

SUCCESS STORY

600 tons plate stretching
for high-quality aluminum
plates for the aerospace and
automotive industry



METALS

PLATE STRETCHING SYSTEM

AMAG ROLLING GMBH, AUSTRIA



ENGINEERED SUCCESS

Achtung!
Lichtschranke

Quality products for the aerospace and automotive industry

The delivery of the plate stretcher to AMAG rolling GmbH in Austria includes equipment for uncoiling of bundles, cutting and manipulating as well as stretching and stacking of aluminum plates. The plate stretching system allows the efficient production of high-quality, evenly stretched sheets of aluminum alloys in strip thickness range of 0.8 to 8.0 mm and a length of 4,000–6,400 mm.

The plate stretcher has a stretching force of max. 600 t and complements the product range and increase the production capacity of AMAG rolling GmbH in the above strip thickness and length ranges. In addition to the 600 t plate stretcher, two other stretching machines at the site of AMAG Ranshofen are in operation.

FUNCTION OF THE PLATE STRETCHER

The cut, positioned and centered panel is taken by the lifting device 1, raised to the stretching section and parallel horizontally transported into the jaws of the stretcher. The centered and positioned panel is centrally clamped in the stretcher and is stretched.

The stretching process starts immediately after the closure of the jaws: The sheet is drawn slowly. Once the pre-determined force is reached, the strain measurement is activated. The plate is stretched until the desired elongation is achieved. Subsequently, the pressure in the stretch cylinders is reduced softly. Once the holding force is obtained at the lifting device 2, the jaws of the stretcher are opened. Following the stretched panel of the lifting device 2 is transported horizontally from the stretcher to the stacking position. As a final process the automatic paper winding machine puts a continuous paper between the stacked plates to protect the surface.

PLANT FACTS

Incoming material

Material	Aluminum alloys 2.xxx, 5.xxx, 6.xxx, 7.xxx
Strip thickness	0.8–8.0 mm
Strip width	900–1,900 mm
Plate length	4,000–6,400 mm (unstretched length)
Yield strength	min. 150 N/mm ² (not for thin strips < 2.0 mm) max. 400 N/mm ²
Tensile strength	max. 550 N/mm ²

Finished material

Panel length	> 4,000–6,750 mm (ready stretched length)
Degree of stretching	1.0–1.2 % for plate thickness 0.8–1.2 mm 1.5–1.8 % for plate thickness 1.3–1.8 mm 2.0–2.5 % for plate thickness ≥ 2.0 mm

Main data

Total length	approx. 30 m
Total width	approx. 13 m
Total height	approx. 3,5 m
Coil weight	max. 11 t
Unwinding speed	max. 18 m/min
Stretching force	max. 600 t

SCOPE OF SUPPLY

- Entry section -, pay-off -, vacuum transport area
- Shears, plate stretcher
- Stacking area
- Complete supply of electrics and automation





ENGINEERED SUCCESS FOR FLAT PRODUCT PROCESSING

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GERMANY

ANDRITZ Metals Germany GmbH

p: +49 2372 54 573

finishing.lines@andritz.com

ANDRITZ.COM

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