

Calculation and Selection - Water Meter

Initial data

5.00 m³/h	Estimated water flow rate	20 °C	Maximum water temperature at the flow meter installation place
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Calculation results

$Q_{min} 0.063 < 5.00 \text{ [m}^3/\text{h}] < Q_n 10.0$	Estimated water flow in the measuring range of the flow meter
$63 \text{ [kPa]} * (5.00 \text{ [m}^3/\text{h}] / 10.0 \text{ [m}^3/\text{h}])^2 = 15.75 \text{ [kPa]}$	Pressure loss across the flow meter at estimated flow rate
$[5.00 \text{ m}^3/\text{h}] / \{3600 * 3.14 * ([DN25] * 0.001)^2 * 0.25\} = 2.8 \text{ [m/s]}$	The flow rate is within normal limits $V < 3.0 \text{ [m/s]}$

Selection result : Water meter

Sensus : 420

Slovakia

Type of flow meter: multi-jet dry-rotor impeller

C	Accuracy class
Q_{max} 13.0 [m³/h]	Maximum flow rate
Q_n 10.0 [m³/h]	Nominal flow rate
Q_t 0.100 [m³/h]	Transitional flow rate
Q_{min} 0.063 [m³/h]	Minimum flow rate
DN 25 [mm]	Nominal diameter of the flow meter
PN 16 [bar]	Nominal pressure of the flow meter
T 5 ... 50°C	Permissible water temperatures for the flow meter
dP 63 [kPa]	Pressure loss across the flow meter at nominal flow rate Q _N 10.0 [m ³ /h]
not required / not required	Straight pipe before / after the flow meter

