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## FOR IMMEDIATE RELEASE

### Nicol Scales & Measurement Creates Solution to Weigh Mobile Tanks and Reactors

Dallas, Texas – June 25, 2014

Nicol Scales and Measurement announces the introduction of their new Caster Load Cell system for mobile reactor weighing. Applications exist for weighing systems on transportable vessels where loadcells are mounted between the regular caster wheels and the frame of the vessel. Typically, 4 such loadcells are mounted on the vessel and are connected to conditioning electronics, which filters the signal to deliver a stable weight reading to the control process. Such a system presents some unique challenges.

Developed in conjunction with Group Four Transducers and in consultation with the world's 2<sup>nd</sup> largest pharmaceutical firm, this new system is designed to solve what has been an insurmountable problem in pharmaceutical and chemical formulation: the accurate high-resolution weighing of portable vessels in hygienic or corrosive environments. The weighing module can be used for all types of mobile process vessels such as production, mixing, charging and storage vessels. These cells are in use worldwide and have been developed and proven over the past 5 years. They conform to HACCP guidelines as well as FDA guidelines for cleanliness, as well as GLP/GMP protocols.

These load cells are the first and only cells in the industry to use “moment-corrected” technology in a portable application. This negates the pinching motion problems inherent in other systems, and eliminates errors due to working on uneven floors throughout your facility. This functionality remains constant whether your vessels are mounted on 3, 4, or even 5 legs.



The nature of the caster swivel means that the load introduction is off-center with the loadcell measurement axis. Since the caster can come to rest at any angle, the loadcell needs to be designed to deal with substantial variable off-center loads.

Moving a loaded vessel on casters produces substantial impact and side loads on the loadcells, requiring robust construction and specification at a high enough capacity to deal with the impact loading. Strong construction will not solve all the problems, however. The mounting system must be designed in such a manner to minimize the side loads while maximizing the vertical loads, ensuring a more accurate reading.



Many of these systems are installed in food processing and/or pharmaceutical applications, and consequently need to be easy to clean and dust- and water-resistant. The loadcells need to be hermetically sealed and machined from corrosion-resistant stainless steel.



These stainless steel load cells are hermetically sealed, affording the highest degree of water protection while making them easy to clean. The use of high-quality materials provides high chemical resistance, guaranteeing reliable long-term use, even when cleaning frequently with aggressive cleaning agents.

The load cells are electronically matched at the factory with every other caster load cell we manufacture. In case of an unlikely load cell failure, this allows quick and easy replacement without having to empty the vessel or recalibrate the system.

The benefits of this system are extensive. The matched cells are easily installed directly onto the caster with a simple bolt-on adapter. These are truly hermetically-sealed cells, with a braided cable for physical strength and superior protection for the cell and the connection to the indicator. The almost limitless indicator choices include communications via legacy analogue outputs of 4-20mA and 0-10V, the capability to support RS232, Ethernet IP, Bluetooth, and a suite of optional wireless communications with future digital interfaces like Modbus TCP and Profibus dp.

The system can be powered by AC, DC, or battery, and with the junction box and indicator in place, we provide a veritable turnkey system.

This system eliminates the need for floor scales (and the associated ramps required) to be placed throughout your facility, greatly increasing available floor space and thus improving product flow.

The system also reduces potential safety issues by eliminating the need to push the vessels up and down the floor scale ramps.

You can get more information and see a video of this system at:

<http://nicolscales.com/manufacturers/rinstrum>

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