











KNOW-HOW

A path of **50 years** in the machines manufacture, press brakes and shears, ensures the necessary experience to offer the best solutions for the greatest challenges. High quality standards require a professional and specialized team.

PREDICTING FUTURE

Day-to-day operations are important, but long-term business strategy will determine the ongoing and further success. Building a reliable board of principles will help to ensure that our vision for the future will be carried forward.



RELIABILITY + DURABILITY

Our products are the result of a continuous focus on improving processes and supported by high quality levels, which result in recognition of RICO machines as state-of-the-art equipment.



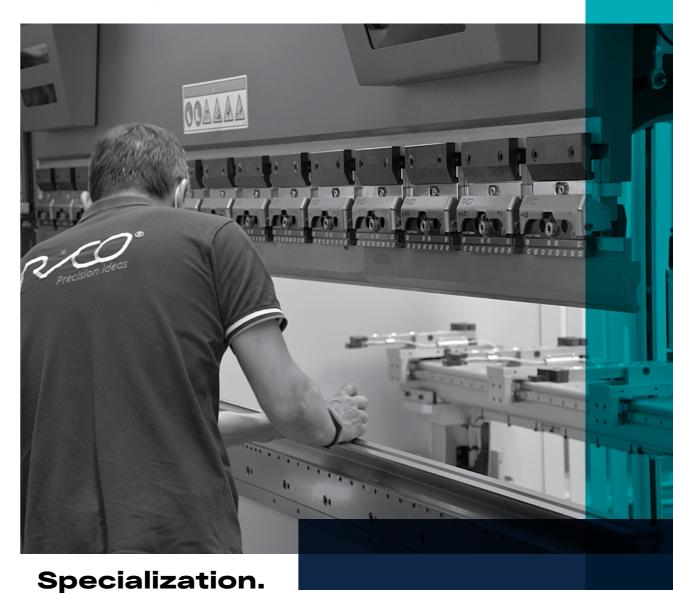
SUSTAINABLE GROWTH

We value sustainability respecting people and the environment.



We believe in specialization because it gives us more advanced knowledge of technology and processes.

With a growing dynamic over time, the experience gained over the years is increasingly fundamental to mastering technology.





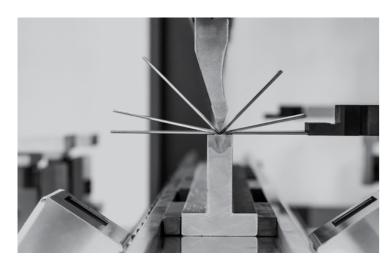
What we



Product Range.

We offer a wide range of fully configurable machines.

All machines can be customized according to a specific need.







All necessary configurations that are not included in this catalog can be offered separately.

Choose Better

Several options, the same **brand**

The best choice for industry.

RICO, Tomás Castro Silva Lda, values its services for quality and proximity to the customer. Competence and experience as a manufacturer are key factors in the solutions and results that we present.

To be a RICO customer is to have a guarantee of an excellent service and permanent pre and post-sale advice. We understand that technical support is vital for a higher performance of our equipments and that is why, in 2007, we decided to offer free and lifetime training to all our customers.

We guarantee immediate intervention for any emergency, either in terms of possible breakdowns, either in training or clarifying doubts. We have highly qualified and experienced technicians who can give you best advices.



Range

. Press Brakes

 CAPACITY
 1100
 1600
 2100
 2600
 3100
 3600
 4100
 6100

 30 Ton
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •
 •

40 Ton 70 Ton • • • • 80 Ton 100 Ton • • • • • • 135 Ton • • • • 160 Ton • • \bullet 200 Ton • • • • • 250 Ton • • 300 Ton 400 Ton • • 450 Ton 500 Ton • • • • 600 Ton

•

• PRCN • PRCB • PRCE

800 Ton

1000 Ton

. Shears

Shears							LENGTH (mm)
CAPACITY	1250	1550	2050	2550	3050	4050	6050
4 mm	0	•	•	•	•	•	•
6 mm		0	•	•	•	•	•
8 mm			•	•	•	•	•
10 mm			•	•	•	•	•
13 mm			•	•	•	•	•
16 mm			0		•	•	0
20 mm					•	•	
25 mm					•	0	
30 mm					•		
35 mm					•		
40 mm					•		
O Under	request						

Knov Hour Products



- All models allow its integration in robotic cells.
- All models may be used in Tandem or Tridem system.
- All customized models are C-Line design.
- All models allow its integration in robotic cells.
- All models may be used in Tandem or Tridem system.
- Capacity with more than 600 Ton available under request.





PRCN

Versatility accuracy

. Standard and Optionals

Туре	Item	I-LINE	C -LINE
Special systems	H-Box frame	•	•
	Swaybend system	•	•
	Triple-guide	•	•
	Standby function	•	•
Control panel	Delem DA-66T control	•	•
Automatic axes	4 automatic axes: Y1+Y2+X+R	•	•
Back gauge	BGR	•	•
Front safety	Laser AKAS II-F	•	•
Rear safety	Safety barriers (Level IV)	•	•
Frontal supports	Sliding SFS	•	•
Top clamping	Promecam Manual clamping	•	•
Bottom clamping	Promecam Manual clamping	•	•
Offline Software	Profile TL	•	•
Others	Hanging swivel control	-	•
	Mobile vehicle control	•	0
	ERFLEX Hanging swivel control	0	0
	Machine LED status	•	•
	Hour counter	•	•
	Hex key set	•	•
Design		•	-
	Design C-line	0	•

• Standard • Optional

















UNIQUE STRUCTURE FAST BENDING EXCELLENT SIZE CUSTOMIZABLE HIGH

HIGH PRECISION + REPEATABILITY

2 YEARS GUARANTEE





PRCB is a highly flexible model prepared for all types of requirements.

Available capacity between 30 Ton and 1500 Ton and fully customizable, PRCB always has a solution.



RXO°

.01 Equipment

. Standard Equipment

Туре	Item				
Control panel	Delem DA-58T control				
Automatic axes	4 automatic axes: Y1+Y2+X+R				
Back gauge	BGA				
Front safety	Laser AKAS II-F				
Rear safety	Safety barriers (Level IV)				
Special systems	Standby function				
Frontal supports	Sliding SFS				
Top clamping	Promecam manual clamping				
Bottom clamping	Promecam manual clamping				
Offline software	Profile TL				
Others	Hanging swivel control				
	Machine LED status				
	Hour counter				
	Hex key set				





The right choice is...











THE SOLUTION IS HEAVY DUTY

RICO has an extensive experience in manufacturing heavy-duty press brakes. With capacity up to 8 mts and 1500 Ton in a single machine.

All structures are calculated to obtain the lowest

possible deformation by reducing stress points.

Only high quality steels are used to achieve minimal structural deflection, even at full machine capacity.





O

לל כל של שלים של היים של

20-27

T T T



Advantages.

The synchronized electric-servo system offers the best performance, with a very short cycle time. Combined with the Direct-Drive motor, we also benefit from greater precision and comfort.

This RICO system includes two special ball screws, specially developed for this purpose, driven by two servo motors and planetary gearbox. The transmission components are high quality and suitable for high loads. Thus, they guarantee high performance and durability.





. PERFORMANCE

PRECISION

The beam synchronism is ensured by the control of two independent servoelectric axes. The reading positioning is obtained by high precision optical linear encoders.

SHORT CICLE TIME

The servo-electric system provides an effective reduction of transition time compared to hydraulic systems. In addition, with the components used in the PRCE model, the speeds are higher when compared to other electric press brakes.

. SAVINGS

LOWER ENERGY CONSUMPTION

The importance of energy consumption in

business competitiveness is increasingly a decisive factor. Energy is one of the main pillars of sustainable development and a major strategic segment for the global industry. The development of eco-design products enables a significant reduction of environmental impacts of energy savings, which results in cost savings at the same time. The PRCE model aims to optimize environmental performance, and ensures the same technical results.

LOW MAINTENANCE

Being an electric model, it doesn't require regular maintenance. The automatic lubrication system is standard equipment on the PRCE.

. CONFORT

LOW NOISE

PRCE allows a reduction up to 70% of noise than other machines. In Europe it is estimated

that more than a third of workers are

exposed to potentially harmful noise levels for at least a quarter of their working time. The reduction of the noise level is therefore a great benefit for workers and the environment impact.











Energy consumption

UP TO

-70%

SHORT CYCLE

LOW **ENERGY** CONSUMPTION

LOW MAINTENANCE

LOW NOISE

2 YEARS **GUARANTEE**

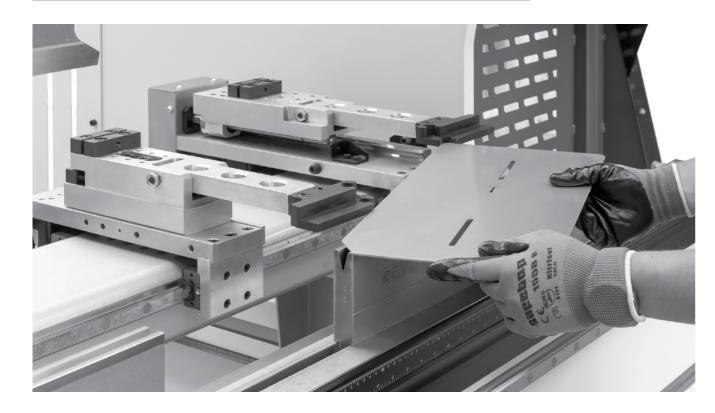
RXO°





. Standard Equipment

Туре	Item
Control panel	Delem DA-58T control
Automatic axes	4 automatic axes: Y1+Y2+X+R
Back gauge	BGR
Front safety	Laser AKAS II-M
Rear safety	Safety barriers (Level IV)
Frontal supports	Sliding SFS
Top clamping	Promecam manual clamping
Bottom clamping	Promecam manual clamping
Offline software	Profile TL
Others	Hanging swivel control
	Machine LED status
	Hour counter
	Hex key set
	Automatic lubrification





. COMPARISON

PRICE	ENERGY EFFICIENCY	BEAM SPEED	CYCLE TIME
	-`\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
	Energy efficiency		
The initial invest- ment is bigger, bu the medium-tern	is one of the most important factors for industries.		
advantages are much higher.			
Hydraulic press brakeHydraulic press brake			

- Hydraulic press brakeHybrid press brake
- Electric PRCE press brake







Seri day

PR-CELL, is the independent solution for automated bending process, from feeding, handling and palletizing. Various control systems, security and automatic tools changes are possible.

. Robot integration

Automation is the solution for repeatability processes. It is now possible to consider these solutions for small quantities with offline programming without machine interruption.





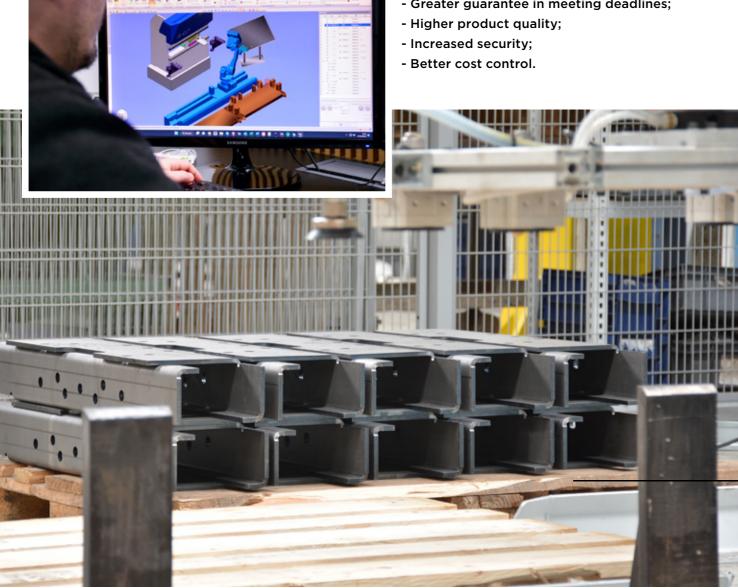


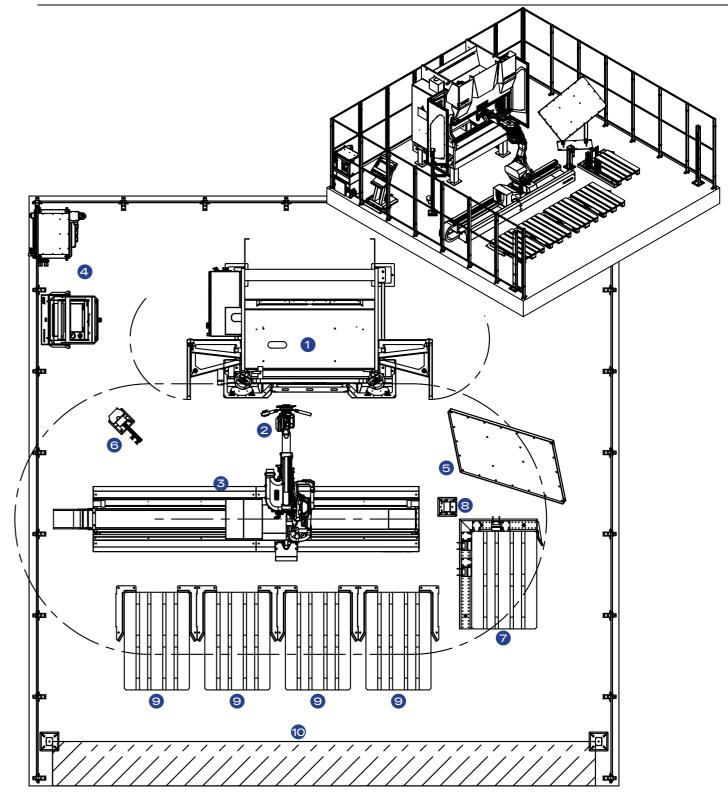
The robotic bending cell can be fully customized according to the characteristics software, it is possible to perform all the programming of the parts. The entire process is developed using intelligence and control systems that prevent potential failures.

With the integration of the offline programming of the press brake and the robot remotely without the need to stop the machine. This solution greatly increases productivity and allows the use of small series.

This solution offers several benefits, namely:

- Increased production cadence;
- Increased productivity;
- Increased profits;
- Reduction of operating costs;
- Reduction of errors;
- Greater guarantee in meeting deadlines;





LEGEND

RICO Press brake

2 Robot Track

Controller

Reference table

6 Regrip station

Loading zone

Thickness measurement & double sheet

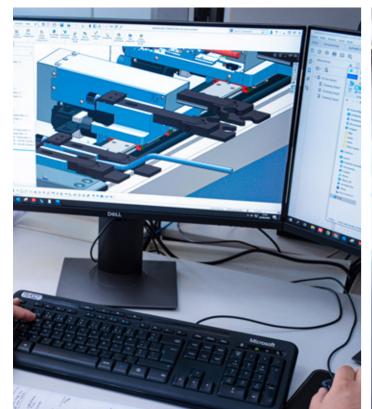
Unloading zone

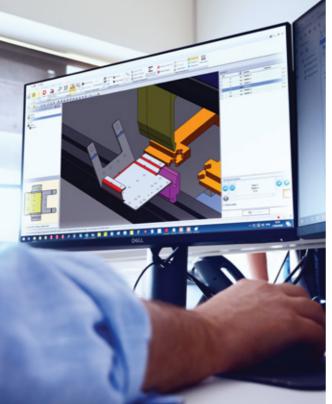
10 Safety barriers



Higher production capacity







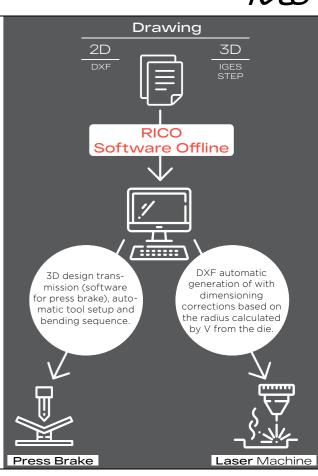
. Offline software

All **RICO** press brakes are supplied with offline software included depending on the machine CNC control model. In the case of 3D software, it allows the import of 2D/3D drawings, automatically programming the bending and creating a dxf file for the cutting.

MAIN ADVANTAGES:

- Automatic planification
- Automatic tool setup
- Automatic bending sequence and 3D simulation

8	2D	3D
Profile TL	•	-
Profile T2D	•	-
Profile T3D	•	•
MBend	•	





. Industry 4.0

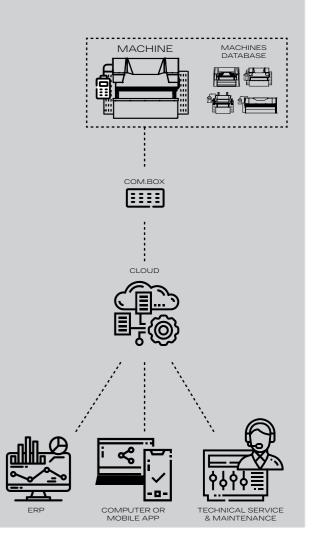
RICO Software P4 - Machine Management FEATURES:

EATURES:

- Production, maintenance and information, management;
- Artificial intelligence, predictive information;
- Control of energy consumption;
- Multi-machine;
- App for any device;
- Intuitive/Configurable;
- Transparent;
- Cybersecure cloud system (Azure).

MAIN ADVANTAGES:

- Ease of access to production data;
- Analytical study of production process and costing;
- Calculation of operating costs;
- Integration with ERP software;
- Maintenance plan and maintenance reports.



speed.

. TANDEM Integration

For long lengths bending, it is possible to use two

press brakes in a Tandem system. This system allows the two machines to be operated simultaneously, or

independently, guaranteeing the same precision and

Rico

Doble

PRCB

your produtive strenght







TI 2 Safety system Laser

RCB

It is possible to

purchase a first press brake with

Tandem prepara-

tion for a future

integration of the

second machine.



Competing for **Dynamics**

With a unique operating principle, HGR shears are distinguished by their dynamic structural behavior and cutting quality.

The mechanical system offers a high quality cut without vibration, thus increasing the machine's useful life.

HGR

RXO

Cutting perfect

HGR



BEST CUT, BEST DURABILITY.

Vertical cutting is the most effective and accurate system compared to alternative ones. Here it is possible to adjust the cutting angle depending on the type of material and thickness of the plate.

RXO

Details that makes the difference

OOAA

/ Vertical cut

HGR

This system guarantees the homogeneous distribution of force along the entire length, which results in a smooth and a vibration-free cut.

/ Variable rake angle

In order to minimize the "helix" effect of the sheet, the HGR shear allows to vary the angle depending on the thickness of the sheet. This rake variation is done automatically.

/ RAE System

While cutting, the back gauge automatically retracts to avoid collision with the plate.



VERSATILITY

With a cutting capacity of 4 mm to 40 mm thick. And from 1.2 m to 8 m in length, the HGR shear has a wide variety of solutions and automation.

Overcoming all the expectations

.O1 Equipment

. Standard equipment

Туре

. 9 0						
Control	Elgo P40					
	Vertical cut					
	Automatic variable rake angle					
Systems	Automatic cutting lenght					
	RAE - Automatic retration					
	Standby function					
Frankal armanaska	1000 mm squaring arm					
Frontal supports	1000 mm single support					
Frontal safety	Mechanical finger protection					
Rear safety	Safety barriors (type IV)					
Back gauge	BGS					
Others	Hanging swivel control panel					
	Cutting lighting shadow line					
	LED table lighting					
	Hold down jacks performing progressive load with Fibroflex					
	2 operating modes: continuous or cycle-by-cycle cut					
	Independent hold down jacks (pre-selected)					
	Frontal table with ball joints					
	Hours counter					



System ON



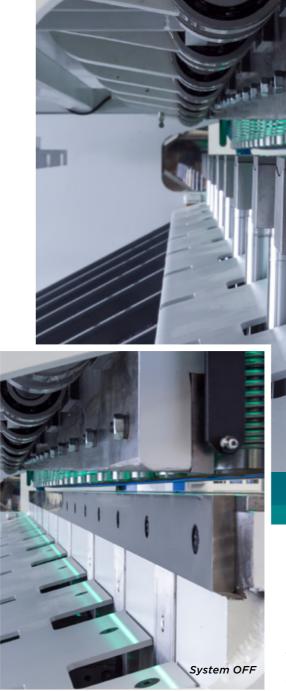


Front Feeder **HGR**

Automatic feeder.

HGR Front Feeder the ideal solution to reach demanding productivity and cadence levels.

It includes automatic positioning grippers that allows to perform programed cuts from entire plates, in a continuous way.



Technical data

Cylinders distance	Aprox. 400 mi				
Machine capacity reduction with ANTI TWIST	Aprox. 30%				
Minimum cutting width	20 mm				

Anti-Twist

Flat cutting.

The Anti Twist is a hydraulic system, with cylinders installed in the lower area of the shear, which exerts force against the sheet to be cut, keeping it straight during the cutting process.

Cylinders are installed along the entire length of the machine.

The system is activated on the control panel in an automatic way.

The movement is synchronized with the blade holder and the force is distributed progressively.







40MM
30MM
12MM

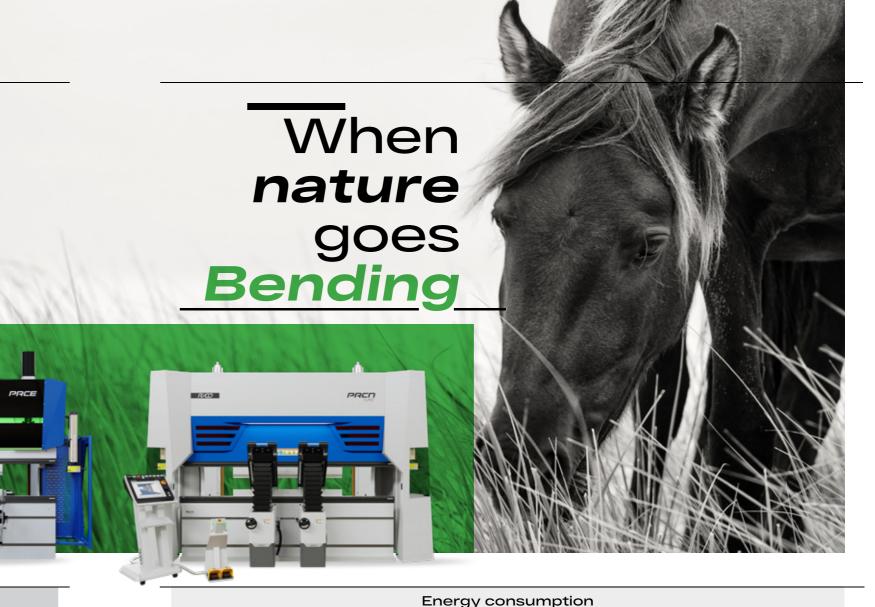
THICK METAL CUTTING

Competing for Heavy Duty

.Rico Green

. The way is green

RICO promotes an environmentally friendly policy and for that purpose has introduced alternative solutions in all its equipments that reduces energy consumption and consequently the environmental impact.





All **RICO** machines have an integrated **StandBy** function. This feature automatically stops the motor after 5 min (configurable value) of inativity.



ECO-Boost is a system that offers more productivity with environmental benefits.

- Return speed
- Energy efficiency
- Consumption: Start/Stop
- Maintenance



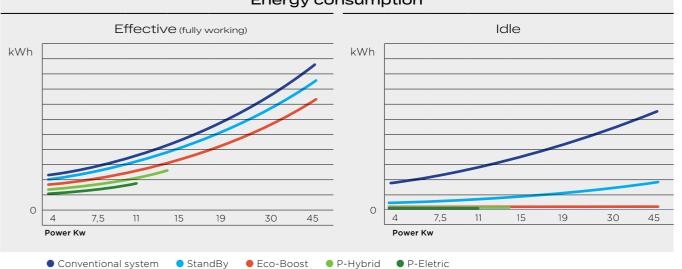
The beam synchronism, the positioning reading through precision optical linear encoders and an innovative servo-electric system guarantees:

- Precision
- Cycle time
- Energy Consumption
- Noise



The beam synchronism, the positioning reading through precision optical linear encoders and an innovative servo-electric system guarantees:

- Precision
 - Cycle time
- Energy Consumption
 - Maintenance



10%

90% 25% 60%

99%

50%

99% Idle Saving

50%

Technical Data







in linkedin.com/company/ricoportugal/

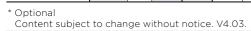


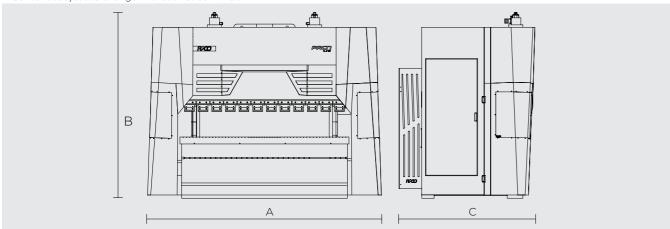


.PRCN

PRCN I-LINE								ost *	
	Bending length	Tonnage	Throat depth	Beam stroke	Fast	Bending	Return	Return Eco-Boost	Aprox. weight
	Ber	5	Thr	Bea		Y axes sp	eed		δ
	mm	Ton	mm	mm		mm/s	5		Kg
2070	2100	70	310	300	210	0-10/18	145	220	6820
2570	2600	70	310	300	210	0-10/18	145	220	7300
3070	3100	70	310	300	210	0-10/18	145	220	7640
25100	2600	100	410	300	200	0-10/18	145	220	8060
30100	3100	100	410	300	200	0-10/18	145	220	9230
35100	3600	100	410	300	200	0-10/18	145	220	10670
40100	4100	100	410	300	200	0-10/18	145	220	12050
30135	3100	135	410	300	200	0-10/17	135	200	11450
35135	3600	135	410	300	200	0-10/17	135	200	13050
40135	4100	135	410	300	200	0-10/17	135	200	14080
30160	3100	160	410	300	200	0-10/17	155	205	12550
35160	3600	160	410	300	200	0-10/17	155	205	14600
40160	4100	160	410	300	200	0-10/17	155	205	16500
30200	3100	200	410	300	200	0-10/17	130	200	15140
35200	3600	200	410	300	200	0-10/17	130	200	16410
40200	4100	200	410	300	200	0-10/17	130	200	20200

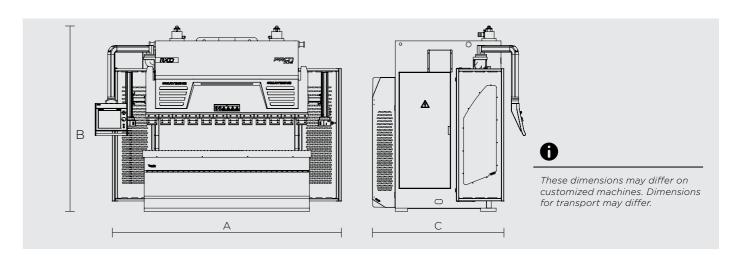






PRCN C-LINE	Bending length	Tonnage	Throat depth	Beam stroke	Fast	Bending	Return	Return Eco-Boost *	Aprox. weight
	Ben	Ton	Thro	Веаг	,	Y axes spe	ed		Apre
	mm	Ton	mm	mm		mm/s			Kg
30250	3100	250	410	350	180	0-10/17	130	205	18080
35250	3600	250	410	350	180	0-10/17	130	205	19720
40250	4100	250	410	350	180	0-10/17	130	205	21700
30300	3100	300	410	350	180	0-10/17*	130	205	19130
35300	3600	300	410	350	180	0-10/17	130	205	20730
40300	4100	300	410	350	180	0-10/17	130	205	23600
35400	3600	400	410	400	170	0-10	120	x	26000
40400	4100	400	410	400	170	0-10	120	x	28000
35450	3600	450	410	400	150	0-10	105	x	27000
40450	4100	450	410	400	150	0-10	105	х	28700
35500	3600	500	410	400	140	0-10	105	x	28320
40500	4100	500	410	400	140	0-10	105	х	31850





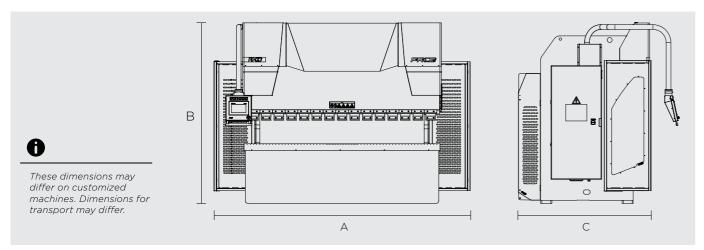


.PRCB

	1	1		1				1	
PRCB	Bending length	Tonnage	Throat depth	Beam stroke	Fast	Bending Y axes sp	pe Return	Return Eco-Boost *	Aprox. weight
	mm	Ton	mm	mm			Kg		
1530	1600	30	310	280	210	0-10/20	140	230	3700
2030	2100	30	310	280	210	0-10/20	140	230	4300
2070	2100	70	310	280	210	0-10/18	145	220	5800
2570	2600	70	310	280	210	0-10/18	145	220	6300
3070	3100	70	310	280	210	0-10/18	145	220	7000
20100	2100	100	410	280	200	0-10/18	145	220	6800
25100	2600	100	410	280	200	0-10/18	145	220	7600
30100	3100	100	410	280	200	0-10/18	145	220	8400
35100	3600	100	410	280	200	0-10/18	145	220	9450
40100	4100	100	410	280	200	0-10/18	145	220	11050
60100	6100	100	410	280	200	0-10/18	125	200	19000
30135	3100	135	410	280	200	0-10/17	135	200	9900
35135	3600	135	410	280	200	0-10/17	135	200	10600
40135	4100	135	410	280	200	0-10/17	135	200	12500
60135	6100	135	410	280	200	0-10/17	115	180	20000
30160	3100	160	410	280	200	0-10/17	155	205	10700
35160	3600	160	410	280	200	0-10/17	155	205	11940
40160	4100	160	410	280	200	0-10/17	155	205	13600
60160	6100	160	410	280	200	0-10/17	135	195	22000
30200	3100	200	410	280	200	0-10/17	130	200	12580
35200	3600	200	410	280	200	0-10/17	130	200	13240
40200	4100	200	410	280	200	0-10/17	130	200	16000
60200	6100	200	410	280	200	0-10/17	110	180	25200



^{*} Optional | ** Size is smaller in Tandem machines. Content subject to change without notice. V4.1



PRCB Heavy Duty	Bending length	Tonnage	Throat depth	Beam stroke	Fast	Bending	Return	Return Eco-Boost *	Aprox. weight	
	Be		두	Be		Y axes sp				
	mm	Ton	mm	mm		mm/			Kg	
30250	3100	250	410	330	180	0-10/17	130	205	15800	
35250	3600	250	410	330	180	0-10/17	130	205	17400	
40250	4100	250	410	330	180	0-10/17	130	205	19600	
60250	6100	250	410	330	180	0-10/17	110	195	30000	
30300	3100	300	410	330	180	0-10/17	130	205	16360	
35300	3600	300	410	330	180	0-10/17	130	205	18400	
40300	4100	300	410	330	180	0-10/17	130	205	21200	
60300	6100	300	410	330	180	0-10/17	110	195	33500	
35400	3600	400	410	380	170	0-10	120	×	22900	
40400	4100	400	410	380	170	0-10	120 x		25000	
60400	6100	400	410	380	170	0-10	100	×	35400	
35450	3600	450	410	380	150	0-10	105	Х	23700	
40450	4100	4100 450		380	150 0-10		105 x		27500	
60450	6100	450	410	380	150	0-10	90	Х	37600	
35500	3600	500	410	380	140	0-10	105	Х	26000	
40500	4100	500	410	380	140	0-10	105 x		30000	
60500	6100	500	410	380	140	0-10	90	х	42000	
40600	4100	600	410	430	130	0-10	115	Х	34000	
60600	6100	600	410	430	130	0-10	100	Х	46000	







.PRCE

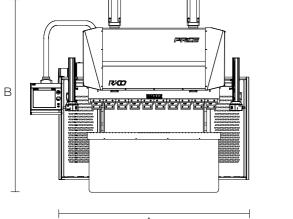
PRCE Y axes speed Kg 1040 40 210 270 220 0-10/20 220 4200 1540 1600 40 210 270 220 0-10/20 | 220 | 4500 2040 2100 40 310 270 220 0-10/20 | 220 | 4700 2080 2100 80 310 270 210 0-10/20 210 6800 2580 2600 80 310 270 210 0-10/20 210 7150 270 3080 3100 80 310 210 0-10/20 210 7500

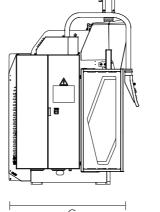


Content subject to change without notice. V1.5

0

These dimensions may differ on customized machines. Dimensions for transport may differ.







.HGR

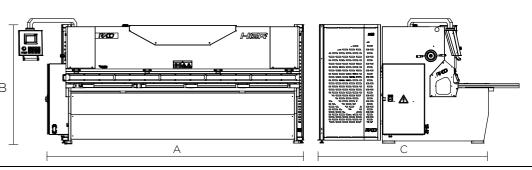
HGR						o		
	Lenght	Mild steel (420 N/mm²)	Stainless steel (700 N/mm²)	Rake angle	Hold down jacks	Back gauge stroke	Aprox. weight	
		Thick		0				
154	mm 1EEO	mm	mm		qt 10	mm	Kg	
204	1550	4	2,8	1,3/0,6	10	1000	3350	
254	2050	4	2,8	1,3/0,7	12	1000	3750	
	2550		2,8	1,3/0,7	14	1000	4600	
304	3050	4	2,8	1,3/0,7	17	1000	5200	
404	4050	4	2,8	1,3/0,7	22	1000	9300	
604	6050	4	2,8	1,3/0,7	31	1000	17300	
206	2050	6	4	1,5/0,7	12	1000	4500	
256	2550	6	4	1,5/0,7	14	1000	5140	
306	3050	6	4	1,5/0,7	17	1000	6000	
406	4050	6	4	1,5/0,7	22	1000	10000	
606	6050	6	4	1,5/0,7	31	1000	25400	
208	2050	8	5,5	2/0,7	12	1000	5750	
258	2550	8	5,5	2/0,7	14	1000	6500	
308	3050	8	5,5	2/0,7	17	1000	8900	
408	4050	8	5,5	2/0,7	22	1000	13000	
608	6050	8	5,5	2/0,7	31	1000	31350	
210	2050	10	7	2/1	12	1000	6300	
2510	2550	10	7	2/1	14	1000	7050	
310	3050	10	7	2/1	17	1000	9570	
410	4050	10	7	2/1	22	1000	13500	
610	6050	10	7	2/1	31	1000	33800	
213	2050	13	9	2/1	12	1000	8300	
2513	2550	13	9	2/1	14	1000	9720	
313	3050	13	9	2/1	17	1000	12500	
413	4050	13	9	2/1	22	1000	14500	
613	6050	13	9	2/1	31	1200	54400	
316	3050	16	11	3/1,5	17	1000	13750	
416	4050	16	11	3/1,5	22	1200	19400	
320	3050	20	14	3/1,5	17	1200	19200	
420	4050	20	14	3/1,5	22	1200	27800	
325	3050	25	17,5	3/1,5	17	1200	23500	
330	3050	30	21	3,5/2	15	1200	32000	
335	3050	35	24	3,5/2	15	1200	33000	
340	3050	40	28	4/2,5	15	1200	34000	



Content subject to change without notice.V7.0



These dimensions may differ on customized machines. Dimensions for transport may differ.





.Bending table

Required bending tonnage (Ton/m)

 $Rm=420 \text{ N/mm}^2 - Rm=700 \text{ N/mm}^2$

S (mm)

R	В	V	0,5	0,6	0,8	1	1,2	1,5	2	2,5	3	4	5	6	8	10	12	15	20	25	30
0,5	3	4	4	6	12																
0,7	3,5	5	3 5	5	9	15 25											90)∞ 			
0,8	4	6	2	3	7	11 19	18								$ \langle$		₹F	L	(b)	> /	
1	5,5	8		2	5	8	12 21	21							`		/		/ /	10	
1,3	6,5	10			4	6	9	15 26	30 50												
1,5	8	12				5	7	12	23	39 66											
2	10,5	16					5	8	16 26	27 45	44						<u>,</u> ∨	-			
2,5	13	20						6 10	12	20	31 52	60 101									
3,2	16,5	25							9	14	23	44	76 126								
4,4	21	32								11 18	16 27	32 53	54 90	85 142							
5	26	40									12	23	39 66	62 103	121						
6,5	32,5	50										18	29 48	45 76	88 147	151 252					
8	41	63											22	33 55	70 117	109 182	173				
10	52	80												25 42	46 77	79 131	124	213 354			
12	65	100													35 59	58 96	91 151	155 258	302 504		
15	81,5	125														44	66 110	113	220	378 630	
20	104	160															50 83	81 135	158	269 448	425
25	130	200																62 104	115 192	197	310 517
37	163	250																	89 148	144	227
45	195	300																		120	173











All content in this catalog is property of Tomás Castro Silva, Lda.

Content subject to change without notice V.01.22.12

TOMÁS CASTRO SILVA, LDA. GONDOMAR | PORTUGAL



