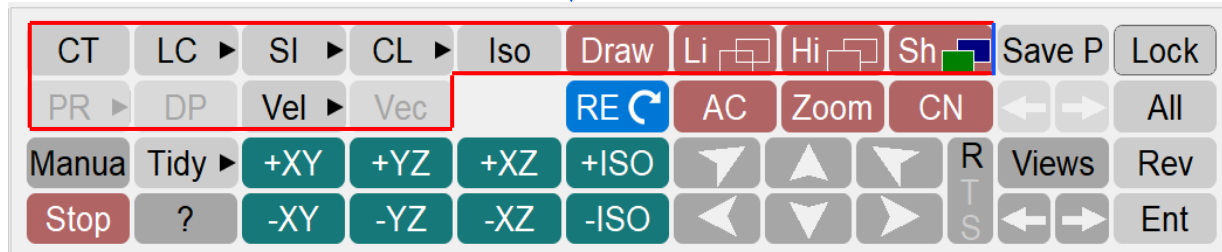


Plotting Modes

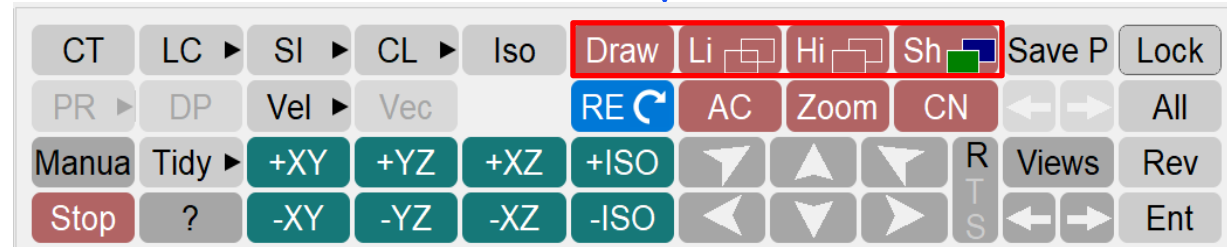


Display Options

D3PLOT contains many different plotting modes. Some of these plotting modes only display the geometry, while others display data values.



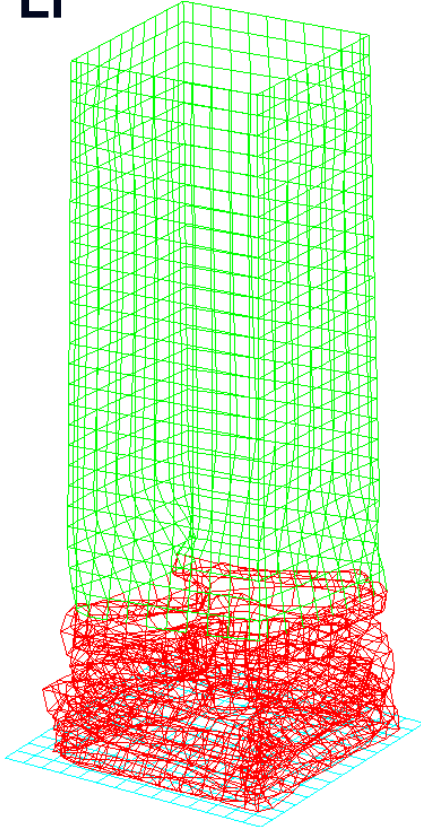
The **Draw**, **Li**, **Hi** and **Sh** commands are always available, as they do not display any data.



Li, Hi & Sh

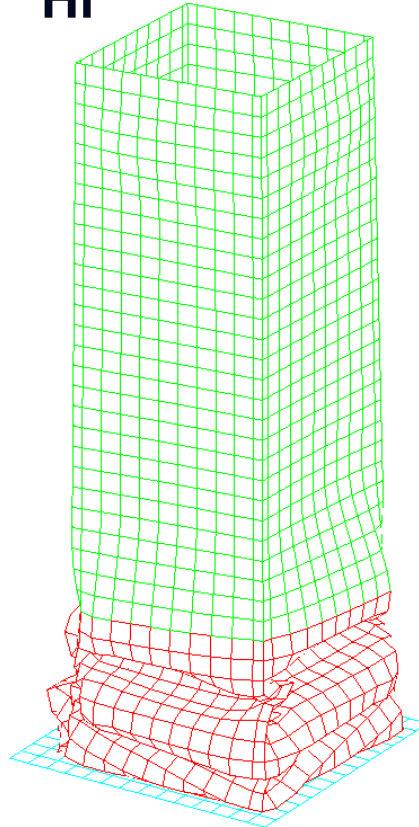


Li



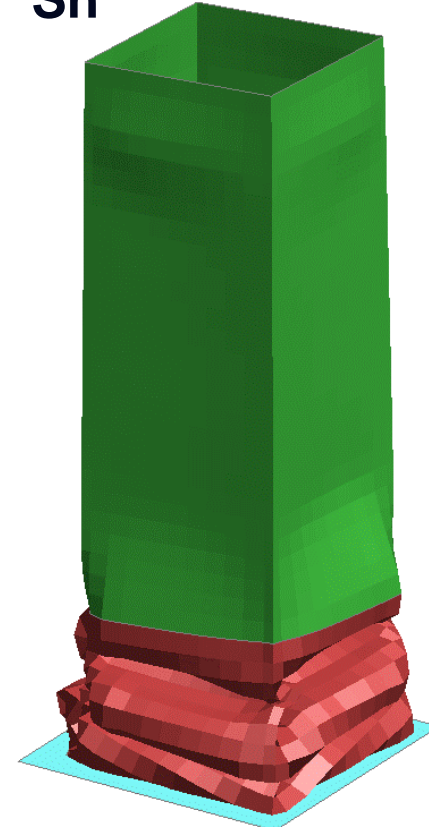
Li (Line) plot mode draws the current state in wire-frame mode. Wire-frame mode exposes lines which should be hidden.

Hi



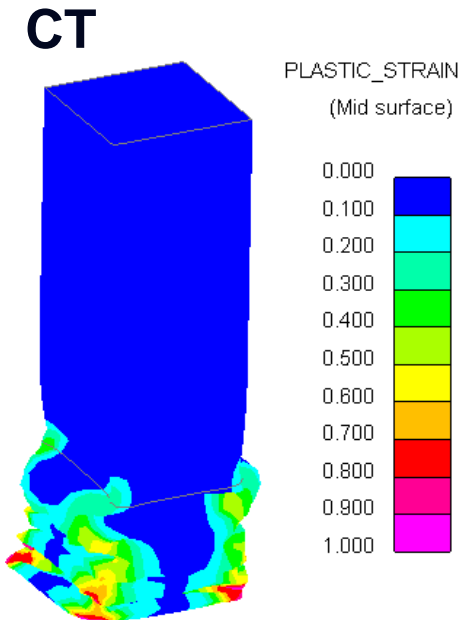
Hi (Hidden Line) plot mode draws the current state in hidden surface mode. Hidden lines are removed in this plot mode.

Sh

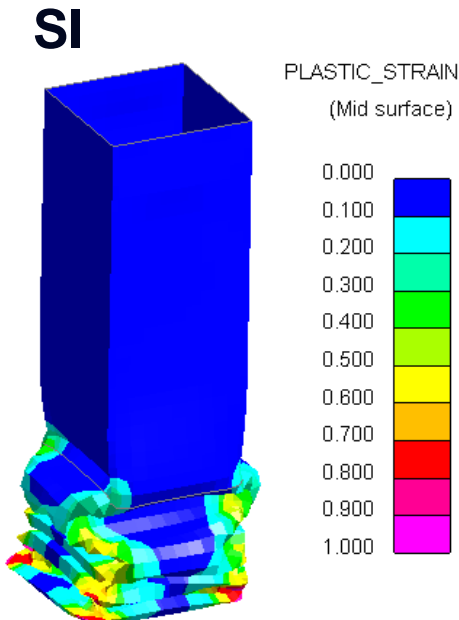


Sh (Shaded) plot mode draws the current state in lit and shaded “greyscale” mode, implicitly with hidden surfaces removed. Hidden lines are removed in this plot mode. When in the **Sh** plot mode, pressing the ‘Y’ button on a keyboard will show the mesh of the model.

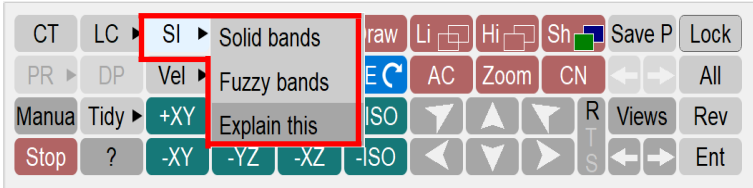
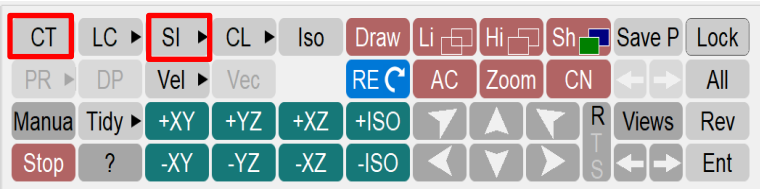
CT & SI



CT (Continuous-Tone) plot mode draws bands of contours in solid colour. No lighting is incorporated in this plot mode.



SI (Shaded Image) plot mode is similar to the **CT** plot mode, except this plot mode does incorporate lighting.



When choosing the **SI** plot mode. There are two display options to choose from.

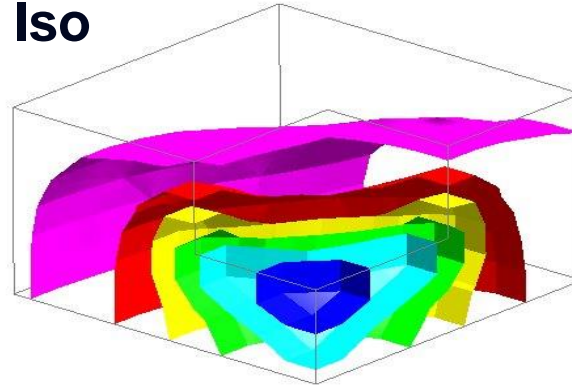
The solid bands display mode draws solid contour bands, with lighting added.

The fuzzy bands display mode draws blurred contour bands.

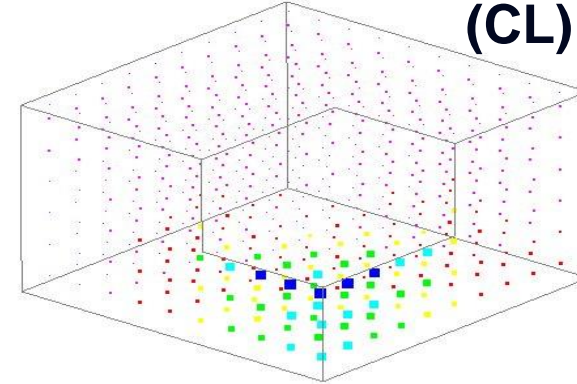
Contour Plots – Iso & CL

Iso surface and **CL** (Cloud) plot modes allow better display of results inside blocks of solid elements, when compared to **CT** and **SI** plot modes.

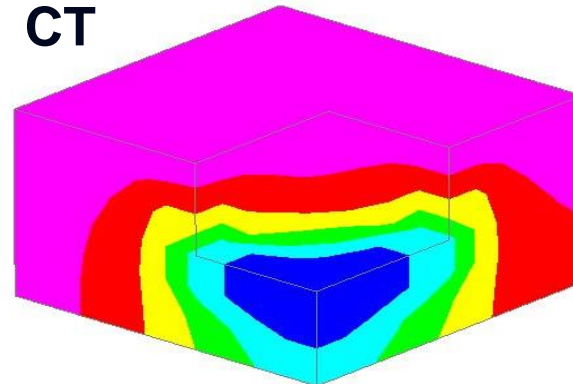
Iso



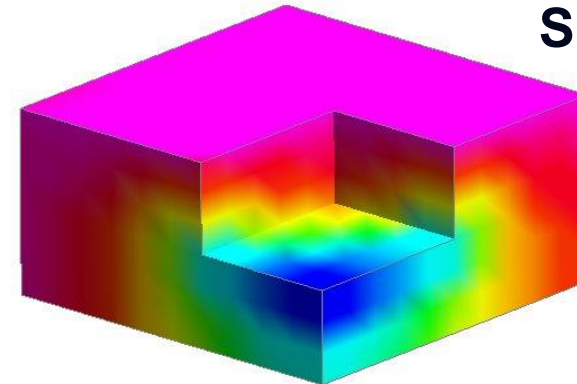
**Cloud Plot
(CL)**



CT



SI



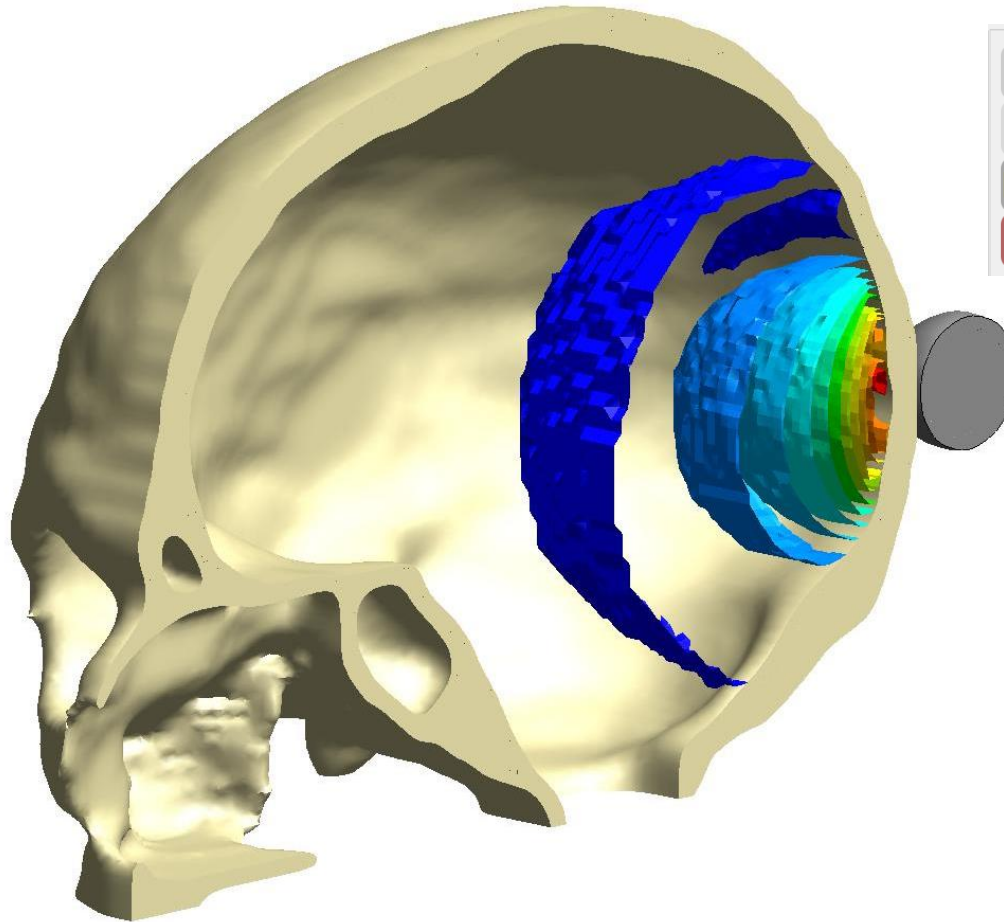
Iso

Iso (Isometric Surface) plot mode shows surfaces which are of a constant data value within a solid element mesh.

In 3D elements, the contour surfaces with constant data values show throughout the solid mass.

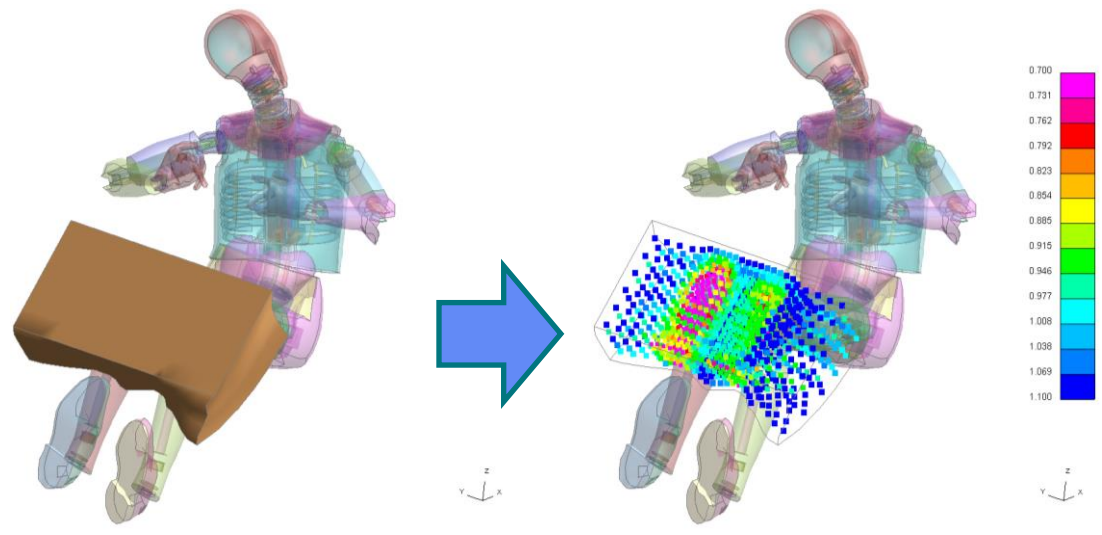
In 2D elements, the contour surfaces with constant data values will show drawings of lines.

Iso plot is especially useful for fluid/structure models. In this example the display mode of the skull is set to SHADED, while the **Iso** surfaces are displayed for the fluid mesh that fills and surrounds the skull.



CL

CL (Cloud) plot mode produces a point at each node, which displays the value of the selected data component. **CL** plots are cheaper than **Iso** plots when it comes to establishing what is going on inside large solid meshes.



CT	LC ▶	SI ▶	CL ▶	Iso	Draw	Li	Hi	Sh	Save P	Lock	
PR ▶	DP	Vel ▶	Vec		RE ↺	AC	Zoom	CN	← →	All	
Manua	Tidy ▶	+XY	+YZ	+XZ	+ISO	⬇	⬆	⬇	R	Views	Rev
Stop	?	-XY	-YZ	-XZ	-ISO	⬆	⬇	⬆	T	← →	Ent

To change the way the points are displayed in the **CL** plot mode, under the Contour Options menu, select the Cloud Plots tab. Under this tab there are various options which allow the user to change the display for the **CL** plot mode .

Contour Options

Levels	Limiting val	Resolution	Vec Plots
Cloud Plots	Iso Plots	Princ Plots	Mapping

☒ Element Centre ?
☐ Averaged at Nodes

Point size options

☐ Fixed size 2
☒ Prop to magnitude

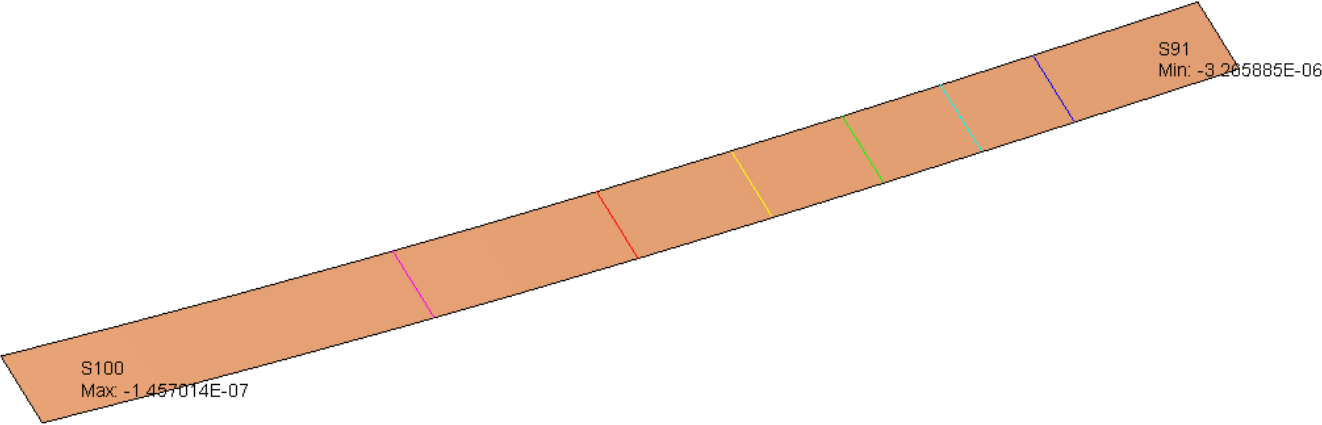
1 Minimum (pixels)
10 Maximum (pixels)



LC (Line-Contour) plotting mode displays lines of constant value across elements.

D3PLOT:
1: Max S100 : -1.457014E-07, Min S91 : -3.265885E-06

CT	LC ▶	SI ▶	CL ▶	Iso	Draw	Li	Hi	Sh	Save P	Lock
PR ▶	DP	Vel ▶	Vec		RE ↺	AC	Zoom	CN	←	→
Manua	Tidy ▶	+XY	+YZ	+XZ	+ISO	↙	↗	↖	R	Views
Stop	?	-XY	-YZ	-XZ	-ISO	↘	↕	↗	T	Ent

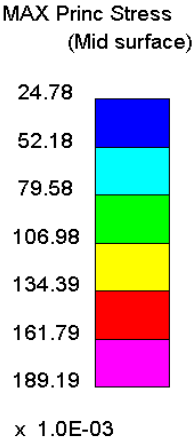
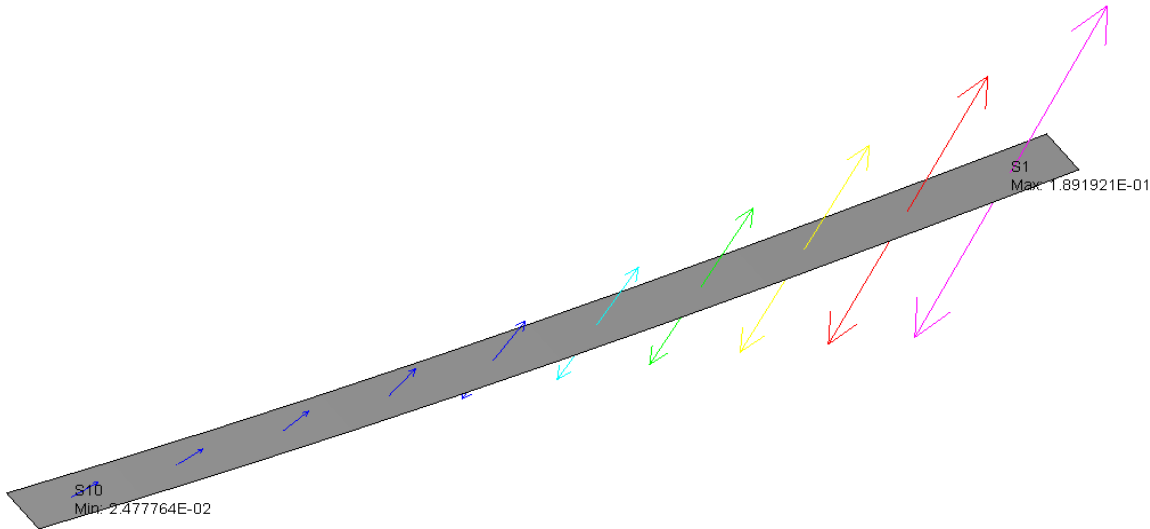


PR

PR (Principal Stress/Strain) plotting (also known as criterion plotting) mode displays values as vectors. These vectors are only displayed on 2D and 3D elements (solid and shells).

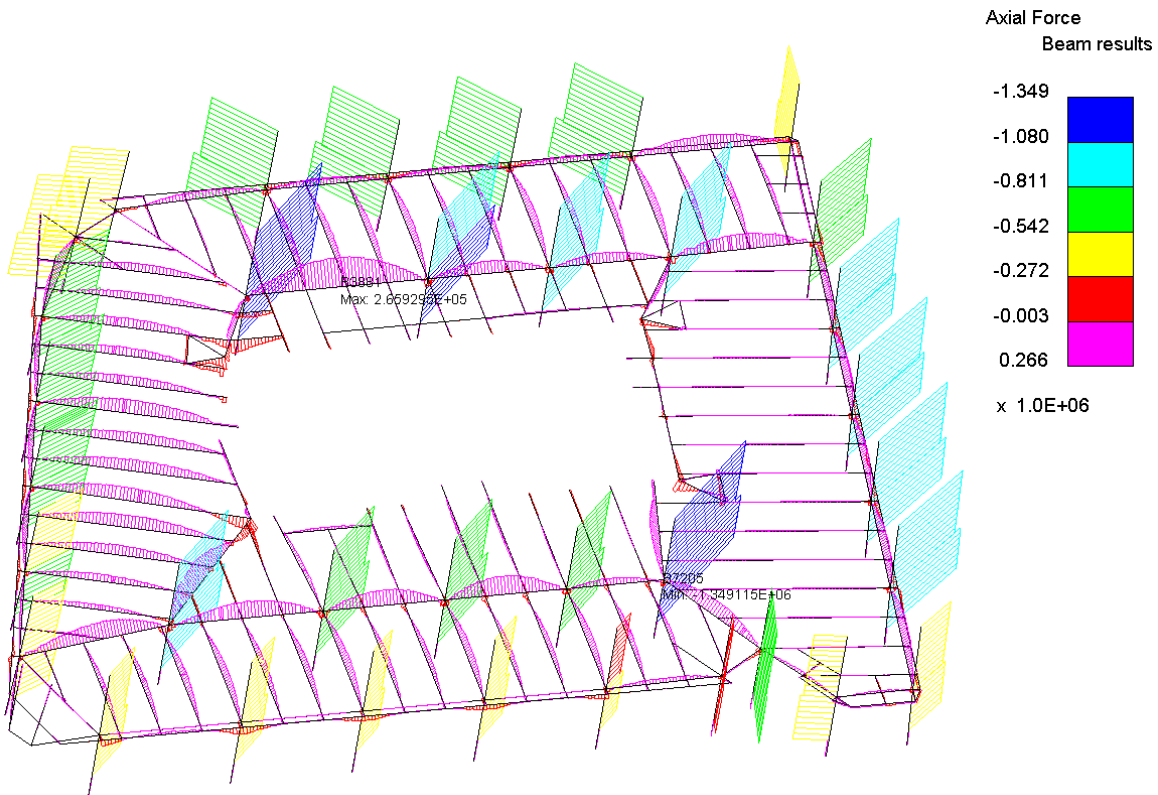
This plotting mode is only available when principle stress or principle strain data components are selected.

D3PLOT:
1: Max S1 : 1.891921E-01, Min S10 : 2.477764E-02



DP plotting mode displays a “diagram” plot showing results hatched on a beam.

This plotting mode is only available when beam specific data components are selected (e.g. beam basic, beam resultant, etc).

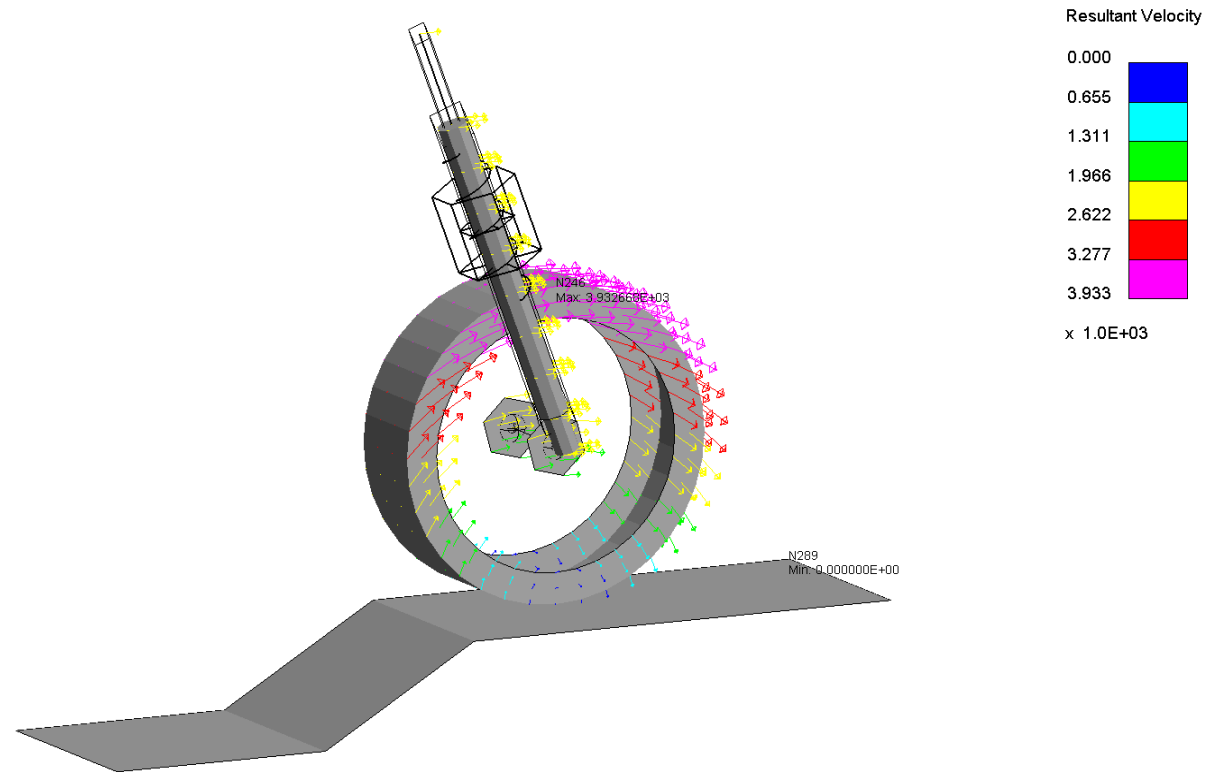
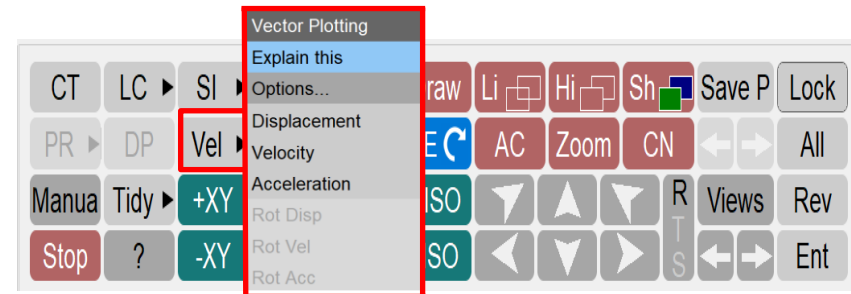


Vel

Vel (Velocity/Vector) plotting mode draws arrows showing the direction and magnitude of nodal velocities. The length and the colour of the arrows drawn are proportional to the velocity magnitude.

Within the popup menu of the **Vel** button, there's a choice of displacement, velocity or acceleration arrow-plots to choose from.

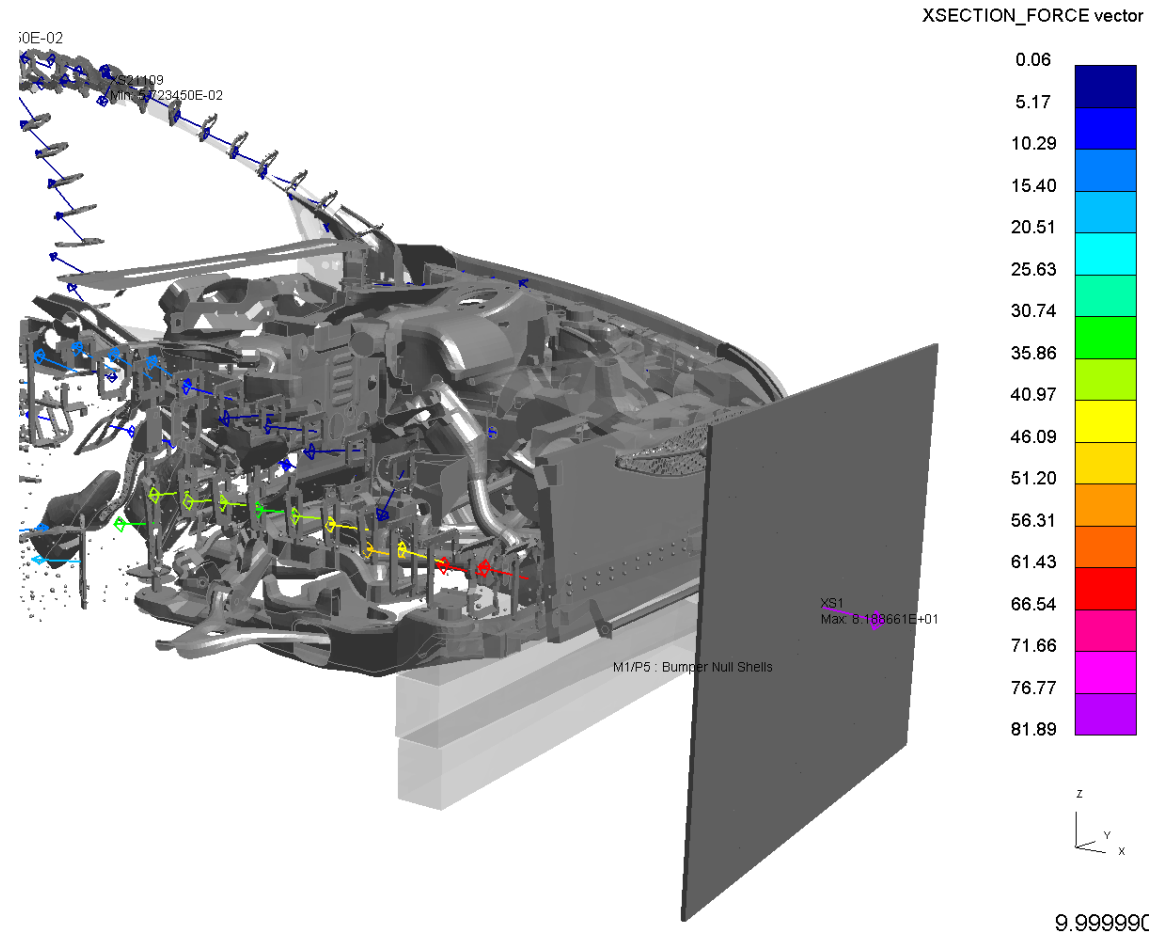
This plot mode can be thought of as a shortcut to displaying acceleration, displacement or velocity, as it doesn't require manually selecting these data components for plotting.



Vec

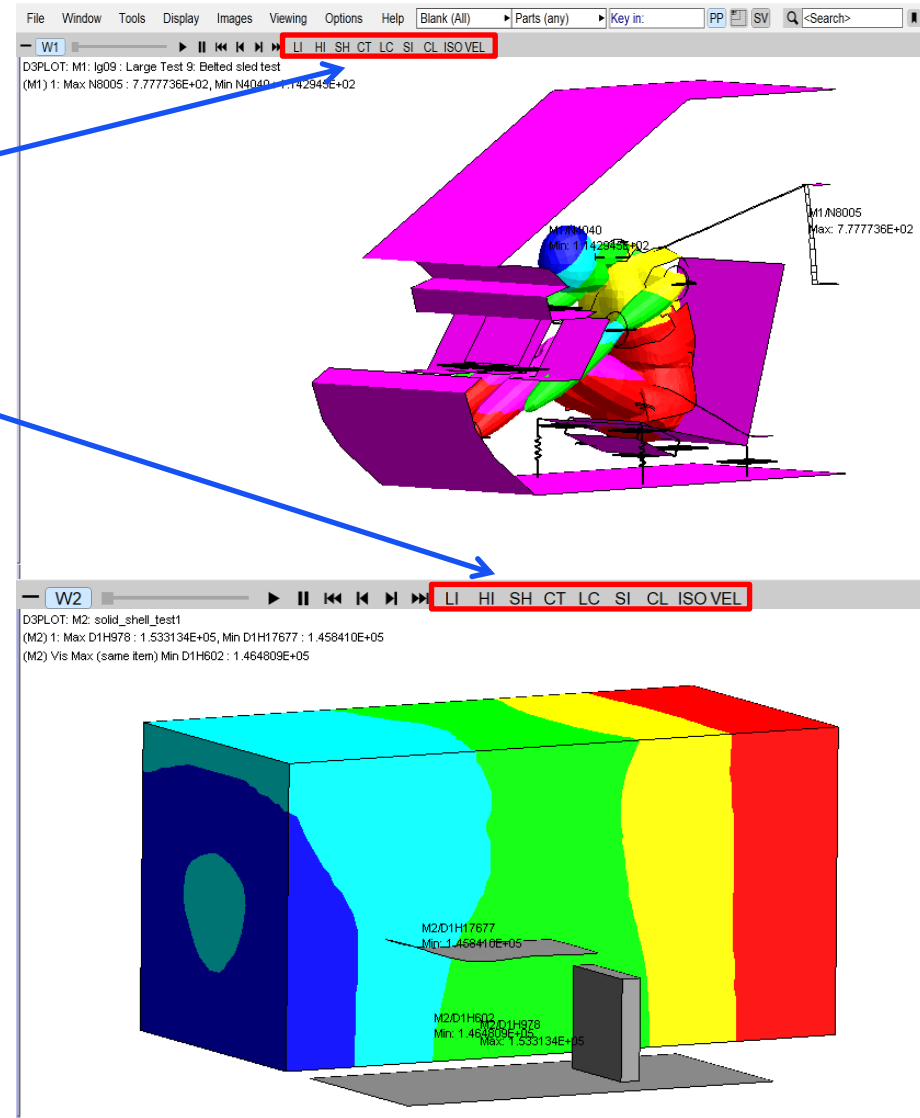
Vec (Vector) plotting mode draws arrows showing the direction and magnitude of the selected data component. The length and the colour of the arrows drawn are proportional to the magnitude of the selected data component.

This plot mode is only available if the selected data component is a vector quantity and can be used to plot various data components other than acceleration, displacement or velocity (e.g. cross section force).



Alternative Display Buttons

To access the different plotting modes within D3PLOT, per window. There is an alternative toolbar which is located in the top left corner of each D3PLOT window. The plot mode selected using this toolbar only applies to the model that is located in the same window as the toolbar.



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