

Design & Manufacture

Homework 4

Anthropometric Data

A designer needs to make sure that the sizes chosen for a design are ergonomically correct. To do this the designer will look up anthropometric data.

The data is a series of tables showing measurements from all parts of the body, for men, women and children of various ages. A lot of people were measured and their results were pooled together to provide the data.

Most designers of popular products only consider 90% of the population, the smallest 5% and the largest 5% are not normally catered for, and rely upon specialist designs, e.g. shoes larger than size 14 are normally handmade to order and cost a lot of money.

To help tell the difference between the smallest 5% and largest 5%, anthropometric tables use the term percentiles instead of percentages and give three columns of information for each measurement.

e.g. For the standing height measurement of adult men 5th percentile - 5% of the population are 1644mm tall, or smaller

50th percentile - 50% (half) of the population will be 1753mm tall, or smaller.

95th percentile- 95% of the population will be 1861mm tall, or smaller.

An example of Anthropometric data is shown below:-

Measurement	Subject	5 th Percentile	50th Percentile	95th Percentile
standing height in mm	adult male	1644	1753	1861
	adult female	1517	1626	1734
handle diameter in mm	all adults	40	45	52

Explain What anthropometric data is use for?

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Explain why most designers of popular products only consider 90% of the population?

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Explain what is meant by the 5th percentile ?

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Explain what is meant by the 50th percentile ?

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Explain what is meant by the 95th percentile ?

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