Product Specifications

Product name	archelis for Medical	
Product code	ar001-S	ar001-M
Wearable height	4'9"ft - 5'4"ft	5'3"ft - 6'ft
Max.load weight	143.3lb	176.37lb
Dimension(one leg)	6.88inch× 11 inch× 30.70inch	6.88inch× 11 inch× 30.90inch
Weight(one leg)	5.07lb	5.95lb
Modes	3modes	3modes
Origin	Japan	Japan

http://www.archelis.com

Patent Pending
Made in JAPAN

ar0614

Archelis Inc.

GOOD DESIGN AWARD 2018
BEST 100

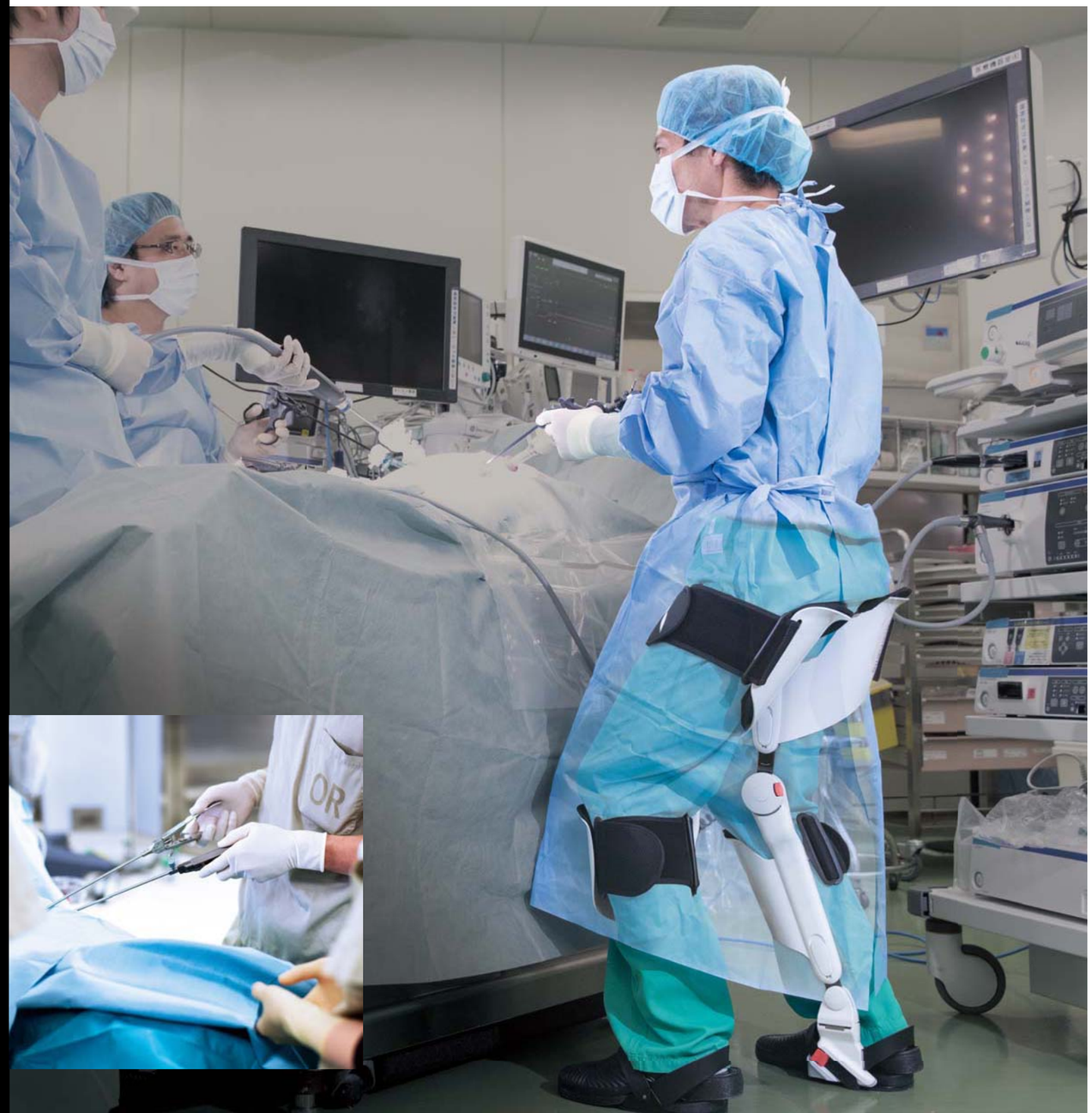
archelis

Removing pain
from standing works

for Medical

Reduce the physical burden and improve work performance

archelis can significantly reduce fatigue of doctors caused by long hours of surgery by supporting their standing posture.
Also, it can stablize the trunk and maximize performance by distributing body weight and supporting it with shins and thighs.



Feature
1.

Freely walk and sit anywhere you want

Thanks to a wearable type and its structure separated into right and left, it enables to repeat "walking" and "sitting" freely with wearing it.

Feature
2.

No power supply needed

No power supply is used, so there is no radio wave interference with other medical devices and no need for charging. It can be used any time without any concern.

Feature
3.

Easy to wear

It can be used immediately just by fastening three belts on foot, shin and thigh on each leg by yourself.

Adjust your heel to the device and fix your foot with a belt

Fix your shin with a belt

Fix your thigh with a belt

archelis

In recent years, there has been remarkable evolution in medical technology. The laparoscopic surgery is also one of highly advanced medical technologies. While laparoscopic surgery significantly reduces physical burden on patients, surgeons and medical staff have to operate in standing posture for long hours, thus there are issues that the burden on their lower back and legs is increasing.
Under such circumstances, the actual reasons why they cannot operate with sitting on chairs are as follows:
The environment of operating room is designed to perform an operation in standing posture.The surgeons may change their positions depending on the areas and contents of treatment during the operation. Besides, many people work together on the operation while various cables for medical devices lie on the floor, so no space can be secured for any chair.
Based on the actual situation of such surgical environment, a wearable chair "archelis" was developed with completely new concepts, taking advantage of the strength of medical-engineering collaboration and the industry-academia partnership to solve issues about physical burden of surgeons and medical staff caused by the standing posture for long hours.

Co-development partner

Hiroshi Kawahira
MD, PhD, FACS
Professor & Director
Medical Simulation Center
Board Certified Surgeon
in Gastroenterology
School of Medicine
Jichi Medical University

In laparoscopic surgery that requires precise movements of the forceps with a few millimeters, the "stability of the trunk" greatly affects the stability of the operation. Thanks to archelis which enables to repeat "walking" and "sitting" without giving burden on muscles even in a half-sitting posture for long hours, I think the stable movements during operation can be improved. Furthermore, I have a sense of possibility that this device can support the half-sitting posture under special environments where medical workers need to go through.

Ryoichi Nakamura
PhD
Professor
Department of Biodesign
Division of Biofunctional Restoration
Institute of Biomaterial
and Bioengineering
Tokyo Medical and Dental University

By fixing the angle of knees and supporting the body weight by distributing it over large areas of shins and thighs, archelis enables to reduce fatigue and maintain the stable posture. In addition, thanks to its design individually separated into each leg, it enables us to sit on freely depending on the posture. archelis has created a new Japanese Industrial Standard (JIS). I hope that it can be widely used in various situations in the future.