



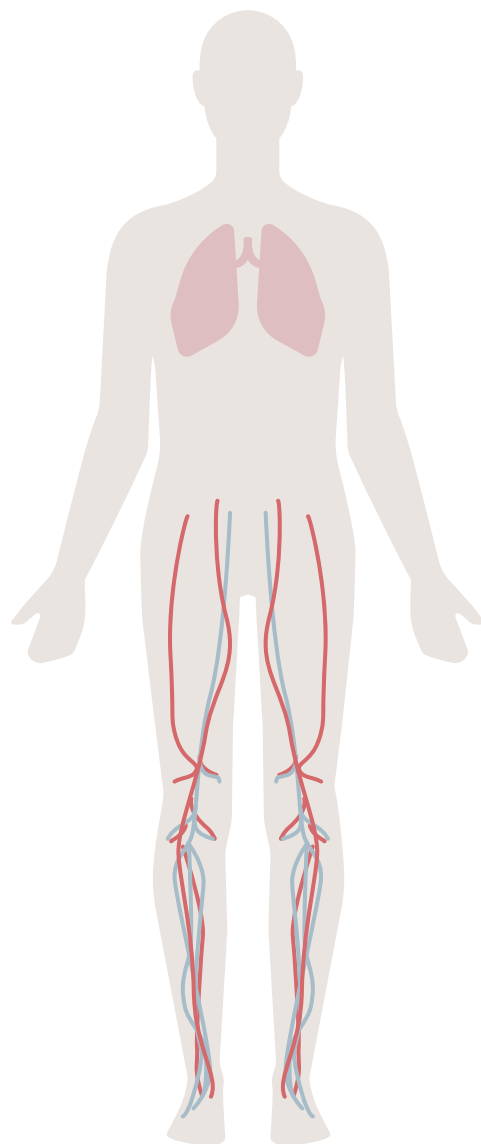
CONVENIENT, COMFORTABLE AND CLINICALLY PROVEN VTE PREVENTION

# Flowtron® Active Compression System

# Safeguarding your patients at risk of VTE

Venous thromboembolism (VTE), which includes both deep vein thrombosis (DVT) and pulmonary embolism (PE), is a life-threatening condition which can have a significant cost burden on acute care providers and healthcare systems.<sup>1,2</sup>

While healthcare facilities are aware of the risk of VTE, care providers may lack the time, training and resources to optimally implement prevention strategies. In order to safeguard the well-being of at-risk patients, comprehensive prevention strategies that take into account individual clinical needs are essential.



## Understanding the burden of VTE and the importance of prevention



There are a number of factors that place patients at risk of VTE. Patients undergoing surgical procedures (>30 min) have always been considered one of the most significant risk groups for developing this condition. At the same time, awareness of other high-risk hospitalised patient groups, such as critical care, cancer, obstetrics, bariatrics and stroke patients, has steadily been increasing over recent years with emphasised importance of prophylaxis.<sup>4,9,10</sup>



VTE is a serious condition that causes death and disability worldwide, with 10 million cases each year.<sup>1</sup>



VTE-related events kill more than double the number of people than breast cancer, prostate cancer, motor vehicle accidents and AIDS combined.<sup>9</sup>



## Clinical relevance

Two Cochrane reviews, published in 2008 and 2016 respectively, assessed the efficacy of combined mechanical and pharmacological prophylaxis versus single modalities in the prevention of VTE in high-risk patients. In the most recent meta-analysis, data from 22 randomised or controlled trials and more than 9,100 patients was included. The selection of studies covered a wide range of patient groups undergoing a variety of surgical procedures, including orthopaedic, urologic, cardiothoracic, neuro, trauma, gynaecologic and general surgery interventions.

Both reviews concluded that the combined modalities of IPC and anticoagulants are more effective in reducing incidence of VTE than either modality used in isolation. While the DVT incidence rate in the anticoagulant group was 4.23/6.2% (2008/2016), the addition of IPC further reduced the risk to 0.65/2.9%, demonstrating an opportunity for significant improvement of DVT rates – in the interval of 53-85% – by adding IPC to pharmacological prophylaxis. These results support current guidelines which recommend multi-modal prophylaxis in high risk patients.<sup>6,7</sup>

Based on clinical evidence, today's guidelines recommend intermittent pneumatic compression (IPC) either as an effective standalone modality, for patients at high risk of bleeding, or as a combined therapy for patients at high risk of VTE.<sup>3,4,5,6,7</sup>

### What is IPC?

IPC is a very well-established and proven type of active compression and mechanical prophylaxis, commonly used in the prevention of VTE. As a therapy with a convincing evidence base and few side effects, it is indicated for use across a wide range of hospitalised patients at risk of VTE.

IPC devices consist of a pneumatic pump that inflates air into garments wrapped around the foot, calf, thigh, or a combination of the three. Garments may have one (uniform) or more (sequential) chambers. By mimicking the action of the calf muscle pump that occurs during natural ambulation, the method increases the circulation of blood in the deep veins of the legs, helping to prevent the formation of blood clots.<sup>8</sup>



Pulmonary embolism, resulting from DVT, is a potentially fatal condition.<sup>11</sup>



While early diagnosis and treatment may lead to recovery, long-term complications can result in lifelong treatment and patient suffering.<sup>13</sup>



In the US, it is estimated that VTE affects 350,000 to 600,000 individuals annually, with almost \$40B spent on treatment of hospital-acquired VTE.<sup>2,15</sup>



US data states that up to 60% of VTE cases occur during or shortly after hospitalisation, making it the leading preventable cause of hospital death.<sup>1,12</sup>



In Europe, more than 1 million VTE cases occur annually, resulting in approximately 544,000 deaths and a cost burden estimated at €1.5-2.2B in direct cost and €13.2B in total cost.<sup>9,14</sup>

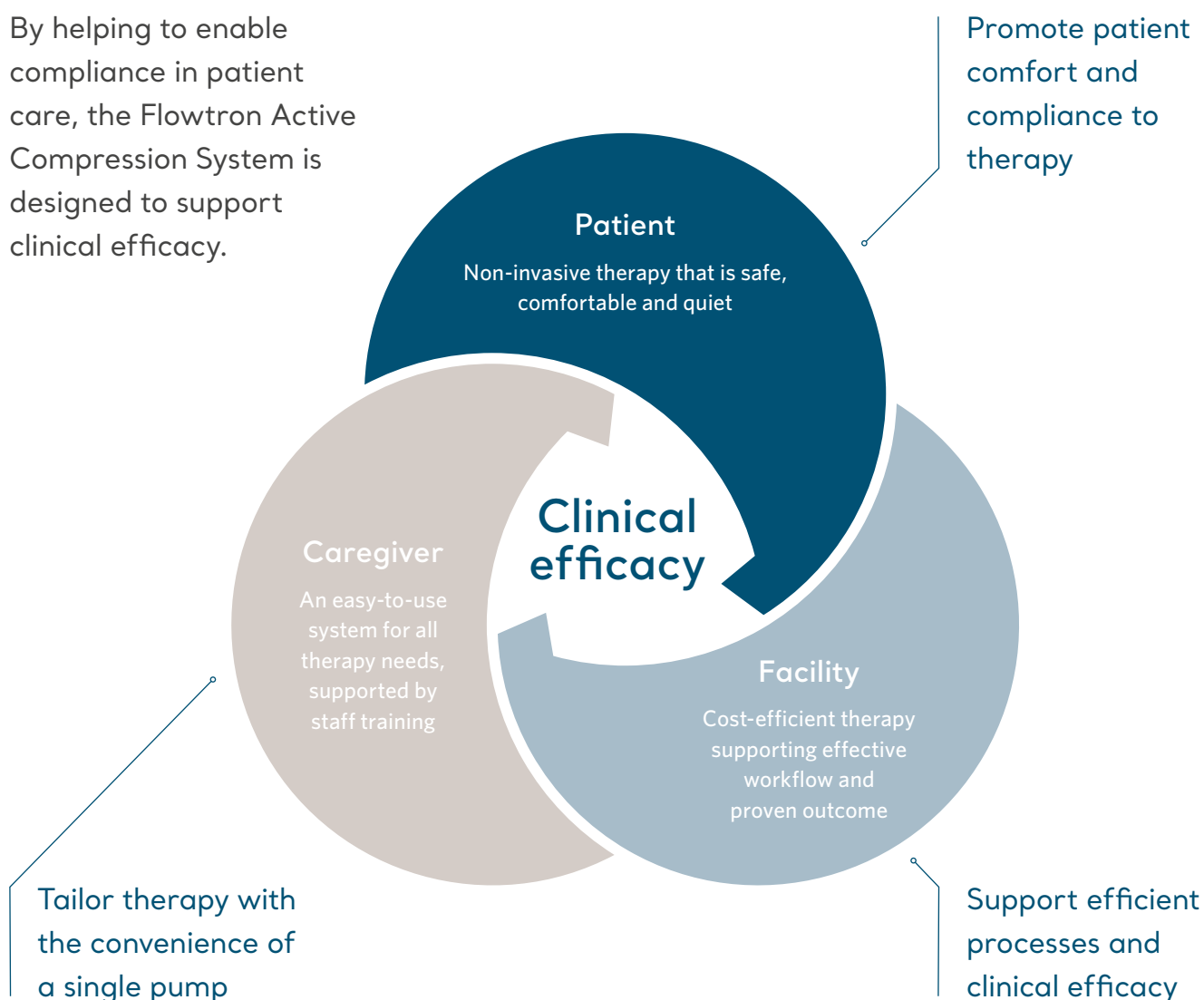


VTE is associated with prolonged and recurring hospital stays and treatment, causing significant economic burden to healthcare systems globally.<sup>16</sup>

# The link between compliance and clinical efficacy in VTE prevention

When compliance is fulfilled by all those involved in patient care, optimal clinical efficacy may be attained.

By helping to enable compliance in patient care, the Flowtron Active Compression System is designed to support clinical efficacy.



# Active compression tailored to individual needs

Designed to give you freedom of choice,  
the Flowtron system offers both uniform and  
sequential modes in one easy-to-use pump.



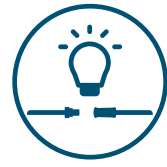
Flowtron  
ACS900 pump



Sequential  
Tri Pulse  
garments



Uniform  
DVT  
garments



SmartSense™  
technology



Flowtron Active Compression System is the safe, convenient and flexible way to deliver VTE prevention therapy.<sup>17,18,19,20</sup> At Arjo, we have built on the Flowtron legacy for decades, continuously improving our offering to ensure the best possible performance of IPC therapy across healthcare environments. We continuously strive to make everyday tasks easier for caregivers, and enable them to spend more time caring for their patients.

## ACS900 reviewed in independent evaluation

An evaluation by the ECRI Institute, an independent non-profit organisation focused on identifying the safest and most effective solutions for care, rated the Flowtron ACS900 against a comparable IPC solution in terms of performance, safety, workflow, patient experience and cost of ownership. For information on how to obtain a copy of the report, please contact your local Arjo representative or visit [www.ecri.org](http://www.ecri.org).

# The right therapy with every connection

Reduce the risk of VTE in your facility by tailoring therapy with the Flowtron ACS900 pump and SmartSense Automatic Garment Recognition technology.

## The challenge

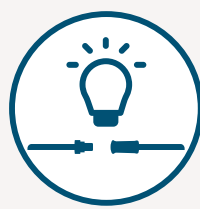
Caregivers are often under a lot of pressure in their daily work. They may even struggle to find time caring for their patients, let alone supporting the use of mechanical prophylaxis. The Flowtron solution is designed to help address caregiver challenges such as:

- Lack of time and resources
- Time spent on non-patient activities
- Managing inventory and troubleshooting equipment
- Multiple systems and new technologies
- Need for continuous training and education
- Tending to non-compliant patients
- Being responsive to individual patient needs



Flowtron  
ACS900  
pump

A single pump that offers both uniform and sequential compression via a variety of garment types, reducing the need to have multiple pump models in the facility. The easy-to-use Flowtron ACS900 makes it simple to tailor VTE prevention with one pump covering all therapy needs.



SmartSense  
Automatic Garment  
Recognition

Arjo's patented garment detection technology automatically sets the correct pressure and compression cycle, without the need for any additional user intervention. Simply attach the snap-lock connectors to the Flowtron ACS900 pump and the system easily and safely does the rest.



**Smart and  
adaptive**

SmartSense Automatic Garment Recognition together with one-button start, making Flowtron a true plug-and-play solution that is easy to set up and operate. The integrated battery ensures uninterrupted therapy, e.g. during transportation.<sup>18,19</sup>



**Foot**



**Calf**



**Thigh**

A variety of garment types and sizes ensuring effective and comfortable<sup>21,22</sup> therapy for all patients. The system allows for a combination of different garment types to be used simultaneously.



**Alarms and  
indicators**

Advanced alarms – including visual indicators allowing operation to be clearly seen from any direction – and real-time pressure indication designed to limit the risk of operator error and potential patient harm, for safety and caregiver peace of mind.



**Compliance  
monitoring**

On-screen compliance monitor via the integrated therapy time display, recording for how long therapy has been delivered, designed to aid concordance and provide data that can be recorded in the patient journal.



**Fixed  
tubesets**

Ready for therapy at all times with fixed tubesets preventing disconnection and loss of tubing, hence eliminating the inconvenience and cost of replacements.



**Integrated Cable  
Management System**

Integrated Cable Management System aiding tubeset and power cord management in the clinical area, and during transportation and storage, promoting caregiver convenience as well as patient safety.<sup>17,18,19</sup>



# Compliance begins with comfort

Lightweight, breathable and vapour permeable garments promote patient compliance to therapy by helping to prevent the build-up of heat and moisture.

## The challenge

The use of IPC as a prophylactic method requires the patient to wear garments continuously over time. This is vital to the success of IPC in reducing the risk of VTE in the hospital environment. Guidelines recommend therapy to take place continuously for 18-24 hours per day, and for no less than 72 hours or until the patient is fully mobile. Mechanical prophylaxis has been suggested for as long as 10-14 days post-operatively for patients undergoing major orthopaedic surgery.<sup>3,23</sup>

Patients may remove sleeves if they are uncomfortable, particularly if they make the skin feel too hot, sweaty or itchy, or if the sleeves in other ways irritate the skin. Patient discomfort may increase the need for caregivers to perform manual checks and re-fit sleeves to non-compliant patients that otherwise risk missing out on therapy.

## Clinical relevance

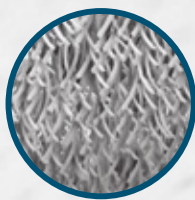
Increasing emphasis has been placed on the comfort of VTE garments in improving wear time which is linked with reduced VTE event rates.<sup>24</sup>

A randomised, controlled trial evaluating patient compliance with IPC therapy, demonstrated that a garment which was more comfortable was worn for longer periods.<sup>25</sup>

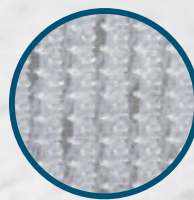
With comfortable premium fabrics, making the patient more inclined to wear the garments during therapy, Flowtron addresses the core challenge of comfort in VTE prevention. Proven comfortable, Flowtron garments promote effective prevention and improved patient outcome.<sup>21,22,24,25</sup>



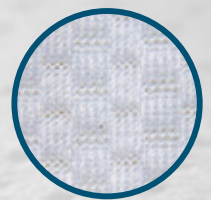
Soft and breathable inner fabric transfers heat and moisture away from the skin through micro vents



Cushioning interior fibres designed to aid patient comfort



Simple and robust Velcro® closures that help keep the garment secure

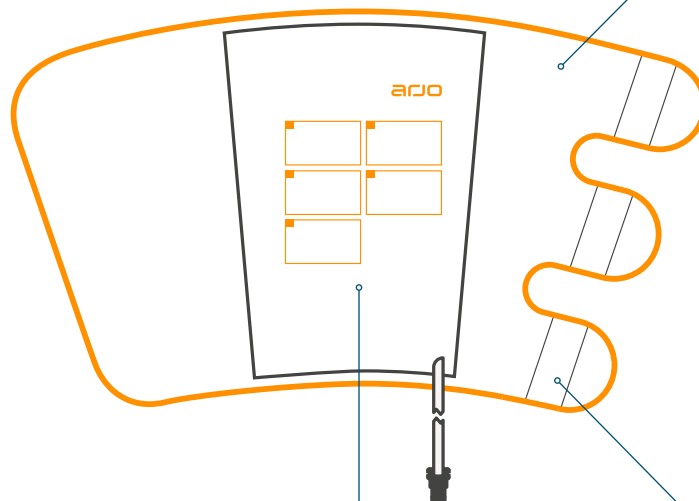


Lightweight mesh outer fabric helps prevent the build-up of heat to keep the patient cool and dry

# Freedom of choice with Flowtron garments



Uniform  
DVT  
garments



Lightweight, breathable fabric helps prevent the build-up of heat and moisture<sup>21</sup>

Extensive range of foot, calf and thigh garments addressing a wide range of patient types, and caregiver needs and preferences



Foot



Calf



Thigh

Clear visual instructions printed on the garment for ease of use and safety in application<sup>26</sup>

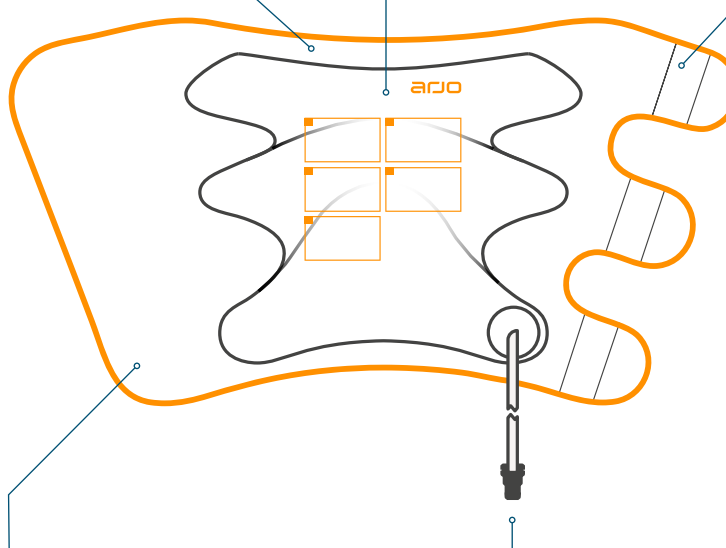


Simple and robust Velcro® closures helping to promote effective therapy by providing a secure and snug fit

Garment designed to follow the natural curve of the leg, with patented wing-shaped bladder wrapping around the calf



Sequential  
Tri Pulse  
garments



Sequential garment range designed for optimal anatomical fit and enhanced patient comfort



Calf



Thigh

Advanced Airflow Light fabric keeps the skin cool and dry by preventing heat and moisture build-up<sup>22</sup>

Single air inlet tube positioned anteriorly on the leg away from the bony prominence, designed to help reduce the risk of pressure injuries and to promote safety with less tubing around the patient

# Your partner in safe and effective VTE prevention

With over 60 years of experience, Arjo is a clinically focused company that works together with healthcare professionals to better understand the evolving needs and challenges of today's complex healthcare environments. Our commitment to VTE prevention goes beyond acting merely as a supplier of pumps and garments, but instead becoming your partner in the fight against deep vein thrombosis and pulmonary embolism.

We do this by offering clinically proven prevention solutions supporting healthcare economic value and increased overall efficiency in the facility. This includes a comprehensive range of services and training programmes designed to boost your compression therapy strategies.

**Everything we do,  
we do with people in mind.**



## Arjo's history and legacy in VTE prevention

1950

1957: Arjo is founded by Swedish entrepreneur Arne Johansson

**Early 1970s:** The first trials of DVT prophylaxis at Hammersmith Hospital and Kings College Hospital in London, leading to the development of Flowtron Aire

1979: Flowtron Aire Ltd becomes Huntleigh, instrumental in developing robust and clinically effective IPC products

**1973:** The first company to demonstrate haematological effects from IPC

1995: Arjo is acquired by Getinge Group

**1998:** Flowtron DVT Foot garment range is introduced and becomes the first foot garment on the market with gentle inflation compression for added comfort

## Clinical support

Designed to help you improve patient outcomes and reduce VTE rates by promoting best practice and evidence based VTE prevention strategies. The goal is to improve quality of care and reduce costs by providing you with the clinical support to optimise device utilisation.

## Training programmes and support

We offer comprehensive training and support services to ensure the most effective use of your Arjo VTE prevention products. Our team not only provides you with an in-depth understanding of deep vein thrombosis and its associated complications and costs; we also provide education on how a complete Arjo solution can help you reduce VTE rates while achieving a more efficient workflow. After implementation, your facility will benefit from ongoing support to continuously improve workflows.

## Financial Solutions

Nothing is more important than giving patients the best possible care. Arjo offers comprehensive solutions to help ensure you have the right equipment at the right time, and that your facility is prepared to meet the changing needs of a diverse patient population. Our rental solutions give you access to specialised equipment and proven therapies to meet specific care needs – whenever and wherever they occur. We also offer financing solutions supported by qualified analysis to help you make the most of your investments.

## Arjo Care

Our comprehensive service ensures that you get the most out of your equipment, and that problems are prevented before they arise. This includes a tailored service agreement, from sourcing genuine replacement parts, to supporting compliant processes with clear documentation of servicing records. Let us focus on the care of your products, so that you can focus on caring for your patients.

## Arjo Locate™

In a busy care environment, spending time to search for critically needed medical equipment is a costly yet common daily occurrence. Arjo Locate lets you find crucial equipment with just a touch, saving valuable caregiver time. A cloud-based solution that is scalable to the needs of large and small facilities, Arjo Locate tracks the real-time location of any mobile equipment via any computer or touchscreen device with an Internet connection. It also eliminates the need for invasive hardwire installation work or complex navigation systems. For your VTE prevention, this means that the problem with pumps going missing – potentially resulting in penalty fees and other costs – may be avoided.

**2007:** Getinge Group acquires Huntleigh Technology PLC, combining it with Arjo to create the ArjoHuntleigh brand

**2017:** Arjo becomes an independent publicly listed company

**2018:** Arjo acquires US based company ReNu Medical, specialising in non-toxic and environmental friendly reprocessing of single-use non-invasive medical devices

**2002:** Flowtron Universal becomes the first IPC pump on the market with automatic garment recognition and capacity to run calf, thigh and foot compression from the same pump

**2014:** Flowtron ACS800, later replaced by the ACS900, becomes the first pump on the market capable to deliver both uniform and sequential therapy

**2018:** Reprocessing service launched under the Arjo Pure brand name in the US, setting a clear direction for Arjo's sustainability and partnership ambitions for the future

**2020**

# Environmental sustainability

Through a number of initiatives, we continuously work to minimise the environmental impact of our products. This includes reducing scrap and waste as well as using more sustainable materials and processes throughout the development, manufacturing, distribution, use, reprocessing and final disposal or recycling stages of our products' lifecycle.

Within VTE prevention, our acquisition of ReNu Medical\* enables us to offer non-toxic reprocessing of non-invasive medical devices, without chemical residue or emissions. It is part of our efforts to reduce environmental impact and medical waste, improving the footprint of our business as well as that of our customers, while ensuring the safety of patients and caregivers.

## USER-FRIENDLY GARMENT PACKAGING WITH LESS WASTE THROUGHOUT THE PRODUCT LIFECYCLE



- **New manufacturing and packaging process**

Less material use and reduced scrap in garment manufacturing and packaging

- **New polybag material**

Higher quality, fully recyclable and easier to open

- **User instructions printed on polybag / Application guide printed on garment**

Improved legibility, ease of use and safety

- **Elimination of paper format IFU**

Preservation of our environment and forests by less paper waste



\*Reprocessing currently only available in the US

## Compression type



Sequential



Uniform

## Application



Foot



Calf



Thigh

## Sizing



Small



Medium



Large



X-large,  
bariatric



## Flowtron ACS900 pump

Model	Type	Tube length
ACS900	Standard	2.1m/7ft
ACS900	OR (Operating Room)	4.0m/13ft



## Flowtron Tri Pulse garments

Application	Item ref	Size	Measurement
	TRP10	M	≤ 43cm/17in
	TRP20	L	≤ 58cm/23in
	TRP60L	XL	≤ 81cm/32in
	TRP30	M	≤ 71cm/28in
	TRP40	L	≤ 89cm/35in



## Flowtron DVT garments

Application	Item ref	Size	Measurement
	DVT5	S	≤ 36cm/14in
	DVT10	M	≤ 43cm/17in
	DVT20	L	≤ 58cm/23in
	DVT60L	XL	≤ 81cm/32in
	DVT30	M	≤ 71cm/28in
	DVT40	L	≤ 89cm/35in
	FG100	S-M	US (M) ≤ 7 US (F) ≤ 9 EU ≤ 40 UK ≤ 7
	FG200	L-XL	US (M) ≥ 7.5 US (F) ≥ 9.5 EU ≥ 41 UK ≥ 7.5



### Wall mount

Item ref:  
526366



### IV pole mount

Item ref:  
526359

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# Boost prevention strategies for your patients at risk of VTE with active compression therapy from Arjo.

Scan the QR code to view the demonstration video.  
Just point your smartphone camera at the QR code  
(Android phones might need a QR reader app).



## Flowtron ACS900 demonstration video

<https://arjo.wistia.com/medias/5ai1dd7584>

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At Arjo, we are committed to improving the everyday lives of people affected by reduced mobility and age-related health challenges. With products and solutions that ensure ergonomic patient handling, personal hygiene, disinfection, diagnostics, and the effective prevention of pressure injury and venous thromboembolism, we help professionals across care environments to continually raise the standard of safe and dignified care. Everything we do, we do with people in mind.

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