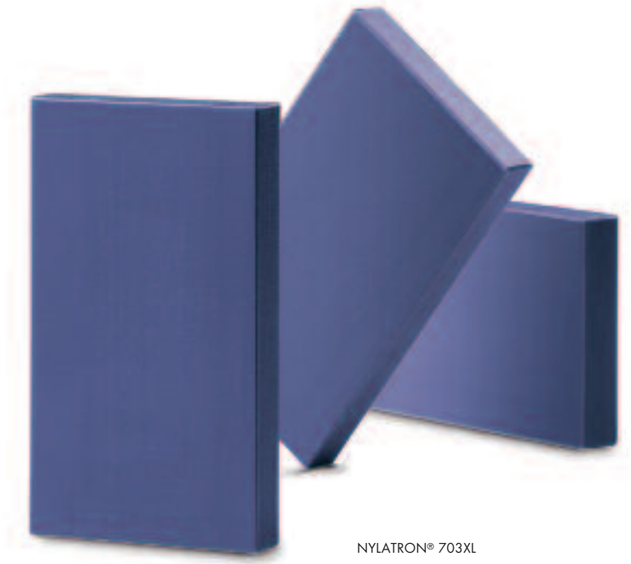
NYLATRON® 703XL reduces warehouse costs

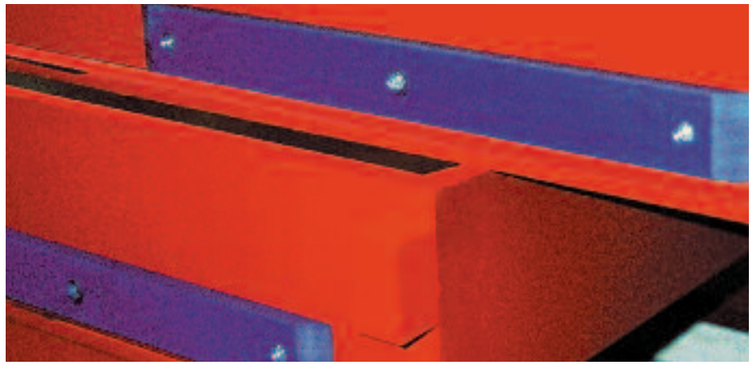
Enrico Colombo, Profit Center Leader

An ingenious system is required for transporting semifinished metal products in automated warehouses, especially wherever heavy metal frames are moved on sliding elements to their designated warehouse location. Sliding elements made of NYLATRON® 703XL from Angst+Pfister have proven to be ideal for this task.



NYLATRON® 703XL

The application presented in this article deals with storing steel plates. Angst+Pfister's customer here specializes in developing, manufacturing and setting up automated warehouses and logistics systems for the storage and movement of rods, rod bundles, plates, sheet metal and heavy palletized goods. The movable frames that carry the steel plates are transported on an automated cart with a support structure.



Sliding element made of NYLATRON® 703XL mounted on the lateral beam of the movable frame

The cart moves alongside the storage racks while the hoisting device remains in a horizontal position.

Once the cart has arrived at the desired destination, the hoisting device lifts the movable frame and its load to the required height and automatically moves it into the chosen storage location. To remove goods, the empty cart positions itself alongside the storage location in order to pull out the movable frame with the steel plate.

This newly developed setup facilitates the transport of bulky and heavy materials within the plant, reducing transport times and thereby speeding up the production process. The movable frames slide freely on the fixed rack, and the movement has to be as rectilinear as possible and free of obstruction. This is brought about by ideal sliding elements that feature optimal mechanical properties such as high compressive strength, a low coefficient of friction and optimal resistance to wear and tear, as well as zero stick-slip.

Sliding element made of NYLATRON® 703XL

The specialists at Angst+Pfister analyzed the problem in collaboration with the customer's technicians and suggested the use of sliding elements made of the plastic NYLATRON® 703XL.

NYLATRON® 703XL is a cast polyamide modified with solid lubricants and other additives with the following properties:

- very low static and dynamic coefficient of friction;
- near zero stick-slip;
- high PV value;
- best possible resistance to wear and tear.

The NYLATRON® 703XL sliding elements were mounted on the lateral beams of the movable frame, which have to slide on the steel rails of the fixed frame. The results in practical operation are excellent. NYLATRON® 703XL fully meets all special specifications for use in systems for storing and moving bulky and heavy semifinished products.

NYLATRON® 703XL in deployment offers the following advantages:

- it supports or obviates additional external lubrication;
- it enables better movement control, no slip-stick;
- it does not create noise or vibrations;
- it increases the service life of elements exposed to friction;
- it reduces maintenance costs.

Angst+Pfister's assortment of semifinished plastic products encompasses an additional 100 different types of polymeric materials for normal to heavy operational demands. Our plastics range is sure to include the right material for your application.

Call us for a consultation or order our engineering plastics catalog.

Your contact:
Enrico Colombo
Angst+Pfister S.p.A., 20156 Milano, Italy
Telephone: +39 02 30087 240
E-mail: e.colombo@angst-pfister.com

View of warehouse with movable frames mounted on the load-bearing structure of the fixed rack