Automated Power Catwalk PC4000 Speed Upgrade

Canrig has developed a Speed Upgrade Kit that improves the performance of the PC4000. The chart below compares performance of the PC4000 with and without the upgrade.
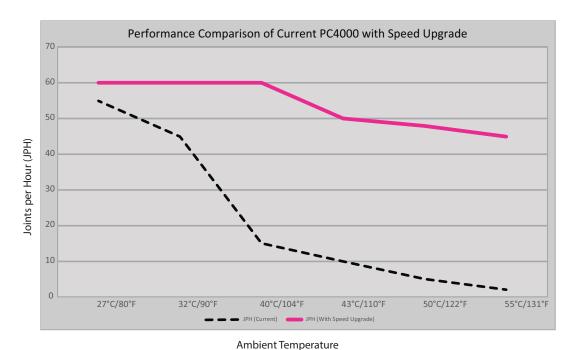

Figure 1: Current PC4000 Design Performance Compared with PC4000 Equipped with Speed Upgrade Kit AY52027 and latest PLC and HMI Upgrade

Joints per Hour (JPH) defines the number of cycles[1] that can be completed in a one-hour period. Performance may vary by ±10% based on rig height and age of unit.

Additional changes to the PLC and HMI software designed to increase performance in regions with high ambient temperatures are also available. **Canrig recommends these software upgrades for all catwalks**, regardless of whether the speed upgrade kit has been installed. The speed upgrade requires software versions for the PLC: PLC_PC_060206 and HMI: NT_PC_0601 or later.

1. A cycle is defined as the time it takes to load a tubular from pipe racks to the drill floor. Tests were conducted by raising the carrier to the drill floor, offloading tubulars from carrier, returning the carrier to the home position, and repeating the cycle.

Oil Type

Safe and efficient operation of the catwalk depends on using the correct oil in the HPU for the ambient temperature in which the catwalk is being operated. Use the HMI on the catwalk to select the correct weight oil being used in the catwalk. Actual selection choices may vary. Refer to your catwalk manual for more information.
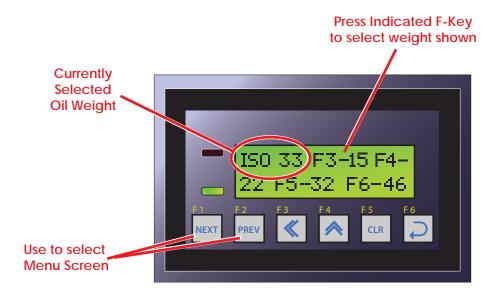

Figure 2: Catwalk Oil Selection Type Screen.

Table 1: Oil Selection Type Guide

Oil Type (ISO VG)	15 (F3 as shown)	22 (F4 as shown)	32 (F5 as shown)	46 (F6 as shown)	68 (F3 on next screen)
Ambient Temp Range (°F/°C)	(-30 to 50/-35 to 10)	(-5 to 85/ -20 to 30)	(15 to 95/-10 to 35)	(30 to115/ 0 to 45)	(50 to 131/ 10 to 55)

Contact your Account Manager or local District Manager for additional information.