

308win - Sierra SPBT 200gr 2165 - RS50 43,38grs - Vo=774m/s

sabato, 24. gennaio 2015

19:16

RICARICA 308win RS50-43e38gr - L71.12 - SierraSPBT200gr - 774m/s

WARNING: Since we have no control over equipment or data which may be used with this program, no responsibility is implied or assumed for results obtained through its use. Input data and results may be incorrect or wrong. Therefore the use of this data for loading ammunition can cause serious injury to personnell and material. The computer-results had to be checked against data available in current loading manuals.

LOT-TO-LOT VARIATIONS OF POWDERS, PRIMER SUBSTITUTION AND COMPONENT CHANGE OFTEN RAISE PRESSURES TO UNSAFE LEVELS. THE USER MUST ASSUME THE ENTIRE RISK OF USING THIS DATA FOR LOADING PURPOSES.

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User Data:		Date:24-gen-2015	Time:19:12:25	File: 308winsierasbpt200grs5043e38grsvo774ms.da	
Cartridge / Caliber	.308 Win. (CIP)		Bullet	.308, 200, Sierra SPBT 2165	
Maximum Average Pressure, allowed	4150 bar	60191 psi. (Piezo CIP)		with boattail	
Groove Caliber	7.82 mm	0.308 in.	Bullet Weight	12.96 gm	200.0 gr.
Case Capacity, overflow	3.636 cm³	56.0 gr. H2O	Bullet Length	35.56 mm	1.400 in.
Case Length	51.16 mm	2.014 in.	Bullet Seating Depth	15.59 mm	0.614 in.
Cartridge O.A. Length	71.12 mm	2.800 in.	Barrel/Tube Length	660.4 mm	26.0 in.
Shot Start / Init Pressure	250.0 bar	3626 psi.	Cross Section Area of Bore	0.4751 cm²	0.07364 in.²
Propellant type		ReloadSwiss RS 50			
Charge Weight	2.811 gm	43.38 gr.	Load Density	0.947 gm/cm³	239.5 gr./in.³
Heat of Explosion, Potential	3815 J/gm	247.2 J/gr.	Energy Density of Charge	3614 J/cm³	59223 J/in.³
Propellant Solid Density	1.61 gm/cm³	407.15 gr./in.³	Used Ratio of Specific Heats cp/cv	1.239	
Burning Rate Factor Ba	0.52 1/s		Weighting Factor	0.5	
Burning Function Limit Z1	0.394		Prog.-/ Degressivity Factor a0	1.231	
Factor b	1.565		Bulk Density	0.957 gm/cm³	242.0 gr./in.³

Calculated and Estimated Data:

Bullet Shank Seating Depth	9.37 mm	0.369 in.	Capacity Displaced by Seated Bullet	0.669 cm³	0.0408 in.³
Useable Case Capacity	2.967 cm³	0.1811 in.³	Bullet Travel at Muzzle Exit	624.83 mm	24.6 in.
Loading Ratio("Density") / Filling	99.0 %		Charge Fraction Burnt at Shot Start	1.19 %	

Predicted Data:

Maximum Chamber Pressure	4078 bar	59148 psi.	Bullet Travel at Pmax	31.0 mm	1.22 in.
at Muzzle Exit:					
Bullet Velocity	773.6 m/s	2538 fps.	Pressure at Muzzle	444 bar	6438 psi.
Bullet Energy	3879 Joule	2861 ft.lbs.	Bullet Barrel Time	1.320 ms	
Propellant Burnt	99.4 %		Ballistic Efficiency	36.2 %	

Additional Data:

Powder Lot		Primer Type and Lot	
Bullet Lot		Case Manufacturer	
Measured Muzzle Vel., StdDev.		Measured Pressure, StdDev.	

WARNING: Near Maximum Average Pressure - unknown tolerances may cause dangerous pressures !
Real maximum (peak) of pressure is reached while bullet moves within barrel.
End of combustion occurs after the bullet's base passes muzzle.

