LU 107

Modular high-explosive shell for 155mm artillery gun

The LU 107 high-explosive shell results from the modernisation of the M107 high-explosive shell for 155mm artillery gun. It offers better safety for training, enhanced operational performances and an extended use in 39-, 45- and 52-calibre artillery guns.
LU 107
Modular high-explosive shell for 155mm artillery gun

The M107 artillery shell has been the most widely used high-explosive shell in the world since the Second World War. It is still widely used, more particularly for training.

Keeping the same geometry and the same characteristics, the modernisation of the "LU 107 high-explosive shell" design offers:

- safety improvement [Nexter patented innovating device], by avoiding any risk of exudation of conventional explosive fillings and any direct contact with the explosive,
- 20% increase in range while keeping safety and accuracy levels,
- unrestricted use in 39- and 45-calibre artillery guns,
- use in 52-calibre artillery guns (up to 5 TCM\(\textsuperscript{1}\) ~ charge M203),
- availability of various explosive fillings, including the insensitive version [IM/MURAT\(\textsuperscript{2}\)] thanks to the use of the melt-cast \(\text{XP}^\circ\) family adaptable to the customer's needs,
- a training version [live or inert filling] with the addition of an airbrake for use on reduced-size firing ranges (> 30% reduction of the nominal range).

**SPECIFICATIONS**

- Use of the existing M107 firing tables
- Interoperability with 39, 45 and 52 calibres guns
- Compatible with M203 and MC93\(\textsuperscript{3}\) propelling charges (up to 5 TCM)
- Compliant with the requirements of safety standard STANAG 4224
- Compliant with the requirements of disposal standard STANAG 4518
- Compliant with the requirements of IM/MURAT standard STANAG 4439 for the LU 107 version filled with \(\text{XP}^\circ\)
- Operating temperature range: -46°C to +63°C
- Long-term storage temperature range: -51°C to +71°C
- Impact, delay or proximity NATO standard fuses with 2-inch ring
- Packaging: standard wood pallet with 20, 12 or 8 rounds in tactical complete ground packs

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**PAYLOAD AS A FUNCTION OF VERSION**

<table>
<thead>
<tr>
<th>Reference</th>
<th>LU 107 T</th>
<th>LU 107 TDRX</th>
<th>LU 107 IM</th>
<th>LU 107 TP-RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payload</td>
<td>8.9kg TNT</td>
<td>7.1kg Compo B</td>
<td>7.3kg (\text{XP}^\circ)</td>
<td>6.8kg inert</td>
</tr>
</tbody>
</table>

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**INCREASE IN RANGE**

<table>
<thead>
<tr>
<th>Range (km)</th>
<th>Weapon system</th>
<th>M107/M198</th>
<th>52 calibres</th>
</tr>
</thead>
<tbody>
<tr>
<td>M107</td>
<td>18.2</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>LU 107HE</td>
<td>22</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>LU 107TP-RR</td>
<td>12.2</td>
<td>14.5</td>
<td></td>
</tr>
</tbody>
</table>

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**LU 107 IM SIGNATURE**

IM level fitted with the choice of \(\text{XP}^\circ\) explosive

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\(\text{1}\) TCM – Top Charge Module of the MOS
\(\text{2}\) IM/MURAT – Insensitive Munitions
\(\text{3}\) MOS – Modular Charge System

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