Powerful lift and precision positioning

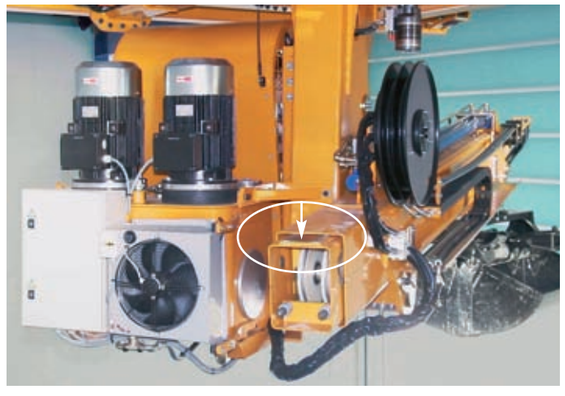
Christian Rieser, Product Application Engineer

Maneuvering loads within a factory hall while efficiently utilizing its entire space has now been made possible by an innovative industrial rotary crane with a telescopic boom. The movements of the boom are of special significance. Angst+Pfister sliding elements made of NYLATRON® 703 XL enable smooth operation under heavy loads and without lubrication. This permits precise and secure positioning of loads and enhances occupational safety.

The Kiebler AG machine and metal engineering company in Zihlschlacht in eastern Switzerland is a family business rooted in the manufacture of farming machinery and equipment. Originally the company specialized in producing fully automatic dosing systems for efficient hay and silage unloading; today it is a leading manufacturer of hay cranes in Switzerland and a well-known crane maker in Europe. The company with its current 25 employees has been developing and manufacturing hay cranes for 10 years now. With the increasing mechanization and even industrialization of farming, demands placed on cranes are continually mounting. Kiebler AG recognized the new needs early on and supplies increasingly complex and refined technologies for modern farming operations.

From hay crane to industrial crane

The proven hay crane technology was further developed for use in other application areas, resulting in the creation of the latest and most powerful generation: the IDK 150 industrial rotary crane. The IDK 150 is specially equipped to meet industrial demands and can be customized with special options ranging to air conditioning or an audio system. The hoisting power of the IDK 150 is 1.3 tons at a claw extension of 10 m. The action radius is 10 m around the rotating control tower. Depending on how it is affixed to the ceiling of the warehouse, the crane is able to maneuver above the goods stored on the floor in a way that makes it possible to utilize the entire floor space to deposit loads. This is a capability that is widely used for sorting out recycling materials or for the disposal of waste materials.

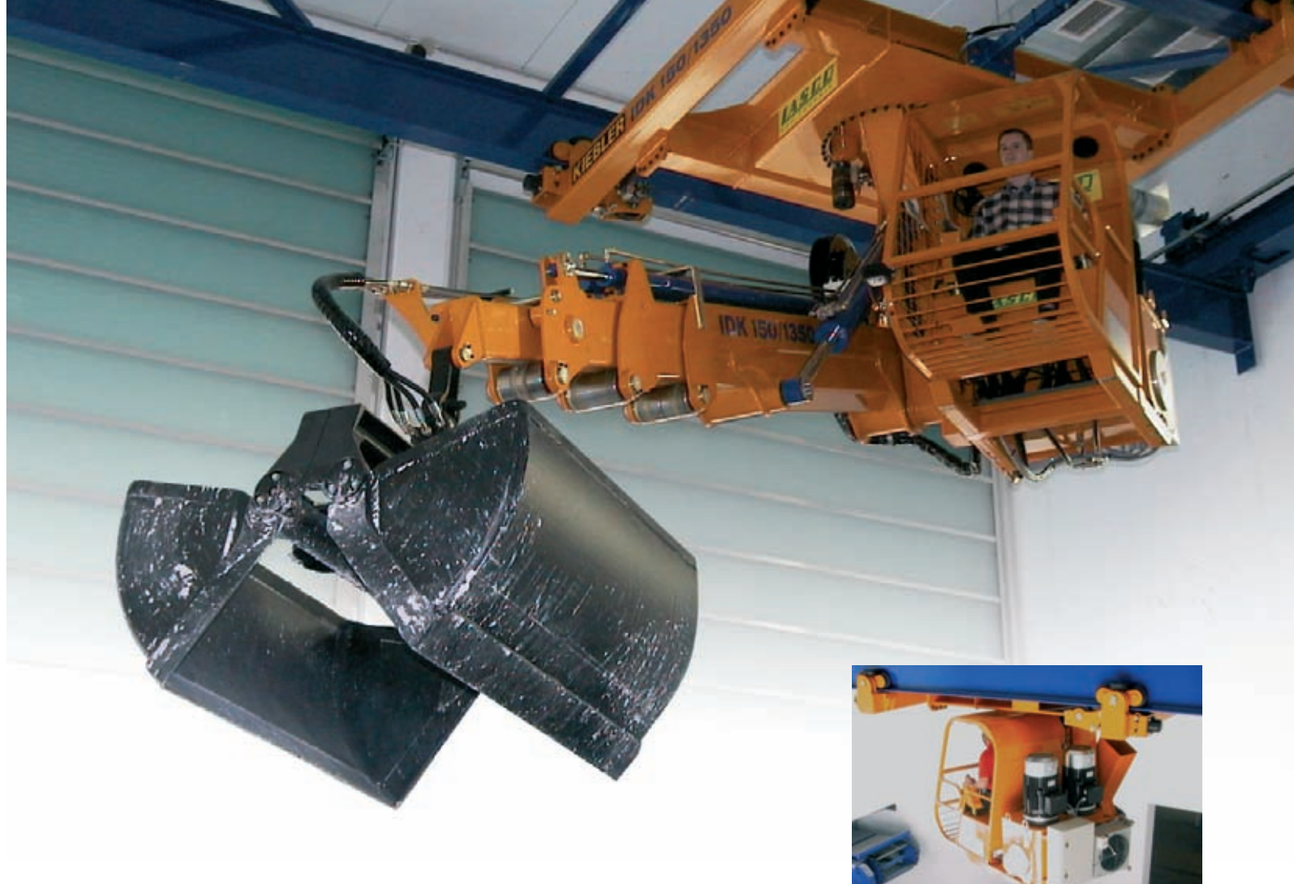


Sliding plates made of NYLATRON® 703 XL

Sliding characteristics in the spotlight

Taking into account the heavy loads and tough physical demands on the sliding properties of the telescopic arms, the design engineers sought out a material for the sliding elements that, without lubrication, would enable smooth load-movement operations under all expectable conditions. They worked closely with the specialists at Angst+Pfister in selecting the most suitable plastic material and designing the sliding elements. They found NYLATRON® 703 XL to be a material that meets the demanding requirements of the IDK 150 industrial crane.

NYLATRON® 703 XL is the ideal material for telescopic booms. It practically eliminates vibrations (jerking) when the crane is in motion, which enables exact positioning of the crane and ensures greater occupational safety. This material is specially recommended when no lubrication is desired and yet a long service life of the sliding elements is required.



Ideal material for sliding bearings

The key advantages of NYLATRON® 703 XL are:

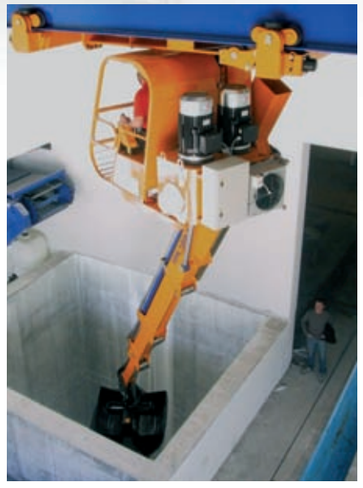
- Low frictional coefficient:
  With the lowest dynamic and static kinetic coefficient of friction of any type of polyamide, NYLATRON® 703 XL ensures greater positioning precision for even the smallest of movements.
- No stick-slip effect:
  NYLATRON® 703 XL is the only polyamide material without any stick-slip effect under all tested conditions. This enables finer movements.
- Greatest wear resistance:
  The low dynamic friction coefficient enhances wear resistance and emergency running properties. In some cases, no lubrication is required.
- Mechanically solid:
  With regard to solidity, NYLATRON® 703 XL compares with other slide-modified types of polyamides, but it can withstand much higher pressure.

Broad range of applications

Its excellent characteristics make NYLATRON® 703 XL the preferred slide-bearing material for telescopic arms. They make a variety of demanding applications possible wherever heavy weight-bearing, precise, vibrationless and near wear-free operation are required. You can even dispense with external lubrication depending on the application.

NYLATRON® 703 XL is deliverable in standard sheets with thicknesses of 10, 16, 20, 40, 60 or 80 mm. Other thicknesses and customized shapes are available upon request.

Benefit from the advantages of modern slide-bearing materials. We will gladly support you in selecting a material. Order our documentation with the reply card, or contact our specialists.



IDK 150 in the act of sorting