

# ISO 7176-5:2008-06 (E)

## Wheelchairs - Part 5: Determination of dimensions, mass and manoeuvring space

---

| <b>Contents</b>    |   | <b>Page</b> |
|--------------------|---|-------------|
| Foreword .....     |   | v           |
| Introduction ..... |   | vii         |
| 1                  | Scope .....   | 1           |
| 2                  | Normative references .....                          | 1           |
| 3                  | Terms and definitions .....                         | 2           |
| 4                  | Wheelchair classes and occupant mass groups .....   | 22          |
| 4.1                | General .....                                       | 22          |
| 4.2                | Classes of electrically powered wheelchairs .....   | 22          |
| 4.3                | Occupant mass groups .....                          | 22          |
| 5                  | Test apparatus .....                                | 22          |
| 6                  | Selection of the test wheelchair .....              | 26          |
| 7                  | Preparation of the test wheelchair .....            | 27          |
| 7.1                | General .....                                       | 27          |
| 7.2                | Wheelchair equipment .....                          | 27          |
| 7.3                | Wheelchair adjustment .....                         | 27          |
| 7.4                | Final check .....                                   | 32          |
| 7.5                | Positioning .....                                   | 32          |
| 7.6                | Loading of the wheelchair .....                     | 32          |
| 7.7                | Records .....                                       | 34          |
| 7.8                | Use of hand space gauge and foot space gauges ..... | 34          |
| 7.9                | Wheel rotation .....                                | 34          |
| 7.10               | Asymmetrical design of test wheelchair .....        | 35          |
| 8                  | Required measurements .....                         | 35          |
| 8.1                | General .....                                       | 35          |
| 8.2                | Full overall length .....                           | 36          |
| 8.3                | Overall width .....                                 | 36          |
| 8.4                | Handgrip height .....                               | 36          |
| 8.5                | Stowage length .....                                | 36          |
| 8.6                | Stowage width .....                                 | 37          |
| 8.7                | Stowage height .....                                | 37          |
| 8.8                | Rising .....  | 37          |
| 8.9                | Total mass .....                                    | 37          |
| 8.10               | Mass of heaviest part .....                         | 37          |
| 8.11               | Pivot width .....                                   | 38          |
| 8.12               | Reversing width .....                               | 38          |
| 8.13               | Turning diameter .....                              | 38          |
| 8.14               | Ground clearance .....                              | 39          |
| 8.15               | Required width of angled corridor .....             | 39          |
| 8.16               | Required doorway entry depth .....                  | 39          |
| 8.17               | Required corridor width for side opening .....      | 39          |
| 9                  | Disclosure of information .....                     | 41          |
| 9.1                | General .....                                       | 41          |

|             |   |           |
|-------------|---|-----------|
| <b>9.2</b>  | <b>Wheelchairs with handrims .....</b>  | <b>41</b> |
| <b>9.3</b>  | <b>Wheelchairs without handrims .....</b>   | <b>41</b> |
| <b>10</b>   | <b>Test report .....</b>  | <b>42</b> |
| <b>10.1</b> | <b>Requirements .....</b>   | <b>42</b> |
| <b>10.2</b> | <b>Recommendations .....</b>  | <b>43</b> |
|             | <b>Annex A (informative) Technical dimensions .....</b>   | <b>45</b> |
|             | <b>Annex B (informative) Pivot width and reversing width .....</b>                                    | <b>59</b> |
|             | <b>Annex C (informative) Turning diameter .....</b>   | <b>69</b> |
|             | <b>Annex D (informative) Wheelchair longitudinal axis and wheelchair centre-point .....</b>           | <b>74</b> |
|             | <b>Annex E (informative) Guidelines and recommendations for wheelchair design and performance ...</b> | <b>75</b> |
|             | <b>Bibliography .....</b>   | <b>79</b> |