

# Elevating the Standard of Standing Works



<Industrial>



The exoskeleton suit “Archelis” alleviates the strain on the legs and lower back caused by standing work.



Labor shortage



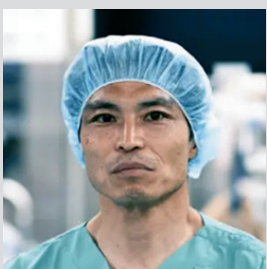
Aging



Physical strain

Archelis can help solve these social issues, contribute to reducing strains while doing standing work, and extend career longevity.

## 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 “move” and “sit” freely while wearing it.



## 2. Easy to wear

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



## 3. No power supply needed

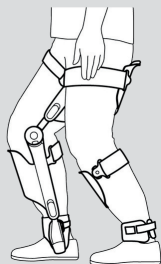
As no power supply is used, there is no need to think about battery life and charging.



# 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)

In this mode your body is supported by bending your knees. Short-distance movement is also possible.



### Stand mode

This mode supports a 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.



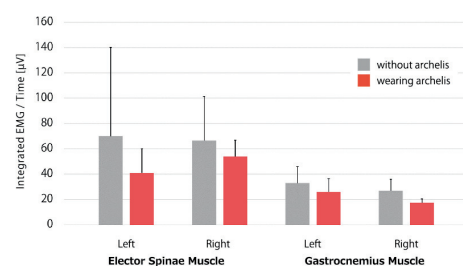
■ Surface pressure dispersion (in-house study)

## Evidence

Reduce up to **41%** of back strain



Research alongside MHLW



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



## Product introduction

# ArchelisFX Stick

Our lightest product yet  
Evolved walkability  
Improved wearability



Using a carbon fiber called  
"Flexcarbon®"  
Much lighter than metal

Stick type  
Easier to both put on and  
walk around.



## User testimonials

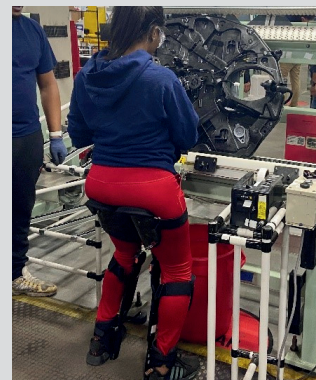
**Empowerment through exoskeleton.  
Tackling labor shortages and aging head-on  
with Archelis!**



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 until that suits the physique of our workers

<Automobile>  
<Assembly>  
<Press work>



**Archelis is an act of "thoughtfulness"  
for long hours of standing work!**



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

"We use it in various processes such as grinding, pickling, and welding. I definitely felt that it reduces the strain on the lower back, and introducing it is truly an act of 'thoughtfulness.'"

<Piping design>  
<Grinding work>





## Product introduction

# ArchelisFX

Mobility & Stability  
Lighter than before



Uses a carbon fiber called  
“Flexcarbon®”  
Much lighter than metal

Ratchet buckle type  
Overwhelming stability



## User testimonials

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

<Inspection>



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 engagement.



**Archelis succeeded in creating a safe and secure workplace!**

<Lathe>



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.



## Comparison





ArchelisFX Stick



ArchelisFX



Archelis

Concept	Latest and lightest model	Mobility + Stability	Outstanding stability
Foot parts	<p>Stick structures Attached to ankles, enabling you to walk smoothly and silently</p> 	<p>Ratchet buckle structure Same as ski boots, it is easy to put on and take off. Offers more stability</p> 	
Materials	Flexcarbon®		Metal
Compatibility	Each foot part is interchangeable.		—

## 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(thigh, shin)	Flexcarbon®*1		Metal
Wearable height	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 reinforced plastic developed by Suncorona Oda Co., Ltd.

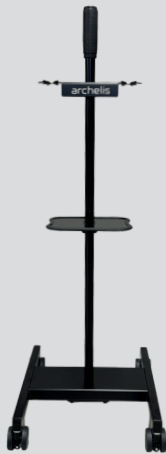


## Quality



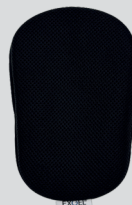
- This product conforms to the Japanese Industrial Standards 《JIS B 9810》
- It has cleared durability tests designed for 100,000 uses.
- Made in Japan

## Accessories



Dedicated wheeled stand

## Consumables



Thigh cushion



Shin cushion



Thigh belt



Shin belt

Each consumable is also available to purchase separately.

## 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)