

300WM 200gr SMK VV N165 77,5 grn

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 personnel 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: 3-iaé-2014	Time: 22:17:37	File: 300wm 200gr smk vv n165 77,5 grn.dat
Comment	300WM 200gr SMK VV N165 77,5grn		
Cartridge / Caliber	.300 Win. Mag.(W)	Bullet	.308, 200, Sierra HP MatchK
Maximum Average Pressure, allowed	4300 bar	62366 psi. (Piezo CIP)	with boattail
Groove Caliber	7,82 mm	0,308 in.	Bullet Weight 12,96 gm 200,0 gr.
Case Capacity, overflow	6,09 cm?	93,8 gr. H2O	Bullet Length 35,33 mm 1,391 in.
Case Length	66,55 mm	2,620 in.	Bullet Seating Depth 13,36 mm 0,526 in.
Cartridge O.A. Length	88,52 mm	3,485 in.	Barrel/Tube Length 610,01 mm 24,0161 in.
Shot Start / Init Pressure	250,0 bar	3626 psi.	Cross Section Area of Bore 0,4732 cm? 0,07335 in.?
Propellant type	Vihtavuori N165		
Charge Weight	5,023 gm	77,51 gr.	Load Density 0,910 gm/cm? 230,1 gr./in.?
Heat of Explosion, Potential	3500 J/gm	226,8 J/gr.	Energy Density of Charge 3185 J/cm? 52193 J/in.?
Propellant Solid Density	1,58 gm/cm?	399,57 gr./in.?	Used Ratio of Specific Heats cp/cv 1,241
Burning Rate Factor Ba	0,424 1/s		Weighting Factor 0,5
Burning Function Limit Z1	0,485		Prog.-/ Degressivity Factor a0 1,156
Factor b	1,741		Bulk Density 0,910 gm/cm? 230,1 gr./in.?

Calculated and Estimated Data:

Bullet Shank Seating Depth	7,27 mm	0,286 in.	Capacity Displaced by Seated Bullet	0,571 cm?	0,0348 in.?
Useable Case Capacity	5,519 cm?	0,3368 in.?	Bullet Travel at Muzzle Exit	556,82 mm	21,92 in.
Loading Ratio("Density") / Filling	100.0 %		Charge Fraction Burnt at Shot Start	1,38 %	

Predicted Data:					
Maximum Chamber Pressure	4262 bar	61815 psi.	Bullet Travel at Pmax	59,4 mm	2,34 in.
at Muzzle Exit:					
Bullet Velocity	871,8 m/s	2860 fps.	Pressure at Muzzle	823 bar	11939 psi.
Bullet Energy	4926 Joule	3633 ft.lbs.	Bullet Barrel Time	1,221 ms	
Propellant Burnt	99,9 %		Ballistic Efficiency	28,0 %	

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.

