

Top 10 Reasons to Select DynaGen™ TOUGH Series™ Controllers

We often hear from clients about a variety of reasons DynaGen controllers are preferred over other controllers in the market. We've compiled a list of our top advantages that eliminate the common issues people may face when operating in the field.



1. Combats enclosure defects.

Customers who have experienced buckling, bubbling, shrinking, warping or even cracking of the housing in the past, said switching to DynaGen eliminated those issues.

Past issues may be caused by the controller not being adequately protected, which may compromise its integrity and ability to survive in extreme environments. DynaGen controllers are the toughest in the industry.



2. Reliable in cold weather.

Failure to start your machine in extremely cold temperatures is a common problem because battery voltage dips in the cold. This can cause the associated electronics to reset and leads to a failure to start.

TOUGH Series controllers get you up and running in the most extreme environments. That's because we test our product to meet cold cranking requirements under demanding SAE standards. We test well beyond the extremes to ensure stability and toughness that never leaves you out in the cold.





3. Durability for almost any job.

This controller looks and feels like it is ready for battle. It immediately inspires confidence in the eyes of your customers. We build rugged controllers that look as good as they work. Our TOUGH Series projects strength in form and functionality that you can see with your eyes, feel in your hands and experience on your machinery. Rugged, solid and impressive, our product is a step up from other controllers and will raise the look and operation of your machinery along with your customer's confidence.



4. A glitch-free controller.

TOUGH Series controllers are glitch-free. Why? We have a rigorous software and firmware release process where we test a great number of possible conditions. Quality assurance is a focus for the DynaGen brand. We simply will not release a version of software or firmware until it has passed every one of our painstaking tests.



5. Avoiding wear-outs.

Did you know that spec sheet ratings don't accurately account for real-world load conditions? Testing to real-world conditions makes a huge difference in the longevity of the controllers. The TOUGH Series RelayPak option comes with specific pilot duty ratings and is approved to UL standards for the loads found in engine environments. No doubts, no guessing, no time wasted and no unnecessary service costs.



6. Rugged display screen.

Without a functioning display, the operator is in the dark as to how the machine is working. To ensure the work isn't compromised from malfunctioning screens, our LCD display goes through rigorous testing in the most demanding SAE temperature and vibration standards.



7. Withstands punishing vibration.

Connectors without secure and positive locks can cause the connector plugs to pull out under vibration, requiring a service call. We want to avoid those calls.

We test our controllers to rugged heavy truck SAE vibration standards. After extensive testing, we are confident that our circuit board is completely secure within its enclosure through multiple screw fasteners at key locations, making it impervious to destructive vibrations.

We use connectors that positively lock in place and cannot be pulled out over time by engine vibration. Also, our superior mounting system includes sturdy and rugged mounting clips that won't snap when overtightened.





8. Failure is not an option.

Electronic equipment can be extremely susceptible to transient voltages, surge currents and thermal breakdown. If you don't have a controller with a sufficient level of protection against these events, you are likely spending time and money on field service.

In other words, adequate surge protection is very cost effective over the long term. TOUGH Series controllers leave no doubt, saving you time and money. Our circuit board uses high-temperature laminates to ensure the long life of our controller. We added a hefty surge protector to absorb power spikes, and we test our controller to severe SAE load dump and transient standards.

You'll save significantly on service calls and troubleshooting, and you won't have to worry about salvaging your reputation.



9. Withstands humid environments.

When working in moist or humid environments, erratic operation, such as false shutdowns, leaves you with high service costs and time wasted guessing what's wrong.

Our TOUGH Series controllers have a blanket of conformal coating protection as well as electronic circuits designed to work in high humidity. The front panel is fully sealed from the environment and mounts to your panel with a rugged silicon gasket. You can be confident we have taken every precaution.



10. Endures noisy gas engine components.

Gas engine systems can emit a lot of electrical noise, which can affect your controller and cause it to act unpredictably. This may force you to use resistive plug wires that require frequent replacement.

Which is why TOUGH Series is tested to the military's MIL-STD-461-E standard to ensure smooth operation in the most demanding gas engine environments.

Learn more about DynaGen solutions at [cattron.com](https://www.cattron.com).



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