

QuickLOAD© V.3.9 Cartridge Dimensions

Selected Bullet: **.224, 77, Sierra TMK #7177** File:\sierra
 Selected Cartridge: **.222 Rem.** File:\qloadfw

Tail/Base Shaped Friction-proofed

	Inches	mm
Seating Depth	0.507	12.88
Shank Seat Depth	0.375	9.53
Bullet Length	1.067	27.10
Bullet Diameter	0.224	5.69
Cartridge Length	2.260	57.40
Case Length	1.700	43.18
Groove Caliber	0.224	5.69
Barrel Length	20.0	508.0
Bullet Travel	18.807	477.7

	psi	bar
Pmax (MAP)	53664	3700.0
Meas. Method	Piezo CIP	
	Grains	Grams
Bullet Weight	77.0	4.99
	Sq. inches	mm ²
Cross-sectional Bore Area	.03889	25.09
	Grains H2O	cm ³
Maximum Case Capacity, overflow	27.90	1.812
Volume Occupied by Seated Bullet	4.821	0.313
Useable Case Capacity	23.087	1.499
Weighting Factor	0.6	

Apply&Calc

QuickLOAD© V.3.9 Charge

Selected Propellant: **ADI BM2** File:\qloadfw

Heat of Explosion / Potential	3910	kJ/kg
Ratio of Specific Heats	1.2300	
Burning Rate Factor Ba	0.6900	1/bar ^{0.5}
Pro- or Degressivity Factor a0	0.7485	
Progressive Burning Limit z1	0.320	x 100%
Factor b	1.3501	
Propellant Solid Density	1.620	g/cm ³
Shot Start (Initiation) Pressure	3626	psi
	Filling/L.R.	Charge Weight
	99.9	22.65
	%	Grains
		1.468
		Grams

Apply&Calc

QuickLOAD© V.3.9 Diagram

Chamber Pressure (psi) vs. Velocity (fps) vs. Bullet Travel Time (ms)

— .222 Rem. - .224, 77, Sierra TMK #7177 - 23.0 grs ADI BM2 - OAL= 2.260 in.

QuickLOAD© V.3.9 Results

Maximum Chamber Pressure (Pmax)	5315 bar	Bullet Travel at Pmax	23.5mm
	77093 psi		0.92 in.
Load Density	0.979 g/cm ³	Energy Density	3887 J/cm ³
Values when Bullet Base Exits Muzzle...click here for more data			
Muzzle Pressure	549 bar	Muzzle Velocity	880 m/s
	7966 psi		2888 fps
Barrel Time, 10% Pmax to Muzzle	0.888 ms	Projectile Energy	1933 Joule
			1426 ft.-lbs.
Amount of Propellant Burnt	99.82 %	Ballistic Efficiency	33.2 %

Results without any guarantee on usability ! DANGER: Load exceeds Maximum Average Pressure ! DO NOT USE THIS LOAD ! Warning : 1.4% compressed charge ! End of