

### Heat Load of a building is determined by calculating:

- Transmission losses (amounts to 50-75% of total heating requirements)
- Ventilation losses (can be as much as 10-25% of total heating requirements)
- Air infiltration losses (can be as much as 15-50% of total heating requirements)

### How do radiant heated floors behave?

Radiant heated floors provide even, comfortable, warmth, as there is less air movement. There are no drafts with this type of heating except for building envelope infiltration and/or mechanical ventilation. The thermal mass evens out temperature fluctuations. The floor is warm to the touch. **Radiant heat does very little to heat up air in the building** ([refer to HRV/ERV OPERATION WITH LEGALETT PDS – 0545](#))

### What does Legalett do?

Sell warm floors, which are normally 10 Btu/hr/sq.ft., though Legalett can supply up to 15-20 Btu/hr/sq.ft. if requested. A Legalett warm floor is only part of building heating requirements. See [HVAC Design](#) for options to consider for full building HVAC system.

### Builders/Architects responsibility:

Legalett can supply an entire building package as per [HVAC Design](#). Should you choose not to proceed with these options, the following must be considered.

**Heat load calculations** for the building taking into account the heat supplied by Legalett.

All ventilation losses including HRV/ERV design and supply including a touch up heater as per Legalett HRV datasheet. ([pds 0533](#))

Building envelope design and building construction and hence control over infiltration losses. It is good practice to specify a maximum air leakage rate, confirmed by a blower door test.

In cases of excessive infiltration, size the HRV/ERV touch up heater to match both ventilation and **excessive infiltration** losses or provide heat for excessive infiltration separately. In this situation the air that is introduced to the occupancy space is being heated directly for comfort and is controllable. Overheating the floor **will not** accomplish this.