SERVING THE MEDICAL COMMUNITY WITH VASCULAR TECHNOLOGY SINCE 1973
D. E. Hokanson, Inc. has provided noninvasive vascular diagnostic instruments of the highest quality to the medical community since 1973. We manufacture our instruments with a commitment to excellence in research, materials and workmanship. It is in this tradition that we continue to add to our product line.

This catalog gives a general description of each of our products. For more specific information or the name of your local Hokanson representative, please contact Hokanson directly. We look forward to working with you in providing convenient, effective health care throughout the world.

D. Eugene Hokanson, President

**Exceptional value**

Our goal with every instrument is to make it easy to use, accurate and reliable – all at a reasonable price. Your investment in Hokanson will serve you well and keep its value.

**Ease of operation**

Self explanatory buttons control the most important functions of each of our instruments. We design every instrument to ensure that the controls are logical, visible and easy to handle.

**Outstanding quality**

Our quality control program of mechanical and thermal shock testing for all Hokanson instruments helps to prevent many instrument failures and allows us to confidently offer a full five year warranty – the longest in the industry.

**Accurate results**

Hokanson instruments utilize the highest quality components. Each instrument is thoroughly tested for function and accuracy.

**A history of reliability**

Physicians have depended on Hokanson instruments since 1973. Today our instruments are at work in over 35 nations.

_Hokanson is ISO9001 certified, and all our products carry the European CE mark._
Dopplers & Plethysmographs .................................................. 2-3
CVS4 Complete Vascular System .............................................. 4-5
MD35 Procord ........................................................................ 6-7
NIVP3 Software: Segmental Arterial and Venous Exams ............. 8
UW7 Operating Room Doppler .................................................. 9
MD6 Vascular System .............................................................. 10
MD6OR Doppler .................................................................... 11
ANS2000 for RR-Interval Measurement .................................... 12
UT4 Ultrasonic Echo Track ....................................................... 13
EC6 Strain Gauge and Photo Plethysmograph ............................ 14
EC5R Strain Gauge and Photo Plethysmograph ............................ 15
Strain Gauges ........................................................................ 16
NIVP3 Software: Arterial Inflow ............................................... 17
E20 Rapid Cuff Inflator & AG101Air Source ............................... 18
TD312 Calculating Cuff Inflator ............................................... 19
S300 Sphygmomanometer & RD2 Rapid Cuff Deflator ............. 20
MV10 Segmental Cuff Selector & Fittings ................................. 21
Vascular Cuffs & Cuff Sets ...................................................... 22-23
Instructional Materials & Accessories ..................................... 24
Warranty, Service, Terms ....................................................... 25
Doppler bloodflow detectors have been used in medicine since their invention in Japan by Satomura in 1948. Innovations in Doppler technology have resulted in easily portable instruments, capable of sensing the direction as well as velocity and location of bloodflow. Doppler output is always an audio signal with a pitch proportional to the velocity of the bloodflow and loudness proportional to the amount of blood. Additional outputs may include analog signals for recording hard copy on a strip chart recorder.

Dopplers are useful in the measurement of systolic blood pressure, in determining the patency of arterial grafts, and in tracing individual arteries and veins.

Dopplers with a direction sensing capability are typically called bidirectional. Bidirectional Dopplers allow you to distinguish between arterial and venous signals based on flow direction, and to identify reverse flow in the arteries. All Hokanson Dopplers are bidirectional, and use a variety of methods to show the direction of flow.

One direction indicator found in many of our Dopplers is the patented use of red and green lights in the probe tip. The red lights illuminate to indicate flow away from the probe, and the green lights indicate flow toward. Other flow direction indicators in Hokanson Dopplers are a bar graph display and printed strip chart. The bar graph display shows the level and direction of the flow signal that will be recorded when the chart paper runs.

Some of our Dopplers also provide an aural indication of flow direction through stereo headphones; flow toward the probe is perceived in the left ear, and away in the right ear.

DNR® is a trademark of National Semiconductor for their patented noise reduction circuitry used in hi-fi audio applications to reduce background hiss. We were the first to license this technology for use in a Doppler instrument. As a result, our instruments eliminate hiss without using common filters which would limit high fidelity response. Accurate diagnosis often depends on clear, high-frequency signals.
A plethysmograph is an instrument for determining and registering variations in the size of an organ or limb. Diagnosis of vascular disease is done with several types of plethysmograph, each with advantages. We manufacture three types:

This instrument uses infrared sensors to detect skin color changes that occur with each heartbeat.

The output of the photo plethysmograph is a waveform showing volume changes in the measurement area. Major uses of this instrument are in the detection of bloodflow and the measurement of blood pressure. A limitation is that variations in skin color and the method of application preclude volume calibration.

A thin rubber tube, filled with Mercury or Indium-Gallium is placed around the limb or digit of interest. As the volume of the limb changes with each heartbeat, the tube is stretched and the electrical resistance increases. This electrical information is processed and conveyed as analog information to the display or recorder.

Advantages of our strain gauge plethysmograph are that it is easily and accurately calibrated in-situ and it can be used in a wide variety of applications.

Common uses of this instrument include measuring arterial bloodflow into the limbs and digits (sometimes called venous occlusion plethysmography), venous capacitance, maximum venous outflow to detect deep venous thrombosis in the legs, and blood pressure in the extremities.

This plethysmograph detects changes in limb or digit volume from the pressure changes in a sensing cuff. The cuff is placed around the object of interest, inflated to a low pressure and sealed off from the inflation device. Any change in volume under the cuff is reflected in a pressure change within the cuff. This is shown on a display or recorded.

The pneumo plethysmograph is generally used for evaluating waveform shapes and relative amplitude changes. It can also be calibrated by adding or subtracting a known volume of air to the system and observing the corresponding output changes.

Advantages of pneumo plethysmography are that it is simple to use and clean waveforms are easy to obtain; multiple cuffs can be applied to several parts of the body and then measured in quick succession. Uses include pulse volume recording (PVR) and maximum venous outflow in comparison to venous capacitance.
The CVS4 Complete Vascular System gives you computerized peripheral vascular exam capabilities in an all inclusive, simple to use package. The combination of a bidirectional Doppler, photo plethysmograph, pneumo plethysmograph, and automatic cuff inflator gives you the capability to easily perform all your peripheral vascular tests.

The CVS4 has an open format which allows you to do vascular examinations in the same order and configuration you’re used to, while storing patient waveforms and data in a database. Tests are easy to perform with user friendly Windows® based software. Reports are clear and concise.

Spectral analysis is included with every CVS4. The Spectral Doppler sounds are saved, so you have the ability to listen to and view stored waveforms – an excellent Doppler training tool. Each waveform is also presented with a gold standard for both viewing and listening comparison.

Patient Demographics and Signs and Symptoms questions are customized to match your existing protocol. Patient data and demographics are stored, so it is easy to track a patient’s progress over multiple visits: graphs representing progress of the ABI, exercise event history, and post exercise recovery time print as part of the standard report.
Standard CVS4 features include:

- Doppler Spectra and Zero-Crossing Doppler
- Photo and Pneumo Plethysmographs
- Automatic Inflator and Cuff Selector
- Complete set of cuffs for performing segmental pressures and PVR’s
- Flatpanel Monitor
- Mini desktop computer running Windows® operating system
- Color HP Desk Jet printer
- Custom instrument cart designed for ease of use and convenience

**CVS4 Tests and Applications**

<table>
<thead>
<tr>
<th>Test and Application</th>
<th>Doppler</th>
<th>PPG</th>
<th>Pneumo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper / Lower Extremity Spectral Doppler</td>
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<tr>
<td>Upper / Lower Extremity Analog Doppler</td>
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<tr>
<td>Upper / Lower Extremity Segmental Blood Pressure</td>
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<td>Blood Pressure in All Digits</td>
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<td>Venous Capacitance</td>
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<td>Maximum Venous Outflow</td>
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<td>Venous Reflux</td>
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Includes 
on-site  
setup and  
in-service  
training
For the most common vascular testing procedures performed today, the MD35 Procord is perfect. Using the same dependable technology found in other Hokanson instrumentation, the MD35 Procord incorporates two plethysmographs (photo and pneumo), and a bidirectional Doppler into the same unit. These let you perform most arterial and venous tests.

The MD35 has a sensitive bidirectional Doppler with convenient controls for volume and the chart recorder on the probe. The MD35 has ten calibrated gain settings, selectable AC or DC coupling for both plethysmographs, and a two speed chart recorder.

This instrument, with its compact size and user-friendly controls is the ideal table top unit for any vascular lab. It can also be used with the NIVP3 software, for waveform storage and printing computerized reports. (See page 8 for detailed software information.)
**MD35 System Accessories**
- Basic cuff set for all limbs and digits
- S300 Aneroid Sphygmomanometer
- RD2 Rapid Cuff Deflator
- University of Iowa Doppler Course
- Segmental Pressures and Maximum Venous Outflow Video

**Optional Segmental Pressure Package**
*(available with purchase of the MD35)*
- Extra cuffs for a complete segmental pressure and PVR studies
- MV10 Segmental Cuff Selector

<table>
<thead>
<tr>
<th>MD35 Procord Tests and Applications</th>
<th>Doppler</th>
<th>PPG</th>
<th>Pneumo</th>
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<tr>
<td>Upper / Lower Extremity Arterial and Venous Doppler</td>
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The NIVP3 software package for Segmental Arterial and Venous Exams is a Windows® based application that captures and prints physiologic studies of upper and lower extremities, arteries and veins. With the NIVP3 software, the computer becomes an extension of your diagnostic instrument, enhancing the power of both. Patient reports are comprehensive, complete with Doppler and plethysmographic waveforms, patient demographics and tabular data.

The NIVP3 database maintains data from current and historical patient visits and can be used to track a patient’s vascular changes over time.

NIVP3 connects to many Hokanson instruments including the MD35 Procord, TL400 Totalab, EC5R Plethysmograph, EC6 Plethysmograph, and the TD312 Calculating Cuff Inflator.

The Spectral Doppler option is available for use with the MD35 Procord and TL400 Totalab. It offers the unique capability to playback Doppler waveforms and sounds.

NIVP3 tests for performing Segmental Arterial and Venous Exams include:

- Segmental Doppler of upper and lower extremities. Available with zero-crossing Doppler and optional Doppler spectra.
- Photo plethysmograph (PPG) waveforms of the toes and fingers.
- Segmental pressures of upper and lower extremities, fingers and toes. Choose between Doppler and PPG to sense the return pulse.
- Pulse volume recordings (PVR’s) of upper and lower extremities.
- Post exercise pressures with automatic ischemic window calculation.
- Penile pressures and plethysmography.
- Thoracic outlet syndrome with PPG.
- Maximum Venous Outflow with a strain gauge or pneumo plethysmograph.
- Venous reflux with PPG.
The UW7 bidirectional Doppler is designed with the operating room in mind. It is simple to use and has a compact footprint to fit in even the most crowded OR.

The UW7 has patented red and green LED’s on the probe tip to indicate the direction of bloodflow, and power to the unit is also controlled on the probe tip. These features make it easy for the user to control during surgery. The pencil style probe and extra long cable are detachable for easy sterilization.

The speaker unit can be placed outside of the sterile field, to maintain safety for the patient. The built-in speaker has a high quality sound, featuring Dynamic Noise Reduction (DNR®). The UW7 is powered by rechargeable NiCad batteries.

The UW7 is a simple stand-alone Doppler for the OR.
The MD6 System is our most compact vascular diagnostic system. There are four components:

**MD6 Bidirectional Doppler**

This Doppler weighs only 9 ounces and fits easily into your pocket. A high quality audio signal is provided by stereo earphones or a built-in speaker by the use of Dynamic Noise Reduction (DNR®). You can visually determine direction of flow with the patented red and green LED’s on the end of the probe. Optional stereo headphones also allow you to distinguish flow direction; flow toward the probe is heard in the left ear and flow away is heard in the right. The convenient on/off switch and a chart recorder start/stop control are located on the probe itself. The MD6 uses rechargeable NiCad batteries and a timed automatic shut-off prevents accidental battery drain. An analog output allows you to connect the MD6 to the MD6R chart recorder to record arterial and venous waveforms.

**MD6RP Photo Plethysmograph and MD6PN Pneumo Plethysmograph**

The MD6RP and MD6PN plethysmographs provide the same high quality transducers as our more expensive vascular instruments in lightweight, portable packages. Either the MD6RP or the MD6PN plugs onto the input plug on the side of the MD6R Chart Recorder and draws its power from it. Combined with the MD6R, six range settings are provided with vein and arterial testing modes for common plethysmographic tests. Each plethysmograph utilizes all the features of the chart recorder to produce real-time waveforms and bloodflow information for hard copy reporting.

**MD6R Chart Recorder**

The MD6R provides real-time chart recording of bloodflow information directly from the MD6 Doppler, the MD6RP Photo Plethysmograph, or the MD6PN Pneumo Plethysmograph. Any one of the three units plugs onto the side of the MD6R chart recorder. No additional wires or connections are necessary. The chart recorder push-button controls are easy to use and simple to understand. There are three sensitivity settings for gain and three chart speeds. The MD6R prints the date and time of the test, the range and speed settings. It uses gridless chart paper, and prints the grid automatically. An LED bar graph shows the signal level enabling you to see the waveform before you print it. A battery level indicator, a push button on/off switch, and automatic shut-off help save battery life. The recorder will run for three to four hours on rechargeable NiCad batteries. The MD6R is compact and weighs just 4 pounds.

The MD6 is an excellent Doppler in a small package
MD6OR Doppler

The MD6 Operating Room Doppler takes the simple compact features of the MD6, and optimizes them for the operating room.

The MD6 Operating Room Doppler is a pocket sized bidirectional Doppler, designed for use in the operating room. The pencil style probe and extra long cable (6 feet) are detachable for easy sterilization. The speaker unit can be placed outside of the sterile field, to maintain safety for the patient. The MD6 Operating Room Doppler’s features include red and green LED’s in the probe tip to indicate flow direction, buttons on the probe for easy operation, and rechargeable NiCad batteries. The MD6 Operating Room Doppler can also be used with the MD6R Chart Recorder for printing waveforms.

Components of the MD6 System fit together in a carrying case, making the unit easy to transport.

<table>
<thead>
<tr>
<th>MD6 System Tests and Applications</th>
<th>MD6 Doppler</th>
<th>MD6RP PPG</th>
<th>MD6PN Pneumo</th>
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The ANS2000 performs three simple tests of cardiac autonomic nervous function:

- **RR-Variation (or HRV)**
  RR-Variation measures beat to beat heart rate variation, as it corresponds with deep respiration.

- **Valsalva**
  Valsalva test measures beat to beat heart rate variation during a Valsalva maneuver.

- **30:15 Stand Test**
  The 30:15 Stand Test measures heart rate variation with the patient's postural change.

The ANS2000 is a handheld unit with three ECG leads and a Respiration Pacer, which connects to a personal computer through an optically isolated cable. ANS Reader software turns the unit on and off. The Respiration Pacer in the ANS2000 consists of a series of moving lights which guide the patient's breathing.

The ANS Reader Software stores patient data and allows you to view and edit the ECG analysis. After viewing the data, it will print your choice of comprehensive reports.
The UT4 is a unique ultrasonic instrument which accurately measures the diameter and diameter changes of a blood vessel noninvasively. It is used primarily in research to measure the compliance of arteries. Its ability to track changes in diameter is unsurpassed.

An external oscilloscope (2 channels, 10 MHz minimum bandwidth) must be connected to the UT4 to observe ultrasonic echoes from the vessel of interest. Two phase-locked tracking gates are aligned with the echoes which correspond to the arterial walls, then the gates are activated and they track the arterial wall movement. Analog outputs of the diameter and diameter change are provided in addition to a digital readout of the diameter of the vessel.

Real-time diameter and diameter changes are measured in the following arteries and veins:

- carotid
- brachial
- femoral
- popliteal

Accuracy of the arterial diameter measurement is 0.3 mm. Accuracy of the diameter change measurement is 0.005 mm. The diameter change signal is 10 mV/mm which can be recorded on an external chart recorder. One transducer and cables to connect the UT4 to the oscilloscope are provided.
The EC6 is an accurate, easy to use strain gauge and photo plethysmograph for use in a wide variety of measurement applications. It is the lowest cost strain gauge plethysmograph with in-situ electrical calibration. The EC6 will handle Mercury strain gauges from 3 to 50 cm and Indium-Gallium gauges from 5 to 50 cm.

In addition, an infrared photo transducer may be used as a sensitive pulse detector for blood pressure and venous reflux tests.

The analog output may be AC or DC coupled for arterial and venous tests. Seven sensitivity ranges span 2% (8% full scale) to 0.02% volume change per division on the meter. The analog output is adjustable from ±20 mV to ±2 Volts full scale so that most chart recorders can be used with the EC6. Calibration and zeroing of the output is accomplished at the push of a button, or by a remote switch or signal. Autobalance is also available, which will reset the signal whenever it goes beyond the scale of the meter on the instrument.

The built-in RS232 data output is optically coupled for safe use with an external computer. The EC6 is fully compatible with our NIVP3 software so that automatic arterial inflow or maximum venous output (MVO) measurements can be made. (See page 17 for detailed software information.)
The EC5R combines two favorite plethysmographs (strain gauge and photo) in one modest package. The strain gauge plethysmograph is self balancing and electrically calibrated. Ten sensitivity ranges from 0.01% to 10% measure exact volume change. Mercury strain gauges from 4 cm to 50 cm and Indium-Gallium gauges from 6 cm to 50 cm are available for limb and digit applications.

The photo plethysmograph (PPG) uses an infrared transducer to record qualitative pulse waveforms. The sensitivity of the PPG is capable of detecting and recording pulses in virtually any body part.

An LED bar graph shows the signal level so you can determine the position and activity of the signal without having to run the chart recorder. The EC5R is AC and DC coupled to allow for both arterial and venous testing. The unit can also be used with our NIVP3 software when an optional RS232 computer output is installed. (See page 17 for detailed software information.)

EC5R applications include:
- Venous Occlusion Plethysmography.
- Maximum Venous Outflow.
- Cold Sensitivity Testing.
- See page 14 for more applications.

See page 16 for information about strain gauges.
Hokanson four-wire strain gauges are the key to accurate bloodflow volume measurement. Gauges are designed so that the active portion of the gauge is the same as the circumference of the limb or digit being measured. This allows the plethysmograph to relate resistance change to volume change.

Since gauges are intended to stretch slightly, specify a length of 1 to 3 cm less than the circumference of a limb, or 0.5 cm less than the circumference of a digit. Adapters are available for using our gauges with other models of equipment.

Strain gauges are available in Mercury or Indium-Gallium types, and have a shelf life. In order to assure the longest useful life, gauges are made after the receipt of an order. They are guaranteed for one year. Gauges may be ordered by specifying individual sizes or they may be ordered in sets.

**Strain Gauge Sets:**
- **Limb Set:** Eight gauges from 22 to 36 cm in 2 cm increments.
- **Forearm Set:** Eight gauges from 16 to 30 cm in 2 cm increments.
- **Digit Set:** Seven gauges from 4.5 to 7.5 cm in 0.5 cm increments.
The NIVP3 software for Arterial Inflow simplifies your test protocol and inflow calculations considerably. It is a Windows® based application that will automatically run the plethysmograph and cuff inflator, and store your inflow waveforms. The software will also generate patient reports that are comprehensive, complete with plethysmographic waveforms, patient demographics and tabular data.

The instruments used for this test include the EC6, EC5R, or TL400 Strain Gauge Plethysmograph, in conjunction with the E20 Rapid Cuff Inflator.

For either single or multiple limb measurements, the NIVP3 software will automatically balance the strain gauge plethysmograph and control the E20 Rapid Cuff Inflator(s). The software allows you to choose your protocol for cuff inflation time, measurement time, and measurement interval.

Following waveform acquisition, the quantitative results are easy to obtain since the software makes the slope calculations for you.

This test has many names including:
- Forearm Bloodflow
- Venous Occlusion Plethysmography
- Arterial Inflow
**E20 Rapid Cuff Inflator**

The E20 is the only rapid cuff inflator that can inflate any cuff in less than 0.3 seconds. Rapid inflation is essential for performing arterial inflow plethysmography. The E20 is useful in measuring Venous Reflux in conjunction with a duplex scanner, and in measuring blood pressures.

The E20 is simple to use; just preset the desired cuff pressure and then push the mode button. A single push button toggles the E20 between Cuff (inflate) and Preset (deflate) modes. The cuff quickly inflates and holds the preset pressure indefinitely. The E20’s large digital readout displays cuff pressures accurately to within 1 mmHg over a range of 0 to 300 mmHg.

NIVP3 Software will automatically inflate and deflate the E20 for Arterial Inflow and Maximum Venous Outflow tests.

**Optional features:**

- An optional cycle timer will inflate and deflate repeatedly for preset intervals when it is desirable to make measurements at regular intervals.
- A remote 3-second timer is available for venous reflux testing, performed in conjunction with a duplex scanner. The 3-second timer switch will automatically inflate the connected cuff, and then deflate it 3 seconds later.
- A foot switch allows remote operation, keeping your hands free for other tasks.

**AG101 Air Source**

The E20 requires a source of compressed air, and the AG101 is the perfect companion. The air source has the capacity to inflate a large contoured thigh cuff every 12 seconds indefinitely. Special care has been taken to make the compressor quiet, compact and dependable.
**TD312 RF and Data Link**

The handheld TD312 is the ideal cuff inflator for making segmental blood pressure measurements. The TD312 inflates any size cuff and remembers the pressure measurements for you. It makes cuff inflation easy: To inflate a cuff, just push the thumbwheel forward. To deflate, roll the thumbwheel back – you control the deflation rate. When the blood pressure is sensed by your Doppler or plethysmograph, you push the Store button to save the pressure readings. Up to 12 pressure readings may be stored in the memory register – ideal for segmental pressure measurements. The TD312 connects to any vascular cuff with a male Luer fitting or to our MV10 Segmental Cuff Selector (see page 21). By switching to Memory mode you can recall the stored pressures and calculate ratios, such as the ankle/brachial index (ABI).

When the TD312 is used with our NIVP3 software, pressures will be automatically entered in the computer when the Store button is pushed. The computer interface is available with either a wireless RF (radio frequency) or a wired connection.

A digital readout accurately displays pressures within 1 mmHg from 0 to 300 mmHg. Rechargeable batteries last up to 350 inflations. One battery pack and charger are included.
The **S300** is a rugged, reliable hand held sphygmomanometer used for manual inflation of our cuffs. It can also be used with our MV10 Segmental Cuff selector for doing segmental pressures and waveforms. The S300 pumps fast and is symmetrical for easy operation with either hand. Precise deflation control is achieved with a trigger-type valve. The S300 is guaranteed for one year. It can be visually checked for calibration and, if ever necessary, we’ll recalibrate it for a small service fee.

**RD2**

The RD2 is specially designed for rapid cuff deflation, necessary for venous outflow measurements. The RD2 works with our contoured thigh cuffs and rapid version straight cuffs (see page 22). Cuffs can be inflated through the RD2 with the S300 or TD312 cuff inflators. When you push in the plunger, the cuff quickly deflates. The RD2 has the same unique connection system as our E20 Rapid Cuff Inflator, for maximum cuff exhaust rate.
The **MV10** Segmental Cuff Selector is specially designed to make segmental pressure measurements easy to perform. Up to 10 vascular cuffs can be connected to this unit at the same time for upper and lower extremity or digit pressure measurements. Each toggle switch allows you to select a specific cuff for inflation and deflation by easily "flipping a switch". The MV10 can be used with the TD312 Calculating Cuff Inflator, S300 Aneroid Sphygmomanometer, or the E20 Rapid Cuff Inflator. The unit has no power requirements, is lightweight (less than 2 lbs.) and can be used with all sizes of vascular cuffs.

**Fittings**

Each standard Hokanson vascular cuff comes with a plastic female Luer fitting. Cuff inflators, including the S300 Aneroid Sphygmomanometer, TD312 Calculating Cuff Inflator, and E20 Rapid Cuff Inflator come with a metal male Luer fitting. The MV10 Segmental Cuff Selector has plastic male fittings.

Special fittings are also available upon request. Please specify the make and model of the equipment the fittings should connect with.
When measuring blood pressure in parts of the body as diverse as the small toe and the thigh you need special vascular cuffs. Hokanson cuffs with their distinctive royal blue color and replaceable bladders have become the standard of the vascular laboratory. They offer exceptional quality, durability and fit.

Our vascular cuffs are available in several sizes to meet most needs. Straight and segmental cuffs have washable nylon covers and durable polyurethane bladders.

<table>
<thead>
<tr>
<th>Model</th>
<th>Overall Cuff Size</th>
<th>Cuff Application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Straight Segmental Cuffs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC10</td>
<td>11 x 85 cm</td>
<td>Upper arm and lower leg for segmental pressure measurements and pulse volume recordings, four cuff method.</td>
</tr>
<tr>
<td>SC12</td>
<td>13 x 85 cm</td>
<td>Upper arm and upper leg for segmental pressure measurements and pulse volume recordings, four cuff method.</td>
</tr>
<tr>
<td>SC12L</td>
<td>13 x 124 cm</td>
<td>Upper thigh for segmental pressure measurements and pulse volume recordings, four cuff method on large patients.</td>
</tr>
<tr>
<td>SC5</td>
<td>6 x 83 cm</td>
<td>Arm or leg tourniquet cuff.</td>
</tr>
<tr>
<td>TMC7</td>
<td>7.5 x 40 cm</td>
<td>Metatarsus or wrist.</td>
</tr>
<tr>
<td><strong>Contoured Cuffs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC17</td>
<td>18 x 108 cm</td>
<td>Small to middle adult thigh for standard thigh blood pressures, plethysmography, segmental pressure measurements and pulse volume recordings, three cuff method.</td>
</tr>
<tr>
<td>CC22</td>
<td>24 x 122.5 cm</td>
<td>Large adult thigh for standard thigh blood pressures, plethysmography, segmental pressure measurements and pulse volume recordings, three cuff method.</td>
</tr>
<tr>
<td><strong>Rapid Version Straight Segmental Cuffs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC10D*</td>
<td>11 x 85 cm</td>
<td>Upper arm and lower leg for plethysmography and venous reflux measurements.</td>
</tr>
<tr>
<td>SC12D*</td>
<td>13 x 85 cm</td>
<td>Upper arm for plethysmography and venous reflux measurements.</td>
</tr>
</tbody>
</table>

* Rapid version cuffs must be used in conjunction with the E20 Rapid Cuff Inflator or the RD2 Rapid Cuff Deflator. These cuffs do not include fittings and are not for standard blood pressure measurements.
Replacement Bladders are also available for Hokanson Straight, Contoured, and Rapid Version Cuffs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Bladder Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC10RB</td>
<td>10 x 41 cm</td>
</tr>
<tr>
<td>SC12RB</td>
<td>12 x 41 cm</td>
</tr>
<tr>
<td>SC12LRB</td>
<td>12 x 56 cm</td>
</tr>
<tr>
<td>SC5RB</td>
<td>5 x 41 cm</td>
</tr>
<tr>
<td>TMC7RB</td>
<td>6.5 x 23 cm</td>
</tr>
<tr>
<td>CC17RB</td>
<td>17 x 65 cm</td>
</tr>
<tr>
<td>CC22RB</td>
<td>22 x 69.5 cm</td>
</tr>
<tr>
<td>SC10DRB*</td>
<td>10 x 41 cm</td>
</tr>
<tr>
<td>SC12DRB*</td>
<td>12 x 41 cm</td>
</tr>
</tbody>
</table>

Digit and Penile cuffs provide easy and secure application for accurate measurement. These specialty cuffs are widely used for measuring digit and penile pressures and for plethysmographic studies. DC and PC cuffs are well constructed of latex rubber on a Velcro backing. Disposable penile cuffs are made of PVC and are packaged separately for single patient use. The inlet tube has a plastic female Luer fitting for inflation with a TD312 or S300 cuff inflator.

<table>
<thead>
<tr>
<th>Model</th>
<th>Overall Cuff Size</th>
<th>Cuff Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC1.6</td>
<td>1.6 x 9 cm</td>
<td>Small toes and fingers.</td>
</tr>
<tr>
<td>DC1.9</td>
<td>1.9 x 9 cm</td>
<td>Middle toes and fingers.</td>
</tr>
<tr>
<td>DC2.5</td>
<td>2.5 x 9 cm</td>
<td>Large fingers and middle toes.</td>
</tr>
<tr>
<td>PC2.5</td>
<td>2.5 x 12 cm</td>
<td>Large toe or penis.</td>
</tr>
<tr>
<td>PC3.3</td>
<td>3.3 x 12 cm</td>
<td>Very large toe or penis.</td>
</tr>
<tr>
<td>DP2.0</td>
<td>2.1 x 12.1 cm</td>
<td>Large toe or penis (disposable). Available in packs of 10, 25 or 100.</td>
</tr>
<tr>
<td>DP2.5</td>
<td>3.0 x 12.1 cm</td>
<td>Large toe or penis (disposable). Available in packs of 10, 25 or 100.</td>
</tr>
</tbody>
</table>

Vascular Cuff Sets

- **VCS23**: Vascular Cuff Set: Two CC22, two CC17, four SC12, four SC10, two SC5, one TMC7, two DC1.6, two DC1.9, two DC2.5, one PC2.5, and one PC3.3.
- **VCS14**: Segmental Vascular Cuff Set: Four SC10, six SC12, two TMC7, and two PC2.5.
Thermal Chart Paper
TCPG60: 5 cm wide paper with 4 cm grid. Case of 60 rolls. (MD35, EC5R)
TCPG3: 5 cm wide paper with 4 cm grid. Box of 3 rolls. (MD35, EC5R)
TCP10: 5 cm wide plain (gridless) paper. Package of 10 rolls. (MD6R)

Ultrasonic Coupling Gel
GEL60: 60 gram tubes. Package of 12 tubes.
GEL5: 5 liter container. Includes a 250 ml dispenser.

Positioning Aids
PAK8: An eight piece set of contoured foam blocks used for positioning legs, arms, hands and feet for plethysmography studies. The blocks are easily cleansed and can withstand years of use. They can be variously configured for Venous Occlusion Plethysmography, Maximum Venous Outflow, Venous Reflux, Digit Flow, and other plethysmographic tests. The PAK8 includes two of each piece shown here.
PAK5: A five piece set, similar to the PAK8, designed for forearm plethysmography. It includes two of each size wedge and one U-shaped block.

Instructional Materials
- University of Iowa Doppler Course: Self teaching guide to Doppler usage.
  Three books and three audio cassettes demonstrate normal and abnormal Doppler sounds for peripheral, cerebrovascular, and venous applications.
- Vascular Texts:
  Hokanson has an assortment of textbooks describing vascular technology and physiology available from Davies Publishing.
- Hokanson Application Notes:
  Hokanson Application Notes are available upon request at no charge. These include: Ankle/Brachial Index, Digit Blood Pressure, Plethysmographic Detection of Blood Pressure, Deep Venous Thrombosis, Thoracic Outlet Syndrome, Venous Insufficiency, Forearm Bloodflow, and Arterial Inflow.
- Segmental Pressures and Maximum Venous Outflow Video:
  The theory and demonstration of these important vascular tests are presented using Hokanson equipment in this 40 minute video. VHS or PAL format available.
Warranty

Hokanson electronic instruments carry a five year warranty. Instruments are warranted against defects in parts, workmanship and performance for a period of five years from the date of delivery, provided that they have not been abused or repaired by an unauthorized person. Repair is free of charge when the instrument is returned prepaid. Return shipment will be made at our expense in a manner similar to your shipment to us. If for any reason we are unable to repair your instrument within three working days we will provide a free loaner instrument at our expense.

Batteries are excluded from this warranty. Strain gauges, blood pressure cuffs and accessories are warranted for one year.

Service Policy

Hokanson will service any instrument we have ever manufactured, regardless of the manufacture date.

Rental and loaner instruments are available to the customer under the following conditions:

1. If repair takes more than three working days, we will furnish a free rental instrument (loaner) at our expense. Freight charges will be the responsibility of D. E. Hokanson, Inc.

2. If the instrument is within the warranty period and the customer requires a rental instrument to continue lab operations during equipment repair, a loaner will be provided free of charge, but air freight charges will be the responsibility of the customer.

3. If the customer requires a rental instrument to continue lab operations during equipment repair, standard charges are 10% of the instrument's value per month, plus all air freight charges. Minimum rental is one month.

Terms

Payment terms are net 30 days on approval of credit. Hokanson customers can also pay for orders on Visa, MasterCard, through a prepayment check, COD, or wire transfer. Past due bills will have 1.5% per month added. All prices quoted are F.O.B. Bellevue, Washington, U.S.A.

Items returned for credit will be subject to a 10% restocking charge. Strain gauges are made to order and are not returnable for credit. Please notify Hokanson prior to returning any items for repair or replacement.

Minimum order is $25.00.