FASTBALL VELOCITY

Fastball velocity doesn't go much deeper than just looking at the numbers and comparing them to the graphic below! Fastball velocity complements just about all of the other metrics that are measured. If you throw hard, it makes all your other pitches/metrics even better.

FASTBALL	MLB	NCAA	HS
Top 10%	96.6	92.5	87.2
Top 25%	95.0	90.8	84.1
Avg 50%	93.3	88.9	80.4
Top 75%	91.6	86.8	76.4
Top 90%	89.9	84.7	72.7

FASTBALL SPIN RATE

Spin rate is a measurement that if you are below average or above average, you can pitch with more room for error. On the other hand, if you are average you should try to throw in the bottom half of the zone with exceptional command. High spin fastballs profile as one that is frequently described as having "late life". Low spin fastballs tend to profile as a fastball that has heavy feel to it. Pitch movement is still dependent on spin direction of the pitch but Trackman does not have that metric displayed on profiles.

FASTBALL	MLB	NCAA	HS
Top 10%	2488	2372	2245
Top 25%	2379	2266	2119
Avg 50%	2256	2148	1977
Top 75%	2137	2026	1837
Top 90%	2031	1913	1716

BAUER UNITS

Bauer Units are an easier way of determining how useful the spin numbers are compared to the velocity. We can calculate this metric by taking average spin rate and dividing it by average velocity. Bauer Units are useful because we can have a case of two pitchers with the same spin numbers, ex. 2200 RPM, but one pitcher throws 90 MPH and the other throws 83 MPH. The pitcher throwing 90 MPH with 2200 spin is not as impressive as the pitcher throwing 83 MPH with the same spin. Typically, we would tell the harder throwing pitcher to throw up in the zone purely off his velocity and his high spin, but because his Bauer Units would equate to around 24 that would be only 1 unit off of average (23), therefore he would want to hammer the bottom of the zone. On the other side, the pitcher throwing 83 MPH has a Bauer Unit measurement of 26 which is incredibly impressive. This would allow him to throw up in the zone even though his velocity is not blow away type numbers because he produces above average spin with that slated velocity.

FASTBALL INDUCED VERTICAL BREAK

As far as deception and importance goes, fast induced vertical break (IVB) may be the most important. Induced vertical break is not what is sounds. IVB simply means the pitch is "breaking" upward from the average level a pitch falls from release to home plate. This is a stat that you want to stay away from being average at. Fortunately, this can be tweaked slightly depending on release height. To put it simply, the higher number = more "rise" the pitch has compared to average. Lower number = more depth the pitch has to it.

FASTBALL	MLB	NCAA	HS
Top 10%	18.7	21.5	23.2
Top 25%	17.1	18.7	20.8
Avg 50%	14.9	15.8	18.2
Top 75%	12.1	12.8	15.5
Top 90%	9.2	9.9	12.9

CURVEBALL SPIN RATE

Spin rate on curveballs is pretty simple: higher spin = nastier stuff. There are some ways to manipulate spin numbers slightly but for the most part spin is spin. At the moment, there are no well known ways to change your spin in a big way. Spin not only dictates how sharp your curveball is, but it can also aid in keeping hitters honest by having similar rotation matching that of your fastball.

CURVEBALL	MLB	NCAA	HS
Top 10%	2967	2730	2459
Top 25%	2786	2529	2265
Avg 50%	2583	2339	2070
Top 75%	2387	2159	1890
Top 90%	2223	1982	1734