

# Envelopes



- **Style, Strength, Reliability**

**CAMERON  
BALLOONS**

*The Choice of Experienced Pilots*

# Welcome to Cameron Balloons

Here at Cameron, we've been building balloons of all shapes and sizes for over 40 YEARS. We're proud to say that pilots around the globe have relied on the legendary performance and ruggedness of a Cameron to allow them to fly in some of the most beautiful and challenging conditions that Mother Nature has to offer. With a reputation like that, no matter what kind of flying you do, you can rely on a Cameron to get the most enjoyment out of flying.



## So what makes a Cameron different?

Well, there's no *single* thing that makes the difference. What sets a Cameron apart is the way *all* the features work together to create a whole that's far greater than the sum of its parts. It's the combination of a great design, rugged but lightweight fabric, quality construction, and performance features (like the PressureScoop™, the Loaded-Mouth™, effective rotation vents, and the pulley assisted parachute) that give every Cameron its legendary performance. After all, engineering excellence should also be user-friendly. Combine these features with our reputation for service before and after the sale, and you've got a winning combination.

So why not join the Cameron family and make your next balloon a Cameron?

## Quality and Experience

With nearly four hundred shapes and over 7,500 balloons under the Cameron name, you can imagine we've learned a thing or two along the way. In fact, every Cameron is built according to our exacting design philosophy. We believe that each balloon should be properly engineered for ruggedness and high performance – and still be beautiful, too. What does that mean to you? It means you'll be flying a balloon you can be proud to call your own. It means that when the going gets tough, you'll still have the ruggedness and performance you need to help manage the flying conditions. It means that you'll get more enjoyment and satisfaction from flying. It means you'll have fun!

And Camerons are designed to last. Efficiently engineered from the ground up, and built from the finest materials available, every Cameron we deliver is custom crafted for its purpose. Take our fabric, for example. Over the last four decades we've spent countless hours developing new fabrics and materials for ballooning. With the introduction of (the now legendary) Hyperlast™ and the Caliber™ family of fabrics, we are proud to offer the highest performance materials available in ballooning. Hyperlast™ and Caliber™ have both proven themselves to give a lifetime of zero-porosity.



**Hyperlast™**  
Amazingly strong!

## Why Caliber™ Fabric?

You asked for heavy-weight performance without the... well, the heavy weight. You asked for longer life and a brighter shine, without losing the things you've come to expect from your Cameron, like DuPont 6.6 high tenacity nylon, great looks and excellent strength. So what's so special about Caliber™? In a word... everything. It's not just the weave design or the new breed of urethane coating that resists Hydrolysis (the most common cause of porosity). It's not the enhanced sheen of Caliber™ that makes the colors so bright or the way Caliber™ holds up over time. It is the way all of these features work together to protect your investment.

Simply said, Caliber™ is the lightweight, high-performance fabric that looks great and won't go porous. What's more, this high-tenacity nylon is constructed to be flexible. Unlike balloons made with some polyester fabrics that frequently develop small holes or tears on launch or landing, Caliber™ will stretch instead of breaking, giving you much longer life.

Caliber also contains a powerful biocide to repel the growth of mold and mildew which eat away the coating of ordinary fabrics. Its unique additives resist chemical breakdown creating a stronger bond between coating and fabric.

While some balloons feel like they're more 'brick' than fabric, Caliber™ won't weigh you down, you'll get heavy-weight performance without the heavy weight. Yet Caliber™ fabric is still soft and supple, so the size of your envelope bag hasn't grown bigger than your basket.

## Hyperlast™ Fabric

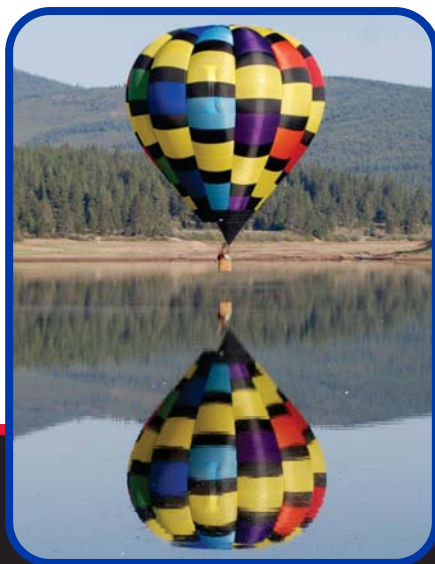
The ultimate rugged fabric gives the strength and performance of some fabrics that are twice the weight. The secret of Hyperlast™ is its combination of thicker high-tenacity fibers that are coated on both sides with a silicone elastomer. While some manufacturers try to copy Hyperlast™ with a single-sided coating, or lesser fibers, they fall short of the mark. By coating on both sides, the silicone is able to bond to itself through the fabric, making a very long lasting bond. After all, what's the point of a good coating, if it simply comes off. Better yet, silicone is non-reactive too, making it resist porosity from weathering or chemical attack. In fact Hyperlast™ may never go porous! You can rest assured that your Hyperlast™ fabric will last well beyond its very generous warranty.

## Warranty

You can imagine that with quality design, construction and fabrics, we have a real-world warranty to back them up. Well, we do. Every Cameron is backed up by a fully transferable six-year warranty. In the case of the heavy-duty Hyperlast™ fabric you can enjoy that coverage for 600 hours, or 350 hours in the case of Caliber™. Unlike some manufacturers, we don't pro-rate the warranty, expecting you to fly 200 hours per year. In fact, for the first three years, we'll base it on hours alone, protecting you even further. The remainder of the warranty is based on the average of age and hours.

## Choice

You can rest assured that no other manufacturer gives you such a range of envelopes. With over 80 models in 8 different types, there's a Cameron that's perfect for you. From single-place 'Hoppers' to enormous 20+ passenger models and everything in between, there's a Cameron to suit your taste and your wallet. You can be sure that no matter which one you choose, it will be well engineered and flawlessly built so you can enjoy it for years to come. Can't decide which one is right for you? Call us, we'll be glad to walk you through the options to select the perfect model.



O-90 flying in Minden, NV

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# Models

## N-Type

The classic Advertising & Sport Balloon.

The N-Type is the original smooth-gored advertising balloon that is just as capable sporting a logo as it is zipping around the sky. The N-type provides maximum visibility with a perfect, almost flat surface to display even the largest and most complicated artwork. Computer-designed to a natural form which yields zero horizontal fabric stress, the loads are carried by closely-spaced, vertical load tapes.

Constructed from 24 gores (28 to 32 on larger models) and built from vertical panels, the N-Type envelope is a premium choice for effective promotional use and lends itself well to color patterns with vertical stripes.



N-Type

## Z-Type

Built for the Racer in you. Or the Artist. Or both.

The "Z" can be your personal racer, whether flying in serious competition or just for fun.

Engineered with the same great shape and smoothness as the Cameron N-Type, the "Z" is a 24-gore smooth envelope, designed with numerous horizontal panels. Take your creativity to new heights with hundreds of panels and more than 18 colors. Spirals, solids, checkerboards, or a combination - they're all possible!

Or add artwork to a super-smooth envelope for promotional work, or your own personal design. Either way, the "Z" can cater to your individual needs.



Z-Type

ZL-Racer



## ZL-Racer

When you're ready to elevate your game, fly the racing-bred ZL.

Available in several sizes, the ZL is designed for today's pure competition pilot. The ZL sports a very streamlined profile for ultimate climb and descent performance. By combining the new profile with a rounded top, we've maintained directional stability.

Its 24 gores provide a super-smooth shape which reduces drag. Surprisingly, you'll also enjoy lower operating temperatures and better fuel economy. Why? Because its sleek design requires less venting and burning to maneuver into those tight wind layers in competition. You can make your ZL even smoother and lighter by having it built with Cameron's exclusive Kevron™ load tapes.

The racer is available with- or without an interior baffle.

A-Type



## A-Type

The Ultimate Passenger Balloon.

Purpose-built for passenger operations, the A-Type offers a wide range of envelopes that will lift from 2 to 24+ persons – from the sport-sized 77 up to the industry's greatest workhorse, the A-400, with 8,000 pounds of gross lift.

Twenty slightly bulbous gores, each with numerous horizontal panels, provide tremendous strength without compromising artwork potential. Reinforced with plenty of horizontal load tapes, it has a 'natural' shape that avoids stress concentrations. The A-Type boasts a large Loaded-Mouth™ and Nomex™ PressureScoop™, which together make even the windiest inflations easy – especially important for hard-working ride balloon.

## O-Type

The curvaceous balloon for all reasons.

There *is* such a thing as a good compromise. The O-Type is an excellent compromise between the engineering efficiency of the large-gored Viva envelope and the advertising effectiveness of the smoother N- and Z-Type envelopes.

A moderately bulbous 12-gore design, the O-Type is ideally suited for fun-flying, passenger-carrying, or promotional work. Its beautiful rounded gores create a classically appealing look, and it's a dream to fly. When artists imagine a balloon, this is the shape they think of.



O-Type

## Viva

The Viva – the balloon that's Elegant Simple.

The Cameron Viva offers you a great combination of strength and light weight, and its unique "tear-drop" shape makes it a favorite among sport pilots. Why? They appreciate the lightness provided by an envelope constructed from just eight bulbous gores.

The Viva's design allows for simple artwork, while the numerous horizontally-cut panels offer virtually unlimited color patterns without the need for special cuts.



Viva

## Concept



## Concept

A great Concept at a great price.

With a Concept envelope you can combine the versatility of low cost, light-weight, semi-smooth gores with the great performance of a Cameron.

The Concept is ideal for fun-flying, training, competition, or for a small passenger operation. And the lowest-cost Cameron doesn't translate into a compromise on quality. We've simply introduced more cost-effective designs that allow us to produce them efficiently – every component is Cameron quality throughout, but with a lower price tag to make the decisions easy.

## Hopper



## Hopper

The ultimate 'go anywhere' balloon.

If you thirst for the adventure and simplicity of flying alone – perhaps in every corner of the globe, then a hopper could be the balloon for you.

These tiny envelopes eliminate the need for a basket, instead offering a seat and harness. Attach it to any standard Cameron tank and you're ready for adventure with a balloon that fits in your trunk.

With optional Kevron™ load tapes and one of our lightweight fabrics, you'll have an envelope that can be carried by one, that fits into the smallest of vehicles.

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# Features

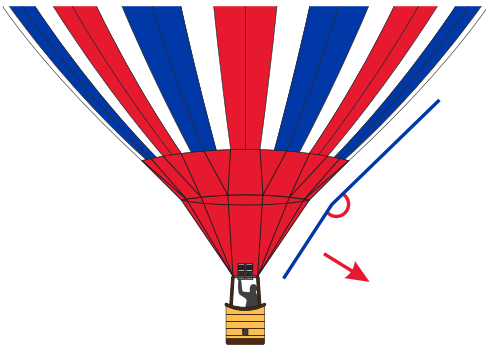
## Standard Features

All Camerons come with an enviable list of standard features - here are a few.

### Loaded-Mouth™ Design

The Cameron Loaded-Mouth™ ensures efficient inflations every time – even when you're short on crew. Inflate a Cameron by yourself and you'll see that our Loaded-Mouth™ speaks for itself. Try that with one of our competitor's balloons and you'll likely pay a visit to your repair station.

How does it work? It's pure geometry. The unique angle between the envelope and the Kevlar™ suspension cables create an outward force on the mouth, causing it to stay open all by itself on inflation – and on rapid descents. Whether you're inflating or negotiating a tricky wind-shear this feature will make things easier, especially when you're short on crew.



The Loaded-Mouth™ stays open by itself making every inflation easy



The PressureScoop™ keeps the envelope fully inflated on even the windiest tether

### PressureScoop™

Together with the Loaded-Mouth™, the Cameron-invented full Nomex™ PressureScoop™ makes even the windiest inflation a 'breeze'. Whether you're tethering in front of the cameras, or trying to sneak in a gusty evening flight, these standard Cameron features give you the edge.

The PressureScoop™ is standard on all systems, but optional on envelope only orders.

### Nomex™ Mouth Panels

Standard, too, is the full Nomex™ mouth. Available in a variety of colors, the mouth panels of every envelope are made from heat-resistant Nomex™, meaning you may never need to make an unplanned trip to the repair station.

### Fully Tailored Envelope Panels

Your envelope is a significant investment, and it should represent you (or your sponsor) well. Cameron balloons look good year after year for the same reason that they perform so well. Every panel, every seam, and every load tape is shaped, sewn, and positioned to add strength and reduce stress. Individual fabric panels are fully tapered on all four sides to exacting tolerances, creating a smooth-curved gore shape eliminating the wrinkles that indicate stress. This produces a neatly tailored look and reduces the possibility of rips spreading from panel to panel. Another example of careful design, the fully tapered panels give a pleasing look and distribute load forces evenly throughout the balloon.

### Pulley Assisted Parachute

We believe that flying a balloon should be easy. That's why every model is fitted with a pulley assisted parachute. No matter what your size, you can comfortably open the top of a Cameron, making it easier and more efficient to maneuver for contour flying and landing.

### Hyperlast™ Parachute

While some manufacturers may charge an upgrade fee for their heavy-duty fabric, every Cameron comes complete with its parachute made from our legendary field-proven genuine Hyperlast™ fabric.



## Internal Horizontal Load Tapes

Horizontal load tapes are important rip-stoppers, especially in the top half of the envelope. We don't skimp on them – typically we install one every two panels. While they're important for strength, we see no need to criss-cross your beautiful envelope with external tapes. That's why every Cameron has its strengthening horizontal load tapes on the inside, where they can't be seen. Your sponsor will appreciate that, too.

## Fit and Finish

Our customers are always coming up with more reasons why they love their Camerons. One comment we hear often is they love the fit and finish details. While some manufacturers are content to number the parachute tabs with a pen, we think embroidered number labels are easier to read and look nicer, too. Wherever you look, you'll find little finishing details like the Nomex™ loops sewn at the bottom of the scoop to attach carabineers when packing up. They keep the suspension cables organized and ready for the next flight. You'll also enjoy the standard Paratriever™ parachute retrieval line that allows you to pull the parachute back up after the flight without walking into the envelope.



Embroidered number labels at the parachute and mouth cables (shown here) make it easy to ready your balloon for flight

## Options

In addition to our standard features, we offer a number of additional options to make the perfect balloon to fit your flying style or environment.

### Kevron™

What you don't see is what you get. Perhaps one of our biggest secrets is the development of our exclusive Kevron™ load tapes. Available on certain sizes of 12 and 24-gore models, Kevron™ is the high performance load tape that actually fits inside the French-felled seam. Far stronger and lighter than any nylon or polyester tape, Kevron™ 'disappears' inside the seam making your envelope more beautiful and easier to handle. Better yet, it saves considerable weight without sacrificing strength. On a typical Z-90 you'll be lugging 27 fewer pounds and have an envelope that's less bulky, easier to pack, and less likely to get snagged. What's more, if your envelope is sporting a logo, your sponsor will be happy that not a single load tape will detract from their prized image.



Beemster Cheese Z-105 with 'invisible' Kevron™ load tapes



The Easy Vent™ II is fully reversible



### Easy Vent™ II

What's Stopping You. If your flying area has tight landing sites or high winds, or if you just want the peace of mind to know you can 'land on a dime', you should consider the Easy Vent™ II rapid deflation system. Its unique design allows normal in-flight venting, together with a fully reversible rapid-deflation mode for the end of the flight. The Easy Vent™ II is available in several model types from 70,000 cubic ft. and up. We've spent decades fine-tuning this deflation system to make it easier to use than ever.

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## PreVent™

Racers are really put through their paces – often launching in conditions that some might frown upon. Sometimes a tricky competition launch is performed after moving from one site to another with just seconds to spare.

Our PreVent™ is designed to give you added control to hold the parachute firmly seated during a difficult inflation – even when the Velcro tabs are not in place.

A light tug of the control line will keep the parachute firmly sealed in the midst of a gusty inflation, even if there was no time to seal the Velcro tabs.

As an added benefit, it can be used to actively hold the parachute closed if you encounter turbulence during a rapid climb.

## Rotation Vents

Not only must the Rotation Vents spin the balloon effortlessly, but they must seal easily without leaking. Cameron rotation vents are engineered to do just that. Rather than just slitting the panels and sewing a vertical tape (which is inexpensive but not very effective), our vents have scalloped edges that hug the panels and create an effective seal.

Z-90 with Digital  
Inkjet logo

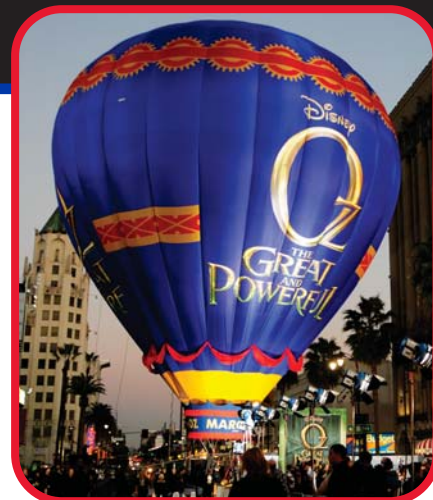
## Clear Windows

Need better visibility before making a climb in congested airspace? Try our clear windows. They'll give you the peace-of-mind that you're clear above without having to radio your crew or a team-mate.



## Scoop Liner

Also available is a heat-reflective scoop liner. This metalized, Kevlar™-backed fabric protects the Nomex™ from prolonged radiant heat or the occasional mis-directing of the burner – after all, we're all human.



## Artwork

Naturally, you may want to dress-up your envelope even further by adding your own custom graphics or a company logo. No matter what your style, our artwork techniques will work for you. Whether inlaid logos, simple applied fabric designs or complex inkjet printed art, we'll make you look good.



ZL-70 with Inlaid and Applique artwork

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