

WARNING! The data predicted by QuickLOAD CANNOT be used as a substitute for information gained from standard handloading manual references; further, it CAN by choosing a charge that is about 10% BELOW the MAXIMUM, but never below the MINIMUM suggested load in a modern data manual, then work up to a (maximum) possible internal ballistic effects resulting from any of the following: particular gun vagaries; or production tolerances in powder, bullets, primers, and cases; or result terms. you may switch off this text by typing the words I AGREE into the >Meas.Method< entry field.

QuickLOAD© V.3.9 Cartridge Dimensions

Selected Bullet: File:\bames

Selected Cartridge: File:\qlloadfw

.458, 500, Barnes 'TSX' 306224582

.450 N.E. 3 1/4"

☐ Ldl/Bdsc Chased

☐ Friction-protected

Seating Depth 0.951 24.16

Shank Seat Depth 0.951 24.16

Bullet Length 1.651 41.94

Bullet Diameter 0.458 11.63

Cartridge Length 3.950 100.33

Case Length 3.250 82.55

Groove Caliber 0.458 11.63

Barrel Length 22.0 558.8

Bullet Travel 19.701 500.41

Pmax (MAP) 44236 3050.0

Meas. Method Piezo CIP

Bullet Weight 500.0 32.399

Cross-sectional Bore Area .162657 104.94

Maximum Case Capacity, overflow 136.00 8.830

Volume Occupied by Seated Bullet 39.609 2.572

Useable Case Capacity 96.386 6.258

Weighting Factor 0.5

psi bar

Grains Grams

Sq. inches mm²

Grains H2O cm³

Apply&Calc

QuickLOAD© V.3.9 Charge

Selected Propellant: File:\qlloadfw

Vhtavuori N140 °C

Heat of Explosion / Potential 3720 kJ/kg

Ratio of Specific Heats 1.2280

Burning Rate Factor Ba 0.6230 1/bar·s

Pro- or Degressivity Factor a0 0.9000

Progressive Burning Limit z1 0.480 x 100%

Factor b 1.6595

Propellant Solid Density 1.600 g/cm³

Shot Start (Initiation) Pressure 3626 psi

Filling/L.R. 87.2 %

Charge Weight 76.0 4.925

Grains Grams

Apply&Calc

140 Powder

QuickLOAD© V.3.9 Diagram

Chamber Pressure (psi)

Velocity (fps)

— .450 N.E. 3 1/4" - .458, 500, Barnes 'TSX' 306 - 76.0 grs Vhtavuori N140 °C - OAL= 3.950 in.

QuickLOAD© V.3.9 Results

Maximum Chamber Pressure (Pmax) 3033 bar 43988 psi

Bullet Travel at Pmax 34.5mm 1.36 in.

Load Density 0.787 g/cm³

Energy Density 2928J/cm³

Values when Bullet Base Exits Muzzle...click here for more data

Muzzle Pressure 442bar 6403psi

Muzzle Velocity 621 m/s 2036 fps

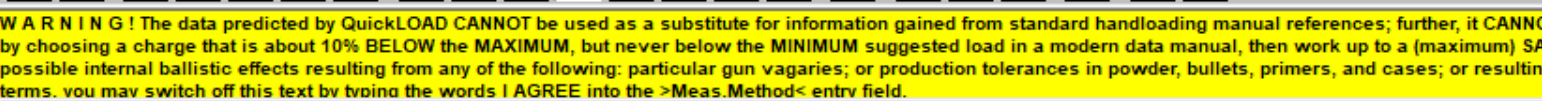
Barrel Time, 10% Pmax to Muzzle 1.409ms

Projectile Energy 6242 Joule 4604 ft.-lbs.

Amount of Propellant Burnt 100.0 %

Ballistic Efficiency 34.1 %

Results without any guarantee on usability ! WARNING: Near Maximum Average Pressure - tolerances may cause dangerous pressures ! End of combustion reached before projectile's base



QuickLOAD© V.3.9 Diagram

**Chamber Pressure**  
(psi)

Bullet Travel Time (ms)

— .450 N.E. 3 1/4" - .458, 600, Barnes 'TSX' 306 - 86.0 grs Vihtavuori N160 °C - OAL= 3.950 in.

**QuickLOAD© V.3.9 Results**

Maximum Chamber Pressure (Pmax)	2968 bar 43044 psi	Bullet Travel at Pmax	34.7mm 1.37 in.
Load Density	0.891 g/cm <sup>3</sup>	Energy Density	3224 J/cm <sup>3</sup>

**Values when Bullet Base Exits Muzzle...click here for more data**

Muzzle Pressure	508 bar 7370 psi	Muzzle Velocity	635 m/s 2082 fps
Barrel Time, 10% Pmax to Muzzle	1.396 ms	Projectile Energy	6524 Joule 4812 ft.-lbs.
Amount of Propellant Burnt	97.07 %	Ballistic Efficiency	32.3 %

**Results without any guarantee on usability ! WARNING: Near Maximum Average Pressure - tolerances may cause dangerous pressures ! End of combustion after the projectile exits muzzle.**

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