GÜRALP SYSTEMS WARRANTY AND REPAIRS POLICY

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1 BACKGROUND

Güralp Systems Limited (Güralp) has been a world leading designer and manufacturer of sophisticated seismic instrumentation for over 30 years. We have manufactured well over 23,000 devices for our customers, and many of these are still in live use around the world, in jungles and deserts, in cities and on volcanoes, on the surface, in boreholes and under the sea.

The technology has evolved over the years, and instruments now contain a varied and wide range of electronics, software and hardware, sometimes now dating back over several decades. Sometimes the technology has moved on so quickly that even finding components can be difficult – some have become obsolete.

In previous years Güralp's Repairs capability was under increasing pressure, and as a result we were not able to provide the level of response and support that we would have liked for our customers, who rightly need good quality and timely support.

Because of this, we redefined our approach to after-sales service, investing time and resource in our Technical Support and Repairs teams. This new approach centred on improved Repairs responsiveness and increased communication, so that we could provide a world class Repairs service for our customers.

This policy document has been a key part of this work, in defining our current policies and processes. This focus has been successful; the improvements we have made, and the objectives we continue to work towards, include:

- Investing in a larger capacity in our Repair Centre, with a wider skill-set, dedicated to repairs, and capacity and skills available as required for specific Repairs, especially when we are working on older or bespoke systems for our customers.
- Introducing better joint processes, so that we can work more closely with customers to remotely investigate and diagnose faults, before shipping.
- Continually ensuring that we can afford the cost of provision of services, so that they are sustainable in the short, medium and long term.
- Introducing a dedicated Repairs test facility, with experienced test personnel.
- Improving and defining lines of communication.

This document will continue to be updated from time to time, because we have been able to adopt a process of "continuous improvement" – making detailed changes to our policy and processes as customer needs become clear or requirements change. This ensures that we evolve our service efficiently, and our customers always receive the very best after-sales care.

This document explains the current policy and processes – in essence how we would like to work with customers. While this policy has been formally introduced over the last three years, and represents the baseline defining how Güralp after-sales services will operate, we fully understand that some specific cases have individual circumstances that require a different – and perhaps bespoke – approach. We will therefore of course remain open to dealing with these situations on a case-bycase basis.

Our aim is to adapt our processes over time to ensure systematic improvement. It is therefore worth checking the policy on our website from time to time, because it will change, gradually, as we better understand customer needs.

We are therefore keen to receive feedback, and will take this into account in fine-tuning the policy; we see this an in important part of facilitating the continuous improvement of the service.

2 APPLICABILITY AND CONTRACT TERMS

This policy will be referenced as part of our standard terms, for all new orders and all new customers. This is our default policy, unless other terms have been agreed in writing with a customer.

As part of their agreements when purchasing devices, some clients enter into ***Support Contracts***, which include customer or site-specific arrangements, and any extended Warranty periods.

We do remain open to varying the terms of the policy for customers with specific needs. We will always be prepared to discuss these requirements, so that we can agree and record an approach that is mutually workable and which does not unfairly disadvantage other customers.

In the event of trade sanctions, or in a situation where conflict or political instability means that Güralp cannot operate the Repairs policy either without breaking laws or regulations, or safely (for example exposing Güralp, Distributor or Customer staff to personal risks or danger), Güralp reserves the right to suspend the Repairs service.

If during the Warranty period a customer sells or otherwise transfers a device to the ownership of another end user then, in the absence of Güralp giving prior authorisation in writing to the novation (or other form of extension) of the Warranty, the Warranty period will automatically terminate,

3 THE SEVEN-STAGE REPAIRS PROCESS

The Seven Stages of the Repair Process are listed below.

	Stage	Description	Final step of this stage	Notes
Customer support	1 - Identify	Detect a fault or problem with the device.	Customer Contacts Güralp Support.	See Appendix B.
		Conduct local investigation, to identify any obvious causes.		
		If the fault cannot be corrected, contact Güralp Support, with a detailed Fault Description.		
	2 – Remote Investigation	Enable communications direct to the device so that Güralp can access live data, or provide stored data from the device by some other means. This enables Güralp to undertake **Remote Investigation** and diagnosis of the potential fault.	Güralp email assessment based on the Remote Investigation and recommended next steps.	This is an essential stage in the process.
		Güralp provides an email assessment of the fault, which will recommend a next step.		
	3 – Repair Planning	Customer and Güralp Support discuss and agree the next steps; one of the options may be to organise an on-site or local Repair.		
	4 – Safe Shipping	If the agreed next step is to Return for Repair, Güralp will issue a **Return Material Authorisation Document,** which will include a reminder of the Inspection Charge, where applicable.	Device arrives at Güralp's Repair Centre.	
		Customer ships device to Güralp following the packing guidelines.		See Appendix C.
		Güralp acknowledges receipt of device by email.		

	Stage	Description	Final step of this stage	Notes
Repair centre	5 - Opening	Güralp opens the device within [15*] working days unless otherwise agreed and notifies the customer by email.	Güralp sends the customer a **Repair Estimation.**	
		Unless otherwise agreed, Güralp sends a **Repair Estimation**, including the Inspection Findings, by email within [15*] working days of opening.		See Appendix D.
	6 - Economic Repair	Customer approves next step in the process.	**Repair Quotation** and **Repair Report** provide notification of completion and a request authorisation to ship is emailed.	
		Güralp undertakes repair work and testing.		
		Güralp sends the final **Repair Quotation** accompanied by the **Repair Report,** notifying the customer of the completion of the Repair. Güralp requests authorisation to ship.		
	7 - Return	Güralp pack and ship the device. Repaired device received by the customer. Invoice raised by Güralp for Repair. Invoice paid by customer.	Confirmation of receipt of Repaired device, and payment received by Güralp for work done.	Invoices will be due for payment within 30 days.

*this is a target; Güralp will not achieve this immediately.

There are four written reports or documents:

- Return Material Authorisation (Stage 4)
- Repair Estimation (Stage 5)
- Repair Quotation (Stage 6)
- Repair Report (Stage 6)

4 THE WARRANTY PERIOD AND CONDITIONS

Warranty periods will, in future, always be defined in the contract terms for a new client, or as part of the order for new instruments. Our standard default period is ***12 months*** full Warranty. Variations can be agreed as part of the order process if there are specific customer requirements. This must be documented in writing, so that there is full transparency and awareness. All past Warranty periods agreed in writing will of course be honoured.

Unless otherwise defined, the Warranty period will start on the date of shipment from our manufacturing plant.

Notification of a Warranty Repair should be made as soon as a fault is realised, and this should be confirmed by the issue of an ***RMA*** number, by Güralp.

We understand that for operational reasons it may not be possible to ship a device back immediately, if it is deployed remotely. However, our standard policy is that we expect the device to be sent back as soon as possible if it is a Warranty Repair. This is because, if there is a design fault, we need to know as soon as possible to prevent further damage and ensure other customer's orders are corrected. If this is not possible within 3 months of the time of the notification, when the RMA number is issued, we expect to agree with the customer what the return date is to be, so that we can plan the work ahead.

Our standard terms describe the detail of our Warranty and unless otherwise agreed these apply (see Section 2 above). Here are some specific points from the standard terms that we wish to stress:

- It is important that customers do not attempt to open or Repair instruments in general - but especially under Warranty. If this has happened without prior written authorisation, we reserve the right to not Repair the device under Warranty. Similarly, customers should not continue to use devices which have been identified for Repair under Warranty and for which an RMA number has been issued.
- Our Warranty will automatically terminate if an instrument is opened by any unauthorised organisation, unless otherwise agreed.
- Our Warranty will terminate if the defect has been caused by wilful damage or negligence in the storage or use of the instrument.
- Our Warranty will terminate when a customer sells or otherwise transfers a device to the ownership of another end user unless we have given prior authorisation in writing to the novation (or other form of extension) of the Warranty to that new end user.
- If the delay in returning an instrument under Warranty exceeds 6 months after notification of the intention to make a Warranty claim via an RMA, without prior agreement, we reserve the right to allow the Warranty to lapse; this would not be done without prior warning, or unreasonably, but it is important to ensure that there is an incentive for the timely return of instruments with faults, to prevent further damage and so that design errors can be detected and corrected, for the benefit of all customers.

Borehole Instruments

In the case of Borehole Instruments Güralp has some clear policies which are outlined as part of our quotations. Some of these, if not followed, are likely to invalidate the Warranty:

1) **Cables**: Only the Güralp supplied cables and connectors should be used; these may be from a 3rd party supplier, and may have their own handling instructions which should always be

followed. Customers should not substitute other cables into the system; failure and damage is often caused by the use of poor quality or inappropriate cables and connectors.

2) **Opening**: Instruments should not be opened by a customer, unless under the direct guidance of a Güralp specialist or a Güralp appointed specialist. Opening an instrument can cause damage.

3) First **installation** and **deployment** of Borehole instruments.

- First installation of a Borehole instrument should normally be undertaken by a Güralp specialist or a Güralp appointed or trained specialist. The installation should follow the Güralp recommended installation guidelines. Installation by unqualified people or without taking account of the recommended installation guidelines is likely to affect the Warranty. If a customer does not follow these polices then this is likely to affect - and potentially invalidate - the Warranty. Please consult Güralp prior to first installation and deployment.

Ocean Bottom Systems (OBSs)

In the case of OBSs Güralp again has some clear policies in relation to Warranty and Repairs, which are supplemental to the other terms in this document. In the event of inconsistency between the terms in this section and other terms within this document, then these terms will apply in relation to OBSs.

For context, Güralp and the customer agree that the Warranty is intended to provide a remedial service in the event of poor manufacturing or failure to meet the specification, and it is not to compensate for mishandling or damage. To that end, the Warranty may be invalidated if any of the points below are breached.

Operation. It is strongly advised that Güralp and the customer undertake a trial deployment with an order of OBS to complete a final acceptance and provide operational and deployment training.
OBS are complex pieces of equipment and in order to be successfully deployed, an exact procedure needs to be followed, where failure to follow this procedure could lead to invalidating the Warranty.
The OBS are designed to be utilised in a variety of sea conditions but use in excessive sea conditions can result in damage to the OBS which would not be covered by the Warranty.

Handling. As per Güralp's Warranty and Repairs Policy, mishandling of equipment either at sea or onshore can result in damage to the equipment that would not be covered by the Warranty

Storage and maintenance. It is essential that OBSs are maintained and stored in a suitable manner. Failure to do so can lead to premature failure and potentially invalidate the warranty. Each OBS can have a unique set of requirements, so please discuss further with Güralp directly.

Transient or excessive electrical exposure. OBSs are sensitive electro-mechanism devices, and as per the rest of Güralp's Warranty and Repairs Policy, exposure to such would invalidate the Warranty.

Service and Repair.

a. **Opening during Warranty period**. The customer (or any third party acting on behalf of the customer) may not attempt to open or Repair an OBS unless under the direct guidance of a Güralp engineer or, has completed a Güralp OBS training course and is fully certified.
b. **Repair during Warranty period**. The customer (or any third party acting on behalf of the customer) may not attempt to Repair an OBS unless under the direct guidance of a Güralp engineer.
c. **Appropriate care**. As with most scientific equipment the OBS need to be suitably maintained and any willful damage or negligence by customer could lead to the Warranty being invalidated.

Deployment.

a. **Depth.** Each OBS is rated to a specific depth and deployments outside of this depth would be classed as a breach.
b. **Duration**. Each OBS have a specified battery life, deployments exceeding this maximum duration will be classed as a breach.
c. **Vessel**. The customer agrees it will ensure that a vessel appropriately equipped to achieve the deployment plan is used, and that the OBS are not deployed in a way that increases the risk of damage. If the vessel subsequently proves to be inadequate for the task and there is any damage to the Instruments during transit, deployment or recovery, the customer will report this to Güralp in good faith.
d. **Sea floor topography**. The customer should take all reasonable precautions to ensure that the Instruments are not deployed in locations where the sea floor topography could mechanically prevent the recovery of the Instruments, or might materially affect the performance of the Instruments. Rough or rugged sea floor conditions may impact the system performance and reliability, or affect or impede the recoverability of the Instrument.

Shipping. The OBSs are delivered in bespoke shipping containers, these should be used when moving the OBS around, potentially including offshore. Use of alternative containers or methods would be classed as a breach unless under the direct guidance or prior agreement of a Güralp engineer.

Batteries. At the point of delivery are warrantied to have a specified life. This life will reduce overtime and need to be taken into consideration. Batteries are not covered with extended warranties.

Consumables. Typically, an OBS will be delivered with all the necessary consumables to complete a deployment and recovery. Additional consumables will be required for subsequent deployments and these consumables can be purchase from Güralp but are not supplied under the Warranty.

Third party cables, connectors and products. The use of third party or customer produced cables, connectors and or products could lead to the Warranty being invalidated. Güralp must be made aware prior to the use of any such items and approve their use at its sole discretion, but such approval not unreasonably withheld.

Transfer. The transfer, loan or reselling of the OBS would invalidate any Warranty unless agreed in advance with Güralp. The Warranty is not transferable.

Return to base. All warranties are offered on a ‘return to base’ basis. This includes OBS, which means the customer is responsible for recovering an OBS and returning to Güralp offices to investigate such a Warranty claim. Güralp is not responsible for any aspects of such recovery.

5 THE ROLE OF OUR DISTRIBUTORS IN THE REPAIR PROCESS

Güralp has a global network of organisations who represent Güralp in various regions and countries. These are our “Distributors”. Some Distributors are able to undertake some technical support or first line work; others are not fully equipped to do that. In some regions, communication, access and transportation is easier than in others.

Generally, in Repairs, Güralp prefers to interact directly with our end user customers who have devices for Repair, because we then get the most accurate information and are better able to diagnose the problem. We therefore encourage customers to come directly to us, to ensure the process is as effective as possible, so that we can respond quickly and efficiently. Remote Investigation is an important part of the process. Güralp will copy the Distributor on relevant communications. This is especially important with any Repairs undertaken during the Warranty period.

However, if a customer would rather delegate the process to the local Distributor, Güralp will of course work with them directly. At the time that the RMA is issued, we will want to confirm how the customer would like to manage the process – directly with Güralp, or via a Distributor. It must be clear at that stage who will be authorised to make commercial commitments on behalf of the customer and who will manage safe shipping.

This clarity is important for the efficient running of the process, for all customers.

6 THE ON-SITE REPAIRS OPTION

It may prove more effective for Repairs to be done on site or locally, either for cost or time efficiency. On-site Repairs can be an effective approach, but are a material commitment by both parties and need to be planned well.

An on-site Repair “project” needs to be agreed by both the customer and Güralp; and Güralp reserves the right to request that the instrument is returned to the factory so that resources are used efficiently and fairly for the overall benefit of all customers.

Since each Repair trip will be unique, the arrangements will be made in conjunction with Güralp Sales team, and the local Distributor where appropriate. Discussion of an on-site Repair will normally take place at Stage 3 in the Repair Process.

If an on-site Repair is agreed, Güralp will send a Technician, with tools and parts, out to a location where the instrument can be worked on. Typically, this needs to be a clean workshop environment.

Normally, Güralp and the customer will agree the scope of work in writing before the on-site Repair starts so the “project” is well defined and neither party are at risk of “scope creep”.

The standard policies for on-site repairs will be as described below. These will apply unless otherwise agreed in writing.

- For Warranty Repairs:
  - The customer will pay for Technician Time (as shown in Appendix E) as well as Travel and accommodation costs, unless otherwise agreed.
  - Güralp will pay for Parts.
  - The customer will provide an adequate (pre-agreed) working area.
  - The customer will pay for safe local shipping of the instruments to and from the working area.

- For non-Warranty Repairs, unless otherwise agreed:
  - Güralp will charge for the Technician’s Time at the day rates shown in Appendix E; this will include travel time. Depending on the nature of the Repair, Güralp may offer a fixed or capped price for this work.
  - Güralp will charge a one-off sum for the parts as used in the Repair.
  - Güralp will charge for travel and accommodation at cost. Depending on the nature of the Repair, this may be a fixed or capped price for the work.
  - The customer will provide an adequate (pre-agreed) working area.
  - The customer will pay for safe local shipping of the instruments to and from the working area.

7 THE REPAIR OF BOREHOLE, OBS AND BESPOKE INSTRUMENTS

More complex, larger, systems such as Borehole Instruments, Ocean Bottom Seismometers (OBS), ***Bespoke Instruments*** and integrated systems are subject to the same general Repairs policy, by default, and unless other specific arrangements have been agreed or are set out in this document (as it the case for OBS).

Because these instruments and systems are more complex, the process of fault finding and diagnosis is also more complex; and, inevitably, the Repair process is likely to be complex.

Overall, the Repair is therefore likely to be more expensive and time consuming. This means that Stages 2 and 3 in the process, which include the Remote Investigation and the repair planning are especially important, to ensure that the customer's needs and any operational or financial constraints are fully understood.

In some cases, Repair of a large, bespoke solution may not be practical within the Repairs Centre without consuming a large proportion of the available capacity. In such a case, the Repair will become a new, bespoke Engineering project, outside the Repairs Process. It may be that this represents an opportunity for upgrade or enhancement of the solution.

It is likely that Güralp Sales, Güralp Engineering and perhaps the local Distributor, if appropriate, will be involved in these discussions.

Please be especially careful to follow the safe shipping process if returning these complex instruments for Repair (see Section 9).

8 THE POLICY FOR UPGRADE AND TESTING

Over the years, instruments have evolved both in technology and performance. The standards that applied at the original time of manufacture will often be more rigorous now and the components superseded by more advanced technology.

The Güralp Repair policy for upgrade and testing is:

- We will use like-for-like components where possible. However, if a repair becomes a significant upgrade, either because a customer has requested upgraded components or because original components are not available, we reserve the right to charge for the full labour and component costs. We will normally identify this in the **Repair Estimation** after we open the device but, sometimes, the reality may only become possible once the work is under way. If such upgrades are possible, Güralp sales will discuss the proposed work with the customer. (Often the balance to be considered will be the cost of a one-off upgrade compared to the cost of a new instrument.)
- We will test Repaired instruments thoroughly to at least the pass criteria expected at the time of original manufacture. We will not, normally, expect the instrument to perform to the current standards if it is several years old. The Repairs test process will not, therefore, normally be the same as for new instruments, unless they are being Repaired under Warranty or are less than 3 years old.

9 THE SAFE SHIPPING PROCESS

Historically many instruments have been returned unlocked and/or badly packed, and some are then materially damaged in transit. This is an avoidable additional risk and we urge all customers to follow the packing guidelines in Appendix C.

If instruments arrive poorly packed and, in Güralp's reasonable judgement, have been damaged in transit, we reserve the right to pause the Repair Process and will not initiate an Inspection or Repair until a formal approval to proceed has been received, so that the additional damage in transit is recorded. The **Repair Estimation** will then be for the whole scope of work, including the transit damage.

Güralp especially recommend great care with Borehole and OBS instruments.

- Boreholes and OBS instruments should always be **shipped on pallets** (to ensure non-manual handling as far as possible).
- Instruments should be returned in the **same quality of packaging as when originally shipped**, if sent back for Repair.
- **Güralp can provide packaging** if customers have lost their original set; this will be charged for but this is important.

10 DECLARATION: “UN-REPAIRABLE” OR “BEYOND ECONOMIC REPAIR”

Outside of Warranty, Güralp reserves the right to declare an instrument as unrepairable, or not Repairable at a viable cost – so Beyond Economic Repair.

This declaration should not be used unreasonably. Nonetheless, in order to ensure fair and effective use of the Repair capacity available, there may be situations where the Repair Centre resources that would be used to Repair an instrument are excessive, even if a customer is prepared to pay fully for the time and materials utilised.

In these situations, Güralp Sales will discuss the costs for replacement with a new device and may offer appropriate discounts on new devices, instead of agreeing to undertake Repair the original device.

In the event that it is agreed not to Repair the device, Güralp will dispose of it free of charge or return it to the customer, at cost for transit. If a replacement instrument is not purchased then the customer will be liable for the applicable **Inspection Charge**. See Appendix F.

11 ANALOGUE INSTRUMENTS – SUPPORT STATUS

Güralp offers the Repairs Process for most of our analogue instruments, of all ages. In the following table is a full list of the status of our sensor families; some older sensors are no longer supported through the Repairs Process, as a matter of normal practice, because of technology changes which mean these devices cannot be supported economically.

In general equipment more than 20 years old is not likely to be Repairable, whereas equipment which is 10-20 years old will be Repaired on a time and materials basis, subject to components being available.

Some Digital Devices are integrated with analogue instruments, so please also check Section 12, about Digital Devices support status for the complete support picture.

Before shipping, there is an important Remote Investigation stage in the process that customers should undertake to ensure that the Repairs Process operates efficiently and effectively for the whole Güralp customer group. This is Stage 3, which includes:

- Collecting Fault data
- Arranging access so that Güralp can see live or recorded data

Both of these mean that pre-shipping, free-of-charge Remote Investigation and diagnostics can be effective. (This is an uncharged service in the Repairs Process, since a successful remote investigation is an important part of managing the Repairs Process efficiently for all parties.)

In running a repair service for all ages of Instruments, we are undertaking to provide a material level of capacity in the Repairs Centre, for the benefit of all customers. To help fund this capacity, and also to ensure careful thought about pre-shipping investigation, Güralp will by default charge an Inspection Charge. This will vary by instrument family. The full Inspection Charge table is included in Appendix F.

Key points:

- The Inspection Charge only becomes payable if a Customer decides **not** to proceed to Repair the unit and **not** to purchase a replacement unit.
- All Repairs where the free-of-charge Remote Investigation has been undertaken (*i.e.* Stage 3 of the Repairs process) will automatically earn a 50% reduction in the Inspection Charge. This is to provide an incentive for the efficient operation of the Repairs Process, for the benefit of all customers. Inspection Charge rates as defined in Appendix F are effective by default, unless otherwise agreed in writing.
- Inspection Charges do not apply to Warranty Repairs.
- Bespoke Instrument Inspection Charges will be agreed when the Return Material Authorisation document is provided, at Stage 4 in the process. For Bespoke Instruments, this will include Güralp Sales and the local Distributor, if appropriate.

ANALOGUE SENSOR REPAIR STATUS

Any Sensors not included in the table below will be supported through the Repair Process on a time and materials basis.

Analogue Sensor	Comment	Repair Status
3T		Fully Supported
3V		Fully Supported
3ESPC		Fully Supported
40T		Fully Supported
6T		Fully Supported
Fortis		Fully Supported
5U		Fully Supported
Certis		Fully Supported
Hexis		Fully Supported
3TB		Fully Supported
3VB		Fully Supported
5TB		Fully Supported
3TB/5TB		Fully Supported
3EX	Discontinued	Time and Materials**
5TC	Discontinued	Time and Materials**
40V	Discontinued	Time and Materials**
6V	Discontinued	Time and Materials**
54T	Discontinued	Time and Materials**
6TC OBS	Discontinued	Time and Materials**
6TC	Discontinued	Not Supported
EDU-V/PEPP	Discontinued	Not Supported
5T	Discontinued	Not Supported
55T	Discontinued	Not Supported
40TB	Discontinued	Not Supported
SPB	Discontinued	Not Supported
Flute/VSP	Discontinued	Not Supported
40T OBS	Discontinued	Not Supported
3ESP	Discontinued	Not Supported
3ESPV	Discontinued	Not Supported

**In general equipment more than 20 years old is not likely to be Repairable, whereas equipment which is 10-20 years old will be Repaired on a time and materials basis, subject to components being available.

Sensors on the table with the Status “Time and Materials” (T&M): Güralp will support these sensors through the Repairs Process, but on the basis of charging for the Engineer time, and any materials used. The Güralp team cannot be certain of being able to make a successful Repair but we are able to provide expertise to try. We recommend that an initial capped period of T&M is agreed to cover stages 1-5 of the Repairs process, leading to a Repair Estimation including the Inspection Findings, which can then be discussed.

Our T&M rates are shown in Appendix E.

Sensors on the table with the Status “Not Supported” will no longer be accepted into the Repairs Process, because they are based on technologies that cannot be replicated economically, now.

Any other bespoke Güralp manufactured sensors not named on the table, will be supported through the Repairs Process on a time and material basis.

12 DIGITAL DEVICES AND DIGITAL SYSTEMS – REPAIR STATUS

Because of advances in technology and the launch of new products, some of Güralp's older electronic devices are formally no longer supported through repair.

In general equipment more than 20 years old is not likely to be repairable, whereas equipment which is 10-20 years old will be Repaired on a Time and Materials basis, subject to components being available.

The full current status list for Digitisers and Digital Systems are laid out below:

Digital Device	Comment	Repair Status
Affinity		Fully Supported
Affinity with Authenticator		Fully Supported
Minimus/Minimus2		Fully Supported
Minimus+		Fully Supported
NAM Mk2		Fully Supported
3TB & 3TB5TB Borehole Digitiser (Minimus)		Fully Supported
DM24S3/6EAM (Peli)	Discontinued	Time and Materials**
DM24 Mk3	Discontinued	Time and Materials**
DM24S3/6EAM (SS)	Discontinued	Time and Materials**
DM24S3/S6AM (SS) Authenticator	Discontinued	Time and Materials**
DM24S3/6EAMU (Peli)	Discontinued	Time and Materials**
3TB & 3TB5TB Borehole Digitiser (DM24)	Discontinued	Time and Materials**
CD24	Discontinued	Time and Materials**
EAM/EAMU	Discontinued	Time and Materials**
NAM	Discontinued	Time and Materials**
DM24 MK1	Discontinued	Not Supported
DM24 MK2	Discontinued	Not Supported
SAM (Storage and acquisition module)	Discontinued	Not Supported
CRM (Combined repeater module)	Discontinued	Not Supported
NAM64	Discontinued	Not Supported
VSP Digitiser	Discontinued	Not Supported
CD24 Rackmount	Discontinued	Not Supported
EAM Rackmount	Discontinued	Not Supported
DCM (Data communication module)	Discontinued	Not Supported
DM24S12EAM	Discontinued	Not Supported

**In general equipment more than 20 years old is not likely to be Repairable, whereas equipment which is 10-20 years old will be Repaired on a Time and Materials basis, subject to components being available.

Digital System	Comment	Repair Status
3ESPCDE (DM24)		Support ends April 2025*
3ESPCD (CD24)		Support ends April 2025*
3EX (DM24)		Support ends April 2025*
3EX (CD24)		Support ends April 2025*
Radian PH/BH (Minimus)		Fully Supported
40TDE (DM24)		Support ends April 2025*
6TD (CD24)		Support ends April 2025*
Fortimus (Minimus)		Fully Supported
5TDE (DM24)	Discontinued	Support ends April 2025*
5TCDE (CD24)	Discontinued	Support ends April 2025*
Certimus		Fully Supported
Orcus OBS (Affinity)		Fully Supported
Maris OBS (Minimus)		Fully Supported
Aquarius OBS (Minimus)		Fully Supported
3TD/3TDE (DM24)	Discontinued	Time and Materials**
3ESPCD (DM24)	Discontinued	Time and Materials**
40TD (DM24)	Discontinued	Time and Materials**
EDU-T (CD24)	Discontinued	Time and Materials**
Breve OBS (CD24)	Discontinued	Time and Materials**
Liber OBS (CD24)	Discontinued	Time and Materials**
3T OBS (DM24)	Discontinued	Time and Materials**
Double Bubble OBS (CD24)	Discontinued	Time and Materials**
EDU-V/PEPP (CD24)	Discontinued	Not Supported
5TD (DM24)	Discontinued	Not Supported
5TCD (CD24)	Discontinued	Not Supported
3ESPD/3ESPDE (DM24)	Discontinued	Not Supported
Double Bubble OBS (CD24)	Discontinued	Not Supported

*After 2026 these devices will be Repaired on a Time and Materials basis (see below).
**In general equipment more than 20 years old is not likely to be Repairable, whereas equipment which is 10-20 years old will be Repaired on a Time and Materials basis, subject to components being available.

Devices on the table with the Status “Time and Materials” (T&M): Güralp will work on, but only on the basis of charging for the Engineer time and any materials used. We cannot be certain of being able to make a successful Repair but we are able to provide expertise to try. We recommend that an initial capped period of T&M is agreed to cover stages 1-5 of the Repairs Process, leading to a Repair Estimation including the Inspection Findings, which can then be discussed.

T&M rates are shown in Appendix E.

Devices on the table with the Status “Not Supported” will no longer be accepted into the Repairs

Process, because they are based on technologies that cannot be replicated economically, now.

13 THE INSPECTION REPORT AFTER OPENING

Devices will be opened within [15] working days of receipt unless otherwise agreed and confirmed in writing. Once a device has been opened, within [15] working days, unless otherwise agreed, Güralp will produce a ***Repair Estimation***, to include the Inspection Findings.

> **Note:** the 15 working day periods are targets. While the new Repairs Process is initially established, the elapsed time may be longer while the Repairs Centre works through the existing backlog. We will take account of the all information provided by the customer and schedule work accordingly.

The contents of this report are listed in Appendix D.

The ***Holding Period*** is the maximum time that Güralp can keep the device free of charge in the repair workshop before returning to the customer, in the event that Güralp Repairs Centre is not given instructions. We will, of course, be keen to agree this in discussion but we cannot hold and store repairs indefinitely. (Arrangements can be made to store customer devices long-term on site; this will be a charged service.) If no direction is received before the end of the agreed Holding Period, Güralp reserves the right to return the device to the customer, at customer cost plus 10% management charge or, if return costs cannot be covered, Güralp reserves the right to dispose of the device.

At the end of the Holding Period defined in the Inspection Report, the customer will be offered the choice of:

- **Returning** the device, at shipping cost plus the Inspection Charge.
- **Approving** the Repair Estimation, if not Beyond Economic Repair.
- Acknowledging that the device should **not** be Repaired and can be disposed of by Güralp, at cost of the Inspection Charge.
- Agreeing to ongoing paid-for **storage** at Güralp (rates as in Appendix E).

Güralp will be proactive with email and telephone communications for 30 days after the end of the Holding Period.

If there is no response and no direction given by the customer, during the 30 days after the end of the Holding Period Güralp will issue a written Notice of Disposal. 30 days after the Notice of Disposal, if there is still no direction from the customer, the device will be disposed of by Güralp.

Once a repair estimate is approved and the work completed Güralp will issue a formal final Repair Quotation, including shipping costs, for the client to formally accept. The device will be kept for 30 days and during this period Güralp will be proactive with email and telephone communications. The customer will be offered a choice of:

- Formal acceptance of the final quote, which will initiate invoicing and shipment back to the customer, or
- Agreeing to ongoing paid-for storage at Güralp (rates as in Appendix E).

If there is no response and no direction given by the customer, and the invoiced amount remains unpaid by the customer, during the 30 days after the Repair is completed, Güralp will issue a written Notice of Disposal. 30 days after the Notice of Disposal, if there is still no direction from the customer, the device will be disposed of by Güralp.

14 THE STATUS OF ACCESSORIES

Accessories will be subject to the same Warranty period as the instruments or devices that they are associated with, unless otherwise agreed in writing, and will be replaced if faulty.

Typically, Güralp will not Repair accessories but, outside of Warranty, we will offer replacement accessories to order. Quotes will be provided on request, since many accessories are bespoke to a device or an installation.

Accessories under Warranty must be returned to Güralp to be replaced.

Accessories include but are not limited to:

Item	Comment
GPS	Manufactured to Güralp specification
Cables	Produced by Güralp to order
Hard Disk and interface electronics	Supplied by a 3rd-party, with Güralp electronics
Mounting boxes	Produced by Güralp to order
Connector boxes	Produced by Güralp to order
Control units	Produced by Güralp to order
Surge protectors	Produced by Güralp to order
SD/MicroSD Card & USB data sticks	Supplied by a 3rd party
SSM (Surface Storage Module)	Produced by Güralp to order
PPM (Power Pack Module)	Produced by Güralp to order

All third-party equipment is supplied with the original manufacturer's Warranty.

15 DISPUTES ABOUT WARRANTY REPAIRS

Customers and Güralp could potentially have different opinions on whether a device is covered by a current Warranty. To ensure that this difference of opinion is settled without distraction, the following process will be adopted.

If the Customer and the Repair Centre representatives disagree as to whether any defect is covered by the terms of the Warranty (as opposed to a chargeable Repair) or, if during the relevant Warranty period, the Repair Centre receives repeated requests for support in respect of any particular device then:

- the Customer and Repair Centre shall attempt to resolve the disagreement through discussion between their relevant senior technical contacts;
- if the Customer and Repair Centre are unable to resolve the disagreement and either party wishes to escalate the issue further, the Customer must send a formal **Warranty Claim Notice.**
- upon receipt of a valid Warranty Claim Notice, Güralp shall escalate the matter to its senior management team, who shall consider the claim and respond to the Customer in writing.

When undertaking any Repairs or fixes under the terms of the Warranty, Güralp may, at its discretion, decide to replace the affected device (in whole or in part) instead of Repairing or fixing the affected Goods, provided such replacement devices have equivalent performance and functionality to the original item(s) and are compatible with the other devices supplied to the Customer as part of the same original order.

APPENDIX A - DEFINITION OF TERMS

Age = an instrument or device age is defined by default as the number of years since the device left our factory, or since Güralp commissioned the device in the field, unless another age start date is agreed in writing.

Beyond Economic Repair (BER) = if a device is not Repairable at a viable cost, it is defined as "beyond economic Repair".

Bespoke Instruments = situations where Güralp only produced a limited number of purpose built devices for a single client. Often this will be as part of a bespoke solution, involving a wider set of technology or devices, some of which may not be supplied by Güralp.

Capped Time and Materials = Güralp may undertake work up to a fixed maximum cost to the client, as a combination of Repair Engineer time, and material (such as components) used either in an investigation, or a Repair. This is to ensure that customers can control costs and Güralp can constrain effort, which means that we do not expend excessive resources on complex or difficult Repairs that may be better dealt with more efficiently in other ways.

Distributor = one of the companies and Organisations world-wide who represent Güralp or resell our Products in various countries and regions.

Güralp Support = the first line support for Güralp. The team can be contacted by email to support@Güralp.com Güralp support will normally manage communications through Stages 1 to 4 of the process.

Holding Period = this is the maximum period that Güralp will hold and store customer devices in the Repair Centre while awaiting authorisation to proceed with the process. If long term storage is required, this can be arranged, as a charged service (see Appendix E).

Inspection Charge = this is a one-off charge to open a device, in the Repair Centre and the default charges are shown in Appendix F. Warranty Repairs will not be subject to an Inspection Charge. Repairs where a Remote Investigation has been successfully undertaken will have a 50% reduction in the Inspection Charge.

Not Supported = This applies to devices which are now obsolete, and for which Güralp can no longer offer a Repairs service.

Notice of Disposal = formal written notice given by Güralp 30 days after the end of the Holding Period if no direction had been received. 30 days after the Notice of Disposal, if no direction has been received (see Section 10 above).

OBS = Ocean Bottom System. This could be a Breve, Liber, Orcus or Maris system of a bespoke instrument which is designed to operate under water. This could be under the sea, but for clarity the term OBS also covers instruments designed to work under lakes or other bodies of water.

On-site Repairs = this typically is a "project" to go to or near the customer location, to undertake repairs, and is described in Section 6.

Periodic Service = this is the return of a working device to Güralp to conduct a service for a Customer, at some point during its instruments working life. The scope of a periodic service is included in Appendix G and the prices for each family of instruments are shown in Appendix E. Once Serviced, the device will have a renewed Warranty period of 6 months.

Remote Investigation = this is the process undertaken at Stage 2 of the Repair Process. Remote Investigation is an important activity, which enables Güralp to manage the Repairs Process efficiently for the benefit of all customers. A key part of this is to provide input for an accurate Fault Description, and remote access to relevant live or recorded data from the faulty device.

Repair = the function performed to restore a Güralp instrument to operational soundness (and derivative words such as Repairable and Repaired shall be understood accordingly)

Repair Centre = the team within Güralp who run the Repairs Process and undertake the Specialist engineering work; they typically become responsible for communications with customers through Stages 5 to 7 of the process.

Repair Estimation = this is the report described Appendix D which Güralp will produce and email to customers once the device has been opened.

Repair Report = this is the final report created by the Güralp Repair Centre, which may include test information and other observations about the device. The Repair Report will be sent in conjunction with the Repair Quotation.

Return Material Authorisation (RMA) = this is a key identification of a Repair and without it we cannot track activity. It is therefore essential that customers obtain an RMA number before shipping, so that we can provide a good service and improve our communication and feedback. We no longer accept shipments without RMA numbers.

Repair Process = the end-to-end joint process for Güralp and our customers, described in this document (summarised in the table in section 3). The process is managed by the Customer Support team, and the Repair Centre, with involvement from Güralp's sales team as appropriate.

Repair Quotation = this is the final quotation to confirm the costs of the Repair work. This is produced at the end of the Repair and requests authorisation to ship the device back to the customer.

Support Contracts = specific contracts for support or Repair agreed with specific contracts for named instruments or sites, which define specific arrangements required by the customer. These will normally either be costed into the original device price, or charged quarterly or annually.

Time and Materials or "T&M" = the cost to the client of Engineers' time, and all materials used in a repair, including components, and *ad-hoc* expenses such as travel and subsistence if appropriate.

Warranty = the warranty provided under the terms of this Warranty and Repairs Policy

Warranty Claim Notice = Formal written notice from a customer if there is a dispute about a Repair. This should include details of the defect, all relevant background and an explanation of why the customer considers the Repair to fall within the terms of the Warranty. A Warranty Claim Notice will only be valid if it is set out on headed paper and signed by a senior manager and is sent as a PDF file (or equivalent) attached to an email with a subject title "Warranty Claim" to sales@guralp.com with a hard copy sent by courier to Güralp at its registered office.

Warranty Repairs = Repairs undertaken when the fault was reported within the agreed Warranty period.

APPENDIX B - CUSTOMER CHECK-LIST FOR STAGE 1

On suspecting a fault the recommended steps are:

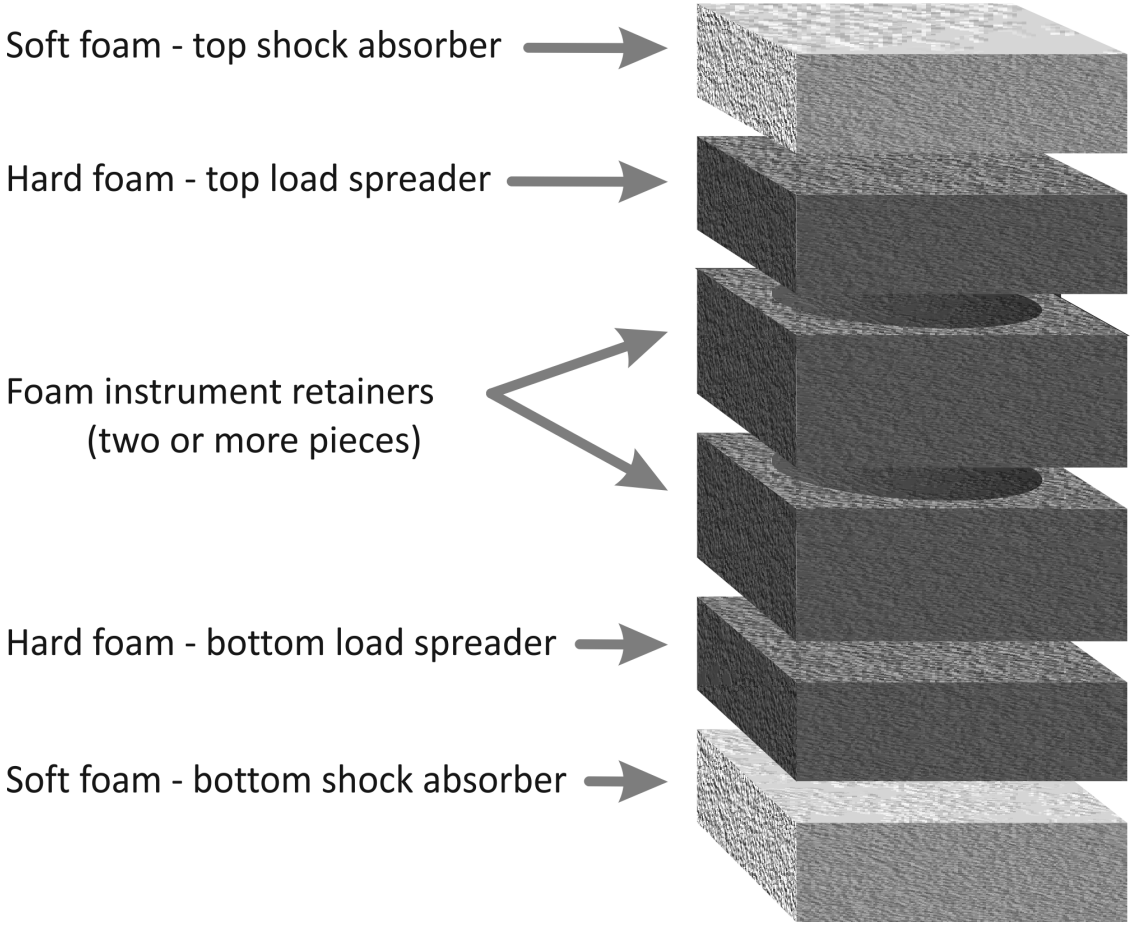
- Check the physical environment
  - Any water ingress or flooding of the location?
  - Any broken cables?
  - Any electrical damage – especially lightning?
  - Any sign of unauthorised access to the device?
  - Any sign of movement or disturbance of the device?
  - Any sign of animal activity near the device?
  - Any sign of plant activity near the device?
- Check all interacting equipment
  - Communications devices
  - Power-supplies (including UPS)
  - Environmental controls (heating or cooling)
- Locate the user guide and check set up is as specified
- Look at the “Frequently Asked Questions” on the Güralp support site

APPENDIX C - PACKAGING GUIDELINES

The Correct way to re-pack cylindrical surface instruments including Certimus for return shipping.

Güralp Systems' packaging for cylindrical surface instruments is specially designed to prevent damage to instruments during transport. Two different densities of foam are used: a soft foam to act as a shock-absorber and a hard foam to act as a load-spreader. It is important that these foam pads are deployed in the correct way to provide effective protection for your instrument.

The typical foam arrangement for instruments is shown below:



Important note: Ensure that there are no insects, other living creatures or organic material inside the packaging. Ensure that the packaging is sealed so that no living creatures can enter after packing. It is illegal to export some living creatures into the United Kingdom.

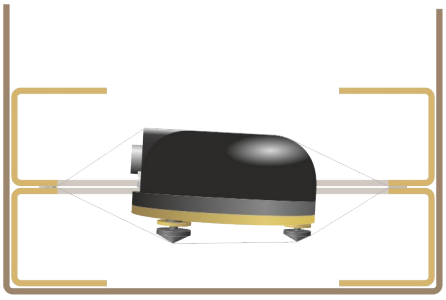
Note: If you have any worries or doubts about packaging, please contact us before shipping. We can advise or even supply new packaging for your instrument, if required.

The correct way to re-pack Minimus, Fortis and Fortimus for return shipping.

1. Start by placing one of the support boxes into the main box, with the membrane uppermost.

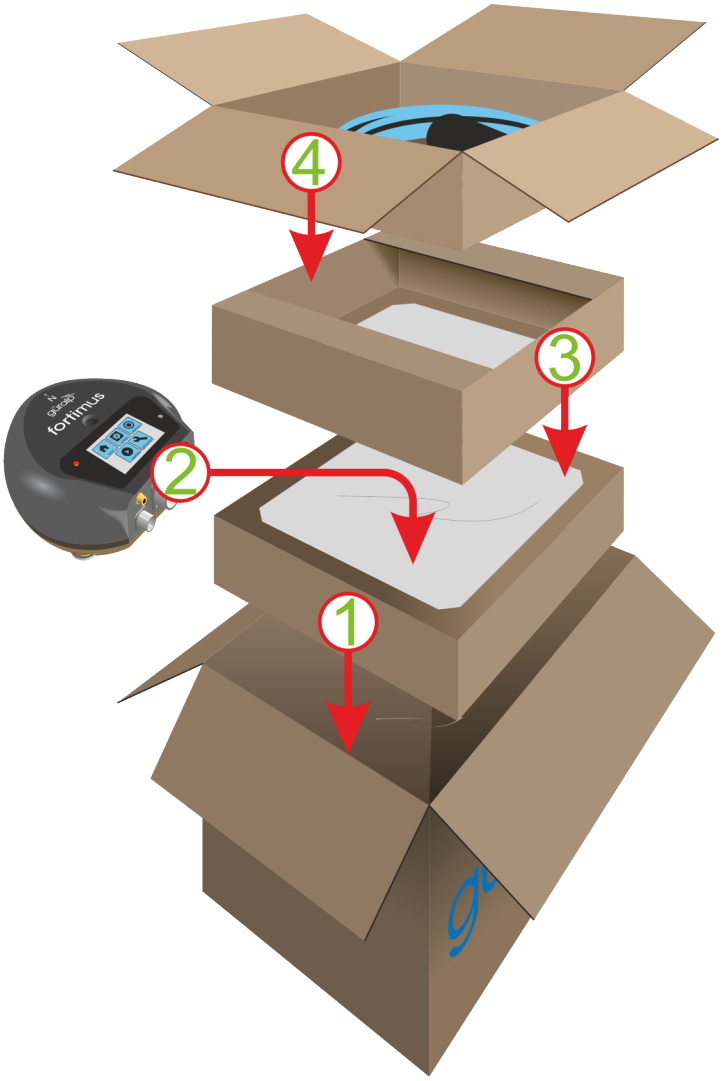
2. Place the digitiser or instrument in the middle of the membrane

3. Place the other support box on top of the instrument or digitiser, with the membrane facing downwards. The unit should now be suspended between the two membranes



4. Pack the accessories into the accessory box, fold the flaps over and place it into the main box, on top of the upper support box.

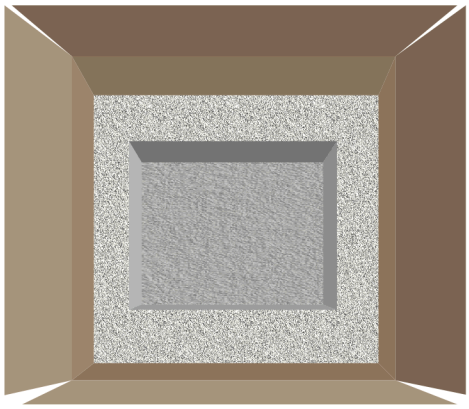
   Finally, close and seal the main box.



Important note: Ensure that there are no insects, other living creatures or organic material inside the packaging. Ensure that the packaging is sealed so that no living creatures can enter after packing. It is illegal to export some living creatures into the United Kingdom.

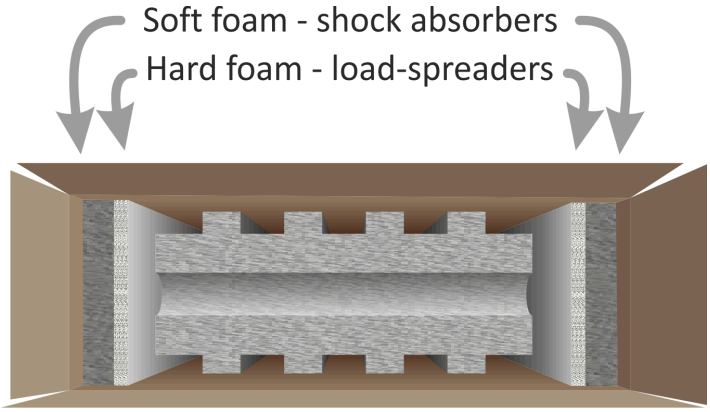
> **Note:** If you have any worries or doubts about packaging, please contact us before shipping. We can advise or even supply new packaging for your instrument, if required.

Typical digitiser packaging is shown here:



A second foam insert is placed on top of the digitiser to secure it before the box is closed.

Typical borehole instrument packaging:



A second foam insert is placed on top of the instrument to secure it before the box is closed.

Important note: Ensure that there are no insects, other living creatures or organic material inside the packaging. Ensure that the packaging is sealed so that no living creatures can enter after packing. It is illegal to export some living creatures into the United Kingdom

Note: If you have any worries or doubts about packaging, please contact us before shipping. We can advise or even supply new packaging for your instrument, if required.

APPENDIX D - REPAIR ESTIMATION

- Güralp will produce **Repair Estimation**, which will include the Inspection Findings. This will be used by the customer, the Repair Centre (Administration and Technicians), copied to the Distributor and to Güralp Sales. The generic contents of this report are:

  The **available options**, which could include:

  - To stop the Repair Process and not proceed with any Repair or replacement. In this case we will invoice the Inspection Charge, and either return or dispose of the un-Repaired instrument as per the customer request.
  - To proceed with the Repair of the instrument, based on Güralp's non-binding estimate of cost and lead time provided in good faith in the Repair Estimation. The Inspection Findings will accompany these estimates.
  - To decide not to proceed with Repairs, and instead to purchase a replacement instrument, at the discounted price quoted.
  - There are standard lines for packaging and shipping as the Repair Estimation is exclusive of these two items.
  - How long in elapsed time the next step of Repair or investigation is estimated to take.

APPENDIX E - STANDARD CHARGING RATES

Item or Service	Description	Charge
Senior Repair Technician	Per day, on-site and travel	£ 1,500
Repair Technician	Per day, on-site and travel	£ 100
Senior Repair Technician	Per day, in factory	£ 1,250
Repair Technician	Per day, in factory	£ 850
Instrument storage per month*	Borehole and OBS	£ 50
	Surface instrument or digitiser	£ 25
Periodic service and recalibration	Borehole (including Radian) OBS	Charged on case-by-case basis
	3 Series family	£ 1,500
	6 and 40 series families	£ 1000
	Radian Posthole	£ 1000
	Fortis	£ 700
Parts and components		Charged as used

*payable in advance for 6 month periods up to a maximum of 2 years.

APPENDIX F - INSPECTION CHARGES

These are the Inspection charges for the analogue instrument families and stand-alone Digital Devices.

Borehole and OBS Inspection Charges will be quoted at the time the Return Material Authorisation is provided to the customer. Any borehole/OBS instruments returned without the (free) pre-shipping investigation (Stages 4, 5 and 6 of the process) will by default have an Inspection charge of £1,500.

All Repairs shipped after a comprehensive (free) pre-shipping Remote Investigation (Stage 2 of the Repairs Process) will automatically have a 50% reduction in the standard Inspection Charge for that instrument family.

Product Family	Age (years)	
	0 – 10	Over 10
All Borehole/OBS instruments	£ 1,500	
Radian Posthole	£ 800	
3T, 3V, 3ESP, 3ESPC, Hexis	£ 800	£ 900
3TD, 3TDE, 3ESPD, 3ESPCD, 3ESPCDE, 3EX	£ 900	£ 1000
40T, 6T, Certis	£ 550	£ 650
6TD, 40TD, 40TDE, Certimus	£ 600	£ 700
Fortis, 5TC	£ 400	
5TD, 5TDE, 5TCDE	£ 500	£ 600
Fortimus	£ 500	
5TB	£ 700	
Affinity. Minimus, Minimus+	£ 300	
CD24, EAM, DM24, NAM, DM24S*x*EAM	£ 300	£ 400

Inspection Charges will not apply to Warranty Repairs.

Bespoke Instrument Inspection Charges will be discussed and agreed at Stage 3 in the process, when the Repair Planning is taking placed and it can be agreed by the customer and Güralp.

APPENDIX G - PERIODIC SERVICE AND RECALIBRATION

Customers may wish to return Instruments to Güralp for a Periodic Service, for example if a device is about to be deployed remotely for a long period or has just returned from a long or extreme deployment. The scope of a Periodic Service is:

- Inspection
- Full Performance/Vault test as applicable for Instrument
- Pressure Test as applicable for instrument
- Cleaning external and connectors
- Calibration process and documentation

Once the Periodic Service is complete, the device has a new **Warranty for 6 months**.

If, during a Periodic Service, the Service Centre identifies a need for a Repair, then a Repair Estimation will be generated with a proposed approach for agreement with the customer.

APPENDIX H - REVISION HISTORY

A	2015-07-19	Initial draft release for internal agreement
B	2015-08-11	Release for Website publication
C	2015-12-06	Release with Güralp spelt with umlaut – no other changes
D	2016-02-19	Update including Affinity, Fortis and Radian and some repricing of Standard Charging and Inspection rates.
E	2016-07-19	Updated to include Minimus and also terms around Storage and Disposal of devices if left with Güralp.
F	2016-08-03	Update to include Packaging guidelines for Borehole Instruments
G	2016-09-05	Update to include guidance on Warranty period in Section 4 explaining that miss-use of equipment may invalidate the Warranty
H	2017-06-10	Addition of specific guidance related to the Warranty for OBS and Borehole instruments.
I	2017-07-10	Updates of the Repair Status of Analogue Sensors (Section 11) Updates of Charging Rates (Appendix G) Updates of the Inspection charges (Appendix H)
J	2017-09-06	Update of the Inspection charges (Appendix H)
K	2018-02-05	Update of the Seven Stage Process Update of the Inspection Charges (Appendix F) General update of the Policy to reflect Repairs Process accurately
L	2018-20-07	Update: Warranty does not transfer automatically to a new owner (Section 2)
M	2018-8-10	Update to the Analogue Sensor Repair Status table (Section 11) and the Background introduction (Section 1).
N	2019-7-30	Update the Analogue Sensor Repair Status Table and the Digital Devices Status Table and add a new Digital Systems Status Table.
O	2020-07-22	Update to Packaging Guidelines (Appendix C)
P	2022-12-14	Update for terms specific to OBS
Q	2024-05-24	Update regarding 3rd party MicroSD Cards, addition of Hexis