

The FRANC SYSTEM II™ - a new concept in tyre warming for motorsport with integrated motorized rollers from Itoh Denki

During the past 27 years of motorsport the aerodynamics, engine technology, transmission, suspension and tyres have evolved tremendously, yet the area which transmits these huge benefits to the track has not. If the racing tyres are not at the correct temperature all these extremely expensive advances can easily go out of the window, but teams are still using blankets, a system over a quarter of century old to heat their highly critical and extremely important tyres.

The **FRANC SYSTEM II™** from Tyre Technology Ltd has patented Black Frequency IR emitters that use a black carbon element, which provides a kinder and deeper heat into the tyre. The operator simply places the wheels into the unit, sets the desired temperature and then presses the GO button. The Itoh Denki motorized roller rotates the wheel whilst the emitters heat the tyres to temperature. The 'set & forget system' takes over and once the tyre has reached the set temperature the unit automatically goes into a holding mode until the wheel is wanted. By using modern light weight aluminum profiles Tyre Technology have been able to provide an easy to assemble/dismantle and ship frame work, capable of handling 4 wheels. Once built an insulated "blanket" covers the unit and the motorized rollers, slave rollers, emitters and automatic IR sensors are quickly clipped into place.



Heated tyres were subjected to scrutiny by heat cameras, showing that an equal distribution of heat was given and also that the generated heat remained in the tyre longer than if blankets had been used. The time taken to heat a tyre to 85°C and the hub to 60+°C took the Franc system less than 10 minutes to achieve - in comparison to 2 hours by blankets.

Itoh Denki Power Moller® 240V 1ph AC Ø57mm motorized roller, series PM570AS were selected by Tyre Technology for this application. The integral motor and gear inside the roller tube completely remove the need for bulky exposed motors and transmissions.

