

INNOVATIONS 2012

- Addition to main catalogue -



All information about our bending machines

- Mobi-bender **Basic**
- Horizontal press **XS**
- Horizontal press **XL**
- Hand-operated bender **HB XS**
- Angle bender **HB XXS**
- Pressbrake **AB 1250**
- Mandrel-bender
- Hand-operated bender

Do you have questions on bending machines? Just call us!

GELBER-BIEGER GmbH

siegmund[®]
GROUP

This catalogue amends resp. replaces products from the main catalogue.
The press brakes GB 28 resp. GB 30 NC are no longer available and are replaced by the product line AB 1250.



Bavarian national award
2004



- Bending pressure: 10 Tons
- long-lasting and maintenance free
- big variety of bending possibilities
- exceptionally price-performance ratio

Handy at high capacity

...PROBABLY THE SMALLEST BENDER IN THE WORLD...

The novel, hydraulic bender is exceptionally light and small – and therefore also mobile.

The company Gelber-Bieger in Losheim developed a hydraulic horizontal bending-press with a weight of only 80 kilograms, which shall replace the angle bender. The "Mobi-Bender" is easily transportable, for example to construction site, as it is only 80 cm long and 25 cm wide and high.

Despite of its handy dimensions the horizontal press pushes ten tons. This corresponds to a bending capacity of 100 x 15 millimeters for construction steel. The simple adjustable stop allows a bending exactness in the range of 0,1 mm. The hydraulic unit is always built up separately and is connected to the press with 2 quick-release fasteners.

What makes the "Mobi-bender" so special is, that it presses with the stamp into the matrix. This is not usual for small machines. To bend a closed part, the positions of stamp and matrix can be exchanged.

As needed, it is also possible to bend around a bending mandrel. With the mandrel a rectangle of 50 mm side length can be bent.



Bending with punch into die



Bending matrix into punch



Narrow bending around the bending mandrel



Connection for hydraulic aggregate



Operating forwards and backwards



Back stop for exactness of position



Multi V die



Die 80 mm



Die 100 mm



Bending mandrel



Punch 90°



Distance piece

Mobi-bender

Dimensions l x w x h (mm)	1200 x 250 x 280
Weight (kg)	80
Motor power (kW)	1,5
Bending pressure (t)	10
Tool height (mm)	100
Bending capacity (mm)	Flat steel: 100 x 15 (with V125)
Round material with rotary plate (mm)	16

optional
also
available in
130 mm

Mobi-bender 100 Basic composed of:

1x hydraulic aggregate, 1 x punch 90°, 1 x Multi V die, 1 x length stop, 1 x supporting plate, 1 x oil filling (HLP 46), operating manual/CE-Conformity

MB.00MB.ST.110

Special accessories set 1 for creasing composed of:

1 x V = 80 mm 85° L = 100

1 x V = 100 mm 80° L = 100

1 x bending mandrel, 1 x distance piece

MB.0100.ST.210



Rotary plate



Cutting



Notching



Flaring of tube



Hydraulic aggregate



Bavarian national award 2004

XS with creasing station left and right



XS with creasing station left and rotary plate right

Horizontal press XS

...THE ALTERNATIVE SOLUTION TO THE RING BENDER...

The horizontal press XL, the top-seller with its unique 3 working stations, has got a smaller, powerful version, the horizontal press XS. With a base of 800 x 600 mm and weight of only 1,1 tons in very compact dimensions, it fits in every workshop.

Though it presents a mix of multifarious facilities which is exclusive and unique in the branch:

The horizontal press XS 200.135.20M comes with 2 working stations, which offer a multiplicity of applications that were not available in this field of machines up to now. Based on 2 hydraulic cylinders it presses up to 20 tons. This capacity can be applied on the left station with a tool height of 135 mm. On this bending side optionally a profile bender, which works with three hydraulic driven shafts, can be additionally mounted. A spiral bender can also be installed on this station.

The second and right side has a bending capacity of 10 tons, which can be used for following operations: cutting, flaring, notching, edging up to a height of 100 mm and in the future also punching. Additional you have the option to install a rotary plate. At the moment the perfect positioning of the tools is effected mechanically, an electrical control is in development.



135 mm punch / die



100 mm punch / die



Bending mandrel for narrow bending



Operation tool



Operation additional hydraulic



Machines on/off



Digital display zero position



Gelber-Bieger XS with profile bender RB 40 and bending tool 100 mm



E.g. bending of tube 1" R 200



RB 40 and digital display

XS		
Dimensions l x w x h (mm)	800 x 600 x 900	
Weight (kg)	1000	
Motor power (kW)	2,5	
Bending pressure (t)	left: 20 right: 10	
Tool height (mm)	left: 135 right: 100	
Bending capacity (mm)	Flat steel left: 120 x 15 Flat steel right: 100 x 15 (with V125)	
Round material with rotary plate (mm)	16	

XS with profile bender RB 40		
Round tube (mm)	60	
Flat steel horizontal (mm)	60 x 20	



Pressure gauge



Additional hydraulic



Side stop



Positioning stop



Horizontal press XL Plus

...THE UNIVERSAL PROFESSIONAL HORIZONTAL PRESS...

The current design of the horizontal press Gelber Bieger XL Plus, is like a "face-lift" model of the origin version and comes with enhanced operation possibilities on a compact basis (1200 x 600 mm) which are unmatched in the branch.

Unique is the bending capacity of up to 30 tons, the cylinder, integrated in the table as parallel feed cylinder, offers pressing to the left as well to the right side. Furthermore this extraordinary universal bender comes with three working stations which can be even enlarged to four operating procedures independently of each other.

Generally there is the possibility to work on two working stations. Tools can be mounted on the right and left side, so the first operation step can be carried out on one and the second step on the other side. Due to the integrated rotary plate also 25 mm round steel can be bent 270°.

Hydraulic connections for further universal use of the machine are positioned on the side and are compatible with all "Gelber Bieger" accessories offered.

Besides the optimal technical equipment the Gelber-Bieger XL is also unique in its operation. The machine can be controlled with a sensitive hand lever. This means you can achieve the desired bending very slowly and finely and you can straighten, rebend or correct previously bent parts. The second operation possibility is the specific programming. Up to 8 program steps can be processed successively. These programs can either be entered directly or be controlled using the "touch-in" procedure, which means moving manually to a position and store it.

At a low entry price, the horizontal press Gelber Bieger XL with its comprehensive tool stations and the optimal operation possibilities is an unmatched universal product in the branch.



165 mm stamp / matrix



Rotary plate for coiling



Side lay



Bending mandrel for narrow bending



Hand lever for precise bending



Plug connection



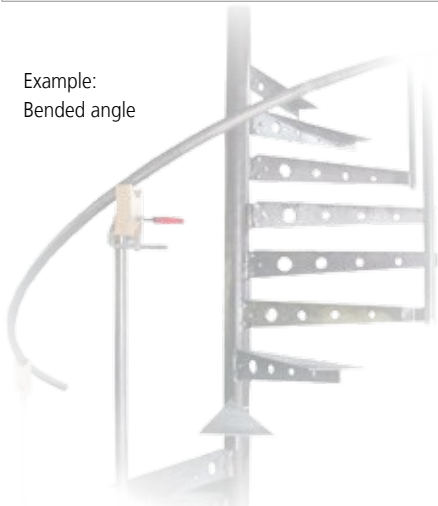
RB 40 plus with adjustable distance between axles 300 to 800 mm



RB 40 with tube 33 mm



RB 40 plus with tube 76 mm



Example:
Bended angle

Horizontal press **XL Plus** with profile bender **RB 40**

The profile bender RB 40 can be mounted easily with four screws and is absolutely maintenance free. The speed of its three hydraulic driven shafts can be regulated proportional by help of a second hand lever.

At the new model profile bender RB 40-Plus the distance of bending shafts is individual adjustable. The advantages are a higher bending capacity, less deformation in bending of profiles as well as reduced tool costs, as cost-saving, small bending rolls are used.



Pressure adjustment up to 300 Bar



Drawer to collect cinder

XL	
Dimensions l x w x h (mm)	1200 x 600 x 900
Weight (kg)	1350
Motor power (kW)	7,5
Bending pressure (t)	30
Tool height (mm)	165
Bending capacity (mm)	165 x 15
Round material with rotary plate (mm)	25
XL with profile bender RB 40	
Round tube (mm)	60 - 90 depending on model
Flat steel horizontal (mm)	60 x 40



Profile bender GBAH60/3 plus (CNC)

Profile bender

... SIMPLY ROUND ...

Technical data : GBAH60/3 plus (CNC)

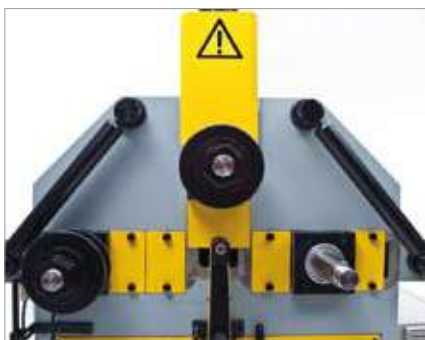
Power	5,5 Kw
Hydraulics	200 bar
Shaft speed	11/min. variable
Shaft diameter	50 mm
Weight	740 kg
Dimensions	1300 x 890 x 1570 mm

Some bending possibilities (profiles):

	90 x 12 mm; Ø 900 mm
	100 x 20 mm; Ø 900 mm
	45 x 45 mm; Ø 1000 mm
	Ø 45 mm; Ø 1000 mm
	Ø 70,3 mm; Ø 1500 mm
	Ø 76,1 x 3,2 mm; Ø 2000 mm
	70 x 40 x 3 mm
	60 x 60 x 4 mm



Shaft inside



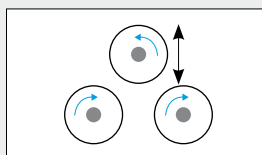
Shaft centre



Shaft outside

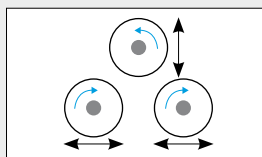
General information

Three machine types are available in our profile bender product range:



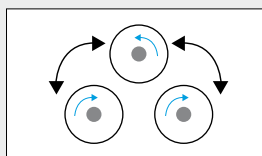
1. Typ I: GBAH60/3

A profile bender with three motorised rollers and the possibility for hydraulic adjustment of the upper roller. See also Gelber-Bieger XL or XS with profile bender RB 40.



2. Typ II: GBAH60/3 plus (CNC)

A profile bender with three motorised rollers and the possibilities to adjust the two lower rollers in three different positions – the upper roller can also be adjusted hydraulically. See also Gelber-Bieger XL or XS with profile bender RB 40 plus.



3. Typ III: GBAH80/3 AC

In contrast to the previously mentioned machine types, the upper roller of this type is fixed, whereas the two lower rollers are individually adjustable resp. movable upwards.

These profile benders are ideal for the bending of flat and angle iron, of T- and U-iron as well as for other kinds of profiles. Round tubes can of course also be bent. Our bending experts will be glad to support you in a non-binding consultation and to define the machine that suits your specific needs.

Generally the rollers of all machine types are smooth and therefore ideal for the bending of brass, aluminium and rust-free steel profiles without damaging the delicate surfaces!

Thanks to the three respectively motorised rollers, there is the possibility to bend profiles having a very small radius without slipping. These profile benders are ideal for craftsmen and manufacturers of i.e. serpentine for heat exchangers – but in general for those seeking a versatile but nevertheless inexpensive machine with high performance. The profile roller set, which is provided as standard with every machine, enables easy bending also of solids, square tubes, rectangular tubes, flat irons and much else. For tube bending, specific rollers are necessary depending on the diameter of the tube. For that purpose, steel rollers are recommended for steel (tube) bending and special polyamide rollers for stainless steel bending. As a matter of course, we deliver tailored special rollers also for customer-specific profiles.

Operating methods for our profile benders

Standard version

The hydraulic settings of the stroke are adjusted by means of the digital display.

CNC version

In manual mode as in the standard version. Furthermore, the distance to move or the bending radius can be programmed electronically – with the possibility to save these data.



Hydraulic feed



CNC version with touchscreen



Radius measuring device



Proximity switch determines the start of the programme



Plug and play



Plug connection to the control panel



Also applicable in horizontal position



Mandrel-bender S03-42 mm

Mandrel-bender

... FOR NARROW BENDING ...

In a mandrel bender, the tube is pushed over the bending mandrel into the bending machine and tensioned between the bending tool and the clamping device. The bending head turns around the bending axis and bends the tube in the bending tool. The tube is supported in the back support during the bending procedure.

Using a mandrel bending procedure, it is possible to achieve the smallest possible bending radii, with the best sheet quality. Mandrel bending machines can – depending on the material used – bend tubing on a radius of 1.5 times the tube's outer diameter.

The more thin-walled the tube and the smaller the bending radius, the more complex is the bending tool required. Different bending mandrels can be used for the bending procedure.

We afford mandrel-bending machines from half-automatic with a bending power of 28 mm up to full-automatic mandrel-bending machines with a power of up to 355 mm pipe diameter.



1" stainless steel bow 90°



2" stainless steel bow 180°



3/4" steel pipe as framework



Control with plug



Foot pedal for automatic use



Castors for simple movement



Touchscreen onboard control panel

Standard equipment for the S-03 mandrel bender machine series

- Modern electronic drive
- PLC controller
- Electronic lengthening and twisting measurement
- Manual stop system
- Hydraulic tube clamping
- Adjustable locking pressure
- Four-jaw chuck
- Control panel

Onboard Software

As the first manufacturers, we offer you the following innovative solution as standard. Using the standard control console, a wide range of bending programs can be performed without using an external laptop or PC for programming. Our system determines the following parameters:

- Stretched tube lengths
- Feed rate
- Bending angle



Right bending



Left bending convertible



Complete bending tool kit



Adjustable length stop



Jaw chuck for twisting



Mandrel back cylinder



Press brake GB 40 - 1250 M

... SMALL, LIGHT, STRONG...

With this machine, we present you a small, light, strong and energy efficient press brake with an edging length of 1250 mm. With its dimensions of 1.8 m (h), 1.1 m (d) and 1.8 m (w), the press brake GB 40 - 1250 M is one of the most compact machines in this range, which is able to edge a length of up to 1,250 mm.

While usually such presses have a weight of about 3,500 kg, this press with a weight of only 1,640 kg is probably also the lightest one on the market. Weight and dimensions enable a very high flexibility, i.e. the machine can be easily transported and fits through almost every door.

With a bending capacity of 40 tons generated by 2 cylinders, it is – despite its compactness and the low weight – one of the strongest press brakes in this edging range.

Another special feature is the installation height for tools of up to 310 mm allowing the processing of correspondingly large items and as well as the integration of a quick tool clamping system. This press is equipped with standard punch and dies of the type Amada/Promecam.

Another advantage is the special energy saving mode. Thus, the press brake has on the one hand a power consumption of only 5.5 kW, on the other hand it is connected in such way that the energy consumption is coupled directly and automatically to the actual use. This "just-in-time" mode and the low consumption have the effect that energy costs saved in comparison to the uncontrolled use of high-consumption competitive products, allow the amortisation of the investment costs within 3 years.



Matrix holder



Quick-release mechanism for stamp



Control panel

The press brakes of the GB 40 series have an operating speed of 10 mm/s with the purpose to operate the machine with less stringent safety requirements. However, in order to allow an efficient work, we developed an innovation – the lift. You can freely adjust the height by which the tool is opened after the bending process. In order to allow an exact positioning and bending, the machine runs slower when it is positioned 1.5-5 mm from the bending target, depending on the adjustment. The manual machine – the GB 40.100. 1250 M allows to set a value in order to realise a bending angle. The back stop can be electrically adjusted from the front side. The position of the back stop can be read on the adjustment wheel in the front where fine manual adjustments are made.

AB 1250

Dimensions l x w x h (mm)	1740 x 900 x 1750
Weight (kg)	1640
Motor power (kW)	5,5
Bending pressure (t)	40
Tool systems	Amada, Promecan, Trumpf
Max. opening (mm)	310
Stroke (mm)	100
Backgauge (mm)	5 - 420
Speed (mm/s)	10



Stamp r 2; height 63 mm



Stamp r 0,8; height 89 mm



Stamp r 0,25; height 104 mm



Backgauge optionally to be hinged



Supporting table



Simple adjustable direction



Press brake GB 40 – 1250 NC

... SIMPLE HANDLING...

The NC controlled version of the machine series GB 40 is mechanically constructed in the same way as the manual version. The only difference is the control method.

Available as manual, semiautomatic and fully automatic version. Regardless of the control method you choose, there is always the possibility to upgrade the machine. During the guarantee period, the existing control system can be updated free of charge.

Manual control

„teach in“ function for bending and control of the back stop. The position can be manually adjusted for both axes before resp. during the bending process. The upper beam (punch) can be moved by 1/0, 1/0, 01 mm and the back stop by 1/0, 1/0, 05 mm by pressing buttons.

Semiautomatic control

The semiautomatic mode allows adopting and saving the values adjusted in the manual mode. Up to 10 bending procedures can be deposited in one programme. The programmes can be saved as a drawing number or a freely selectable text. The number of programmes is nearly unlimited because the control can be extended by means of a memory card. A backup can be realised in the same way.

Fully automatic control

The fully automatic mode allows the bending with angle input. After having entered the sheet-metal thickness, the punch and the die, the software calculates the feed of the punch (available from beginning of 2013)



Controlled back stop



Control



Side view of the machine

A diagram of a V-shaped notch. A vertical rectangular block with a downward-pointing triangle containing the letter 'F' is positioned above a V-shaped notch. A diagonal line labeled 'S' represents the left side of the notch. The right side of the notch is labeled 'Ri'. The width of the notch at its base is labeled 'V'. The height of the notch is labeled 'B'. Dashed lines indicate the geometry of the notch.

$$\mathbf{F}_{t/m} = \left(\frac{S^2 \times 2 \times R}{1,4 \times V} \right)$$

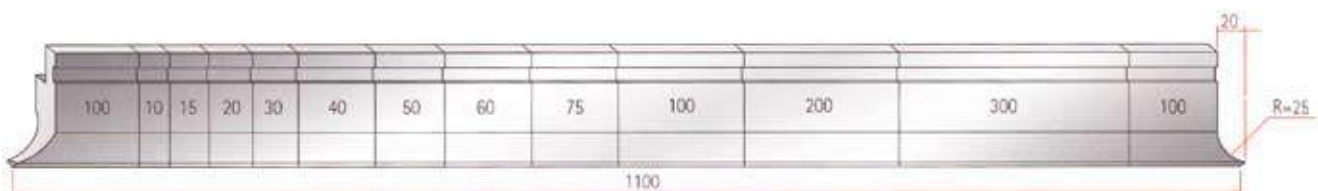
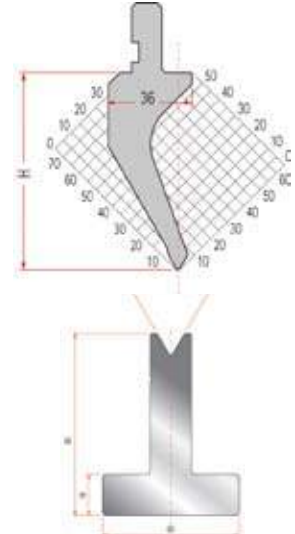
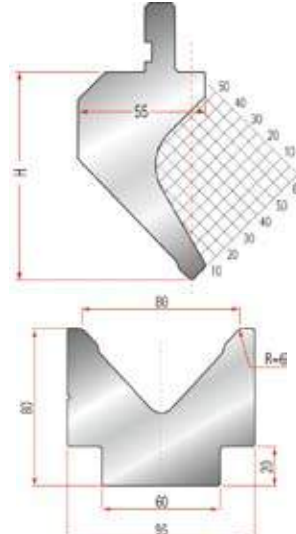
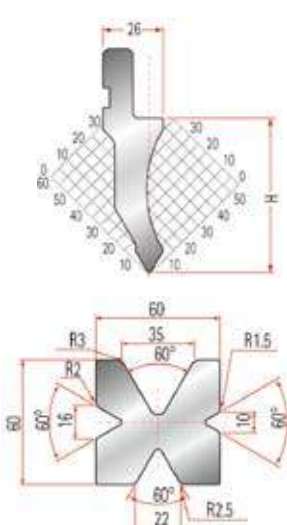
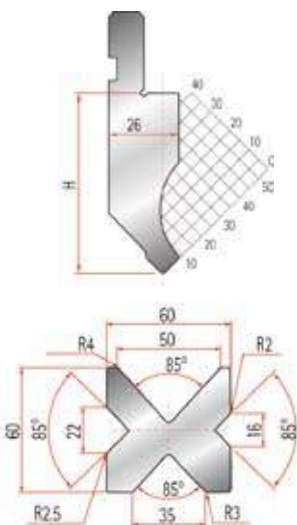
Um 2 mm Blech (S) in eine Matrize mit Öffnung (V) 16mm zu biegen, werden (F) 17Tonnen benötigt.

V	6	8	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250
B	4	5,5	7	8,5	11	14	17,5	22	28	35	45	55	71	89	113	140	175
Ri	1	13	16	2	2,6	3,3	4	5	6,5	8	10	13	16	20	26	33	41

[illegible]

Feinmechaniker

	V	A	R	H	S	Rf/P	max. t/m
11Q	60°	0,8	85				40
3021	10	60°	0,6		18	R 0,5	60





i Highly stable despite lightweight construction

Vario 2³ hydraulic feed and 3 motorised rollers

Vario-Bieger

... FLEXIBLE BASIC EQUIPMENT ...

Profile benders are part of the basic equipment of every metal-working company. However, these machines are large, inflexible and expensive for generations. With the bender Vario, the company Gelber-Bieger revolutionised this machine type in all these aspects. The bender Vario perfectly adapts to the needs of the different metal trades and is universally applicable depending on the equipment, small and above all inexpensive. This machine, which also can be used on construction sides, is the ideal basis for smaller entrepreneurs but also larger companies. Previous profile benders known to us could not be changed by the customer afterwards. There was no possibility to upgrade them. If the existing machine was equipped with only two driven shafts, whilst three shafts were necessary (e.g. for spiral bending), they could not be modified accordingly. This is changing now: the different versions of the Vario bender allow a high flexibility, because it can be exactly adapted to the needs of the customer.



Spiral bending device



Polyamide bending rollers



Steel bending rollers

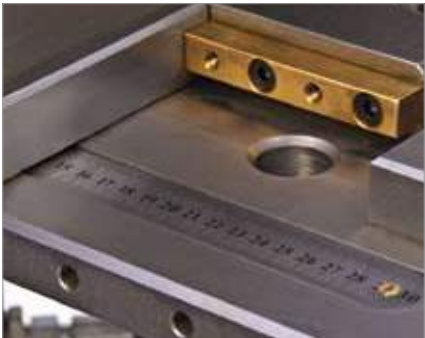
Vario		
Vario 1 ²	Manual feed with 2 motorised shafts	On demand
Vario 1 ³	Manual feed with 3 motorised shafts	On demand
Vario 2 ²	Hydraulic feed with 2 motorised shafts	On demand
Vario 2 ³	Hydraulic feed with 3 motorised shafts	On demand
A spiral bending device is available for all models		On demand



Bending capacity for tube diameters of up to 48 mm



Integrated hydraulic unit



Adjustable guide



Vario 3 hydraulic bender with 10 tons

For many companies, the use of a simple profile bender is not profitable despite the low entry level price because it "only" bends tubes or profiles and is often underutilised. Also for this problem, the company Gelber Bieger offers an optimal extension of the applications. Because the Vario bender allows converting the profile bender into a press for the bending of flat iron and round material.

For the Vario bender-3, it is only necessary to make a few simple adjustments and to loosen the screws in order to remove the profile bending unit and to mount an edging tool. With a bending capacity for flat iron with a thickness of up to 15 mm and a height of up to 100 mm, this machine is an enormous help during bending procedures in the metal industry.

Apart from the reconstruction for the edging, the Vario bender offers the possibility to use all tools constructed by Gelber-Bieger for the Mobi-bender as usual: e.g. the rotating plate as well as devices for cutting, notching, flaring...



Standard tool



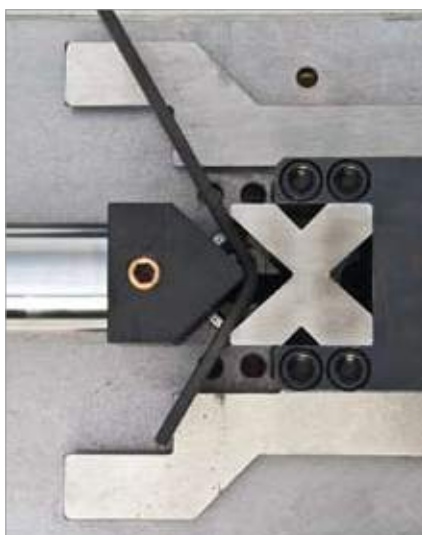
Bending with punch adapter



Special tool rotary plate



Manual control / one-way valve



Bending with Multi V



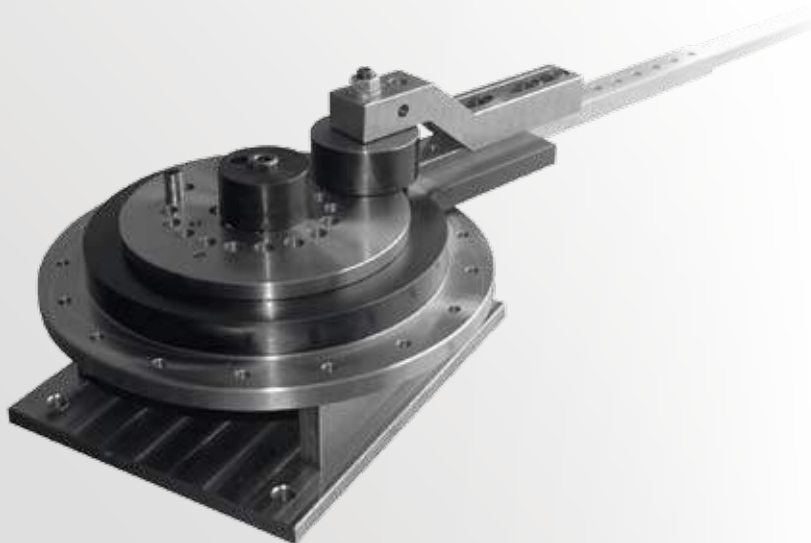
Copper bending

Universal hand-operated tube bender **HB XS**

GELBER-BIEGER
GmbH



- Robust hand-operated bender with a weight of 80 kg
- Bending of round material, flat steel and tubes



Hand-operated tube bender **HB XS**

...THE ONLY UNIVERSAL HAND-OPERATED BENDER...

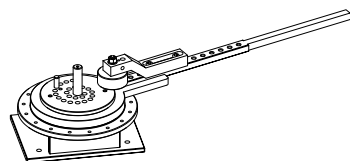
The universal hand-operated bender Gelber-Bieger HB allows to bend manually, thus by physical effort, nearly all materials in most diverse designs. But compared to hydraulic driven machines this applies only to materials with thin material thickness.

The Gelber-Bieger HB is an elaborate and high-class hand-operated bending machine. The hand grip is zinc coated, so that it will not rust and cause an uncomfortable feeling in the hand at use. The construction is very simple and makes it possible for the customer to design his own tools.

Welding table optional.

Package 1 (Basis-package)

for bending of solid matter:

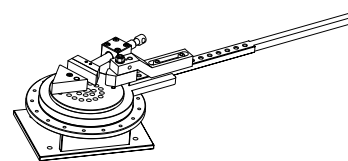


Round bar: 16 mm
Square bar: 14 mm
Flat steel: 40 x 8

Order-number: HA.0000.ST110

Package 2 (optional)

for bending of flat steel:

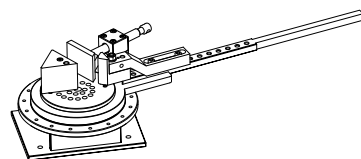


Round bar: 10 mm
Square bar: 10 mm
Flat steel: 40 x 8

Order-number: HA.0000.ST201

Package 3 (optional)

for bending of flat steel:

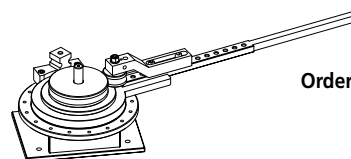


Flat steel: 100 x 6

Order-number: HA.0000.ST202

Package 4 (optional)

for bending of tubes:



Standard size: 17,2 mm
21,3 mm
26,7 mm

Order-number: HA.0000.ST203 = 17,2
HA.0000.ST204 = 21,3
HA.0000.ST205 = 26,7



Bending of round material



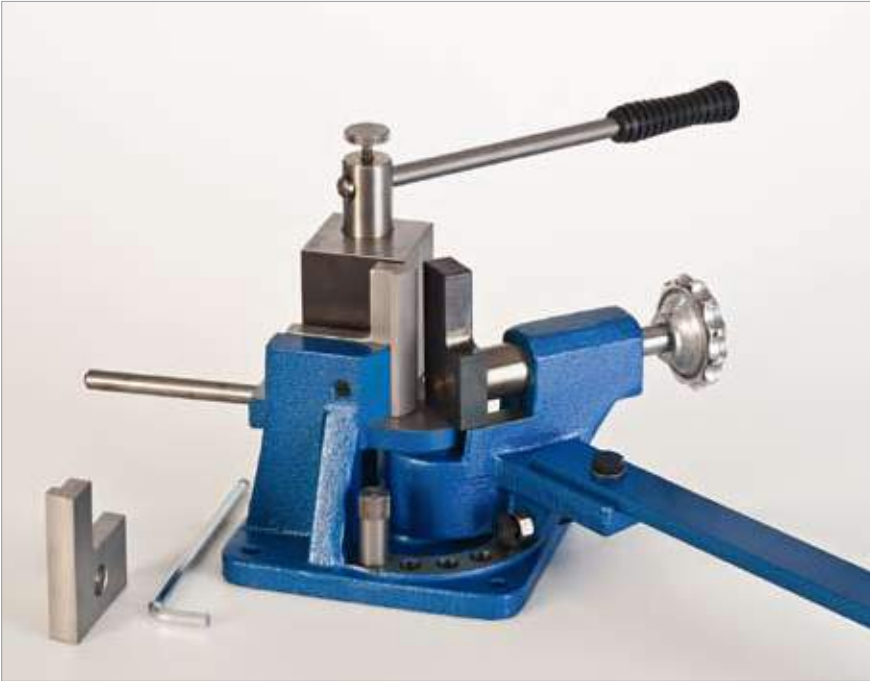
Bending of flat material 180°



Edging of flat steel



Bending of tubes



Angle bender HB XXS

WB.100E.ST.100

No cheap import – Made in Germany!
This angle bender is a qualitative high-class design.
It is optimally suitable for the bending of thin as well as thick materials.

In contrast the import design has a little bit play between chuck jaw and bending jaw, thus thin materials cannot always be bent angular and accurate.
We commend the lower priced version only for occasional or private use.

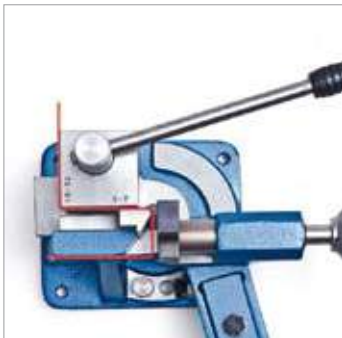
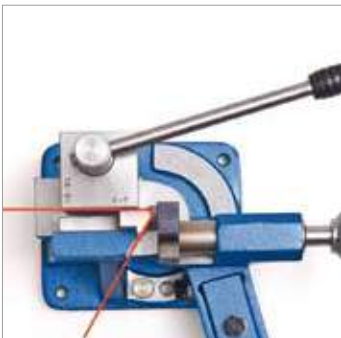
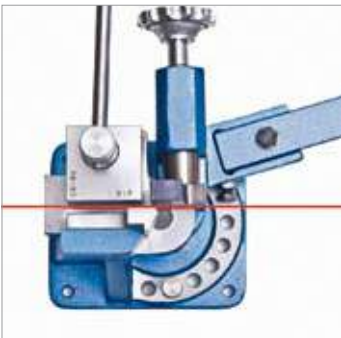
Adapter plate for mounting on
Siegmund welding table optional
available.

Angle bender HB XXS

Bending capacity based on material cross section at a solidity of 400 N/mm

Cold bending:	
Flat steel	max. 100 x 6 mm or max. 50 x 12 mm
Round bar	max. 18 mm
Square bar	max. 18 mm
Flat bar copper	max. 100 x 12 mm
Angle steel notched	max. 60 x 8 mm

Warm bending:	
Flat steel	max. 100 x 12 mm or max. 60 x 20 mm
Round bar	max. 30 mm
Square bar	max. 30 mm
Angle steel notched	max. 100 x 12 mm



A problem in bending?
Just ask us – we are pleased to
support you!

Our business hours are Monday - Friday from 08:00 a.m. - 16:00 p.m.

Gelber-Bieger

Worldwide we are one of the companies that offer a nearly complete assortment of machines in the field of bending technology. We are pleased to advise you to find exactly the machine you need! This flyer is only an abridgement of our range of products. In the following issues we will present you further machines. We are pleased to send you our general catalogue by postal service.

For bending
machines please see
in the Siegmund general
catalogue page 588 - 611



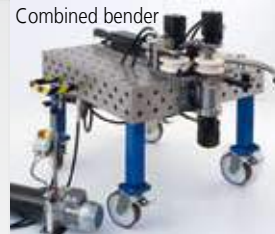
Mobi-bender



Board bender



Combined bender



Vario



Gelber Bieger XS



Measuring table



Gelber Bieger XL



Hand-operated bender



Mandrel-bender



Pressbrake



Angle bender



Tube grinder



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