



STABILITY AND EFFICIENCY **ML-X SERIES**
LASER CUTTING OF Ultra-High-Speed WITH 3G
Powered by a 6 ~ 60 kW





DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ELEVATE YOUR PERFORMANCE IN 2D LASER CUTTING

OPTIMIZATION, EFFICIENCY & PRECISION

The ACCURL ML-X laser machine offers superior safety, performance, and cutting efficiency for modern manufacturing. Its hollow-structure body with Graphite insulation and thermal deformation., 3G acceleration, and servo-driven worktable ensure precision across material thicknesses. Industry 4.0 integration with IIoT and real-time monitoring ensures high-performance operation.

KEY PERFORMANCE FEATURES

SUPERIOR DYNAMIC PERFORMANCE:

- Best-in-class **performance** with **up to 20% ⁽¹⁾ faster cycle times**, thanks to 28 m/s² acceleration and 180 m/min trajectory speed.

INNOVATIVE STRUCTURAL DESIGN:

- Seamless integration with **modular and scalable automation** solutions, from stand-alone setups to fully automated production cells, integrable at any time.

VERSATILE MATERIAL PROCESSING

•THICK PLATE CUTTING:

The workbench offers robust load capacity (surface load up to 550 kg/m²), providing solid support for thick plate processing while maintaining superior cutting quality.

•THIN PLATE CUTTING:

High dynamic performance, paired with a fast-response lifting workbench, significantly enhances thin plate cutting efficiency, reducing production cycles.

INDUSTRY 4.0 INTEGRATION:

- Real-time data and IIoT connectivity streamline design-to-production workflows. ACCURL ensures efficient, high-performance operation.



Optimal **cost-effectiveness** with **gas savings up to 40% ⁽²⁾** and a remarkable **96% ⁽³⁾ sheet utilization**.

ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ELEVATE YOUR PERFORMANCE IN 2D LASER CUTTING

BOOST PRODUCTIVITY WITH ACCURL MODULAR SOLUTIONS

Available for processing models 3015/ 4020/ 6025/ 8025

Seamless integration with modular, scalable automation, from standalone systems to fully automated production cells, adaptable anytime.



Note: the data in this table are standard configuration technical parameters, and can also be customized according to the technical requirements.



ACCURL[®] DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL ML-X for 6~60KW -FASTER,MORE PRECISE,CHEAPER

EXCEPTIONAL DYNAMICS

The **ML-X SERIES** range achieves exceptional dynamics thanks to the gantry design and **Beckhoff or Rexroth** motors and drives. The frame design ensures stiffness and stability even during high acceleration, guaranteeing workpiece accuracy across a wide range of materials, from thick to thin.





DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL- Drawer-Type Material Collection Cart



WHY ACCURL'S DRAWER-TYPE MATERIAL COLLECTION CART EXCELS IN DESIGN

ACCURL's drawer-type collection cart optimizes parallel operations with independent cutting zones, ensuring uninterrupted production during maintenance, while its ergonomic handle enables easy extraction, embedded insulation prevents heat and dust leakage, and flip down protective panels on the exterior block light and slag spillage

ADVANTAGE:

Efficient Parallel Operation and Maintenance:

- Independent cutting zones allow simultaneous operations, with maintenance on one cart not affecting other workstations ,ensuring uninterrupted production.

User-Friendly and Safe Design:

- Equipped with front handles for easy extraction, embedded insulation to prevent heat and dust leakage, and flip-down protective panels to block light and slag spillage.



Note: the data in this table are standard configuration technical parameters, and can also be customized according to the technical requirements.



VALUES IN PERFECT BALANCE ML-X SERIES

ACCURL ML-X: A SAFELY CE MARKED CLASS 1 SYSTEM

CHOOSE THE SAFETY FOR YOUR JOB

The TUV CE-marked SL-X, a **Class 1 fiber laser system**, ensures zero-risk operation per CE standards. Its enclosed cutting area, protective windows, and PILZ safety interlocks shield against laser radiation and fumes, the SL-X maintains robust safety features to eliminate eye injury and fire risks, ensuring reliable, high-performance cutting.

KEY FEATURES AND BENEFITS:

CE CLASS 1 SAFETY:

- Enclosed design with protective windows blocks laser radiation.

TUV CE COMPLIANCE:

- PILZ interlocks ensure secure, risk-free operation.

RISK-FREE PERFORMANCE:

- Unmodified safety features eliminate eye injury and fire hazards.



FOLDING SIDE-SLIDING SAFETY DOOR

The safety door features a fully enclosed structure with an integrated safety lock switch, preventing the door from being opened during machine operation. It is equipped with laser-protective glass for safe observation & maintenance.



LIFTING SAFETY DOOR DESIGN

The door automatically rises during worktable exchanges and closes upon completion, effectively isolating laser radiation and piercing slag for enhanced safety.



DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL ML-X for 6~60KW -FASTER, MORE PRECISE,CHEAPER

SPECIFICATIONS MASTERLINE-X (ML-X SERIES):

SMARTLINE SERIES	ML-3015X	ML-4020X	ML-6025X
Maximum sheet size (L*W)	3050*1525mm(10'*5')	4100*2080mm(13.45'*6.82')	6150*2580mm(20.18'*8.49')
Z-axis travel	150mm	150mm	150mm
Positioning accuracy*	+/- 0.03mm	+/- 0.03mm	+/- 0.03mm
Repetitive accuracy	+/- 0.02mm	+/- 0.02mm	+/- 0.02mm
Maximum positioning speed X-Y	180m/min	180m/min	180m/min
Maximum X/Y acceleration	3.0G	3.0G	3.0G
Laser Power	3KW-60KW	3KW-60KW	3KW-60KW
Nozzle changer	Optiona	Optiona	Optiona
Maximum sheet weight on table	550kg/m ²	550kg/m ²	550kg/m ²
Airflow of Dust Collector	4000m ³ /h	6000m ³ /h	6000m ³ /h
Gas proportioning valve	Air/Oxygen/Nitrogen	Air/Oxygen/Nitrogen	Air/Oxygen/Nitrogen
Workbench structure	Modular	Modular	Modular
Internal Thermal Insulation Structure of the Frame	Graphene Plate Protection	Graphene Plate Protection	Graphene Plate Protection
Overall dimensions without a three-color light)	9990*3180*2620	12070*3680*2620	16230*4180*2620
Approximate weight	10500 KG	18550KG	21500 KG

Note:

Achievable workpiece accuracy depends on the type of workpiece, pre-treatment and sheet size as well as other variables. According to VDI/DGQ 3441..



DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

CONFIGURATION LIST

TECHNOLOGIES FOR ML-X SERIES:

No.	Item	Brand / Specification	Remarks
1	Laser cutting head	PRECITEC ProCutter	Germany
2	Fiber laser	RAYCUS CE	China
3	X and Y high-precision reducer	ALPHA Level 6 precision	Germany
4	X and Y high-precision helical rack	ALPHA Level 6 precision	Germany
5	X, Y linear guide rail	Bosch Rexroth	Germany
6	X and Y-axis servo motors	Yaskawa/BECKHOFF	Germany
7	CNC control system	TWINCUT® CNC 21" S80 EtherCAT Control System	Germany
8	Nesting software	ACCURL iCut NEST	Spain
9	Proportional valve	HOERBIGER (Air/Oxygen/Nitrogen)	Germany
10	Water chiller	TONGFEI -CE	China
11	Main low-voltage electrical components	SCHNEIDER	France
12	Laser protection	Laser cabinet + Laser cabinet air conditioner (TONGFEI)	ACCURL
13	Laser anti-radiation protective glass CE	LaserVision OD7 107nm	USA
14	Safety PLC	Pilz Security lock and Pilz PLC	Germany
15	Surveillance Camera	TIANDY	China
16	Detection of gas supply pressure	AIR/N2/O2	Japanese
17	Safety Light Curtain	KEYENCE	Germany



DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

YOU CHOOSE THE POWER OF THE LASER

CUTTING PARAMETERS WITH CARBON STEEL(OXYGEN)

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Carbon steel (Positive focus oxygen cutting)	1	7.0-10	7.0-10	9-10.5	7-10	7-10.5	7-10.5
	2	4.0-7.5	5.0-7.5	5.5-6.5	5-7.5	4-7.5	4-7.5
	3	3.3-4.5	3.5-4.5	3.8-4.5	3.8-4.5	4-7.5	3.7-4.6
	4	3.0-3.5	3.0-3.5	3.3-3.8	3.4-3.9	3.1-3.6	3.2-3.9
	5	2.8-3.4	2.8-3.4	3.0-3.4	3.1-3.5	3-3.5	3-3.5
	6	2.4-3.0	2.8-3.2	2.8-3.2	2.9-3.2	2.4-3.3	2.4-3.4
	8	2.2-2.7	2.3-2.7	2.4-2.8	2.5-2.8	2.2-3.1	2.2-3.2
	10	2.0-2.3	2.0-2.4	2.1-2.3	2.2-2.6	2-2.6	2-2.6
	12	1.7-2.0	1.7-2.0	1.8-2.0	1.8-2.1	1.8-2.1	1.8-2.2
	14	1.3-1.7	1.3-1.7	1.7-1.9	1.7-2.0	1.6-2	1.6-2
	16	1.1-1.4	1.2-1.5	1.5-1.8	1.6-1.8	1.4-1.8	1.5-1.8
	20	0.45-0.65	0.9-1.2	1.2-1.5	1.2-1.5	1.2-1.5	1.2-1.5
	25	0.3-0.4	0.5-0.8	0.8-1.2	1.0-1.2	1-1.3	1.0-1.4
	30	0.1-0.2	0.2-0.4	0.4-0.9	0.6-1.0	0.8-1.1	0.8-1.2
	35		0.1-0.3	0.3-0.8	0.4-1.0	0.5-1.0	0.7-1.1
	40			0.2-0.5	0.3-0.5	0.4-0.8	0.6-1
	50			0.1-0.3	0.1-0.4	0.2-0.55	0.4-0.8
	60					0.1-0.18	0.2-0.5
	70						0.15-0.2

CUTTING PARAMETERS WITH CARBON STEEL(OXYGEN)

Material / Auxiliary Gas	Thickness (mm)	8000W	10000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Carbon steel (Negative focus oxygen cutting)	10		3-3.2	3.1-3.5			
	12		2.8-3.2	3-3.2	3-3.4	3.0-3.8	
	14		2.5-3.1	2.8-3.2	2.8-3.4	2.8-3.5	
	16		1.6-2.2	2.5-3.1	2.5-3.1	2.5-3.2	2.5-3.0
	20			1.6-2.2	1.8-2.5	2.2-3.0	2.2-2.8
	25			0.9-1.4	1.2-1.8	1.9-2.3	2.0-2.4
	30				0.8-1.4	1.4-1.9	1.8-2.2
	35					1.3-1.6	1.5-1.9
	40					0.8-1.2	1.3-1.75
	50					0.6-0.8	1.0-1.3
	55						0.85-1.2
	60						0.85-1.1
	65						0.65-0.8
	70						0.4-0.6
	75						
	80						
	90						
	100						

CUTTING PARAMETERS WITH CARBON STEEL(MIXGAS)

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Carbon steel (Air and nitrogen cutting)	1	40-50	40-50	40-50	45-50	30-50	35-50
	2	22-27	25-30	30-40	35-40	30-40	35-40
	3	13-21	18-22	23-28	25-30	25-35	25-35
	4	10-13	13-17	21-25	22-25	22-30	23-30
	5	9.0-11	9.0-13	16-18	17-20	19-24	20-30
	6	6.5-7.5	7.0-11	11-16	13-17	14-19	15-20
	8	3.0-4.5	4.5-6.0	8.0-10	9.5-12	10-14	12-17
	10		3.5-4.2	6.5-8	7-9.0	9-11	11-15
	12			4.2-5.5	6-7	8.5-10	10-13.0
	14			2.2-3.5	4.5-5.5	6-7	8.0-10
	16				2.7-3.5	4.5-5.7	7.0-8.5
	18					3.3-4.2	5.5-6.5
	20					2.5-3.7	4.5-5.5
	25						3.0-4.0
	30						2-2.8
	35						
	40						



ACCURL[®] DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

YOU CHOOSE THE POWER OF THE LASER

CUTTING PARAMETERS WITH STAINLESS STEEL(NITROGEN)

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Stainless steel (Nitrogen cutting)	1	40-50	40-50	40-50	40-50	30-50	30-50
	2	35-45	25-30	30-40	35-40	30-40	30-40
	3	22-27	20-25	23-28	25-32	25-35	28-35
	4	15-20	15-17	19-23	22-25	22-30	25-30
	5	9.0-12	10-13	17-19	20-23	21-25	22-28
	6	8.0-11	9.0-10	10-14	14-19	15-22	18-22
	8	3.5-4.5	4.5-5.5	7.0-10	11-13	12-15	14-20
	10	2.0-2.5	3.5-4.5	4.5-7.0	8-10	9-13	13-17
	12	1.5-1.8	2.0-3.0	3.8-5.5	5.5-7.5	8.0-10.5	10-13.0
	14	1.0-1.5	1.5-2.0	3.0-4.5	3.8-5.0	6.5-8	8.5-11.0
	16	0.5-0.8	1.0-1.4	2-3.0	2.8-3.5	4.5-6	7-9.0
	18	0.3-0.5	0.7-1.0	1.5-2.3	2.2-2.6	2.8-4	7.0-8.0
	20	0.15-0.25	0.5-0.6	1-1.9	1.8-2.2	2.5-3.5	6-7.0
	25		0.2-0.5	0.6-1.0	1-1.3	1.3-2.0	3.5-4.5
	30			0.3-0.7	0.7-0.9	0.55-1.2	2.5-3.5
	40			0.15-0.3	0.2-0.35	0.25-0.6	0.6-1.8
	50			0.15-0.2	0.1-0.2	0.15-0.3	0.3-1.0
	60					0.1-0.25	0.2-0.35
	70						0.1-0.2
	80						
	90						



ACCURL[®] DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

YOU CHOOSE THE POWER OF THE LASER

CUTTING PARAMETERS WITH STAINLESS STEEL(AIR)

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Stainless steel (Air cutting)	1	40-50	40-50	40-50	40-50	30-50	30-50
	2	35-40	25-30	27-40	30-40	30-40	30-40
	3	20-25	20-25	22-28	27-32	28-35	28-35
	4	15-20	16-22	19-23	22-25	25-30	25-30
	5	9.0-12	10-13	16-20	20-24	22-25	22-25
	6	8.0-11	8.5-12	12-15	16-19	17-23	18-23
	8	3.5-4.5	4.5-5.5	8-12	11-13	14-17	16-21
	10	2.0-2.8	3.4-4.5	5.0-7.0	8.5-10	10-13	14-17
	12	1.5-1.8	2.5-4.0	4.5-6.0	6-7.5	8.5-11	10-13.0
	14	1.0-1.5	1.5-2.8	3.5-4.5	4-5.2	7-8	8-11.0
	16	0.8-1	1.0-1.5	2.3-3.2	3.2-4.3	5.0-6	7-9.0
	18		0.7-1.0	1.6-2.3	2.8-3.5	3.5-4.0	6-8.0
	20		0.5-0.7	1.3-1.8	2-2.6	2.5-3.1	4-6.5
	25			0.7-1.2	1.5-1.8	1.6-2.5	3-4.0
	30			0.3-0.7	0.8-1.1	1.0-1.6	2-3.0
	40				0.45-0.6	0.5-0.7	1.5-2.0
	50					0.25-0.5	0.7-1.2
	60						0.3-0.6
	70						
	80						

Note: The filled color code in the data sheet indicates the limit cutting speed, and batch use is not recommended.

CUTTING PARAMETERS WITH ALUMINUM(NITROGEN)

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Aluminum (Nitrogen cutting)	1	40-50	40-50	40-50	40-50	30-50	35-50
	2	20-28	25-30	25-35	28-38	30-40	30-50
	3	11-16	18-22	20-25	23-30	25-35	28-40
	4	9.0-11	15-18	18-21	20-25	20-27	25-35
	5	6.0-7.0	11-13	14-17	18-22	17-22	22-30
	6	4.5-5.5	6.0-7.0	10-13	12-16	15-19	15-20
	8	2.5-3.5	3.0-4.0	7.5-8.5	10-12	10-13	13-18
	10	1.8-2.3	2.0-3.0	4-5.2	5-8	7-10	8-12
	12	0.8-1.0	1.5-2.0	2.3-3.5	3.8-4.5	6-8.0	5-8.0
	14	0.7-0.8	1.2-1.5	1.8-2.4	2.2-2.7	3.6-5.5	4-6.0
	16	0.4-0.7	0.8-1.2	1.6-2.0	1.7-2.2	2.5-4	2-3.0
	18	0.3-0.5	0.6-0.9	1.3-1.6	1.4-1.8	1.8-2.5	1.8-2.5
	20	0.2-0.25	0.4-0.5	0.8-1.2	0.8-1.5	1.2-1.8	1.5-2.0
	25		0.3-0.4	0.6-0.9	0.6-1	0.8-1.2	1-1.6
	30		0.15-0.2	0.5-0.7	0.5-0.7	0.4-0.8	0.6-1
	40			0.25-0.4	0.25-0.45	0.3-0.5	0.4-0.7
	50				0.1-0.2	0.25-0.4	0.3-0.6
	60						0.2-0.3
	70						

Note: The filled color code in the data sheet indicates the limit cutting speed, and batch use is not recommended.



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YOU CHOOSE THE POWER OF THE LASER

CUTTING PARAMETERS WITH ALUMINUM(AIR)

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Aluminum (Air cutting)	1	40-50	40-50	40-50	40-50	30-50	35-50
	2	20-28	25-30	25-33	28-38	30-40	30-50
	3	11-16	20-25	20-25	23-30	25-32	28-40
	4	9-10.5	15-18	18-20	20-25	22-28	25-30
	5	5.0-5.5	11-13	14-16	16-20	17-23	22-25
	6	3.0-4.0	6.0-7.0	9.0-10	12-15	15-19	14-20
	8	1.0-1.5	3.0-4.0	6.0-8.5	11-13	13-16	12-18
	10	0.8-1.1	1.8-2.8	4.5-6.5	8.0-10	8-13	7-12
	12	0.7-0.9	1.2-1.8	3.5-5.0	5.5-6.7	7.2-9.5	5-8.0
	14	0.5-0.7	1-1.3	1.5-2.8	3.0-4.0	3.2-4.5	3.5-4.7
	16		0.8-1.2	1.3-2.0	2.2-2.6	2.5-4	2.2-3.5
	18		0.5-0.7	1-1.6	1.6-2.0	1.8-2.8	1.8-2.8
	20		0.3-0.4	0.8-1.2	1.0-1.6	1.2-1.6	1.5-2.5
	25			0.5-0.75	0.6-1.1	0.7-1.2	0.9-1.3
	30			0.4-0.5	0.5-0.7	0.4-0.8	0.6-0.8
	40			0.25-0.3	0.3-0.35	0.3-0.5	0.3-0.45
	50					0.2-0.4	0.2-0.4
	60						0.15-0.4

Note: The filled color code in the data sheet indicates the limit cutting speed, and batch use is not recommended.



DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

YOU CHOOSE THE POWER OF THE LASER

CUTTING PARAMETERS WITH BRASS

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Brass (Nitrogen cutting)	1	30-40	30-42	40-50	45-50	30-45	30-45
	2	17-23	22-25	20-30	30-35	25-35	26-35
	3	13-16	13-18	15-20	25-30	20-30	20-30
	4	7.0-8.5	9.0-13	12-15	20-25	17-25	18-25
	5	5.0-6.7	6.0-9.0	9-11	14-17	14-23	17-24
	6	2.8-4.0	4.5-5.5	8.5-9.5	9.5-11	10-15	12-18
	8	1.8-3.0	3.5-4.4	5.5-6.5	7.5-8.5	7.5-11	8-13
	10	1.0-1.6	1.5-2.0	4.0-5.0	4.5-6	6.5-8.5	7-10.0
	12	0.6-1	0.8-1.2	2.5-3.5	3-3.5	4.0-6.0	5-8.0
	14		0.5-0.8	1.8-2.7	2.2-3.0	2.5-4	3-5.0
	16		0.3-0.5	0.8-1.0	1.3-1.8	1.5-2.4	2-4.0
	18						1-2.0
	20						0.6-1.5
	25						
	30						

Note: The filled color code in the data sheet indicates the limit cutting speed, and batch use is not recommended.

CUTTING PARAMETERS WITH RED COPPER

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Red copper (Oxygen cutting)	1	25-35	25-35	30-40	35-40	28-30	25-30
	2	15-20	18-22	20-25	25-28	18-28	22-28
	3	8.0-12	12-15	15-18	20-25	16-25	20-25
	4	4.5-6.5	6.0-7.5	10-14	16-18	15-18	16-20
	5	2.2-3.5	4.0-4.5	7-9	13-15	12-15	12-15.0
	6	1.5-2.5	3.5-4.5	4-6	9.5-12	9.0-13	10-13.0
	8	0.6-1.2	1.2-1.8	3-4.0	5-5.5	7-9.0	6-9.0
	10		0.7-1.2	2.5-3.0	2.7-3.5	3-6.5	4-6.5
	12			1.0-2.0	2.0-2.5	2.0-4.0	2.6-4
	14				0.6-1.1	1.1-2.0	1.2-2.5
	16						0.8-2
	18						

Note: The filled color code in the data sheet indicates the limit cutting speed, and batch use is not recommended.



DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

YOU CHOOSE THE POWER OF THE LASER

CUTTING PARAMETERS WITH CARBON STEEL(OXYGEN)

Material / Auxiliary Gas	Thickness (mm)	6000W	8000W	12000W	15000W	20000W	30000W
		Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)	Cutting Speed (m/min)
Carbon steel (Positive focus oxygen cutting)	1	7.0-10	7.0-10	9-10.5	7-10	7-10.5	7-10.5
	2	4.0-7.5	5.0-7.5	5.5-6.5	5-7.5	4-7.5	4-7.5
	3	3.3-4.5	3.5-4.5	3.8-4.5	3.8-4.5	4-7.5	3.7-4.6
	4	3.0-3.5	3.0-3.5	3.3-3.8	3.4-3.9	3.1-3.6	3.2-3.9
	5	2.8-3.4	2.8-3.4	3.0-3.4	3.1-3.5	3-3.5	3-3.5
	6	2.4-3.0	2.8-3.2	2.8-3.2	2.9-3.2	2.4-3.3	2.4-3.4
	8	2.2-2.7	2.3-2.7	2.4-2.8	2.5-2.8	2.2-3.1	2.2-3.2
	10	2.0-2.3	2.0-2.4	2.1-2.3	2.2-2.6	2-2.6	2-2.6
	12	1.7-2.0	1.7-2.0	1.8-2.0	1.8-2.1	1.8-2.1	1.8-2.2
	14	1.3-1.7	1.3-1.7	1.7-1.9	1.7-2.0	1.6-2	1.6-2
	16	1.1-1.4	1.2-1.5	1.5-1.8	1.6-1.8	1.4-1.8	1.5-1.8
	20	0.45-0.65	0.9-1.2	1.2-1.5	1.2-1.5	1.2-1.5	1.2-1.5
	25	0.3-0.4	0.5-0.8	0.8-1.2	1.0-1.2	1-1.3	1.0-1.4
	30	0.1-0.2	0.2-0.4	0.4-0.9	0.6-1.0	0.8-1.1	0.8-1.2
	35		0.1-0.3	0.3-0.8	0.4-1.0	0.5-1.0	0.7-1.1
	40			0.2-0.5	0.3-0.5	0.4-0.8	0.6-1
	50			0.1-0.3	0.1-0.4	0.2-0.55	0.4-0.8
	60					0.1-0.18	0.2-0.5
	70						0.15-0.2

WHY CHOOSE ACCURL LASER CUTTING MACHINE ?

ACCURL machines use a stress-relieved, plate-welded bed with annealing to ensure stability. Secondary vibration aging and finite element analysis enhance rigidity. The process includes laser cutting, welding, tempering, precision machining, and rigorous inspection for exceptional quality.



WELDING



HIGH-TEMPERATURE ANNEALING



ROUGH MACHINING

ADVANTAGE:

Stress-Relieved Welded Structure:

- The machine bed adopts a plate-welded design, undergoing annealing to eliminate internal stresses, followed by rough machining. This process effectively mitigates stresses from welding and machining, significantly enhancing the machine's stability.

Secondary Vibration Aging Treatment:

- Mechanical components are subjected to secondary vibration aging and professional finite element analysis, ensuring a rational and safe design with superior rigidity.



PRECISION MACHINING



NATURAL AGING



VIBRATION AGING

Comprehensive Manufacturing Process:

- The full process includes structural design, professional analysis, laser cutting, welding, rough machining, tempering, sandblasting, precision machining, painting, and rigorous accuracy inspection, ensuring exceptional quality and reliability.

ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

INTEGRATED PLATE-WELDED HOLLOW BED STRUCTURE

WHY USE AN INTEGRATED PLATE-WELDED HOLLOW BED STRUCTURE?

Ultra-high-speed machines deliver faster cutting speeds, but challenges arise when the bed lacks sufficient strength to handle vibrations during high-speed operation or when prolonged high-power cutting causes thermal deformation. How can these issues be addressed?

ADVANTAGE:

Plate-Welded Structure:

- Compared to tube-welded structures, the plate-welded design offers superior strength and stability, ensuring reliable performance under ultra-high-speed conditions without vibration issues.

Hollow Structure:

- As an industry-first innovation, the hollow bed structure prevents heat transfer during cutting, maintaining consistent precision throughout extended operations.

Deformation Resistance:

- The hollow bed incorporates a soft-connection internal baffle system, effectively mitigating the impact of laser-induced heat conduction to prevent thermal deformation.



Traditional Structure After **One Year** of Use



Hollow Structure After **Five Years** of Use



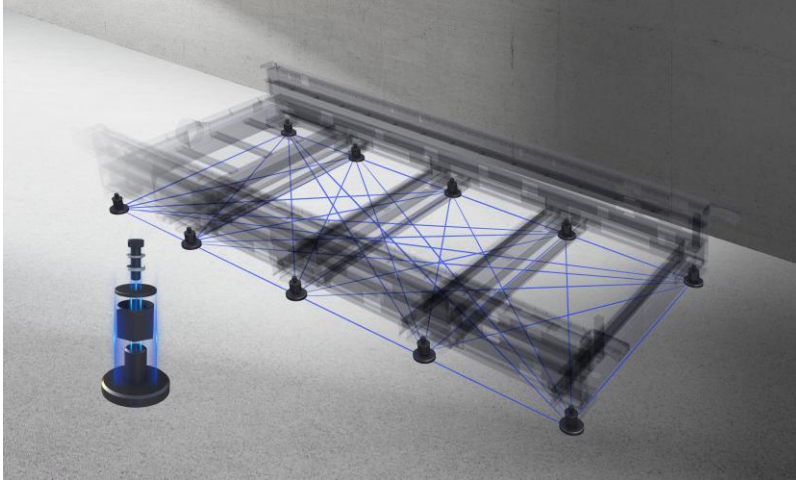
Hollow Bed Structure with No Internal Connections

ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL CUTTING MACHINE BASE FEET

WHY CHOOSE ADAPTIVE BASE FEET?

In long-distance, high-speed operations, how do you address changes in bed levelness that affect cutting accuracy?



ADVANTAGE:

Adaptive Design:

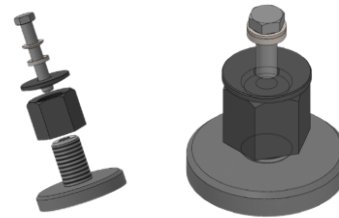
- Features a self-developed adaptive structure that seamlessly adjusts to variations in the customer's foundation, ensuring consistent contact between the base feet and the foundation plate.

High Stability:

- Utilizes a 4+4 structural configuration, where the base feet and foundation plate (connecting the machine bed to the ground) maintain surface-to-surface contact. This minimizes vibrations during high-speed operations, ensuring stability and durability at connection points.

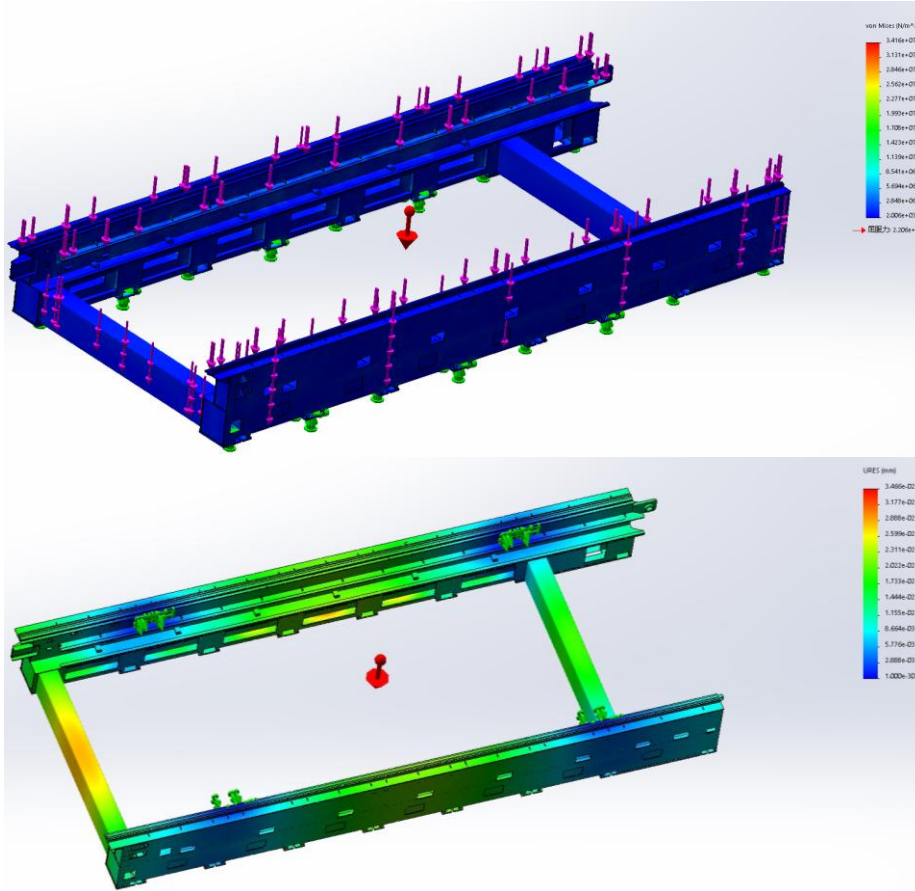
Enhanced Cutting Accuracy:

- The adaptive and stable design significantly improves cutting precision, even under demanding high-speed conditions.



WHY CONDUCT DYNAMIC AND STATIC SIMULATIONS?

Ultra-high-speed machines deliver faster performance, but challenges such as insufficient rigidity, reduced precision, and vibrations during operation can arise. How can these issues be addressed?



ADVANTAGE:

Dynamic Simulation:

- Validates long-term operational stability by simulating design parameters, including vibration and rigidity, to ensure consistent performance under high-speed conditions.

Static Simulation:

- Verifies structural integrity during lifting and load-bearing scenarios, ensuring the machine meets design requirements for safety and stability.

0.012mm

Maximum displacement:

FRAME ANALYSIS RESULTS

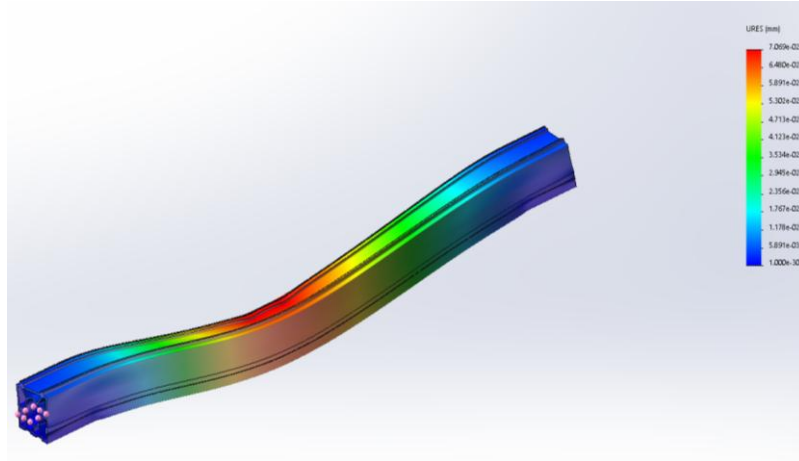


DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

LIGHTWEIGHT ALUMINUM CROSSBEAM FOR ML-X

WHY CHOOSE A LIGHTWEIGHT ALUMINUM CROSSBEAM?

Ultra-high-speed laser cutting machines demand rapid operation, but inadequate crossbeam strength can cause vibrations, compromising precision. The lightweight aluminum crossbeam addresses this challenge effectively.



Advantages:

The lightweight aluminum crossbeam combines exceptional rigidity, reduced weight, and superior dynamic performance, enabling precise, high-speed cutting with minimal vibration. Its robust, defect-free construction ensures long-term reliability and meets the rigorous demands of ultra-high-speed operations.

0.03_{mm}

Max displacement under 3.0 G acceleration (150 kg load):

BEAM STRESS ANALYSIS RESULTS:

ADVANTAGE:

Advanced Design:

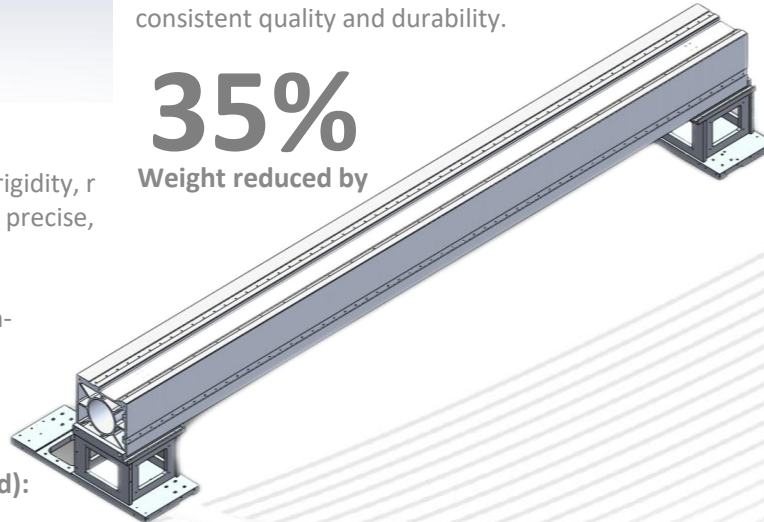
- Engineered using T6061 aerospace-grade aluminum through an extrusion molding process, the crossbeam is optimized via SolidWorks finite element stress analysis. This ensures a lightweight yet rigid structure, achieving accelerations up to **3.0G** while maintaining stability.

Extruded High-Density Construction:

- The integrated extrusion and film-drawing process produces a seamless, high-density aluminum crossbeam, free from bubbles, cracks, or edge defects, ensuring consistent quality and durability.

35%

Weight reduced by



ACCURL[®] DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

DYNAMIC LINKAGE DUST REMOVAL TECHNOLOGY

WHY INTELLIGENT FOLLOW-ALONG DUST EXTRACTION?

The SG-X Series Laser enhances large-format, large-span cutting efficiency by 30%, but increases smoke and dust by a similar margin, risking cutting head contamination and environmental impact. Advanced dust collection with HEPA filtration, integrated cooling systems, and real-time airflow monitoring efficiently capture particulates and dissipate heat.

KEY FEATURES AND BENEFITS:

Intelligent Dust Extraction:

- A real-time, zoned system tracks the cutting head, directing airflow precisely to prevent contamination, improving dust removal by over 40% compared to standard systems.

Benefits:

- Segmented, zoned, and timed extraction ensures optimal airflow, resolving smoke and dust issues effectively.

Heat Extraction:

- Simultaneously removes cutting heat with smoke, enhancing stability and protecting components.

Key Features:

- Segmented, zoned follow-along extraction.
- Low-smoke, eco-friendly cutting process.
- High-flow dust extraction channels.



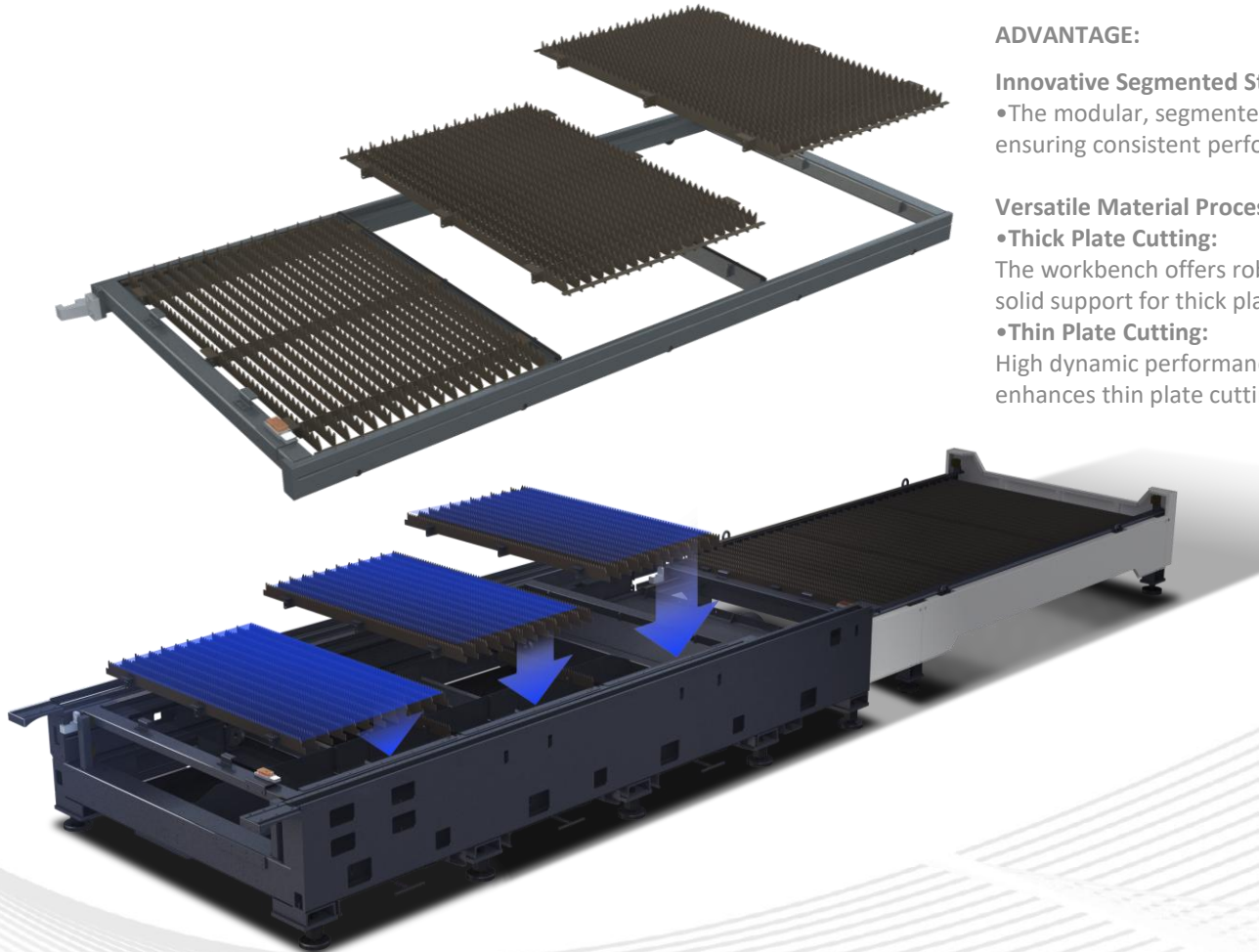


DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

INNOVATIVE MODULAR DESIGN

WHY CHOOSE A MODULAR DESIGN?

This series of machines incorporates an innovative modular design, enabling flexible grid replacement to enhance operational efficiency. Its segmented structure ensures superior stability, rigidity, and reduced resonance while boosting operating speed and acceleration.



ADVANTAGE:

Innovative Segmented Structure:

- The modular, segmented design maximizes stability and minimizes deformation, ensuring consistent performance.

Versatile Material Processing:

•Thick Plate Cutting:

The workbench offers robust load capacity (surface load up to 549 kg/m²), providing solid support for thick plate processing while maintaining superior cutting quality.

•Thin Plate Cutting:

High dynamic performance, paired with a fast-response lifting workbench, significantly enhances thin plate cutting efficiency, reducing production cycles.

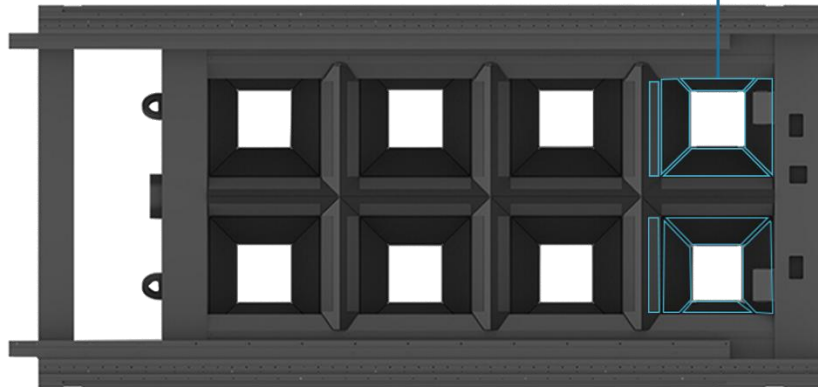
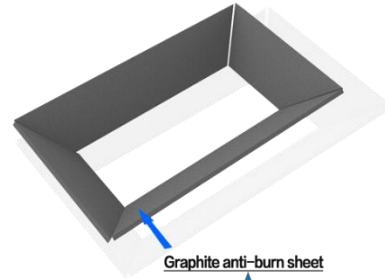


DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

GRAPHITE PLATES FOR THERMAL PROTECTION IN ML-X LASER

WHY DO GRAPHITE PLATES PROTECT SL-X SERIES LASER MACHINES?

Graphite plates protect the ultra-high-speed laser cutting machine's internals from high-power laser heat. Their superior thermal conductivity and non-absorptive nature prevent thermal deformation and damage, ensuring stable, long-term component performance.



KEY FEATURES AND BENEFITS:

HEAT MANAGEMENT:

- Efficiently dissipates heat, minimizing thermal impact and preventing deformation.

LOW MAINTENANCE:

- Cost-effective, fire-resistant materials simplify upkeep.

EASY SLAG REMOVAL:

- Partitioned bed with heat-resistant materials aids cleanup.

KEY ADVANTAGES:

Component Longevity:

- Protects parts from thermal stress for reliable operation.

Efficient Maintenance:

- Partitioned design and fire-resistant materials reduce maintenance costs.

Full Protection:

- Graphite/manganese anti-burning materials shield laser-exposed areas.

ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL SKELETON-FREE WORKTABLE STRUCTURE

WHY USE THE ACCURL SKELETON-FREE WORKTABLE STRUCTURE?

The Accurl skeleton-free worktable structure is an innovative design that enhances performance in ultra-high-speed laser cutting machines by eliminating traditional framework supports, offering improved stability and functionality.

ADVANTAGE:

High Stability and Precision:

- The stable worktable design allows simultaneous cutting on the front table and material loading on the rear table, ensuring consistent precision during cutting operations.

Enhanced Load-Bearing Capacity:

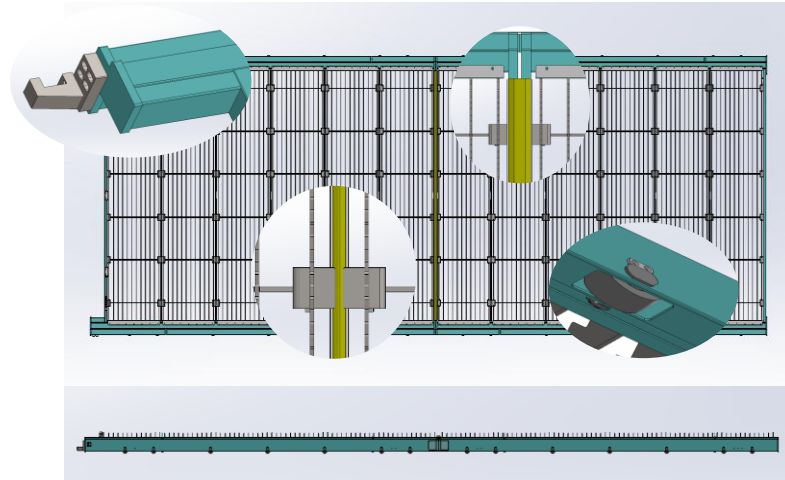
- The reinforced structure supports thick plates and withstands high thermal loads from intense cutting processes.

Graphite Protection:

- Graphite strips shield the worktable's support areas, providing robust protection to the table framework against laser heat.

Key Advantages:

- Innovative Design:
The skeleton-free structure ensures superior stability and precision.
- Robust Load Support:
Handles heavy plates and high thermal stress effectively.
- Durable Protection:
Graphite strips enhance the worktable's resilience to heat damage.



ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL DYNAMIC TYPE EXCHANGE TABLE STRUCTURE

WHY USE THE PULL-TYPE WORKTABLE STRUCTURE?

The pull-type worktable ensures rapid 15-second exchanges, high stability, and low failure rates, enhancing efficiency and reliability in ultra-high-speed cutting.

ADVANTAGE:

Increased Efficiency:

- Servo-driven system completes table exchanges in approximately 20 seconds, significantly boosting production efficiency.

Uninterrupted Operation:

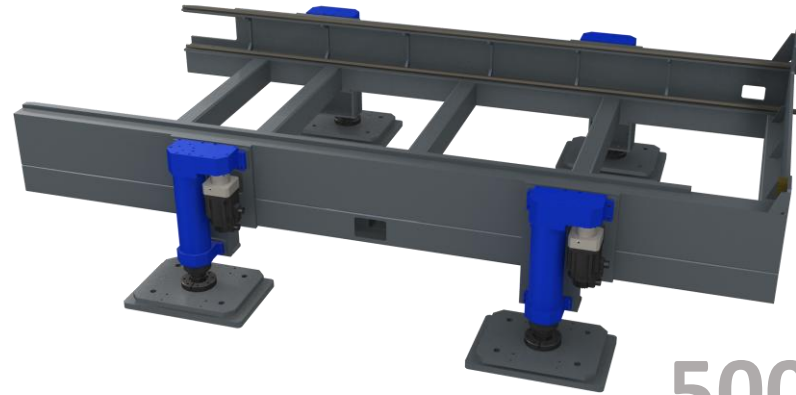
- Wide spacing between tables prevents material deformation caused by cutting from affecting exchanges, ensuring a seamless workflow.

Enhanced Reliability:

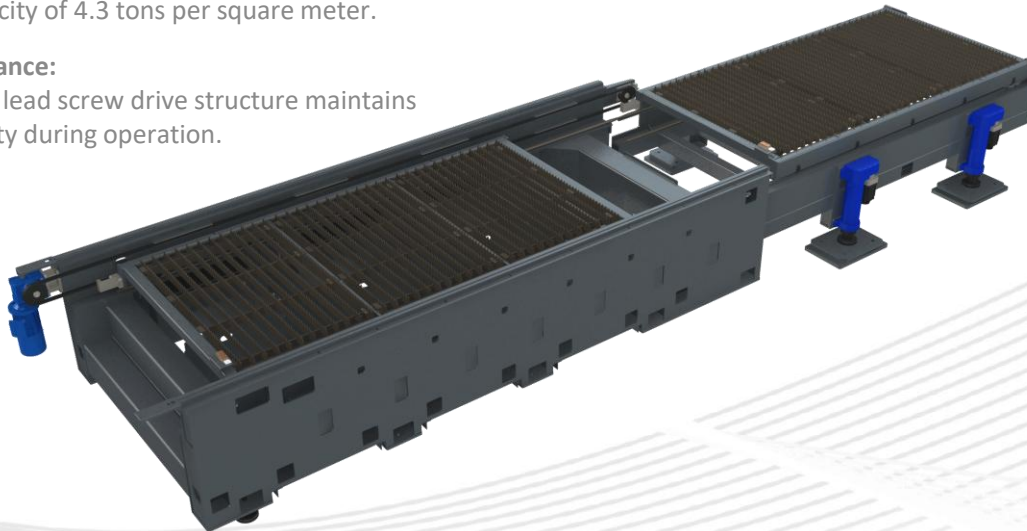
- Servo-driven lifting mechanism offers high efficiency with a maximum load capacity of 4.3 tons per square meter.

Consistent Performance:

- Robust heavy-duty lead screw drive structure maintains precision and stability during operation.



500KG/m³
HIGH LOAD CAPACITY



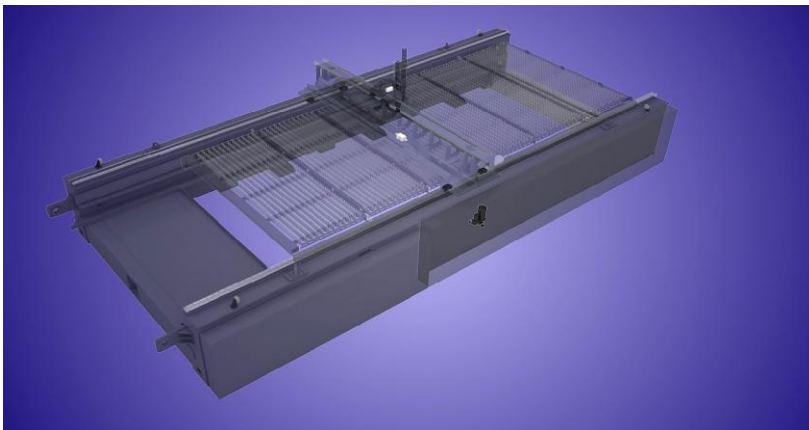
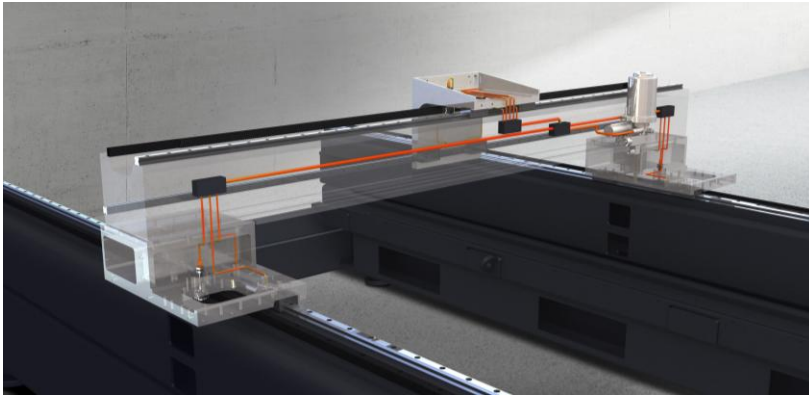


DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

-FULLY AUTOMATED MACHINE LUBRICATION

WHY CHOOSE AN INTELLIGENT LUBRICATION SYSTEM?

In complex working environments with long-distance, high-speed motion, how do you address issues like friction in guide rails and sliders, or heat-induced precision changes in high-speed gear and rack systems that lead to poor cutting accuracy?



ADVANTAGE:

“Intelligent” Lubrication:

- Unaffected by slider distance, the system delivers “timed and quantified” lubrication, precisely compensating for consumption to ensure all lubrication points receive adequate and appropriate lubricant at all times.

Centralized Control:

- Allows for software-based configuration of lubrication timing and intervals, streamlining operation and ensuring consistency.

“Maintenance-Free” Automation:

- Features automatic lubrication with low-level alerts and no-oil shutdown protection. Unlike competitors’ manual lubrication systems, which rely on periodic reminders that workers may forget, this system prevents untimely lubrication, avoiding cutting inaccuracies and operational issues during ultra-high-speed performance.

POWER RUN LINK SENSOR

TwinCut S80

Simpler Operation System

The system has the features of high reliability, intelligence and networking, excellent performance, simple operation and convenient use.

Intelligent Cutting Control

The corresponding process database can be set according to different materials and thicknesses, and it has real-time display function of cutting state and current position, comprehensive diagnosis function and quick fault finding.

Powerful Function Module

Plate surface height tracking control (follow-up function), retreat function, breakpoint return function, edge finding function, seam cutting compensation function, frog leaping function, common edge cutting, automatic type setting function of introducing various parts, automatic optimization of cutting path, and support for marking and small hole marking.

ACCURL[®] DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

-READY FOR INDUSTRY 4.0

ACCURL PUTS INDUSTRY 4.0 WITHIN THE REACH OF COMPANIES[™]

ACCURL machines and software form a productive ecosystem with a constant exchange of digital information. The key to all this is the availability of information with which you can constantly monitor your work and streamline the work flow from design to production.



ADVANTAGE:

PIONEERING DIGITAL ECOSYSTEMS IN INDUSTRY 4.0

- Real-time digital information access.
- Automatic traceability codes.
- Active Job technology for process adaptation.
- IIoT for enhanced efficiency.



ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES -ACCURL BLT SERIES Intelligent cutting head

WHY CHOOSE THE ACCURL BLT CUTTING HEAD?

The ACCURL offers high-performance laser cutting heads for diverse metal processing, from precision to ultra-high-power tasks. With advanced technologies like intelligent common-edge detection, real-time focus adjustment, and coaxial vision monitoring, they ensure efficient cutting and consistent seam quality. Accurl's solutions deliver reliable, efficient production.

ADVANTAGE:

Function \ Model	BLT6X2H Series	BLT8X0H Series	BLT6X2M Series	BLT9X0MA Series	BLTA140M Series
	≤60kW	≤20kW	≤40kW	≤40kW	≤80kW
Collision Protection	✓	✓	✓	✓	✓
Protective Window Monitoring	✓	✓	✓	✓	✓
Bottom Stray Light Monitoring	✓	✓	✓	✓	✓
Closed-Loop Monitoring	✓	✓	✓	✓	✓
Fast Focusing	✓	✓	✓	✓	✓
Built-In Amplifier	✓	✓	✓	✓	✓
Nozzle Cooling	✓	✓	✓	✓	✓
Amplifier Water Cooling	✓	✓	✓	✓	✓
Cutting Gas Pressure Monitoring	✓	✓	✓	✓	✓
Smart Laser Off	✓	✓	✓	✓	✓
Plane/Bevel Cutting					
Focusing Lens Temperature Monitoring	✓	✓	✓	✓	✓
Stray Light Monitoring	✓	✓	✓	✓	✓
Smart Piercing	✓	✓	✓	✓	✓
O2/N2 Process Monitoring	✓	✓	✓	✓	✓
Protective Window Anti-Explosion	✓	✓	✓	✓	✓
Co-edge Piercing Monitoring	✓	✓	✓	✓	✓
Variable Beam Shape		✓		✓	
Cutting Path Monitoring			✓	✓	✓
Coaxial Monitoring			✓	✓	✓
Nozzle Quality Monitoring			✓	✓	✓
Nozzle Misalignment Monitoring			✓	✓	✓
Auto Centering			✓	✓	



ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL BLT SERIES INTELLIGENT CUTTING HEAD

WHY CHOOSE THE ACCURL BLT CUTTING HEAD?

The ACCURL BLT 6 SERIES Cutting Head designed for ultra-high-power laser cutting up to 60 kW, it offers advanced optics, smart monitoring, precise piercing, and anti-collision features for superior precision and efficiency in industries like steel structure and shipbuilding.

ADVANTAGE:

Advanced Optical Design:

- Optimized lenses and new beam path ensure stable, high-precision cutting with dual dust-proof protection and easy installation.

Intelligent Monitoring & Automation:

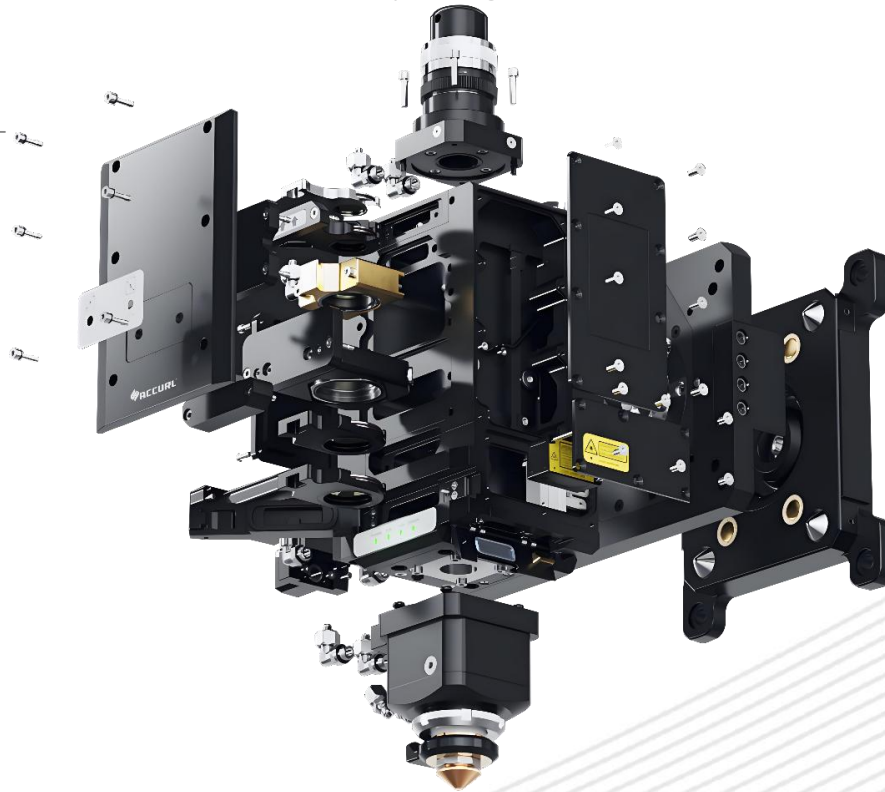
- Real-time sensors for smart piercing, auto-recut, gas pressure, lens temperature, and astigmatism enhance efficiency and yield.

Smart Piercing Technology:

- Advanced sensors monitor and optimize the piercing process, enabling immediate cutting post-piercing with precise control, reducing material waste and improving speed for thick materials up to 50 mm.

Anti-Collision & Easy Maintenance:

- Protective screws, explosion-prevention detection, and drawer-type lens design minimize damage and downtime, ensuring cost-effective operation.

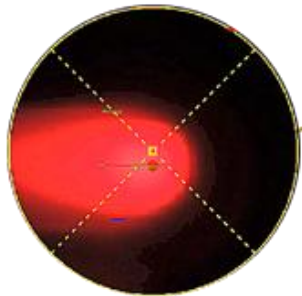


ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

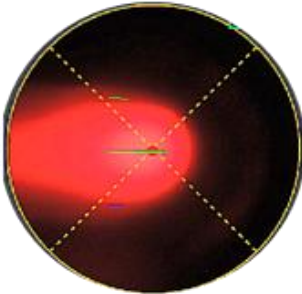
ACCURL BLT SERIES INTELLIGENT CUTTING HEAD

WHY CHOOSE THE ACCURL BLT 6X2MA CUTTING HEAD?

The ACCURL BLT6X2MA intelligent cutting head featuring advanced molten pool vision technology: real-time coaxial beam monitoring with automatic centering correction, plus continuous kerf-width tracking that dynamically adjusts focal position to compensate for thermal drift, delivering consistently perfect cutting quality throughout long-duration, high-power operations.



Beam Deflection: 0.12 mm



Beam Deflection: 0.02 mm



ADVANTAGE:

SMART PIERCING TECHNOLOGY:

- Advanced sensors monitor and optimize the piercing process, enabling immediate cutting post-piercing with precise control, reducing material waste and improving speed for thick materials up to 50 mm.

AUTO CENTERING:

- By collecting molten pool image, the sensor detects beam-to-nozzle misalignment and automatically adjusts it during cutting, ensuring consistent cutting results.

INTELLIGENT MONITORING & AUTOMATION:

- Real-time sensors for smart piercing, auto-recut, gas pressure, lens temperature, and astigmatism enhance efficiency and yield.

CLOSED-LOOP MULTI-SENSOR MONITORING

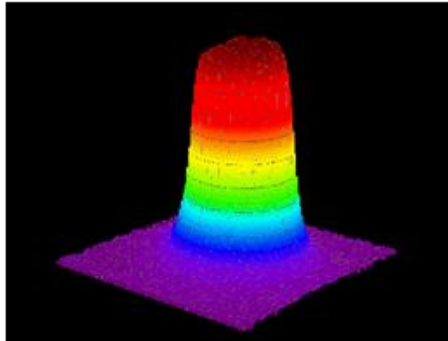
- Gas pressure, lens/cavity temperature, stray light, and protective window status.

ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

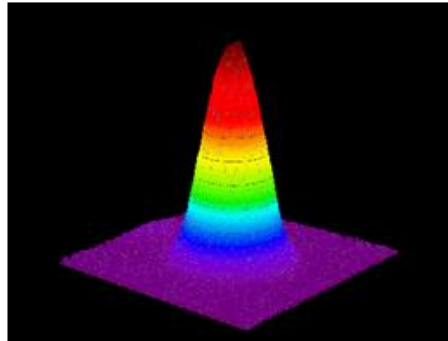
ACCURL BLT SERIES INTELLIGENT CUTTING HEAD

WHY CHOOSE THE ACCURL BLT 8X2MA & 9X0MA CUTTING HEAD?

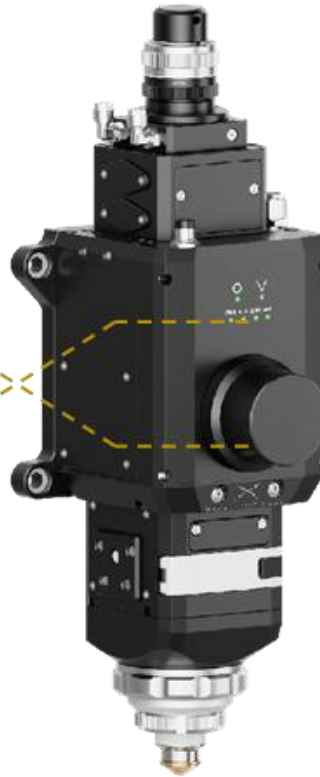
The BLT9x0MA introduces motorized Variable Spot Technology, enabling instant switching between multiple beam diameters (e.g., 2.0× to 4.0×) within a single head — delivering optimal performance across ultra-thin to thick-plate applications without hardware changes.



Ring Beam



Gaussian Beam



ADVANTAGE:

VARIABLE BEAM SHAPE:

- The switching between small and large beam spots is used for ultrahigh-power cutting of thin/thick plates, support both air and oxygen cutting.

AUTO CENTERING SMARTER CUTTING:

- By collecting molten pool image, the sensor detects beam-to-nozzle misalignment and automatically adjusts it during cutting, ensuring consistent cutting results.

VARIABLE SPOT TECHNOLOGY:

- Motorized zoom optics instantly switch beam diameter and focus position without changing the cutting head or nozzle.

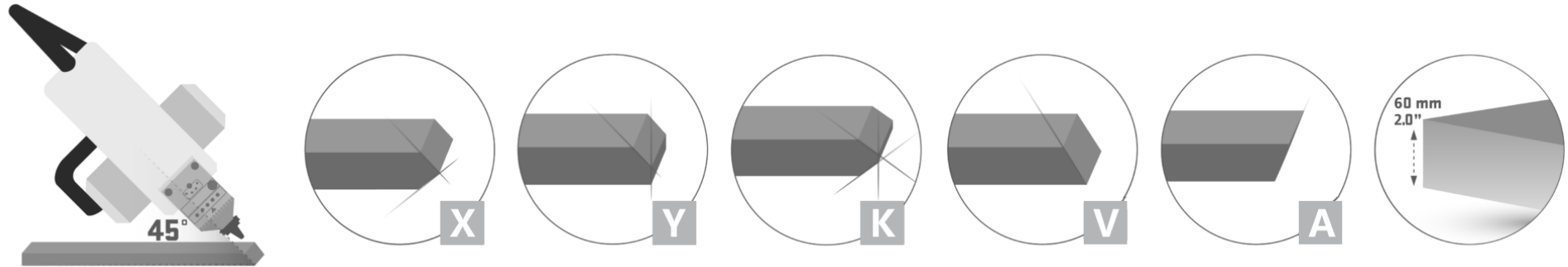
CLOSED-LOOP MULTI-SENSOR MONITORING

- Gas pressure, lens/cavity temperature, stray light, and protective window status.

ACCURL® ADVANCED BEVEL CUTTING FROM 0 - 45 DEGREES

OPTIONAL WITH ADVANCED BEVEL CUTTING HEAD

ACCURL SMART GIANT produces weld-ready parts, optimizing further processing. It crafts precise A-, V-, X-, K-, and Y-bevels up to 45° for welding. Its sturdy aluminum frame and direct drive motors ensure fast, stable, accurate cuts, including intricate countersunk holes.



Weld-ready products straight off the machine, creating bevels up to 45 degrees.

ADVANTAGES OF BEVEL CUTTING HEAD:

High Cutting Precision:

- Ensures accurate cuts, facilitating seamless welding and assembly.

Minimal Thermal Deformation:

- Reduces heat-affected zones, lowering the need for costly straightening processes.

Narrow Kerf Width:

- Produces fine cut seams, optimizing material usage and reducing waste.

Professional Nesting:

- Supports engraving, marking, straight cutting, and various bevel forms, enabling one-step forming for diverse cutting requirements.

ACCURL® DYNAMIC-VERSATILE LASER CUTTING ML-X SERIES

ACCURL AUTOMATIC NOZZLE CHANGING SYSTEM

WHY NEED NOZZLE CHANGING SYSTEM NEEDED?

The automatic nozzle changing device significantly reduces downtime by swiftly replacing nozzles as needed. This ensures a continuous work flow and maximizes productivity.



SAFETY:

With built-in safety protocols, the device ensures that nozzle changes are conducted safely, protecting both the machine and the operator.

ADVANTAGE:

PRECISION:

- The device is designed to handle nozzles with utmost accuracy, preventing any misalignment that could affect cutting precision.

VERSATILITY:

- Capable of supporting a wide range of nozzle sizes and types, the device is adaptable to different cutting requirements and materials.

AUTOMATION:

- By utilizing advanced sensors and robotics, the device automates the nozzle change process, minimizing the need for manual intervention and reducing the risk of human error.

WHY HOERBIGER LASGAR NEEDED ?

The HOERBIGER LasGAR Compact is a robust, compact valve engineered for precise switching and control of cutting gases—air, nitrogen, and oxygen—in laser cutting machines. Featuring an integrated filter block, it protects the control unit from particles, ensuring reliable performance.

Why Choose a HOERBIGER LasGAR Compact valve ?

ADVANTAGE:

- Precise three-in-one gas control (air, nitrogen, oxygen)
- Integrated particle filter block
- Analog (0-10V) or digital (EtherCAT) interface
- Compact, robust German engineering
- Reliable for demanding laser cutting

Precision and Reliability:

- Highly Sensitive Gas Switching: Enables precise, rapid control of air, nitrogen, and oxygen for optimal cutting quality.

Particle Protection:

Built-in filter block safeguards the control unit, extending service life.

HOERBIGER

because performance counts



ACCURL[®] HIGH PERFORMANCE LASER SL-X LASER SYSTEM

ACCURL LASGAM GAS MIXING SYSTEM(OPTIONAL)

WHY ACCURL LASGAM GAS MIXING SYSTEM ?

The ACCURL LasGAM system enhances laser cutting efficiency, precision, and cost-effectiveness. It uses a controlled gas mix to clear molten metal, enabling fast, clean cuts on sheet metal up to 120 mm thick with 50 kW power. Minimizing burrs reduces rework, saving time and costs. It boosts productivity by 50% and cuts gas use by 55%, ideal for sustainable cutting.

Flip design
applicable in every
installation

Touch screen in IP65 design
and local language

Service connection

EtherCAT in/out

Power supply

Nitrogen input

Pilot pressure

Oxygen input

 **Bluetooth[®]**



With bluetooth
connection to
function monitoring

HOERBIGER

because performance counts

ADVANTAGE:

Rapid Mixing Adjustment:

- Achieves a 0-20% O₂ gas ratio in under 1 second.

Increased Productivity:

- Boosts output by up to 50% compared to standard laser cutting.

Lower Gas Usage:

- Reduces consumption by up to 55%, cutting costs and environmental impact..

+50%

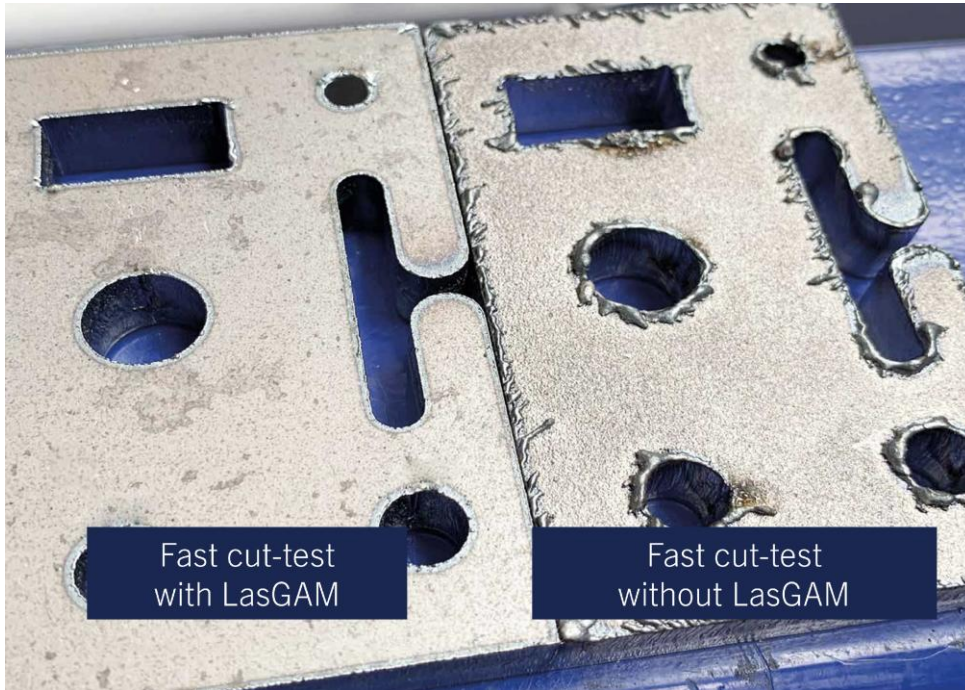
Productivity compared to
cutting without gas mixing
system

ACCURL® HIGH PERFORMANCE LASER SL-X LASER SYSTEM ACCURL LASGAM GAS MIXING SYSTEM(OPTIONAL)

YOUR GAMECHANGER FOR LASER MACHINES

Faster, more precise with low energy consumption – Be part of the evolution and secure the leading edge!

Boost your
innovativeness
and order the
product of
tomorrow now!



Fast cut-test
with LasGAM

Fast cut-test
without LasGAM

ADVANTAGE:

Fast Mixing:

- You can achieve a mixing ratio between 0 - 20% O₂ in less than 1 sec.

Higher Productivity:

- You increase your productivity by up to 50%

Reduced Gas Use:

- You reduce your cutting gas consumption by up to 55%

Reliable Cuts:

- You get reliable cut quality through uninterrupted status monitoring.

-55%

Cutting gas consumption
compared to cutting without gas
mixing system

HOERBIGER

because performance counts



EFFORTLESS PRECISION HOLE CUTTING

ACCURL FIBER LASER: PRECISION SMALL-HOLE CUTTING

REDUCED LOGISTICS:

ACCURL’s laser technology delivers drill-quality small-hole cutting, meeting EN1090-2 standards up to Execution Class 4. It cuts holes as small as 0.15 times the plate thickness, often eliminating drilling. Automated nozzle changers and vision technology ensure precise, consistent results with minimal operator input, even in thick plates.;

KEY FEATURES AND BENEFITS:

HIGH PRECISION

- Cuts holes down to 0.15 times plate thickness with drill-like accuracy.

STANDARDS COMPLIANCE

- Meets EN1090-2 up to Execution Class 4 for reliable quality.

AUTOMATED PRECISION

- Nozzle changers and vision tech enable repeatable cuts with less oversight.

THICK-PLATE CAPABILITY

- Excels in small-hole cutting in thick materials, reducing secondary processes.

Thickness (mm)	Min Hole Diameter (mm)
12	1.5
16	2
20	3
25	3
30	4
40	5
45	5
50	5

☆20mm SS with Hole 4mm



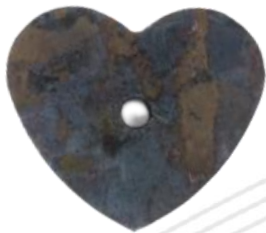
☆35mm CS with Hole 3mm



☆20mm CS with Hole 4mm



☆50mm CS with Hole 5mm



PRECISION LASER CUTTING FOR OPTIMAL EFFICIENCY

Smooth, precise edges with uniform quality across all materials. Adaptive laser power optimizes complex geometries, eliminating burns. Water-assisted cooling enhances efficiency in thicker materials, enabling tighter nesting and maximizing material use, lowering costs per part.



☆30mm MS with O2



☆20mm SS with N2



☆30mm SS with MixGas



☆45mm MS with O2



☆50mm MS with O2



☆80mm SS with N2



☆30mm BRASS with N2



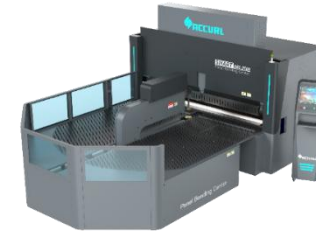
Press Brake SMART MODEL



Press Brake EUROMASTER MODEL



Press Brake EB ULTRA MODEL



Panel Bender SMART BEC MODEL

**Bending
machines**



Laser Cutting SMART CUBE MODEL



Laser Cutting SMARTLINE MODEL



Laser Cutting SMART GIANT MODEL



TUBE Laser Cutting TUBELINE MODEL

**Laser
cutting**



Combi Punch & Laser Genius MODEL



Deburring Machine EM MODEL

**COMBI
DEBURRING**

A light gray map of Europe is positioned on the left side of the image, showing the outlines of the continents and the borders of various countries.

**STRONG PARTNERS
ALL OVER EUROPE**