



Applications

- Vertical Ground Source Borehole Loops

Features

- Available in 25, 32, 40, 45 and 50mm diameters
- 32mm & 40mm also available as double loops
- 32mm & 40mm available with pre wound sacrificial tremie
- 45mm & 50mm available with separate sacrificial tremie
- All diameters dual wound to aid with ease of installation
- Available from stock or can be made to any length to the nearest metre
- Custom metre marked
- Available up to 340m in length
- Made from PE100-RC
- Meets VDI 4060 standards
- Each individual loop is pressure tested
- Made to the UK GSHPA Vertical Borehole Standards
- 45 & 50mm probe foot are 'True' 45 & 50mm, not reduced meaning less pressure drop
- Full range of E/F Fittings available for all sizes, including the 45mm

MGS Thermo-Loops® provide the ultimate quality and performance for ground source borehole loops. Available in 25, 32, 40, 45 and 50mm diameters as single loops the 25, 32 & 40mm diameters are also available as double loops.

All Thermo-Loops® can be produced in bespoke lengths to the nearest meter to suit individual project requirements. 25, 32 & 40mm Thermo-Loops® can also be supplied complete with an integral sacrificial Tremie Pipe to help with ease of installation and the grouting procedure.

Our new 45 & 50mm Thermo-Loops® are made as dual wound loops, specifically designed with the issues of pressure drop in deeper borehole installations in mind, helping to maintain maximum efficiency of the ground source heat pump.

Thermo-Loops® are made from virgin grade PE100-RC (polyethylene resistant to crack) material in accordance with BS EN ISO 17855-1 and are rated to 16 bar.

The Thermo-Loop® probe foot is designed in accordance with VDI 4060 to ensure a maximum hydraulic loss of 10mbar at 1m³/hr flow.

MGS Thermo-Loops® are UK made and are produced in accordance GSHPA (Ground Source Heat Pump Association) Standards, not exceeding the maximum number of two welds where each pipe is attached to the probe foot.



Material	PE100-RC (RC=resistance to cracking)	
CONSTRUCTION	Single loop comprising one probe foot with single socket weld to flow and return in accordance with GSHP specification. Minimal pressure drop <10mbar @ 1.0m ³ /hr flow.	
	Double loop comprising two probe feet with single socket weld to both flows and returns in accordance with GSHP specification. Minimal pressure drop <10mbar @ 1.0m ³ /hr flow.	
	Probe foot designed to allow weights to be attached to aid installation.	
	Single and double loops are available with an integral Tremie pipe.	
	All loops are factory air pressure tested before despatch & supplied with a test certificate.	
	Packed on pallets with protective shrink wrap.	
	Maximum dimension for 45mm & 50mm Thermoloop is 1800mm OD x 850mm depth Maximum dimension for 32mm & 40mm Thermoloop is 1400mm OD x 900mm depth All loops are custom metre marked to aid with installation depth placing	
PRESSURE RATING		
Maximum operating pressure	16 bar	
Factory test pressure	7.5 bar	
MATERIAL SPECIFICATION		
Pipe dimensions	DIN 8074	
Density	0.96 g/cm ³	
Tensile modulus of elasticity	1100 MPa	
Yield stress	23 MPa	
Elongation at yield	9%	
Elongation at break	> 600 %	
Coefficient of thermal expansion	0.18mm/m K	
FNCT test (Full Notch Creep Test)	> 8760 h	
Shore hardness (Shore's scale D)	>65	
Poisson's Ratio	0.45	
Friction co-efficient	Colebrook-White: 0.00152mm	
Pipe roughness	0.03mm	
Maximum temperature	+40°C	
Minimum temperature	-20°C	
SIZES	MAXIMUM LENGTHS	MAXIMUM PROBE FOOT LOAD²
25mm single loop	340m	40kg
25mm double loop	340m	80kg
32mm single loop	340m	200kg
32mm double loop	340m	400kg
32mm single loop with Tremie	200m	200kg
32mm double loop with Tremie	200m	400kg
40mm single loop	340m	300kg
40mm double loop	300m	600kg
40mm single loop with Tremie	200m	300kg
40mm double loop with Tremie	200m	600kg
45mm single loop	340m	400kg
50mm single loop	340m	500kg

¹ Custom metre marking tolerance +/- 0.5% over the length of the loop
Length verification based on manufactured marking

² Tested under dry string conditions