



PRECISION IDEAS

PRCN

HYDRAULIC SYNCHRONIZED
PRESS BRAKE



HYDRAULIC PRESS BRAKE PRCN

THE RICO PRESS BRAKE PRCN IS A **SYNCHRO MACHINE** **SUITABLE FOR ALL TYPES OF PRODUCTIONS.** INTEGRATED WITH THE HIGHEST TECHNOLOGY ALLIED TO A "USER-FRIENDLY" USE IT MAKES OF THIS MODEL A TOP MACHINE THAT ENSURES A HIGH LEVEL OF ACCURACY AND COMPETITIVENESS.



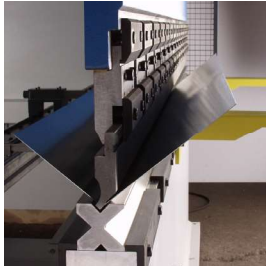


MAIN CHARACTERISTICS

+ PRODUCTIVITY

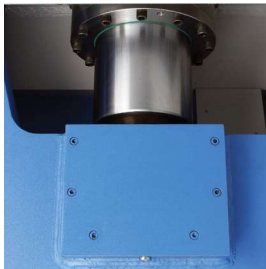
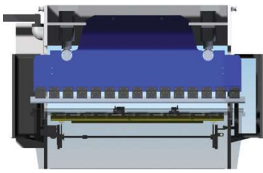
The productivity of a machine is increasingly vital for the success of a company. We at RICO fully understand the importance of producing machinery that assists our customers to be competitive, we strive to update our specification at every opportunity, we constantly embrace and evaluate new technologies.

- CNC control system that gives automatic calculation of the angle, with simple correction procedures, the positioning of the axes.
- Easy handling of the machine controls in the preparation and implementation of the parts to be manufactured.
- High speeds of movement for all axes.
- Self centring table: using centring dies, adjustment is done only by the front of the machine, not being necessary to align with the punch.



+ VERSATILITY

- **SWAYBEND:** the bending beam is supported and fixed to the cylinder by ball joints in an oil bath allowing the bending beam inclination without mechanical hazards. Possibility to do conic bending (up to 50 mm of difference between Y1 and Y2) in safety.
- With ample "throat depth" and distance between side frames, having flexibility for the handling of plates of greater dimensions.
- Several solutions for compensation and custom automatic multi-axis to reduce working time



+ ACCURACY

- The cylinders are installed inside the structure and not directly into the machine end frames. This method of construction reduces the deflection of the beam during bending by around 60% simple because the distance between cylinders is smaller.
- **SYNCHRO** (electronic-hydraulic balancing of bending beam) - The position of the bending beam is monitored by the reading of two linear encoders (0,01 mm accuracy) situated at Y1 and Y2. The position of the attachment of the encoders is important. With RICO machines the attachment method ensures that the encoders are free of the machines frame. The significance of this is that even if there is deformation in the machine structure during bending, the angle is not affected, in other words, the angle calculated by CNC is not subject to errors caused by deformation of the machines frame.
- Back gauge equipped with hardened ball screws and brushless servo-motors.



+ SAFETY

- DSP Laser (Category IV)
- Back safety barriers (Category IV)
- Machines with EC certification



+ RELIABILITY

At RICO we have a strict policy of choosing components suppliers very carefully in line with experience gained over many years. All the components are certified in accordance with European standards. The main sources of our components are: Germany, USA, Italy, Switzerland and Holland.



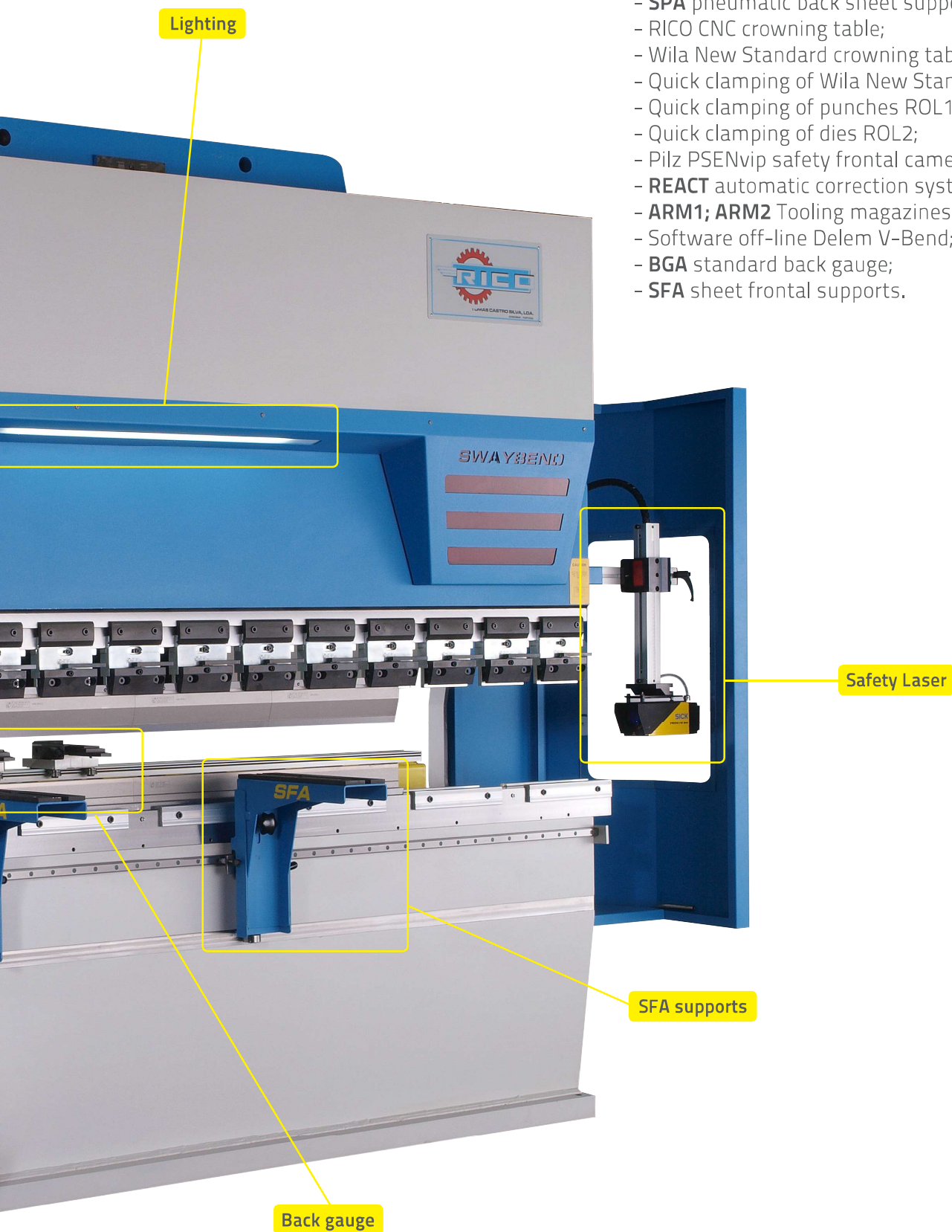
STANDARD EQUIPMENT

- DelemDA-52 or Cybelec DNC 60 controls;
- 3 Automatic Y1 + Y2 + X axes;
- 4 Manual R1 + R2 + Z1 + Z2 axes;
- **Standard BGS** type back gauge equipped with ball screws and brushless motor;
- **SFS** sheet frontal supports;
- **SWAYBEND**: ball joints supporting the bending beam in oil bath;
- Frontal protection: DSP safety Laser (category IV);
- Back protection: Safety barriers (category IV);
- CNC control mounted to a moveable pendant arm;
- Self centring table.
- Standard Tools;
- Frontal and back lighting;



OPTIONAL EQUIPMENT

- **ACF-1** Automatic sheet follower system;
- Servo motor automatic Z1+Z2 axis;
- Servo motor automatic X5 axis;
- **SPA** pneumatic back sheet supports;
- RICO CNC crowning table;
- Wila New Standard crowning table;
- Quick clamping of Wila New Standard tools;
- Quick clamping of punches ROL1, ROL5;
- Quick clamping of dies ROL2;
- Pilz PSEnvip safety frontal camera;
- **REACT** automatic correction system of angle;
- **ARM1; ARM2** Tooling magazines;
- Software off-line Delem V-Bend;
- **BGA** standard back gauge;
- **SFA** sheet frontal supports.



CONTROLS

Delem DA-52

- Operating system: Windows;
- Monochromatic 6.4" TFT screen.



Cybelec DNC 60

- Operating system: DOS
- Monochromatic screen

Delem DA-56

- Operating system: Windows;
- Polychromatic 5.7" TFT screen;
- 2D graphical programming;
- Collision detection.



Cybelec DNC 880

- Operating system: Windows
- Polychromatic screen
- 2D/3D graphical programming

Delem DA-65W

- Operating system: Windows;
- Polychromatic 10" TFT screen;
- 2D/3D graphical programming;
- Collision detection;
- Automatic bend sequence calculation.



Cybelec Modeva 10

- Operating system: Windows;
- Polychromatic screen;
- 2D/3D graphical programming.

Delem DA-66W

- Operating system: Windows;
- Polychromatic 12" TFT screen;
- 2D/3D graphical programming;
- Collision detection;
- Automatic bend sequence calculation.



Cybelec Modeva 12

- Operating system: Windows;
- Polychromatic screen;
- 2D/3D graphical programming.

Delem DA-69W

- Operating system: Windows
- Polychromatic 12" TFT screen;
- 2D/3D graphical programming;
- Collision detection;
- Automatic bend sequence calculation.



Cybelec Modeva 15

- Operating system: Windows;
- Polychromatic screen;
- 2D/3D graphical programming.

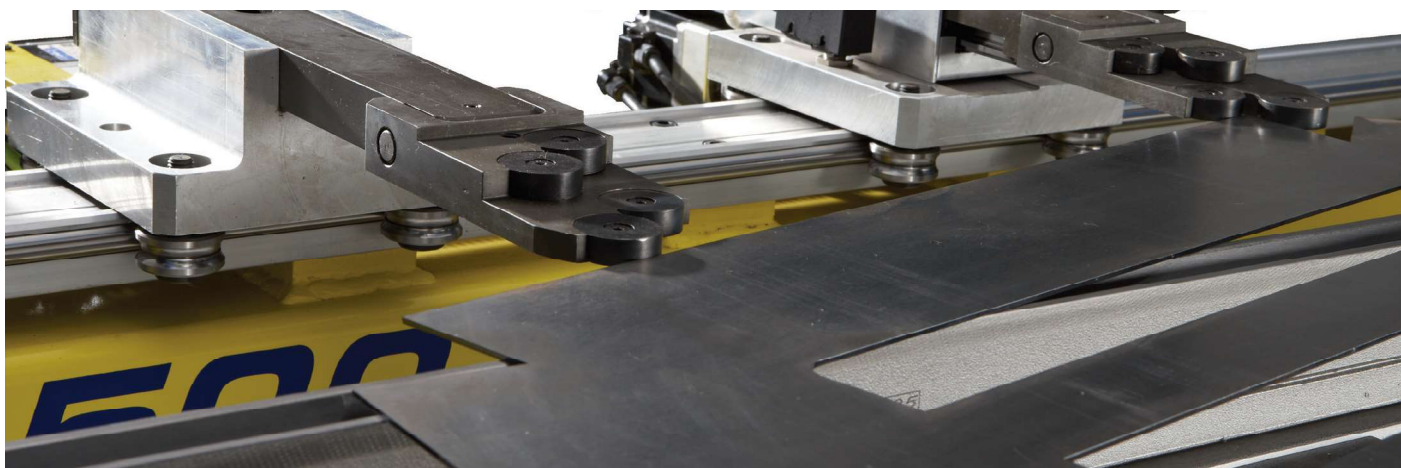
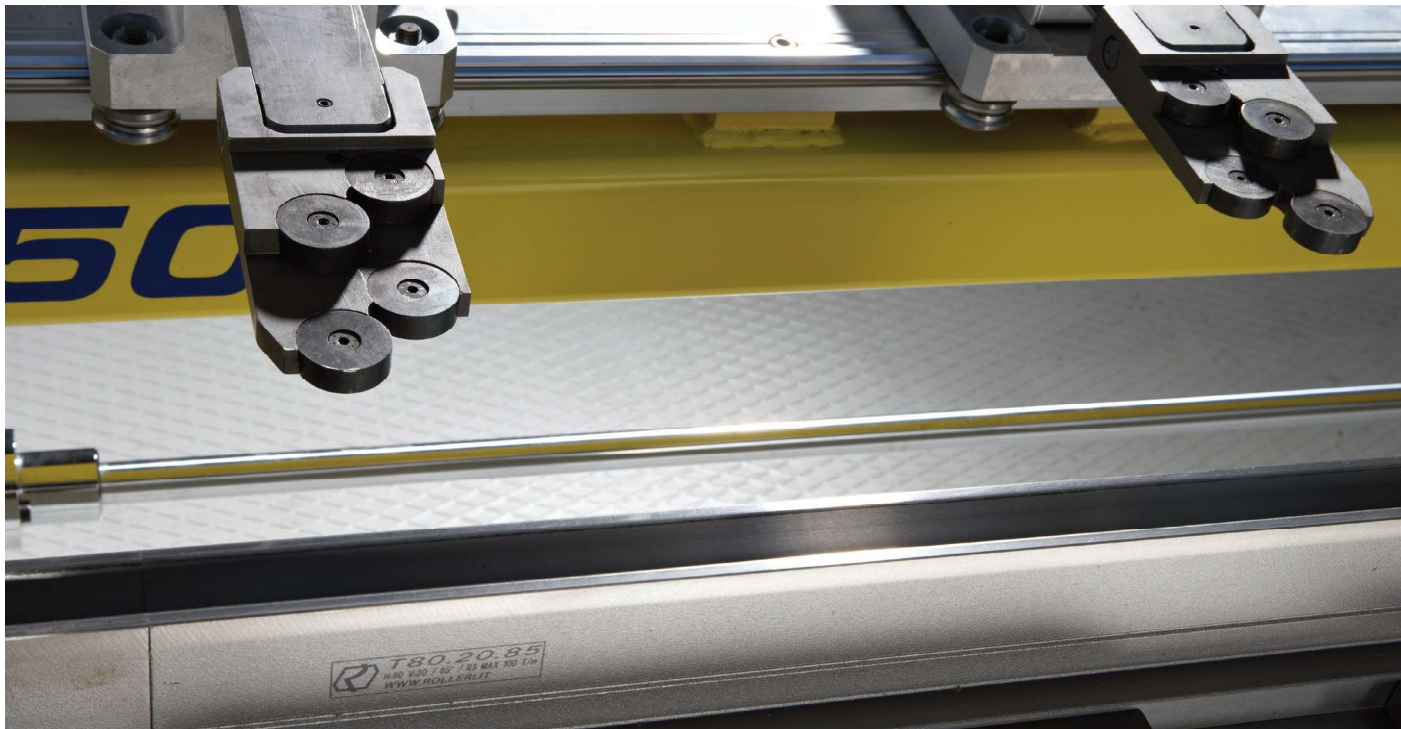


BGS BACK GAUGE

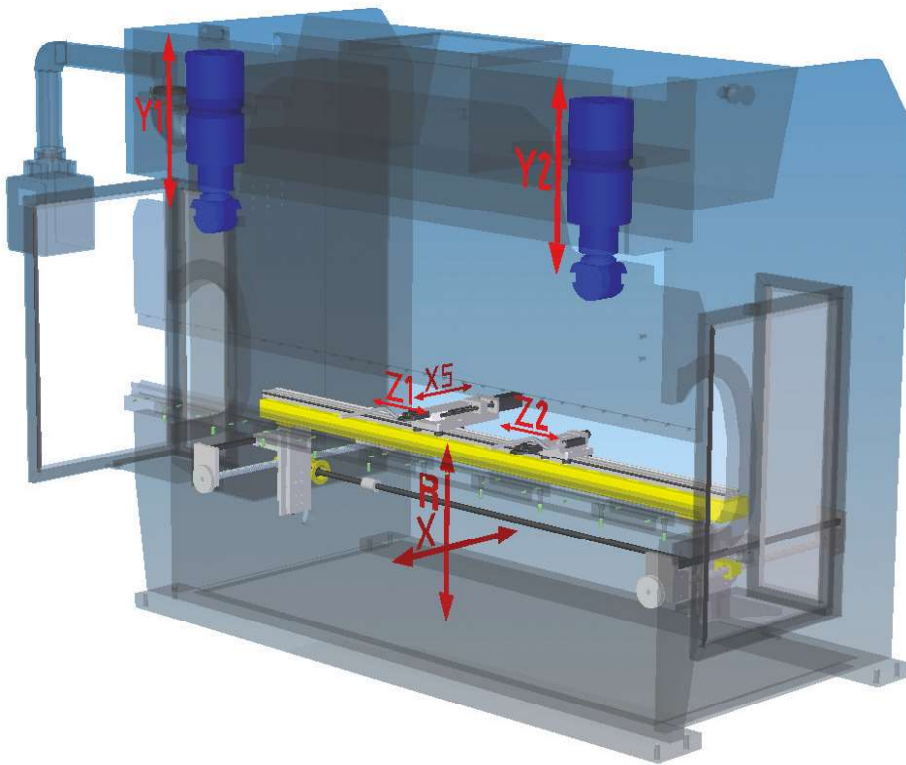
- Aluminum profile;
- Back gauge fingers supported on easily slidable rule;
- Aluminum slide rule;
- Hardened ball screws;
- Hardened linear shafts;
- Automatic X axe;
- Manual R1+R2+Z1+Z2 axis.

BGA BACK GAUGE

- Robust structure in steel;
- Back gauge fingers supported on easily slidable rule with automatic brake;
- Aluminum slide rule;
- Hardened ball screws;
- Linear guidances with recirculation of balls;
- Automatic X axis;
- Automatic R axis;
- Automatic Z1+Z2 axis (optional);
- Automatic X5 axis (optional).

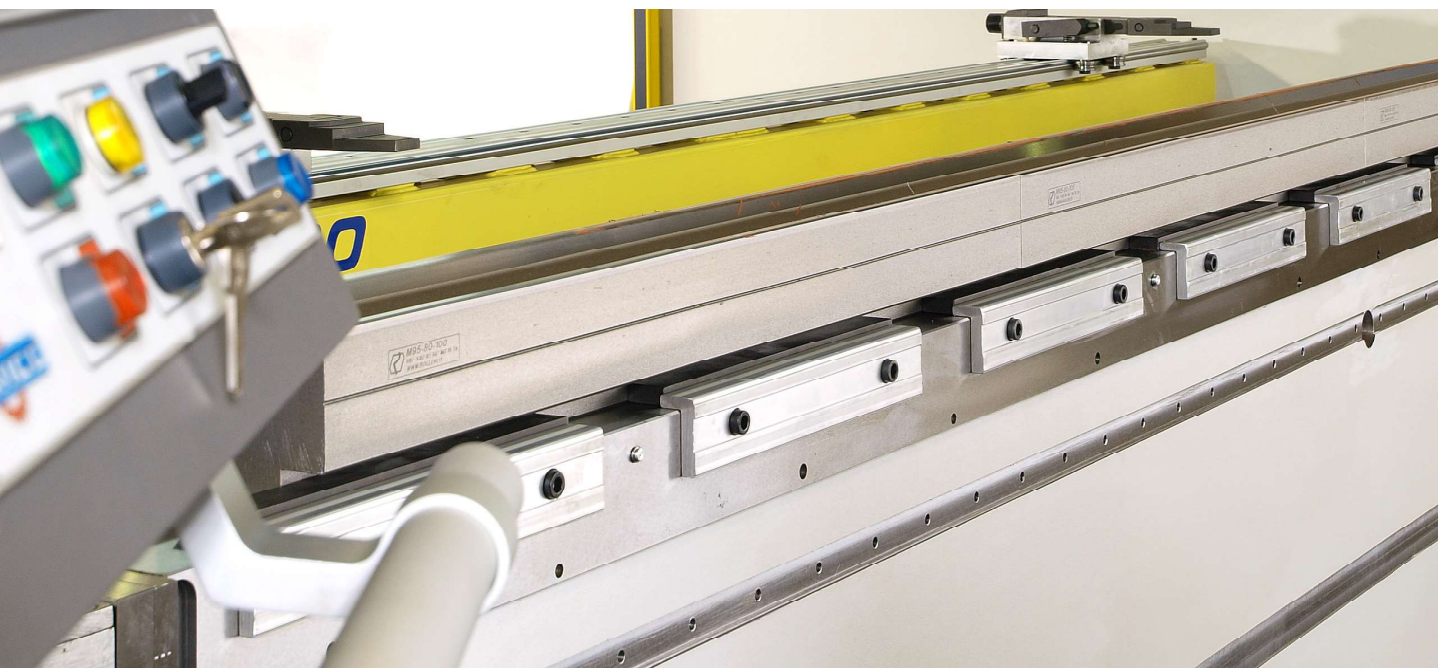


AXES



- Y1 Cylinder 1 (Standard)
- Y2 Cylinder 2 (Standard)
- X Back gauge (Standard)
- R Back gauge (Optional)
- Z1+Z2 Back gauge (Optional)
- X5 Back gauge (Optional)

AUTOMATIC AXIS	X	R	Z1	Z2	X5
STROKE (mm)	700	150	On request	On request	200
SPEED (mm/s)	500	170	2000	2000	300
ACCURACY (mm)	+/- 0.05	+/- 0.20	+/- 0.10	+/- 0.10	+/- 0.05
REPEATABILITY (mm)	+/- 0.05	+/- 0.20	+/- 1.00	+/- 1.00	+/- 0.05
MOTOR TYPE	Brushless	Brushless	Brushless	Brushless	Brushless
MECHANICAL SYSTEM	Ball screws	Ball screws	Belt	Belt	Ball screws



CROWNING TABLE

This system allows compensating the deformations that are subject the beams during the bending. In this way ensures that the angle is constant throughout the length.

RICO









WILA



Crowning table

TOOLING QUICK CLAMPING

MODEL		TYPE
Rolleri ROL1 Quick clamping of the punch		Mechanical
Rolleri ROL1 PN Quick clamping of the punch		Pneumatic
Rolleri ROL1 HYD Quick clamping of the punch		Hydraulic
Rolleri ROL5 Quick clamping of the punch		Hydraulic
Rolleri ROL2 Quick clamping of the die		Mechanical
Rolleri ROL2 HYD Quick clamping of the die		Hydraulic

FRONTAL SUPPORTS

SFS

- Support in each position of the chocks;
- Manual height adjustment.

SFA

- Support in slide rules;
- Height adjustment for positions;
- Milimetric scale;
- Transporting balls;
- Adjustable stopper sheet;
- Device die approach;
- Removable supports.



ACF1

- Sheet follow-support;
- CNC controlled;
- Support in slide rules;
- Height adjustable by steering wheel.

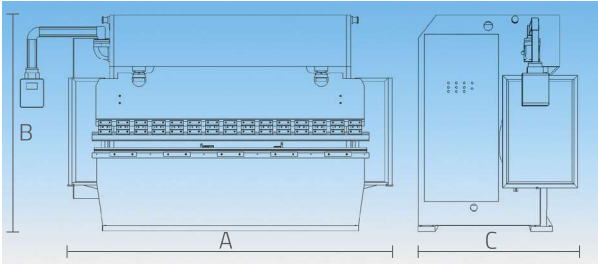


REACT System

Whenever a correction it is necessary to make, the digital reading of the measured angle with **REACT system** can be directly transferred to the numerical control. In such way the correction is made automatically by the command.



PRCN TECHNICAL CHARACTERISTICS



Model	Bending length mm	Tonnage Ton	Throat Depth mm	Beam Stroke mm	Daylight mm	Back Gauge Speed			Oil Capacity Lts	Back Gauge Stroke mm	Motor Power HP/CV	Dimensions					Aprox. Weight Kg
						Fast Speed mm/s	Slow Speed (Work Speed) mm/s	Return Speed mm/s				Total Length (A) mm	Total Height (B) mm	Total Width (C) mm	Distance Between Frames mm	Height Under the Floor mm	
PRCN 2070	2100	70	300	200	395	200	0-10	150	125	750	7.5	2850	2495	1540	1600	0	4800
PRCN 2570	2600	70	300	200	395	200	0-10	150	125	750	7.5	3350	2495	1540	2100	0	5500
PRCN 3070	3100	70	300	200	395	200	0-10	150	125	750	7.5	3850	2495	1540	2600	0	6435
PRCN 25100	2600	100	400	200	395	200	0-10	150	125	750	10	3370	2570	1600	2100	0	7200
PRCN 30100	3100	100	400	200	395	200	0-10	150	125	750	10	3870	2570	1600	2600	0	8800
PRCN 30135	3100	135	400	200	405	200	0-10	150	160	750	15	3890	2590	1620	2600	0	10120
PRCN 30160	3100	160	400	200	405	200	0-10	150	160	750	20	3880	2780	1770	2600	0	11000
PRCN 30200	3100	200	400	200	405	200	0-10	120	200	750	25	3910	2800	1880	2600	0	14135
PRCN 30250	3100	250	400	250	455	200	0-10	100	300	750	25	3950	2910	2010	2600	0	15785
PRCN 30300	3100	300	400	250	455	200	0-10	100	300	750	30	3950	2910	2010	2600	0	18700
PRCN 35100	3600	100	400	200	395	200	0-10	150	125	750	10	4370	2570	1600	3100	0	8900
PRCN 35135	3600	135	400	200	405	200	0-10	150	160	750	15	4390	2590	1620	3100	0	11000
PRCN 35160	3600	160	400	200	405	200	0-10	150	160	750	20	4410	2780	1770	3100	0	14685
PRCN 35200	3600	200	400	200	405	200	0-10	120	200	750	25	4430	2820	1980	3100	0	16500
PRCN 35250	3600	250	400	250	455	200	0-10	100	300	750	25	4450	2910	2010	3100	0	17750
PRCN 35300	3600	300	400	250	455	200	0-10	100	300	750	30	4450	2910	2010	3100	0	19000
PRCN 40100	4100	100	400	200	395	200	0-10	150	125	750	10	4870	2570	1600	3100	0	9900
PRCN 40135	4100	135	400	200	405	200	0-10	150	160	750	15	4880	2590	1620	3100	0	12100
PRCN 40160	4100	160	400	200	405	200	0-10	150	185	750	20	4880	2800	1770	3100	0	15950
PRCN 40200	4100	200	400	200	405	200	0-10	120	200	750	25	4900	2800	2010	3100	0	18150
PRCN 40250	4100	250	400	250	455	200	0-10	100	300	750	25	4920	2890	2100	3100	0	19000
PRCN 40300	4100	300	400	250	455	200	0-10	100	300	750	30	4960	2910	2100	3100	0	21000
PRCN 60100	6100	100	500	200	395	200	0-10	120	125	750	10	6780	2900	1900	5100	0	16000
PRCN 60135	6100	135	500	200	405	200	0-10	120	160	750	15	6800	2950	1900	5100	0	16500
PRCN 60160	6100	160	500	200	405	200	0-10	120	160	750	20	6820	3100	2050	5100	0	23000
PRCN 60200	6100	200	500	200	405	200	0-10	100	200	750	25	6840	3150	2150	5100	1150	24300
PRCN 60250	6100	250	500	250	455	200	0-10	90	300	750	25	6860	3380	2230	5100	1200	27500
PRCN 60300	6100	300	500	250	455	200	0-10	90	300	750	30	6860	3380	2230	5100	1200	33000

PCRN AT series TECHNICAL CHARACTERISTICS



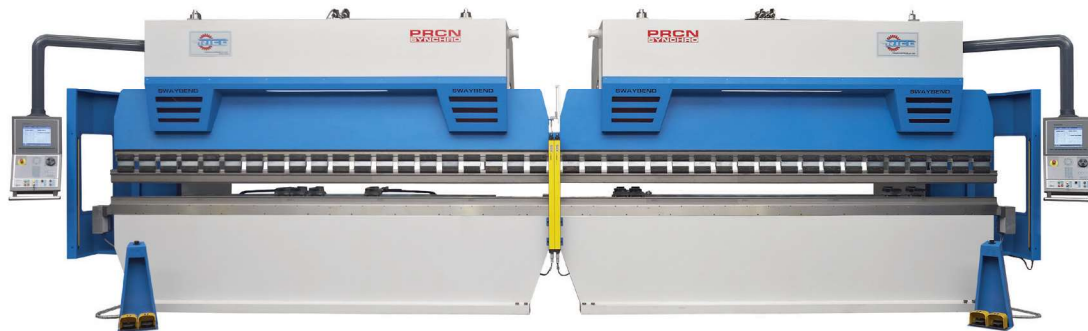
Model	Bending length mm	Tonnage Ton	Throat Depth mm	Beam Stroke mm	Daylight mm	Back Gauge Speed			Oil Capacity Lts	Back Gauge Stroke mm	Motor Power HP/CV	Dimensions					Aprox. Weight Kg
						Fast Speed mm/s	Slow Speed (Work Speed) mm/s	Return Speed mm/s				Total Length (A) mm	Total Height (B) mm	Total Width (C) mm	Distance Between Frames mm	Height Under the Floor mm	
PCRN 35400	3600	400	300	300	520	180	0-10	100	380	750	40	4460	3000	2200	3100	0	22500
PCRN 35450	3600	450	300	300	520	180	0-10	100	450	750	50	4500	3000	2200	3100	450	23500
PCRN 35500	3600	500	300	300	520	180	0-10	100	450	750	50	4500	3000	2200	3100	450	25000
PCRN 40400	4100	400	300	300	520	180	0-10	100	380	750	40	4980	3000	2200	3100	450	23500
PCRN 40450	4100	450	300	300	520	180	0-10	100	450	750	50	4990	3000	2200	3100	450	24750
PCRN 40500	4100	500	300	300	520	180	0-10	100	450	750	50	4990	3000	2200	3100	450	26000
PCRN 60400	6100	400	400	300	520	150	0-10	90	380	750	40	7040	3520	2400	5100	1350	40000
PCRN 60450	6100	450	400	300	520	150	0-10	80	450	750	50	7040	3520	2400	5100	1350	45000
PCRN 60500	6100	500	400	300	520	150	0-10	80	450	750	50	7080	3520	2400	5100	1700	47000
PCRN 60600	6100	600	400	350	570	150	0-10	80	500	750	60	7080	3700	2400	5100	1700	51000

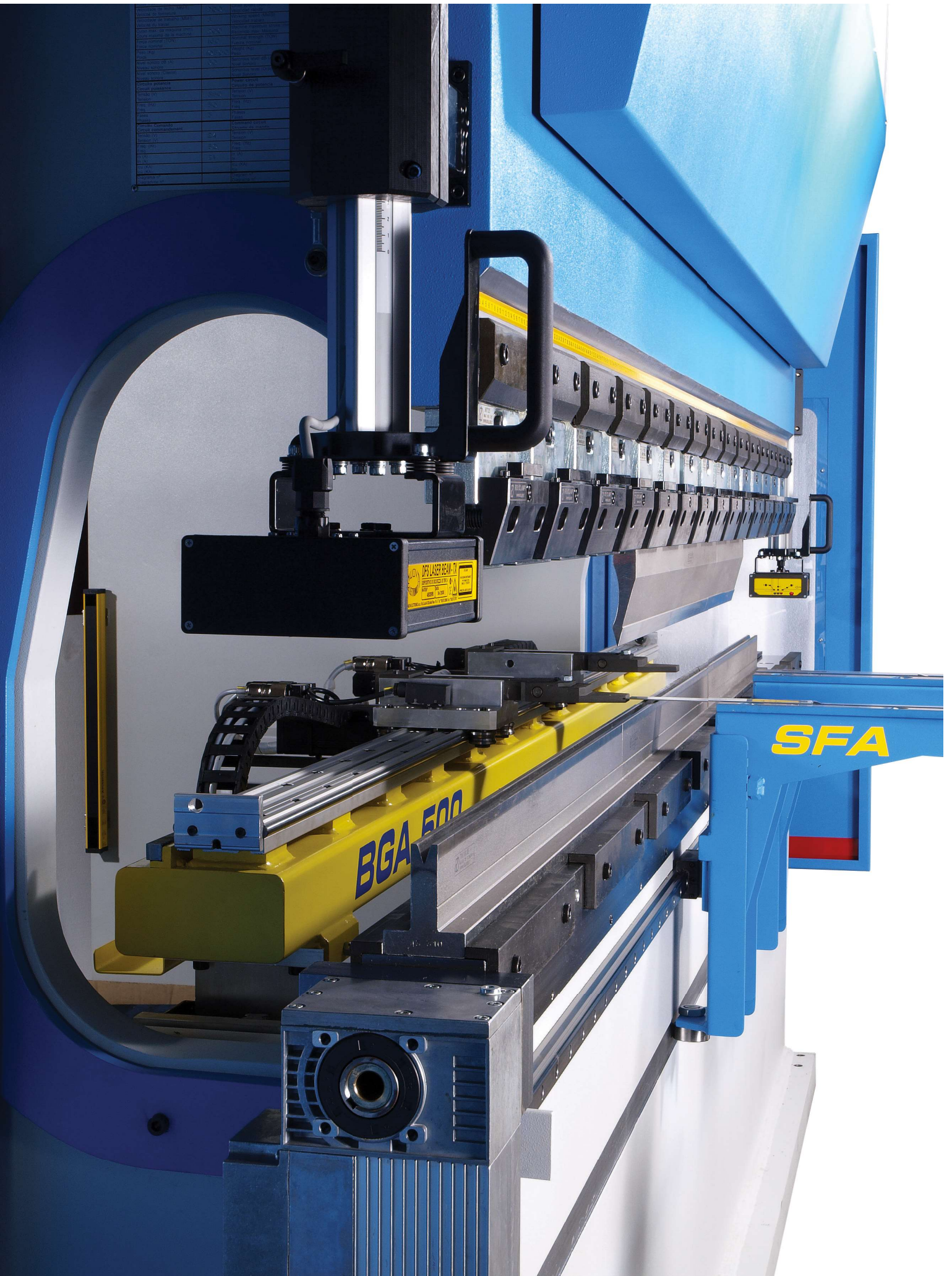
TANDEM SYSTEM

For large lengths bending the Tandem system allows the synchronisation of two press-brakes maintaining the same level of accuracy and speed. With the advantage that we can choose the Tandem mode – with two synchronized machines or simple mode – working with each of the machines separately.

AVAILABLE RANGES

6200mm
7200mm
8200mm
12200mm





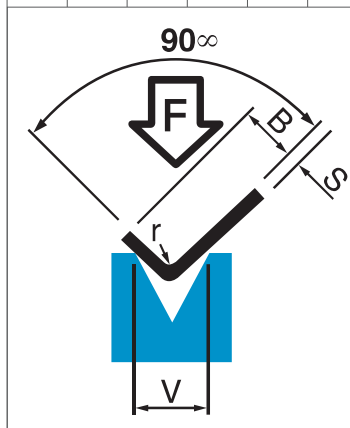
BENDING TABLE



BENDING FORCE NECESSARY (t/m)

R=42 da N/mm² - R=70 da N/mm²

R	B	V	S (mm)																				
			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 ₇	6 ₁₀	12 ₂₀																		
0,7	3,5	5	3 ₅	5 ₈	9 ₁₅	15 ₂₅																	
0,8	4	6	2 ₄	3 ₆	7 ₁₂	11 ₁₉	18 ₃₀																
1	5,5	8		2 ₄	5 ₈	8 ₁₃	12 ₂₁	24 ₃₅															
1,3	6,5	10			4 ₆	6 ₁₀	9 ₁₅	15 ₂₆	30 ₅₀														
1,5	8	12				5 ₈	7 ₁₂	12 ₂₀	23 ₃₈	39 ₆₆													
2	10,5	16					5 ₈	8 ₁₃	16 ₂₆	27 ₄₅	44 ₇₁												
2,5	13	20						6 ₁₀	12 ₁₉	20 ₃₃	31 ₅₂	60 ₁₀₁											
3,2	16,5	25							9 ₁₅	14 ₂₄	23 ₃₈	44 ₇₃	76 ₁₂₆										
4,4	21	32								11 ₁₈	16 ₂₇	32 ₅₃	5 ₉₀	85 ₁₄₂									
5	26	40									12 ₂₁	23 ₃₈	39 ₆₆	62 ₁₀₃	124 ₂₀₂								
6,5	32,5	50										18 ₃₀	29 ₄₈	45 ₇₆	88 ₁₄₇	151 ₂₅₂							
8	41	63											22 ₃₇	33 ₅₅	70 ₁₁₇	109 ₁₈₂	173 ₂₈₈						
10	52	80												25 ₄₂	46 ₇₇	79 ₁₃₁	124 ₂₀₇	213 ₃₅₄					
12	65	100													35 ₅₉	58 ₉₆	91 ₁₅₁	155 ₂₅₈	302 ₅₀₄				
15	81,5	125														44 ₇₄	66 ₁₁₀	113 ₁₈₉	220 ₃₆₇	373 ₆₃₀			
20	104	160															50 ₈₃	81 ₁₃₅	158 ₂₆₉	269 ₄₄₈	425 ₇₀₉		
25	130	200																62 ₁₀₄	115 ₁₉₂	197 ₃₂₈	310 ₅₁₇		
37	163	250																		89 ₁₄₈	144 ₂₄₀	227 ₃₇₈	
45	195	300																				120 ₂₀₀	173 ₂₈₈

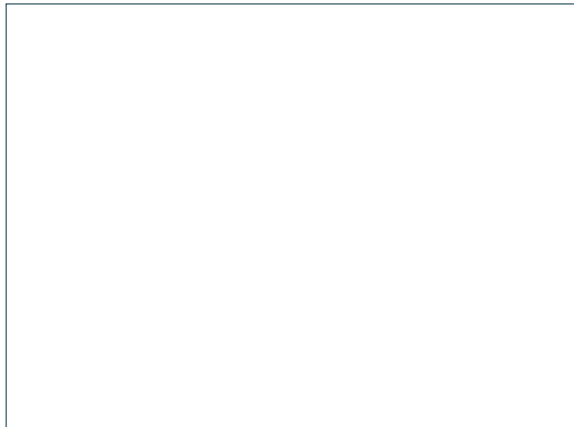


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