8x57IS - Barnes TSX 180gr - SwissReload50 = 53.20gr

RICARICA 8x57IS SwissReload50 - L82.00 - Barnes TSX BT 180gr - 53.21gr

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.

User Data:

Date:3-nov-2014 **Time:23:40:29** **File: 8x57is-rs50-barnes 180tsxbt-53.20gr.dat**

Cartridge / Caliber	**8 x 57 IS (8 mm Mauser CIP)**		**Bullet**	**.323, 180, Barnes 'TSX' BT 32**	
Maximum Average Pressure, allowed	3900 bar	56565 psi. (Piezo CIP)		with boattail	
Groove Caliber	8.2 mm	0.323 in.	Bullet Weight	11.66 gm	180.0 gr.
Case Capacity, overflow	4.091 cm³	63.01 gr. H2O	Bullet Length	32.26 mm	1.270 in.
Case Length	57.0 mm	2.244 in.	Bullet Seating Depth	7.26 mm	0.286 in.
Cartridge O.A. Length	81.99 mm	3.228 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	3.448 gm	53.21 gr.	Load Density	0.925 gm/cm³	233.9 gr./in.³
Heat of Explosion, Potential	3815 J/gm	247.2 J/gr.	Energy Density of Charge	3530 J/cm³	57846 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	4.09 mm	0.161 in.	Capacity Displaced by Seated Bullet	0.365 cm³	0.0222 in.³
Useable Case Capacity	3.726 cm³	0.2274 in.³	Bullet Travel at Muzzle Exit	610.66 mm	24.04 in.
Loading Ratio("Density") / Filling	96.7 %		Charge Fraction Burnt at Shot Start	1.51 %	
Predicted Data:					
Maximum Chamber Pressure	3818 bar	55372 psi.	Bullet Travel at Pmax	35.8 mm	1.41 in.
at Muzzle Exit:					
Bullet Velocity	851.7 m/s	2794 fps.	Pressure at Muzzle	506 bar	7343 psi.
Bullet Energy	4231 Joule	3121 ft.lbs.	Bullet Barrel Time	1.227 ms	
Propellant Burnt	98.2 %		Ballistic Efficiency	32.2 %	

Additional Data:

Powder Lot		Primer Type and Lot	RWS 5341 LR Sinoxid
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.