ELE International

OPERATING INSTRUCTIONS

Digital Data Recorder

39-1300/24

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WEEE Directive

"DDRpod" Digital Data Recorder (Temperature & Humidity)

1   Introduction

The Eurotherm nanodac Digital Data Recorder (DDRpod) is a stand-alone, simple to use modern version of an analogue paper chart recorder. Data can be viewed on screen or downloaded for viewing on a computer. The digital data recorder has the following features and benefits:

- Stand-alone device with built in power supply.
- Temperature and humidity probe on a long cable.
- 3.5" colour TFT screen.
- 50 MB built in non-volatile memory for recording temperature and humidity data.
- Panel mounted USB socket (for downloading recorded data).
- Scrollable colour graphs for **temperature** and **humidity** displayed in real time.
- Data is recorded and stored every few seconds in .csv format
- Recorded data can be imported into Microsoft© Excel© via a USB flash drive.

i Recording of data (to built-in memory) starts automatically after power on.

i The recorder will hold approximately 1 years' worth of data before data is overwritten.

i Recorded data can be downloaded onto a USB flash drive for analysis (as required).

i The recorder does not need a USB flash drive inserted to record data. (It only needs one for *downloading* recorded data)*.*

In the event of a power cut, stored data will remain safe in the recorder. Recording will not happen during a power cut.

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2   Installation

The DDRpod recorder requires a 240V AC 50 Hz mains supply to operate. It has a two-in-one temperature / humidity probe on a long cable. It is suitable for monitoring temperature and humidity levels inside the chamber of a humidity cabinet.

To be able to record the conditions inside the chamber, the probe cable needs to be inserted into the chamber through *one* of the humidity cabinet's access ports. (Two 12mm diameter access ports are located on the side of each humidity cabinet as standard for this purpose).

Access port (showing bung fitted / bung removed)

Bung removed

Temperature & humidity probe

1) Stand the DDRpod on top of the humidity cabinet (or alongside it on a bench / shelf).

2) Remove *one* red cap / bung from one of the humidity cabinet access ports.

3) WITH POWER OFF, carefully unscrew the green connector from the DDRpod temperature & humidity probe.

4) Thread the temperature and humidity probe cable through the access port into the humidity cabinet chamber. The probe will ultimately need to be located towards the top of the chamber alongside the existing temperature and humidity probe.

5) Re-connect the green connector to the DDRpod temperature & humidity probe, making sure the pins are aligned correctly.

6) No need to re-fit the red access port bung where the cable is threaded through.

7) Power ON.

PRECAUTIONS:

Do not allow the probe to touch any metal surface (shelf / roof / back panel / chamber wall). It needs to be in free-moving air alongside the existing probes, at the top of the chamber to operate correctly.

2.1   Switching On

The recorder requires a 240V AC 50 Hz mains supply. After plugging the recorder in, it will switch on and show a logo while starting up. (A fuel gauge below the logo shows the loading progress).

Please wait for the recorder to start up

The recorder has been factory configured to record data automatically, once it has fully started up. No button pressing required.

The screen (below) will appear once the recorder is operating normally:
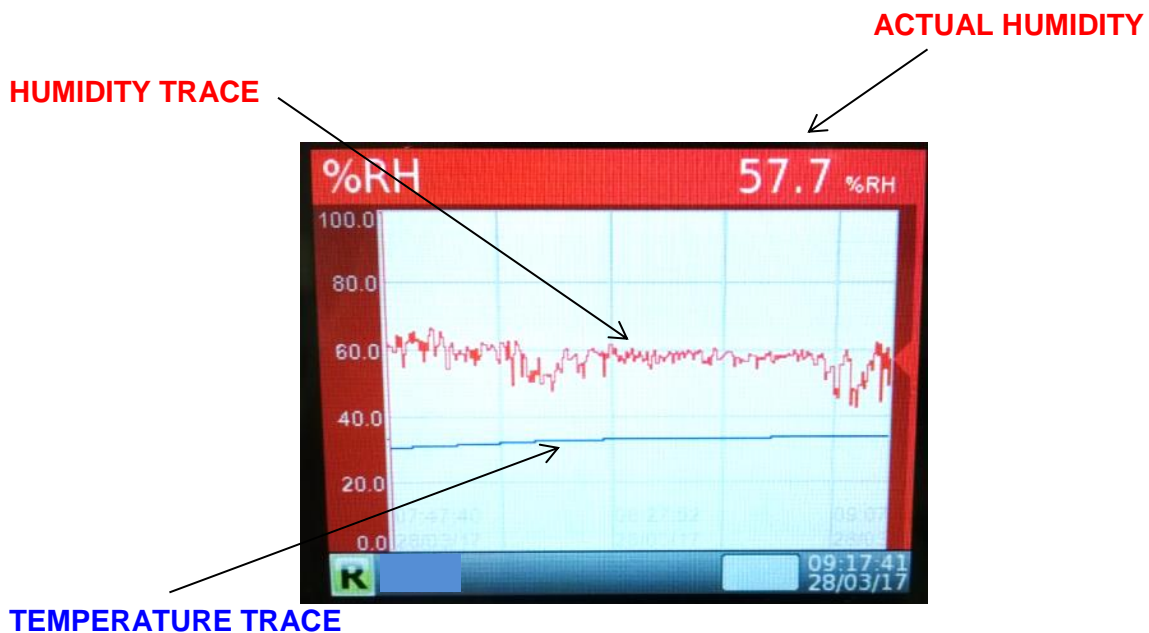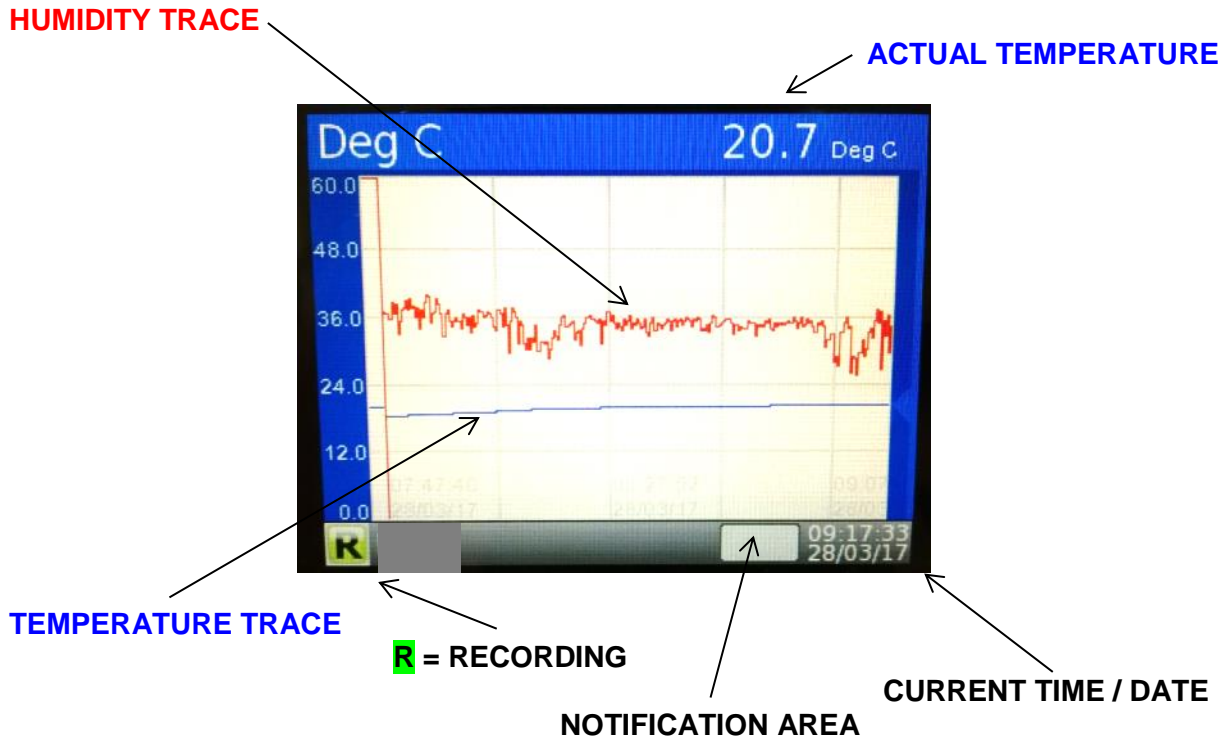
Normal operating screen (°C)   **Normal operating screen (%RH)**

The screen changes automatically between **temperature** and **humidity** every few seconds during normal operation.

2.2   Normal Operation

The recorder starts recording data automatically. The screen shows a live animated graph (in real time) for both the **temperature** and the **humidity**. The screen changes between **temperature** and **humidity** every few seconds. Large numbers in the top right corner of the screen show the actual **temperature** or actual **humidity** so it can be verified easily.

The graph updates itself every few seconds and draws a history line. Historic data from this time line can be viewed from the main menu.

HUMIDITY TRACE

ACTUAL TEMPERATURE

TEMPERATURE TRACE

R = RECORDING

NOTIFICATION AREA

CURRENT TIME / DATE

ACTUAL HUMIDITY

HUMIDITY TRACE

TEMPERATURE TRACE

## 2.3   Control Panel Buttons

It is not necessary to enter the menu or change any settings for normal operation. The recorder has been pre-configured to work optimally without any adjustment or input from the user.

The buttons on the recorders control panel perform these functions:

STATUS BAR

MENU   **ENTER / SELECT**

DOWN / SCROLL BACK   **UP / SCROLL FORWARD**
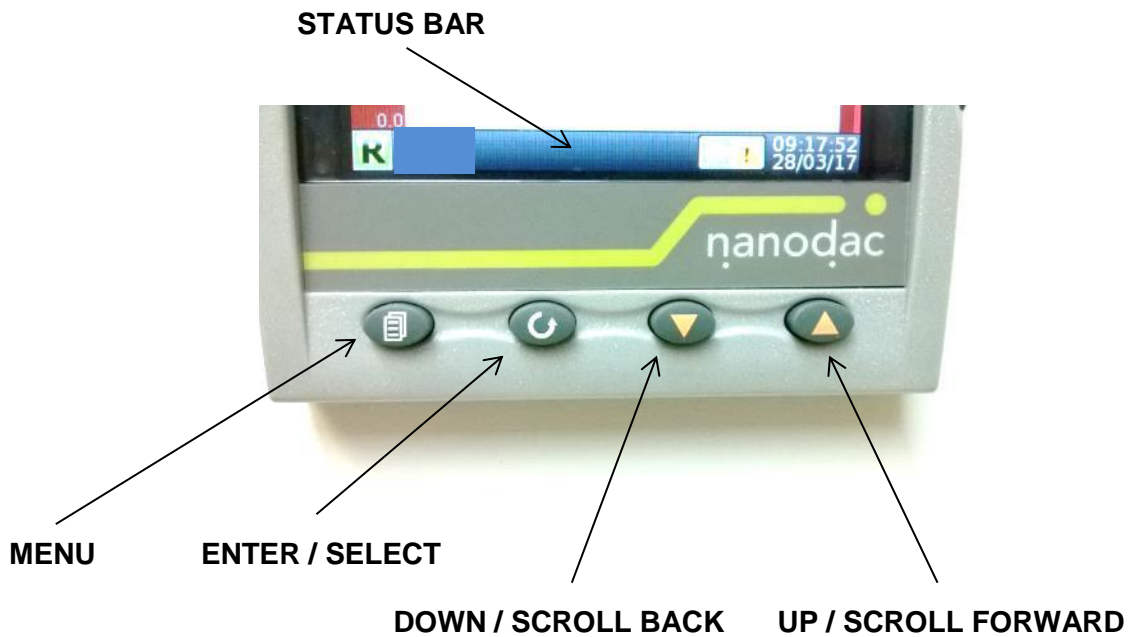
2.4   Screen Icons

The lower part of the screen contains the status bar, which shows the current date / time. The following icons may also be visible:
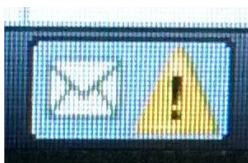
A flashing yellow warning triangle means there is no USB flash drive connected.
A white envelope is a system message (used by engineers only).

A green and black R icon means data is being recorded and stored in internal memory (temperature and humidity).

2.5   Viewing Graph Data On Screen

Historical graph data can be viewed on-screen without affecting the recording process.
To view historical graph data:

1) Press the [button icon] button.

The following screen will appear:
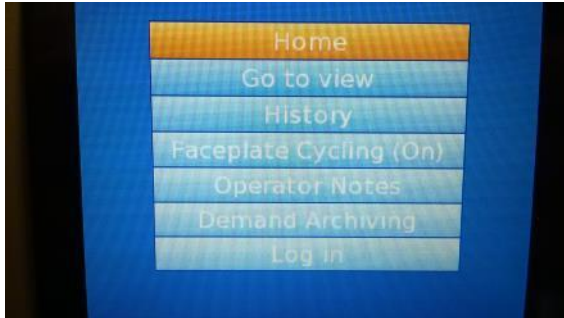
2) Press the [down button icon] button and select **History**.

3) Press the [refresh button icon] button and a grey background graph screen will be visible. (This is historic graph data that has been recorded for temperature and humidity).

4) Press the [down button icon] button to scroll BACK in time.
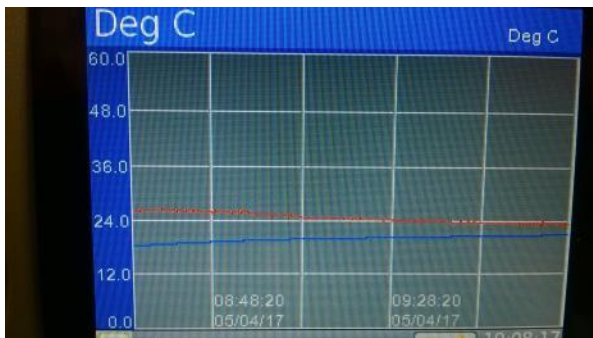
5) Press the ▲ button to scroll FORWARD in time.

6) Press the ↻ button to change between **temperature** and **humidity** screens.

7) When you have finished viewing the historic graph data, press the 🗐 button.

The following screen will appear:

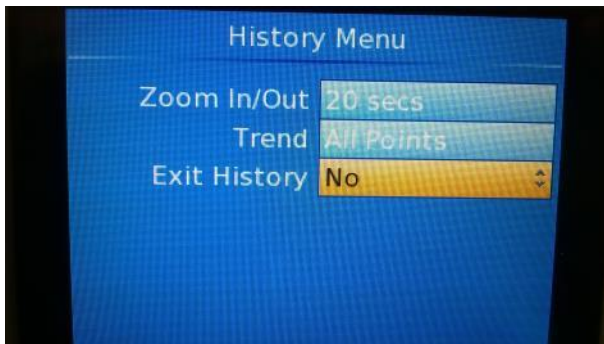8) Press the ↻ button and change **No** to **Yes** with the ▼ or ▲ button.

9) Press the ↻ button

The following screen will appear:

10) Select **Home**.

11) Press the ↻ button to exit the Menu.

ℹ️ The normal operation screen (white background) will be displayed. The screen changes automatically between **temperature** and **humidity** every few seconds.

2.6   USB Socket

A panel mounted USB socket is included next to the recorder. The recorder does not need a USB flash drive inserted to record data - the data is recorded and stored inside the recorder as standard.

The USB socket is only needed when data download to a USB flash drive is required.

A removable screw cap prevents dirt / dust / moisture from entering the USB socket when not in use. Remove the screw cap by turning the cap anti-clockwise to expose the USB socket.

| Unscrew cap | Cap removed | Inserting a USB flash drive |
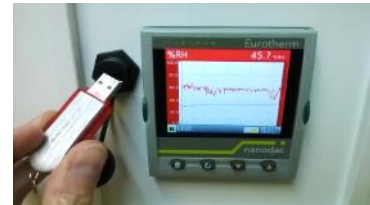
Replace the screw cap when you have finished downloading.

2.7   USB Flash Drive Compatibility

The recorder will accept any brand of USB flash drive **up to 8GB** in capacity.
Do not use a USB flash drive larger than 8GB in capacity.

1GB ✔

2GB ✔

4GB ✔

8GB ✔

16GB ✖

32GB ✖

64GB ✖

128GB ✖

256GB ✖

2.8 Downloading Graph Data

The recorder holds approximately 1 years' worth of data internally before data is overwritten. The recorded data is stored in .csv format.

Recorded data can be downloaded onto a USB flash drive when required. This can be done daily, weekly, or monthly.

After the downloaded data has been analysed in a computer, the USB flash drive does not need inserting back into the recorder.

The recorder will continue recording and storing data internally after the USB flash drive has been removed.

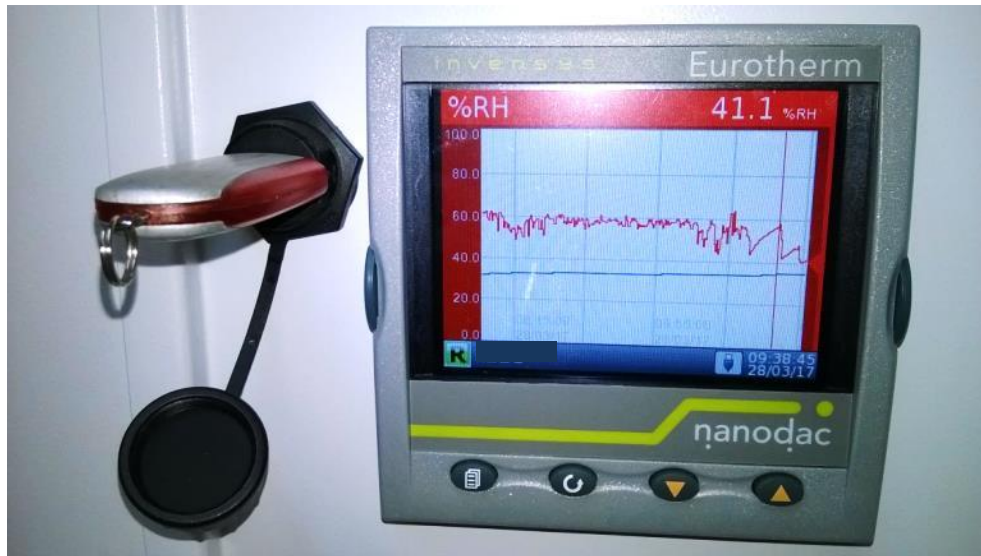When the USB flash drive is next inserted back into the recorder, it will synchronise and update the existing data on that USB flash drive with any new recorded data which has been captured since the last download.

No data acquisition software required for data analysis.

When the recorded data is needed for analysis on a computer, follow this procedure:

Insert a USB flash drive into the USB socket (max. capacity 8GB).

Wait 15 minutes (for the recorded data to synchronise) before removing the USB flash drive.

If it has been a month or longer since you last downloaded recorded data, you may have to wait up to 30 minutes for the data to synchronise.

Remove the USB flash drive from the USB socket.

Insert the USB flash drive into a computer running Microsoft© Excel© (or equivalent).

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2.9   Viewing the Downloaded Graph Data

On your computer, navigate to where the downloaded data has been stored on the USB flash drive.

The normal data storage location will be on the flash drive in a folder called "history". (There may be other sub folders within the "history" folder).

The recorded data will be stored in .csv format in a sub-folder called "CSV".

An example is shown below:
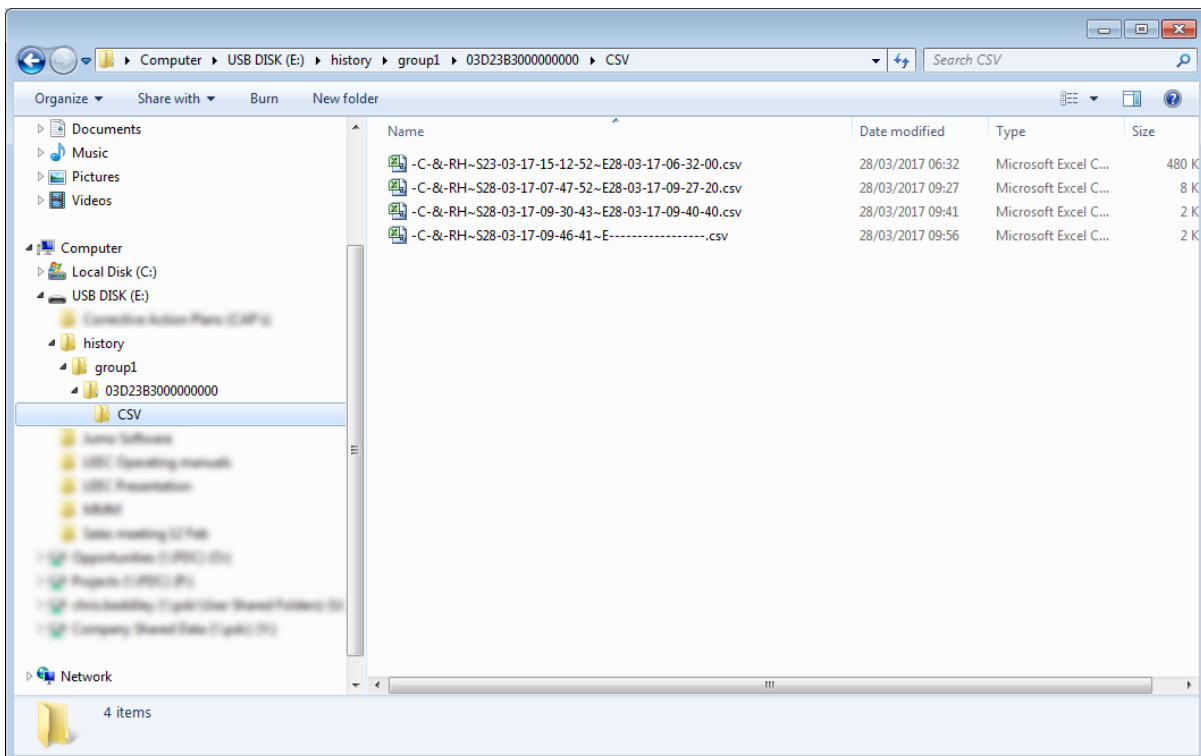
Open the .csv data in Microsoft© Excel© and display the data in a graph of your own choice.

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 sopstationer 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 utrangerad 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 wetgegeving (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.

PORTUGESE

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.