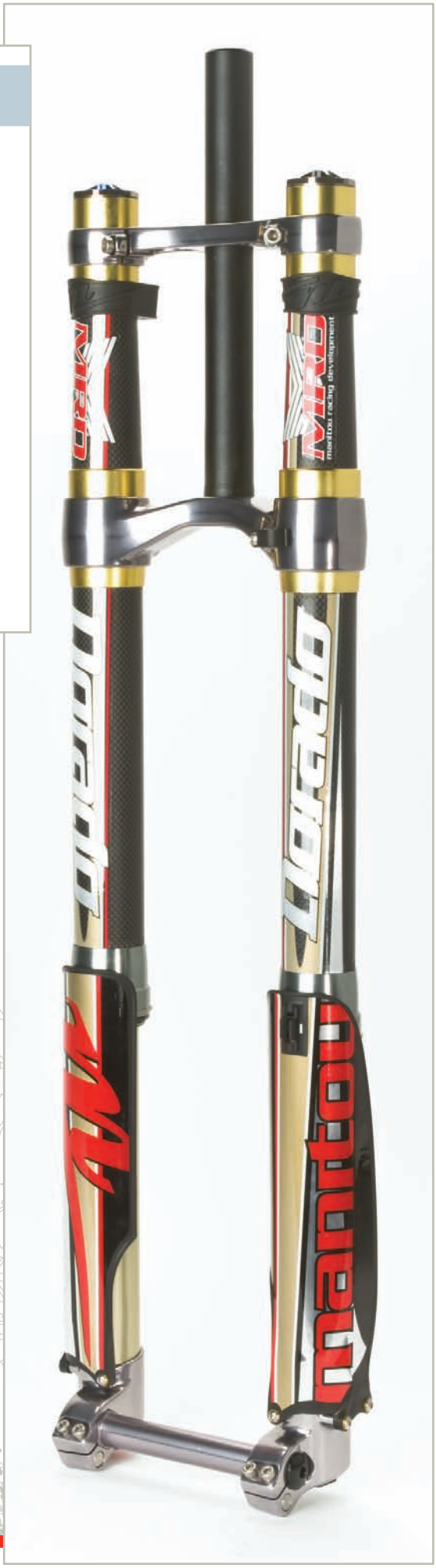
DORADO

Key Specifications

- Inverted construction
- Dual-layer, custom modulus carbon legs
- 36mm hard-anodized aluminum stanchions
- Internally convertible between 180mm and 203mm of travel
- Self-equilibrating air spring
- TPC+ compression damping with adjustable velocity-, pressure-, and energy-dependent circuits
- Open-bath, double-tube rebound damper
- Hydraulic bottom-out and top-out
- HexLock 20mm thru-axle
- 2902g (6.4lbs)



That Armstrong guy isn't the only comeback story of 2009. After four years of absence from the Manitou lineup, the Dorado is back with a vengeance.

The original Dorado was a revolutionary downhill fork. It changed the game by bringing motocross technology to mountain biking. In fact, it was probably a bit too far ahead of its time. The new Dorado represents a fulfillment of the original vision - a no-holds-barred downhill weapon of unprecedented performance.

The most striking features of the Dorado are its inverted design and its massive carbon legs. Inverted forks are ubiquitous in the motorcycle world. Their rigidity and responsiveness can't be matched by older conventional forks. The Dorado's legs have clamp diameters substantially greater than those of other manufacturers' downhill forks. Their two-ply, mandrel-wrapped construction imparts unsurpassed stiffness and strength. The 36mm hard-anodized lower stanchions are equally massive, and their two-part seals keep dirt out and oil in.

Axle stiffness is critical to an inverted fork. The Manitou HexLock thru-axle was developed specifically for the Dorado. In addition to the inherent linear rigidity of a 20mm thru-axle, its six-sided clamp resists torsional forces in the dropouts. Test riders have been particularly amazed by the Dorado's performance through rock gardens and steering-intensive terrain.

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As massive as the Dorado is, it's also surprisingly light. That's due in large part to the use of an air spring. The cavernous volume inside the Dorado's air chamber imparts a very linear rate, while low pressure and multiple seals minimize the possibility of leakage. The positive and negative chambers of the spring are self-equilibrating, so top-out resistance is always perfectly matched to compression force.

Manitou's legendary TPC+ damping returns in the Dorado. TPC+ goes beyond high-speed and low-speed damping by adding an energy-dependent circuit that controls the compression rate in mid- to full-stroke events. A red dial at the bottom of the leg adjusts the velocity-dependent low-speed damper and the timing of the TPC+ circuit while maintaining a constant relationship with the high-speed damper. A larger black dial controls the pressure-dependent high-speed damper.

Another revolutionary feature of the Dorado is its hydraulic bottom-out circuit, which adds increasing damping force through the final 55mm of travel. Unlike coil and MCU bottom-out springs, a hydraulic bottom-out dissipates energy rather than storing it. This has a number of advantages. First, it gives the Dorado a nearly bottomless feel. Second, since the energy of a hard impact is not returned to the bike, rebound jack is completely eliminated. Third, since there is no contact between components, a hydraulic bottom-out is more durable and robust than a mechanical bottom-out. Similarly, a hydraulic top-out circuit smoothes out the top 10mm of the fork's travel.

The Dorado's open-bath rebound damper is a scaled-up version of the proven MRD rebound damper, featuring a tapered needle adjuster for linear adjustment. It employs a double-tube design to minimize oil volume while maximizing the circuit's length. As a result, weight is kept down and aeration is effectively prevented. A large air chamber above the damper reduces the effect of oil expansion on the damping rate.