



Located at Old Orchard Beach in Maine, US, Palace Playland is a beachfront amusement park featuring one of the largest amusement arcades in New England. Its 'Pirate' ride is a HUSS Pirate Ship, a truly classic ride that Amusement Technical has vast experience in retrofitting. The swinging motion of the ship gently lifts passengers out of their seats, allowing them to experience weightlessness.

### Inefficient and un-environmental

Like all other older HUSS Pirate Ships, Palace Playland's ride used an oil-powered hydraulic drive, which was gradually causing more and more problems. The heated, high-pressure oil ran the risk of spilling and incurring fines from the local environment agency. Meanwhile, the drive placed a greater manual burden on the ride operator than more modern rides.

### Retrofitted drive system: efficiency all round

Amusement Technical was brought on board to retrofit the Pirate Ship with a brand new on-demand electrical drive system. There are four main elements to the Amusement Technical system, including the motor drive unit, control cabinet, operator panel and top encoder and home sensor assembly.

- The motor drive unit comprises an SEW Eurodrive 75kW AC geared motor mounted on a pivoting chassis.
- There is a drive wheel with a pneumatic tyre on the output shaft of the gearbox which can be brought in and out of contact with the keel of the boat by inflating and deflating pneumatic bellows under the chassis.
- The control cabinet is a powder-coated steel or optional stainless steel enclosure which houses all of the control equipment for the ride. The operator panel is mounted in a powder coated, mild steel enclosure with stainless steel front panel. An LCD display provides real time information about the operating conditions of the ride as well as maintenance features, which enable detailed system statuses to be displayed.
- The top encoder assembly is mounted on a stainless steel chassis and houses the components to allow the ride controller to know the axle position.

The system incorporates a plug in maintenance panel, which connects to the side of the main control panel. The maintenance panel allows all of the outputs of the system to be operated manually, for use during set up and maintenance operations.

We built the system at our workshop in North West England and then travelled to Maine to install and test it on-site. Palace Playland now enjoys a far more energy-efficient and safe class Pirate Ship. Rather than incorporating the old continuously running oil pump, the drive now operates only when needed, driving great energy savings. Meanwhile the new start-stop drive removes any manual burden from the operator when the ride is in motion.

Joel Golder, Owner, Palace Playland is delighted with the new system: ***"The new drive system for our Pirate Ship was installed in less than a week and has been both reliable and efficient ever since,"***

## At a glance

**Client:** Palace Playland

**Project:** Retrofit of HUSS Pirate Ship - brand new on-demand drive system

**Result:** An up-to-the-minute, highly efficient and much safer drive system

