User Data:

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Cartridge / Caliber	**6 mm Dasher**		**Bullet**	**.243, 68, XPERT Bullet**	
Maximum Average Pressure, allowed	65000 psi.	4482 bar (Piezo)		with flatbase	
Groove Caliber	0.242 in.	6.15 mm	Bullet Weight	68.0 gr.	4.41 gm
Case Capacity, overflow	41.0 gr. H2O	2.662 cm³	Bullet Length	1.031 in.	26.2 mm
Case Length	1.554 in.	39.47 mm	Bullet Seating Depth	0.420 in.	10.67 mm
Cartridge O.A. Length	2.165 in.	55.0 mm	Barrel/Tube Length	24.0 in.	609.6 mm
Shot Start / Init Pressure	3625 psi.	249.94 bar	Cross Section Area of Bore	0.04576 in.²	0.2952 cm²
Propellant type	**Somchem S335**				
Charge Weight	32.0 gr.	2.074 gm	Load Density	223.8 gr./in.³	0.885 gm/cm³
Heat of Explosion, Potential	240.4 J/gr.	3710 J/gm	Energy Density of Charge	53799 J/in.³	3283 J/cm³
Propellant Solid Density	407.15 gr./in.³	1.61 gm/cm³	Used Ratio of Specific Heats cp/cv	1.224	
Burning Rate Factor Ba	0.624 1/s		Weighting Factor	0.4	
Burning Function Limit Z1	0.35		Prog.-/ Degressivity Factor a0	2.299	
Factor b	1.666		Bulk Density	227.6 gr./in.³	0.900 gm/cm³

Calculated and Estimated Data:

Bullet Shank Seating Depth	0.42 in.	10.67 mm	Capacity Displaced by Seated Bullet	0.0194 in.³	0.318 cm³
Useable Case Capacity	0.1431 in.³	2.344 cm³	Bullet Travel at Muzzle Exit	22.87 in.	580.8 mm
Loading Ratio("Density") / Filling	98.3 %		Charge Fraction Burnt at Shot Start	1.53 %	
Predicted Data:					
Maximum Chamber Pressure	48785 psi.	3364 bar	Bullet Travel at Pmax	1.65 in.	41.9 mm
at Muzzle Exit:					
Bullet Velocity	3259 fps.	993.2 m/s	Pressure at Muzzle	7539 psi.	520 bar
Bullet Energy	1603 ft.lbs.	2173 Joule	Bullet Barrel Time	1.050 ms	
Propellant Burnt	98.8 %		Ballistic Efficiency	28.3 %	

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.