Technical Bulletin
Industry: ErP 2022

ErP COMPLIANT SPARE PART CIRCULATING PUMPS

From 01/01/2022, the ErP directive requires that only low energy circulating pumps may be used as spare parts to replace integral appliance circulating pumps.

This means that standard efficiency pumps will be phased out and replaced with low energy pump spares.

The legislation allows any spare part pump which has already been placed in the market place to be used. This means that we can continue to use up our stock of Grundfos branded pumps, and merchants can also continue to sell any stock they are holding of Grundfos or Bosch branded pumps. New spare part numbers will be introduced as stock is used up.

EQUIVALENT SPARE PART NUMBERS: All of our spare part circulating pumps will be ErP compliant from 01/01/2022. Equivalent spare part numbers are listed below in Figure 1.

Current Pump Bosch Branded	Current Pump Grundfos Branded	New Low Energy Solution
8-716-106-355-0	8-716-119-822	8-716-120-409
8-716-106-850-0	8-716-119-823	8-716-120-411
8-716-105-656-0	8-716-119-826	8-716-120-415
8-716-113-594-0	8-716-119-827	8-716-120-416
8-716-143-116-0	8-716-119-828	8-716-120-416
8-716-143-105-0	8-716-119-829	8-716-120-453
8-716-120-302-0	8-716-119-830	8-716-120-496
8-716-143-103-0	8-716-119-831	8-716-120-416
8-716-143-107-0	8-716-119-832	8-716-120-416
8-716-108-246-0	8-716-119-833	8-716-120-459
8-716-112-504-0	8-716-119-834	8-716-120-459
8-716-143-108-0	8-716-119-835	8-716-120-416
8-716-116-561-0	8-716-119-836	8-737-710-972
8-716-116-562-0	8-716-119-837	No compatible pump
8-718-685-798-0	8-716-119-838	8-716-117-628
8-718-682-790-0	8-716-119-839	8-716-120-472
8-718-690-009-0	8-716-119-840	8-716-120-472
8-716-116-795	8-716-119-841	8-716-120-486
8-716-112-293-0	8-716-119-842	8-716-120-495
8-716-108-423-0	8-716-108-423-0	8-716-120-416
8-716-113-593-0	8-716-119-843	8-716-120-416
8-716-143-102-0	8-716-119-844	8-716-120-416
8-716-108-405-0	8-716-108-405-0	8-716-120-416
8-717-204-443-0	8-716-122-077	8-716-120-416
8-717-204-264-0	N/A	8-737-711-965
8-717-204-265-0	N/A	8-737-711-965
8-718-681-447-0	N/A	8-737-711-966
8-718-221-460-0	N/A	8-735-300-748
8-718-221-461-0	N/A	8-735-300-748
8-718-221-463-0	N/A	8-735-300-750
8-718-221-462-0	N/A	8-735-300-749

Fig. 1) Spare Part Numbers

ELECTRICAL CONNECTIONS: As the electrical connection at the replacement pump may be different to the connection on the original pump, the spare part may also contain a harness which will be specific to the appliance (Figure 2).

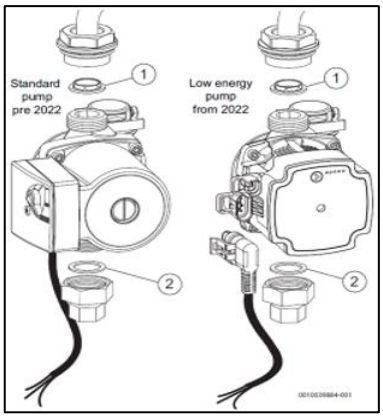


Fig. 2) Pump differences

For the replacement of circulating pumps on obsolete appliances where we no longer provide dedicated support for spares, a universal UPMO pump spare will be available **(8-716-120-416).** This will contain a harness plug which will require the existing harness to be adapted. Guidance for wiring is included on the plug packaging (Figure 3).
The harness must be disconnected from the existing pump and prepared as shown below.

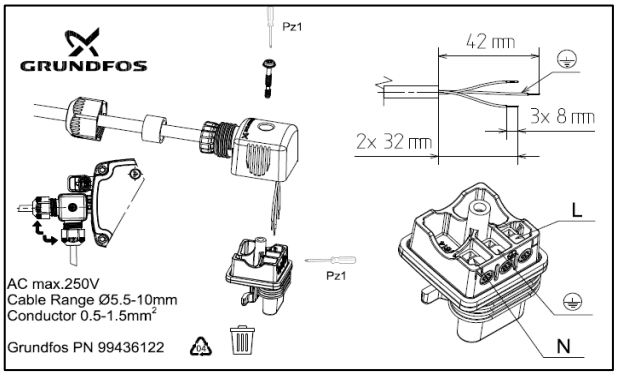


Fig.3) Harness detail

ELECTRICAL CONSIDERATIONS: The information in Figure 4 is provided by the pump manufacturer and will be included with ErP compliant pump spares.

Electrical considerations

The correct type of RCD must be employed where additional protection is required that is suitable for a low energy DC modulating pump according to IET wiring regulations.

Fig. 4) Electrical Considerations note

Worcester Bosch, Cotswold Way, Warndon, Worcester WR4 9SW
Technical Support: 0330 123 3366 | technical-advice@uk.bosch.com

RCD TYPES CAN BE IDENTIFIED BY THE SYMBOLS PRINTED ON THEM:

Type AC RCDs are for general purpose use. The RCD can only detect and respond to AC sinusoidal earth faults. Type AC is not suitable for DC modulating pumps.

Type A RCDs can be used on equipment incorporating electronic components. The RCD can detect and respond to AC sinusoidal and pulsating DC earth faults.

Type F RCDs can be used on equipment incorporating frequency controlled speed drives. The RCD can detect and respond to AC sinusoidal, pulsating DC and composite current earth faults.

Type B RCDs can detect and respond to AC sinusoidal, pulsating DC, smoothed DC and composite current earth faults. They are usually only required for electric vehicle chargers and PV supplies.

IMPORTANT:

Greenstar CDi Classic boilers

Greenstar CDi Classic boilers which were manufactured before June 2012 (FD 206) are not compatible with the low energy UPM pumps and may also require the PCB and Low Voltage harness to be replaced (SMPS conversion kit 8-748-300-912).

You must check to see whether the PCB has previously been upgraded. (Refer to Figure 5) This advice will be included on a label with spare part pump 8-716-122-126

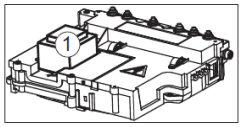
Pump UPM 15-70 CHG 8 716 122 126 as a spare part is compatible with all Greenstar CDi Classic appliances

Appliances built before 1st of June 2012 (FD code 206) may require the **SMPS PCB conversion kit 8 748 300 912***

Appliances built after 31st of May 2012 (FD code 205) will **NOT** require the **SMPS PCB conversion kit**

Note: *The FD code is either stated in full (as FDxxx) on the appliance Data Label or included as digits 5,6 and 7 in the Product Code. e.g. 3730-xxx-7733600xxx-xxxxxx.*

*If the back of the control box has:
- a transformer (1), then a SMPS PCB conversion kit is required
- a plastic cover with no transfomer, then a SMPS PCB conversion kit is **NOT** required



Electrical considerations
If the electrical installation supplying the appliance uses a Residual Current Device (RCD) as addition protection, this RCD must trip when earth currents with DC content (pulsating DC) occur, in accordance with the latest edition of the IET wiring regulations.

Fig. 5) PCB Check information

Any Greenstar CDi classic boiler that has a transformer type PCB will require SMPS upgrade kit 8-748-300-912 if a UPM pump is fitted.

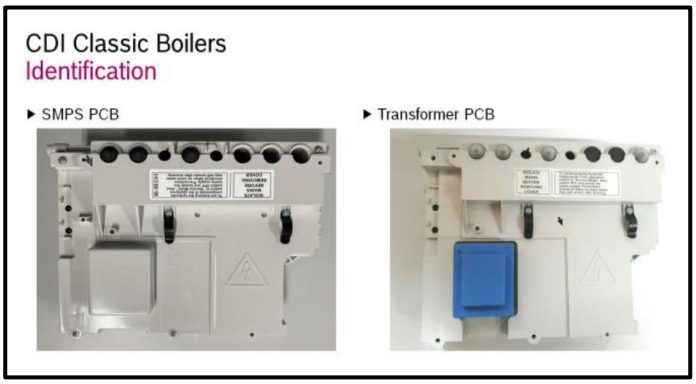


Fig. 6) CDI Classic boilers identification

Worcester Bosch, Cotswold Way, Warndon, Worcester WR4 9SW
Technical Support: 0330 123 3366 | technical-advice@uk.bosch.com

Greenstar i & Si boilers.

A replacement drain valve (Figure 7) is supplied with the pump spare for these boilers. The replacement valve must be fitted as the original part will clash with the pump which will make it difficult to operate.

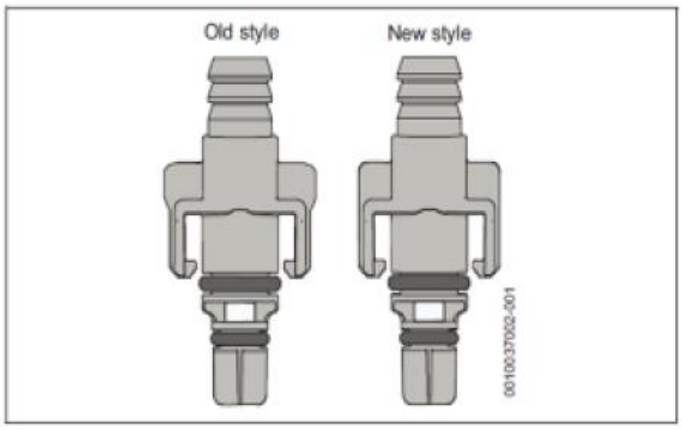


Fig. 7) Drain valve

TO REPLACE THE VALVE:

- Twist the valve anti-clockwise to the stop.
- Push the valve firmly into the appliance until a click is heard.
- Whilst the valve is pushed fully back, rotate the valve anti-clockwise to the next stop and the valve shoulders are at top and bottom.
- Withdraw the valve from the hydraulic assembly.
- Align the replacement valve with the shoulders top and bottom and insert fully into the hydraulic.
- Twist clockwise to the stop.
- Release the valve and it should spring forward with a click.
- Rotate clockwise to close the valve.

Combi boilers: UPMO pump speeds.

For pumps that do not have a speed control wire connected to the boiler, the pump pressure is adjustable on the pumps (Figure 8). To maintain hot water performance on Combi boilers that do not have modulating pumps, it is important that the pump pressure is set to Constant Curve 3 – Max.

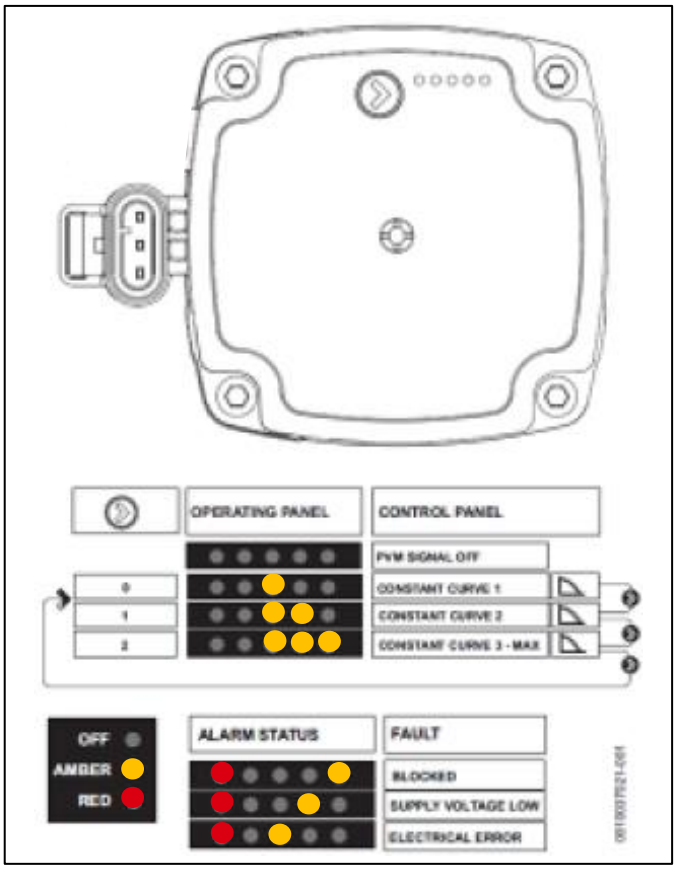


Fig. 8) Pump Fault Lights

UPMO pumps will not have a speed control wire connection but will have fault and selected pump speed indicators.
You can scroll through the pump speeds by using the arrowed button next to the indicator LED's:

- One Amber LED = Constant Curve 1
- Two Amber LED's = Constant Curve 2
- Three Amber LED's = Constant Curve

ALARM CONDITIONS: The pump will display warning lights for various fault conditions. The red led indicates a fault, the amber lights indicate the specific failure.

- Red and Fifth LED = Pump blocked.
- Red and Fourth LED = Supply voltage low.
- Red and Third LED = Electrical error

Worcester Bosch, Cotswold Way, Warndon, Worcester WR4 9SW
Technical Support: 0330 123 3366 | technical-advice@uk.bosch.com