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	Final	Version: 1.1

Mechanical standards for design BM10 Front End section

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1. Description of the subject matter

This document describes specific assumptions for design and construction of front end in sector BL-BM02, not included in mechanical appendix MECH1.


All descriptions refer to the following DWG files:

- “Appendix MECH4-BM02 - Dimensions of the BM02 Front End area.dwg”,
- “Appendix MECH5-BM02 - Dimensions of the BM02 Front End area 2.dwg”,
- “Appendix MECH6-BM02 - Dimensions of the BM02 cable trays.dwg”.

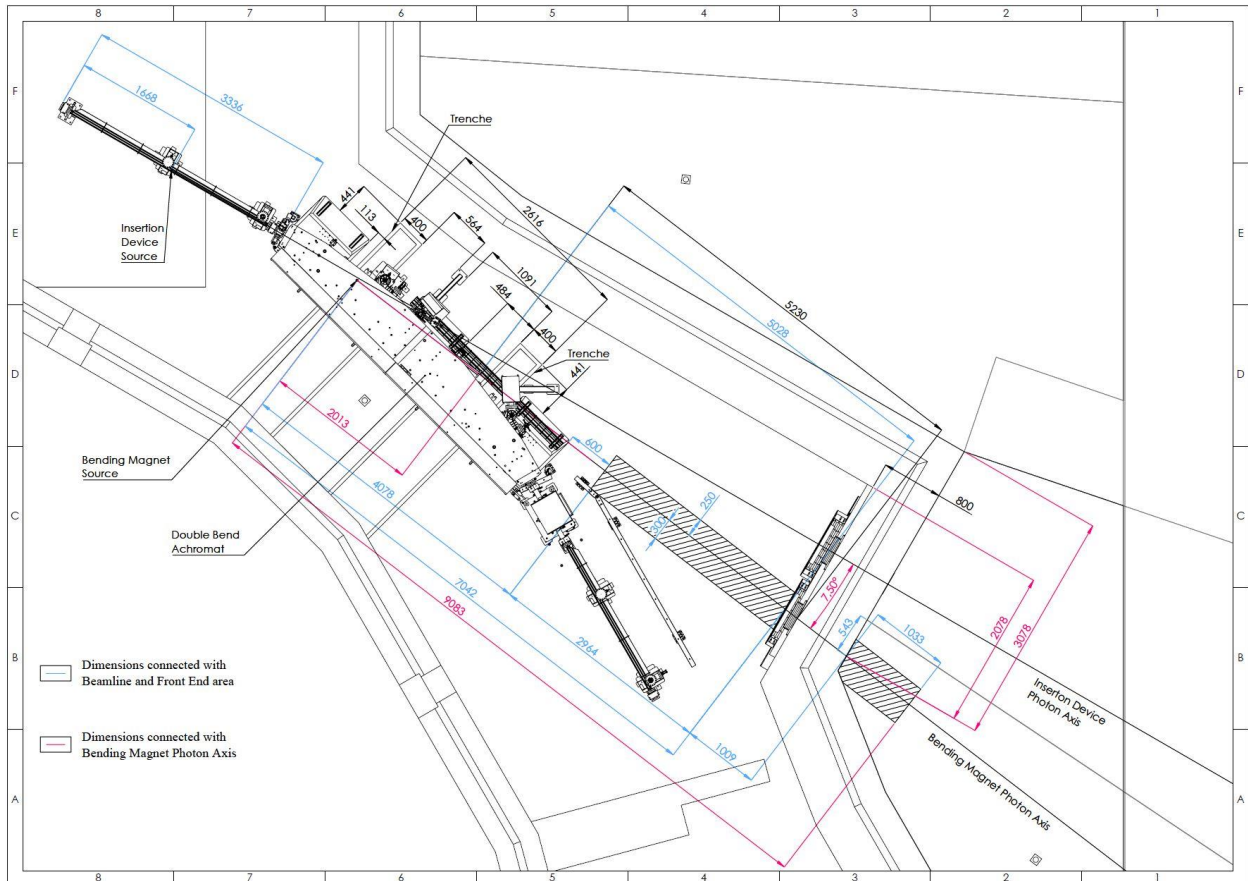
2. Description of the areas respect to the machine supports and infrastructure

2.1. Front End section

Between concrete stands supporting DBA there are two ducts in the floor (trenches). Around the trench there is undercut 50 mm width, and 5 mm depth. This undercut is used as a place for steel plate which cover the trench so upper surface of the steel plate is equal with the surface of the floor. The design of the Front End must allow access to the media in the trench, so it must allow to elevate cover plate.

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The drawing specifies the area allowed for the installation of the insertion device source Front End supports (Drawing 2).




Drawing 1. Projection of the storage ring with the characteristic dimensions

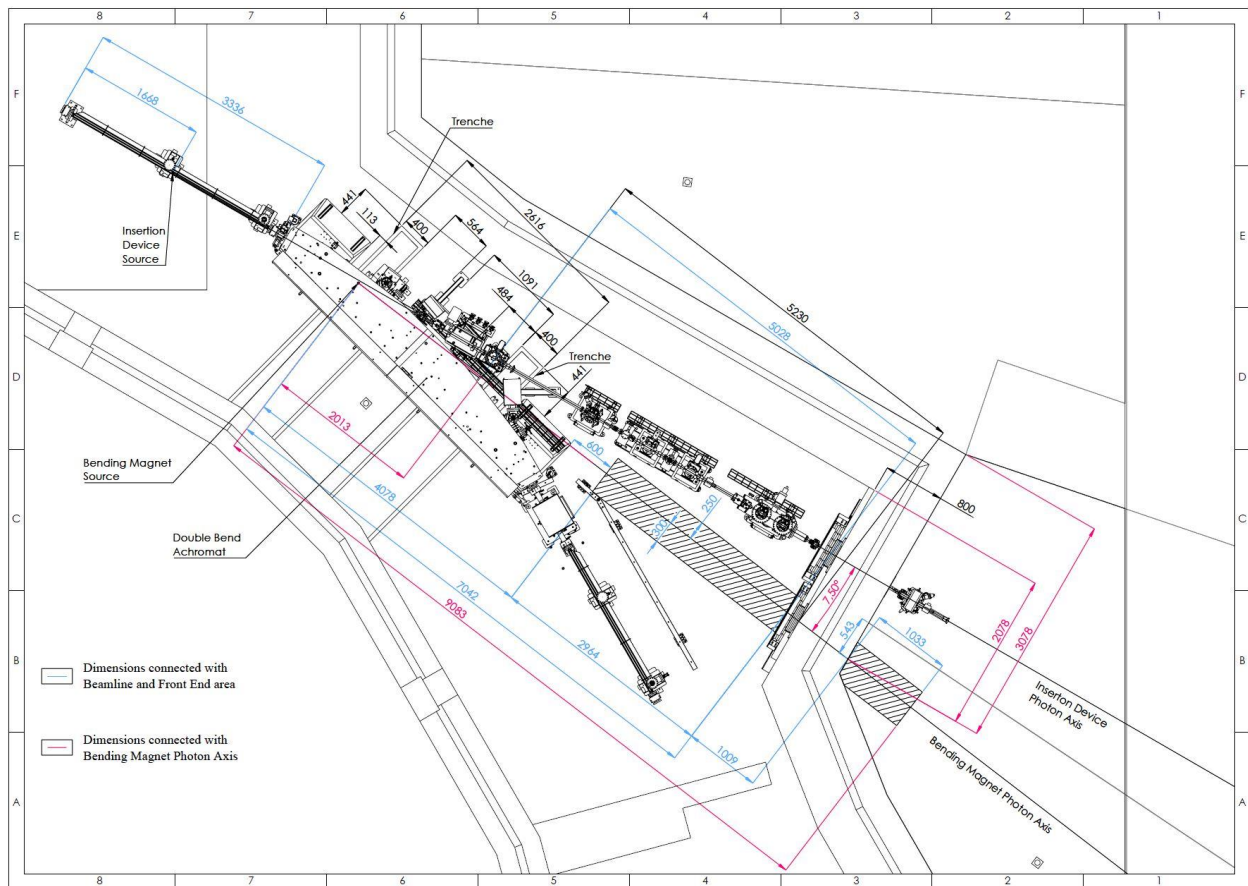
For more details of Drawing 1, please refer to a .dwg file “Appendix MECH4-BM02 - Dimensions of the BM02 Front End area.dwg”

2.2. Adjacent Front End section

In section 2 of the storage ring will be installed in the future the front end for the experimental beamline BL-02ID.

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The view of planned ID02 front end is presented in the figure below (Drawing 2).



Drawing 2. Projection of the storage ring with the BM02 front end.

For more details of Drawing 2, please refer to a .dwg file “Appendix MECH5-BM02 - Dimensions of the BM02 Front End area 2.dwg”

2.3. DBA (double bend achromat) section

The DBA is placed on three concrete supports. On second and third concrete block there are two cable trays. Dimensions of these trays are 110 mm width and 60 mm height each. The lower tray is 689,7 mm from the surface of the floor (Drawing 3).

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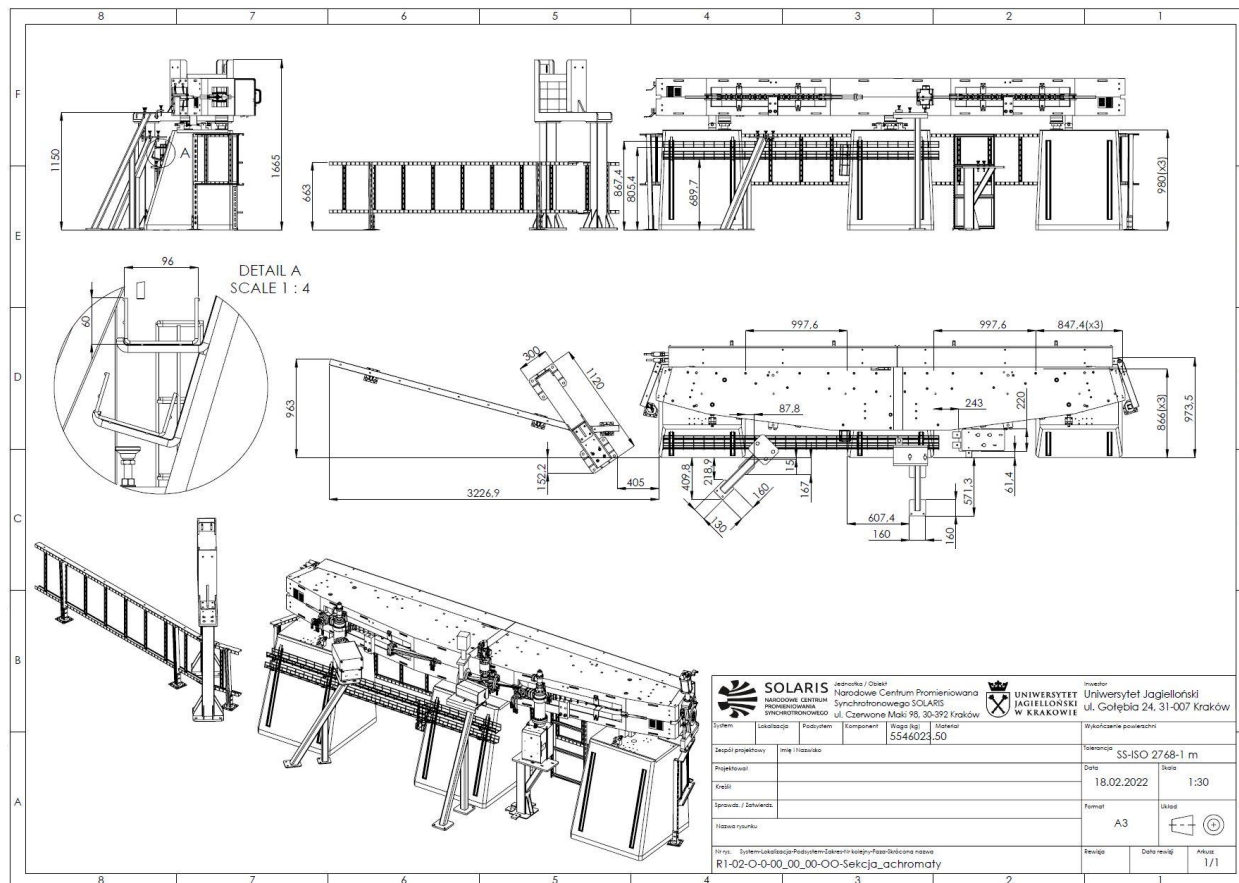
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Drawing 4. Position of cable trays on concrete supports of DBA

For more details of Drawing 3, please refer to a .dwg file “Appendix MECH6-BM02 - Dimensions of the BM02 cable trays.dwg”

IMPORTANT!: If there will be necessary to put instruments outside of dedicated area, Contractor has to send, as soon as possible, a 3D STEP (and/or IGES) model and a DWG drawing in order to check for potential collision!