



# Centre for Advanced Structural Engineering THIN-WALL-2

## General specifications

THIN-WALL-2 is a development of the THIN-WALL program to include shear loading and generalised loading. The shear loading results in more complex buckling modes which can be captured by THIN-WALL-2.

The generalised loading results in non-uniform stresses which are not included in THIN-WALL so that a pre-buckling analysis is performed in this case to determine the stress distributions in the section prior to buckling.

The program calculates the longitudinal stresses caused by moment and axial load, shear stresses caused by shear load, and normal stresses caused by localised load. The buckling deformations due to these stresses are also calculated. The stresses and buckling deformations can also be displayed in 2D or 3D on the screen.

The program has been written to align with the Direct Strength Method (DSM) of design in the American Iron and Steel Institute Specification AISI S100:2012 and current revision of AS/NZS 4600 Cold-Formed Steel Structures. The program is written in C++ code with a Matlab interface.

## Education and research

This version of THIN-WALL-2 is available free of charge for educational and research purposes only and cannot be used for commercial purposes. The program is limited to 50 strips and 51 nodes and cannot create a report. For commercial purposes, the program THIN-WALL can be purchased. A commercial version of THIN-WALL-2 with 150 strips and report capability will be available when the new edition of AS/NZS 4600 is published.

## Download and setup instructions

Download the following into any directory:

[Download specifications](#) (2.4MB pdf)

Download the following zip file and extract the three files into any directory but not the program files directory:

[THIN-WALL-2.zip](#) (31.8MB exe)

Download and install the MATLAB Runtime:

[MCR R2013b win64 installer.exe](#)  
(486MB exe)