

Notes From the Lab: 8x57mm Mauser

The 8mm Mauser (aka 8x57 Mauser) was adopted by the German military in 1888 utilizing .318-inch roundnose bullets (8x57mm J version) weighing 227 grains and loaded with smokeless powder. By 1905 bullet diameter was changed to .323 inch (JS version) with a modern spitzer profiled bullet weighing 150 grains, and pressures increased. U.S. manufacturers have standardized on the .323-inch 170-grain bullets loaded to a leisurely 2,360 fps. In Europe, where the 8mm Mauser is widely popular for hunting, most companies still load it to notably greater pressure and velocity. Following World War II surplus guns have been sold regularly to the U.S. market. The case is rimless, features a gentle, 20-degree shoulder for positive headspace control, and in spite of its age it is a modern, well designed cartridge useful for hunting most thin-skinned game.

Many extruded powders such as IMR-3031, IMR-4320, IMR-4064, Hodgdon H-4895, Varget, Alliant Reloder 15 and Accurate 2495 produced excellent accuracy and low extreme spreads with all loads listed (including "starting" and "maximum" loads). When using ball (or spherical) powders, it is strongly suggested to avoid reducing loads below the listed "starting" loads, or erratic pressures can occur.

In the U.S., the industry maximum pressure guideline for the 8mm Mauser is 37,000 CUP, which is intentionally low in the event that cartridges are fired in an early Model 1888 period rifle with its tighter bore and weaker action and is nonetheless not recommended. Much of today's European ammunition is loaded to around 50,000 CUP, which is safe in Mauser Model 98 rifles (in good condition) and other strong actions. Much of the accompanying data exceeds U.S. industry pressure limits with some maximum loads approaching 50,000 CUP. These loads should only be used in rifles of suitable strength and with a barrel groove diameter of .323 inch.