



# ACE Structural Engineering Applications LLC

## ACE Filter Selector Utility Documentation

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### ACE Filter Selector Utility (ACE\_FS.MA)

(Current Versions - FWP 3.1.x.x/3.2.x.x rel 2.0.5 & FWP 7.0.x.x rel 7.0.5 & FWP 7.1/7.2/7.3 rel 6.0.5 & FWP 8.0.x.x rel 8.0.5 & FWP 9.0.x.x rel 9.0.5 & FWP 10.0.x.x rel 10.0.5 & FWP 11.0.x.x rel 11.0.5 & FWP 12.0.x.x rel 12.0.5)

The ACE filter selector utility is provided facilitate the manipulation of collections of FrameWorks members. While FrameWorks currently contains both a filter capability and a locate command, the ACE filter selector is essentially another filter which provides additional grouping capabilities. The filter selector was specifically developed to aid in working with the ACE FrameWorks utilities so that utilities which produce collections of members (such as Caged Ladders, Circular Platforms, Stairs, Handrails, etc). This filter application allows the assorted components (such as rails, rungs, hoops, bars & interference envelopes for the Caged Ladder as an example) to be put into a selection set from where they can be easily manipulated as groups. This application can be useful for all of the modeling components produced with the ACE FrameWorks Utilities. This application can also be very useful in ordinary FrameWorks operations. To fully understand the uniqueness of the ACE filter selector, the filter selector along with other two native FrameWorks tools are briefly discussed & contrasted at the end of this document.



**ACE Filter Selector Dialog Box**

For the most part the filter selector capabilities are easy to understand by looking at the dialog box shown above. Each major category (Type, Component, Class & Name) may be toggled to active status. The filter is additive, that is, if a category is toggled on, the member must satisfy the criteria for that category to be included.

The Name filter allows for the inclusion of a wildcard which can be specified as either a "\*" or a "^". The option is available to turn off the wild card capability. Wild cards may be placed at the beginning of the name, the end of the name or both. If a wildcard is placed in the center region of the name, it is treated as an ordinary character. The case of the name is relevant for this filter.

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## Comparison of Filter/Locate Commands

### FrameWorks Filter Capability

The built in filter capability allows the combination of Type, Name, Section, Class & Named Groups. Each category can be on or off and may be equal or not equal. The class category has additional options of equal, not equal, greater than, less than, less than or equal and greater than and equal. Of significant note, the Name category support wildcards, which is a very powerful option. The filter can then be utilized with FrameWorks commands to additionally filter ordinary selection sets. If the filter is active and the selection set includes members from attached models, the attached models are also filtered. The FrameWorks filter is a very useful powerful tool. One drawback of the filter is that it cannot be utilized by ordinary FPL applications, as access to the filter is not given in FPL functions.

### FrameWorks Locate Command

The locate command can be utilized to highlight members or build selection sets of members. This command works separately on the following categories: Material, Grade, Section, Element ID, Type, Class, Name & Cutback. A category is selected and the value is specified, the model is then searched and if matching members are found they are either highlighted or selected. In every case only one value may be specified. The Name category does not support. This utility also contains the option to zoom the found members with the option to view them one by one. This utility works only on the current model. This is a powerful and useful utility, which would be even more powerful with stronger combination options. The locate command can be used in conjunction with the FrameWorks filter capability (i.e. create the selection set with locate and then use the filter).

### ACE Filter Selector

The ACE filter selector supports four categories: Type, Component, Class & Name. As with the FrameWorks filter each category can be on or off. Unlike the other capabilities, for each category the individual options can be individually toggled on or off (i.e. Type has 10 options, Component has 4 options and Class has 10 options). Also of some significance is the Component category as this is the only utility to include this category. Like the FrameWorks filter, the Name category has the powerful option to support wildcards. The wildcard capability can be toggled on or off. An option is given to use either a "\*" or a "^" as the wildcard. The ACE filter selector will search the active model with a toggle option to search attached models and build a selection set of all members matching the filter criteria. As with the locate command, this utility can be used in conjunction with the FrameWorks filter capability (i.e. create the selection set with ACE filter and then use the FrameWorks filter).

## LOG FILES

All applications can write log files if the environment variable ACE\_DUMP is set to 1. There have been reports that some sites lock the C root drive and under certain conditions a locked C drive can cause a system fault 5.

All applications have been modified to warn of a locked drive/file and then gracefully exit. All applications now look for the environment variable ACE\_LOG\_PATH. If it is found, that is the directory where the log files will be placed. If the directory is locked or non-existent or if file is locked a warning will be given and the C drive will be tried. If it is locked or the file is locked a warning will be given and application will gracefully exit.

Usage of the variable ACE\_LOG\_PATH to control log file locations is similar to ACE\_DEF\_PATH to control DEF files. However there is one very important difference: ACE\_LOG\_PATH should NEVER point to a network drive (this is highly recommended for ACE\_DEF\_PATH). Everyone writes to the same named log file and if they are on a network drive there will be bad consequences. ALWAYS point ACE\_LOG\_PATH to a local drive (perhaps a temp off C root).