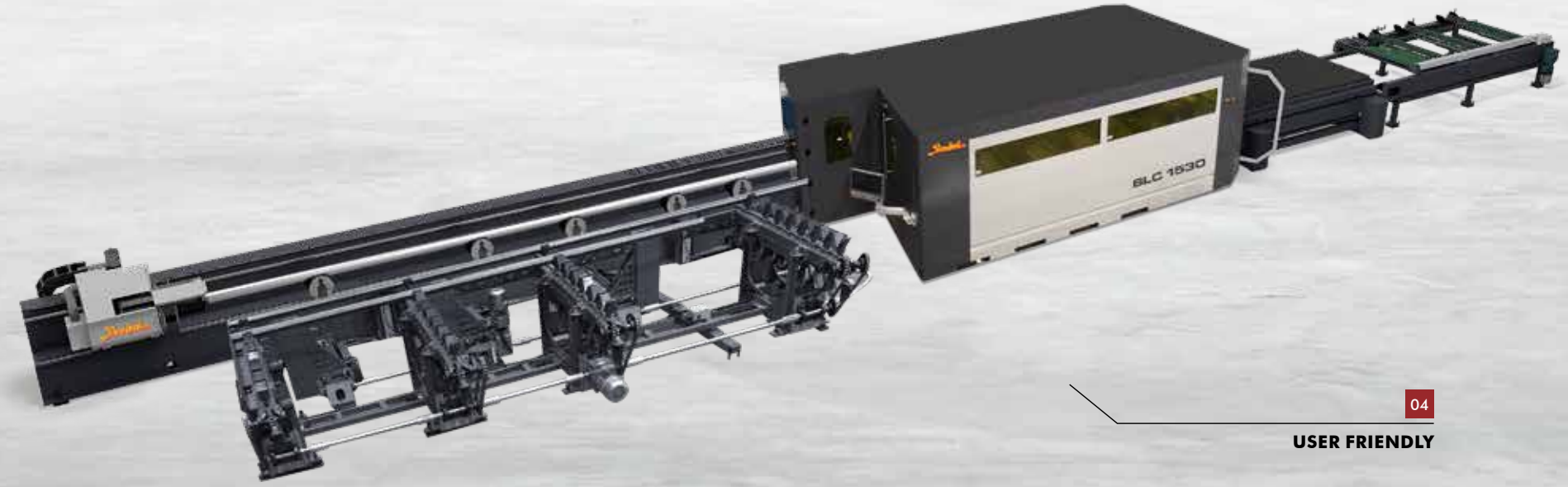
BLC LOADING

01

INCREASE PRODUCTIVITY

03

EASY INTEGRATION



04

USER FRIENDLY

02

FULLY AUTOMIZABLE

BLC LOADING	
Min. Loadable Length (mm)	2500mm
Max. Loadable Length (mm)	6100mm
Beam Loading Capacity (kg)	75 kg/m2
Number of loading stations	4

BLS PRO

High flexibility and high performance.

01

FLEXIBILITY
Oversize sheets cutting

02

HIGH-QUALITY RESULTS

03

TOP CUTTING EDGES
Create high-quality cutting edges in thick sheet.

04

HIGH-END PRODUCTIVITY
Achieve high feed rates and process the workpiece productively.

05

MAXIMUM PRECISION
Ability for cutting different materials and without affecting cut quality.

06

EASY TO OPERATE
Fast and intuitive operation performance.

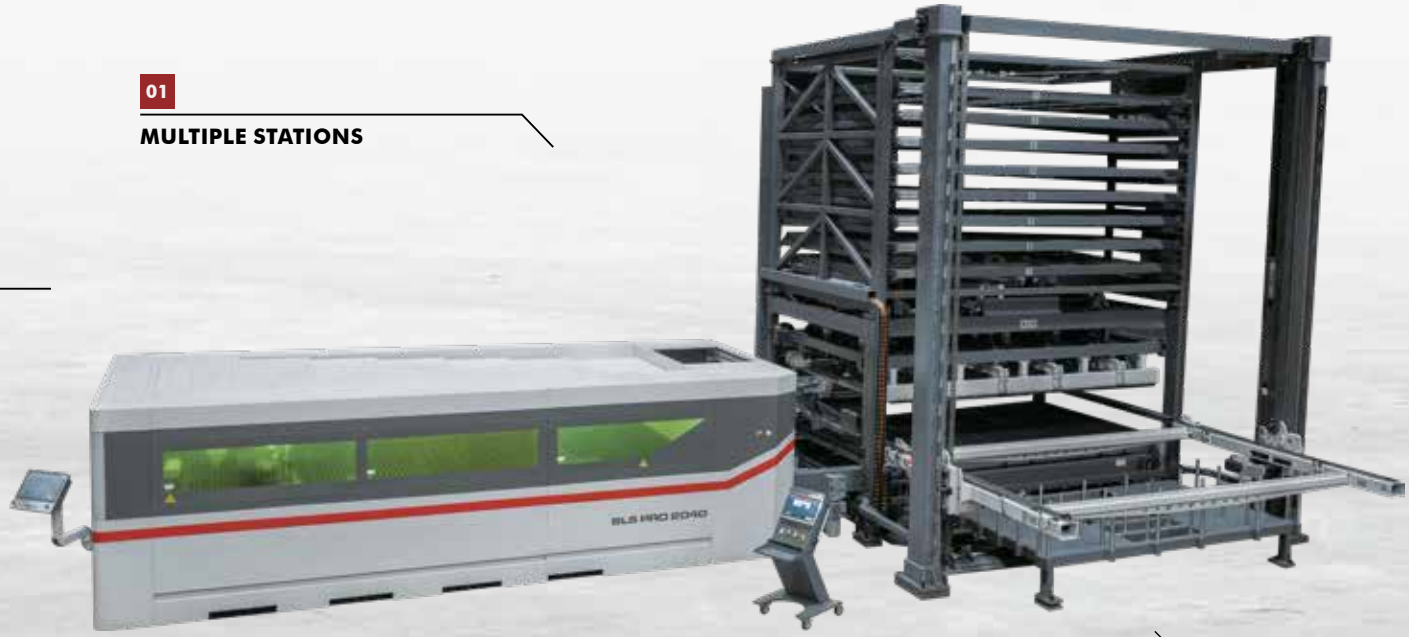
BLS PRO			
Working Area	Width	1500 to 3000 mm	
	Length	3000 to 12000 mm	
Laser Power		6 kW - 15 kW	
Resonator		IPG - nLIGHT - Max Photonics	
Cutting Head		Precitec ProCutter 2.0 (Standard)	
CNC Control Unit		Beckhoff CNC (18.5" TFT - Windows 10)	
Motion System		X Axis Rack and Pinion Y Axis Linear	X + Y Axis Linear
Motors & Drivers		Beckhoff	Beckhoff
Rapid Traverse		115 m/min.	150 m/min.
Vector Speed		165 m/min.	215 m/min.
Acceleration		2.2G (22m/s^2)	3.0G (30m/s^2)
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		2500 kg for 2000x4000 mm / 3500 kg for 2000x6000 mm	
Nesting Software		LANTEK Expert Cut II or Metalix AutoNest Pro	
Nozzle Cleaning & Calibration		Automatic	
Bevel Cutting Head		Optional	
Automatic Nozzle Changer		Optional	
Automatic Nozzle Centering		Optional	
Fume Extractor		Optional	

TOWER

Extraordinary flexible and simple to operate storage system.

01
MULTIPLE STATIONS

02
EASY INTEGRATION



03
VERSATILE PRODUCTIVITY

04
24/7 OPERATION

TOWER	
Applicable Machine Size	1500x3000 2000x4000
Max. Sheet Size (Thickness x Wide x Lenght)	20x2000x4000 mm
Max. Load Per Compartment	3000 kg
Lifting Speed	30 m/min.
Number of Compartments	(Up to) 8 Units
Max. Loading and Unloading Course	200mm
Loading and Unloading Positioning Accuracy	± 1 mm
Capacity of Loading and Unloading System	1.300 kg
Servo Motor	Beckhoff

Design and specifications are subject to change without notice by Baykal.

BLE PRO

Cost-effective and productive.

01

PRODUCTIVE

High dynamism increases productivity on thin sheets compared to a conventional drive system.

02

ACCURATE

Precise and repeatable in cutting and laser head positioning. Excellent cutting quality.

03

MODULAR

Suitable for any production need

04

USER FRIENDLY

Easy to use interface and programming software.

05

PROFITABLE

Low operating costs and reduced maintenance.

BLE PRO		
Working Area	Width	1500 mm
	Length	3000 mm
Laser Power		1 kW - 6 kW
Resonator		IPG- nLIGHT - Max Photonics
Cutting Heads		Precitec ProCutter Thunder Raytools BS Series Precitec ProCutter 2.0 (Optional)
Motion System		Rack and Pinion
CNC Control Unit		Beckhoff CNC (18.5" TFT-Windows 10)
Motors & Drivers		Beckhoff
Rapid Traverse		95 m/min.
Vector Speed		135 m/min.
Acceleration		1.8G (18m/s^2)
Absolute Positioning Accuracy		± 0.03 mm
Repeatability		± 0.04 mm
Programmable Feed Rate		Up to 50 m/min.
Transfer Table Motorized		Motorized - Automatic Exchange
Max. Load Capacity		1250 kg for Each Table
Nesting Software		LANTEK Expert Cut II or Metalix AutoNest PRO
Nozzle Cleaning & Calibration		Automatic
Automatic Nozzle Changer		Optional
Automatic Nozzle Centering		Optional
Fume Extractor		Optional
Protected Side Windows		Optional

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COMPACT TOWER

01

COMPACT
Designed to take up as little floor space as possible.

02

MAXIMUM PRODUCTIVITY
Shorter cycle times.

03

SMART AUTOMATION
Enable unsupervised production.

04

UNIQUE DESIGN
Easy to assemble and quick to install.

05

RELIABLE
More reliable and optimized material management.

06

VERSATILE APPLICATION
Combined loading/unloading system complete with storage tower.

COMPACT TOWER	
Applicable Machine Size	1500x3000 mm
Max. Sheet Size	1500x3000 mm
Min. Sheet Size	1000x1000 mm
Max. Sheet Weight (Handling)	600 kg
Max. Material Stacking Weight (on Pallet)	3000 kg
Number of Compartments	2 Units (Stacking and Scrap)
Max. Sheet Metal Thickness	16 mm
Loading and Unloading Cycle Time	135 Seconds
Cycle Time: Start with taking scrap sheet from transfer table to pull over on pallet and then taking new sheet from pallet to transfer table.	

Design and specifications are subject to change without notice by Baykal.

FIBER LASER CUTTING CAPACITIES

SHEET CUTTING CAPACITIES

Material	1 kW	2 kW	3 kW	4 kW	6 kW	8 kW	10 kW	12kW	15 kW	20 kW
Mild Steel	12 mm	16 mm	20 mm	20 mm	25 mm	30 mm	35 mm	40 mm	50 mm	50 mm
Stainless Steel	5 mm	6 mm	8 mm	12 mm	16 mm	25 mm	30 mm	35 mm	40 mm	45 mm
Aluminum	3 mm	4 mm	6 mm	10 mm	12 mm	25 mm	30 mm	35 mm	40 mm	45 mm
Copper	2 mm	3 mm	3 mm	6 mm	8 mm	10 mm	10 mm	15 mm	15 mm	20 mm
Brass	3 mm	4 mm	4 mm	8 mm	10 mm	16 mm	16 mm	16 mm	20 mm	25 mm

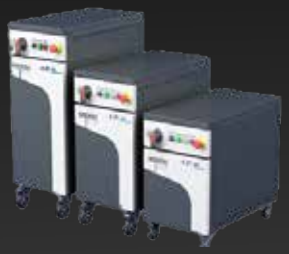
TUBE CUTTING CAPACITIES

Material	1 kW	2 kW	3 kW	4 kW	6 kW
Mild Steel	12 mm	16 mm	20 mm	20 mm	22 mm
Stainless Steel	1 mm	6 mm	8 mm	12 mm	16 mm
Aluminum	3 mm	4 mm	6 mm	10 mm	12 mm

POWER UNITS

IPG YLR SERIE

YLR resonators are available up to 6kW. Their advantage against YLS is that they deliver more accurate cutting on thin materials. In case of maintenance, IPG technicians are authorized for assistance.



IPG YLS SERIE

YLS resonators are available with wide range of powers. Therefore they may deliver cutting process on thick materials with high speed. Their stability and beam quality brings accurate performance for your applications. In case of maintenance, IPG technicians are authorized for assistance .

MAX PHOTONICS PRO SERIES

Max Photonics PRO serie is available between 15 and 30 kW for Baykal fiber laser cutting machines. Pro series delivers good beam quality, high speed, stability at affordable price allowing great performance for your applications. In case of maintenance, Max Photonics technicians are authorized for assistance.

MAX PHOTONICS ELITE SERIES

Max Photonics Elite serie is available up to 30kW for Baykal fiber laser cutting machines. Elite series delivers intermediate performance at cheaper prices. In case of maintenance, Max Photonics technicians are authorized for assistance.

nLIGHT

Nlight resonators are available with wide range of powers. Therefore they may deliver cutting process on thick materials with high speed. Their stability and beam quality brings accurate performance for your applications while its back-reflection protection ensures eliminating unwanted issues. In case of maintenance, Baykal technicians are authorized for assistance.

CUTTING HEADS

Precitec ProCutter Thunder

ProCutter Thunder is the ideal solution for efficient and economical laser cutting in the power range up to 6.6kW. When maintenance of the cutting head is required, the design allows quick and easy access to the optics.

Precitec ProCutter 2.0

ProCutter 2.0 is a premium solution for high cutting speeds. It is capable to perform continuous cutting with the power up to 30kW. 4 intelligent sensors monitors the cutting head for the circumstances such as lens heat, pressure, lens dirt, and lens position. Should one failure occur, process is stopped. Therefore the cutting head is protected against breakdown.

Precitec LightCutter 3D

Light Cutter 3D is ideal for use in professional tube and profile cutting systems as well as in demanding free-form applications. The narrow contour of the 3D cutting head's lower section enables even complex cuts on tubes, profiles and free-form parts with an inclination angle of up to 45 degrees.

Raytools 3D

Raytools 3D cutting head is designed for tube and profile cutting processes. It has high rigidity to secure the stability of optics system.

Raytools BS Serie

Fully smart sensor technology with real-time status monitoring by APP or CNC. Auto focus by 0-10V or EtherCAT. It offers real-time monitoring to temperature of top/bottom cover glass, focus lens and cavity, cutting gas and cavity pressure, focus position and ready status of bottom cover glass.

BEVEL HEAD

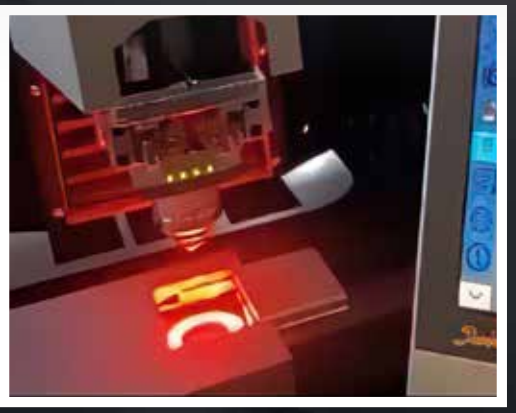
Angle: ± 45°

Bevel is used for accurate beveling on flat materials. Fully programmable to cut parts that have both bevel and straight cuts.

NOZZLE APPLICATIONS

AUTOMATIC NOZZLE CHANGER

- Number of Stations: 8-12
- Fast Cycle Change



AUTOMATIC NOZZLE CENTRING

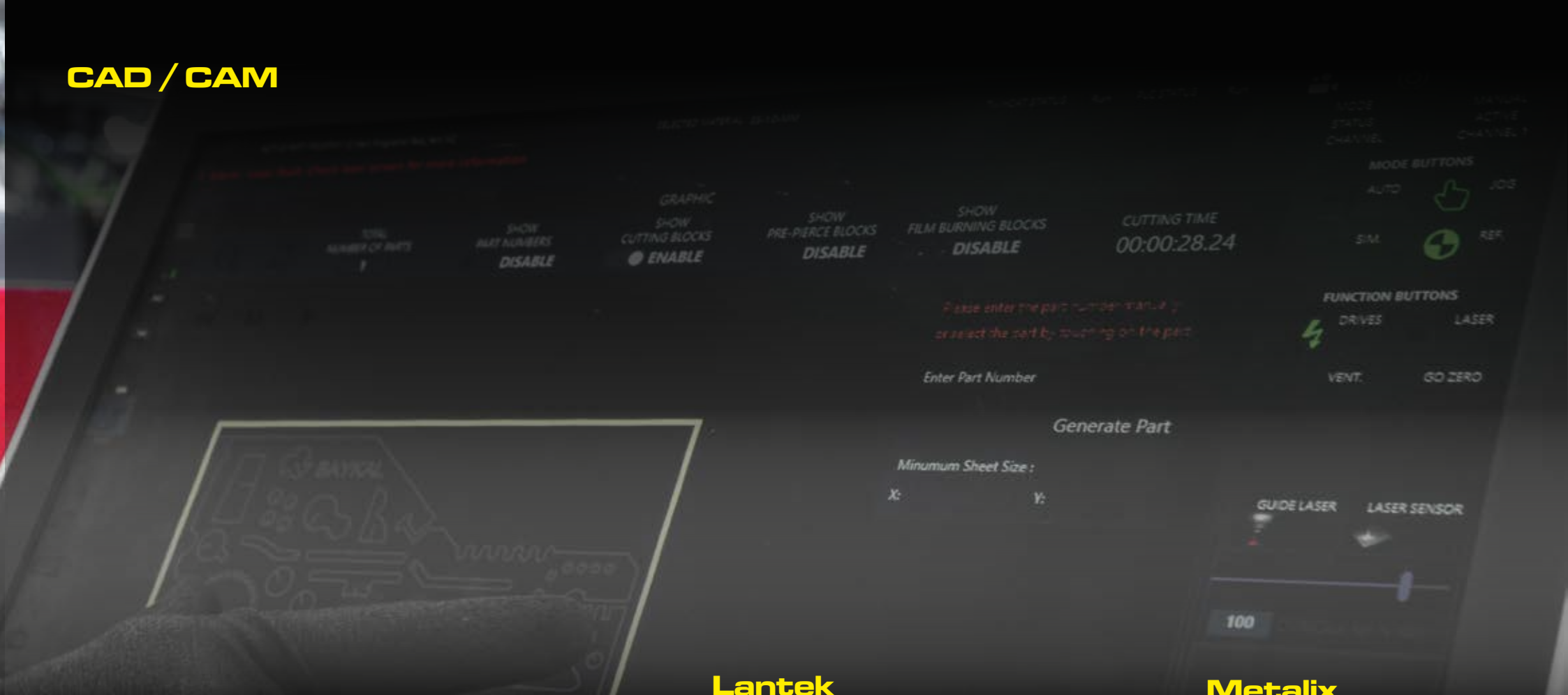
- Motorized alignment
- Accurate settings

NOZZLE CLEANING & CALIBRATION

CONTROL UNIT & BAYKAL HMI

User friendly interface with one touch menu to reach all machine HMI pages graphically real-time cutting monitoring extensive cutting parameters database control of laser power on different materials errors detecting during cutting process parameters change during cutting process, and more specifications.

CAD / CAM



Lantek

- Arrange all the parts generated on sheets manually or automatically
- Generate CNC programs automatically transmit to machines.
- Print standard or fully customized lists
- Export the results to DXF format, ASCII tables, etc.
- Import the parts to be cut in various ways (DXF format, ESSI format, etc.)
- Freely define the shape of the parts to be cut.
- Draw the parts with its user friendly drawing module.

Metalix

- **The best and fastest material usage you can find.**
- **Supports minimizing the number of NC Programs/ SubNests (when you select the Min. Number of SubNests Mode option)**
- **Allows full control of running time.**
- **During, shows all the SubNests of the solution.**
- **Allows you to stop nesting when you see a satisfactory result.**
- **Saves work hours and money.**

MOTION SYSTEMS

Rack & Pinion

Baykal Fiber Laser Cutting Machines with high performance class rack and pinion motion systems are fast, smooth, accurate and trouble free, setting the pace in laser drive system design.

Linear Motion Technology

Linear Motion Technology brings high traverse speeds with accuracy which may assist to increase productivity. Their magnetic work principle may deliver up to 4G acceleration.

DRIVERS & MOTORS

Baykal Laser Systems are using advanced and latest Beckhoff high quality servo motors and drivers, which represents robust, durable and high-performance synchronous servomotors “Made in Germany”.

The drives utilize EtherCAT as a high-performance communication system, providing an ideal interface with PC-based control technology while supporting coupling with other fieldbus systems.

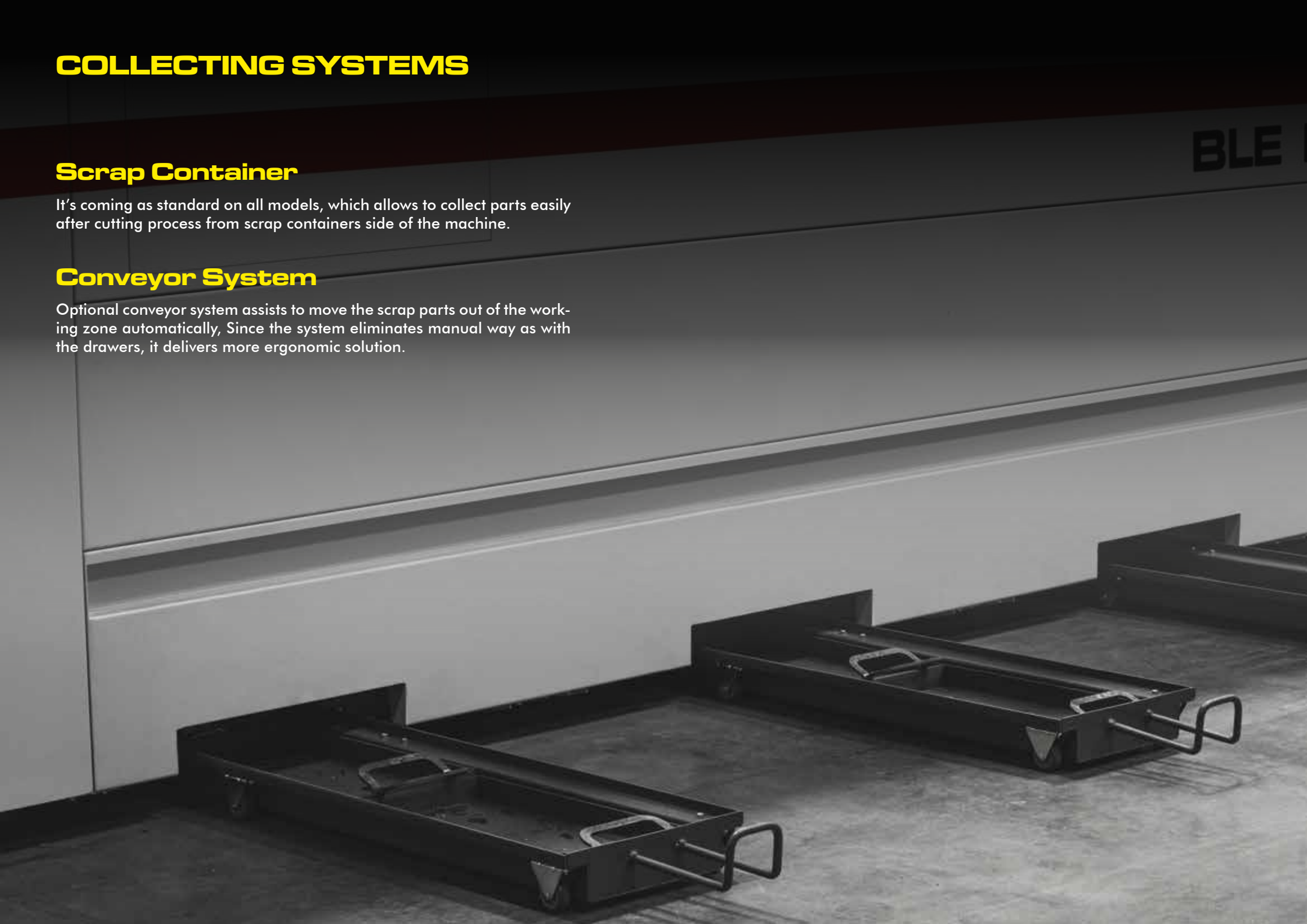
COLLECTING SYSTEMS

Scrap Container

It's coming as standard on all models, which allows to collect parts easily after cutting process from scrap containers side of the machine.

Conveyor System

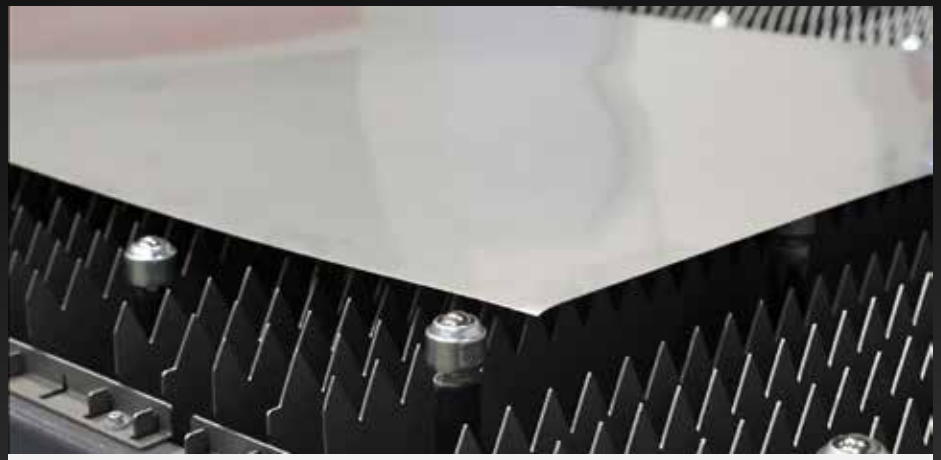
Optional conveyor system assists to move the scrap parts out of the working zone automatically, Since the system eliminates manual way as with the drawers, it delivers more ergonomic solution.



LOADING OPTIONS & SAFETY

SHUTTLE TABLE

Shuttle table plays a critical role when productivity is necessary. Its capability to load new sheet metal and unload the cut one in seconds assists to increase productivity. With its hydraulic vertical motion capability bring precise movement, it serves for a long period with less maintenance.



ANTI-SCRATCH PROTECTION

Shuttle Table is capable to be upgraded optionally with hydraulic support system with ball bearings when requested. Should surface of the material is critical for scratches such as stainless steel, this system is able to satisfy the need.

SAFETY SWITCH

LIGHT BARRIER

PROCESS CAMERA

PROTECTIVE GLASS

COOLING & FILTRATION

CHILLER

Chiller inclueded to resonator. It helps the components between laser unit and cutting head to cool down. It works with a water based chiller. It collects the hot water caused by cutting head and laser unit by recirculation system and cools down the water to 22°C to send back to cutting head and laser unit.

FILTRATION SYSTEM

Vanterm filtration unit has approximately 20.000 hours life time with filter efficiency over 99,997% of 0,12 micron particles and low operating cost thanks to superior long filter life time.W3/IFA certified according to EN ISO 15012 standard.

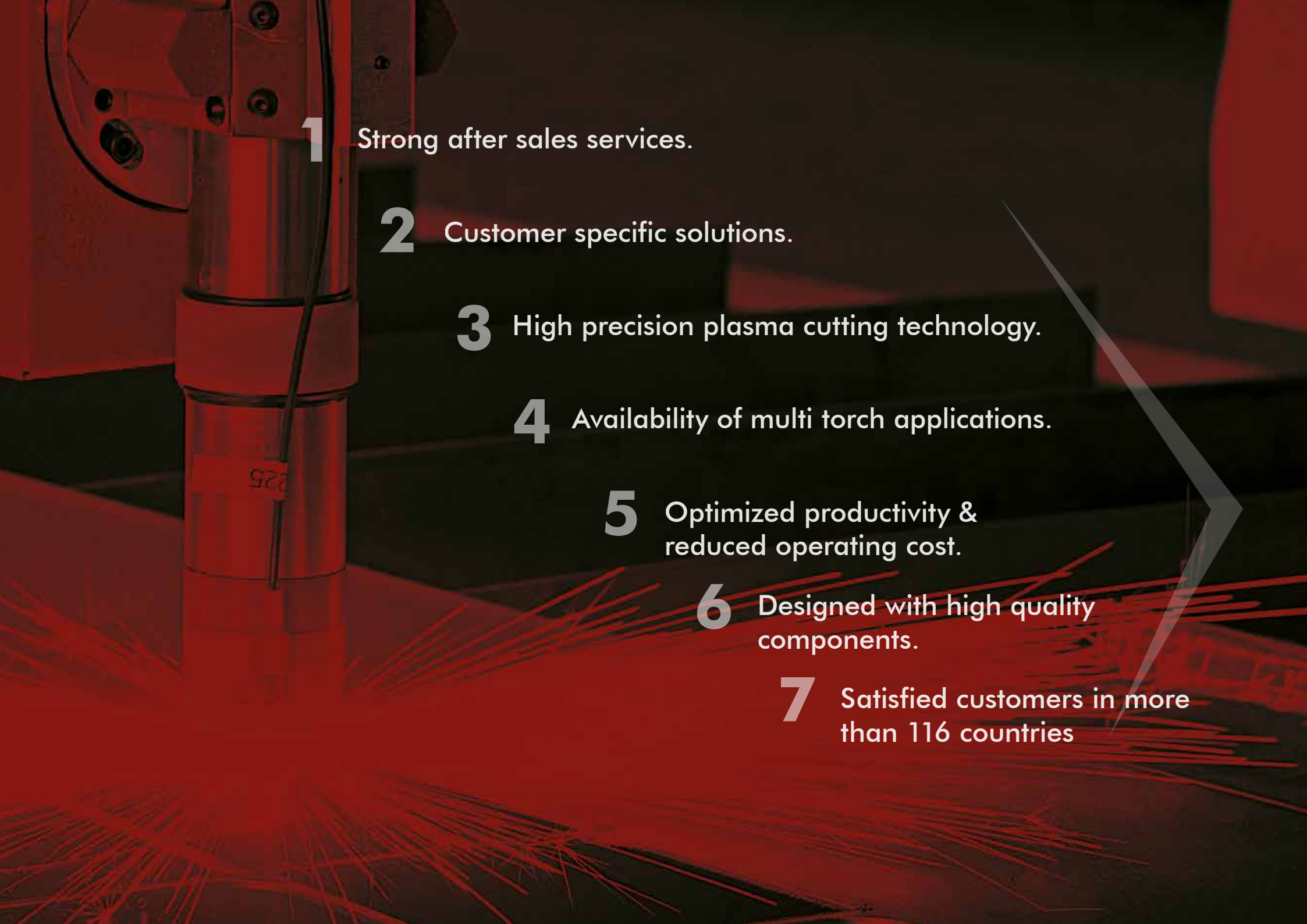
PLASMA CUTTING

INTRODUCTION

Plasma cutting is a versatile and efficient method used for cutting various metals and other conductive materials. It employs a high-velocity jet of ionized gas, known as plasma, to melt and sever through electrically conductive materials with precision and speed. Plasma cutting has become an indispensable tool in numerous industries, ranging from automotive and construction to aerospace and metal fabrication.

ADVANTAGES

- Industry leading cut quality—X-Definition
- Optimized productivity and reduced operating costs
- Engineered system optimization
- Ease of use
- Expanded HyDefinition technology



1 Strong after sales services.

2 Customer specific solutions.

3 High precision plasma cutting technology.

4 Availability of multi torch applications.

5 Optimized productivity & reduced operating cost.

6 Designed with high quality components.

7 Satisfied customers in more than 116 countries

BPL H

Highly accurate and reliable performance with positioning speeds.

01

MULTI PROCESS

- Multi Torch
- Bevel Cutting
- Oxy-Fuel Cutting
- Multi drill
- Tube Cutting

02

SURECUT

- Pronest
- EdgeConnect
- XPR

03

FAST & ACCURATE POSITIONING

04

HIGH PRECISION

05

AUTOMATIC HEIGHT CONTROL

BPL H			
Cutting Area	Width	1500 mm to 6000 mm	
	Length	3000 mm to 28000 mm	
Plasma Supply		Max Pro 200	XPR 170 XD - XPR 300 XD - XPR 460
Gas Console		Manuel	Core / VWI / Optimix
CNC Control Unit		Tecnos CNC	Hypertherm EdgeConnect
		15" TFT-Windows 10	19.5" TFT-Windows 10
Nesting Software		LANTEK Expert Cut II	ProNest
Servo Motors & Drivers		Yaskawa	Rexroth
Linear Rail Guides		Rexroth	
Torch-Height Travel		Ballscrews on Dual Lineer Guides	
Feed Rate		30 m/min.	30 m/min.
Mechnaical Accuracy		± 0.05 mm	± 0.05 mm
Pipe & Tube Cutting Device		Optional	Optional
Multiple Plasma Torches		Optional	Optional
Bevel Cutting Head		Optional	Optional
Multiple Oxy Fuel Torches		Optional	Optional
Multi Drilling Device		Optional	Optional
Fume Extrator		Optional	Optional

BPS

Ergonomically designed with stable table construction and integrated extraction.

01

MULTI PROCESS

- Multi Torch
- Bevel Cutting
- Multi drill
- Tube Cutting

02

SURECUT

- Pronest
- EdgeConnect
- XPR

03

RIGID CONSTRUCTION

04

HIGHER SPEEDS

05

COST EFFECTIVE

BPS			
Cutting Area	Width	1500 mm to 4000 mm	
	Length	3000 mm to 14000 mm	
Plasma Supply		Max Pro 200	XPR 170 XD - XPR 300 XD - XPR 460
Gas Console		Manuel	Core / VWI / Optimix
CNC Control Unit		Tecnos CNC	Hypertherm EdgeConnect
		15" TFT-Windows 10	19.5" TFT-Windows 10
Nesting Software		LANTEK Expert Cut II	ProNest
Servo Motors & Drivers		Yaskawa	Rexroth
Linear Rail Guides		Rexroth	
Torch-Height Travel		Ballscrews on Dual Lineer Guides	
Feed Rate		30 m/min.	30 m/min.
Mechnaical Accuracy		± 0.05 mm	± 0.05 mm
Bevel Cutting Head		Optional	Optional
Pipe & Tube Cutting Device		Optional	Optional
Multiple Plasma Torches		Optional	Optional
Fume Extrator		Optional	Optional

APPLICATIONS

BEVEL CUT

Capable to rotate ±45°.

PLASMA MULTI PROCESS APPLICATION

- Up to 2 plasma cutting heads.
- Up to 4 oxy cutting heads.

MULTI DRILLING UNIT

- Max hole diameter: 20 mm
- Max taping size : 16 mm
- Countersinking
- Number of Stations: 3 or 6

TUBE CUTTING

Baykal Tube cutting station is designed like add on device which is able to work with pipes and square / rectangular tubes.

- Min. Size: Ø50
- Max. Size: Ø600

OXY-FUEL CUTTING UNIT

- Automatic Ignition
- Automatic Height Control
- Pierce Height : 125 mm
- Edge Cut : 300 mm
- Enhanced Ability to Cut Thick Metals.

PLASMA CUTTING SYSTEMS

HYPERTHERM MAXPRO 200

The MAXPRO200® Long-Life® plasma cutting system is engineered for heavy-duty, high capacity automated and hand-held cutting and gouging appli-cations. Using with manuel gas console only .The easy-to-use system operates with either air, oxygen, or nitrogen plasma gas, and combines fast cutting speeds and quick process changes to maximize productivity.

HYPERTHERM XPR 170

The XPR170® is the latest system in the XPR® plasma product line. Delivering next generation processes from very thin up to mid-range thicknesses, the XPR170 expands plasma capabilities and opportunities in ways never before possible.

HYPERTHERM XPR 300

The XPR300® represents the most significant advance in mechanized plasma cutting technology, ever. This next generation system redefines what plasma can do by expanding its capabilities and opportunities in ways never before possible.

HYPERTHERM XPR 460

The Hypertherm XPR460® is part of the world's most powerful and versatile family of mechanized plasma cutters for cutting mild steel, stainless steel, and aluminum over various thicknesses. XPR460 pays you back with maximum versatility, productivity and precision. XPR460's precision cutting produces parts with less dross and rework, reducing secondary operations.

PLASMA GAS CONNECT CONSOLES

Core™

O_2 N_2 Air

- XPR X-Definition mild steel cutting.
- Very good thin stainless steel cutting. Nitrogen HDi® processes available for non-ferrous materials.
- Nitrogen marking capability.

CorePlus™

O_2 N_2 Air Ar

- XPR X-Definition mild steel cutting.
- Very good thin stainless steel cutting. Nitrogen HDi processes available for non-ferrous materials.
- Nitrogen marking capability.
- Enhanced Argon marking capability.
- Argon assist technology increases pierce capacity.

VWI™

O_2 N_2 Air Ar F5 H_2O

- XPR X-Definition mild steel cutting.
- Patented Vented Water Injection processes yield excellent results for non-ferrous materials.
- F5 HDi available for great results on stainless steel thinner than 12 mm (1/2").
- Very good thin stainless steel cutting. Nitrogen HDi processes available for non-ferrous materials.
- Nitrogen marking capability.
- Enhanced Argon marking capability.
- Argon assist technology increases pierce capacity.

OptiMix™

O_2 N_2 Air Ar F5 H_2O H_2

- XPR X-Definition mild steel cutting.
- Discrete 3-gas mixing and flexibility to premium stainless steel and aluminum cutting.
- Patented Vented Water Injection processes yield excellent results for non-ferrous materials.
- F5 HDi available for great results on stainless steel thinner than 12 mm (1/2").
- Very good thin stainless steel cutting. Nitrogen HDi processes available for non-ferrous materials.
- Nitrogen marking capability.
- Enhanced Argon marking capability.
- Argon assist technology increases pierce capacity.
- Full XPR plasma process capability.

Three console options – Core™, Vented Water Injection™ (VWI™) and OptiMix™ – offer unmatched mild steel cut quality with each console delivering successively enhanced cutting capabilities on stainless steel and aluminum. All consoles can be fully controlled through the CNC for high productivity and ease of use.

HYPERTHERM TRUE HOLE TECHNOLOGY

12 mm hole without True Hole Technology cut with HPRXD Plasma.

12 mm hole with True Hole Technology cut with HPRXD Plasma.

Hypertherm's patent-pending True Hole cutting technology for mild steel produces significantly better holquality than what has been previously possible using plasma. This is delivered automatically without operator intervention, to produce unmatched hole quality that surpasses the competition. True Hole Technology requires a HyPerformance Plasma HPRXD® auto gas system along with a True Hole enabled cutting table, nesting software, CNC, and torch height control.

CONTROL UNITS & CAD / CAM

TECNOS PC12

HYPERTHERM EDGE CONNECT

LANTEK EXPERT

- Arrange all the parts generated on sheets manually or automatically
- Generate CNC programs automatically transmit to machines.
- Print standard or fully customized lists
- Export the results to DXF format, ASCII tables, etc.
- Import the parts to be cut in various ways (DXF format, ESSI format, etc.)
- Freely define the shape of the parts to be cut.
- Draw the parts with its user friendly drawing module.

PRONEST

ProNest CAD/CAM part nesting software for advanced mechanized cutting is designed to supercharge your cutting operation, helping you achieve greater automation, efficiency, and profitability. Brought to you by the cutting experts at Hypertherm, ProNest can optimize performance for Baykal Plasma Machines.

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