APPLICATIONS

Ball transfer units are the ideal solution for moving and turning the heaviest loads with the minimum of effort.

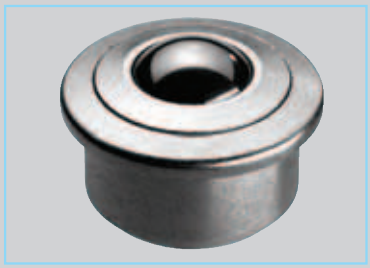
A larger ball is seated on many smaller bearings within a hardened load bearing dish.

The design allows the large ball to rotate freely in any direction.

Cup Roller - Pressed sheet metal housing, no reduction in load carrying capacity when inverted or off-set.

6700 Cup Roller or Euro Type.

6704 Flange or Standard Type.



6706 Flanged Pot Roller Type.

6708 Unflanged Pot Roller Type.

6710 Heavy Duty Roller.

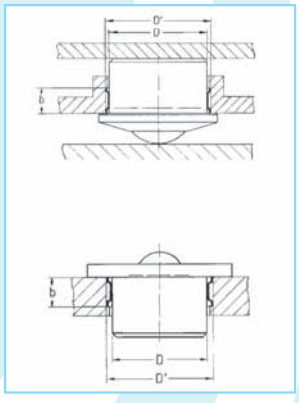
6712 Spring Loaded Roller.

Pot Roller Design - Solid, Machined Housing

Ball Unit Order No.	Tolerance Ring Oder No.	D mm	D' mm	b mm
6700/6706/6708.W108	6760.W180	18	19,67-19,75	6
6700/6706/6708.W_12	6760.W220	22	23,67-23,75	5
6700/6706/6708.W_15	6760.W21	24	25,67-25,75	7
6700/6706/6708.W_30	6760.W450	45	46,67-46,75	12
6700/6706/6708.W_45	6760.W601	62	64,03-64,15	15
6710.W324	6760.W241	24	25,67-25,75	7
6710.W345	6760.W450	44	45,67-45,75	12
6710.W350	6760.W501	50	52,03-52,15	15
6710.W360	6760.W600	60	62,03-62,15	15

Ball transfer units can also be mounted through use of spring clips or circlips.

MOUNTING RECOMMENDATIONS



MATERIALS HANDLING

ARRANGEMENT OF BALL TRANSFER UNITS

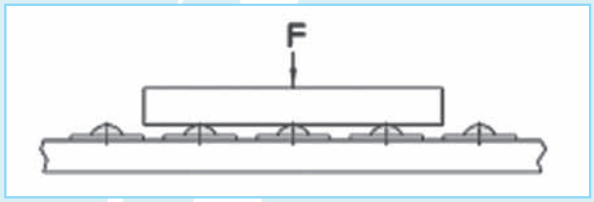
How the ball transfer units should be arranged depends on the bottom surface of the load to be transported. For loads with a uniform, even bottom surface, e.g. packing cases, the distance between the ball transfer units is calculated by dividing the smallest dimension by 2.5.
Example: bottom surface of the load to be transported = 500 x 1000mm.
Distance between ball transfer units:

$$a = \frac{500mm}{2.5} = 200mm$$

CALCULATION OF BALL TRANSFER UNIT LOAD

To determine the load of a ball transfer unit, the weight of the article to be conveyed should be divided by 3. If the height tolerance of the load balls is good and the surface of the workpiece to be conveyed suitable, the calculation can be based on the number of ball transfer units under load.
Example: Weight of the article to be conveyed = 300kg.
Ball transfer unit load:

$$a = \frac{300kg}{3} = 100kg$$



CONVEYING SPEED AND LOAD CAPACITY

The maximum conveying speed allowed amounts to 2m/s. The load capacities specified apply to any mounting position and are based on 10^6 rotations of the load ball. With the units being used over a longer time at speeds exceeding 1m/s, an increase in temperature as well as a reduction in travel life must be expected depending on the load.

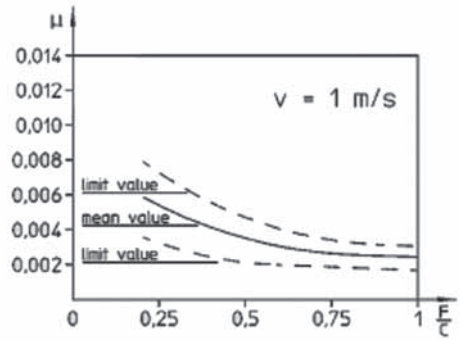
CALCULATION OF TRAVEL LIFE

$$L = \left(\frac{C}{F}\right)^3 10^6 \text{ rotations}$$

L = Travel life
C = Load capacity (N)
F = Load (N)

FRICTION

The diagram shows the friction values as a function of load and speed for ball transfer units. These approximate values apply to all mounting positions with operation on a hardened steel plate.



TEMPERATURE RESISTANCE

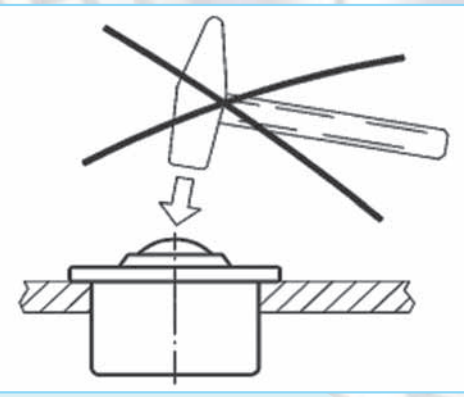
Ball transfer units with felt seals are temperature resistant up to a permanent operating temperature of 100°C.
At temperatures exceeding 100°C, only non-galvanized ball transfer units with steel load ball and without felt seal should be used. Observe the reduction in load capacity! The load capacity should be multiplied with the temperature factor (see table).

PLEASE NOTE

Only use high-temperature lubricants!
Observe the manufacturers' instructions!
If necessary, wash-off any present lubricating oil.

Temperature	Temperature Factor
°C	fT
125	0.9
150	0.8
175	0.7
200	0.5

ASSEMBLY INSTRUCTIONS



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