



**Check list for visual inspections and functional tests** **No. N 4**  
 (This list is not exhaustive)

TRANSLATION

**Numerically controlled  
 stationary grinding machines  
 with CE marking  
 -- Essential safety requirements \*--**

(\* acc. to DIN EN 13218 "Machine tools - Safety –Stationary grinding machines"  
 version 2002 - to concretize EC Machinery Directive 98/37/EC)

Does not apply to honing machines, polishing machines and belt grinding machines

Details relating to the tested machine tool:			
Manufacturer: _____			
Type designation: _____ Year of manufacture: _____			
Location: _____ Mach. no.: _____			
No.	Safety requirements	EN 13218 Cl. ....	Y/N
<b>1</b>	<b>CE marking</b>		
1.1	Is the CE marking affixed to the machine in a <b>clearly visible</b> and <b>permanent</b> manner?	MD	
<b>2</b>	<b>EC Declaration of conformity</b>		
2.1	Is an EC Declaration of conformity <b>in acc. with Annex II A of the Machinery Directive 98/37EC</b> available for the <u>ready-for-use</u> machine?	MD	
<b>3</b>	<b>Marking</b>		
3.1	Are <b>name and address of the manufacturer, design, serial number and year of manufacture</b> declared on the machine? - Direction of rotation of the grinding spindle? - Speed and speed range, resp., of the grinding spindle? - max. admissible dimensions of the grinding tool	7.3 a-d.) f.) g.) i.)	
<b>4</b>	<b>Instructions for use</b>		
4.1	Are instructions for use providing all necessary <b>safety-relevant information</b> available for the machine?	7.2	
<b>5</b>	<b>Safeguarding against mechanical hazards</b>		
5.1	Do the protective covers for the grinding tools fulfil the requirements? - shape and opening angle - wall thickness and material (tables A.1 to A.6) - joints sufficient (screws, welding etc)  <b>Exceptions:</b> Not necessary for internal circular grinding with $D < 80$ mm and $V < 50$ m/s as well as for grinding wheels $D < 1000$ mm and $v < 16$ m/s	5.2.1.1  Annex A 3.1-3.3	

No.	Safety requirements	EN 13218 Cl. ....	Y/N
5.2	Are additional protective devices provided for $v > 50$ m/s? <i>(e.g. guards in acc. with A.3.4; Protective cover for the grinding tool, equipped additionally with an internal protective cover closing the protective cover mechanically in the event of a grinding tool fracture (see A.3.1.4).</i>	5.2.1.2 A 3.4	
5.3	Are bench grinding machines and column type grinders equipped with viewing panels?	5.2.3 A 3.7	
5.4	Are the guards arranged in a <b>sufficient distance</b> to the danger zone?	5.2.3	
5.5	Are protective devices provided to prevent dusts and cooling lubricants from being ejected?	5.2.2	
5.6	Are grinding tools protected against contact, with the exception of the part required for machining?	5.2.5	
5.7	Does the design of the grinding tool fastening (spring flanges) correspond to Annex B?	5.2.6	
5.8	Are bench grinding machines and column type grinders equipped with workpiece supports (gap between grinding tool - workpiece support max. 2 mm)?	5.2.7	
5.9	Are power-operated clamping devices constructed in such a way that in the event of the clamping energy being not available feed drives are prevented from being switched on?	5.2.7	
5.10	Is the operating condition of the clamping device indicated by a light or another appropriate device?	5.2.7	
5.11	Is safety maintained in case of grinding spindle speed change?	5.2.8	
5.12	Does, on swing frame grinding machines, the grinding spindle move away from the operator when the handles are released?	5.2.9	
5.13	Are automatic loading devices dimensioned sufficiently safe?	5.2.10	
<b>6 Electrical hazards</b>			
6.1	Are emergency stop control devices provided on the machine?	5.3.1	
6.2	Is the machine equipped with a key-lockable main switch?	5.3.1	
6.3	Is protection against direct contact provided (EN 60204-1)?	5.3.1	
<b>7 Noise</b>			
7.1	Do the instructions for use declare the noise emission values measured on the machine?	5.4	

<b>8 Risks caused by dusts, fumes and mists</b>			
8.1	Are protective devices required for machining or using health-damaging materials, or for the foreseeable formation of dusts, fumes and mists, dimensioned such that operator exposure is minimized? <i>(An integrated extraction system shall be provided and/or devices allowing an extraction system to be mounted shall be provided).</i>	5.6	
8.2	Does the additional integral, or external, evacuation system start automatically? (follow-up time min.15 sec.)	5.6	
<b>9 Emissions</b>			
9.1	Do containment systems prevent health-damaging concentrations (aerosols, vapours or mists) from escaping where <b>cooling lubricants</b> are used?	5.7	
<b>10 Fire or explosive dusts</b>			
10.1	Is the <b>risk</b> of formation of flammable compounds and of fire and explosions minimized where <u>flammable cooling lubricants are used</u> ? <i>(e.g. by providing evacuation systems, eliminating ignition sources, avoiding flammable concentrations)</i>	5.8.1	
10.2	Are, when grinding <u>self-igniting or explosive</u> materials (e.g. aluminium and magnesia and their alloys), <b>measures taken</b> to minimize the risks by fire or explosion? <i>(e.g. wet grinding or dry grinding with water spray separation see Annex F)</i>	5.8.2	
10.3	Do <b>additional measures</b> limit the consequences of possible fires and/or explosions? <i>(e.g. fire extinguishers, explosion relief apertures)</i>	5.8.1	
<b>11 Illumination</b>			
11.1	Does the <u>working area</u> illumination achieve at least <b>300 lux</b> when the guard is open?	5.9	
11.1	Are dazzle and reflexion avoided? Does the illumination design ensure that soiling is kept at a low level?	5.9	
<b>12 Controls</b>			
12.1	Does the starting function of grinding machines <u>without</u> electronic control system achieve category 1 of EN 954-1? (Otherwise, category B of EN 954-1 <u>with</u> electronic control system <u>and</u> interlocking guards) (Unexpected start-up prevented)	5.10.2	
12.2	Is unexpected start-up prevented as laid down in EN 1037?	5.10.2	
12.3	Do the emergency stop devices correspond to EN 60204-1 and EN 13850 (former EN 418)?	5.10.3.3	
12.4	Is automatic mode possible only with the guards being closed?	5.10.4.2	
12.5	Is set-up mode ( $v < 50\text{m/s}$ without machining, and max. feed speed 2 m/min) possible with inching mode?	5.10.4.2	

12.6	Do conditions for special operation modes exist, and are they fulfilled? (with the guards open, a.o. machining up to 50 m/s circumferential speed of the grinding tool is possible).	5.10.4.4	
<b>13</b>	<b>Electromagnetic compatibility</b>		
13.1	Electromagnetic immunity acc. to EN 61000-6-2 ?	5.11.1	
13.2	EMC emission acc. to EN 61000-6-4 ?	5.11.2	

Assessment (summary):

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