

General information about working with ODCLASS

1. General information about ODCLASS

ODCLASS gives ordinary users the ability to add descriptive data to any dwg graphic elements. And based on this, it allows you to draw/model faster, better and create object models instead of graphical ones.

ODCLASS depending of its version uses AutoCAD ® Xrecord or Object Data AutoCAD ® Map/Civil 3D ® to define objects and for descriptive, additional data.

ODCLASS - arx, ObjectARX plugin for AutoCAD ® 2011-2019, 32- и 64-bit. The plugin can be loaded manually by `_APPLOAD` command.

ODCLASS window is opened by `ODCLASS_GUI` command.

The window of a review and entering of characteristics is opened by `ODCLASS_PROPERTIES` command.

Work of ODCLASS bases on files of object definitions.

The files of object definitions contains:

- drawing parameters and settings,
- access to the necessary drawing sources such as a library of blocks, line types, text and dimension styles etc.,
- object types and theirs graphic properties such as primitive types, colors, layers, styles etc.,
- objects characteristics and theirs possible values, input characteristics parameters.

The structure of the definition file is described in *ODCLASS_definition_file_structure_R-4, htm or pdf*.

The structure of the definition file was consciously developed not the same as xml for supplying tightness and simplification of the manual creating of any user.

If the necessary definition file has already existed then it is enough just to load the file in ODCLASS and start to draw, define objects and theirs characteristics etc. (see chapters 3 and next).

2. Creation of objects definition file

The definition file can be manually generated in a text editor - see examples are attached with ODCLASS.

The definition file can be generated by ODCLASS_TEMPLATE command (*File→Generate Description Template*). The templates of the definition file are generated for the required graphics elements. Generated by this way definition file in general needs to be edited because it has no parameters and settings of drawing, it does not show characteristics of objects etc. Although this template of definition file may be added (loaded) to the current dwg and can be used at once for drawing, definition, checking etc.

3. Loading of the definition file

The definition file is loaded by ODCLASS_LOAD command (*File→Load Description*).

When the definition file loading in an active file, all parameters and settings of drawing are set and all sources are loaded.

You can start to draw, to define objects and their characteristics etc. (see chapters 4 and next).

If the definition file has been edited or the drawing sources have been purged, or the parameters of drawing have been changed, then the loading of the definition file might be refreshed by ODCLASS_RELOAD command (*File→Reload Description*).

After the reloading of the definition file, all drawing settings and parameters are restored. The sources are not loaded.

When loading and reloading, the definition file are checked. The AutoCAD message window provides messages about download results, errors, and warnings.

4. Drawing/modeling

After the definition file is loaded, the classes and types of drawing/modeling objects are displayed in the object menu window.

Drawing/insertion is activated by double clicking on the line with the object type. A corresponding graphic primitive appears with the specified graphical properties — color, layer, linetype, lineweight, block name, hatch type, text style, text height, etc.

Drawing by the specified objects type is active up to the selecting another type of objects, does not require a recall.

When creating a new graphic element, the corresponding Xrecord or Object Data record is automatically attached to it, containing the object type name and the corresponding fields for its characteristics.

Existing graphical elements can be defined as objects by the *Define* action. In this case, the records of the corresponding Xrecord or Object Data are automatically added to the graphic elements.

To set, to restore the corresponding graphical properties of the elements - actions *Assign graphical properties* and *Restore graphical properties* are used.

To remove the object definitions and characteristics *Remove* action is used.

This and other actions available from the menu *Edit* and from the right click menu of objects on any line of the objects menu.

5. Determining the objects characteristics values.

For viewing, entering and editing characteristics the ODCLASS_PROPERTIES window is provided - ODCLASS_PROPERTIES command.

In ODCLASS_PROPERTIES window you can view, enter, select from specific lists, and edit characteristic values. Control for the correct values is automatically included – the incorrect values will be marked with magenta background.

All fields in ODCLASS_PROPERTIES window are available to copy.

6. Checks

Checks are available from the menu - *Check*.

Checks are performed for characteristics, mandatory characteristics, graphical properties, and object definitions.

7. Statistic of the objects

Information about the objects defined in dwg can be viewed by ODCLASS_STAT command (*Info* → *Statistics*).

For details, for more information about ODCLASS, see *ODCLASS_description_en*, *ODCLASS_definition_file_structure*, *ODCLASS_creating_object_definition_files*, *htm* or *pdf*.

ODCLASS, Version 1.19.2

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odclass.odedit.ac@gmail.com - ODCLASS based on Object Data