

These graphs and ranks are by no means authoritative. For that matter they should be considered "For Entertainment Purposes Only". They are the author's attempt to provide relative power/defense information on all of the handguns in the database. Some measurements are absolute, based on standards and using known calculations. Others are entirely subjective, developed by the author. All are "Subject to the Viewer's Interpretation".

All information presented in this section is for the most part relative, meaning that the same calculations are applied to all guns in the database, and the results are ranked against the range from best to worse of all guns measured.

Below are the methods used for calculating the graphs and ranks shown in this section.

Absolute Measurements:

Power Factor

This calculation is based on the IDPA (International Defensive Pistol Association) power rating of a particular caliber/cartridge, which is determined by simply multiplying the bullet's muzzle velocity in (feet per second) by its weight (in grains).

Power Factor = Muzzle Velocity • Bullet Weight

Data used for all calculations are the average muzzle velocity for a given cartridge as measured by SAAMI (Sporting Arms and Ammunition Manufacturers Institute), and the mean bullet weight from the range of bullets available for that particular cartridge.

SAAMI uses a specific barrel length for measuring each cartridge, so an adjustment is made of 2.5% of the test muzzle velocity for every inch difference between the gun's barrel length and the SAAMI test barrel length.

The graph represents the specific gun's power factor compared against the range of power factors for all guns in the database.

Recoil Factor

This calculation is based on a public domain free recoil equation that takes into account the bullet weight and muzzle velocity plus the cartridge powder charge weight and expelling gas muzzle velocity applied against the gun's weight. The result is measured in foot-pounds of energy.

$$v_{gu} = \{(m_p \cdot v_p) + (m_c \cdot v_c)\} / m_{gu} \cdot 7000 \rightarrow E_{tgu} = m_{gu} \cdot v_{gu}^2 / 2 \cdot g_c$$

Where:

E_{tgu} is the recoil energy expressed in foot-pounds (ft·lb).

m_{gu} is the weight of the gun expressed in pounds (lb).

m_p is the weight of the bullet expressed in grains (gr).
 m_c is the weight of the powder charge expressed in grains (gr).
 v_{gu} is the total forward velocity of the gun expressed in feet per second (ft/s).
 v_p is the velocity of the bullet expressed in feet per second (ft/s).
 v_c is the velocity of the powder charge expressed in feet per second (ft/s).
 g_c is the dimensional constant and is the numeral coefficient of 32.1739.
7000 is the conversion factor to set the equation equal to pounds.

The graph represents the specific gun's recoil factor compared against the range of recoil factors for all guns in the database.

Total Capacity

This value is the maximum number of rounds that a particular gun can carry. For revolvers, derringers and single-shot guns the database value is used. For semi-automatic pistols with removable magazines, 1 is added to the database value. (i.e. magazine plus one in the chamber)

The graph represents the specific gun's capacity compared against the range of capacities for all guns in the database.

Subjective Measurements:

Concealability

This calculation is entirely subjective and is intended to provide a relative measure of concealability for each of the guns in the database. It is a simple calculation of the overall length of the gun (in inches) plus the weight of the gun (in pounds).

Concealability = Length + Weight

Ranking is based on a range bounded on the high end by the gun with the lowest calculated concealability factor and on the low end at an arbitrary setting of 16. (For example, this could be a gun that is 12 inches in length and weighs 4 pounds.) There are guns in the database whose concealability factor exceeds 16.

The graph represents the percentile that a particular gun ranks compared to the rest of the guns in the database, while the textual rank is represented by a 5-point scale; Very Poor, Poor, Fair, Good and Excellent.

Defense Ranking

This calculation is entirely subjective and is intended to give a relative measure of a gun's ability to provide concealed personal defense. This ranking is based on a weighted combination of the four previous calculations:

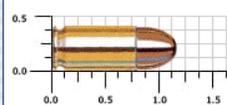
Power Factor • 60% + Capacity • 40% + Concealability • 30% - Recoil Factor • 30%

This value is compared against all of the guns in the database and is then represented as a percentile ranking.

(100% = the gun with the highest combined value, 1% = the gun with the lowest combined value)

Again, please remember, "For Entertainment Purposes Only" and "Subject to the Viewer's Interpretation". Please feel free to contact the author with any comments or suggestions.

The screenshot shows a Mozilla Firefox browser window displaying the STI International TruSight product page. The page features a detailed image of the handgun on the left and a list of specifications on the right. Below the specifications is a table of ballistics data and a ranking chart. On the right side of the page, there is an advertisement for the Ruger SR45 handgun.

STI International Model TruSight	
	Type: Pistol Produced: 2006 - 2009 Caliber: 9 mm Action: recoil operated semi-automatic Trigger: single-action (SA) Safety: grip safety, manual thumb safety Magazine: 17-round Frame: steel Grips: modular polymer Sights: fiber-optic front, adjustable rear Notes: Barrel Length: 4.15 in. Overall Length: 8.625 in. Height: No Data Width: No Data Weight: 36.3 oz.
	Manufacturer: STI International 114 Halmar Cove Georgetown TX 78628
Phone Number: 512-819-0656 Website: www.stiquns.com	MSRP: \$1985 Used Est.: \$1525 <small>Last Update: 7/7/2013</small>
Caliber: 9mm Luger Alias: 9mm Parabellum	
Muzzle Velocities - from 985 to 1500 ft/sec Muzzle Energies - from 294 to 450 ft-lb Bullet Weights - from 90 to 147 gr	
Low  High	Ranking Factors
	Power Factor: 142499 - IDPA Rating Calculation Recoil Factor: 3.81 ft-lb - Standard Free Recoil Calculation Total Capacity: 18 rounds - Includes Chambered Rounds Concealability: Fair Defense Factor: 89%

THE RUGER SR45

Like the popular Ruger® SR9® and SR40® pistols, the SR45™ is perfectly sized to be comfortable and controllable with a slim, ergonomic grip and narrow slide.



RUGER

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The "Trusight" is just

The "Trusight" is just STI's attempt to copy the system developed by SVI, the Sight Tracker. The Sight Tracker uses the same barrel as the race guns, but with no ports in the rib. The sight mounts on the rib, just back from the muzzle.

STI took SVI's basic idea, a **barrel-mounted** front sight, but put it on an uncut compensator because it was easier and cheaper than using the ribbed race barrels. I doubt that the "expansion chamber" does much, but it may function a little like a muzzle brake because the gasses will hit the front of the chamber, pushing the barrel forward.

If you want to see the original, go to www.sviguns.com or check out Front Sight magazine.
:wink: