

8x57IS - Barnes TTSX BT 160gr - RS50 50gr - L76mm

martedì, 16. dicembre 2014

20:03

RICARICA 8x57IS RS50-50gr - L76.00 - BarnesTTSXBT160gr - 855m/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:16-dic-2014	Time:20:00:22	File: 8x57is-rs50-barnes 160ttsxbt-50gr-l76mm.dat	
Cartridge / Caliber	8 x 57 IS (8 mm Mauser CIP)		Bullet	.323, 160, Barnes 'TTSX' BT 3	
Maximum Average Pressure, allowed	3900 bar	56565 psi. (Piezo CIP)		with boattail	
Groove Caliber	8.2 mm	0.323 in.	Bullet Weight	10.37 gm	160.0 gr.
Case Capacity, overflow	4.091 cm³	63.01 gr. H2O	Bullet Length	32.49 mm	1.279 in.
Case Length	57.0 mm	2.244 in.	Bullet Seating Depth	13.49 mm	0.531 in.
Cartridge O.A. Length	76.0 mm	2.992 in.	Barrel/Tube Length	660.4 mm	26.0 in.
Shot Start / Init Pressure	300.0 bar	4351 psi.	Cross Section Area of Bore	0.5178 cm²	0.08026 in.²
Propellant type		ReloadSwiss RS 50			
Charge Weight	3.24 gm	50.0 gr.	Load Density	0.954 gm/cm³	241.3 gr./in.³
Heat of Explosion, Potential	3815 J/gm	247.2 J/gr.	Energy Density of Charge	3639 J/cm³	59633 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	10.32 mm	0.406 in.	Capacity Displaced by Seated Bullet	0.694 cm³	0.0424 in.³
Useable Case Capacity	3.397 cm³	0.2073 in.³	Bullet Travel at Muzzle Exit	616.89 mm	24.29 in.
Loading Ratio("Density") / Filling	99.7 %		Charge Fraction Burnt at Shot Start	1.41 %	

Predicted Data:

Maximum Chamber Pressure	3461 bar	50204 psi.	Bullet Travel at Pmax	33.3 mm	1.31 in.
at Muzzle Exit:					
Bullet Velocity	854.6 m/s	2804 fps.	Pressure at Muzzle	457 bar	6621 psi.
Bullet Energy	3787 Joule	2793 ft.lbs.	Bullet Barrel Time	1.223 ms	
Propellant Burnt	94.9 %		Ballistic Efficiency	30.6 %	

Additional Data:

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

Check Loading Manuals for Safe Minimum Charge Weight to Avoid Hazardous Ignition Conditions like Secondary Explosion Effects !
Real maximum (peak) of pressure is reached while bullet moves within barrel.
End of combustion occurs after the bullet's base passes muzzle.

