

AIC has been awarded an order for 6 tying machines for an american customer in Pennsylvania

This proposal includes the supply of 2 tying machines for bundles and of 4 tying machines for coils to be inserted into the finishing end areas.

TYING MACHINES TMB500-SP

The tying machine hangs above the operating area working on horizontal guides, moved by a gear motor, and can be repositioned for cleaning or maintenance. Its positioning allows the bundle to stay put while the tying machine works and ties the product.

The wire is made of Inox steel (AISI304) and can withstand a product temperature of 700° Celsius. After each tying cycle, the machine retracts to reposition, with inductive sensors and a gear-driven carriage motor ensuring precise online or offline movement. The machine has the possibility to make a single or double turns.

The tying head, constructed from annealed and machined welded steel, integrates a wire feeding device, a knot-forming mechanism, and guide clamps. While a hydraulic cylinder opens the wire guide, with the alignment maintained by a guide pin. The knot-forming mechanism uses a hydraulic motor to drive a revolving tool steel head with integrated jaws and cutting knives. Wear-resistant steel guide clamps, equipped with rolls, support and recover the tie wire during the process.

The bundle retaining jaws, made of welded steel, are pivoted on a shared base and actuated by hydraulic cylinders to secure the bundle during tying. A valve bench on the machine's backside manages the hydraulic functions.

Technical Specification	
Min. stack size	150 x 150 mm
Max. stack size	500 x 500 mm
Wire diameter	5,5 - 8 mm upon customer request
Knot position	45 degrees
Number of turns and turn type	1 or 2, tight/loose (selectable via control panel)
Installed power	20 kW
Working pressure	120 bar (Hydr.)
Tying cycle	7,5 s



TYING MACHINES TMC020-SP

Positioning is controlled by mechanical microswitches, and the tying head moves vertically using guides and a pneumatic cylinder. A photocell assists in the tying process.

The tying head, built from durable welded and machined steel, includes a wire feeding device, knot-forming mechanism, and guide clamps.

The wire is made of Inox steel (AISI304) and can withstand a product temperature beyond 700° Celsius. The wire feeding device uses steel plates to load and guide the wire, while the knot-forming mechanism, features a rotating twisting head with a built-in wire cutter.

Guide clamps, made from wear-resistant steel, are powered by oledynamic cylinders, enabling efficient wire movement and recovery during the tying cycle. The machine has the possibility to make a single or double turns.

The support structure, made of welded steel profiles, allows for height adjustment and is installed under the main body.



Both machines were installed as major revamping replacements for existing machines.

The machines were installed with reduced impact on the foundations of existing plant, minimising mechanical work.

The binding machines are always tested in the ATS Mechatronics workshop to ensure minimal downtime for the customer.

About Companies:

AIC Group is a technological partner with extensive experience and deep know-how and stands itself as a global power control supplier and system integrator designing, manufacturing, and implementing automation systems, process control, and mechatronic solutions for both greenfield and revamping projects. Focusing on the steel and metals industries for long and flat products, the Group provides cutting-edge technical solutions by handling complex project schedules and thus establishing satisfactory and remarkable partnerships through its 6 international offices.

More than 45 years of modernization for endless reliability processes.

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