

# ISO 12643-3:2023-11 (E)

## Graphic technology - Safety requirements for graphic technology equipment and systems - Part 3: Binding and finishing equipment and systems

---

<b>Contents</b>		<b>Page</b>
Foreword		v
Introduction		vii
<b>1</b>	<b>Scope</b>	<b>1</b>
<b>2</b>	<b>Normative references</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions</b>	<b>1</b>
<b>4</b>	<b>Significant hazards</b>	<b>4</b>
<b>5</b>	<b>Guarding of significant hazards</b>	<b>4</b>
5.1	General	4
5.2	Interlocks	5
5.2.1	Interlocking with guard locking	5
5.2.2	Exception for machine motion at inching speed	6
5.2.3	Exception for machine motion at production speed	6
5.3	Guarding of hoppers and hopper feeders	6
5.3.1	Manually loaded hoppers	6
5.3.2	Guarding of automatically fed hoppers	6
5.3.3	Protection of unused hoppers and hopper feeders	7
5.3.4	Separating elements on hopper feeders	7
5.4	Guarding on binding and finishing machines	7
5.4.1	Hand-fed riveting, eyeletting and attaching machines	7
5.4.2	Hand-fed flat- and saddle-stitching machines	7
5.4.3	Gang stitchers and drum stitchers	8
5.4.4	Gathering machines	11
5.4.5	Perfect binders	13
5.4.6	Paper drills	15
5.4.7	Book signature presses	17
5.4.8	Book press	17
5.4.9	Sheet-folding machines	18
5.4.10	Book production lines for the production of hard-cover books	19
5.4.11	Back-rounding and pressing machines	20
5.4.12	Backlining and head-banding machines	20
5.4.13	Casing-in (case-binding) machines	21
5.4.14	Book-cover crease-forming machines (presses)	23
5.5	Inserting and collating machines	23
5.6	Counter-stackers	23
5.6.1	Safeguarding divert gates (waste separator)	23
5.6.2	Safeguarding hazard points at turntable	24
5.6.3	Pneumatic system	24
5.7	Paper-embossing machines	24
5.7.1	Safeguarding in-running nips on guide rollers	24
5.7.2	Stretch rollers and counter rollers	24
5.7.3	Safeguarding movement of counter roller	24
5.7.4	Insulation of heated parts	25
5.8	Finishing machines	25
5.8.1	Coaters	25
5.8.2	Laminators	27
5.9	Guillotine cutters	30
5.9.1	Knife cycles	30

5.9.2	Interruption of cutting cycles.....	31
5.9.3	Clamping.....	31
5.9.4	Failure of knife and clamp bar linkages.....	32
5.9.5	Backgauge.....	32
5.9.6	Guarding front (operating side) of a guillotine.....	34
5.9.7	Pile-support angles (jogging blocks).....	38
5.9.8	Knife changing and adjustment.....	39
5.9.9	Hazards from integral feeding and delivery equipment on guillotine cutters.....	39
5.10	Trimmers and three knife trimmers.....	41
5.11	Three-knife trimmer with manual infeed.....	42
5.12	Inserters/attaching machines.....	43
5.13	Overcover/protective wrapper gluers.....	43
5.14	Corner-rounding machines.....	43
<b>6</b>	<b>Verification of the safety requirements and/or protective/ risk reduction measures.....</b>	<b>44</b>
<b>7</b>	<b>Information for use — Contents of instruction handbook.....</b>	<b>47</b>
7.1	Information for gang stitchers.....	47
7.2	Information for gathering machines.....	47
7.3	Information for perfect binders.....	47
7.4	Information for sheet folding machines.....	48
7.5	Information for inserting machines.....	48
7.6	Information for machines for the production of envelopes.....	48
7.7	Information for guillotine cutters.....	49
7.8	Information for integral feeding and delivery equipment for guillotine cutters.....	49
7.9	Information for trimmers.....	49
7.10	Information for corner-rounding machines.....	50
7.11	Information for contact with hot surfaces above 65 °C.....	50
<b>Annex A (normative)</b>	<b>Safety distance of ESPDs on guillotine cutters and three knife trimmers with manual infeed — Formulae for the calculation of safety distance of ESPDs.....</b>	<b>51</b>
<b>Annex B (informative)</b>	<b>List of significant hazards.....</b>	<b>52</b>
<b>Bibliography.....</b>		<b>62</b>