

ISO 19085-7:2019 (E)

Woodworking machines — Safety — Part 7: Surface planing, thickness planing, combined surface/thickness planing machines

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	List of significant hazards
5	Safety requirements and measures for controls
5.1	Safety and reliability of control systems
5.2	Control devices
5.3	Start
5.4	Safe stops
5.4.1	General
5.4.2	Normal stop
5.4.3	Operational stop
5.4.4	Emergency stop
5.5	Braking function of tool spindles
5.6	Mode selection
5.7	Spindle speed changing
5.7.1	Spindle speed changing by changing belts on the pulleys
5.7.2	Spindle speed changing by incremental speed change motor
5.7.3	Infinitely variable speed change by frequency inverter
5.8	Failure of any power supply
5.9	Manual reset control
5.10	Enabling control
5.11	Machine moving part speed monitoring
5.12	Time delay
5.13	Power-operated adjustment of tables
6	Safety requirements and measures for protection against mechanical hazards
6.1	Stability
6.1.1	Stationary machines
6.1.2	Displaceable machines
6.2	Risk of break-up during operation
6.3	Tool holder and tool design
6.3.1	General
6.3.2	Spindle locking
6.3.3	Circular saw blade fixing device
6.3.4	Flange dimension for circular saw blades
6.4	Braking
6.4.1	Braking of tool spindles
6.4.2	Maximum run-down time
6.4.3	Brake release
6.5	Safeguards
6.5.1	Fixed guards
6.5.2	Interlocking moveable guards
6.5.2.1	General
6.5.2.2	Moveable guards with interlocking without guard locking

- 6.5.2.3 Moveable guards with interlocking and guard locking
 - 6.5.3 Hold-to-run control
 - 6.5.4 Two-hand control
 - 6.5.5 Electro-sensitive protective equipment (ESPE)
 - 6.5.6 Pressure sensitive protective equipment (PSPE)
 - 6.6 Prevention of access to moving parts
 - 6.6.1 General
 - 6.6.2 Guarding of tools
 - 6.6.2.1 Cutterblock guarding during surface planing
 - 6.6.2.1.1 General
 - 6.6.2.1.2 Guarding above the surface planing tables
 - 6.6.2.1.2.1 Guarding at the front side of the fence
 - 6.6.2.1.2.2 Guarding at the rear of the fence
 - 6.6.2.1.3 Guarding below the surface planing tables
 - 6.6.2.2 Guarding the cutterblock and the feed mechanism during thickness planing
 - 6.6.2.3 Guarding during mortising
 - 6.6.3 Guarding of drives
 - 6.6.4 Guarding of shearing and/or crushing zones
 - 6.7 Impact hazard
 - 6.8 Clamping devices
 - 6.9 Measures against ejection
 - 6.9.1 General
 - 6.9.2 Guards material and characteristics
 - 6.9.2.1 Choice of class of guards
 - 6.9.2.2 Guards of class A
 - 6.9.2.3 Guards of class B
 - 6.9.3 Anti-kickback devices
- 6.10 Work-piece supports and guides
 - 6.10.1 General
 - 6.10.2 Surface planing tables
 - 6.10.3 Thicknessing table
 - 6.10.4 Mortising table
 - 6.10.5 Work-piece guiding during surface planing
 - 6.10.6 Work-piece guiding during thickness planing
- 6.11 Safety appliances

7 Safety requirements and measures for protection against other hazards

- 7.1 Fire
- 7.2 Noise
 - 7.2.1 Noise reduction at the design stage
 - 7.2.2 Noise emission measurement
- 7.3 Emission of chips and dust
- 7.4 Electricity
 - 7.4.1 General
 - 7.4.2 Displaceable machines
- 7.5 Ergonomics and handling
- 7.6 Lighting
- 7.7 Pneumatics
- 7.8 Hydraulics
- 7.9 Electromagnetic compatibility
- 7.10 Laser
- 7.11 Static electricity
- 7.12 Errors of fitting
- 7.13 Isolation
- 7.14 Maintenance

8 Information for use

- 8.1 Warning devices
- 8.2 Marking
 - 8.2.1 General
 - 8.2.2 Additional markings
- 8.3 Instruction handbook
 - 8.3.1 General
 - 8.3.2 Additional information

Annex A (informative) Performance levels required

Annex B (normative) Test for braking function

Annex C (normative) Stability test for displaceable machines

C.1 Stability test for surface planing machine and combined surface/thickness planing machine in surface planing mode

C.2 Stability test for combined surface/thickness planing machine in thicknessing mode

C.3 Stability test for thickness planing machine

Annex D (normative) Impact test for guards

Annex E (normative) Noise emission measurement for machines not in ISO 7960:1995

Annex F (normative) Tests for bridge-type guards

F.1 Compression test

F.2 Shock test

F.3 Strength test for bridge-type guard

Annex G (normative) Surface planing machines table lips resistance test

G.1 General

G.2 Work-piece

G.3 Measurements

G.4 Test

G.5 Result

Annex H (normative) Kickback test

Page count: 45