FORZA Press

Technical Sheet

Model FXPXXXTXX

V 122024

FORZA Press

Robust 4+1 axis CNC bending machine for complex bending applications.

BENT

The CNC bending machine is used to bend metal sheets, an ideal tool for bent sheet metal design. It uses computer numerical control (CNC) technology and hydraulic components for its drive, which allows complex operations to be performed with high repeatability and accuracy with low maintenance.

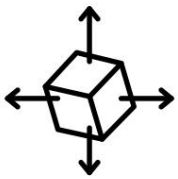
with

With this machine, bent sheet metal parts such as structural components and metal housings can be manufactured with high precision and consistency, with rigidity and structural stability guaranteed thanks to its robust Q235B steel construction.

We have 35 CNC bending machine options for the capacity and dimensions required.

Special Features

4+1 / 6+1 / 8+1 Axles



The standard version has 4+1 degrees of freedom on the back stop for more precise positioning of the plate in complex operations.
It is possible to upgrade to 6+1 or 8+1 axes.

Deflection compensation

The V-axis allows for compensation of sheet deflection, resulting in precise bends across the width of the sheet.

Heavy duty machine bed

The machine is implemented in heat-treated Q235B steel plates, and all joints of the steel plates have relief grooves to ensure the strength of the whole machine.

Delem-DA53T Controller

The Delem controller is the most widely used controller in CNC bending applications, and features a color touch screen, 2D graphic programming and automatic correction functions, ensuring its intuitive use and comfortable learning curve.

Bosch-Rexroth hydraulic system

Premium hydraulic components ensure machine operation under demanding conditions (18 MPa) and reduced maintenance throughout the machine's life cycle.

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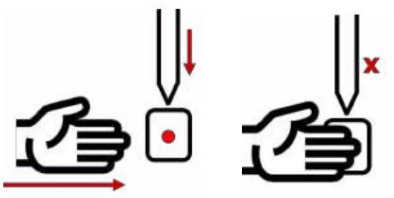
Laser safety system



When the machine is in the bending process, a laser sensor detects if the operator's hand enters and immediately blocks the process, ensuring the well-being of the operator and the machine.

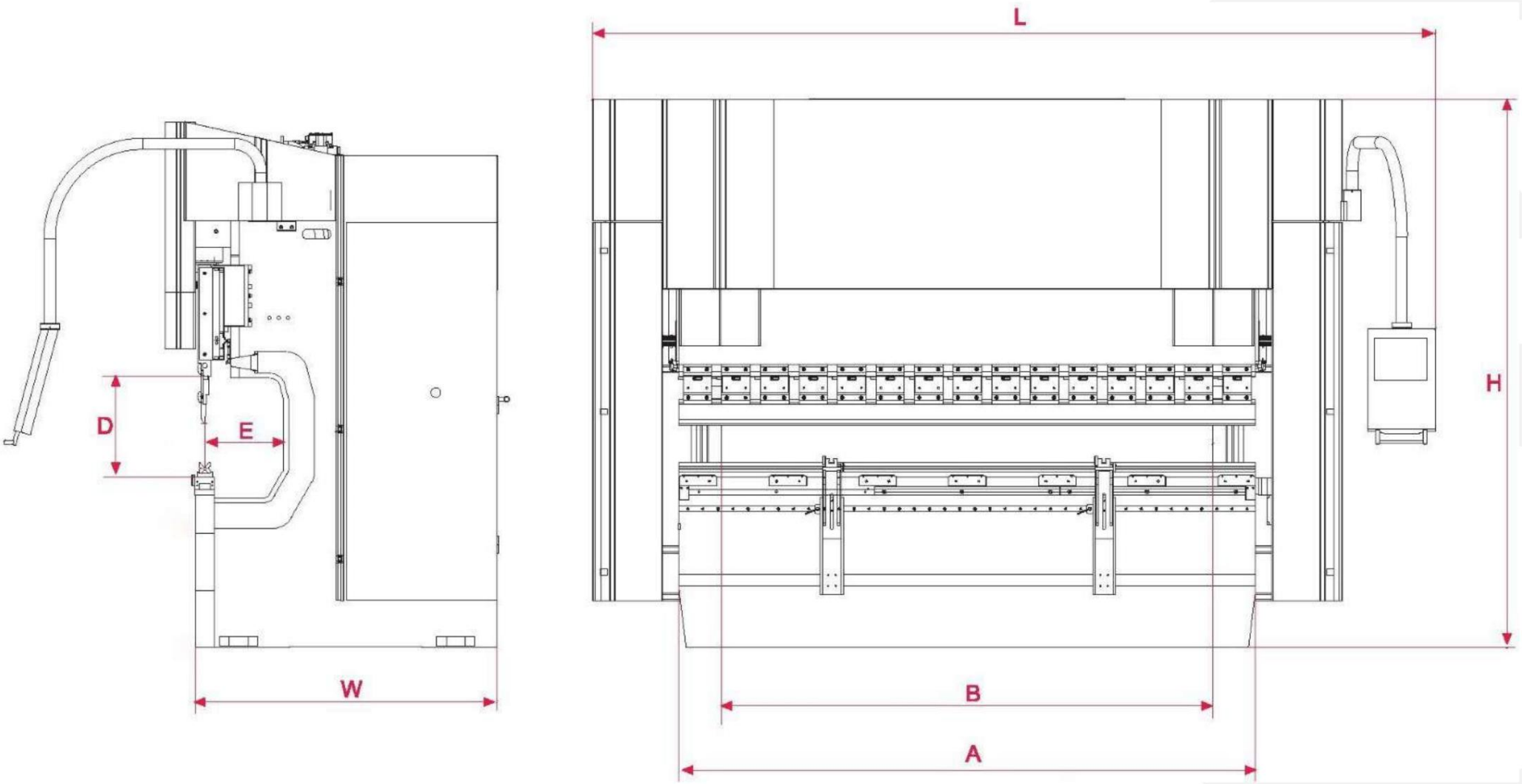
General Specifications

MODEL	MAXIMUM FORCE OF BENDING (kN)	VOLUME TANK OF OIL (1) ISO 46 (L)	SPEEDS (mm/s)			POWER OF THE ENGINE MAIN (kW)	CONSUMPTION OF PEAK ENERGY (kW)	MAXIMUM CURRENT BY LINE @220V-3ph (A)	BREAKER 3ph (TO)	WIRE FEEDING (TW type) (2)
			Speed of Approach	Speed of Job	Speed of Return					
FXP16T50	500	120	180	0-10	160	5.5	9	26.2	30	3 x 10 AWG
FXP25T70	700	200	180	0-10	160	7.5	13	37.9	40	3 x 8 AWG
FXP32T70	700	200	180	0-10	160	7.5	13	37.9	40	3 x 8 AWG
FXP25T100	1000	200	180	0-10	160	7.5	13	37.9	40	3 x 8 AWG
FXP32T100	1000	220	180	0-10	160	7.5	13	37.9	40	3 x 8 AWG
FXP42T100	1000	290	180	0-10	160	7.5	13	37.9	40	3 x 8 AWG
FXP25T130	1300	200	180	0-10	160	11	16	46.7	50	3 x 6 AWG
FXP32T130	1300	220	180	0-10	160	11	16	46.7	50	3 x 6 AWG
FXP42T130	1300	290	180	0-10	160	11	16	46.7	50	3 x 6 AWG
FXP32T170	1700	270	160	0-10	130	11	16	46.7	50	3 x 6 AWG
FXP42T170	1700	300	160	0-10	130	11	16	46.7	50	3 x 6 AWG
FXP50T170	1700	330	160	0-10	130	11	16	46.7	50	3 x 6 AWG
FXP60T170	1700	500	150	0-10	130	15	20	58.3	60	3 x 6 AWG
FXP32T200	2000	400	140	0-10	120	15	20	58.3	60	3 x 6 AWG
FXP42T200	2000	470	140	0-10	120	15	20	58.3	60	3 x 6 AWG
FXP50T200	2000	550	140	0-10	110	15	20	58.3	60	3 x 6 AWG
FXP60T200	2000	670	140	0-8	110	18.5	24	70.0	70	3 x 4 AWG
FXP32T250	2500	440	130	0-8	120	18.5	24	70.0	70	3 x 4 AWG

MODEL	MAXIMUM FORCE OF BENDING (kN)	VOLUME TANK OF OIL ISO 46 (L)(1)	SPEEDS (mm/s)			POWER OF THE ENGINE MAIN (kW)	CONSUMPTION OF PEAK ENERGY (kW)	MAXIMUM CURRENT BY LINE @220V-3ph (A)	BREAKER 3ph (TO)	WIRE FEEDING (TW type) (2)
			Speed of Approach	Speed of Job	Speed of Return					
FXP42T250	2500	470	130	0-8	120	18.5	24	70.0	70	3 x 4 AWG
FXP50T250	2500	550	100	0-8	100	18.5	24	70.0	70	3 x 4 AWG
FXP60T250	2500	650	100	0-8	100	22	28	81.6	90	3 x 2 AWG
FXP32T320	3200	440	110	0-8	100	22	28	81.6	90	3 x 2 AWG
FXP42T320	3200	520	110	0-8	100	22	28	81.6	90	3 x 2 AWG
FXP50T320	3200	580	100	0-8	100	22	28	81.6	90	3 x 2 AWG
FXP60T320	3200	650	100	0-8	100	22	28	81.6	90	3 x 2 AWG
FXP32T400	4000	720	100	0-8	100	30	36	105.0	110	3 x 1 AWG
FXP42T400	4000	720	100	0-8	100	30	36	105.0	110	3 x 1 AWG
FXP50T400	4000	850	90	0-8	90	30	36	105.0	110	3 x 1 AWG
FXP60T400	4000	850	90	0-7	90	30	36	105.0	110	3 x 1 AWG
FXP42T500	5000	750	90	0-7	90	37	43	125.4	130	3 x 0 AWG
FXP50T500	5000	900	90	0-7	90	37	43	125.4	130	3 x 0 AWG
FXP60T500	5000	1000	90	0-7	90	37	43	125.4	130	3 x 0 AWG
FXP42T600	6000	1000	90	0-7	90	45	51	148.7	150	3 x 00 AWG
FXP50T600	6000	1200	90	0-7	90	45	51	148.7	150	3 x 00 AWG
FXP60T600	6000	1200	90	0-7	90	45	51	148.7	150	3 x 00 AWG

1. *This value corresponds to 100% of the tank volume. However, it is recommended to fill the oil tank between 70% - 80% of its total capacity.*
2. *Additionally, 1 x 10AWG ground wire is included.*

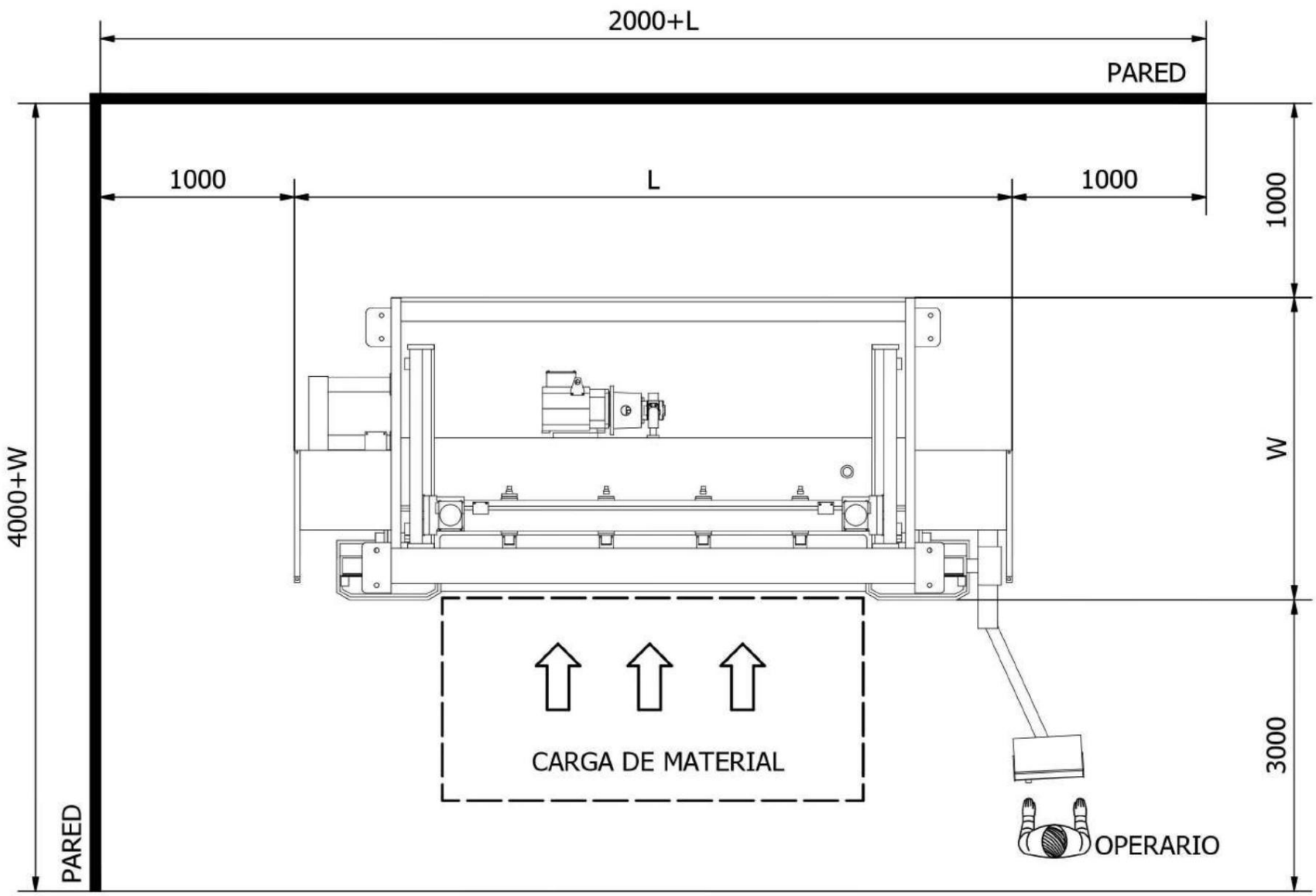
Machine measurements



MODEL	WEIGHT (kg)	A: LENGTH OF BENDING (mm)	B: DISTANCE BETWEEN SUPPORTS (mm)	E: DEPTH FROM THROAT (mm)	D: HEIGHT OF OPENING (mm)	RACE OF THE CYLINDER (mm)	GENERAL MEASURES		
							L: LENGTH (mm)	W: WIDTH (mm)	H: HEIGHT (mm)
FXP16T50	3400	1600	1200	205	460	160	2100	1770	2395
FXP25T70	5500	2500	2100	350	460	160	3000	1765	2450
FXP32T70	6000	3200	2600	350	460	160	3700	1765	2450
FXP25T100	6300	2500	2100	400	480	200	3000	1930	2630
FXP32T100	6600	3200	2600	400	480	200	3700	1930	2630
FXP42T100	8300	4200	3600	400	480	200	4700	1930	2630
FXP25T130	6400	2500	2100	400	480	200	3000	1930	2630
FXP32T130	6800	3200	2600	400	480	200	3700	1930	2630
FXP42T130	8500	4200	3600	400	480	200	4700	1930	2630
FXP32T170	8200	3200	2600	400	480	200	3700	2070	2680
FXP42T170	9800	4200	3600	400	480	200	4700	2070	2730
FXP50T170	14800	5000	4200	400	480	200	5500	2120	2990
FXP60T170	18000	6000	5000	400	480	200	6500	2120	3050
FXP32T200	9350	3200	2600	400	480	200	3700	2120	2725
FXP42T200	11500	4200	3400	400	480	200	4700	2120	2760
FXP50T200	16500	5000	4200	400	480	200	5500	2150	3080
FXP60T200	18500	6000	5000	400	480	200	6500	2150	3290
FXP32T250	10300	3200	2600	400	500	250	3700	2120	2800

MODEL	WEIGHT (kg)	A: LENGTH OF BENDING (mm)	B: DISTANCE BETWEEN SUPPORTS (mm)	E: DEPTH FROM THROAT (mm)	D: HEIGHT OF OPENING (mm)	RACE OF THE CYLINDER (mm)	GENERAL MEASURES		
							L: LENGTH (mm)	W: WIDTH (mm)	H: HEIGHT (mm)
FXP42T250	12500	4200	3400	400	500	250	4700	2120	2820
FXP50T250	17800	5000	4200	400	500	250	5500	2190	3350
FXP60T250	20500	6000	5000	400	500	250	6500	2190	3520
FXP32T320	14800	3200	2600	500	530	250	3700	2480	3200
FXP42T320	18000	4200	3400	500	530	250	4700	2480	3200
FXP50T320	21500	5000	4200	500	530	250	5500	2480	3525
FXP60T320	26500	6000	4800	500	530	250	6500	2535	3620
FXP32T400	18000	3200	2600	500	600	300	3700	2520	3300
FXP42T400	22000	4200	3400	500	600	300	4700	2520	3400
FXP50T400	31000	5000	4200	500	600	300	5200	2620	3800
FXP60T400	35000	6000	4800	500	600	300	6200	2640	3950
FXP42T500	32000	4200	3400	500	600	300	4400	2520	4050
FXP50T500	38000	5000	4200	500	600	300	5200	2520	4150
FXP60T500	43000	6000	4800	500	600	300	6200	2520	4250
FXP42T600	41000	4200	3400	600	670	300	4400	2700	4550
FXP50T600	47000	5000	4200	600	670	300	5200	2700	4650
FXP60T600	52000	6000	4800	600	670	300	6200	2700	4750

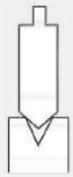
SPACE REQUIRED:



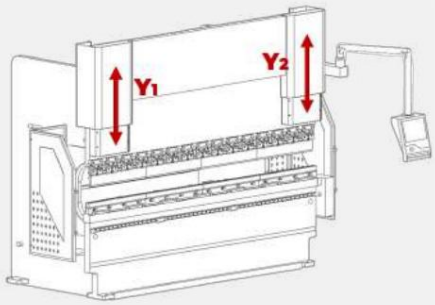
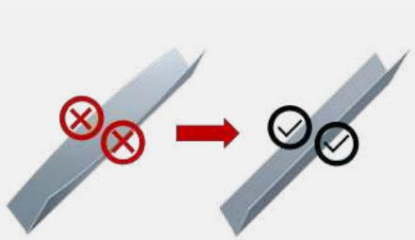
BENDING CAPACITY

MODEL	MAXIMUM LENGTH OF BENDING (mm)	BENDING THICKNESSES (mm)		
		AL STEEL CARBON	STEEL STAINLESS	ALUMINUM
FXP16T50	1600	3.0	2.0	5.0
FXP25T70	2500	4.0	2.5	5.0
FXP32T70	3200	3.0	2.0	4.0
FXP25T100	2500	4.5	3.0	6.0
FXP32T100	3200	3.5	2.5	5.0
FXP42T100	4200	2.5	1.5	4.0
FXP25T130	2500	5.5	3.0	8.0
FXP32T130	3200	4.5	3.0	7.0
FXP42T130	4200	3.5	2.0	5.0
FXP32T170	3200	6.0	3.5	9.0
FXP42T170	4200	4.5	3.0	7.0
FXP50T170	5000	4.0	2.5	6.0
FXP60T170	6000	3.0	2.0	5.0
FXP32T200	3200	7.0	4.5	10.0
FXP42T200	4200	6.0	4.0	8.0
FXP50T200	5000	4.5	3.0	6.0
FXP60T200	6000	3.5	2.5	6.0
FXP32T250	3200	8.0	5.5	14.0
FXP42T250	4200	7.0	4.5	10.0
FXP50T250	5000	5.5	3.5	8.0
FXP60T250	6000	4.5	3.0	7.0
FXP32T320	3200	10.0	7.0	16.0
FXP42T320	4200	8.5	5.0	12.0
FXP50T320	5000	7.0	4.5	10.0
FXP60T320	6000	6.0	3.5	8.0
FXP32T400	3200	14.0	9.0	20.0
FXP42T400	4200	12.0	7.0	16.0
FXP50T400	5000	10.0	6.0	14.0
FXP60T400	6000	8.0	5.0	12.0
FXP42T500	4200	16.0	10.0	22.0
FXP50T500	5000	13.0	8.0	16.0
FXP60T500	6000	10.0	6.0	14.0
FXP42T600	4200	18.0	12.0	26.0
FXP50T600	5000	15.0	10.0	18.0
FXP60T600	6000	12.0	7.5	18.0

Consumables:

Image	Article	Description
	Die and punch	These tools wear with use and may need to be resharpened or replaced.
	Oil filter	They should be replaced regularly to ensure purity.
	Fat	For lubricating specific points such as bearings and guide rails.
	Lubricating oil ISO 68	For moving parts and transmission systems.
	Hydraulic oil anti-wear mineral ISO 46	Replacement or refill depending on oil level and quality.

Standard control axes (4+1)

Axis	Function	Scheme
Y1	Control the race of the cylinders hydraulics in each end	
Y2		
X	Control longitudinal of the rear stop	
R	Vertical control from the rear stop	
+V	Deflection compensation of the iron	

Packing List:

-MAIN PACKAGE-

- [ ] 1 x FORZA PRESS Machine
- [ ] 1 x Control pedals with emergency stop
- [ ] 4 x Leveling plates
- [ ] 4 x J-type anchor bolts with nut
- [ ] 1 x DA53T Controller with Touch Screen
- [ ] 1 x Laser Operator Protection System (DSP)
- [ ] 1 x Hydraulic pump
- [ ] 1 x Pressure gauge
- [ ] 1 x Worktop support frame

-LICENSES-

- [ ] 1 x 4-year Super 7 SUPPORT License

-CABLES AND HOSES-

- [ ] 10m x Power Cable 3 x ____AWG + 1x10AWG, (T:Eye-Tip)
- [ ] 1 x Set of hoses for the hydraulic circuit

-CONSUMABLES-

- [ ] 1 x Punch and die set

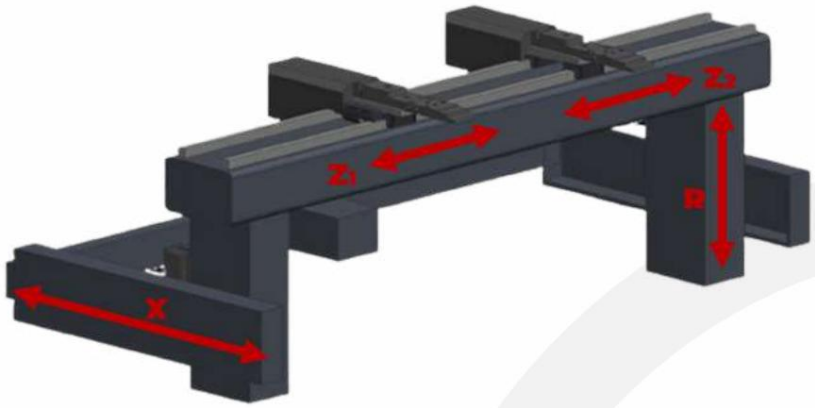
-TOOL BOX-

- [ ] 1 x Plastic tool box
- [ ] 1 x Manual oiler
- [ ] 1 x Metric Allen Key Set
- [ ] 1 x Open End Wrench 11mm-13mm
- [ ] 1 x Grease injector
- [ ] 1 x Phillips screwdriver
- [ ] 1 x Adjustable or parrot beak wrench
- [ ] 1 x O-ring set

UPGRADES (OPTIONAL UPGRADES):

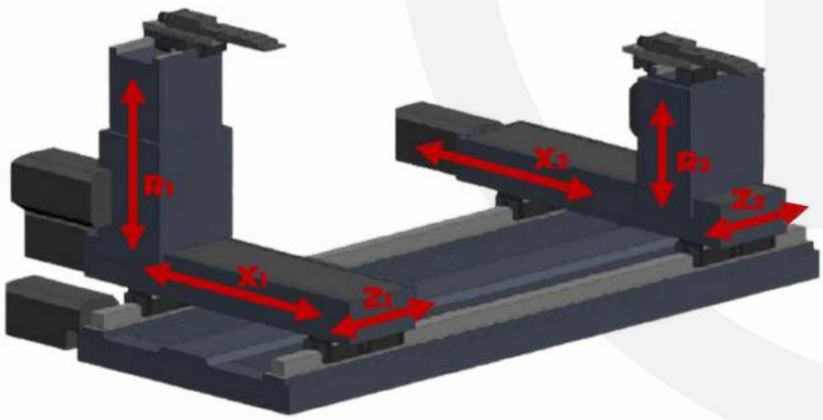
6+1 CONTROL AXES

An additional improvement to the CNC bending machine is the addition of 2 more axes (Z1-Z2) for the control and positioning of the backgauge. This allows for automated control, reducing manual intervention and increasing production.



8+1 CONTROL AXES

It is even possible to increase up to 6 degrees of freedom (X1-X2-R1-R2-Z1-Z2) for automatic control and positioning of the backgauge. This allows the simultaneous production of more complex parts that require more sophisticated bends.

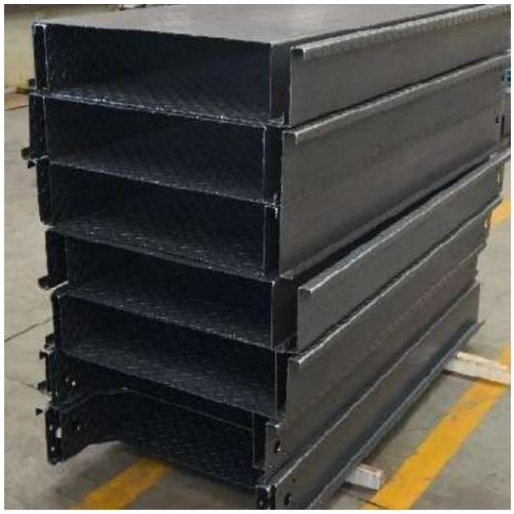


STATION WITH ASSISTANCE ROBOT

Depending on the process requirements, it is possible to implement a bending station in conjunction with an assisting robot, where the robot loads the material, manipulates it during bending and finally unloads it. This makes the process faster and more efficient, as well as improving product consistency.

Manufactured Parts:

Carbon Steel Bent



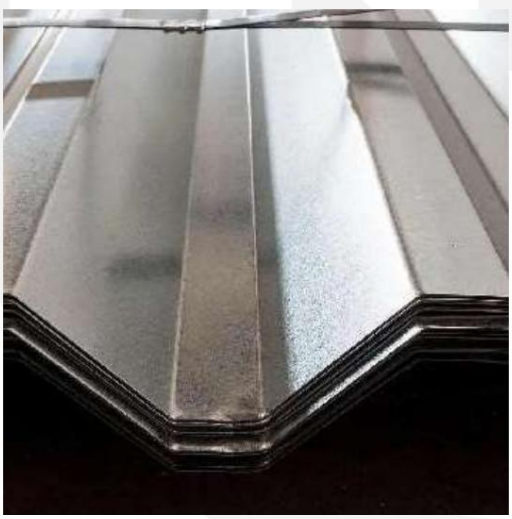
Sheet metal cabinet components

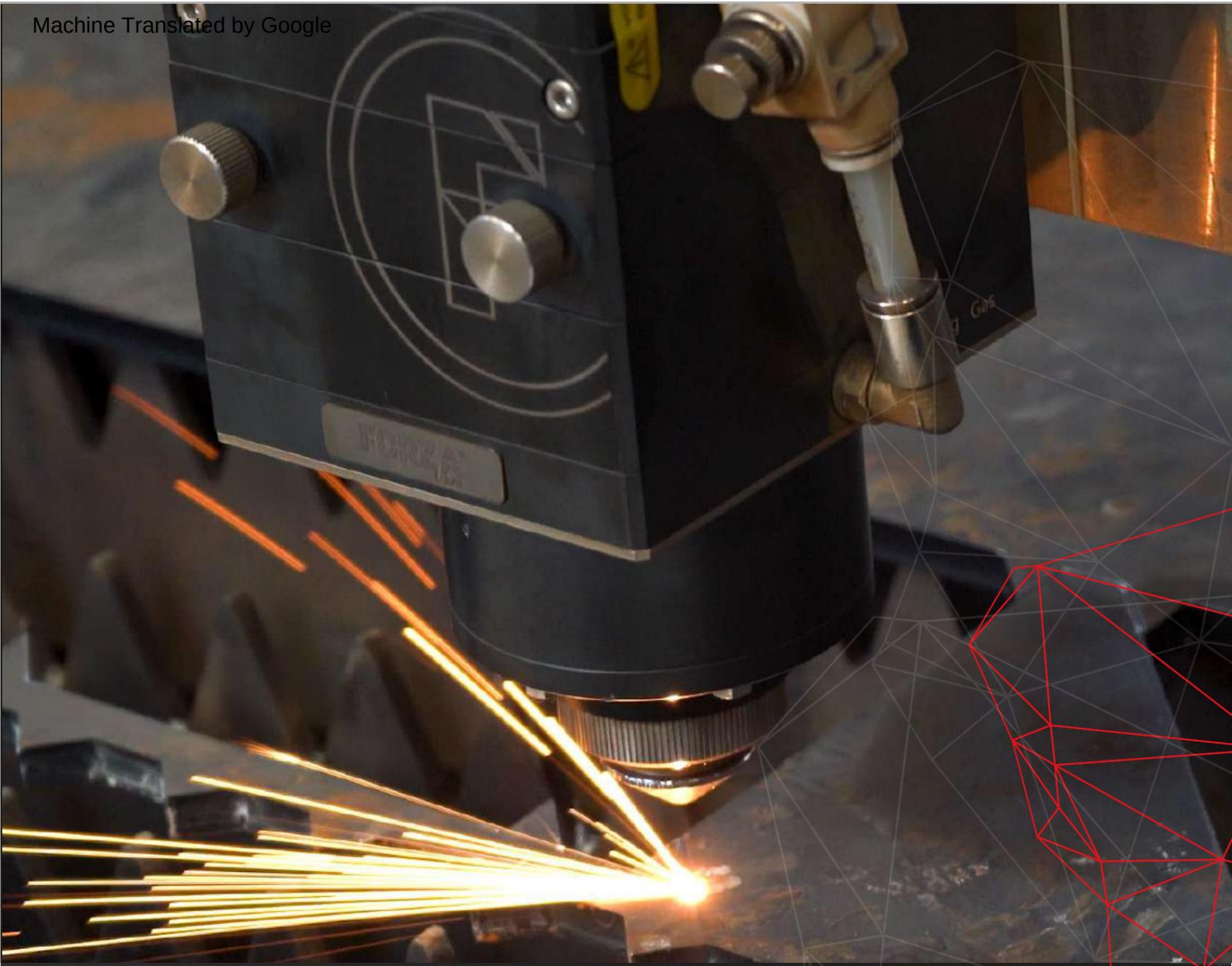
Aluminum bending

Bending in Fluor-Aluminum-Zinc alloy

Brass Bent

Bent in Stainless Steel





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