

Finding your way around a hot air balloon

Written by Staff Reports

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If you've never been up close to a hot air balloon, it may appear to be a large, colorful teardrop, sitting on a field or traveling in the air. But when you get near it, or inside, or maybe you're lucky enough to help blow it up, you see that it's more than a single element. It has parts.

The main parts of a hot air balloon are:

Parachute valve: Holes in the envelope at the top and bottom of the balloon allow hot air to escape and make it possible for the balloon to lift off and land. The top of the balloon, or the crown, has a hole in it called the parachute vent or valve. It can be opened by pulling on a cord. When the pilot pulls the cord, hot air can escape, lowering the inner air temperature and allowing the balloon to slow its ascent.

Gores: In most modern hot air balloons, the envelope is constructed from long nylon gores, reinforced with sewn-in webbing. The gores, which extend from the base of the envelope to the crown, are made up of a number of smaller panels. The gores expand at the top (called the "crown") and taper at the bottom (the "skirt"). This shape helps keep the hot air in the balloon. The top of the envelope is made out of a heavier nylon with a silicone coating to protect the balloon from high heat, molds, and fungi.

Envelope: The envelope contains heated air and is generally made from nylon fabric.

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Skirt: The nylon at the base of the envelope, is coated with special fire-resistant material, to keep the flame from igniting the balloon. The hot air doesn't escape from the hole at the bottom of the envelope, because buoyancy keeps it moving up.

Burners: Located between the envelope and the gondola, they heat the air to make the balloon travel.

Gondola or basket: Often made of wicker, the basket is where riders stay when they take balloon rides.

Propane tanks: Carried inside, the propane tanks power the burners. Modern hot air balloons heat the air by burning propane. It's the same substance commonly used in [outdoor cooking grills](#)

. The propane is stored in compressed liquid form, in lightweight cylinders positioned in the balloon basket. The intake hose runs down to the bottom of the cylinder, so it can draw the liquid out.