



## CERTIFICATE OF TYPE APPROVAL

(EC Certificate of Type Examination - Module B)  
(Marine Equipment Directive - 96/98/EC)

**Applicant:-**  
**McMurdo Ltd**  
**Silver Point**  
**Airport Service Road**  
**Portsmouth, PO3 5PB**  
**United Kingdom**

**Manufacturer:-**  
**McMurdo Ltd**  
**Silver Point**  
**Airport Service Road**  
**Portsmouth, PO3 5PB**  
**United Kingdom**

This is to certify that the applicant has submitted details of a:-

**406 MHz EMERGENCY POSITION INDICATING RADIO BEACON (EPIRB)**  
**(COMMISSION DIRECTIVE 2002/75/EC – ITEM A.1/5.6)**

Of system type known and designated as:-

**a) McMurdo C1 S-VDR capsule, 406 MHz GPS EPIRB**

(Comprising component parts and having technical characteristics shown in schedule 1)


and that these have been assessed, tested and when used in a combination of component parts as described in the attached schedules, is CERTIFIED as complying with the relevant parts of:

**IEC 61097-2 : 2002 "COSPAS-SARSAT Satellite EPIRBs operating on 406 MHz"**

**BS EN 60945 : 2002 "General Requirements for marine equipment"**

(being specifications for Technical Characteristics and Methods of measurements, published by the European Telecommunications Standards Institute and the British Standards Institute).

It is also RECOGNISED that the equipment conforms to performance standards not inferior to those adopted by the International Maritime Organisation, and which are contained in Resolution A810(19), (as amended by MSC 56(66) & MSC 120(74)), Resolution MSC/Circ 862 (as applicable) and the relevant parts of Resolution A694(17).

SIGNED: 

DATE of ISSUE: 20<sup>th</sup> October 2006

DATE of EXPIRY : 19<sup>th</sup> October 2011

P J Goddard Authorised Signatory

Certificate Number: QQ-MED-25/06-01

This Certificate is Valid until expiry date shown, subject to the standard conditions of issue printed on the attached schedule  
McMurdo Ltd are Module D registered with QinetiQ in accord with standard condition 3, ref Certificate DQAS-03/01-McM001R8

QinetiQ  
Cody Technology Park  
Ively Road, Farnborough  
Hampshire. GU14 0LX



Maritime and Coastguard Agency  
The MCA is an Executive Agency of  
the Department for Transport.

*Under the terms of the United Kingdom Statutory Instrument, No 1957 : 1999, the QinetiQ Group PLC (formerly known as DERA) has been Notified to the European Commission by the Maritime and Coastguard Agency as a Body authorised to conduct Conformity Assessment procedures under the provisions of the European Council Directive 96/98/EC on Marine Equipment and issue Certificates of Type Approval.*

# Certificate of Type Approval - Schedule 1

## McMURDO – C1 S-VDR, 406 MHz Emergency Position Indicating Radio Beacon

The applicant declared that the following units comprise the GPS equipped EPIRB equipment of the system designation given at a) on sheet 1. This unit has been assessed & tested, and satisfactory details of these units were included in the technical file. This unit form systems consistent with the Item Description A1/5.6, given in Annex A1 of Commission Directive 2002/75/EC. The equipment also houses a S-VDR final memory capsule for use with simplified Voyage Data Recording systems which is not at present included in the equipment Annexes of Commission Directive 2002/75/EC.

MAIN UNITS Comprising:- 406MHz EPIRB Beacon mounted on float-free Auto release ----- End of List -----	Identity No: <b>McMurdo C1</b>	Assembly No: 36-100-xxxA	notes *1 to 7
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**\*NOTES:-**

- 1 The McMURDO C1 beacon unit also houses a S-VDR memory capsule complying to the relevant parts of test standard IEC 61996-2 and is used in conjunction with a third-party manufacturer's S-VDR system to provide the final recording memory in a float-free form with 406MHz and 121.5MHz location and homing beacons.
- 2 The S-VDR function is electrically independent and is subject to separate assessment and approval certification in conjunction with each individual S-VDR system it is expected to operate with.
- 3 Suffix "xxx" will be 005 for a McMurdo branded, 2Gb memory capsule but another a 3 digit number for different memory size or an OEM branded S-VDR system. An OEM brand will have independent certification.
- 4 These beacons have additionally been assessed to the requirements of IMO A814(19), Annex clause 2.1 to 2.5 and have been tested and assessed to Class 2 temperature requirements.
- 5 The automatic float free release assembly has been tested for correct hydrostatic release at temperatures of -30°C and +65°C and with the C1 forfills the requirements for a 'Category 1' EPIRB.
- 6 The Float-free auto release is fitted with a Hammar 'H20' disposable Hydrostatic Release Unit.
- 7 Marine COSPAS-SARSAT 406MHz EPIRBs form a distress alerting component of the Global Maritime Distress & Safety System (GMDSS). The McMurdo C1 S-VDR has been granted COSPAS-SARSAT Type Approval certification No.165, dated 15 September 2006.

**Technical Characteristics**

FREQUENCY OF OPERATION	406.028MHz and 121.5MHz	TRANSMIT Only 121.5MHz sweep is coded with the S-VDR "V"
EMISSION CODE	16K0G1D 3K20A3X	
POWER CHARACTERISTIC	5W 50mW	- 406.028MHz - 121.5MHz
GNSS Location Device fitted	Yes – Internal GPS module	Module tested to relevant tests of IEN 61108-1 Average error, Static accuracy < 100 metres.
TEMPERATURE RANGE Category 1 & Category 2	-20°C to +55°C.	- Class 2 Note: Hydrostatic release operation tested at -30°C and +65°C
POWER SOURCE (EPIRB section only)	Internal lithium Battery	7 day minimum battery life at -20°C. Label shows expiry date. Manufacturer authorised service centre replacement only

**Conditions of Issue of this certificate are printed the reverse of this sheet.**

QinetiQ  
Cody Technology Park  
Ively Road, Farnborough  
Hampshire. GU14 0LX

Certificate Number    **QQ-MED-25/06-01**



**Certificates of Type Approval**  
**Conditions of Issue**

1. Each Certificate will be used in its entirety and not reproduced in part.
2. This certificate remains valid until the date shown (normally 5 years) unless cancelled or revoked, provided:-
  - i) the design and manufacture remain unmodified from the specimen tested and recorded in the Technical Construction File;
  - ii) any conditions contained in the schedule are complied with;
  - iii) Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply;
  - iv) and, the equipment remains satisfactory in service.
3. The mark of conformity may only be affixed to the equipment listed on this certificate and a manufacturer's Declaration of Conformity issued when the production Quality Assurance requirements laid down in Annex B, of the Directive (96/98/EC) is fully complied with and controlled by a written inspection agreement with a Notified Body. The use of the QinetiQ Notified Body Number (0191) in combination with the Wheelmark implies that the manufacturer is Registered with the QinetiQ Quality Assurance Scheme. A Certificate of Registration is issued to the manufacturer and should be made available on request. The manufacturer is responsible for ensuring that certification renewal and periodic surveillance are maintained.
4. USCG Approval Number, A Mutual Recognition Agreement (MRA) on marine equipment exists between the European Commission and the US Coastguard but only applies to equipment types included in the listing of marine equipment annexed to the MRA. For included equipment a USCG Approval number may be issued. This can be found under the MED certificate number on the first page and should be used on the main identity label of the equipment. Radio and Radar equipment continues to need separate or additional approval by the USA FCC.
4. This certificate does not confer any approval status to this equipment other than defined by, and tested according to the specifications listed on sheet 1.
5. The labeling requirements of IMO Resolution A694(17) shall be met. Descriptions of each unit of apparatus forming part of the equipment will be as given on this Certificate. Each unit of equipment will be marked with the minimum safe distance at which it should be mounted from a standard and steering magnetic compass.
6. No unit of apparatus shall be advertised or labeled as "approved" or "certified" on behalf of the Maritime and Coastguard Agency, the Department of Transport or the QinetiQ Group in any sense other than that it is a type that has been assessed as satisfactory against the specification;
7. The manufacturer must advise QinetiQ of any intended changes to the design or production of the equipment which might affect the equipment performance.
8. Minor Modifications to the equipment will be considered on a case-by-case basis. QinetiQ will review any factory test results, in consultation if necessary, with the test facility that conducted the original Type Approval testing on the equipment. QinetiQ will advise the manufacturer if any further testing is required to maintain valid certification.
9. If an equipment manufacturer wishes to have the type approved equipment designated under alternative names (e.g. agent/distributor's name and model number), a separate application should be completed and sent to QinetiQ.

QinetiQ Ltd  
Marine Approval and Testing Service  
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