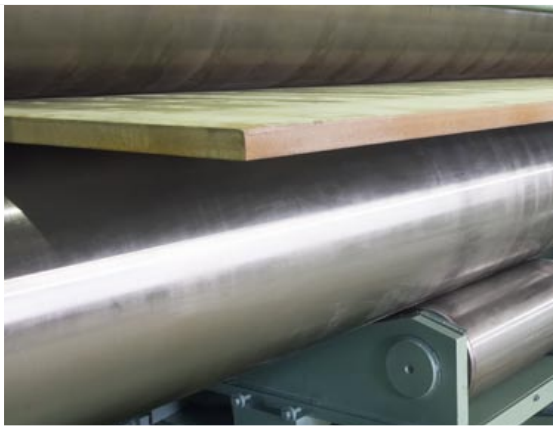
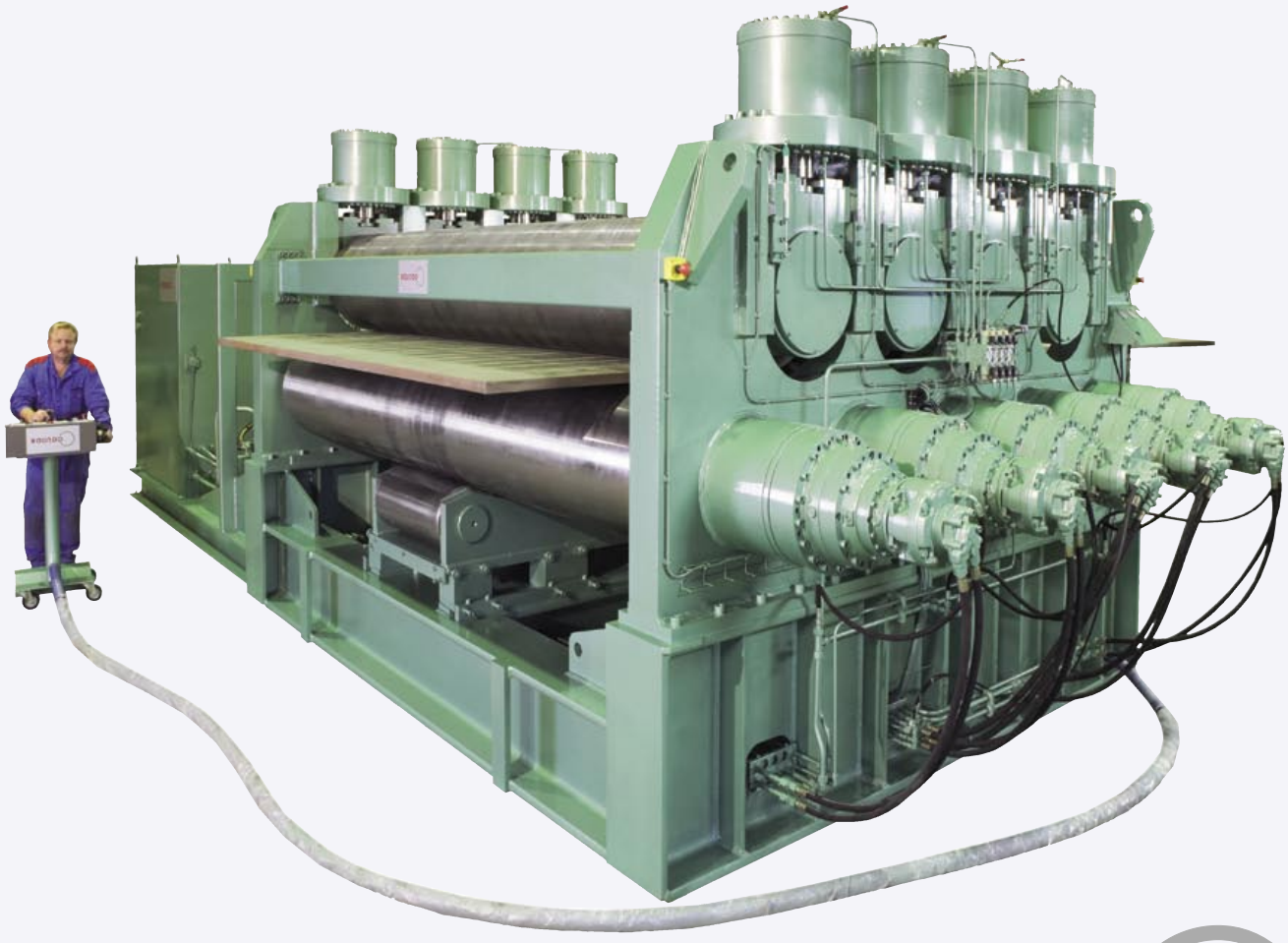
ROUNDO
Plate Straightening Machines
Type PRH/PRV





ROUNDO

Plate Straightening Machines for greatest possible flexibility.

PRH 560

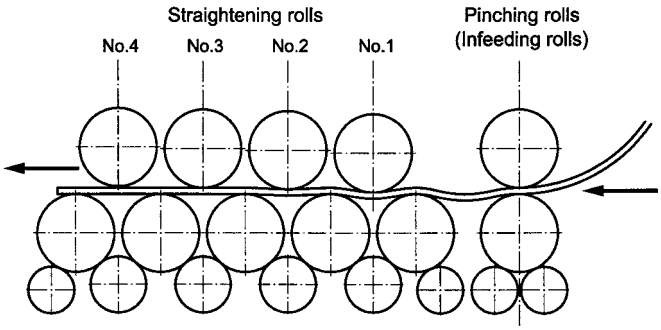
ROUNDO is the world's leading manufacturer of plate and section bending machines and a wide range of special purpose machines including plate straightening machines. The company was formed in 1964, and has since delivered more than 15 000 machines to satisfied customers around the globe. ROUNDO machines are world-renowned for outstanding performance, reliability and quality.

Plate Straightening Machines Type PRH

The PRH machines are used for straightening of steel plates in dimensions within the machine's capacity. PRH machines are produced in a wide range of sizes for plate thicknesses from 1 up to 70 mm and for plate widths up to 4000 mm. The smallest plate size that can be straightened depends on the shape of the plates, but generally the minimum plate length is twice the top roll centre distance.

The minimum plate width is limited by the feeding possibility, but since all ROUNDO machines have roller bearings, these machines can handle smaller widths than other types.

Depending on size and execution the machines can be equipped with three, four or five bottom rolls and two, three or four top rolls. Often the PRH machines are equipped with an extra pair of in-feeding rolls, in order to get easy in-feeding of the plate. This pair of rolls is also called "pinching rolls".



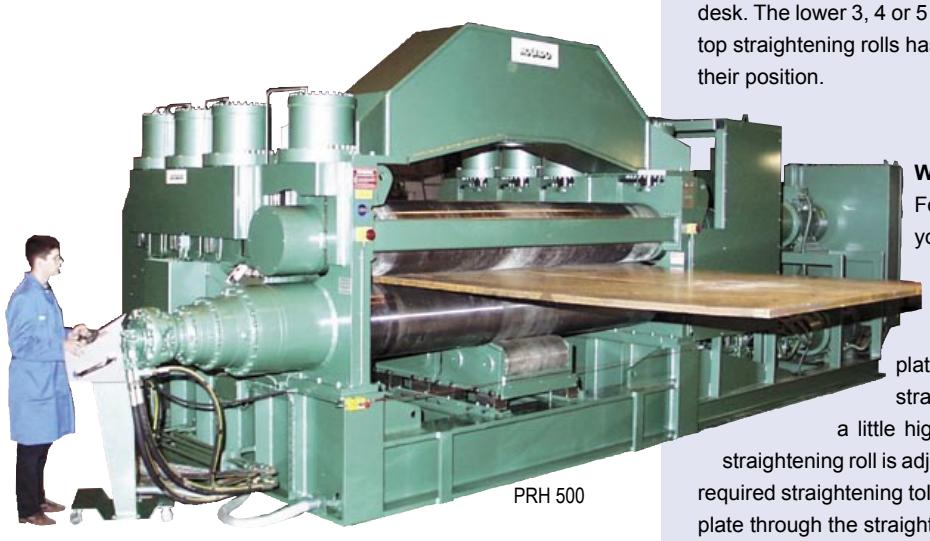
Working principle with 9 straightening rolls and 2 pinching rolls.

The Pinching rolls (optional)

The purpose of the pinching rolls is to simplify the operation of the machine. They also improve the feeding of the plate through the machine. The top pinching roll is hydraulically adjustable up and down, and the lower pinching roll is fixed. The pinching pressure can be pre-set and the floating function maintains a constant pressure against the un-straightened plate. The position of the top pinching roll can be read by digital readouts on the control desk.

Straightening rolls

After the pair of pinching rolls, there are 5, 7 or 9 straightening rolls which will perform the actual straightening of the plate. The top 2, 3 or 4 straightening rolls are hydraulically and independently adjustable up and down by means of switches in the control desk. The lower 3, 4 or 5 straightening rolls are fixed. Each of the top straightening rolls has its own set of digital readouts showing their position.



PRH 500

Working principle

For example, when using a 7 roll machine, you would place the leading edge of the plate on the lower pinching roll and pinch the plate. Adjust the first top straightening roll down, so the roll bends the plate beyond the yield point. The next top straightening roll is adjusted to a position a little higher than the first one and the last top straightening roll is adjusted even further up. Depending on the required straightening tolerance, it may be necessary to pass the plate through the straightening machine two or more times.

Type PRV
It is also possible to get the straightening machines in vertical execution, Type PRV. This execution is often equipped with an additional roll to bend the plate to a radius after straightening.

MACHINE DESIGN
All welded plate frame, stress relieved and accurately machined.

- Rolls
All forged steel rolls. As an option the rolls can be hardened and ground.

- Support Rolls
The lower straightening rolls are supported in the middle by fixed support rolls to increase the thickness range of the machine. Some machines with short roll length are made without support rolls.

- Bearings
All rolls are journalled in SKF spherical roller bearings, sealed and greased for many years of operation.

- Drive
Smaller models
All bottom rolls are driven from a central gear box motor that transmits the torque via steel gears to the bottom rolls.
Larger models
All bottom rolls are driven by separate high-torque hydraulic motors with planetary gearboxes.
As an option the rolling speed can be infinitely variable from 0-7 m/min.

- Top roll adjustment
Each end of each top roll has a hydraulic cylinder that moves the roll up or down. The top rolls can either be adjusted parallel against the bottom rolls or tilted if required.

- Hydraulic system
The hydraulic unit is placed on the machine and is completely sealed, filled with oil when the machine is delivered.

- Electric unit
The electric unit is placed on the machine, completely equipped when delivered. At installation, only one incoming power cable is required.

- Control unit
The main control unit includes all push buttons, joysticks, digital readouts, etc. Two emergency stops are placed on the machine.

PRH 160

Capacities and Specifications

ROUNDO Plate Straightening Machines Type PRH/PRV

Machine size	Capacity in steel with yieldpoint 270 N/mm²	Capacity in steel with yieldpoint 350 N/mm²	Diameter of Straightening Rolls	Diameter of Pinching Rolls	Connected power	Mechanical Drive	Hydraulic Drive
	mm	mm	mm	mm	kW*		
120	500x7	500x6	120	120	2,2	X	
140	500x10	500x8	140	140	3,0	X	
160	500x12	500x10	160	160	4,0	X	
200	500x18	500x16	200	200	5,5	X	
225	500x22	500x18	225	225	7,5	X	
120	1000x5	1000x4	120	120	2,2	X	
140	1000x6	1000x5	140	140	3,0	X	
160	1000x8,5	1000x7	160	160	4,0	X	
200	1000x14	1000x11	200	200	5,5	X	
225	1000x16	1000x14	225	225	7,5	X	
260	1000x20	1000x16	260	180	11		X
310	1000x24	1000x21	310	200	18,5		X
360	1000x34	1000x29	360	220	30		X
120	1500x4	1500x3,5	120	120	2,2	X	
140	1500x5	1500x4	140	140	3,0	X	
160	1500x7	1500x6	160	160	4,0	X	
200	1500x10	1500x8	200	200	5,5	X	
225	1500x13	1500x11	225	225	7,5	X	
260	1500x16	1500x14	260	180	11		X
310	1500x20	1500x17	310	200	18,5		X
360	1500x28	1500x24	360	220	30		X
400	1500x36	1500x30	400	240	50		X
450	1500x43	1500x36	450	270	75		X
500	1500x55	1500x47	500	300	100		X
570	1500x68	1500x59	570	320	120		X
120	2000x3,5	2000x3	120	120	2,2	X	
140	2000x4,5	2000x4	140	140	3,0	X	
160	2000x6	2000x5	160	160	4,0	X	
200	2000x10	2000x8	200	200	5,5	X	
225	2000x12	2000x10	225	225	7,5	X	
260	2000x14	2000x12	260	180	11		X
310	2000x18	2000x15	310	200	18,5		X
360	2000x25	2000x21	360	220	30		X
400	2000x32	2000x26	400	240	50		X
450	2000x38	2000x32	450	270	75		X
500	2000x48	2000x41	500	300	100		X
570	2000x60	2000x51	570	320	120		X
120	2500x3	2500x2,5	120	120	2,2	X	
140	2500x4	2500x3,5	140	140	3,0	X	
160	2500x5	2500x4,5	160	160	4,0	X	
200	2500x8	2500x6	200	200	5,5	X	
225	2500x10	2500x8	225	225	7,5	X	
260	2500x12	2500x10	260	180	11		X
310	2500x16	2500x13	310	200	18,5		X
360	2500x22	2500x19	360	220	30		X
400	2500x28	2500x24	400	240	50		X
450	2500x35	2500x28	450	270	75		X
500	2500x43	2500x37	500	300	100		X
570	2500x55	2500x47	570	320	120		X
225	3000x8	3000x6	225	225	7,5	X	
260	3000x10	3000x8	260	180	11		X
310	3000x14	3000x12	310	200	18,5		X
360	3000x20	3000x18	360	220	30		X
400	3000x26	3000x22	400	240	50		X
450	3000x32	3000x26	450	270	75		X
500	3000x40	3000x34	500	300	100		X
570	3000x50	3000x43	570	320	120		X

* Connected power depends on how many rolls that are driven and the drive speed.
- Min capacity of steel depends on various facts.
  Please contact your reseller for more information.
- Mechanical Drive = Electrical motor + worm gear
- Hydraulic Drive = Hydraulic low speed motor + planetary gear box
- Other machine sizes can be delivered on request
- All data subject to change without price notice

NORTH AMERICAN DISTRIBUTOR

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