

## Softball Pitch Spin Chart (RPM) (AKA Spin Velo Ratio)

| Age Level                | Fastball                | Riseball       | Dropball       | Curveball      | Changeup     | Screwball      |
|--------------------------|-------------------------|----------------|----------------|----------------|--------------|----------------|
| 10U (avg)                | ~700 avg / ~770 top 10% | ~650 / 715     | ~700 / 770     | ~700 / 770     | ~600 / 660   | ~650 / 715     |
| 12U                      | 916 avg / ~1,008        | 819 / ~900     | 867 / ~954     | 1,004 / ~1,105 | 819 / ~900   | 934 / ~1,028   |
| 14U                      | 984 / ~1,082            | 962 / ~1,058   | 971 / ~1,068   | 1,015 / ~1,117 | 901 / ~991   | 1,038 / ~1,142 |
| 16U                      | 1,016 / ~1,118          | 991 / ~1,090   | 990 / ~1,089   | 1,067 / ~1,174 | 885 / ~974   | 1,058 / ~1,164 |
| 18U (HS)                 | 1,027 / ~1,130          | 1,040 / ~1,145 | 978 / ~1,076   | 1,037 / ~1,141 | 874 / ~961   | 1,070 / ~1,177 |
| College (avg)            | 1,063 / ~1,170          | 1,093 / ~1,210 | 1,003 / ~1,103 | 1,115 / ~1,227 | 923 / ~1,015 | 1,138 / ~1,252 |
| College Top ~10% (Elite) | ~1,170+                 | ~1,500+        | ~1,250+        | ~1,300+        | ~950+        | ~1,100+        |

## Estimated Spin-Velocity Ratio (RPM per MPH)

**Spin-Velocity Ratio = Spin Rate (RPM) ÷ Pitch Speed (MPH)**

Higher values imply **more spin per unit of velocity** (useful for movement generation).

| Age Level          | Pitch      | Avg Velocity (mph) | Avg Spin (RPM) | Avg Spin/Vel | Top 10% Spin (RPM) | Top10% Spin/Vel |
|--------------------|------------|--------------------|----------------|--------------|--------------------|-----------------|
| <b>10U</b>         | Fastball   | ~38                | ~700 est       | ~18.4        | ~770 est           | ~20.3           |
|                    | Rise/Break | ~35                | ~700 est       | ~20.0        | ~770 est           | ~22.0           |
| <b>12U</b>         | Fastball   | ~44                | ~900 est       | ~20.5        | ~1,000 est         | ~22.7           |
|                    | Breaking   | ~42                | ~900 est       | ~21.4        | ~1,000 est         | ~23.8           |
| <b>14U</b>         | Fastball   | ~50                | ~1,000 est     | ~20.0        | ~1,100 est         | ~22.0           |
|                    | Breaking   | ~48                | ~1,050 est     | ~21.9        | ~1,150 est         | ~24.0           |
| <b>17-18U (HS)</b> | Fastball   | ~55                | ~1,050 est     | ~19.1        | ~1,150 est         | ~20.9           |

|                |                |     |            |       |             |       |
|----------------|----------------|-----|------------|-------|-------------|-------|
|                | Breaking       | ~53 | ~1,150 est | ~21.7 | ~1,380+ est | ~26.0 |
| <b>College</b> | Fastball       | ~60 | ~1,100+    | ~18.3 | ~1,170 est  | ~19.5 |
|                | Rise/Curve etc | ~58 | ~1,200+    | ~20.7 | ~1,500+     | ~25.9 |

## Softball Pitch Spin by Age (RPS) — Average vs Top ~10%

| Age Group                   | Fastball Avg / Top10% | Breaking<br>(Rise/Curve/Drop/Screw)<br>Avg / Top10% |
|-----------------------------|-----------------------|-----------------------------------------------------|
| <b>10U (est.)</b>           | ~12 / ~14             | ~13 / ~15                                           |
| <b>11–12U (est.)</b>        | ~14 / ~16             | ~15 / ~18                                           |
| <b>13–14U (est.)</b>        | ~16 / ~18             | ~17 / ~20                                           |
| <b>15–16U (est.)</b>        | ~17 / ~19             | ~18 / ~21                                           |
| <b>17–18U (High School)</b> | ~17–18 / ~20          | ~19 / ~23+                                          |
| <b>College</b>              | ~18–19 / ~21          | ~20–22 / ~25+                                       |