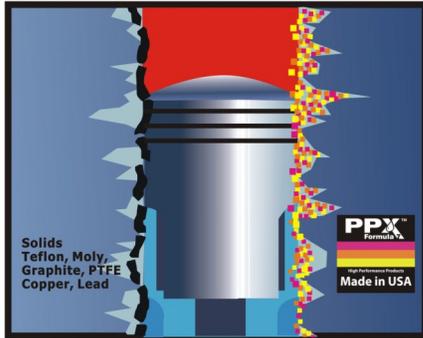


PPXTM

Formula 7



GENERAL ELEVATOR

- ▶ GEARED ELEVATORS WITH BEARINGS & GEAR CASES
- ▶ HIGH AMPERAGES
- ▶ HIGH TEMPERATURES

CUSTOMER TESTIMONIAL

CUSTOMER & TEST PROFILE

Their geared elevators have bearing and gearboxes that require a lot of attention. They reported that the electric motors that operated the gearboxes, had increased in temperature and amperage, the amperage increased to 60 amps.

CUSTOMER TEST & RESULTS

They added PPX Formula 7 Transmission & Gearbox Supplement to the gearboxes. A week later they rechecked the electric motors and found the amperage had dropped to 50 amps.

ADDITIONAL INFORMATION, CONT.

To put it another way, the balance maintains a near constant potential energy level in the system as a whole. Using up the potential energy in the elevator car (letting it descend to the ground) builds up the **potential energy** in the weight (the weight rises to the top of the shaft). The same thing happens in reverse when the elevator goes up. The system is just like a see-saw that has an equally heavy kid on each end.

Both the elevator car and the counterweight ride on **guide rails (5)** along the sides of the elevator shaft. The rails keep the car and counterweight from swaying back and forth, and they also work with the safety system to stop the car in an emergency.

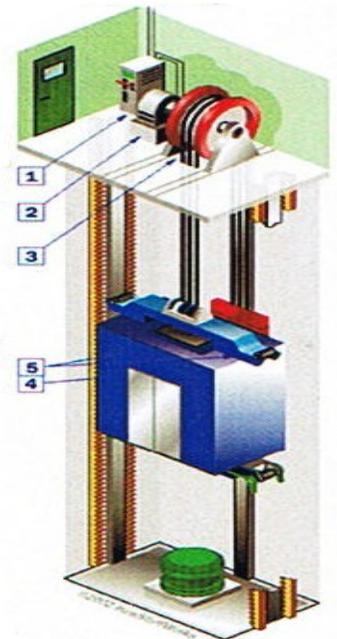
ADDITIONAL INFORMATION

The most popular elevator design is the roped elevator. In roped elevators, the car is raised and lowered by traction steel ropes rather than pushed from below. - - The ropes are attached to the elevator car, and looped around a **sheave (3)**. A sheave is just a pulley with a groove around the circumference. The sheave grips the hoist ropes, so when you rotate the sheave, the ropes move too.

The sheave is connected to an **electric motor (2)**. When the motor turns one way, the sheave raises the elevator; when the motor turns the other way, the sheave lowers the elevator. In geared elevators, the motor turns a **gear train** that rotates the sheave. Typically, the sheave, the motor and the **control system (1)** are all housed in a machine room above the elevator shaft.

The ropes that lift the car are also connected to a **counterweight (4)**, which hangs on the other side of the sheave. The counterweight weighs about the same as the car filled to 40-percent capacity. In other words, when the car is 40 percent full (an average amount), the counterweight and the car are perfectly balanced.

The purpose of this balance is to conserve energy. With equal loads on each side of the sheave, it only takes a little bit of force to tip the balance one way or the other. Basically, the motor only has to overcome friction -- the weight on the other side does most of the work.



PETRON PLUSTM GLOBAL, INC.

P.O. BOX 1906 HUTCHINSON, KS 67504 USA, 620/663-1800 Phone, 620/663-8560 Fax,
www.petronplus7.com www.petronplusglobal.com