Documentation

The following Excel file belongs, as a tool, to the description below:

00-3B01-UH-E.xls Calculation sheet with graphs (Click here to download)

Introduction

The standard conditions under which a spill back atomizer is tested, such as supply pressure and oil viscosity, may be different for different types of atomizers. Every single atomizer is tested under these specific conditions before leaving our factory. The output and spray angle, given on the head of each atomizer, only are valid under these standard conditions.

The data provided for disc type spill back atomizers also applies only under specific standard conditions as shown on the corresponding data sheets.

Normally, output characteristics only have been measured under standard conditions and are not available for all possible operating conditions.

Conversion

Very often an atomizer or disc combination will not be operated under standard conditions, but at a different supply pressure and with a fluid of different viscosity. The Excel file "00-3B01-UH-E.xls" will enable you to determine the actual output characteristics of any pressure atomizer or disc combination under non-standard conditions.

Data under standard conditions is to be taken from an existing output characteristics page. One enters the known data together with the operating conditions on the sheet "Calculator", in the cells with a green background, thus generating output characteristics that are valid under operating conditions.

In detail it works as follows. Put the description of the atomizer or the discs in cell E1. The supply pressure and viscosity under standard conditions are entered in the cells C3 and C4. Enter supply pressure and viscosity under operating conditions in cells G3 and G4. Starting with line 6, in column A one enters a spill pressure, in column B the corresponding supply flow and in column C the corresponding spill flow. At each spill pressure, both flows are read off the chosen output characteristics page.

It is not necessary to fill all of the lines. Just a low number of different spill pressures suffices to achieve a result that is reliable in practice. However, it is advised to choose the spill pressures near the maximum spill pressure closer together.

Example

The data entered on sheet "Example" of the file "00-3B01-UH-E.xls" is taken from information sheet "12-E1GM-DG-E", for a size 750 atomizer. This shows clearly how few filled lines are needed to generate useful output characteristics.