

DIN EN ISO 19085-15:2022-05 (E)

Woodworking machines - Safety - Part 15: Presses (ISO 19085-15:2021)

Contents		Page
European foreword		4
Annex ZA (informative) Relationship between this European Standard and the essential requirements of EU Directive 2006/42/EC aimed to be covered		5
Foreword		7
Introduction		8
1	Scope	10
2	Normative references	11
3	Terms and definitions	12
4	List of significant hazards	21
5	Safety requirements and measures for controls	23
5.1	Safety and reliability of control systems.....	23
5.2	Control devices.....	23
5.3	Start.....	24
5.4	Safe stops.....	24
5.4.1	General.....	24
5.4.2	Normal stop.....	24
5.4.3	Operational stop.....	25
5.4.4	Emergency stop.....	25
5.5	Braking function of tool spindles.....	25
5.6	Mode selection.....	25
5.7	Spindle speed changing.....	25
5.7.1	Spindle speed changing by changing belts on the pulleys.....	25
5.7.2	Spindle speed changing by incremental speed change motor.....	25
5.7.3	Infinitely variable speed by frequency inverter.....	25
5.8	Failure of any power supply.....	25
5.9	Manual reset control.....	26
5.10	Enabling control.....	26
5.11	Machine moving parts speed monitoring.....	26
5.12	Time delay.....	26
6	Safety requirements and measures for protection against mechanical hazards	26
6.1	Stability.....	26
6.1.1	General.....	26
6.1.2	Displaceable machines.....	27
6.2	Risk of break-up during operation.....	27
6.3	Tool holder and tool design.....	27
6.3.1	General.....	27
6.3.2	Spindle locking.....	27
6.3.3	Circular saw blade fixing devices.....	27
6.3.4	Flange dimensions for circular saw blades.....	28
6.4	Braking.....	28
6.4.1	Braking of tool spindles.....	28
6.4.2	Maximum run-down time.....	28
6.4.3	Brake release.....	28

6.5	Safeguards.....	28
6.5.1	Fixed guards.....	28
6.5.2	Interlocking moveable guards.....	28
6.5.3	Hold-to-run control.....	28
6.5.4	Two hand control.....	28
6.5.5	Electro-sensitive protective equipment (ESPE).....	28
6.5.6	Pressure sensitive protective equipment (PSPE).....	28
6.6	Prevention of access to moving parts.....	29
6.6.1	General.....	29
6.6.2	Guarding of tools.....	29
6.6.3	Guarding of drives.....	29
6.6.4	Guarding of shearing and/or crushing zones.....	29
6.7	Impact hazard.....	33
6.8	Clamping devices.....	33
6.9	Measures against ejection.....	34
6.9.1	General.....	34
6.9.2	Guards materials and characteristics.....	34
6.10	Work-piece support and guides.....	34
7	Safety requirements and measures for protection against other hazards.....	35
7.1	Fire.....	35
7.2	Noise.....	35
7.2.1	Noise reduction at the design stage.....	35
7.2.2	Noise emission measurement and declaration.....	36
7.3	Emission of chips and dust.....	36
7.4	Electricity.....	37
7.4.1	General.....	37
7.4.2	Displaceable machines.....	38
7.5	Ergonomics and handling.....	38
7.6	Lighting.....	38
7.7	Pneumatics.....	38
7.8	Hydraulics.....	38
7.9	Electromagnetic compatibility.....	38
7.10	Laser.....	38
7.11	Static electricity.....	38
7.12	Errors of fitting.....	38
7.13	Isolation.....	38
7.14	Maintenance.....	39
7.15	Extreme temperatures.....	39
8	Information for use.....	39
8.1	Warning devices.....	39
8.2	Marking.....	39
8.2.1	General.....	39
8.2.2	Additional markings.....	39
8.3	Instruction handbook.....	39
8.3.1	General.....	39
8.3.2	Additional information.....	40
	Annex A (informative) Performance level required.....	41
	Annex B (normative) Tests for braking function.....	42
	Annex C (normative) Stability test for displaceable machines.....	43
	Annex D (normative) Impact test for guards.....	44
	Annex E (normative) Noise test code.....	45
	Bibliography.....	51