



Why Custom Gunmakers Love That Big CZ Action

The CZ action as heart of a big-bore custom.

Many CZ 550s are delivered off the shelf to their new owners and put directly on a plane to Africa . Others are required to hang out with a custom gunsmith or riflemaker for months or even years before going on a hunt.

American riflemaker Michael Scherz has built almost 300 complete custom guns in his career as gunsmith and stockmaker, and the CZ 550 magnum action, especially as initially set up for the .375 Holland & Holland cartridge, is the heart of many of his custom rifles for very good reasons.



“The CZ 550 magnum action in .375 H&H possesses the unique characteristics of a Rigby-length magazine box with a standard magnum bolt face,” Scherz says. “This allows the bolt face to be opened to *exactly* the dimensions of any case head smaller than the Rigby. The wide magazine area easily accommodates Rigby and Weatherby and .404 Jeffery and .505 Gibbs cases while the .375 action lends itself better to modifying the rails even for these big cases than does the .416 Rigby which may already have too much material removed from the wrong places for certain cartridges. The CZ is the most reasonably priced Mauser-type controlled-round-feed action available – it’s a \$500 action, not a \$3,000 action. It’s very good and very strong. And it’s the right size for building a big-bore rifle – all the classic and most desirable magnum cartridges fit the CZ standard magnum box and standard bolt diameter with very little adjustment.”

A whole new cartridge inspired by the CZ action.

Scherz chose the CZ action to develop the prototype rifle for the new .550 Magnum cartridge which is based on necking-up the .460 Weatherby Magnum. Scherz's rifle is featured in a major new firearms book, *Africa's Most Dangerous* by professional hunter Kevin "Doctari" Robertson and published by Safari Press (2007).

"A modest load from the .550 Magnum launches a 700-grain, .550"-diameter bullet at 2150 fps, thereby delivering 7,200 foot-pounds of kinetic energy at the muzzle and a Taylor Knock Out Value of 118," Scherz explains. "Rifles in this power category developed over the last hundred years can be counted on the fingers of one hand. When velocity is increased to 2300 fps, muzzle energy goes up to 8,222 ft/lbs, which is the equal of the .600 Nitro Express in a vastly smaller package. Even at this bullet weight and velocity, computer work and practical load development conducted in Yuma, Arizona, where the average high temperature in the midsummer shade is 107 degrees Fahrenheit, show chamber pressure levels below 48,000 psi."

The Scherz prototype rifle holds three cartridges in the big CZ magazine. The action and barrel are fully bedded in a plain walnut stock. The custom contoured Scherz-spec'd barrel is 26 inches long, with single-point cut rifling and a 1-in-20" rate of twist. The contour was arrived at to shift the balance of the heavy barrel rearward while accommodating standard front sights, and the rate of twist was determined by U.S. Department of Defense computers running sophisticated ballistics programs as optimum for stabilizing 600- and 700-grain bullets.



Another surprising thing about the rifle is its recoil, or rather its relative lack thereof. The delivery of more than 7,000 foot-pounds of energy downrange is normally accompanied by a major thump on the other end. The fact that the .550's recoil feels more like a warm .458 is attributable to the rifle's weight, its stock design, perhaps to low pressures in the chamber and, according to Michael Scherz, a factor I've never heard anyone discuss in the context of recoil before.

"It's been demonstrated that rifling twist is responsible for between 30 and 38 percent of recoil," Scherz says. "When the projectile contacts the rifling twist, slows down and starts rotating, the rifle begins to move. I've seen a .600 Nitro Express torque right out of a guy's hand. If you spin the bullet faster than you need to for stability, you're just creating unnecessary torque and recoil. At a lower twist rate, the pressure spike is not nearly as steep, it's more of a gentle curve."

Dan Pederson in Prescott, Arizona (www.cutrifle.com) did the original prototype barrel and is set up to do more custom barrels with any contour and twist the customer wants. Truvelo in South Africa also furnishes barrels. In fact, barrels, bullets, brass and all needed loading components are now available for the .550 Magnum from a variety of quality sources. There is even talk of a factory-chambered rifle from (who else?) CZ!

More Scherz touches for the CZ.

Certain modifications to the CZ action have become standard procedure when Michael Scherz is building a custom gun. He always replaces the bolt handle, as he is decidedly not fond of the factory version. He is not a fan of set triggers on dangerous-game rifles and normally replaces the CZ unit with a single-stage hunting trigger placed further back in the triggerguard. Conversion of the CZ safety to a horizontal type is a popular operation. And Scherz is capable of considerably more advanced modifications, such as regrinding CZ receivers in the Mauser style, eliminating or recutting the scope-mount dovetails in the bridges, the addition of a true Mauser-style bolt stop and Mauser-style full bolt shroud.

CZ action an with oversize bolt?

According to Michael Scherz, the real reason for going to an oversize bolt for the super-large cases is enhanced feeding reliability. Scherz explains: "The really big cartridges, like those based on the big Gibbs and Rigby cases, sit lower in a staggered magazine box than smaller diameter cartridges. Sometimes, as the bolt moves forward to strip the cartridge from the magazine, the front of the cartridge tips up into the chamber and the back of it tips down so that the bolt rides right over the case and loses it. That's why Weatherby and some others have done single-stack

magazines. That's why Fred Wells and some other high-end custom action makers went to a .750" bolt for the big cartridges. If your bolt's bigger around it sits down lower in your receiver and has a broader area to pick the cartridge up out of the magazine. Even the .500 Jeffery, which doesn't need a thicker bolt-face because of its rebated rim, is still a fat piece of brass and a larger diameter bolt helps strip it out of the magazine with more reliability. It's no trick to bore out a standard CZ receiver and put a bolt in it that's a few thousandths larger. It doesn't weaken the receiver and doesn't have any effect on the locking lugs. It just makes everything work a little better."

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