Mounting

Mounting is done from the operating side. The Ball Transfer Units should easily slip into the receiving bores. This can be done by hand. These units do not require an additional safety mechanism, given that their housing is tapered. For head-mounted installation fixing elements can be used in different versions.

For installation, do not hit the big ball with a tool. The might result in rendering Ball Transfer Units inoperative.

Number and Arrangement of Ball Transfer Units

The number of Ball Transfer Units depends on the weight as well as size and condition of the basal surface of the load. Relevant is the heaviest load with the smallest basal surface.

To be sure that the basal surface of the load lies always on the Ball Transfer Units and does not slip down between the Ball Transfer Units, the distance between the Ball Transfer Units is: smallest edge of the load divided by 2.5.

Load Capacity

Relevant is the heaviest load with the smallest basal surface.
Considering probable tolerances in height as well on the ball mat as on the Ball Transfer Units, it has to be assumed that only 3 Ball Transfer Units are led to carry the load, applying to sturdy basal surface. This implies that the load divided by 3 = necessary load capacity per Ball Transfer Unit. An adequate security load should be added. When using spring loaded Ball Transfer Units or in case the basal surface is flexible, it should be assumed that more Ball Transfer Units are carrying the load. In that case, the load devided by the number of carrying Ball Transfer Units = necessary load capacity per Ball Transfer Unit.

Example load-capacity per Ball Transfer Unit:

Weight of conveyed good (F) = 300 kg
$F = \dfrac{300 \text{ kg}}{3} = 100$ kg (load-capacity per Ball Transfer Unit)

Example distance between Ball Transfer Units:

Basal surface (a) smallest edge of the load
= 600 mm x 1000 mm (size of the load)
Distance between Ball Transfer Units:
a = 600 mm : 2,5 = 240 mm (optimal spacing of the unit)

Temperature Resistance
Ball Transfer Units with steel balls and felt sealing resist temperature up to 100°C, those with nylon balls up to 60°C. Higher temperatures reduce the load capacity.

Friction
With a speed of 2m/sec. friction is approximately $0{,}005\mu$. The friction is subject to great deviations, depending on the kind and circumstances of application of the Ball Transfer Units.