

# CU 100

Installation and operating instructions

GB D F I E P GR NL S FIN DK



## **(GB) Declaration of Conformity**

We, Grundfos, declare under our sole responsibility that the product CU 100, to which this declaration relates, is in conformity with these Council directives on the approximation of the laws of the EC member states:

- Machinery Directive (2006/42/EC).  
Standard used: EN 60204-1: 2006
- Low Voltage Directive(2006/95/EC).  
Standard used: EN 60439-1: 2004.
- EMC Directive (2004/108/EC).  
Standard used: EN 61000-6-2: 2005 and EN 61000-6-3: 2007.

## **(F) Déclaration de Conformité**

Nous, Grundfos, déclarons sous notre seule responsabilité, que le produit CU 100, auquel se réfère cette déclaration, est conforme aux Directives du Conseil concernant le rapprochement des législations des Etats membres CE relatives aux normes énoncées ci-dessous :

- Directive Machines (2006/42/CE).  
Norme utilisée : EN 60204-1: 2006
- Directive Basse Tension (2006/95/CE).  
Norme utilisée : EN 60439-1: 2004.
- Directive Compatibilité Electromagnétique CEM (2004/108/CE).  
Normes utilisées : EN 61000-6-2: 2005 et EN 61000-6-3: 2007.

## **(E) Declaración de Conformidad**

Nosotros, Grundfos, declaramos bajo nuestra propia responsabilidad que el producto CU 100, al cual se refiere esta declaración, está conforme con las Directivas del Consejo en la aproximación de las leyes de los Estados Miembros del EM:

- Directiva de Maquinaria (2006/42/CE).  
Norma aplicada: EN 60204-1: 2006
- Directiva de Baja Tensión(2006/95/CE).  
Norma aplicada: EN 60439-1: 2004.
- Directiva EMC (2004/108/CE).  
Normas aplicadas: EN 61000-6-2: 2005 y EN 61000-6-3: 2007.

## **(GR) Δήλωση Συμμόρφωσης**

Εμείς, η Grundfos, δηλώνουμε με αποκλειστικά δική μας ευθύνη ότι τα προϊόντα CU 100, στα οποία αναφέρεται η παρούσα δήλωση, συμμορφώνονται με τις εξής Οδηγίες του Συμβουλίου περί προσέγγισης των νομοθεσιών των κρατών μελών της ΕΕ:

- Οδηγία για μηχανήματα (2006/42/ΕΚ).  
Πρότυπο που χρησιμοποιήθηκε: EN 60204-1: 2006
- Οδηγία χαμηλής τάσης(2006/95/ΕΚ).  
Πρότυπο που χρησιμοποιήθηκε: EN 60439-1: 2004.
- Οδηγία Ηλεκτρομαγνητικής Συμβατότητας (EMC) (2004/108/ΕΚ).  
Πρότυπα που χρησιμοποιήθηκαν: EN 61000-6-2: 2005 και EN 61000-6-3: 2007.

## **(S) Försäkran om överensstämmelse**

Vi, Grundfos, försäkrar under ansvar att produkten CU 100, som omfattas av denna försäkran, är i överensstämmelse med rådets direktiv om inbördes närmande till EU-medlemsstaternas lagstiftning, avseende:

- Maskindirektivet (2006/42/EC).  
Tillämpad standard: EN 60204-1: 2006
- Lågspänningsdirektivet(2006/95/EC).  
Tillämpad standard: EN 60439-1: 2004.
- EMC-direktivet (2004/108/EC).  
Tillämpade standarder: EN 61000-6-2: 2005 och EN 61000-6-3: 2007.

## **(DK) Overensstemmelseserklæring**

Vi, Grundfos, erklærer under ansvar at produktet CU 100 som denne erklæring omhandler, er i overensstemmelse med disse af Rådets direktiver om indbyrdes tilnærmelse til EF-medlemsstaternes lovgivning:

- Maskindirektivet (2006/42/EC).  
Anvendt standard: EN 60204-1: 2006
- Lavspændingsdirektivet(2006/95/EC).  
Anvendt standard: EN 60439-1: 2004.
- EMC-direktivet (2004/108/EC).  
Anvendte standarder: EN 61000-6-2: 2005 og EN 61000-6-3: 2007.

## **(D) Konformitätserklärung**

Wir, Grundfos, erklären in alleiniger Verantwortung, dass das Produkt CU 100, auf das sich diese Erklärung bezieht, mit den folgenden Richtlinien des Rates zur Angleichung der Rechtsvorschriften der EU-Mitgliedsstaaten übereinstimmt:

- Maschinenrichtlinie(2006/42/EG).  
Norm, die verwendet wurde: EN 60204-1: 2006
- Niederspannungsrichtlinie (2006/95/EG).  
Norm, die verwendet wurde: EN 60439-1: 2004.
- EMV-Richtlinie (2004/108/EG).  
Normen, die verwendet wurden: EN 61000-6-2: 2005 und EN 61000-6-3: 2007.

## **(I) Dichiarazione di Conformità**

Grundfos dichiara sotto la sua esclusiva responsabilità che il prodotto CU 100, al quale si riferisce questa dichiarazione, è conforme alle seguenti direttive del Consiglio riguardanti il riavvicinamento delle legislazioni degli Stati membri CE:

- Direttiva Macchine (2006/42/CE).  
Norma applicata: EN 60204-1: 2006
- Direttiva Bassa Tensione (2006/95/CE).  
Norma applicata: EN 60439-1: 2004.
- Direttiva EMC (2004/108/CE).  
Norme applicate: EN 61000-6-2: 2005 e EN 61000-6-3: 2007.

## **(P) Declaração de Conformidade**

A Grundfos declara sob sua única responsabilidade que o produto CU 100, ao qual diz respeito esta declaração, está em conformidade com as seguintes Directivas do Conselho sobre a aproximação das legislações dos Estados Membros da CE:

- Directiva Máquinas (2006/42/CE).  
Normas utilizadas: EN 60204-1: 2006
- Directiva Baixa Tensão(2006/95/CE).  
Normas utilizadas: EN 60439-1: 2004.
- Directiva EMC (compatibilidade electromagnética) (2004/108/CE).  
Normas utilizadas: EN 61000-6-2: 2005 e EN 61000-6-3: 2007.

## **(NL) Overeenkomstigheidsverklaring**

Wij, Grundfos, verklaren geheel onder eigen verantwoordelijkheid dat het product CU 100 waarop deze verklaring betrekking heeft, in overeenstemming is met de Richtlijnen van de Raad in zake de onderlinge aanpassing van de wetgeving van de EG lidstaten betreffende:

- Machine Richtlijn (2006/42/EC).  
Gebruikte norm: EN 60204-1: 2006
- Laagspannings Richtlijn(2006/95/EC).  
Gebruikte norm: EN 60439-1: 2004.
- EMC Richtlijn (2004/108/EC).  
Gebruikte normen: EN 61000-6-2: 2005 en EN 61000-6-3: 2007.

## **(FIN) Vaatimustenmukaisuusvakuutus**

Me, Grundfos, vakuutamme omalla vastuullamme, että tuote CU 100, jota tämä vakuutus koskee, on EY:n jäsenvaltioiden lainsäädännön yhdenmukaistamiseen tähtäävien Euroopan neuvoston direktiivien vaatimusten mukainen seuraavasti:

- Konedirektiivi (2006/42/EY).  
Sovellettu standardi: EN 60204-1: 2006
- Pienjännitedirektiivi(2006/95/EY).  
Sovellettu standardi: EN 60439-1: 2004.
- EMC-direktiivi (2004/108/EY).  
Sovellettavat standardit: EN 61000-6-2: 2005 ja EN 61000-6-3: 2007.

Bjerringbro, 15th June 2010



Svend Aage Kaase  
Technical Director  
Grundfos Holding A/S  
Poul Due Jensens Vej 7  
8850 Bjerringbro, Denmark

Person authorised to compile technical file and empowered to sign the EC declaration of conformity.

# CU 100

<b>Installation and operating instructions</b>	<b>4</b>	<b>GB</b>
<b>Montage- und Betriebsanleitung</b>	<b>9</b>	<b>D</b>
<b>Notice d'installation et d'entretien</b>	<b>15</b>	<b>F</b>
<b>Istruzioni di installazione e funzionamento</b>	<b>20</b>	<b>I</b>
<b>Instrucciones de instalación y funcionamiento</b>	<b>25</b>	<b>E</b>
<b>Instruções de instalação e funcionamento</b>	<b>30</b>	<b>P</b>
<b>Οδηγίες εγκατάστασης και λειτουργίας</b>	<b>35</b>	<b>GR</b>
<b>Installatie- en bedieningsinstructies</b>	<b>40</b>	<b>NL</b>
<b>Monterings- och driftsinstruktion</b>	<b>45</b>	<b>S</b>
<b>Asennus- ja käyttöohjeet</b>	<b>50</b>	<b>FIN</b>
<b>Monterings- og driftsinstruktion</b>	<b>55</b>	<b>DK</b>

### 3. Type key

## CONTENTS

	Page
1. General description	4
2. Applications	4
3. Type key	4
4. Functions	4
5. Construction	5
6. Installation	7
7. Wiring diagrams	7
8. Maintenance	7
9. Fault finding chart	8
10. Technical data	8
11. Disposal	8

#### Warning



**Prior to installation, read these installation and operating instructions. Installation and operation must comply with local regulations and accepted codes of good practice.**

## 1. General description

The control box CU 100 is designed for the control of small pumps.

The CU 100 is incorporated in an IP54 plastic cabinet and has screwed metric cable entries.

The control box is available in several variants which can be used for

- single-phase pumps or
- three-phase pumps

and

- start/stop by means of a float switch or
- manual start/stop.

Single-phase control boxes are supplied with capacitors and with or without float switch.

Three-phase control boxes are supplied with a float switch.

## 2. Applications

The control box CU 100 is designed for the starting, operation and protection of small pumps.

- Single-phase: up to 9 amps.
- Three-phase: up to 5 amps.

See section 10. *Technical data*.

Example	CU	100	230	1	9	30/150	A
Type range							
Type designation							
Voltage:							
230 = 230 [V]							
400 = 400 [V]							
Number of phases:							
1 = One phase							
3 = Three phases							
Maximum amp. consumption for the pump [A]							
Run / starting capacitor [ $\mu$ F]							
A = with float switch							
[ ] = without float switch							

## 4. Functions

The control boxes CU 100 incorporate:

- an on/off switch (O/I),
- a contactor which is cut in and out by the float switch (if installed) and/or
- a man/auto switch in the cabinet front as well as
- capacitors for single-phase variants.

During manual operation, the pump is started and stopped by means of the man/auto switch or the thermal relay.

Single-phase variants: The thermal relay must be reset manually with the button in the cabinet front.

Three-phase variants: The motor starter is automatically reset.

During automatic operation, the float switch will start and stop the pump.

See the following functional block diagram.

#### Functional block diagram:

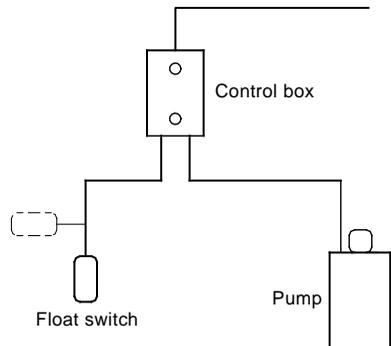


Fig. 1

TM01 1267 4097

## 5. Construction

### External construction:

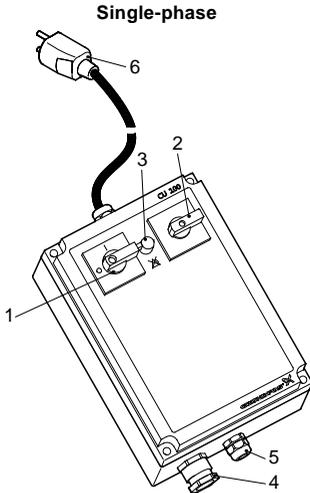


Fig. 2

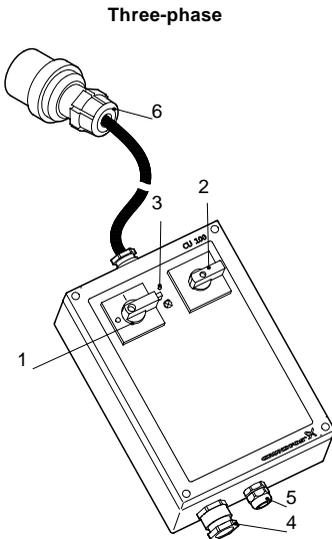


Fig. 3

The position numbers in the table refer to figs. 2 and 3.

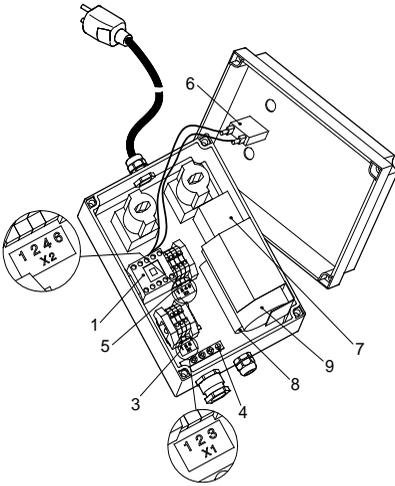
Pos.	Description
1	On/off switch – lockable
2	Man/auto switch
3	Single-phase: Resetting of thermal relay (⊗) Three-phase: Phase sequence indicator (⊗)
4	Connection of pump
5	Connection of float switch (model A only)
6	Mains connecting cable (3 metres): Single-phase: with Schuko plug Three-phase: with CE plug

TM02 6030 0703

TM02 6028 0703

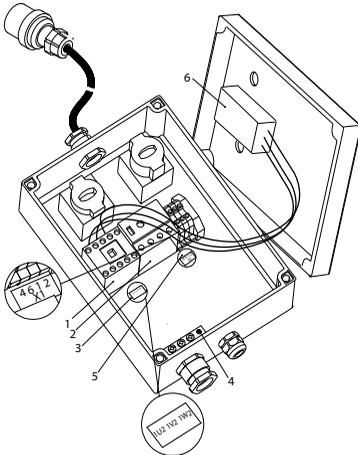
**Internal construction**

**Single-phase**



**Fig. 4**

**Three-phase**



**Fig. 5**

The position numbers in the table refer to figs. 4 and 5.

Pos.	Description
1	Starter relay
2	Motor protection: Single-phase: Manual resetting, in the cabinet front Three-phase: Automatic resetting
3	Terminal block for connection of pump. Single-phase: Leads marked 1, 2 and 3 [1, 2 and 3] Three-phase: Leads marked 1, 2 and 3 [1, 2 and 3]
4	Earth bar, lead marked greenish yellow [⊕]
5	Terminals for the connection of: thermal switch(es)*: Leads marked 4, 5 and 6 [4 and 6] and float switch** : Leads marked brown and black [1 and 2].
6	Single-phase: Thermal relay Three-phase: Phase sequence indicator
7	Single-phase: Capacitor contact
8	Single-phase: Run capacitor
9	Single-phase: Starting capacitor

TM02 6031 4902

The lead markings in [ ] refer to SEG, SE1, SEV, DP and EF pumps from Grundfos.

\* If the pump has more than one thermal switch, the switches must be connected in series so that the lowest switch stops the pump and the highest one is in reserve.

\*\* The float switch is supplied with the control box and must be connected to the brown and black leads (NO contact).

TM02 6029 0509

## 6. Installation

### Warning

**Before starting any work on pumps used to pump liquids which could be constituted as being hazardous to health, thorough cleaning/venting of pumps, pits, etc. must be carried out according to local regulations.**

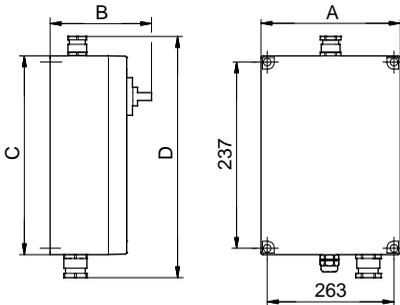


**Before making any connections in the CU 100 or work on pumps, pits, etc., it must be ensured that the electricity supply has been switched off and that it cannot be accidentally switched on.**



**The control box CU 100 must not be installed and used for pumps installed in potentially explosive environments.**

- Check that the control box is suitable for the local conditions, i.e. pump (current, voltage, etc.).
- Remove transport protectors, if any, from inside the cabinet.
- Remove the cabinet front and mount the control box on a plane surface with four screws through the mounting holes in the back plate of the pump and the float switch must pointing downwards.



TM02 6072 5002

Fig. 6

Pos.	Three-phase and single-phase with start and run capacitor	Single-phase with run capacitor
A	180	180
B	155	133
C	253	253
D	305	305

## 7. Wiring diagrams

The figures in the table below refer to the wiring diagrams at the end of these instructions.

Control box	Figure
CU 100.230.1.9.30	A
CU 100.230.1.9.30.A	B
CU 100.230.1.9.30/150	C
CU 100.230.1.9.30/150.A	D
CU 100.230.3.5.A	E
CU 100.230.3.12.A	
CU 100.400.3.5.A	F

## 8. Maintenance

During normal operation, the control box CU 100 is maintenance-free.

It is advisable to carry out periodic checks of the control box and the installation, i.e. cable entries, cables, float switch, gasket of the cabinet front and the pump. In particularly aggressive environments, it is advisable to check the contact in the control box.

## 9. Fault finding chart

GB



### Warning

*Before starting any work on pumps used to pump liquids which could be constituted as being hazardous to health, thorough cleaning/venting of pumps, pits, etc. must be carried out according to local regulations.*

*Before making any connections in the CU 100 or work on pumps, pits, etc., it must be ensured that the electricity supply has been switched off and that it cannot be accidentally switched on.*

Fault	Cause	Remedy
1. The pump does not run.	a) Incorrect setting of switches.	Check the setting of the switches in the cabinet front. Select the desired operating mode.
	b) Fuse in front of the control box blown.	Replace the fuse.
	c) The float switch does not function.	Clean or replace the float switch.
	d) Capacitor defective.	Replace the capacitor.
2. The pump starts and stops too frequently.	a) Incorrect setting of motor starter.	Set the motor starter to the rated current stated on the pump nameplate (three-phase variants only).
	b) Float switch not positioned correctly.	Place the float switch in the right position.

## 10. Technical data

### Voltage variants, rated voltages

- 1 x 230 V, 50 Hz.
- 3 x 230 V, 50 Hz.
- 3 x 400 V, 50 Hz.

### Voltage tolerances

-15%/+10%.

See the voltage tolerance stated in the installation and operating instructions for the pump.

### Back-up fuse

Depending on variant, see nameplate.

### Ambient temperature

- During operation: -30°C to +50°C.
- In stock: -30°C to +60°C.

### Enclosure class

IP54.

### EMC (electromagnetic compatibility)

According to EN 61 000-6-2 and EN 61 000-6-3.

### Weight

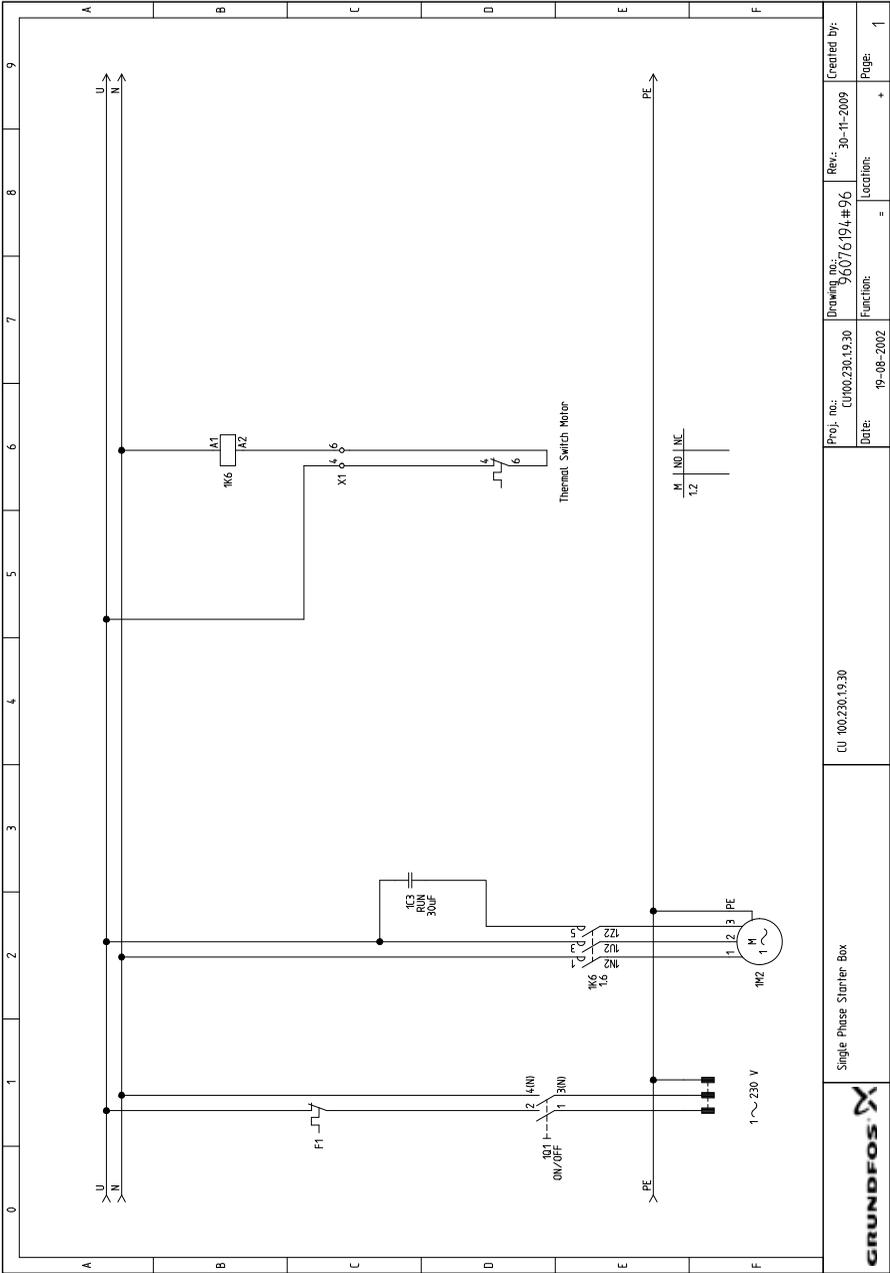
Approx. 4 kg. Depending on variant, see nameplate.

## 11. 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.

Fig. A



		Single Phase Starter Box		CU 100.230.19.30		Proj. no.: CU100.230.19.30 Drawing no.: 607619A.#96 Rev.: 30-11-2009		Created by: Location: = Date: 19-08-2002		Page: 1	
--	--	--------------------------	--	------------------	--	----------------------------------------------------------------------------	--	------------------------------------------------	--	------------	--

Fig. B

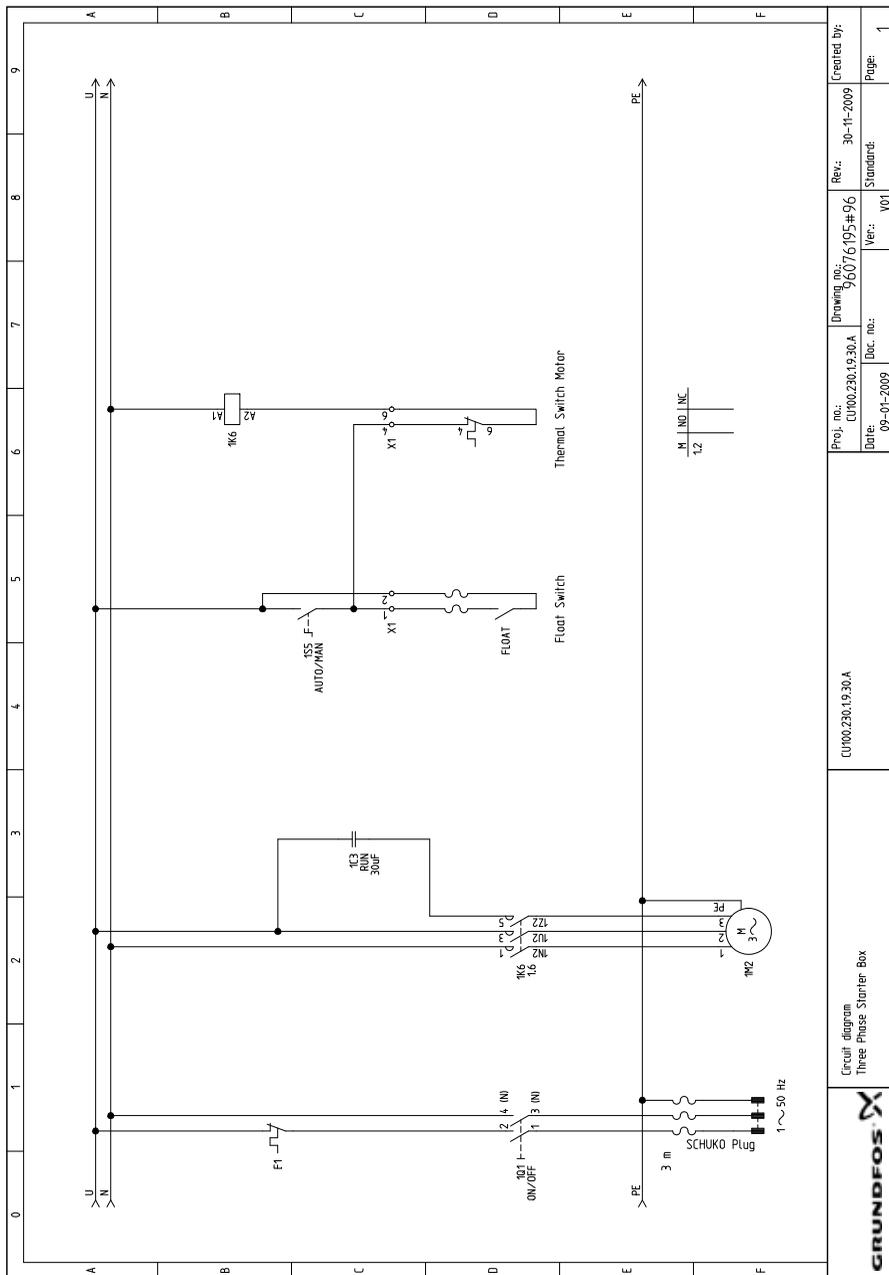
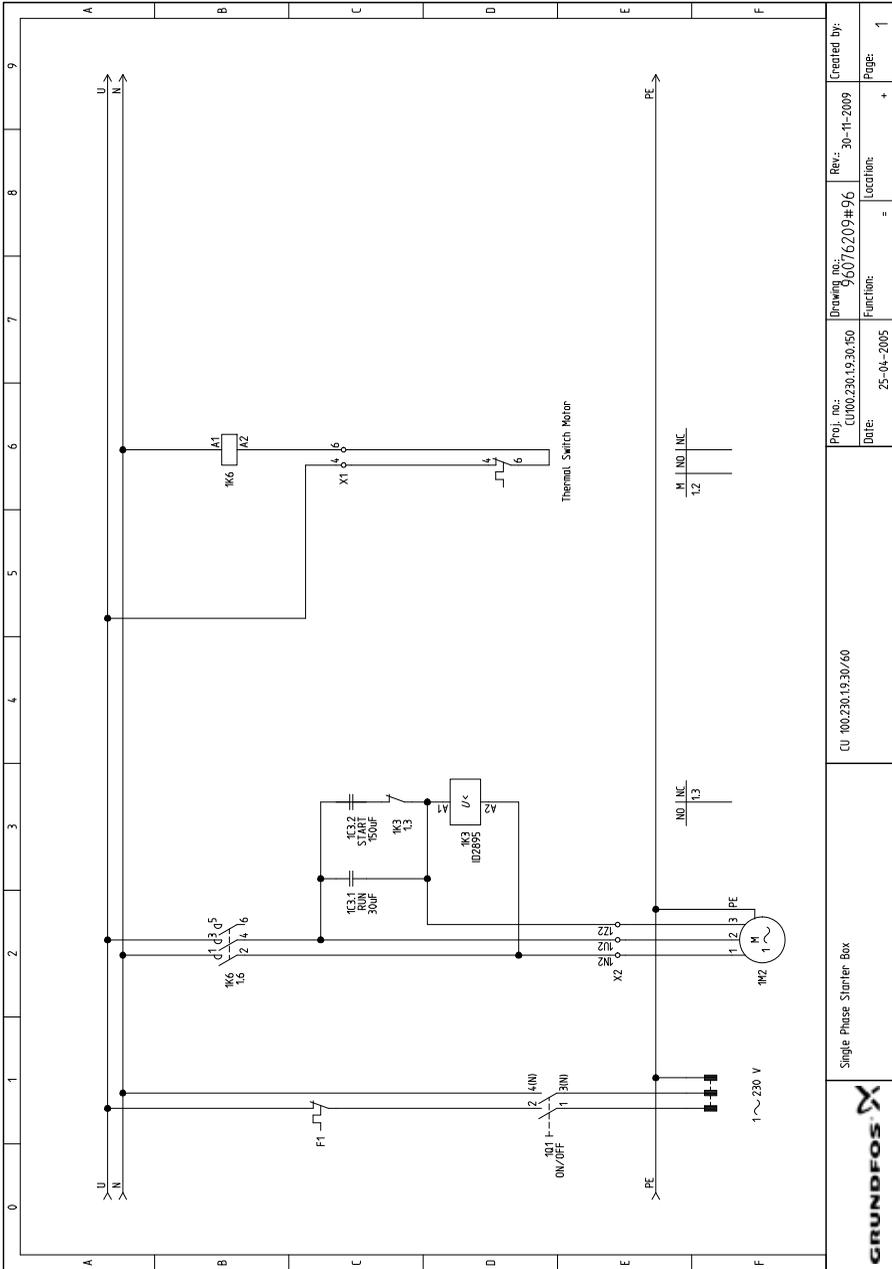
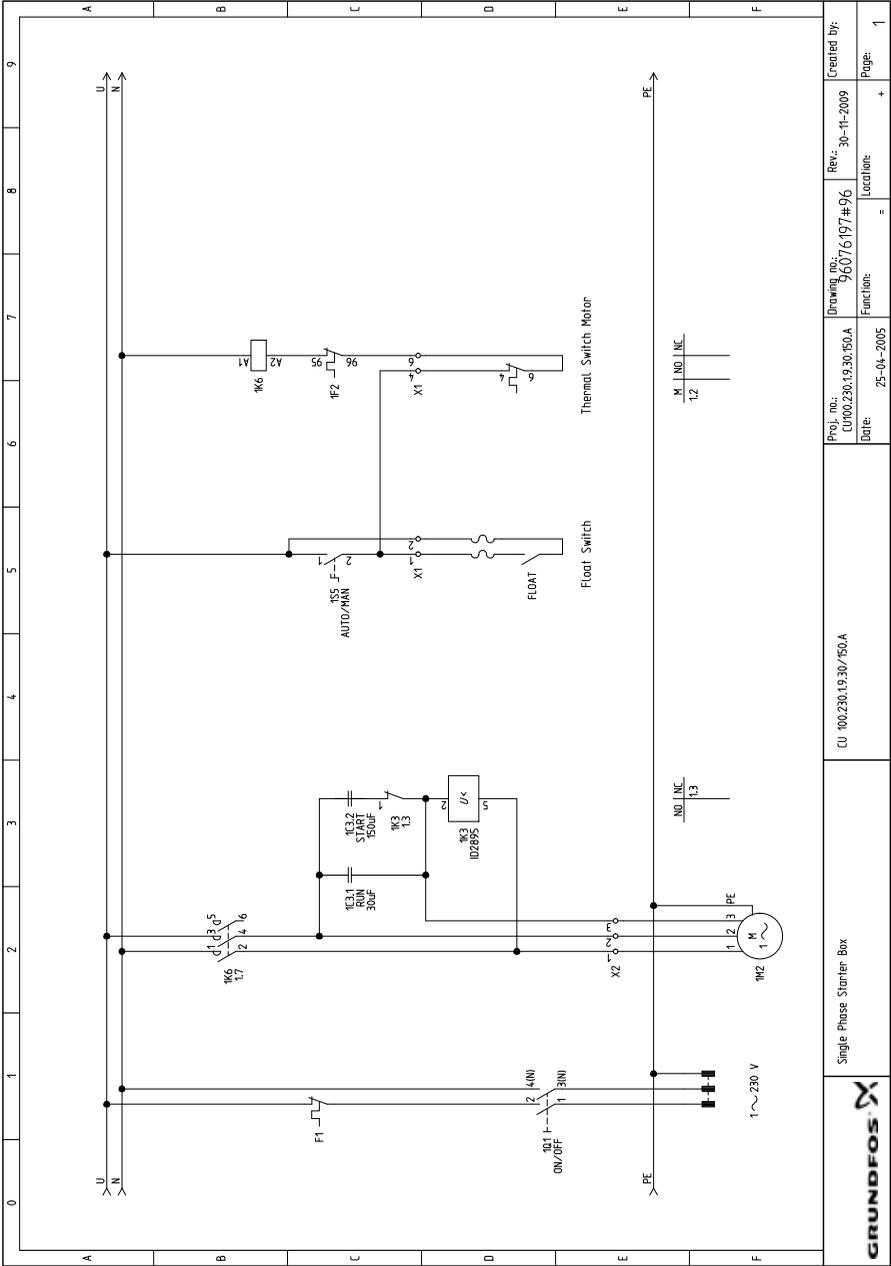


Fig. C



	Single Phase Starter Box	CU 100.230.19.30/60	Proj. No.: CU100.230.19.30.50 Date: 25-04-2005	Drawing No.: 90076209#96 Function: = Location: =	Rev: 30-11-2009 Created by:
					Page: 1 +

Fig. D



	Single Phase Starter Box	CU 100Z30.19.30/150A	Drawing no.: 96076197 # 96 Rev.: 30-11-2009	Created by:
			Date: 25-04-2005 Function: =	Location: =
				Page: 1
				+

Fig. E

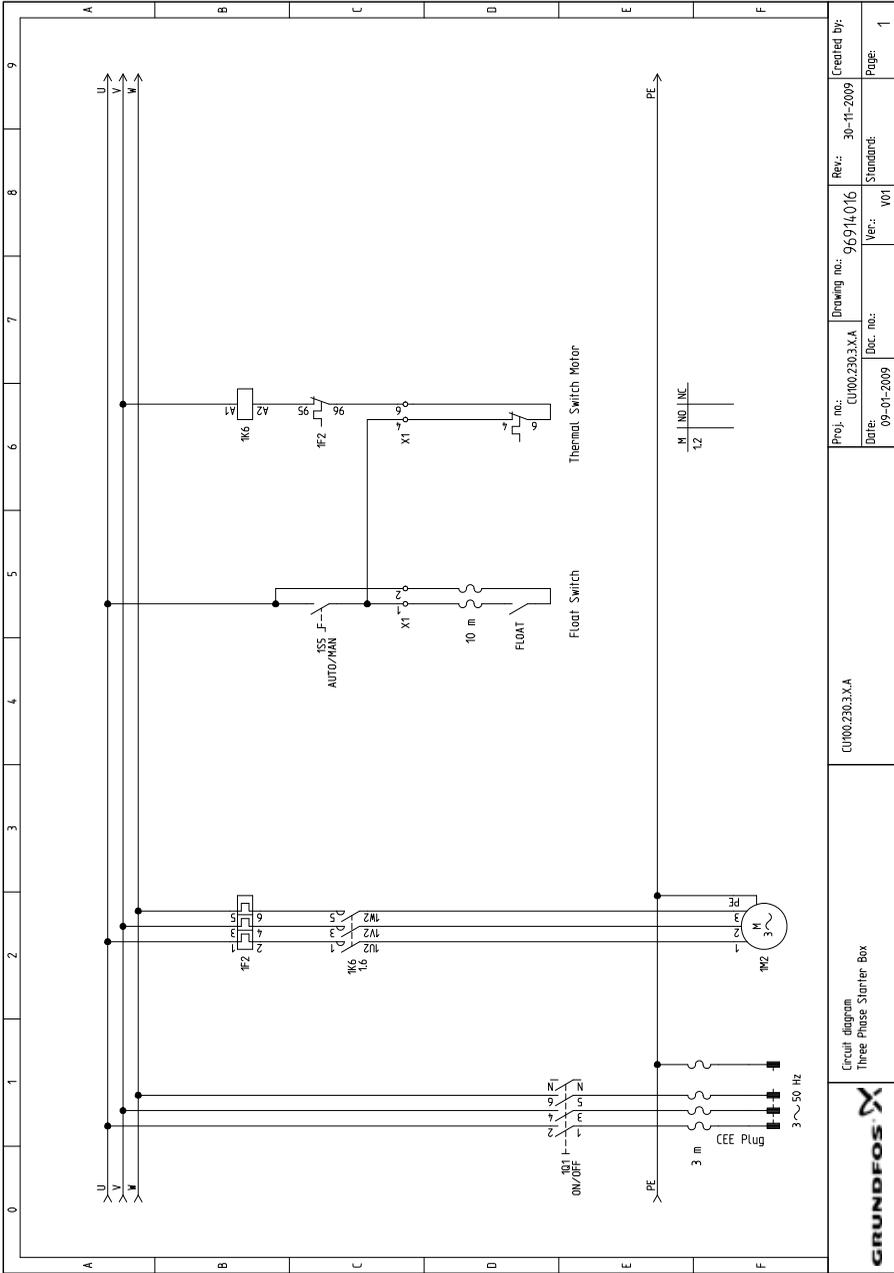
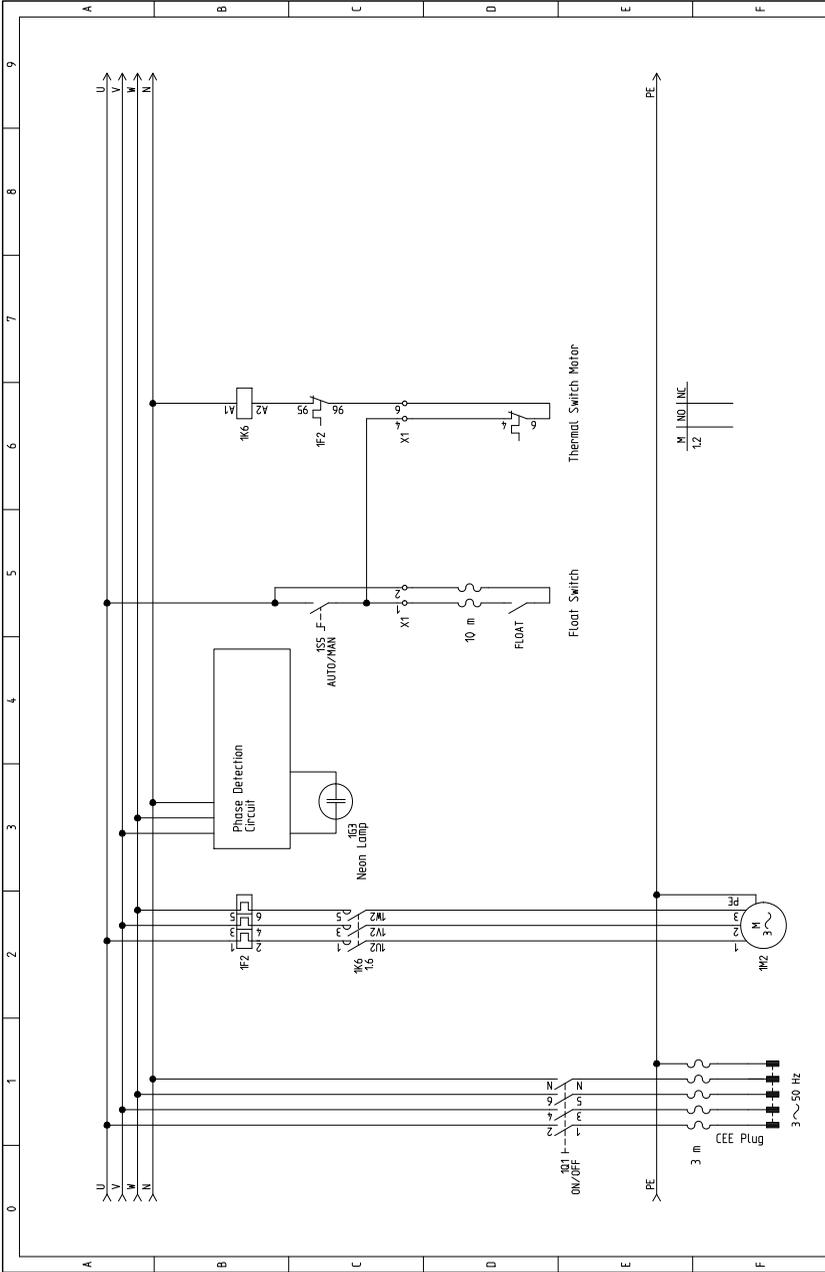


Fig. F

	Circuit diagram Three Phase Starter Box	Proj. no.: CU002303.X.A		Drawing no.: 96914/016		Rev.: 30-11-2009		Created by:	
		CU002303.X.A		Doc. no.:		Ver.: V01		Standard:	
		Date: 09-01-2009							



Circuit diagram Three Phase Starter Box		CU900.400.3.5.A		Created by: 30-11-2009	
Proj. no.: CU900.400.3.5.A		Drawing no.: 96974.019		Rev.:	
Date: 09-12-2008		Ver.: V01		Standard:	
				Page: 1	



TM 04 3941 1209



**Argentina**

Bombas GRUNDFOS de Argentina S.A.  
Ruta Panamericana km. 37.500 Lote 34A  
1619 - Garin  
Poia. de Buenos Aires  
Phone: +54-3327 414 444  
Telefax: +54-3327 411 111

**Australia**

GRUNDFOS Pumps Pty. Ltd.  
P.O. Box 2040  
Regency Park  
South Australia 5942  
Phone: +61-8-8461-4611  
Telefax: +61-8-8340 0155

**Austria**

GRUNDFOS Pumpen Vertrieb Ges.m.b.H.  
Grundfosstraße 2  
A-5002 Grödig/Salzburg  
Tel.: +43-6248-883-0  
Telefax: +43-6246-883-30

**Belgium**

N.V. GRUNDFOS Bellux S.A.  
Boomsstedenweg 81-83  
B-2630 Aartselaar  
Tel.: +32-3-870 7300  
Téléphone: +32-3-870 7301

**Belorussia**

Представительство ГРУНДФОС в  
Минске  
220123, Минск,  
ул. В. Хоружей, 22, оф. 1105  
Тел.: +(37517) 233 97 65,  
Факс: +(37517) 233 97 69  
E-mail: grundfos\_minsk@mail.ru

**Bosnia/Herzegovina**

GRUNDFOS Sarajevo  
Trg Heroja 16,  
BIH-71000 Sarajevo  
Phone: +387 33 713 290  
Telefax: +387 33 659 079  
e-mail: grundfos@bih.net.ba

**Brazil**

Mark GRUNDFOS Ltda.  
Av. Humberto de Alencar Castelo Branco,  
630  
CEP 09850 - 300  
São Bernardo do Campo - SP  
Phone: +55-11 4393 5533  
Telefax: +55-11 4343 5015

**Bulgaria**

GRUNDFOS Pumpen Vertrieb  
Representative Office - Bulgaria  
Bulgaria, 1421 Sofia  
Lozenetz District  
105-107 Arsenalski Blvd.  
Phone: +359 2963 3620, 2963 5653  
Telefax: +359 2963 1305

**Canada**

GRUNDFOS Canada Inc.  
2941 Brighton Road  
Oakville, Ontario  
L6H 6C9  
Phone: +1-905 829 9533  
Telefax: +1-905 829 9512

**China**

GRUNDFOS Pumps (Shanghai) Co. Ltd.  
51 Floor, Raffles City  
No. 268 Xi Zang Road. (M)  
Shanghai 200001  
PRC  
Phone: +86-021-612 252 22  
Telefax: +86-021-612 253 33

**Croatia**

GRUNDFOS CROATIA d.o.o.  
Cebini 37, Buzin  
HR-10010 Zagreb  
Phone: +385 1 6595 400  
Telefax: +385 1 6595 499  
www.grundfos.hr

**Czech Republic**

GRUNDFOS s.r.o.  
Čajkovského 21  
779 00 Olomouc  
Phone: +420-585-716 111  
Telefax: +420-585-716 299

**Denmark**

GRUNDFOS DK A/S  
Martin Bachs Vej 3  
DK-8850 Bjerringbro  
Tlf.: +45-87 50 50 50  
Telefax: +45-87 50 51 51  
E-mail: info\_GDK@grundfos.com  
www.grundfos.com/DK

**Estonia**

GRUNDFOS Pumps Eesti OÜ  
Peterburi tee 92G  
11415 Tallinn  
Tel.: + 372 606 1690  
Fax: + 372 606 1689

**Finland**

OY GRUNDFOS Pumput AB  
Mestariintie 11  
FIN-01730 Vantaa  
Phone: +358-3066 5650  
Telefax: +358-3066 5650

**France**

Pompes GRUNDFOS Distribution S.A.  
Parc d'Activités de Chesnes  
57, rue de Malacombe  
F-38290 St. Quentin Fallavier (Lyon)  
Tel.: +33-4 74 82 15 15  
Téléphone: +33-4 74 94 10 51

**Germany**

GRUNDFOS GMBH  
Schillerstr.: 33  
40699 Erkrath  
Tel.: +49-(0) 211 929 69-0  
Telefax: +49-(0) 211 929 69-3799  
e-mail: info@grundfos.de  
Service in Deutschland:  
e-mail: kundendienst@grundfos.de

**Greece**

GRUNDFOS Hellas A.E.B.E.  
20,th km. Athinon-Markopoulou Av.  
P.O. Box 71  
GR-19002 Peania  
Phone: +0030-210-66 83 400  
Telefax: +0030-210-66 46 273

**Hong Kong**

GRUNDFOS Pumps (Hong Kong) Ltd.  
Unit 1, Ground floor  
Siu Wai Industrial Centre  
29-33 Wing Hong Street &  
68 King Lam Street, Cheung Sha Wan  
Kowloon  
Phone: +852-27861706 / 27861741  
Telefax: +852-27858664

**Hungary**

GRUNDFOS Hungária Kft.  
Park u. 8  
H-2045 Törökbalánt,  
Phone: +36-23 511 110  
Telefax: +36-23 511 111

**India**

GRUNDFOS Pumps India Private Limited  
118 Old Mahabaliapuram Road  
Thoraipakkam  
Chennai 600 096  
Phone: +91-44 2496 6800

**Indonesia**

PT GRUNDFOS Pompa  
Jl. Rawa Sumur III, Blok III / CC-1  
Kawasan Industri, Pulogadung  
Jakarta 13930  
Phone: +62-21-460 6909  
Telefax: +62-21-460 6910 / 460 6901

**Ireland**

GRUNDFOS (Ireland) Ltd.  
Unit A, Merrywell Business Park  
Ballymunt Road Lower  
Dublin 12  
Phone: +353-1-4089 800  
Telefax: +353-1-4089 830

**Italy**

GRUNDFOS Pompe Italia S.r.l.  
Via Gran Sasso 4  
I-20060 Truccazzano (Milano)  
Tel.: +39-02-95838112  
Telefax: +39-02-95309290 / 95838461

**Japan**

GRUNDFOS Pumps K.K.  
Gotanda Metalion Bldg., 5F,  
5-21-15, Higashi-gotanda  
Shiagawa-ku, Tokyo  
141-0022, Japan  
Phone: +81 35 448 1391  
Telefax: +81 35 448 9619

**Korea**

GRUNDFOS Pumps Korea Ltd.  
6th Floor, Aju Building 679-5  
Yeoksam-dong, Kangnam-ku, 135-916  
Seoul, Korea  
Phone: +82-2-5317 600  
Telefax: +82-2-5633 725

**Latvia**

SIA GRUNDFOS Pumps Latvia  
Deglava biznesa centrs  
Augusta Deglava iela 60, LV-1035, Rīga,  
Tālr.: + 371 714 9640, / 749 641  
Fakss: + 371 914 9646

**Lithuania**

GRUNDFOS Pumps UAB  
Smolensko g. 6  
LT-03201 Vilnius  
Tel.: + 370 52 395 430  
Fax: + 370 52 395 431

**Malaysia**

GRUNDFOS Pumps Sdn. Bhd.  
7 Jalan Peguam UI/25  
Glenmarie Industrial Park  
40150 Shah Alam  
Selangor  
Phone: +60-3-5569 2922  
Telefax: +60-3-5569 2866

**México**

Bombas GRUNDFOS de México S.A. de  
C.V.  
Boulevard Tl. No. 15  
Parque Industrial Stva Aeropuerto  
Apodaca, N.L. 66600  
Phone: +52-81-8144 4000  
Telefax: +52-81-8144 4010

**Netherlands**

GRUNDFOS Netherlands  
Veluwezoom 35  
1326 AE Almere  
Postbus 22015  
1302 CA ALMERE  
Tel.: +31-86-478 6336  
Telefax: +31-86-478 6332  
e-mail: info\_gnl@grundfos.com

**New Zealand**

GRUNDFOS Pumps NZ Ltd.  
17 Beatrice Timsey Crescent  
North Harbour Industrial Estate  
Albany, Auckland  
Phone: +64-9-415 3240  
Telefax: +64-9-415 3250

**Norway**

GRUNDFOS Pumper A/S  
Strømsveien 344  
Postboks 235, Leirdal  
N-1011 Oslo  
Tlf.: +47-22-92 40 70  
Telefax: +47-22-92 31 50

**Poland**

GRUNDFOS Pompy Sp. z o.o.  
ul. Klonowa 23  
Baranowo k. Poznania  
Pl.-62-081 Przemysłowo  
Tel: (+48-61) 650 13 00  
Fax: (+48-61) 650 13 50

**Portugal**

Bombas GRUNDFOS Portugal, S.A.  
Rua Calvet de Magalhães, 241  
Apartado 1079  
P-2770-155 Paço de Arcos  
Tel.: +351-21-440 76 00  
Telefax: +351-21-440 76 90

**România**

GRUNDFOS Pompe România SRL  
Bd. Biruintei, nr 103  
Pantelimon county Ilovo  
Phone: +40 21 200 4100  
Telefax: +40 21 200 4101  
E-mail: romania@grundfos.ro

**Russia**

ООО Грундфос  
Россия, 109544 Москва, ул. Школьная 39  
Тел. +7(495) 737 30 00, 564 88 00  
Факс +7(495) 737 75 36, 564 88 11  
E-mail grundfos.moscow@grundfos.com

**Serbia**

GRUNDFOS Predstavništvo Beograd  
Dr. Milutina Ivkovića 2a/29  
YU-11000 Beograd  
Phone: +381 11 26 47 877 / 11 26 47 496  
Telefax: +381 11 26 48 340

**Singapore**

GRUNDFOS (Singapore) Pte. Ltd.  
24 Tuas West Road  
Jurong Town  
Singapore 638381  
Phone: +65-6865 1222  
Telefax: +65-6861 8402

**Slovenia**

GRUNDFOS PUMPEN VERTRIEB  
Ges.m.b.H.,  
Pružnična Ljubljana  
Štandrova 8b, SI-1231 Ljubljana-Črnuče  
Phone: +386 1 568 0610  
Telefax: +386 1 568 0619  
E-mail: slovenia@grundfos.si

**Spain**

Bombas GRUNDFOS España S.A.  
Camino de la Fuentequilla, s/n  
E-28110 Algete (Madrid)  
Tel.: +34-91-848 8800  
Telefax: +34-91-628 0465

**Sweden**

GRUNDFOS AB  
Box 333 (Lunnagårdsgatan 6)  
431 24 Motala  
Tel.: +46(0)771-32 23 00  
Telefax: +46(0)31-331 94 60

**Switzerland**

GRUNDFOS Pumpen AG  
Bruggacherstrasse 10  
CH-8117 Fallanden/ZH  
Tel.: +41-1-806 8111  
Telefax: +41-1-806 8115

**Taiwan**

GRUNDFOS Pumps (Taiwan) Ltd.  
7 Floor, 219 Min-Chuan Road  
Taichung, Taiwan, R.O.C.  
Phone: +886-4-2305 0868  
Telefax: +886-4-2305 0878

**Thailand**

GRUNDFOS (Thailand) Ltd.  
92 Chaloom Phrakiat Rama 9 Road,  
Dokmai, Pravej, Bangkok 10250  
Phone: +66-2-725 8999  
Telefax: +66-2-725 8998

**Turkey**

GRUNDFOS POMPA San. ve Tic. Ltd. Sti.  
Gebze Organize Sanayi Bölgesi  
İhsan dede Caddesi,  
2. yol 200. Sokak No. 204  
41490 Gebze/Kocaeli  
Phone: +90 - 262-679 7979  
Telefax: +90 - 262-679 7905  
E-mail: satis@grundfos.com

**Ukraine**

ТОВ ГРУНДФОС УКРАЇНА  
01010 Київ, вул. Московська 85,  
Тел.: (+38 044) 390 40 50  
Факс: (+38 044) 390 40 59  
E-mail: ukraine@grundfos.com

**United Arab Emirates**

GRUNDFOS Gulf Distribution  
P.O. Box 16768  
Jebel Ali Free Zone  
Dubai  
Phone: +971-4- 8815 166  
Telefax: +971-4-8815 136

**United Kingdom**

GRUNDFOS Pumps Ltd.  
Grovebury Road  
Leighton Buzzard/Beds. LU7 8TL  
Phone: +44-1525-850000  
Telefax: +44-1525-850011

**U.S.A.**

GRUNDFOS Pumps Corporation  
17100 West 118th Terrace  
Olathe, Kansas 66061  
Phone: +1-913-227-3400  
Telefax: +1-913-227-3500

**Uzbekistan**

Представительство ГРУНДФОС в  
Ташкенте  
700000 Ташкент ул.Усмана Носира 1-й  
тулик 5  
Телефон: (3712) 55-68-15  
Факс: (3712) 53-36-35

<b>96498154</b> 0610	<b>30</b>
Repl. 96498154 1209	

The name Grundfos, the Grundfos logo, and the payoff Be–Think–Innovate are registered trademarks owned by Grundfos Management A/S or Grundfos A/S, Denmark. All rights reserved worldwide.

---