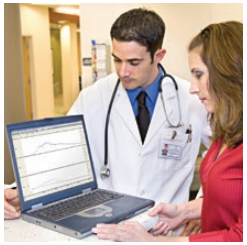
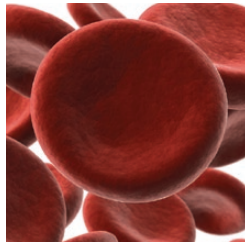
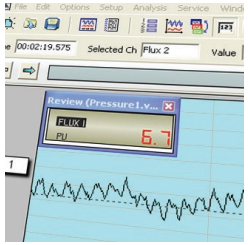
2014 moorVMS Product Catalogue







moor instruments

innovation in microvascular assessment

moorVMS Family

The moorVMS, vascular monitoring system, is a group of products that have been designed to work together seamlessly to help achieve your microvascular assessment no matter how simple or complex.

Monitoring products are available to detect flexible combinations of Tissue Blood Flow (from superficial and deeper tissue beds), Skin Temperature and Tissue Oxygenation.

Changes in flow, temperature and oxygen can be provoked with our “protocol products”; the moorVMS-HEAT skin heater, moorVMS-PRES pressure cuff controller and MIC2 iontophoresis system which can also operate in standalone mode or be controlled via moorVMS-PC PC software.

Measurement and protocol control is all handled by moorVMS-PC PC software that accepts signals from the monitors and provides control for the protocol products to bring reliability and reproducibility to your measurement.

moorVMS-PC will also ease analysis and reporting and with the addition of moorVMS-DAQ, enable you to collect signals from other measurement systems too.

This catalogue is intended to provide an overview. Please contact us for further details or to arrange a no obligation on site visit. Visit **www.moor.co.uk** for full details of our imaging and moorVMS family for blood flow and oxygen monitoring.

Moor Instruments

Moor Instruments, established in 1987, is a world leader in the design and manufacture of laser Doppler systems.

Our systems are used for the measurement of skin blood flow and microvascular blood flow in other organs for a broad range of clinical and research applications such as wound management, plastic surgery, dermatology and dentistry.

Quality

Moor Instruments is an ISO 13485 registered company and has been for at least a decade. By working to strict quality procedures we ensure product safety, reliability and effectiveness.

Customer support

First hand experience of laser Doppler research and development within Moor dates back to 1978 and with this we have the breadth of knowledge to help with your application and the enthusiasm to try to find answers to any of your questions.

By giving priority to performance, quality and service we strive to be our customers number one choice.

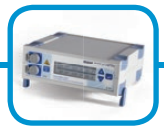
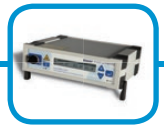
The future

Our aim will always be to offer technical excellence within each product we manufacture.

Our experienced and highly skilled design team are also involved with a number of development projects for other partners and manufacturers. Whatever your needs, as a researcher, clinician or manufacturer, Moor will work harder for you.

Choosing the right package

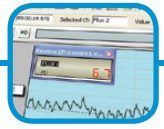
MEASURE

Laser Doppler Monitoring	Tissue blood flow and temperature monitoring	moorVMS-LDF		SEE PAGE 4
Tissue Oxygenation Monitoring	Continuous tissue oxygenation and temperature monitoring	moorVMS-OXY		SEE PAGE 5
High Power Laser Doppler Monitoring	Deeper tissue blood flow and surface temperature monitoring	moorVMS-LDF1-HP		SEE PAGE 6

STIMULATE

Automated Pressure Cuff Controller	Automatic pressure cuff control for routine microvascular testing	moorVMS-PRES		SEE PAGE 7
Skin Heater	Skin heating for flexible and reproducible challenges to the microvasculature	moorVMS-HEAT		SEE PAGE 8
Iontophoreses Controller	Transdermal drug delivery	MIC2		SEE PAGE 9

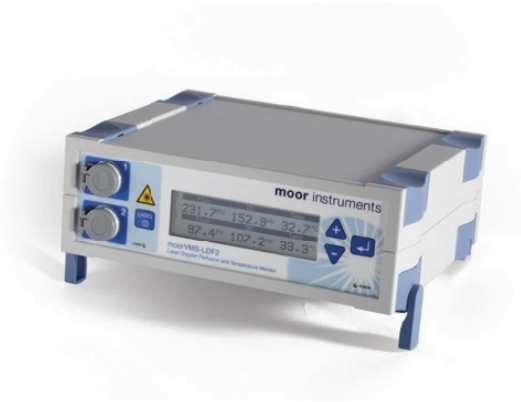
ACQUIRE & ANALYSE

Data Acquisition Module	8 Channel data acquisition	moorVMS-DAQ		SEE PAGE 10
PC Software	Recording and analysis software	moorVMS-PC moorVMS-TREND moorVMS-VASC		SEE PAGE 11-13

moorVMS-LDF Tissue blood flow and temperature monitoring

The moorVMS-LDF laser Doppler blood flow monitor is a high performance, medical grade module for clinic or laboratory. Use of DSP technology brings you a portable, lightweight module featuring uncompromised specifications and reliability at a breakthrough price. The features include;

- **Single and dual** channel options.
- **Multi-channel:** combine modules for a multi-channel system with software support for your ideal configuration. Stacking case design offers a compact footprint for multi-channel users.
- **'MemoryChip' probes:** for a wide range of applications. Calibration constants are stored within the probe itself with timed re-calibration reminders
- **"Same-site"** combined probes that offer simultaneous assessments of tissue oxygenation and laser Doppler blood flow (in surface or needle probe formats).
- **Full compatibility** with other moorVMS™ family products (laser Doppler, iontophoresis, skin heating and pressure cuff control options).
- **Easy viewing:** high contrast, ice white, backlit LCD display.
- **Advanced Windows™ PC software:** with extensive analytical features and automatic report generation.
- **Easily connectable:** analogue output (0-5V, BNC) and digital (USB) real time data transfer included as standard for connection to data acquisition systems.
- **Medical grade design:** for both clinical and research applications.
- **Multilingual training DVD:** for continual reference.
- **Reliability:** industry leading 5 year manufacturers warranty – independent of service history.



moorVMS-LDF2 – dual channel laser Doppler monitor

moorVMS-LDF – single and dual channel modules with MemoryChip probes.

Key Features

- Single and dual channel options
- Industry leading 5 year manufacturers warranty
- 'MemoryChip' probes
- Small footprint

moorVMS-OXY Continous tissue oxygenation and temperature monitoring

Adequate oxygen supply is essential for the life and health of all biological tissue. Both oxygen levels and tissue blood flow (measured by moorVMS-OXY™ and moorVMS-LDF™ respectively) are therefore important physiological indicators of tissue health and viability.

These indicators can provide vital information on current status and link closely to many applications, for example wound healing, re-epithelialisation, angiogenesis and improved immune function. The ability to measure oxygen delivery is a useful aid to wound management for prompt and successful healing.

The moorVMS-OXY™ monitor allows accurate and convenient real-time assessment of oxygenated / deoxygenated haemoglobin concentration, oxygen saturation (%) and skin temperature in the microcirculation, with the use of small, easy to use optic probes. The features include;

- **Non-invasive**, immediate and real time measurements at up to 40Hz, that start on contact with the tissue.
- **Flexibility** to measure baseline (resting) and maximal tissue oxygenation. Suitable for long term measurements.
- **Quick** and simple probe application.
- **Compact**, portable and lightweight.
- **Probes** for skin use, needle designs for other tissues.
- **"Same-site"** combined probes that offer simultaneous assessments of tissue oxygenation and laser Doppler blood flow (in surface or needle probe formats).
- **Full compatibility** with other moorVMS™ family products (laser Doppler, iontophoresis, skin heating and pressure cuff control options).
- **Advanced Windows™ PC software** with extensive analytical features and automatic report generation.
- **Convenient connections:** Analogue (0-5V, BNC connection) and digital (USB) real time data transfer included as standard.
- **High quality:** medical grade design for clinical and research applications.
- **Reliability:** 3 year manufacturers warranty as standard – independent of service history.

moorVMS-OXY – tissue oxygen saturation, haemoglobin and temperature

Key Features

- Non-invasive, immediate and real time measurements at up to 40Hz
- Combined blood flow, temperature and oxygenation probes

moorVMS-LDF1-HP High power tissue blood flow and temperature monitoring

The moorVMS-LDF1-HP™ laser Doppler monitor is optimised specifically to enable measurements to be taken from the tissue surface down to deeper vascular beds relative to standard laser Doppler monitoring. The higher laser power together with wider separation of transmitting and receiving fibres in the probe head enable a larger volume to be monitored and also reduces site to site variations. The system can be used together with the standard moorVMS-LDF system to provide a comparison between deeper and more superficial changes. The features include;

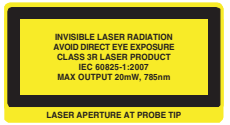
- **Multi-channel:** combine modules for a multi-channel system with software support for your ideal configuration. Stacking case design offers a compact footprint for multi-channel users.
- **'MemoryChip' probes:** for a wide range of applications. Calibration constants are stored within the probe itself with timed re-calibration reminders
- **"Same-site"** combined probes that offer simultaneous assessments of tissue oxygenation and laser Doppler blood flow (in surface or needle probe formats).
- **Full compatibility** with other moorVMS™ family products (laser Doppler, iontophoresis, skin heating and pressure cuff control options).
- **Easy viewing:** high contrast, ice white, backlit LCD display.
- **Advanced Windows™ PC software:** with extensive analytical features and automatic report generation
- **Easily connectable:** analogue output (0-5V, BNC) and digital (USB) real time data transfer included as standard for connection to data acquisition systems.
- **Medical grade design:** for both clinical and research applications.
- **Multilingual training DVD:** for continual reference.
- **Reliability:** industry leading 5 year manufacturers warranty – independent of service history.

moorVMS-LDF1-HP – high power laser Doppler monitor

VP1-HP wide fibre separation (4mm) probe (left) and VP7BS-HP (right) with probe head inserts.

Key Features

- Optimised for superior penetration compared to standard laser Doppler monitoring



moorVMS-PRES Automatic pressure cuff control for routine microvascular testing

The moorVMS-PRES™ pressure cuff control system provides reproducible and fully automated pressure cuff control for routine vascular challenges. With the use of a moorVMS-LDF™ laser Doppler monitor, blood flow responses can be measured providing a fully integrated and powerful solution for protocol management, analysis and reporting. The features include;

- **Choice of 7 standard pressure protocols** including limb/toe blood pressure, skin perfusion pressure, post occlusive reactive hyperaemia, pulse volume and ankle/toe brachial pressure index.
- **Custom protocols** for fully automated Inflation, Hold Pressure and Deflation patterns, all from a single key press. Flexible and linear deflation rates.
- **Rapid cuff inflation** with built in microprocessor control for all cuff sizes.
- **Highly accurate pressure sensing**.
- **Range of cuff sizes** for digit to thigh. Quick fit, airtight pressure line connectors.
- **Stand alone operation** for use with any laser Doppler, Imaging or other flow detection systems.
- **moorVMS-PC software available** with USB output for graphical display of pressure profiles and integration with moorVMS-LDF blood flow traces.
- **Connect easily** to your data acquisition system. Analogue outputs of pressure and pulse volume recording. BNC connections.
- **Medical grade design** for both clinical and research applications.
- **Multilingual training DVD** for continual reference.
- **Single** operator control.
- **Reliability:** 3 year manufacturers warranty as standard – independent of service history.
- **Part of the moorVMS family;** configure your ideal system with extra pressure, laser Doppler, oxygenation and haemoglobin concentration, iontophoresis and skin heating modules.

moorVMS-PRES – pressure cuff controller

moorVMS-PRES™ – complete with pressure cuff, optic probes and moorVMS-LDF2™ laser Doppler monitor.

Key Features

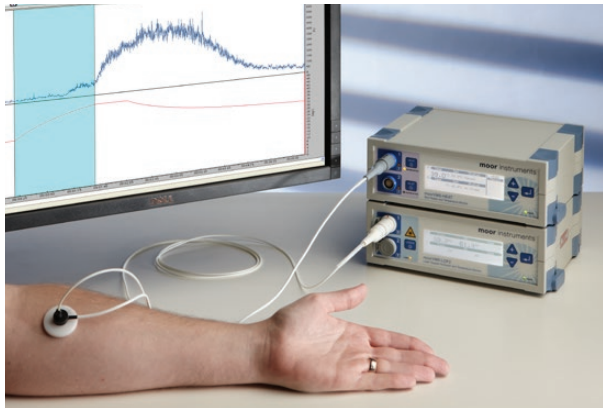
- Automated pressure cuff protocols
- Excellent reproducibility
- Operate protocols at the touch of a button

moorVMS-HEAT Skin heating for flexible and reproducible challenges to the microvascular

The programmable moorVMS-HEAT™ skin heater unit provides reproducible heating of skin tissue to be used with any laser Doppler blood flow monitor, imager or tissue oxygenation monitor. It can also be used as a skin temperature monitor. Features include;

- **Dual channel:** enables simultaneous, independent heating and monitoring of two separate areas.
- **Variable heating rate:** independent channel heating rate 0.01ºC - 0.1ºC per second.
- **Stand-alone:** manual control enables operation without a separate control unit or computer.
- **Protocol control:** to enable fully reproducible procedures in your studies supported by moorVMS-PC software.
- **Measurement and analysis software package:** automated to aid generation and processing of results.
- **Factory calibrated probes:** no calibration necessary for the life time of the probes.
- **Accurate and reproducible:** heater range between 20ºC and 45ºC with 0.1ºC increments and a measurement range between 5ºC and 50ºC.
- **Multi-channel:** combine modules within the moorVMS family for a multi-channel system with software support for your ideal configuration.
- **Easily connectable:** analogue output (0-5V, BNC) and digital (USB) real time data transfer included as standard for connection to data acquisition systems.
- **Reliability:** 3 year manufacturers warranty as standard – independent of service history.

moorVMS-HEAT – skin heater and temperature monitor



moorVMS-HEAT and moorVMS-LDF2 – setup showing skin heater and laser Doppler monitor.

Key Features

- Automate heating protocols
- Excellent reproducibility
- Operate protocols at the touch of a button

MIC2 Transdermal drug delivery

A low current Iontophoresis Power supply for use in combination with Laser Doppler assessment of blood flow changes stimulated by the transdermal delivery of vaso-active drugs. The features include;

- **Programmable:** current levels and delivery periods can be controlled via the serial port (RS232 or USB) of a PC.
- **Stand Alone mode:** current levels and delivery periods can be set via a soft key user interface. The MIC2 can be used with any laser Doppler instrument and when ever low current (0 to 250 microAmps) drug delivery by iontophoresis is called for.
- **Skin Resistance Measurement:** both voltage and current are measured and recorded for assessment of skin resistance changes.
- **Tests of microvascular responses:** these include endothelial function, smooth muscle function, peripheral neuropathy and irritancy.
- **Re-usable drug chambers:** Perspex 'ION' chambers with platinum electrodes. These drug chambers are compatible with Moor Instruments laser Doppler optic and heater probes. The large area ION6 chamber allows imaging of blood flow changes through a transparent window.
- **Full compatibility:** with other moorVMS™ family products (laser Doppler, tissue oygenation, skin heating and pressure cuff control options).
- **Advanced Windows™ PC software:** with extensive analytical features and automatic report generation.
- **Convenient connections:** Analogue (0-5V, BNC) for external monitoring of current and voltage.
- **Reliability:** 2 year manufacturers warranty as standard – independent of service history.

MIC2 – iontophoresis controller

moorVMS-LDF2 and MIC2 – Experimental set-up with enhanced image of responses to simultaneous iontophoresis of Acetylcholine and Sodium Nitroprusside.

Key Features

- Very low dose control to avoid galvanic effect artefact
- Multi period iontophoresing
- Re-usable chambers for monitoring and imaging

moorVMS-DAQ 8 Channel data acquisition

The moorVMS-DAQ™ data acquisition module enables analogue voltages from up to 8 externally connected systems (Moor or non Moor) to be captured with the moorVMS-PC™ software. The features include;

- 8 simultaneous channels / 16-bit resolution at 40Hz sampling frequency.
- Accepts ±10V analogue inputs with overvoltage protection of ±30V.
- Digital input triggering to control moorVMS-PC™ software from externally connected equipment.
- Digital output triggering to control externally connected equipment from the moorVMS-PC™ software.
- Industry standard BNC connections used throughout.

Connectivity

The moorVMS-DAQ™ provides 8 analogue inputs to sample analogue voltages from externally connected equipment.

The analogue inputs accept ±10V and allow voltages from a wide variety of equipment to be monitored and recorded by the moorVMS-PC™ software.

Digital Trigger

The digital input trigger accepts 0-5V logic level triggering for a minimum pulse width of 25ms and can only be used with the moorVMS-PC™ software to provide commands to start measurements or to add markers to measurement traces.

The digital output trigger provides 0-5V logic level triggering for a multiple of 25ms pulse width and is controlled by the user within the moorVMS-PC™ software by the use of actions and protocols, allowing you to trigger external connected equipment.

moorVMS-DAQ – data acquisition module

Key Features

- 8 Channel data acquisition
- Trigger in / out
- Standard BNC connectors

moorVMS-PC Recording and analysis software

The moorVMS-PC Windows based software package is specifically designed to work with your own moorVMS setup.

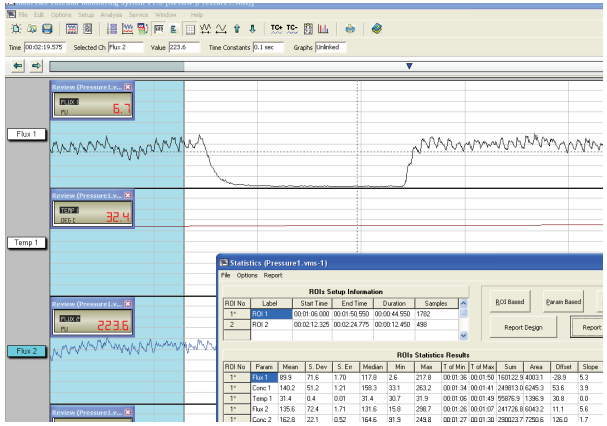
The software is compatible with all moorVMS modules (moorVMS-LDF / moorVMS-OXY / moorVMS-PRES / moorVMS-DAQ) and MIC2 and SH02 modules for measurement, protocol control, analysis and reporting.

Use the software in conjunction with moorVMS-DAQ to collect up to 8 analogue signals from other systems alongside VMS data and for digital triggering in/ out.

Data files from DRT4 (.drt) and moorLAB (.mlb) monitors can also be opened using V3.0 moorVMS-PC software, allowing use of the new advanced processing and data analysis features including FFT analysis, wavelet analysis and report generation.

This software enables;

- Clear graphical and digital display of all measurement modules connected, featuring quick set-up.
- Multiple alarm options for low, high absolute levels and % baseline.
- Protocol capability for automated control and analysis of iontophoresis drug delivery, tissue heating and pressure cuff control.
- Protocol scripting for automated recording, pausing measurement, sound prompts, insert marker, display text message, digital trigger.
- Storage of data for subsequent analysis and conversion to spreadsheet style format.
- Marker and ROI (Region of Interest) functions for flexible analysis including add, edit, delete and search.
- Simple analysis functions including: mean, std deviation, median, min, max, area under curve, histogram and curve fitting.
- Vasomotion/ Pulsatility analysis using FFT and wavelet analysis.
- Routine analysis of standard protocols, including; Toe Pressure, Ankle Brachial Pressure Index, % changes, Trending, skin heating and iontophoresis.
- Report generation with a formatting wizard to suit your individual requirements, for display in PDF, JPG, XML and other formats.
- Dedicated “spectral monitoring mode” for moorVMS-OXY.



moorVMS-PC screen shot – please refer to the moorVMS-PC software brochure for further details.

moorVMS-PC – windows software

Key Features

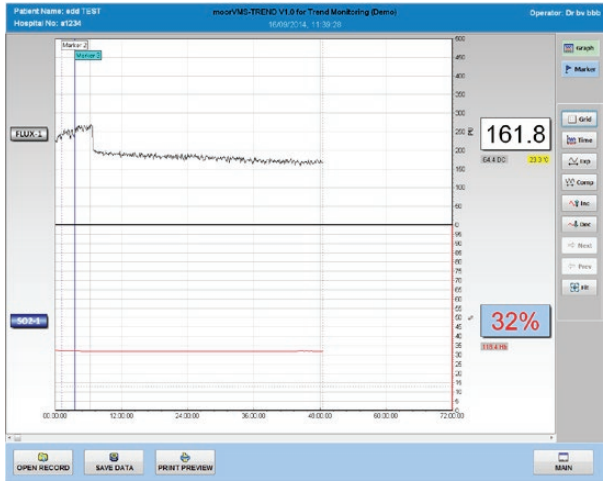
- Clear graphical displays from any moorVMS product
- Comprehensive analysis including FFT and wavelet
- Report functions

moorVMS-TREND Assistance for post operative monitoring

Free flaps, replants and transplants depend on tissue blood flow and oxygenation for survival and lasting health. These essential parameters are monitored by the moorVMS-TREND system, over the important minutes, hours and days post-op providing an aid to your decision making.

The moorVMS-TREND system provides accurate and sensitive measurements of microvascular blood flow, oxygenation and temperature post surgery and can help to provide early warning of potential complications post surgery. Automation has been in-built with baseline sampling, noise rejection, graphical trend display, alarm levels and alerts all automated, leaving the system as intuitive and easy to use as possible.

Central to the system is the moorVMS-TREND software package that will display traces from your preferred combination of blood flow, temperature and/or tissue oxygenation probes. Probes are available for surface, buried and oral flaps (tissue oxygenation and temperature probes are surface only). The large, clear graphical display shows smoother long term trending. In addition, “live” traces can be viewed to assess pulsatility and vasomotion status. A mobile clinical cart is also available as an optional extra to provide convenient housing and mobility of monitors, PC interface and probes.



moorVMS-TREND screen shot – please refer to the moorVMS-TREND software brochure for further details.

moorVMS-PC – windows software

Key Features

- Easy, patient-led interface
- Automatic baseline monitoring
- Alarm sensitivity adjustment
- Report functions and data export

moorVMS-VASC Microvascular testing

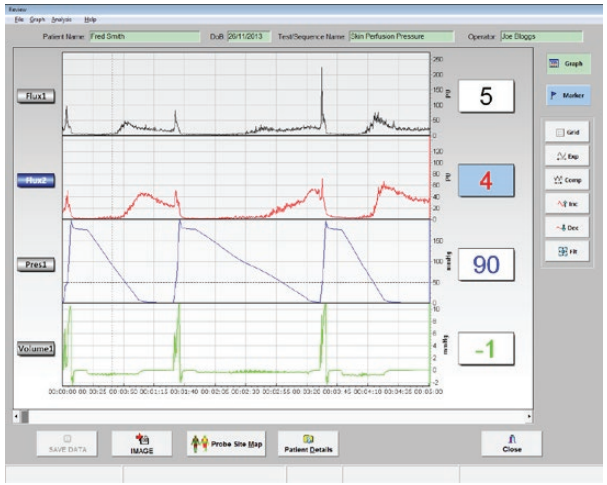
The moorVMS-VASC is a microvascular monitoring and testing system designed to assess tissue blood flow responses to standard pressure cuff inflation protocols. Custom protocols can be created to extend the applicability for clinical research.

The system combines a blood flow monitor with an automatic cuff control system and new user friendly clinical software. This functionally combined system from Moor enables clinical and research users to simplify the implementation of a wide range of vascular tests including:

- Toe and/or Limb Blood Pressure
- Toe and/or Limb Brachial Pressure Index (TBPI/ABPI)
- Skin Perfusion Pressure (SPP)
- Pulse Volume (PV)
- Post Occlusion Reactive Hyperaemia (PORH)
- Define your own unique test or sequence of tests or use pre-programmed test(s)

The moorVMS-VASC system has been specifically designed to aid microvascular assessments in a variety of physiological research and clinical applications. The user friendly software (including patient database) can be used for single tests or any combination of tests according to your study requirements. The system is easily configured enabling you to save user selected and defined test sequences or alternatively perform single tests of your choice. A range of tests are available and the software makes these simple to set-up, customise, and perform.

The display of data is clear and uncluttered - clear and intuitive. Reports are available in several customisable formats enabling you to display what you need to enable clear presentation of the information you need.



moorVMS-VASC screen shot – please refer to the moorVMS-VASC software brochure for further details.

moorVMS-PC – windows software

Key Features

- Easy, patient-led interface
- Intuitive setup
- Reproducible pressure cuff challenges
- Reporting functions and data export

Optic Probes

Moor Instruments manufacture a wide range of probes designed to help you assess flow from almost any tissue. We are more than happy to advise on your particular application but hope too that the following general notes are useful.

Skin probes

Skin probes are available with two main fibre configurations, twin or multi-fibre designs. Multi-fibre designs usually contain a ring of up to eight collecting fibres around a central delivery fibre. This provides an averaged signal for a larger tissue area than would otherwise be provided by the conventional twin fibre model.

Skin probes are usually fixed to the skin with a probe holder and double sided adhesive discs, although they can be used in other applications (e.g. bone, visceral measurements) and with other equipment (e.g. Iontophoresis). Please refer to the Accessories and Iontophoresis catalogues. moorVMS-LDF users can specify combined laser Doppler and temperature probes.

The standard length for all probes is 2 metres. Longer lengths can be supplied on request (code PXL). The range of probe holders for these (and other) probes is described in the accessories page.

Needle probes

Needle probes are amongst the most versatile designs. They can be used for surface measurements, inserted into tissue or used for single vessel measurements. The compact design also lends itself to measurements in tissues with restricted access, e.g. teeth, conjunctiva and where micromanipulation is required.

Probes can be fixed in position over tissue with a normal laboratory manipulator by clamping onto the black acetal shank.

Deeper measurements are possible by inserting the probe tip into tissue bulk, for which finer needles are suitable (VP4 and VP4s). The finest needles can be inserted directly into some tissues with the application of gentle pressure: for larger needles it may be necessary to puncture the tissue first with a hypodermic needle.

The use of specific probe holders can extend the application range of needle probes further still. Wet stick probe tips can be used to aid adhesion to moist/ mucosal surfaces. Dental putty can be used to create an individual probe holder for tooth measurement. Angled needle probes can be used to access hind teeth.

Although laser Doppler is not usually advocated for assessment of flow in single vessels, there is a role for the technique in the assessment of flow changes in small individual vessels. Moor manufactures a range of probe holders to aid this measurement.

Endoscopic probes

Endoscopic probes enable internal investigations of blood flow in tissue beds such as colon, bronchus and urethra. The probes are available in a wide range of diameters to fit the biopsy channel of most endoscopes. All are made from a flexible yet tough nylon sleeving.

Optic Probes

The finer diameter probes, although generally more delicate, can be used with some naso-gastric tubes: the tip of the n.g. tube is removed to allow an end viewing probe to protrude for measurement.

The standard length for all endoscopic probes is three metres. Longer lengths can be supplied, to a maximum of 4 metres, and are particularly useful for larger animals (e.g. horses).

Low profile

Low profile designs are either used where access is difficult (e.g. oral mucosa) or to reduce application pressure if the probe is to be covered by bandages. Various designs are available, including the titanium disc probe and the near flat silicon probe.

Master / single fibre probe system

Master probes are twin fibre designs, acting as a link between the monitor and the single fibre probe. The Master probe connects to the single fibre probe via an optical in-line connector (order code PCP).

This system offers a number of advantages over more conventional probe designs. The benefits include;

1. Small diameter probes (down to 250 micron) for minimally invasive measurements.

2. Wide choice of single fibre probes for diverse measurements. Just connect a new probe for a change to muscle, cerebral, gastric, organ or endoscopic (etc.) applications. This represents an economic solution if you intend to sample at a number of different tissue sites with a limited number of LDF channels.

3. Single fibre probes are supplied with re-usable, detachable connectors (order code PCN). Probes can be sterilised easily for re-use or treated as disposable (see P10d, P10k,P10s-TCG). Moor Instruments can also supply the materials for you to construct your own single fibre probes.

4. For longer-term measurements the Master can be disconnected to leave the single fibre in position between measurement periods.

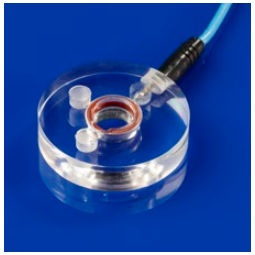
SINGLE FIBRE PROBES NOT SUITABLE FOR HUMAN USE.

Combined Optic Probes

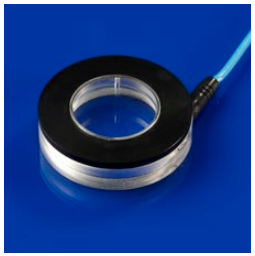
Combined optic probes allow blood flow and tissue oxygen measurements within a single probe head with connecting plugs for moorVMS-OXY and moorVMS-LDF.

Skin and needle designs available with skin probes also capable of measuring temperature.

Iontophoresis Chambers and Pressure Cuffs



ION1r - perspex drug chamber which accepts Moor optic and skin heater probes. Drug chamber 9.5mm, overall diameter 36mm.

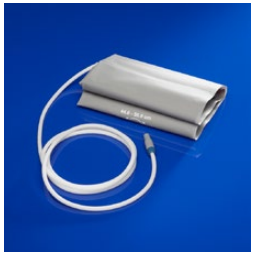


ION6 - is a drug chamber with a sealed cap to prevent drug spillage and a transparent window for LDI imaging. Drug chamber 22mm, overall diameter 36mm.

ION3-P2 - direct and indirect (axon reflex) assessment with moorVMS-LDF. For use with P2 optic probes. Drug chamber annulus internal diameter 4mm, outside diameter 22mm, overall diameter 36mm.

Arm Pressure Cuff with airline and quick fit connector. Manual rapid deflation valve for PORH assessments. Cuff size 11cm x 85cm.

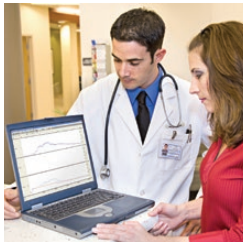
Arm Pressure Cuff (Adult) with airline and quick fit connector. Also suits child thigh. Cuff size 13.5cm x 52.5cm for limbs 27.5cm to 36cm circumference.

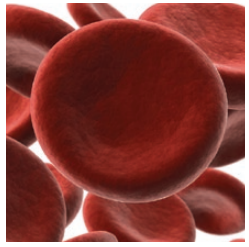


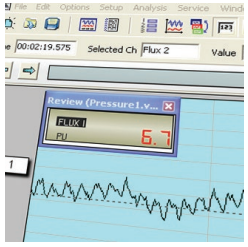
Thigh Pressure Cuff (Adult) with airline and quick fit connector. Cuff size 21cm x 84cm for limbs 44cm to 56cm circumference.

Toe Pressure Cuff with airline and quick fit connector. Cuff size 2.5cm x 9cm. For large fingers and middle toes.

Notes







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