

# ISO 19085-17:2021-05 (E)

## Woodworking machines - Safety - Part 17: Edge banding machines fed by chains

---

<b>Contents</b>		<b>Page</b>
<b>Foreword</b>		<b>vi</b>
<b>Introduction</b>		<b>vii</b>
<b>1</b>	<b>Scope</b>	<b>1</b>
<b>2</b>	<b>Normative references</b>	<b>2</b>
<b>3</b>	<b>Terms and definitions</b>	<b>3</b>
<b>4</b>	<b>Safety requirements and measures for controls</b>	<b>9</b>
4.1	Safety and reliability of control systems	9
4.2	Control devices	9
4.3	Start	9
4.3.1	Direct start	9
4.3.2	Start via control power-on	10
4.3.3	Integrated feed	10
4.4	Safe stops	10
4.4.1	General	10
4.4.2	Normal stop	10
4.4.3	Operational stop	11
4.4.4	Emergency stop	11
4.5	Braking function of tools	11
4.6	Mode selection	11
4.6.1	Units' Manual adjustments mode (MODE 2)	12
4.6.2	Fine adjustment mode (MODE 3)	12
4.6.3	Feed chains greasing mode (MODE 4)	13
4.7	Tool speed changing	14
4.7.1	Speed changing by shifting the belts on the pulleys	14
4.7.2	Speed changing by incremental speed change motor	14
4.7.3	Infinitely variable speed by frequency inverter	14
4.8	Failure of any power supply	14
4.9	Manual reset control	14
4.10	Standstill detection and monitoring	14
4.11	Machine moving parts speed monitoring	14
4.12	Time delay	14
4.13	Teleservice	14
<b>5</b>	<b>Safety requirements and measures for protection against mechanical hazards</b>	<b>14</b>
5.1	Stability	14
5.2	Risk of break-up during operation	15
5.3	Tool and tool fixing design	15
5.3.1	General	15
5.3.2	Spindle locking	15
5.3.3	Circular saw blade fixing device	15
5.3.4	Flange dimension for circular saw blades	15
5.3.5	Spindle rings	15
5.4	Braking	16
5.4.1	Braking of tools	16
5.4.2	Maximum run-down time	16
5.4.3	Brake release	16
5.5	Safeguards	16
5.5.1	Fixed guards	16

5.5.2	Interlocking moveable guards.....	16
5.5.3	Hold-to-run control.....	17
5.5.4	Two-hand control.....	17
5.5.5	Electro-sensitive protective equipment (ESPE).....	17
5.5.6	Pressure-sensitive protective equipment (PSPE).....	17
5.5.7	Enabling control.....	17
5.6	Prevention of access to hazardous moving parts.....	17
5.6.1	Guarding of tools installed inside the integral enclosure.....	17
5.6.2	Guarding of external milling units.....	17
5.6.3	Guarding of sanding belts.....	18
5.6.4	Guarding of the edge banding zone.....	18
5.6.5	Access between machine halves on double-end machines.....	18
5.6.6	Access to hazard points through the slot between chain beam and top pressure beam.....	19
5.6.7	Guarding of drives.....	20
5.6.8	Safeguarding of the feed mechanisms.....	20
5.6.9	Safeguarding of machine half movement on double-end machines.....	23
5.7	Impact hazard.....	26
5.8	Clamping devices.....	26
5.9	Measures against ejection.....	26
5.9.1	General.....	26
5.9.2	Guards materials and characteristics.....	27
5.9.3	Devices to minimize ejection of rigid edges.....	27
5.9.4	Height adjustments of feed mechanism.....	28
5.10	Workpiece supports and guides.....	28
5.10.1	General.....	28
5.10.2	Additional workpiece support at the outfeed.....	28
5.10.3	Transversal infeed device.....	29
5.10.4	Automatic panel returner.....	29
<b>6</b>	<b>Safety requirements and measures for protection against other hazards.....</b>	<b>30</b>
6.1	Fire.....	30
6.2	Noise.....	31
6.2.1	Noise reduction at the design stage.....	31
6.2.2	Noise emission measurement and declaration.....	31
6.3	Emission of chips and dust.....	31
6.4	Electricity.....	31
6.5	Ergonomics and handling.....	31
6.6	Lighting.....	31
6.7	Pneumatics.....	31
6.8	Hydraulics.....	31
6.9	Electromagnetic compatibility.....	31
6.10	Laser.....	32
6.11	Static electricity.....	32
6.12	Errors of fitting.....	32
6.13	Isolation.....	32
6.14	Maintenance.....	32
6.15	Relevant but not significant hazards.....	32
6.16	Extreme temperatures.....	32
6.17	Substances.....	33
6.18	Artificial optical radiation.....	33
<b>7</b>	<b>Information for use.....</b>	<b>33</b>
7.1	Warning devices.....	33
7.2	Marking.....	33
7.2.1	General.....	33
7.2.2	Additional markings.....	33
7.3	Instruction handbook.....	34
7.3.1	General.....	34
7.3.2	Additional information.....	34

<b>Annex A (informative) List of significant hazards</b> .....	<b>36</b>
<b>Annex B (informative) Performance level required</b> .....	<b>38</b>
<b>Annex C (normative) Stability test</b> .....	<b>40</b>
<b>Annex D (normative) Test for braking function</b> .....	<b>41</b>
<b>Annex E (normative) Impact test for guards</b> .....	<b>42</b>
<b>Annex F (normative) Noise test code</b> .....	<b>43</b>
<b>Bibliography</b> .....	<b>48</b>