

ISO 19085-15:2021-10 (E)

Woodworking machines - Safety - Part 15: Presses

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	2
3	Terms and definitions	3
4	List of significant hazards	12
5	Safety requirements and measures for controls	14
5.1	Safety and reliability of control systems	14
5.2	Control devices	14
5.3	Start	15
5.4	Safe stops	15
5.4.1	General	15
5.4.2	Normal stop	15
5.4.3	Operational stop	16
5.4.4	Emergency stop	16
5.5	Braking function of tool spindles	16
5.6	Mode selection	16
5.7	Spindle speed changing	16
5.7.1	Spindle speed changing by changing belts on the pulleys	16
5.7.2	Spindle speed changing by incremental speed change motor	16
5.7.3	Infinitely variable speed by frequency inverter	16
5.8	Failure of any power supply	16
5.9	Manual reset control	17
5.10	Enabling control	17
5.11	Machine moving parts speed monitoring	17
5.12	Time delay	17
6	Safety requirements and measures for protection against mechanical hazards	17
6.1	Stability	17
6.1.1	General	17
6.1.2	Displaceable machines	18
6.2	Risk of break-up during operation	18
6.3	Tool holder and tool design	18
6.3.1	General	18
6.3.2	Spindle locking	18
6.3.3	Circular saw blade fixing devices	18
6.3.4	Flange dimensions for circular saw blades	19
6.4	Braking	19
6.4.1	Braking of tool spindles	19
6.4.2	Maximum run-down time	19
6.4.3	Brake release	19
6.5	Safeguards	19
6.5.1	Fixed guards	19
6.5.2	Interlocking moveable guards	19
6.5.3	Hold-to-run control	19
6.5.4	Two hand control	19

6.5.5	Electro-sensitive protective equipment (ESPE)	19
6.5.6	Pressure sensitive protective equipment (PSPE)	19
6.6	Prevention of access to moving parts	20
6.6.1	General	20
6.6.2	Guarding of tools	20
6.6.3	Guarding of drives	20
6.6.4	Guarding of shearing and/or crushing zones	20
6.7	Impact hazard	24
6.8	Clamping devices	24
6.9	Measures against ejection	25
6.9.1	General	25
6.9.2	Guards materials and characteristics	25
6.10	Work-piece support and guides	25
7	Safety requirements and measures for protection against other hazards	26
7.1	Fire	26
7.2	Noise	26
7.2.1	Noise reduction at the design stage	26
7.2.2	Noise emission measurement and declaration	27
7.3	Emission of chips and dust	27
7.4	Electricity	28
7.4.1	General	28
7.4.2	Displaceable machines	29
7.5	Ergonomics and handling	29
7.6	Lighting	29
7.7	Pneumatics	29
7.8	Hydraulics	29
7.9	Electromagnetic compatibility	29
7.10	Laser	29
7.11	Static electricity	29
7.12	Errors of fitting	29
7.13	Isolation	29
7.14	Maintenance	30
7.15	Extreme temperatures	30
8	Information for use	30
8.1	Warning devices	30
8.2	Marking	30
8.2.1	General	30
8.2.2	Additional markings	30
8.3	Instruction handbook	30
8.3.1	General	30
8.3.2	Additional information	31
	Annex A (informative) Performance level required	32
	Annex B (normative) Tests for braking function	33
	Annex C (normative) Stability test for displaceable machines	34
	Annex D (normative) Impact test for guards	35
	Annex E (normative) Noise test code	36
	Bibliography	42