

DIN EN ISO 11148-9:2012-06 (E)

Hand-held non-electric power tools - Safety requirements - Part 9: Die grinders (ISO 11148-9:2011)

Contents	Page
Foreword	3
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	26
Introduction	4
1 Scope	5
2 Normative references	6
3 Terms and definitions	6
3.1 General terms and definitions	6
3.2 Terms and definitions related to die grinders	8
4 Safety requirements and/or protective measures	8
4.1 General	8
4.2 Mechanical safety	8
4.3 Thermal safety	9
4.4 Noise reduction	9
4.5 Vibration	10
4.6 Materials and substances processed, used or exhausted	10
4.7 Ergonomics	11
4.8 Controls	11
5 Verification	12
5.1 General conditions for tests	12
5.2 Noise	12
5.3 Vibration	12
5.4 Unintentional start	12
5.5 Power tool construction	12
5.6 Structure of verification of safety requirements	13
6 Information for use	13
6.1 Marking, signs and written warnings	13
6.2 Instruction handbook	14
6.3 Operating instructions	20
6.4 Data	20
6.5 Maintenance instructions	21
Annex A (informative) List of significant hazards	22
Annex B (informative) Examples of die grinders covered by this part of ISO 11148	23
Annex C (normative) Symbols for labels and signs	24
Annex D (informative) Examples of abrasive products for use with die grinders	25
Bibliography	27