Prevention Gets Personal

SCD Response™ Compression System
In the fight against DVT and PE...

The SCD Response™ Compression System clinically and statistically reduces the frequency of both proximal vein and calf vein thrombosis. Nearly 60% of all medical and surgical patients admitted to hospital will require medium to high risk prophylactic treatment, which cannot be performed by anti-coagulants alone. The combination of mechanical and pharmacological modalities is significantly more effective than one modality on its own to prevent DVT and PE. 1,2,3

Patients at high risk

- Risk increases with age (40-60-70+)
- History of DVT
- Previous major surgery
- Malignancy, severe infection
- Trauma
- Stroke, Myocardial Infarction
- Pelvic surgery or total joint replacement
- Operations lasting one hour or longer

Laparoscopic surgery

The pneumoperitoneum created during laparoscopic surgery results in intraabdominal pressure that exceeds the pressure of venous blood return from the legs. This factor, along with general anesthesia and the reverse Trendelenburg position, can lead to venous stasis in the legs and an increased risk of DVT.

The intraoperative use of the SCD™ optimizes the venous blood return during pneumoperitoneum and significantly decreases the thromboembolic risk even during prolonged laparoscopic surgery.

SCD-therapy during laparoscopic cholecystectomy

Relative risk of DVT of a surgical patient
The SCD Response™ is the only Compression System that can detect each patient’s individual vascular refill rate to deliver the most reliable, efficient, customized compression therapy on the market.

- Personalized compression cycles
- Maximized blood flow for minimized stasis
- Reliable safety features
- User-friendly design
- Patient compliance
- Automatic operation

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**Improvement of Total Volume of Blood Moved**

<table>
<thead>
<tr>
<th>Position</th>
<th>SCD Sequel™</th>
<th>SCD Response™ System with Vascular Refill Detection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supine</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Semi Recumbent</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>Sitting</td>
<td>3.5</td>
<td>3.8</td>
</tr>
</tbody>
</table>

**Variation in Patient Refill Times**

- SCD Response Controller Refill Time (Seconds)
- Doppler Refill Time (Seconds)

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**Michael Berger**
Orthopedic patient
Age: 37
Typical refill time: 51 seconds

**Susanne Duvall**
Gynecological patient
Age: 52
Typical refill time: 31 seconds
Why do patients need personalized compression cycles?
Very simply, because venous refill times vary from patient to patient. Ideally, a compression cycle would be established based on their individual refill times, rather than relying on one pre-set parameter for every patient.

What additional benefits will my patients receive?
Because it personalizes the therapy delivered to each patient, the SCD Response™ System offers significant new benefits over traditional compression systems. While treatment delivered at pre-set cycle times can be relied upon to combat stasis, customized compression will move blood away from the lower extremities as quickly as the patient’s veins have refilled. So for the vast number of patients whose refill times are shorter than 60 seconds, this personalized approach provides more compression over time to minimize stasis and maximize blood flow.

How is the individual vascular refill rate established?
The SCD Response™ System uses a technique similar to air plethysmography to measure blood flow changes in the leg. This information is used by the system to calculate the patient’s venous refill time and adjust the frequency of compression. The system periodically re-evaluates the patient’s refill time to detect and adjust for any positional changes that may occur during hospitalization.

What makes the system user-friendly?
With a single touch, the system consistently delivers clinically proven sequential, gradient compression. In addition, the microprocessor control adjusts the level and frequency of compression without nursing intervention. The lightweight design and integrated bed mount promote easy handling and setup.

"SCD™ is a simple and reliable technique to increase venous blood flow from the lower extremities in conventional surgery. It also neutralizes the negative effect of pneumoperitoneum on venous blood return even in prolonged laparoscopic colorectal resections. Therefore, we strongly recommend thigh-length pneumatic ISC in every prolonged laparoscopic procedure."

Dr. W. Schwenk, University Hospital for General, Visceral, Vascular and Thorax Surgery of the Charité in Berlin, Germany

"The SCD™ combined with T.E.D.™ elastic compression is the most effective mechanical method of preventing deep vein thrombosis and is as effective as low molecular weight heparins. It is also more cost effective." Prof A.N. Nicolaides MS FRCS, The Cyprus Institute of Neurology and Genetics, Cyprus

SCD Response™ Personalized Sequential Compression

Personalized
The compression cycle comprises 11 seconds compression followed by individual vascular refill time without compression. This cycle gives maximal venous emptying and arterial refill for an individual.

Sequential
The three chamber design produces a compression wave up the leg. This results in complete emptying of the vasculature and maximises venous valve cusp clearance.

Automatic
The ideal compression profile is automatically preadjusted for safe operation and ease of use. The SCD™ controller adjusts automatically to each patient’s anatomy and through a constant feedback system maintains the correct compression profile at all times. This results in excellent patient tolerance with less nursing time.

Graduated
The compression wave is also graduated with the highest pressure: 45 mm Hg at the ankle, 40 mm Hg at the calf and 30 mm Hg at the thigh. This graduation of the SCD sleeve compression profile works synergistically with the compression profile of the T.E.D.™ Anti-embolism stocking to maximise blood velocity during the compression cycle.

Circumferential
The pressure chamber wraps around the leg providing hemodynamically appropriate compression. The pressure is unaffected by positioning and allows rotation of the sleeves if required.
## SCD™ Compression System: Proven DVT Reduction

### Published Peer Reviewed Clinical Studies

<table>
<thead>
<tr>
<th>Date / Author</th>
<th>Patient Group</th>
<th>End Point</th>
<th>Diagnostic</th>
<th>Control Group Incidence Rate</th>
<th>SCD Group Incidence Rate</th>
<th>Risk Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987 — Scurr et al.</td>
<td>Gen. Surg.</td>
<td>DVT</td>
<td>1-125 Doppler</td>
<td>7/78 (9%)</td>
<td>1/78 (1%)</td>
<td>89%</td>
</tr>
<tr>
<td>1989 — Turpie et al.</td>
<td>Neurosurgery</td>
<td>DVT</td>
<td>1-125 IPG</td>
<td>16/81 (20%)</td>
<td>7/78 (9%)</td>
<td>55%</td>
</tr>
<tr>
<td>1990 — Haas et al.</td>
<td>J Bone Joint Surg (AM)</td>
<td>Total Knee</td>
<td>Venography</td>
<td>Unilateral 17/38 (47%)</td>
<td>Bilateral 18/22 (82%)</td>
<td>8/36 (22%)</td>
</tr>
<tr>
<td>1990 — Lynch et al.</td>
<td>Total Knee</td>
<td>DVT</td>
<td>Venography</td>
<td>5/50 (10%)</td>
<td>31/307 (10%)</td>
<td>50%</td>
</tr>
<tr>
<td>1991 — Bailey et al.</td>
<td>Total Hip</td>
<td>DVT</td>
<td>Venography</td>
<td>12/45 (27%)</td>
<td>1/5 (20%)</td>
<td>78%</td>
</tr>
<tr>
<td>1991 — Woolson et al.</td>
<td>Total Hip</td>
<td>Proximal DVT</td>
<td>Venography</td>
<td>7/72 (10%)</td>
<td>T.E.D.* + Aspirin</td>
<td>6/69 (9%)</td>
</tr>
<tr>
<td>1992 — Francis et al.</td>
<td>JAM Med Assoc</td>
<td>Trauma</td>
<td>DVT/PE</td>
<td>3/7 (41%)</td>
<td>T.E.D./LDW</td>
<td>2/36 (6%)</td>
</tr>
<tr>
<td>1992 — Knudson et al.</td>
<td>J Trauma</td>
<td>Neuro-Trauma</td>
<td>DVT</td>
<td>5/34 (15%)</td>
<td>T.E.D.*</td>
<td>0/26 (0%)</td>
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<tr>
<td>1996 — Kodson et al.</td>
<td>J Bone Joint Surg (AM)</td>
<td>Total Hip</td>
<td>DVT</td>
<td>6/30 (20%)</td>
<td>T.E.D.*</td>
<td>0/26 (0%)</td>
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<tr>
<td>1996 — Ramos et al.</td>
<td>Chest</td>
<td>Cardiac PE</td>
<td>Venoscan (4%)</td>
<td>1/2 (5%)</td>
<td>1/11 (9%)</td>
<td>0%</td>
</tr>
<tr>
<td>1999 — Hooker et al.</td>
<td>J Bone Joint Surg (AM)</td>
<td>Total Hip</td>
<td>DVT</td>
<td>3/8 (37%)</td>
<td>T.E.D.*</td>
<td>0/26 (0%)</td>
</tr>
</tbody>
</table>

### Ordering Information

<table>
<thead>
<tr>
<th>REF</th>
<th>Description</th>
<th>Case</th>
<th>Fitting Information Location</th>
<th>Max. Circ.</th>
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<tbody>
<tr>
<td>73260/73261</td>
<td>SCD Response™ Control Unit with tubing</td>
<td>1</td>
<td>N/A</td>
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<tr>
<td>72040</td>
<td>SCD™ Knee-length sleeves, medium</td>
<td>5 pairs</td>
<td>Calf</td>
<td>53.3 cm</td>
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<tr>
<td>72041</td>
<td>SCD™ Knee-length sleeves, large</td>
<td>5 pairs</td>
<td>Calf</td>
<td>66.0 cm</td>
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<tr>
<td>72044</td>
<td>SCD™ Thigh-length sleeve, small</td>
<td>5 pairs</td>
<td>Thigh</td>
<td>55.9 cm</td>
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<tr>
<td>72045</td>
<td>SCD™ Thigh-length sleeve, medium</td>
<td>5 pairs</td>
<td>Thigh</td>
<td>71.1 cm</td>
</tr>
<tr>
<td>72046</td>
<td>SCD™ Thigh-length sleeve, large</td>
<td>3 pairs</td>
<td>Thigh</td>
<td>91.4 cm</td>
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<tr>
<td>1100-5336</td>
<td>SCD™ Sterile sleeve</td>
<td>5 eaches</td>
<td>Thigh</td>
<td>71.1 cm</td>
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<tr>
<td>6328</td>
<td>SCD™ Replacement tubing</td>
<td>1</td>
<td>N/A</td>
<td></td>
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</tbody>
</table>

REF 73260: 220V-240V two-pin plug
REF 73261: 220V-240V three-pin plug