

# DIN EN 1870-9:2013-01 (E)

## Safety of woodworking machines - Circular sawing machines - Part 9: Double blade circular sawing machines for cross-cutting with integrated feed and with manual loading and/or unloading

---

| <b>Contents</b>    |   | <b>Page</b> |
|--------------------|---|-------------|
| Foreword .....     |   | 4           |
| Introduction ..... |   | 6           |
| 1                  | Scope .....   | 7           |
| 2                  | Normative references .....  | 7           |
| 3                  | Terms and definitions .....   | 9           |
| 3.1                | General .....   | 9           |
| 3.2                | Definitions .....   | 9           |
| 4                  | List of significant hazards .....                                   | 11          |
| 5                  | Safety requirements and/or measures .....                           | 13          |
| 5.1                | General .....   | 13          |
| 5.2                | Controls .....  | 13          |
| 5.2.1              | Safety and reliability of control systems .....                     | 13          |
| 5.2.2              | Position of controls .....  | 14          |
| 5.2.3              | Starting .....  | 15          |
| 5.2.4              | Normal stopping .....   | 15          |
| 5.2.5              | Emergency stop .....  | 16          |
| 5.2.6              | Failure of the power supply .....                                   | 16          |
| 5.3                | Protection against mechanical hazards .....                         | 17          |
| 5.3.1              | Stability .....   | 17          |
| 5.3.2              | Risk of break-up during operation .....                             | 17          |
| 5.3.3              | Tool holder and tool design .....                                   | 17          |
| 5.3.4              | Braking .....   | 19          |
| 5.3.5              | Devices to minimise the possibility or the effect of ejection ..... | 20          |
| 5.3.6              | Workpiece supports and guides .....                                 | 20          |
| 5.3.7              | Prevention of access to moving parts .....                          | 21          |
| 5.3.8              | Clamping devices .....  | 27          |
| 5.4                | Protection against non-mechanical hazards .....                     | 28          |
| 5.4.1              | Fire .....  | 28          |
| 5.4.2              | Noise .....   | 28          |
| 5.4.3              | Emission of chips and dust .....                                    | 29          |
| 5.4.4              | Electricity .....   | 30          |
| 5.4.5              | Ergonomics and Handling .....                                       | 30          |
| 5.4.6              | Lighting .....  | 31          |
| 5.4.7              | Pneumatic .....   | 31          |
| 5.4.8              | Hydraulic .....   | 31          |
| 5.4.9              | Laser .....   | 31          |
| 5.4.10             | Errors of fitting .....   | 31          |
| 5.4.11             | Isolation .....   | 31          |
| 5.4.12             | Maintenance .....   | 32          |
| 6                  | Information for use .....   | 32          |
| 6.1                | General .....   | 32          |
| 6.2                | Warnings and warning devices .....                                  | 32          |

|   |                                      |    |
|---|--------------------------------------|----|
| 6.3   | Marking of the machine .....         | 33 |
| 6.4   | Instruction handbook .....           | 33 |
| Annex A (normative) Dimensional tolerances of saw spindles .....  |                                      | 37 |
| Annex B (normative) Braking tests .....   |                                      | 38 |
| B.1   | Conditions for all tests .....       | 38 |
| B.2   | Tests .....                          | 38 |
| B.2.1   | Un-braked run-down time .....        | 38 |
| B.2.2   | Braked run-down time .....           | 38 |
| Annex C (normative) Impact test method for guards .....   |                                      | 39 |
| C.1   | General .....                        | 39 |
| C.2   | Test method .....                    | 39 |
| C.2.1   | Preliminary remarks .....            | 39 |
| C.2.2   | Testing equipment .....              | 39 |
| C.2.3   | Projectile for guards .....          | 39 |
| C.2.4   | Sampling .....                       | 39 |
| C.2.5   | Test procedure .....                 | 39 |
| C.3   | Results .....                        | 40 |
| C.4   | Assessment .....                     | 40 |
| C.5   | Test report .....                    | 40 |
| C.6   | Test equipment for impact test ..... | 40 |
| Annex ZA (informative) Relationship between this European Standard and the Essential<br>Requirements of EU Directive 2006/42/EC ..... |                                      | 42 |
| Bibliography .....  |                                      | 43 |