

# HydraCALC™

## HydraCALC™ Hydraulic Calculation Software

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Hydratec's hydraulic programs have been industry leaders for more than thirty years. From their humble beginnings a decade and a half before PC's were invented to modern super-desktops and notebooks, they have always allowed for more flexibility and greater customization than any other hydraulics package.

HydraCALC is fully compatible with all current Windows versions.

## Features

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### Analysis

- Uses flexible pump and water supply arrangements with multiple pumps
- Enter diameters with a mouse click and make global or line-by-line changes
- Automatic remote head location and auto-peaking of a grid
- Automatic fitting equivalent length adjustment based on pipe type
- Automatically checks for stranded pipes
- Automatic remote head location and auto-peaking of a calculation
- Calculate using Velocity Pressure or Total Pressure
- Displays and instantly updates calculated flow, pressure and velocity for each pipe

### Estimating

- Generates loop, tree, or grid based estimates
- Graphics based estimating design tool
- Automatically generate pipe layout and size options
- Windows compatible pull-down menus, mouse operations, and on-line help

### Reports

- Flow schematics and detailed water supply graphs
- Many predefined final printout forms
- Review printouts on the screen or send directly to printer

### Utilities

- Unlimited pipe types and fittings tables
- Change pop-up menu defaults
- Use any unit system—Imperial or Metric



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Node 1	Node 2	Pipe Dia.	Pipe Type	Length	Friction	C. Factor	Input Size	Dead End	K Factor at Pipe	Den.	Area	Min. Press.	Flow	Friction Loss	Velocity
1	44	48	1 1/2	SCH40	891.00	T	100	UNF	8.8	2	100	7.0	34.0		
2	45	48	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
3	46	47	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
4	47	48	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
5	48	49	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
6	49	7	1 3/8	SCH40	1114.00	T	100	UNF	8.8	2	100	7.0	34.0		
7	8	7	1 3/8	SCH40	891.00	T	100	UNF	8.8	2	100	7.0	34.0		
8	37	38	1 1/2	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
9	38	39	1 1/2	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
10	39	40	1 1/2	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
11	40	41	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
12	41	41	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
13	41	41	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
14	41	41	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		
15	41	41	1 3/8	SCH40	10.00		100	UNF	8.8	2	100	7.0	34.0		

Easy to learn, intuitive Windows based input makes even a novice user comfortable with entering data. Cut, copy and paste are all available with HydraCALC. A single mouse click is all that is needed to bring up common defaults, or just type in the information.

Calculation Summary

Flow Required: 0.148  
Pressure Required: 0.3

System is: 11.894 Under the Water Supply Curve  
The Estimated Medium Density this system is capable of is: 0.27

HydraCALC Calculation Program

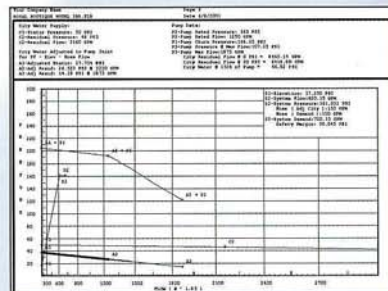
Job - Black  
File Name - BLACKROG.WX1  
Date - 081001  
Time - 15:11:03

AREA CALCULATED - HEAD FLOW SUMMARY

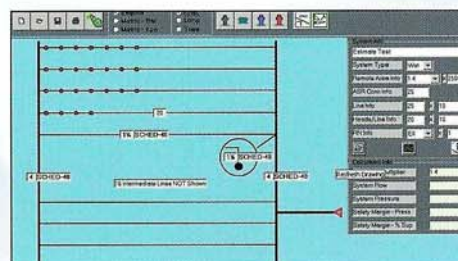
ID	K-Factor	Actual Flow	Req. Flow	Delta Flow	Actual Press.	Req. Press.	Delta Press.
8001	8.100	25.62	20.01	5.61	10.005 Ft	6.100	3.905
8002	8.100	23.07	20.01	3.06	8.109 Ft	6.100	2.009
8003	8.100	21.38	20.01	1.37	6.970 Ft	6.100	0.870
8004	8.100	20.44	20.01	0.43	6.371 Ft	6.100	0.271
8005	8.100	20.06	20.01	0.05	6.135 Ft	6.100	0.035
8006	8.100	20.01	20.01	0.00	6.100 Ft	6.100	0.000
8007	8.100	20.04	20.01	0.03	6.123 Ft	6.100	0.023
8008	8.100	25.62	20.01	5.61	10.008 Ft	6.100	3.908
8009	8.100	23.07	20.01	3.06	8.111 Ft	6.100	2.011
8010	8.100	21.39	20.01	1.38	6.972 Ft	6.100	0.872
8011	8.100	20.45	20.01	0.44	6.372 Ft	6.100	0.272
8012	8.100	20.06	20.01	0.05	6.136 Ft	6.100	0.036
8013	8.100	20.01	20.01	0.00	6.101 Ft	6.100	0.001

Calculation Summary is produced every time you calculate. You can also request a more detailed summary to help you properly size the sprinkler system.

All important information is readily available—friction loss, velocity, flow. HydraCALC will even tell you the best density you can expect from a given sprinkler configuration.



Detailed water supply graph shows valuable information in easy to understand format. Graph automatically scales to demand and shows all important pump and city supply characteristics. You can even draw your own supply graph to meet demands required by your local authority.



Graphic Sizing Module (GSM) lets salespeople easily generate hydraulic input for verification of sizes and configuration.

Change sizes easily, add in pumps and city supplies, and change layout quickly with this module.