

## RECOMMENDATIONS AND WARNINGS

In compliance with EEC directive No. 85/374 on manufacturer's liability, the user is obliged to observe all the recommendations specified by manufacturers regarding the installation, use and maintenance of their products.

### STORAGE

Before installation, the wheels and castors must be stored in well-ventilated rooms without excessive humidity and within a temperature range of -10°C to +35°C. They must under no circumstances be exposed to sunlight for long periods of time.

### USE

The wheels and castors are interchangeable parts which are normally used on manually-propelled equipment, trucks and trolleys for indoor material handling requirements. When the wheels or castors are to be put to a different use from that for which they were originally intended, prior agreement between the customer and supplier is essential (identifying which product is best suited for the application). On any single item of equipment always use wheels and castors of the same type and with the same specifications, bearings and tread.

All the locking or braking devices illustrated in this catalogue (improperly called "brakes") must only be used on horizontal floors. The braking force on floors which are not horizontal (which anyhow must not have a gradient greater than 3%) the braking force may not be sufficient to hold the total mass of the truck, trolley or equipment: suitable tests should be carried out before use. Never use these devices to reduce the speed of moving equipment or make it come to an immediate halt.

### CAPACITY

The load capacities of wheels and castors for industrial applications shown in this catalogue apply to normal conditions of use, unless otherwise stated. Namely:

- maximum speed of movement 4 km/h
- floor hard, compact and in good condition
- height of obstacles no greater than 5% of diameter (for wheels with tread hardness Shore A < 90) or no greater than 2.5% of diameter (for wheels with treads hardness Shore A ≥ 90)
- ambient temperature between +15°C and +28°C
- non-continuous manual movement.

Unless otherwise specified the load capacities up to about 2000 kg are verified according to ISO 22883 and ISO 22878 while the remaining are defined with finite elements analysis (FEA). The load capacities of items within series Q and QD, as related to special applications, are set according to internal procedures. Load ratings are given in accordance with the ETRTO standard for polyurethane tread idle wheels with load capacities exceeding 2000 kg, drive wheels and press-on-bands. Internal procedures are used to determine load capacities for wheels with polyamide 6 hubs (unsuitable for long distances under load) as well as for forks and transpallet rollers (no applicable standards).

### FITTING

The user must always check the strength of the mechanical parts (axles, bolts, bushes, etc.) used for assembling wheels, ensuring they are suitable for the type of fitting and the maximum load to which they will be subjected. When using swivel fork assemblies it is essential for them to be fitted perfectly perpendicular to the floor. Fixed castors must be vertical and perfectly aligned so that the wheel is under all circumstances orientated in the direction of travel. Castors with top plate mounting are designed to be fitted using four bolts with washers and nuts. The mounting interface of the equipment on which they are to be fitted must be rigid and the top plate must be in contact with it along its entire surface. Under no circumstances weld the top plate to the equipment. The solid stem castors require tubular structures with tight tolerances to ensure the solid stem is rigidly held inside the mounting hole.

### MAINTENANCE

The user is responsible for maintenance of the product. Use of the product in more corrosive environments than normal, close to the sea, with loads exceeding the rated capacity, with overloads, at high speeds or on floors with surface damage can lead to early deterioration of the wheels and castors and even cause their failure. Draw up an effective maintenance schedule which includes the following:

#### Inspection of the trolley

Check:

- that the structure is stable and that the wheels and fork assemblies are fitted correctly;
- for any damage to the frame due to loads in excess of the rated capacity or to violent falls of the loads carried;
- that the surface on which the castors are mounted is perfectly flat.

If there are any faults restore the truck, trolley or equipment to its original condition, changing the wheels and castors if necessary. Make sure all the mounting means, such as bolts, nuts, washers etc. are tightened correctly, changing them if they are no longer effective.

#### Inspection of the wheels

Check the visible tread wear: flat areas indicate that foreign bodies (string, cord, threads, etc.) are preventing the wheel from turning freely on its axis. If necessary, fit thread guards to slow down the accumulation of this type of material around the hub. Change wheels and castors with excessive play or stiff rotation. Change wheels with cut or irregularly worn tread. Change wheels with cracked or dry elastomer coating and polyamide wheels with flat treads. Change wheels with rubber tyres that have stretched or show signs of swelling or softening. Check the electrical conductivity of the conductive wheels at regular intervals and clean the tread frequently to make sure it is free of any impurities which could insulate it from the floor. Remove larger foreign bodies which have penetrated the tread or made their way between the wheels of twin fork assemblies. Make sure the wheel axle is tight.

#### Inspection of the fork assemblies

Check that the fork swivels correctly, that the centre nut is tight, that the bearing races are in fair condition and that there are no foreign bodies and corrosion inside the swivel head. The plate bearings must be in fair condition, without excessive play. Replace the castor if wear or deformation detected is such to be of prejudice to the performance of the castor. Check that the arms on the fixed fork assemblies are not bent and are perpendicular to the floor.

Check efficiency of braking and blocking devices.

#### Lubrication

The swivel bearings and wheel bearings must be lubricated at regular intervals to ensure a long service life, reduce tractive force and improve the smooth operation of the assembly as a whole. Use appropriate lubricants for the application, paying particular attention to ensure they are suited to the work temperature. Our products are normally supplied pre-greased and it is generally sufficient to lubricate them every six months. When working in corrosive environments or in high temperatures, lubricate at least once a month. If the trucks/trolleys are washed frequently, it is advisable to lubricate them every time after washing. Never use chemically corrosive detergents.