



JOROS LTD's BENDING DIE TOOL SERIES

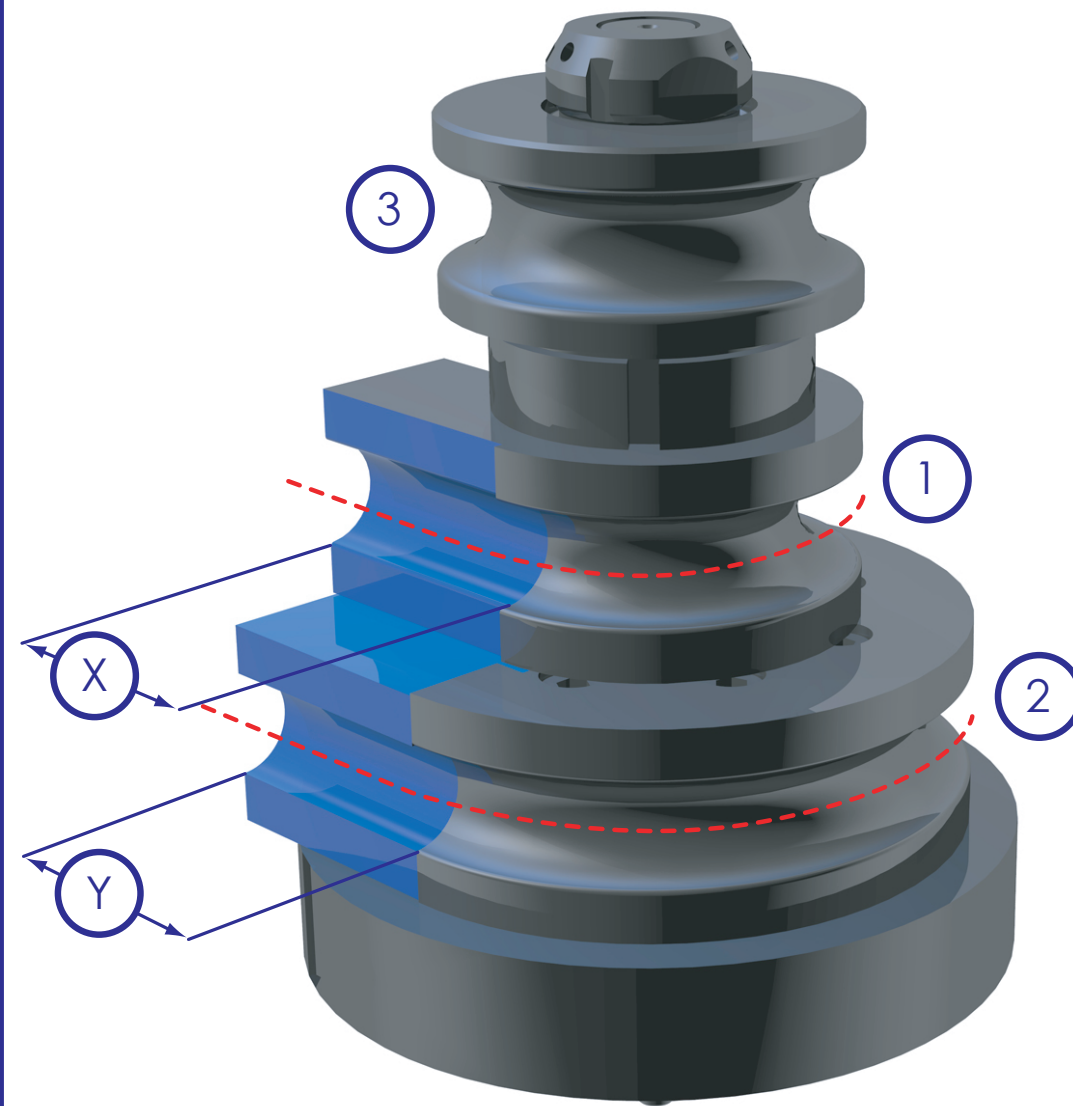


ILLUSTRATION:
CNC-bending machine | Bending die 1 | Bending die 2 | Rolls | Bending die 1 (X) | Bending die 2 (Y)
TUBE Ø25 R50 R75 Yes 75mm 65mm

- EXPLANATIONS:**
- 1 Bending die, R50
 - 2 Bending die 2, R75
 - 3 Roll for larger curves (minimum size of the rolled curve is 6 x tube diameter Ø25)
 - X Recommended straight for the bending die 1
 - Y Recommended straight for the bending die 1
 - Z Recommended straight for the bending die 1 (Tube sizes Ø15 ja Ø16)
 - - - Centerline of the tube

Recommendation: X, Y and Z = The recommended straight between two bent curves (mm)

Do not hesitate to contact us in case of bending exceptional tube sizes and profiles, such as rectangular and square tubes.

We're also able to do flanges and collars with an Endformer to the tube diameters listed below: Ø12mm, Ø15mm, Ø16mm, Ø18mm, Ø19mm, Ø22mm, Ø25mm, Ø26.9mm, Ø28mm, Ø30mm and Ø35mm.

CNC-Bending machine	Bending die 1	Bending die2	Bending die 3	Rolls	Bending die (X)	Bending die (Y)	Bending die (Z)	Machine	Exceptional tools
• TUBE Ø6	R15	R25	R35	Yes	25	30	30	CAN	
• TUBE Ø8	R20	R30	R40	Yes	30	25	25	CAN/542	
• TUBE Ø10	R20	R30	R40	Yes	25	30	30	CAN/542	
• TUBE Ø12	R25	R40	R55	Yes	25	40	40	CAN/542	•Ø12/R16/X23
• TUBE Ø15	R25	R40	R55	Yes	50	50	50	CAN/542	
• TUBE Ø16	R25	R40	R55	Yes	50	50	50	CAN/542	
• TUBE Ø17.2	R30	R55		Yes	50	50	50	CAN/542	
• TUBE Ø18	R35	R60		Yes	50	50	50	CAN/542	
• TUBE Ø19	R35	R60		Yes	50	50	50	CAN/542	•Ø19/R30/X50
• TUBE Ø20	R30	R60		Yes	50	50	50	C845	•Ø20/ R50/X50
• TUBE Ø21.3	R40	R65		Yes	55	55	55	CAN/542	
• TUBE Ø22	R40	R65		Yes	55	55	55	CAN/542	
• TUBE Ø22	R55			No	55			C563	
• TUBE Ø22	R60			Yes	50				
• TUBE Ø25	R30			No	75			C563	
• TUBE Ø25	R40	R80		Yes	60	60		CAN/542	
• TUBE Ø25	R50	R75		Yes	75	65		C845	
• TUBE Ø25	R60	R85		Yes	60	60		CAN/542	•Ø25/R112.5/X60
• TUBE Ø25	R65	R90		Yes	60	60		C845	
• TUBE Ø26.9	R50	R75		Yes	50	50		CAN/542	•Ø26.9/R65/X60
• TUBE Ø28	R50	R80		Yes	70	70		CAN/542	•Ø28/R60/X65
• TUBE Ø30	R60	R120		Yes	90	75		CAN/C845	
• TUBE Ø30	R100			No	75			CAN/C845	
• TUBE Ø32	R60	R90		Yes	80	80		CAN/542	
• TUBE Ø33.7	R65	R95	R55*	Yes	50/60	50	R60	CAN/542	•Ø33.7/R117.5
• TUBE Ø35	R70	R140		Yes	90	90		C845	
• TUBE Ø38	R75	R120		Yes	120	100		C845	
• TUBE Ø38	R80			No	110			C845	
• TUBE Ø40	R80	R120		Yes	120	100		CAN	
• TUBE Ø40	R80	R160		Yes	120	100		C845	
• TUBE Ø42.4	R80	R135		Yes	120	100		C845	
• TUBE Ø44.5	R80	R135		Yes	120	100		MAC	
• TUBE Ø48.3	R80	R130		Yes	120	100		C563	•Ø48,3/R63,7/X145
• TUBE Ø48.3	R85	R150		Yes	160	160		MAC	•Ø48,3/R120/X160
• TUBE Ø50.8	R90	R175		Yes	160	160		MAC	
• TUBE Ø60.3	R105	R180		Yes	160	160		MAC/AMOB	•Ø60,3/R105/X120
• TUBE Ø60.3	R105*	R120*		No	120	120		C563	
• TUBE Ø63.5	R110*	R210*		No	160			MAC	
• TUBE Ø76.1	R135*	R155*	R220*	Yes	160	160	160	MAC/AMOB	
• TUBE Ø88.9	R160*	R260*		Yes	200	200		MAC/AMOB	
• TUBE Ø101.6	R200			No	240			AMOB	
• TUBE Ø114.3	R171*	R190*	R225*	No	230	230	230	AMOB	
• TUBE Ø114.3	R225*			Yes	250			AMOB	
• TUBE Ø120	R200*			No	240			AMOB	
• TUBE Ø127	R180*	R200*		No	240			AMOB	
• TUBE Ø139.7	R209*	R280*		No	350	280		AMOB	
■ RECTANGULAR TUBE 20x10	ILR35			Yes	50			CAN/542	
■ RECTANGULAR TUBE 30x15/20	ILR100			Yes	50			CAN/542	
● Ellipse 40X20	R50			No	50				Can be bent in easier direction only!
● FLAT OVAL 40X20	R60			Yes	60				Can be bent in easier direction only!
● FLAT OVAL 45X25	R70			Yes**	50				Can be bent in easier direction only!
● FLAT OVAL 60x20	R120			No	100				Can be bent in easier direction only!

* Single tooling only. Can not combine with other radius tooling

** Roll bend in harder direction



JOROS LTD's ROLL BENDER TOOL SERIES

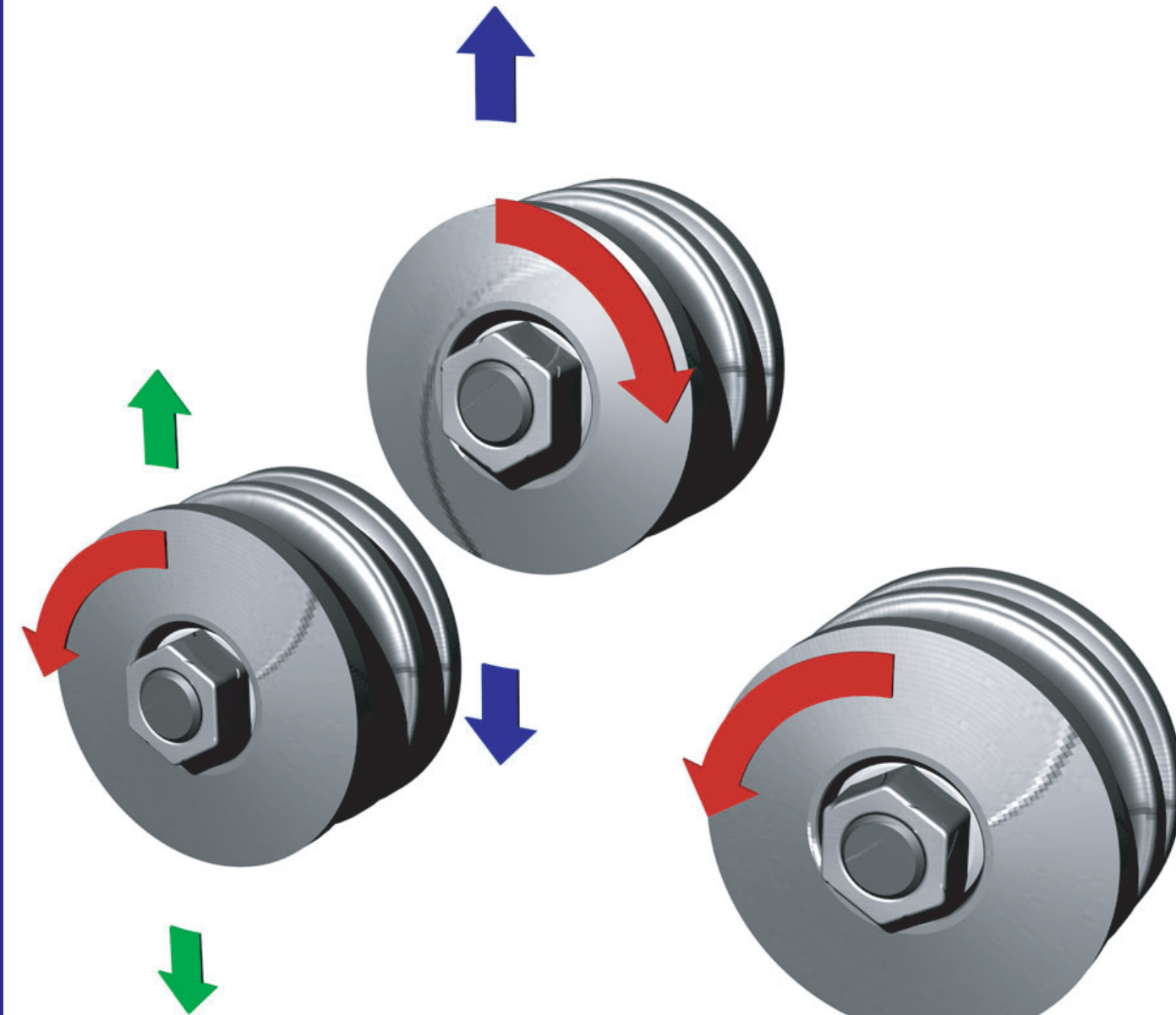


ILLUSTRATION:
The illustration of the roll bender shows three rollers which are used to form a metal bar into a circular arc. The rollers freely rotate about (Red arrows) three parallel axes, which are arranged with uniform horizontal spacing. Two lower rollers cradle the bottom of the material while the upper and the left roller, whose positions are adjustable vertically (Blue and green arrows) press on the the material to the radius which is required.

Do not hesitate to contact us in case of bending exceptional tube sizes and profiles.

CNC-Roll bender	Machine
• TUBE Ø15	BPR
• TUBE Ø16	BPR/THOMAN
• TUBE Ø17.2	THOMAN
• TUBE Ø18	THOMAN
• TUBE Ø19	THOMAN
• TUBE Ø20	BPR
• TUBE Ø21.3	THOMAN
• TUBE Ø22	THOMAN
• TUBE Ø25	BPR
• TUBE Ø26.9	THOMAN
• TUBE Ø28	BPR
• TUBE Ø30	BPR/THOMAN
• TUBE Ø32	BPR
• TUBE Ø33.7	THOMAN
• TUBE Ø35	BPR
• TUBE Ø38	THOMAN
• TUBE Ø40	BPR
• TUBE Ø42.4	THOMAN
• TUBE Ø45	THOMAN
• TUBE Ø48.3	THOMAN
• TUBE Ø50	THOMAN
• TUBE Ø51	THOMAN
• TUBE Ø54	BPR
• TUBE Ø60.3	BPR/THOMAN
• TUBE Ø63.5	THOMAN
• TUBE Ø70	BPR
• TUBE Ø75	THOMAN
• TUBE Ø76.1	BPR
• TUBE Ø80	THOMAN
• TUBE Ø88.9	BPR
• TUBE Ø90	THOMAN
• TUBE Ø100	THOMAN
• TUBE Ø110	THOMAN
• TUBE Ø101.6	FACCIN
• TUBE Ø114.3	FACCIN
• TUBE Ø139.7	FACCIN
• TUBE Ø168.3	FACCIN

CNC - bending machine tools for rectangular tubes	Bending die 1	Bending die 2	
■ SQUARE TUBE 30x30	ILR60/X160	ILR62.5/X160	Roll bend with mandrell
■ SQUARE TUBE 40x40	ILR80/X160	ILR120/X160	Roll bend with mandrell
■ SQUARE TUBE 50x50	ILR90/X160	ILR150/X160	Roll bend with mandrell
■ SQUARE TUBE 60X60	ILR150/X160		Roll bend with mandrell
■ SQUARE TUBE 70X70	RollBend only		Roll bend with mandrell
■ RECTANGULAR TUBE 20x40	ILR80/X160	ILR120/X160	Can be bent in easier direction only!
■ RECTANGULAR TUBE 25x50	ILR90/X160	ILR150/X160	Can be bent in easier direction only!
■ RECTANGULAR TUBE 30x50	ILR90/X160	ILR150/X160	Can be bent in easier direction only!
■ RECTANGULAR TUBE 40x60	ILR150/X160		Can be bent in easier direction only!

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