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## TEST - Search functions

Search for a section with Fields values greater or equal to the specified Values Output is sorted according to the "Sorting" property.

## Search for:

Second moment of area F1:= "Iy" V1:=3000000  $cm^4$ Second moment of area F2:= "Avz" V2:=490  $cm^2$ Sort results over weight S:= "G"

$$\texttt{search\_2\_sec}\left(\!F1\,,\!\frac{V1}{1~\textbf{\textit{cm}}^4},\!F2\,,\!\frac{V2}{1~\textbf{\textit{cm}}^2},\!S\right)\!=\texttt{``W920X420X1377;W36X16.5X925;HL920X1377;''}$$

To get an array with sections

$$Res \coloneqq Search_{sec} 2 \left(F1, V1, F2, V2, S\right) = \begin{bmatrix} \text{``W920X420X1377''} \\ \text{``W36X16.5X925''} \\ \text{``HL920X1377''} \end{bmatrix}$$

To get a matrix with sections and properties

$$SearchTable_{sec}2(F1,V1,F2,V2,S) = \begin{bmatrix} 1 & N & \text{``Iy''} & \text{``Avz''} & \text{``G''} \\ \text{``Names''} & \text{``cm}^4\text{''} & \text{``cm}^2\text{''} & \text{``kg/m''} \\ \text{``W920X420X1377''} & 3034000 & 797.2 & 1377 \\ \text{``W36X16.5X925''} & 3034000 & 797.2 & 1377 \\ \text{``HL920X1377''} & 3034000 & 797.2 & 1377 \\ \end{bmatrix}$$

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