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| Installation and Labelling - Bunker Mid Wall Blocks |
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# Scope

This document gives instruction how to label mid wall blocks, as well as it instructs how to perform an installation, or an uninstallation of the Bunker walls.

# Blocks LabelLing

Bunker walls are built of nearly 550 blocks and every block has its own, unique destination. Wall blocks are not interchangeable, thus in order to avoid errors during an installation, each block must be labelled - painted numbers on sides and on top of each block.

Blocks should be labelled in accordance with their title, which describes destination of a block. ESS-0135537 will be used as an example:

* CAD number of the block: ESS-0135537
* Title of the block: MW.1.T MID WALL TOP
* Label of the block: **MW.1.T**
* MW.1.T label stands for (for more details please refer to Section 3 of this document):
  + **M**id **W**est Sector
  + Wall position **1**
  + **T**op layer

Some blocks are universal for different destinations, thus their titles do not describe the final installation place. Nevertheless, they must be marked with a unique label. ESS-0109707 will be used as an example:

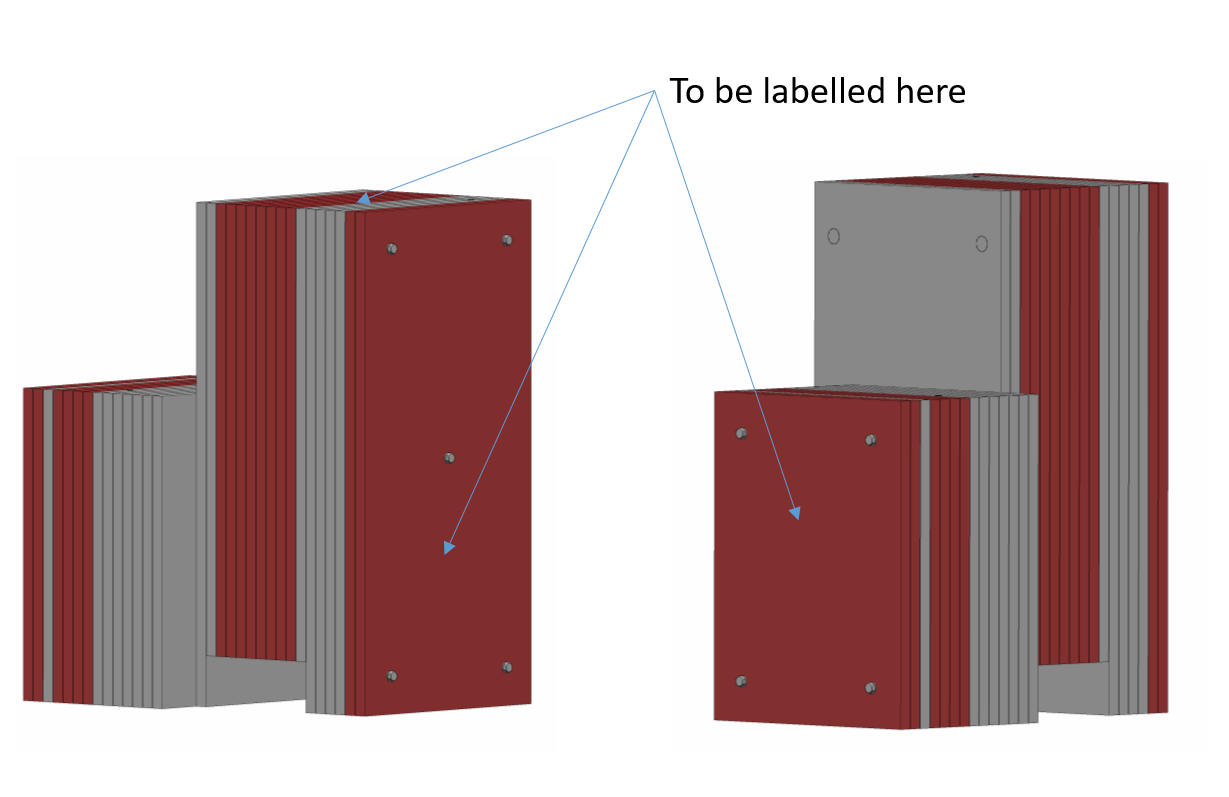
* CAD number of the block: ESS-0109707
* Title of the block: MW.X.L MID WALL LOWER
* Labels of the blocks: from **MW.1.L** to **MW.12.L** (12 blocks in total)

Any “X” mark in a block title represents a universal block. A spreadsheet with block CAD numbers and corresponding labels will be delivered to a manufacturer (reference to be advised).

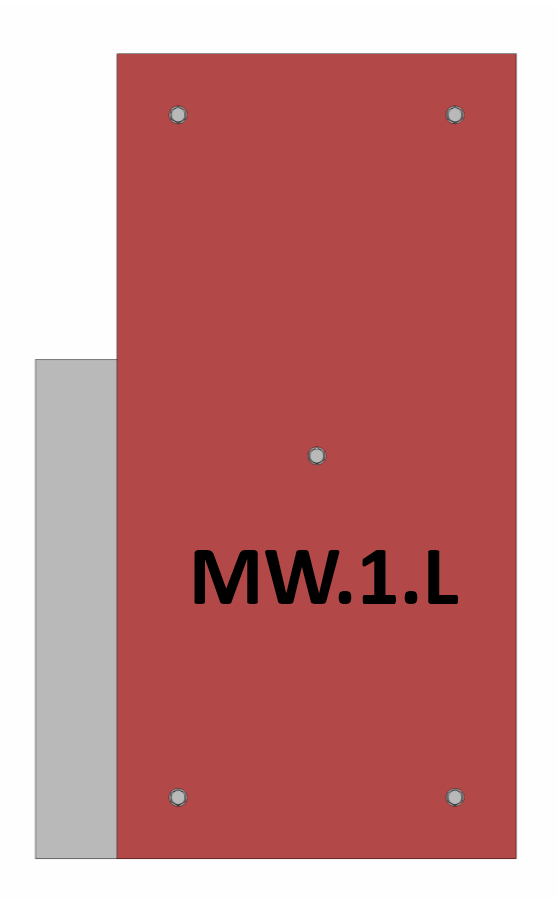
## Labels requirements

Labels should be easily visible for a crane operator, as well as for people working on the ground. Labels requirements are (details of the font to be advised):

* Bright color, contrasting with a blocks color surface (see *Figure 2*)
* Orange color is forbidden
* Font size height 200-300mm, To Be Decided with supplier
* Label painted on the sides and on top of the block (see *Figure 1*)



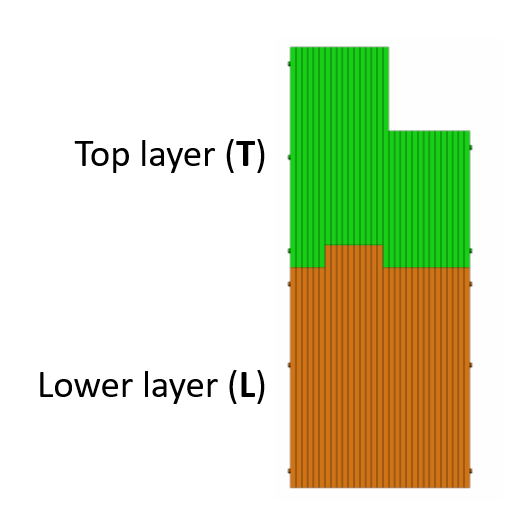
*Figure 1 - Position of block labels*

3. Blocks installation and uninstallation

*Figure 2 – An illustrative label*

The Mid Wall blocks design require a specific sequence. The strategy during an installation is to start with the lower layer then the top layer.

* Blocks are not interchangeable,
* Blocks have to be installed and uninstalled layer by layer (lower layers have to be installed first - see *Figure 3*)



*Figure 3 – Wall composition*

In order to avoid mistakes during an installation, each block will be marked, as described in Section 2 of this document. Every label gives four information about a block position and it is defined as follows:

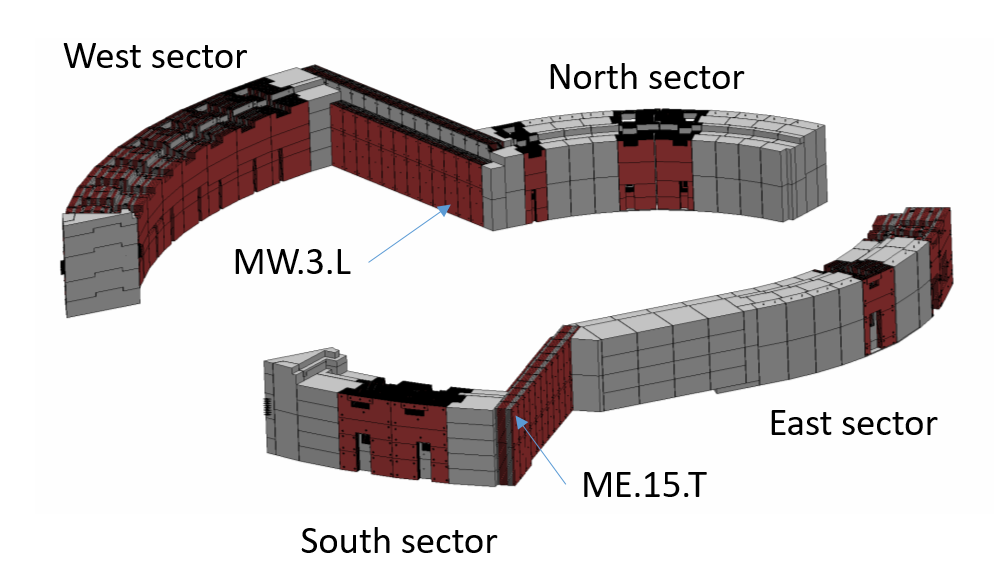
[sector].[block position].[layer]

* [sector] – MW (Mid West) or ME (Mid East)
* [block position] – 1 to 15 (where 1 is the innermost block seen from center of the bunker)
* [layer] – Lower or Top

For the sake of an example, MW 2.L label stands for:

* Mid West Sector
* Position 2
* Lower layer

Please see *Figure 4* for illustration, ESS-0053441 Wall Top Assm



East sector starts with position 3, this is due to the reduced south-east sector.

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*Figure 4 - Bunker Walls*

# references

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|  | *ESS-0053441 - Wall Top Assm.* |
|  | *ESS-0109716 – Mid Wall East* |
|  | *ESS-0109717 – Mid Wall West* |
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Document Revision history

| Revision | Reason for and description of change | Author | Date |
| --- | --- | --- | --- |
| 1 | First issue | Thorbjörn Lindwall | 2017-11-29 |
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