RICARICA 300 Win Mag - RS60 - 68gr - L84.84 - BARNES TTSX BT 180gr

User Data:

Date:20-lug-2014 **Time:18:50:16** **File: *.dat**

Cartridge / Caliber	**.300 Win. Mag.(@)**		**Bullet**	**.308, 180, Barnes 'TTSX'BT 3**	
Maximum Average Pressure, allowed	4300 bar	62366 psi. (Piezo CIP)		with boattail	
Groove Caliber	7.82 mm	0.308 in.	Bullet Weight	11.66 gm	180.0 gr.
Case Capacity, overflow	5.941 cm³	91.5 gr. H2O	Bullet Length	37.59 mm	1.480 in.
Case Length	66.55 mm	2.620 in.	Bullet Seating Depth	19.3 mm	0.760 in.
Cartridge O.A. Length	84.84 mm	3.340 in.	Barrel/Tube Length	660.4 mm	26.0 in.
Shot Start / Init Pressure	300.0 bar	4351 psi.	Cross Section Area of Bore	0.4732 cm²	0.07335 in.²
Propellant type	**ReloadSwiss RS 60**				
Charge Weight	4.406 gm	68.0 gr.	Load Density	0.876 gm/cm³	221.5 gr./in.³
Heat of Explosion, Potential	3990 J/gm	258.5 J/gr.	Energy Density of Charge	3496 J/cm³	57289 J/in.³
Propellant Solid Density	1.61 gm/cm³	407.15 gr./in.³	Used Ratio of Specific Heats cp/cv	1.2291	
Burning Rate Factor Ba	0.468 1/s		Weighting Factor	0.5	
Burning Function Limit Z1	0.695		Prog.-/ Degressivity Factor a0	0.669	
Factor b	2.192		Bulk Density	0.965 gm/cm³	244.0 gr./in.³

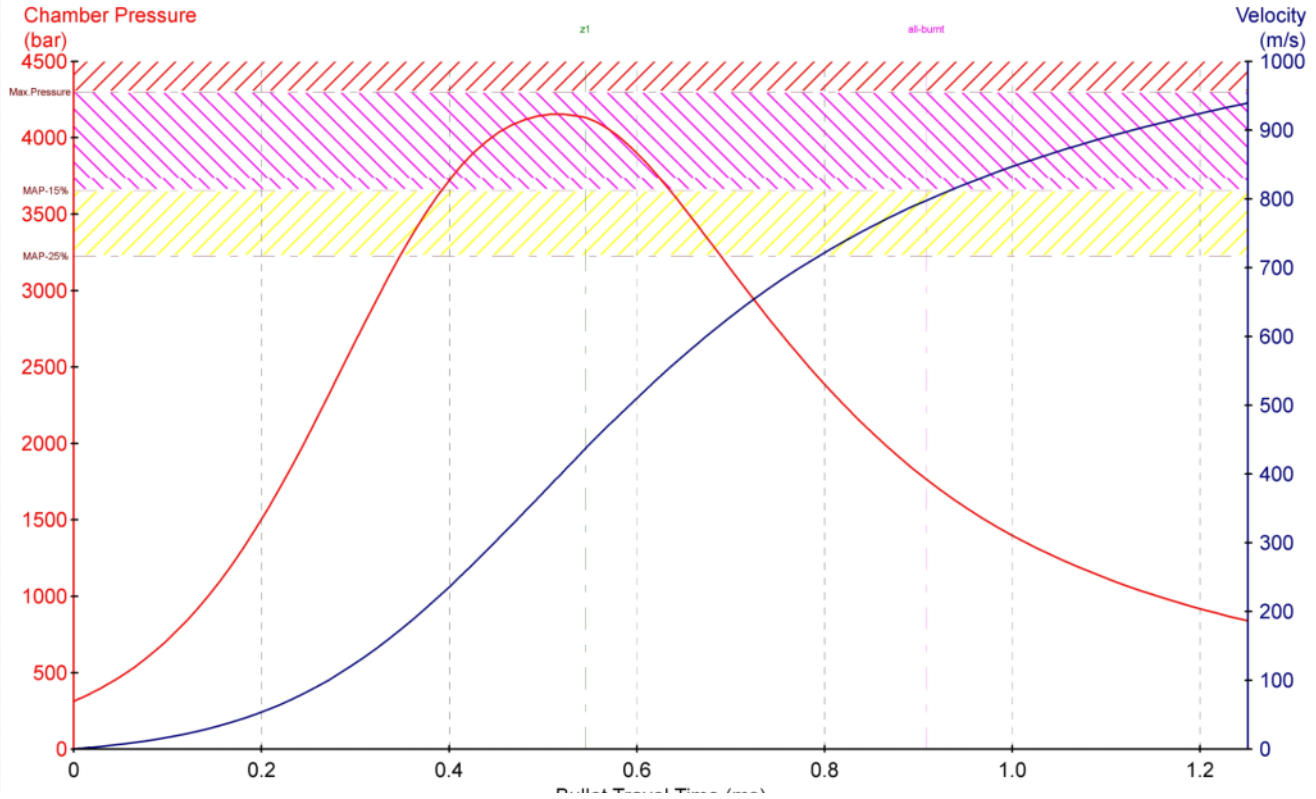
Calculated and Estimated Data:

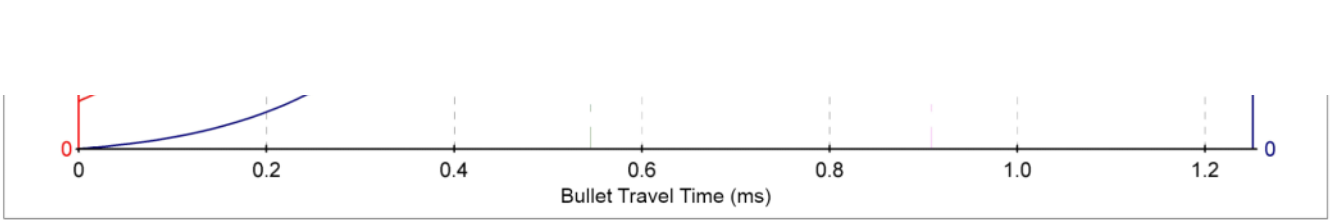
Bullet Shank Seating Depth	16.13 mm	0.635 in.	Capacity Displaced by Seated Bullet	0.913 cm³	0.0557 in.³
Useable Case Capacity	5.028 cm³	0.3068 in.³	Bullet Travel at Muzzle Exit	613.15 mm	24.14 in.
Loading Ratio("Density") / Filling	90.8 %		Charge Fraction Burnt at Shot Start	1.71 %	
Predicted Data:					
Maximum Chamber Pressure	4154 bar	60250 psi.	Bullet Travel at Pmax	66.5 mm	2.62 in.
at Muzzle Exit:					
Bullet Velocity	939.5 m/s	3082 fps.	Pressure at Muzzle	706 bar	10233 psi.
Bullet Energy	5148 Joule	3797 ft.lbs.	Bullet Barrel Time	1.218 ms	
Propellant Burnt	100.0 %		Ballistic Efficiency	29.3 %	

Additional Data:

Powder Lot		Primer Type and Lot	RWS 5333 LRM 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 reached before bullet's base passes muzzle.




0
0
0.2
0.4
0.6
0.8
1.0
1.2
Bullet Travel Time (ms)