



Temperature

SoftDucts, LLC. air diffusers are designed for temperature ranges between 0°F and 180°F (-17.8°C and 82°C). SoftDucts, LLC. can supply upon request insulated ducts. The temperature differential (in control terminology, is the difference in temperature between the high event and the low event) will have a very important effect to consider within the design of the air dispersion, since the higher the differential, the greater the "fall" air, precipitating with a smaller extension and a greater velocity of displacement towards the occupied zone.

Because of the density differential, with the cooled air being heavier compared to the warmer air in the room, the room air is displaced below the duct while the supply air continues moving towards the floor. The warm air is driven up to high level where it will not cause any discomfort.

*"Hot air is less dense than cool air causing the balloon to rise.
The inverse effect happens in air conditioned systems."*



Hot air balloon