

# DIN EN ISO 28927-9:2010-05 (E)

## Hand-held portable power tools - Test methods for evaluation of vibration emission - Part 9: Scaling hammers and needle scalars (ISO 28927-9:2009)

---

<b>Contents</b>		<b>Page</b>
Foreword .....		3
Introduction .....		4
1	Scope .....	5
2	Normative references .....	5
3	Terms, definitions and symbols .....	6
3.1	Terms and definitions .....	6
3.2	Symbols .....	6
4	Basic standards and vibration test codes .....	7
5	Description of the family of machines .....	7
6	Characterization of vibration .....	9
6.1	Direction of measurement .....	9
6.2	Location of measurements .....	9
6.3	Magnitude of vibration .....	11
6.4	Combination of vibration directions .....	11
7	Instrumentation requirements .....	12
7.1	General .....	12
7.2	Mounting of transducers .....	12
7.2.1	Specification of transducer .....	12
7.2.2	Fastening of transducers .....	12
7.3	Frequency weighting filter .....	12
7.4	Integration time .....	12
7.5	Auxiliary equipment .....	13
7.6	Calibration .....	13
8	Testing and operating conditions of the machinery .....	13
8.1	General .....	13
8.2	Operating conditions .....	13
8.2.1	Pneumatic machines .....	13
8.2.2	Hydraulic machines .....	14
8.2.3	Electrical machines .....	14
8.3	Other quantities to be specified .....	14
8.4	Attached equipment, work piece and task .....	14
8.4.1	Test set-up and procedure .....	14
8.4.2	Feed force .....	15
8.5	Operators .....	15
9	Measurement procedure and validity .....	15
9.1	Reported vibration values .....	15
9.2	Declaration and verification of the vibration emission value .....	16
10	Measurement report .....	16

<b>Annex A (informative) Model test report for vibration emission at handles of scaling hammers and needle scalars .....</b>	<b>17</b>
<b>Annex B (normative) Determination of uncertainty .....</b>	<b>19</b>
<b>Bibliography .....</b>	<b>21</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC, amended by Directive 98/79/EC .....</b>	<b>22</b>
<b>Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC .....</b>	<b>23</b>