

Rex® specializes in durometers to fit specific non-standard applications. Rex® can manufacture a durometer to perform hardness determinations on virtually any non-metallic material! Rex® has myriad *custom durometer models and options*.

Rex® features many *special durometer types* that conform to a specified standard, i.e. ASTM, ISO, DIN, JIS, Asker, etc. All special durometers are produced with the same accuracy and precision as our standard product line, and most are available in analog or digital models.

The new *SG-5000 SpaceGauge*, developed for NASA, exemplifies their R&D and manufacturing capabilities. The *SG-5000 SpaceGauge* demonstrates the quality, reliability, and durability for which Rex® durometers have become renowned!



Special Rex® Durometers: Type SG-5000 *SpaceGauge*



The Rex® Gauge Company collaborated with engineers at [Lockheed Martin](#) and [NASA](#) for over a year in the development of a custom durometer (materials hardness gauge), which could be used by astronauts during EVAs (extra-vehicular activities).

The SG-5000 *SpaceGauge* was employed to test an experimental repair technique for the thermal protection tiles of space shuttles in the event they experienced damage.

Developing a durometer that could endure the extreme environs of outer space, as well as onboard the shuttle, and meet the ergonomic requirements of the astronaut's cumbersome space suits was a daunting task!

In order to assure that the SG-5000 would perform in the critical conditions which are experienced during an EVA, the durometer passed rigorous testing in simulated environments. These included vacuum, temperatures ranging from -150 to $+150$ F°, the extremes of G forces and near weightlessness, and many other dynamic factors.



STS-114 pilot James Kelly gives 'thumbs up' to the SG-5000

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