



Quality Tools for Smart Cleaning

PRESS RELEASE

Top marks for UNGER floor cleaning system erGO! clean in the comparative test of the University of Siegen

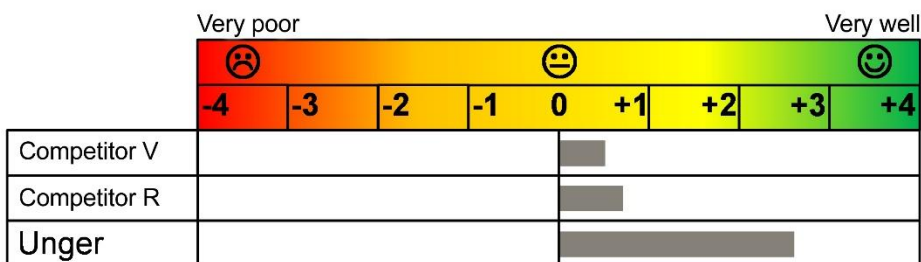
As part of a comparative evaluation, the Institute of Work Sciences and Ergonomics of Prof. Dr.-Ing. Karsten Kluth at the University of Siegen has undertaken a test of floor cleaning systems under the aspect of ergonomics. The innovative floor cleaning system erGO! clean from UNGER achieved significantly better results than the competitor products tested. The UNGER erGO! clean floor cleaning system has an S-Shaped telescopic handle and rotatable hand grips which allows a greater and swifter mobility. Designed to reduce the stress and strains placed on a user's wrists, shoulder and back in comparison to conventional floor cleaning tools with a straight handle.

Demonstrates lower stress

The reduced physical strain caused by the erGO! clean floor cleaning system has now been scientifically proven in an electromyographic examination. This examination method objectively measures the muscle activities during the work assignment. In particular, the strain on the wrist is considerably lower when cleaning with the UNGER system than with the other cleaning systems tested. The rotatable handles of the erGO! clean prevent extreme joint positions of the wrist in particular. The more natural, less pronounced wrist position this makes possible can help to prevent illnesses in the wrist. The erGO! clean from UNGER also requires the least effort when guiding the system during the cleaning process and when operating the He-bels for the pulse beam. The height-adjustable system can also be individually adjusted from of 130 cm to 170 cm to suit the body height of the cleaning person and is easy on the back.

Convincing in practical use

The superiority of the erGO! clean floor cleaning system from UNGER becomes even clearer in the subjective assessment by the 40 participating testers. Especially with regard to the manageability



The handling of the floor cleaning systems during the cleaning process

during the cleaning process, erGO! clean receives the highest score by far. Both the shape of the handles and the material received top marks. The evaluation of the



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non-slip grip surface, which prevents slipping, is also outstanding. The competitors' products received some negative reviews against this evaluation.

The new S-shape of the erGO! clean was described as advantageous by the vast majority. Reason: Improved motion sequence and less physical strain.

Clear vote for soil humidification by means of integrated dosing lever

92.5 percent of the testers favoured of the application of cleaning fluid using a dosage lever. The testers cited the greater independence from a water bucket and the faster cleaning performance. By dispensing with a spray system that is susceptible to clogging, UNGER's floor cleaning system is immediately ready for use even after longer breaks. Both the filling and the emptying of the cleaning container was judged to be significantly easier by the tester compared to the competitor products tested.

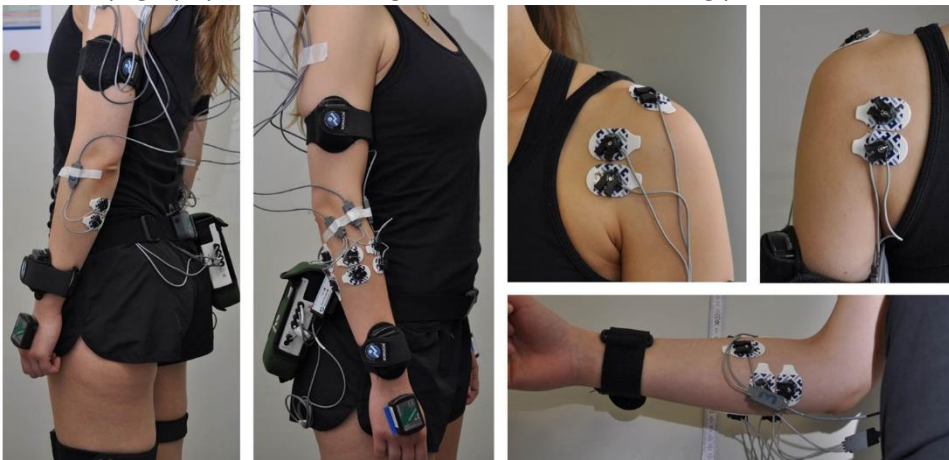
This makes the erGO! clean floor cleaning system not only a pioneer in terms of ergonomics, but also in terms of work and time efficiency. According to the tester, both the subjectively perceived highest cleaning speed and the best cleaning result were provided by the UNGER model. In the final practical comparison, the erGO! clean was clearly named as the winner by the testers. More than three quarters of the participants preferred the UNGER product. The majority of the test persons who had decided on a competitive product before the test deviated from the previously preferred model due to their practical experience and choice the erGO! clean. The most common criterion for the erGO! clean was the S-shaped telescopic handle with the associated lighter movement.

The background to the study is the recommendation of the German Building Trade Association (Berufsgenossenschaft Bau für gewerbliche Gebäudereiniger) to use ergonomic work equipment. This is intended to counteract excessive physical rain in order to avoid downtimes and physical ailments.



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To evaluate the ergonomic quality of floor cleaning systems, the team around Prof. Dr.-Ing. Karsten Kluth at the University of Siegen tested three systems from different manufacturers. Prof. Dr.-Ing. Karsten Kluth is head of the department of ergonomics at the Institute of Production Engineering in the Department of Mechanical Engineering of the Faculty of Natural Sciences at the University of Siegen. The investigation was divided into an objective evaluation by means of surface electromyography (OEMG) during standardized soil cleaning processes with 40 testers and a survey.



The floor cleaning system "erGO! clean" as well as two spray systems of well-known manufacturers of cleaning tools for professional use were tested.

About UNGER

UNGER is a leading international manufacturer of professional cleaning and maintenance tools. All UNGER systems are designed to make cleaning work efficient, ergonomic, and thorough. The portfolio includes professional pure water cleaning systems, a comprehensive range of glass cleaning products, floor cleaning, and maintenance systems, a colour-coded surface cleaning system, and a cleaning system for sanitary rooms. In addition to the high quality requirements and innovative product development, UNGER offers outstanding customer service. The headquarters of the company founded in Hamburg in 1964 are in Solingen, Germany and Bridgeport, Connecticut. The growing global business is driven by distributors in over 80 countries.