

# Rollerbeds



# PEMA Rollerbeds

Rollerbeds provide assistance in the handling of containers, tubes, pipes, and other revolving workpieces during welding, painting, blasting, and assembly. By means of a rollerbed set, workpieces can always be placed in the most advantageous working position. The use of PEMA rollerbeds also reduces set-up and handling times to a minimum.

## Extensive range

PEMA offers a wide range of rollerbed models to handle varying weights, diameters, and shapes of rotating workpieces. The range includes automatically and manually adjusted rollerbed types as well as special models designed for demanding product geometries and weights.

## Reliable products

Durability, operational reliability, and safety are all typical characteristics of PEMA rollerbeds. Designed and built for demanding machine workshop environments, they fulfill the latest European EN safety-at-work regulations.

Loading capacities of PEMA rollerbeds range from 5 to 1600 tons. Every operator can find a perfect solution from the comprehensive PEMA rollerbed selection.



PEMA rollerbeds with PEMA column & booms complement even the most demanding hard automation solutions.

## Accessories

PEMA rollerbeds can be equipped with a selection of accessories depending on the requirements of the customer's production flows, used materials, and the geometry of manufactured products.

All rollerbed models can be equipped with rail cars for enhancing the efficiency of production material flows. On rail cars, loaded rollerbeds are easily and rapidly transported between workstations without the need for workpiece lifting. Rail cars also enable effortless handling of workpieces of varying lengths within the workstations. The cars come in two-unit types: powered with motorized motion (2D), or idler (I).

For preventing axial creeping of the workpiece during rotation, the idler unit can be equipped with an anti-creep (AC) solution.

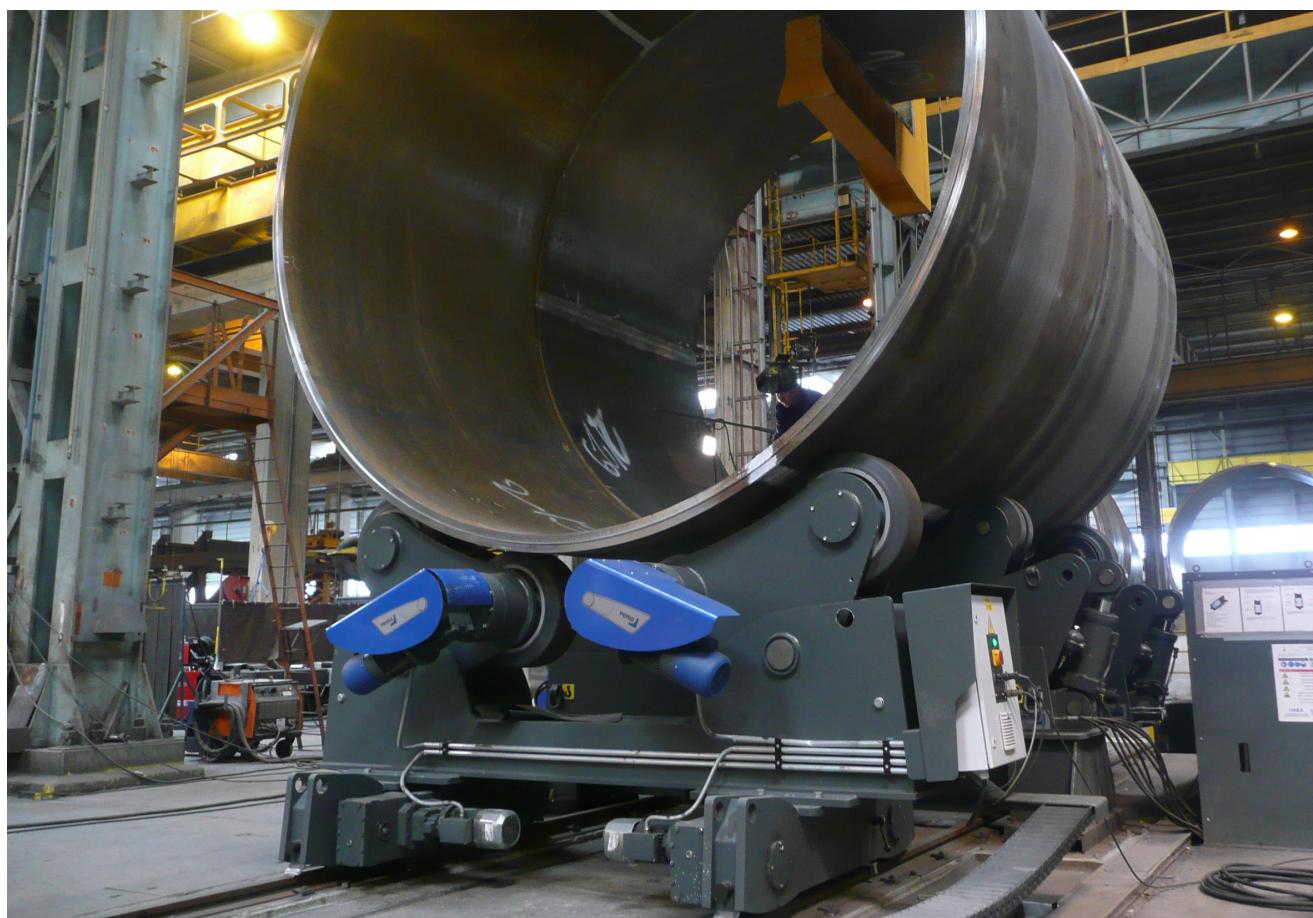
Other accessories include a foot pedal for start/stop of rotation and speed control, an external control interface for integration with e.g., PEMA column & boom, and a wireless remote-control unit.

### Quick facts:

- Quality improvement - less finishing and repairing
- Accurate, safe and ergonomic
- Essential for all automated welding of cylindrical work-pieces by column & booms and platforms
- PEMA rollerbeds fulfill the requirements of the European EN-safety norm
- All PEMA rollerbeds come with CE-markings

### Accessories

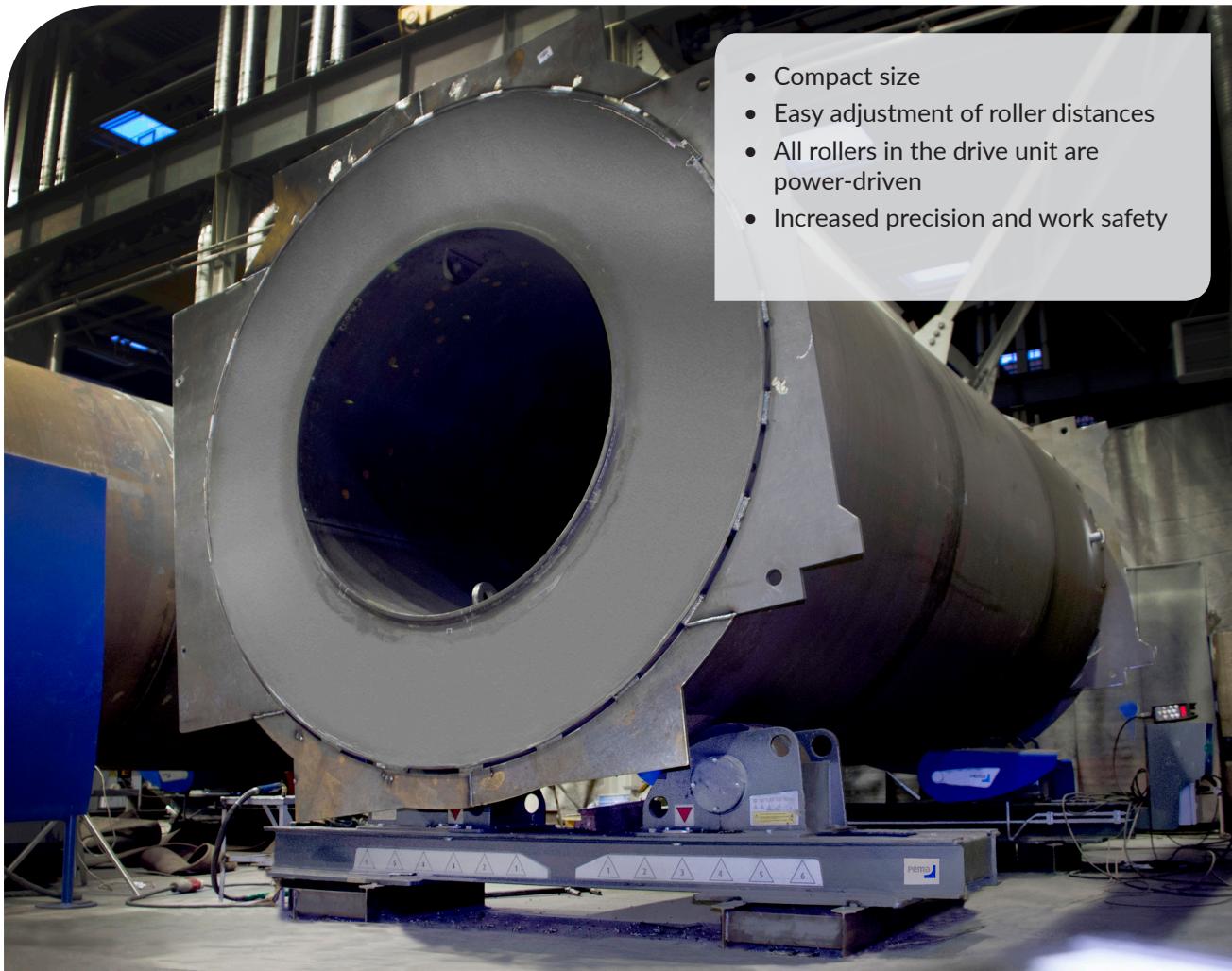
- Foot pedal for start/stop of rotation
- Foot pedal for speed control
- Rail car units, drive and/or idler
- Automatic anti-creep (AC) equipment
- Fit-up equipment
- External control interface for rotation integration
- Wireless remote control unit
- Special models for ATEX environment



PEMA rollerbeds can be equipped with rail cars to enhance the efficiency of production material flows.

## N Series

PEMA N series of conventional rollerbeds make up a basic range of solutions for handling a wide variety of cylindrical workpieces. They occupy little space and feature a handy manual diameter adjustment. Loading capacities range between 5 and 1 600 tons.



Heavy work-piece and a set of PEMA N50 rollerbeds.



PEMA N220 ATEX rollerbed set with rails.



Longitudinal welding carried out by means of a C&B and PEMA N rollerbed stations.

## Basic solution for handling cylindrical work-pieces

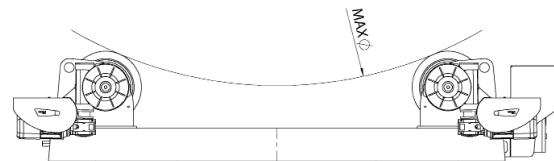
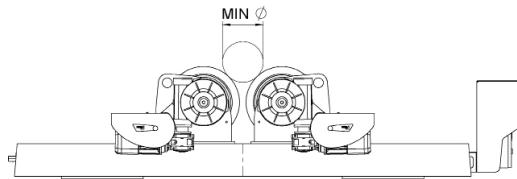
PEMA N series of conventional rollerbeds make up a range of basic solutions for handling cylindrical workpieces such as pressure vessels and tanks in automated welding. They occupy little space thanks to their compact size. In the N series, roller distances are manually adjusted to accommodate varying work-piece diameters. The adjustments are stepless in the smaller models but the heavier rollerbeds come with stepped adjustments to ascertain the appropriate settings of the rollers.

The N series loading capacity ranges from 5 tons up to even 1 600 tons. Heavier rollerbeds often form a part of complete PEMA hard automation welding solutions.

Smaller rollerbeds have polyurethane rollers (PU) and the heavier beds come with high-quality steel rollers.

Powerful and accurate rotation is essential when welding demanding structures. In PEMA rollerbeds, this is ensured by high-quality, inverter-controlled AC drives and gears.

Every PEMA rollerbed model is delivered with a standard remote-control unit.

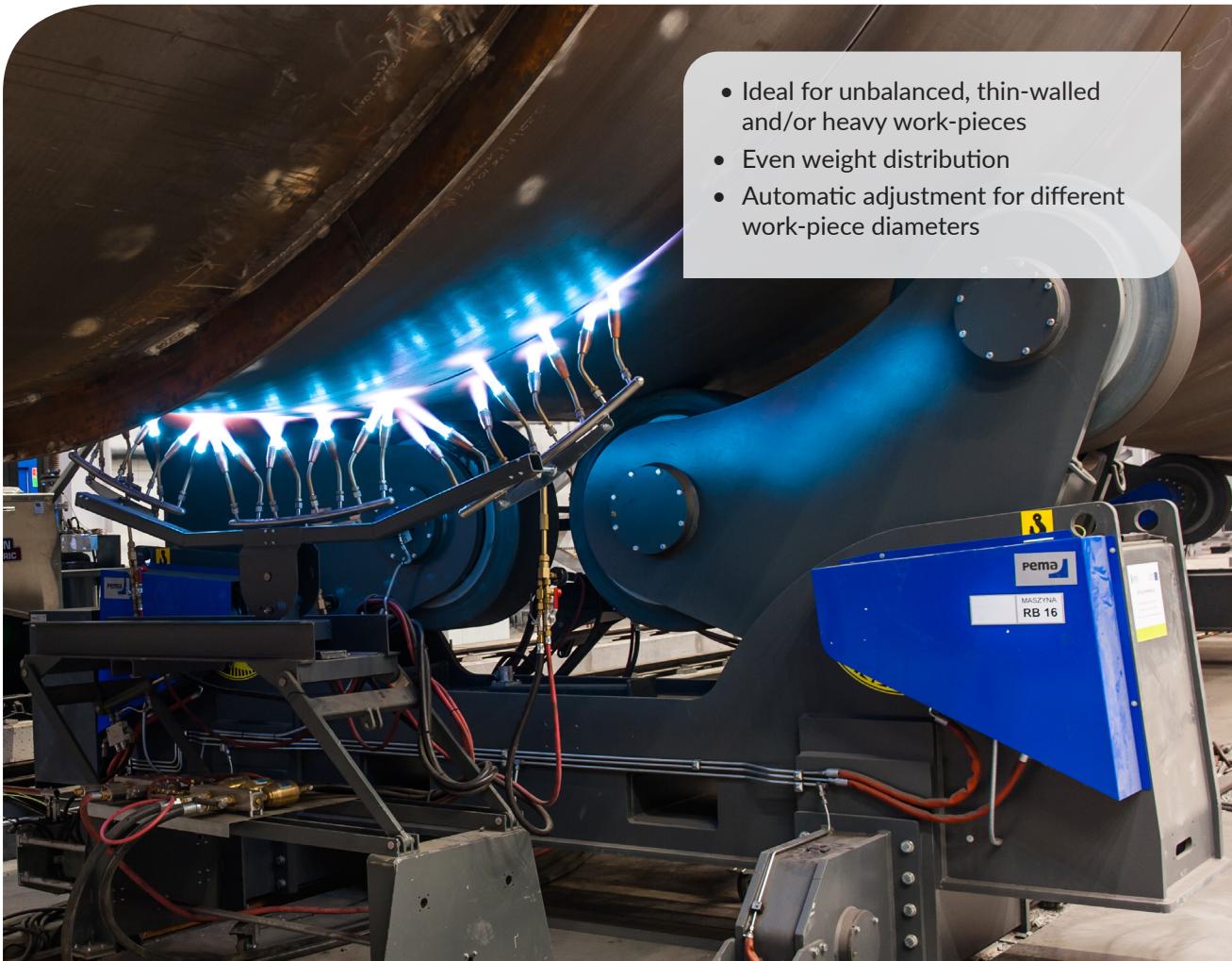


	N5	N12	N25	N50	N75	N100	N150	N200
Max load (ton/section)	drive unit	2,5	6	12,5	25	37,5	50	75
	idler unit	2,5	6	12,5	25	37,5	37,5	100
Rolling capacity (ton)		7,5	18	37,5	75	112,5	150	225
Max rotation force (kN)		4,0	8,5	18	40	50	50	110
Rotation speed range (mm/min)		100 - 2 000	100 - 2 000	100 - 2 000	100 - 2 000	100 - 2 000	100 - 2 000	100 - 2 000
Diameter range min-max (mm)	50% load	150 - 3 200	250 - 5 000	250 - 5 000	550 - 5 000	600 - 5 500	600 - 5 500	600 - 7 500
Diameter range min-max (mm)	100% load	150 - 3 200	250 - 5 000	400 - 5 000	800 - 5 000	1 100 - 5 500	1 100 - 5 500	1 100 - 7 500
Roller material		PU	PU	PU	PU	PU	PU	PU
Length (mm)	drive unit	2530	3 350	3 350	3 560	3 820	3 820	4 670
	idler unit	2100	2 840	2 840	3 030	3 410	3 410	4 200
Width (mm)	drive unit	680	680	680	1 130	1 120	1 120	1 430
	idler unit	380	400	400	700	700	700	880

Please contact us for PEMA N300 - N1600 technical information.

## A Series

PEMA A series of self-aligning rollerbeds are ideal for handling unbalanced, thin-walled, and/or heavy workpieces. The A series rollerbeds provide even weight distribution, constant rotation speeds, and adaptability to a wide range of work-piece diameters without the need for separate adjustment. Loading capacities range between 12 and 1000 tons.



A set of PEMA A rollerbeds equipped with special anti-creep AC function.



PEMA A rollerbeds ascertain even weight distribution on the work-piece.



PEMA products combine modern design and reliable technology for effective welding work.

## Ideal for difficult and demanding work-pieces

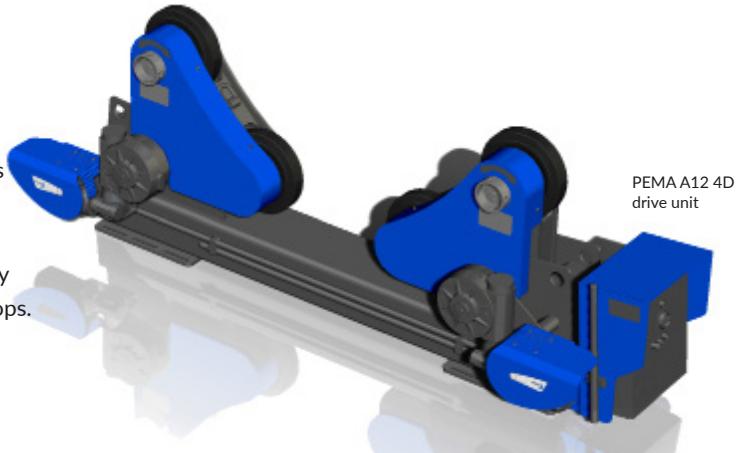
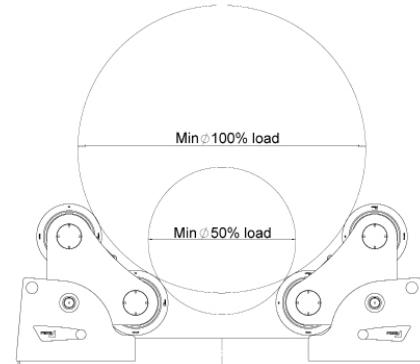
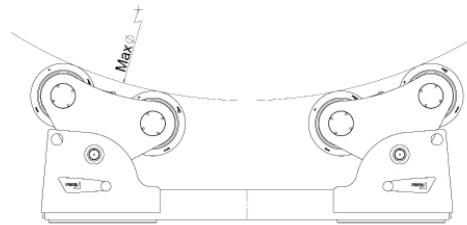
PEMA A self-aligning rollerbeds are ideal for difficult and demanding workpieces. The A roller bogies automatically adjust to align with the diameter of the workpiece in question.

Compared with other rollerbeds, PEMA A series provides superior weight distribution. This is a significant advantage in the handling of thin-walled workpieces. Conical parts can be handled also with hydraulic fit-up functions built for the roller bogies.

Either two or all four axles of the drive unit are power-driven. The four-wheel drive provides excellent grip and accurate rotation characteristics even for very unbalanced workpieces. The A series rollerbeds with two-wheel drives suit well for wind energy towers and other conical work-piece handling.

PEMA rollerbeds are designed in close cooperation with the best welding production professionals. PEMA's extensive experience in designing and manufacturing welding automation solutions has been a key factor in the development of PEMA rollerbeds. Every PEMA product utilizes high-quality components from internationally recognized brands. All structures and components are series-produced and tested.

Designed based on the same high-quality standards as PEMA positioners and column & booms, PEMA rollerbeds fulfill the requirements of the European EN safety norm. All PEMA rollerbeds come with CE markings. Special ATEX models are available for use in areas with potentially explosive atmospheres, like shot blasting and painting shops.



	A12	A25	A50	A100	A150	A200	A350
Max load (tons/unit)	drive unit	6	12,5	25	50	75	100
	idler unit	6	12,5	25	50	50	100
Rolling capacity (tons)		18	37,5	75	150	225	300
Max rotation force (kN)		8,5	18	30	50	50	110
Rotation speed range (mm/min)		100 - 2 000	100 - 2 000	100 - 2 000	100 - 2 000	100 - 2 000	100 - 2 000
Diameter range min-max (mm)	50% load	700 - 5 000	700 - 5 000	1 000 - 6 000	1 000 - 6 000	1 000 - 6 000	1 000 - 8 000
	100% load	1 500 - 5 000	1 500 - 5 000	2 000 - 6 000	2 000 - 6 000	2 000 - 6 000	2 900 - 7 000
Roller material		PU	PU	PU	PU	PU	PU
Length (mm)	drive unit	2 830	2 870	3 220	3 230	3 230	4 500
	idler unit	2 280	2 280	2 790	2 800	2 800	4 100
Width (mm)	drive unit	710	780	1 120	1 210	1 210	1 780
	idler unit	400	400	700	700	750	1 100

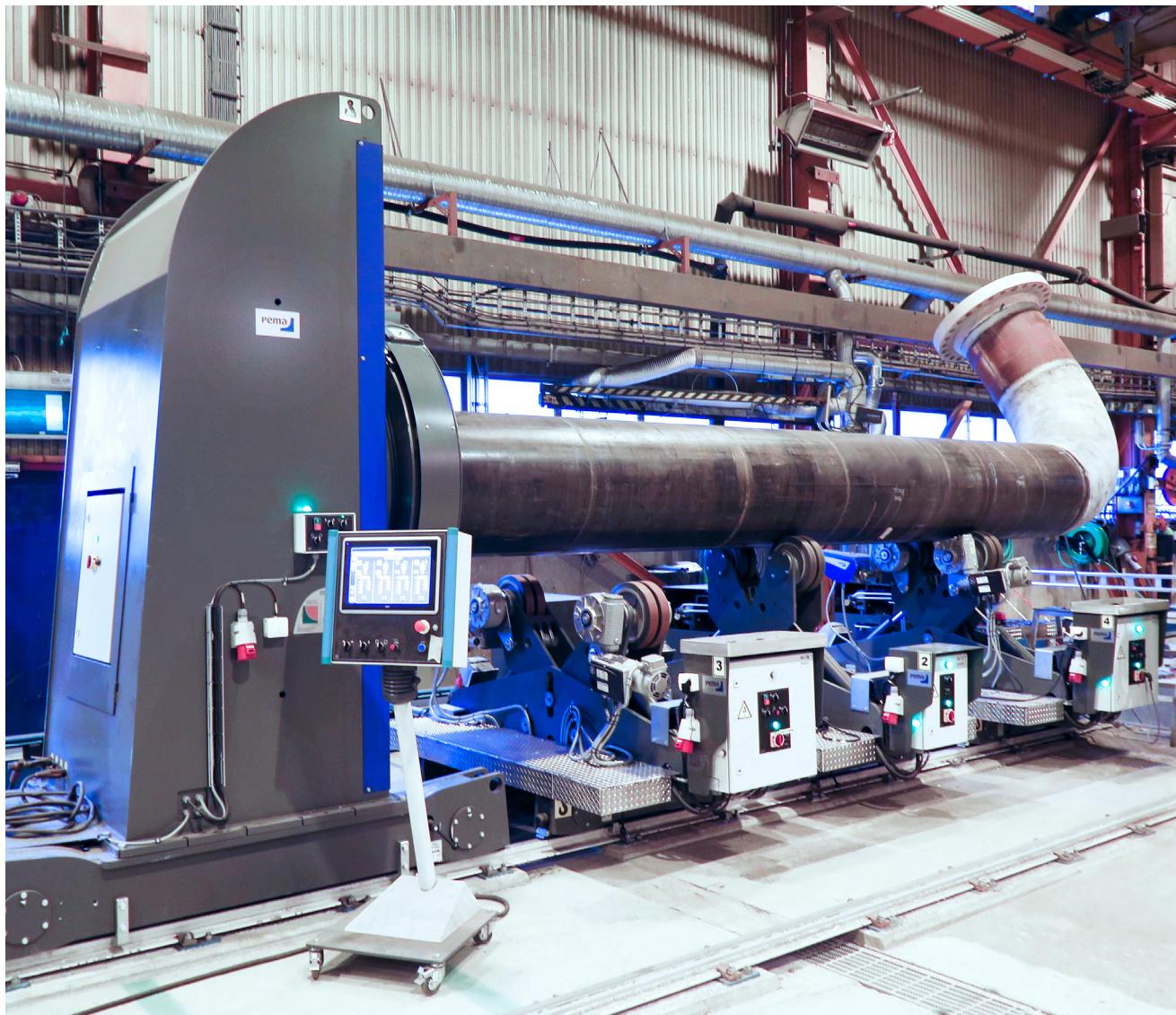
Please contact us for PEMA A400 - A1000 technical information.

## X Series

PEMA X series of scissor-type rollerbeds are ideal for handling pipes and tubes. The center height of the parts can be kept constant despite the diameter changes with the hydraulic adjustment of the scissor's mechanism. Loading capacities range between 8 and 16 tons.



A complete turn-key solution, PEMA Nozzle welding station. The station has PEMA X16 rollerbeds integrated into positioner and robot welding portal.



PEMA X16 rollerbeds with HPS positioner for circumferential welding of pipe assemblies.

		X8	X16
Max load (tons/unit)	drive unit	4	8
	idler unit	4	8
Rotation speed range (mm/min)		100 - 2 000	100 - 2 000
Diameter range min-max (mm)	100% load	150 - 3 200	150 - 3 200
Length (mm)	drive unit	2 200	2 200
	idler unit	1 400	1 400
Width (mm)	drive unit	950	950
	idler unit	600	600
Length (mm)	drive unit	2 830	2 870
	idler unit	2 280	2 280
Width (mm)	drive unit	710	780
	idler unit	400	400



## Welding and production automation for:

- General fabrication
- Heavy equipment
- Wind energy
- Shipbuilding
- Power generation
- Offshore and process

## About us

Pemamek Ltd., founded in 1970, is a global welding and production automation leader. With over 50-year experience in welding and production automation, Pemamek is dedicated to helping heavy fabrication industries, such as shipbuilding, wind energy, and the power generation industry, to raise the level of productivity.

Pemamek is a family-owned limited company with solid finances (AAA-rated company). Today, Pemamek employs 300 personnel at its headquarters and factory in Finland and has local sales offices in the USA, Brazil, Spain, Italy, Germany, and Poland.

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