

# ISO Geodetic Registry

<i>Item class</i>	OperationMethod
<i>Name</i>	<b>Geographic3D to Gravity Related Height (GRAVSOFT)</b>
<i>Item status</i>	VALID
<i>Identifier</i>	774
<i>Data source</i>	ISO Geodetic Registry
<i>Remarks</i>	This transformation involves the application of a geoid-ellipsoid separation value interpolated from a geoid or quasigeoid model in the GRAVSOFT grid format. The model provides separation values at the nodes on a regular grid of latitude and longitude intersection points. The geodetic latitude and longitude used to interpolate within the grid are not affected by this transformation. The grid is referenced to the horizontal subset of the geographic CRS (the source CRS) and interpolation must be made in this system.
<i>Formula</i>	The gravity-related height (H) in the target vertical CRS is then obtained from the height above the ellipsoid (h) in the source geographic 3D CRS using: $H = h - N$ where N is the geoid-ellipsoid separation relative to the ellipsoid of the source Geographic 3D CRS. The separation N is calculated through a bi-linear interpolation of the grid using the latitude and longitude of the point.

## Operation parameters

*Geoid (height correction) model file*