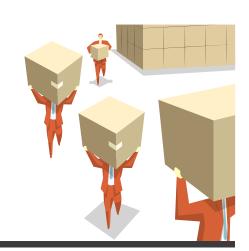
# THE CMC ROPE RESCUE STEPS OF DEVELOPMENT



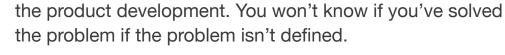
#### **HOW DO GREAT PRODUCTS GET MADE?**

Quality rope rescue products don't just show up one day ready for sale. It takes time and testing to be assured that the products are going to perform at the highest level once they're out in the field serving our users. At CMC Rescue, we take pride in our customized process, outlined below.

### **PRODUCT REQUIREMENTS** AND SPECIFICATIONS STAGE

What it is: Building the business case for the use and need of this product.

Why it Matters: Without well-defined requirements and specifications, you won't really know when you're done with



## **CONCEPT STAGE**

What it is: Prototyping at the "breadboard" stage to prove if concept is feasible.



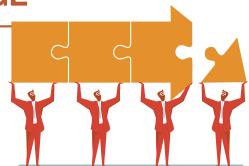
Why it Matters: For sewn goods, in-house fabrication allows rapid prototyping and design review and testing. No drawings, just physical samples mocked up.

For hardware, solid models are worked up in 3D and reviewed, then metal is cut out-of-house. Prototypes are assembled in-house for review and testing.

Conceptual prototypes allow for a more free-flow of ideas, which aids in defining risks as well as providing a variety of directions from which to choose for the Design Stage.

## **DESIGN STAGE**

What it is: Multiple rounds of design, build, test, and review, followed by in-field testing and reporting.



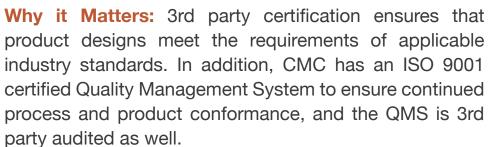
Why it Matters: In-house testing against industry standards ensures that the design meets all necessary requirements.

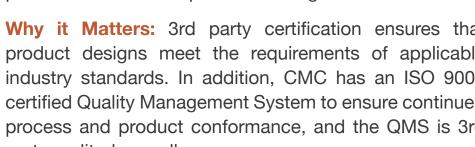
CMC's testing utilizes a variety of tools, including: drop tower with test mass for dynamic testing of harnesses, hydraulic rams, and load cells for static testing of harnesses and hardware.



## **CERTIFICATION**

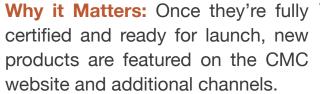
What it is: Samples are sent to a 3rd party lab for testing and certification against an industry standard, typically NFPA 1983 for CMC products. Supporting documentation for the product is also developed at this stage.

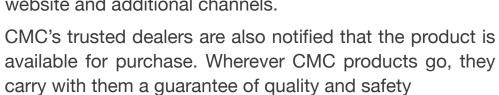




## **RELEASE FOR PRODUCTION STAGE**

What it is: The product is fully developed, tested, & certified. The product launch is planned and initiated, & the project is closed out.





The "difference maker" factor is that end users have assurance that a given product meets industry supported design, manufacturing, quality & performance requirements. When you're literally hanging your life in the balance on a piece of equipment, this is no small factor!

### **NFPA 1983**

Products certified to General Use, Technical Use, Escape Use or Manufactured System. This standard specifies design, construction and performance requirements, as well as marking and certification. This is a manufacturer's standard, not a user's standard (i.e. it does not specify how, where, when to use a product).

http://www.nfpa.org/codes-and-standards/document-information-pages?mode=co de&code=1983

### MADE IN THE USA

Not a certification, just a statement of pride and assurance to the end user regarding the in-house control over the quality of production.

org/codes-and-standards/document-information-pages?mode=code&code=1983



### THE END RESULT

Safety that protects, quality that lasts some competitors use a similar approach but do not achieve the same results. What sets CMC apart is the organization's more than 30 year history of product development for rope rescue, as well as access to in-field experts (CMC Rescue School instructors as well as a variety of industry partners). Other competitors may not have in-house testing capability, and still others forgo 3rd party certification of their products.





