

Elevating the Standard
of Standing Works



DESIGN
AWARD
2020



reddot award 2020

<Industrial>

The exoskeleton suits “Archelis” to alleviate the strain on the legs and lower back caused by standing work.



Labor shortage



Aging



Physical strain

Archelis can solve these social issues and contribute to improve the productivity and retention of your workforce.

Why did we develop Archelis ?



Hiroshi Kawahira

MD, Ph.D., FACS Professor & Director Medical Simulation Center Board Certified Surgeon in Gastroenterology School of Medicine Jichi Medical University

Archelis was born from the medical issue surgeons have faced. In recent years, medical technology has evolved significantly. Laparoscopic surgery reduces patient burden, but surgeons face increased strain on their lower back and legs from prolonged standing. The exoskeleton “Archelis” addresses this issue by allowing surgeons to sit while standing, reducing fatigue and improving performance.

Features

1. Freely move and sit anywhere

By independently separating each leg, it enables one to repeat "move" and "sit" freely while wearing it.



2. Easy to wear

It can be worn only 3 steps just by fastening three belts each foot, shin and thigh by yourself.



3. No power supply needed

As no power supply is used, there is no need to care the battery and charging.



Modes

Free mode (No support)

You can freely bend your knees and even perform squats with ease. No need to worry about steps or stairs either.



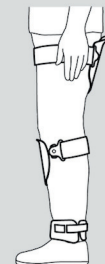
Archelis mode (Half-sitting)

This mode, where your body is supported by bending your knees. Short-distance movement is also possible.



Stand mode

This mode supports the standing posture. It's more upright and straight compared to the Archelis mode.



Benefits

Mechanism

By dispersing the wearer's weight, it reduces the load on the lower back, legs, and feet.



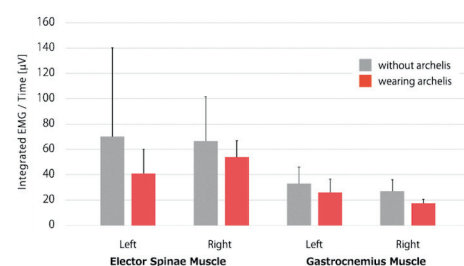
■ Surface pressure dispersion (in-house study)

Evidence

Reduce the max. **41%** of back strain



The scene of the research



Demonstration Project for Safety and Health Equipment for Older Workers(2021.MHLW)

Product introduction

ArchelisFX Stick

NEW

The lightest
Evolved walkability
Improve the wearability



Adopting the carbon fiber
called "Flexcarbon®"
Much lighter by far

Stick type
Increased ease of
movement, wearing



User testimonials

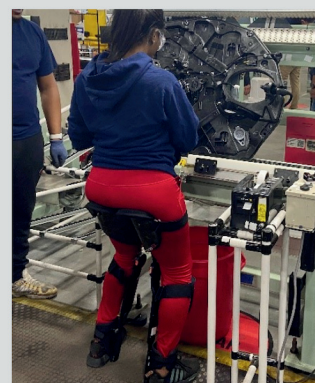
**Empowerment through exoskeleton.
Tackling labor shortages and aging head-on
with Archelis!**



Gavin Carr
Chief Operating Officer
Hi-Lex Controls, Inc.

I would like to express our gratitude to Archelis for promoting the introduction and for developing a more robust unit that suits the physique of our workers

<Automobile>
<Assembly>
<Press work>



**Archelis is a "compassion" to employees
who work standing for long periods of time.**

<Designing of pipe>
<Polishing>



Masasuke Sekimoto
President and Representative Director
Sekimoto Kanko Co., Ltd.

Archelis is used at various processes, such as pickling, polishing, welding, etc. I definitely felt that it reduced the burden on my back. Archelis is my compassion in a word for my employees.



Product introduction

ArchelisFX

Mobile & Stable
Lighter



Adopting the carbon fiber
called "Flexcarbon®"
Much lighter by far

Ratchet buckle type
Overwhelming stability



User testimonials

7 units of Archelis introduced for female workers to alleviate lower back pain, boosting productivity.



Yoshihiko Hashizume
President and Representative Director
Koryo Co., Ltd.

We are very satisfied with the positive effects of the introduction of Archelis. This involves not only the reduction of physical burden but also the effect on the mental aspect. Workers have told us that we are a good company that thinks about its employees, and this has led to increased employee's engagement.

<Inspection>



Archelis succeeded in creating a safe and secure workplace!



Shinichi Nakamura
Representative Director
Shin-ei Industries Co., Ltd.

Our employee was considering leaving the company due to back pain. By wearing Archelis, he is still able to work in the same field. Thanks to archelis, we are very happy that we were able to create an environment that will allow our employees to work in good health for a long time to come.

<Lathe>



Comparison





ArchelisFX Stick



ArchelisFX



Archelis

Concept	Latest model The lightest	Mobile and Stable	The Most Stable Available in two colors(White/Black)
Foot parts	Stick structures Free to your ankles and enable you to walk smoothly and silently 	Ratchet buckle structure Same as ski boots, it is easy to put on and pull off. It makes you stable 	
Materials	Flexcarbon®		Metal
Compatibility	Each foot part can be replaced with another type		—

Product Specification

Product name	ArchelisFX stick	ArchelisFX	Archelis
Product code	arFXS001-S (Size S) arFXS001-M (Size M) arFXS001-L (Size L)	arFX001-S (Size S) arFX001-M (Size M) arFX001-L (Size L)	ar001-S (Size S) ar001-M (Size M)
Material(thign, shin)	Flexcarbon®* ₁		Metal
Wearable heigh	1.45-1.65m (Size S) 4'9"- 5'5"ft (Size S) 1.60-1.85m (Size M) 5'3"- 6'1"ft (Size M) 1.70-1.95m (Size L) 5'7"- 6'5"ft (Size L)		1.45-1.65m (Size S) 4'9"- 5'5"ft (Size S) 1.60-1.85m (Size M) 5'3"- 6'1"ft (Size M)
Max. load weight	65kg / 143lb (Size S) 90kg / 198lb (Size M) 115kg / 254lb (Size L)		65kg / 143lb (Size S) 90kg / 198lb (Size M)
Dimension(one leg)	17.5 x 28.0 x 71.5 cm (Size S) 6.9 x 11.0 x 28.1inch (Size S) 17.5 x 28.0 x 78.5 cm (Size M) 6.9 x 11.0 x 30.9inch (Size M) 17.5 x 28.0 x 82.3 cm (Size L) 6.9 x 11.0 x 32.4inch (Size L)		17.5 x 28.0 x 71.5 cm (Size S) 6.9 x 11.0 x 28.1inch (Size S) 17.5 x 28.0 x 78.5 cm (Size M) 6.9 x 11.0 x 30.9inch (Size M)
Weight(one leg)	1.7kg / 3.7lb (Size S) 1.8kg / 4.0lb (Size M) 1.9kg / 4.2lb (Size L)	2.0kg / 4.4lb (Size S) 2.1kg / 4.6lb (Size M) 2.5kg / 5.5lb (Size L)	2.3kg / 5.1lb (Size S) 2.7kg / 6.0lb (Size M)
Color	Carbon black		Black / White
Accessory	Dedicated stand		

*1 Flexcarbon® is strong and light fiber rein-forced plastic developed by Suncorona Oda Co., Ltd.

Quality



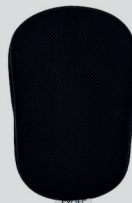
- This product conforms to the Japanese Industrial Standards 《JIS B 9810》
- It has cleared durability tests designed for 100,000 times.
- Made in Japan

Accessories



Dedicated caster stand

Consumables



Thigh cushion



Thin cushion



Thigh belt



Thin belt

Each consumables are also available by single items for purchase

The Founder's Thoughts

The Archelis project started with the thoughts of “reducing the burden on doctors who perform surgery while standing for long hours.”

There are many people in the world who are engaged in standing works while suffering from backaches, not only doctors but also factory workers, security guards, cooks, and so on. Our goal is to solve social issues by completely new ideas through technology and design.

We propose a new style of a working environment and make it the global standard in the near future. Our vision is to free humanity from the burden of standing posture by technology and design and to realize the society where people across the globe live healthy forever.

Founder & CTO
Hideyuki Fujisawa



Archelis.Inc

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Case Study



Distributor (contact for inquiries)

Specifications and appearance are subject to change without notice for improvement.
Product color may appear different from actual colors due to photography and printing inks.

Patented
Made in JAPAN

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