

Calculation of pressure drop in the pipeline

Initial data

15 m³/h Water flow rate **DN 50 mm** Nominal pipe diameter

Calculation results

Steel pipe 57x3,5 [mm]

0.00196 [m ²]	The area of the through bore
130 [m ³ /h]	Kvs - flow coefficient
$(15 / 130)^2 * 100\ 000 = 1331$ [Pa/m]	Specific pressure losses
$15 / (0.00196 * 3600) = 2.13$ [m/s]	Flow velocity

Polypropylene pipe PP 63x5,8 [mm]

0.00207 [m ²]	The area of the through bore
168 [m ³ /h]	Kvs - flow coefficient
$(15 / 168)^2 * 100\ 000 = 797$ [Pa/m]	Specific pressure losses
$15 / (0.00207 * 3600) = 2.01$ [m/s]	Flow velocity

Copper pipe 54x2,0 [mm]

0.00196 [m ²]	The area of the through bore
149 [m ³ /h]	Kvs - flow coefficient
$(15 / 149)^2 * 100\ 000 = 1013$ [Pa/m]	Specific pressure losses
$15 / (0.00196 * 3600) = 2.13$ [m/s]	Flow velocity

