

EVO S

Pump Kit

Grundfos Magna 1 Model C

INSTRUCTIONS

When replacing any part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by ACV.

For the very latest copy of literature for specification and maintenance practices visit our website www.acv.com/gb where you can download the relevant information in PDF format.



CONTENTS

Section 1 - General.....	2
1.1 Introduction.....	2
1.2 Contents	2
Section 2 - Installation	3
2.1 Preparation	3
2.2 Installation.....	3
2.3 Pump Connections	4
2.4 Operating Panel	5
2.5 Setting The Control Function	5
2.6 Control Functions.....	6

Section 1 - General

1.1 INTRODUCTION

This kit is suitable for the Evo S 150.

This manual explains how to install the Pump Control kit and determine the pump settings.

The Pump control kit converts the demand signal from the boiler pump QX3 mains voltage output into a Volts Free enable signal for the Grundfos Magna 1 Model C SELV Start/Stop input signal.

1.2 CONTENTS

This kit includes the following items:

Item	Description
1.	Relay Module Kit
2.	Instructions

Section 2 - Installation

2.1 PREPARATION

Install the Pump Control kit as follows:

⚠ WARNING: Be careful when you install electrical connections. Electric shock can cause serious injury or death and can cause damage to equipment.

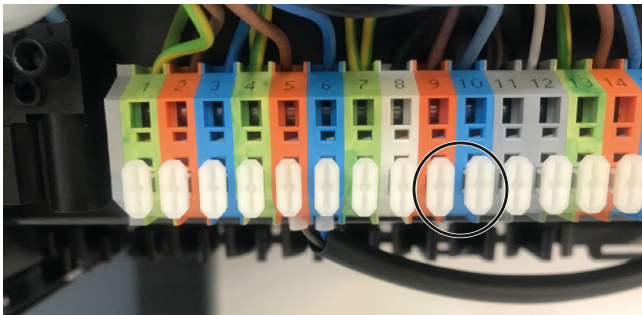
2. For access to the control box (refer to refer to manual Evo S INSTALLATION, COMMISSIONING AND SERVICING INSTRUCTIONS Frame 4.6.1).

1. Make sure that the electrical power supply to the boiler is set to OFF. For safe electrical isolation refer to Gas Safe technical bulletin 118. All work must be carried out by a competent person.

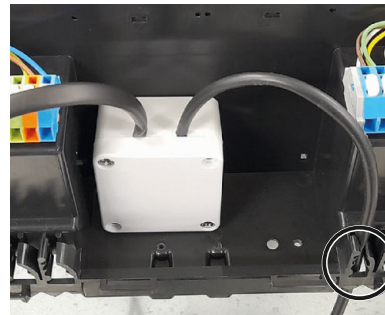
2.2 INSTALLATION

1. Connect the cables from the left-hand side of the relay onto connection QX3, L3, connection 9-brown (live) and connection 10-blue (neutral) on the boiler wiring strip.
2. Make sure that the right-hand side cable from the relay goes through the provided cable clamp.
3. Insert the relay module into the space between the Mains voltage and PELV installer connection terminals.

1



2

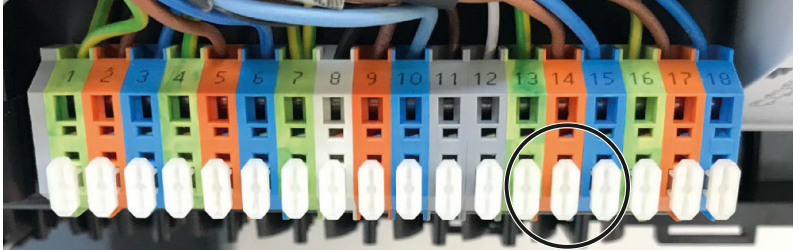


Section 2 - Installation

2.3 PUMP CONNECTIONS

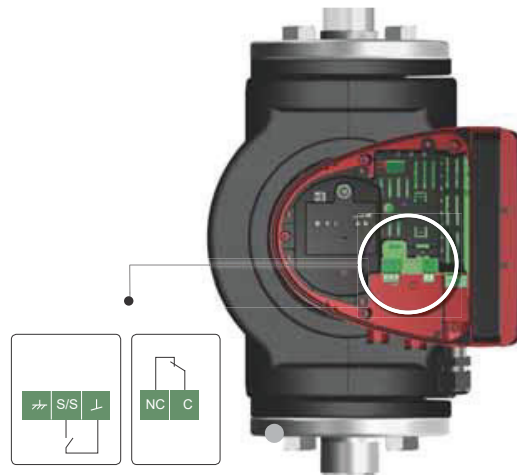
Mains Voltage Connections 230 VAC

1. Connect a suitable 3 core cable between the Boiler and the Pump. 13-Green/Yellow (PE), 14-brown (live) and 15-blue (neutral) on the boiler wiring strip, this provides the permanent supply to the pump.
2. Secure the Pump supply cable into the cable clamp at the boiler and the cable retention at the Pump.



In the supplied Grundfos Installation & Operating instructions refer to 'Connection to the power supply, terminal-connected Version'.

For the connection from the relay, refer to the supplied Grundfos installation and operating instructions 'Digital input (Start/ Stop)'.



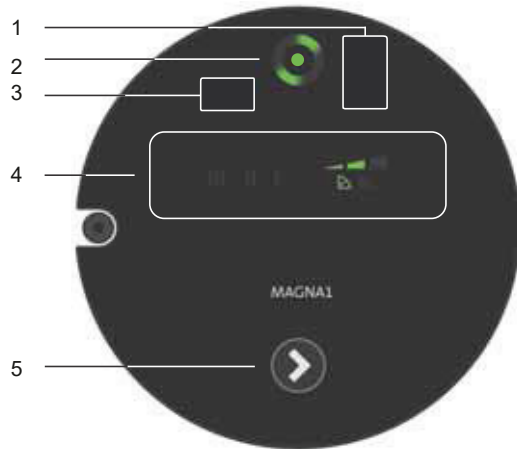
Evo S 150			
Hydraulic Configuration	Flow Rate Q (m ³ /hr) Δt 20°C	Head (m)	Pump Used
No separation	6.22	9.99	Magna 1 32 - 120F
LLH	6.22	10.19	Magna 1 32 - 120F
PHEX	6.28	11.52	Magna 1 40 - 150F

During the commissioning procedure, to achieve a temperature differential of 20°C at maximum rate, adjust the pump curve following the pump manufacturer's instructions.

Section 2 - Installation

2.4 OPERATING PANEL

⚠ CAUTION: Hot surface - minor or moderate personal injury. To avoid burns, only touch the operating panel.



The operating panel on the pump comprises of the following:


Position	Description
1	Infrared receiver for Grundfos GO. Plug-connected versions.
2	Grundfos Eye. Refer to Section 9.1 in the Grundfos Magna1 Installation & Operating instructions.
3	Infrared receiver for Grundfos GO. Terminal-connected versions.
4	LEDs indicate the control function. Refer to Section 8.2 in the Grundfos Magna1 Installation & Operating instructions.
5	Push-button for selection of a control function

2.5 SETTING THE CONTROL FUNCTION

The pump has nine control functions, refer to section 7 Control Functions in the Grundfos Magna1 Installation & Operating instructions. Select the control function by pressing the push-button on the operating panel, see section 2.4 Operating Panel. The control function is indicated by eight different light fields in the display.

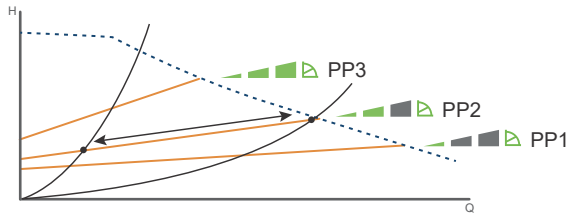
Position		Description
0		Intermediate proportional-pressure curve, referred to as PP2 factory setting.
1		Highest proportional-pressure curve, referred to as PP3.
2		Lowest constant-pressure curve, referred to as CP1.
3		Intermediate constant-pressure curve, referred to as CP2.
4		Highest constant-pressure curve, referred to as CP3.
5		Constant curve III.
6		Constant curve II.
7		Constant curve I.
8		Lowest proportional-pressure curve, referred to as PP1.

2.6 CONTROL FUNCTIONS

 Factory setting: Intermediate proportional-pressure curve, referred to as PP2.

Proportional-pressure curve (PP1, PP2 or PP3)

Proportional-pressure control adjusts the pump performance to the actual flow rate demand in the system, but the pump performance follows the selected performance curve, PP1, PP2 or PP3. See below where PP2 has been selected.

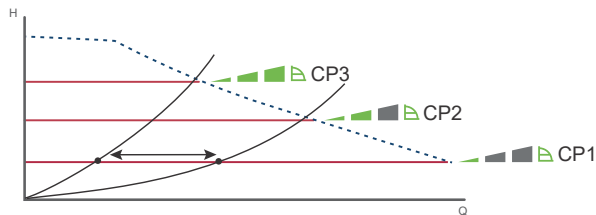


The selection of the right proportional-pressure setting depends on the characteristics of the system in question and the actual flow rate demand.

For further information, refer to section 7.4 Overview of the control functions and 7.5 Selecting control function in the Grundfos Magna1 Installation & Operating instructions.

Constant-pressure curve (CP1, CP2 or CP3)

Constant-pressure control adjusts the pump performance to the actual flow rate demand in the system, but the pump performance follows the selected performance curve, CP1, CP2 or CP3. See below where CP1 has been selected.

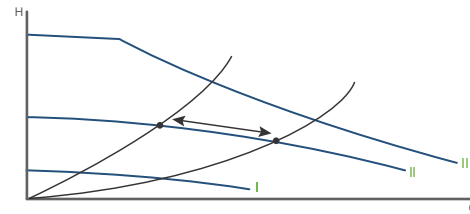


The selection of the right constant-pressure setting depends on the characteristics of the system in question and the actual flow rate demand.

For further information, refer to section 7.4 Overview of the control functions and 7.5 Selecting control function in the Grundfos Magna1 Installation & Operating instructions.

Constant curve (I, II or III)

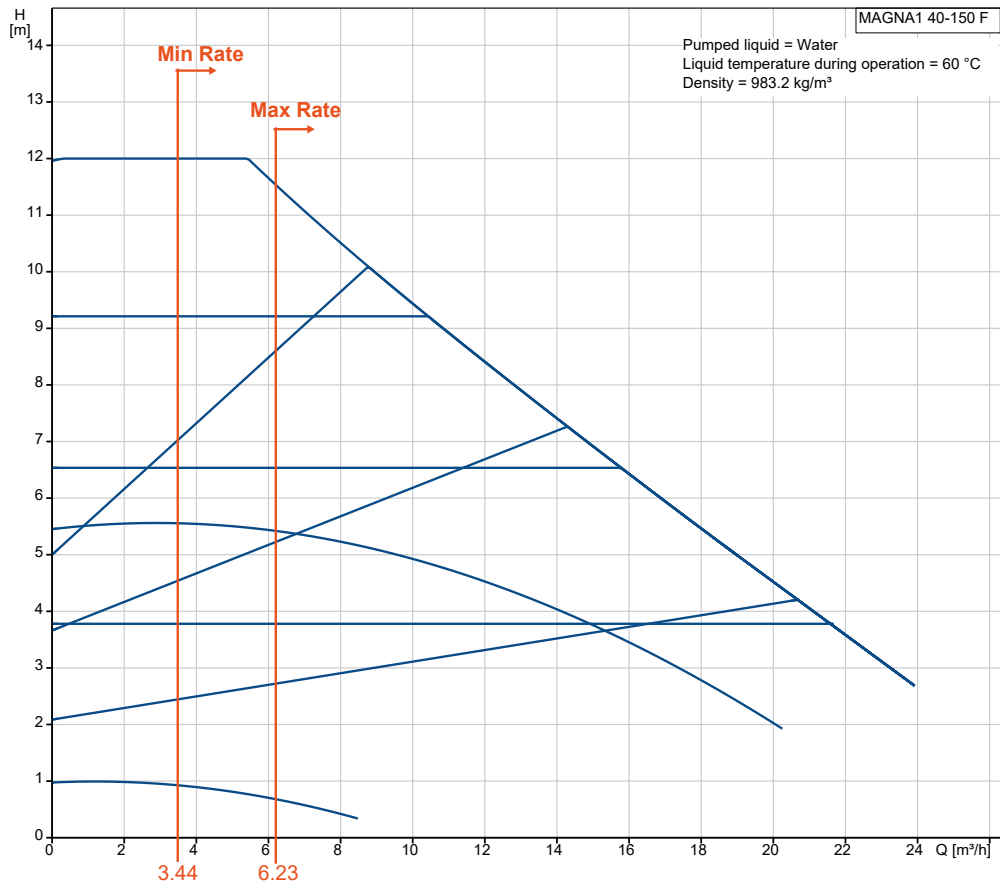
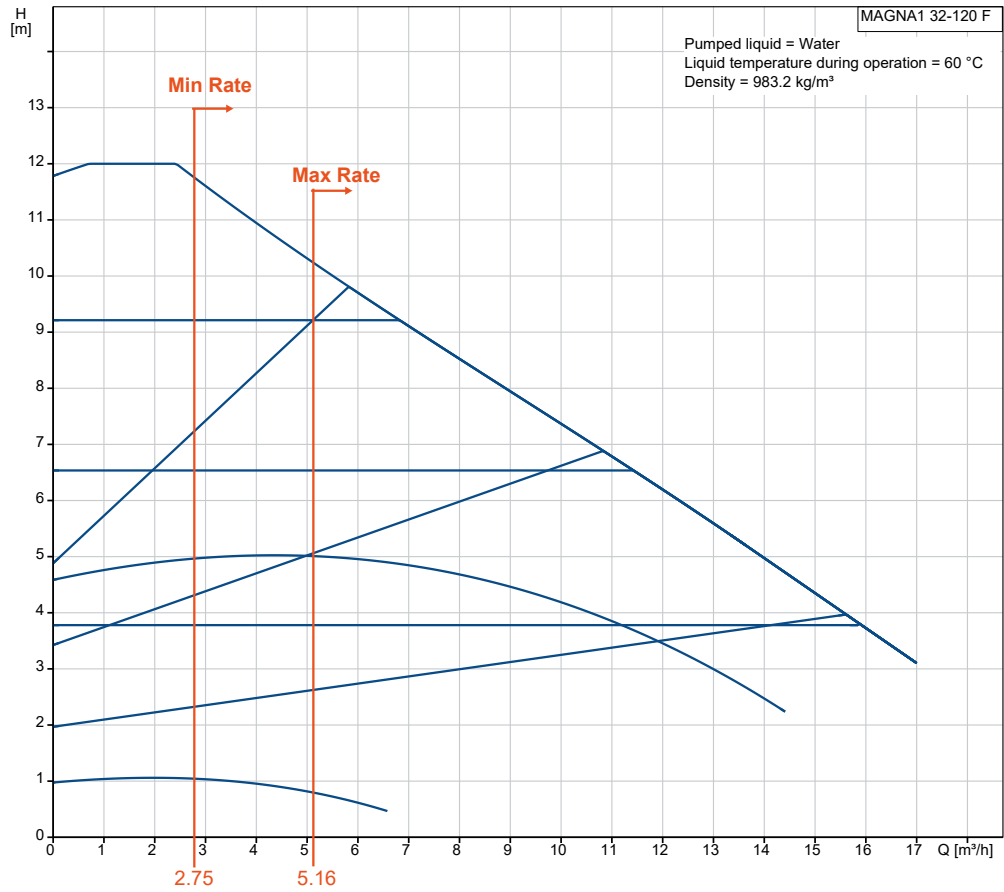
At constant-curve operation, the pump runs at a constant speed, independently of the actual flow rate demand in the system. The pump performance follows the selected performance curve, I, II or III. See below where II has been selected.




The selection of the right constant-curve setting depends on the characteristics of the system in question.

For further information, refer to section 7.4 Overview of the control functions and 7.5 Selecting control function in the Grundfos Magna1 Installation & Operating instructions.

Section 2 - Installation



Notes



Notes



ACV U.K. Limited

St. David's Business Park,
Dalgety Bay
Fife, Scotland
KY11 9PF

Tel: 0044 (0)1383 820100

www.acv.com/gb

ACV pursues a policy of continuing improvement in the design and performance of its products. The right is therefore reserved to vary specification without notice.

