



ADDENDUM
to
INSTALLATION INSTRUCTIONS
for
Grant Vortex Pro and Eco
Oil-fired Boilers

DOC.101 Rev01 - May2015

ATTENTION INSTALLERS - UPDATED INFORMATION!

Grant Vortex condensing oil fired boilers now have several recent changes that differ from the Installation & Servicing Instructions supplied. These changes are due to compliance with new UK and European Legislation.

Please read this Addendum and use the information in conjunction with the corresponding sections of the Installation & Servicing Instructions supplied with the boiler.

After installation and commissioning the boiler(s), please ensure that both the Installation & Servicing Instructions and this Addendum are left with the user for future reference.

HIGH EFFICIENCY CIRCULATING PUMPS

The following Grant oil-fired boilers and Sealed System kits are now supplied with Wilo High Efficiency circulating pumps. These conform to the requirements of the Energy Related Products (ErP) Directive that is effective from the 1st August 2015:

- Grant Vortex Pro Kitchen/Utility System boilers – 15/26, 26/36 & 36/46
- Grant Vortex Pro External boilers – 15/21, 15/26, 26/36 & 36/46 (Sealed System kit)
- Grant Vortex Eco Utility System boilers – 15/21, 21/26 & 26/35
- Grant Vortex Eco External System boilers – 15/21, 21/26 & 26/35
- Grant Vortex Eco Wall Hung Internal System boilers – 12/16 & 16/21
- Grant Vortex Eco Wall Hung External System boilers – 12/16 & 16/21
- Grant Vortex Combi Internal boilers – Combi 21, Combi 26 & Combi 36
- Grant Vortex Combi External boilers – Combi 21, Combi 26 & Combi 36

PUMP SPECIFICATION

Make and Model	Wilo Yonos PARA RS 15/7.0 RKC FS 130 12
Construction	
Pump housing	Cast iron (with cataphorisis treatment)
Impeller	PP composite with GF 40%
Pump Shaft	Stainless Steel
Bearing	Carbon, metal impregnated
Protection Class	IPx4D
Insulation Class	F
Motor Protection	Integrated
Performance	
Max Delivery Head	7.2m @ Q = 0 m ³ /h
Max Volume Flow	3.3 0 m ³ /h
Minimum Suction Head @ 50/95°C	0.5/4.5m
Power Consumption @ 1 – 230V	3 – 45W
Nominal Motor Power	37W
Current @ 1 – 230V	0.028 – 0.44 A
EEl	≤ 0.20
Speed	800 – 4650 rpm
Settings	ΔP-variable (1 – 7m head) and Constant Speed (I, II and III)
Application	
Maximum Static Pressure	PN6
Temperature Range @ Max Ambient Temperatures	Max Ambient temperature 57°C: 0 to 95°C Max Ambient temperature 59°C: 0 to 90°C Max Ambient temperature 67°C: 0 to 70°C
Approved Fluids	Heating Water Water/Glycol – Max 1:1 (above 20% check pumping data)

Energy Efficiency Index

The Wilo Yonos PARA circulating pump complies with the ErP requirement for all circulating pumps to have an Energy Efficiency Index (EEI) of not more than 0.23.



Figure A: Wilo Yonos PARA High Efficiency circulating pump

ELECTRICAL CABLE

The pump is supplied with a 3-core mains cable fitted with a moulded plug to provide a safe but easy connection at the pump. Refer to Figure A.

On all boilers (except Combi boilers) this is a black coloured cable that will be pre-wired to the electrical system of the boiler. To disconnect the pump it is only necessary to remove the moulded plug from the socket on the pump.

On Combi boilers two pumps will be fitted – one in the Heating Flow pipework in the boiler and the other in the internal Hot Water pipework of the boiler. The Heating pump will have a Black cable whilst the Hot Water pump will have a White cable.

With Sealed System Kits the pump will be supplied loose with the electrical cable. Install the pump in the boiler and connect it to the power supply as described in the Installation Instructions supplied with the boiler. Ensure that the three wires of the pump cable are connected as follows:

Brown:	Live
Blue:	Neutral
Yellow/Green:	Earth

Then connect the cable to the pump by fitting the moulded plug onto the pump socket.

To fit the plug: First check that the power to the boiler is switched off. Then firmly push the plug fully onto the socket on the pump.

NOTE: The plug will only fit onto the pump socket one way.

To disconnect the plug: Check that the power to the boiler is switched off. Then simply pull the plug off the socket on the pump.

PUMP CONTROL PANEL

Wilo Yonos PARA RKC circulating pumps have two possible setting modes:

- Constant speed with three pump speed settings (I, II and III)
- Variable pressure ($\Delta p-v$) with pump head adjustable between 1 and 7m head

Figure B shows the pump control panel with the red selector knob.

Constant Speed Mode (I, II, III)

This is the default setting of the pump and as such is recommended by Grant for heating systems. In this mode the pump speed is not automatically regulated (as with the Variable Pressure Mode), but operates at constantly at one of the three possible speeds (set using the red selector knob on the pump control panel).

Variable Pressure Mode ($\Delta p-v$)

In this mode the electronic control changes the differential pressure setpoint to be maintained by the pump in a linear fashion between H_s (the value set using the red selector knob on the pump control panel) and $\frac{1}{2} H_s$. The differential setpoint varies linearly with the volume flow Q .

Indicator LED

The pump is fitted with an indicator LED. This is located around the circumference of the red selector knob. See Figure B below. This indicates the operating status of the pump and will be illuminated green when the pump is operating normally. This indicator LED can assist in diagnosing and rectifying faults. See the FAULT DIAGNOSIS section of this Addendum.

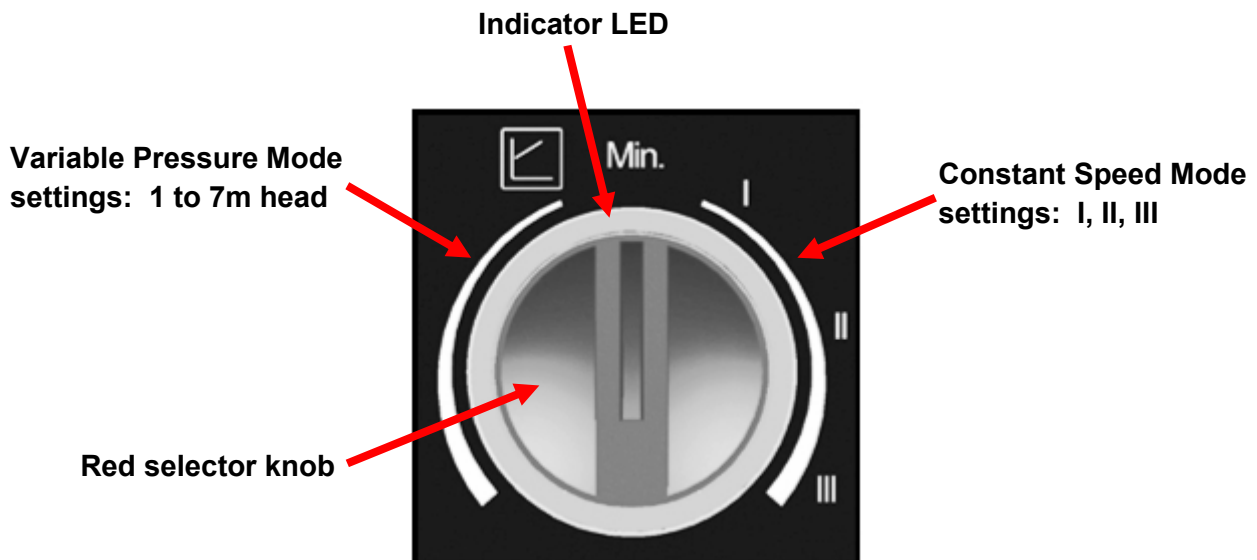


Figure B: Control panel with red selector knob and LED indicator

SETTING THE PUMP CONTROL MODE

Set the pump to one of the two operating modes as follows:

Constant Speed Mode (I, II, III)

Grant recommends this operating mode for the pump.

To set the pump to the 'Constant Speed' mode, the pointer on the red selector knob must be set to the RIGHT of the mid position. See Figure B above.

Set it to point at the required speed setting, I, II or III as required, ensuring that there is adequate flow to distribute the heat from the boiler whilst avoiding high water velocities causing noise in the pipework.

IMPORTANT

In the case of the Hot Water pump in the Grant Vortex Pro Combi boilers, the pump must always only be set to speed setting III.

Variable Pressure Mode ($\Delta p-v$)

To set the pump to the 'Variable Pressure' mode the pointer on the red selector knob must be set to the LEFT of the mid position. See Figure B above. The further anticlockwise it is set the greater the pressure head setting of the pump – from 1m to 7m head.

If this mode is to be used, set the selector knob at a pressure that represents the maximum pressure (head) loss for the heating system in question.

FAULT DIAGNOSIS

The Indicator LED, located around the circumference of the red control knob, can assist in diagnosing and rectifying a fault with the pump. See the table below.

LED condition	Meaning	Diagnostic	Cause	Remedy
Green	Pump operating	Pump runs according to the red knob setting	Normal operation	N/A
Flashes Red and Green	Pump is operating but stopped	Pump restarts by itself after fault has disappeared	Undervoltage Voltage<160V OR Overvoltage Voltage>253V	Check supply voltage is 195V<V<253V
			Overheating: temperature inside motor too high	Check water and ambient temperature
Flashes Red	Pump not operating	Pump stopped (blocked)	Pump does not restart itself due to a permanent failure	Replace pump
LED off	No power supply	No voltage to pump control electronics	Pump is not connected to power supply	Check cable connection
			LED is damaged	Check if pump is running
			Electronics are damaged	Replace pump

RECYCLING & DISPOSAL

This circulating pump must not be disposed of in normal domestic waste as most of the materials used in it's construction can be recycled. For details on how to responsibly dispose of this pump please go to www.wilo.com/recycling.



GRANT ENGINEERING (UK) LTD
Hopton House, Hopton Industrial Estate, Devizes, Wiltshire. SN10 2EU
Telephone: 01380 736920 Fax: 01380 736991
Email: info@grantuk.com Website: www.grantuk.com