



Metrics Analysis

Agility Measurement

Definitions

References

60 Yard Dash Time:

The 60-yard dash is a sprint covering 60 yards. It is primarily run to evaluate the speed and acceleration of baseball players.

PRO: 6.25-6.9 seconds
HIGHSCHOOL: 7.0-7.8 seconds
YOUTH: 7.9-8.5 seconds

30 Yard Split Time:

The distance from home plate to first base (90 ft).

PRO: 3.9-4.5 seconds
HIGHSCHOOL: 4.2-4.9 seconds
YOUTH: 4.6-5.25 seconds

Standing Broad Jump:

The standing broad jump is primarily used to measure a player's short-area power and explosion. Players jump forward from a standing position, landing in a balanced, athletic stance. This action will translate to both hitting and pitching.

WORLD RECORD: 12 feet 2 inches
NFL RECORD: 12 feet 2.75 inches
USA HS RECORD: 11 feet 5 inches

Lateral Jump:

Lateral Jump is a sideways (lateral) jump off one leg. This translates to explosiveness and power in both hitting and pitching.

PROFICIENT: Player height + 1.5ft ↑
DEFICIENT: Player height + .5ft ↓

Defensive Measurement

Definitions

References

Infield Velocity:

Measures the infielder's arm strength when throwing from shortstop to first base.

PRO: 90-100 mph
HIGHSCHOOL: 70-80 mph
YOUTH: 50-60 mph

Outfield Velocity:

Measures the outfielder's arm strength when throwing from centerfield to home plate.

PRO: 90-105 mph
HIGHSCHOOL: 70-80mph
YOUTH: 50-60 mph

Mound Velocity:

Measures the pitcher's arm strength when throwing from off the mound to the catcher.

PRO: 93- 104 mph
HIGHSCHOOL: 75-85mph
YOUTH: 55-65 mph

Catcher Pop Time:

Pop Time measures the time from the moment the pitch hits the catcher's mitt to the moment the ball reaches the fielder's glove at second base.

PRO: 1.9-1.7 seconds
HIGHSCHOOL: 2.0-2.2 seconds
YOUTH: 2.25-2.45 seconds



Offensive Measurement

Definitions

References

Exit Velocity:	Exit Velocity measures the speed of the baseball as it comes off the bat, immediately after a batter makes contact.	PRO: 90-105 mph HIGHSCHOOL: 70-85mph YOUTH: 50-65mph
Bat Speed:	Bat Speed is the observed speed of the sweet spot of the bat at impact. The sweet spot of the bat is measured six inches from the tip of the bat.	PRO: 65-80 mph HIGHSCHOOL: 55-70 mph YOUTH: 40-55 mph
Attack Angle:	Attack Angle is the angle of the bat's path, at impact, relative to horizontal. A positive value indicates swinging up, and a negative value indicates swinging down. Zero is perfectly level.	PRO: 19-23° HIGHSCHOOL: 14-18° YOUTH: 9-13°
Time Contact:	Time to Contact is the elapsed time between start of downswing and impact. The start of downswing uses an advanced algorithm to detect when functional forward bat speed is initiated and is not triggered by bat waggle early in the swing.	PRO: 0.13-0.17 seconds HIGHSCHOOL: 0.14-0.2 seconds YOUTH: 0.17-0.23 seconds
Peak Hand Speed:	Peak Hand Speed is the observed maximum speed as measured on the handle of the bat (measured six inches from the knob of the bat). Peak Hand Speed will occur prior to the moment of impact, very close to the commit time in the swing when the wrists unhinge.	PRO: 23-29 mph HIGHSCHOOL: 29-26 mph YOUTH: 17-23 mph
Power:	The average power generated during the swing is found from the effective mass of the bat, the bat speed at impact, and the average acceleration during the downswing. Power is measured in watts. Higher power is achieved when a hitter is able to swing a heavier bat and accelerate it to higher speeds.	PRO: 3.8-5.8 kW HIGHSCHOOL: 2.1-4.1 kW YOUTH: 0.8-2.8 kW