

Stratton mk3 150

**Pump Kit Instructions
Grundfos Magna 1 Model C**

IMPORTANT NOTE

**THESE INSTRUCTIONS MUST BE READ
AND UNDERSTOOD BEFORE INSTALLING,
COMMISSIONING, OPERATING OR
SERVICING EQUIPMENT**



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Technical Enquiries

To supplement the detailed technical brochures, technical advice on the application and use in the Hamworthy Heating range is available from our technical team in Poole and our accredited agents.

Site Assembly

Hamworthy offer a service if site assembly for many of our products where plant room access is restricted. Using our trained staff we offer a high quality of build and assurance of a boiler built and tested by the manufacturer.

Commissioning

Commissioning of equipment by our own engineers, accredited agents or specialist sub-contractors will ensure the equipment is operating safely and efficiently.

Service Contracts

Regular routine servicing of equipment by Hamworthy service engineers inspects the safety and integrity of the plant, reducing the risk of failure and improving performance and efficiency. Service contracts enable you to plan and budget more efficiently.

Breakdown service, repair, replacement

Hamworthy provide a rapid response breakdown, repair or replacement service through head office at Poole and accredited agents throughout the UK.

Spare Parts

We offer a comprehensive range of spare parts, providing replacement parts for both current and discontinued products. Delivery options are available to suit you. Please refer to our website hamworthy-heating.com for more details.

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Section 1 - General

1.1 INTRODUCTION

This kit is suitable for the Stratton mk3 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.

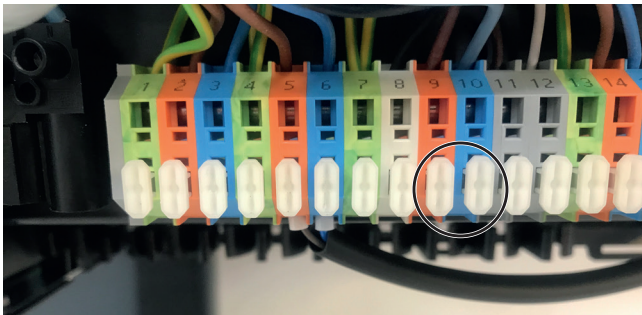
1. Make sure that the electrical power supply to the boiler is set to OFF. For safe electrical isolation refer to Gas Safe technical bulletin 118. All work must be carried out by a competent person.

2. For access to the control box (refer to refer to manual Stratton mk 3 INSTALLATION, COMMISSIONING AND SERVICING INSTRUCTIONS Frame 4.6.1).

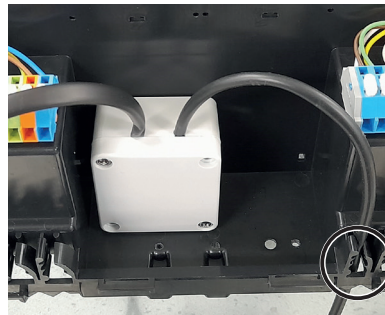
2.2 INSTALLATION

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.

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Section 2 - Installation

2.3 PUMP CONNECTIONS

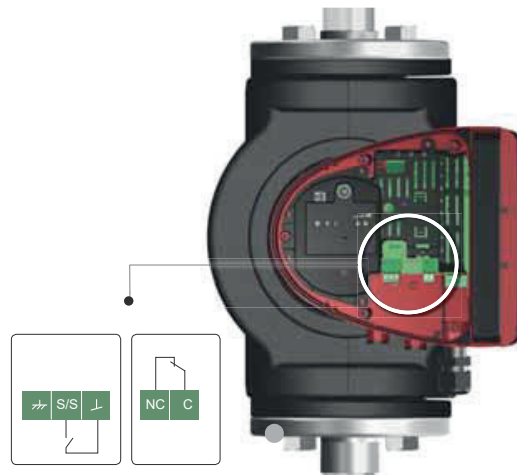
Mains Voltage Connections 230 VAC

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)'.



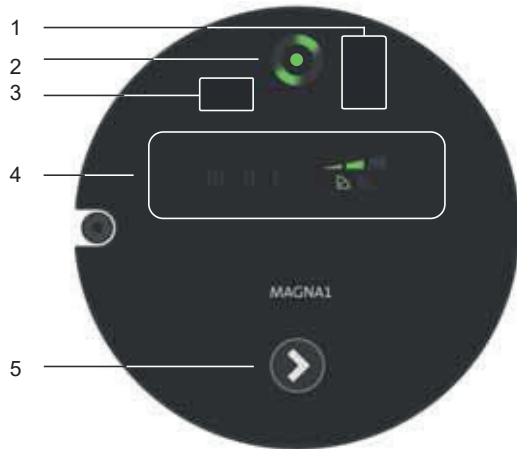
Stratton mk3 150			
Hydraulic Configuration	Flow Rate Q (m ³ /hr) Δt 20°C	Head (m)	Pump Used
No separation	6.22	9.99	Magna 1 32 - 120F
LLH	6.22	10.19	Magna 1 32 - 120F
PHEX	6.28	11.52	Magna 1 40 - 150F

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.

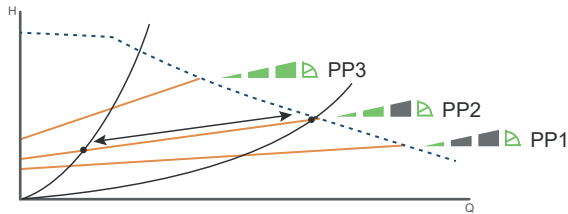
2.6 CONTROL FUNCTIONS



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.

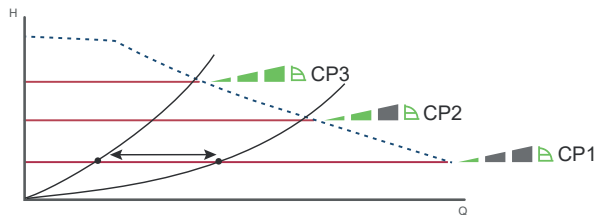


The selection of the right proportional-pressure setting depends on the characteristics of the system in question and the actual flow rate demand.

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.

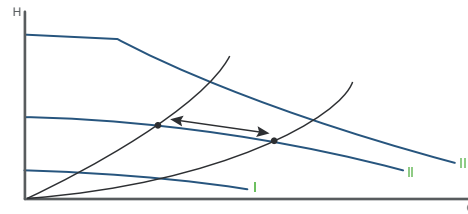


The selection of the right constant-pressure setting depends on the characteristics of the system in question and the actual flow rate demand.

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)

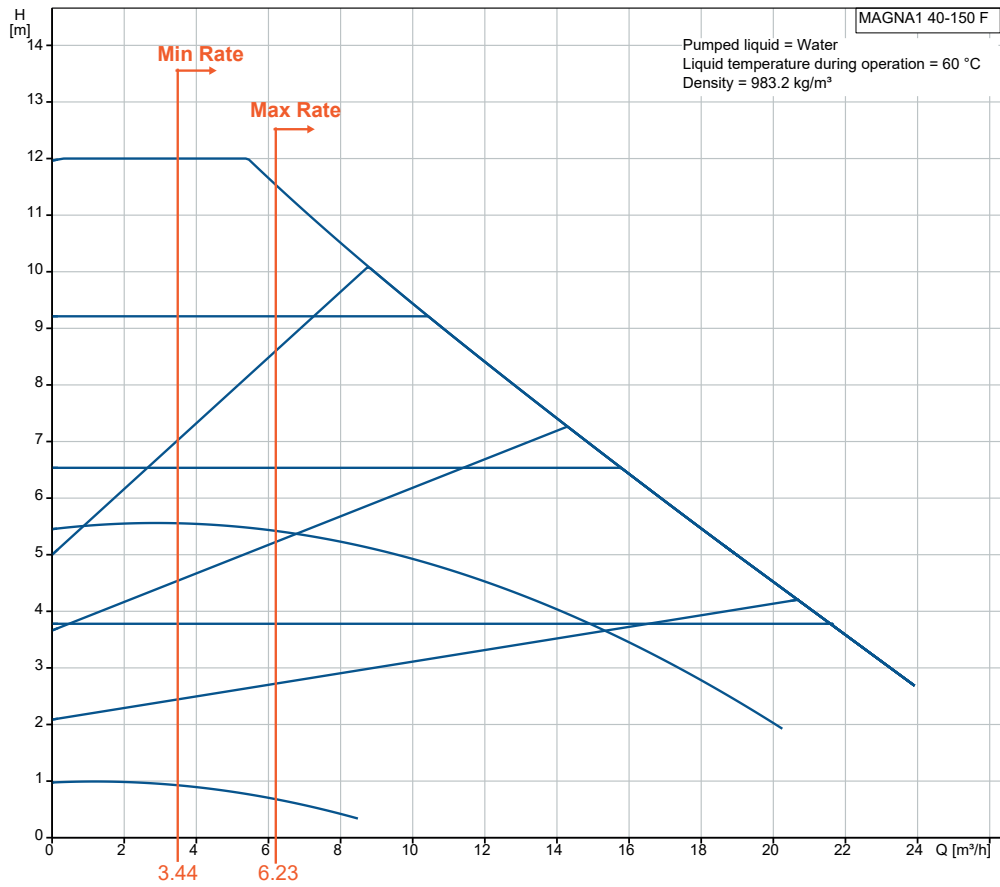
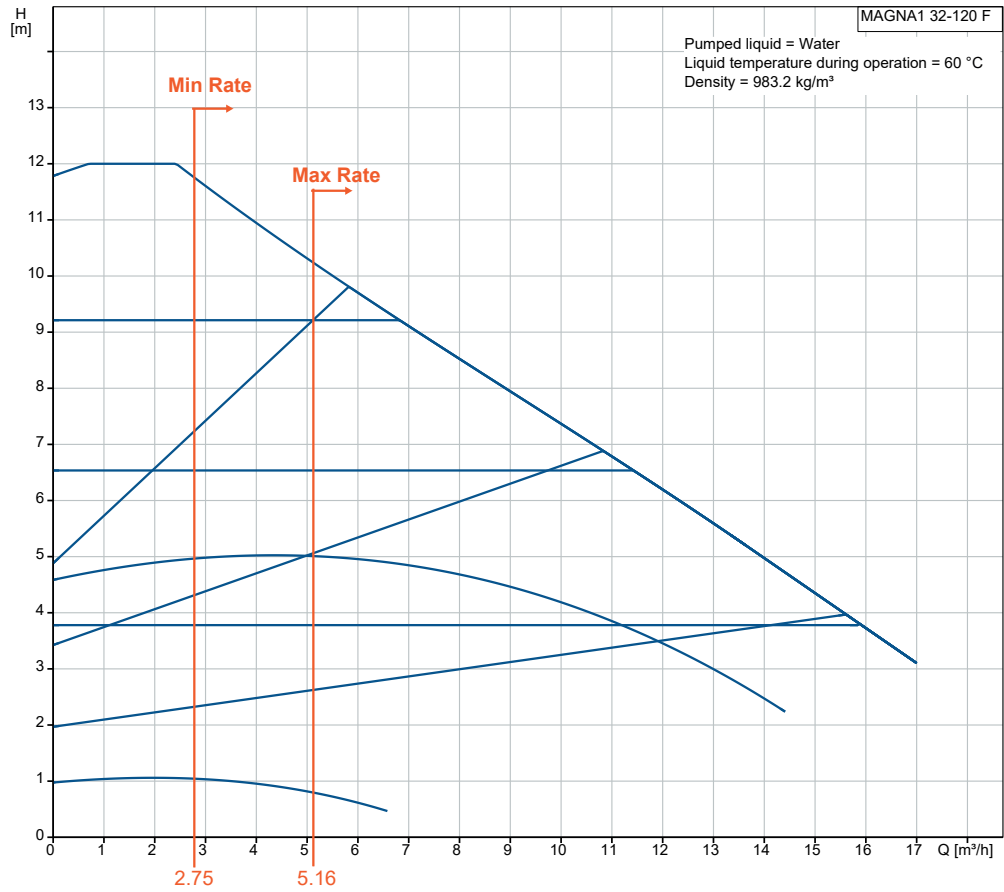
At constant-curve operation, the pump runs at a constant speed, independently of the actual flow rate demand in the system. The pump performance follows the selected performance curve, I, II or III. See below where II has been selected.



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



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the commercial heating and hot water specialists.



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