
# SMART COMPRESSION™ SYSTEM

Kendall SCD™ 700 Series Controller Smart Compression™ System

## GET SMART ABOUT COMPRESSION

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## THE PROBLEM WITH HOSPITAL-ASSOCIATED VTE

**60%** of all VTE cases occur within 90 days of hospitalization, making hospital-associated VTE (HA-VTE) one of the leading causes of avoidable hospital death.[1]

## THE PROBLEM WITH CONVENTIONAL COMPRESSION

Some compression devices in use today have technological limitations that can impact:

- **Ability to customize cycles for the patient**[2]
- **Nurse time**[3]
- **Blood movement**[2]
- **Compliance**[4]

# THE SMART COMPRESSION™ SYSTEM DIFFERENCE

Smart Compression™ System is the next evolution of IPC. It's designed to move blood[2] to help prevent stasis,[2] track compliance[4] and educate patients and clinicians about the risk of VTE.

The five critical components of a Smart Compression™ System are:

- Smart Sleeve Design
- Smart Compression Cycles
- Smart Patient Compliance
- Smart Breathability
- Smart Training



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# SMART COMPRESSION™ DETECTS

### Kendall SCD™ 700 Series Controller Smart Compression™ System

It's compression that's observant. That notifies you when a sleeve is removed. That shows true therapy delivery time, not just run time. Because when pumps monitor patients 24/7, you won't have to. That's smart compliance, and it's available in the Kendall SCD™ 700 Compression System.

**PATIENT SENSING™ TECHNOLOGY**

**COMPLIANCE VERIFIED BY SHIFT**

**QUALITY IMPROVEMENT PLAN (QIP) READY**


**Smart Compliance** · Smart Sleeve Design · Smart Compression Cycles · Smart Breathability · Smart Training

# THE PROBLEM WITH CONVENTIONAL COMPLIANCE

**Every hour counts**
Relying on current pump timers may not be sufficient. A 2017 study found that 80% of patients had IPCs that were not being used,[4] despite the fact that CHEST guidelines recommend 18 hours of IPC therapy a day.

**Patients may remove their sleeves**
Patients require frequent checks to ensure sleeves are worn. Hospitals are challenged by technological limitations to ensure compliance and resort to time-consuming manual checks.[5]

**Missed therapy leads to increased patient risk**
A study showed that when compliance rose from 11.8 to 20 hours of therapy a day, DVT rates dropped by 63 percent.[6]

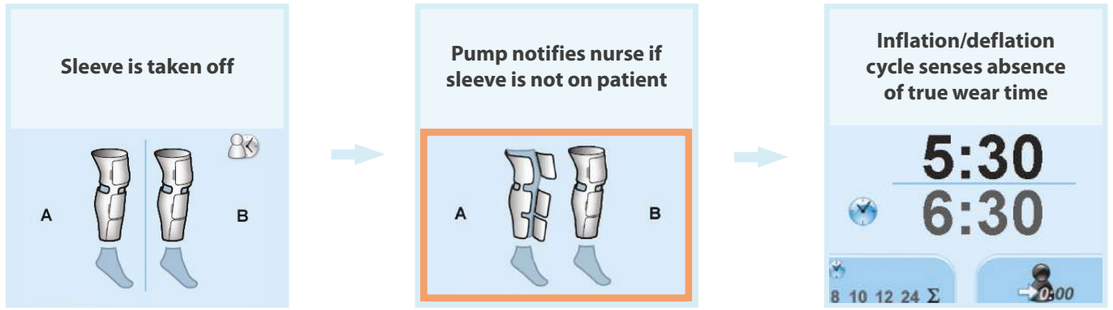
**80%** **of patients had IPCs that were not being used[4]**

# THE SMART COMPRESSION™ SYSTEM DIFFERENCE

The Kendall SCD™ 700 Compression System takes the guesswork out of compression therapy. With it, patients get better care, and you get better peace of mind knowing therapy will be delivered.[4]

## A COMPLIANCE METER THAT WORKS WITH YOU

- It allows you to see the patient's true wear time by nursing shift
- It features Patient Sensing™ Technology, which alerts the nurse of removed sleeves
- It provides a measurement tool to support true compliance to therapy and QIP initiatives



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# SMART COMPRESSION™ ADAPTS

## Kendall SCD™ 700 Series Controller Smart Compression™ System

It's compression that thinks. That senses. That reacts. That provides each patient with an automated, customized compression cycle around the leg. Because a custom cycle time for them means more time for you. It's the Smart Compression cycles with vascular refill detection available in the Kendall SCD™ 700 Compression System.


✓ Smart Compression Cycles ✓ Smart Sleeve Design ✓ Smart Compliance ✓ Smart Breathability ✓ Smart Training

# THE PROBLEM WITH CONVENTIONAL COMPRESSION CYCLES

**They apply the same cycle to all patients**

Your patients are unique. They have different conditions, different vasculatures, and different venous refill times.

**Differences in venous refill time matter**

As every patient is unique and if they are not treated uniquely, the patient may receive a second cycle of compression long after the veins have refilled with blood.[7]

**They move blood at a lower volume per hour**

By not timing a patient's unique vascular refill cycles, you're not moving as much blood as you can.[2]

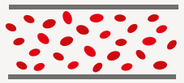
# THE SMART COMPRESSION™ SYSTEM DIFFERENCE

## PERSONALIZED THERAPY

TheKendall SCD™ 700 Series Controller uses the Smart Compression™ System technology including the vascular refill detection (VRD) which measures venous refill time and adjusts cycle times automatically. This proprietary technology:

**Automatically customizes compression cycles for each patient**

**Moves 100% more blood per hour than a competitive device with fixed, uniform compression[7*]**

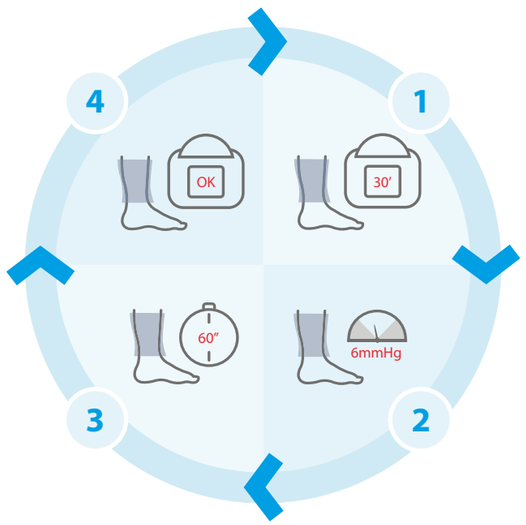


**Adjusts accordingly when a patient's needs change over time**


## HOW IT WORKS

Vascular refill time is calculated and set; the sleeve deflates.

Pressure is held for up to 60 seconds to evaluate calf girth changes. When calf girth stops increasing for 10 seconds, the leg veins have refilled completely.




Every 30 minutes, the pump checks venous refill time.

The sleeve deflates, holding 6 mmHg of pressure in the middle chamber of the calf.

*Competitive device was Venaflow Aircast Inc



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# SMART COMPRESSION™ PROTECTS

## Kendall SCD™ 700 Series Controller Smart Compression™ System

Kendall SCD™ sleeves are circumferential. They're clinically proven to move more blood.[7] They provide positionally independent compression on all sides of the leg to reduce the risk of DVT and save nurse's time. Because when compression goes around, confidence comes around. That's smart sleeve design, and it's part of the Kendall SCD™ 700 Compression System.


✓ Smart Sleeve Design ✓ Smart Compression Cycles ✓ Smart Compliance ✓ Smart Breathability ✓ Smart Training

## THE PROBLEM WITH CONVENTIONAL SLEEVE DESIGN

**Single posterior bladders only compress the calf**

Compressing this smaller surface area may not fully clear the valve cusps, which can lead to blood pooling and clot formation.[7]

**May require nurse intervention to be effective**

In a survey conducted by an outside firm, 63% of nurses said uniform sleeves needed to be repositioned somewhat often to ensure they are placed directly behind the calf.[8]

**Functional limitations may result in not proper therapy delivered**

A clinical study has shown a posterior, uniform, compression device expels less volume of blood over time compared to a circumferential, sequential, gradient one.[2]

## THE SMART COMPRESSION™ SYSTEM DIFFERENCE

### CIRCUMFERENTIAL DESIGN

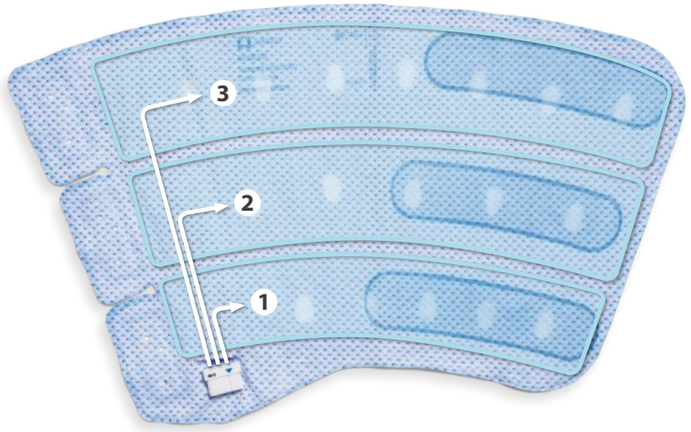
- Bladders extend to the end of each sleeve so that therapy is delivered at all points of contact
- Compresses a larger surface area,[9] clearing blood from behind the valve cusp where most DVTs form[10]
- Delivers therapy regardless of sleeve position, which may save nursing time

### SEQUENTIAL INFLATION

- Three separate chambers inflate to squeeze the leg in a 'milking' action

### GRADIENT PRESSURE PATTERNS

- Each chamber inflates at a different pressure to maximize blood flow[10]




### SUPERIOR HEMODYNAMICS

| | Patient Customization | Volume of Blood Moved[2] |
|---|---|---|
| **Kendall SCD™** | **Vascular Refill Detection (VRD)** | **7.8 L/hr** |
| Aircast Venaflow® | Fix set cycle | 5.2 L/hr |
| Arjohuntleigh Flowtron® | Fix set cycle | 3.3 L/hr |



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# SMART COMPRESSION™ BREATHES

**Kendall SCD™ 700 Series Controller Smart Compression™ System**

It's a sleeve that breathes.[11] That address the issue of sweat and heat with its moisture and thermal management properties.[11] That allows air circulation on the patient's skin, minimizing sweat pools, irritation and itchiness.[11] That's the comfort sleeve design and it's available with the Kendall SCD™ Compression System.


✓ Smart Breathability ✓ Smart Sleeve Design ✓ Smart Compression Cycles ✓ Smart Compliance ✓ Smart Training

# THE PROBLEM WITH CONVENTIONAL MATERIALS

**Patient discomfort may lead to compromised patient compliance**

Insufficient air circulation through the sleeves may cause sweat pools on the patient's skin, leading to skin irritation and itchiness and, potentially, to the removal of the sleeve by the patient.

**PVC bladder design**

The inflatable PVC bladders may be a barrier against sweat and heat evaporating into the atmosphere. Conventional sleeve design traps them on the patient legs making the therapy uncomfortable.

**Layers design and materials**

The reduced softness and flexibility of conventional sleeves, their edges and mutiple layers design may result in low comfort for awake patients receiving IPC.

# THE SMART COMPRESSION™ SYSTEM DIFFERENCE

## BREATHABLE DESIGN

- The simultaneous presence of mini holes in the internal and external fabric and larger ventilation holes strategically positioned throughout the inner PVC bladder allows sweat and heat to evaporate, preventing them from being trapped on the patient's legs.[11]

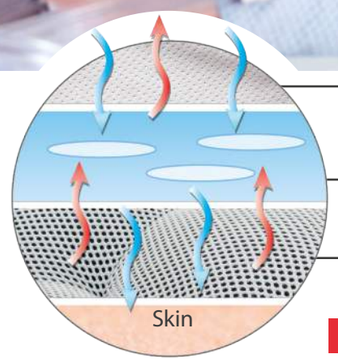
## PILLOWCASE DESIGN

- The pillowcase design describes the way the three layers of the sleeve come together and work as one to deliver an optimal level of flexibility and stretch, allowing the layers to glide freely among each other as a patient shifts their legs.[11]

## LAYERS MATERIAL

- The fibers' diameters of the venting inner fabric is similar to silk or Cashmere thus reducing itchiness.[11]
- The PVC middle bladder material is soft and pliant. This allows the sleeve to be comfortable for the patients and more forgiving once inflated.[11]

## COMFORT SLEEVE BREATHABLE DESIGN

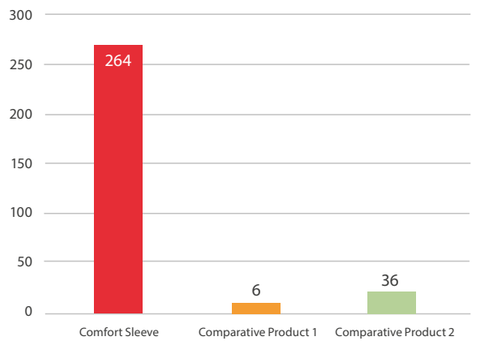



1. COOL VENTING LIGHTWEIGHT MESH OUTER FABRIC WITH LARGER APERTURES
2. LIGHTWEIGHT DEHP FREE PVC BLADDER WITH VENTILATION HOLES
3. SOFT AND BREATHABLE INNER FABRIC WITH MINI HOLES



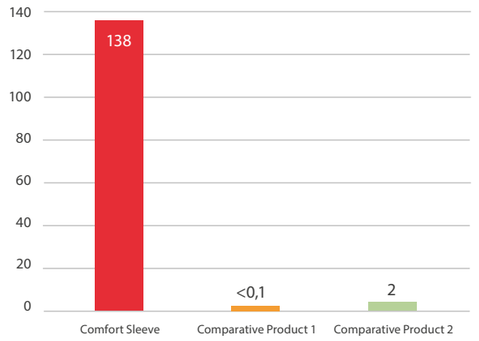
# LABORATORY TESTING

Vapor Transmission Rate (g/m$^2$/24h)[11]



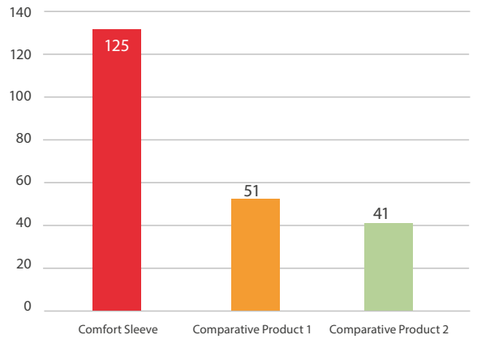

The Vapor transmission test measures the time rate for water vapor to pass through flat material surface. A high transmission rate indicates that liquid such as sweat can evaporate away from the patient leg quickly. The comfort sleeve showed the best vapor transmission rate compared to the alternative products thus resulting a highly breathable fabric.

Air Permeability (cfm/sq ft)[11]




The Air permeability test measures how much breathable is a fabric quantifying the level of ease with which air passes through it. A high permeability rate indicates that air passes easily through the sleeve fabric leaving the patient leg cool and dry. The comfort sleeve material has been shown to be more permeable for air transmission than the alternative products.

Heat & Evaporation Transmission Rate (Watts/m$^2$)[11]




The Heat & Evaporation transmission rate test is designed to evaluate thermal and evaporative resistance.

- Thermal resistance refers to a material's insulation properties and its resistance to dry heat transfer.
- Evaporative resistance is the resistance to the flow of moisture vapor from a saturated surface (high vapor pressures) to an environment of lower pressure. The comfort shows higher heat and evaporation transmission rate compared to the alternative products tested.

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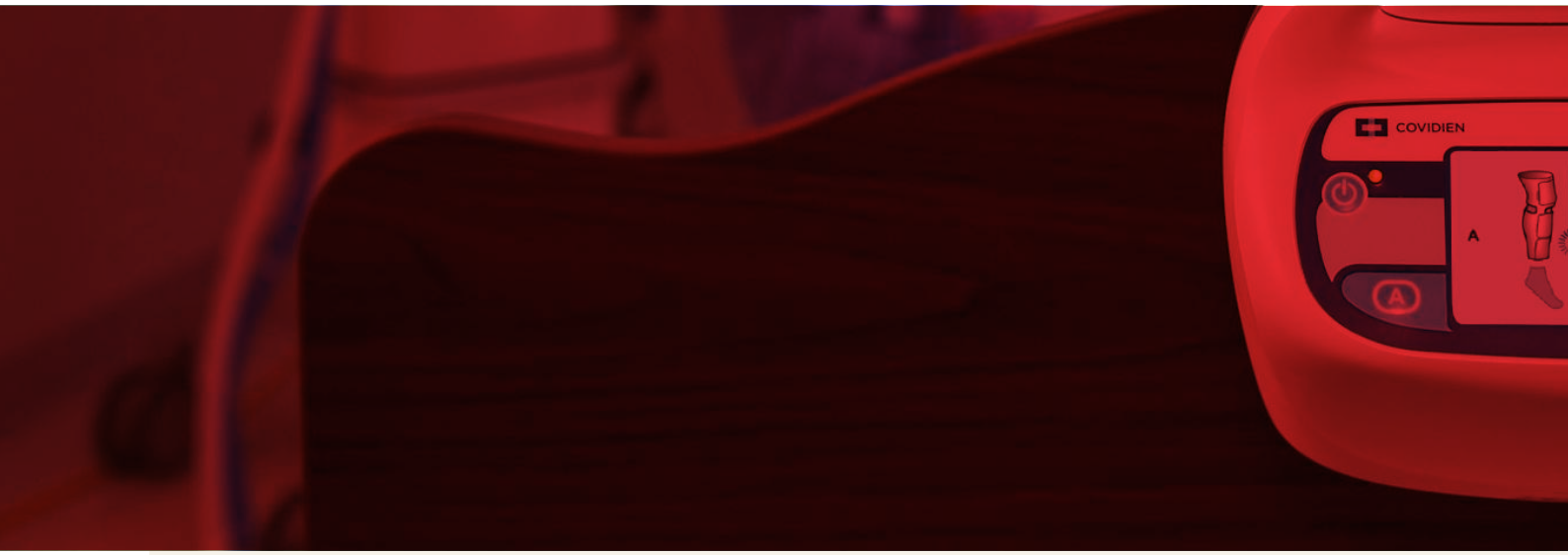


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