

# *floor heating*

*The ESWA floor heating system is a system that has been developed in use over 54 years in the United Kingdom (74 years in Norway) and which is used today in more than 20 countries world-wide.*

*It has been designed to take particular economic advantage of current UK electricity tariffs whilst providing an ideal combination of comfort, safety and sophistication. It consists of heating cables embedded within the floor to provide gentle warmth evenly spread from wall to wall and floor to ceiling.*

*As the source of the heat is contained within the structure there are no radiators or grilles to interfere with your furnishings or decoration. All the floor and wall space you have paid for can be used. The ESWA system will give a long, maintenance free life.*

## **USER INSTRUCTIONS**

### **HOW IT WORKS:**

*Your floor heating is designed to provide gentle warmth using unrestricted electricity with the amount of heat being determined by individual room thermostats.*

*It is a low surface temperature system which makes it particularly efficient. Remember, so called 'hot' radiator conventional systems rely on cold air falling, forcing the heated air up and causing uneven temperatures and draughts.*

*Although the system is available to take energy at all times, there is a certain amount of storage of the heat within the floor structure, and if careful use is made of the controls a substantial proportion of the energy used will be at the low rate.*

*There is a programmer installed [see separate instructions], and this enables the heating to be turned off at times of non-occupancy. Remember floor heating responds only slowly so sufficient time must be allowed prior to occupancy. Careful use of the programmer will allow maximisation of the low rate availability.*

*Example of settings to take advantage of the low rate of the two rate electricity tariff (Economy 10 - other tariffs will vary):*

<i>heating on:</i>	<i>00.00</i>	<i>heating off:</i>	<i>05.00</i>
<i>heating on:</i>	<i>13.00</i>	<i>heating off:</i>	<i>16.00</i>
<i>heating on:</i>	<i>18.00</i>	<i>heating off:</i>	<i>22.00</i>

*This will allow heat to be stored within the floor slab for the lower priced electricity periods, but enable a 'boost' for additional comfort if required. These should be varied to suit personal requirements and tariff arrangements.*

*Note: The programmer has two zones – Zone 1 controls the living/kitchen, whereas Zone 2 controls the bedrooms. It is recommended that for normal operation both zones are set to the programmes shown above. However, if required the second setting for Zone 2 (bedrooms) could be omitted. The bathroom and hallway are not timed through the programmer, but controlled by the individual thermostats.*

**OPERATION:**

*During the summer months of course, there is no need for heating and so the floor systems may be switched off. As the weather becomes colder, the floor heating should be switched on at its main switch to provide warmth. Floor temperatures are only marginally above the room temperature as this is all that is necessary to achieve the designed warmth. You will notice that the floor is somewhat warmer, under a floor rug or cushion on the floor.*

*The room will need time to heat up before comfort is established - particularly from new. The system is designed to be left on continuously, with the thermostats being set to the required comfort setting for the room concerned and then controlled through the programmer to provide the heat required at the times required.*

thermostat for bathrooms

thermostat for living, bedrooms etc

*suggested thermostat settings*

*living/dining: 20<sup>o</sup> - 22<sup>o</sup> C*

*bedroom, kitchen, hall: 16<sup>o</sup> - 18<sup>o</sup> C*

*bathrooms: 25<sup>o</sup> - 35<sup>o</sup> C*

*Note: the thermostats for the bathrooms are based on monitoring the floor temperature; in all other areas they are based on monitoring the air temperature.*

**Electricity Tariffs:**

*Your heating is designed to operate on 'time of day' tariffs (for example Economy 7). This will mean that all energy taken during the specified economy hours is at the low rate. All energy taken at other times will be at the standard rate.*

**Electric Water Heating:**

*In order to get the fullest benefit from time of day tariffs you are recommended to make maximum use of the lower rate periods to heat your water.*

**Payment of Accounts:**

*In all homes much more energy is used in the winter than in the summer. In fact, it is normal to incur as much as 75% of your annual heating cost over the worst winter quarter. More energy is of course also used for lighting, cooking and water heating in the winter. Most people wish to 'spread the load' of costs evenly over the year, and this can be arranged through your Electricity Company with a direct debit facility.*

*Remember maintaining a higher temperature than required will increase running costs - a 1<sup>o</sup>C increase in temperature could increase costs by 10%.*

**NOTES:**

*There have to be some "do's and don'ts" and these are:-*

- (a) **DO NOT** pierce the floor. Clearly this must not be done as the heating cables in the floor could be damaged.*
- (b) **DO NOT** add additional floor surfaces. The warmth is designed to pass u p through the floor.*
- (c) **DO NOT** fit permanent fixtures or furniture on the floor heated areas that will seriously restrict heat output. (for example polystyrene 'bean bags')*
- (d) **DO NOT** maintain higher than necessary temperatures.*

**WARNING:** *Access to the inside of all controls should only be undertaken by a competent person, after the supply has been disconnected.*