

## THERMSAVER'S GROUND SOURCE HEAT PUMP RANGE AND ACCESSORIES

Thermsaver are the only Scottish distributor of DeLonghi-Climaveneta residential and commercial heat pump equipment.

Our range of GSHPs (5kW – 200kW) can heat water to as high as 65°C and comes with a control system that is easy to operate and includes customised time bands and intelligent control.

### BWR MTD2 (5kW – 43kW)

BWR MTD2	0011ms	0025ms	0031ms	0041ms	0025t	0031t	0041	0061t	0071t	0091t	0101t
Nominal Heating Power (kW)	5.40	7.30	9.20	11.7	7.50	9.10	12.2	16	19.8	23	26.5
Total Absorbed Power (kW)	1.34	1.82	2.65	2.80	1.74	2.10	2.80	3.50	4.40	4.90	5.80
Dimensions (mm)	Length 680 Depth 1105 Height 845										
Operational Weight (kg)	188	190	195	210	190	195	210	225	240	245	250

- MSC accredited heat pumps, certificate HP0005
- Full DHW and heating control
- Heating only or reversible heat pump
- Built-in plant and circulation pump
- High value and high performance
- 55°C output temperature

### THERMSAVER'S GROUND SOURCE HEAT PUMP ACCESSORIES

We also offer a range of controllers and accessories, designed to make this renewable heat source work for you.

Installation Kit – Our installation kits consist of the following:

- Anti-vibration feet
- Filter valve
- Flow Meter

Code	Size	Flow Rates (l/m)	Flow Rates (l/s)	Kv
132404	½"	2 to 7	0.033 – 0.116	0.9
132512	¾"	5 to 13	0.083 – 0.216	2.5
132522	¾"	7 to 28	0.117 – 0.466	5.4
132602	1"	10 to 40	0.167 – 0.666	7.2
132702	1 ¼"	20 – 70	0.333 – 1.166	13.1
132802	1 ½"	30 – 120	0.5 – 2.0	27.8
132902	2"	50 - 200	0.833 – 3.333	46.4

- Flow switch (GSHP only)

Our ELF range of switches sense liquid flow through chillers, boilers, pipes and other units in order to monitor pump operation. In the event of flow failure they will switch alarms i.e. hot water, chilled water, diesel oil and up to 30% glycol systems.

Type	Media Temp° C	Operation	Media Contact Materials
ELF-1	+4/110	Normal	Phosphor Bronze/Stainless Steel/Brass
ELF-3		Sensitive	Phosphor Bronze/Stainless Steel/Brass
ELF-4		Aggressive	Stainless Steel
ELF-5		Sensitive	Stainless Steel
ELF-2	-30/+110	Normal	Phosphor Bronze/Stainless Steel/Brass
ELF-3W		Sensitive	Phosphor Bronze/Stainless Steel/Brass
ELF-4W		Aggressive	Stainless Steel
ELF-5W		Sensitive	Stainless Steel
ELF-7	+4/110	Normal	Phosphor Bronze/Stainless Steel/Brass

- Anti-vibration pump connections
- Fittings (for copper/plastic/carbon pipe)

Filterball – Saves on installation time and material cost by replacing two valves and a strainer. DZR body with female BSP parallel screwed ends. Includes standard 700 micron (28 Mesh) strainer.

Type	Details
FB5108 Filterball	Combined Isolation Valve and Strainer 1"
FB5110 Filterball	Combined Isolation Valve and Strainer 1 ¼"
FB5112 Filterball	Combined Isolation Valve and Strainer 1 ½"
FB5116 Filterball	Combined Isolation Valve and Strainer 2"

### Buffer Tanks

Buffer tanks are an essential part of kit within modern renewable heating systems. Their job is to hold water and they're normally fitted to help improve the efficiency of renewable heating appliances. Our buffer tanks come in a range of sizes (100 litres – 1000 litres) and includes open and closed circuit tanks. To find out more about our range of buffer tanks go to our Cylinder & Buffer's product page.

## Ground Loop Accessories

PE100 - Virgin Grade Black PE100 is made from high-grade polyethylene (BS/EN12201). This Geothermal collector pipe is manufactured specifically for heat collection and available in coil sizes from 50m to 400m.

Nominal Size O/D (mm)	SDR Rating	Maximum Operating Pressure	Wall Thickness (mm)	Approx Weight (kg/m)	Lengths Available
25mm	11	16 Bar	2.3	0.165	100m
32mm	11	16 bar	2.9	0.274	100-300m
40mm	11	16 bar	3.7	0.434	50-250m
40mm	17	10 bar	2.4	0.282	300-400m

## PE100-RC -

Nominal Size O/D (mm)	SDR Rating	Maximum Operating Pressure	Wall Thickness (mm)	Approx Weight (kg/m)	Lengths Available
32mm	11	16 bar	2.9	0.274	100-200m
40mm	11	16 bar	3.7	0.434	100-250m

We also offer the following accessories in horizontal ground loop installation:

Slinkies - In 32mm PE100 SDR11 16bar, lengths as follows:

- 30m (200m of 32mm)
- 40m (250m of 32mm)
- 50m (300m of 32mm).

Header Pipe - Manufactured in the UK from Virgin Grade Black PE100 High Performance Polyethylene (BS/EN12201).

- Typically installed in pipe sizes 40mm
- 50mm
- 63mm OD
- (available in 25m, 50m, 100m & 150m coils)

Preinsulated Header Pipe - specifically designed for the transport of low temperature Glycol to and from the manifold in Ground Source applications.

- Available in 40mm, 50mm & 63mm (63mm, 90mm & 110mm OD respectively)
- Significantly reduces installation time on site
- Superior heat loss values versus other installation practices
- Manufactured in Virgin Grade Polyethylene with insulation and corrugated casing

## Vertical Installation

Probes (Vertical Ground Loops)

- Manufactured from Virgin Grade Black PE100-RC High Performance Polyethylene.
- Tested in accordance with EN12201 / PAS1075.

- The Probe Tip and finished product audited and certified by and according to the guideline by SK-Z Würzburg HR 3.26 and complies with the VDI 4640 & VBS 2011 guidelines.
- All Probes have metre markings and print line information in accordance with EN12201.
- Go Geothermal probes are designed to operate at a minimum of 25 years service life.

#### PE100-RC Probes

Nominal Size O/D mm	SDR Rating	Maximum Operating Pressure	Wall Thickness (mm)	Approx Weight (kg/m)	Maximum Probe Width (mm)	Lengths Available
32mm	11	16 bar	2.9	0.274	83	50-150m
40mm	11	16 bar	3.7	0.434	98	50-300m

#### Pilot Weights

- 12.5Kg and 40Kg Pilot Weights
- 12.5Kg Weights can be daisy chained to create 25kg Weights if required

#### Raugeo PE-Xa Probe

- No need for joints in the soil ensures highest operational reliability
- PE-Xa material is not sensitive to notches and grooves
- Stable up to temperatures of 95°C, thus the RAUGEO PE-Xa probe can be used for heat storage purposes
- Probe base is protected by a special tough resin
- Connected by means of Electrofusion Fittings or Rehau Everloc jointing system
- Available in Probe lengths of 800 metres

#### PE-Xa collector pipe

- Resistant to puncture loads
- notches and grooves – allowing the pipe to be backfilled with excavated material (PE 100 requires a sand bed), therefore reduction of installation time and costs
- Better thermal efficiency from excavated material compared to a dry sand bed
- Extremely tough and able to handle temperatures up to 95oC
- Tight bending radii, therefore easier installation as less space is required
- High operational reliability of PE-Xa pipe
- Minimal pressure losses due to smooth pipe inner surface

#### Raugeo Helix Probe PE-Xa

- Use in new builds and refurbishments
- Extraction performance of up to 700 W/Helix Probe in Sandy clay (Wet)
- Simple and cost effective drilling possible
- Ideal where space is at a premium
- Defined pipe spacing and probe diameter using special PE membrane
- High Quality PE-Xa material means high resistance to puncture loads and elimination of any joints due to small bending radius.
- The high temp resistance of up to plus 95deg C makes a combination with solar energy possible – even retrospectively.

- Making excess heat storage a reality in this increasingly required feature of new builds.