

DIN EN 12984:2011-02 (E)

Food processing machinery - Portable and/or hand-guided machines and appliances with mechanically driven cutting tools - Safety and hygiene requirements (includes Amendment A1:2010)

| Contents | Page |
|--|-------------|
| Foreword | 4 |
| Introduction | 5 |
| 1 Scope | 6 |
| 2 Normative references | 9 |
| 3 Terms and definitions | 10 |
| 4 List of significant hazards | 10 |
| 4.1 General | 10 |
| 4.2 Mechanical hazards | 10 |
| 4.3 Electrical hazards | 11 |
| 4.4 Hydraulic/pneumatic hazards | 11 |
| 4.5 Noise hazards | 11 |
| 4.6 Vibration hazards | 11 |
| 4.7 Hazards from non-compliance with ergonomic principles | 11 |
| 4.8 Hazard from non-compliance with hygiene principles | 11 |
| 5 Safety and hygiene requirements and/or protective measures | 12 |
| 5.1 General | 12 |
| 5.2 Mechanical hazards | 12 |
| 5.3 Electrical hazards | 15 |
| 5.4 Hydraulic and pneumatic hazards | 15 |
| 5.5 Noise | 16 |
| 5.6 Vibrations | 16 |
| 5.7 Ergonomic requirements | 16 |
| 5.8 Hygiene and cleaning | 16 |
| 6 Verification of safety and hygiene requirements and/or protective measures | 17 |
| 7 Information for use | 19 |
| 7.1 General | 19 |
| 7.2 Operating instructions | 19 |
| 7.3 Training of operators | 21 |
| 7.4 Marking | 21 |
| Annex A (normative) Design principles to ensure cleanability of portable and/or hand-operated machines and appliances equipped with mechanically driven cutting tools | 22 |
| Annex B (normative) Common hazards for food processing machines and reduction requirements applicable to portable and/or hand-operated machines | 28 |
| Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC" | 30 |
| Bibliography | 31 |

| | |
|---|----|
| Figures Figure 1 -- Cutting saw | 6 |
| Figure 2 -- Leg saw, horn saw | 6 |
| Figure 3 -- Sternum saw | 7 |
| Figure 4 -- Reciprocating saw | 7 |
| Figure 5 -- Band saw for carcasses | 7 |
| Figure 6 -- Pincer/shear | 7 |
| Figure 7 -- Pincer for cutting the feet of pigs/shear | 7 |
| Figure 8 -- Derinder | 8 |
| Figure 9 -- Flexible driven circular knife | 8 |
| Figure 10 -- Fixed guard on circular saws | 13 |
| Figure 11 -- Fixed guard on horn or leg saws | 13 |
| Figure 12 -- Fixed guard (spacer) on shear for cutting the feet of pigs | 14 |
| Figure 13 -- Cutting saw | 17 |
| Figure 14 -- Leg saw, horn saw | 17 |
| Figure 15 -- Sternum saw | 17 |
| Figure 16 -- Reciprocating saw | 17 |
| Figure 17 -- Band saw for carcasses | 17 |
| Figure 18 -- Horn, leg shear | 17 |
| Figure 19 -- Shear for cutting the feet of pigs | 17 |
| Figure 20 -- Derinder | 17 |
| Figure A.1 -- Smooth surfaces - food area | 23 |
| Figure A.2 -- Angles and radii in the food area | 24 |
| Figure A.3 -- Angles in the food area | 24 |
| Figure A.4 -- Intersecting surfaces in the food area | 25 |
| Figure A.5 -- Admissible fasteners - head profiles | 26 |