In recent years, titanium has received increasing attention from gunmakers, as its combination of strength and light weight makes it ideal for weight-sensitive applications such as handguns for concealed carry. Titanium offers the additional benefit of being impervious to corrosion from water, sweat and other substances to which guns are often exposed.

Despite its advantages, titanium has been used for major structural components of bolt-action rifles by only a handful of custom and semi-custom gunmakers. The introduction in 2001 of the Remington 700 Titanium Lightweight marks the first time a major American manufacturer has entered the titanium rifle derby.

The Titanium Lightweight is essentially a Model 700 Mountain Rifle with additional weight-reducing features. Both short- and long-action variants are offered, with the former chambered in .260 Rem. and 7 mm-08 Rem. and the latter in .270 Win. and .30-06 Sprg. The rifle’s capacity is three rounds in the blind internal magazine in its ADL-style stock.

Despite its name, only the receiver of the Titanium Lightweight is made of titanium; the rest of the rifle is of steel. While the gun’s titanium receiver is in large part responsible for the its light weight—some 1 1/2 lbs. less than its Mountain Rifle sibling—other modifications also contribute to weight reduction. For example, the bolt has six 0.25” wide spiral flutes around its body, a skeletonized bolt handle and a hollowed-out bolt knob. Furthermore, the rifle sports a new Bell & Carlson carbon fiber/Kevlar composite stock that is both trimmer and lighter than its Mountain Rifle counterpart. That stock, which is designed to exert upward pressure on the barrel at the fore-end tip, features quick-detach sling swivel studs, a 3/4” rubber buttpad and aluminum bedding pillars around the stock screws.

The Titanium Lightweight’s main story, however, is its receiver. The exact titanium alloy used is proprietary, but is described by Remington as a “commercial aerospace-grade titanium alloy.” According to the company, the titanium receiver is fully as strong and as hard as receivers made of the more familiar chrome-moly and stainless steels used in gunmaking. Shooting tests seem to confirm that, as the Titanium Lightweight passed the same 10,000-round factory endurance test to which other Remington rifles are subjected.

We shot a .30-06-cal. Model 700 Titanium Lightweight for accuracy at 100 yds. off sandbags using Federal
Premium High Energy loads with 165-gr. Sierra GameKing BTSP bullets, Remington Extended Range loads with 178-gr. flat-base soft-point bullets and Winchester High-Velocity loads with 150-gr. Power Point Plus projectiles. There were no malfunctions of any kind. The results of those tests are given in the accompanying table.

Best grouping was obtained with the Federal load, which produced a 1.77" average for five consecutive, five-shot groups. That load also boasted the most power, pushing a 165-gr. bullet to an average of 2968 f.p.s. and 3,228 ft.-lbs. of energy. Average groups of 2.81" and 2.48" were produced by the Remington and Winchester loads, respectively.

Recoil was stiff with all loads, as was to be expected with a rifle that weighs only about 6½ lbs. with a 3-9X scope installed. We test-fired the rifle using a PAST recoil pad; even so, the Titanium Lightweight’s kick made shooting technique more critical and likely limited the degree of accuracy we were able to obtain.

The gun’s recoil made scope mounting (and scope quality) more critical as well. The scope originally mounted on the gun had to be replaced because its reticle began to wander, possibly as a result of recoil. We also found that we had to tighten the rifle’s scope rings more securely than usual to prevent the scope from creeping forward with each shot.

Another factor that may have influenced performance was the speed with which the barrel became hot. Typically, after only about five to seven rounds were fired at a moderate pace, the barrel became far too hot to touch comfortably. Even the synthetic fore-end became noticeably warm. This level of heat could produce variations in the barrel/stock contact, affecting grouping. On the plus side, the Titanium Lightweight is amazingly light and yet very well-balanced. The textured surface of the synthetic stock allows a secure grip, and the minimal rearward slant of its comb keeps the gun from slapping the shooter’s face, even with the stiff recoil generated by the higher-intensity loads.

The Remington 700 Titanium Lightweight is a highly specialized rifle offering powerful chamberings in an extremely light, handy package. While it is clearly not for the plinker or occasional hunter, it will likely have strong appeal to those whose hunting conditions require them to spend many hours on foot with their rifles slung on their shoulders.

**SHOOTING RESULTS**

<table>
<thead>
<tr>
<th>.30-'06 Sprg. Cartridge</th>
<th>Vel. @15’ (f.p.s.)</th>
<th>Energy (ft.-lbs.)</th>
<th>Recoil (ft.-lbs.)</th>
<th>Group Size In Inches</th>
<th>Average Extreme Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal P3006Y Sienna 165-gr. BTSP GK</td>
<td>2968 Avg. 16 Sd</td>
<td>3,228 20.6</td>
<td>1.34 2.22 1.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remington ER3006C 178-gr. FB SP</td>
<td>2739 Avg. 13 Sd</td>
<td>2,966 20.4</td>
<td>2.14 3.32 2.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winchester SHV30061 150-gr. Power-Point Plus</td>
<td>3034 Avg. 18 Sd</td>
<td>3,066 18.4</td>
<td>1.89 2.77 2.48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Measured average velocity for five rounds from a 22” barrel. Range temperature: 91°F. Humidity: 71%. Accuracy for five consecutive, five-shot groups at 100 yds. from sandbags. Abbreviations: BTSP (boattail soft point), FB (flat base), GK (GameKing), Sd (standard deviation), SP (soft point).
Many shooters looking for an accurate AR-15-type rifle have found price to be a major obstacle. With the cost of a service-grade rifle or carbine running $850 to $1,000, some shooters have settled for less-expensive, less-capable rifles while others have chosen to go without. DPMS, a manufacturer of AR-15-style rifles and components since 1986, hopes to reach out to those consumers with the Lo-Pro.

The idea behind the company’s Lo-Pro was to create an affordable AR-15-style rifle with the features shooters want, and drop those that inflate cost yet offer little benefit in terms of performance. A number of factors drive up the cost of an AR-15-type rifle, including forged aluminum receivers as well as a number of vestigial military requirements, some of dubious utility to the average gun owner. They include the forward assist plunger, ejection port dust cover and other features that are outright detrimental to the performance most shooters want. For instance, a chrome-lined bore limits accuracy and a carrying handle hinders the use of a scope. One could always count on desirable custom features such as unlined barrels and flat-top uppers adding even more to the cost.

The DPMS Lo-Pro, chambered for .223 Rem., features a round-contour 0.92”-diameter 16½” long, 4140 chrome-moly bull barrel. To maximize its accuracy potential, there is no chrome lining, and it has a recessed muzzle crown to protect the rifling’s origin. The lower receiver is investment cast from aircraft-grade aluminum alloy, while the upper receiver is an aluminum alloy extrusion with 1/4” thick wall dimensions for extra strength. Each is Mil-Spec hard coat anodized, and DPMS goes a step further by adding a black Teflon coating to aid durability and lubricity. Both upper and lower receivers of the example sent to us were free of voids and pits from casting.

In lieu of screws, the upper and lower receivers are connected by standard captured pins at the front and rear. To provide the firer with a more solid feel, a polymer Accu-wedge makes for a tighter fit between the two. To maximize economy, the Lo-Pro will accommodate commercial and surplus AR-15/M16-style magazines and is provided with two clear synthetic magazines with a capacity of 10 rounds each.
the Lo-Pro has no forward assist, brass deflector or ejection port cover.

The inherent accuracy potential of an AR-15-style rifle cries out for a scope, yet scope bases that attach to the carrying handle tend to shift or wobble, and the height of the carrying handle requires a cheek pad to raise the shooter’s head high enough to see through the scope and still maintain contact with the stock. Strap-on cheek pads can shift and interfere with the retraction of the charging handle. Whatever means one uses to cope just seems to trade one problem for another. Accordingly, DPMS dispensed with the traditional carrying handle and rear sight base in favor of a flat-top Picatinny rail better suited for the attachment of a scope or the holo- or reflex-type sights that are growing in popularity.

Two polymer 10-round magazines are included with the Lo-Pro, but its magazine well accepts all commercial and military surplus AR-15/M16 magazines. Ribbed for strength, the walls of the Lo-Pro’s magazines are clear, allowing the firer to see how many rounds remain.

Internal components of the Lo-Pro’s upper and lower receivers, such as the bolt assembly, charging handle, magazine release and single-stage trigger components, are common to most commercial AR-15 clones. No iron sights are provided and the gas block is machined from a solid aluminum billet and secured to the barrel by two set screws. The gas block holds a standard carbine-length gas tube protected by a ribbed thermoplastic handguard with an internal aluminum heat shield. External furniture is finished off with an A2 pistol grip with finger rest and an M16A2-length synthetic black buttstock with an A1-style buttpad containing a trap door compartment for a G.I.-style cleaning kit that is included as an accessory.

We fitted a Leupold M8 Compact 6X scope to the DPMS Lo-Pro’s Picatinny rail for accuracy testing. Results shown in the accompanying table compare favorably with other commercial AR-15 carbines. As expected with the 1:9” twist, the Lo-Pro shot well with 62- to 69-gr. loads, but did best with cartridges loaded with lighter 50- to 55-gr. bullets. At 6 1/2 lbs. pull, the trigger was a little heavier than desirable, but was free of any stacking or creep. We function fired the Lo-Pro with its provided magazines, as well as military surplus and commercial units that had proven reliable in previous tests. Empty magazines dropped free of their own weight, and there were no failures of any kind.

The Lo-Pro’s lack of certain features limit its utility as a tactical/ law enforcement carbine. It has no forward sling loop, no shell deflector for weak-hand shooting from barricades, no dust cover to limit fouling from a hostile environment and no back-up iron sights for use in an emergency. Furthermore, if you are of a mind to add those features there is no place to put them. However, the Lo-Pro is suitable for Three Gun matches and is already proving popular in that capacity. The Lo-Pro is a rifle best suited for recreational use such as competition, plinking and varminting, where performance is the bottom line and there is no sense in buying more gun than you need.

### SHOOTING RESULTS

<table>
<thead>
<tr>
<th>.223 Rem. Cartridge</th>
<th>Vel. @ 15° (f.p.s.)</th>
<th>Energy (ft.-lbs.)</th>
<th>Recoil (ft.-lbs.)</th>
<th>Group Size in Inches</th>
<th>Average</th>
<th>Ext. Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Hills 50-gr. V-Max</td>
<td>2985 Avg. 17 Sd</td>
<td>990</td>
<td>2.6</td>
<td>0.78 1.52 1.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remington R223R6 62-gr. BTHP</td>
<td>2588 Avg. 29 Sd</td>
<td>925</td>
<td>2.9</td>
<td>1.27 2.79 2.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winchester X223R 55-gr. PSP</td>
<td>2640 Avg. 27 Sd</td>
<td>852</td>
<td>2.5</td>
<td>0.77 1.14 0.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>2788 Avg.</strong></td>
<td><strong>925</strong></td>
<td><strong>2.9</strong></td>
<td><strong>1.27 2.79 2.01</strong></td>
<td><strong>4.98</strong></td>
<td><strong>1.37</strong></td>
</tr>
</tbody>
</table>

Measured average velocity for 10 rounds from a 16.5” barrel. Range temperature: 75° F. Humidity: 21%. Accuracy for five consecutive, five-shot groups at 100 yds. from a sandbag. Abbreviations: Sd (standard deviation), BTHP (Boat-Tail Hollow Point), PSP (pointed soft-point).