

# Tourniquet Systems

A Personal Focus, A Personalized Fit



## Tourniquet Capital Equipment

### No two patients are the same –

that's why our tourniquet system, the A.T.S.<sup>®</sup> 4000, treats every patient with **Personalized Pressure<sup>®</sup> Technology**.

The A.T.S. 4000 strives to personalize pressure for the patient by delivering the minimum tourniquet pressure at a specific time, with a specific cuff, for a specific patient limb.

Personalized Pressure Technology can help OR Staff choose a more individual, often lower, cuff pressure. Lower tourniquet cuff pressure reduces post-operative wound complications after Total Knee Arthroplasty (TKA).<sup>1</sup>

Applying lower tourniquet pressure has been found to result in less post-operative pain. One study demonstrated that an average thigh tourniquet pressure of 230 mmHg resulted in statistically significant lower pain over a multi-day recovery period versus a tourniquet pressure of 350 mmHg.<sup>2</sup>

Minimizing tourniquet pressure and pressure gradients by using Personalized Pressure Technology helps minimize the risk of nerve-related injuries.<sup>3</sup>





A.T.S. 4000 Tourniquet



A.T.S. 2200 Tourniquet

## System Features and Benefits

	Zimmer A.T.S. 4000	Zimmer A.T.S. 2200
Number of Ports	Dual Port	Single Port
Number of Potential Cuffs	Dual Cuff	Dual Cuff
Mounting Options	Table or Pole Mount	Table or Pole Mount
Battery Type and Life	Lithium Ion 6 hrs	Lithium Ion 6 hrs
User Interface	Touchscreen	Touchscreen
International Alarm Standard 60601-1-8	Compliant	Compliant
Display	8.4" Color	7.0" Color
Minimum/Maximum Pressure	50/600 mmHg	50/600 mmHg
Pressure Accuracy	3 mmHg (50-600 mmHg)	4 mmHg (50-600 mmHg)
<b>Limb Occlusion Pressure (LOP) ▼</b> Allows for patient specific pressure which ensures that the minimum pressure is used, reducing the potential for post-operative tourniquet pain or other complications, such as bruising, nerve damage and swelling.	Yes	No
<b>Line Occlusion Detection (Acoustic Reflectometry) ▼</b> A kinked pneumatic tube can prevent an inflated cuff from deflating, resulting in unintentional tourniquet pressure. This alarm alerts OR staff that there is an occlusion in the line to the cuff and can prevent post-operative complications.	Yes	Yes
<b>Cuff Alert ▼</b> If OR staff tries to turn off the device and there is still pressure in the cuff, OR staff will be alerted. This ensures that an inflated cuff is not unintentionally left on a patient.	Yes	Yes
<b>Automatic IVRA Cuff Lock Out ▼</b> If both cuffs are inflated, users are warned before deflating the second cuff. This takes the guess work out of IVRA procedures and potentially deflating both cuffs simultaneously. Additionally, the cuffs will stay inflated in the event of loss of both A/C and back-up battery power to the tourniquet machine.	Yes	Yes
<b>Advanced Leak Detection ▼</b> Monitors the cuff and hoses for minor variations intraoperatively with the intention of reporting potential cuff/hose leaks. The machine will automatically maintain the pressure set point.	Yes	Yes
<b>Pre-Op Cuff Test ▼</b> Checks for cuff leaks prior to use to avoid putting a new cuff on a patient in the middle of a procedure.	Yes	Yes

▼ Proprietary Safety Feature

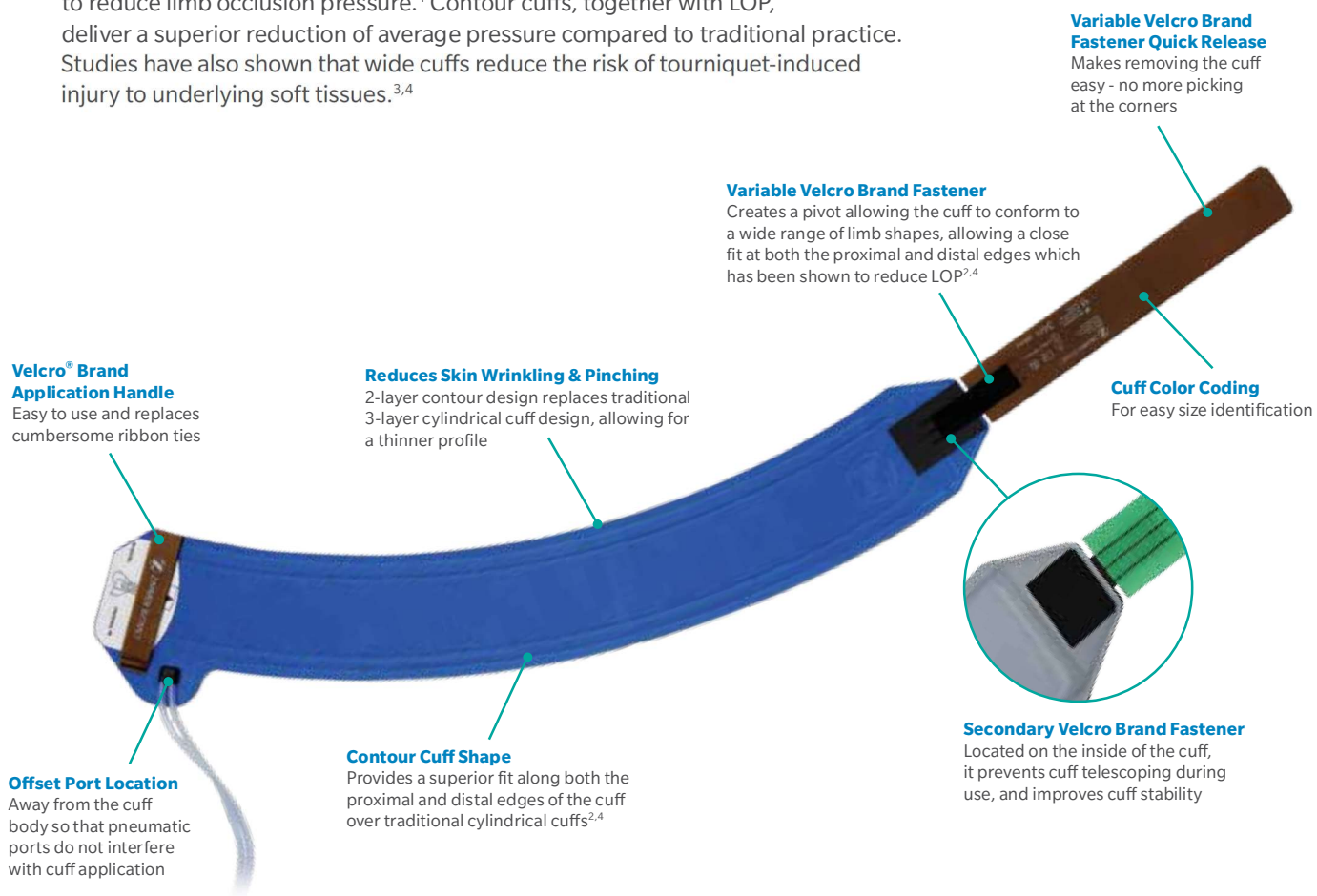
## Disposable Contour Cuffs

### Shaping the Future of Tourniquet Care

Your patients come in all shapes and sizes,  
shouldn't your tourniquet cuff?

Disposable contour cuffs have been proven to provide a superior fit to tapered limbs over traditional cylindrical cuffs.<sup>4</sup>

Previous studies have shown that wide contoured tourniquet cuffs occlude flow at lower pressures than narrow cuffs.<sup>3,4</sup> For tapered limbs, contouring the cuff to match the conical shape of the limb has been shown to reduce limb occlusion pressure.<sup>4</sup> Contour cuffs, together with LOP, deliver a superior reduction of average pressure compared to traditional practice. Studies have also shown that wide cuffs reduce the risk of tourniquet-induced injury to underlying soft tissues.<sup>3,4</sup>



Designed for comfortable, repeated use,  
Zimmer Biomet also offers reusable contour cuffs.

# Cylindrical Cuffs and Cuff Sleeves

## Reusable and Disposable Cylindrical Cuffs

These durable cuffs are designed to ensure enhanced performance and patient comfort. The wide variety of color-coded sizes makes it easy to meet even the most demanding procedural needs.

Zimmer Biomet disposable cuffs have been shown to have superior surface control than comparable disposable tourniquet cuffs.<sup>4</sup> Studies have shown that greater surface contact potentially reduces tourniquet inflation pressure.<sup>6,7</sup>

A.T.S. Cylindrical Disposable Cuffs



## Cuff Sleeves

**Specially designed to complement Zimmer Biomet cuffs and protect the patient from skin wrinkling and pinching.**

Our limb protection sleeves have been found to be more effective at eliminating wrinkles and pinches in the skin surface as well as reducing the chance of folding or wrinkling of material under the cuff during application when compared to four-layer stockinette and conventional cast padding.<sup>5</sup> All Zimmer Biomet protection sleeves are compatible with both cylindrical and contour cuffs.

## Limb Protection Sleeves

Disposable, Sterile, Box of 10 Size	Size
60-8000-008-00	8" (20 cm)
60-8000-012-00	12" (30 cm)
60-8000-018-00	18" (46 cm)
60-8000-024-00	24" (61 cm)
60-8000-030-00	30" (76 cm)
60-8000-034-00	34" (86 cm)
60-8000-042-00	42" (107 cm)
Reusable, Non-Sterile, Box of 10	Size
60-7910-001-00	X-SM Adult (8 cm)
60-7910-002-00	SM Adult (9 cm)
60-7920-001-00	Contour Arm Cuff Sleeve
60-7920-002-00	Contour Thigh Cuff Sleeve
60-7920-003-00	Contour Leg Cuff Sleeve



# Ordering Information

## Disposable Cuffs

### Contour Disposable Cuffs

*Single Bladder, Sterile, PLC, Box of 10*

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
18" (46 cm)	4.5" (11 cm)	Disposable Cuff	60-7970-153-00	60-7970-103-00	60-7975-153-00	60-7975-103-00
24" (61 cm)	4.5" (11 cm)	Disposable Cuff	60-7970-154-00	60-7970-104-00	60-7975-154-00	60-7975-104-00
30" (76 cm)	4.5" (11 cm)	Disposable Cuff	60-7970-155-00	60-7970-105-00	60-7975-155-00	60-7975-105-00
34" (86 cm)	4.5" (11 cm)	Disposable Cuff	60-7970-156-00	60-7970-106-00	60-7975-156-00	60-7975-106-00
44" (112 cm)	4.5" (11 cm)	Disposable Cuff	60-7970-157-00	60-7970-107-00	60-7975-157-00	60-7975-107-00

*Dual Bladder, Sterile, PLC, Box of 10*

Limb Circumference	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)
9"-21" (23-53.5 cm)	5.70" (14 cm)	Variable Contour IVRA Cuff	60-9400-011-00	60-9300-011-00

### Cylindrical Disposable Cuffs

*Single Bladder, Sterile, PLC, Box of 10*

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
8" (20 cm)	2.75" (7 cm)	Cylindrical Cuff	60-7070-151-00	60-7070-101-00	–	60-7075-101-00
12" (30 cm)	3.50" (9 cm)	Cylindrical Cuff	60-7070-152-00	60-7070-102-00	60-7075-152-00	60-7075-102-00
18" (46 cm)	4.00" (10 cm)	Cylindrical Cuff	60-7070-153-00	60-7070-103-00	60-7075-153-00	60-7075-103-00
24" (61 cm)	4.00" (10 cm)	Cylindrical Cuff	60-7070-154-00	60-7070-104-00	60-7075-154-00	60-7075-104-00
30" (76 cm)	4.00" (10 cm)	Cylindrical Cuff	60-7070-155-00	60-7070-105-00	60-7075-155-00	60-7075-105-00
34" (86 cm)	4.00" (10 cm)	Cylindrical Cuff	60-7070-156-00	60-7070-106-00	60-7075-156-00	60-7075-106-00
42" (107 cm)	4.00" (10 cm)	Cylindrical Cuff	60-7070-157-00	60-7070-107-00	60-7075-157-00	60-7075-107-00

*Dual Bladder, Sterile, PLC, Box of 10*

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
12" (30 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff	–	60-7080-101-00	–	60-7085-101-00
18" (46 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff	60-7080-152-00	60-7080-102-00	–	60-7085-102-00
24" (61 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff	60-7080-153-00	60-7080-103-00	–	60-7085-103-00



## Disposable Cuffs (cont.)

### Pediatric Disposable Cuffs

*Single Bladder, Sterile, PLC, Box of 10*

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)
7.25" (18 cm)	1.75" (4 cm)	Pediatric Cuff	60-9800-001-00	60-9700-001-00
10.5" (27 cm)	2.25" (6 cm)	Pediatric Cuff	60-9800-002-00	60-9700-002-00
15" (38 cm)	3.00" (8 cm)	Pediatric Cuff	60-9800-003-00	60-9700-003-00
17.5" (44 cm)	3.50" (9 cm)	Pediatric Cuff	60-9800-004-00	60-9700-004-00

### Luer Lock Cylindrical Disposable Cuffs

*Single Bladder, LLC, Box of 1*

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
8" (20 cm)	2.75" (7 cm)	Cylindrical Cuff with LLC Connector	–	60-7070-001-00	–	60-7075-001-00
12" (30 cm)	3.50" (9 cm)	Cylindrical Cuff with LLC Connector	–	60-7070-002-00	60-7075-052-00	60-7075-002-00
18" (46 cm)	4.00" (10 cm)	Cylindrical Cuff with LLC Connector	60-7070-053-00	60-7070-003-00	60-7075-053-00	60-7075-003-00
24" (61 cm)	4.00" (10 cm)	Cylindrical Cuff with LLC Connector	–	60-7070-004-00	60-7075-054-00	60-7075-004-00
30" (76 cm)	4.00" (10 cm)	Cylindrical Cuff with LLC Connector	–	60-7070-005-00	60-7075-055-00	60-7075-005-00
34" (86 cm)	4.00" (10 cm)	Cylindrical Cuff with LLC Connector	60-7070-056-00	60-7070-006-00	60-7075-056-00	60-7075-006-00
42" (107 cm)	4.00" (10 cm)	Cylindrical Cuff with LLC Connector	–	60-7070-007-00	60-7075-057-00	60-7075-007-00

*Dual Bladder, LLC, Box of 1*

Cuff Length	Cuff Width	Description	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
12" (30 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff with LLC	60-7080-001-00	60-7085-001-00
18" (46 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff with LLC	60-7080-002-00	60-7085-002-00
24" (61 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff with LLC	60-7080-003-00	60-7085-003-00

# Reusable Cuffs

## Contour Reusable Cuffs

### Single Bladder, PLC, Box of 1

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
9" x 21" (23 x 53.5 cm)	5.75" (15 cm)	Contour Arm Cuff	60-7450-002-00	–	60-7350-002-00	–
12" x 30" (30 x 76 cm)	5.75" (15 cm)	Contour Thigh Cuff	60-7450-003-00	–	60-7350-003-00	–
9" x 17" (23 x 43 cm)	5.75" (15 cm)	Contour Lower Leg Cuff	60-7450-004-00	–	60-7350-004-00	–
30" x 39" (76 x 99 cm)	4.75" (12 cm)	Contour Large Cuff	–	60-7500-008-00	–	60-7600-008-00

### Dual Bladder, PLC, Box of 1

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
9" x 21" (23 x 53.5 cm)	5.75" (15 cm)	Contour IVRA Cuff	60-7450-011-00	–	60-7350-011-00	–

## Cylindrical Reusable Cuffs

### Single Bladder, PLC, Box of 1

Cuff Length	Cuff Width	Description	Dual Port Cuff with Sleeve (e.g. for A.T.S. 4000)	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff with Sleeve (e.g. for A.T.S. 2200)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
8" (20 cm)	2.75" (7 cm)	Cylindrical Cuff	–	60-7500-001-00	–	60-7600-001-00
12" (30 cm)	3.50" (9 cm)	Cylindrical Cuff	–	60-7500-002-00	–	60-7600-002-00
18" (46 cm)	4.00" (10 cm)	Cylindrical Cuff	–	60-7500-003-00	–	60-7600-003-00
24" (61 cm)	4.00" (10 cm)	Cylindrical Cuff	–	60-7500-004-00	–	60-7600-004-00
30" (76 cm)	4.00" (10 cm)	Cylindrical Cuff	–	60-7500-005-00	–	60-7600-005-00
34" (86 cm)	4.00" (10 cm)	Cylindrical Cuff	–	60-7500-006-00	–	60-7600-006-00
42" (107 cm)	4.00" (10 cm)	Cylindrical Cuff	–	60-7500-007-00	–	60-7600-007-00
15" (38 cm)	3.00" (8 cm)	Extra Small Adult Cuff	60-8100-001-00	–	60-8000-001-00	–
17.5" (44 cm)	3.50" (9 cm)	Small Adult Cuff	60-8100-002-00	–	60-8000-002-00	–

### Dual Bladder, PLC, Box of 1

Cuff Length	Cuff Width	Description	Dual Port Cuff without Sleeve (e.g. for A.T.S. 4000)	Single Port Cuff without Sleeve (e.g. for A.T.S. 2200)
12" (30 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff	60-7555-001-00	60-7666-001-00
18" (46 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff	60-7555-002-00	60-7666-002-00
24" (61 cm)	5.50" (14 cm)	Cylindrical IVRA Cuff	60-7555-003-00	60-7666-003-00

# Accessories

## Hose Extensions

### Sterile, Box 20

Description	Dual Port (e.g. for A.T.S. 4000)	Single Port (e.g. for A.T.S. 2200)
Hose Extension, 36" (91 cm), PLC	60-1812-101-00	60-4009-101-00
Hose Extension, 36" (91 cm), LLC	60-1812-001-00	60-4009-001-00



## Tourniquets

### Tourniquet Capital – A.T.S. 4000 – Dual Cuff, Dual Port

*includes 1x Dual Hose (blue), 1x Dual Hose (red), 1x LOP Sensor, 1x Power Cord*

Description	Power Cord	Part Number
A.T.S. 4000 Tourniquet – English	US	60-4000-101-00
A.T.S. 4000 Tourniquet – Danish	Denmark	60-4000-301-03
A.T.S. 4000 Tourniquet – Dutch	Central Europe	60-4000-301-04
A.T.S. 4000 Tourniquet – Finnish	Central Europe	60-4000-301-05
A.T.S. 4000 Tourniquet – French	Central Europe	60-4000-301-06
A.T.S. 4000 Tourniquet – German	Central Europe	60-4000-301-07
A.T.S. 4000 Tourniquet – Italian	Central Europe	60-4000-301-08
A.T.S. 4000 Tourniquet – Portuguese	Central Europe	60-4000-301-11
A.T.S. 4000 Tourniquet – Spanish	Spain	60-4000-301-12
A.T.S. 4000 Tourniquet – Swedish	Sweden	60-4000-301-13

### Tourniquet Capital – A.T.S. 2200 – Dual Cuff, Single Port

*includes 1x Single Hose (blue), 1x Single Hose (red), 1x Power Cord*

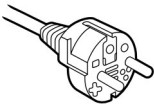
Description	Power Cord	Part Number
A.T.S. 2200 Tourniquet – English	US	60-2200-101-00
A.T.S. 2200 Tourniquet – Danish	Denmark	60-2200-301-03
A.T.S. 2200 Tourniquet – Dutch	Central Europe	60-2200-301-04
A.T.S. 2200 Tourniquet – Finnish	Central Europe	60-2200-301-05
A.T.S. 2200 Tourniquet – French	Central Europe	60-2200-301-06
A.T.S. 2200 Tourniquet – German	Central Europe	60-2200-301-07
A.T.S. 2200 Tourniquet – Italian	Central Europe	60-2200-301-08
A.T.S. 2200 Tourniquet – Portuguese	Central Europe	60-2200-301-11
A.T.S. 2200 Tourniquet – Spanish	Spain	60-2200-301-12
A.T.S. 2200 Tourniquet – Swedish	Sweden	60-2200-301-13

## Tourniquet Capital Accessories

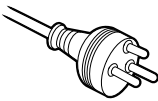
Description	Part Number
A.T.S. 4000 LOP Sensor – English	60-4000-105-00
A.T.S. 4000 LOP Sensor – Danish	60-4000-305-03
A.T.S. 4000 LOP Sensor – Dutch	60-4000-305-04
A.T.S. 4000 LOP Sensor – Finnish	60-4000-305-05
A.T.S. 4000 LOP Sensor – French	60-4000-305-06
A.T.S. 4000 LOP Sensor – German	60-4000-305-07
A.T.S. 4000 LOP Sensor – Italian	60-4000-305-08
A.T.S. 4000 LOP Sensor – Portuguese	60-4000-305-11
A.T.S. 4000 LOP Sensor – Spanish	60-4000-305-12
A.T.S. 4000 LOP Sensor – Swedish	60-4000-305-13
Accessory Basket	60-1908-001-00
Stand, Telescoping, W/28 Base	60-4022-001-00
Dual Hose, Blue, A.T.S. 4000	60-4017-001-00
Dual Hose, Red, A.T.S. 4000	60-4018-001-00
Single Hose, Red, A.T.S. 2200	60-2790-001-00
Single Hose, Blue, A.T.S. 2200	60-2790-002-00

# Power Cords

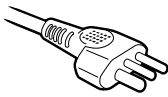
## Power Cords – A.T.S. 4000 & A.T.S. 2200



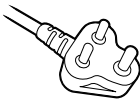
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Denmark  
60-4600-012-00



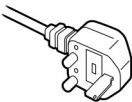
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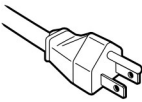
South Africa  
60-4600-008-00



Switzerland  
60-4600-003-00



United Kingdom  
60-4600-002-00



United States  
62-8000-800-00



## References

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2. Worland, RL; Arredondo, J; Angles, F; Lopez-Jimenez, F; Jessup, DE: Thigh pain following tourniquet application in simultaneous bilateral total knee replacement arthroplasty. *J Arthroplasty*. 12(8):848 – 52,1997.
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4. Younger ASE, McEwen JA, Inkpen K. Wide contoured thigh cuffs and automated limb occlusion measurement allow lower tourniquet pressures. *Clin Orthop*. November 2004; (428):286-293
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7. "New Limb Protection Sleeves: For Zimmer A.T.S. Automatic Tourniquet Systems." Zimmer Surgical, Dover, OH. Report on file, Zimmer Surgical, Inc., Dover, OH 2004

**For more information about the Zimmer Biomet Tourniquet Systems contact your Zimmer Biomet representative.**

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