

# Problem info

Problem type: Magnetostatics

Geometry model class: Plane-Parallel

Problem database file names:

- Problem: *Pickup\_3.pbm*
- Geometry: *Pickup\_3.mod*
- Material Data: *Pickup\_3.dms*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

# Geometry model

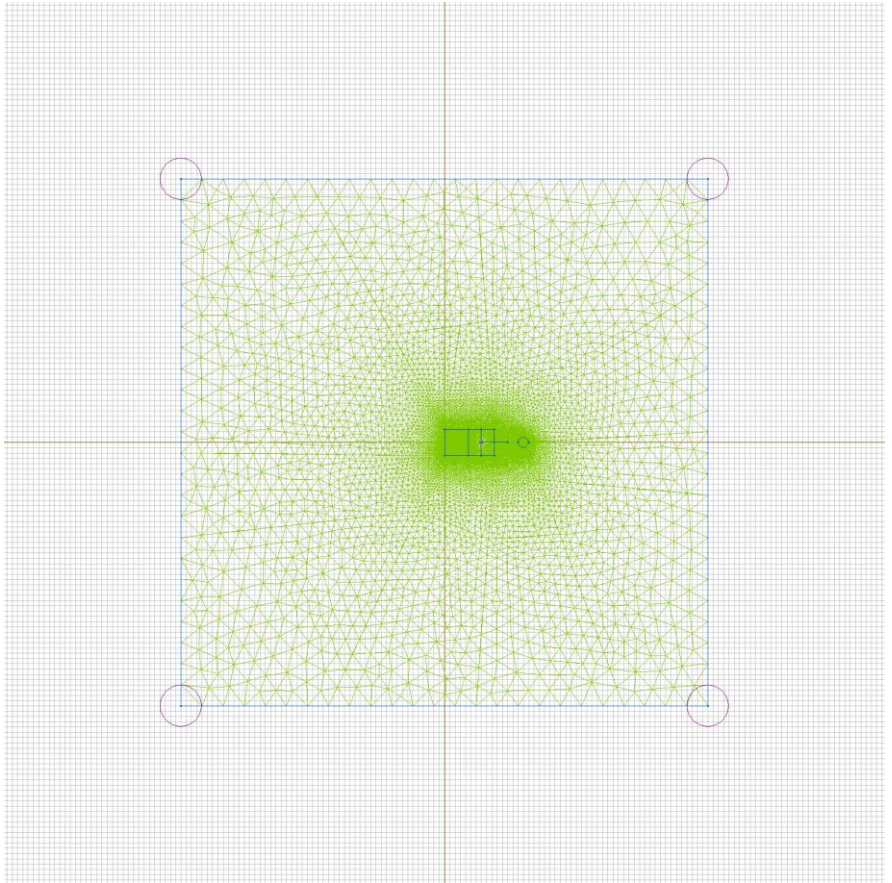


Table 1. Geometry model statistics

	With Label	Total
Blocks	4	6
Edges	4	20
Vertices	1	17

Number of nodes: 18078.

# 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:

- [Core](#)
- [Magnet](#)
- [Air](#)
- [String](#)
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Edges:

- [Wall](#)
- [Surface](#)
- [Area](#)
- [measure\\_x](#)
- 

Vertices:

- [measure](#)
- 

Detailed information about each label is listed below.

Labelled objects: block "Core"

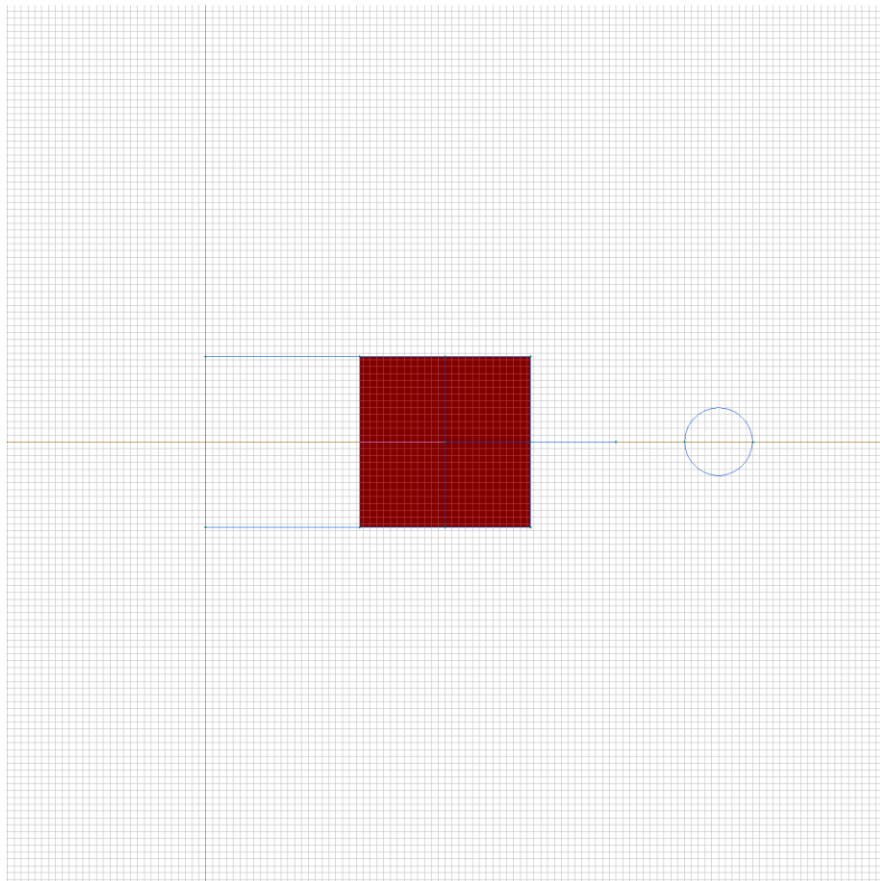
There are (3) objects with this label

Relative magnetic permeability:  $\mu_x=10000$ ,

$\mu_y=10000$

Current density:  $j=0$  [A/m<sup>2</sup>]

Conductor's connection: in parallel



Labelled objects: block "Magnet"

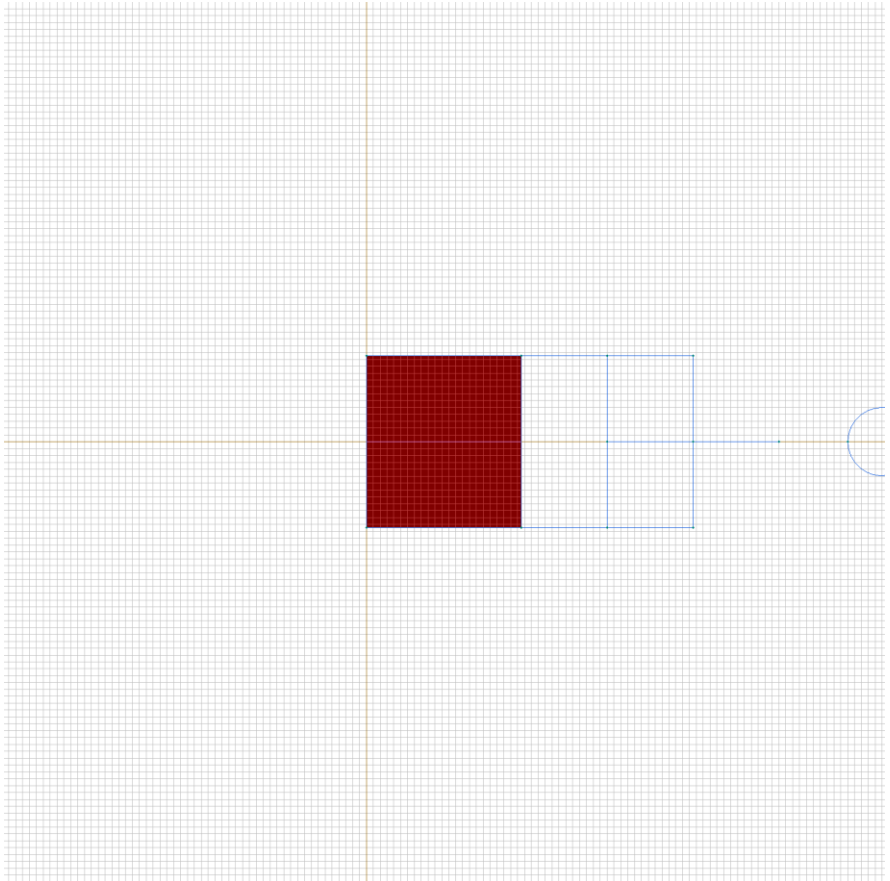
There are (1) objects with this label

Relative magnetic permeability:  $\mu_x=1000$ ,  $\mu_y=1000$

Coercive force:  $H_c=1000000$  [A], direction: 0 [deg]

Current density:  $j=0$  [A/m<sup>2</sup>]

Conductor's connection: in parallel



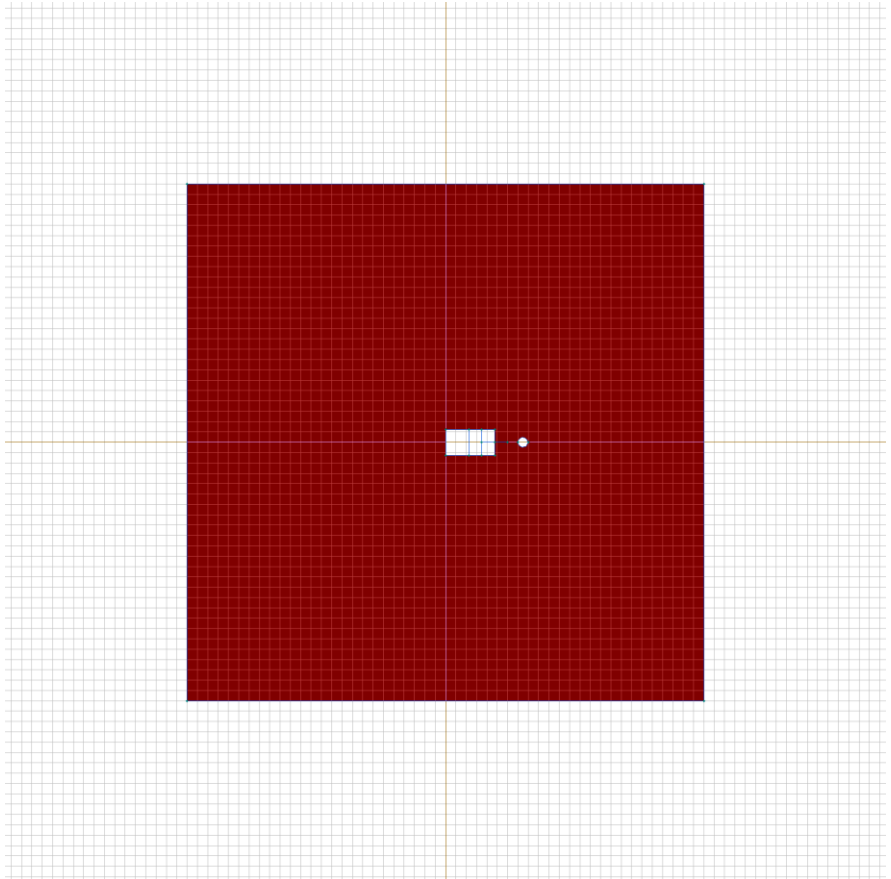
Labelled objects: block "Air"

There are (1) objects with this label

Relative magnetic permeability:  $\mu_x=1$ ,  $\mu_y=1$

Current density:  $j=0$  [A/m<sup>2</sup>]

Conductor's connection: in parallel



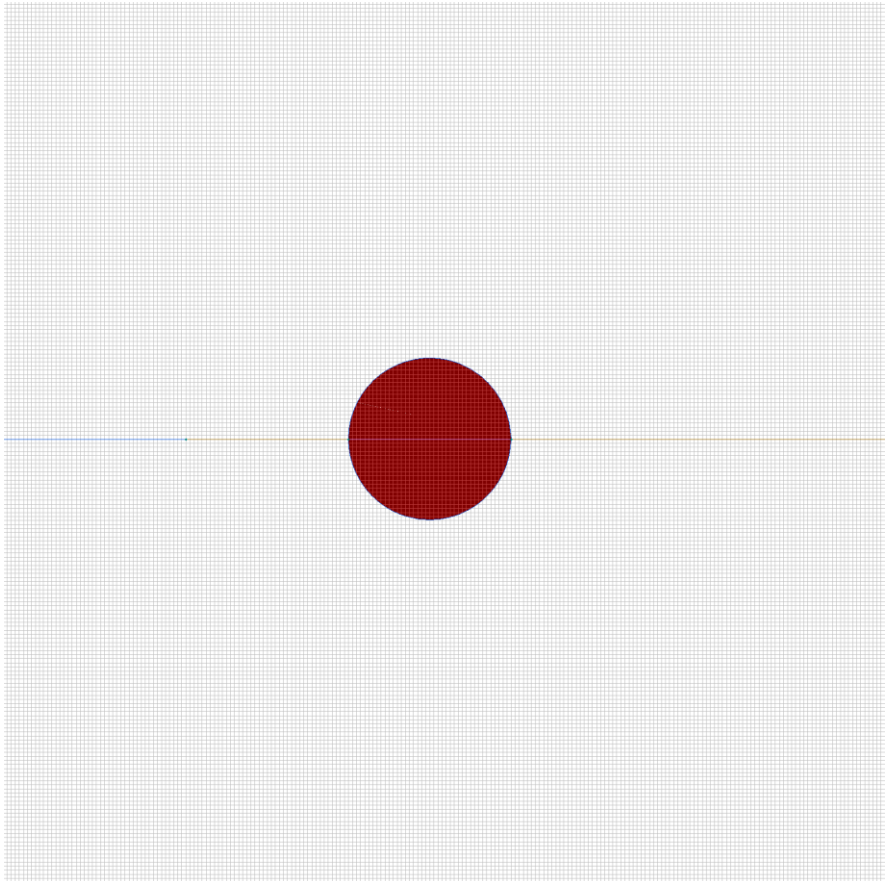
Labelled objects: block "String"

There are (1) objects with this label

Relative magnetic permeability:  $\mu_x=10000$ ,  
 $\mu_y=10000$

Current density:  $j=0$  [A/m<sup>2</sup>]

Conductor's connection: in parallel

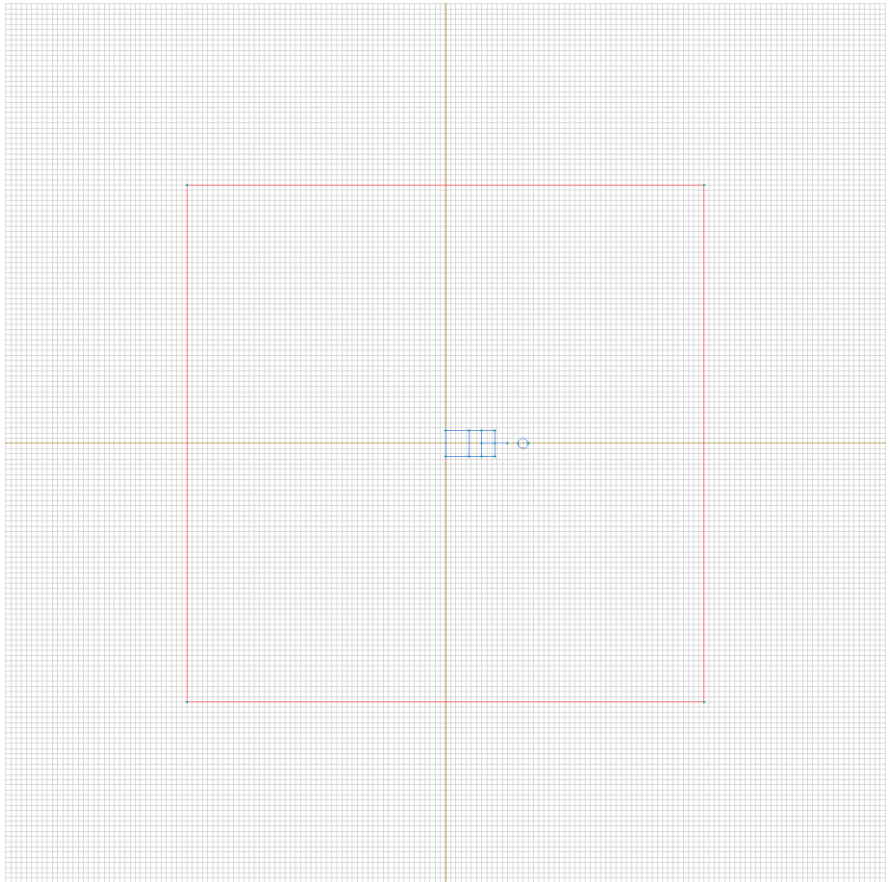




Labelled objects: edge "Wall"

There are (4) objects with this label

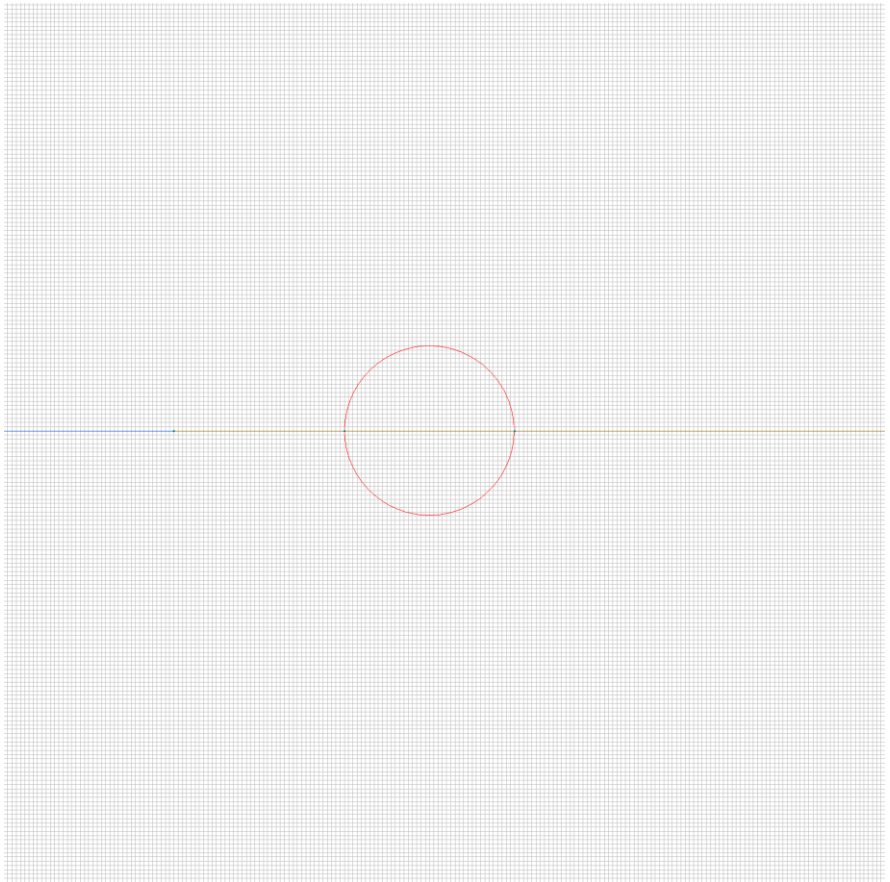
Magnetic potential:  $A=0$  [Wb/m]



## Labelled objects: edge "Surface"

There are (2) objects with this label

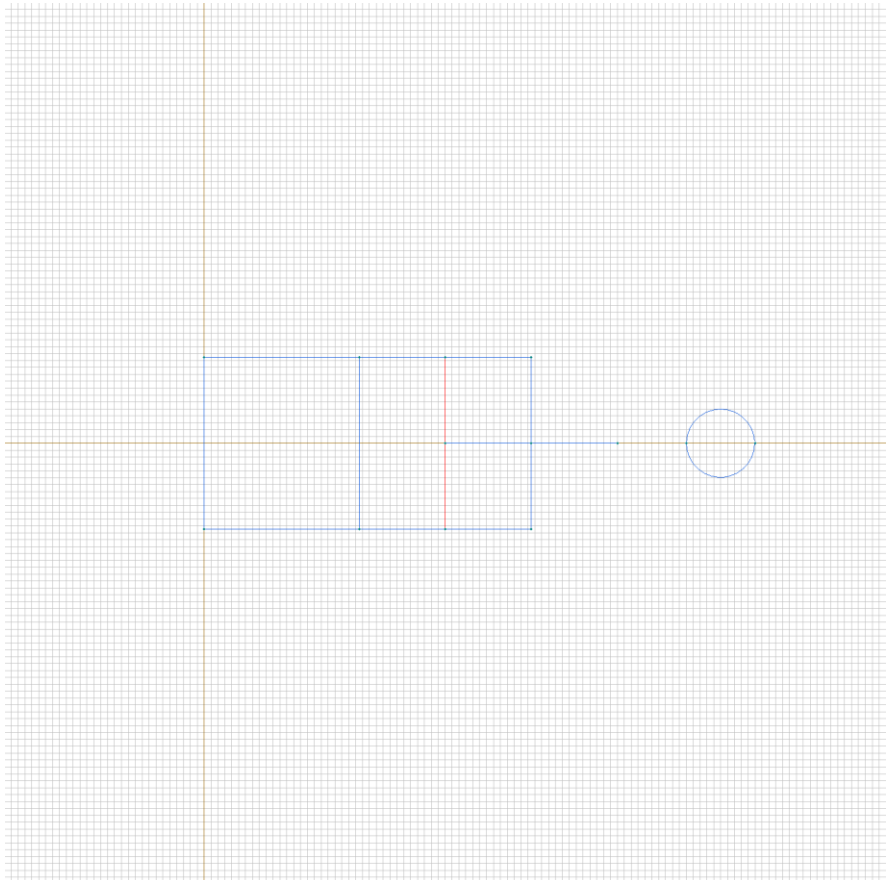
No material data (boundary conditions) are specified



## Labelled objects: edge "Area"

There are (2) objects with this label

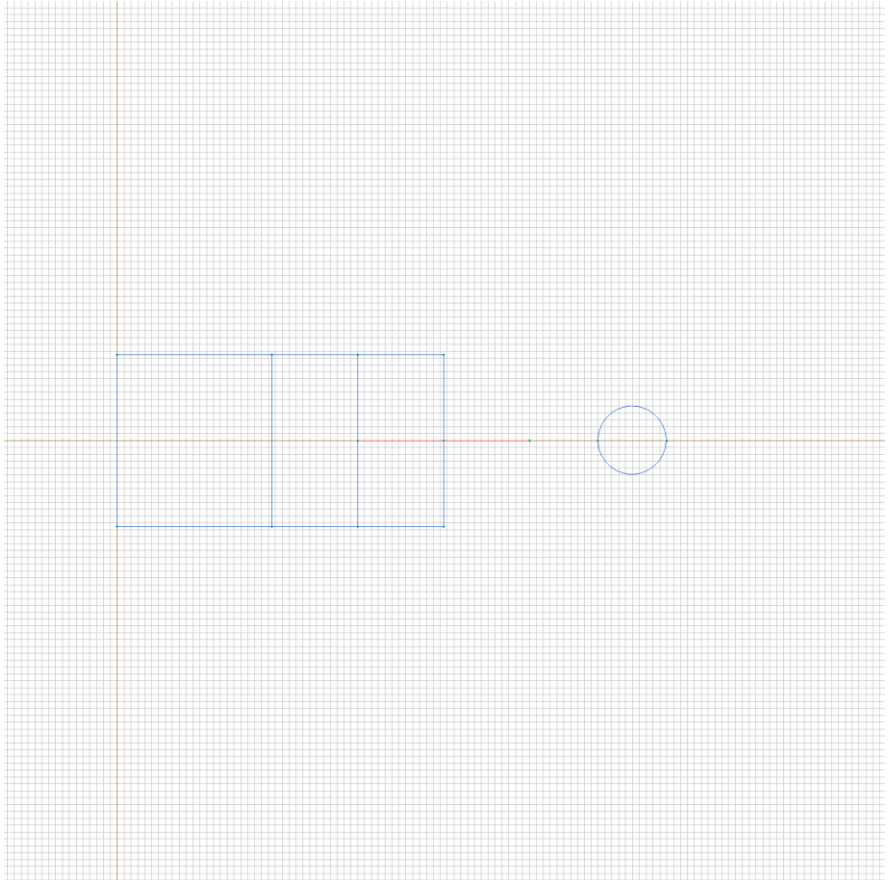
No material data (boundary conditions) are specified



Labelled objects: edge "measure\_x"

There are (2) objects with this label

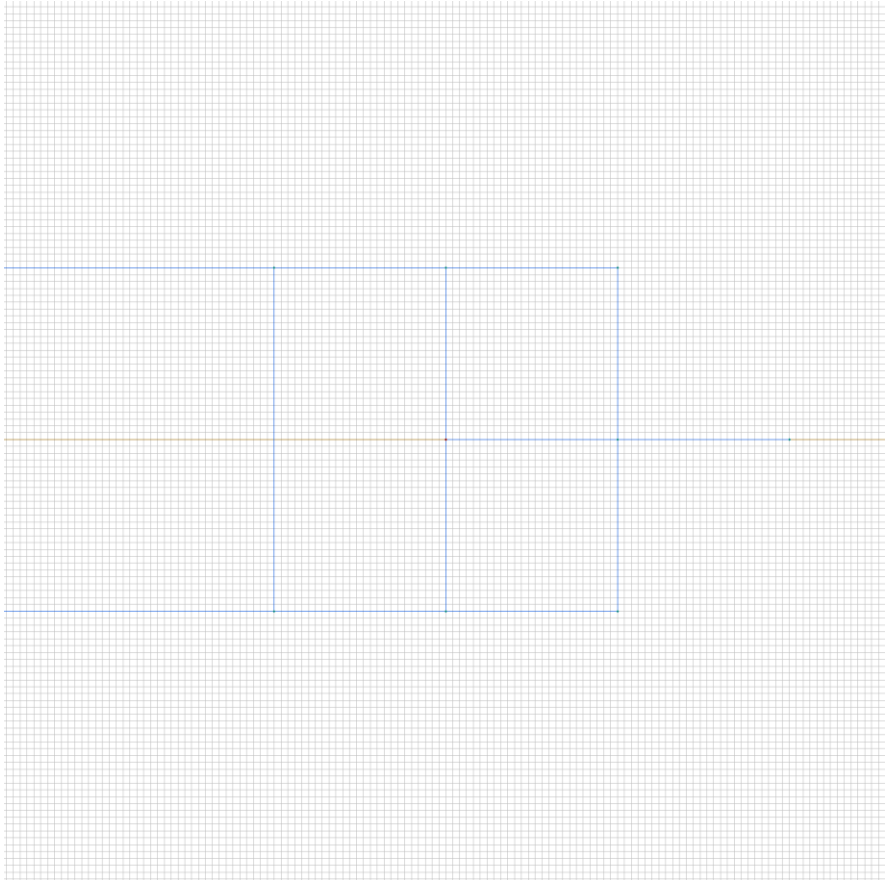
No material data (boundary conditions) are specified



## Labelled objects: vertex "measure"

There are (1) objects with this label

No material data (boundary conditions) are specified

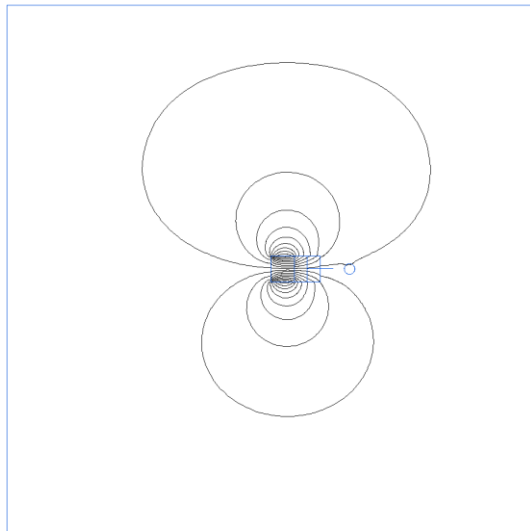






# Results

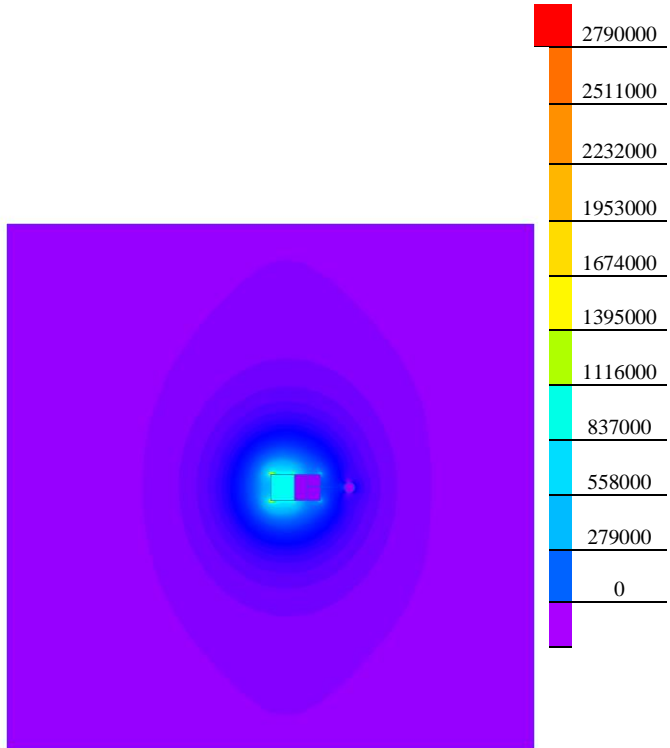
Field lines





# Results

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



# Nonlinear dependencies

No non-linear dependencies are used in this problem data