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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:8-Apr-2015

Time:22:45:49

File: xpert 6.5 x 55mm swe 98gr.dat

Cartridge / Caliber

6.5 x 55 Swedish

Bullet

.264, 98, XPERT

Maximum Average Pressure, allowed
Groove Caliber
Case Capacity, overflow
Case Length
Cartridge O.A. Length
Shot Start / Init Pressure

55114 psi. 3800 bar (Piezo CIP)
0.265 in. 6.73 mm
57.0 gr. H2O 3.701 cm³
2.165 in. 54.99 mm
2.854 in. 72.5 mm
3625 psi. 249.94 bar

with flatbase
Bullet Weight
Bullet Length
Bullet Seating Depth
Barrel/Tube Length
Cross Section Area of Bore

98.0 gr. 6.35 gm
1.240 in. 31.5 mm
0.551 in. 13.99 mm
24.0 in. 609.6 mm
0.05326 in.² 0.3436 cm²

Propellant type

Somchem S335

Charge Weight
Heat of Explosion, Potential
Propellant Solid Density
Burning Rate Factor Ba
Burning Function Limit Z1
Factor b

37.0 gr. 2.398 gm
240.4 J/gr. 3710 J/gm
407.15 gr./in.³ 1.61 gm/cm³
0.624 1/s
0.35
1.666

Load Density
Energy Density of Charge
Used Ratio of Specific Heats cp/cv
Weighting Factor
Prog.-/ Degressivity Factor a0
Bulk Density

189.4 gr./in.³ 0.749 gm/cm³
45523 J/in.³ 2778 J/cm³
1.224
0.5
2.299
227.6 gr./in.³ 0.900 gm/cm³

Calculated and Estimated Data:

Bullet Shank Seating Depth
Useable Case Capacity
Loading Ratio("Density") / Filling

0.551 in. 13.99 mm
0.1954 in.³ 3.202 cm³
83.2 %

Capacity Displaced by Seated Bullet
Bullet Travel at Muzzle Exit
Charge Fraction Burnt at Shot Start

0.0304 in.³ 0.499 cm³
22.39 in. 568.6 mm
2.15 %

Predicted Data:

Maximum Chamber Pressure
at Muzzle Exit:
Bullet Velocity
Bullet Energy
Propellant Burnt

43215 psi. 2980 bar
2857 fps. 870.8 m/s
1776 ft.lbs. 2408 Joule
99.9 %

Bullet Travel at Pmax
Pressure at Muzzle
Bullet Barrel Time
Ballistic Efficiency

1.98 in. 50.3 mm
7752 psi. 534 bar
1.233 ms
27.1 %

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.

