



News

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CYBERDYNE,INC.

CYBERDYNE announced start of selling a new model (LB03) of “HAL Lumbar Type for Labor Support”

~ dust proofed/waterproofed model for various indoor-outdoor uses ~

CYBERDYNE, INC. (the “Company”) will commence sales of a new model, “HAL Lumbar Type for Labor Support (LB03)” with additional waterproof and dust proof functions (the “Product”) from December 1, 2017, as a product designed to improve working environment and to prevent work related injuries such as back pain.

Alike other HAL products, the Product provides assistance according to the intention of the wearer, by reading the bio-electric signals that is sent from the brain to the muscles through nerves when he/she moves the body. The assistance would reduce the stress applied on the lumbar region when the wearer lifts or carries something heavy so as to mitigate back injury risks. The Product has added on cutting edge technology that realizes assistance that is even more natural. Furthermore, dust proof and waterproof functions (IP54^{*1} compliant) were added on, so that the Product could be used in various situations such as rainy or dusty outdoor construction sites and humid indoor sites. In addition, communication function of the Product was reinforced significantly, expanding the environment that this function could be used at to all areas of outdoor and indoor work fields. This function is expected to advance the endeavors to structure a network of IoH and IoT^{*2}.

In addition to features mentioned above, the Product is light, compact, easy to wear and easy to control, it can be used comfortably for long hours by all kinds of users including women and elderly ones. The Product conforms to strict industrial standards for the usage in factory environment. It also obtained certifications for conformance with both ISO13482 standard, which is an international safety standard for personal care robots and European Machinery Directive, which assures the Product’s safety.

In Japan, aging and decline of birthrate is accelerating the decline in the population of work force,. Under these circumstances, improving the work environment and preventing work related injuries in



work fields due to heavy physical work are emerging problems in Japan. By disseminating the Product that utilizes innovative Cybernic Technology^{*3} to reduce the risk of causing back pain, the Company aims to structure an environment where all workers could work healthily, and safely in order to solve the problem. This will also lead the endeavor to realize Society 5.0, a super smart society where humans and technologies coexist and connect together.

*A part of the basic research and development of this Product was promoted Impulsing Paradigm Change Through Disruptive Technologies (“ImPACT”) Program of Council for Science, Technology and Innovation (Cabinet Office, Government of Japan).

(*1) International Protection (IP) standards are used to designate the protective capacity of an electrical enclosure. The two-digit code shows the protection against particles (the first digit) and water (the second digit).

(*2) IoH: Internet of Humans, IoT: Internet of Things

(*3) Cybernics: A new academic field that is centered around human, robots and information systems. Targeting medicine, welfare and living support fields (including labor support) as its main industries,. It fuses and combines the functions of humans, robots and information systems, realizing interactions between physical-information-vital systems. Cybernics is championed by Dr. Yoshiyuki Sankai, a professor at the University of Tsukuba (he is also the President and CEO of CYBERDYNE) and the technology is thought to be one of the core technical domain that drives the movements to realize “Society 5.0”.

