



Hydraulic Hammer v12.0

Simple & easy

- Supports 3 pipes, 1 junction, a constant pressure device and a valve.
- Supports any fluid using a customizable fluid database
- Custom friction calculation formulas
- Step by step calculations analysis
- Multilevel undo and redo

Parameter	Turbulent	Laminar	Transient
Wave celerity (m/s)	1000.00	1000.00	1000.00
Flow area (m ²)	0.1963	0.1963	0.1963
Calculation step (m)	100.000	100.000	100.000
Calculated Friction	0.003	0.003	0.003
Maximum over-pressure (m)	296.214	296.214	296.214
Time when over-pressure occurs (s)	1.00	1.00	1.00
Maximum sub-pressure (m)	-141.532	-141.532	-141.532
Time when sub-pressure occurs (s)	0.50	0.50	0.50

Friction calculation algorithm...

Turbulent flow if Reynolds is greater than:

Friction type:

Laminar flow if Reynolds is lower than:

Friction type:

Transient flow

Friction type:

Settings

Accuracy:

Maximum number of trials:

Averaging formula:

Set as defaults for all new projects

System layout

Diagram showing a pipe network with nodes A, B, C, and D. A valve is located at node B.

Buttons: Pipe, Tank, Valve, Ok

Select different equations for turbulent, laminar and transient flow from a wide variety of formulas: Manning (constant and variable n), Bazin, Kutter, Ganguillet-Kutter, Chezy, Hazen-Williams and Darcy-Weisbach.

For Darcy-Weisbach formula, the friction factor *f* can be calculated using: Colebrook, White, Colebrook-White, Laminar, Miller, Nikuradse, Prandtl, Swamee-Jain, Scimemi and cubic interpolation from Moody diagram.

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Station (m)	Pressure (m)	Velocity (m/s)	Flow rate (m ³ /s)
0.000	20.000	9.71	1.906
100.000	20.000	9.71	1.906
200.000	20.000	9.71	1.906
300.000	20.000	9.71	1.906
400.000	20.000	9.71	1.906
500.000	20.000	9.71	1.906
600.000	20.000	9.71	1.906
700.000	20.000	9.71	1.906
800.000	20.000	9.71	1.906

Valve...

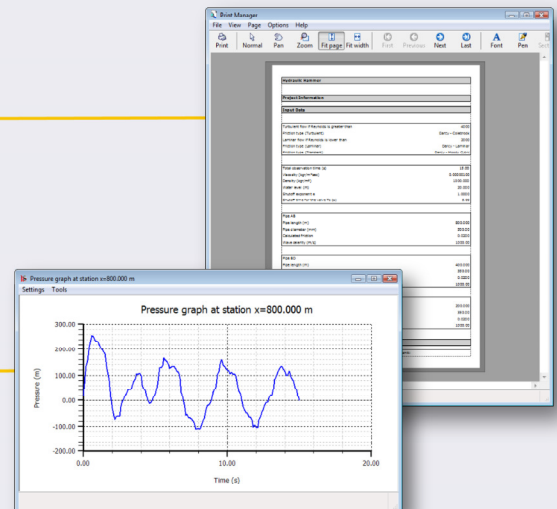
Valve shutoff equation: $r = \left(1 - \frac{t}{T_c}\right)^n$

Shutoff exponent *n*:

Shutoff time for the valve *T_c* (s):

Buttons: Ok, Cancel

- Linear or polynomial closing equation.
- Pressure, flow rate and velocity graphs at a user-defined station.
- Graphical presentation of the results with animation.
- Automated calculations sheets.



Export: Microsoft Word 2000, Excel 2000 or later, Bitmap image, ASCII

A free functional demo is available at TechnoLogismiki's web site.

www.technologismiki.com

Since its foundation, Technologismiki specializes in the development of advanced technical software. Moreover, its activities include publishing of technical books and consulting services in the fields of Hydraulics, Hydrology, Environment and Water Resources.

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