

R100

Installation and operating instructions



GB Declaration of Conformity

We **Grundfos** declare under our sole responsibility that the product **R100**, to which this declaration relates, is in conformity with the Council Directives on the approximation of the laws of the EC Member States relating to

- Electromagnetic compatibility (89/336/EEC).
Standards used: EN 61000-6-2 and EN 61000-6-3.
-

D Konformitätserklärung

Wir **Grundfos** erklären in alleiniger Verantwortung, dass das Produkt **R100**, auf das sich diese Erklärung bezieht, mit den folgenden Richtlinien des Rates zur Angleichung der Rechtsvorschriften der EG-Mitgliedstaaten übereinstimmt:

- Elektromagnetische Verträglichkeit (89/336/EWG).
Normen, die verwendet wurden: EN 61000-6-2 und EN 61000-6-3.
-

F Déclaration de Conformité

Nous **Grundfos** déclarons sous notre seule responsabilité que le produit **R100** auquel se réfère cette déclaration est conforme aux Directives du Conseil concernant le rapprochement des législations des Etats membres CE relatives à

- Compatibilité électromagnétique (89/336/CEE).
Standards utilisés: EN 61000-6-2 et EN 61000-6-3.
-

I Dichiarazione di Conformità

Noi **Grundfos** dichiariamo sotto la nostra esclusiva responsabilità che il prodotto **R100** al quale questa dichiarazione si riferisce è conforme alle Direttive del Consiglio concernente il ravvicinamento delle legislazioni degli Stati membri CE relative a

- Compatibilità elettromagnetica (89/336/CEE).
Standard usati: EN 61000-6-2 e EN 61000-6-3.
-

E Declaración de Conformidad

Nosotros **Grundfos** declaramos bajo nuestra única responsabilidad que el producto **R100** al cual se refiere esta declaración es conforme con las Directivas del Consejo relativas a la aproximación de las legislaciones de los Estados Miembros de la CE sobre

- Compatibilidad electromagnética (89/336/CEE).
Normas aplicadas: EN 61000-6-2 y EN 61000-6-3.
-

P Declaração de Conformidade

Nós **Grundfos** declaramos sob nossa única responsabilidade que o produto **R100** a qual se refere esta declaração está em conformidade com as Directivas do Conselho das Comunidades Europeias relativas à aproximação das legislações dos Estados Membros respeitantes à

- Compatibilidade electromagnética (89/336/CEE).
Normas utilizadas: EN 61000-6-2 e EN 61000-6-3.
-

GR Δήλωση Συμμόρφωσης

Εμείς η **Grundfos** δηλώνουμε με αποκλειστική μας ευθύνη ότι το προϊόν **R100**, με το οποίο σχετίζεται η παρούσα δήλωση, είναι σε συμφωνία με την Οδηγία του Συμβουλίου επί της σύγκλισης των νόμων των Κρατών Μελών της Ευρωπαϊκής Ένωσης σε σχέση με τα

- Ηλεκτρομαγνητική συμβατότητα (89/336/EEC).
Πρότυπα που χρησιμοποιήθηκαν: EN 61000-6-2 και EN 61000-6-3.
-

NL Overeenkomstigheidsverklaring

Wij **Grundfos** verklaren geheel onder eigen verantwoordelijkheid dat het product **R100**, waarop deze verklaring betrekking heeft in overeenstemming zijn met de Richtlijnen van de Raad inzake de onderlinge aanpassing van de wetgevingen van de Lid-Staten betreffende

- Elektromagnetische compatibiliteit (89/336/EEG).
Normen: EN 61000-6-2 en EN 61000-6-3.
-

S Försäkran om överensstämmelse

Vi **Grundfos** försäkrar under ansvar, att produkten **R100**, som omfattas av denna försäkran, är i överensstämmelse med Rådets Direktiv om inbördes närmande till EU-medlemsstaternas lagstiftning, avseende

- Elektromagnetisk kompatibilitet (89/336/EC).
Använda standarder: EN 61000-6-2 och EN 61000-6-3.
-

FIN Vastaavuusvakuutus

Me **Grundfos** vakuutamme yksin vastuullisesti, että tuote **R100**, jota tämä vakuutus koskee, noudattaa direktiivejä jotka käsittelevät EY:n jäsenvaltioiden koneellisia laitteita koskevien lakien yhdenmukaistusta seuraavasti:

- Elektromagneettinen vastaavuus (89/336/EY).
Käytetyt standardit: EN 61000-6-2 ja EN 61000-6-3.
-

DK Overensstemmelseserklæring

Vi **Grundfos** erklærer under ansvar, at produktet **R100**, som denne erklæring omhandler, er i overensstemmelse med Rådets direktiver om indbyrdes tilnærmelse til EF medlemsstaternes lovgivning om

- Elektromagnetisk kompatibilitet (89/336/EØF).
Anvendte standarder: EN 61000-6-2 og EN 61000-6-3.
-

PL Deklaracja zgodności

My, **Grundfos**, oświadczamy z pełną odpowiedzialnością, że nasz wyrób **R100** którego deklaracja niniejsza dotyczy, zgodny jest z następującymi wytycznymi Rady d/s ujednoczenia przepisów prawnych krajów członkowskich EG:

- zgodność elektromagnetyczna (89/336/EWG),
zastosowane normy: EN 61000-6-2 i EN 61000-6-3.
-

RU Декларация о соответствии

Компания **Grundfos** заявляет о своей исключительной ответственности за то, что изделия модели **R100**, на которые распространяется эта декларация, соответствуют нижеследующим рекомендациям Совета по унификации правовых норм стран - членов Европейского Союза:

- Электромагнитная совместимость (89/336/ЕЭС).
Применявшиеся стандарты: Евростандарт EN 61000-6-2 и EN 61000-6-3.
-

H Konformitási nyilatkozat

Mi, a **Grundfos** egyedüli felelősséggel kijelentjük, hogy a **R100** termék, amelyre jelen nyilatkozat vonatkozik, megfelel az Európai Unió tagállamainak jogi irányelveit összehangoló tanács alábbi irányelveinek:

- Elektromágneses összeférhetőség (89/336/EGK).
Alkalmazott szabványok: EN 61000-6-2 és EN 61000-6-3.
-

SI Izjava o ustreznosti

Mi, **Grundfos**, pod polno odgovornostjo izjavljamo, da so izdelki **R100**, na katere se ta izjava nanaša, v skladu z naslednjimi smernicami Sveta za uskladitev pravnih predpisov držav članic Evropske skupnosti:

- Elektromagnetna kompatibilnost (89/336/EWG).
Uporabljeni normi: EN 61000-6-2 in EN 61000-6-3.
-

HR Izjava o usklađenosti

Mi, **Grundfos**, izjavljujemo uz punu odgovornost da je proizvod **R100**, na kojeg se ova izjava odnosi, sukladan smjernicama Savjeta za prilagodbu propisa država članica EZ:

- Elektromagnetska kompatibilnost (89/336/EEZ).
Korištene norme: EN 61000-6-2 i EN 61000-6-3.
-

SER Izjava o konformitetu

Mi, **Grundfos**, izjavljujemo pod potpunom odgovornošću da su proizvodi **R100** na koje se odnosi ova izjava u saglasnosti sa smernicama i uputstvima Saveta za usaglašavanje pravnih propisa članica Evropske unije:

- elektromagnetna usaglašenost (89/336/EWG),
korišćeni standardi: EN 61000-6-2 i EN 61000-6-3.
-

RO Declarație de conformitate

Noi, **Grundfos**, declarăm asumându-ne întreaga responsabilitate că produsele **R100** la care se referă această declarație sunt în conformitate cu Directivele Consiliului în ceea ce privește alinierea legislațiilor Statelor Membre ale CE, referitoare la:

- Compatibilitate electromagnetice (89/336/CEE).
Standarde aplicate: EN 61000-6-2 și EN 61000-6-3.
-

BG Декларация за съответствие

Ние, фирма **Grundfos** заявяваме с пълна отговорност, че продуктите **R100**, за които се отнася настоящата декларация, отговарят на следните указания на Съвета за уеднаквяване на правните разпоредби на държавите членки на ЕО:

- Електромагнетична поносимост (89/336/ЕИО).
Приложени норми: EN 61000-6-2 и EN 61000-6-3.
-

CZ Prohlášení o konformitě

My firma **Grundfos** prohlašujeme na svou plnou odpovědnost, že výrobek **R100** na nějž se toto prohlášení vztahuje, je v souladu s ustanoveními směrnice Rady pro sblížení právních předpisů členských států Evropského společenství v oblastech:

- elektromagnetická kompatibilita (89/336/EWG),
použité normy: EN 61000-6-2 a EN 61000-6-3.
-

SK Prehlásenie o konformite

My firma **Grundfos**, na svoju plnú zodpovednosť prehlasujeme, že výrobok **R100**, na ktorý sa toto prehlásenie vzťahuje, je v súlade s nasledovnými smernicami Rady pre zblíženie právnych predpisov členských zemí Európskej únie:

- Elektromagnetická kompatibilita (89/336/EWG),
Použité normy: EN 61000-6-2 a EN 61000-6-3.
-

TR Uygunluk Bildirgesi

Biz **Grundfos** olarak, bu beyanda belirtilen **R100** ürünün, şu şekilde:

- Elektromanyetik uyumluluk (89/336/EEC).
Kullanılan standartlar: EN 61000-6-2 ve EN 61000-6-3.

ile ilgili olarak Avrupa topluluğu'na Üye Devletlerin yasalarında yer alan Belediye Yönetmeliklerine uygun olduğunu, tüm sorumluluğu bize ait olmak üzere beyan ederiz.

EE Vastavuse deklaratsioon

Meie, Grundfos, deklareerime enda ainuvastutusel, et toode **R100**, mille kohta käesolev juhend käib, on vastavuses EL nõukogu Direktiividega EMÜ liikmesriikide seaduste ühitamise kohta, mis käsitlevad:

- Elektromagnetilist ühilduvust (89/336/EEK).

Kasutatud standardid: EN 61000-6-2 ja EN 61000-6-3.

LT Atitikties deklaracija

Mes, **Grundfos**, su visa atsakomybe pareiškiame, kad gaminys **R100**, kuriam skirta ši deklaracija, atitinka Tarybos Direktyvas dėl Europos Ekonominės Bendrijos šalių narių įstatymų suderinimo šiose srityse:

- Elektromagnetinis suderinamumas (89/336/EEK).

Naudojami standartai: EN 61000-6-2 ir EN 61000-6-3.

LV Paziņojums par atbilstību prasībām

Sabiedrība **Grundfos** ar pilnu atbildību dara zināmu, ka izstrādājums **R100**, uz kuru attiecas šis paziņojums, atbilst šādām Padomes direktīvām par tuvināšanas EK dalībvalstu likumdošanas normām:

- Elektromagnētiskā savienojamība (89/336/EEK).

Piemērotie standarti: EN 61000-6-2 un EN 61000-6-3.

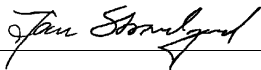
UA Свідчення про відповідність вимогам

Ми, фірма **Grundfos**, із усією відповідальністю заявляємо, що вироби **R100** до яких і відноситься дане свідоцтво відповідають вимогам наступних указівок Ради СЕС про уніфікацію законодавчих розпоряджень країн-членів СЕС:

- Електромагнітна сумісність (89/336/EEK).

Стандарти, що застосовувалися: Євростандарт EN 61000-6-2 і EN 61000-6-3.

Bjerringbro, 1st March 2007



Jan Strandgaard
Technical Director

R100

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Read these operating instructions before using the R100 remote control.

1. General description

The Grundfos R100 remote control is designed for wireless IR communication with Grundfos products.

The functions available depend on the product with which the R100 communicates. See installation and operating instructions for the product in question.



TM02 4710 1502

Fig. 1 R100 remote control

Buttons	Description
+ and -	Used to navigate in a menu and to change values in a display. Only values in framed setting fields can be changed.
< and >	Steps from one menu to the other.
∨ and ∧	Moves one display forwards or backwards.
OK	Accepts the entered value or function, resets fault indications, exchanges data between the R100 and the product.

1.1 Switching on the R100

Press **OK** to switch on the R100.



Press **OK** and the entry display will appear.



Light and contrast in display

In all displays, the light can be switched on or off by simultaneously pressing **OK** and any of the arrow buttons.

If the buttons are not pressed for 2 minutes, the light in the R100 is automatically switched off.

The display contrast can be adjusted by simultaneously pressing **OK** and **+** or **-**.

1.2 Switching off the R100

Press **<** and **>** simultaneously to switch off the R100.

If the buttons are not pressed for 5 minutes, the R100 is automatically switched off.

2. Setting the R100

Settings to be made:

- Language
- Real-time setting
- Name and address.



2.1 Language

The R100 has been factory-preset to show texts and data in English. The user can select any of the supported languages.



If *US English* is selected, the units of the displayed data will change as follows:

Measurement	Unit	
	SI	US
Flow	[m ³ /h]	[US gpm]
Head	[m]	[ft]
Temperature	[°C]	[°F]
Specific energy consumption	[Wh/m ³]	[Wh/kgal]

2.2 Real-time setting



In this display, the real time can be entered.

This entry is only of importance for the function **Store status data** where the information will appear in the generated file.

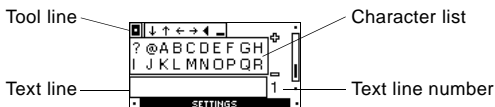
2.3 Name and address










In this display, the name and address can be entered.

This entry is only of importance for the function **Store status data** where the information will appear in the generated file.

2.4 Character editor



2.4.1 Tool line

-  End of entry
-  Next text line
-  Previous text line
-  Move text cursor to the left
-  Move text cursor to the right
-  Delete backwards
-  Space

2.4.2 Character list

- Use **+** or **-** to move one line forwards or backwards in the character list.
- Use **<** or **>** to move the cursor to the desired character.
- Accept the desired character with **OK**.

3. Starting the communication

Point the R100 at the product and select **START** with **OK**. A red indicator light on the product will flash rapidly, indicating that communication takes place.

Note: During the entire communication, the R100 must be pointed at the product in question.

The data transmission time depends on the amount of data to be transferred, which differs from product to product.

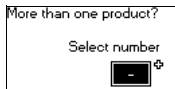
More than one product?

The R100 can only communicate with one product at a time. If the R100 comes into contact with more than one product, it is necessary to select a product.

Possible solutions:

- Move the R100 closer to the product in question and press **OK**.
- Hide the line of sight to the product next to the desired product, for example with your hand, and press **OK**.

If the product has already been given a unique number, you can select the number of the product you want to communicate with.



4. Menu structure

Each product has a specific menu structure.

The functions in the GENERAL menu are common to all products. The main functions are described on the next pages.

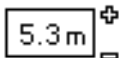
The displays relating to the individual product are described in detail in the installation and operating instructions for the product in question.

Setting field

The current/last transferred value will appear as light-coloured text on a dark background.



When values are changed, the text will be dark-coloured on a light background.



When **OK** has been pressed and the new data have been transferred to the product, the text will again be light-coloured.

Continuous display of status values

When **OK** is pressed continuously in a display under OPERATION or STATUS, the displayed value is being updated continuously.

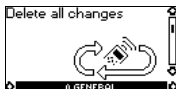
4.1 Menu GENERAL

4.1.1 Return to start



Returns to start.
The R100 can now communicate with another product.

4.1.2 Delete all changes



Changes the product back to the original setting, i.e. before communication was started.

4.1.3 Store settings



Stores the product settings in the R100. The settings will remain stored as a file (*.set) even if the R100 is switched off.

4.1.4 Call up settings



Can be used to transfer the factory presetting or stored product settings in the R100 to the product you communicate with.

Options:

- DELETE: Deletes the selected setting file. A warning appears in the display.
- USE: Transfers the selected setting file to the product in question (point at the product).
- RENAME: Renames the selected setting file. The character editor appears.
- CANCEL: Cancels the operation.

4.1.5 Store status data



When **OK** is pressed, a file (*.txt) is generated.

4.1.6 Call up status data



Accesses the data files generated by **Store status data**.

Options:

- **DELETE:** Deletes the selected status data file. A warning appears in the display.
- **RENAME:** Renames the selected status data file. The character editor appears.
- **CANCEL:** Cancels the operation.

4.2 File structure

When the R100 is connected to a PC, it will be displayed as "Removable Disk".

The folder structure is shown in fig. 2. For PC connection via USB connection, see fig. 3.

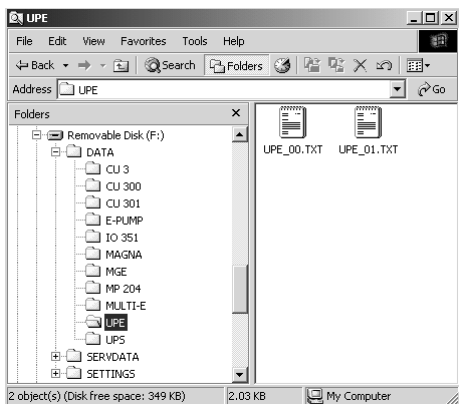


Fig. 2 Folder structure

Each of the main folders contains the product folders: CU 3, CU 300, CU 301, E-pump, IO 351, MAGNA, MGE, MP 204, Multi-E, UPE, UPS. Each of the product folders contains the R100 auto-generated files.

Note: The service folder SERVDATA is displayed, but cannot be changed.

5. USB connection

The USB connection is used for

- transfer of updated application program from a PC to the R100
- transfer of status data files (type *.txt) and setting files (type *.set) from the R100 to the PC.

When the status data files have been transferred to the PC via the USB connection, the data can be displayed, examined and organised by any text processing software and be printed on any printer.

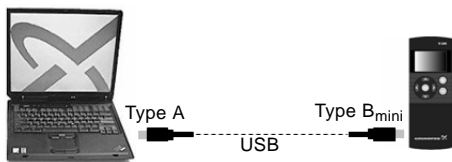


Fig. 3 Connection to PC via USB connection

5.1 Programming the R100

If "Unknown product" appears in the R100 display during communication with a product, the R100 must be upgraded with a new application software version. To get the new software, please contact Grundfos.

5.2 Upgrading of the R100 application software

1. Switch off the R100.
2. Connect the R100 to the PC via the USB cable.
3. Press all four arrow buttons and **OK** simultaneously. The R100 will then be switched on and open in "Programming mode" showing the message "USB link established". In a Windows browser, it will appear as "Removable Disk" and the application program file (type *.mk2) will appear.
4. Delete the application program file. "Device busy" appears in the R100 display during the deletion, which takes 30 seconds. After the deletion, "USB link established" appears in the R100 display.
5. Copy the new application program file to "Removable Disk". "Device busy" appears in the R100 display during the file transfer, which takes approximately 50 seconds. After the file transfer, "Device safe to remove" appears in the R100 display.
6. Perform a safe removal of the R100 USB connection. The R100 display will show "Application program download complete". This will take 5 to 10 seconds. The update procedure has now been successfully completed.

7. Press **<** and **>** simultaneously to switch off the R100.
8. Switch on the R100. After start-up, the R100 updates its file structure for the new application software. This takes approximately 45 seconds. "Updated successfully" appears in the display.

6. Technical data

Ambient temperature

-10°C to +50°C during operation.

-20°C to +60°C during storage.

Relative air humidity

Maximum 95%.

Voltage supply

2 batteries, 1.5 V, type AA.

Enclosure class

IP 40.

IR communication

Reach: Minimum 3 metres.

Transmission angle: $\pm 12^\circ$.

Batteries

During battery replacement, the R100 will store its settings (Language, Real-time setting, Name and address, display contrast) for at least 10 minutes.

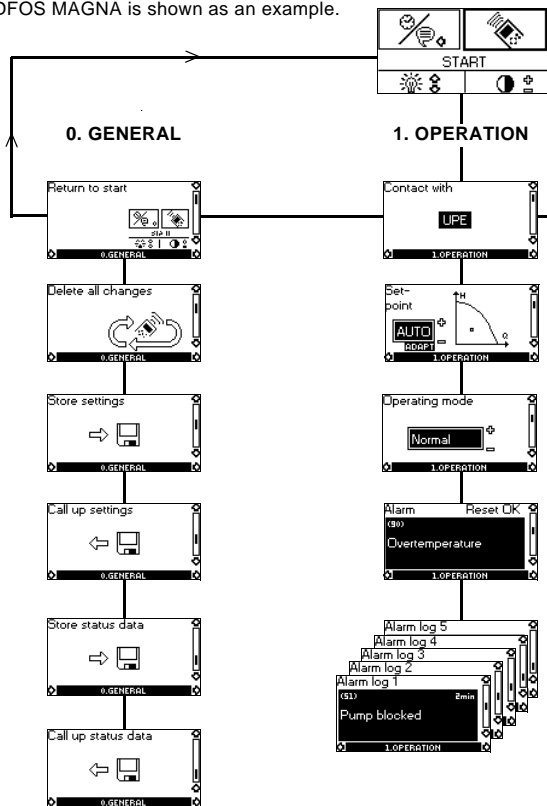
 Low-battery indicator.

7. Disposal

This product or parts of it must be disposed of in an environmentally sound way:

1. Use the public or private waste collection service.
2. If this is not possible, contact the nearest Grundfos company or service workshop.

GRUNDFOS MAGNA is shown as an example.



2. STATUS

Actual setpoint	4.2 m
corresponding to	-
2.STATUS	
Operating mode	Normal
From	-
2.STATUS	
Head	4.2 m
Flow	10 m ³ /h
2.STATUS	
Speed	2350 min ⁻¹
2.STATUS	
Liquid temperature	76 °C
2.STATUS	
Power input	340 W
Power consumption	140 kWh
2.STATUS	
Operating hours	412 h
2.STATUS	

3. INSTALLATION

Control mode	AUTOADAPT
3.INSTALLATION	
Automatic night-time duty	Not active
3.INSTALLATION	
Min. curve	1
3.INSTALLATION	
Temperature influence	Not
3.INSTALLATION	
Buttons on pump	Active
3.INSTALLATION	
Signal relay activated during	Operation
3.INSTALLATION	
Number	-
3.INSTALLATION	
Maximum flow	2.2 m ³ /h
3.INSTALLATION	
Twin-head pump	Oper. Twin ✓ Standby
3.INSTALLATION	

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