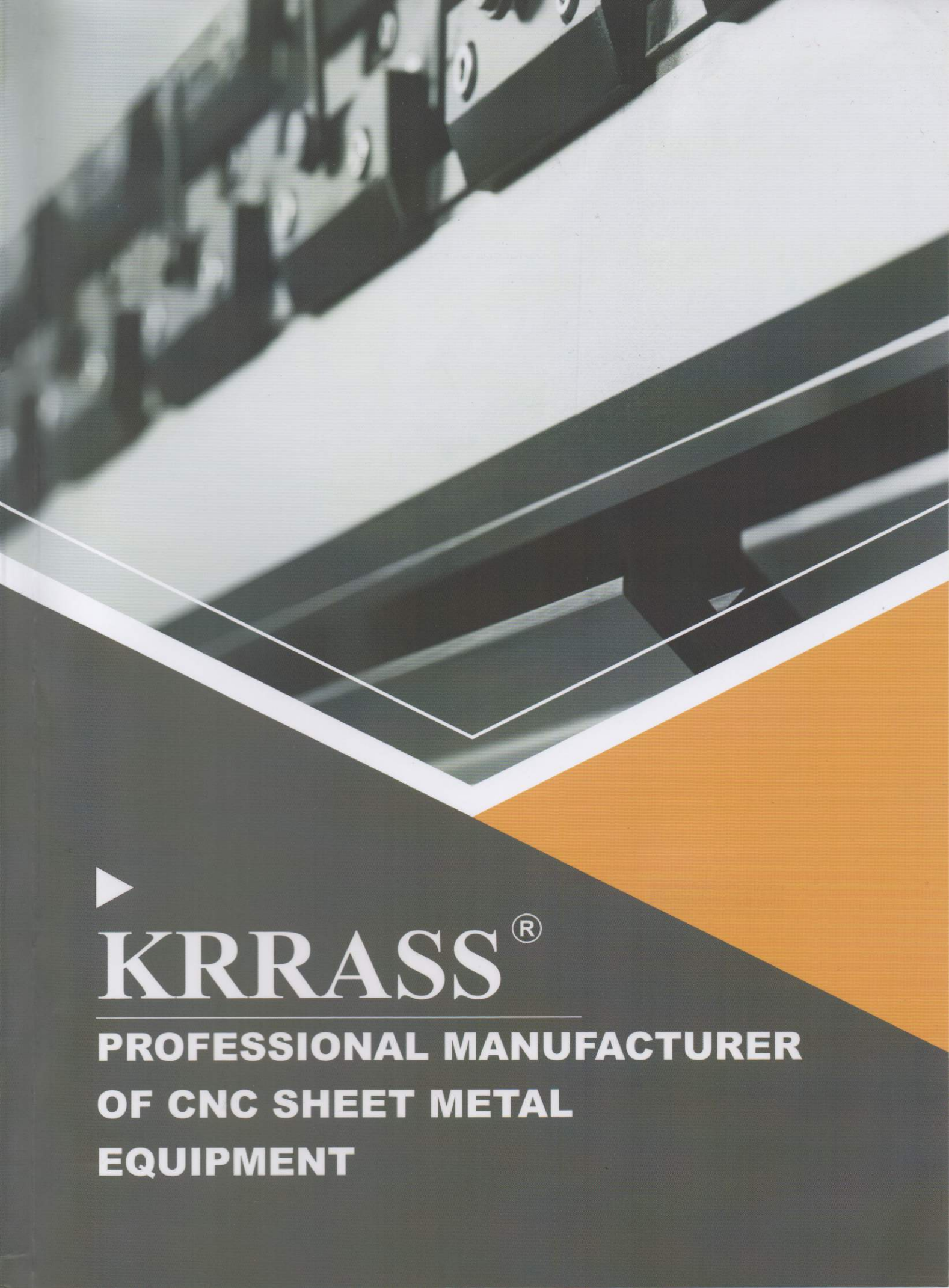


A close-up, high-angle photograph of a CNC sheet metal machine. The image shows various mechanical components, including rollers and guides, which are part of the equipment used for processing sheet metal. The lighting is dramatic, with strong highlights and shadows that emphasize the industrial nature of the scene. A large, white, geometric shape, resembling a stylized 'K' or a series of parallel lines, is overlaid on the right side of the image, extending from the top right towards the bottom right. This shape is composed of several parallel lines that create a sense of depth and movement. The overall color palette is dominated by the metallic grays of the machine, with a bright white highlight on the right side and a dark gray background at the bottom.

▶ **KRRASS[®]**

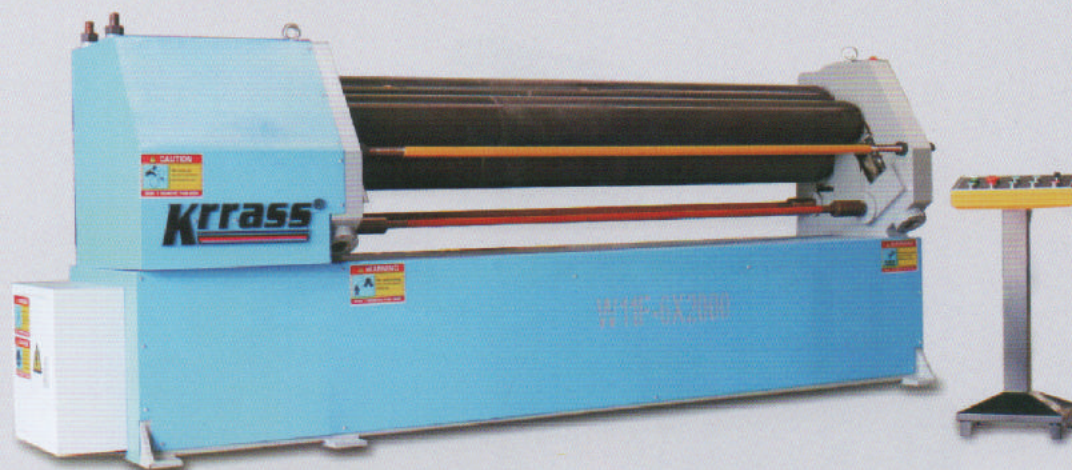
**PROFESSIONAL MANUFACTURER
OF CNC SHEET METAL
EQUIPMENT**

> W11 SERIES 3-ROLL ROLLING MACHINE



Name	Max. Plate Thickness		Max. Plate Width (mm)	Min. Rolling Diameter (mm)	Yield Limit (N/mm ²)	Rolling Speed (m/min)	Upper Roller Diameter (mm)	Lower Roller Diameter (mm)	Lower Roller Center Distance (mm)	Main Motor Power (Kw)	Length (mm)	Width (mm)	Height (mm)	Weight (Kg)
	<450N/mm ²	<700N/mm ²												
W11-4/1500	4	2.5	1500	187.5	245	5	150	140	200	4	3050	860	1070	1700
W11-4/2000	4	2.5	2000	200	245	5	160	150	220	4	3500	950	1200	2000
W11-6/1500	6	4	1500	200	245	5	160	150	220	4	3000	750	1200	2200
W11-6/2000	6	4	2000	212.5	245	5	170	160	220	5.5	3500	900	1150	2500
W11-6/2500	6	4	2500	225	245	4.5	180	170	250	5.5	4050	910	1150	2600
W11-8/1500	8	5	1500	212.5	245	5	170	160	220	5.5	3000	900	1150	2400
W11-8/2000	8	5	2000	225	245	4.5	180	170	250	5.5	3500	850	1150	2500
W11-8/2500	8	5	2500	300	245	4.5	240	180	280	7.5	4350	950	1250	4000
W11-12/2000	12	8	2000	300	245	4.5	240	180	280	7.5	3900	1200	1350	3500
W11-12/2500	12	8	2500	325	245	4.5	260	220	320	11	4300	1285	1400	5300
W11-12/3000	12	8	3000	350	245	4	280	240	360	11	5100	1350	1350	7500
W11-16/2000	16	10.5	2000	325	245	4.5	260	220	320	11	3850	1250	1300	4800
W11-16/2500	16	10.5	2500	350	245	4	280	240	360	11	4500	1600	1450	6700
W11-16/3000	16	10.5	3000	425	245	4	340	270	440	15	5700	1600	1750	10300
W11-20/2000	20	13	2000	350	245	4	280	240	360	11	4000	1450	1450	6500
W11-20/2500	20	13	2500	425	245	4	340	270	440	15	4700	1530	1680	9300
W11-25/2000	25	16.5	2000	425	245	4	340	270	440	15	4300	1600	1650	8800
W11-25/2500	25	16.5	2500	462.5	245	4	370	280	480	22	5780	1650	1962	11000
W11-30/2000	30	20	2000	462.5	245	4	370	280	480	22	5280	1650	1962	10000
W11-30/2500	30	20	2500	525	245	4	420	360	550	30	5240	1750	2070	16000
W11-30/3000	30	20	3000	187.5	245	4	150	390	600	30	5700	1750	2300	18500
W11-40/2500	40	26.5	2500	625	245	4	500	400	600	37	5300	1900	2400	20000

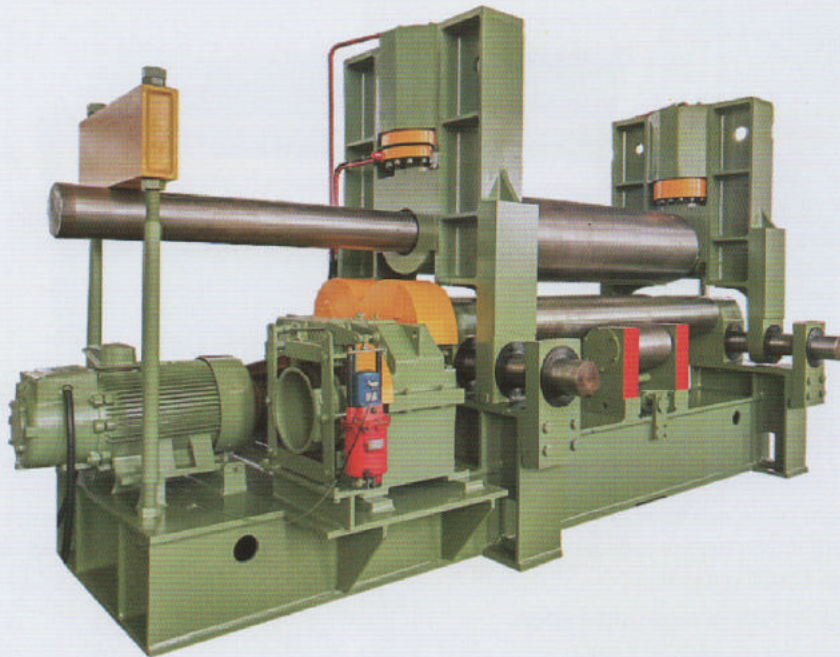
➤ W11F SERIES ASYMMETRICAL 3-ROLL ROLLING MACHINE



- Streamlined design originated from EU, integral welding processing and annealing treatment.
- The two rollers are driven by one reducer; both the upper roller and lower roller are equipped with gear systems, with pre-bending function.
- SAE1050 certificated high-strength steel rollers
- Overall stress-relieving ductile iron body
- Movable console with foot switch
- Cone-forming device
- Manual material overturning rack
- Upper roller supporting system
- Use motor with brake to ensure the rolling accuracy

Model	Max Bending Thickness (mm)	Pre-bending Thickness (mm)	Max Bending Width (mm)	Plate Yield Limit (Mpa)	Top Roller Diameter (mm)	Bottom Roller Diameter (mm)	Side Roller Diameter (mm)	Main Motor Power (Kw)	Length*Width* Height (L*W*H)	Weight (T)
W11F-2×1000	2	2	1000	245	110	110	110	2.2	2000×700×1100	1000
W11F-2×1500	2	2	1500	245	120	120	120	2.2	2500×700×1100	1200
W11F-2×2000	2	2	2000	245	130	130	130	2.2	2950×700×1000	1450
W11F-3×1000	3	3	1000	245	120	120	120	2.2	2000×700×1150	1050
W11F-3×1500	3	3	1500	245	130	130	130	2.2	2500×670×1050	1150
W11F-4×1000	4	4	1000	245	130	130	130	2.2	2100×800×1100	1300
W11F-4×1500	4	4	1500	245	135	135	135	3	2600×800×1150	1600
W11F-4×2000	4	4	2000	245	150	150	150	4	3150×700×1100	2000
W11F-6×1000	6	6	1000	245	140	140	140	3	1950×700×1000	1500
W11F-6×1500	6	6	1500	245	150	150	150	4	2660×800×1250	2200
W11F-6×2000	6	6	2000	245	170	170	170	5.5	3150×800×1300	2600

➤ W11S Big Type Upper Roller Universal Plate Rolling Machine



Structure style:

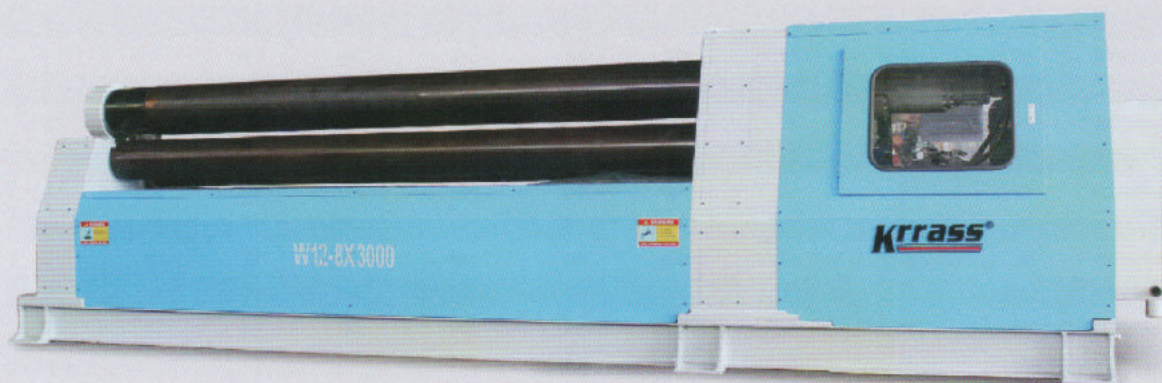
- This machine is a special equipment to roll the plate into curve, cylinder, conical in the principle of three point circle, the action as below:
- Top roller move by vertical power, hydraulic oil tank role put the pressure on the plate to make the plate bending deformation
- Top roller move by horizontal power electromotor role adjust the horizontal distance between the top and bottom roller to make the top and bottom roller position in asymmetrical to pre-end the sheet edge and decline the length of the flat zone
- Bottom roller rotate power electromotor, role supply the torque for bending plate.
- Opening device drop down and reset power, hydraulic oil tank role take out the finished workpiece.

Performance features:

- The upper roller is designed as drum shape, support roller install in the lower of bottom roller to help bending a perfect cylinder form thin to thick plate
- Special bending craft, high precision pre-bending of the edge, digital control for bending process
- Rich shape bend such as O, U, R etc;
- Cone bending device for conical bend easily
- Whole chassis simple ground foundation, it's convenient to move the workplace
- According to the role or requirement of customer, economic digital display type of TNC digital control type is optional
- CE certificate.

Model	Pressure of Top Roller(T)	Max. Bending Thickness(mm)	Pre-bending Thickness(mm)	Max. Bending Width(mm)	Top Roller Diameter(mm)	Bottom Roller Diameter(mm)	Side Roller Diameter (mm)	Central Distance (mm)		
								For Drive	For Hydraulic	For Movement
W11S-4x2500	25	4	3.5	2500	200	125	160	4	2.2	1.1
W11S-6x2500	30	6	5	2500	210	125	160	4	2.2	1.1
W11S-8x2000	37	8	6.5	2000	210	135	180	4	2.2	1.1
W11S-8x2500	37	8	6.5	2500	235	135	180	5.5	2.2	1.1
W11S-10x2000	37	10	8	2000	235	135	180	5.5	2.2	1.1
W11S-10x2500	55	10	8	2500	250	145	200	7.5	4	1.1
W11S-12x2000	65	12	10	2000	250	145	200	7.5	4	1.1
W11S-12x2500	75	12	10	2500	265	145	200	7.5	4	1.5
W11S-12x3000	75	12	10	3000	290	150	245	11	4	1.5
W11S-16x2000	75	16	13	2000	265	150	245	7.5	4	1.5
W11S-16x2500	100	16	13	2500	300	165	270	15	5.5	1.5
W11S-16x3000	130	16	13	3000	330	180	300	15	5.5	2.2
W11S-20x2000	100	20	16	2000	300	165	270	15	5.5	1.5
W11S-20x2500	130	20	16	2500	330	180	300	15	5.5	2.2
W11S-20x3000	160	20	16	3000	380	200	330	18.5	7.5	2.2
W11S-20x4000	230	20	16	4000	440	235	380	30	11	4
W11S-25x2500	190	25	20	2500	380	220	360	22	7.5	4
W11S-25x3000	230	25	20	3000	410	235	380	30	11	4
W11S-25x4000	270	25	20	4000	490	250	400	30	11	4
W11S-30x2500	230	30	25	2500	410	235	380	30	11	4
W11S-30x3000	270	30	25	3000	450	250	400	30	11	4
W11S-30x4000	380	30	25	4000	550	275	460	45	22	5.5
W11S-35x2500	320	35	28	2500	450	250	400	30	11	4
W11S-35x3000	380	35	28	3000	510	275	460	45	22	5.5
W11S-40x2500	380	40	32	2500	500	275	460	45	22	5.6
W11S-40x3000	430	40	32	3000	540	290	500	55	22	7.5
W11S-40x4000	540	40	32	4000	630	340	610	55	22	11
W11S-45x3000	540	45	36	3000	590	340	610	55	22	11
W11S-50x2500	430	50	40	2500	580	290	500	55	22	7.5
W11S-50x3000	540	50	40	3000	600	340	610	55	22	11
W11S-50x4000	690	50	40	4000	700	380	700	75	30	15
W11S-55x3000	610	55	45	3000	620	360	650	75	30	15
W11S-55x4000	850	55	45	4000	750	420	780	90	37	15
W11S-60x3000	690	60	50	3000	650	380	700	75	30	15
W11S-60x4000	930	60	50	4000	780	440	820	90	37	15
W11S-70x3000	850	70	56	3000	710	420	780	75	37	15
W11S-70x4000	1150	70	56	4000	840	480	920	110	45	18.5
W11S-75x3000	930	75	60	3000	740	440	820	90	37	15
W11S-80x3000	1050	80	65	3000	770	460	880	90	37	18.5
W11S-90x3000	1150	90	75	3000	820	480	920	110	45	18.5
W11S-100x3000	1350	100	80	3000	860	480	920	110	45	22
W11S-110x4000	1800	110	90	4000	950	600	1120	132	55	37
W11S-120x3000	1800	120	100	3000	920	580	1120	132	55	37
W11S-120x4000	2300	120	100	4000	990	640	1280	275	75	37
W11S-150x3000	2300	150	120	3000	1050	660	1280	2x75	75	45
W11S-160x3000	2500	160	130	3000	1080	700	1360	2x75	75	45
W11S-160x4000	2800	160	130	4000	1260	720	1380	2x90	90	45

> W12 SERIES 4-ROLL ROLLING MACHINE



- Streamlined designed originated from EU, adopting whole welding and annealing treatment of the machine frame to eliminate stress.
- Adopting Germany Bosch Rexroth integrated hydraulic system, hydraulic drive, stable and reliable, and can effectively avoid the problems caused by oil leakage.
- Fixed top roller, bottom roller driven by hydraulic oil cylinder, left and right side rollers is driven by hydraulic pistons and make diagonal movement.
- CNC control, three group digital readout show the position of working roller, high accuracy and good roundness, material aligning is convenient and accurate, avoid the wrong side.
- Hydraulic Drop-end for easy removal of finished ferrule.
- SAE 1050 Quality Certificated induction hardened forged steel rollers with high strength.
- Hydraulic balancing system with self-tapping conical bending device is convenient for bending cone.
- Permanent lubrication technology (bearings needn't be oiled within service life), easy to add handling device, feeding device and material supporters device.
- Consistently tightly clamp the top and bottom rollers during rolling process to prevent plate from sliding.
- Blade clearance quick adjusting mechanism, simple and quick manual adjustment method, supporting stepless adjustment of blade clearance.

Model	Max. Plate Thickness (mm)	Pre-bending Thickness (mm)	Roller Working Length (mm)	Plate Yield Limit (Mpa)	Top Roller Diameter (mm)	Bottom Roller Diameter (mm)	Side Roller Diameter (mm)	Main Power (Kw)	Length*Width* Height (L*W*H) (mm)	Weight (Kg)
W12-4×2000	4	3.5	2050	245	160	140	120	3	4600×1100×1100	4300
W12-4×2500	4	3.5	2550	245	190	170	150	4	5150×1300×1400	5000
W12-4×3000	4	3.5	3100	245	210	190	170	5.5	5650×1420×1400	6300
W12-6×2000	6	5	2050	245	190	170	150	4	4650×1300×1400	4800
W12-6×2500	6	5	2550	245	210	190	170	5.5	5150×1420×1400	5800
W12-6×3000	6	5	3100	245	230	210	190	7.5	5860×1430×1400	7000
W12-8×2000	8	6.5	2050	245	210	190	170	5.5	4650×1420×1400	5600
W12-8×2500	8	6.5	2550	245	230	210	190	7.5	5250×1500×1400	6300
W12-8×3000	8	6.5	3100	245	270	250	210	11	5750×2130×2000	9500
W12-10×2000	10	8	2050	245	230	210	190	7.5	4700×1420×1400	5800
W12-10×2500	10	8	2550	245	270	250	210	11	5270×1420×1400	6500
W12-10×3000	10	8	3100	245	300	270	220	11	5700×1500×1500	8800
W12-12×2000	12	10	2050	245	270	250	210	11	4770×1520×2130	6500
W12-12×2500	12	10	2550	245	300	270	220	11	5200×1500×1500	8200
W12-12×3000	12	10	3100	245	330	300	240	11	5770×1900×1880	13500
W12-16×2000	16	13	2050	245	300	270	220	11	4700×1500×1500	7500
W12-16×2500	16	13	2550	245	330	300	240	11	5550×1840×1820	12000
W12-16×3000	16	13	3100	245	360	330	250	15	6300×2000×2050	17000
W12-20×2000	20	16	2050	245	330	300	240	11	4700×1900×2000	12000
W12-20×2500	20	16	2550	245	360	330	250	15	5800×2000×2050	15000
W12-20×3000	20	16	3100	245	390	360	300	18.5	6500×2250×2550	23000
W12-25×2000	25	20	2050	245	360	330	250	15	5300×2000×2050	14000
W12-25×2500	25	20	2550	245	390	360	300	18.5	6250×2160×2350	22500
W12-25×3000	25	20	3100	245	430	390	330	22	7000×2300×2500	30000
W12-30×2000	30	25	2050	245	390	360	300	18.5	5000×2160×2350	21000
W12-30×2500	30	25	2550	245	430	390	330	22	6500×2300×2500	27000
W12-30×3000	30	25	3100	245	460	420	360	30	7300×2600×2700	33000
W12-35×2000	35	28	2050	245	430	390	330	22	6000×2300×2500	25000
W12-35×2500	35	28	2550	245	460	420	360	30	6800×2600×2700	31000
W12-35×3000	35	28	3100	245	510	460	390	37	7600×2800×2900	38500
W12-40×2000	40	32	2050	245	460	420	360	30	6300×2600×2700	29000
W12-40×2500	40	32	2550	245	510	460	390	37	7100×2800×2900	35000
W12-40×3000	40	32	3100	245	550	510	420	45	8000×3100×3200	45000
W12-45×2000	45	36	2050	245	510	460	390	37	6600×2800×2900	33500
W12-45×2500	45	36	2550	245	550	510	420	45	7500×3100×3200	42000
W12-50×2000	50	40	2050	245	550	510	420	45	7000×3100×3200	38000
W12-50×3000	50	40	3100	245	610	560	480	55	8800×3600×3800	65000
W12-60×3000	60	48	3100	245	670	620	520	75	10000×4300×4600	90000