**SURGICAL DIATHERMY UNIT**

**Martin ME400**

**MAIN FEATURES**

**Facilities**
- monopolar outputs
- bipolar outputs
- power output controls
- cut, coag, blend two, micro and macro rotary

**Alarms**
- neutral plate continuity monitor yes
- patient earth monitor no
- patient voltage monitor no

**Operating switches**
- footswitches monopolar, twin; bipolar, single
- handswitches monopolar, twin; bipolar, automatic forceps

**Output indicators**
- visual yes
- auditory yes
- volume control yes

**Electrical**
- generator type solid state
- output configuration isolated
- maximum output power 330 W

**Price ex VAT** £5,650

<table>
<thead>
<tr>
<th>Weight</th>
<th>Made in</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.6 kg</td>
<td>Germany</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size H X W X D</th>
<th>Manufacturer</th>
<th>DH Registered Manufacturer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>135 x 405 x 380 mm</td>
<td>Martin Medizin-Technik Tuttlingen Germany</td>
<td>No</td>
</tr>
</tbody>
</table>

**Does product comply with BS 5724/IEC 601?** Yes, BS 5724: Part 1 and Section 2.2

**Note:** Manufacturers may be registered, de-registered or re-registered at any time. Consult the latest issue of the DH Register of manufacturers to check current status.

---

**SUMMARY**

**Advantages:** very good footswitches; excellent cutting facility; easy to use.

**Disadvantages:** unable to switch out 'Uro-cut' facility when using footswitches, activation alarm irritating.

**Overall:** good all round unit, well liked by users, has BS 5724: Section 2.2, certificate. The footswitches tend to glide on highly polished floors. Users should consider carefully the safety implications of using automatic forceps switching without footswitch control.

**Update:** A change in the interpretation of IEC 60122, since this unit was type tested, now requires that a bipolar footswitch be operated to enable forceps switching. The relevance of this change should be considered for each application.

---

**BRIEF DESCRIPTION**

The Martin ME400 is a solid-state, tabletop, surgical diathermy unit with an isolated RF output rated at 330 W cut, 300/300/270 W blend, 250/100 W coag monopolar, and 70 W bipolar.

The unit has a dual mode operational facility with continuously variable rotary power controls and digital displays. The monopolar outputs are activated by twin electrical footswitches a fingerswitching active pencil; the bipolar output by an electrical footswitch or by forceps switching.

The Martin ME400 is fitted with a volume control, a neutral plate continuity monitor and a carrying handle.
DESCRIPTION

The Martin ME400 is a solid-state, table top, surgical diathermy unit with an isolated output rated by the manufacturer at 330 W maximum and a bipolar output rated at 70 W maximum.

All modes of operation are selected by touch switch controls. Output power levels for cut/blend, coagulation and bipolar are adjusted by separate, continuously variable, rotary controls. The selected power levels are indicated by simple numeric settings (1-10) printed around the control knobs and these settings are also indicated on digital displays.

One pure cut and three blend output options are available: Pure cut (330 W); Blend 1 (300 W); Blend 2 (300 W) and Blend 3 (270 W), each selected by touch switch, then the power level is set using the cut control. The Martin ME400 has a special 'Uro-cut' facility which is designed to assist the initiation of cutting for endoscopic and TUR procedures, by providing a brief power boost above the control setting each time the user activates the cut output. The power boost is automatically enabled when the user selects footswitch control and is automatically disabled with fingerswitch control.

Two types of monopolar coagulation are provided, contact coagulation (250 W) intended for desiccation and spray coagulation (100 W) intended for fulguration.

A single touch switch reduces the maximum power

PRODUCT SUPPORT

Supplier
Albert Waeschle
123/125 Old
Christchurch Rd
Bournemouth
BH1 1EX
Tel: 0202
557513/290502
Fax: 0202 299683
1 year

Guarantee
Maintenance provisions
• service contract?
  no
• will service engineer call?
  no
• temporary equipment replacement?
  yes

Spare parts
• spares availability
  10 years

Cost of spares
• monopolar leads £13.80 + VAT + P&P
• bipolar leads £27.60 + VAT + P&P
• monopolar footswitches £168 + VAT + P&P
• bipolar footswitch £78 + VAT + P&P

available from all monopolar outputs to about one third of that normally available.

There are two bipolar output power ranges, 20 W
<table>
<thead>
<tr>
<th>MANUFACTURER'S INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer/supplier</strong></td>
</tr>
<tr>
<td><strong>DH Manufacturer Registration(^1)</strong></td>
</tr>
<tr>
<td><strong>Certificated Product</strong></td>
</tr>
<tr>
<td><strong>Country of origin</strong></td>
</tr>
<tr>
<td><strong>Purchase Price(^2)</strong></td>
</tr>
<tr>
<td><strong>Physical Data</strong></td>
</tr>
<tr>
<td>• Dimensions (H x W x D)</td>
</tr>
<tr>
<td>• Weight</td>
</tr>
<tr>
<td><strong>Facilities</strong></td>
</tr>
<tr>
<td>• monopolar outputs</td>
</tr>
<tr>
<td>• bipolar outputs</td>
</tr>
<tr>
<td>• output controls</td>
</tr>
<tr>
<td><strong>Alarms</strong></td>
</tr>
<tr>
<td>• neutral plate continuity monitor?</td>
</tr>
<tr>
<td>• neutral plate voltage monitor?</td>
</tr>
<tr>
<td>• neutral plate earth monitor?</td>
</tr>
<tr>
<td>• diathermy current continuity monitor?</td>
</tr>
<tr>
<td><strong>Operating switches available</strong></td>
</tr>
<tr>
<td><strong>footswitches</strong></td>
</tr>
<tr>
<td>• monopolar</td>
</tr>
<tr>
<td>• bipolar</td>
</tr>
<tr>
<td><strong>handswitching</strong></td>
</tr>
<tr>
<td>• monopolar</td>
</tr>
<tr>
<td>• bipolar</td>
</tr>
<tr>
<td><strong>Output Indicators</strong></td>
</tr>
<tr>
<td>• visual</td>
</tr>
<tr>
<td>• auditory</td>
</tr>
<tr>
<td>• volume control</td>
</tr>
<tr>
<td><strong>Electrical</strong></td>
</tr>
<tr>
<td>• generator type</td>
</tr>
<tr>
<td>• output configuration</td>
</tr>
<tr>
<td>• maximum output power(^3)</td>
</tr>
<tr>
<td>• cooling</td>
</tr>
<tr>
<td><strong>Output connection</strong></td>
</tr>
<tr>
<td>• monopolar</td>
</tr>
<tr>
<td>• bipolar</td>
</tr>
</tbody>
</table>

**NOTES**
1. Manufacturers may be registered, de-registered or re-registered at any time. Consult the latest issue of the DH Register of Manufacturers to check the current status.
2. Prices typically include footswitch, active cable and plate assembly but do not include P&P or VAT.
3. Manufacturer's rating.

and 70 W, also selected by membrane touch switch. The ME400 allows simultaneous activation of one monopolar and one bipolar output enabling two surgeons to work together. The users can select from two monopolar outputs and two bipolar outputs. The primary monopolar output is activated by twin electrical footswitches or by using an active pencil with two fingerswitches. The secondary monopolar output is activated by fingerswitched active pencil only. The primary bipolar output is activated by a single electrical footswitch or by automatic forceps switching. The secondary bipolar output is activated by automatic forceps switching only. Activating either primary output overrides the corresponding secondary output.

The auditory output indicator produces three tones to distinguish between the cut and blend, and coag
and bipolar outputs. Simultaneous activation of the monopolar and bipolar outputs produces an alternating tone. The sound level is set by a volume control, adjusted by screwdriver, on the rear panel. The ME400 is fitted with an activation alarm to warn users when the output has been activated for more than 15 seconds.

The unit weighs 11.6 kg and has a carrying handle.

USER EVALUATION

The users were asked to score the facilities and attributes of the surgical diathermy on a five point scale. These were aggregated and are depicted in Figs. 1 and 2, on page 7, as bar charts.

The Martin ME400 was used in general, urological and neurological surgery. After initial instruction, all users found the unit very easy to operate.

The footswitches were particularly liked by our users. They had a positive action and good sensitivity both at the edge and centre of the switch. They were very easy to clean either by wiping the smooth surfaces or by total immersion. A few users found that the footswitches tended to slide around the theatre floor and had to place a theatre towel beneath them to provide adequate grip.

All users set the auditory output indicator to its minimum volume setting. It had an unobtrusive tonal quality. For some procedures requiring extensive use of diathermy, the surgeons occasionally activated the unit for over 15 seconds, setting off the activation alarm. This warning surprised and irritated the users during particularly intense periods of electrosurgery. The users silenced the alarm by releasing the footswitch or fingerswitch then immediately activating the output again.

Our users found the unit very easy to clean because of the smooth front panel and recessed rotary controls.

In neurosurgery users found that the unit had a very smooth, highly efficient cutting output, giving excellent results. For some procedures requiring operation close to the central nervous system there was a marked tendency for the initial power boost to stimulate the patient, so the lack of a switch to disable the 'Uro-cut' feature when using footswitches was a disadvantage. Even so, the users preferred to use footswitches rather than change to fingerswitch control where this feature is disabled. Contact coagulation performance was good at both high and low power settings with a variety of active electrodes.

For bipolar work both the macro and micro power ranges were utilized, with the micro output used deep inside the brain. Bipolar performance was good at all power settings. Automatic forceps switching was good, though some users commented that a delayed output facility would have been useful. The theatre staff were concerned that the automatic forceps switching might activate the bipolar output when the tines of the forceps were being cleaned.

Both monopolar and bipolar outputs are available together on the Martin ME400. Simply depressing the appropriate footswitch activates the selected output. For neurosurgery, where the surgeons often switched
between monopolar and bipolar, this feature was especially useful.

The ME400 performed well in general surgery. Cut, blend and contact coagulation were used and were all effective. The users found the cut output excellent and contact coagulation performance good.

For TUR procedures the cut, blend and spray coagulation outputs were all used. Both cut and blend options gave very good results. Spray coagulation performance was particularly effective with either a resection loop or roller ball active electrode.

TECHNICAL EVALUATION

Safety and performance: The ME400 met all of the safety and performance requirements. A sample of the ME400 submitted by Martin to TUV Bayem Munich and BSI testing independently of the evaluation, has recently been granted Certificates of Compliance. TUV Certificate No. 91 04 9628 002 (April 1991) and BSI Certificate No. 189096 (March 1992) apply.

However, users should note that the current UK interpretation of IEC 601-2-2/BS 5724: Section 2.2 sub-clause 56.11 requires the bipolar footswitch to be depressed to enable forceps switching, a change since the ME400 was type tested. Users should consider carefully the safety implications of using automatic forceps switching without footswitch control for a particular application.

The test results are summarised in the Results Table on page 6.

Reliability: The equipment was well made and reliability should be high. However, at the end of our user trials a full functional check revealed one fault. Activation of the coagulation output from the secondary monopolar output was not possible. The unit was returned to the supplier who confirmed the fault and returned it to the manufacturer for repair. The manufacturer did not find the fault and have since returned the unit to the supplier. Subsequent checks by the supplier identified the fault as an intermittent poor connection on one of the PCB's.

Serviceability and manuals: The user manual was well written and gave clear instructions for use, including suggested power settings for a range of procedures. It also contained photographs of accessories for use with this unit. The service manual supplied with the ME400 gave good technical descriptions of circuit design but failed to provide any circuit diagrams, so repairs at component level would be very difficult. However, the supplier has informed us that current service manuals include full circuit diagrams.

Access for servicing was good, and repair of printed circuit boards could be carried out by printed circuit board exchange with the supplier/manufacturer. The supplier does not offer a service contract, but faulty units can be returned to the supplier for repair with the option of temporary equipment replacement.

COMPLIANCE WITH STANDARDS

BS 5724 is the current British Standard for the safety of medical electrical equipment. Part 1 applies to all types, while Section 2.2 adapts it specifically for surgical diathermy equipment (see Appendix 1). The UK Health Departments recommend that purchasers specify compliance with both Part 1 and Section 2.2.

Independently of the evaluation, a sample of the Martin ME400 has been submitted by Martin to the TUV Test House under the joint agreement with BSI.


However, see the comment in emboldened text under Technical Evaluation.

MANUFACTURER’S COMMENTS

A copy of the draft report was sent to the supplier for comment, who responded as follows:

“We are happy with the comments made, and the report in general, and we do not wish to make any comments or observations, being satisfied with the outcome.”
### RESULTS TABLE

#### Safety
- earth leakage current\(^{(1)}\) pass
- patient leakage current\(^{(2)}\) pass
- patient leakage current\(^{(3)}\) pass
- diathermy leakage current\(^{(4)}\) pass
- earthing of exposed conductive parts pass

#### Output power
- maximum output power and load used\(^{(5)}\)
  - cut 330 W/500 Ω
  - blend 1 300 W/500 Ω
  - blend 2 300 W/500 Ω
  - blend 3 270 W/500 Ω
  - contact coagulation 250 W/300 Ω
  - spray coagulation 100 W/500 Ω
  - micro bipolar 20 W/100 Ω
  - macro bipolar 70 W/100 Ω
  - output power on minimum setting pass

#### Output waveform
- basic frequency 500 kHz nominal
- waveform sinusoidal pulsed sinusoidal

#### Construction\(^{(6)}\)
- quality of assembly excellent
- mechanical construction excellent
- serviceability satisfactory

#### Reliability
- faults on delivery none
- breakdowns in service one\(^{(8)}\)

#### Manuals\(^{(5)}\)
- user instruction good
- servicing information satisfactory/good when manual includes circuit diagrams

#### CLINICAL OBSERVATIONS

### Performance applications\(^{(6)}\)
- cut excellent
- coag good
- blend good
- bipolar good
- muscle stimulation negligible, except neurosurgery\(^{(7)}\)

### Controls\(^{(6)}\)
- foot switches good/excellent
- bipolar forceps switching good
- controls and front panel good

#### NOTES
1. Worst case, single fault conditions: PASS ≤ 1000 μA.
2. Worst case, single fault conditions: PASS ≤ 500 μA.
3. With mains on the active electrode or neutral plate: PASS ≤ 5000 μA.
4. PASS ≤ 150 mA.
5. PASS ≤ 400 W.
7. See User Evaluation.
8. See Technical Evaluation.
ACKNOWLEDGEMENTS

This report was prepared by Dr C J Hacking of Bioengineering Services, South Glamorgan Health Authority. The DH thanks the following members of Bioengineering Services, Cardiff Royal Infirmary for their work on this evaluation:

Dr C J Hacking
Dr D G Spendley
Mr J P McCarthy

We also thank the following consultants at the University Hospital of Wales, Cardiff, for their cooperation and assistance in carrying out the user evaluations:
Mr K Davies, Mr R H Hatfield, Mr B A Simpson and Mr J A Vafidis, Department of Neurosurgery;
Mr D L Crosby, Mr D Flook, Mr J J Tjandra, Department of Surgery;
Mr S S Matarihelia, Mr P N Matthews and Mr R W M Rees, Department of Urology;
and all the medical, nursing and theatre staff who helped in the evaluation; and Mrs J Rowles of the Department of Medical Photography, Cardiff Royal Infirmary for the photographic work.

APPENDIX 1: HOW TO BUY WITH CONFIDENCE

Current production
Please note that, because a manufacturer or supplier may continue to modify a product after commenting on our report, the version you may buy might differ from the one we evaluated. You are strongly advised to check this with your supplier.

Compliance with standards
BS 5724: Part 1 is officially recognised by the Department of Health¹ (DH): when purchasing equipment preference should be given to products which comply with this Standard. (For this product, see the Technical Evaluation and Manufacturer's Comments on pages 4 & 5.)

Manufacturer's quality control
The Summary Box on page 1 shows whether the manufacturer has registered, or applied for registration, under the DH Registration Scheme for Manufacturers of this category of medical equipment. The Scheme has been in operation since April 1985. A manufacturer seeking registration for a specific category of equipment is required to declare that the quality system used to control the manufacture of that category is in compliance with DH requirements. The quality system at a specific manufacturing site is subject to audit by the Medical Devices Directorate, to assess its compliance. In general, registration does not imply that all products offered by the manufacturer are from registered sources: you should ask the supplier whether the relevant product is manufactured at a DH Registered Site.

NOTE
1. See HEI 145 Item 18/85.
APPENDIX 2: STANDARDS USED FOR TESTING

The Technical performance and safety assessments in this issue were carried out for Air-Shields by TÜV, Rheinland-Westphalia, and in the evaluation centre at Cardiff Royal Infirmary. Supplementary testing was also carried out at the Cardiff evaluation centre.

For this evaluation, two samples were assessed: one by TÜV, the other at Cardiff. The conclusions are therefore based on the assumption that the samples tested were typical of normal production.

Safety

An Electro-medical Laboratory of TÜV tested a unit under the joint agreement with BSI, at 240 V, for compliance with the following standards to assess the general and technical safety aspects of the equipment: IEC 601-1 and IEC 601-2-2:1982 Medical Electrical Equipment: Specification for high frequency surgical diathermy units.


User evaluation

The protocol used for the user evaluations was devised in cooperation between the clinicians and nursing staff involved in the trials, the medical physicists of the evaluation centre and the Department of Health.

APPENDIX 3: PRODUCT CERTIFICATION TO MEDICAL ELECTRICAL SAFETY STANDARDS

First issued in 1979, BS 5724: Part 1 is the UK equivalent of the International Standard IEC 601-1, covering the general requirements for the safety of medical electrical equipment. In its 1979 edition, which we used for testing the products in this issue, the differences from IEC 601-1 are slight, and normally of no significance. (The second edition, BS 5724: Part 1: 1989 is identical to the revised IEC 601-1:1988). A number of test houses issue certificates relating to these standards. However, any certificate of compliance with BS 5724 or IEC 601 comes with a set of assumptions, the validity of which is discussed below.

Control over test procedures

Test authorities may differ in the degree to which they exercise control over staff and procedures used in testing. The Department has ensured that adequate control is provided for tests to BS 5724 or IEC 601 done at BSI Testing, Hemel Hempstead, or by certain test authorities in other countries where the tests are requested to be carried out under the terms of a Joint Agreement between BSI and these test authorities.

At present, these are limited to TÜV (Bayern), IMQ (Italy), SEMKO (Sweden) and GLEM (France).

Control over interpretation of standards

Testing by BSI or under a Joint Agreement also means that agreed interpretations of certain clauses of BS 5724 are applied. These are established by the BSI Committee which represents all UK interests and which acts as the UK input to the ongoing process of revising the International Standard IEC 601-1, and are published to UK manufacturers associations as BS 5724 Advisory Notices.

Control over test voltages used

Testing to BS 5724 by BSI or under a Joint Agreement also ensures that the tests on the mains section are carried out at the UK's nominal mains supply voltage of 240 volts. Certificates of compliance obtained under other circumstances may 'conceal' the fact that tests were done at 220 or 115 volts: components suitable for these lower voltages may not be adequate for UK applications.

Control over content of testing

GS (Geprüfte Sicherheit) certificates issued by test houses in the Federal Republic of Germany may not cover all the requirements of IEC 601, but may include additional tests. This is because the German Ministry of Labour requires the country's test houses to ensure the safety of medical electrical equipment, and leaves the test house to apply what tests it thinks necessary.

TÜV (Bayern) = Technischer Überwachungsverein, Bayern e.V., Munich
IMQ = Istituto Italiano del Marchio di Qualita, Milan
SEMKO = Svenska Elektriska Materielkontrollanstalten
GLEM = Groupement des Laboratoires d'Essais des Matériaux de Technique Medicale LCE-LNE
NATIONAL REPORTING & INVESTIGATION CENTRE (NATRIC)

All staff working in a healthcare environment have a responsibility to report any incident that occurs at work that could put either themselves or patients at risk. The National Reporting and Investigation Centre (NATRIC) exists to coordinate investigations into all faulty products/materials and ensure that the NHS is aware when any product has been deemed unsafe.

Incident reports are a vital source of product feedback, that enables the DH to advise the health care sector of potentially hazardous or safety related situations by the publication of hazard notices and safety action bulletins, as well as enabling manufacturers to make improvements to product design, manufacturing processes, labelling and user instructions.

NATRIC’s computer database currently holds over 16,500 incident records dating back to 1983. During 1991, 2,700 incidents were reported of which 52 per cent were the subject of a full investigation, and current trends indicate that over 3,000 will be reported this year. The kind of incidents staff should report include:

- any safety related incident or potentially harmful product/material whether identified as such prior to use, during use, or as the result of an accident;
- problems arising through incorrect use of or inappropriate modification, adjustment or maintenance of equipment, products or materials;
- minor incidents or anomalies which may be indicators of inadequate quality assurance on the part of the manufacturer or supplier.

It is important to bear in mind that apparently minor local incidents might, when added to other reports, indicate a wider problem. If staff are in any doubt, they should contact their line management or NATRIC direct for advice.

Experience shows us that an incident in a local unit will often have implications for the rest of the health care sector. The purpose of reporting procedures allows nationally coordinated action to be taken to safeguard patients and staff. That is why all those involved in care have a responsibility, if they come across a product that might be faulty, to let us know about it.

HOW TO CONTACT NATRIC

NATRIC

'HOT LINE' during normal office hours is: 071 972 8080
24 hour answering machine service: 071 972 8080

FAX facility number: 071 972 8109  BT Gold computer link: NHS217

The information about NATRIC given on this page is here for your guidance purely in connection with medical devices generally, and the importance of reporting incidents. It is not intended to imply that there are any problems associated with the particular equipment evaluated in this publication.

HOW TO REPORT ADVERSE INCIDENTS (DEFECTS)

All staff working in a healthcare environment have a responsibility to report any incident that occurs at work involving medical devices, equipment or materials to the Department of Health. Guidance for reporting such incidents is contained in Health Service Guidelines (93)13. If you are in any doubt about the reporting procedures please seek advice from your line manager or from the Department of Health.

NOTE: The UK Territorial Health Boards of N Ireland, Scotland and Wales equivalents to HSG(93)13 are:
N Ireland: DHSS Circular HSS(ESD)3/90,
Scotland: NHS Circular 1991 (Gen) 24, issued in September 1991,
Wales: WHC(89)26 issued in August 1989.

evaluation no 187, November 1993
OTHER REPORTS ON SURGICAL DIATHERMY UNITS

This is the tenth issue of 'Evaluation' on this category of equipment. 'Evaluation' number 117, March 1992, was the last Review Issue to be published relating to surgical diathermy units.

Evaluation No 12, Erbe Erbotom TUR
Evaluation No 28, Valleylab Force 2,
Evaluation No 42, Olympus PSD10,
Evaluation No 56, Berchtold Elektrotom 390,
Evaluation No 96, Eschmann TD4115,

Evaluation No 97, Eschmann TD411RS,
Evaluation No 117, Review Issue 5 models,
Evaluation No 157, Eschmann TDB60,
Evaluation No 165, Eschmann TD20,
Evaluation No 187, Martin ME400.

COMING NEXT

Other surgical diathermy units now being evaluated: Valleylab Force 40S

ENQUIRIES

For information on the evaluation of surgical diathermy units, please contact Peter Oddy, Department of Health, Medical Devices Directorate (MDD/DEP), 14 Russell Square, London WC1B 5EP (Tel: 071 972 8155).

The 'Evaluation' series editor is Rob Musgrave, Department of Health, MDD/DEP, 14 Russell Square, London WC1B 5EP (Tel: 071 972 8162).

© Crown copyright 1993

Apart from any fair dealing for the purpose of research or private study, or criticism or review, as permitted under the Copyright, Design & Patents Act, 1988, this publication may only be reproduced, stored or transmitted in any form or by any means with the prior permission, in writing, of the Controller of Her Majesty's Stationery Office (HMSO). Enquiries concerning reproduction outside those terms should be sent to HMSO at the undermentioned address:

HMSO (Copyright Section)
St Crispins
Duke Street
Norwich
Norfolk NR3 IPD
United Kingdom
This report could improve safety and reduce costs

A copy should be placed in all hospital and health authority libraries. In addition, all major users of this type of equipment, and all staff involved in its selection, maintenance and purchase, including the departments and professions marked below, should be made aware of this issue.

<table>
<thead>
<tr>
<th>Accident &amp; Emergency</th>
<th>Maternity/Midwifery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulance Officers</td>
<td>Medical</td>
</tr>
<tr>
<td>Anaesthetics</td>
<td>Medical Physics</td>
</tr>
<tr>
<td>Audiology</td>
<td>Neonatal Units</td>
</tr>
<tr>
<td>Cardiac and Coronary Care</td>
<td>Nursing</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Obstetrics &amp; Gynaecology</td>
</tr>
<tr>
<td>Clinical Nutrition Units</td>
<td>Paediatrics</td>
</tr>
<tr>
<td>Dental</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>Dermatology</td>
<td>Physiotherapy</td>
</tr>
<tr>
<td>Dialysis Units</td>
<td>Radiology</td>
</tr>
<tr>
<td>Dietitians</td>
<td>Renal Services Managers</td>
</tr>
<tr>
<td>ECG Departments</td>
<td>Renal Units</td>
</tr>
<tr>
<td>Electronic Engineering</td>
<td>Rheumatology</td>
</tr>
<tr>
<td>Engineering</td>
<td>Scientific Officers</td>
</tr>
<tr>
<td>Family Health Service Authorities</td>
<td>Supplies Officers</td>
</tr>
<tr>
<td>Home Dialysis Administrators</td>
<td>Surgical</td>
</tr>
<tr>
<td>HOSPITAL LIBRARIES</td>
<td>Theatre Staff</td>
</tr>
<tr>
<td>HEALTH AUTHORITY LIBRARIES</td>
<td>Transplant Units</td>
</tr>
<tr>
<td>Intensive Care/Therapy</td>
<td>Works Officers</td>
</tr>
</tbody>
</table>

**HOW TO OBTAIN COPIES**

"Evaluation" is issued by the Department of Health, Scottish Home and Health Department, Welsh Office and Department of Health and Social Services (Northern Ireland).

If you wish to see "Evaluation" regularly, you should talk to your General Manager's office about the possibility of being included on their local distribution list. Copies should be available in your hospital or health authority library. If your library does not receive copies, please first check that it is on the local distribution list. If there is still a problem, please ask your library to contact the Medical Devices Directorate (Tel: 071 972 8181).

Further copies of individual issues for health authorities can be obtained from the following:

**England:**
Medical Devices Directorate  
Ordering Department  
Room 222  
14 Russell Square  
London WC1B 5EP  
Tel: 071 972 8181

**Northern Ireland:**
Department of Health and Social Services  
Estate Services Directorate  
Dundonald Centre, Stony Road  
Dundonald  
Belfast BT16 0US  
Tel: 0232 523714

**Scotland:**
SOHHD  
NHS Management Executive  
Division 3 – 2  
St Andrews House  
Edinburgh EH1 3DE  
Tel: 031 244 2447

**Wales:**
Welsh Office  
Health Personnel Division  
Cathays Park  
Cardiff CF1 3NQ  
Tel: 0222 823641

If you are not an NHS employee, you can purchase individual copies or subscribe to "Evaluation".

Further information can be obtained by calling 071 972 8181.