C29 SERIES OVERVIEW
CELINA Adaptive Color And Environment (ACE) Shelter

The Adaptive Color and Environment (ACE) Shelter design is distinctive for its innovative reversible fabric that enables a green or tan shelter to be erected in any environment. Enabling quicker deployment, less inventory overhead, and a significant cost savings in distribution and formation of camps. The features include a reduction in arches that provide an expanded multi-functional interior space. Utilization of internal liners and bubble foil radiant barrier liners minimizes exterior noise interruptions. The unique frame incorporates tensioning purlins and kedar fabric, ensuring uniform tautness and even stress distribution, enhancing the overall durability and strength to withstand extreme weather conditions and climates. The lightweight frame components lessen physical exertion when installing the shelter.

Features

- **Patented tan/green** reversible fabric that performs to any environment
- Durable anodized aluminum frame, lighter to transport
- Rugged steel eave and apex joiners, add strength where it's needed most
- Wall and roof X-Bracing for added stability and ease of assembly
- External accordion style vestibule provides privacy and climate control
- High wind staking options
- 40 minute rapid deployment, 6 man team
- Keder tensioned fabric and liner that supports and insulates better than competitors
- Optional energy efficient insulation package provides enhanced efficiency

Intended Uses

Specifications

- Testing in accordance with TOP 10-2-175
  - Resists wind speeds up to 90 mph
  - Withstands 20 psf of snow
  - Prevents water intrusion during exposure to steady rain, wind driven rain, and water spray Water resistant, flame retardant fabric (MIL-PRF vinyl laminate)
- Designed to meet or exceed US Military performance specifications
- 20' Width x 33' Length

Snow load validation accordance with TOP 10-2-175

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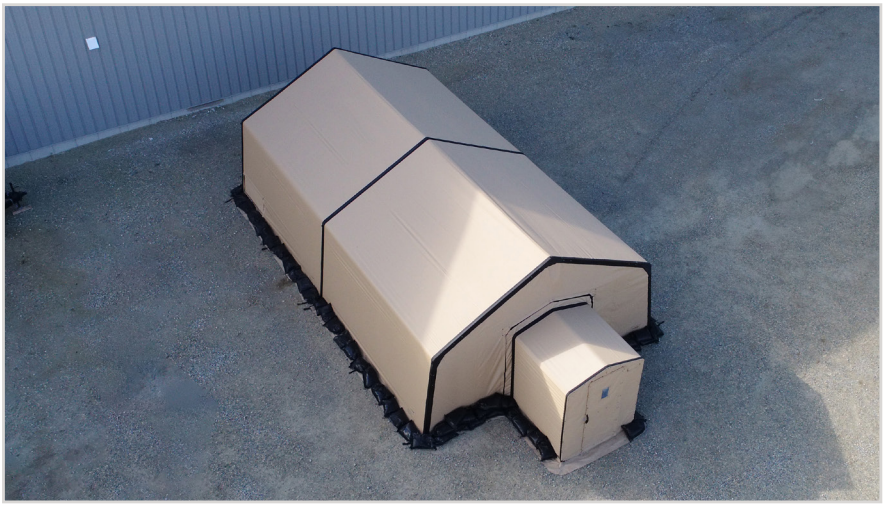
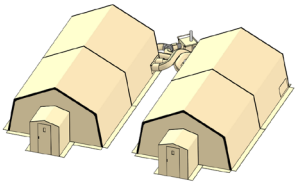
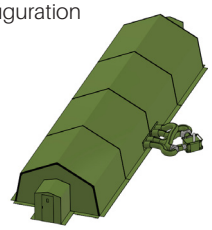


Side by side configuration



End to end configuration



Optional ACE Shelter Energy Efficient Package

As a highly energy efficient shelter, the energy efficient package achieves a 50 °F temperature difference with one 5-ton ECU supplying two shelters when cooling. When heating, a temperature difference of 80 °F higher than ambient air is achieved with a 130k BTU/hr indirect fuel fired heater supplying **two shelters**.

Thermal management areas

Conduction:

- An air gap separating the fabric skin from the insulating liner prevents thermal conduction from occurring due to direct contact between materials
- Unisex flaps on each insulating liner allow an additional air gap at the shelter frame's arches to prevent conductive energy from passing through the arches, eliminating a thermal bridge
- Fabric skin, insulating liner, and fabric floor are constructed from materials with low thermal conductivity that are air and watertight
- Half the number of arches of similar shelters allows for further minimization of conductive heat transfer

Convection:

- Millions of still air chambers located within the layers of the high performance dual-function bubble foil radiant barrier are designed to impede the natural air flow of the convective current between chambers
- A sealed connection between the insulating liner and the fabric floor reduces convective heat loss between the conditioned space and the ambient air currents
- The aluminum frame's keder tracking ensures the optimum spacing of still air space between the fabric skin and insulating liner is maintained
- Air tight fabric construction methods including hot air, HF/RF, and ultrasonically welded seams are used at critical locations to ensure air tightness.

Radiation:

- The bubble foil radiant barrier contains a highly reflective, low emissivity coating, used to radiate energy away from the interior conditioned space.

Anodized aluminum frame

Shelter body panel installation

Bubble foil radiant barrier (*optional)

Internal white liner

Plenum, lighting, and power receptacles

HVAC/utility units