

Source: American Industrial Hygiene Association Journal, 32:10, 633-652, 1971.

Abstract: Sitting as a working position is less fatiguing than standing and can, therefore, be maintained longer. It is also a more stable posture and allows better control of motions. Based on anthropometric and biomechanical data, design aspects of work seats as well as of foot rests, office equipment, consoles, work benches, machine stands, and the like are discussed. Recommended dimensions for such work stations are presented.

117. REPORT NUMBER/DATE	TITLE	AUTHOR(S)
AMRL-TR-71-88 August 1972 AD 754 224	Link System of the Human Torso	Snyder, R.G., D.B. Chaffin, & R.K. Schutz

Abstract: The objective of this study has been to develop a quantitative description of the mobility of the human torso. This has been accomplished by a systematic multidisciplinary investigation involving techniques of cadaver dissection, anthropometry, radiography and cinefluoroscopy, photogrammetric, and computer analysis. Seventy-two anthropometric dimensions were obtained on 28 male volunteers, including bone lengths of the extremities and vertebral landmarks. These subjects were statistically matched for both stature and weight to a 1967 USAF anthropometric survey of 2385 adult males. Both radiographs and photographs from different viewing angles were then taken of the subjects while they performed specific reach motions. Statistical regressions were obtained which describe how specific surface markers and bone reference points move in relation to the elbow position for both seated and standing subjects. The major results of the study are: (1) prediction equations and graphs depicting both surface marker and bone reference point locations for a large range of body positions and specific anthropometric variables, (2) prediction equations and graphs describing how the base of the spine reference point (fifth lumbar spinal surface marker) moves in relation to defined seated and standing reference points for given reaches, and (3) a statistical tabulation with illustrations of 72 anthropometric dimensions. It was found that the surface landmarks selected could predict precise locations of the underlying anatomical landmarks. Both the prediction equations and graphical results allow the construction of alternative linkage systems of the human torso for design purposes.

118. REPORT NUMBER/DATE	TITLE	AUTHOR(S)
AMRL-TR-71-102 January 1972 SAE Paper No. 720004 AD 735 015	Pedal Operation by the Seated Operator	Kroemer, K.H.E.

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