

## Index

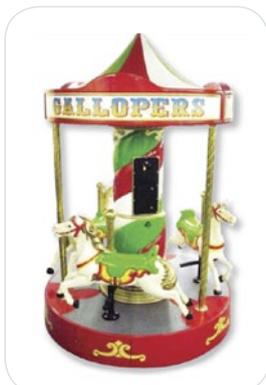
1. Application description
2. Motovario solution



## 1. Application description

Most industrial segments where Motovario gearboxes are used, is focused on the production of machines and equipments; power transmission components are employed not only in the industry but also in the applications for the entertainment as Carousel and Twist Drop Towers. In these applications the electromechanical system is used to guarantee the carousel rotation.

The first type of application, the carousel, does a rotation movement with variable speed and it is usually controlled by an operator. The machine could be customized with different layouts and various sound effects; the handling system is powered by a worm geared motor with the output shaft connected through a belt to a pulley system to guarantee the movement.



The second type of attraction is a tower with the addition of a little 'thrill', which consists on carrying the passengers on proper seats to a great height, and then they are freely falling downward and at the same time rotating around the tower.

The lifting is done by the use of an oleodynamic cylinder, dimensioned on the machine load; the rotation is carried out by an helical geared motor installed in the center of a structure moved by wheels fitted along a rail, allowing the 360° seats rotation.



## 2. Motovario solution

Motovario solutions answer exactly to the requirements of these applications, ensuring reliability and high performances during the operation cycle.

Worm geared motors, **NMRV-power Series**, size 063 with three phase 4poles motors size 071, are used for carousel applications, where low and constant speed is required. **NMRV-P Series** is characterized by aluminum casing with square design; the universal mounting ensures the maximum flexibility in all mounting positions by using always the same quantity of oil lubricant.



Helical geared motors, **H Series**, size 050 with 2 reduction stages, are used for twist drop towers applications, where the movement speed is not constant and with high torque peaks. These gearboxes are characterized by cast iron casing and hardened/tempered gears.



Thanks to the following technical/commercial advantages, Motovario has become the new partner for these applications, replacing the previous supplier of the drive:

- Wide range of sizes and versions
- Products design
- High performances and efficiency
- Low noise level
- Product quality and reliability
- Lower price than competitors
- Fast deliveries
- Appropriate technical support