

OPERATING INSTRUCTIONS

Vibro Consistometer

34-0300

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<p><i>In the interests of improving and updating its equipment, ELE reserves the right to alter specifications to equipment at any time</i> ELE International 2005 ©</p>		

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1 Introduction

- 1.1 There are a number of techniques for determining the workability and consistency of concrete. The British Standards Institution suggest preferences in the type of technique to use directly related to the workability characters of concrete. It will be seen that the Vebe time using a consistometer is recommended for testing the workability of stiff concrete.
- 1.2 The ELE consistometer is based on the original unit developed by V Bahrner of Sweden. In fact, his initials formed the title for the technique.
- 1.3 The principle of the test is to carry out a normal slurry test after which the sample of concrete is vibrated to remould the material. The time taken for the vibrator to achieve a preset amount of remoulding is known as the 'Vebe' time.

2 Specification

Overall dimensions	415 x 510 x 810 mm (length x width x height)
Weight (approx.)	90 kg

3 Description

- 3.1 The consistometer can be considered in three parts:
- (a) the vibrating table
 - (b) the container assembly
 - (c) the measuring head
- 3.2 The vibrating table (see figure 1)
- 3.2.1 The table (6) comprises a steel unit with a flat top.
- An electrical vibrator (10) is fitted to the underside of the table to provide the correct amplitude. A separate control box (8) is provided to switch the vibrator on and off as required.
- Two studs on the table with clamping knobs are used to firmly position the test container (5).
- The table is supported by four rubber buffers (7) on a steel base unit (9). A mounting tube (11) is fixed to the base to support the funnel/measuring head assembly.
- 3.3 The container assembly
- 3.3.1 The sampler container (5) comprises a steel unit with two clamps for fixing to the vibrator table.
- 3.3.2 A slump cone (4) of standard dimensions but without 'feet' is provided to form the initial cone of concrete. (Not required for ASTM tests).
- 3.4 The measuring head
- 3.4.1 This part of the equipment incorporates the necessary items to perform three functions.
- 3.4.2 A filling funnel (3) is attached to the support arm (2) attached to the mounting tube (11). The arm is so arranged that after using the funnel it can be swung through 180° to use the measuring head (1).
- 3.4.3 The measuring head (1) comprises the scale bar graduated in units of 5 mm. Attached to the bottom of the bar is a perspex disc (12) and a weight (13).

4 Installation

Safety

Whilst the test is in operation do not remove any covers or attempt to adjust any part of the machine.

Ensure all moving parts are thoroughly secured before attempting any maintenance.

Ensure all appropriate measures are taken to protect the operator from excessive noise.

See noise certificate (when supplied).

Power Supply

Electrical safety

Warning: Before removing any covers or performing maintenance repair and service, isolate from electrical supply by removing mains plug. Where mains supply is required during these activities, only competent persons should perform the work.

Check that the power supply is compatible with the requirements stated on the label and connect in accordance with IEE regulations or to local requirements.

It is advised that this machine be connected via a residual current device (not supplied), and it should operate if earth leakage current exceeds 0.03 amps.

The power cable is coded as follows:

Brown wire	Live or power
Blue wire	Neutral
Green/Yellow wire	Earth or ground

Important: this equipment must be correctly earthed.

Note: exercise extreme caution when using the machine with wet hands. Dry hands before operating machine.

Portable Appliance Tests (PAT)

All ELE designed products are tested for electrical safety prior to sale.

An electrical safety test label is fitted, (usually adjacent to the mains input socket).

Should no label be found, please contact ELE Service Department quoting the serial number of the equipment.

Organisations have an obligation to ensure equipment is maintained and is safe for use. Regular PAT testing is one means of ensuring equipment continues to be electrically safe.

Important: do not connect PAT leads to sensitive components such as PCBs, control switches and the like.

DO NOT FLASH TEST ELECTRONIC EQUIPMENT.

If in doubt as to the most suitable connection point (which will usually be an earth stud or an external earth connection) contact ELE Service Department for assistance.

5 Operation

- 5.1 It is recommended that the operator refers to the relevant Standard to conduct the test technique correctly.

6 Maintenance

6.1 General

6.1.1 The unit is designed to be maintenance free. However, the following points relating to good laboratory practice will ensure trouble free operation.

6.1.2 Occasionally lubricate the clamp assemblies.

6.1.3 Regularly clean off the table top to keep it free from contamination and apply a thin film of light oil.

6.2 After test

6.2.1 Immediately after test is finished, remove the concrete from the container.

6.2.2 Wash all items contaminated by concrete and dry the assembly ready for the next test.

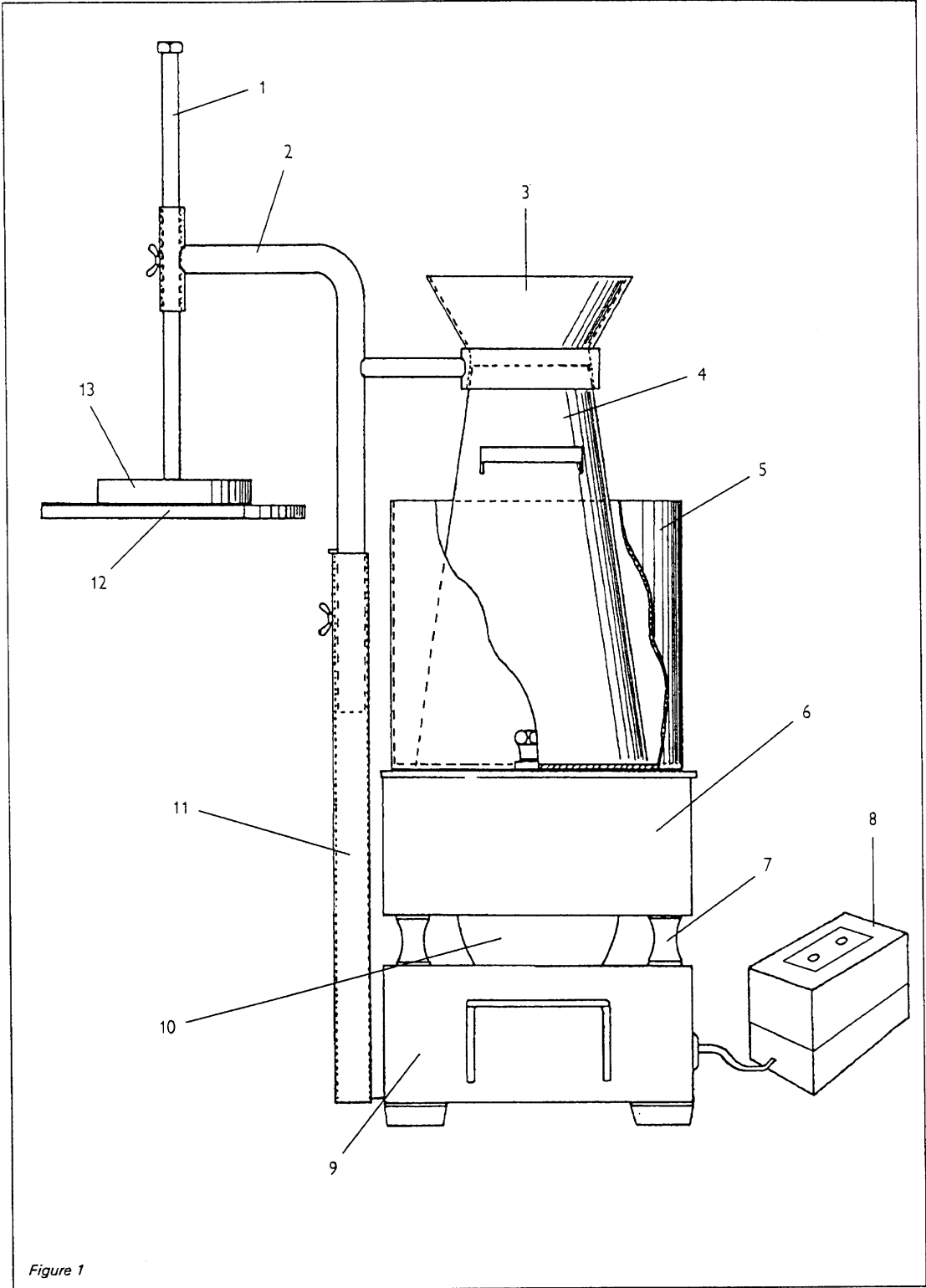


Figure 1

Declaration of Conformity

ELE
International

Issued By: **ELE International**

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Date of Issue: 1 January 1998 ELE doc ref: 9901X0013

Approved
Signatory



We, ELE International, Chartmoor Road, Chartwell Business Park, Leighton Buzzard, Beds LU7 4WG, England, declare under sole responsibility that the following product(s) to which this declaration relates is (are) in conformity with the provisions of:

73/23/EEC Electrical Equipment Directive implemented in the UK by S1728/1989 amended by 93/68/EEC 1/1/1997.

Electrical Safety tested to BS EN 60204-1.

89/392/EEC, 91/368/EEC, 93/44/EEC and 93/68/EEC Machinery Directive implemented in the UK by S13073/1992 and S12063/1994.

89/336/EEC, 91/263/EEC, 92/31/EEC (the EMC Directive) amended by 93/68/EEC and implemented in the UK by SI/2372/1992 and SI/3080/1994.

Emissions tested to BS EN 50081-1 Domestic/Light Industrial.
Immunity tested to prEN 50082-2 Industrial.

Product Description	Serial No.
34-0300 Vibro Consistometer	(See details on product identification plate)



BS EN ISO9001: 1994 approved
Certificate number 860461

Responsible person's/approved signatory
M Green, Managing Director

This Declaration of Conformity complies with BS
7514 (EN 45014), General Criteria for suppliers'
Declaration of Conformity

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Hach Lange Ltd

Noise Test Certificate

Issued By: **ELE International**

Date of Issue: 1 January 1995 ELE doc ref: 9901X0013

Date of Test: 1 January 1995



Page 1 of 1

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89/392/EEC, 91/368/EEC, 93/44/EEC and 93/68/EEC Machinery Directive implemented in the UK by S13073/1992 and S12063/1994.

<p>Product Description</p> <p>34-0300 Vibro Consistometer</p>	<p>Serial No.</p> <p>(See details on product identification plate)</p>																									
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BS EN ISO9001: 1994 approved Certificate number 860461

Noise tests were carried out using Test Meter, serial No.

N30863

which has been calibrated using calibrated standards traceable to national standards of measurement.

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DIRECTIVE ON WASTE ELECTRICAL & ELECTRONIC EQUIPMENT (WEEE)



Electrical equipment marked with this symbol may not be disposed of in European public disposal systems after 12 August of 2005. In conformity with European local and national regulations (EU Directive 2002/96/EC), European electrical equipment users must now return old or end-of life equipment to the Producer for disposal at no charge to the user.

Note: For return for recycling, please contact the equipment producer or supplier for instructions on how to return end-of-life equipment for proper disposal.

Important document. Retain with product records.

GERMAN

Elektrogeräte, die mit diesem Symbol gekennzeichnet sind, dürfen in Europa nach dem 12. August 2005 nicht mehr über die öffentliche Abfallentsorgung entsorgt werden. In Übereinstimmung mit lokalen und nationalen europäischen Bestimmungen (EU-Richtlinie 2002/96/EC), müssen Benutzer von Elektrogeräten in Europa ab diesem Zeitpunkt alte bzw. zu verschrottende Geräte zur Entsorgung kostenfrei an den Hersteller zurückgeben.

Hinweis: Bitte wenden Sie sich an den Hersteller bzw. an den Händler, von dem Sie das Gerät bezogen haben, um Informationen zur Rückgabe des Altgeräts zur ordnungsgemäßen Entsorgung zu erhalten.

Wichtige Informationen. Bitte zusammen mit den Produktinformationen aufbewahren.

FRENCH

A partir du 12 août 2005, il est interdit de mettre au rebut le matériel électrique marqué de ce symbole par les voies habituelles de déchetterie publique. Conformément à la réglementation européenne (directive UE 2002/96/EC), les utilisateurs de matériel électrique en Europe doivent désormais retourner le matériel usé ou périmé au fabricant pour élimination, sans frais pour l'utilisateur.

Remarque : Veuillez vous adresser au fabricant ou au fournisseur du matériel pour les instructions de retour du matériel usé ou périmé aux fins d'élimination conforme.

Ce document est important. Conservez-le dans le dossier du produit.

ITALIAN

Le apparecchiature elettriche con apposto questo simbolo non possono essere smaltite nelle discariche pubbliche europee successivamente al 12 agosto 2005. In conformità alle normative europee locali e nazionali (Direttiva UE 2002/96/EC), gli utilizzatori europei di apparecchiature elettriche devono restituire al produttore le apparecchiature vecchie o a fine vita per lo smaltimento senza alcun costo a carico dell'utilizzatore.

Nota: Per conoscere le modalità di restituzione delle apparecchiature a fine vita da riciclare, contattare il produttore o il fornitore dell'apparecchiatura per un corretto smaltimento.

Documento importante. Conservare con la documentazione del prodotto.

DANISH

Elektriske apparater, der er mærket med dette symbol, må ikke bortskaffes i europæiske offentlige affaldssystemer efter den 12. august 2005. I henhold til europæiske lokale og nationale regler (EU-direktiv 2002/96/EF) skal europæiske brugere af elektriske apparater nu returnere gamle eller udtjente apparater til producenten med henblik på bortskaffelse uden omkostninger for brugeren.

Bemærk: I forbindelse med returnering til genbrug skal du kontakte producenten eller leverandøren af apparatet for at få instruktioner om, hvordan udtjente apparater bortskaffes korrekt.

Vigtigt dokument. Opbevares sammen med produktdokumenterne.

SWEDISH

Elektronikutrustning som är märkt med denna symbol kanske inte kan lämnas in på europeiska offentliga sopsstationer efter 2005-08-12. Enligt europeiska lokala och nationella föreskrifter (EU-direktiv 2002/96/EC) måste användare av elektronikutrustning i Europa nu återlämna gammal eller uträdd utrustning till tillverkaren för kassering utan kostnad för användaren.

Obs! Om du ska återlämna utrustning för återvinning ska du kontakta tillverkaren av utrustningen eller återförsäljaren för att få anvisningar om hur du återlämnar kasserad utrustning för att den ska bortskaffas på rätt sätt.

Viktigt dokument. Spara tillsammans med dina produktbeskrivningar.

SPANISH

A partir del 12 de agosto de 2005, los equipos eléctricos que lleven este símbolo no deberán ser desechados en los puntos limpios europeos. De conformidad con las normativas europeas locales y nacionales (Directiva de la UE 2002/96/EC), a partir de esa fecha, los usuarios europeos de equipos eléctricos deberán devolver los equipos usados u obsoletos al fabricante de los mismos para su reciclado, sin coste alguno para el usuario.

Nota: *Sírvase ponerse en contacto con el fabricante o proveedor de los equipos para solicitar instrucciones sobre cómo devolver los equipos obsoletos para su correcto reciclado.*

Documento importante. Guardar junto con los registros de los equipos.

DUTCH

Elektrische apparatuur die is voorzien van dit symbool mag na 12 augustus 2005 niet meer worden afgevoerd naar Europese openbare afvalsystemen. Conform Europese lokale en nationale wetgeving (EU-richtlijn 2002/96/EC) dienen gebruikers van elektrische apparaten voortaan hun oude of afgedankte apparatuur kosteloos voor recycling of vernietiging naar de producent terug te brengen.

Nota: *Als u apparatuur voor recycling terugbrengt, moet u contact opnemen met de producent of leverancier voor instructies voor het terugbrengen van de afgedankte apparatuur voor een juiste verwerking.*

Belangrijk document. Bewaar het bij de productpapieren.

POLISH

Sprzęt elektryczny oznaczony takim symbolem nie może być likwidowany w europejskich systemach utylizacji po dniu 12 sierpnia 2005. Zgodnie z europejskimi, lokalnymi i państwowymi przepisami prawa (Dyrektywa Unii Europejskiej 2002/96/EC), użytkownicy sprzętu elektrycznego w Europie muszą obecnie przekazywać Producentowi stary sprzęt lub sprzęt po okresie użytkowania do bezpłatnej utylizacji.

Uwaga: *Aby przekazać sprzęt do recyklingu, należy zwrócić się do producenta lub dostawcy sprzętu w celu uzyskania instrukcji dotyczących procedur przekazywania do utylizacji sprzętu po okresie użytkowania.*

Ważny dokument. Zachować z dokumentacją produktu.

PORTUGUESE

Qualquer equipamento eléctrico que ostente este símbolo não poderá ser eliminado através dos sistemas públicos europeus de tratamento de resíduos sólidos a partir de 12 de Agosto de 2005. De acordo com as normas locais e europeias (Directiva Europeia 2002/96/EC), os utilizadores europeus de equipamentos eléctricos deverão agora devolver os seus equipamentos velhos ou em fim de vida ao produtor para o respectivo tratamento sem quaisquer custos para o utilizador.

Nota: *No que toca à devolução para reciclagem, por favor, contacte o produtor ou fornecedor do equipamento para instruções de devolução de equipamento em fim de vida para a sua correcta eliminação.*

Documento importante. Mantenha junto dos registos do produto.