DIN EN ISO 13857:2020-04 (E)

Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)

Contents

Page

European foreword ... **3**

Annex ZA (informative) **Relationship between this European Standard and the essential requirements of EU Directive 2006/42/EC aimed to be covered** ... **4**

Foreword ... **6**

Introduction ... **7**

1 Scope ... **8**

2 Normative references ... **8**

3 Terms and definitions ... **8**

4 Safety distances to prevent reach or access by upper and lower limbs ... **9**

4.1 General ... 9

4.1.1 Assumptions ... 9

4.1.2 Risk assessment ... 9

4.2 Safety distances to prevent access by upper limbs ... 10

4.2.1 Reaching upwards ... 10

4.2.2 Reaching over protective structures ... 11

4.2.3 Reaching around ... 13

4.2.4 Reaching through openings ... 15

4.2.5 Effect of additional protective structures on safety distances ... 17

4.3 Safety distances to prevent access by lower limbs ... 18

4.4 Consideration of whole body access ... 20

Annex A (informative) **Use of Tables 1 and 2 with intermediate values** ... **21**

Annex B (informative) **Distances to impede free access by lower limbs** ... **25**

Bibliography ... **27**