



## INTRODUCTION

Version 6 of EnSight defines a new data format that is largely a superset of the EnSight 5 format. The new format was designed to accommodate block structured data as well as dynamic data varying at different rates. The EnSight 6 format is actually loaded into EnSight through the *Case* mechanism. A case file supersedes the older “results” file providing all the information contained in a results file and more. Indeed, the case file can actually be used as a wrapper for formats other than EnSight 6 (since it contains information on the format of the underlying data files).

**NOTE: this How To article also applies to any User Defined Data Reader!**

Reading data into EnSight is a two-step process. First, the appropriate files are selected. This step is largely the same regardless of the format of the data being read. Second, parts are constructed using an interface that is specific to the applicable data format. This article covers the second step for EnSight 6 data. See [How To Read Data](#) for more information on selecting the appropriate files.

EnSight 6 datasets consist of the following files. Note that the entry in the File Name column is only a suggestion – it typically does not matter to EnSight what the actual file name is.

File	File Name	Notes	Required?
Case	file.case	Provides additional information about the dataset (such as time information) as well as pointers to the files actually containing the variable data.	yes
Geometry	file.geo	Contains coordinates and element connectivity.	yes
Scalar Variable	file.scl	Each scalar variable file contains one value per node or element defined in the geometry file.	optional
Vector Variable	file.vec	Each vector variable file contains three values per node or element defined in the geometry file.	optional
Tensor Variable	file.ten	Each tensor variable file contains six (symmetric) or nine (asymmetric) values per node or element defined in the geometry file.	optional
Measured and Boundary files	*	Measured results, geometry, and variable files. Boundary definition files for structured data.	all optional



## BASIC OPERATION

After you have specified the appropriate data files with the File Selector (opened with File > Data (Reader)... as discussed in [How To Read Data](#)) and clicked Okay, the Data Part Loader (Case) dialog will open. You use this dialog to build the desired parts. Since the EnSight 6 format supports both structured and unstructured data, you can select the type of parts you wish to build and the dialog's interface will change accordingly. Since the interface for building unstructured parts is exactly the same as building parts for EnSight 5 format, only structured part building is covered here. (See [How To Read EnSight 5 Data](#) for details on building unstructured parts.)

To build structured parts from the EnSight 6 format data:

1. If the Data Part Loader dialog is not open, select File > Data (Part Loader)...

2. Be sure Structured Data is selected to display only the structured parts in the Parts List.

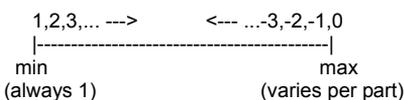
3. Select the desired part(s) in the Parts List.

4. Choose the desired initial Visual Representation for the select part(s).

5. If the selected part has Iblanking, you can build based on the value (Inside selects cells where Iblank=1, Outside selects Iblank=0, All selects all cells ignoring Iblanking).

6. You can specify From, To, and Step IJK values for the part. The From and To values are inclusive.

Valid values in the From and To fields are numbers advancing from 1 (the min for each part), or numbers decreasing from 0 (the max for each part):



If you specify values that will be outside of the range of an individual part, the proper min or max values for the given part will be used.

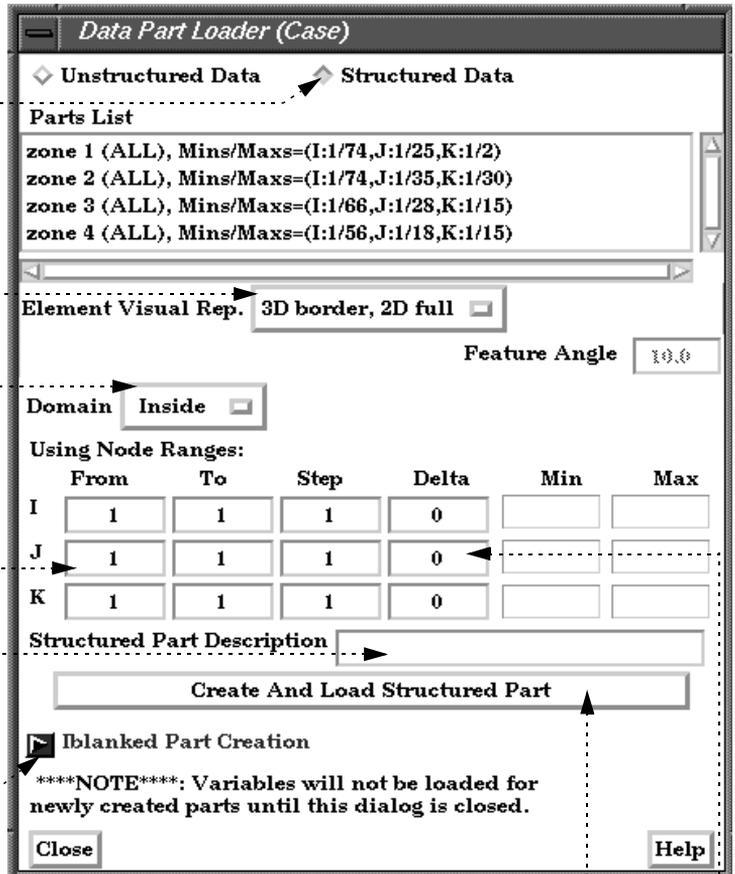
The Min and Max values are for reference only.

8. If desired, enter a name for the part (to use in the Main Parts list). The default name is the same as the entry in the Parts List.

9. Open this turndown section to create unstructured parts based on boundary Iblanking from any parts created above.

10. Click Create and Load Part.

11. Click Close when done.



7. If you desire to extract multiple surfaces (at a constant delta) from the same zone, set one of the directions to the desired non-zero delta value.

This is a "blade row" kind of operation. Please note that this results in an unstructured part instead of a structured one.



## OTHER NOTES

You can reopen the Data Part Loader dialog at any time to build additional parts. Simply select File > Data Part Loader)... and build the desired parts as described above.

If your data fails to read, you should run it through the ens\_checker program provided with the EnSight distribution to check for format errors.

## SEE ALSO

[How To Read Data](#)

[How To Use ens\\_checker](#)

User Manual: [EnSight Case Reader](#)