FINN-POWER

- PUNCHING
- LASER CUTTING
- **BENDING**
- INTEGRATED PUNCHING & SHEARING
- INTEGRATED PUNCHING & LASER CUTTING
- FLEXIBLE MANUFACTURING SYSTEMS

Energy in Efficient Use®

E-BRAKE B
35 - 100 TONS

SERVO ELECTRIC BENDING TECHNOLOGY BY FINN-POWER

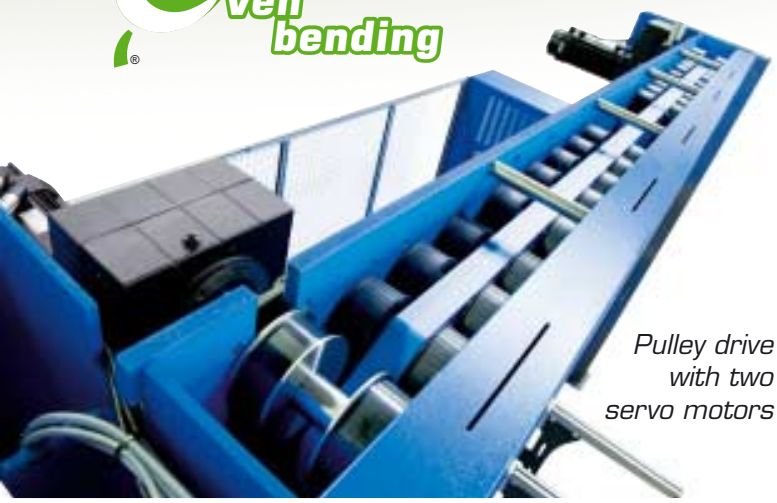
Model	Press tonnage (t)	Bending length (mm)
E35-1250 B	35	1250
E50-2050 B	50	2050
E80-2550 B	80	2550
E100-3100 B	100	3100

***FINN-POWER** is continually driven to seek new, more efficient solutions based on E-technology. This has resulted in a new generation of **FINN-POWER** E-Brake.*

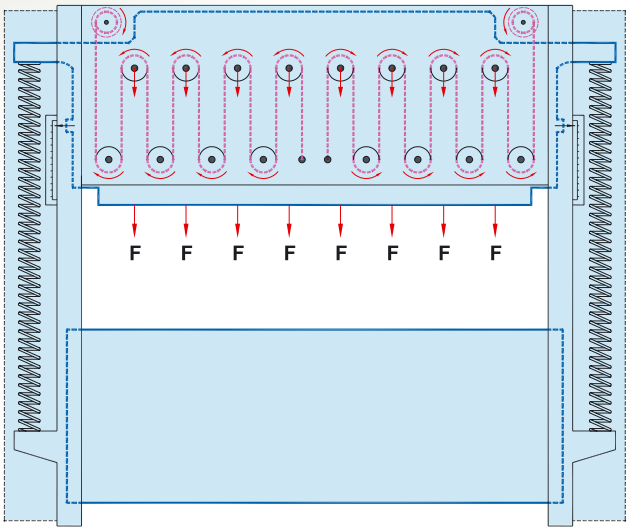
*The second generation of **FINN-POWER** E-Brake adds important new advantages to an already worldwide proven E-Brake technology. The E-Brake construction is based on a modular concept ensuring high flexibility in machine configuration. The new design and the back gauge construction of the whole machine range is now in line with the concept applied in the heaviest 150t and 200t E-Brakes.*

Along with the second generation of E-Brakes comes also the E-Brake B. It is a competitively priced basic version that brings E-Brake technology to everyone's reach. The E-Brake B product and option range are a result of the customer requests most often made. The choice is impressive although limited in comparison with the standard Finn-Power E-Brake range which offers in addition a number of advanced options. By keeping the design more 'basic' Finn-Power has succeeded in offering a technically superior press brake at an attractive price.

UNIQUE TECHNOLOGY



Pulley drive with two servo motors



Highly equal force distribution

Power belt force transmission

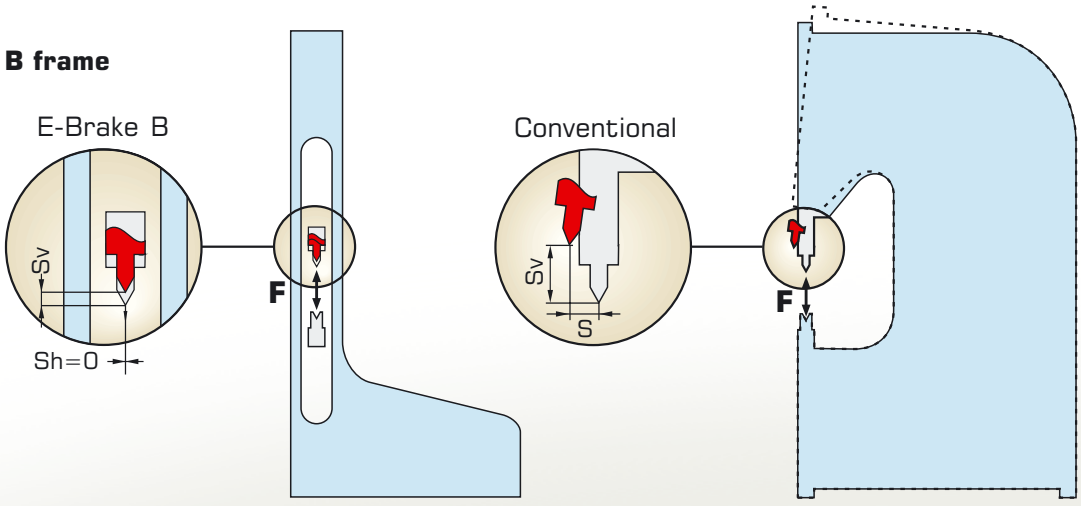
The patented power belt system distributes the bending force over the whole bending length. The system consists of fixed and moving rolls spread out over the total working length of the upper beam. The entire force is transmitted trough tension so that no friction effect neither teeth on the belt are needed. Simple and reliable. Servomotor drives guarantee high productivity through high dynamics and reliability. The absence of oil and the low energy use are further advantages.

5 year warranty

The flexible belts are reinforced with steel wires and coated with hard polyurethane. The technology is so reliable that FINN-POWER offers a 5 year warranty on the mechanical drive system, when combined with an annual service contract.

The FINN-POWER E-Brake B also contributes to the even absorption of big forces. The O-frame acts as a single unit and deformation is kept to an absolute minimum. It is more stable, stronger and produces less deformation than a conventional C-frame.

Stable E-Brake B frame



Angle measurement

Outstanding precision is one of the most characteristic features of the Finn-Power Press Brakes. However, variations in sheet metal material can negatively affect the work piece quality. With real time angle measurement systems of Finn-Power a constant production quality can be reached even under circumstances where material thickness varies.

E-Bend S

The most common reason for angle deviation is deviation of sheet thickness. E-Bend S is a thickness measurement system mounted next to the back gauge finger. It measures thickness, feeds it into the TS control and the ram penetration is calculated according to the real value. E-Bend S is reliable and fast; the measuring cycle takes only 2.5 s.

E-Bend S is integrated into the left back gauge finger.

E-Bend S measuring cycle takes only 2.5 s.

Extended gauging possibilities

Innovative back gauge solution

Due to O-frame construction the back gauge system can be used effectively over the whole bending length. It consists of a sturdy beam, controlled by a servomotor and attached to the machine side frames by means of rigid supports. The application of play-free ball screw and guiding technology with digital linear measuring system gives the X-axis high accuracy at high speed.

The best solution to meet your manufacturing requirements can be chosen from a wide range of back gauge variations. CNC controlled X- and R-axis are standard features of the machine and Z-axis can be manually adjustable or CNC-controlled.

Top to bottom: Hinged back gauge, BG 4

Various interchangeable back gauge stops.

State-of-the-art control and programming

FINN-POWER E-Brake B features a Windows based touch screen control. The on-board electronics communicate through CAN-BUS and Ethernet connection is a standard accessory to be used for external program storing, back-ups etc.

TS1 control

TS1 is a numerical control which has been developed aiming to ease of use. It contains a ***material database*** of products, tools and bend results with different material–tool combinations to generate new programs.

Icons and push buttons on the touch screen are big, and only those buttons are visible that are needed during each programming task.

All this makes the Finn-Power TS1 control easy to learn, fast to program and assures accurate bending results.

TS1

Easy-2D

Easy 2D is a graphical user interface. It enables the drawing of simple 2D drawings, generating of programs and bending simulation.

TS2 control

TS2 is an add-on module to TS1. It enables to visualize graphically programs made with off-line programming (Autopol).

ease of programming

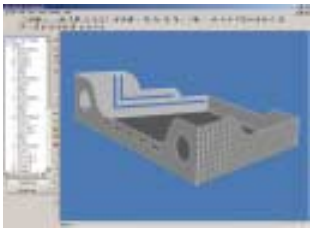
Off-line programming

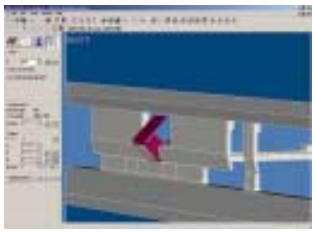
AutoPOL is an easy-to-use and effective tool for off-line programming of FINN-POWER E-Brakes. Sophisticated bending simulation makes it possible to shorten set-up times and to ensure the feasibility of the products already in the office.

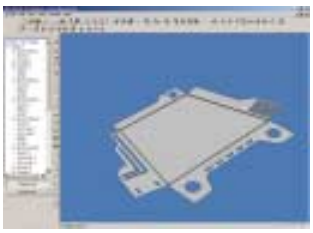
3-D models can be created with AutoPOL's designer program or they can be imported from practically any CAD program. AutoPOL's bend allowance algorithm takes into account also bending tools to obtain correct radii and thus correct unfolding dimensions. The 2D unfold pattern can be exported as a DXF file to be used in programming punching and cutting machines.

AutoPOL includes ***3-D Designer*** for designing of sheet metal parts, ***Unfolder*** for automatic flat part calculation and ***Bend Simulator*** for graphical programming and simulation.

3-D Designer







Integrated safety

Finn-Power E-Brake B is equipped with an intelligent safety light guard. Fast approaching speed can thus be used and the productivity is raised – fulfilling the CE safety regulations.

The safety system of FINN-POWER E-Brake B is integrated within the control and the light beam mode can be programmed individually for each bend. The unique possibility of running the E-Brake B in one-tact or two-tact mode results in many cases to even higher production than with press brakes without safety features.

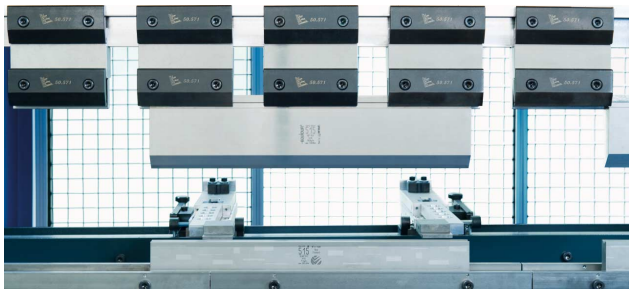
In addition, the E-Brake B has another built-in safety provision; in the case of an emergency stop the application of the spring-return system always runs the top beam upwards.

Spring return system for maximum safety in case of emergency stop.

effective safety systems

E-Brake B is equipped with active light guard system

Easy access to maintenance with rear safety door



E-Brake B comes with European style tooling system and the beam is segmented by 100 mm heigh intermediates. Mechanical clamping bars are equipped with safety adaptation.

Ergonomics: support arms for workpieces

For heavy-duty sheet metal work, a series of multi-purpose support units has been developed. They are all fitted with brushes to eliminate scratches onto components. Thanks to the modular design there is a support arm for every situation:

- Movable arms across machine width
- Height adjustable
- Fitted with brushes
- Fine adjustable front stops
- Suitable for use with safety light guard

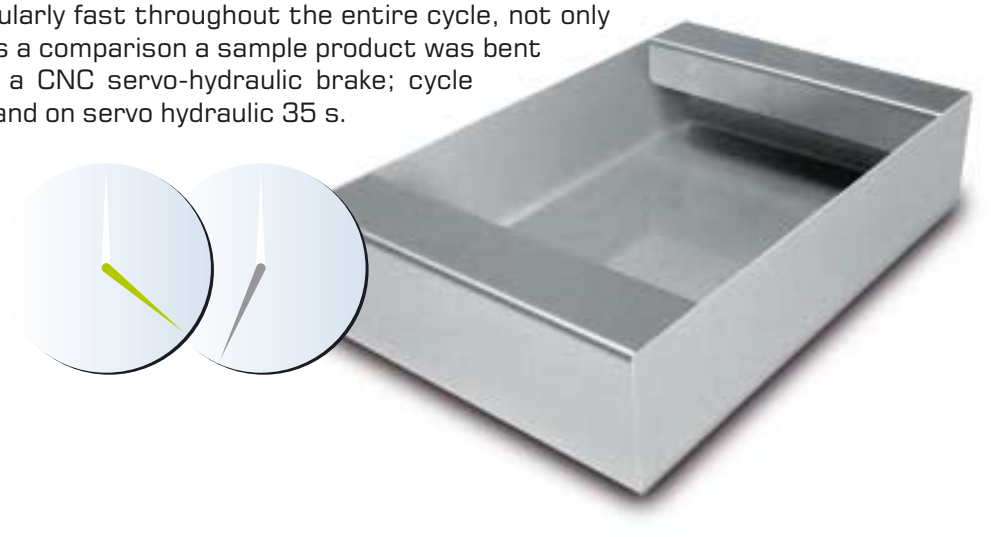
ergonomical working

Aluminium front support is adjustable on linear guides.

Height adjustment with hand wheel.

Maximum productivity

The E-Brake B is further optimised to take maximum advantage of the high acceleration and other sophisticated servo-motor characteristics. For this reason, E-Brake B is particularly fast throughout the entire cycle, not only in the rapid approach. As a comparison a sample product was bent on a E-Brake B and on a CNC servo-hydraulic brake; cycle time on E-Brake B 22 s and on servo hydraulic 35 s.



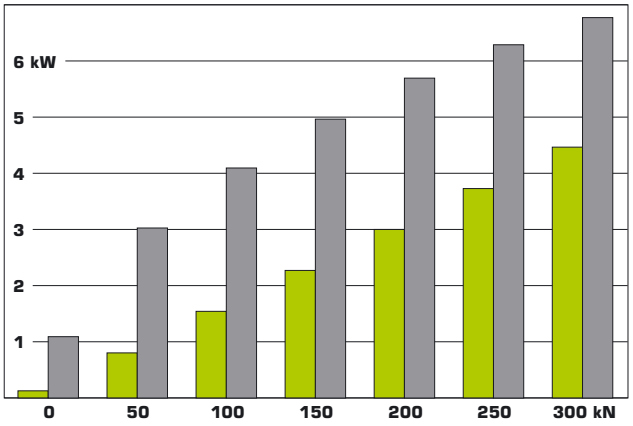
Energy in Efficient Use®

High reliability & Low maintenance

The electronic evolution of E-Brake B helps you run your business more economically, while maintaining environmental awareness for the future. The absence of hydraulics means that the problems associated with environmentally harmful and risky oil are now things of the past. There is no need to adjust the settings of pressure relief valves – with the inherent risk of mistakes and drift – nor are there filters to be checked and replaced. The absence of oil, tanks, pumps, seals, valves and filters means that the servo-electronic system is much more reliable than a hydraulic one. And you will never again have to face the inconvenience of a cold start.

As E-Brake B contains less critical parts than a hydraulic brake it consequently needs less maintenance and guarantees higher reliability.

Finn-Power E-series press brake energy consumption at 10 mm/s bending speed



Energy savings

Furthermore, the E-Brake B uses much less energy, namely only when the beam actually moves. This can result in energy savings of 50 % compared with conventional hydraulic press brakes. On the E-Brake B, the main drive motor is used when the brake has to actually perform a movement. With a conventional hydraulic press brake, the hydraulic pump motor is running all the time. The graph adjoining only covers the time when the press brake is actually in operation. During the standby time – which can be as much as 90 % on account of sheet handling, conversion and intervals – this means a further saving of no less than 3000 kWh a year.

E-series press brake
Conventional press brakes

Flexibly yours®

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