

THE COMPLETE PRODUCT LINE

Baykal

Think Big, We Do.



FROM PAST TO FUTURE

With a history dating back to the early 1950s, BAYKAL has evolved into a leading global manufacturer and supplier of sheet metal working machinery. The company specialises in the production of "O-Frame" and "C-Frame" press brakes, 2D laser cutting machines, laser automation systems, plasma cutting solutions, shears, and custom-engineered projects. Guided by decades of engineering expertise and continuous innovation, BAYKAL remains committed to advancing metalworking technology and delivering high-performance solutions to industries worldwide.

BAYKAL is certified to ISO 9001 by TÜV NORD (Germany) and, since 1995, has built all machines in compliance with European CE safety standards, becoming the first Turkish machine-tool manufacturer authorised to carry the CE mark. In addition, all BAYKAL products are produced under TSE and TSEK quality certifications issued by the Turkish Standards Institution. These credentials reflect BAYKAL's commitment to quality, safety, and reliability in every machine it builds.

With over 75 years of experience, BAYKAL has become a major exporter to global markets, with customers across more than 100 countries from the Americas to Australasia. Its machines consistently hold leading market shares thanks to the company's pioneering role in Turkey's machine industry and its unwavering focus on quality and service. Today, BAYKAL stands as a quality-driven, engineering-focused manufacturer dedicated to delivering advanced, reliable solutions for the future of sheet metal processing.

BAYKAL - Think Big, We Do.



Shaping Metal, Shaping a Greener Future.

Sustainable Manufacturing with BAYKAL Engineering a Greener Future in Sheet Metal Processing

At BAYKAL, sustainability is integral to our mission. As a global leader in sheet metal processing technology, we help manufacturers reduce their carbon footprint through advanced, energy-efficient machinery and intelligent production solutions. Our hybrid, servo-electric, as well as our high-efficiency laser cutting systems, are designed to lower energy consumption, minimise waste, and support long-term sustainability goals.

We go beyond machine design to deliver smarter production. BAYKAL systems integrate Industry 4.0-ready features, adaptive bending algorithms, and intelligent automation to optimise energy use and enhance workflow efficiency. Our modular solutions can be upgraded and retrofitted, enabling existing machines to meet new environmental standards. We also extend the life of our products by refurbishing and modernising pre-owned machines, saving materials and energy while delivering cost-effective performance.

With over 75 years of engineering excellence, **BAYKAL** continues to pioneer sustainable solutions that combine innovation, efficiency, and responsibility — helping manufacturers worldwide achieve greener, more productive, and future-ready operations.

BAYKAL – Think Big, We Do.

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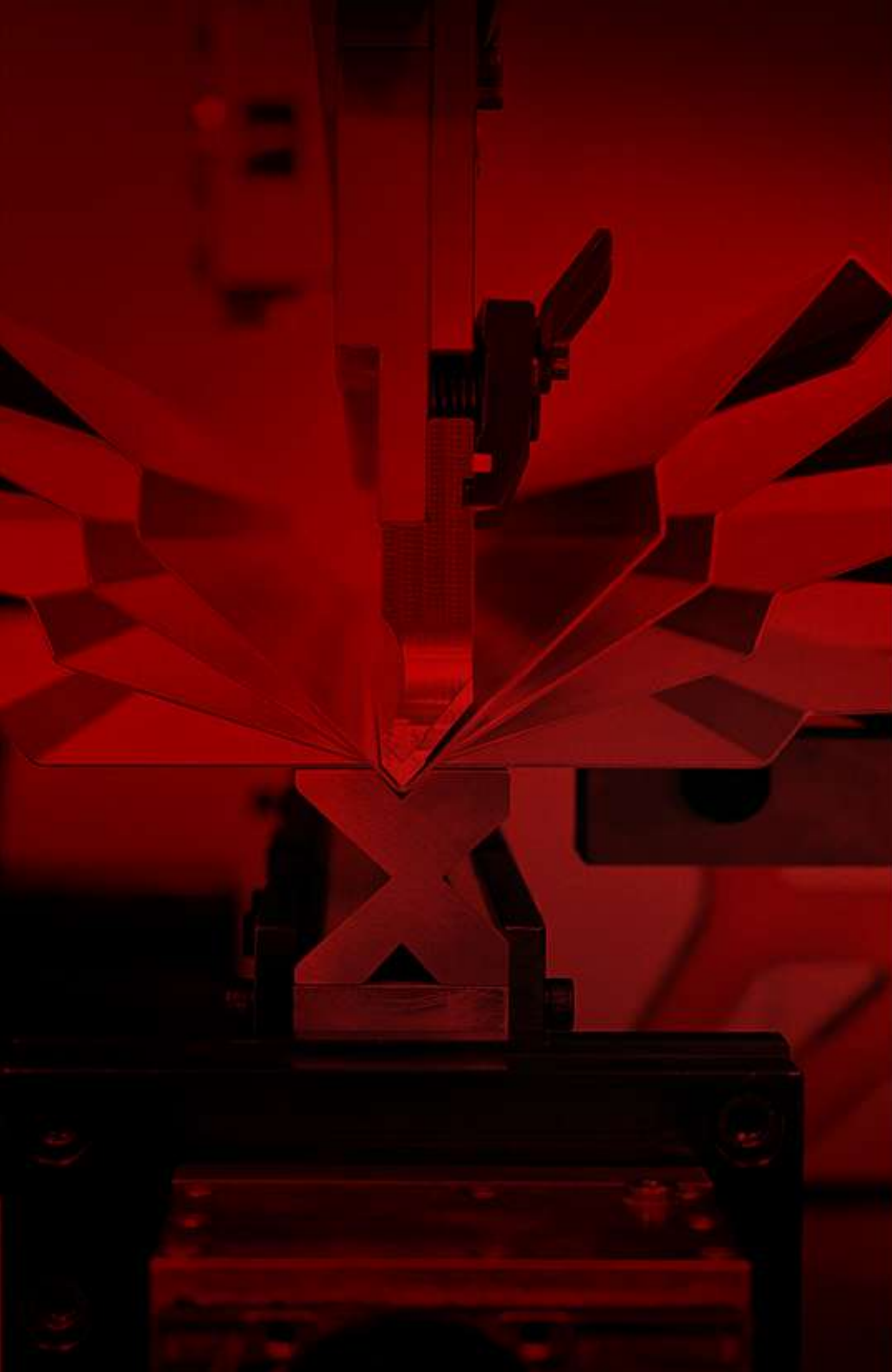
BAYKAL is a global leader in sheet metal processing technology and innovation, delivering advanced solutions that redefine precision, productivity, and performance in modern manufacturing. As a complete solutions provider, we offer a comprehensive portfolio including flat and tube laser cutting systems, high-performance press brakes, intelligent automation technologies, and fully integrated production solutions, all supported by a global service network.

With over seven decades of engineering expertise and continuous investment in R&D, BAYKAL sets new benchmarks in quality, reliability, and efficiency. Our technologies empower manufacturers across industries — from automotive and aerospace to construction, shipbuilding, and energy — to optimise operations, lower costs, and achieve sustainable growth.



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THE WORLD'S MOST COMPREHENSIVE RANGE OF PRESS BRAKES

Precision. Power. Performance. All from BAYKAL.

With over **75 years of engineering excellence**, BAYKAL has become one of the most trusted names in sheet metal forming, delivering cutting-edge press brake solutions that redefine efficiency, precision, and productivity. Our machines combine advanced engineering with intelligent control and automation, enabling manufacturers around the world to achieve consistent, high-quality results — from entry-level operations to the most demanding industrial-scale projects.

BAYKAL press brakes offer the widest product range in the global market. Our portfolio spans from colossal **22,100 mm systems delivering up to 10,000 tons of force**, covering every bending requirement with unmatched versatility. We provide **HYBRID, MILD HYBRID, and HYDRAULIC** technologies; modular **Tandem, Tridem, and Quadrem** multi-machine solutions; and two distinct structural concepts — the ultra-rigid **O-Frame** and the agile **C-Frame** — ensuring optimal performance for every production scenario.

Designed with **ergonomics, energy efficiency, and sustainability** in mind, BAYKAL machines incorporate intelligent drive systems, low-oil hydraulic circuits, and advanced servo-hydraulic technology that significantly reduces energy consumption and environmental impact. Operator-focused interfaces and intuitive CNC controls simplify complex bending tasks, while automation-ready configurations enable fully automated workflows that maximise throughput and process reliability.

Whether you're bending light sheet metal or forming oversized structural components, BAYKAL solutions deliver **precision, repeatability, and superior part quality** across all materials and thicknesses. Innovative tooling, adaptive crowning, Industry 4.0 connectivity, and integrated automation make BAYKAL press brakes the ultimate choice for modern manufacturing — enabling you to **work faster, smarter, and more sustainably**.

From precision engineering to large-scale power, BAYKAL press brakes are more than machines — they're strategic assets built to elevate your production.

BAYKAL - Think Big, We Do.

From Precision to Productivity

The Power of BAYKAL C-Frame Technology

Compact. Smart. Efficient. Designed for Modern Manufacturing.

BAYKAL C-Frame press brakes combine advanced engineering with modern technology to deliver exceptional precision, flexibility, and cost-effectiveness in sheet metal bending. Purpose-built for small to medium-sized components and fast-paced production environments, they strike the ideal balance between performance and value — making them indispensable for workshops, OEMs, and fabricators worldwide.

With decades of press brake expertise behind them, BAYKAL's C-Frame solutions are designed to evolve alongside the demands of modern manufacturing. Featuring compact footprints, intuitive operation, and cutting-edge servo-hydraulic systems, these machines deliver more than bending power — they deliver productivity, consistency, and reliability in every operation.

Easy Access and Enhanced Operator Visibility

The open-front and side-access design of BAYKAL C-Frame press brakes provides exceptional accessibility, allowing operators to position workpieces effortlessly and carry out tool changes quickly. This ergonomic design accelerates setup times, optimises workflow, and boosts operator efficiency — essential advantages in high-mix, low-volume production environments.

Compact Footprint and Cost Efficiency

BAYKAL's C-Frame press brakes are engineered for maximum performance with a minimal footprint. Their lighter, streamlined construction reduces investment and operating costs without compromising quality or reliability, making them the ideal choice for facilities where space and cost efficiency are top priorities.

Precision and Consistency for Standard Applications

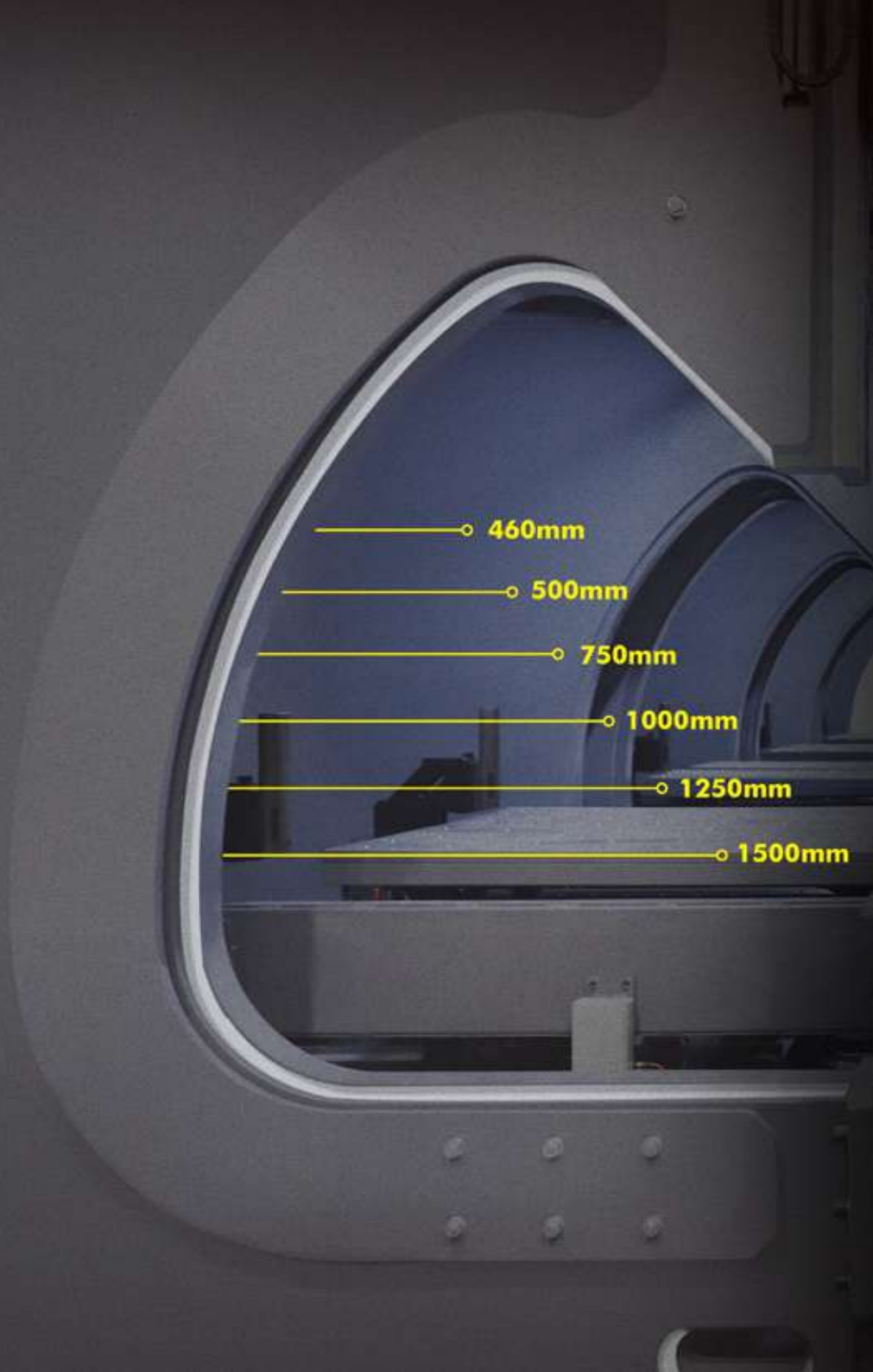
Modern BAYKAL C-Frame press brakes incorporate servo-hydraulic drives, adaptive crowning, and intelligent CNC control systems to deliver precise, repeatable results. They excel in a wide range of bending applications where ultra-high tonnage or extreme structural rigidity is not required — offering consistent accuracy, part after part.

Versatility Across Industries

Thanks to their balance of size, performance, and affordability, BAYKAL C-Frame press brakes are trusted across diverse industries including automotive, HVAC, electrical enclosures, metal furniture, and light structural fabrication. Their capability to process thin- to medium-thickness materials makes them a highly versatile solution for standard production tasks.

BAYKAL C-Frame press brakes deliver more than bending power — they deliver precision, agility, and unmatched value in a compact, future-ready solution. Whether upgrading an existing production line or building a new facility, BAYKAL provides the performance and reliability your operation demands.

BAYKAL – Think Big, We Do.



Why Extra Throat Depth Matters Precision Meets Flexibility

In modern sheet metal fabrication, flexibility and accessibility are as vital as precision and power. That's why BAYKAL press brakes are engineered with **extended throat depth**, enabling fabricators to handle a broader range of part geometries with ease and confidence. This feature provides the clearance, versatility, and control needed to bend large, deep, or complex parts — all while maintaining exceptional accuracy and repeatability.

A **larger throat gap** expands the bending envelope, allowing operators to form bigger or thicker workpieces without frame interference. It enhances tooling flexibility by accommodating larger dies and punches, supports multi-bend operations, and ensures smooth, accurate forming even on oversized components. The added space behind the tooling simplifies handling and positioning, reduces setup times, and eliminates the need to reorient parts — improving both workflow efficiency and operator safety.

BAYKAL's extended-throat press brakes are **finite-element optimised** to maintain frame rigidity under maximum load, ensuring stability, precision, and long-term reliability even in high-tonnage applications. This advanced design also minimises the risk of interference between parts and the frame, allowing for more complex and deeper geometries to be achieved effortlessly.

The benefits are tangible: faster production, reduced post-processing, and superior forming freedom. Whether you're producing deep box sections, architectural panels, or structural components, a BAYKAL press brake with extra throat depth delivers greater flexibility, efficiency, and bending capacity — all within the same powerful, compact footprint. It's an intelligent investment that enhances both performance and profitability on every level.

BAYKAL – Think Big, We Do

BAYKAL proudly presents...

The “C-Frame” Press Brake Series

APHS HYBRID



APHS MILD HYBRID



APHS



With the introduction of this versatile series, **BAYKAL** brings together proven engineering and advanced drive technologies to meet a wider range of sheet metal bending requirements. The C-Frame Series includes three distinct categories—**APHS HYBRID**, **APHS MILD HYBRID**, and **APHS HYDRAULIC**—each developed to provide the right balance of productivity, energy efficiency, operational flexibility, and investment value.

The accessible **C-Frame construction** combines a compact footprint with excellent operator visibility and convenient workpiece handling. From general fabrication and mixed-batch production to demanding industrial applications, BAYKAL C-Frame press brakes deliver reliable bending performance, consistent repeatability, and flexible configuration options across a broad range of materials, part geometries, and production requirements.

APHS HYBRID

High Output. Hybrid Excellence.

01

Hybrid system merges servo precision with proven hydraulic forming power.

02

Up to 63% lower energy consumption enhances operational efficiency.

03

Stable bending force ensures repeatability across varied material thicknesses.



04

Compact yet robust C-Frame design offers excellent accessibility and handling.

05

Adaptive crowning and real-time feedback improve bend quality and accuracy.

06

Designed for demanding production lines requiring high output and reliability.

APHS HYBRID (C FRAME)		APHS H 3110	APHS H 31150	APHS H 31190	APHS H 31240	APHS H 31320	APHS H 41150	APHS H 41190	APHS H 41240	APHS H 41320	APHS H 41440	APHS H 61240	APHS H 61320	APHS H 61440	APHS H 61600
Capacity	kN	1100	1500	1900	2400	3200	1500	1900	2400	3200	4400	2400	3200	4400	6000
Oil Tank Volume	lt	70	110	110	110	110	110	110	110	110	140	110	110	140	140
Motor Output	kW	2x6	2x10	2x10	2x10	2x10	2x10	2x10	2x10	2x10	2x30	2x10	2x10	2x30	2x30
Speeds (mm/s)	Approach	200	200	200	150	130	200	200	150	130	150	150	130	150	140
	Working	10	10	10	8	7	10	10	8	7	10	8	7	10	10
	Return	200	200	200	150	130	200	200	150	130	150	150	130	150	140
Approx. Weight	ton	9	10,3	10,7	11,7	15,7	12,8	13,3	14,5	19	27	25,5	30,5	39,5	56
Bending Length	mm	3100	3100	3100	3100	3100	4100	4100	4100	4100	4100	6100	6100	6100	6100
Inside Frames	mm	2550	2550	2550	2550	2550	3550	3550	3550	3550	3550	5100	5100	5100	5100
Side Frame Width	mm	2150	2150	2150	2170	2250	2150	2170	2250	2390	2255	2550	2170	2375	
Overall Width (Front View)	mm	3950	3970	3970	3990	4010	4970	4970	4990	5010	5010	7100	7100	7140	7140
Bed Height	mm	880	880	880	880	1000	880	880	880	1000	1000	1100	1185	1100	1050
Machine Height	mm	2915	2965	2985	2990	3325	2965	2985	2990	3325	3550	3250	3705	3900	4260
Daylight Opening	mm	540	540	530	530	660	530	530	530	635	570	500	580	630	745
Stroke	mm	260	260	260	260	320	260	260	260	320	320	260	320	320	360
Table Width	mm	60	60	90	90	380	60	90	90	280	380	90	200	280	380
Throat Gap	mm	460	460	460	460	500	460	460	460	500	500	500	500	500	500
Adapter Height	mm	80	80	80	80	80	80	80	80	80	125	80	80	110	125

Design and specifications are subject to change without notice

APHS MILD HYBRID

Balanced Performance. Energy Conscious.

01

Smart hybrid drive delivers energy savings and lower operating costs.

02

Reduced oil volume contributes to cleaner, more sustainable production.

03

Consistent bending results maintained across variable batch sizes.



04

Optimised for workshops seeking performance without excessive energy demand.

05

Compact design enhances flexibility and simplifies machine installation.

06

Balances cost efficiency with dependable forming performance for daily use.

APHS MILD HYBRID TYPES (C FRAME)		APHS MH 120060	APHS MH 21080	APHS MH 26110	APHS MH 31110	APHS MH 31150	APHS MH 31190	APHS MH 31240	APHS MH 31320	APHS MH 31440	APHS MH 41150	APHS MH 41190	APHS MH 41240	APHS MH 41320	APHS MH 41440	APHS MH 51150	APHS MH 51190	APHS MH 51240	APHS MH 51320	APHS MH 51440	APHS MH 61150	APHS MH 61190	APHS MH 61240	APHS MH 61320	APHS MH 61440	APHS MH 61600
Capacity	kN	600	800	1100	1100	1500	1900	2400	3200	4400	1500	1900	2400	3200	4400	1500	1900	2400	3200	4400	1500	1900	2400	3200	4400	6000
Oil Tank Volume	l	70	120	120	120	170	170	200	200	350	170	170	200	200	350	170	170	200	200	350	170	170	200	200	350	400
Motor Output	kW	8.5	8.5	8.5	8.5	20.3	20.3	20.3	20.3	32.7	20.3	20.3	20.3	20.3	32.7	20.3	20.3	20.3	20.3	32.7	20.3	20.3	20.3	20.3	32.7	32.7
Speeds (mm/s)	Approach	150	180	190	190	190	170	120	100	110	190	170	120	100	110	190	170	120	100	110	190	170	120	100	110	100
	Working	10	10	10	10	10	10	8	7	10	10	10	8	7	10	10	10	8	7	10	10	10	8	7	10	8
	Return	150	180	190	190	190	170	120	100	110	190	170	120	100	110	190	170	120	100	110	190	170	120	100	110	90
Approx. Weight	ton	5	6.5	7.5	8.7	10	10.4	11.4	15.5	22.5	12.5	12.7	14	19	27	11	12	13	17	26	31	40	56			
Bending Length	mm	1250	2100	2600	3100	3100	3100	3100	3100	3100	4100	4100	4100	4100	4100	3700	3700	3700	3700	6100	6100	6100	6100			
Inside Frames	mm	1070	1600	2050	2550	2550	2550	2550	2550	2550	3550	3550	3550	3550	3550	3250	3250	3250	3250	5100	5100	5100	5100			
Side Frame Width	mm	1855	1950	1950	1950	1950	1950	1950	2175	2080	1950	1950	1950	2175	2390	1935	1975	1975	1935	2255	2550	2170	2375			
Overall Width (Front View)	mm	2310	2860	3310	3810	3850	3830	3850	3870	4050	4830	4830	4850	4870	4830	4530	4530	4550	4570	7000	7000	7040	7040			
Bed Height	mm	850	880	880	880	880	880	880	1000	1000	880	880	880	1000	1000	880	880	880	980	1100	1185	1100	1050			
Machine Height	mm	2610	2595	2905	2905	2905	2895	2895	3245	3575	2895	2895	2895	3200	3350	2895	2895	3200	3090	3705	3775	4240				
Daylight Opening	mm	530	530	540	540	540	530	530	660	700	530	530	530	635	705	530	530	530	635	500	580	630	745			
Stroke	mm	260	260	260	260	260	260	260	320	320	260	260	260	320	320	260	260	260	320	260	320	320	360			
Table Width	mm	60	60	60	60	60	90	90	380	495	60	90	90	280	380	60	90	90	280	90	200	280	380			
Throat Gap	mm	460	460	460	460	460	460	460	500	500	460	460	460	500	500	460	460	460	500	500	500	500	500			
Adapter Height	mm	80	80	80	80	80	80	80	80	125	80	80	80	80	125	80	80	80	80	80	110	125				

APHS

Precision You Can Rely On.

01

Proven hydraulic technology ensures stable, high-force bending performance.

02

Robust C-Frame construction offers excellent visibility and easy access.

03

Consistent forming accuracy even under continuous production cycles.



04

CNC-controlled system simplifies setup and increases operational precision.

05

Versatile solution for a wide range of standard bending applications.

06

Cost-effective, reliable machine ideal for general fabrication needs.

APHS (C FRAME)		APHS 120080	APHS 21080	APHS 26110	APHS 31110	APHS 31150	APHS 31190	APHS 31240	APHS 31320	APHS 31440	APHS 41150	APHS 41190	APHS 41240	APHS 41320	APHS 41440	APHS 37150	APHS 37190	APHS 37240	APHS 37320	APHS 61240	APHS 61320	APHS 61440	APHS 61600
Capacity	kN	600	800	1100	1100	1500	1900	2400	3200	4400	1500	1900	2400	3200	4400	1500	1900	2400	3200	2400	3200	4400	6000
Oil Tank Volume	lit	80	140	140	140	210	210	210	280	450	210	210	210	280	450	210	210	210	280	300	300	450	500
Motor Output	kW	5.5	7.5	11	11	15	18.5	22	30	30	15	18.5	22	30	30	15	18.5	22	30	22	30	30	45
Speeds (mm/s)	Approach	150	150	160	150	150	150	130	130	80	160	160	150	130	90	160	150	140	130	140	130	90	80
	Working	10	10	10	10	10	10	10	10	8	10	10	10	10	8	10	10	10	10	10	10	8	7
	Return	130	130	130	130	130	130	120	120	70	130	110	120	120	70	130	110	110	120	100	120	70	70
Approx. Weight	ton	5	6.5	7.5	8.7	10	10.4	11.4	15.5	22.5	12.5	12.7	14	19	27	11	12	12.5	16.5	25.5	30.5	39.5	56
Bending Length	mm	1250	2100	2600	3100	3100	3100	3100	3100	3100	4100	4100	4100	4100	4100	3700	3700	3700	3700	6100	6100	6100	6100
Inside Frames	mm	1070	1600	2050	2550	2550	2550	2550	2550	3550	3550	3550	3550	3550	3550	3250	3250	3250	3250	5100	5100	5100	5100
Side Frame Width	mm	1855	1950	1950	1950	1950	1950	1950	2175	2060	1950	1950	1950	2175	2390	1935	1975	1975	1935	2255	2550	2170	2375
Overall Width (Front View)	mm	2310	2860	3310	3810	3850	3830	3850	3870	4050	4830	4830	4850	4870	4830	4530	4530	4550	4570	7000	7000	7040	7040
Bed Height	mm	850	880	880	880	880	880	880	1000	1000	880	880	880	1000	1000	880	880	880	980	1100	1185	1100	1050
Machine Height	mm	2610	2595	2905	2905	2905	2895	2895	3245	3575	2895	2895	2895	3200	3350	2895	2895	2895	3200	3090	3705	3775	4240
Daylight Opening	mm	530	530	540	540	540	530	530	660	700	530	530	530	635	705	530	530	530	635	500	580	630	745
Stroke	mm	260	260	260	260	260	260	260	320	320	260	260	260	320	320	260	260	260	320	260	320	320	360
Table Width	mm	60	60	60	60	60	90	90	380	495	60	90	90	280	380	60	90	90	280	90	200	280	380
Throat Gap	mm	460	460	460	460	460	460	460	500	500	460	460	460	500	500	460	460	460	500	500	500	500	500
Adapter Height	mm	80	80	80	80	80	80	80	80	125	80	80	80	80	125	80	80	80	80	80	80	110	125

From Precision to Productivity

The Power of BAYKAL O-Frame Technology

Precision, Power, and Performance — Redefined.

In the world of sheet metal bending, **structural design is everything — and BAYKAL's "O-Frame" press brakes** set a new standard for strength, accuracy, and long-term performance. Developed through over **75 years of engineering expertise and continuous innovation**, these systems combine advanced mechanical architecture with state-of-the-art hydraulic and servo technology to deliver unmatched forming capabilities, even under the most demanding production conditions.

At the heart of every **BAYKAL "O-Frame" press brake** lies a **patented hydraulic cylinder system**, positioned precisely at the centre of the bending axis to apply force **vertically and evenly across the workpiece**. This innovative configuration dramatically enhances **bending precision, repeatability, and overall process reliability** — ensuring consistently accurate results, part after part.



Superior Structural Rigidity and Accuracy

The fully enclosed **BAYKAL O-Frame** acts as a single, monolithic structure, significantly reducing frame deflection under high loads. This exceptionally rigid design maintains bending accuracy even at extreme tonnages and across long working lengths, ensuring repeatable results and extending the machine's service life. The result is **precision forming without compromise**, even in continuous, heavy-duty production environments.



Uniform Force Distribution for Consistent Results

By positioning the hydraulic cylinders directly on the bending axis, **BAYKAL O-Frame press brakes** guarantee perfectly vertical and evenly distributed force across the workpiece. This eliminates torsional stress and ensures balanced force transfer, resulting in uniform bend angles from end to end and improved part quality across the entire length of the component.



Extended Forming Capability and Greater Flexibility

Unlike traditional open-side designs, **BAYKAL O-Frame press brakes** remove restrictions caused by leg width or frame geometry. This enables deeper and more complex bending operations and allows the forming of larger, more intricate components — a critical advantage in industries such as shipbuilding, structural steel fabrication, energy, and heavy machinery manufacturing.



Enhanced Stability, Durability, and Performance

The O-Frame's closed-loop construction not only improves bending precision but also enhances resistance to cyclic stress, leading to **longer machine life and reduced maintenance requirements**. Its robust build ensures sustained peak performance under heavy workloads, making it ideal for **continuous industrial use and high-volume production environments**.



Ready for Automation and Industry 4.0

BAYKAL O-Frame press brakes are designed for the future of manufacturing. Their stable frame architecture provides the ideal foundation for advanced features such as multi-axis servo backgauges, automatic crowning, adaptive bending algorithms, and full **Industry 4.0 connectivity**. This digital-ready platform enables smart production workflows with real-time monitoring, predictive maintenance, and seamless automation integration.

From unmatched **structural rigidity** and **uniform force distribution** to **future-ready automation** and **large-scale forming capabilities**, **BAYKAL "O-Frame" press brakes** deliver a complete solution that redefines what's possible in sheet metal bending. They are not just machines — they are **strategic assets engineered to drive productivity, precision, and profitability**.

BAYKAL – Think Big, We Do.



Modern sac metal imalatında, özellikle büyük, derin veya karmaşık bileşenlerin işlenmesinde şekillendirme esnekliği, yapısal stabilite ile desteklenmelidir. BAYKAL O Tipi Gövde abkant presleri, kapalı gövde yapısının rijitliğini ve kontrollü kuvvet aktarımını korurken, zorlu iş parçası geometrileri için gerekli ek boşluğu sağlar.

Boğaz derinliğinin olmaması, büküm hattının arkasındaki kullanılabilir çalışma alanını genişleterek, operatörlerin derin kutu kesitleri, geniş flanşlar ve çoklu bükümlü bileşenleri, iş parçası ile makine gövdesi arasında daha az temas riski ile işleyebilmesini sağlar. Ek alan, iş parçasının konumlandırılmasını kolaylaştırabilir, gereksiz taşıma ve yeniden yönlendirme işlemlerini azaltabilir ve büyük veya geometrik olarak karmaşık parçaların daha verimli üretimini destekleyebilir.

Her bir O-Tipi Gövde konfigürasyonu, gerekli büküm uzunluğu, şekillendirme kuvveti, strok, açıklık genişliği ve iş parçası geometrisine göre tasarlanır. Tasarım sürecinde, belirtilen yükleme koşulları altında yapısal davranışı değerlendirmek için sonlu elemanlar analizi kullanılır; bu da gövde sapmasını kontrol etmeye ve çalışma uzunluğu boyunca istikrarlı, tekrarlanabilir büküm performansını korumaya yardımcı olur.

BAYKAL, artırılmış iş parçası açıklığını O Tipi Gövde yapısının yapısal avantajlarıyla birleştirerek, derin yapısal bileşenler, mimari paneller, enerji sektörü bileşenleri ve diğer zorlu imalatlar gibi uygulamalar için özel olarak tasarlanmış bir çözüm sunar. Sonuç olarak, karmaşık büküm işlemlerinde daha fazla şekillendirme özgürlüğü, iyileştirilmiş malzeme taşıma ve güvenilir performans elde edilir.

BAYKAL – Think Big, We Do

BAYKAL proudly presents...

The “O-Frame” Press Brake Series

APHS PRO HYBRID



APHS PRO MILD HYBRID

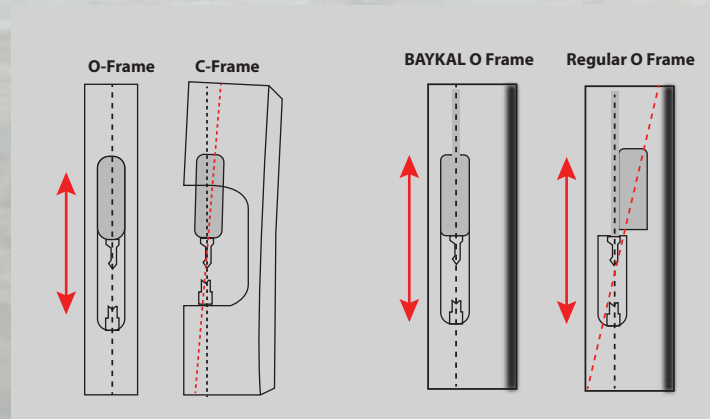


APHS PRO



With the introduction of this groundbreaking series, **BAYKAL is redefining the future of sheet metal working technology.** The “O-Frame” Series includes four advanced categories — **APHS PRO HYBRID, APHS PRO MILD HYBRID, APHS PRO HYDRAULIC** — each engineered to elevate production performance to the next level.

The innovative **O-Frame construction** provides superior structural rigidity, resulting in greater bending precision, process stability, and long-term reliability. Whether working with light gauge sheet metal or heavy plate materials, BAYKAL “O-Frame” press brakes guarantee optimal performance, exceptional repeatability, and maximum productivity across all applications.



APHS PRO HYBRID

Hybrid Power. Intelligent Precision.

01

Combines hydraulic power with servo precision for unmatched bending performance.

02

Delivers up to 63% energy savings with intelligent drive control.

03

Adaptive bending control maintains consistent results across varying materials and thicknesses.



04

Optimised oil usage reduces maintenance needs and environmental impact.

05

Rigid O-Frame structure minimises deflection and maximises forming precision.

06

Ideal for demanding production lines requiring speed, power, and repeatability.

APHS PRO HYBRID TYPES (O FRAME)	Capacity	Oil Tank Volume	Motor Output	Speeds (mm/s)			Approx. Weight	Bending Length	Inside Frames	Machine Width	Overall Width (Front View)	Bed Height	Machine Height	Daylight Opening	Stroke	Table Width	Promecam Adapter
				Approach	Working	Return											
APHS PRO H 31110	1100	70	2x6	200	10	200	9	3100	3120	2155	4175	885	2850	540	260	60	80
APHS PRO H 31150	1500	110	2x9,2	200	10	200	9,7	3100	3120	2155	4175	885	2850	540	260	60	80
APHS PRO H 31190	1900	110	2x9,2	200	10	200	10,2	3100	3120	2155	4195	885	2855	540	260	60	80
APHS PRO H 31240	2400	110	2x9,2	160/200	8/10	160/200	10,4	3100	3120	2155	4195	885	2855	540	260	90	80
APHS PRO H 41190	1900	110	2x9,2	200	10	200	12,9	4100	4140	2155	5220	885	2900	540	260	90	80
APHS PRO H 41240	2400	110	2x9,2	160/200	8/10	160/200	13,3	4100	4140	2155	5220	885	2900	540	260	90	80

APHS PRO MILD HYBRID

Smart Efficiency, Superior Consistency.

01

Intelligent hybrid system delivers excellent efficiency with reduced energy use.

02

Operates quietly with lower oil consumption for cleaner production.

03

Maintains consistent bending quality across diverse batch sizes and materials.



04

Compact hydraulic circuit ensures smoother motion and longer component life.

05

Rigid O-Frame structure guarantees precision even under heavy loads.

06

Perfect for workshops seeking sustainable, high-quality bending performance.

APHS PRO MILD HYBRID TYPES (O FRAME)	Capacity	Oil Tank Volume	Motor Output	Speeds (mm/s)			Approx. Weight	Bending Length	Inside Frames	Machine Width	Overall Width (Front View)	Bed Height	Machine Height	Daylight Opening	Stroke	Table Width	Promecam Adapter
				Approach	Working	Return											
	kN	lt	kW				ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
APHS PRO MH 31110	1100	120	11	190	10	190	9	3100	3120	2155	4175	885	2850	540	260	60	80
APHS PRO MH 31150	1500	170	15	190	10	190	9,7	3100	3120	2155	4175	885	2850	540	260	60	80
APHS PRO MH 31190	1900	170	18,5	170	10	170	10,2	3100	3120	2155	4195	885	2855	540	260	60	80
APHS PRO MH 31240	2400	200	22	120	8	120	10,4	3100	3120	2155	4195	885	2855	540	260	90	80
APHS PRO MH 41190	1900	170	18,5	170	10	170	12,9	4100	4140	2155	5220	885	2900	540	260	90	80
APHS PRO MH 41240	2400	200	22	120	8	120	13,3	4100	4140	2155	5220	885	2900	540	260	90	80

APHS PRO

Heavy-Duty Power. Proven Performance.

01

Built for heavy-duty industrial forming with maximum force and power.

02

Robust hydraulic system ensures stable, repeatable bending under continuous use.

03

Large-tonnage capacity ideal for thick, wide, and structural components.



04

Precision-engineered frame minimises deflection for consistent forming accuracy.

05

Advanced CNC control optimises process speed, reliability, and operator control.

06

Designed for demanding sectors like construction, shipbuilding, and heavy machinery.

APHS PRO TYPES (O FRAME)	Capacity	Oil Tank Volume	Motor Output	Speeds (mm/s)			Approx. Weight	Bending Length	Inside Frames	Machine Width	Overall Width (Front View)	Bed Height	Machine Height	Daylight Opening	Stroke	Table Width	Promecam Adapter
				Approach	Working	Return											
	kN	lt	kW	ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
APHS PRO 31110	1100	140	11	160	10	130	9	3100	3120	2155	4175	885	2850	540	260	60	80
APHS PRO 31150	1500	210	15	160	10	130	9,7	3100	3120	2155	4175	885	2850	540	260	60	80
APHS PRO 31190	1900	210	18,5	150	10	130	10,2	3100	3120	2155	4195	885	2855	540	260	60	80
APHS PRO 31240	2400	210	22	130	10	120	10,4	3100	3120	2155	4195	885	2855	540	260	90	80
APHS PRO 31320	3200	280	30	130	10	110	12,5	3100	3120	2335	4215	1020	3260	660	320	90	80
APHS PRO 41190	1900	210	19	160	10	110	12,9	4100	4140	2155	5220	885	2900	540	260	90	80
APHS PRO 41240	2400	210	22	150	10	100	13,3	4100	4140	2155	5220	885	2900	540	260	90	80
APHS PRO 41320	3200	280	30	130	10	110	15,5	4100	4140	2335	5250	1020	3260	660	320	90	80

Design and specifications are subject to change without notice

What Makes a BAYKAL Press Brake 'MAX'?

Scale. Power. Precision. Redefined.

When bending operations demand extraordinary scale, forming force, and engineering capability, **BAYKAL large-format press brakes** deliver performance beyond the reach of conventional machines. **Backed by over 75 years of engineering expertise and cutting-edge manufacturing technology, BAYKAL APHS MAX press brakes are purpose-built for the most demanding production challenges — where power, precision, and scale converge.** Purpose-built for **heavy-duty industrial applications**, these giants are engineered to handle **extreme forming** requirements, with capacities starting from **600 tons** and reaching up to **10,000 tons**. This immense power enables the precise and efficient bending of **thick, wide, and high-strength materials**, meeting the demands of modern manufacturing in industries where accuracy, reliability, and strength are non-negotiable.

Designed with **reinforced monoblock frames**, BAYKAL press brakes provide exceptional structural rigidity and long-term durability, ensuring consistent precision even under **continuous, high-load operation**. Bending lengths begin at **6 metres** and extend beyond **20 metres** in our largest configurations, giving manufacturers the capability to form oversized and complex components without compromise. These capabilities make BAYKAL machines indispensable in sectors such as **shipbuilding, structural steel fabrication, energy infrastructure, heavy construction equipment, and transportation**, where large-scale forming precision is essential to production success.

BAYKAL large-format press brakes are far more than oversized bending machines — they are **strategic manufacturing platforms** designed to transform production capacity and shape the future of fabrication. Every system can be tailored to specific production needs, with **custom-engineered worktables, precision tooling, hybrid or fully hydraulic drive systems, and advanced CNC control with Industry 4.0 connectivity**. Optional **automation and intelligent material handling solutions** further streamline workflows, enhance safety, and reduce labour intensity, allowing manufacturers to achieve higher throughput with maximum process reliability.

Built to deliver **power, precision, and productivity on an industrial scale**, BAYKAL large press brakes unlock new possibilities in metal forming — enabling manufacturers to bend bigger, build stronger, and compete more effectively in the most demanding global markets.

BAYKAL – Think Big, We Do.

APHS MAX
9100 mm x 2500 tons
FABRICATION



Special Projects – The Art of Bending

BAYKAL APHS MAX: Engineering the Extraordinary

When bending requirements exceed the limits of standard solutions, BAYKAL's Special Projects Division steps in to transform complexity into capability. Backed by over 75 years of engineering expertise and cutting-edge manufacturing technology, BAYKAL APHS MAX press brakes are purpose-built for the most demanding production challenges — where power, precision, and scale converge. These advanced systems enable manufacturers to stay ahead of the competition, handling extreme forming tasks with unrivalled flexibility, immense forming power, and micron-level accuracy. With BAYKAL, even the toughest materials are bent into innovation, turning sheet metal forming into an art form.

Every BAYKAL APHS MAX press brake is fully tailored to your specific production needs, from working length, tonnage, and structural configuration to automation level, material handling, and digital integration. Whether you require over 20 metres of bending length, up to 10,000 tons of forming force, or a fully automated process from material loading to part handling, BAYKAL delivers the technology, precision, and expertise to turn ambitious visions into reality.

BAYKAL Special Projects pushes the boundaries of press brake engineering to deliver solutions beyond conventional limits. Our dedicated R&D team collaborates closely with customers worldwide to design, develop, and manufacture custom-built press brake systems that align perfectly with their production goals. Each project begins with a deep understanding of material requirements, part geometry, and workflow demands, and results in a fully engineered solution that boosts productivity, reduces costs, and enhances efficiency. Whether it's ultra-large components, complex bending geometries, or fully automated manufacturing systems, BAYKAL's Special Projects redefine what's possible — creating tailored solutions for the world's most ambitious bending challenges.

BAYKAL – Think Big, We Do.

APHS MAX

6800 mm x 6000 tons

PETROLEUM AND GAS PIPE
MANUFACTURING INDUSTRY

The world's largest press brake ever.

6800 mm and 6000 metric tons press power! This is the only unique difference distinguishes from the others...

Baykal is proud of building the world largest high-tech press brake whose weight is total 920 tons and power force is 6000 tons whereas its height is equivalent to three floor building. With its 6 months delivery time, this machine is now running to process natural gas pipeline in Florida, USA.

www.baykal.com.tr



APHS MAX

9100 mm x 3000 tons

CONSTRUCTION EQUIPMENT
MANUFACTURING INDUSTRY



APHS MAX
6100 mm x 1000 tons
DEFENCE INDUSTRY



APHS MAX
6100 mm x 1600 tons
DEFENCE INDUSTRY



APHS MAX
9200 mm x 1200 tons
TRAILER INDUSTRY



APHS MAX
9100 mm x 1400 tons
DEFENCE INDUSTRY



APHS MAX
10100 mm x 2000 tons
SHIP BUILDING INDUSTRY



BAYKAL Tandem, Tridem, and Quadrem Press Brakes



Key Advantages & Engineering Benefits



Extended Bending Length & Capacity

By linking multiple BAYKAL press brakes, manufacturers can achieve bending lengths of **20 metres or more** and total capacities of up to **8,000 – 10,000 tons**. This makes them ideal for producing oversized components used in shipbuilding, heavy construction, energy infrastructure, and large-scale industrial machinery.



Flexibility & Modular Operation

Each press brake within a BAYKAL tandem, tridem, or quadrem configuration can function independently or as part of a unified system. This modularity allows manufacturers to efficiently manage both **small-scale components and extra-large parts** without investing in multiple dedicated machines.



Precision Across Long Workpieces

Synchronous motion and advanced control ensure **consistent bending angles and uniform quality** across the entire workpiece. Features such as automatic crowning, CNC-based deflection compensation, and continuous feedback loops maintain micron-level precision even in challenging, oversized applications.



Improved Productivity & Throughput

BAYKAL multi-machine systems reduce setup times for large parts, streamline workflow, and significantly boost throughput. Switching between standard bending and extended-length operations is fast and seamless, minimising downtime and enhancing production efficiency.



Cost-Effective Scaling

Compared to a single ultra-large press brake, BAYKAL's tandem and tridem solutions are a more cost-effective alternative while still delivering comparable capacity. Their modular nature also allows future expansion by integrating additional machines as production requirements grow.



Typical Applications

- **Shipbuilding:** Large hull sections, decks, and structural panels
- **Construction & Infrastructure:** Bridge beams, girders, and structural steel components
- **Energy Sector:** Wind turbine towers, pressure vessels, and heavy-duty components
- **Transport Equipment:** Railcar panels, trailers, and large vehicle chassis
- **Heavy Machinery:** Industrial frames, press housings, and chassis structures



The BAYKAL Advantage

BAYKAL's **APHS Tandem, Tridem, and Quadrem press brakes** combine decades of engineering expertise with cutting-edge CNC technology to deliver **synchronised operation, exceptional accuracy, and scalable performance**. Built for heavy-duty, large-format manufacturing, these systems deliver **seamless precision, unmatched flexibility, and production-ready versatility** — making them the preferred choice for manufacturers tackling the most challenging bending applications.

APHS MAX
6100 mm x 600 tons tandems
SUBCONTRACT MANUFACTURING





APHS MAX
9200 mm x 1400 tons Tandem
STRUCTURAL INDUSTRY

APHS MAX
7100 mm x 700 tons Tandem
LIGHT POLE INDUSTRY





BAYKAL Quadrem Press Brakes

Maximum Flexibility for Custom Projects – Precision Without Limits

BAYKAL Quadrem press brakes push the boundaries of bending technology with advanced multi-machine tandem and modular systems engineered for large-scale, high-tonnage applications. By synchronising up to four powerful press brakes into a single, fully integrated bending line, BAYKAL delivers seamless forming power with **bending lengths exceeding 20 metres and tonnages up to 10,000 tons**. This modular configuration allows manufacturers to tackle the largest and most complex components with ease while retaining full operational flexibility — as each unit can also function independently for smaller-scale or standard production runs.

Driven by intelligent CNC synchronisation, BAYKAL Quadrem systems ensure **perfectly uniform bending angles** across the entire workpiece, even under extreme loads and oversized geometries. Advanced **load compensation, real-time feedback control, and adaptive bending algorithms** guarantee micron-level precision and repeatable results across every part. Designed for heavy-duty industries such as **shipbuilding, structural steel fabrication, wind turbine tower production, and heavy equipment manufacturing**, BAYKAL's modular press brake systems combine **scalability, productivity, and precision** — delivering the ultimate solution for **Custom fabrication projects** that demand uncompromising performance.

BAYKAL – Think Big, We Do.



APHS PIPE-POLE Bending



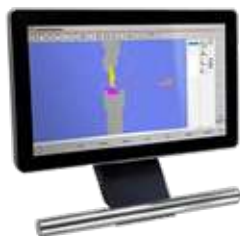
APHS MAX
4100 mm x 500 tons Quadrems
LIGHT POLE INDUSTRY



Standard Control Units

■ **ESA S 840**

Standard for APHS /
APHS PRO



- Interactive 2D graphic editor for work-pieces and tools data entry
- 2D graphic display of machine frame, work piece and tools
- 2D automatic identification of the best bending sequence
- Windows 10 operating system
- Complete off-line programming on a standard PC
- Selectable and programmable axes and auxiliary functions
- Following arms, thickness detector, in-process angle measurement units, robotic interfacing, controlling for tandem press brakes
- 15.6" Widescreen colour display with anti glare screen
- Resistive Touch Screen with multi-touch functionality
- 2x USB ports

■ **ESA S 875 W**

Standard for APHS Hybrid,
Mild Hybrid,
APHS PRO Hybrid, Mild Hybrid
Option for APHS / APHS PRO



The S875 W is our top-of-the-line CNC for press brakes. It offers highest performance, option fully 3D capabilities and a 21" multi-touch screen for the best operating experience you'll ever have.

Features:

- 21" Multitouch Screen
- Windows 10 Operating System
- Ethercat/CAN open or Analog Axes Interface
- DXF, DWG import on control unit (Included to 3D Option)
- 3D is an option.

■ **ESA S 875 3D W**

Standard for APHS Hybrid,
Mild Hybrid,
APHS PRO Hybrid, Mild Hybrid
Option for APHS / APHS PRO



The S875 3D W is our top-of-the-line CNC for press brakes. It offers highest performance, a 21" multi-touch screen for the best operating experience you'll ever have.

Features:

- 21" Multitouch Screen
- Windows 10 Operating System
- Ethercat/CAN open or Analog Axes Interface
- DXF, DWG import on control unit (Included to 3D Option)

■ **CYBELEC VISIPAC**

Option for All APHS,
APHS PRO Models



- Modern streamlined glass surface touch screen that can be used with gloves.
- 2D graphical profile drawing (Touch Profile) and 3D viewer
- Automatic bending sequence calculation.
- Highest precision of bending thanks to sophisticated algorithms.
- Tandem
- Tools import.
- Group management for complex production.
- Preliminary / Final bend.
- Hemming management.
- Running under Windows 10 for multitasking and networking.
- Angle measurement.
- Barcode reader
- Customizable Industry 4.0
- Running on Windows 10 with UWF cut off protection.

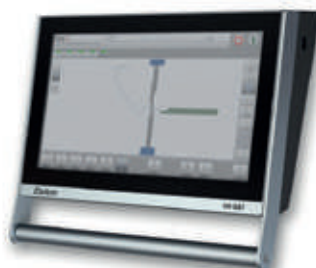
Optional Control Units

■ DELEM 53 Tx Option for APHS / APHS PRO



- Numerical touch screen programming
- 15" high resolution color TFT
- Crowning control
- Servo and frequency inverter control
- Advanced Y-axis control algorithms for closed-loop as well as open-loop valves.
- USB, peripheral interfacing
- Profile-T offline software

■ DELEM 58 Tx Option for APHS / APHS PRO



- 2D graphical touch screen programming
- 18,5" high resolution color TFT
- Bend sequence calculation
- Crowning control
- Servo and frequency inverter control
- Advanced Y-axis control algorithms for closed-loop as well as open-loop valves.
- USB, peripheral interfacing
- Profile-T offline software

■ DELEM 66 S Option for All APHS, APHS PRO Models



- 2D graphical touch screen programming mode
- 3D machine representation, in simulation and production
- 24" high resolution color TFT
- Delem Modusys compatibility (module scalability and adaptivity)
- USB, peripheral interfacing
- User specific application support within the control's multitasking environment
- Sensor bending & correction interface
- Profile-S2D offline software

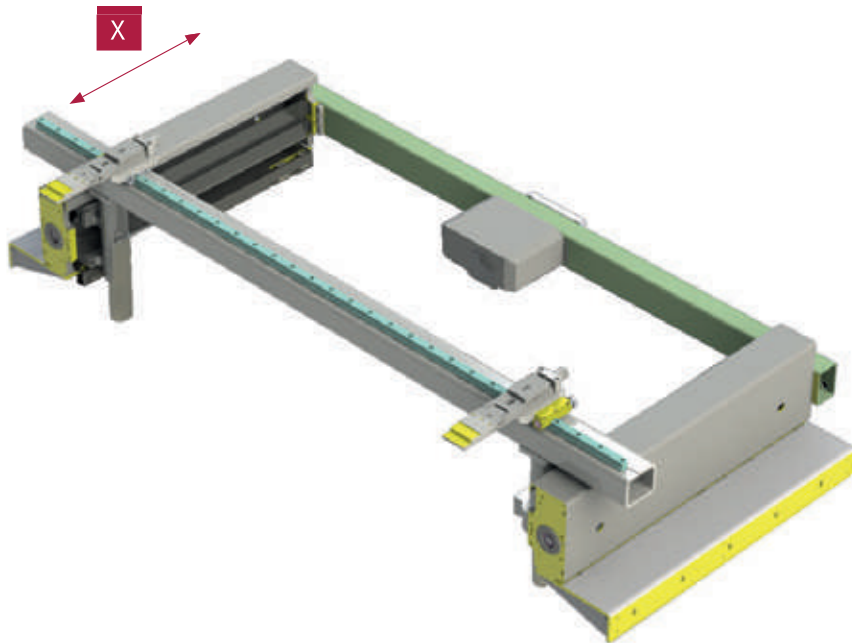
■ DELEM 69 S Option for All APHS, APHS PRO Models



- 3D and 2D graphical touch screen programming mode
- 3D visualization, including 3D machine representation, in simulation and production
- 24" high resolution color TFT
- Delem Modusys compatibility (module scalability and adaptivity)
- USB, peripheral interfacing
- User specific application support within the control's multitasking environment
- Sensor bending & correction interface
- Profile-S3D offline software

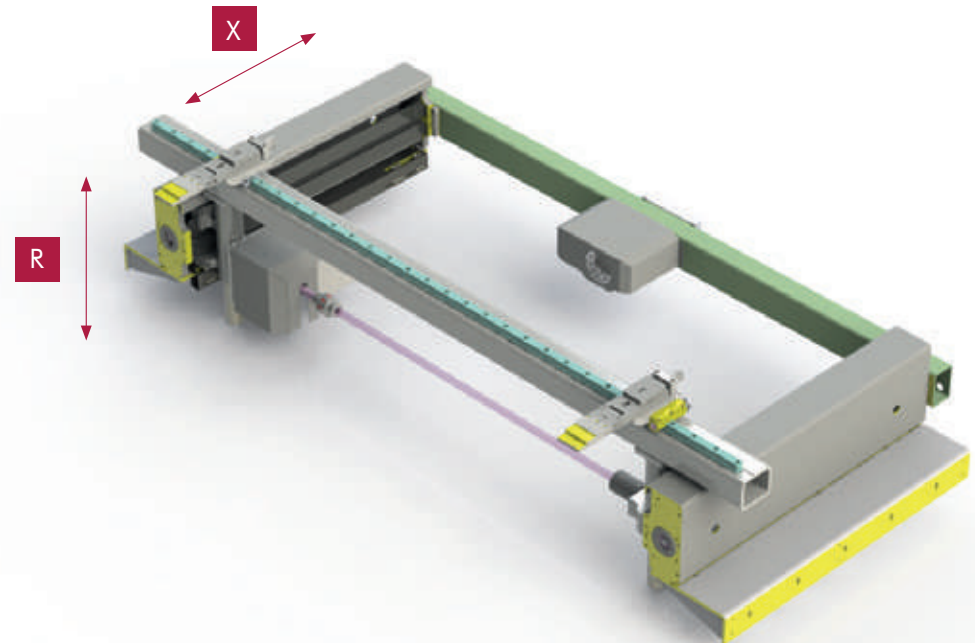
X Backgauge

Standard for APHS



X+R Backgauge

Standard for APHS Hybrid,
Mild Hybrid,
APHS PRO Hybrid, Mild Hybrid
Option for APHS / APHS PRO

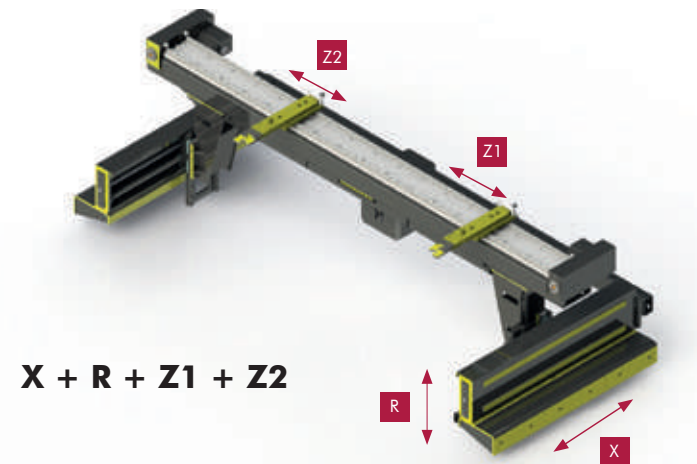


Backgauge is a crucial instrument when it comes to accurate processes. The system is CNC controlled and servo motor driven on two sided ballscrews so it locates itself fast and automatically according to the design and assists operator to position sheet metal with better accuracy for bending process. Backgauges are produced from steel. Therefore, they are more accurate and reliable.

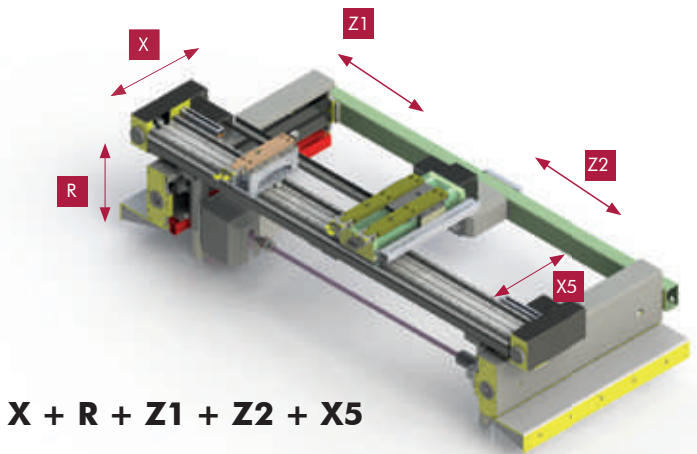
(For 4m and longer machines, 4 fingers are standard.)

Optional Backgauges

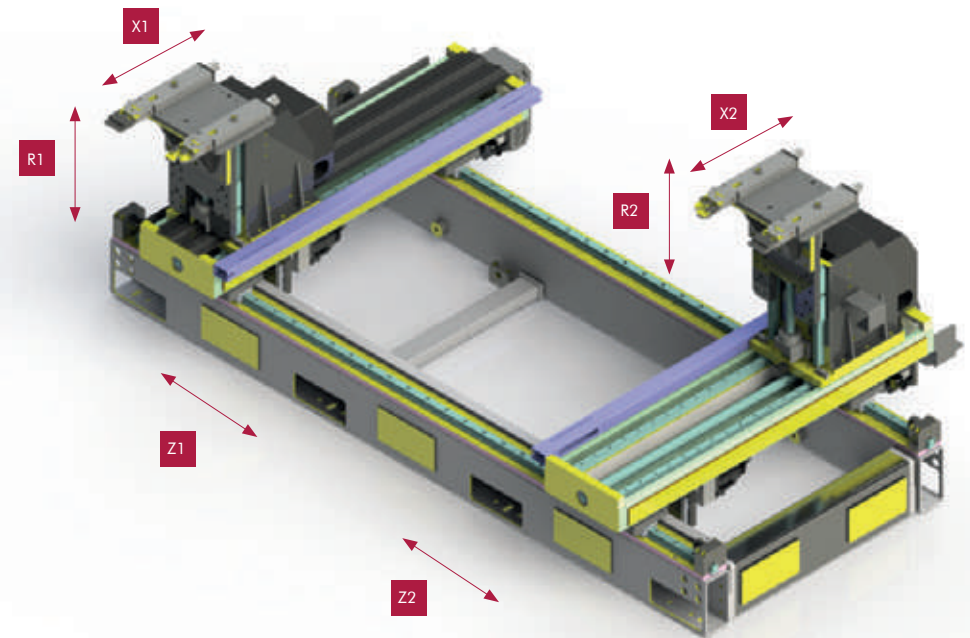
Option for APHS / APHS PRO Models



X + R + Z1 + Z2



X + R + Z1 + Z2 + X5



X1 + X1 + R1 + R2 + Z1 + Z2

TOWER TYPE

A close-up photograph of a BAYKAL press brake's mechanical clamping system. The image shows a large, silver-colored metal clamping block with the brand name 'BAYKAL' and the number '100' engraved on it. The block is part of a larger assembly with various bolts and components. In the background, a yellow label with black text is visible, though the text is not legible. The lighting is dramatic, with strong highlights and shadows, emphasizing the industrial nature of the equipment.

**Standard for APHS / APHS PRO
Models**

European Clamping System

BAYKAL Press Brake models have standard mechanical european clamping systems suitable for various tool brands, types, heights.

Optional Mechanical Clamping Systems

■ QUICK RELEASE



- Brand: BAYKAL
- Working Height: 100/120/150mm
- Width: 150mm
- Fast tool change
- Less downtime

Option for APHS / APHS PRO Models

■ ROLL 200 MANUAL



- Brand: ROLLERI
- Power: Manual
- Product type: Upper clamping
- Tonnage: 1000 kN/m max.

Option for APHS / APHS PRO Models

■ NSCL-I/MC PRO MECHANICAL



- Brand: WILA
- Clamping Type = Mechanical
- Working height H = 80mm
- Width W = 61mm

Option for APHS / APHS PRO Models

■ NSCR-I/MC PRO MECHANICAL



- Brand: WILA
- Clamping Type = Mechanical
- Working height H = 95mm
- Width W = 95mm
- Max. load = 200ton/m

Option for APHS / APHS PRO Models

Optional Hydraulic Clamping Systems

■ NSCL-I/HC PRO HYDRAULIC



- Brand: WILA
 - Clamping Type = Hydraulic
 - Working height H = 80mm
 - Width W = 88mm
 - Max. load = 180ton/m
- Option for APHS / APHS PRO Models**

■ NSCL-II/HC PREMIUM HYDRAULIC



- Brand: WILA
 - Clamping Type = Hydraulic
 - Pressure surfaces CNC-Deeaphardened ® (2-4mm / 56-60 HRC)
 - Working height H = 80mm
 - Width W = 82mm
 - Max. load = 250ton/m
- Option for APHS / APHS PRO Models**

■ NSCR-I/HC PRO HYDRAULIC



- Brand: WILA
 - Clamping Type = Hydraulic
 - Working height H = 95mm
 - Width W = 98mm
 - Max. load = 200ton/m
- Option for APHS / APHS PRO Models**

■ NSCR-II/HC PREMIUM HYDRAULIC



- Brand: WILA
 - Clamping Type = Hydraulic
 - Pressure surfaces CNC-Deeaphardened ® (2-4mm / 56-60 HRC)
 - Working height H = 95mm
 - Width W = 98mm
 - Max. load = 300ton/m
- Option for APHS / APHS PRO Models**

Optional Hydraulic Clamping Systems

■ SMART TOOL LOCATOR (STL)



Additional option for NSCL-II/HC
Option for APHS / APHS PRO Models

■ POWER PACK



Power pack is necessary for hydraulic clamping systems. WILA and ROLLERI options are available.

Option for APHS / APHS PRO Models

■ ROLL 200 HYDRAULIC



- Brand: ROLLERI
 - Power: Hydraulic
 - Product type: Upper clamping
 - Tonnage: 1000 kN/m max.
- Option for APHS / APHS PRO Models**

■ ROLL 200 KDS HYDRAULIC



- Brand: ROLLERI
 - Power: Hydraulic
 - Product type: Upper clamping
 - Tonnage: 1000 kN/m max.
- Option for APHS / APHS PRO Models**

*Double side clamping available



Option for APHS / APHS PRO Models

Motorized Crowning

Hydraulic cylinder generate force downwards and this force distributes throughout upper and lower ram. However while side parts may apply the force completely, middle part may apply lesser due to deflection. Thus, the angle of middle part of sheet metal has different angle than other areas. In order to prevent this and have exact results, crowning is utilized. This instrument allows user to bend sheet metals with exact angles throughout the part.

Motorized crowning system is CNC controlled. Therefore adjustment is made precisely in short time. CNC automatically calculates deflections depending on material and brings perfect solutions.

**Option for APHS /
APHS PRO Models**

Laser Guard

Laser guard is essential on press brakes for CE standards and user protection.

Laser protective field between the transmitter and the receiver monitors the hazardous area underneath the top tool and guarantees protection from serious injuries which may occur to operator. Depending on the machine performance, press brake can be operated at high speed right before the top tool meets the sheet metal to be bent. The result is maximum safety at maximum productivity.

Laser guard system satisfy the necessity for CE conformity in required countries.





**Standard for APHS Hybrid, Mild Hybrid /
APHS PRO Hybrid, Mild Hybrid Models**

Brushed Front Arm

Brushed Front arms are handy when large and heavy sheet metals are in discussion. They are moveable so they may slide linearly on the rail, and assist operator to align sheet metals better.

A large industrial sheet metal bending machine, likely a BAYKAL Press Brake, is shown in a factory setting. A prominent feature is a large, black, pleated sheet following arm that is extended over the machine's bed. The machine has a long, horizontal bed with various rollers and guides. A red safety guard is visible in the foreground. On the machine's frame, there are three warning symbols: a triangle with a hand, a triangle with a foot, and a triangle with a person. The background is a plain, light-colored wall.

**Option for APHS /
APHS PRO Models**

Sheet Following Arm

Sheet following arm is suggested for BAYKAL Press Brakes when bending thin and long or heavy sheet metals are in discussion. Since the sheet following arm system may move up automatically according to the bending, it assists operator to perform bending process easily.

Sheet following arm system is driven by servo motor and controlled by CNC control unit.

125kg and 400kg carriage capacity sheet following arms are available as well as automatic R-axis movement for different height of tools.

Parking area is suggested for this system.



**Option for APHS /
APHS PRO Models**

Parking Area

Parking areas is suggested for BAYKAL Press Brakes equipped with sheet following arm. It allows sheet following arm to be stored until next use. Parking areas may have the capacity for single or double sheet following arm.

**Option for APTS /
APHS PRO Models**

Robot Interface

Robot interface is a system that allows a robotic arm to collaborate with a press brake in a manufacturing environment. This interface is essential for automating the bending and forming of metal components, increasing efficiency, reducing the need for operator, and continuous production. This integration can significantly enhance manufacturing efficiency, accuracy, and consistency.



A close-up photograph of an industrial press brake machine. A metal workpiece is being bent. Two black camera modules are mounted on the machine's frame, one on each side of the workpiece, to capture images for angle measurement. The background is blurred, showing other parts of the machine.

**Option for APHS /
APHS PRO Models**

Angle Measurement

Angle measurement system, which has a motorized movement, is a technology used to accurately measure the angles of bends performed by a press brake during the bending process. This measurement ensures that the bent components meet the required specifications for high accuracy and valuable parts.

The system may consist 2 cameras depending on request.



**Option for APHS /
APHS PRO Models**

Lubrication

Lubrication system provides lubrication to critical moving parts and components within the press brake machine.

This system ensures that the machine operates smoothly and efficiently while reducing wear and tear on key components. Both manual and motorized version are optional for BAYKAL Press Brakes.

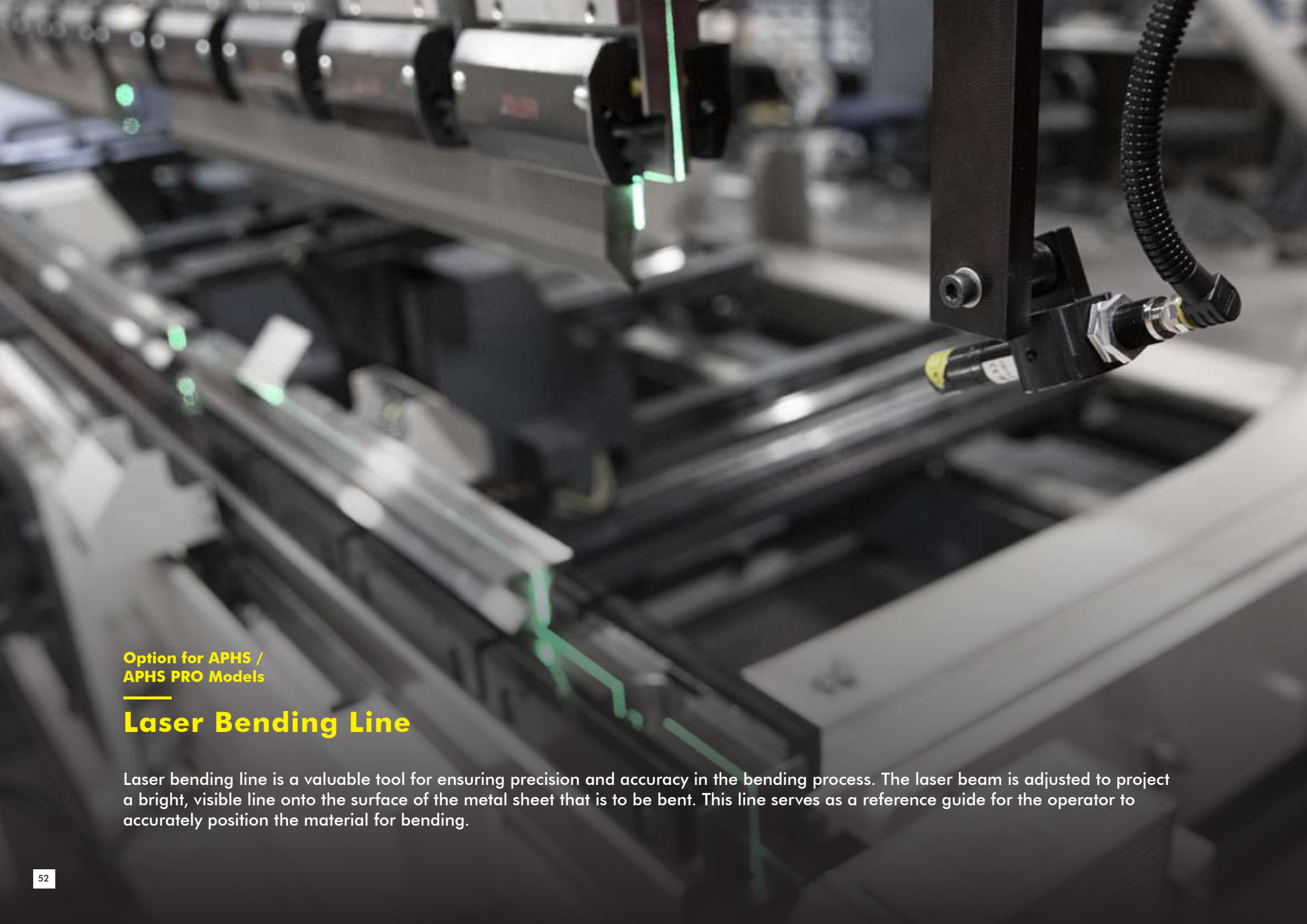


**Option for APHS /
APHS PRO Models**

Motorized Lubrication

Motorized lubrication system is equipped with a motor-driven pump that delivers lubricant to various points of the press brake where friction and motion occur.

It automates the lubrication process, eliminating the need for manual greasing and reducing downtime.



Option for APHS /
APHS PRO Models

Laser Bending Line

Laser bending line is a valuable tool for ensuring precision and accuracy in the bending process. The laser beam is adjusted to project a bright, visible line onto the surface of the metal sheet that is to be bent. This line serves as a reference guide for the operator to accurately position the material for bending.

**Option for APHS Hybrid /
APHS PRO Hybrid Models**

Speed Package

Speed package is taken into consideration when high approach and return speed is preferred in the machines above 200 tons in order to increase productivity.



BAYKAL HIGH-PERFORMANCE LASER CUTTING MACHINES

Experience precision laser cutting technology engineered to handle even the most demanding sheet metal applications with exceptional accuracy and reliability.

Our comprehensive portfolio offers the ideal solution for every production requirement, no matter the type or thickness of material you need to process. Your application determines the most suitable machine — and BAYKAL ensures you have everything from a single source: the laser system, machine, automation, software, and the confidence of a global service network. We don't just focus on cutting speed — we also optimise upstream and downstream processes to maximise overall productivity and workflow efficiency.

Unlock the full potential of fibre laser technology. Whether you are new to laser cutting or expanding existing capacity, BAYKAL solutions combine high performance with low investment costs, minimal operating expenses, and reduced maintenance requirements. Our systems are also designed with automation in mind — enabling both fully unmanned production and seamless transitions to manual operation when needed. With a broad range of laser cutting machines tailored to diverse applications, BAYKAL ensures you receive the ideal configuration for your material, quality, and capacity needs — helping you achieve maximum cost-effectiveness in your manufacturing operations.

BAYKAL - Think Big, We Do.



BAYKAL MixGas

High-Speed Laser Cutting with Optimised Gas Technology

BAYKAL MixGas revolutionises laser cutting by combining nitrogen and oxygen into a precisely engineered gas blend, delivering cleaner cuts, minimal burr, and dramatically faster results. Compared with conventional fusion or flame cutting methods, BAYKAL's innovative gas technology achieves superior cutting speeds, enhanced surface quality, and greater overall efficiency — even when processing lower-grade materials.

With its optimised nitrogen-oxygen composition, **BAYKAL MixGas** achieves cutting speeds up to **%219 faster** than oxygen and **%104 faster** than nitrogen alone. It produces oxide-free, weld- and paint-ready surfaces while significantly reducing post-processing time. This advanced solution boosts productivity, enables thicker materials to be cut at higher speeds, and ensures precise, repeatable results with minimal material waste — all while lowering overall operating costs by up to **%56**.

From mild steel to aluminium and a wide range of alloys, **BAYKAL MixGas** delivers exceptional performance across diverse materials and industries. It eliminates the need for expensive high-pressure compressors when cutting aluminium, increasing speed by up to **%40** and achieving smoother, burr-free edges. Its clean cutting performance, combined with energy-efficient operation, makes **BAYKAL MixGas** a cost-effective, high-performance solution that redefines modern laser cutting — uniting speed, precision, and sustainability in one powerful technology.

Why Choose BAYKAL MixGas for Your Laser Systems?

BAYKAL MixGas is designed to transform laser cutting performance by significantly boosting productivity and efficiency. It enables thicker steels to be processed at much higher speeds while maintaining exceptional quality, reducing project turnaround times, and maximising machine uptime. By delivering sharper edges and cleaner cuts with less material waste, **BAYKAL MixGas** ensures repeatable, high-accuracy results and superior part quality. Its versatility allows manufacturers to work seamlessly with mild steel, aluminium, and a wide range of steel grades, expanding cutting capabilities across industries and ensuring excellent results on various materials.

Beyond cutting performance, **BAYKAL MixGas** streamlines downstream operations by producing burr-free and oxide-free cuts, eliminating the need for surface cleaning before welding or painting. Seamlessly integrating with **BAYKAL** fibre laser systems, it enhances cutting power, efficiency, and overall productivity. Together, these advantages make **BAYKAL MixGas** an essential solution for manufacturers aiming to enhance precision, improve profitability, and future-proof their production.

BLU

Ultra-High Power. Unmatched Productivity.

01

Ultra-high power source delivers exceptional cutting speeds and throughput.

02

Handles thick plate cutting with outstanding precision and edge quality.

03

Intelligent beam control ensures consistent performance across all materials.



04

Automation-ready design streamlines workflow and reduces operator intervention.

05

Energy-efficient fiber technology lowers operating costs and boosts sustainability.

06

Ideal for heavy-duty, high-volume manufacturing environments.

BLU		
Working Area	Width	1500 to 3000 mm
	Length	3000 to 15000 mm
Laser Power	15-60 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

BLP

Speed Meets Precision.

01

High-speed fiber laser enables rapid cutting cycles and shorter lead times.

02

Superior positioning accuracy delivers clean, high-quality cuts on every part.

03

Compact, space-saving design fits seamlessly into modern production floors.



04

Low-maintenance system reduces downtime and optimises total cost of ownership.

05

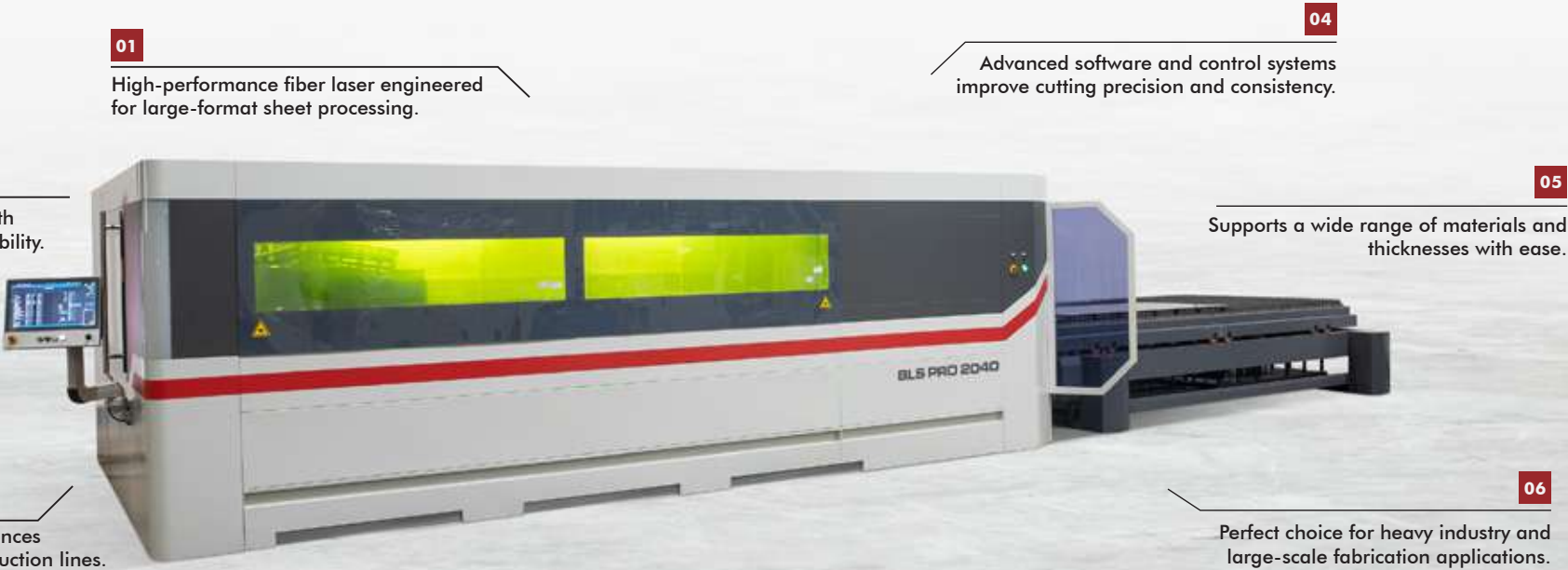
Ideal solution for fast-paced sheet metal fabrication and mass production.

06

Combines performance, precision, and value for maximum manufacturing efficiency.

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	

Design and specifications are subject to change without notice



01 High-performance fiber laser engineered for large-format sheet processing.

02 Delivers high-speed cutting with superior accuracy and repeatability.

03 Automation-ready design enhances productivity in continuous production lines.

04 Advanced software and control systems improve cutting precision and consistency.

05 Supports a wide range of materials and thicknesses with ease.

06 Perfect choice for heavy industry and large-scale fabrication applications.

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
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

BLE PRO

Compact Form. Flexible Function.

01

Modular and compact design optimises space and simplifies installation.

02

Rapid changeovers support dynamic, high-mix production environments.

03

Precision cutting with consistent quality across a wide range of materials.

04

Intuitive control system enhances usability and operator efficiency.

05

Automation compatibility enables seamless integration into smart factory setups.

06

Cost-effective solution for flexible, medium-to-high volume sheet metal cutting.



BLE PRO		
Working Area	Width	1500 mm
	Length	3000 mm
Laser Power	1 kW - 10 kW	
Resonator	IPG- nLIGHT - Max Photonics	
Cutting Heads	Precitec ProCutter Thunder	
	Raytools BS Series	
	Precitec ProCutter 2.0 (Optional)	
Motion System	Rock 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	

Side protective glasses are not standard feature for BLE PRO but an option can be added with order.

Design and specifications are subject to change without notice

BLM

Custom Precision. Maximum Output.

01

Custom-configured fiber laser system tailored to your specific production needs.

02

High throughput and speed ensure maximum productivity in sheet cutting.

03

Advanced control systems deliver micron-level accuracy and part consistency.

04

Flexible configurations support a wide range of sheet sizes and materials.

05

Designed for cost-optimised production and reduced per-part expenses.

06

Perfect for manufacturers seeking precision and performance at scale.



BLM		
Working Area	Width	2000mm / 2500mm / 3000mm
	Length	up to 24000mm (min: 12000mm)
Laser Power		6 kW - 60 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

BLT

Precision Tube Cutting. Advanced Control.

02

Motion control systems guarantee exceptional accuracy and repeatable results.

01

Engineered for high-precision tube and profile cutting applications.

04

Capable of processing complex geometries and intricate shapes with ease.

05

Delivers superior edge quality across a wide range of tube materials.

06

Essential for manufacturers in construction, automotive, and machinery sectors.

03

Advanced automation options improve throughput and minimise cycle times.

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 Length	6100 mm	8100 mm
Max. Part Length	4000 mm	
Min. Auto Loading Length	2000 mm	
Acceleration of Driver Chuck	7000 Deg/s ²	
Speed of Driver Chuck	560 7/s	
Types of Profiles	Round, Rectangular 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	0.8 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



BAYKAL CUSTOM Fiber Laser Cutting Systems

Big Power. Big Format. Big Performance.

When cutting requirements exceed standard limits, **BAYKAL CUSTOM Fiber Laser Cutting Systems** deliver unmatched capability. Engineered for **large-format, high-volume production**, these machines combine **cutting-edge laser power, precision optics, and modular automation** to achieve exceptional productivity and efficiency. With **working lengths exceeding 30 meters** and **laser powers up to 60 kW**, they are purpose-built for industries such as **shipbuilding, structural steel fabrication, heavy machinery, and renewable energy** — where **scale, speed, and precision** must operate in perfect harmony.

Every BAYKAL CUSTOM Fiber Laser is designed for **seamless large-scale processing**. Its **rigid dual-gantry structure** guarantees stability and accuracy over long spans, while advanced **beam delivery, CNC control, and motion systems** ensure clean, consistent cuts across varying thicknesses. **Adaptive height sensing and servo-driven motion** deliver flawless edges and zero rework, even on the toughest materials. Intelligent automation — including **automatic loading/unloading systems, vertical storage towers, and robotic part handling** — transforms each setup into a **fully connected, Industry 4.0-ready manufacturing cell**.

With **modular table extensions, bevel-cutting options, and energy-efficient operation**, BAYKAL CUSTOM Fiber Lasers offer **scalability, sustainability, and precision** in one powerful package. More than just machines, they represent a **new era of industrial performance** — where power meets intelligence, and every cut defines the **future of fabrication**.

BAYKAL - Think Big, We Do.



FIBER LASER CUTTING CAPACITIES

SHEET CUTTING CAPACITIES									
Material	2 kW	3 kW	4 kW	6 kW	12 kW	20 kW	30 kW	40 kW	60 kW
Mild Steel	20 mm	22 mm	25 mm	25 mm	40 mm	80 mm	80 mm	80 mm	100 mm
Stainless Steel	8 mm	10 mm	16 mm	25 mm	40 mm	100 mm	100 mm	100 mm	110 mm
Aluminum	6 mm	8 mm	12 mm	20 mm	35 mm	60 mm	60 mm	70 mm	70 mm
Copper	5 mm	6 mm	8 mm	20 mm	16 mm	12 mm	20 mm	20 mm	20 mm
Brass	3 mm	4 mm	4 mm	8 mm	12 mm	12 mm	12 mm	20 mm	20 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

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

POWER UNITS



■ **IPG YLR SERIE**



■ **IPG YLS SERIE**



**MAX
PHOTONICS
PRO SERIES**



**MAX
PHOTONICS
ELITE SERIES**

CUTTING HEADS



**Precitec
ProCutter
Thunder**



**Precitec
ProCutter 2.0**



**Precitec
LightCutter
3D**



■ **Raytools 3D**



■ **Raytools
BS Serie**

BAYKAL Bevel Cutting

Precision at an Angle – Redefining the Cutting Edge

BAYKAL Bevel Cutting transforms the fiber laser from a standard flat-sheet cutter into a **multi-functional manufacturing solution**, capable of producing **weld-ready components in a single step**. This advanced technology significantly increases production speed, reduces overall costs, and elevates part quality — all while streamlining the fabrication process.

At the core of BAYKAL's bevel cutting system is a **tilt-and-rotation laser head** with advanced CNC control, allowing the beam to be oriented at precise angles ranging from **0° to $\pm 45^\circ$** . Our multi-axis cutting heads, combined with high-performance capacitive height sensing systems, continuously maintain optimal focus and distance from the workpiece — even during complex angular movements. Intelligent beam path compensation software recalculates cutting trajectories in real time, ensuring **clean, accurate, and repeatable bevels** across a variety of material thicknesses and profiles. With programmable bevel angle, depth, and width, manufacturers can produce components with **ready-to-weld edges** directly on the cutting machine, eliminating costly and time-consuming secondary processes such as milling or grinding. Suitable for materials including **mild steel, stainless steel, aluminium, and special alloys**, BAYKAL bevel cutting is capable of handling plates from **3 mm up to 50 mm**, depending on power and configuration.

Application Benefits

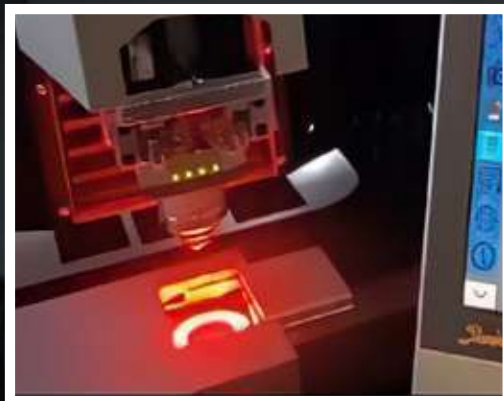
Cutting angled edges directly on a **BAYKAL fiber laser cutting machine** offers substantial productivity, cost, and quality advantages. It **eliminates secondary beveling operations**, reduces production steps, and lowers labour costs — all while improving overall throughput. This capability is especially valuable in demanding industries such as **shipbuilding, structural steel fabrication, construction machinery, and pressure vessel production**, where precise edge preparation is essential for welded assemblies.

The **high precision and repeatability** of BAYKAL bevel cutting ensures consistent chamfer geometries, enhancing weld quality, part integrity, and final assembly strength. It also enables more **complex part designs**, supports **automated welding workflows**, and contributes to a more **streamlined, lean manufacturing process**. Combined with BAYKAL's intelligent control systems and energy-efficient operation, bevel cutting represents a major step forward in laser processing — delivering unmatched versatility, precision, and performance.

NOZZLE APPLICATIONS

AUTOMATIC NOZZLE CHANGER

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



AUTOMATIC NOZZLE CENTRING

- Motorized alignment
- Accurate settings

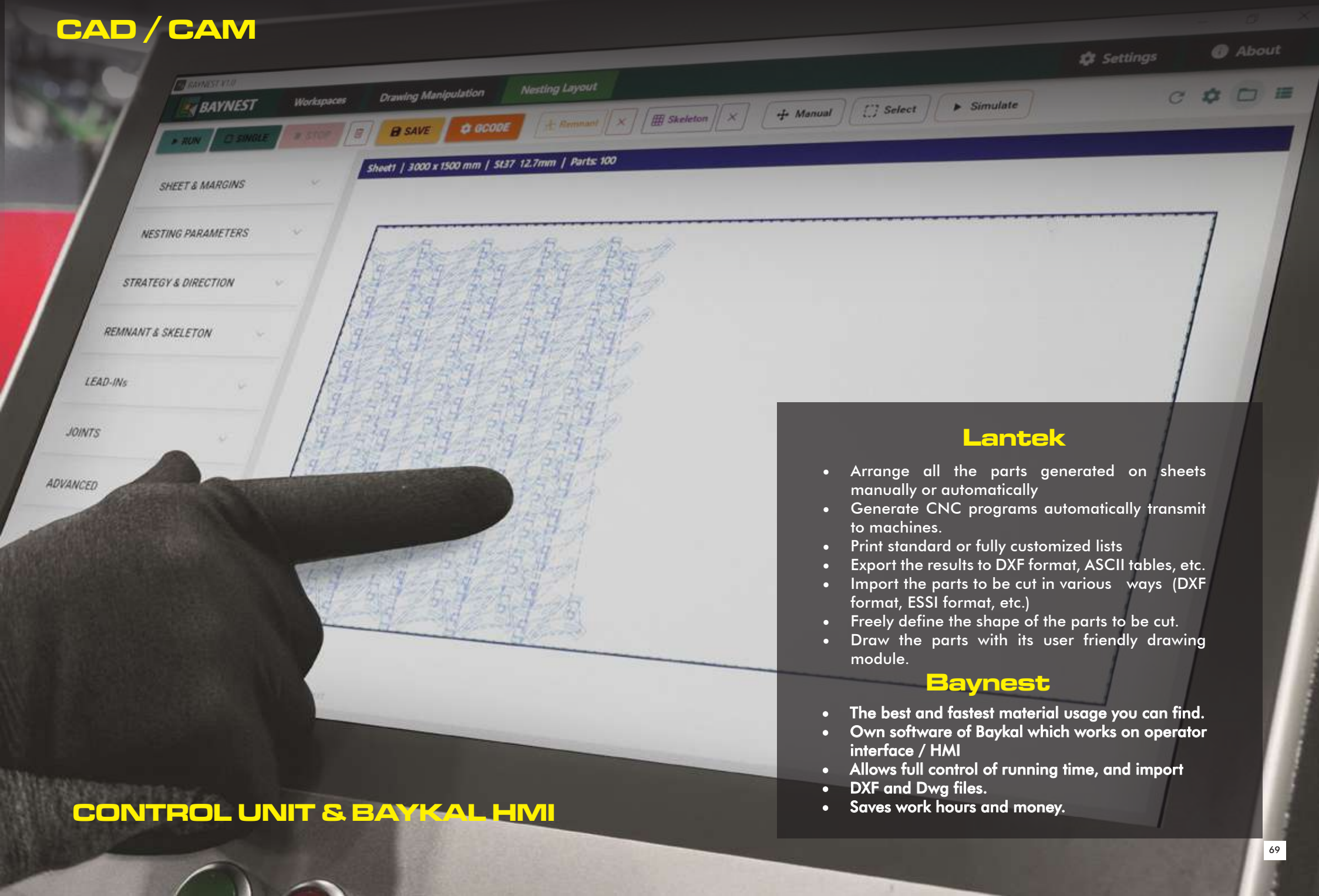


NOZZLE CLEANING & CALIBRATION



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.



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.

Baynest

- The best and fastest material usage you can find.
- Own software of Baykal which works on operator interface / HMI
- Allows full control of running time, and import
- DXF and Dwg files.
- 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".

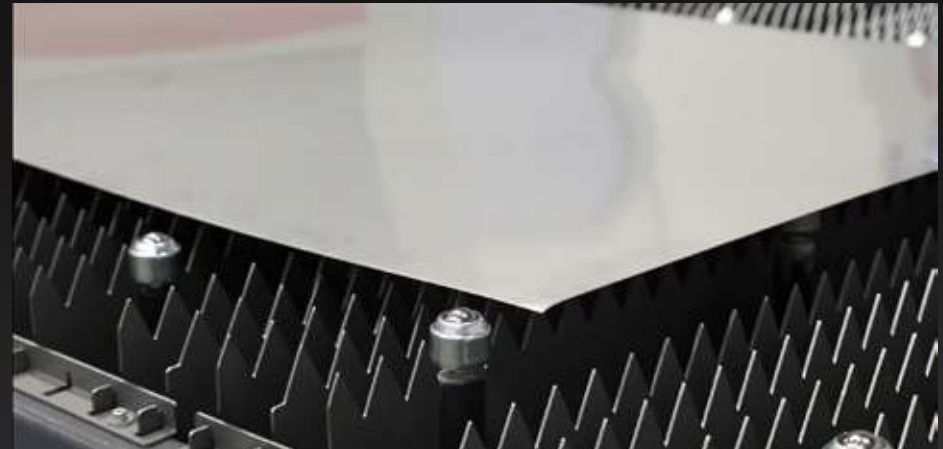
The drives utilize EtherCAT as a high-performance communication system, providing an ideal interface with PC-based control technology while supporting coupling with other fieldbus systems.

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 included 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

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.

AUTOMATION SOLUTIONS

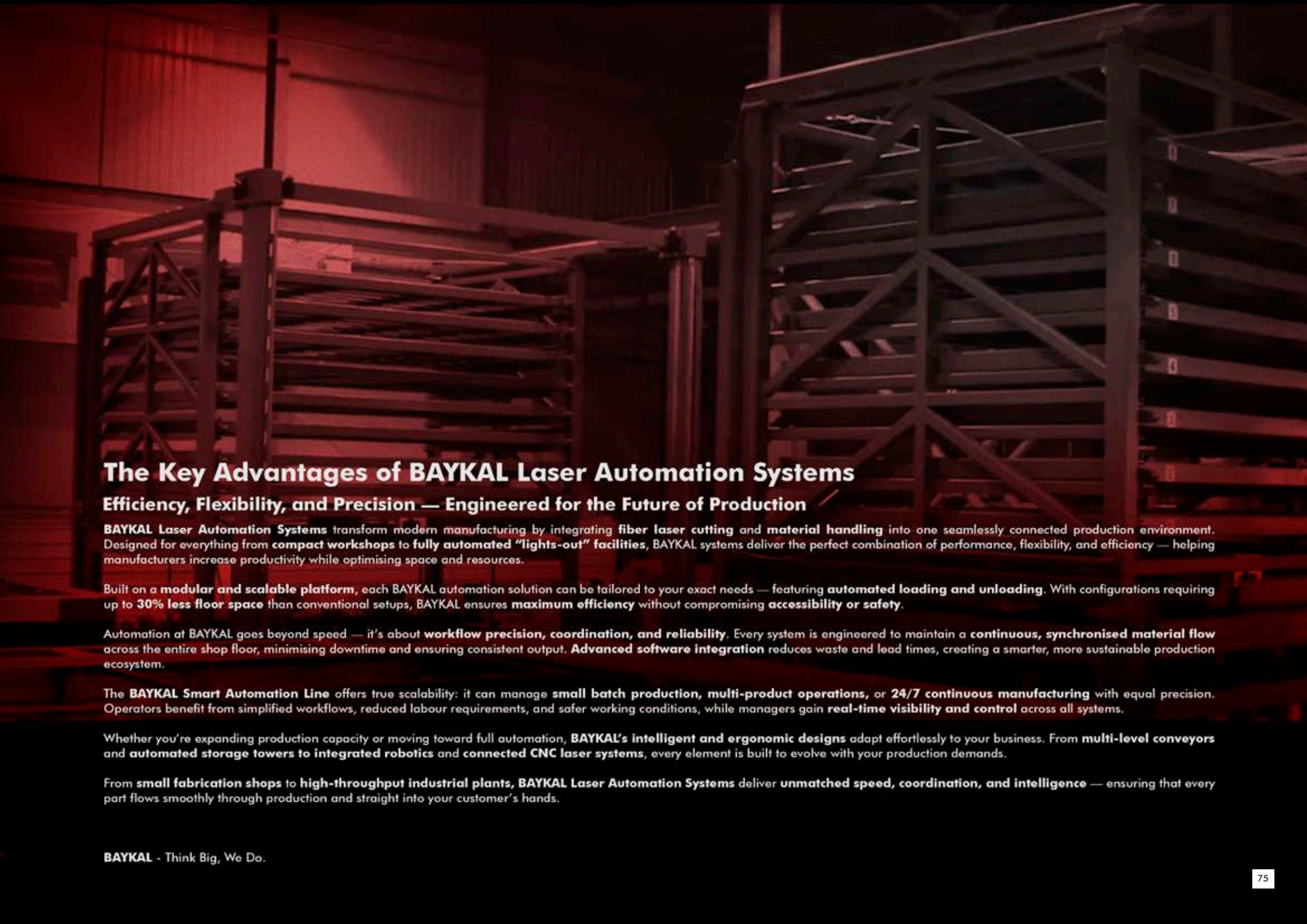
At BAYKAL, we work closely with you to develop automation solutions tailored to your production needs. Intelligent automation forms the backbone of cost-efficient manufacturing, offering transparent and highly efficient processes that free your workforce to focus on critical tasks and boost overall productivity. This not only enhances employee engagement but also strengthens your reputation as a reliable supplier. As automation and software become increasingly vital for sustainable manufacturing, the seamless interaction between machines, digital systems, and production workflows is more important than ever.

From small fabrication workshops to large-scale, lights-out facilities, BAYKAL's laser automation specialists help you configure the optimal combination of machines, storage systems, product carts, and loading/unloading stations. Our modular and scalable solutions grow with your business and improve productivity and profitability through automated part picking, sorting, material handling, and inventory management — all designed to streamline your operations and maximise output.

With a wide variety of configurations — including layouts that require up to 30% less floor space than conventional automation systems — BAYKAL ensures there is a solution for every production scenario. Whether you aim for fully unmanned production or rapid transitions to manual operation, our automation technologies empower you to achieve new levels of efficiency, flexibility, and long-term competitiveness.

BAYKAL - Think Big, We Do.





The Key Advantages of BAYKAL Laser Automation Systems

Efficiency, Flexibility, and Precision — Engineered for the Future of Production

BAYKAL Laser Automation Systems transform modern manufacturing by integrating **fiber laser cutting** and **material handling** into one seamlessly connected production environment. Designed for everything from **compact workshops** to **fully automated “lights-out” facilities**, BAYKAL systems deliver the perfect combination of performance, flexibility, and efficiency — helping manufacturers increase productivity while optimising space and resources.

Built on a **modular and scalable platform**, each BAYKAL automation solution can be tailored to your exact needs — featuring **automated loading and unloading**. With configurations requiring up to **30% less floor space** than conventional setups, BAYKAL ensures **maximum efficiency** without compromising **accessibility or safety**.

Automation at BAYKAL goes beyond speed — it's about **workflow precision, coordination, and reliability**. Every system is engineered to maintain a **continuous, synchronised material flow** across the entire shop floor, minimising downtime and ensuring consistent output. **Advanced software integration** reduces waste and lead times, creating a smarter, more sustainable production ecosystem.

The **BAYKAL Smart Automation Line** offers true scalability: it can manage **small batch production, multi-product operations, or 24/7 continuous manufacturing** with equal precision. Operators benefit from simplified workflows, reduced labour requirements, and safer working conditions, while managers gain **real-time visibility and control** across all systems.

Whether you're expanding production capacity or moving toward full automation, **BAYKAL's intelligent and ergonomic designs** adapt effortlessly to your business. From **multi-level conveyors** and **automated storage towers** to **integrated robotics** and **connected CNC laser systems**, every element is built to evolve with your production demands.

From **small fabrication shops** to **high-throughput industrial plants**, **BAYKAL Laser Automation Systems** deliver **unmatched speed, coordination, and intelligence** — ensuring that every part flows smoothly through production and straight into your customer's hands.

TOWER

Smart Storage. Maximum Throughput.

01

High-capacity sheet storage system streamlines material flow and logistics.

02

Automated retrieval boosts production speed and reduces manual handling.

03

Integrated software enables seamless communication with laser cutting systems.

04

Modular design allows scalable storage capacity as production grows.

05

Optimised material sequencing improves throughput and reduces idle time.

06

Enhances overall factory efficiency by minimising setup times and workflow interruptions.



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

COMPACT TOWER

Space-Saving Automation. Maximum Flexibility.

02

Modular structure allows easy integration into existing laser systems.

01

Space-saving automation solution ideal for smaller production areas.

04

Smart scheduling optimises material flow for continuous, high-volume production.

05

Improves machine utilisation by maintaining consistent material supply.

06

Perfect for workshops aiming to increase productivity without expanding floor space.

03

Automated sheet loading and unloading reduces cycle times and labour costs.



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.	

BAYKAL PLASMA CUTTING SYSTEMS

For over 75 years, BAYKAL Cutting Systems has been at the forefront of delivering cutting-edge technology to the global metalworking sector. We have continually developed and enhanced our machinery for both straight and bevel plasma cutting, guaranteeing superior quality, reliability, and efficiency in every stage of your cutting operations.

BAYKAL's plasma cutting solutions address the complete range of requirements across today's metal industries. Each system is built for outstanding durability, accuracy, and productivity, helping your business achieve maximum return on investment. Core features of our straight and bevel plasma cutting machines include precise, smooth-edge cutting, variable speeds and angles, and the capability to handle a broad spectrum of materials with ease and consistency.

If your operations demand a custom-engineered CNC plasma cutting solution, BAYKAL is your trusted partner. We design and manufacture bespoke plasma cutting systems tailored for industries such as automotive, construction, energy, material handling, mechanical engineering, and shipbuilding. Our advanced plasma technology is ideal for processing aluminium, stainless steel, and other metals with consistent precision — whether in fabrication plants, industrial construction projects, repair facilities, or recycling and salvage environments.

BAYKAL - Think Big, We Do.

The Key Advantages of BAYKAL Plasma Cutting Systems

Power. Precision. Performance — Engineered for Industrial Excellence.

When productivity, versatility, and cost-efficiency matter most, **BAYKAL Plasma Cutting Systems** deliver the perfect balance of **cutting power, precision control, and operational efficiency**. Combining advanced plasma technology with robust machine design, they provide reliable, high-speed performance across a wide range of materials and thicknesses — making them the preferred choice for modern fabrication environments.

BAYKAL plasma systems achieve **exceptional cutting speed and throughput**, processing parts several times faster than traditional oxyfuel methods. The precisely controlled plasma arc melts and ejects material at high velocity, ensuring **clean, consistent cuts even on thick plates**. Their **versatility across conductive metals** — including mild steel, stainless steel, aluminum, and various alloys — allows manufacturers to handle everything from thin sheets to heavy structural components with ease.

Built with **advanced CNC motion systems, torch height control (THC), and optimised gas regulation**, BAYKAL plasma machines ensure **smooth edges, narrow kerf widths, and minimal dross**, producing weld-ready parts straight off the table. Operating costs are kept low through efficient power use, long-life consumables, and intelligent nesting software that minimizes material waste — delivering **maximum productivity at minimum cost**.

Engineered for the future, BAYKAL plasma systems feature **modular, Industry 4.0-ready architectures** that integrate seamlessly with automation upgrades such as robotic loading/unloading, material storage towers, and digital production networks. For even greater flexibility, **BAYKAL's bevel cutting technology** enables angled edge preparation directly during cutting, eliminating secondary machining and saving valuable production time.

Backed by over **75 years of BAYKAL engineering excellence**, every plasma cutting machine is built to deliver long-term reliability, precision, and productivity. From small fabrication shops to high-throughput manufacturing plants, **BAYKAL Plasma Cutting Systems** redefine what's possible in sheet and plate processing — offering **speed, scalability, and smart technology** that empower manufacturers to cut faster, work smarter, and compete stronger.

BAYKAL - Think Big, We Do.

BPL H

Heavy-Duty Precision. Industrial Strength.

01

Heavy-duty construction engineered for cutting thick plates with precision.

02

High-speed plasma technology ensures clean edges and minimal post-processing.

03

Advanced CNC control delivers consistent quality across complex geometries.



04

Robust design guarantees durability and reliability in demanding environments.

05

Compatible with automation systems for enhanced material handling and throughput.

06

Ideal for shipbuilding, construction, and heavy fabrication applications.

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

01

Versatile plasma solution capable of cutting a wide range of materials.

02

Rapid setup and intuitive controls minimise downtime and training requirements.

03

Delivers high-quality cuts with excellent repeatability and edge finish.



04

Compact footprint and cost-effective design suit various production scales.

05

Optimised cutting speeds boost productivity in medium-to-heavy applications.

06

Perfect for workshops needing flexibility, precision, and reliability.

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 Linear Guides	
Feed Rate	30 m/min.	30 m/min.
Mechanical Accuracy	± 0.05 mm	± 0.05 mm
Bevel Cutting Head	Optional	Optional
Pipe & Tube Cutting Device	Optional	Optional
Multiple Plasma Torches	Optional	Optional
Fume Extractor	Optional	Optional

APPLICATIONS



■ BEVEL CUT

Capable to rotate $\pm 45^\circ$.



■ 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 tapping 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 applications. Using with manual 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™



O₂ N₂ 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™



O₂ N₂ 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™



O₂ N₂ Air Ar F5 H₂O

- 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™



O₂ N₂ Air Ar F5 H₂O H₂

- 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 hole quality 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.

PLASMA MACHINES CUTTING CAPACITIES

System/Amperage	Pierce Capacity	Severance Capacity
XPR170	40 mm (1-9/16")	60 mm (2-3/8")
MAXPRO200	50 mm (2")	75 mm (3")
XPR300	50 mm (2")	80 mm (3-1/8")
XPR460	64 mm (2-1/2")	102 mm (4")

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



BAYKAL SHEARS

Sheet metal shearing machines are essential components of modern fabrication facilities. Designed to cut plates and materials precisely to size, they deliver clean, straight edges and accurate angles with minimal material waste — forming a critical part of efficient, high-quality production processes. As sheet thicknesses and material types continue to diversify in industry, the demand for precision, speed, and repeatability in shearing technology has never been greater.

BAYKAL's hydraulic shearing systems combine exceptional build quality with cost-efficiency, offering a wide range of solutions from competitively priced standard machines to heavy-duty, fully configurable models. Built for high output, accuracy, and versatility, they are engineered to adapt to diverse production requirements — from small workshops to high-volume industrial plants. BAYKAL's cutting technology integrates advanced hydraulic systems, precision-ground blades, and optimised frame designs to ensure superior cutting performance and long service life.

BAYKAL - Think Big, We Do.

BAYKAL proudly presents...

The HNC, MGH & HGL Hydraulic Shear Series

HNC



MGH



HGL



BAYKAL proudly presents the HNC, MGH and HGL Hydraulic Shear Series—three high-performance solutions engineered to meet a wide range of sheet metal cutting requirements. The HNC Variable-Rake Guillotine Shear combines linear vertical blade motion with an adjustable rake angle to deliver exceptional precision when processing stainless steel, alloy steel and heavy plates, while the MGH and HGL Swing-Beam Shears provide fast, smooth and reliable cutting for mild steel, aluminium and medium-gauge materials.

Built with robust welded frames, precision-ground blades and advanced hydraulic systems, all three series ensure clean cuts, minimal deformation, operational efficiency and long-lasting performance across demanding production environments.

BAYKAL - Think Big, We Do.

The Perfect Cut — BAYKAL HNC, MGH & HGL Hydraulic Shears

From precision sheet cutting to heavy-plate processing — BAYKAL delivers performance, accuracy, and reliability in every stroke.

BAYKAL's advanced hydraulic shearing solutions redefine cutting precision and productivity. The **BAYKAL HNC Hydraulic Variable-Rake Guillotine Series** and the **BAYKAL MGH & HGL Hydraulic Swing-Beam Shears Series** are engineered to meet the full spectrum of industrial cutting demands — from delicate sheet metal work to heavy-duty plate fabrication. Each machine is designed with a robust welded frame, precision-ground blades, and intelligent hydraulic systems that ensure long-lasting performance, minimal deformation, and exceptional surface finish across all materials.

BAYKAL HNC Hydraulic Variable-Rake Guillotine Series

The **HNC Series** represents BAYKAL's top-tier guillotine cutting technology. Featuring a **linear vertical blade motion** with an **adjustable rake angle**, it delivers optimal cutting geometry for every material type and thickness. This precision system minimises twisting, burr, and distortion, producing clean, square cuts on **high-tensile materials** such as **stainless steel, alloy steel, and heavy plates**. CNC-controlled rake and blade gap adjustment ensure consistent performance, while the machine's rigid monoblock frame provides unmatched accuracy under full load. Ideal for high-volume, heavy-gauge production, the HNC Series combines power and intelligence for exceptional results in demanding environments.

BAYKAL MGH & HGL Hydraulic Swing-Beam Shears Series

The **BAYKAL MGH and HGL Series** are designed for speed, simplicity, and everyday reliability. Their **swing-beam cutting motion** ensures fast and smooth operation, delivering burr-free cuts for **mild steel, aluminium, and medium-gauge materials**. Built for continuous production, they feature compact hydraulic systems, durable construction, and operator-friendly controls that simplify setup and reduce maintenance. These models offer excellent cutting precision with low energy consumption — a perfect choice for workshops that value productivity, efficiency, and consistent quality.

Choose the Right Solution for Your Operation

Application Focus	Recommended Series	Material Suitability
Heavy-duty fabrication, stainless steel, thick plates	BAYKAL HNC Variable-Rake Guillotine	High-tensile and thick materials
General sheet-metal work, mild steel, aluminum	BAYKAL MGH / HGL Swing-Beam	Thin to medium-gauge sheets

Both systems reflect **BAYKAL's 75 years of engineering excellence**, delivering cutting precision, operator safety, and long-term durability. Whether you require flexible performance for light materials or robust power for thick plates, BAYKAL shearing technology ensures perfect results — every time.

BAYKAL – Think Big, We Do.

HNC Hydraulic Variable-Rake Guillotines

Precision Cuts. Superior Edges.

01

Rigid, all-steel welded frame construction and a variable-rake blade design ensure exceptional strength, precision, and cutting performance.

02

Machine functions are easily adjusted through intuitive digital control units, allowing precise operation and simplified setup for different cutting tasks.

03

Extra-deep 350 mm side frame throat gaps enable continuous strip slitting and flexible material handling across diverse sheet sizes.



04

A precision ballscrew backgauge system with retract function guarantees repeatable positioning, high accuracy, and smooth part flow.

05

Adjustable stroke length boosts productivity on shorter cuts, while the hydraulic holddown system maintains secure material clamping throughout the process.

06

Compact, low-maintenance European hydraulics with overload protection and a centralised manual lubrication system deliver long-term reliability and reduced downtime.

HNC												
TYPES	Capacity		Cutting Length	Rake Angle	Motor Output	Working Pressure	Number of Hold-downs	Strokes per Minute	Capacity of Oil Tank	Back-gauge Range	Back-gauge Motor	Approx. Weight
	≤450	≤700										
	N/mm2	N/mm2										
	mm	mm		Degree	kW	kg/cm2	Pcs.	Cuts/min	Lt	mm	Kw	kg
HNC 3106	6	4	3070	0.5°-1.5°	11	260	16	20-32	240	1000	0.37	7800
HNC 3110	10	6	3070	0.5°-2.0°	22	260	15	12-18	360	1000	0.37	11000
HNC 3113	13	8	3070	0.5°-2.5°	30	260	15	9-14	360	1000	0.37	13000
HNC 3116	16	10	3070	0.5°-3.0°	30	260	15	8-14	400	1000	0.55	16500
HNC 3120	20	13	3070	0.5°-3.0°	37	260	16	6-10	400	1000	0.55	21000
HNC 3125	25	16	3070	0.5°-3.5°	45	260	15	4-6	600	1000	0.55	23000
HNC 4106	6	4	4070	0.5°-1.5°	11	260	21	16-25	360	1000	0.55	12000
HNC 4110	10	6	4070	0.5°-2.0°	22	260	21	9-14	360	1000	0.55	15000
HNC 4113	13	8	4070	0.5°-2.5°	30	260	21	7-14	400	1000	0.55	18000
HNC 4116	16	10	4070	0.5°-3.0°	30	260	21	7-12	400	1000	0.55	23500
HNC 4120	20	13	4070	0.5°-3.0°	37	260	21	6-9	400	1000	0.55	26000
HNC 6106	6	4	6070	0.5°-2.0°	18.5	260	30	12-18	360	1000	0.55	22000
HNC 6110	10	6	6070	0.5°-2.0°	22	260	30	6-10	400	1000	0.55	30000
HNC 6113	13	8	6070	0.5°-2.5°	30	260	30	6-10	400	1000	0.75	38000
HNC 6116	16	10	6070	0.5°-3.0°	37	260	30	5-9	400	1000	0.75	43000
HNC 6120	20	13	6070	0.5°-3.0°	37	260	30	5-9	600	1000	0.75	48000

Design and specifications are subject to change without notice

MGH Hydraulic Swing-Beam Shears

Heavy-Duty Cutting. Proven Reliability.

01

A welded all-steel frame provides maximum rigidity and cutting accuracy, ensuring long-term structural stability and reliable performance.

02

The swinging top beam operates on high-precision, self-aligning roller bearings, delivering smooth, consistent cuts and extended blade life.

03

Rapid blade gap adjustment and fine-tuning from the lower beam enable quick setup changes and precision cutting across various material thicknesses.



04

A swing-up backgauge system with retract function allows shearing of longer pieces beyond the standard range while maintaining high accuracy and repeatability.

05

Adjustable stroke length increases stroke frequency on shorter cuts, while a 250 mm throat gap enables continuous strip slitting for higher throughput.

06

A compact, low-maintenance hydraulic unit with easily serviceable series-connected cylinders, hold-down system, and overload protection ensures dependable operation and simplified maintenance.

MGH											
TYPES	Capacity		Cutting Length	Rake Angle	Motor Output	Number of Hold-Downs	Stroke per Minute	Oil Tank Capacity	Back-Gauge Range	Back-Gauge Motor	Approx. Weight
	≤ 450	≤ 700									
	N/mm2	N/mm2									
	mm	mm		Degree	kW	Pcs.	Cuts/min.	Lt	mm	Kw	kg
MGH 3106	6	4	3060	1.5°	11	15	8	170	1000	0.37	7000
MGH 3110	10	6	3060	2.0°	22	17	12	170	1000	0.37	9200
MGH 3113	13	8	3060	2.4°	30	17	12	220	1000	0.37	11500
MGH 3116	16	10	3060	2.7°	30	17	7	220	1000	0.55	15500
MGH 3120	20	13	3060	3.0°	37	18	7	280	1000	0.55	19600
MGH 4110	10	6	4060	2.0°	22	23	10	170	1000	0.37	13000
MGH 4113	13	8	4060	2.2°	30	23	8	220	1000	0.37	16100

Design and specifications are subject to change without notice

HGL Hydraulic Swing-Beam Shears

Precision and Power. Every Day.

01

A welded all-steel frame and box-type top beam and worktable construction ensure maximum rigidity, structural stability, and long-term cutting accuracy.

02

The swinging top beam operates on high-precision, self-aligning roller bearings, delivering smooth, reliable cuts and extended blade life.

03

Rapid blade gap adjustment and a fine blade adjustment system allow quick setup and precise cutting across a wide range of material thicknesses.



04

A swing-up backgauge system with retract function enables the shearing of longer pieces beyond the standard range while maintaining consistent precision.

05

Adjustable stroke length increases stroke frequency for shorter cuts, maximising productivity and throughput in high-volume operations.

06

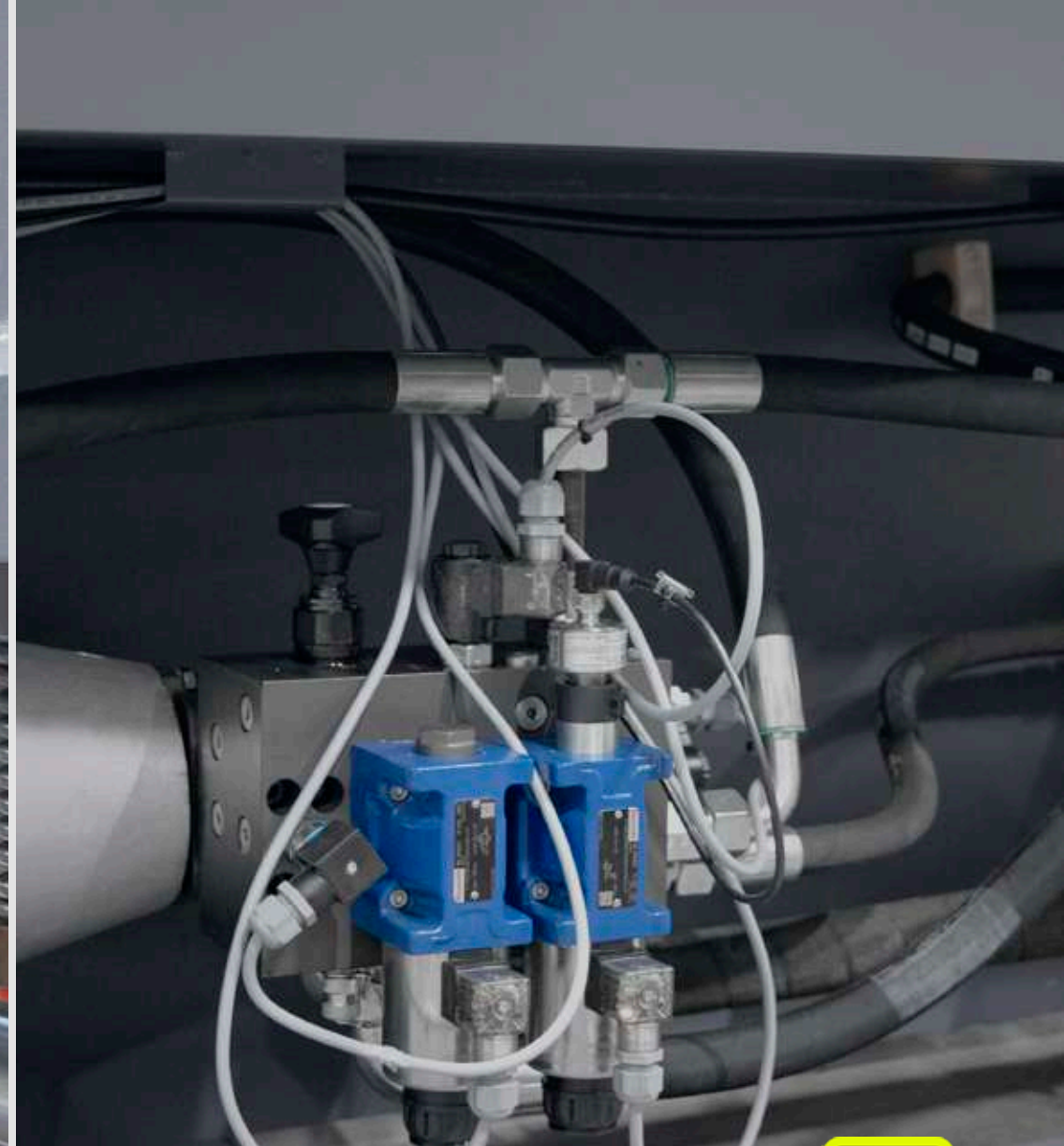
A compact, low-maintenance hydraulic unit with easily serviceable cylinders, an integrated holddown system, and overload protection ensures dependable operation and simplified maintenance.

HGL											
TYPES	Capacity		Cutting Length	Rake Angle	Motor Output	Number of Hold-downs	Strokes per Minute	Capacity of Oil Tank	Back-gauge Range	Back-gauge Motor	Approx. Weight
	≤450	≤700									
	N/mm2	N/mm2									
	mm	mm									
HGL 2606	6	4	2560	1.6°	11	15	24	160	750	0.37	4700
HGL 3106	6	4	3060	1.6°	11	17	20	160	750	0.37	5500
HGL 3108	8	5	3060	1.8°	15	17	13	160	750	0.37	6450
HGL 4106	6	4	4060	1.2°	11	23	12	160	750	0.37	9400



PRECISION

Hydraulic holddown system.



HYDRAULIC SYSTEM

Compact, low-maintenance hydraulic unit

CONTROL UNIT



CYBELEC CYBTOUCH
Standard for
MGH and HGL

Cybelec CybTouch control unit is specifically designed for sheet-metal cutting, particularly for swing beam shears.

With its vivid color touch screen and a high integration of functions, it was designed so that anybody could start using it right away.



CYBELEC CYBTOUCH
Standard for HNC

Cybelec CybTouch control is a multi-axes control for high level automatic shears. It manages up to 2 back gauges axes and 2 front gauges axes, as well as the angle and cutting length using potentiometers, linear encoders or a timer. Additionally the CybTouch handle full sheet supports, 2 or 3 positions cycles and many other shears features as Return to sender function.



SIEMENS MTP 1000
Optional for HNC

Performance level control unit with 10.1" touch screen and algorithms to make the most of the machines in all applications brings efficiency for your applications. It is now available for HNC as an option.



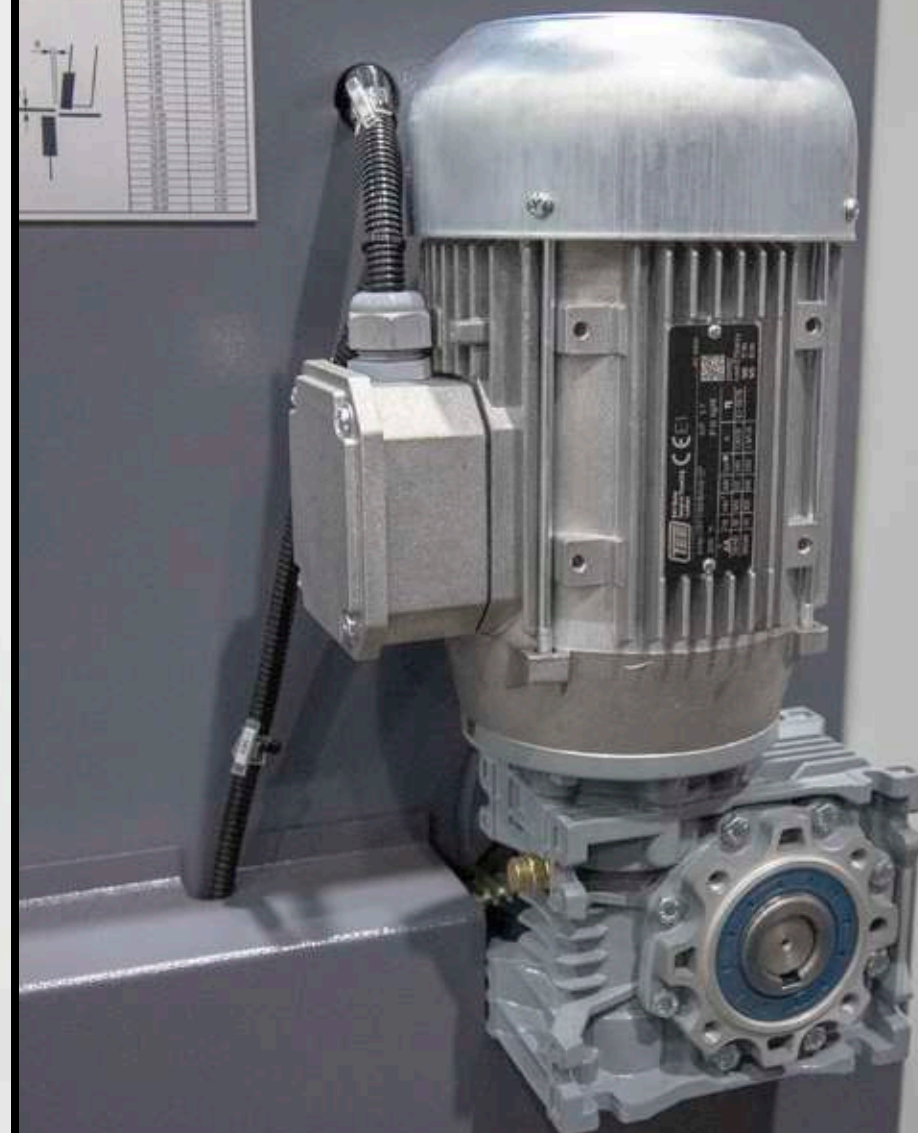
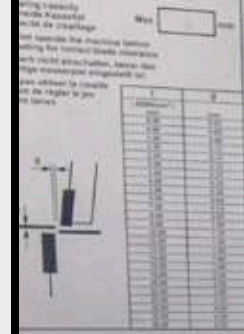
BLADE GAP ADJUSTMENT

Rapid blade gap adjustment mechanism



MANUAL BLADE GAP ADJUSTMENT

Standard for MGH and HGL



MOTORISED BLADE GAP ADJUSTMENT

Optional for MGH and HGL

+ MOTORIZED FRONT FEEDING SYSTEM (OPTIONAL)



+ SCRAP SEPARATOR AND CONVEYOR SYSTEM (OPTIONAL)





SQUARING AND FRONT ARMS

1000mm Squaring arm with T-Slot, Scale and Flip Stop for HNC, MGH and HGL. Front support arm with T-Slot, Scale and Flip Stop is standard for HNC and optional for MGH and HGL.



THROAT GAP

**350mm standard for HNC, 250mm standard for MGH,
500mm optional for HNC and MGH**

FRONT & REAR SAFETY



FIXED FINGER GUARD

Standard for HNC, MGH and HGL



FINGER GUARD WITH LIGHT BARRIER

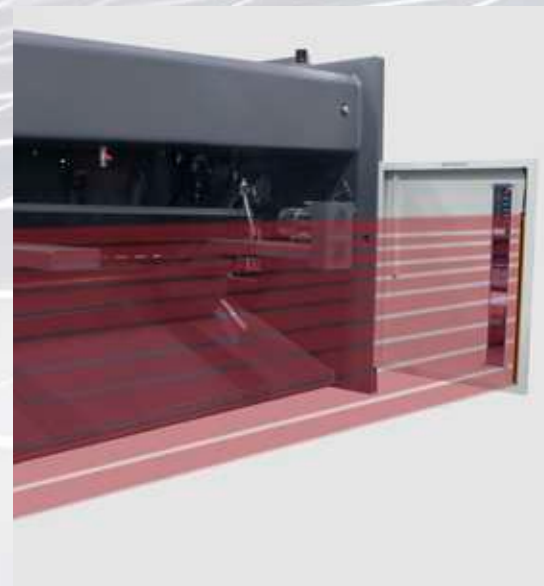
Optional for HNC, MGH and HGL



1000MM LIFT-UP FRONT FINGER GUARD

with electrically interlocked safety switch

Optional for HNC , MGH and HGL



REAR LIGHT BARRIER

BACKGAUGE



MOTORIZED SWING-UP BACKGAUGE

L=750mm
(Standard for HGL)
L=1000mm
(Standard for MGH)
(Optional for HGL)



MECHANICAL SWING-UP BACKGAUGE

L=1000 mm
(Standard for HNC)
(Optional for HNC 3000mm and 4000mm)



HYDRAULIC SWING-UP BACKGAUGE

L=1000mm
(Optional for HNC)

PNEUMATIC SHEET SUPPORT (OPTIONAL)

D TYPE HEAVY DUTY PNEUMATIC SHEET SUPPORT SYSTEM



Option for Guillotine Shears (HNC, MGH)
between 13mm to 20mm (MS)

Pneumatic sheet support consists of roller support arms mounted on a shaft. These support arms are 900 mm in length starting from the lower blade. The support arms, which are moved by the pneumatic cylinder, are in the upper position before cutting and they prevent the sheet to be cut from sagging. When the cutting is started, the support arms move downwards and since the support arms are jointly connected, they are constantly in contact with the cut sheet. At the end of the cut, the support arms, which become parallel with the ramp sheets, allow the cut sheet to slide more easily and fall behind the machine. Pneumatic sheet support system is completely controlled from the control panel. Pneumatic sheet support system is activated or deactivated with the On-Of control button.

PNEUMATIC SHEET SUPPORT (OPTIONAL)

A TYPE PNEUMATIC SHEET SUPPORT SYSTEM



Option for Guillotine Shears (HNC, MGH and HGL) until cutting capacity 13mm (MS)

Pneumatic sheet support consists of roller support arms mounted on a shaft. These support arms start 200mm from the lower blade and their length is 300 mm. The support arms, which are moved by the pneumatic cylinder, are in the upper position before cutting and they prevent the sheet to be cut from sagging. When cutting is started, the support arms move down. At the end of the cut, the support arms, which become parallel with the ramp sheets, allow the cut sheet to slide more easily and fall behind the machine. Pneumatic does not support parts smaller than 200mm. Pneumatic sheet support system is completely controlled from the control panel. Pneumatic sheet support system is activated or deactivated with the On-Of control button.

PNEUMATIC SHEET SUPPORT (OPTIONAL)

U TYPE UNIVERSAL PNEUMATIC SHEET SUPPORT SYSTEM



- With Transfer Balls
 - With Brushes
 - With Roller
- Option for Guillotine Shears (HNC, MGH and HGL)
until cutting capacity 13mm (MS)

U type Pneumatic sheet support system has two operating modes:

1st mode - It is used in thin sheet metal cutting to prevent sagging of the sheets and to be cut in precise dimensions. Pneumatic sheet support system works in 2 stages. In sheet metal cutting (while the upper jaw moves down) Pneumatic sheet support shifts from idle position to top position. After the cut is finished (while the upper jaw moves up), the pneumatic sheet support moves downward and allows the cut sheet to slide down. Cutting strip narrower than 35 mm is not recommended in this mode.

2. Mode - In this mode, the Pneumatic sheet support switches from idle position to top position, and after the cutting is finished, it switches back to first position. In this case, the cut sheet remains on the pneumatic support and by moving the back gauge forward, it is possible to take the cut sheet from the front. It is recommended that the cut length of the cut sheet should be up to 500 and the width should be min 50 mm. For longer lengths, when the cut sheet is on the pneumatic sheet support, the sheet cut at first position should not hang between the pneumatic support arms, otherwise it may rest on the lower blade while pushing it forward.

OPTIONS



ANTI TWIST SYSTEM OPTIONAL FOR HNC

Anti-Twist system prevents cutting sheet material from twisting in narrow and strip cuttings by holding straight during the cutting process against to blade movements.



DRAWER FOR SMALL PIECES

Enable to take small cut parts from the front easily.

Optional for HNC, MGH, HGL



LASER CUTTING LINE

Enable to see clearly the cutting point

Optional for HNC, MGH, HGL



SHADOW LINE

Standard for MGH, HNC, HGL

OPTIONS



ANGLE GAUGE

Optional for HNC , MGH and HGL

This device provides accurate and easy material handling in the angled cuttings.



RTS FUNCTION

Standard for U type pneumatic sheet support system

Precisely cut plate via the assistance of U type pneumatic sheet support system at the rear is being returned to the front of the machine by this system.



Baykal

Think Big, We Do.

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   / BaykalMachinery

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