Ergonomic Assessment

By Brendan Grimes
Certified Professional Ergonomist

J.Burrows Matrix Multi-Function Tilt Chair

JBMATSSBK

Suited for whole population in perch position.

*provided seat base measurement is met. See page 2 for guidance.

ADJUSTABLE CHAIR TILT

FLIP-BACK ARMRESTS

160KG
WEIGHT CAPACITY

Summary

A drafting chair designed for home use rather than commercial. With a range of sitting/standing options, it could be used for 3-4 hours, but most people would not be able to use it in a full sitting position. Most of the population would be able to use the chair in the 'perch' or sit/stand position. The seat is well upholstered and has good fittings.

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AS/NZS 4438:1997 compliance[1] – No
AFRDI Rating[2] – Not rated for commercial use

Posture Support

Mesh seat and backrest allow for more conventional sitting comfort and support, as well as a sit-stand position, where the seat allows the user to lean against the chair more than sit, while in a standing position, designed for drafting workstations which are typically higher than normal computer desks. The seat base has a reasonable foam base (70mm) of moulded foam, which is soft but supportive.

Adjustability

The seat height can be adjusted from 565mm to 815mm, designed more as a drafting sit-stand chair. The seat tilts forward about 70mm encouraging the 'perch' position if desired. Anti-roll safety castors automatically brake when weight is applied to the chair, so it does not roll. The seat can be reclined, but there is only one setting to lock the chair into place (in an upright position). The seat recline has tension control. The armrests can be moved in line with the backrest or set down beside the user. When 'engaged', they are 195mm above the seat height. All controls are easy to operate and accessible whilst sitting in the seat.

Stability

It appears reasonably strong and stable, but negligible sidways and back and forward movement are evident. This chair has a 160kg weight capacity, which means it is capable of withstanding heavy individuals. The chair is on a 5-castor hard plastic and steel pedestal base and pillar, which is strong and stable.

Upholstery, Covering, Corners and Edges

The seat and seat base are good quality nylon mesh and foam base. The corners and edges are well-rounded and smooth. There are no sharp projections, sharp edges or rough surfaces evident. Edges accessible to users are rounded with a minimum radius of 2mm. The ends and feet of tubular metal components are capped/closed and finished smoothly. It appears to have adequate air/water vapour permeability, except where non-permeability is required for hygiene or ease of cleaning. The foam thickness is reasonable.

Dimensional Requirements / Anthropometrics[3]

Seat height adjustment from 565-815mm. There is no rim on the stem, so it would make it difficult for most users to use in a full sitting position (unless they were over 200cm). Effectively the whole population should be able to use the chair in the 'perch' position. Seat depth is 450mm, suitable for people with a measurement of 490mm or more from their buttocks to the back of the knee (see note on Seat Depth measurement below). The width of the seat base is 500mm, and the width between the armrests is 480mm, essentially accommodating the whole population (at least 95%). Armrests are fixed at 195mm when in an engaged position. The backrest height at 500mm and 470mm wide is a medium backrest, essentially suitable for the whole population.

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Seat Depth
While seated, measure from your buttock to the back of your knee, then subtract 40mm.

1 AS/NZS 4438:1997 Height-adjustable swivel chairs: Relevant standard for adjustable swivel office chairs. 2 AFRDI Rating: Rated by Australasian Furnishing Research & Development Institute Limited, independent tester/certifier of furniture products. Blue Tick Certification ensures stability, durability, ergonomic dimensions, safety and strength and ignition mitigation sources. Green Tick Certification means material is sustainably sourced, requires low operating energy, waste is minimised during production and the ability to recycle components at end of life of product is maximised. 3 Anthropometrics: Based on data from S Pheasant, Bodyspace, Anthropometry, Ergonomics and Design, 1988; World Engineering Anthropometry Resource.