

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

*GENIE-B/UWWTR, GENIE-B, GENIE-J/UWWTR,
GENIE-J Portable Automatic Waste Water Samplers*

Manufactured by:

SIRCO Controls Ltd

*Sweynes Industrial Estate
Ashingdon Road
Rochford
Essex
SS4 1RQ*

has been assessed by CSA Group
and for the conditions stated on this certificate complies with:

**Performance Standards and Test Procedures for Continuous Water
Monitoring Equipment, Part 1: Performance standards and test procedures for Automatic
Water Sampling Equipment, Environment Agency, version 4, April 2017**

Certification Range:

Lift Height 0 to 7 metres

Project number: 80116654
Certificate number: Sira MC070105/06
Initial certification: 15 March 2007
This certificate issued: 14 March 2022
Renewal date: 14 March 2027



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Environmental Team Manager

MCERTS is operated on behalf of the Environment Agency by

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Certificate Contents

Approved Site Application.....	2
Basis of Certification	2
Product Certified.....	2
Certified Performance	3
Description.....	6
General Notes	7

Approved Site Application

Any potential user should ensure, in consultation with the manufacturer, that the monitoring system is suitable for the intended application. For general guidance on monitoring techniques refer to the Environment Agency Monitoring Technical Guidance Notes available at www.mcerts.net

The GENIE-B/UWWTR product is suitable for use on applications for compliance with the Urban Wastewater Treatment Regulations. The GENIE-B/UWWTR portable sampler can be operated at any site where UWWTR sampling is required with or without a mains power source and is suitable for indoor or outdoor use.

The GENIE-B portable automatic effluent sampler is suitable for any sampling application where cooling of the sample is either not critical or not required. This sampler can be operated at any site with or without a mains power source and is suitable for indoor or outdoor use.

The GENIE-J/UWWTR portable automatic effluent sampler is a more compact version of the GENIE-B/UWWTR sampler which meets the E32 specification for automatic sampling equipment for the Urban Wastewater Treatment Regulations. This sampler can be operated at any site where UWWTR sampling is required with or without a mains power source and is suitable for indoor or outdoor use.

The GENIE-J is a lightweight composite only portable automatic effluent sampler which is suitable for any sampling application where cooling of the sample is not required. This sampler can be operated at any site with or without a mains power source and is suitable for indoor or outdoor use.

Basis of Certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

WRc Report Ref: UC 3966 dated October 2001
WRc Report Ref: UC12483.08 dated May 2017

Product Certified

This certificate applies to all GENIE-B and GENIE-J portable samplers fitted with software version V1.5 onwards (serial number 000906E onwards).

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Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: -10°C to +40°C

Test	Results	MCERTS specification												
Sample Collection	Flow proportional and timed sampling available. Certified for use with 24 x 1L bottles.	Clause 3.1.2												
Sample interval <ul style="list-style-type: none"> · Time proportional sampling · Flow proportional sampling 	Sample interval range is 1min to 99 hours 1 min intervals is selectable Flowmeter (proportional) contact closure or 4-20mA output are available Number of pulses per sample adjustable	Clause 3.1.2												
Sample failure	Sample failures recorded. Fault indicated on display	Clause 3.1.2												
Sample line diameter	10 mm	Clause 3.1.2 >9 mm												
Sample Volume <ul style="list-style-type: none"> · Max discrete sample · Storage capacity 	300ml stated 25L composite, 24 x 500ml, 24 x 1L, 1 x 5L, 1 x 15L available	Clause 3.1.2												
Maximum volume of a discrete sample that can be set Total storage capacity both by numbers and volumes of individual bottles and in a composite container	<table border="0"> <tr> <td>GENIE-B</td> <td>300ml</td> </tr> <tr> <td>GENIE-J</td> <td>250ml</td> </tr> <tr> <td>GENIE-J</td> <td>1 x 10L</td> </tr> <tr> <td>GENIE-J/UWWTR</td> <td>1 x 5L</td> </tr> <tr> <td>GENIE-B</td> <td>24 x 500ml, 24 x 1L, 1 x 15L</td> </tr> <tr> <td>GENIE-B/UWWTR</td> <td>1 x 5L</td> </tr> </table>	GENIE-B	300ml	GENIE-J	250ml	GENIE-J	1 x 10L	GENIE-J/UWWTR	1 x 5L	GENIE-B	24 x 500ml, 24 x 1L, 1 x 15L	GENIE-B/UWWTR	1 x 5L	Clause 3.1.2
GENIE-B	300ml													
GENIE-J	250ml													
GENIE-J	1 x 10L													
GENIE-J/UWWTR	1 x 5L													
GENIE-B	24 x 500ml, 24 x 1L, 1 x 15L													
GENIE-B/UWWTR	1 x 5L													
Maximum sampling head	7.5 metres Certified for maximum of 7 metres	Clause 3.1.2												

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Test	Results	MCERTS specification
Sample volume error a) Time Proportional	<p>Expanded Uncertainty (U):</p> <p>0.17% at 1m 0.3% at 3.5m 0.03% at 7m Overall: 0.17%</p> <p>Mean Error (X):</p> <p>0.5% at 1m 0.9% at 3.5m 0.6% at 7m Overall: 0.67%</p>	<p>Clause 6.4.1.1 <5% Note 1</p>
Sampling Principles	All available sampling principles were tested. No timing errors were seen.	<p>Clause 6.4.2 Note 2</p>
Sample line velocity	<p>0.91 m/s at 1 m sampling head 0.83 m/s at 2 m sampling head 0.83 m/s at 3 m sampling head 0.78 m/s at 4 m sampling head 0.73 m/s at 5 m sampling head 0.64 m/s at 6 m sampling head 0.55 m/s at 7 m sampling head</p>	<p>Clause 6.4.3 >0.5 m/s</p>
Supply Voltage (Mains supply samplers) (220V to 240V)	0 to 7m @ 0.504 m/s	<p>Clause 6.4.4.1 >0.5 m/s</p>
Supply Voltage (Battery powered samplers)	0 to 7m @ 0.505 m/s	<p>Clause 6.4.4.2 >0.5 m/s</p>
Sample integrity	No statistically significant difference was found in analysis for BOD, COD, suspended solids, total N and total P	<p>Clause 6.4.5 Annex B5</p>
Sample timing error	<1 sec	<p>Clause 6.4.6 < ±10 sec/24h</p>
Sample temperature control a) Without sample temperature control: effect on volume	Not tested: Sample volume is calculated according to a volume control tube, which would not be affected by ambient temperature.	<p>Clause 6.4.7.2 ±5%</p>

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Test	Results	MCERTS specification								
Sample temperature control b) With sample temperature control (maintain sample between 0°C to 5°C)	<table border="0"> <tr> <td>During sample period:</td> <td>24hrs after sample period:</td> </tr> <tr> <td>3.56°C at -10°C</td> <td>0.13°C at -10°C</td> </tr> <tr> <td>3.72°C at 15°C</td> <td>1.41°C at 15°C</td> </tr> <tr> <td>4.91°C at 40°C</td> <td>1-5°C at 40°C*</td> </tr> </table> <p>*At 40°C ambient the sample temperature exceeds 5°C after 10.5 hours from the end of the sampling period.</p> <p>Formation of ice was observed after 8 hours from the end of the sampling period.</p> <p>It is recommended that when the sampler is deployed in conditions where the temperature may remain above 30°C during the period of deployment, the samples should be retrieved within a period of 10.5 hours from the end of the sampling period to minimise the risk of the sample temperature exceeding 5°C.</p> <p>It is recommended that when the sampler is deployed in conditions where the temperature may remain <0°C during the period of deployment, the samples should be retrieved within a period of 8 hours from the end of the sampling period to minimise the risk of ice formation.</p>	During sample period:	24hrs after sample period:	3.56°C at -10°C	0.13°C at -10°C	3.72°C at 15°C	1.41°C at 15°C	4.91°C at 40°C	1-5°C at 40°C*	Clause 6.4.7.3 Maintain sample between 0°C to +5°C Annex B7
During sample period:	24hrs after sample period:									
3.56°C at -10°C	0.13°C at -10°C									
3.72°C at 15°C	1.41°C at 15°C									
4.91°C at 40°C	1-5°C at 40°C*									

Note 1: The sampler was not tested operating on the time proportional sampling principle (clause 6.2.1a), not on flow proportional sampling – CVVT and CTVV (clauses 6.2.1b and 6.2.1c).

Note 2: The sampler was not tested operating on flow proportional sampling CTVV (clause 6.4.1.2) as sample volume has to be manually changed. Both CVVT and CTCV were tested.

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Description

GENIE-B/UWWTR

The GENIE-B/UWWTR portable effluent sampler is a weatherproof sampler suitable for sampling from an open channel or vessel using the vacuum/pressure method of sampling. The sample once collected is deposited in a 5 litre sample container which is housed in a fully insulated base section, which will store the sample between 0 and 5° C for up to a 48 hour period as per the requirements of the UWWTD. Cooling is provided by 6 standard ice packs which are frozen prior to deployment of the sampler.

The sampler is fully weatherproofed and is suitable for indoor or outdoor use and its casing is manufactured from high density polypropylene. The sampler weighs 13.5 kg (excluding sample container and ice packs), and has a maximum diameter of 450 mm with a height of 1060 mm. The sampler can be operated from an external battery pack or 12 vdc mains power supply unit.

GENIE-B

The GENIE-B portable effluent sampler is a weatherproof sampler suitable for sampling from an open channel or vessel using the vacuum/pressure method of sampling, and is most suited when sample cooling is not critical or required. The sampler can be provided with various interchangeable sample bottle options including 24 x 500 ml, 24 x 1 litre and 1 x15 litre.

The sampler is fully weatherproofed and is suitable for indoor or outdoor use and its casing is manufactured from high density polypropylene. The sampler weighs 14 kg (depending on sample bottle configuration), and has a maximum diameter of 450 mm with a height of 775 mm (with standard 24 x 500ml base section). The sampler can be operated from an external battery pack or 12 vdc mains power supply unit.

GENIE-J/UWWTR

The GENIE-J/UWWTR portable effluent sampler is a weatherproof sampler suitable for sampling from an open channel or vessel using the vacuum/pressure method of sampling. The sample once collected is deposited in a 5 litre sample container which is housed in a fully insulated base section, which will store the sample between 0 and 5° C for up to a 48 hour period as per the requirements of the UWWTD. Cooling is provided by 6 standard ice packs which are frozen prior to deployment of the sampler.

The sampler is fully weatherproofed and is suitable for indoor or outdoor use and its casing is manufactured from high density polypropylene. The sampler weighs 14 kg (excluding sample container and ice packs), and has a maximum diameter of 420 mm with a height of 900 mm. The sampler can be operated from an external battery pack or 12 vdc mains power supply unit.

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GENIE-J

The GENIE-J portable effluent sampler is a weatherproof sampler suitable for sampling from an open channel or vessel using the vacuum/pressure method of sampling, and is most suited when sample cooling is not required. The sample once collected is deposited in a 10 litre sample container.

The sampler is fully weatherproofed and is suitable for indoor or outdoor use and its casing is manufactured from high density polypropylene. The sampler weighs 7 kg, and has a maximum diameter of 312 mm with a height of 527 mm. The sampler can be operated from an external battery pack or 12 vdc mains power supply unit.

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of CSA Certificates'.
2. The design of the product certified is defined in the CSA Design Schedule V06 for certificate No. Sira MC070105/06.
3. If the certified product is found not to comply, CSA Group should be notified immediately at the address shown on this certificate.
4. The certification marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of CSA Certificates'.
5. This document remains the property of CSA Group and shall be returned when requested by CSA Group.

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