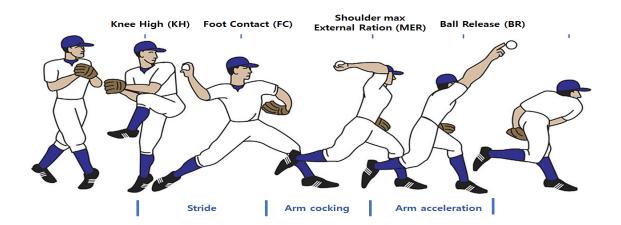
# **2024 Next-Level Training Camp**

Name: n51 Date: 20240213 Hand: Right Ball Velocity: 132 km/h Weight: 72kg Height: 178 cm



#### **PITCHING EFFICIENCY**

1. KINEMATIC SEQUENCE

#### **STRIDE**

- 1. HEIGHT OF KNEE AND PELVIS
- 2. HIP/SHOULDER SEPARATION
- 3. ELBOW FLEXION

#### **ARM COCKING**

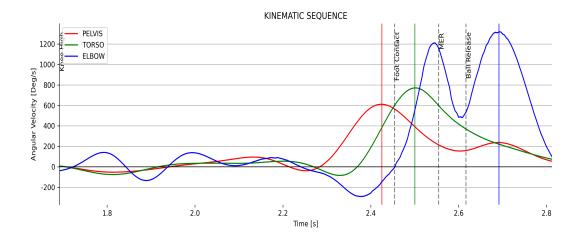
- 1. SHANK LATERAL TILT
- 2. PELVIS HEIGHT
- 3. SHOULDER EXTERNAL ROTATION
- 4. SHOULDER HORIZONTAL ABDUCTION
- 5. LEAD LEG KNEE FLEXION
- 6. LEAD LEG KNEE EXTENSION ANGULAR VELOCITY

#### **ARM ACCELERATION**

- 1. HEAD HAND DISTANCE
- 2. SHOULDER ABDUCTION
- 3. TRUNK LATERAL TILT
- 4. LEAD LEG KNEE FLEXION
- 5. LEAD LEG KNEE EXTENSION ANGULAR VELOCITY

# **KINEMATIC SEQUENCE**



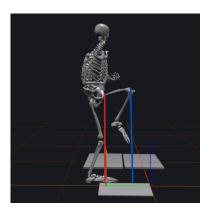


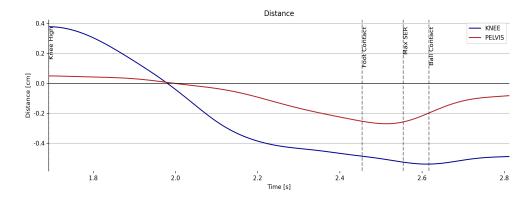
### **Kinematic Sequence**

Segment	Major League	Peak Velocity	Timing [BC - FC (100%)]	Speed Gain
Pelvic	475 ~ 550	611	-18 %	
Torso	600 ~ 800	771	28 %	1.26
Elbow	2500 ~ 4500	1319	146 %	1.71

# **STRIDE**

# **HEIGHT OF KNEE AND PELVIS**

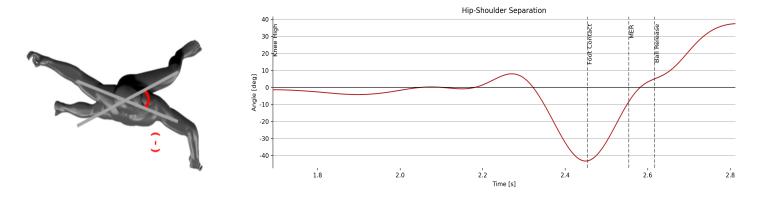




# Height of knee and pelvis

Segment	at Knee High	Max
Knee	0.38	0.38
Pelvis	0.05	0.05

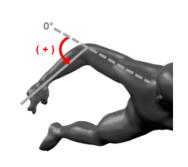
# **HIP/SHOULDER SEPARATION**

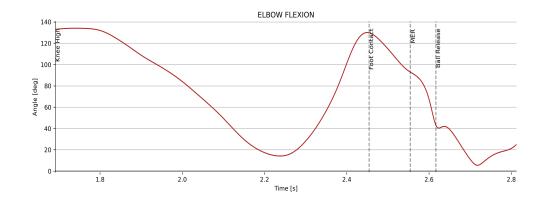


# **Hip-Shoulder Separation**

at Foot Contact		Min	Min Timing [BC - FC (100%)]
-43		-43	0 %
FC -43°			
	-39°	25°	

# **ELBOW FLEXION**



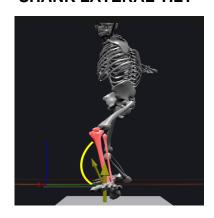


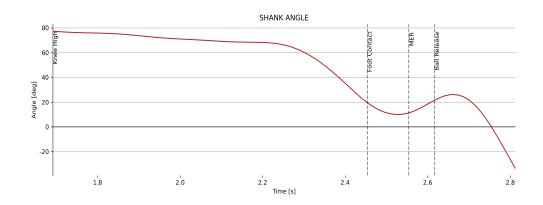
# **Elbow Flexion**

at Foot Contact	Max	Max Timing [BC - FC (100%)]
130	130	0 %
FC		130°
76		115°

# **Arm cocking**

# **SHANK LATERAL TILT**

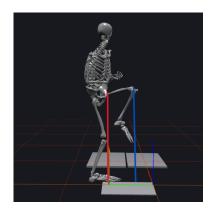


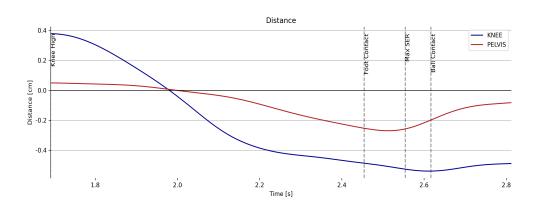


### shank angle

at Knee High	at Foot Contact
77.31	19.53

# **PELVIS HEIGHT**

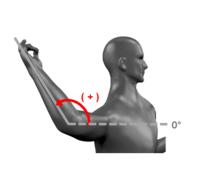


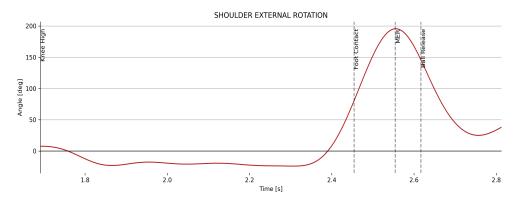


# pelvis Height

Segment	at Foot Contact	at Max SER	Max
Pelvis	-0.25	-0.26	0.05

# SHOULDER EXTERNAL ROTATION

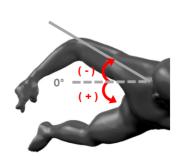


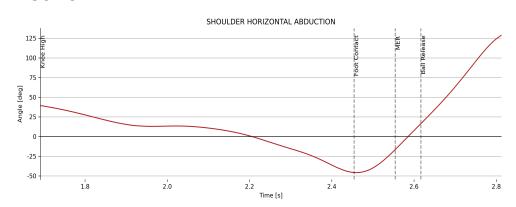


#### **Shoulder External Rotation**

at Foot Contact	at Max ER	Max	Max Timing [BC - FC (100%)]
81	196	196	62 %
FC			81° <b>V</b>
11°		48°	
MER		196°	
	163° 178°		

# SHOULDER HORIZONTAL ABDUCTION

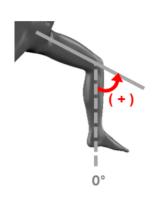


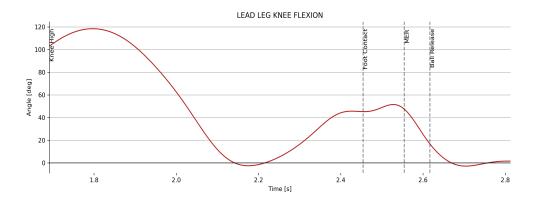


### **Shoulder Horizontal Abduction**

at Foot Contact	at Max ER	Max	Max Timing [BC - FC (100%)]
-46	-17	16	100 %
-C	-46°		
MER	-63° -17° ▼	-24°	
	-12°		9°

# **LEAD LEG KNEE FLEXION**





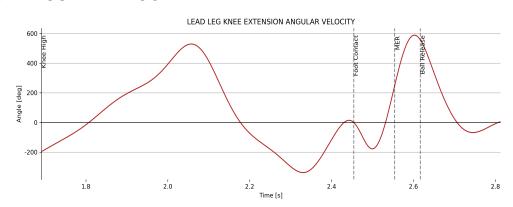
### **Lead Leg Knee Flexion**

at Foot C	Contact	at Max ER		Max	Max Timing [BC - FC (100%)]
45	; 	48		52	46 %
FC		45°			
	39°		66° 48°		
MER			<b>T</b>		

# LEAD LEG KNEE EXTENSION ANGULAR VELOCITY

35°





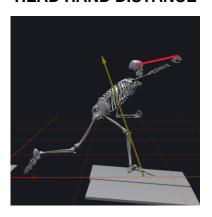
57°

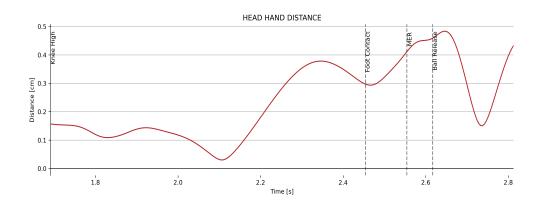
# Lead Leg Knee Extension Angular Velocity

at N	Max ER	Max	Max Timing [BC - FC (100%)]
	249	589	92 %
MAX			589°/s
	218°/s	502	2°/s

# **Arm acceleration**

# **HEAD HAND DISTANCE**



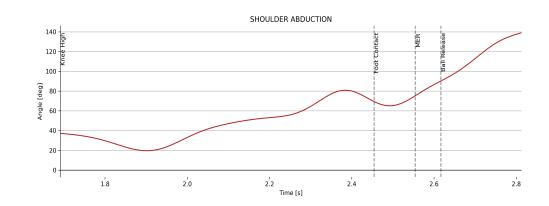


# head\_hand\_distance

at Ball Release	
0.46	

# **SHOULDER ABDUCTION**



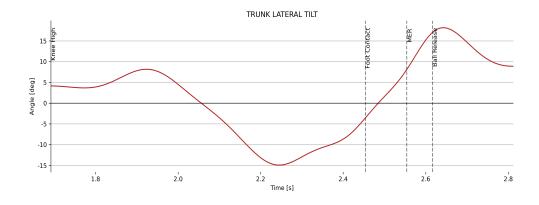


### **Shoulder Abduction**

at Ball Release	Max	Max Timing [BC - FC (100%)]
90	90	100 %
BR	90°	
	81°	99°

# TRUNK LATERAL TILT

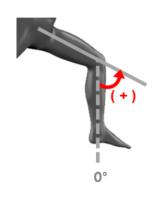


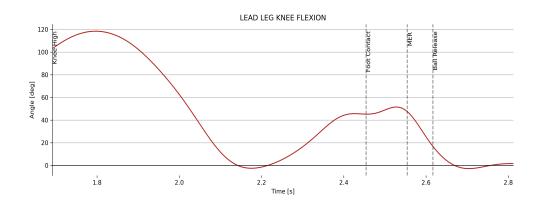


#### **Trunk Lateral Tilt**

at Ball Release	Max	Max Timing [BC - FC (100%)]
17	17	100 %
BR	17°	
	9° 23°	

# **LEAD LEG KNEE FLEXION**



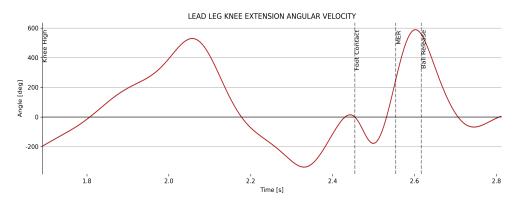


# **Lead Leg Knee Flexion**

	at Ball Release	Max	Max Timing [BC - FC (100%)]
	17	52	46 %
BR	17°		
	25°	53°	

# LEAD LEG KNEE EXTENSION ANGULAR VELOCITY





# Lead Leg Knee Extension Angular Velocity

at Ball Release	Max	Max Timing [BC - FC (100%)]
558	589	92 %