world class equipment for

drilling and bolting
The company’s origin dates back to the early 70’s. Mine Master is based at the old “Lena” copper ore mine that closed when the deposit was exhausted in 1972. On these premises the company Zakład Urządzeń Górniczych “Lena” (“Lena” Mining Facilities Works) belonging to the state owned KGHM „Polska Miedź” S.A. copper mines was established and within two years engineers and technicians had constructed their first twin boom pneumatic drilling rig designed for the non-ferrous metal ore mining industry.

Later in 1993 a joint venture between KGHM Polska Miedź S.A. and Boart Longyear was established to improve the position of the company in the supply of equipment to a wider mining market. Then in 1999 upon taking over 100% of shares by Boart Longyear the name was also changed to Boart Longyear Ltd.

However in August 2006 Boart Longyear Ltd. was sold off by its owner to the management of the company plus a corporate shareholder – the company GHH Fahrzeuge a well known manufacturer of loading and haulage machines for mining and tunneling industries. This new company was called Mine Master Ltd. and continues to specialize in the production and supply of drilling and roof-bolting rigs together with the supply of loading and haulage machines produced by our German shareholder. This enables us to offer our customers a full package of machines necessary for the performance of mining and tunneling works.

Our company policy offers a close co-operation with future users of our products and allows us to provide them machines which will fulfill their expectations by being designed for use in specific working conditions.
Our greatest strength and asset lies in our employees. They reflect on the quality of services we provide and are specialists in their field at all structural levels in the company. Combining the three elements: individual goals, goals of the company and teamwork, with which we can guarantee our development and customer satisfaction.

The experience of our employees and constant upgrading of their qualifications allows us to improve our products and their quality resulting in improved equipment productivity.
Mine Master offers a wide range of self-propelled drilling rigs suitable for various heights and width of headings. Plus a range of optional features that allow the machines to be operated under various exploitation conditions.

Operator's safety and protective canopies complying with requirements of FOPS/ROPS, are basic features of our rigs while other features improve reliability and availability allowing our machines to be efficient and productive.
### Specifications of standard drill rigs

<table>
<thead>
<tr>
<th>Type</th>
<th>FM 1.4 / FLP1400-1B</th>
<th>FM 1.7</th>
<th>FM 1.7L</th>
<th>FM 1.7L.E</th>
<th>FM 1.7R</th>
<th>FM 1.8RS</th>
<th>FM 2.1</th>
<th>FM 2.3-1B</th>
<th>FM 2.3</th>
<th>FM 2.3L</th>
<th>FM 2.8MP D</th>
<th>FM 3.0 MK.3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length [m]</strong></td>
<td>12.3</td>
<td>13.8</td>
<td>13</td>
<td>12.5</td>
<td>13</td>
<td>13.4</td>
<td>16</td>
<td>10.2</td>
<td>12.7</td>
<td>12</td>
<td>14.5</td>
<td>15.9</td>
</tr>
<tr>
<td><strong>Width [m]</strong></td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
<td>1.35</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Height [m]</strong></td>
<td>1.4</td>
<td>1.7</td>
<td>1.65</td>
<td>1.65</td>
<td>1.9</td>
<td>1.7</td>
<td>1.8</td>
<td>2.1</td>
<td>2.3</td>
<td>2.3</td>
<td>2.8</td>
<td>3</td>
</tr>
<tr>
<td><strong>Weight [t]</strong></td>
<td>14.9</td>
<td>21</td>
<td>19.5</td>
<td>19.5</td>
<td>21</td>
<td>21</td>
<td>24</td>
<td>13</td>
<td>17.5</td>
<td>23.8</td>
<td>19</td>
<td>30</td>
</tr>
<tr>
<td><strong>No. of boom</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2+1</td>
</tr>
<tr>
<td><strong>Max. coverage [m²]</strong></td>
<td>63</td>
<td>67</td>
<td>66</td>
<td>66</td>
<td>56</td>
<td>67</td>
<td>56</td>
<td>25</td>
<td>56</td>
<td>67</td>
<td>45</td>
<td>65</td>
</tr>
<tr>
<td><strong>Minimum width of heading for tralming @ 90° [m]</strong></td>
<td>3.9</td>
<td>4.5</td>
<td>3.85</td>
<td>3.85</td>
<td>4.5</td>
<td>4.5</td>
<td>5</td>
<td>2.6</td>
<td>3.5</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Power source tralming / working</strong></td>
<td>rotary-percussive</td>
<td>rotary</td>
<td>rotary-percussive</td>
<td>rotary-percussive</td>
<td>diesel / electric</td>
<td>electric batteries</td>
<td>diesel</td>
<td>diesel / electric</td>
<td>hard rock / non-flameproof</td>
<td>soft rock / non-flameproof</td>
<td>Ex / flameproof</td>
<td>hard rock / non-flameproof</td>
</tr>
</tbody>
</table>
Bolting Rigs

Roof support in mining excavations and tunnels by means of roof-bolting is one of the applications that can be achieved by machines manufactured by our company.

Self-propelled bolting rigs featuring various parameters depending on the height of the roof and hardness of rock are manufactured to tailor individual clients applications.
Dry rotary drilling with a dust collection system, rotary drilling or impact drilling guarantee the effectiveness of the bolting process in all geological conditions. Automation of this process is available and increases the operator’s safety with full control of the roof-bolting being carried out.

### Specifications of standard roof bolters

<table>
<thead>
<tr>
<th>Type</th>
<th>RM 1.4</th>
<th>RLP 1400-1B</th>
<th>RM 1.7</th>
<th>RM 1.8AWK</th>
<th>RM 2.0AWK</th>
<th>RM 2.3</th>
<th>RM 2.6 ATEX</th>
<th>RM 2.0 SWKB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length [m]</td>
<td>10,5</td>
<td>10,1</td>
<td>11,3</td>
<td>13,9</td>
<td>11,3</td>
<td>14</td>
<td>12,7</td>
<td>6,5</td>
</tr>
<tr>
<td>Width [m]</td>
<td>2,4</td>
<td>2,4</td>
<td>2,4</td>
<td>2,4</td>
<td>2</td>
<td>2,4</td>
<td>2,6</td>
<td>1,4</td>
</tr>
<tr>
<td>Height [m]</td>
<td>1,4</td>
<td>1,4</td>
<td>1,7</td>
<td>1,8</td>
<td>2,4</td>
<td>2,6</td>
<td>2,3</td>
<td>2,1</td>
</tr>
<tr>
<td>Weight [t]</td>
<td>18,4</td>
<td>19,7</td>
<td>19,5</td>
<td>22,4</td>
<td>20,5</td>
<td>28</td>
<td>29,7</td>
<td>13</td>
</tr>
<tr>
<td>Max. bolting height</td>
<td>3,3</td>
<td>3</td>
<td>4</td>
<td>7,5</td>
<td>8,3</td>
<td>7,5</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Operation</td>
<td>on the left side of the boom</td>
<td>from operator’s compartment</td>
<td>on the left side of the boom / from operator’s compartment</td>
<td>on both sides of the boom</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum width of heading for tramming @ 90° [m]</td>
<td>4,5</td>
<td>4,5</td>
<td>4,5</td>
<td>4,9</td>
<td>4</td>
<td>4,5</td>
<td>4,5</td>
<td>2,4</td>
</tr>
<tr>
<td>Drifter</td>
<td>rotary with dust collection</td>
<td>rotary-percussive</td>
<td>rotary with dust collection</td>
<td>rotary-percussive</td>
<td>rotary-percussive or rotary</td>
<td>rotary-percussive</td>
<td>rotary with dust collection or water flushing</td>
<td></td>
</tr>
<tr>
<td>Power source tramming / working</td>
<td>diesel / electric</td>
<td>electric</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td>non-flameproof</td>
<td>Ex / flame-proof</td>
<td>non-flameproof</td>
<td>Ex / flame-proof</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Production Master

For underground production drilling Mine Master offers a range of long hole drilling rigs in configurations suitable for the required work in mines.

To adapt to specific working conditions the machines can be offered with variable setups of the working unit featuring different feed lengths and drifter parameters. For easy operation the customer can choose between mechanized or manual rod handling. In some models traditional control systems from the operator’s stand are supported by a bluetooth remote control panel to improve safety as well as precision and efficiency of drilling.
A self-propelled Production Master 2.3 long hole drill rig is designed for drilling parallel upholes and downholes as well as fans and rings in vertical or inclined planes. A top-hammer system gives the possibility of drilling in a range of 64-165 mm holes depending on the configuration. Easy to use positioning system offers drilling in required directions. The machine has a very good stability for fast tramming even in tough road conditions. Remote control panel is included for easy operation and drilling accuracy.

### Specifications of standard production rigs

<table>
<thead>
<tr>
<th>Type</th>
<th>PM 2.1</th>
<th>PM 2.3</th>
<th>PM 2.3M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length [m]</td>
<td>10,2</td>
<td>9,2-9,6</td>
<td>11,7</td>
</tr>
<tr>
<td>Width [m]</td>
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<td>2,0</td>
<td>2,0</td>
</tr>
<tr>
<td>Height [m]</td>
<td>2,1</td>
<td>2,7</td>
<td>2,3</td>
</tr>
<tr>
<td>Weight [t]</td>
<td>12,0</td>
<td>23,0</td>
<td>20,6</td>
</tr>
<tr>
<td>Max depth of drilling [m]</td>
<td>20,0</td>
<td>32,0</td>
<td>20,0</td>
</tr>
<tr>
<td>Control system</td>
<td>direct from operator’s stand</td>
<td>from operator’s stand or remote via bluetooth</td>
<td>direct from operator’s stand</td>
</tr>
<tr>
<td>Minimum width of heading for tramming @ 90 deg [m]</td>
<td>2,85</td>
<td>3,6</td>
<td>3,5</td>
</tr>
<tr>
<td>Drifter</td>
<td>20kW class</td>
<td>30kW class</td>
<td>20kW class</td>
</tr>
<tr>
<td>Power source tramming / working</td>
<td>diesel / electric</td>
<td>diesel / electric</td>
<td>diesel / electric</td>
</tr>
<tr>
<td>Rod handling method</td>
<td>manual with helper</td>
<td>rod magazine</td>
<td>manual with helper</td>
</tr>
</tbody>
</table>
Mine Master is a provider of tools for use in mining, quarries and civil engineering works. We provide the highest quality tools supplied by manufacturers recognized worldwide.

The tools offered are made from the highest quality TC and stainless steel materials.

In our offer you will find button bits, which, due to the chemical composition and shape of tungsten carbide can be used in all geological conditions in mines and quarries. You will also find drill rods and shank adaptors with a superior life service.

We also offer down the hole (DTH) hammers with very good characteristics and performance of work as well as excellent durability and great reliability.

**Standard underground tools:**
- Button bits - tapered & threaded (Ø 30 – 127 mm)
- Tapered rods (l - 1830 – 3100 mm)
- Extension rods (l - 2400 – 4915 mm)
- Tunneling rods m/f (l - 2400 – 4310 mm)
- Couplings
- Shanks adapters – for many type of rock drills
- Reaming equipment

**Standard quarrying tools:**
- Button bits (Ø 76 – 127 mm)
- DTH button bits (Ø 90 – fi 200 mm)
- DTH hammers (3” – 8”)
- Tube rods / drilling pipes
- Extension rods
- Integral drill steels
- Shank adapters
- Tapered rods and bits
In order to satisfy the expectations of our users, we created a professional group of specialists responsible for our machine servicing. This Service Department provides complex services for the maintenance, repair and routine equipment inspection. It is equipped with modern specialist diagnostic facilities and the technical background of the service team is continually being updated and enriched with new tooling, tools and service materials.

To achieve these high levels of service ability and equipment knowledge our service staff attend regular upgrading training courses carried out within the whole machine construction process.

Mine Master Ltd. pass onto their customers this thorough equipment knowledge by offering long or short term Service Contracts on their equipment.
Ever since the establishment of the Company, its priority has been to supply equipment of a high standard of quality. In order to maintain this standard we apply continual improvements to our systems and involve our engineers in numerous training courses, workshops and contacts with other companies dealing with world technology. We provided our professionals with modern tools and computer software for designing in Pro-Eng for example plus special tools and control-measuring instruments to check all machine produced everyday work.

These actions and attitude paved the way for the company being granted the quality certificate of ISO 9001 in 1997. Another fixed goal was in connection with good quality and satisfaction in the work place and natural environmental requirements. To achieve this in 2003 we implemented the integrated system of quality, environment and safety management for which we were accredited for and again re-certified it in the year 2006.
Mine Master co-operates with partners enjoying a stable and well-grounded position in the market and specialized professionals within these listed companies provide our customers with a wide range of high quality products used in underground mining, construction and tunneling works.

The result of this co-operation are machines which provide the users with high effectiveness of operation, operator’s safety, as well as complying with natural environment requirements.

**Our Partners**

- **AMV**
  - Drilling rigs for tunneling

- **HAZEMAG**
  - Machines and mining equipment for coal mines

- **Beever Control as**
  - Computer system of drilling, monitoring and control

- **MONTABERT**
  - Hydraulic rotary percussive rock drills

- **CMAC**
  - Long hole drilling solutions

- **P&V Padley & Venables**
  - Drilling accessories

- **Fletcher Mining Equipment**
  - Roof bolting mast & machines
  - Rotary rock drills
  - Rotary percussive rock drills

- **GHH Fahrzeuge**
  - Load haul dumpers
  - Dump trucks

- **Rotamec**
  - Compressors
Mine Master is recognized worldwide as a producer of drilling and bolting equipment. Below please find countries, where our products are under operation. We also offer our customers after sales support and arrange commissioning of supplied equipment.

**We are at present in:**
- Poland
- Portugal
- Estonia
- Turkey
- Republic of South Africa
- Zimbabwe
- Botswana
- Zambia
- Russia
- Kazakhstan
- Kyrgyzstan
- Iran
- Pakistan
- India
- Nepal
- Chile
- Australia