



LIVE LUGGAGE
POWER ASSISTED
PRESS RELEASE

How motor technology innovation revolutionises travel with the world's first powered suitcase

Henley-on-Thames ,UK Sept 22 2008 ...Stone age man first discovered the wheel 10,000 years ago. The travel industry first introduced a solution to moving luggage with wheels some 10,000 years later - in 1985 to be precise. This meant standard issue luggage with a trolley handle and wheelie features which was a brilliant concept and has made many a weary traveller sigh with relief! All very good, but that was twenty-three years ago, when the now common small castor wheels were first used. Now every conceivable bag or suitcase has these little gems attached.

Wheelies may make our lives more comfortable, especially if it's a smaller day bag or on flat smooth surfaces, but the reality is that on an incline, step, kerb or gravel surface, pulling them is down to sheer human energy. How many holiday makers or business executives have twisted their backs or shoulders, or worse, stressed their hearts hauling luggage around? Now, at last, brushless motor technology has finally arrived in the travel sector and a revolutionary suitcase is available which puts an end to all this effort.

Live Luggage www.liveluggage.com has introduced the world's first powered suitcase, with motors designed in the wheels. Designed and built to military specifications, Live Luggage suitcases make light work of the heaviest load and the longest trek through airport or station concourses. The new technologically-advanced brushless wheels are just 36mm wide and are easily able to assist a 32Kg case up a kerb or incline or over rough surfaces, in fact anywhere the problem lies - which is generally getting to the airport or departure lounge and on arrival at the final destination. Live Luggage suitcases are especially useful for medium to large pay-loads on long business trips or holiday cruises where the weight limit is less restrictive.

The ingenious controller built into the wheel hub delivers torque, not speed, and is controlled via simple force sensors in the handle, so the user simply just pulls the handle as normal. Live Luggage has been developing the "power assisted suitcase" for five years. The combination of the anti-gravity handle and the powered wheels is a stroke of British genius; big powerful motors are no longer needed – the result is a well balanced product incorporating strength and lightness.

The Live Luggage wheels (nanowheels) weigh just one kilogram each. Inside there's an internal stator, with wound, laminated iron poles, acting on neodymium iron boron magnets on the interior of the rotor. The

motors themselves are fixed to the suitcase with racing steel ball bearings, rotating only, ensuring long life and maximum protection. The magnets are very thin and backed by an equally thin iron ring round the entire rotor, in order to complete the magnetic circuit. The drive delivers a maximum of 12V, 12A and the motors deliver a maximum torque of 2Nm.

Pulling on the suitcase handle delivers a force that is measured by a force sensor. The drives (based on 16bit PIC micro-controllers) are in each wheel hub, with hall sensors on the undersides of the printed circuit board to detect the positions of the rotors from sensor magnets on their insides. The drives deliver sufficient current to the motors to give them enough torque to reduce the force detected in the handle to a low level. The Live Luggage suitcase has been tested to 60kg of content (twice the normal maximum) and has survived double the normal number of drop test programmes.

The cleverly-engineered motors work so effectively because of the anti-gravity handle system. The rechargeable battery is small and lightweight and can move a fully loaded case up to two miles uphill, enough to get to most destinations easily. The Live Luggage case is recharged using a trickle charger, which is similar to a mobile phone charger.

Live Luggage suitcases are available now from the Live Luggage website and will shortly be available from leading department stores.

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More information:

Please go to www.liveluggage.com to Media Centre and download the hi-res images.

Or contact Live Luggage PR manager Claire Johnson on claire.johnson@liveluggage.com

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