ASPREX Fact Sheet

Braille writing equipment

Manual device for writing Braille on embossed paper. It is composed of a slate and a stylus. The slate is a metal or plastic surface with evenly spaced rectangular holes representing the dots of braille characters; its size may vary from four-lines or six-lines, for small portable slates; a higher number of lines can be achieved by using slates that can be moved down a wood or metal or plastic clip board.

The stylus is available in different shapes and sizes to accommodate different users. Braille can be described as a tactile writing system designed for people with visual impairment; it is a combination of raised dots in different patterns, where each pattern represents an alphabet character or a number, which people with blindness or low vision can touch with their fingers to read and understand.

- Product Classification
  - APL (WHO Assistive Product Priority List): 4 (Braille writing equipment/braillers)
  - ISO 9999:2022: 221327 (Manual Braille writing equipment)
- Possible configuration variants

  None specified.
- Possible accessories or optional components
  - Wooden eraser.
  - Case for the slate (including a pocket for the stylus).
- Product goals

  Activities or functions the product is mainly intended to support, according to WHO ICF Classification:
  - Writing [d170].
- Indicated impairments

  Difficulties the product is mainly intended to address, according to the WHO ICF Classification:
  - Seeing [b210] (blindness).
- Contraindicated impairments

  Difficulties for which the product may be inappropriate:
  - Difficulty in fine hand use.
- Indicated environments

  Specific environments in which the product should be used:
  None specified.
- Contraindicated environments

  Environments in which the product may be inappropriate:
  None specified.
- Other indicated factors

  Other factors or situations the product is intended to address:
  - Situations where writing short notes in Braille as fast as possible is required.
  - Writing in Braille.
- Other contraindicated factors

  Other factors or situations in which the product may be inappropriate:
  - Unfamiliarity with writing and reading braille.
  - Writing books (as it would take too long).
- Points to be considered in product selection

- The product is unsuitable for producing graphics.
- The product is unsuitable for writing mathematical or scientific expressions.
- Braille transcription services are limited as trained professionals are required who know braille and are also able to use braille writing devices.
- Consider intellectual property issues when transcribing books to braille in the field of education.
- Consider if an embosser would be more helpful than a manual Braille writing device; embossers are faster and more efficient than Braille press.
- The product is not suitable for mass production of braille. This can be best achieved by means of braille press or embossers; both techniques are used to print two-sided braille documents and books on large scale. The braille press is an expensive method, as plates must be developed for each side of a document, and skilled personnel is needed. Conversely, embossers work by receiving input from computer software and can print on pages of different weights (nearly one thousand pages within an hour).

- Points to be considered in product fitting
  - Braille writing devices are difficult to use for people who lost their vision at a later age.
  - Users need a comprehensive training to learn braille; even though they can benefit of screen readers that can read the braille to them, they still need to learn using notetakers to be able to write first.
  - Braille backward writing (right to left) may be hard to learn for some people.
  - A well-structured training should be provided to users to learn writing braille.
- Points to be considered in product use
  - A comprehensive training is required when teaching people, especially children, how to manage their braille equipment.
  - Users must understand learn how to insert paper in the frame, how to hold the stylus, how to move the paper over the board, and how they can locate the braille cell with the tip of the stylus to punch it.
  - In order to write braille, a special paper is needed that may not be easily available everywhere.
  - Users must keep the equipment safe from falling.
- Points to be considered in product maintenance / follow-up
  - Due to their portability, the braille slate and stylus may get lost during movement, or get damaged after falling, especially if the equipment is made of plastic.
  - The maintenance and repair of braille writing equipment is expensive and requires trained technicians.
- Examples of products available on the market
  - Live product search on the EASTIN website https://www.eastin.eu/en/searches/products/list?iso=221327

Source

This Fact Sheet was compiled in 2021 by an international team of experts, to provide the initial knowledge base for a project ("An online system to assist the selection of assistive product") supported by the World Health Organization in 2020-2021 within the GATE Initiative (Global collaboration on Assistive Product). Fact Sheets were compiled for each of the 50 types of products included in the WHO APL (Assistive Product Priority List).

The team was composed of Renzo Andrich (Italy, group leader), Natasha Layton (Australia), Stefan von Prondzinski (Italy), Jerry Weisman (USA), Silvana Contepomi (Argentina) and Hasan Minto (Pakistan).

The project led to a prototype online tool called ASPREX (ASsistive PRoduct EXplorer). At the end of the project, it was transferred to a WHO collaborating center (the Global Disability Hub in the UK), in view of possible future developments.