Problem info

Problem type: Magnetostatics
Geometry model class: Axisymmetric
Problem database file names:

- Problem: *coil_problem.pbm*
- Geometry: *Coil_model.mod*
- Material Data: *Coil_data.dms*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

Geometry model

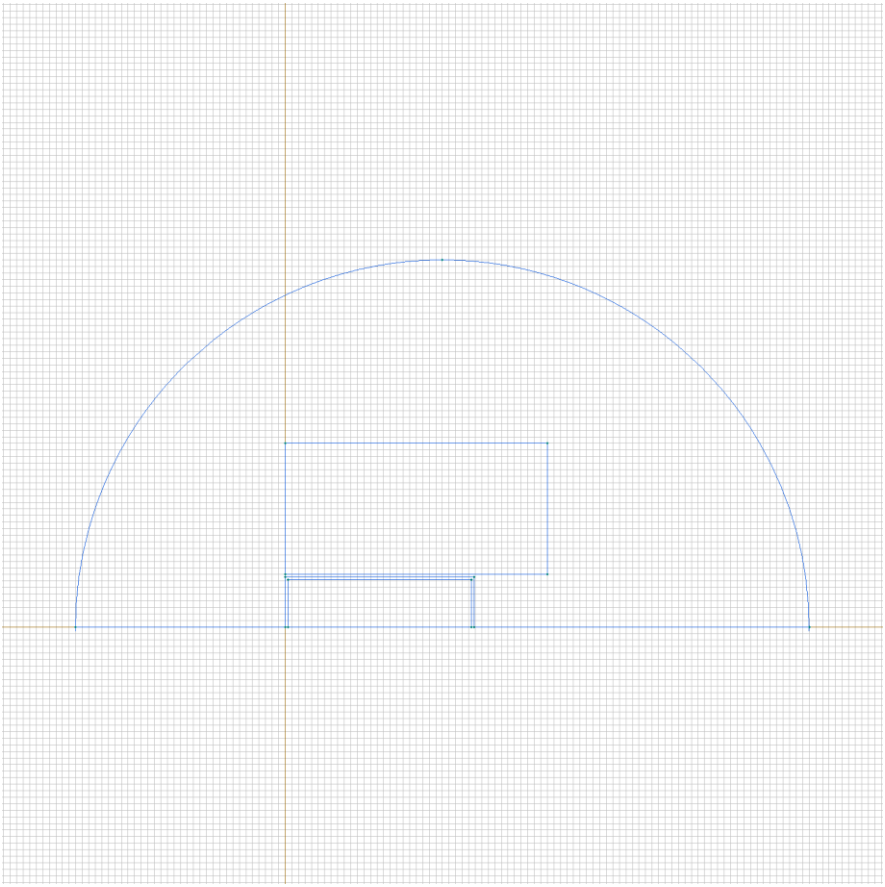


Table 1. Geometry model statistics

	With Label	Total
Blocks	4	4
Edges	1	17
Vertices	1	15

Number of nodes: 234.

Labelled objects

There are following labelled objects in the geometry model (Material Data file could contain more labels, but only those labels that assigned to geometric objects are listed)

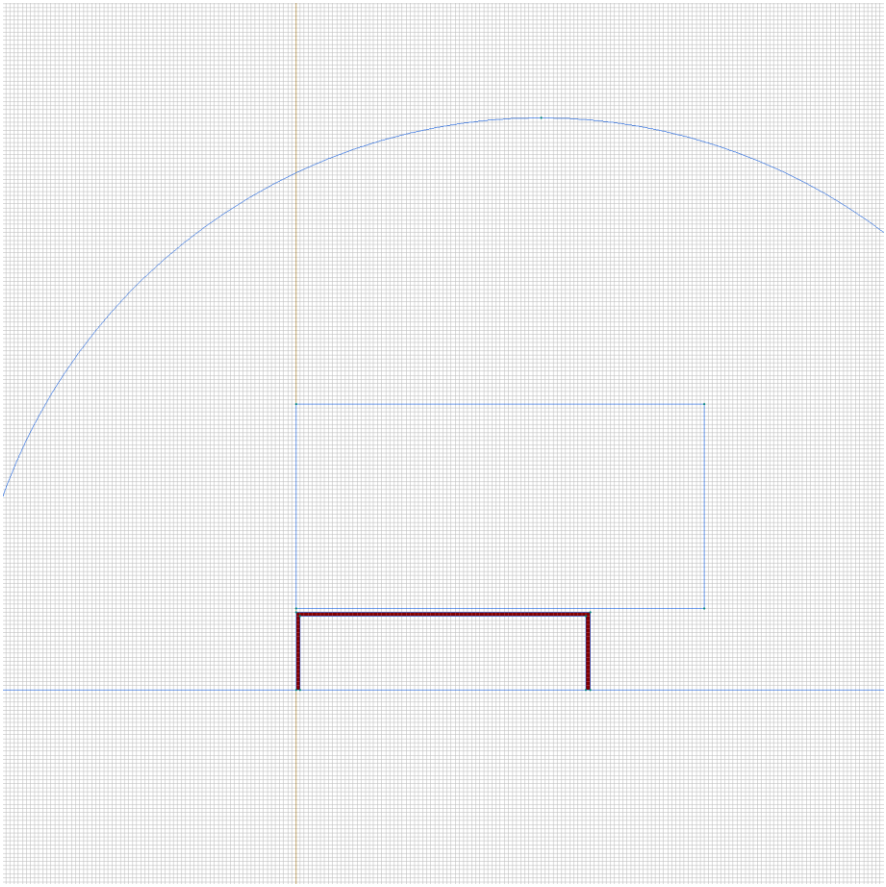
Blocks:	Edges:	Vertices:
• insulation • winding • plunger_core • air •	• a0 •	• position •

Detailed information about each label is listed below.

Labelled objects: block "insulation"

There are (1) objects with this label

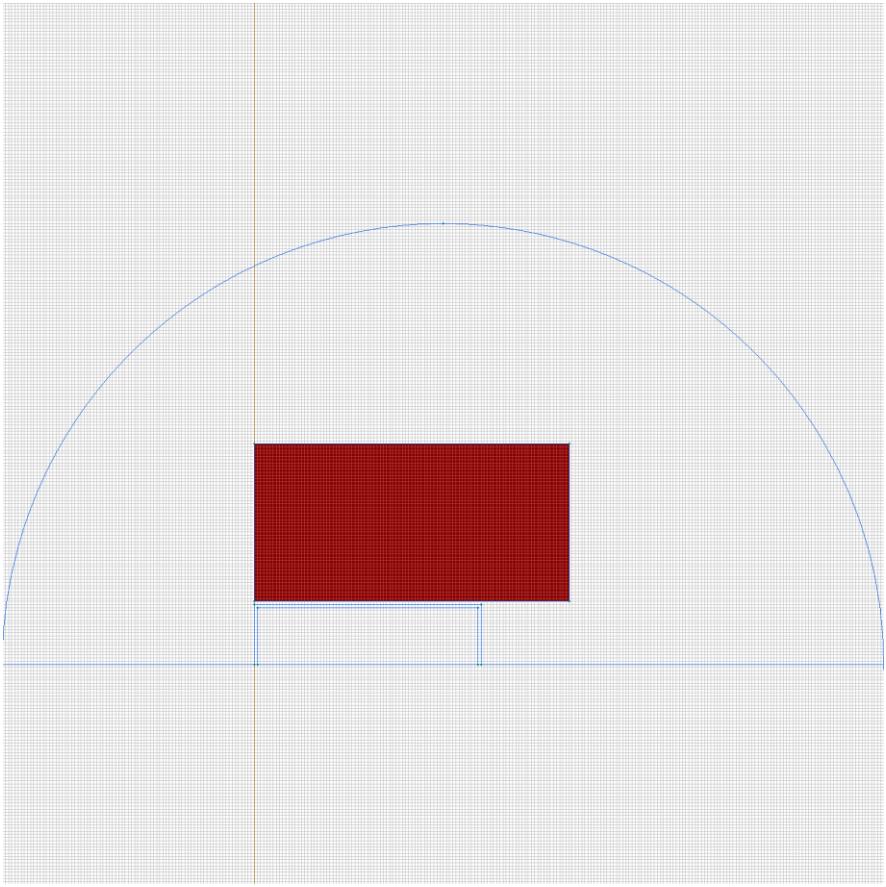
Relative magnetic permeability: mu_x=1, mu_y=1
Current density: j=0 [A/m2]
Conductor's connection: in parallel



Labelled objects: block "winding"

There are (1) objects with this label

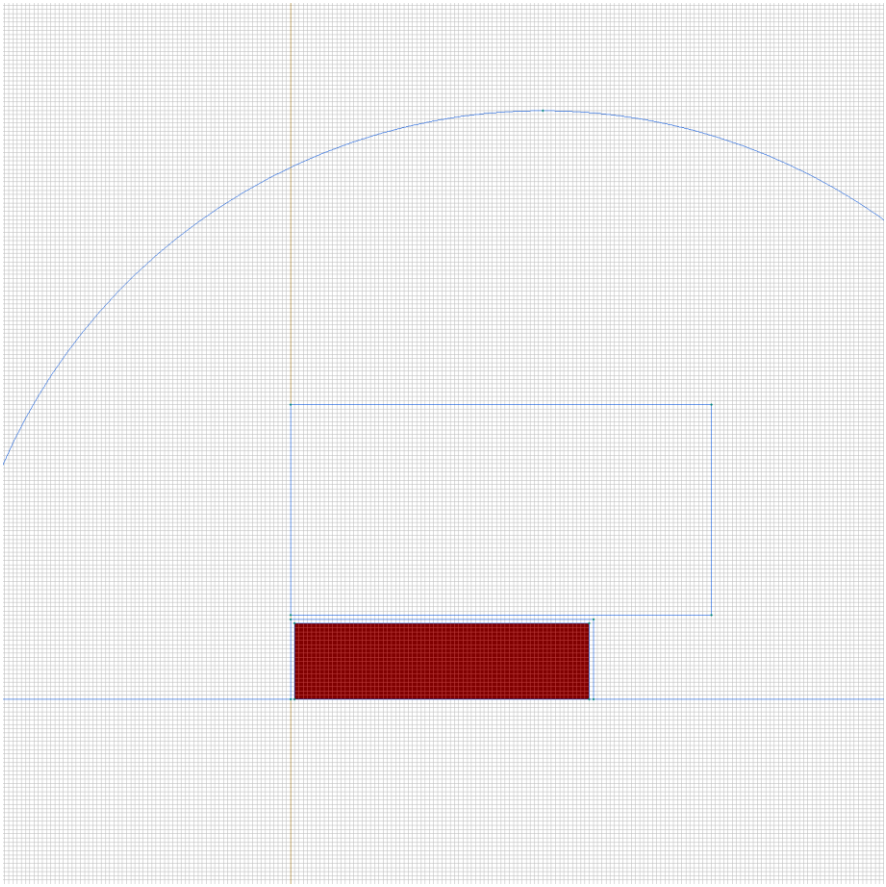
Relative magnetic permeability: mu_x=1, mu_y=1
Total current: I=2000*0.2 [A]
Conductor's connection: in parallel



Labelled objects: block "plunger_core"

There are (1) objects with this label

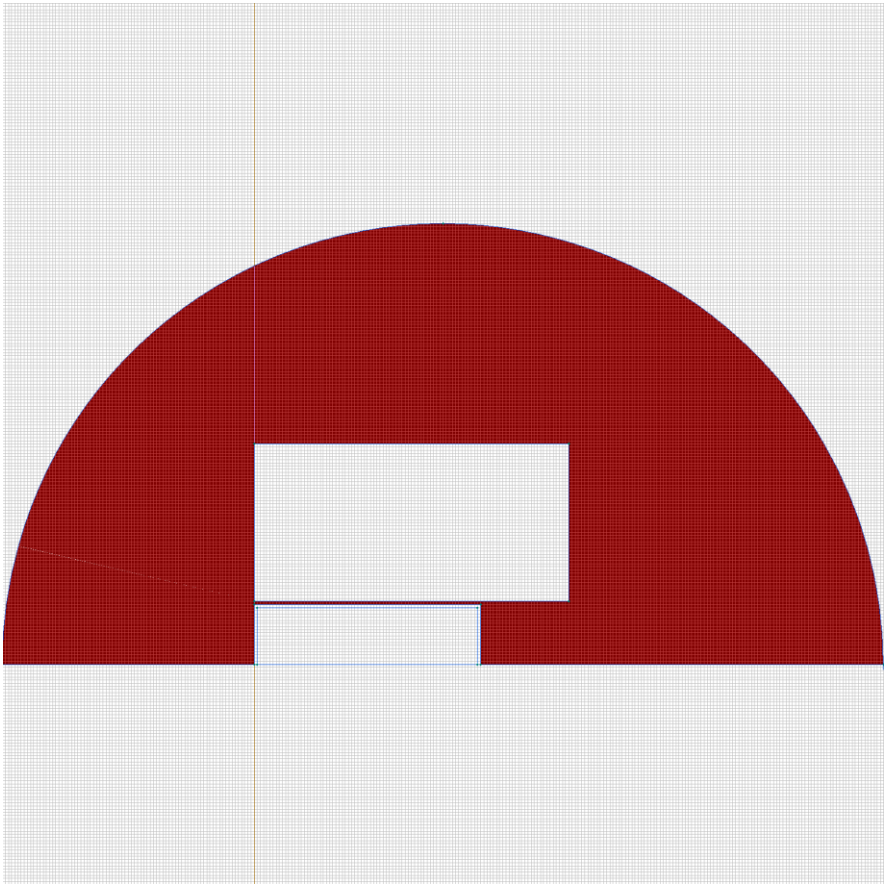
Relative magnetic permeability: mu_x=1000, mu_y=1000
Current density: j=0 [A/m2]
Conductor's connection: in parallel



Labelled objects: block "air"

There are (1) objects with this label

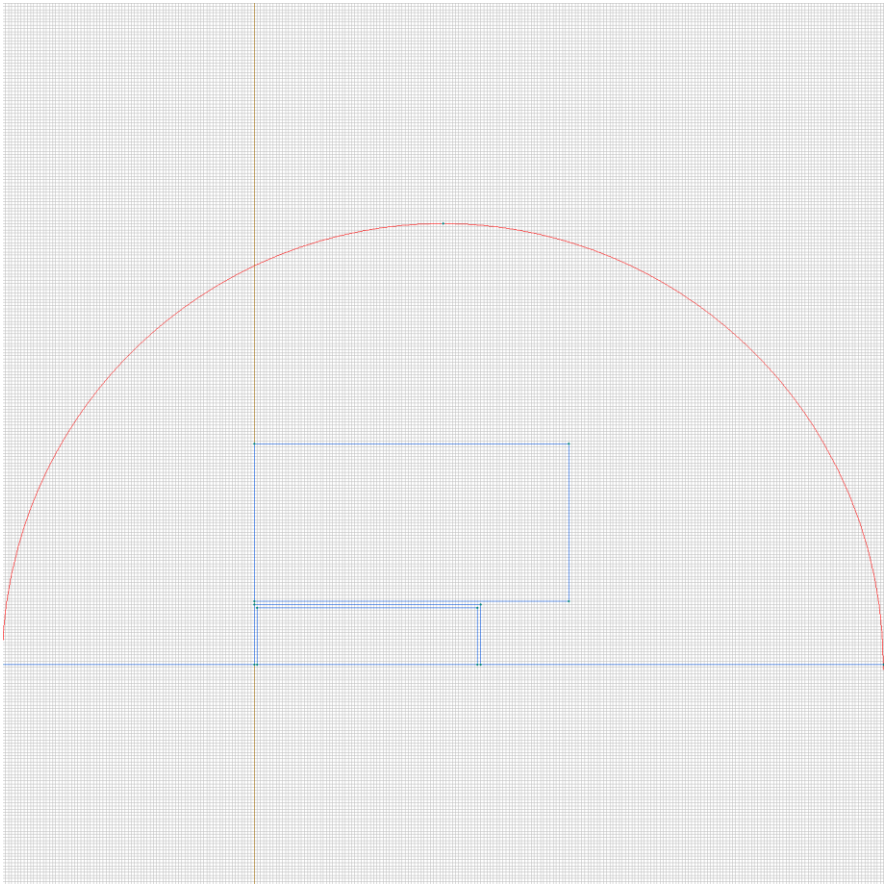
Relative magnetic permeability: mu_x=1, mu_y=1
Current density: j=0 [A/m2]
Conductor's connection: in parallel



Labelled objects: edge "a0"

There are (2) objects with this label

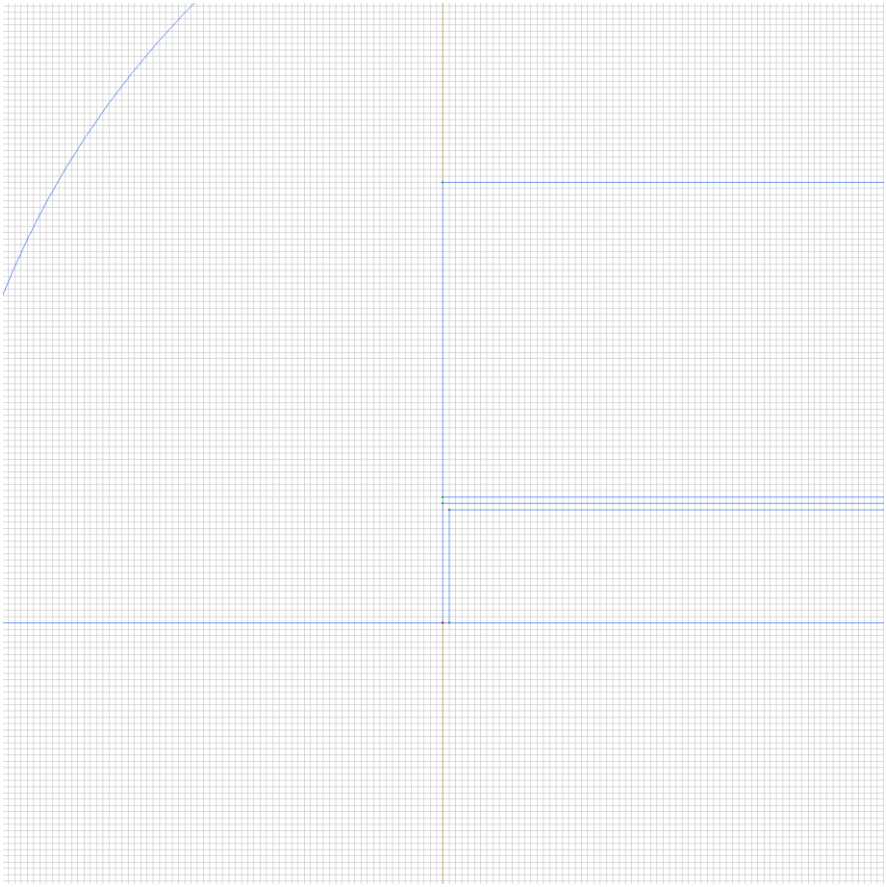
Magnetic potential: A=0 [Wb/m]



Labelled objects: vertex "position"

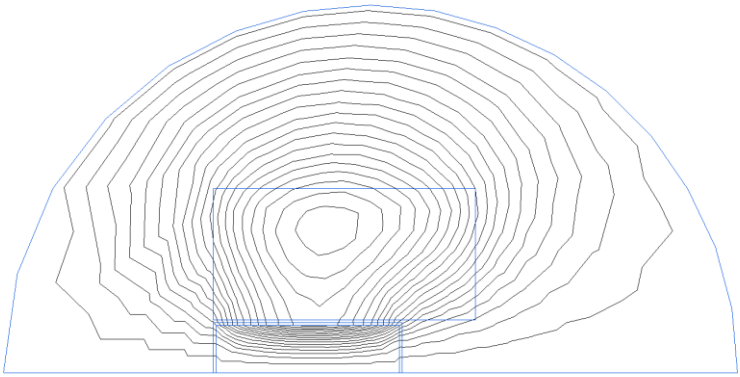
There are (1) objects with this label

No material data (boundary conditions) are specified



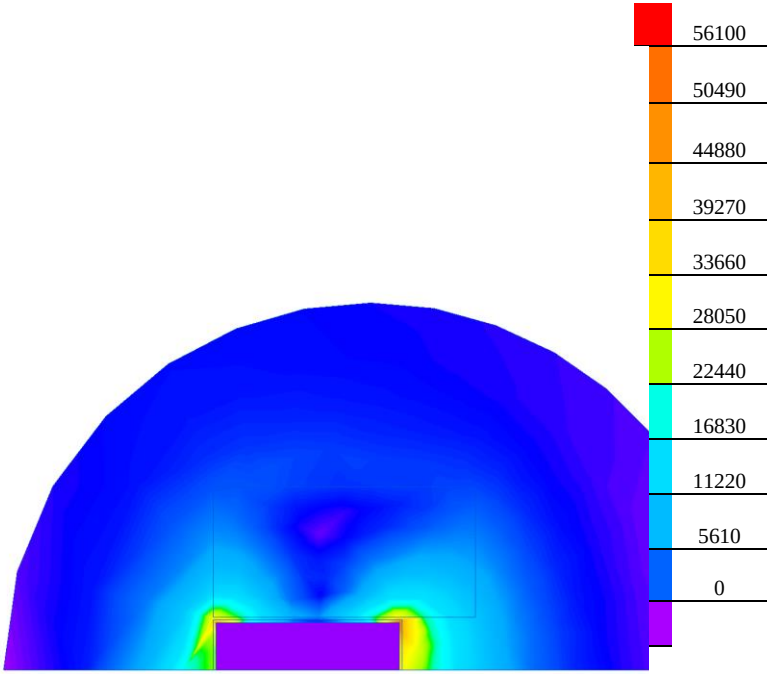
Results

Field lines



Results

Color map of Strength |H| [A/m]



Nonlinear dependencies

No non-linear dependencies are used in this problem data