

# DIN EN 12418:2022-07 (E)

## Masonry and stone cutting-off machines for job site - Safety

---

<b>Contents</b>		<b>Page</b>
	European foreword .....	5
	Introduction .....	6
<b>1</b>	<b>Scope .....</b>	<b>7</b>
<b>2</b>	<b>Normative references .....</b>	<b>7</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>9</b>
<b>4</b>	<b>Safety requirements and/or protective/risk reduction measures .....</b>	<b>12</b>
4.1	General .....	12
4.2	Mechanical hazard .....	12
4.2.1	General .....	12
4.2.2	Protection against moving parts .....	13
4.2.3	Minimum strength of the guards .....	15
4.2.4	Frame and legs .....	15
4.2.5	Transport and handling .....	15
4.2.6	Fixing of the cutting-off wheel .....	15
4.2.7	Combustion engine-starting device .....	15
4.2.8	Guiding device of the table and for the material .....	16
4.2.9	Control devices .....	16
4.2.10	Failure of the power supply .....	17
4.3	Electrical hazards .....	17
4.3.1	General .....	17
4.3.2	Water pump .....	17
4.4	Thermal hazards .....	17
4.4.1	General .....	17
4.4.2	Test method .....	17
4.5	Exhaust fumes (and gas) .....	17
4.6	Fluid containers .....	18
4.7	Protection against water splashes and dust emissions .....	18
4.8	Rotational speed .....	18
4.9	Noise .....	18
4.9.1	Noise reduction at the design stage .....	18
4.9.2	Noise emission measurement, declaration and verification procedures .....	19
4.10	Vibrations .....	19
4.11	Maintenance .....	19
<b>5</b>	<b>Verification of safety requirements and/or protective/risk reduction measures .....</b>	<b>20</b>
<b>6</b>	<b>Information for use .....</b>	<b>22</b>
6.1	General .....	22
6.2	Marking, warnings and signs .....	22
6.2.1	Marking .....	22
6.2.2	Warnings and signs .....	22
6.3	Accompanying documents .....	23
6.3.1	Instruction handbook .....	23
6.3.2	Description of the machine .....	23
6.3.3	Instructions for transport, handling and storage of the machine and its dismantlable parts .....	24
6.3.4	Instructions for the installation and the use of the machine .....	24

6.3.5	Maintenance instructions .....	26
	Annex A (informative) List of significant hazards .....	27
	Annex B (normative) Noise test code - accuracy grade 2 .....	29
B.1	General .....	29
B.2	Measurement of the A-weighted emission sound pressure level at the workstation of the operator .....	29
B.3	Determination of the sound power level emitted by the machine .....	30
B.4	Measurement uncertainties .....	30
B.5	Operating conditions .....	31
B.6	Information to be recorded .....	32
B.7	Information to be reported .....	32
B.8	Noise emission declaration by the manufacturer .....	32
	Annex C (normative) Dimensions of the flanges for cutting-off diamond wheel .....	34
C.1	General .....	34
C.2	Ratios to the diameters of the cutting-off wheel .....	34
C.3	Minimum diameter S of the flange .....	35
C.4	Minimum width R of contact surface of the flange with the cutting-off wheel .....	35
C.5	Depth of the clearance T .....	35
	Annex D (normative) Strength of guards - State of the art concerning the characteristics of guards used with cutting-off wheels .....	36
D.1	General .....	36
D.2	Guard specifications for type-1 and -2 machines (see 3.2) .....	36
D.2.1	Calculation method .....	36
D.2.2	Example of a minimum thickness of guards made with E24 grade-2 steel (alternative to D.2.1) .....	39
D.2.3	Other methods for determining the minimum thickness of guards .....	40
	Annex E (informative) Safety signs .....	41
	Annex F (normative) Verification of surface temperature .....	43
F.1	Test equipment .....	43
F.2	Test method .....	43
F.3	Test acceptance .....	43
	Annex G (informative) Vibration-test code .....	44
G.1	General .....	44
G.2	Terms and definitions .....	44
G.3	Vibration parameters to be measured and determined .....	44
G.4	Instrumentation .....	44
G.4.1	General .....	44
G.4.2	Accelerometer .....	44
G.4.3	Fastening of accelerometer .....	44
G.4.4	Calibration .....	45
G.5	Operating conditions, testing and declaration of results .....	45
G.6	Uncertainties .....	45
G.7	Information .....	46
	Annex ZA (informative) Relationship between this European Standard and the essential requirements of EU Directive 2006/42/EC aimed to be covered .....	47
	Bibliography .....	49