

XPH Hydraulic Press Brake

The Morgan Rushworth XPH range of hybrid press brakes are designed with an individual electro-hydraulic servo drive system for each of the left and right cylinders. With this system the hydraulics run on demand when the foot pedal is activated, rather than having a pump running continuously. This results in lower energy usage than a standard hydraulic machine as well as faster cycle times and extremely high accuracy.

All models are fitted with the ESA VIS-875W CNC control featuring a 21" touch screen and both numerical and 2D graphical program entry. These machines follow a rigorous design and manufacturing process to ensure minimum deflection of the machine frame under maximum working pressure. AKAS laser tooling guards are standard and offer a vastly improved operator experience without compromising safety.

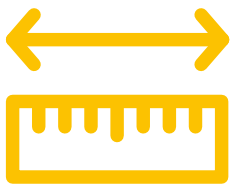
A comprehensive range of options are available to fully tailor the machine to requirements including 6-axis or 8-axis configurations.



FEATURES & BENEFITS



**110 TO 300
TONNE
CAPACITY**



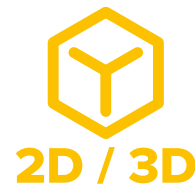
**3100 TO 4100MM
BENDING
LENGTHS**



**SECTIONALISED
EURO STYLE
TOP TOOL**



**MULTI VEE
EURO STYLE
BOTTOM DIE**



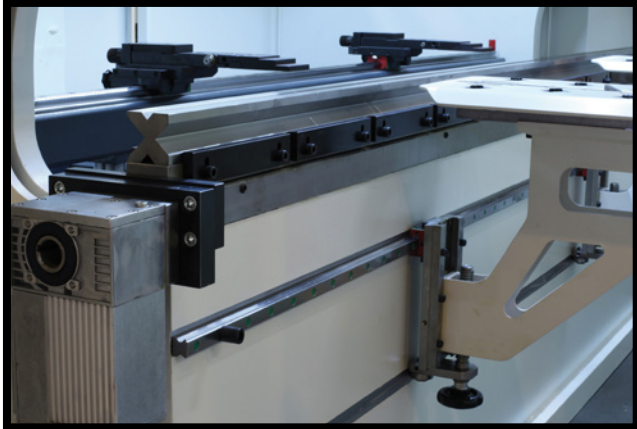
**2D OR
3D PROGRAM
ENTRY**



**4 TO
8-AXIS CNC
CONTROL**



ESA VIS-875W CNC Control



CNC Crowning



Foot Pedal Control



Front Arms with Brushes (Standard)

Machine Features

- Approximately 60% less energy use when idle
- Approximately 45% less energy use during bending
- Approximately 30% faster cycle times
- ESA VIS-875W multi-axis CNC control with numerical and 2D graphical programming and 2D or 3D visualisation
- Control mounted on height adjustable pendant arm
- Fully synchronised CNC control of left and right upper beam cylinder position – Y1 + Y2 axis
- CNC control of back gauge depth – X axis
- CNC control of back gauge height – R axis
- Manual side to side movement of back gauge fingers – Z axis
- Euro style top tool holders with intermediates
- Sectionalised goose neck top tool and multi vee bottom die
- CNC bottom tool crowning system
- AKAS laser tooling guards for enhanced ease of use

Optional Equipment

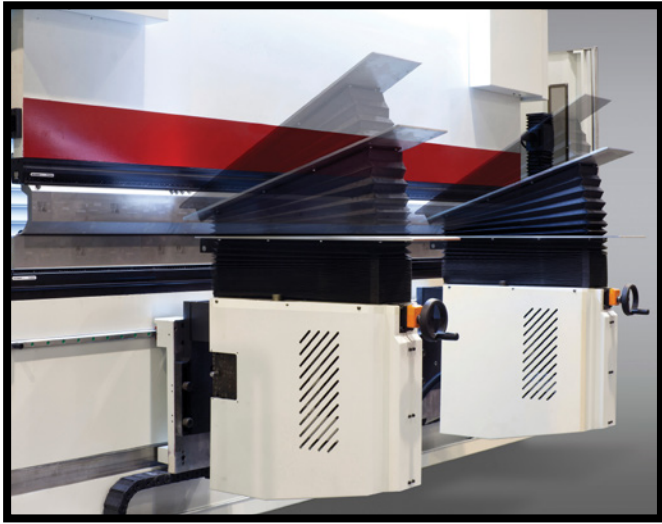
- Optional off line ESA Bend 3D Software with Control Viewer
- Independent CNC control of side to side movement of back gauge fingers – Z1 + Z2 axis
- Independent CNC tower back gauge system – X1 + R1 + Z1, X2 + R2 + Z2
- Laser angle measurement system with live feedback to CNC control
- Quick release top tool clamping system
- Hydraulic top and bottom tool clamping system
- Additional back gauge fingers
- Additional front support arms
- CNC sheet follower support arms
- Parking area for sheet follower support arms – one per side



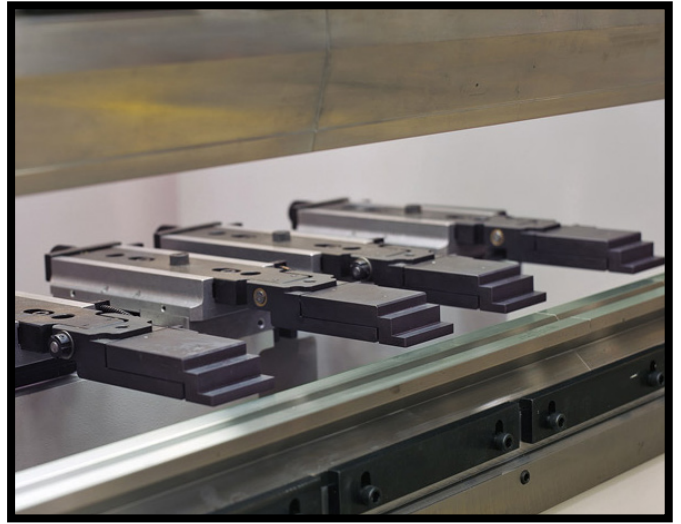
AKAS Light Guards



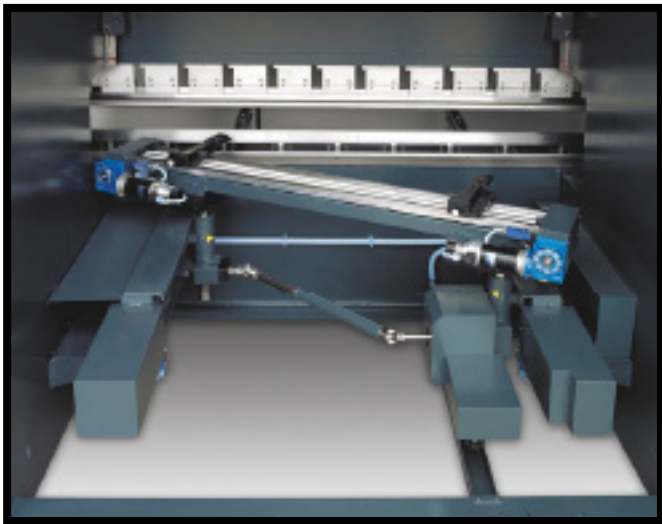
Hydraulic Tool Clamping (Optional)



Sheet Follower Support Arms
(Optional)



Additional Backgauge Fingers
(Optional)



X1+X2, R1+R2, Z1+Z2 CNC Backgauge
(Optional)



Independent Tower Backgauge
(Optional)



WILA Hydraulic Tool Clamping or Roller
Clamping Systems (Optional)



DELEM DA69T
CNC CONTROL
(OPTIONAL)

DELEM DA66T
CONTROL
(OPTIONAL)



Why a Hybrid Press Brake?

60% Energy Saving



To reduce electrical consumption and heat, the pump motor is active only when the machine is working.

40% Faster



Compared with standard hydraulic press brakes, Hybrids can easily reach 200 mm/s movement speeds.

Environmental



60 % less energy and oil consumption in average compared to the Standard Hydraulic Press Brakes.

Silent Working (63 db)



As servo motor and pump assembled inside the tank with compact design of hydraulic system, 13% more silent work achieved.

Hybrid - Key Benefits

- Improved productivity up to 30%.
- Improved energy efficiency up to 60%.
- Reduced tank volume, approx. 60% less.
- Minimum risk of leakage.
- Cost Effective
- High Precision
- "0" Zero hydraulic assembly work.
- Closed cycle: "0" maintenance cost.

Energy Saving of up to 60%

A standard hydraulic system pump motor is working continuously, but at hybrid system servo motor is working only when it is necessary.

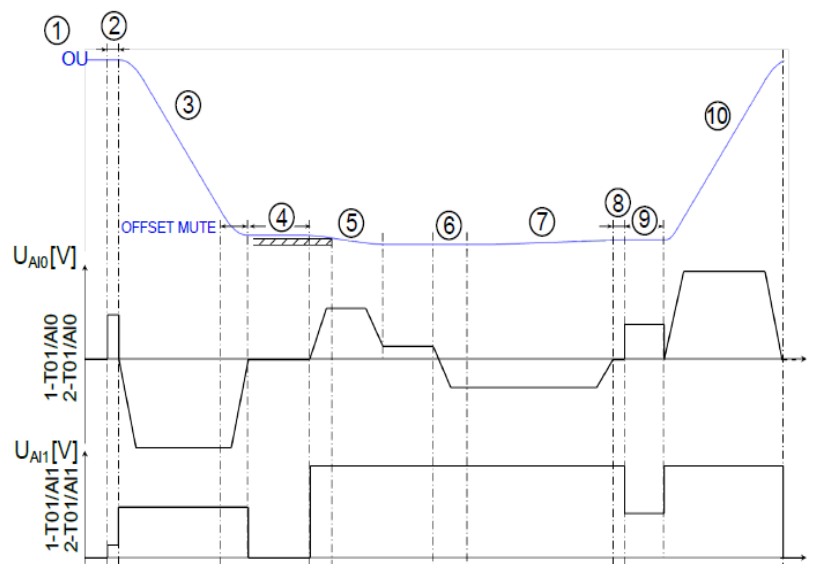
By preparation of material process and adjustment time of the mechanical parts on the machine, servo motor stops and unnecessary consumption is prevented.

Furthermore with a compact hydraulic design and accumulator, unnecessary high speed and circulation are prevented which increases efficiency.

Especially at the stages shown in the graphic here.

- 6 - bending
- 7 - forming
- 8 - decompression
- 9 - preparation
- 10 - return back

Energy saved at each of these stages.



Fast and Precise

Fast descent and return back speeds are 40% faster than standard hydraulic press brake.

**Up to 40%
Faster**

Approach speed is 150 mm/s on 200 tons hydraulic press brakes and this will reach up to 200 mm/s on hybrid press brakes.

Furthermore at robotic applications, bending speed can be increased approximately 100% with bending speed of 20 mm/sec. with the advantage of servo motors.

Easy Maintenance and Assembly

With easy to reach valves and components at compact design hydraulic unit, maintenance is much more easier and faster.

Environmental

The capacity of total oil usage is approximately 80lt. Oil tank capacity is 210 litres on 200 tons standard hydraulic press brakes. Due to the reduced piping system on hybrid press brakes, oil consumption cost decreases around 70% depending on oil usage life time and amount.

**Up to 60% More
Environmentally
Friendly**

No heating problem

As Oil cycle path and speed decreased, oil heating problem resolved and oil lifetime increased.

Repeatability with Servo motor system

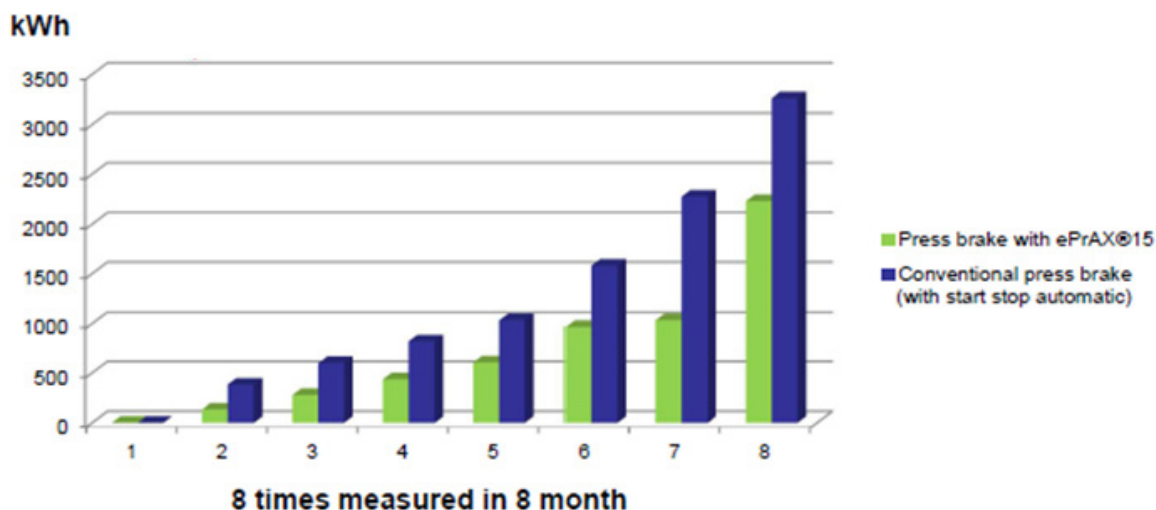
With servo motor and compact hydraulic system, precision and repeatability achieved as 0.01.

Consumption: kWh

(Measured by Hawe at End User's Premises)

	Strokes	working h	kWh
Press brake with ePrAX®15	154,511	2,352	1,325
Conventional press brake	149,086	3,266	3,158
	+ 5,425	- 914	- 1,833

ePrAX15 needs only 1,325 kWh for all 154,511 strokes. The conventional press brake needs 3,266 kWh for all 149,086 strokes.



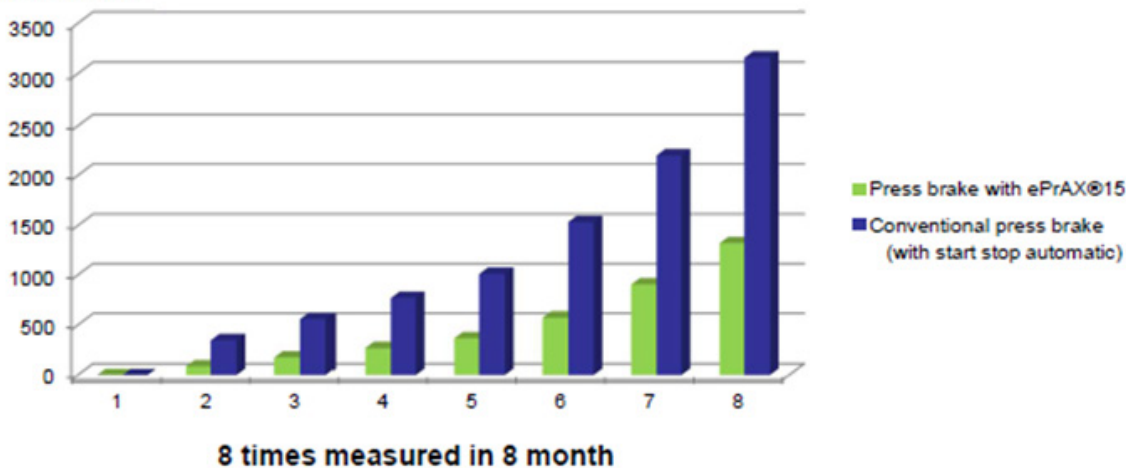
Consumption: kWh / Stroke

(Measured by Hawe at End User's Premises)

	Strokes	working h	kWh	kWh/stroke
Press brake with ePrAX®15	154,511	2,352	1,325	0.0080
Conventional press brake	149,086	3,266	3,158	0.0201
	+ 5,425	- 914	- 1,833	- 0.0124

ePrAX15 needs only 0.0080 kWh for each stroke. The conventional press brake needs 0.0201 kWh average for each stroke.

kWh / stroke



ePRAX control 15 SERIES

For 100-120 Tonnes Hybrid Press Brakes



ePRAX control 19 SERIES

For 160-200-240-300 Tonnes Hybrid Press Brakes

ePRAX control

Features:

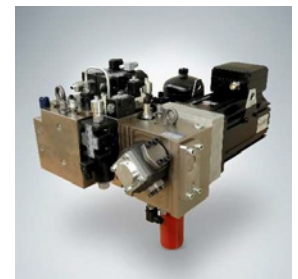
- Control of volume flow and pressure via servo drive
- Compact servo hydraulic power unit incl. tank
- Direct mounted to the cylinder body
- Customised cylinder (in charge of customer)
- Two sizes available (22.5 l/min, 36.5 l/min)
- No external pipes hoses

Customer Benefits:

- Plug & Run Solution
- Compact
- Free of piping

ePRAX modular

For 240-300-440-600 Tonnes Hybrid Press Brakes



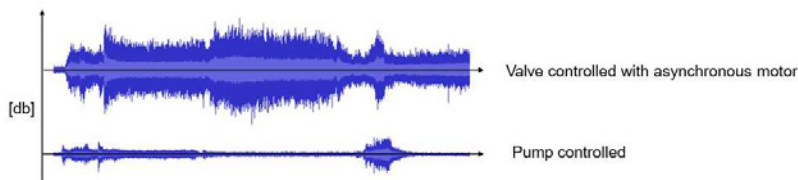
ePRAX modular

Features:

- Control of volume flow and pressure via servo drive
- Customised cylinder (in charge of customer)
- Modular design brings more flexibility
- Cylinder control block in two sizes available (CM050 and CM063)
- Servomotor pump unit in 6 sizes available
- Customer motor can easily get adapted
- Optional module for angle controlled bending and step bending available
- Tank is optional

Customer Benefits:

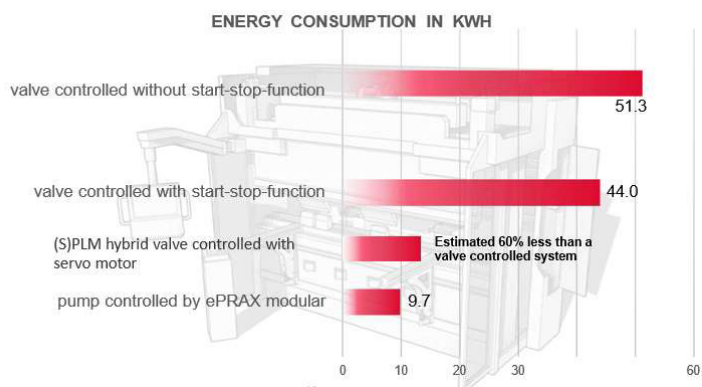
- Flexible in regards of servo motor brand and cylinder
- Same flange as MACB
- Lower installation height
- High dynamic angle controlled bending / step bending



Benefits of Pump Speed Controlled CNC Press Brake Systems

Up to 81% Energy Savings

No Oil Cooler Necessary!



TECHNICAL SPECIFICATIONS

MODEL	STOCK CODE	Bending Power Tonne	Bending Length A mm	Distance Between Column B mm	Y Rapid Speed mm/sec	Y Working Speed mm/sec	Y Return Speed mm/sec	Travel in X Axis mm	Speed of X Axis mm/sec	Travel in R Axis mm	Speed of R Axis mm/sec	Number of Backgauge Fingers	Number of Sheet Support Arms	Oil Tank Capacity Litre	Motor Power kW	Stroke C mm	Daylight D mm	Throat Depth E mm	Table Height F mm	Table Width G mm	Length L mm	Width W mm	Height H mm	Weight kg
XPH 3100/110	M5340	110	3100	2550	200	10	200	750	350	160	240	2	2	2 x 34.5	2 x 6.0	260	540	410	880	60	4,850	2,790	2,905	8,400
XPH 3100/150	M5341	150	3100	2550	200	10	200	750	350	160	240	2	2	2 x 55	2 x 9.2	260	540	410	880	60	4,850	2,800	2,905	9,700
XPH 3100/190	M5342	190	3100	2550	200	10	200	750	350	160	240	2	2	2 x 55	2 x 9.2	260	540	410	880	60	4,850	2,800	2,905	10,000
XPH 3100/240	M5343	240	3100	2550	160	8	160	750	350	160	240	2	2	2 x 55	2 x 9.2	260	530	410	880	90	4,850	2,810	2,905	11,000
XPH 3100/300	M5344	300	3100	2550	140	7	140	750	350	160	240	2	2	2 x 55	2 x 9.2	320	660	410	905	380	4,850	3,015	3,150	15,000
XPH 4100/150	M5349	150	4100	3550	200	10	200	750	350	160	240	4	4	2 x 55	2 x 9.2	260	530	410	880	60	5,850	2,800	2,905	12,000
XPH 4100/190	M5350	190	4100	3550	200	10	200	750	350	160	240	4	4	2 x 55	2 x 9.2	260	530	410	880	90	5,850	2,800	2,905	12,500
XPH 4100/240	M5351	240	4100	3550	160	8	160	750	350	160	240	4	4	2 x 55	2 x 9.2	260	530	410	880	90	5,850	2,810	2,905	14,000
XPH 4100/300	M5352	300	4100	3550	140	7	140	750	350	160	240	4	4	2 x 55	2 x 9.2	320	635	410	980	280	5,850	3,020	3,200	17,500

