

# DIN EN 1012-1:2011-02 (E)

## Compressors and vacuum pumps - Safety requirements - Part 1: Air compressors

---

<b>Contents</b>		<b>Page</b>
Foreword .....		3
Introduction .....		4
<b>1</b>	<b>Scope .....</b>	<b>5</b>
<b>2</b>	<b>Normative references .....</b>	<b>5</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>7</b>
<b>3.1</b>	<b>General terms .....</b>	<b>7</b>
<b>3.2</b>	<b>Specific terms .....</b>	<b>8</b>
<b>4</b>	<b>List of significant hazards Hazard analysis and risk assessment .....</b>	<b>8</b>
<b>5</b>	<b>Safety requirements and/or protective measures .....</b>	<b>10</b>
<b>5.1</b>	<b>General .....</b>	<b>10</b>
<b>5.2</b>	<b>Mechanical safety .....</b>	<b>11</b>
<b>5.3</b>	<b>Electrical safety .....</b>	<b>13</b>
<b>5.4</b>	<b>Control systems .....</b>	<b>13</b>
<b>5.5</b>	<b>Thermal safety .....</b>	<b>15</b>
<b>5.6</b>	<b>Noise .....</b>	<b>15</b>
<b>5.7</b>	<b>Materials and substances processed, used or exhausted .....</b>	<b>15</b>
<b>5.8</b>	<b>Fire and explosion .....</b>	<b>16</b>
<b>5.9</b>	<b>Ergonomic principles .....</b>	<b>17</b>
<b>5.10</b>	<b>Breaking down of machinery parts and other functional disorders .....</b>	<b>18</b>
<b>5.11</b>	<b>Pressure relief - fragmentation .....</b>	<b>19</b>
<b>5.12</b>	<b>Information and warning devices .....</b>	<b>20</b>
<b>6</b>	<b>Verification of safety requirements and/or protective measures .....</b>	<b>21</b>
<b>6.1</b>	<b>Pressure testing .....</b>	<b>21</b>
<b>6.2</b>	<b>Noise .....</b>	<b>21</b>
<b>6.3</b>	<b>Stability of portable compressor units .....</b>	<b>21</b>
<b>6.4</b>	<b>Structure of verification .....</b>	<b>22</b>
<b>7</b>	<b>Information for use .....</b>	<b>24</b>
<b>7.1</b>	<b>General requirements .....</b>	<b>24</b>
<b>7.2</b>	<b>Accompanying documents (in particular, instruction handbook) .....</b>	<b>25</b>
<b>7.3</b>	<b>Specific types of compressors .....</b>	<b>27</b>
<b>7.4</b>	<b>Service instructions .....</b>	<b>28</b>
<b>7.5</b>	<b>Markings, signs and written warnings .....</b>	<b>29</b>
<b>7.6</b>	<b>Noise .....</b>	<b>31</b>
<b>7.7</b>	<b>Dismantling .....</b>	<b>31</b>
<b>Annex A (informative)</b>	<b>Labels, signs and tags .....</b>	<b>32</b>
<b>Annex ZA (informative)</b>	<b>Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC Safety of machinery .....</b>	<b>37</b>
<b>Bibliography .....</b>		<b>38</b>