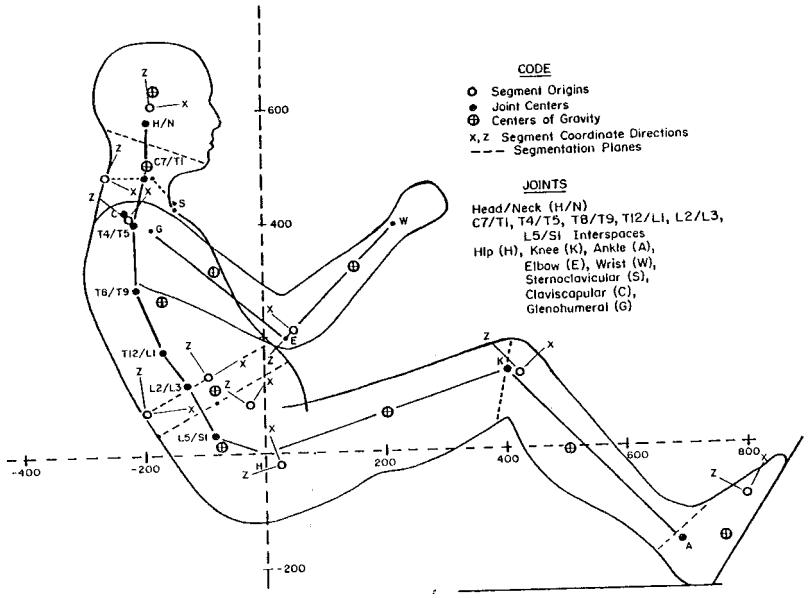
Dimension	PS 119R2	Robbins UMTRI Study	
Distance between ankle joint center and knee joint center (mm)	---	**412.69**	
Distance between bottom of foot and ankle joint center (mm)	---	**70.7**	* UMTRI report says
Total length from bottom of foot to knee joint center (mm)	**493 +/- 5**	**483.39**	seated position = 80 mm
Distance between hip joint center and knee joint center (mm)	**428 +/- 5**	**428.17**	standing = 70.7 mm (more force on foot)
Femur center of gravity from knee joint center (mm)	**218 +/- 10**	**218**	
Tibia **only** center of gravity from knee joint center (mm)	---	**172**	
Tibia**+foot** center of gravity from knee joint center (mm)	**233 +/- 10**	**241**	
Femur mass including skin and foam (kg)	**8.6 +/- 0.1**	**8.61**	
Tibia **only** mass including skin and foam (kg)	---	**3.59**	
Tibia**+foot** mass including skin and foam (kg)	**4.8 +/- 0.1**	**4.57**	
Total leg mass (kg)	**13.4 +/- 0.1**	**13.18**	
Moment of inertia around y axis of tibia (kg-m^2)	**0.120 +/- 0.001**	**0.054**	* UMTRI report is with
Moment of inertia around y axis of femur (kg-m^2)	**0.127 +/- 0.002**	**0.132**	respect to segment CG



Center of Gravity WRT Whole Body Coordinate System (Hip pivot)	X	Y	Z	sqrt X^2+Z^2
Upper Leg (mm)	200	131	64	209.99
Lower Leg (mm)	504	125	-5	504.02
Foot (mm)	763	110	-164	780.43

Joint Center WRT Whole Body Coordinate System (Hip pivot)	X	Y	Z	sqrt X^2+Z^2
Hip (mm)	0	82	0	0.00
Knee (mm)	406	138	136	**428.17**
Ankle (mm)	684	94	-169	704.57

CG WRT Relevant Joint Centers	X	Y	Z	sqrt X^2+Z^2
Upper Leg CG WRT Hip Pivot (mm)	200	49	64	209.99
Upper Leg CG WRT Knee Pivot (mm)	-206	-7	-72	**218.22**
Lower Leg CG WRT Knee Pivot (mm)	98	-13	-141	171.71
Lower Leg CG WRT Ankle Pivot (mm)	-180	31	164	243.51
Foot CG WRT Ankle Pivot (mm)	79	16	5	79.16

Predicted Principal Moment of Inertia WRT Segment CG	Ix	Iy	Iz
Upper Leg (kg-m^2)	0.1270	0.1340	0.0378
Lower Leg (kg-m^2)	0.0537	0.0545	0.0063
Foot (kg-m^2)	0.0009	0.0044	0.0046

Scaled Principal Moment of Inertia WRT Segment CG	Ix	Iy	Iz
Upper Leg (kg-m^2)	0.1230	0.1302	0.0367
Lower Leg (kg-m^2)	0.0520	0.0528	0.0061
Foot (kg-m^2)	0.0087	0.0043	0.0044

Average Principal Moment of Inertia WRT Segment CG	Ix	Iy	Iz
Upper Leg (kg-m^2)	0.1250	0.1321	0.0373
Lower Leg (kg-m^2)	0.0529	0.0537	0.0062
Foot (kg-m^2)	0.0048	0.0044	0.0045