

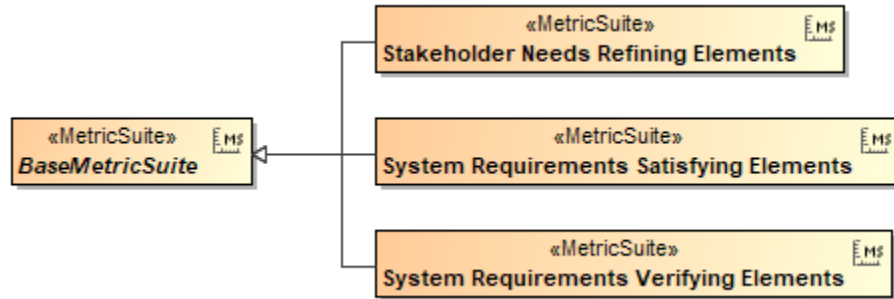
# Requirement covering elements

A Metric suite is a collection of parameters and metric definitions used to calculate metrics that evaluate specific aspects of your model. For your convenience, there are three predefined Metric Suites for MagicGrid that calculate Requirement covering elements. The following figure outlines these Metric Suites and their purposes.



## Important

You must create a MagicGrid project or use the MagicGrid Profile in your model in order to use predefined Metric Suites for MagicGrid.



Predefined Requirement covering elements Metric Suites for MagicGrid.

## Stakeholder Needs Refining Elements

This Metric Suite tracks refining elements by checking the outgoing Refine relationships from behavior, structure, and parameter elements to Stakeholder Needs. Stakeholder Needs can only be refined by the following elements:

- Action
- Part Property
- Reference Property
- Value Property

## System Requirements Satisfying Elements

This Metric Suite tracks satisfying elements by checking the outgoing Satisfy relationships from behavior, structure, and parameter elements to System Requirements. System Requirements can only be satisfied by the following elements:

- Action
- Part Property
- Reference Property
- Value Property

## System Requirements Verifying Elements

This Metric Suite tracks verifying elements by checking the outgoing Verify relationships from Test Cases to System Requirements.

| <div> <div>Actions</div> <div>Part Properties, Reference Properties</div> <div>Value Properties</div> </div> |                  |                                                 |                   |                                  |                                     |                    |                                   |                                      |            |                           |                              |
|--------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------|-------------------|----------------------------------|-------------------------------------|--------------------|-----------------------------------|--------------------------------------|------------|---------------------------|------------------------------|
| #                                                                                                            | Date             | Scope                                           | Behavior Elements | Req Satisfying Behavior Elements | Req Satisfying Behavior Element Pct | Structure Elements | Req Satisfying Structure Elements | Req Satisfying Structure Element Pct | Parameters | Req Satisfying Parameters | Req Satisfying Parameter Pct |
| 1                                                                                                            | 2019.04.30 13.53 | 2.2 Heating System Solution<br>1 Problem Domain | 13                | 0                                | 0                                   | 8                  | 1                                 | 12.5                                 | 3          | 1                         | 33.3333                      |
| 2                                                                                                            | 2019.04.30 13.55 | 2.2 Heating System Solution<br>1 Problem Domain | 9                 | 4                                | 44.4444                             | 8                  | 4                                 | 50                                   | 3          | 2                         | 66.6667                      |

Filter is not applied. 2 rows are displayed in the table.

A Metric Table that tracks System Requirements satisfying elements.

## Elements tracked by Requirement covering elements Metric Suites

The quantity of model elements tracked by Stakeholder Needs Refining Elements and System Requirements Satisfying Elements Metric Suites for MagicGrid depends on the following rules:

- In most cases, only the elements that do not own any elements (leaf elements) are tracked.

### Examples

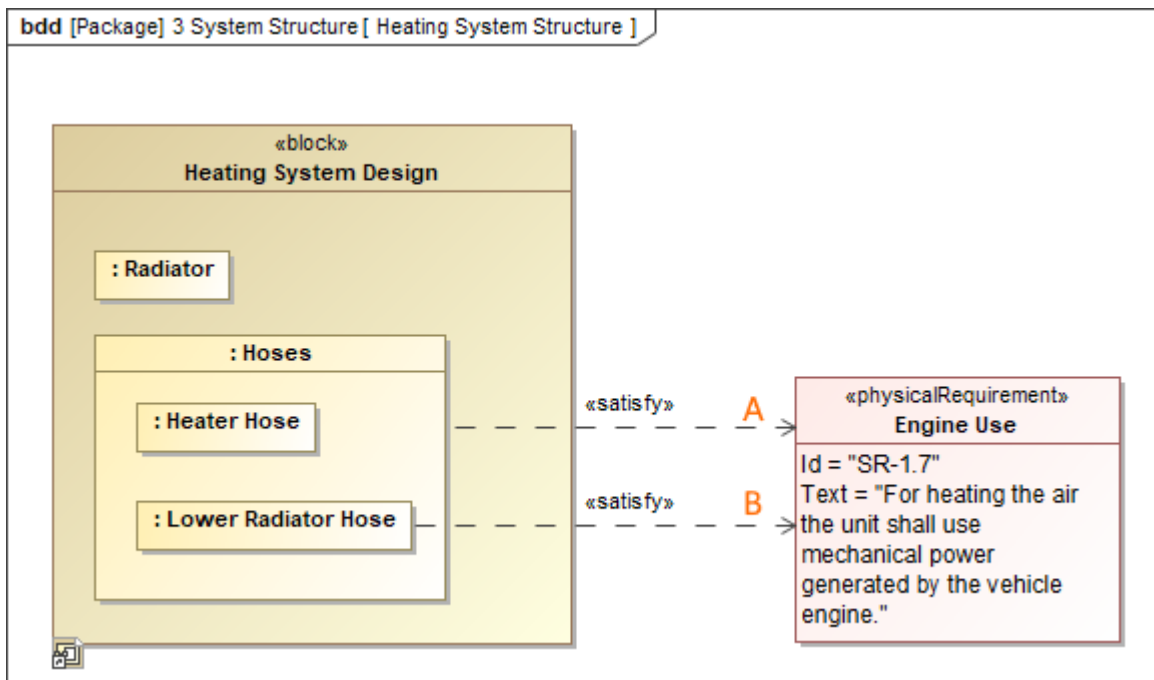
The following examples are from the Block Definition Diagram displayed below:

- If relationships A and B do not exist, *Radiator*, *Heater Hose*, and *Lower Radiator Hose* Part Properties are tracked.
- If only relationship B exists, *Radiator*, *Heater Hose*, and *Lower Radiator Hose* Part Properties are tracked.
- If both relationships A and B exist, *Radiator*, *Heater Hose*, and *Lower Radiator Hose* Part Properties are tracked.

- The elements that own other elements are only tracked if they have outgoing relationships, but none of the elements they own have outgoing relationships.

### Example

If only relationship A existed in the diagram below, then *Hose* and *Radiator* Part Properties would be tracked.



A Block Definition Diagram illustrating which elements are tracked by Requirement covering elements Metric Suites. For more information, see the examples described above.