

TECHNICAL OVERVIEW

version 2013

From 2D to 3D - From France to the World Over 20 years of success...

For almost 25 years Logopress' only business has been the development of die design software for the Tool & Die Industry as well as Flattening and Blank prediction software. Up until 2002 we provided a full 2D die design software package in France. In 2000, after 3 years of research and development in 3D technology, we decided to also develop a 3D solution based on SolidWorks™ and to expand our business worldwide.



All Logopress3[™] for SolidWorks[™] software is Gold Certified by SolidWorks[™]. More and more die designers all over the world are currently running Logopress3[™]. Many people who need to create die quotations (via a quick strip layout) and sheet metal part quotations (via a quick blank determination) are also running Logopress3[™] or one of its packages. Logopress3[™] is currently used in over 30 countries around the world.

The work can be started from a SolidWorksTM native part or, more commonly, from an imported part from another cad system. The entire process will be sped up thanks to the dedicated Logopress 3^{TM} functions and automation.

I started out using a competitor's die design software and I was never able to fully use the product. It was just too complicated and not the least bit user friendly... Switching to Logopress has completely changed my opinion of die design software. Logopress is extremely user friendly and intuitive. Two months after purchasing the product I was able to complete a 2-out 10 station progressive die from start to finish. (Their) support has been excellent..."

Bill Beam T & C Stamping, Inc.

I can design small dies using Logopress3 twice as fast as I can using SolidWorks alone. With big dies, the difference isn't quite as high as that, just because there's more thinking involved with big dies."

Mike Schmit Oldenburg Metal Tech, Inc.

Once you've turned that corner from 2D to 3D you'll never go back. I know I never would. I've designed a few dies with Logopress3 so far and I know they went faster than they would have with (2D CAD)."

Bill Brunner Strattec Security Corporation



Certified Gold Product

LOGOPRESS

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Unbending Functions

In only a few mouse clicks you can unfold your part and then model the intermediate stages that will allow defining the process that will become your strip layout. This can be done from a native SolidWorks™ model or from an imported model from any other cad system, without preparing it in any specific way.

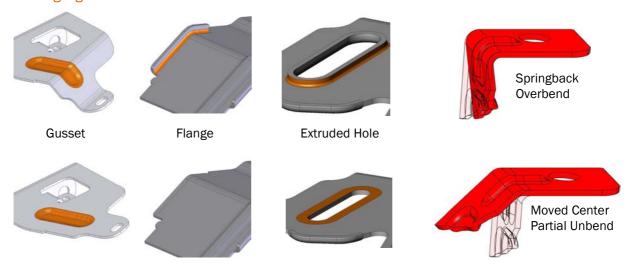


The K-Factors for each individual bend can be automatically calculated by Logopress3™ and the unfolding/unbending features can very easily be edited. This way, you can switch from a full unbending to a partial unbending. You can change the partial unbending angle value, you can manage the spring back options, the bend allowance, etc.

Key functions:

- Automatic bend analysis
- Automatic K-Factor calculation for each individual bend
- Customizable and flexible bend allowance management
- Full or partial unbending
- Spring back management
- Overbend management
- Gusset management
- Flange management
- Extruded holes management
- Shearing management
- Non constant thickness management
- Capability to show or hide the previous stages
- Capability to superimpose several intermediate stages

Highlighted Features:



The functionality described above is included in each of the Logopress3 software packages listed below:

DIE DESIGN

STRIP LAYOUT

FLATTENING

LOGOPRESS Experience the power

3D Die Design Software for Progressive, Fineblank, Transfer & Draw Dies

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BLANK Prediction Functions

Logopress^{3™} BLANK allows the user to quickly and easily determine the theoretical blank of 3D complex shaped parts. The parts can be imported solid or surface models that have come from a different CAD system.

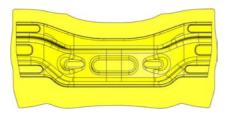
The Flattening function helps both at the quotation stage and in the die design process. It minimizes development time in the press. The mesh is fully automatic but it size can also be adjusted if the user wishes to do so.



There is no need to be a mechanical engineer with finite element analysis skills to handle the Logopress 3^{TM} BLANK module because it is very user friendly.

The Logopress3™ BLANK module is included inside the die design package but can also be purchased independently if you don't need to design strip layouts and complete dies.

Logopress3F is the package that includes both Logopress3 $^{\text{TM}}$ BLANK capabilities and Logopress3 $^{\text{TM}}$ Unbending capabilities (including multi-stage unbending management too).

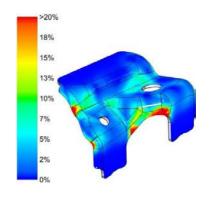






Key functions:

- Manage native and/or imported data
- Manage solids and surfaces
- Material thickness management
- Customizable material database
- Choice of the "stamping starting area"
- Choice of the "stamping direction"
- Allow defining pinched/locked areas
- Thinning and thickening information
- Stress and strain information



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DIE DESIGN

STRIP LAYOUT

FLATTENING

BLANK

LOGOPRESS Experience the power

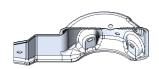
3D Die Design Software for Progressive, Fineblank, Transfer & Draw Dies

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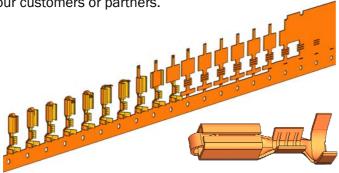
Strip Layout Functions

The strip layout module can be used for both progressive dies and transfer dies. It allows quick modeling of the true solid 3D strip in a very easy and logical way, resulting from our more than 20 years experience shared with passionate die designers.

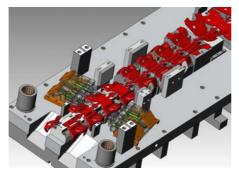




The Logopress3™ strip module can be started from a blank and a folding/stamping process that was first defined using the Logopress3™ Unbending and Flattening tools or from dumb imported data provided by your customers or partners.



Any kind of parts, even those with non-constant thickness or coining are able to be managed. It also allows managing multiple parts in one strip, whether they be identical, mirrored or completely different.



- Multiple part management
- Nesting optimization
- Excel spreadsheet including useful data for quoting
- Drag and drop actions
- Mismatch wizard
- Insert/delete stations
- Material usage info
- Force info
- Global center of force computation
- Local center of force computation
- Spring back management
- Capability to show or hide the previous stages
- Associativity with the Unbending/Flattening process
- OpenGL preview
- Automatic creation of internal punches
- Powerful assistant tool to define cutting punches in the skeleton
- Powerful assistant tool to define bending and forming punches
- Punch patterning

The functionality described above is included in each of the Logopress3 software packages listed below:

DIE DESIGN

STRIP LAYOUT



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Strip Layout Functions

Round Draw Module

Logopress3™ strip layout module also includes great and specific features and capabilities dedicated to Round Draw Parts.

For those who have to manage these kinds of parts, this may mean saving several hours of work or even several days! Take a look at the pictures below. They speak more than a long explanation would, knowing that all of this is done in less than 5 minutes!

It's also important to highlight that as everything is parametric, any changes can be done very quickly. In addition to that, you will find it very interesting to note that this is not newly developed technology, but rather has been well proven for over 20 years in our Logopress2 2D product.

10 seconds for this:



Plus 2 minutes for this:

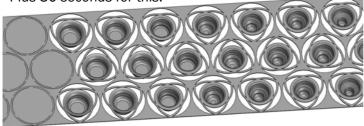




- Automatic computation of each intermediate stage
- Material type of drawn part automatically determines what draw reductions are used
- Draw reductions can be manually edited for each individual station
- Customizable computation database to include your experience and know how
- Automatic re-computation when changing a radius or a diameter
- Stripper pressure computation
- Automatic and customizable web management
- Graphical overlays of previous stations or subsequent stations









The functionality described above is included in each of the Logopress3 software packages listed below:

DIE DESIGN

STRIP LAYOUT

TECHNICAL OVERVIEW

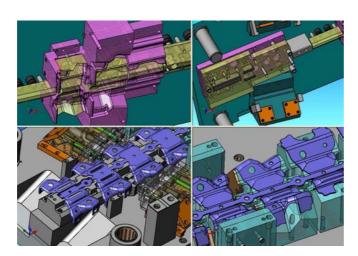
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Die Design Functions

Die Set Assistant & Standard Components

Logopress^{3™} Die Design Software includes a powerful Tool Structure Assistant that allows you to quickly model the main die components. It is also very useful throughout the entire die design process when you need to insert additional plates or sub-assemblies.

You can very easily and very quickly insert a plate or a sub-assembly and then adjust its dimensions. The plates can be named at this point and material type and heat treatment can also be specified at the time of insertion. It also acts as a Mate Manager so that you don't have to search the feature tree for mates.



No die design software is complete unless it has a thorough Intelligent Standard Component Library. The only way to understand how powerful, user friendly, flexible, customizable, strong and complete the one Logopress 3^{TM} offers is to see it.

It manages both millimeter and inch components and includes literally dozens of vendors that you are also able to add to. It not only inserts the component you select but also cuts every hole in each plate and automatically manages all mates.

Tool Structure Assistant

- Key functions:
- Component and sub-assembly insertion feature dedicated to the die design needs
- Customizable plates
- Customizable die sets
- Automatic mate management
- Customizable material database
- Customizable heat treat callouts

Intelligent Standard Components Library

Key functions:

- Holes are cut and components inserted with one mouse validation click
- Standard Hole Wizard holes
- Automatically sizing of components
- Choice assistant
- Automatic patterning
- Edit definition
- Smart copy and paste function
- Customizable library
- Automatic mate management
- Automatic hole creation
- OpenGL preview
- Wire EDM hole management
- Dozens of custom and multi stepped holes—all hole chartable
- User defined custom components







The functionality described above is included in each of the Logopress3 software packages listed below:

DIE DESIGN

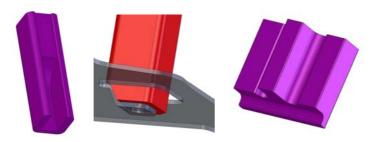
TECHNICAL OVERVIEW

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Die Design Functions

Punch Assistant & Intelligent Animation

Logopress3™ also includes powerful features to "Mount" (cut all openings in all plates) the cutting, bending and forming punches. Punch Mounting would be a huge amount of work without this dedicated feature since so many die components are involved which each needing different clearances. Logopress3™ easily manages this with only a few mouse clicks and dialog box settings. After you define the first one, Logopress3™ stores your preferences in order to save even more time for the next mounting.



If later on you decide to create an **insert** around your punch or die mounting, Logopress3[™] offers you a dedicated feature to do this very easily, including the ability to automatically create a shim under the insert.

In addition to all of these tools & features designed to increase your productivity, Logopress3™ also includes an Intelligent Animation command along with a Dynamic Interference Detection command, which provides far more than just an interesting but nonfunctional animation. It automatically does dynamic interference and collision detection between the four main sub-assemblies of the die, while showing the entire die operating as if it were in the press, including the strip lifting and advancing with each press stroke. This assures that mistakes are caught at the design stage and not at the much more expensive and time consuming build stage of the die.

Punch Mounting

Key functions:

- Cutting punches
- Automatic plate recognition
- Bending punches
- Coining management
- Forming punches
- Cut all openings in all plates
- Clearance management
- Relief type management (tapered or stepped relief)
- Shoulder, heel, pedestal and roof management
- Locking tab management
- Editable mountings
- Store user defined preferences
- Punch mismatches/undercuts
- Corner relief options





The "Add an insert" command adds an insert (and a shim if desired) in less than 5 min.

Intelligent Animation/ Dynamic Interference Detection

Key functions:

- No time consuming setup required. Just press the icon and set your press stroke, stripper travel and strip lift
- Detects collision during strip advance through the die
- Highly visual and accurate representation of the die running in the press
- Finds clearance issues before the die goes in the press

The functionality described above is included in each of the Logopress3 software packages listed below:

DIE DESIGN



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Die Design Functions

2D Drawings, Hole Chart & BOM

Logopress3[™] has multiple tools for automatically creating the 2D drawings for the 3D model, including automatic population of title blocks. These tools enhance the tools already in SolidWorks[™] and include a specific and powerful Logopress3[™] Hole Chart Feature as well as a specific and customizable Logopress3[™] BOM. SolidWorks[™] along with Logopress3[™] make the creation of detail drawings very easy and fast, with considerable flexibility allowed for user preferences.

Hole Tag	×	Υ.	Hollow	Bollow Hollow	Designation	Standard Components
1	45	45			Ø45 Thru All	Pless Rt Guide Post DANLY METRIC Ref: 5 5elf-luctricoting Demounitable Short DANLY MCTRIC Ref: 6-32-45-4
2	45	255			Ø45 Thru All	
3	355	255			Ø45 Thro All	
4	358	45			Ø45 Thro All	
5	45	287.5			Ø6.75 ¥228 ofform M6x1 .25 ¥188 ofform	Press Rt Guide Post DANLY MERIC Ref
6	16.05	238.75		2	Ø6.75 ¥228 ofform MEx1 25 ¥188 ofform	
7	73.15	238,75			Ø6.75 ∓228 oftom MBxl 25 ₹188 oftom	
8	355	287.5			Ø6.75 ¥228 offorn M8x1 25 ¥ 188 offorn	
9	326.85	238,75			Ø6.75 ¥228 offern MBx1 25 ¥188 offern	
10	383.15	238.75			Ø6.75 ¥228 ofform MBx1 25 ¥ 188 ofform	
33	386.15	61.25			Ø6.75 ₹228 offers MBx1 .25 ₹188 offers	
12	329.85	61.25			Ø6.75 ¥228 ofform M8x1 25 ¥188 ofform	
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					Ø6.75 ¥228abis	

Tool & Die Hole Charts

Key functions:

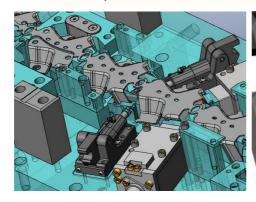
- Front side and back side holes in the same chart
- Automatic, compact or complete and very detailed description of every hole in addition to the X and Y data for each tag, tolerances and also the standard component going into that hole

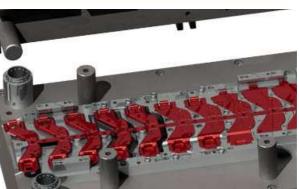
BOM (Bill of Materials)

Key functions:

- Many options for automatic sorting/sequencing of balloons
- Populates sizes of without needing reference dimensions
- Automatically sort/group upper, middle & lower parts as well as standard components

Logopress3[™] takes full advantage of all of SolidWorks[™] power and ease of use and includes many other dedicated tools based on our over 20 years of experience that will make today's modern die designers much more productive. In the end, you will be much more profitable.





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DIE DESIGN



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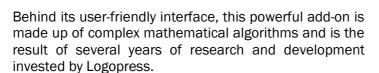
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Progressive Blank Companion

How to complete your Logopress3 software package:

Progressive Blank Companion

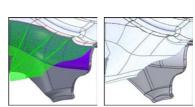
Progressive Blank Companion is a greatly anticipated and requested new add-on that was released at the beginning of 2012. It allows die designers to model the complex-shaped intermediate stages of a progressively formed part in *minutes* instead of hours or days.

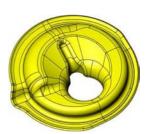


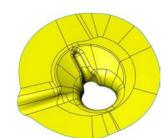
Besides simplifying and speeding up the modeling of intermediate stages, Progressive Blank Companion also provides localized information about thinning and thickening as well as measuring stress and strain.

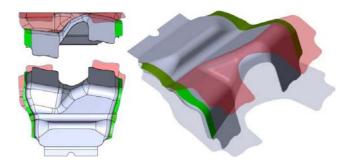
Progressive Blank Companion also allows the user to form a flat BLANK up to a complex shaped surface.

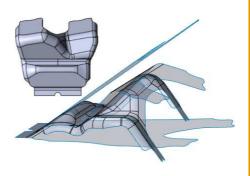
Progressive Blank Companion can be added on to any of the following Logopress3 software packages: BLANK, FLATTENING, STRIP LAYOUT or DIE DESIGN.











See narrated video demonstrations at: www.accuratediedesign.com/pbc

Progressive Blank Companion is an optional add-on that requires one of the Logopress3 software packages listed below:

DIE DESIGN

STRIP LAYOUT

FLATTENING

BLANK



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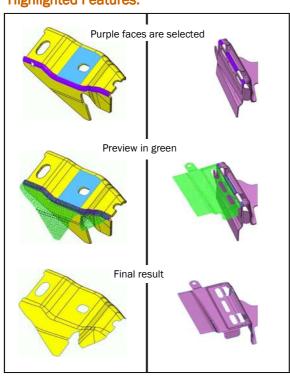
Progressive Blank Companion

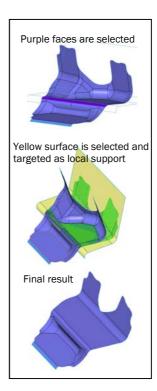
How to complete your Logopress3 software package:

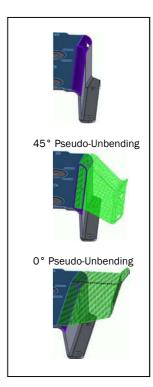
Progressive Blank Companion

Model the complex-shaped intermediate stages of a progressively formed part in <u>minutes</u> instead of hours or days.

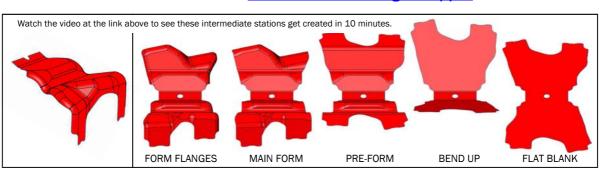
Highlighted Features:







See narrated video demonstrations at: www.accuratediedesign.com/pbc



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DIE DESIGN

STRIP LAYOUT

FLATTENING

BLANK