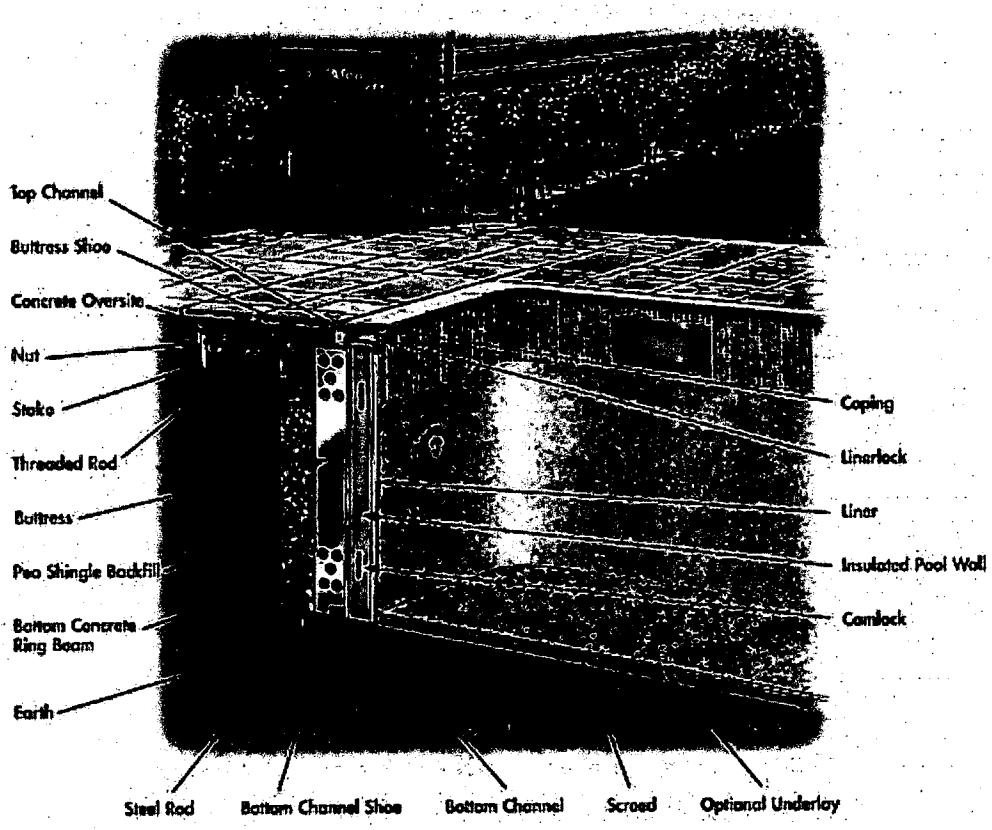
Manor Barn

Pool Details.

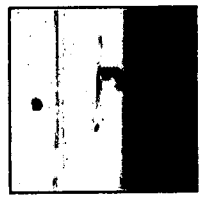



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**Interlocking Panels**
Panels are easy to assemble with key locks to clamp each panel to the next.



**Panels**
All panels are manufactured by Polypool in its factory using CFC free rigid polyurethane insulation foam injected between two facing sheets in pre-set jigs. The foam injection process is undertaking in large hydraulic presses to ensure dimensional stability and insulation density requirements.



Overall average panel foam density of 40/kg/m3 gives the following 'u' value of 0.14W/m°C for a 125mm thick panel.
All panels have an integrally formed compressible closed cell sealing system.



**Mechanical Equipment**
Polypool install only high quality plant equipment, constantly monitoring and updating specifications as the technology develops. A full range of pump and filtration systems is available to cover every pool size as well as gas, propane and oil pool heaters.



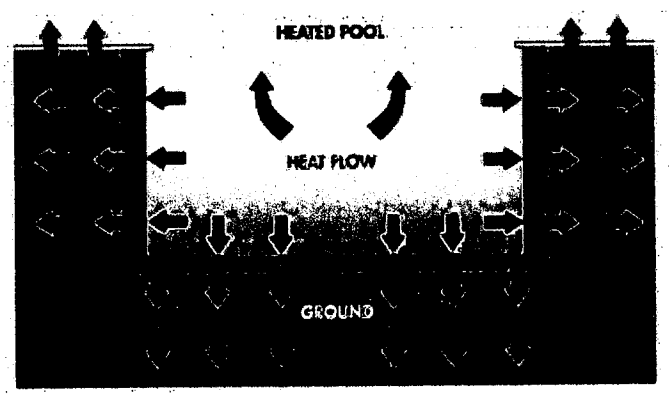
**Self Sealing Joints**
Polypool plumbing is quick and simple, making it quick and easy for the professional and straight forward for the DIY installer.

**Insulated Swimming Pools By Polypool**

One of the laws of physics states that heat will flow from a warm body to a cold one.

All pools in the same location will lose the same amount of heat from the surface, the construction of the walls and floor will make a big difference regarding heat loss.

Below is a diagram of how heat is lost through the walls and floor of a traditionaliy built pool, such as block and concrete sheli construction.




*Typical Block swimming pool*

As you will see heat is lost through the walls is continuous and is dissapated into the surrounding soil, this is dependant on three basic facts.

1.Area of the pool walls and floor.
2.Difference in temperature between the soil and the pool water.
3.The heat conducting properties of the wall and floor construction.

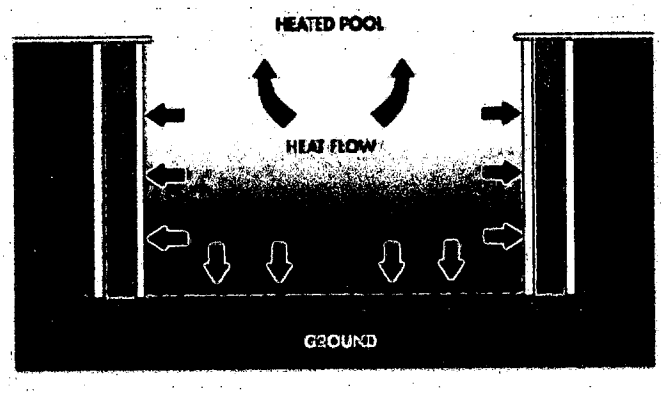
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The third factor involves the nature and thickness of the material from which the pool is constructed. Some materials conduct heat better than others do, for example concrete conducts heat faster than insulation.

As heat dissipates into the surrounding soil of the pool structure, so it further dissipates outwards through the soil and it is reasonable to base the heat flow calculation on a fairly constant temperature which allows for a steady amount of heat lost all the time the pool is heated.

If the water table is high and the pool construction materials become effectively saturated this will cause a big difference in the thermal efficiency and increase the heat lost.

Below is a diagram of how the Polypool system has been designed to eliminate heat lost through the walls and floor of the pool.




*Polypool Swimming Pool*

With the unique Polypool patented system using insulated panel construction with steel faces, the insulation acts as a thermal barrier to trap the heat in the pool, as well as stopping the cold from outside penetrating into the pool thereby extracting the heat out.
The steel faces prevent any vapour or moisture from penetrating into the pool.

As you can see the Polypool system defies the laws of physics.

Below are examples of heat loss from traditional block and concrete pools and Polypool. In wet and dry conditions. The calculations are based on a pool water temperature of 27°C and a soil temperature of 10°C.

| | | |
|---|---|---|
| Dry | Heat conducted through 1m2 of Polypool walls | 4.19 W/m2hr |
| Dry | Heat conducted through 1m2 of Polypool floor | 17.47 W/m2hr |
| Dry | Heat conducted through 1m2 of conventional walls | 78.81 W/m2hr |
| Dry | Heat conducted through 1m2 of Conventional floor | 26.49 W/m2hr |
| Wet | Heat conducted through 1m2 of Polypool walls | 4.19 W/m2hr |
| Wet | Heat conducted through 1m2 of Polypool floor | 24.41 W/m2hr |

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| | | |
|---|---|---|
| Wet | Heat conducted through 1m2 of conventional walls | 96.70 W/m2hr |
| Wet | Heat conducted through 1m2 of Conventional floor | 139.92 W/m2hr |

Click here for a detailed technical drawing of the Polypool system - may take a few seconds to open in new window.

Click here if you cannot see the navigation menu

Polypool is the only HEAT RETAINING panel pool system in the world. The fully patented design uses heat retaining thermal panels. The panel acts as a thermal break preventing outside ground temperature extracting heat from the pool water.



The Polypool team, with over 30 years of pool construction experience, have carried out extensive research and development, including a full scientific report to enable us to further revolutionise pool construction with heat conservation at the forefront of our concept.



The Polypool system is totally unrivalled in its design and construction technique. The advanced technology of the panel and channel system allows you to assemble the walls quickly and efficiently.



All pool components are manufactured to the highest standards in Polypool's own factory. The latest injection processes and moulding technology ensure that all panels and channel systems are made to the highest quality.

Click here to see our pool sizes and a selection of styles.

Click here if you cannot see the navigation menu