

Easy 2016 Release Notes

Installing

- Please note that installing Easy Release 2016 will not overwrite an older (2015, 2014, ...) existing installation of Easy. You can use Easy 2016 and an older release of Easy on the same computer.
- Easy Release 2016 requires a new password!
- Easy 2016 is downward compatible (with Easy 2016 you can open Easy 2015 projects).

Known Issues

This list covers some of the known problems with Easy 2016. Please read this before reporting any new bugs.

There are no known issues at the moment.

What's new in Easy Release 2016?

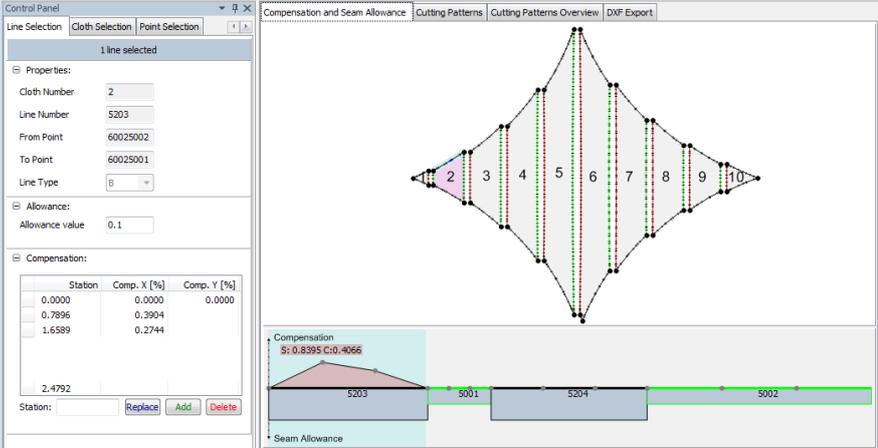
Easy – General remarks

All modules	Enhancement	64 bit version: Easy Release 2016 supports the 64-bit technology. Now it is possible to access more than 4GB RAM. With the appropriate hardware and a 64-bit operation system even larger projects can be handled.
All modules	Enhancement	Easy supports now the SafeNet-dongles SentinelHL

Graphical Editors

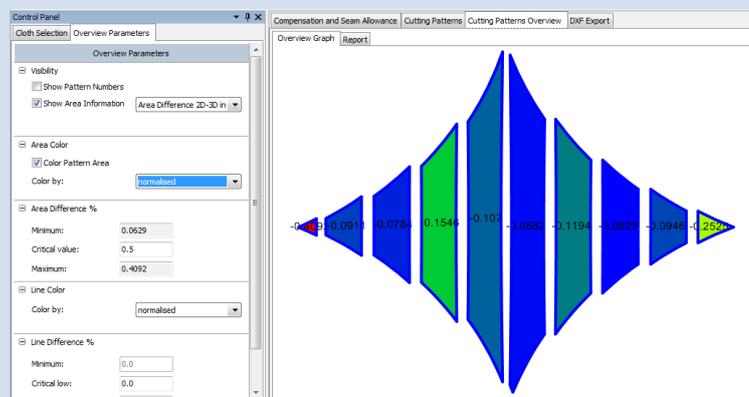
Module	Type	Description
Tailor	New feature	The new graphical editor includes: <ul style="list-style-type: none"> • Preparation of patterns • Compensation Editor • Creation of patterns • Functions of STPrint

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<p>Tailor</p>	<p>New feature</p>	<p>The definition of compensation and seam allowance values are done interactively in the Easy Tailor in the right tab and the graph at the bottom or by editing the values in the panel on the left.</p> 
<p>Tailor</p>	<p>New feature</p>	<p>The result of the creation of cutting patterns is visible in the tab "Cutting patterns". In this tab the functions of the classical graphical editor "STPrint" are used to configure and print the cutting patterns.</p>

The tab “Cutting Patterns Overview” offers two possibilities for the evaluation of the flattening quality :

A graphical overview:



A report:

The “Report” tab provides a summary including the most important values and parameters of the flattening quality.

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StRep: Creates report of pattern geometry.
StRep: (PrStaus) Adjustment 3D.
StRep: (PrStaus) The following boundary lengths are used.
StRep: (PrStaus) Columns 139-150 Input (I DStation3 I)
Report of Pattern Geometry
Cloth 1
Stausn 07/20/201516:04:49
No 1 Center of Gravity Area Middle Width Max. Width Area (3D)
1 0.0005 0.0002 0.5180 1.0261 1.0545 0.5155
No From To Mode Distance STORD Distance EIN Difference Difference EIN
1 60025001 99000004 B 1.1729 1.1729 0.0000
2 99000004 60015001 B 1.1557 1.1557 0.0000
3 60015001 60025001 G 0.9864 0.9864 0.0000 0.0000
Cloth 2
Stausn 07/20/201516:04:49
No 2 Center of Gravity Area Middle Width Max. Width Area (3D)
2 -0.0002 -0.0010 4.5971 2.1085 2.1099 4.5925
No From To Mode Distance STORD Distance EIN Difference Difference EIN
4 60025002 60025001 B 2.4794 2.4794 0.0000
5 60025001 60015001 G 0.9864 0.9864 0.0000 0.0000
6 60015001 60015002 B 2.4334 2.4334 0.0000 0.0000
7 60015002 60025002 G 3.4940 3.4940 0.0000 0.0000
Cloth 3
Stausn 07/20/201516:04:49
No 3 Center of Gravity Area Middle Width Max. Width Area (3D)
3 -0.0007 -0.0016 10.7374 2.0968 2.1098 10.7290
No From To Mode Distance STORD Distance EIN Difference Difference EIN
8 60025003 60025002 B 2.7530 2.7530 0.0000
9 60025002 60015002 G 3.4940 3.4940 0.0000 0.0000
10 60015002 60015003 B 2.6803 2.6803 0.0000 0.0000
11 60015003 60025003 G 6.9072 6.9072 0.0000 0.0000
Cloth 4
Stausn 07/20/201516:04:49
    
```

Tailor

New feature

The tab “DXF Export” encloses the functions of the “DXF Export” in the classical graphical Editor “STPrint”.

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<p>FormEdit</p>	<p>New feature</p>	<p>New view options: Boundary – Local coordinate axis scale Boundary – Type symbols scale PreView – Display normal</p>
<p>FormEdit</p>	<p>New feature</p>	<p>Access to calculation parameters: Fofin Volfin Boundary mapping</p>

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<p>FormEdit</p>	<p>New feature</p>	<p>Topological adaption parameters Sometimes it is useful to exclude a boundary from topological adaption.</p>
<p>FormEdit</p>	<p>New feature</p>	<p>Sliding Supports: Sliding supports can be defined in FormEdit and used in Easy.Beam.</p>
<p>FormEdit</p>	<p>New feature</p>	<p>User defined surfaces can be defined in FormEdit</p>

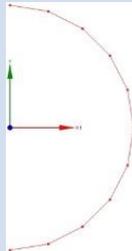
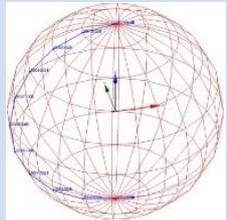
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<p>FormEdit</p>	<p>New feature</p>	<p>New function for chambers definition: "Create chambers from boundaries":</p>
<p>FormEdit</p>	<p>New feature</p>	<p>New calculation step in PreView: Volume Formfinding</p>

FormEdit	New feature	<p>New files after saving a project:</p> <table border="1"> <thead> <tr> <th>Release 2015 and earlier</th> <th>Release 2016</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>projectname.fef</td> <td>projectname.fef</td> <td>Standard</td> </tr> <tr> <td>projectname_rangenn.inp</td> <td>projectname_rangenn.inp</td> <td>Standard</td> </tr> <tr> <td>projectname_netgenn.inp</td> <td>projectname_netgenn.inp</td> <td>Standard</td> </tr> <tr> <td>projectname_fest.ein</td> <td>projectname_fest.ein (*)</td> <td>Standard</td> </tr> <tr> <td></td> <td>projectname_randmerge.inp</td> <td>Standard</td> </tr> <tr> <td></td> <td>projectname_surfaces.dre</td> <td>User defined surfaces PreView required</td> </tr> <tr> <td></td> <td>projectname_surfaces.eck</td> <td>User defined surfaces PreView required</td> </tr> <tr> <td></td> <td>projectname_chambers.dre</td> <td>User defined chambers PreView required</td> </tr> </tbody> </table> <p>(*) If Strut and bracing elements are defined, projectname_fest.ein includes initial values for the non-linear Formfinding calculation</p>	Release 2015 and earlier	Release 2016	Type	projectname.fef	projectname.fef	Standard	projectname_rangenn.inp	projectname_rangenn.inp	Standard	projectname_netgenn.inp	projectname_netgenn.inp	Standard	projectname_fest.ein	projectname_fest.ein (*)	Standard		projectname_randmerge.inp	Standard		projectname_surfaces.dre	User defined surfaces PreView required		projectname_surfaces.eck	User defined surfaces PreView required		projectname_chambers.dre	User defined chambers PreView required
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GED	New feature	New option in GED: Save always with confirmation																											

Calculation programs

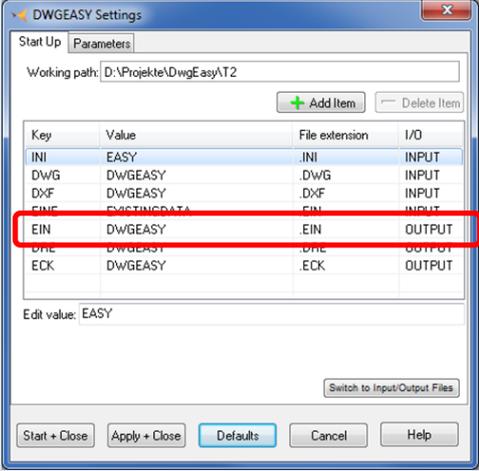
Module	Type	Description
Line3d	enhancement	<p>Program Line3D is improved. Line3D reads a line in x, y-plane and creates a rotationally symmetric surface. If a point has an x-value of 0 then a lot of points with the same coordinates will be generated. If the line turns around 360° then the last line overlaps the first line. The newest version of program Line3d has the option to merge these points and links automatically. For example the program Line3D reads an arc and creates a sphere. See pictures.</p>

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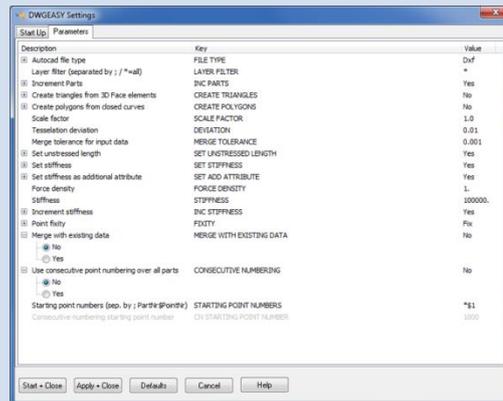
<p>Statical Analysis</p>	<p>enhancement</p>	<p>New Concept for the Load-case Subdirectories</p> <p>The program Load in EASY and the program Loadgen in Easy.Beam are writing always 2 files, which will be inputted in the calculation programs as Statik, StatikX, Volstan, VolstanX in Easy and Beam3d, Beam3dV in Easy.Beam.</p> <p>The program Load in Easy writes Load.las and Load.ein. Load.las stores the load-vectors and load.ein the changed unstressed lengths in case of temperature or imperfection loads.</p> <p>If we have only vector loads are applied, the unstressed lengths in Load.ein are identical with the unstressed lengths from the loadcase prestress. The reason for this new concept is simple: Now load combinations between vector loads and temperature or imperfections loads can be made simply.</p> <p>Loadcombinations are done by Loadsum.</p> <p>The program Loadgen in Eas.Beam writes Loadgen.las (Loadgen.ela) and Loadgen.elv; Loadgen.las stores the load-vectors and loadgen.elv the unstressed lengths. Load combinations are done by Lgsum.</p>
<p>Beam3d (V)</p>	<p>enhancement</p>	<p>For the sliding supports of Textile Halls a new file (Easy_Bm.rol) can be inputted.</p>
<p>Beam3d (V)</p>	<p>enhancement</p>	<p>The nonlinearity caused by the so-called crimp-stiffness was solved in 2015 by external iterations; this iterations are not needed any more as the calculation procedure (or the theory) was improved.</p>

Easy Shell

Module	Type	Description																												
DWGEasy	New feature	<p>New StartUp parameter – (EINE) Existing data</p> <p>The DWGEasy program is able to read an ein-file as existing data (Key = EINE). The data of this ein file are stored together with the data of the dxf/dwg file in the new ein-file which is created by the dwg/dxf import (Key=EIN). The parameter “Merge with existing data” controls the merging behavior in case of geometrical identical points. If the EINE-file does not exist the import process works without existing data. The EINE file is not mandatory.</p>  <table border="1" data-bbox="518 1191 975 1368"> <thead> <tr> <th>Key</th> <th>Value</th> <th>File extension</th> <th>I/O</th> </tr> </thead> <tbody> <tr> <td>INI</td> <td>EASY</td> <td>.INI</td> <td>INPUT</td> </tr> <tr> <td>DWG</td> <td>DWGEASY</td> <td>.DWG</td> <td>INPUT</td> </tr> <tr> <td>DXF</td> <td>DWGEASY</td> <td>.DXF</td> <td>INPUT</td> </tr> <tr> <td>EINE</td> <td>DWGEASY</td> <td>.EIN</td> <td>INPUT</td> </tr> <tr style="border: 2px solid red;"> <td>EIN</td> <td>DWGEASY</td> <td>.EIN</td> <td>OUTPUT</td> </tr> <tr> <td>ECK</td> <td>DWGEASY</td> <td>.ECK</td> <td>OUTPUT</td> </tr> </tbody> </table>	Key	Value	File extension	I/O	INI	EASY	.INI	INPUT	DWG	DWGEASY	.DWG	INPUT	DXF	DWGEASY	.DXF	INPUT	EINE	DWGEASY	.EIN	INPUT	EIN	DWGEASY	.EIN	OUTPUT	ECK	DWGEASY	.ECK	OUTPUT
Key	Value	File extension	I/O																											
INI	EASY	.INI	INPUT																											
DWG	DWGEASY	.DWG	INPUT																											
DXF	DWGEASY	.DXF	INPUT																											
EINE	DWGEASY	.EIN	INPUT																											
EIN	DWGEASY	.EIN	OUTPUT																											
ECK	DWGEASY	.ECK	OUTPUT																											

DWGEasy

New feature



Increment Parts

If the parameter “Increment Parts” is set to “No” then all elements of all layers will be imported into the Easy Part 1.

If the parameter “Increment Parts” is set to “Yes” then the first layer of the dwg/dxf-file will be imported to Part 1, the second layer will be imported to Part 2 and so on.

The order of the layers is determined by the alphabetic sequence of the layer names.

Example: A dwg file has the following layers:

- 0
- System lines
- Free points
- Fixed points

The alphabetical sequence of the layer names is:

- 0
- Fixed points
- Free points
- System lines

This means if you are using the “Increment Parts” as “Yes”, then the elements of the different layers are imported as follows:

- 0 → Part1
- Fixed points → Part2
- Free points → Part3
- System lines → Part4

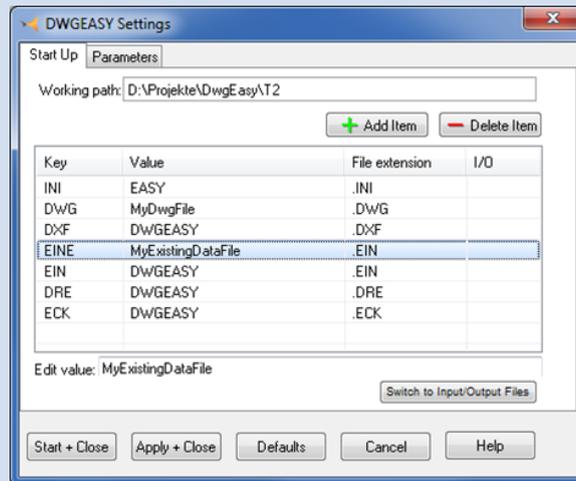
If you want to define an individual point numbering for special layer elements it is important to know which elements will be imported in which Parts because the starting point numbers (see parameter “Starting point numbers”) have to be set for the individual Parts.

DWGEasy

New feature

Merge with existing data

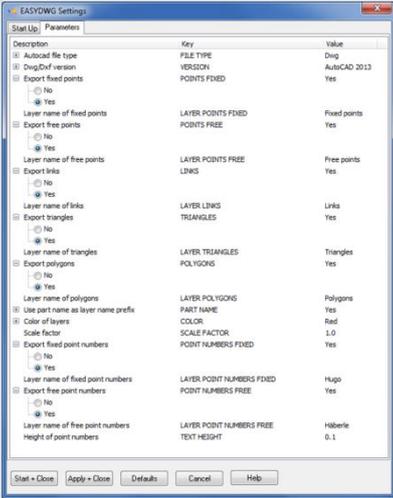
If the parameter “MERGE WITH EXISTING DATA” is set to “Yes” you can set in the StartUp dialog an ein-file (key EINE) which defines the existing data. Before the import process reads the dwg-file it reads the ein-file and uses this ein-file data as existing data. If the import process finds points at the same geometrical position and in the same Easy Part of the existing data it merges the points and uses the point numbers of the existing points.



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DWGEasy	New feature	<p>Starting point numbers</p> <p>The user can define the starting point numbers for each Easy Part individually with the new parameter "STARTING POINT NUMBERS". The default values is "\$1" which means: The point numbering in all parts (*) is starting with point number 1.</p> <p>If the value is "\$99000000" then the point numbering in all parts (*) is starting with point number 99000000.</p> <p>The value can be combined for several parts as follows: PartNr\$StartNr;PartNr\$StartNr;.....</p> <p>Example: Part1\$99000000;Part2\$10000000; Part3\$20000000; Part8\$50000000</p> <p>The point numbering of the points which are imported to Part 1 is starting with 99000000.</p> <p>The point numbering of the points which are imported to Part 2 is starting with 10000000</p> <p>The point numbering of the points which are imported to Part 3 is starting with 20000000</p> <p>The point numbering of the points which are imported to Part 8 is starting with 50000000</p> <p>Please note:</p> <ol style="list-style-type: none"> 1. If the parameter "Merge with existing data" is set to yes the point numbers of the existing data will win! 2.This parameter is only valid if the parameter "Use consecutive point numbering over all parts" is set to "No" <p>Please note: If you want to define an individual point numbering for special layer elements it is important to know which elements will be imported in which Parts because the starting point numbers have to be set for the individual Parts (see parameter "Increment Parts").</p>
DWGEasy	New feature	<p>Use consecutive point numbering over all parts</p> <p>If the parameter "Use consecutive point numbering over all parts" is set to "Yes", the import generates consecutive point numbers over all parts. If this parameter is set to "No" the import generates point numbers starting with 1 (in standard case) for each part. The user can set individual starting point numbers for each Part by using the parameter "Starting point number".</p>

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EasyDWG	New feature	<p>Consecutive numbering starting point number</p> <p>If the parameter “Use consecutive point numbering over all parts” is set to “Yes”, the import generates consecutive point numbers over all parts. In standard case the point numbering starts with 1. The user can set and individual starting point number by using the parameter “Consecutive numbering starting point number”.</p>
EasyDWG	New feature	<p>We changed and added some parameters to the EasyDWG program. EasyDWG is mainly used for batch-exports. In standard case the users can use the dwg/dxf export of GED.</p>  <p>New Yes/No switches</p> <p>The following settings are new:</p> <ul style="list-style-type: none"> Export fixed points → Yes/No Export free points → Yes/No Export links → Yes/No Export triangles → Yes/No Export polygons → Yes/No <p>With the help of the new parameters the user can decide if he wants to export the corresponding elements. Additionally we have now the possibility to distinct between fixed points and free points. Previous versions had only the possibility to distinct between fixed/and free point numbers.</p>

EasyDWG	New feature	New Layer names The user has now the possibility to set the layer names for the free and fixed point numbers (see new parameters "Layer name of fixed point numbers" and "Layer name of free point numbers").
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System Requirements

Operating systems

- Windows 8.1 (current service pack)
- Windows 8 (current service pack)
- Windows 7 (current service pack)

Minimum Hardware

- A graphic card with an OpenGL accelerator is strongly recommended.