



World's Tallest Observation Wheel

The High Roller

Las Vegas, Nevada

Officially opened on March 31, 2014, The High Roller Observation Wheel is the tallest in the world at 550 ft., and is the focal point for the new LINQ Project recently constructed by Caesars Entertainment. The High Roller can accommodate 1,120 people across 28 cabins for a 30-minute ride that features sweeping views of the skyline and valley.



A Schwager Davis Project



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Schwager Davis, Inc. (SDI) was contracted by Caesars Entertainment to design, supply, install and commission ALL of the mechanization equipment for the High Roller. In short, this equipment is what rotates and stops the wheel and stabilizes the wheel for smoother ride comfort. It also provides the power to the entire wheel as well as communicates between cabins and the control room. SDI also integrated a one-of-a-kind emergency backup system essential for life safety. It goes without saying that it is critical that the equipment performs what it was designed to do, and must be extremely reliable and safe. SDI is proud to have been instrumental in the successful construction and completion of this iconic world record breaking project!



Drive System

The hydraulic Drive System provides the propulsion and normal braking force for the system in normal use to rotate the wheel. There are a total of eight (8) Drive Units, each of which has four (4) large tires that provide the traction force to rotate the wheel. One full revolution of the wheel takes 30 minutes. The system is capable of rotating the wheel in both directions and has a total of 1000 HP.

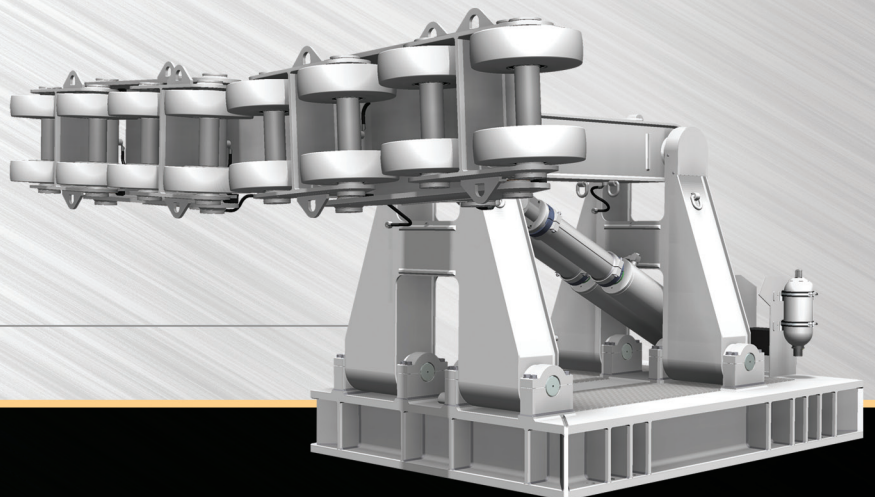


Integrated Ride Control System (IRCS)

The Integrated Ride Control system is a top level control system used to operate the wheel. It provides the network for communication to the cabins & lighting, and monitors the entire attraction. The entire wheel is operated and monitored from the Central Control Room at the end of the boarding platform; however the wheel can also be operated from local control stations.

Lateral Guidance System

The Lateral Guidance system improves ride comfort for passengers in the cabins by dampening the lateral wheel movement of the wheel's rim, and prevents the cabins from contacting the loading platforms.

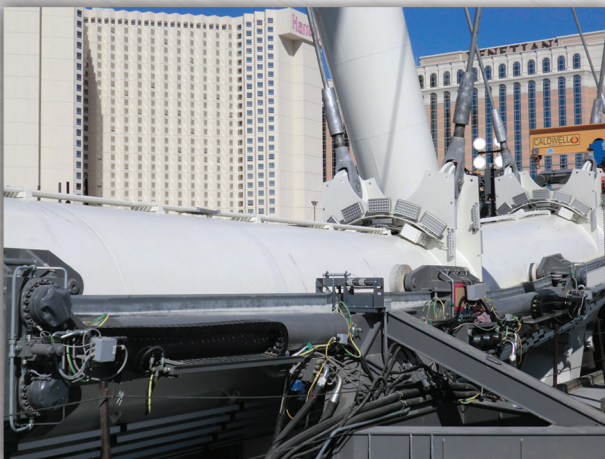
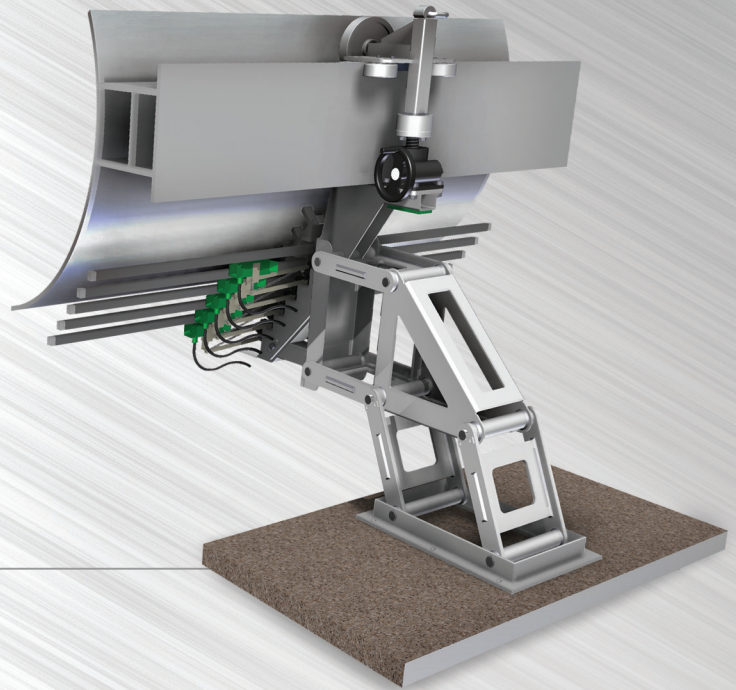




Upon project completion and commissioning SDI was awarded the contract to maintain the wheel. Maintenance is provided 24 hours a day, 7 days a week. The wheel will operate up to sixteen (16) hours per day, depending on ridership demand, and the down-time will be used to provide maintenance.

Collector Support Units

The Collector Support Units transfer electrical power from the static platform to the rotating wheel by means of collectors mounted on the collector supports, which provides power for the cabins, the wheel light show, and the rim communication network. There are a total of six (6) units, three (3) mounted on the Northwest tower and three (3) on the Southwest tower. The supports are a passive system (floating) to allow for more precision following rim deflections. The supports can be retracted by using one of the four (4) hydraulic maintenance cranes.



Manual Mode Recovery Drive (MMRD)

The Manual Mode Recovery Drive (MMRD) system is the first of its kind, and provides emergency recovery and evacuation of a fully loaded wheel in two hours. The MMRD is a completely independent backup system for the main Drive System. There are two (2) units, one per side, located in the center of the maintenance platform. The MMRD system provides a viable independent drive system for evacuation! This innovative system has undoubtedly raised the safety standard for future observation wheels.