

# 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)

---

<b>Contents</b>		<b>Page</b>
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

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