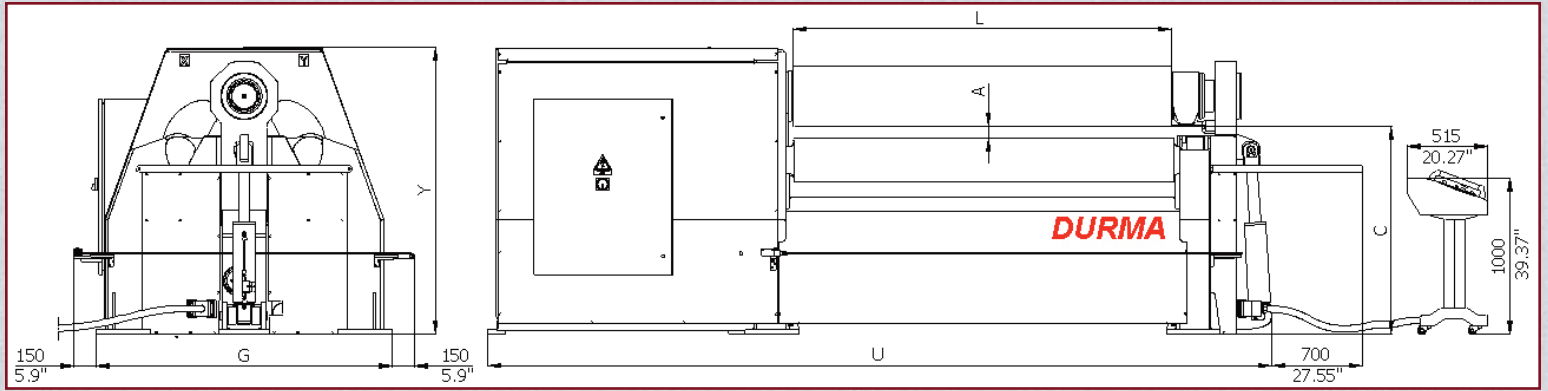


HYDRAULIC 4-ROLLS



Special design for cone bending and easy handling.

Hydraulic top roll lift is standard equipment.



Custom Down-Flange Roll

Many Special Applications Available for Your Requirements



Horizontal/Vertical 3 & 4-Roll Machines Available

HYDRAULIC 4-ROLLS

Model	Bending Length (L)	Pre-Bending (1.5 x Top Roll Ø)	Pre-Bending (3 x Top Roll Ø)	Top Roll	Bottom Roll	Side Rolls	Max. Pass Through (A)	Working Height (C)	Length (U)	Width (G)	Height (Y)	LBS	HP
HRB-4 1504	5' 1"	1/8"	5/32"	5.51"	5.12"	5.12"	1/2"	34.65	137"	50"	45"	3,969	5
HRB-4 1505	5' 1"	5/32"	3/16"	5.91"	5.51"	5.12"	1/2"	34.45	137"	50"	45"	4,410	5
HRB-4 1507	5' 1"	3/16"	5/16"	6.69"	5.91"	5.51"	5/8"	34.06	137"	50"	45"	4,851	7
HRB-4 2003	6' 8"	14 Ga	1/8"	5.51"	5.12"	5.12"	1/2"	34.65	156"	50"	45"	4,630	5
HRB-4 2004	6' 8"	1/8"	5/32"	5.91"	5.51"	5.12"	1/2"	34.45	156"	50"	45"	5,071	5
HRB-4 2006	6' 8"	5/32"	1/4"	6.69"	5.91"	5.51"	5/8"	34.06	156"	50"	45"	5,953	7
HRB-4 2008	6' 8"	1/4"	5/16"	7.87"	7.09"	6.69"	1-3/16"	33.07	164"	58"	46"	8,599	10
HRB-4 2010	6' 8"	5/16"	3/8"	8.27"	7.48"	7.09"	1-3/16"	32.87	164"	58"	46"	9,480	10
HRB-4 2013	6' 8"	3/8"	1/2"	9.06"	8.27"	7.48"	1-3/16"	32.48	164"	58"	46"	11,685	15
HRB-4 2016	6' 8"	1/2"	5/8"	10.63"	9.84"	8.66"	2"	45.47	168"	65"	55"	14,331	15
HRB-4 2020	6' 8"	5/8"	25/32"	11.81"	10.63"	8.66"	2"	44.88	168"	65"	55"	17,637	20
HRB-4 2025	6' 8"	25/32"	1"	12.99"	11.81"	9.84"	2"	44.29	172"	75"	67"	23,149	20
HRB-4 2030	6' 8"	1"	1-3/16"	14.17"	12.99"	9.84"	2-3/8"	59.45	172"	75"	67"	24,692	25
HRB-4 2035	6' 8"	1-3/16"	1-3/8"	15.75"	14.57"	11.81"	2-1/2"	58.66	195"	83"	75"	30,865	30
HRB-4 2040	6' 8"	1-3/8"	1-9/16"	16.93"	15.75"	12.99"	2-3/4"	58.07	195"	87"	79"	39,684	40
HRB-4 2050	6' 8"	1-9/16"	2"	17.72"	16.54"	14.17"	3-3/8"	73.82	215"	91"	87"	52,911	50
HRB-4 2065	6' 8"	2"	2-1/2"	19.29"	17.72"	14.57"	3-1/2"	73.43	215"	91"	79"	66,139	60
HRB-4 2506	8' 4"	5/32"	1/4"	7.87"	7.09"	6.69"	1-3/16"	33.07	172"	51"	46"	9,480	7
HRB-4 2508	8' 4"	1/4"	5/16"	8.27"	7.48"	7.09"	1-3/16"	32.87	175"	55"	46"	10,583	10
HRB-4 2510	8' 4"	5/16"	3/8"	9.06"	8.27"	7.48"	1-3/16"	32.48	175"	55"	46"	13,228	10
HRB-4 2513	8' 4"	3/8"	1/2"	10.63"	9.84"	8.66"	2"	45.47	183"	65"	55"	15,874	15
HRB-4 2516	8' 4"	1/2"	5/8"	11.81"	10.63"	8.66"	2"	44.88	183"	65"	55"	19,401	15
HRB-4 2520	8' 4"	5/8"	25/32"	12.99"	11.81"	9.84"	2"	44.29	191"	75"	67"	22,488	20
HRB-4 2525	8' 4"	25/32"	1"	14.17"	12.99"	9.84"	2-3/8"	59.45	191"	75"	67"	27,558	25
HRB-4 3006	10' 2"	5/32"	1/4"	8.27"	7.48"	7.09"	1-3/16"	32.87	205"	58"	46"	11,685	10
HRB-4 3008	10' 2"	1/4"	5/16"	9.06"	8.27"	7.48"	1-3/16"	32.48	205"	58"	46"	14,331	15
HRB-4 3010	10' 2"	5/16"	3/8"	10.63"	9.84"	8.66"	2"	45.47	209"	65"	55"	18,740	15
HRB-4 3013	10' 2"	3/8"	1/2"	11.81"	10.63"	8.66"	2"	44.88	209"	65"	55"	21,385	20
HRB-4 3016	10' 2"	1/2"	5/8"	12.99"	11.81"	9.84"	2"	44.29	213"	75"	67"	26,897	20
HRB-4 3020	10' 2"	5/8"	25/32"	14.18"	12.99"	9.84"	2-3/8"	59.45	213"	75"	67"	30,865	25
HRB-4 3025	10' 2"	25/32"	1"	15.75"	14.57"	11.81"	2-1/2"	58.66	237"	83"	75"	39,684	30
HRB-4 3030	10' 2"	1"	1-3/16"	16.93"	15.75"	12.99"	2-3/4"	58.07	237"	87"	79"	52,911	40
HRB-4 3035	10' 2"	1-3/16"	1-3/8"	17.72"	16.54"	14.17"	3-3/8"	73.82	256"	91"	87"	66,139	50
HRB-4 3040	10' 2"	1-3/8"	1-9/16"	18.50"	16.93"	14.17"	3-1/2"	73.43	256"	91"	87"	72,753	60
HRB-4 3050*	10' 2"	1-9/16"	2"	20.47"	19.29"	16.54"	4"	72.44	264"	107"	99"	99,209	75
HRB-4 3065*	10' 2"	2"	2-1/2"	25.59"	24.02"	19.69"	5"	111.22	288"	142"	144"	165,347	100
HRB-4 3085*	10' 2"	2-3/4"	3-3/8"	29.92"	28.35"	23.62"	6-3/8"	118.11	296"	142"	156"	198,417	150
HRB-4 3105*	10' 2"	3-1/2"	4"	32.28"	30.71"	25.20"	7-3/4"	129.13	296"	156"	170"	308,648	200
HRB-4 3120*	10' 2"	4"	4-1/2"	34.25"	32.28"	27.17"	8-3/4"	145.28	296"	170"	189"	352,740	250
HRB-4 3140*	10' 2"	4-1/2"	5-1/2"	38.19"	36.22"	30.31"	10"	157.09	303"	185"	105"	418,879	300
HRB-4 3160*	10' 2"	5-1/2"	6-3/8"	42.13"	40.16"	34.25"	11"	164.96	335"	209"	216"	507,064	400
HRB-4 4006	13' 5"	5/32"	1/4"	10.63"	9.84"	8.66"	2"	45.47	248"	65"	55"	21,385	15
HRB-4 4008	13' 5"	1/4"	5/16"	11.81"	10.63"	8.66"	2"	44.88	248"	65"	55"	26,897	15
HRB-4 4010	13' 5"	5/16"	3/8"	12.99"	11.81"	9.84"	2"	44.29	252"	75"	67"	33,070	20
HRB-4 4013	13' 5"	3/8"	1/2"	14.17"	12.99"	9.84"	2-3/8"	59.45	252"	75"	67"	36,377	25
HRB-4 4016	13' 5"	1/2"	5/8"	15.75"	14.57"	11.81"	2-1/2"	58.66	276"	83"	75"	44,093	30
HRB-4 4020	13' 5"	5/8"	25/32"	16.93"	15.75"	12.99"	2-3/4"	58.07	276"	87"	79"	59,525	40
HRB-4 4025	13' 5"	25/32"	1"	17.72"	16.54"	14.17"	3-3/8"	73.82	296"	91"	87"	83,776	50
HRB-4 4030	13' 5"	1"	1-3/16"	18.50"	16.93"	14.17"	3-1/2"	73.43	296"	91"	87"	92,595	60
HRB-4 4035*	13' 5"	1-3/16"	1-3/8"	20.47"	19.29"	16.54"	4"	72.44	303"	107"	99"	119,050	75

Standard machine specifications. *Custom machines available upon request.*

* For models marked with an asterisk: Ø Dmin= Ødx2 (prebending); Ødx4 (bending). Above info for Class 2 material (mild steel). For different materials, please consult your sales representative. Bending capacities may have to be reduced for conical bending.



HYDRAULIC 4-ROLLS

HRB-4 3050 Capacity Chart

"I have a 10' machine and can roll a 10' wide sheet of 2" thick Class 2 mild steel to a 61" diameter. If I only needed to roll a 6' plate to that diameter, how thick could it be?"
(The answer is 2.582")

With this example chart for the HRB-4 3050, you can determine what you can roll at different diameters, lengths, thicknesses and in different materials.

Charts are available for all machines.

SAMPLE CHART — Ask your sales representative for the chart for your plate roll.

MACHINE DATA		10.000		1.57		2		20.47		10.000		3.000		2.000							
BENDING LENGTH (feet)		10.000		1.57		2		20.47		10.000		3.000		2.000							
PREBENDING CAPACITY (inch)		1.57		1.57		2		20.47		10.000		3.000		2.000							
BENDING CAPACITY (inch)		2		2		2		20.47		10.000		3.000		2.000							
TOP ROLL DIAMETER (inch)		20.47		20.47		20.47		20.47		10.000		3.000		2.000							
Plate Width	W (feet):	10.000		10.000		10.000		10.000		10.000		10.000		10.000							
Material Types	Inside Diameter	Pre-Bending Capacities		Bending Capacities		9.000		8.000		7.000		6.000		5.000		4.000		3.000		2.000	
		s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)	s (inch)
CLASS-1 MATERIAL Max Yield Strength	22.517	1.268	1.723	1.337	1.817	1.418	1.927	1.516	2.060	1.637	2.225	1.794	2.437	2.005	2.725	2.316	3.147				
	26.611	1.488	1.874	1.569	1.976	1.664	2.096	1.779	2.240	1.921	2.420	2.105	2.651	2.353	2.963						
206.843 30,000	30.705	1.691	1.939	1.783	2.044	1.891	2.168	2.021	2.317	2.183	2.503	2.392	2.742		3.066						
	40.940	1.733	2.047	1.827	2.157	1.938	2.288	2.072	2.446	2.238	2.642	2.451	2.894								
N/mm ²	61.410	1.776	2.154	1.872	2.271	1.985	2.409	2.122	2.575	2.292	2.781	2.511	3.047								
	81.880	1.826	2.262	1.925	2.384	2.042	2.529	2.183	2.704	2.358	2.920		3.199								
CLASS-2 MATERIAL Max Yield Strength	102.350	1.860	2.370	1.961	2.498	2.080	2.649	2.223	2.832	2.402	3.059										
	204.700	1.945	2.477	2.050	2.612	2.174	2.770	2.325	2.961	2.511	3.198										
241.317 35,000	22.517	1.178	1.600	1.241	1.687	1.316	1.789	1.407	1.912	1.520	2.066	1.665	2.263	1.862	2.530	2.150	2.921				
	24.564	1.382	1.740	1.456	1.834	1.545	1.945	1.651	2.080	1.784	2.246	1.954	2.461	2.185	2.751		3.177				
N/mm ²	30.705	1.570	1.800	1.655	1.897	1.755	2.012	1.877	2.151	2.027	2.324	2.220	2.546	2.482	2.846						
	40.940	1.609	1.900	1.696	2.003	1.799	2.124	1.923	2.271	2.078	2.453	2.276	2.687		3.004						
CLASS-3 MATERIAL Max Yield Strength	61.410	1.649	2.000	1.738	2.108	1.843	2.236	1.970	2.390	2.128	2.582	2.331	2.828		3.162						
	81.880	1.696	2.100	1.787	2.214	1.896	2.348	2.027	2.510	2.189	2.711	2.398	2.970								
344.738 50,000	102.350	1.727	2.200	1.820	2.319	1.931	2.460	2.064	2.630	2.230	2.840	2.442	3.111								
	204.700	1.806	2.300	1.903	2.424	2.019	2.571	2.158	2.749	2.331	2.969										
N/mm ²	22.517	0.982	1.335	1.036	1.407	1.098	1.493	1.174	1.596	1.268	1.723	1.389	1.888	1.553	2.111	1.794	2.437	2.197	2.985		
	26.611	1.153	1.452	1.215	1.530	1.289	1.623	1.378	1.735	1.488	1.874	1.630	2.053	1.823	2.296	2.105	2.651				
CLASS-4 MATERIAL Max Yield Strength	30.705	1.310	1.502	1.381	1.583	1.465	1.679	1.566	1.795	1.691	1.939	1.853	2.124	2.071	2.375	2.392	2.742				
	40.940	1.343	1.585	1.415	1.671	1.501	1.772	1.605	1.895	1.733	2.047	1.899	2.242	2.123	2.507	2.451	2.894				
448.159 65,000	61.410	1.375	1.669	1.450	1.759	1.538	1.866	1.644	1.995	1.776	2.154	1.945	2.360	2.175	2.639	2.511	3.047				
	81.880	1.415	1.752	1.491	1.847	1.582	1.959	1.691	2.094	1.826	2.262	2.001	2.478	2.237	2.770		3.199				
N/mm ²	102.350	1.441	1.836	1.519	1.935	1.611	2.052	1.722	2.194	1.860	2.370	2.038	2.596	2.278	2.902						
	204.700	1.506	1.919	1.588	2.023	1.684	2.146	1.801	2.294	1.945	2.477	2.130	2.714	2.382	3.034						
HIGH YIELD	22.517	0.862	1.171	0.908	1.234	0.963	1.309	1.030	1.399	1.112	1.512	1.219	1.656	1.362	1.851	1.573	2.138	1.927	2.618		
	26.611	1.011	1.273	1.066	1.342	1.130	1.424	1.208	1.522	1.305	1.644	1.430	1.801	1.599	2.013	1.846	2.325	2.261	2.847		
689.476 100,000	30.705	1.149	1.317	1.211	1.388	1.285	1.473	1.373	1.574	1.483	1.701	1.625	1.863	1.817	2.083	2.098	2.405	2.945			
	40.940	1.178	1.390	1.241	1.466	1.317	1.555	1.408	1.662	1.520	1.795	1.665	1.966	1.862	2.198	2.150	2.539	3.109			
N/mm ²	61.410	1.206	1.464	1.272	1.543	1.349	1.636	1.442	1.749	1.557	1.889	1.706	2.070	1.907	2.314	2.203	2.672				
	81.880	1.241	1.537	1.308	1.620	1.387	1.718	1.483	1.837	1.602	1.984	1.785	2.173	1.962	2.430	2.265	2.806				
PSI	102.350	1.264	1.610	1.332	1.697	1.413	1.800	1.511	1.924	1.632	2.078	1.787	2.277	1.998	2.546	2.307	2.939				
	204.700	1.321	1.683	1.393	1.774	1.477	1.882	1.579	2.012	1.706	2.173	1.869	2.380	2.089	2.661	2.412	3.073				
PSI	22.517	0.695	0.944	0.732	0.995	0.777	1.055	0.830	1.128	0.897	1.219	0.982	1.335	1.098	1.493	1.268	1.723	1.553	2.111		
	26.611	0.815	1.027	0.859	1.082	0.911	1.148	0.974	1.227	1.052	1.325	1.153	1.452	1.289	1.623	1.488	1.874	1.823	2.296		
PSI	30.705	0.926	1.062	0.976	1.119	1.036	1.187	1.107	1.269	1.196	1.371	1.310	1.502	1.465	1.679	1.691	1.939	2.071	2.375		
	40.940	0.949	1.121	1.001	1.182	1.062	1.253	1.135	1.340	1.226	1.447	1.343	1.585	1.501	1.772	1.736	2.047	2.123	2.507		
PSI	61.410	0.973	1.180	1.025	1.244	1.087	1.319	1.162	1.410	1.256	1.523	1.375	1.669	1.538	1.866	1.776	2.154	2.175	2.639		
	81.880	1.000	1.239	1.055	1.306	1.118	1.385	1.196	1.481	1.291	1.600	1.415	1.752	1.582	1.959	1.826	2.262	2.237	2.770		
PSI	102.350	1.019	1.298	1.074	1.368	1.139	1.451	1.218	1.551	1.315	1.676	1.441	1.836	1.611	2.052	1.860	2.370	2.278	2.902		
	204.700	1.065	1.357	1.123	1.430	1.191	1.517	1.273	1.622	1.375	1.752	1.506	1.919	1.684	2.146	1.945	2.477	2.382	3.034		

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HYDRAULIC 4-ROLLS



Optional CNC Control

Standard Specifications

- Control unit with 6 digital readouts
- Programmable multi-pass points
- Cone bending
- Hardened rolls (HRC 58)
- Highly durable forged 4140 alloy steel rolls machined by CNC Lathes with optimal crown (special crown upon request)
- All rolls mounted on bearings
- Electronic control for side rolls
- Dual speed control
- Stress relieved steel construction machine frame
- Hydraulic drop end with easy pull out system
- Central rolls are driven with hydraulic motor(s) and planetary gear box(es)
- All rolls driven on machines with 1" pre-bend and above
- Electrical and hydraulic protection against overloads
- World standard electrical and hydraulic components (parts stocked by us or available off-the-shelf from your local supplier)
- Hydraulic pressure adjustable bottom roll (crowning compensation)

Optional Accessories

- CNC or NC control unit
- Remote (wired or wireless)
- All axis positioning with adjustable speed on CNC machines
- Variable speed control
- Oil cooler
- Side supports
- Vertical overhead supports
- Material feed table
- Changeable top roll for smaller diameters
- Polished rolls
- Automation available
- Custom machines readily available



Standard 4-Roll Control with 6 Digital Readouts on Touch Screen Panel with Multiple Programmable Pass Points



All Rolls Mounted on Sealed Bearings



CNC Induction Hardening

HYDRAULIC 4-ROLLS

CNC Control

This user-friendly, versatile CNC control has interpolation capabilities with hydraulic proportional valves in order to roll different shapes without the need to stop at curvature change points.

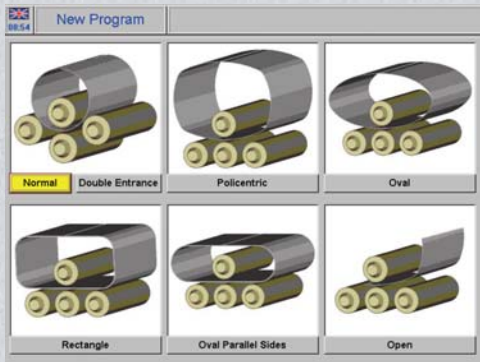
This control gives the operator the ability to efficiently produce everything from simple cylinders to complex parts with repeatability. An extensive library of preprogrammed part shapes (with editable geometry) allows even inexperienced operators to produce quality parts. With the Autolearning Function, the operator can also create teach/record programs.

- 12" TFT S VGA full color display with antiglare screen
- Ergonomic molded cabinet
- Dedicated scratch-proof, oil-proof, acid-resistant sealed membrane push button keyboard
- Interactive graphic editor for workpieces and tool data entry
- Automatic identification of the best bending sequence(s) (with manual override)
- Programming of all axes positions with error checking (automatic or manual)
- Internal memory for up to 10,000 programs (external memory available)
- Autolearning function (teach/record mode)
- Manual mode



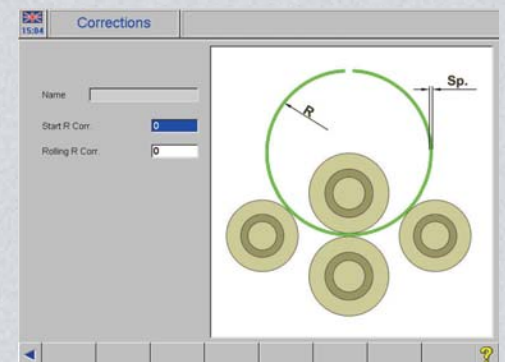
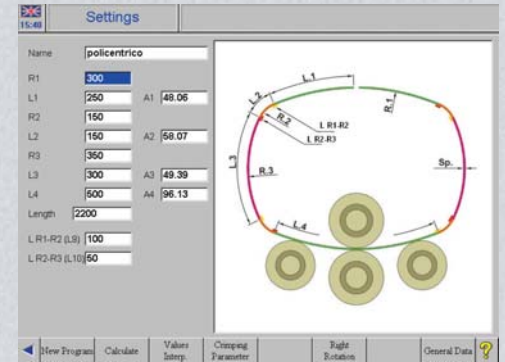
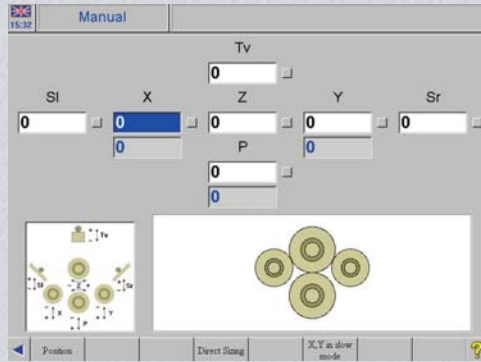
Precise conical and poly-centric bending with CNC controls

As with any type of fabrication, the quality of the finished parts depends not only on the equipment and the operator, but also on the consistency of the material being used. Slight adjustments *may* be required from one material lot to another in order to maintain consistency of the parts.



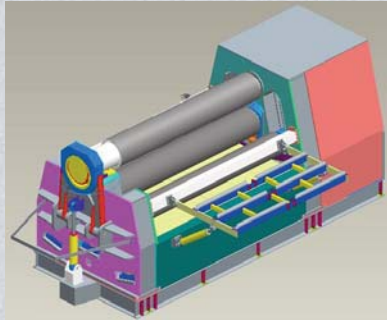
Above are some of the more established shapes in the industry, including oval, buckets, round-square, etc.

Multiple rolling profiles are already programmed in the control and all the operator needs to do is insert the parameters for the specific profile. The control will roll a part with only limited input from the console (minor adjustments can be made to adjust for material variations when necessary). Users may program any profile needed and save it to use with other similar parts by changing the parameters.

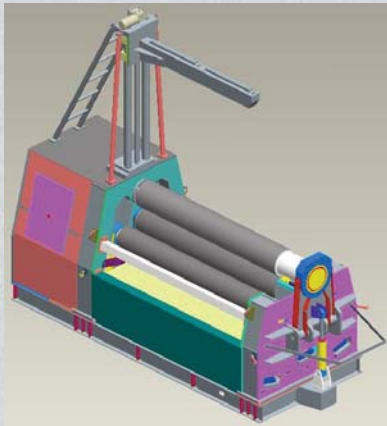


HYDRAULIC 4-ROLLS

HRB-4 HYDRAULIC ROLL BENDING



HRB-4 with Rectilinear Guides



1" + Prebend HRB-4
Shown with Rectilinear Guides
(Planetary Swing Available)

Pre-bending, conical bending and ellipse bending can be done easily on a Hydraulic 4-Roll Bending Machine.

The Hydraulic 4-Roll Bending Machines have all of the advantages of the asymmetrical and pyramid bending machines. It is possible to make double pre-bends (both ends) in one pass.

The HRB-4 rolls have 2 hydraulic powered rolls on which the hydraulic motor and planetary gears are mounted. All four rolls have been mounted on the bearings. They also feature a hydraulic drop-end and hydraulic top roll lift.

1" pre-bend and above machines have rectilinear guides (planetary swing guides also available). In this system all 4 rolls are hydraulic motor driven through planetary gear boxes.

Hydraulic and electrical systems have been safeguarded from overloads and require minimum maintenance. Hydraulic and electrical components are modular and designed according to world standards. All models have been manufactured according to CE norms.



Machine Shown
with Options