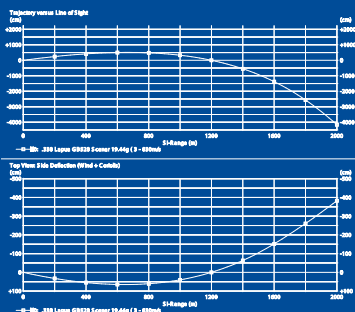


# Lapua Bullets

## Drag Coefficient Data



### QuickTARGET Unlimited® Lapua Edition

QTU Lapua Edition is a sophisticated exterior ballistic software that can utilize extremely accurate Doppler radar measurements of bullet trajectories. These continuous air drag coefficients make it possible to calculate the trajectory of your bullet much more accurately than using the simplified one-number B.C. Now Lapua is first to offer this radar-data and these advanced ballistic calculations for civilian long-range shooters. Software is available free from [www.lapua.com](http://www.lapua.com) website under "Lapua ballistic site".

**Now downloadable from  
Lapua website!**

Basically, as starting values you will need only bullet type and muzzle velocity. Software will calculate e.g. bullet drop, velocity and energy as a function of distance and the flying time. You can calculate also wind drift and the program has many features useful for adjusting your scope. All fine features of the software can be found in the manual downloadable from Lapua website (downloads section).

# Quick Target Unlimited® Lapua Edition

Typically used simple ballistic coefficients (common B.C. G1 or rarely used B.C. G7) describe only ballistic performance of the bullet compared to a standard bullet G1 or G7. Ballistic Coefficient is essentially a measure of drag force compared to G1 or G7 standard projectile. The higher the B.C. value, the less drag and better ballistic performance.

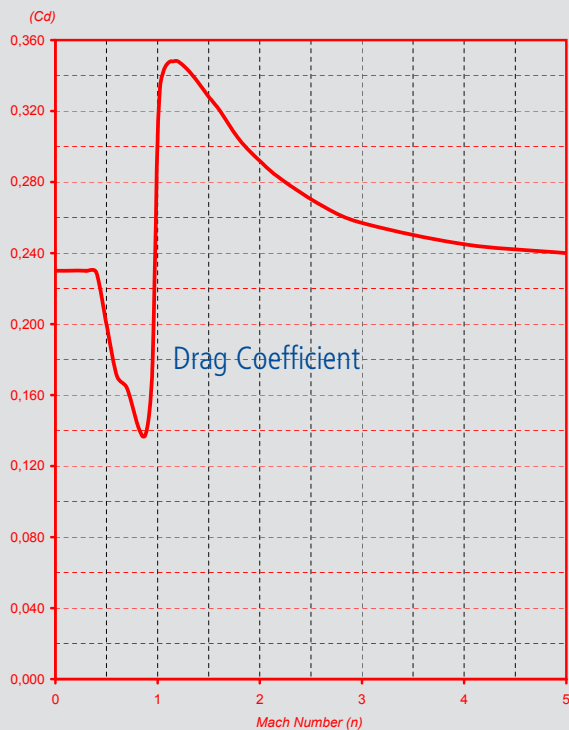
The B.C. changes during a projectile's flight and stated B.C.'s are always averages for particular velocity ranges. Knowing how a B.C. was established is almost as important as knowing the stated B.C. value itself. For the precise establishment of bullet trajectory, Doppler radar-measurements are required. The normal shooter however, has no access to such expensive professional measurement devices. Doppler radars are used by governments, professional ballisticians, defense forces and a few ammunition manufacturers to obtain exact real world data on the flight behavior of projectiles of interest. The useful result for shooter is bullet Drag Coefficient ( $C_d$ ).

$C_d$  factor describes the aerodynamic drag at particular point of trajectory.  $C_d$  table shows this factor as a function of velocity (Mach number). Special software is required (e.g. Quick Target Unlimited) to utilize this data to ballistic table.

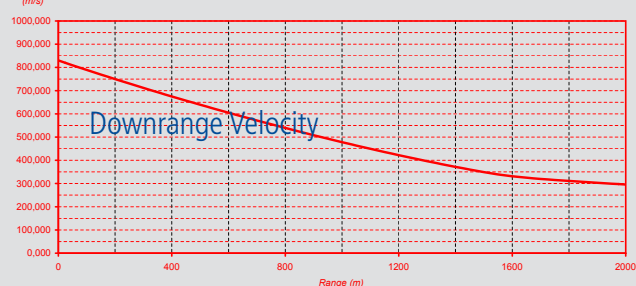
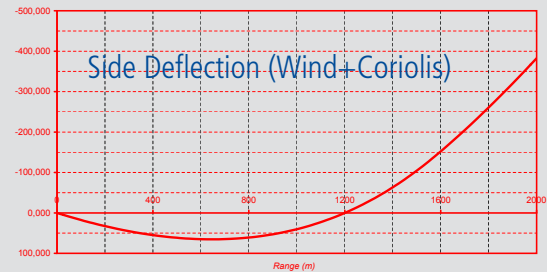
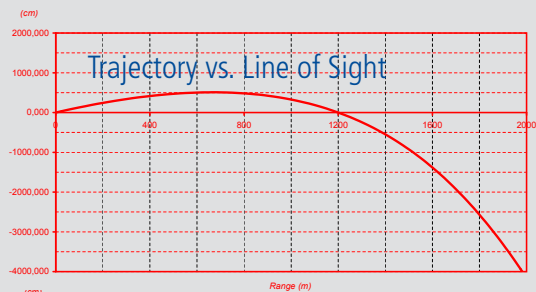
$C_d$  factor does not include the material mass on contrary to B.C. but this is included by software. Calculating from  $C_d$  table the wind drift can be estimated more accurately.

During the Doppler radar measurements the complete location information versus time is recorded. Therefore this method considers bullet drop during flight and enables the feedback coupling of calculated data and reality.

Lapua is offering today this most scientific and accurate data for serious long range Target Shooting.



$C_d$  vs MACH data is the basis for accurate trajectory calculation



NOTE! Basic Quick Target software can not utilize this multiple ballistic data

QTU Lapua Edition is a special version of normal QTU that is tailored for Lapua bullets. The full version of QuickLoad (QL) and QuickTarget (QT) programs (QL+QT+QTU) can be purchased from dealers listed here?. QuickLOAD© and QuickTarget© are Copyright 1988-2009 of H.G.Broemel, Neubruecker Weg 15, D-64382 Babenhausen, Germany



Nammo Lapua Oy  
PO. Box 5  
FI-62101 Lapua, Finland  
Tel. +358 6 431 0111  
Fax +358 6 431 0244  
info@lapua.com www.lapua.com

Part of **nammo** Group

Your retailer