


Bike fitting comparison (Compact report)

Sports 3DMA OT Version 6.11 | Powered by STT SYSTEMS

FULL NAME Cycling and Bike Fitting, Samples		REPORT DATE 27/9/2018	STUDY PERFORMED BY: 
ANALYSIS PROTOCOL Capture 1: Bike fitting (full body) Capture 2: Bike fitting (full body)		BIKE	

3D Motion Capture: Technical details

CAPTURE 1				CAPTURE 2			
RECORDING DATE	DATA SAMPLING RATE	RECORDING TIME	AVG CADENCE	RECORDING DATE	DATA SAMPLING RATE	RECORDING TIME	AVG CADENCE
Mon Nov 27 22:23:44 2017	50 Hz (frames/sec.)	10 sec.	73 rpm Min: 71 rpm Max: 76 rpm	Mon Nov 27 22:23:44 2017	50 Hz (frames/sec.)	24.1 sec.	64 rpm Min: 59 rpm Max: 67 rpm

	Capture 1 Left		Capture 2 Left		Capture 1 Right		Capture 2 Right		
	Min	Max	Min	Max	Min	Max	Min	Max	
FEET & ANKLES									
Foot Rotation	-2°	-0°	-1°	2°	-0°	1°	3°	4°	
Ankle Flexion	73°	99°	76°	92°	81°	105°	77°	98°	
Ankle Flex at 0°	75°		79°		81°		80°		
Ankle Flexion at 90°	76°		80°		83°		82°		
Ankle Flexion at 180°	99°		92°		105°		97°		
Ankle Flexion at 270°	90°		86°		94°		87°		
Crank at Max Ankle Flex Ext	181 mm		189 mm		172 mm		179 mm		
Crank at Min Ankle Flex Ext	48 mm		64 mm		78 mm		46 mm		
Ankle to GT Lateral Oscillation	17°	23°	10°	23°	0°	11°	17°	36°	

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KNEES

Knee Flexion	71 °	143 °	77 °	146 °	72 °	148 °	76 °	149 °
Knee Lateral Oscillation	24 mm		26 mm		23 mm		25 mm	
Knee to M5 Lateral Oscillation	3 mm	25 mm	22 mm	36 mm	7 mm	31 mm	-4 mm	37 mm
KOPS Distance	29 mm		-75 mm		22 mm		-65 mm	
Knee GT Lateral Oscillation	-26 mm	-6 mm	-37 mm	-14 mm	-36 mm	-14 mm	-46 mm	-17 mm

HIPS

Hip Flexion	129 °	170 °	115 °	159 °	127 °	173 °	117 °	166 °
Hips Height Difference	-11 mm		9 mm		11 mm		-9 mm	
Hip Vertical Oscillation	57 mm		59 mm		50 mm		59 mm	
GT-M5 Lateral Distance	-0 mm		15 mm		13 mm		14 mm	
Hip Setback		80 °				74 °		

PELVIS

	Min	Avg	Max		Min	Avg	Max
Pelvis Rotation	-1 °	1 °	2 °		-3 °	-2 °	-1 °
Pelvis Fore-Aft Swing		7 mm				10 mm	
Pelvis Vertical Swing		4 mm				5 mm	

TRUNK

Hip to shoulder tilt	39 °	43 °	55 °	58 °	37 °	41 °	56 °	59 °
Knee-Hip-Shoulder	64 °	107 °	73 °	118 °	62 °	108 °	77 °	125 °
Lumbar Segment Tilt		55 °				67 °		
Torso (Sacrum-Neck) Tilt		37 °				45 °		
Hip-Wrist Absolute Distance	670 mm		635 mm		668 mm		596 mm	
Hip-Wrist Vertical Distance	160 mm		114 mm		163 mm		109 mm	
Hip-Wrist Horizontal Distance	650 mm		622 mm		648 mm		586 mm	

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SHOULDERS

Shoulder Flexion	76°			75°			77°		78°
Hip-Shoulder-Elbow	70°	70°	61°	61°	72°		77°	63°	68°
Hip-Shoulder-Wrist	74°	81°	64°	70°	77°		81°	63°	70°
Shoulder Height Difference	11 mm			34 mm			-11 mm		-34 mm
Shoulder For/Back		6 mm					5 mm		

AMRS

Elbow Flexion	163°			165°			162°		176°
Forearm Tilt	56°			51°			55°		54°
Arm vs Sagittal Plane	7°	9°	4°	8°	7°		10°	0°	4°
Wrist-Shoulder Lateral Oscillation	15 mm			4 mm			27 mm		31 mm
Wrist-Elbow Lateral Oscillation	27 mm			34 mm			22 mm		-19 mm

COG

Aeroposterior movement		3 mm					-107 mm		
Lateral movement		-9 mm					40 mm		
Vertical movement		1159 mm					1176 mm		

ANTHROPOMETRY

Trochanter-Knee	423 mm			424 mm			422 mm		445 mm
Knee-Ankle	438 mm			427 mm			445 mm		415 mm
Shoulder-Elbow	295 mm			368 mm			319 mm		342 mm
Elbow-Wrist	276 mm			275 mm			236 mm		262 mm
Sacrum-Neck		600 mm					550 mm		

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