

SINCE **1973**

CATALOGUE

PRESS BRAKES



ADDICTED TO **ACCURACY**



COSTRUITE INTERAMENTE IN ITALIA
VENDUTE IN TUTTO IL MONDO

ENTIRELY MADE IN ITALY
SOLD WORLDWIDE

OUR PRODUCTION

DESIGN

The design stage is the key to allow for efficient production and customization in line with the customer's expectations. This is why Vimercati has an in-house technical office entirely dedicated to the design of machinery.

The company's staff takes care of all aspects concerning design and calculation. It is also at customer disposal to develop tailor-made feasibility studies and required machine tooling studies, to meet all the production needs of each customer as best as it can.

OUR PRODUCTIVE DEPARTMENTS

- > Structural work
 - Oxy cutting
 - Welding
 - Sandblasting
- > Machining
 - Boring
 - Turning
 - Milling
 - Grinding
 - Lapping
- > Painting booths
- > Electrical and electronic wiring
- > Assembly and finish
- > Quality check and testing
- > R&D

RELIABILITY AND ACCURACY

Vimercati offers a wide range of press brakes, standing from the smallest 30 tonnes x 1250 mm up to the 600 tonnes x 8050 mm, without stroke and opening limits along with a varied series of optional accessories.

The reliability and accuracy developed over many years of experience in terms of design and production, are combined with the new opportunities offered by modern electronics and computing to create strong, high-tech, reliable, accurate and extremely flexible machines.

Along with the vast offer already available, we can design customized and specific solutions based on the production needs of individual customers.



HYDRAULIC PRESS BRAKES

HYDRAULIC PRESS BRAKES

RANGE

↓ ↓	from 30 to 600 tonnes
↔	from 1250 to 8050 mm in length
↔ ↔	up to 16000 mm in length for Tandem versions

CUSTOMIZATIONS

- From 4 to 16 axes
- Gap
- Stroke
- Opening
- Intermediate height
- Tool clampings for any kind of tool
- Software
- Colour
- Robotized cell





HYBRID PRESS BRAKES

INNOVATION, ENERGY SAVINGS

Hybrid press brakes differ from traditional machines as they are fitted with high-performance EOS100LA6B35 motors.

These systems are operated by an inverter that, combined with a high-performance pump, controls the main motor and activates it only when the machine starts running: this means zero consumption during standby.

However, energy savings are also guaranteed during operation thanks to the Pressure Control system that only provides the necessary force for the bending step with a reduction in cycle times.

With the CNC, consumption and operating pressure values can be viewed in real time.

HYBRID PRESS BRAKES

e.TERNA MODEL

BENEFITS COMPARED TO A TRADITIONAL PRESS BRAKE

Energy consumption:	-40%
Automatic standby:	Start&stop
During programming and tooling:	Zero consumption
Oil duration:	4 times longer
Productivity for reduced cycle times:	+20%



ERGONOMICS AND SPEED

The smallest press brakes of the range stand out for their speed and precision, and are suitable for the production of small pieces.

These machines are fitted with EOS100LA6B35 inverter motors and a specially designed hydraulic system.

To improve operator comfort and increase productivity, these press brakes can be equipped with optional ergonomic equipment.

BENDING

30 t x 1250 mm

PRESS BRAKES

30 t x 1250 mm

Descent	250 mm/sec
Ascent:	250 mm/sec
Working speed	da 0 a 20 mm/sec

FIGURE 1
4-AXIS SINGLE-BLOCK BACK GAUGE
X-R-Z1-Z2 4-axis single-block back gauge..

FIGURE 2 - ERGONOMIC ARMRESTS
Ergonomic armrests for greater operator comfort.
Optional control.

FIGURE 3 - IRIS LAZER SAFE PHOTOCELLS
Front Lazer Safe mod. IRIS PLUS photocells,
1mm slowdown from contact with sheet
metal with built-in angle reader.



FIGURE 1



FIGURE 2



FIGURE 3

GUARANTEED LINEARITY

Tandem press brakes can have various setups:

- > with two or more press brakes with the same length and the same nominal bending forces
- > with two or more press brakes with different lengths and different bending forces

In both cases the presses can work both together in tandem mode, and separately in an independent way, while being protected by special photocell safety systems.

TANDEM

PRESS BRAKES

TANDEM

PRESS BRAKES

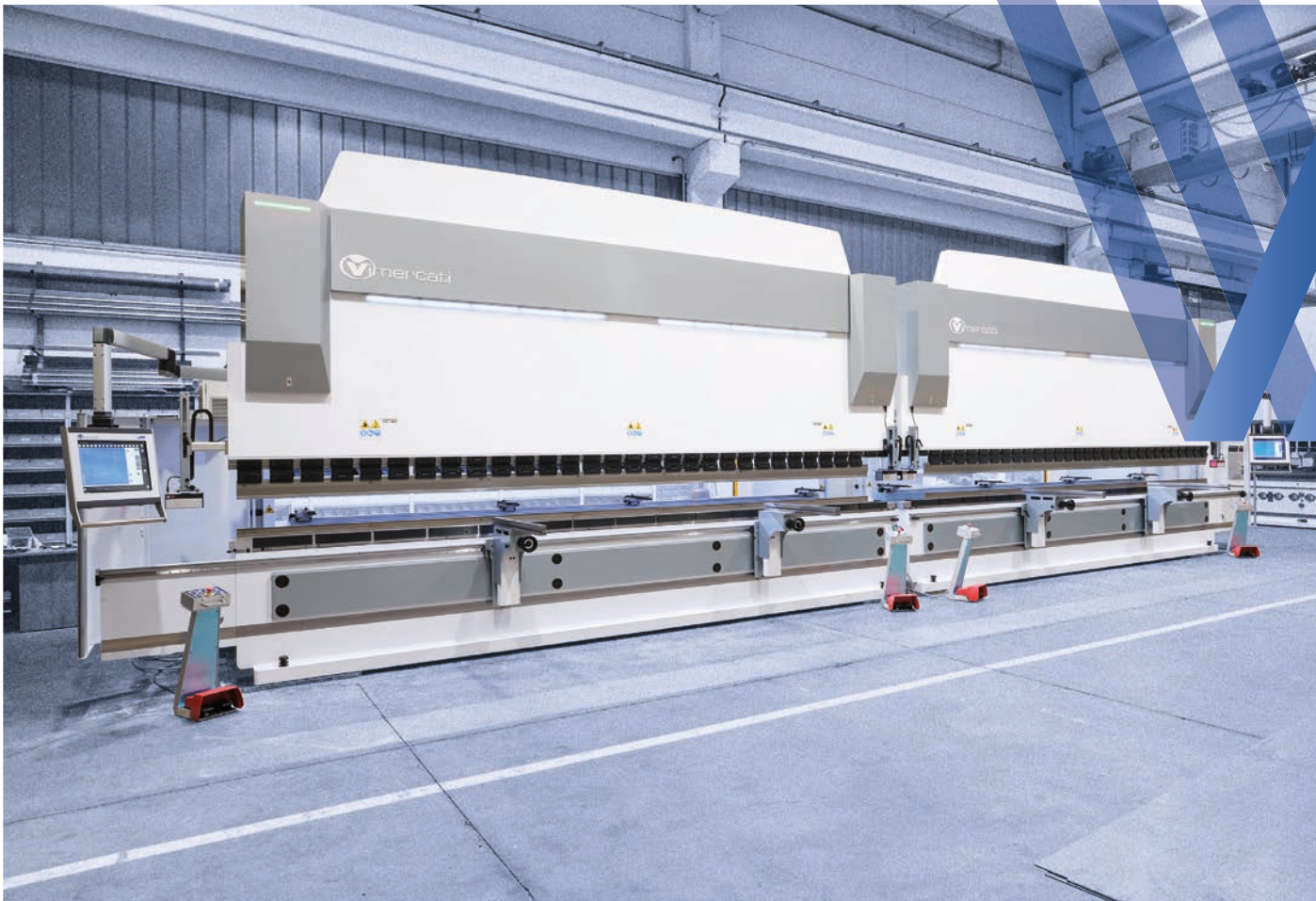


You can choose from a wide range of optional features for a customized setup, specifically designed according to your production needs. Our tandem machines are standardly equipped with latest generation photocells that allow you to work in maximum safety

and with greater ergonomics, both in stand-alone mode (removing the central photocells) and in tandem mode, without using the photocell barriers, obtaining in this way greater productivity and efficiency.

OPTIONAL FEATURES

- > Extra gap
- > Extra stroke
- > Extra opening
- > Intermediate height
- > Tool clampings for any kind of tool
- > Sheet metal accompanying devices
- > Motorized front supports
- > Angle reader



EFFICIENCY AND PRODUCTIVITY

Robotized systems are solutions customized around individual production needs, allowing for bending operations without the presence of operators by means of a press brake controlled by anthropomorphic robots equipped with:

- > Layering and thickness control
- > System sensors
- > Smart positioning
- > Series of additional features, including material loading and unloading
- > Automatic tool changeover



ROBOTIZED
SYSTEMS

ROBOTIZED SYSTEMS

This type of system can have either the robot fixed in front of the bending, installed on a floor-mounted track or on a portal, so that the press can be used in manual mode as well.

OPTIONAL FEATURES

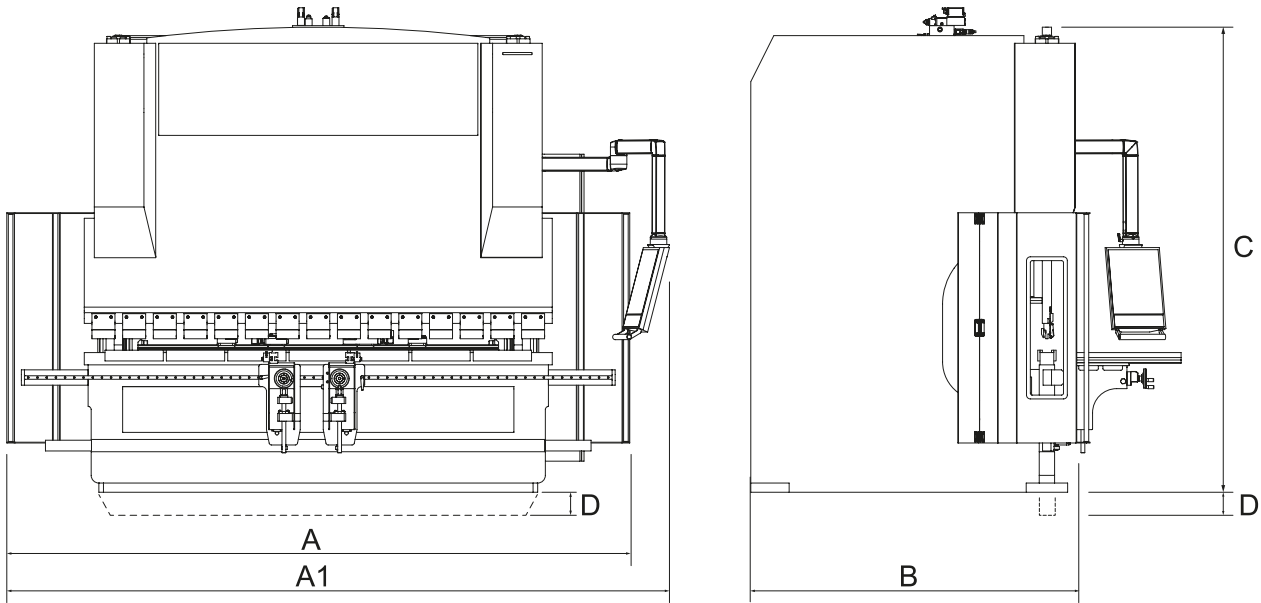
- > Sheet metal pre-loader to reduce the cycle time of a piece
- > Automatic loading and unloading solutions to ensure pieces can be fed and evacuated without stopping the system
- > Vision system with one or more cameras enabling the robot to pick up the pieces from a container even if they are randomly positioned
- > Option of interfacing the system with other machines to carry out pre- or post-bending processes.



TABLES AND TECHNICAL DATA

> FROM 30T TO 150T

The data contained are indicative and may vary without notice in relation to our continuous technological evolution



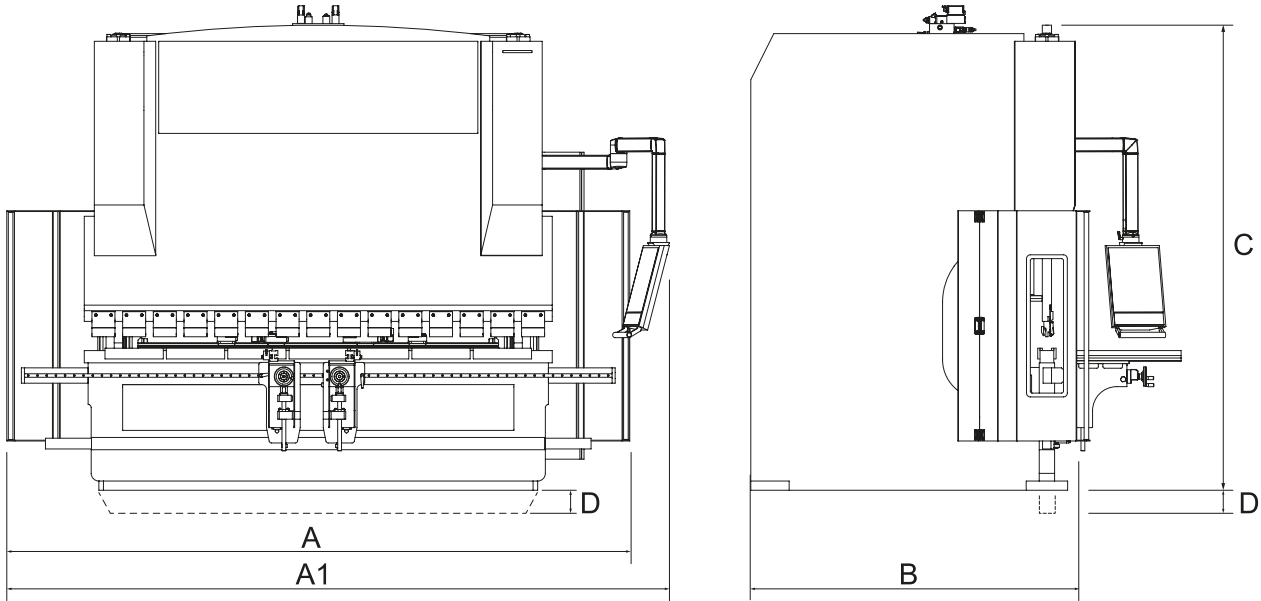
Model	Length PROMECAM	Length WILA	Clearance between the uprights	Height of the working table	Ben- ding Force	Y Axis Stroke	X Axis Stroke	R Axis Stroke	X-2 Axis Stroke	Speed				
										Down		Work	Up	
										PHSY	ETERNA		PHSY	ETERNA
	mm	mm	mm	mm	Kn	mm	mm	mm	mm	mm/s		mm/s	mm/s	
PHSY 301250	1250	1275	940	900	300	180	450	130	± 100	240		10	240	
PHSY 5020	2085	2040	1550	900	500	220	500	180	± 100	200	210	10	190	200
PHSY 5025	2505	2550	2050	900	500	220	500	180	± 100	200	210	10	190	200
PHSY 5030	3050	3060	2550	900	500	220	500	180	± 100	200	210	10	190	200
PHSY 5040	4175	4080	3550	900	500	220	500	180	± 100	200	210	10	190	200
PHSY 7520	2085	2040	1550	900	750	220	500	180	± 100	200	210	10	190	200
PHSY 7525	2505	2550	2050	900	750	220	500	180	± 100	200	210	10	190	200
PHSY 7530	3050	3060	2550	900	750	220	500	180	± 100	200	210	10	190	200
PHSY 7540	4175	4080	3550	900	750	220	500	180	± 100	200	210	10	190	200
PHSY 10020	2085	2040	1550	910	1000	270	500	180	± 100	190	210	10	190	200
PHSY 10025	2505	2550	2050	910	1000	270	500	180	± 100	190	210	10	190	200
PHSY 10030	3050	3060	2550	910	1000	270	500	180	± 100	190	210	10	190	200
PHSY 10040	4175	4080	3550	910	1000	270	500	180	± 100	190	210	10	190	200
PHSY 10050	5050	5100	4550	910	1000	270	500	180	± 100	190	210	10	190	200
PHSY 10060	6260	6120	5550	910	1000	270	500	180	± 100	190	210	10	190	200
PHSY 12520	2085	2040	1550	910	1250	270	500	180	± 100	190	210	10	190	200
PHSY 12525	2505	2550	2050	910	1250	270	500	180	± 100	190	210	10	190	200
PHSY 12530	3050	3060	2550	910	1250	270	500	180	± 100	190	210	10	190	200
PHSY 12540	4175	4080	3550	910	1250	270	500	180	± 100	190	210	10	190	200
PHSY 12550	5050	5100	4550	910	1250	270	500	180	± 100	190	210	10	190	200
PHSY 12560	6260	6120	5550	910	1250	270	500	180	± 100	190	210	10	190	200
PHSY 15030	3050	3060	2550	910	1500	270	500	180	± 100	190	210	10	190	200
PHSY 15040	4175	4080	3550	910	1500	270	500	180	± 100	190	210	10	190	200
PHSY 15050	5050	5100	4550	910	1500	270	500	180	± 100	190	210	10	190	200
PHSY 15060	6260	6120	5550	910	1500	270	500	180	± 100	190	210	10	190	200

Distance Table/ Toolholder	Gap	Main Motor	Oil tank capacity	Operating Pressure	Approx. Weight	Length. A	Length. A1	Wid. B	Wid. B1	Height C	Height D	Height D1
mm	mm	kW	L	Bar	Kg	mm	mm	mm	mm	mm	mm	mm
365	150	4	140	250	2950	2200	2950	1150	1300	2350	-	-
410	300	4	180	200	5600	3100	4000	1500	1650	2800	-	-
410	300	4	180	200	5850	3600	4500	1500	1650	2800	-	-
410	300	4	180	200	6400	4100	5000	1500	1650	2850	-	-
410	300	4	180	200	8000	5100	6000	1550	1700	2950	-	-
410	300	5,5	195	250	7200	3100	4000	1550	1700	2890	-	-
410	300	5,5	195	250	7900	3600	4500	1550	1700	2890	-	-
410	300	5,5	195	250	8900	4100	5000	1550	1700	3000	-	-
410	300	5,5	195	250	10300	5100	6000	1600	1750	3200	-	-
460	500	7,5	220	250	8250	3100	4000	2000	2150	2950	-	-
460	500	7,5	220	250	9400	3600	4500	2000	2150	2950	-	-
460	500	7,5	220	250	10600	4100	5000	2000	2150	3050	-	-
460	500	7,5	220	250	12600	5100	6000	2050	2200	3200	-	-
460	500	7,5	220	250	15500	6100	7000	2100	2250	3300	-	-
460	500	7,5	220	250	19500	7100	8000	2100	2250	3400	-	-
460	500	11	230	250	9500	3100	4000	2050	2200	3000	-	-
460	500	11	230	250	10600	3600	4500	2050	2200	3000	-	-
460	500	11	230	250	12800	4100	5000	2050	2200	3100	-	-
460	500	11	230	250	15500	5100	6000	2100	2250	3300	-	-
460	500	11	230	250	19000	6100	7000	2100	2250	3400	-	-
460	500	11	230	250	22500	7100	8000	2100	2250	3600	-	-
460	500	15	275	240	14000	4100	5000	2100	2250	3200	-	-
460	500	15	275	240	16800	5100	6000	2100	2250	3350	-	-
460	500	15	275	240	20700	6100	7000	2200	2350	3450	-	-
460	500	15	275	240	25200	7100	8000	2200	2350	3650	-	-

TABLES AND TECHNICAL DATA

> FROM 200T TO 600T

The data contained are indicative and may vary without notice in relation to our continuous technological evolution



Model	Length PROMECAM	Length WILA	Clearance between the uprights	Work surface height	Ope- rating Force	Y Axis Stroke	X Axis Stroke	R Axis Stroke	X-rel Axis Stroke	Speed				
										Down		Work	Up	
										PHSY	ETERNA		PHSY	ETERNA
	mm	mm	mm	mm	Kn	mm	mm	mm	mm	mm/s	mm/s	mm/s	mm/s	mm/s
PHSY 20030	3050	3060	2550	910	2000	270	1000	200	± 100	190	210	10	190	200
PHSY 20040	4175	4080	3550	910	2000	270	1000	200	± 100	190	210	10	190	200
PHSY 20050	5050	5100	4550	910	2000	270	1000	200	± 100	190	210	10	190	200
PHSY 20060	6260	6120	5550	910	2000	270	1000	200	± 100	190	210	10	190	200
PHSY 25030	3050	3060	2550	910	2500	270	1000	200	± 100	190	200	10	190	200
PHSY 25040	4175	4080	3550	910	2500	270	1000	200	± 100	190	200	10	180	200
PHSY 25050	5050	5100	4550	910	2500	270	1000	200	± 100	190	200	10	180	200
PHSY 25060	6260	6120	5550	910	2500	270	1000	200	± 100	190	200	10	180	200
PHSY 30030	3050	3060	2550	910	3000	320	1000	200	± 100	160	170	8	160	170
PHSY 30040	4175	4080	3550	910	3000	320	1000	200	± 100	160	170	8	160	170
PHSY 30050	5050	5100	4550	910	3000	320	1000	200	± 100	160	170	8	160	170
PHSY 30060	6260	6120	5550	910	3000	320	1000	200	± 100	160	170	8	160	170
PHSY 40030	3050	3060	2550	910	4000	370	1000	200	± 100	120	130	8	120	130
PHSY 40040	4175	4080	3550	910	4000	370	1000	200	± 100	120	140	8	120	130
PHSY 40050	5050	5100	4550	910	4000	370	1000	200	± 100	120	140	8	120	130
PHSY 40060	6260	6120	5550	910	4000	370	1000	200	± 100	120	140	8	120	130
PHSY 50040	4175	4080	3550	910	5000	420	1000	220	± 100	100	110	8	100	110
PHSY 50050	5050	5100	4550	910	5000	420	1000	220	± 100	100	110	8	100	110
PHSY 50060	6260	6120	5550	910	5000	420	1000	220	± 100	100	110	8	100	110
PHSY 60040	4175	4080	3550	910	6000	520	1000	220	± 100	90	110	7	90	110
PHSY 60050	5050	5100	4550	910	6000	520	1000	220	± 100	90	110	7	90	110
PHSY 60060	6260	6120	5550	910	6000	520	1000	220	± 100	90	110	7	90	110

Distance Table/ Toolholder	Gap	Main Motor	Oil tank capacity	Operating Pressure	Approx. Weight	Length. A	Length. A1	Wid. B	Wid. B1	Height C	Height D	Height D1
mm	mm	kW	L	Bar	Kg	mm	mm	mm	mm	mm	mm	mm
460	500	18,5	310	240	18500	4100	5000	2150	2300	3350	-	-
460	500	18,5	310	240	21500	5100	6000	2150	2300	3550	-	-
460	500	18,5	310	240	26000	6100	7000	2200	2350	3700	-	-
460	500	18,5	310	240	30000	7100	8000	2200	2350	3850	-	-
460	500	22	370	250	20600	4100	5000	2250	2400	3400	-	-
460	500	22	370	250	24500	5100	6000	2250	2400	3550	-	-
460	500	22	370	250	27500	6100	7000	2200	2400	3700	1000	250
460	500	22	370	250	35000	7100	8000	2200	2400	3900	1200	250
560	500	30	510	220	27000	4100	5000	2450	2600	3550	-	-
560	500	30	510	220	30500	5100	6000	2450	2600	3750	-	-
560	500	30	510	220	35500	6100	7000	2400	2600	3900	1450	300
560	500	30	510	220	42000	7100	8000	2400	2600	4150	1650	300
600	500	37	560	220	33000	4100	5000	2650	2800	3650		
600	500	37	560	220	40500	5100	6000	2600	2800	3850	1300	300
600	500	37	560	220	44000	6100	7000	2600	2800	4000	1550	300
600	500	37	560	220	49500	7100	8000	2600	2800	4150	1750	300
650	500	45	580	250	45000	5100	6000	2750	2950	3900	1400	350
650	500	45	580	250	50000	6100	7000	2750	2950	4150	1650	350
650	500	45	580	250	56500	7100	8000	2750	2950	4350	1850	350
750	500	55	600	240	52000	5100	6000	2900	3100	4150	1600	350
750	500	55	600	240	59000	6100	7000	2900	3100	4300	1800	350
750	500	55	600	240	68000	7100	8000	2900	3100	4500	2000	350

HOW TO CHOOSE A VIMERCATI BENDING PRESS

WHICH THICKNESSES DO YOU WANT TO BEND AND WHICH MATERIAL?

Use the bending table below to understand how many tonnes per meter you will need to bend your pieces and to establish the correct tonnage of your new Vimercati bending.

After defining the thickness (s) of the sheet metal that you usually bend, it is important to consider the width of the die (V) you use. This choice will affect the tonnage required for the bending stage. The usual choice is a die with V equal to 8 times the thickness value and for sheets thicker than 3 mm we recommend 10 times the thickness of the sheet.

After defining the width V of the die, the third internal edge (B min) in millimetres is indicated in the third row, i.e. the internal measurement that allows for bending without the risk that the sheet might fall inside the die, resulting in a variation of the bending line. Pay attention, as the indicated value must be equal to or less than the value in the drawing of the piece or you will have to tighten the die, which mean an increase of the required force.

In the fourth and fifth row you find the minimum edge for 60° and 30° angles. These require a longer edge to avoid falling inside the V of the die.

The sixth, seventh and eighth rows show the inner radius (Ri) in mm of the bended sheet generated by the die. For example, the 8 mm die generates an inner radius of 1 mm on iron sheets. When bending aluminium or stainless steel, the different springback generates, with the same die, different inner radiuses. In this case, you will have to use the values indicated in row 6 for aluminium and row 8 for stainless steel.

In rows 9, 10 and 11 you find the necessary force (F) in KN/m to bend sheets with thickness S, in the slot V and of the specific material (note: if you want to use tonnes divide the value in the table by 10). This value is the required force per metre that the machine must be able to express. By multiplying the value by the length of the piece to be bended, you will find the necessary tonnage to be transmitted to Vimercati.

EXAMPLE:

To bend 1 metre of stainless steel, 3 mm thick, in the 25 mm slot, you need about 416 KN (41 Tonnes).
To bend 2 metres, you need 416x2 = 832 KN (83 Tonnes).

s	mm	0,6		0,8		1		1,2		1,5		2		2,5		3	
V	mm	5	6	6	8	8	10	10	12	12	16	16	20	20	25	25	32
B min (mm)	90°	3,5	4,0	4,0	5,5	5,5	6,5	6,5	8,0	8,0	10,5	10,5	13,0	13,0	16,5	16,5	21,0
	60°	3,9	4,4	4,4	6,1	6,1	7,2	7,2	8,8	8,8	11,6	11,6	14,3	14,3	18,2	18,2	23,1
	30°	5,6	6,4	6,4	8,8	8,8	10,4	10,4	12,8	12,8	16,8	16,8	20,8	20,8	26,4	26,4	33,6
Ir (mm)	Aluminium	0,5	0,6	0,6	0,8	0,8	1,0	1,0	1,2	1,2	1,6	1,6	2,0	2,0	2,5	2,5	3,2
	Iron	0,6	0,8	0,8	1,0	1,0	1,3	1,3	1,5	1,5	2,0	2,0	2,5	2,5	3,1	3,1	4,0
	Stainless steel	0,9	1,1	1,1	1,4	1,4	1,8	1,8	2,1	2,1	2,8	2,8	3,5	3,5	4,4	4,4	5,6
F (KN/m)	R=200 N/mm2 - Al	24	20	35	26	41	33	48	40	62	46	83	66	103	83	119	93
	R=450 N/mm2 - Fe	53	45	79	59	93	74	107	89	139	104	186	149	232	186	267	209
	R=700 N/mm2 - Stainless steel	83	69	123	92	144	116	166	139	217	162	289	231	361	289	416	325

F = Bending Force V = Slot Opening Ir = Minimum Edge
s = Thickness B = Minimum Edge R = Material Strength

HOW LONG ARE THE PIECES?

The answer to this question will allow us to understand the required press width.

WHICH TOOLS AND WHAT SHAPE DO THE PIECES HAVE?

If you want to use high tools or it is difficult to extract bended pieces, such as boxes, it is important to choose a machine with the correct clearance, stroke and intermediate devices. The stroke indicates how far the machine can move along the Y axis. The clearance is the distance between the upper crossbar and the table. The intermediate devices are the tools used to fix the upper tools to the upper crossbar.

STRUGGLING TO MOVE BULKY PIECES DURING BENDING?

Vimercati offers you machines with front supports and guides that can help you move the pieces during the bending phase.

YOU NEED PIECES WITH VERY ACCURATE ANGLES?

Fit your new machine with an angle check system.

MANY PIECES WITH FLATTENED BEND?

Buy a table with a hemming features to make operations easier and eliminate tool changeover times.

YOU HAVE PIECES WITH COMPLEX SHAPES OR YOU WANT TO BEND SEVERAL PIECES AT A TIME?

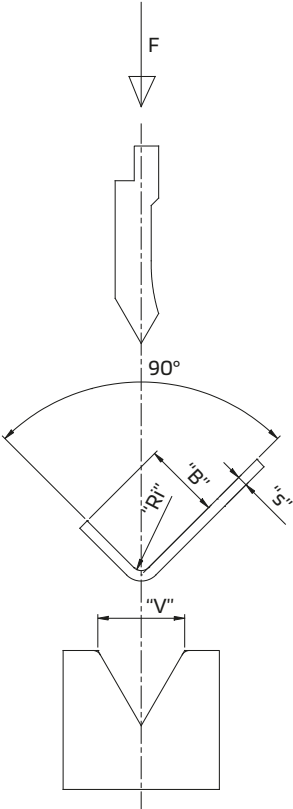
Check with Vimercati which and how many axes are actually needed for your machine.

YOUR OPERATORS ARE USED TO USING A NUMERICAL CONTROL?

With Vimercati, you can install the numerical control you want.

YOU HAVE LONG PIECES AND STRUGGLE TO MAINTAIN THE ANGLE ACROSS THE WHOLE LENGTH OF THE PIECE?

Ask Vimercati for a bending system suitable to your needs that enables you to compensate for the deformation of the machine during bending.



s	mm	4		5		6		8		10		12		15		20	
V	mm	32	40	40	50	50	63	63	80	80	100	100	125	125	160	160	200
B min (mm)	90°	21,0	26,0	26,0	32,5	32,5	41,0	41,0	52,0	52,0	65,0	65,0	81,5	81,5	104,0	104,0	130,0
	60°	23,1	28,6	28,6	35,8	35,8	45,1	45,1	57,2	57,2	71,5	71,5	89,7	89,7	114,4	114,4	143,0
	30°	33,6	41,6	41,6	52,0	52,0	65,6	65,6	83,2	83,2	104,0	104,0	130,4	130,4	166,4	166,4	208,0
Ir (mm)	Aluminium	3,2	4,0	4,0	5,0	5,0	6,3	6,3	8,0	8,0	10,0	10,0	12,5	12,5	16,0	16,0	20,0
	Iron	4,0	5,0	5,0	6,3	6,3	7,9	7,9	10,0	10,0	12,5	12,5	15,6	15,6	20,0	20,0	25,0
	Stainless steel	5,6	7,0	7,0	8,8	8,8	11,0	11,0	14,0	14,0	17,5	17,5	21,9	21,9	28,0	28,0	35,0
F (KN/m)	R=200 N/mm2 - Al	165	132	206	165	238	189	335	264	413	330	475	380	594	464	825	660
	R=450 N/mm2 - Fe	371	297	464	371	535	424	754	594	928	743	1069	855	1337	1044	1856	1485
	R=700 N/mm2 - Stainless steel	578	462	722	578	832	660	1173	924	1444	1155	1663	1331	2079	1624	2888	2310

The data in the table are to be considered as average values



AFTER-SALES SERVICES

ASSISTANCE



Spare parts always in stock



Free support over the phone and online



After-sales assistance at the customer's premises

TRAINING



Free basic course at the customer's premises on how to use the machine



Refresher and training courses at Vimercati's head office

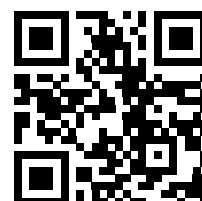




Via G.Verga 6 / 14
20845 Sovico (MB) Italy

T. +39 039.2014603
T. +39 039.2014563

info@vimercati.eu
www.vimercati.eu



ADDICTED TO **ACCURACY**