Clear Page

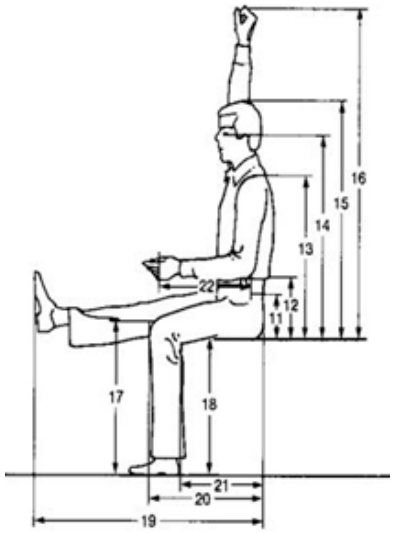
Anthropometry – Sit/Stand Workbench

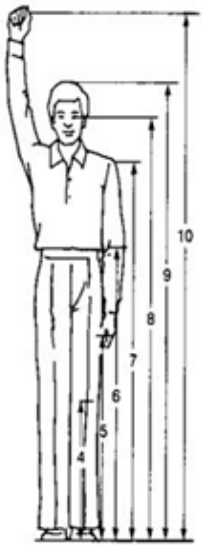
In the Anthropometry section in the manual we went through a case study where we determined the specifications for a standing height workbench (adjustable and fixed height).

In some other workstations we may want a workbench where the worker can sit and/or stand (sit/stand workbench). For this Exercise you will access the ***Anthropometry Reference Data Base.xlsm*** found in your training materials and generate the specifications for a sit/stand workbench.

Exercise – Sit/Stand Workbench

Reference Points





Thigh Clearance Height - Sit {11}	**Tibial Height {4}**
Elbow Rest Height - Sit {12}	**Knuckle Height - Stand {5}**
Mid-shoulder Height - Sit {13}	**Elbow Height - Stand {6}**
Eye Height - Sit {14}	**Shoulder Height - Stand {7}**
Sitting Height - Normal {15}	**Eye Height - Stand {8}**
Functional Overhead Reach - Sit {16}	**Stature {9}**
Knee Height - Sit {17}	**Functional Overhead Reach - Stand {10}**
Popliteal Height - Sit {18}	
Leg Length - Sit {19}	
Upper-Leg Length - Sit {20}	
Buttocks-to-Popliteal Length - Sit {21}	
Elbow-to-Fist Length {22}	

Background Information

Task – A workbench is being designed for a ***general assembly*** process.

User Population – *Diverse* user population (gender, stature, etc.).

Object Weight – Up to ***5#***.

Body Position – Assembly performed at ***elbow height*** from ***either seated or standing*** positions.

Reference Points – Select the Dimensions of Interest in the Reference Points.

Homework Tip – You may need to add together segment lengths to determine the needed Reference Points.

Seated

Dimension(s) of Interest (Enter in the box)

Elbow Rest Height - Sit (12)
Popliteal Height - Sit (18)

Adult Population Mix (%) (enter number)

Men 0 Women 100

Design Exclusion (%) (enter number)

Find Values – Click on ***Find Value***s in the spreadsheet to perform the calculation

Results (enter calculated seated workbench height) 7.2 + 14.9 + 22.1

Standing

Dimension(s) of Interest (Enter in the box)

Elbow Height - Stand (5)

Adult Population Mix (%) (enter number)

Men 100 Women 0

Design Exclusion (%) (enter number)

Find Values – Click on ***Find Value***s in the spreadsheet to perform the calculation

Results (enter calculated standing workbench height) 46.5