



## Calculation of max. flow rate for thermostatic control valve model M...

This table is intended to calculate the max flow rate: For this you need to enter four sizes:

- The medium: "0" for water or "46" for oil ISO VG 46
- Pressure drop  $\Delta p$ : Enter pressure drop between 0,1 bar and 1,35 bar
- Valve dimension: Choose diameter of the valve from DN 20 to DN 150
- Temperature fluid T: choose specified mix-temperature in °C

From line 17 to line 28 the results get administered.

You can specify the valve more precisely from line 33 housing and data options. These data have no influence on the calculation of the max flow rate

On the next side is an example calculation.

If you are interested in our table in Excel format, or you would like to make future valve selections on your own, please contact us. The table can be obtained from us free of charge via Email or CD.

Ihre MVA Mess- und Verfahrenstechnik GmbH



## Kalkulation of max. flow rate

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**PROJECT:**  
**MVA No.:**  
**Position:**

**example**

**Input/System Data:**

<b>Oil typ (water = 0)</b>	ISO-VG	46	← specify typ of oil for example "46" ISO VG 46 or "0" for water
<b>pressure drop <math>\Delta p</math></b>	bar	1,00	← specify desired pressure drop of valve
<b>Valve dimension</b>	DN	80	← specify desired diameter of valve
<b>Temperature fluid T</b>	°C	45	← specify desired temperature in degree Celsius

**Result:**

Code MVA temperatur control valve	<b>M80T....</b>
specific gravity $\gamma$	kg/l 0,90
Oil code	10
Temp. Rounded	°C 50,00
Kvs value:	l/min 1455
Kvs value:	m³/h 87,30
A0 min.	cm² 21,64
velocity	m/s 4,03
viscosity	cSt 30,00
correction value viscosity f	./ 0,79
<b>flow rate q max</b>	<b>l/min 1214,69</b>
<b>flow rate q max</b>	<b>m³/h 72,88</b>

**valve selection:**

DN	mm	<b>80</b>
Kvs valve:	l/min	1455
Kvs valve:	m³/h	87,30

**Housing, material and options:**

Connections	DIN-PN40
Reducing bush for low flow	nein
Housing material	GJS400
Elements	kanigen plated
Sealing	EPDM
Laek hole	3mm
Manuale Override	nein