

DIN EN ISO 10821:2013-02 (E)

Industrial sewing machines - Safety requirements for sewing machines, units and systems (ISO 10821:2005 + Amd 1:2009) (includes Amendment :2009)

Contents		Page
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	8
4	Significant hazards	10
4.1	General	10
4.2	Mechanics	10
4.3	Electricity/Control	11
4.4	Thermal hazards	11
4.5	Noise	11
4.6	Radiation	11
4.7	Ergonomics	12
4.8	Special hazards	12
4.9	Danger zones	13
5	Safety measures and requirements	20
5.1	General principles	20
5.2	Requirements for all types of industrial sewing machines	20
5.2.1	Mechanical equipment	20
5.2.2	Electrical equipment/control/control gear	23
5.2.3	Thermal requirements	25
5.2.4	Noise	25
5.2.5	Radiation	26
5.2.6	Ergonomics	27
5.3	Specific requirements for particular types of industrial sewing machines	27
5.3.1	Button, buttonhole and programmable pattern sewing machines, bartacking machines ...	27
5.3.2	Quilting machines	28
5.3.3	Bag closing sewing machines in the packaging industry	28
5.3.4	Embroidery machines	28
5.3.5	Glove sewing machines	29
5.3.6	Sewing machines for shoe repair	29
5.3.7	Blindstitch sewing machines	29
5.3.8	Linking machines	29
6	Verification of safety requirements or measures	29
7	Information on use and maintenance	31
7.1	General	31
7.2	Marking	31
7.3	Warning of residual risk	32
7.4	Instructions	32
7.4.1	General information	32
7.4.2	Particular information	33
Annex A (normative) Finger deflecting device		34
Annex B (normative) Warning of residual risk		37

Annex C (normative) Noise test code	40
Annex D (normative) Needle breakage protection shield	55
Annex E (normative) Belt guard at sewing machine drive (motor)	56
Annex F (informative) Safe fastening of belt pulley at drive shaft of clutch or positioning drives	58
Annex G (informative) Safe mounting of adaptable positioner/synchronizer at sewing machine shaft	65
Annex H (informative) Safe mounting of sewing machine drives	66
Annex I (informative) Noise declaration examples	71
Annex J (informative) Examples of noise reduction measures at the design stage	74
Annex K (normative) Written warning -- Languages	75
Annex L (informative) Ergonomic principles	79
Bibliography	80
!Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC"	82
!Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC"	83
!Annex ZC (informative) Corresponding International and European Standards for which equivalents are not given in the text"	84