QuickLOAD© V.3.6 © Copyright 1987-2010 - H.Broemel, Babenhausen, Germany

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.

QuickLOAD© V.3.6.02 #130542, © Copyright 1987-2010 - H.Broemel, Babenhausen, Germany

User Data:

Date:9-Apr-2015 **Time:18:43:07** **File: xpert 338 lapua 185gr.dat**

Cartridge / Caliber	**.338 Lapua Mag.**		**Bullet**	**.338, 185, XPERT TARGET M**	
Maximum Average Pressure, allowed	60916 psi.	4200 bar (Piezo CIP)		with flatbase	
Groove Caliber	0.338 in.	8.59 mm	Bullet Weight	185.0 gr.	11.99 gm
Case Capacity, overflow	108.0 gr. H2O	7.012 cm³	Bullet Length	1.441 in.	36.6 mm
Case Length	2.724 in.	69.19 mm	Bullet Seating Depth	0.622 in.	15.79 mm
Cartridge O.A. Length	3.543 in.	90.0 mm	Barrel/Tube Length	28.0 in.	711.2 mm
Shot Start / Init Pressure	3625 psi.	249.94 bar	Cross Section Area of Bore	0.08813 in.²	0.5686 cm²
Propellant type	**Somchem S385**				
Charge Weight	82.0 gr.	5.314 gm	Load Density	220.5 gr./in.³	0.872 gm/cm³
Heat of Explosion, Potential	238.5 J/gr.	3680 J/gm	Energy Density of Charge	52570 J/in.³	3208 J/cm³
Propellant Solid Density	404.63 gr./in.³	1.6 gm/cm³	Used Ratio of Specific Heats cp/cv	1.239	
Burning Rate Factor Ba	0.405 1/s		Weighting Factor	0.55	
Burning Function Limit Z1	0.42		Prog.-/ Degressivity Factor a0	2.206	
Factor b	1.823		Bulk Density	235.2 gr./in.³	0.930 gm/cm³

Calculated and Estimated Data:

Bullet Shank Seating Depth	0.622 in.	15.79 mm	Capacity Displaced by Seated Bullet	0.056 in.³	0.917 cm³
Useable Case Capacity	0.3719 in.³	6.095 cm³	Bullet Travel at Muzzle Exit	25.9 in.	657.8 mm
Loading Ratio("Density") / Filling	93.7 %		Charge Fraction Burnt at Shot Start	1.48 %	
Predicted Data:					
Maximum Chamber Pressure	44806 psi.	3089 bar	Bullet Travel at Pmax	2.56 in.	65.1 mm
at Muzzle Exit:					
Bullet Velocity	2968 fps.	904.7 m/s	Pressure at Muzzle	8912 psi.	614 bar
Bullet Energy	3619 ft.lbs.	4906 Joule	Bullet Barrel Time	1.394 ms	
Propellant Burnt	96.9 %		Ballistic Efficiency	25.1 %	

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.