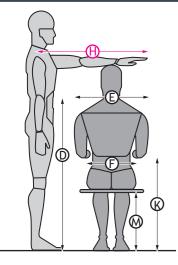
Design and Manufacture

Assignment

Name:

Research and specification pro forma — DESIGN BRIEF 2



### ANTHROPOMETRIC DATA

Standing and seated figures		Adult male			Adult female		
Н	Forward reach	5 <sup>th</sup>	50 <sup>th</sup>	95 <sup>th</sup>	5 <sup>th</sup>	50 <sup>th</sup>	95 <sup>th</sup>
		760	820	879	671	738	804

SOA

A key size to determine the maximum width of the surface that the baby can be on is the forward reach. I have selected the reach of the 5<sup>th</sup> adult female as this is the shortest and means almost everyone will be able to reach.

		Age in months						
		0-2	3–5	6-8	9-11	12-15	16-19	20-23
1.	Weight (lbs)	11.2	15.2	17.8	20.2	22.2	23.3	25.3
2.	Crown-sole length	22.5	25.2	27.4	29.2	30.6	31.7	33.0
3.	Crown-rump length	15.6	16.9	18.5	19.0	19.6	19.9	20.6
4.	Head circumference	15.4	16.7	17.5	18.2	18.6	18.7	19.1
5.	Head breadth	4.2	4.6	4.7	4.9	5.1	5.1	5.2
6.	Head length	5.4	5.8	6.2	6.4	6.7	6.7	6.8
7.	Shoulder breadth	6.7	7.5	8.1	8.4	8.5	8.7	9.0
8.	Shoulder elbow length	4.4	4.9	5.2	5.8	6.0	6.2	6.5
9.	Upper arm circumference	4.7	5.2	5.6	5.9	5.8	5.9	6.0
10.	Elbow-hand length	6.0	6.5	7.2	7.8	8.0	8.3	8.6
11.	Forearm circumference	4.7	5.2	5.6	5.7	58	5.8	5.9
12.	Wrist circumference	3.6	4.1	4.2	4.3	4.4	4.3	4.4
13.	Hand length	2.7	3.0	3.2	3.6	3.7	3.7	3.8
14.	Hand breadth	1.5	1.6	1.7	1.8	1.8	1.8	1.9
15.	Minimum hand clearance	13.6	14.4	15.2	16.1	16.2	16.0	16.5
16.	Maximum fist breadth	1.7	1.8	2.0	2.0	2.1	2.2	2.2
17.	Chest circumference	14.8	16.2	17.4	18.0	18.5	18.7	19.1
18.	Chest breadth	4.9	5.5	5.9	6.4	6.3	6.3	6.5
19.	Waist circumference	13.8	15.2	16.1	16.2	16.6	17.2	17.8
20.	Waist breadth	4.6	5.0	5.4	5.6	5.7	5.8	6.0
21.	Rump sole length	9.2	10.2	12.0	13.5	14.2	15.0	16.2
22.	Rump knee length	5.6	6.4	6.9	7.7	8.0	8.5	9.0
23.	Hip circumference	14.7	16.2	16.3	17.9	18.6	19.1	19.0
24.	Hip breadth	5.3	5.7	6.4	6.6	6.7	6.8	6.8
25.	Mid thigh circumference	6.7	8.3	6.5	9.4	9.4	9.8	9.9
26.	Mid thigh depth	2.1	2.4	2.5	2.8	2.8	2.8	2.9
27.	Knee-sole length	6.0	6.6	7.2	8.3	8.3	8.6	9.2
28.	Calf circumference	5.5	6.2	6.8	7.2	7.2	7.2	7.6
29.	Ankle circumference	4.1	4.6	4.9	5.2	5.3	5.3	5.4
30.	Ankle breadth	1.2	1.4	1.4	1.5	1.6	1.6	1.8
31.	Foot length	3.3	3.5	4.0	4.4	4.9	4.8	5.0
32.	Foot breadth	1.4	1.5	1.7	1.9	2.0	2.0	2.1

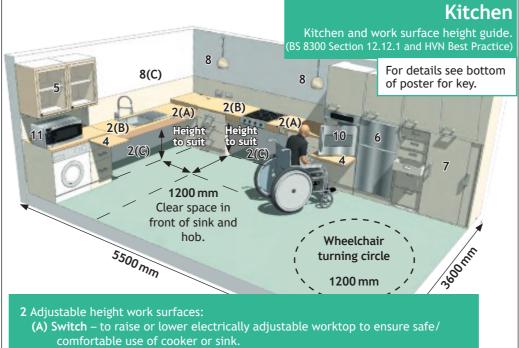
I found anthropometric sizes for up to age 2.

The key sizes here are the length and breadth of the biggest child. This is the 2-year-old. The maximum height is 33" = 338 mm. The maximum width is across hips and is 6.8" = 172 mm.

Note that these sizes do not include clothing.

#### INTERNET RESEARCH

There is no fixed or regulation height at which baby changing units should be fitted to. Most manufacturers agree that the height should be between 730 mm and 800 mm from the floor. This seems to be the most comfortable height for a number of users, male and female alike.



(B) Height – 760 mm minimum height of work surface specifically for wheelchair users. A work surface should not be more than 600 mm deep to allow wheelchair users to access the preparation area and to reach the back wall.
(C) Knee recess – 700 mm minimum clear height from floor to the underneath of work surface.

These are recommended sizes for kitchens suitable for wheelchair users. Some of these sizes can be applied to the changing pod:

Wheelchair turning circle — 1500 mm, height of worktop — min 760 mm, clearance height for knees — min 700 mm.

#### **AESTHETICS OF CENTRES**



I took a picture of the inside of the centre when I was interviewing the manager of my local store so that I would remember what the aesthetics were like.

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## Specification

The specification should include key points from the brief and research to detail the requirements of the proposal.

It should clarify aspects such as aesthetics, function, ergonomics, performance, and cost.

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