



<p style="writing-mode: vertical-rl; transform: rotate(180deg);">System Requirements</p>	<p>Operating System: 64bit Microsoft Windows (MS) 10 or 11.</p> <p>CPU: 64 bit Intel, 64 bit AMD or equivalent 64 bit Intel Pentium compatible multicore CPU with minimum of 2 GHz.</p> <p>Memory: Minimum of 8 Gb, recommended 16 Gb RAM, 500 GB Free Hard Disk Space for Data processing</p> <p>Graphics Adapter: Minimum FullHD resolution with 32 Bit Colour Depth and 1 Gb Graphics Memory, recommended double screen with 4Gb memory and GPU.</p> <p>Interfaces: 1 free USB-port; Direct or USB-Hub for software security key</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">General</p>	<p>Design Module is a set of special tools which can be used to create rehabilitation designs for roads, streets or railways. The tools are meant for cases, where the design does not change the horizontal geometry, small changes in elevation are possible.</p> <p>Requires: Road Doctor Core</p> <p>Recommended: Road Doctor Diagnostics module</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Creation of a design database</p>	<p>Design database: Is a special database, which can include 40 different operations or measures. For each operation the operation type can be set, options are:</p> <ul style="list-style-type: none"> <li>• NO_OPER - do nothing</li> <li>• REMOVE - remove a specified thickness from structures (milling, excavation)</li> <li>• MODIFY - modify structures (mixing)</li> <li>• ADD_TO_LAYER - add material to an existing layer</li> <li>• NEW_LAYER - add a new layer</li> <li>• STRENGTHEN - strengthen the layer's bearing capacity without changing the thickness (geotextile, steel enforcement)</li> <li>• OFF_ROAD_L, OFF_ROAD_R, operation, which is outside the lanes. Not directly affecting the bearing capacity (ditch cleaning etc.)</li> </ul> <p>Parameters: Other operator definable parameters are: Layer minimum/maximum value, unit (SI, US), unit multiplier, density, moduli, unit price, price unit type (m, m<sup>2</sup>, and m<sup>3</sup>), width, drawing colour + some others.</p> <p>The database divides the section to fixed distance cells. The default cell length is 1m, but it is user definable.</p> <p>Notes can be added at any distance, regardless of the cell length used.</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Rehabilitation design</p>	<p>Selecting the section: The design is made manually by highlighting the desired section with the mouse and selecting the operation. Program shows the selected section's start and end location and lets the user change them, if necessary. After confirmation of the section, the program asks for thickness or value of the measure. Multiple operations can be selected, one after another.</p> <p>Wedge structures: Depending on the operation and layer thickness the program allows selection of a wedge structure if it is needed.</p> <p>The operation is drawn on the screen immediately after selecting, setting parameters and accepting it.</p> <p>The drawing can be shown as horizontal bars with depth and thickness or as a sketch drawing with layers drawn as lines. Alternatively, the type of measure can also be displayed.</p> <p>The order of the operations can be changed and is significant to the end result (for example milling should not be after adding a new layer).</p> <p>The structure can be dimensioned using the Odemark operation in Road Doctor</p>



Bearing capacity analysis	<p>Odemark tool: The bearing capacity of current structures as MPa can be calculated using the Odemark tool. For definition of the initial bearing capacity, it uses road structures, which are interpreted from GPR data or given as a database, and moduli values, which can be set values or calculated values.</p> <p>Elmod link is a tool which can be used to calculate layer moduli values. The falling weight deflections and layer thicknesses are transferred via a database to the Elmod back calculation program. Elmod writes the results and Road Doctor reads them back and uses them in its own calculations. Elmod needs to be purchased separately from Dynatest. Compatibility is to Elmod 6.5 version.</p>	Road structure dimensioning	<p>Odemark tool: The bearing capacity of new structures as MPa can be calculated using Odemark tool. For definition of the bearing capacity of new structure, it uses the bearing capacity of the old structures and thicknesses and set moduli values for the new designed structures. The operation can be set to combine thin layers or split thick layers.</p> <p>The results are drawn on the screen and saved as a database. The target bearing capacity can be set and shown in the same view.</p> <p>The structures can be modified and a new bearing capacity calculated. The results can be set to be updated after every change in the new structure almost in real-time.</p>
	<p>Forward calculation of pavement, base and subgrade moduli. The operation is part of Odemark moduli and is based on FHWA formulas. It uses pavement and base thickness values and falling weight deflection values to make an estimation of layers moduli value and depth to stiff layer. The operation also calculates several curvature indexes. The results are output to a grid table and specified analysis file fields.</p>		Exporting results