

**ROUND**O

Quick Rolling  
Machines - Type PM

# ROUND0 QUICK ROLLING MACHINES TYPE PM

For high production of cylinders and tubes, the best solution is very often the ROUND0 Quick Rolling Machine. The features of this machine are:

- Very short rolling times
- Very good roundness tolerances and short straight ends
- Less dependence on plate quality than other machine types
- No demand for skilled bending operators to run the machine
- High machine performance and low maintenance costs

The PM-machine is designed to prebend and roll the plate into a completed cylinder in one pass, and in a very short cycle time.

The two lower rolls are fixed-positioned, journalled in ball or roller bearings, and driven by a geared motor equipped with a brake.

On most sizes, the lower rolls are equipped with support rolls under their mid-point to reduce the deflection of the rolls under load.

The top roll units are easy to change and takes a very short time.

The interchangeable top roll unit consists of an inner non-rotating shaft with journalled rolls for each different rolling diameter.

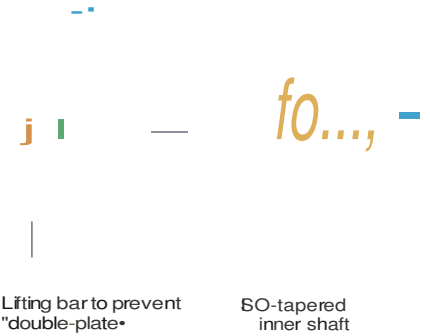
Because of this design there is less load on the inner shaft and the interchangeable top roll than there would be on a conventional solid roll, making it possible to roll to smaller diameters.

One end of the inner shaft is fixed in the machine frame.

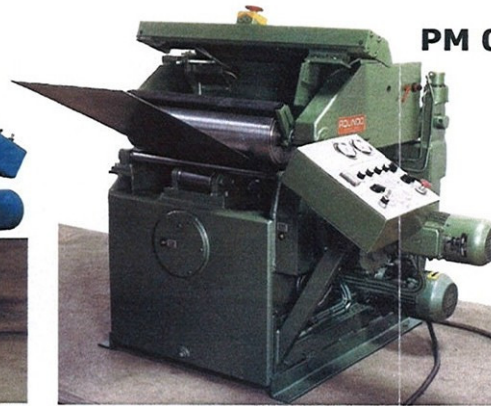
The other end is supported from the frame by the yoke of a drop end, which is pneumatically operated to allow the finished cylinder to be manually removed or automatically ejected.

The upper part of the machine frame moves up and down during rolling and is powered by hydraulic cylinder or cylinders, depending on machine size.

The interchangeable top rolls are quick and easy to change.

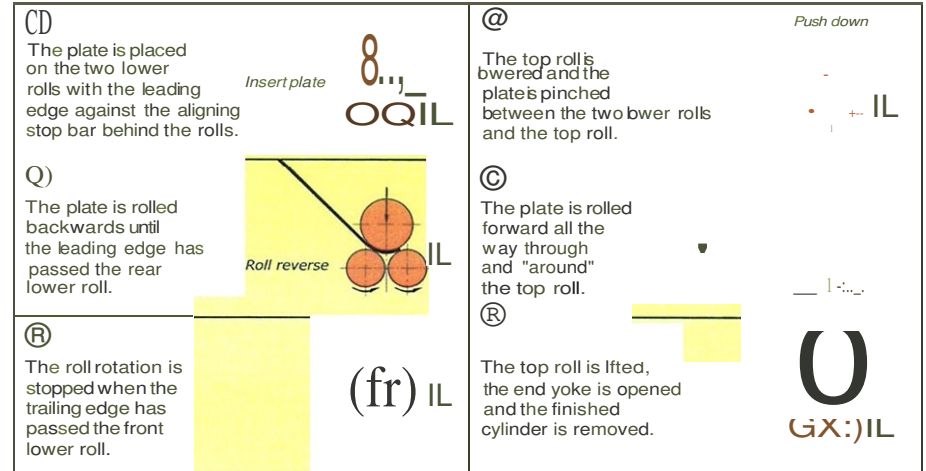


PM 1



PM 0

## WORKING PRINCIPLE



## STANDARD EQUIPMENT | OPTIONAL EQUIPMENT | TECHNICAL DATA

Two lower rolls driven via geared motor with brake. Hydraulic adjustment of the top roll. Quick changeable top roll system including inner shaft and lifting bar/roll. Ball and roller bearings in all main journals. Pneumatic operation of the end yoke. Pressure relief valve and gauge for adjustment of the working pressure of the top roll. Portable push button control for remote control. Complete electric equipment including emergency stop.

Automatic working cycle including pneumatic ejection device. Control panel, including digital limit switch for upper top roll position, timer settings for auto cycle and pressure setting. Infeeding table, motorized or non-motorized. Automatic infeeding system.

DATA	TYPE	PM0			PM 1					PM2						
		500	750	1000	500	750	1000	1250	1500	500	750	1000	1250	1500	1750	2000
Working length >> (mm)		500	750	1000	500	750	1000	1250	1500	500	750	1000	1250	1500	1750	2000
Max. plate thickness >> (mm)		3.5	3.0	2.0	3.0	4.0	3.0	2.5	2.0	10	8.0	7.0	6.0	5.0	4.5	4.0
Min. rolling diameter, ID >> (mm)		85	90	90	120	120	130	130	130	150	150	160	160	170	170	170
Max. rolling diameter, OD (mm)		-400-			-500-					-600-						
Top shaft diameter (mm)		- 50 -			- 70 -					- 110 -						
Lower rolls diameter (mm)		- 50 -			- 88 -					- 120 -						
Drive power (kW)		- 0.9 -			- 1.9 -					- 2.4 -						
Total connected power (kW)		- 3.9 -			- 5.9 -					- 5.4 -						
Rolling speed, rev./fwd. (m/min)		- 2.0/4.0 -			- 2.7/5.5 -					- 2.7/5.5 -						
Max. bending power (N)		- 70000 -			- 150000 -					- 250000 -						
Net weight, approx. (Kg)		900	1050	1200	1250	1400	1600	1800	2000	2000	2200	2500	2900	3200	3600	4100

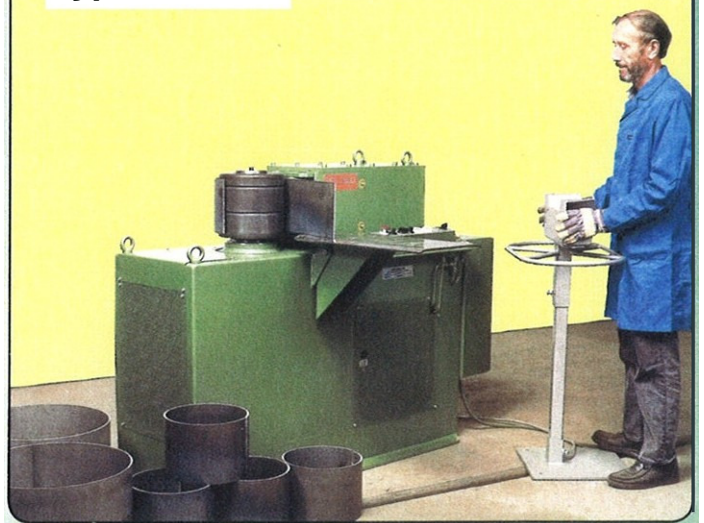
Rem: 1) Other lengths on request 2) Mild steel with yield point 270 N/mm<sup>2</sup> 3) Depending on plate thickness and material quality

# Also from **ROUND** other high speed production rolling machines

Two-roll horizontal urethane machine  
**Type TH**



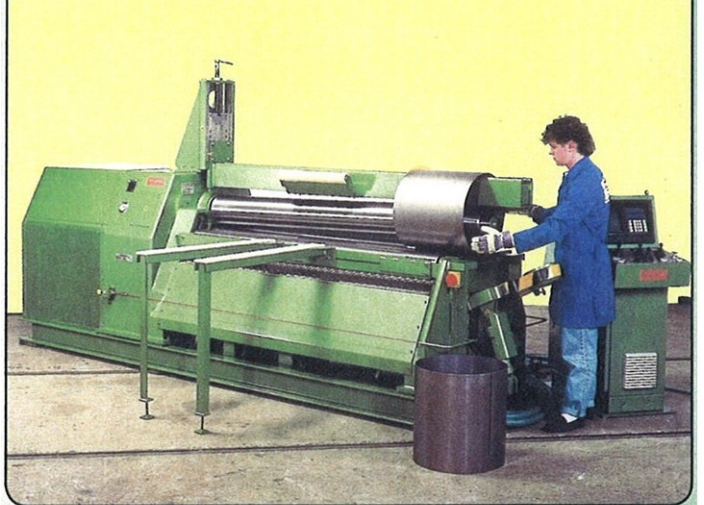
Three-roll vertical short quick  
rolling machine  
**Type PM-S**



Two-roll vertical urethane machine  
**Type TV**



Four-roll double-pinch CNC rolls  
with lifting- and ejection device  
**Type PASS**



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All design, capacities and technical data are subject to change without prior notice.

