

# REFERENCE MANUAL

The logo for the Infrastructure Management System (ims) features the lowercase letters 'ims' in a bold, black, sans-serif font. A white, curved swoosh element starts from the top left, loops around the 'i' and 'm', and ends at the top right, partially overlapping the 's'.

*infrastructure management system*

## Reference Manual and User's Guide

Version 2.0





# Welcome

Thank you for purchasing Hurco's Infrastructure Management System, IMS, software. IMS was developed to help you manage one of our most important infrastructures, water distribution. The IMS system was designed to be used with Hurco's Fire Flow Pro for fire flow testing, unidirectional flushing, c-factor testing and Hurco's Valve Star for valve exercising and management. This IMS software can also be used as a standalone system ready for you to enter data and create reports.

This software has many user friendly features including drop down menus and data selection fields, report editing, security features and much more. This software will give you every function you need to manage your water distribution system including valves, hydrants and mains.

IMS software modules include:

- Hydrant and Valve Maintenance, included with base package.
- Fire Flow Testing
- C-factor Testing
- Unidirectional Flushing
- Valve Exercising
- QSI Integration Module for Valve Star G4 and Fire Flow Pro QSI

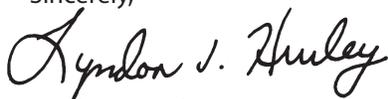
This manual will take you through the step by step procedures for using the IMS software. We use simple to understand instructions and photos to assist you in learning how to get the best results from your IMS software. Please follow each step completely to insure you will get the valuable data, management tools and reports you expect.

The IMS system is designed for any size water distribution system and set up so you can generate your own custom reports using Crystal Reports. To get started, please read this manual front to back. If you need help getting started with your new IMS software, the staff at Hurco will be happy to assist you. We can set up training by Webex, telephone, fax, e-mail or even onsite training. Please call to learn more about our training programs. You will have unlimited Webex and telephone support for one year from your purchase date.

In this IMS software program, we give you numerous fields to collect and record important data about your water distribution system. As a general rule, these features are based on the recommendations of the American Water Works Association, (AWWA) and the National Fire Protection Association, (NFPA). It will be your responsibility to read and understand these recommendations. Hurco Technologies, Inc. will not be responsible for the incorrect collection of data or for the failure to follow AWWA and NFPA recommendations. Assign a competent worker with knowledge of your distribution system and capabilities to manage data in a software program. Always verify that the equipment you are using to collect data in the field is properly calibrated and certified.

To set up training or for general information regarding your new IMS software, call Hurco Technologies, Inc. at 1-800-888-1436.

Sincerely,



Lyndon J. Hurley  
President, Hurco Technologies, Inc.



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# Chapter 1

## Installation

### *System Requirements*

#### **Minimum System Requirements**

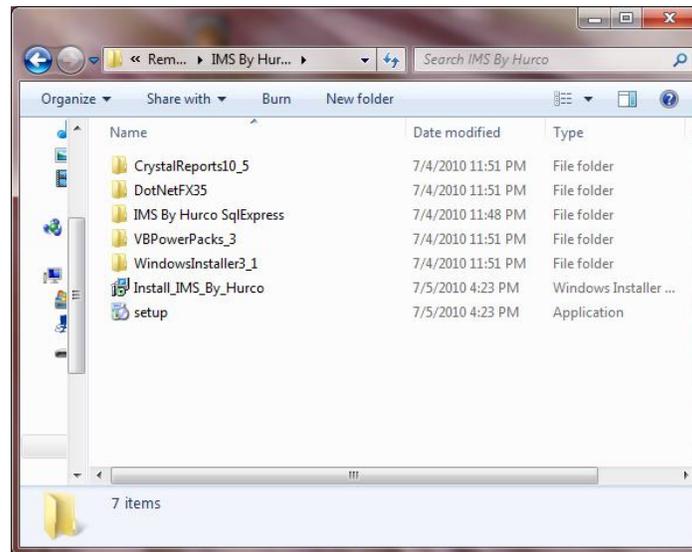
- 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor
- 512 megabyte (MB) RAM (1 gigabyte (GB) Recommended)
- **1.5 gigabytes (GB)** free hard disc space (application data entered by the user will take up additional space)
- CD-ROM or DVD drive
- 1024 x 768 or higher resolution monitor
- .Net framework 2.0
- Internet Access (fees may apply) – *Used only for google maps addon*
- Adobe Reader

#### **Supported Operating Systems**

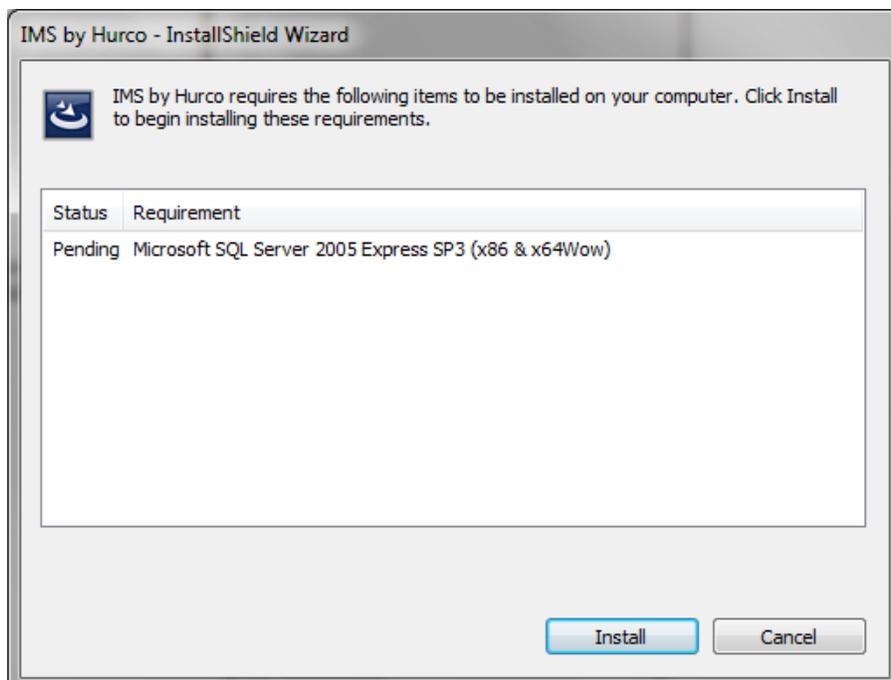
- XP Home SP2
- XP Professional SP2
- XP Media Center
- Vista Home Basic
- Vista Home Premium
- Vista Business
- Vista Ultimate
- Vista Enterprise
- Windows 7 Home
- Windows 7 Business
- Windows 7 Ultimate
- Server 2003 SP1
- SBS 2003 Standard
- SBS 2003 Premium
- SBS 2003 R2 Standard
- SBS 2003 R2 Premium

## Installing the Program

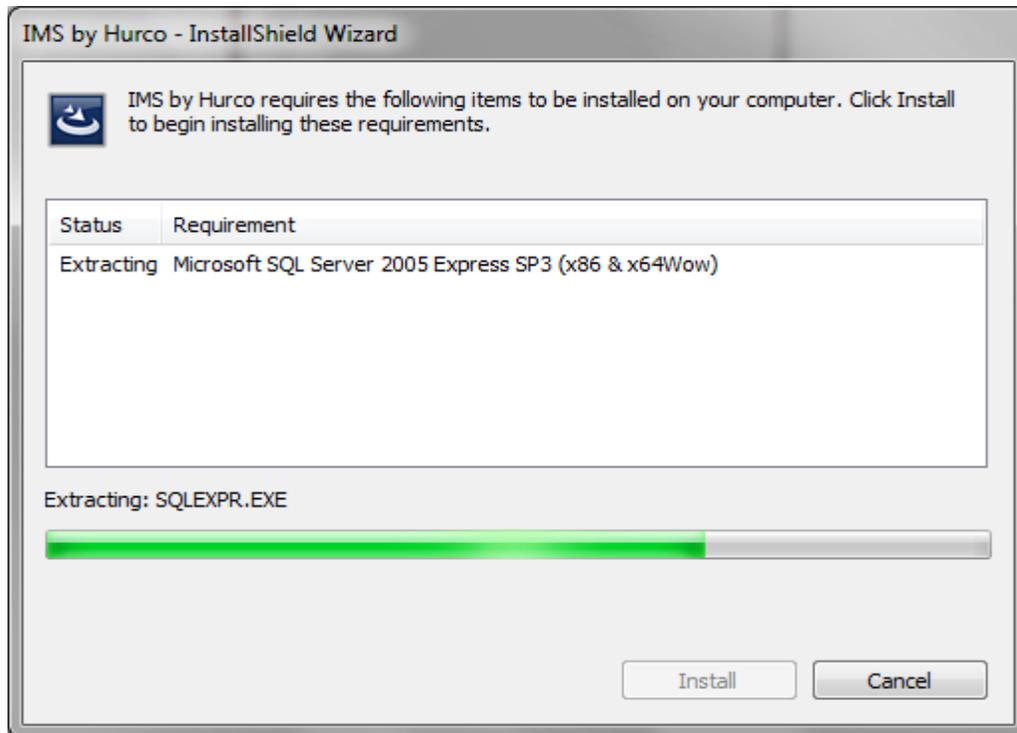
To begin the installation of IMS by Hurco, double click on the “setup.exe” file located on your installation CD (or inside your downloaded zip file). You must run the setup file with administrative privileges. Also temporarily shut down any antivirus programs to prevent interference during installation.



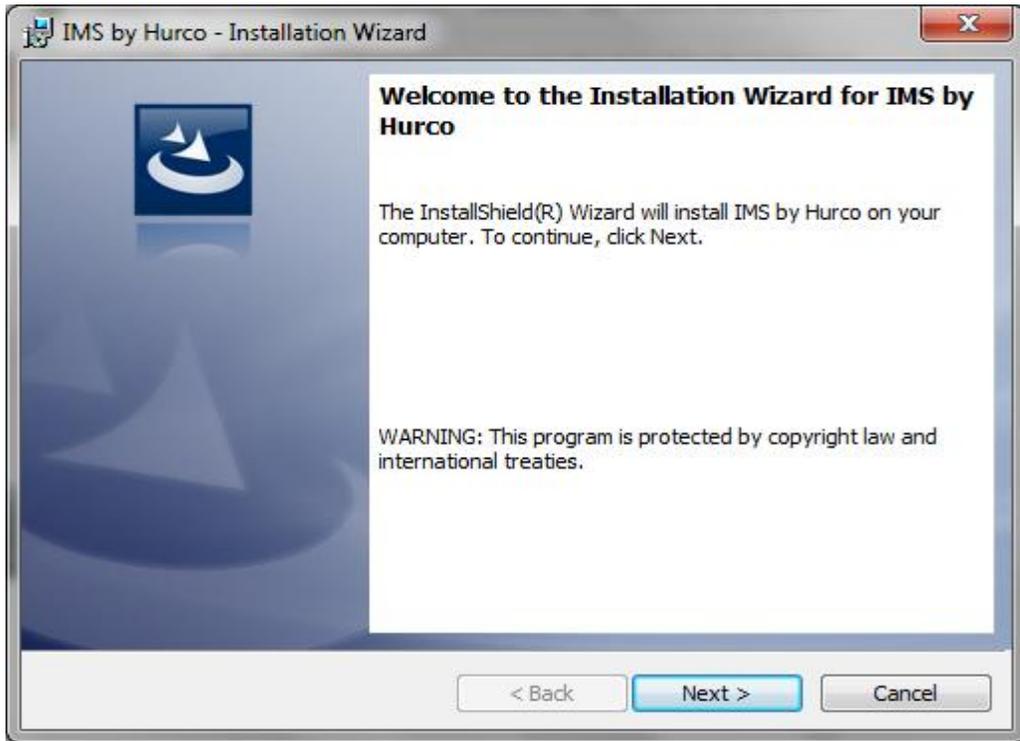
When the installation begins, you will see the following screens. This screen will appear if you do not have the required pre-requisite programs loaded on your computer at the time of installation. Clicking “Install” will move the installation forward.



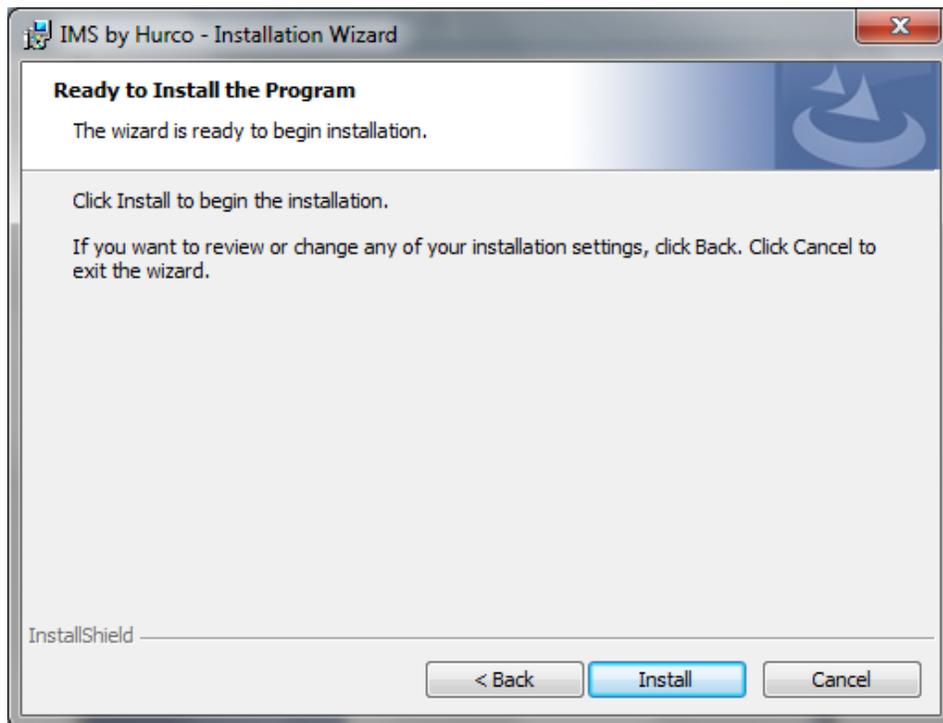
After clicking “Install”, you will see a progress bar. Please be patient, this install may take several minutes depending on the speed of your PC.



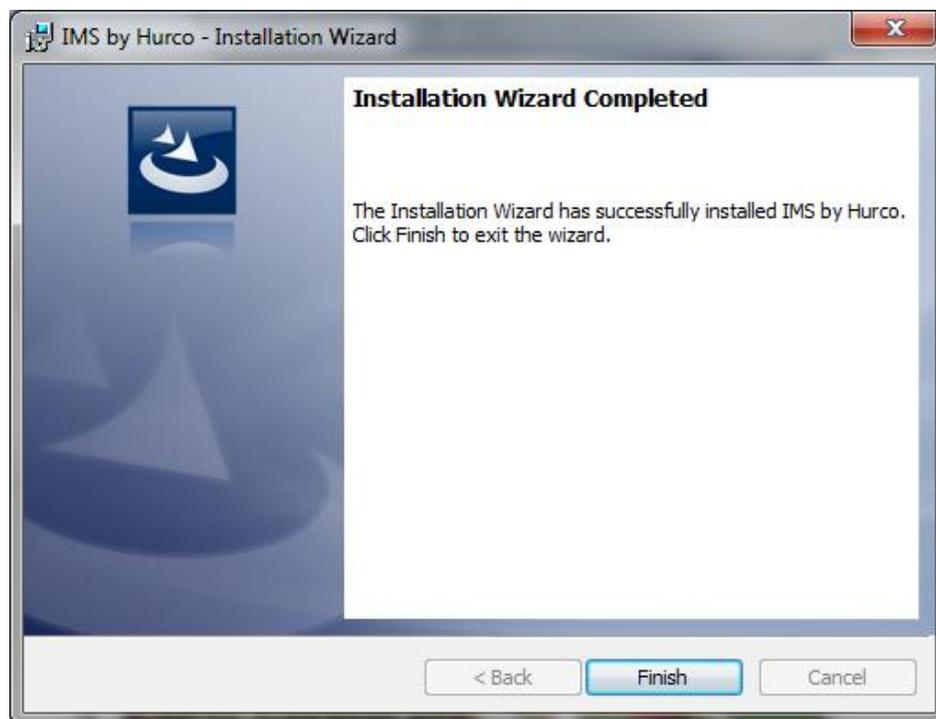
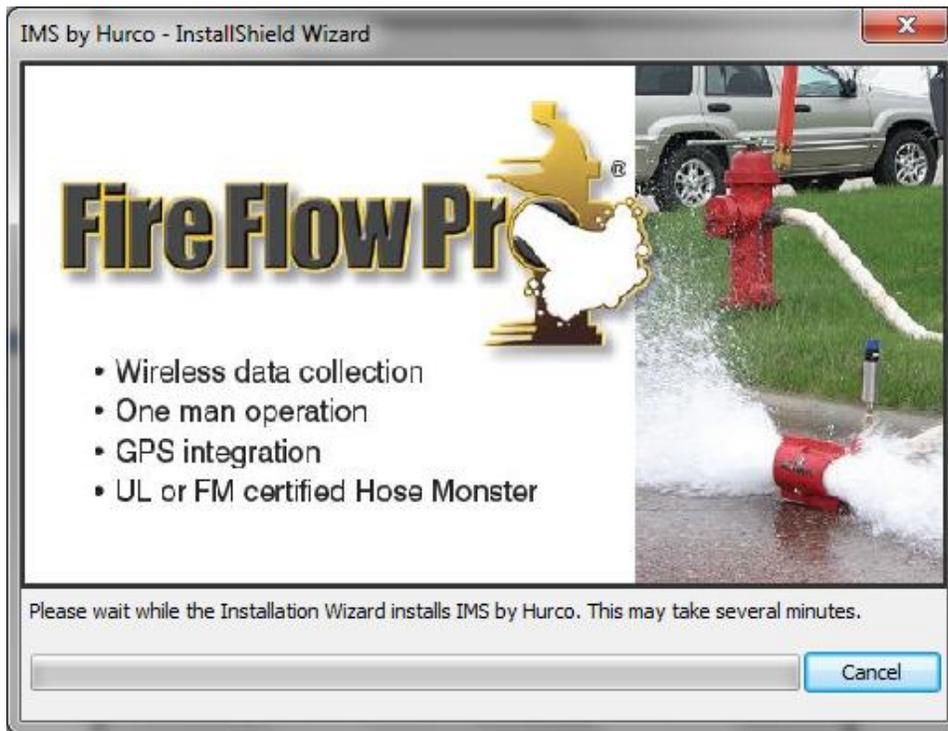
Once the pre-requisites have been installed, the following screen will appear to start the installation of IMS by Hurco. Click “Next” to proceed with the install.



To proceed with the installation, click “Install” to continue. you will see a progress bar. Please be patient, this install may take several minutes depending on the speed of your PC.



After clicking “Install” , you will see a progress bar. Please be patient, this install may take several minutes depending on the speed of your PC.



Once the installation finishes, you will be asked to click “Finish”. Do so and you are all done!

For network environments, IMS by Hurco can be set up to share its database with other installations. To learn more about this feature, contact Hurco Technologies Inc.

# Chapter 2

## GETTING STARTED

### *Starting the Application*

The IMS by Hurco software icon appears under the Hurco Technologies group by default and on the desktop as a shortcut.

#### **To start the application**

1. Click the Start button on the Windows taskbar, and then select Programs from the Start menu.
2. Select Hurco Technologies from the Programs submenu, and then select the IMS by Hurco icon.

OR

1. Select the IMS by Hurco software icon.

We have provided demonstration data for a company called “Sample Company.” This demonstration data makes it much easier for new users to learn the application. Depending on whether you are a new user, or the first user of the application for your company, Sample Company might open automatically after startup. If not, you can open it as you would any other company.

### *Activating Your Product*

Upon first opening your program, you will see the activation screen. If you have not purchased an activation ID, you will have 15 uses before you will be required to purchase one. To use your trial uses, click Cancel and you will be taken to the user login screen. After you have purchased your activation ID, you will need to enter it on the screen and click Activate. This screen will not appear again after activating your product. If you purchase additional modules at a later date, you will need to go to the Help menu to enter new activation ID. See “[Help Section](#).”



## ***Logging into the Program***

You must enter your user login name and password to access the application. The default user name is **Admin**. The default password is **imsadmin**.

### **To enter a user login name and password**

1. The User Login screen appears when the application is started. (It may be the second screen if the program has not been activated.)
2. Type your user name in the User Name and password.
3. Select the company under Connect To. You must choose a company to continue.
4. You now have access only to those functions as defined by program administrator.



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**Note: User names and passwords are case-sensitive. That is, Admin and ADMIN are two different user names/passwords.**

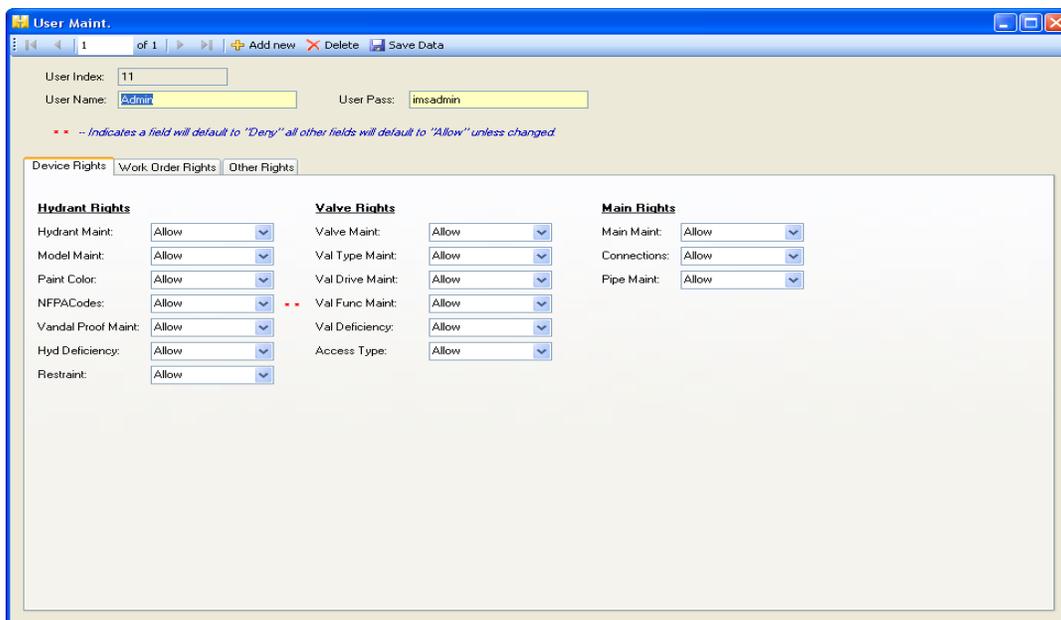
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# User Maintenance

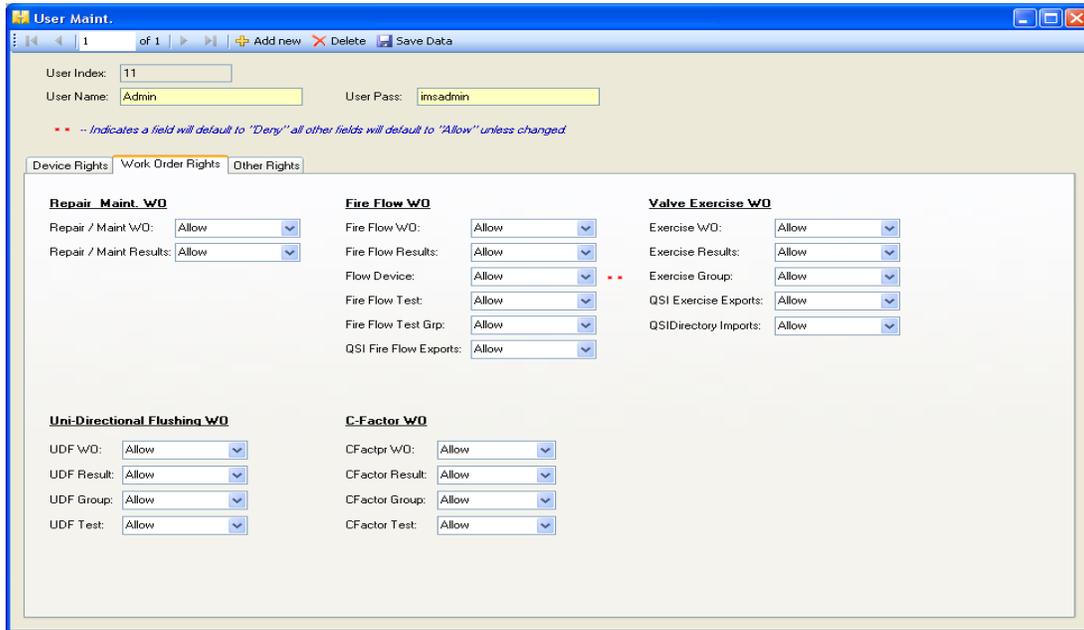
Select User Maint from the Edit menu to edit the permissions and options for each user. This is where password and user names for each user are created. Also access to certain parts of the program can be restricted here. Certain fields are automatically set to “Deny” when the program is installed. These items are denoted by two asterisks. These are pertinent fields that affect other parts of the program.

## Create new user

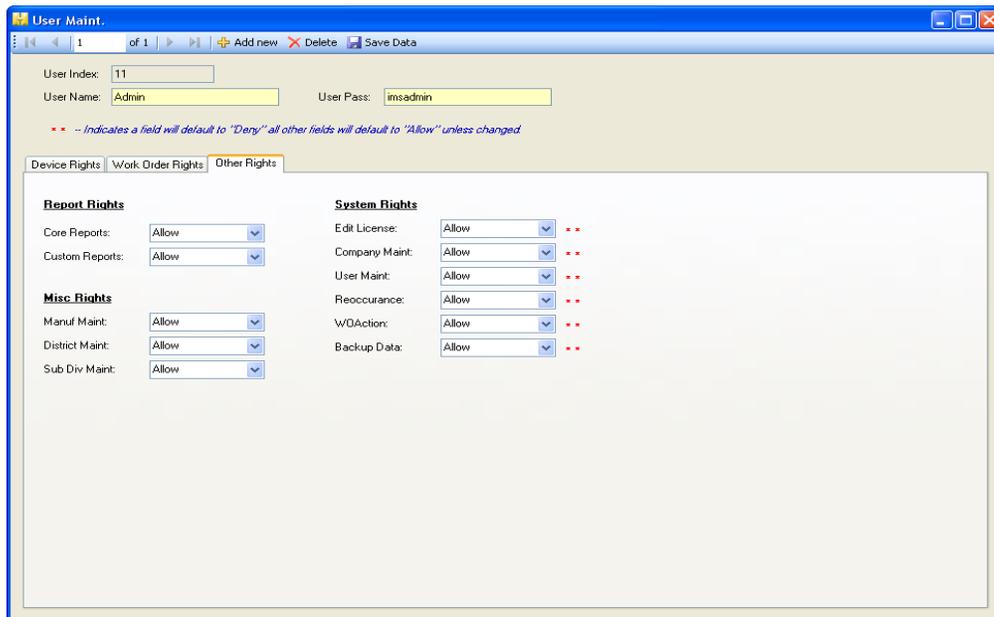
1. To create a new user, select Add New.
2. Enter User Name for new user.
3. Enter password for new user.
4. Select device rights for the new user. To change access for a field, select the drop down box and chose either Allow or Deny. Allow will grant the user access to that menu option. Deny will prevent that option from appearing in the users menu options.



5. Select work order rights for the new user. To change access for a field, select the drop down box and chose either Allow or Deny. Allow will grant the user access to that menu option. Deny will prevent that option from appearing in the users menu options.



6. Select other rights for the new user. To change access for a field, select the drop down box and chose either Allow or Deny. Allow will grant the user access to that menu option. Deny will prevent that option from appearing in the users menu options.



7. Select Save Data to save new user or Cancel to not save new user.

## Delete current user

1. To delete a user, select the user that needs to be deleted.
2. Click Delete.

3. Confirmation box will appear asking if you are sure you want to delete user.
4. Select yes to confirm deletion or no to cancel deletion.

### **Edit current user**

1. To edit a user, select the user that needs to be edited.
2. You can update the user name or password.
3. Select access level for new user. To change access for a field, select the drop down box and chose either Allow or Deny. Allow will grant the user access to that menu option. Deny will prevent that option from appearing in the users menu options.
4. Select Save Data to save updated information.

## ***Exiting the Application***

There are a couple of ways to exit IMS by Hurco. Once this is done, you will be taken to the Windows desktop. Do one of the following:

- Select File and Close Company from the menu bar.
- Click the “X” button in the upper right corner.

## ***Getting Help***

There are many ways to obtain help with this the application. Your options include:

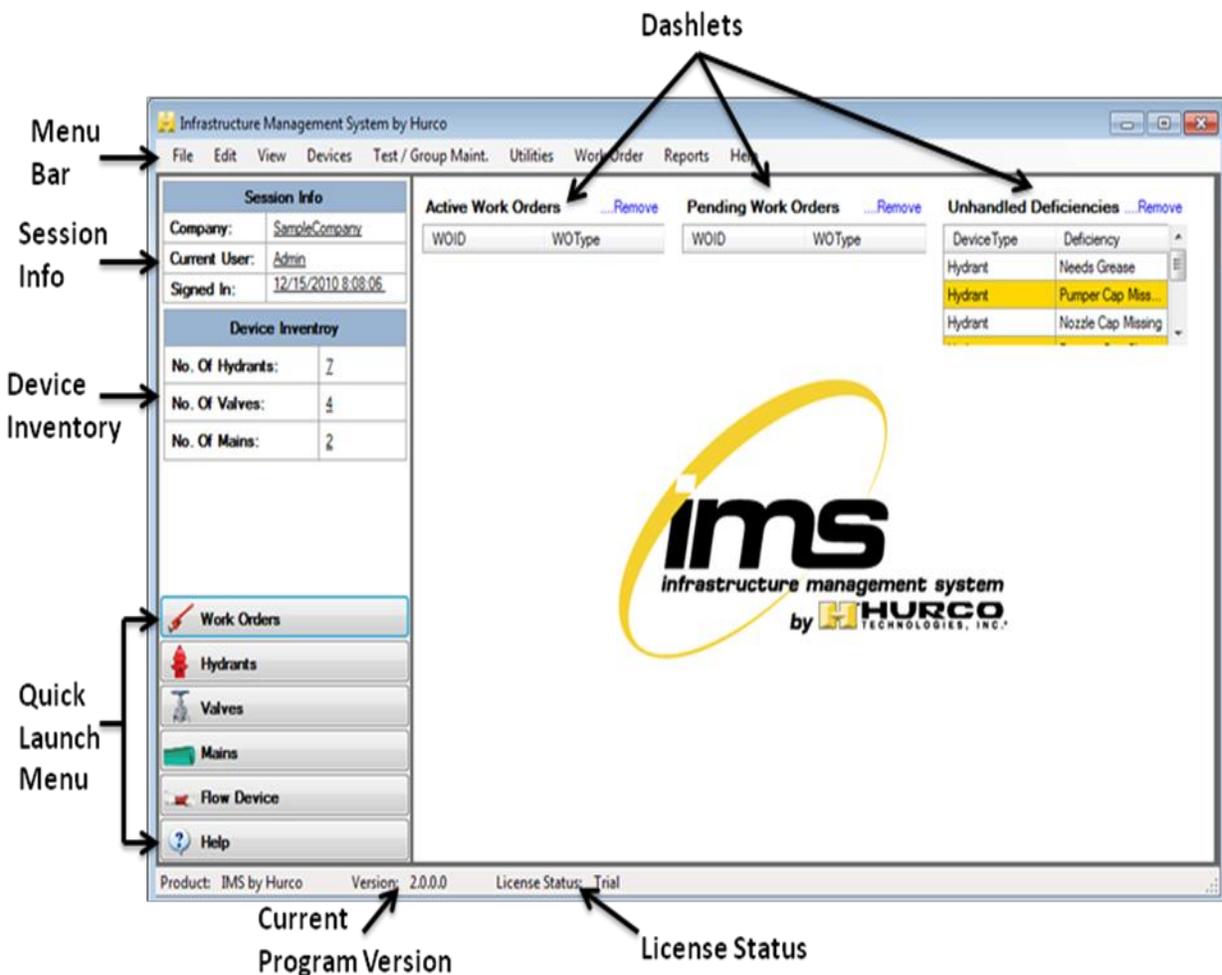
- Using the online Help system
- Viewing the online user’s guide
- Contacting Hurco Technologies

## ***The Program Interface***

After starting the application, the main program window appears. The main window contains all the options that are needed to maneuver in IMS by Hurco.

## Elements of the Main Window

The diagram below illustrates the most important elements of the main window. Following the diagrams are brief explanations of most elements.



The following describes most elements of the IMS by Hurco interface listed in the above illustration.

- **Menu Bar**

The menu bar is a standard Windows interface tool used to access specific areas of a program. The menu bar contains menu headings that list specific functions or actions in the program. To initiate an action, click the menu heading that corresponds to the desired action.

- **Session Info**

This section gives the name of the company that user is currently logged into. It also gives the current users name and the date and time that they signed into the program.

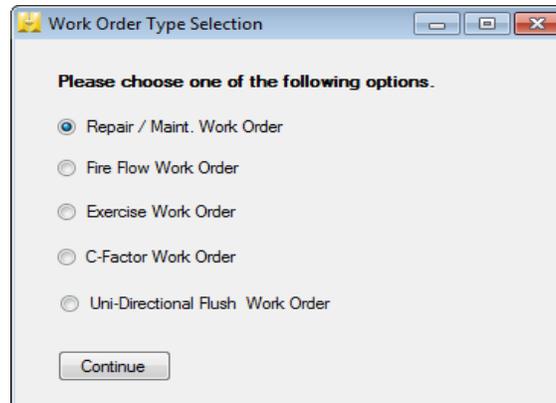
- **Device Inventory**

This section gives details of the number of devices that are currently in the program.

### ▪ **Quick Launch Menu**

These are buttons that can be clicked on in order to access a specific function in the program easily and quickly.

- Work Order – This will take you to a new menu where you can choose what type of work order you would like to create or view. Select a work order type and then click continue and you will be taken to the appropriate work order screen.



- Hydrants – This will take you to the hydrant maintenance screen where you can view or create a new hydrant.
- Valves – This will take you to the valve maintenance screen where you can view or create a new valve.
- Mains– This will take you to the main maintenance screen where you can view or create a new main.
- Flow Devices– This will take you to the flow device maintenance screen where you can view or create a new flow device.
- Help– This will take you the program manual.

### ▪ **Dashlets**

These areas give quick access to important functions in the program.

- Active Work Orders – This lists all of the work orders that are active and have not been completed or closed.
- Pending Work Orders –This lists all of the pending work orders that have been created by the system due to reoccurrence period being met on a past work order.
- Recent Work Orders – This lists the 10 most recent work orders that have been completed.
- Unhandled Deficiencies – This lists pending deficiencies that have been logged from work orders.

### ▪ **Current Program Version**

This displays the current version of IMS by Hurco that is running.

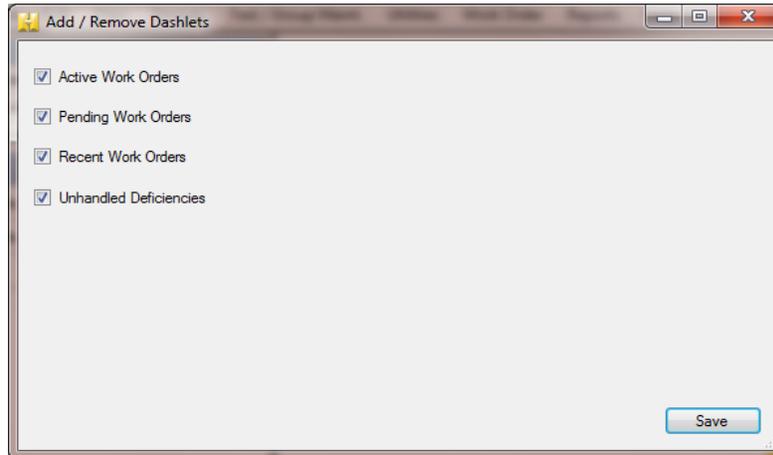
### ▪ **License Status**

This displays the status of you license. It will either be Registered or Trial. Trial means that you have not purchased and activated a license code.

# Add/Remove/Working with Dashlets

## Adding dashlets

To add dashlets, select Add/Remove Dashlets from the View menu. There are four dashlets that are available. You can select one, all or none. To add a dashlet, click inside the box next to the dashlet that is wanted.



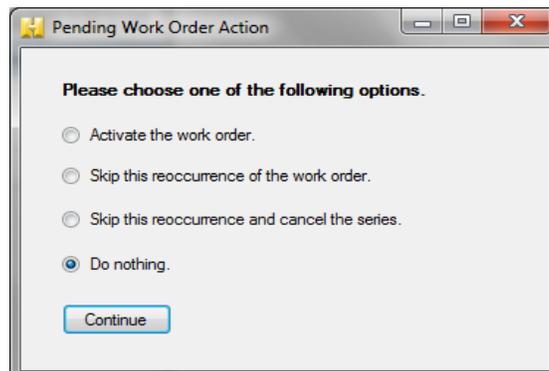
## Removing dashlets

There are two ways to remove a dashlet, you can uncheck the box in this screen or you click the Remove option that is next to each dashlet on the main window.

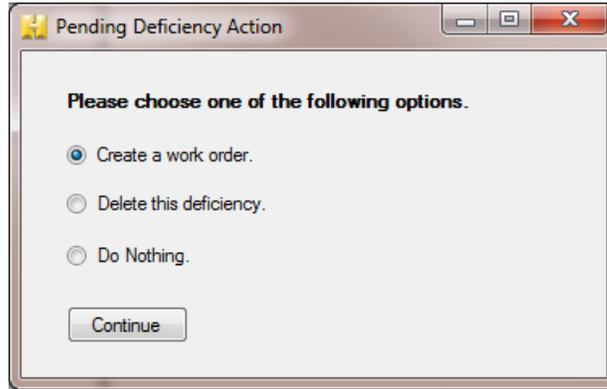
## Working with dashlets

Each dashlet has a unique function. Below is how the dashlets work.

- 1) **Active Work Orders-** Double clicking on any work order in this dashlet will pull up the work order selected.
- 2) **Pending Work Orders-** Double clicking on any work order in this dashlet will pull up the following menu.



- a) **Activate the work order** – This will create the work order and add it to the active work orders.
  - b) **Skip this reoccurrence of the work order** – This will remove the selected pending work order and it will reoccur on the next scheduled date.
  - c) **Skip this reoccurrence and cancel the series** – This will remove the selected pending work order and will also cancel any further reoccurrences.
  - d) **Do nothing** – This will close the menu option and will not affect the selected pending work order.
- 3) **Recent Work Orders** – Double clicking on any work order in this dashlet will pull up the results report for the selected work order.
  - 4) **Unhandled Deficiencies** – Double clicking on any deficiency listed in this dashlet will pull up the following menu.

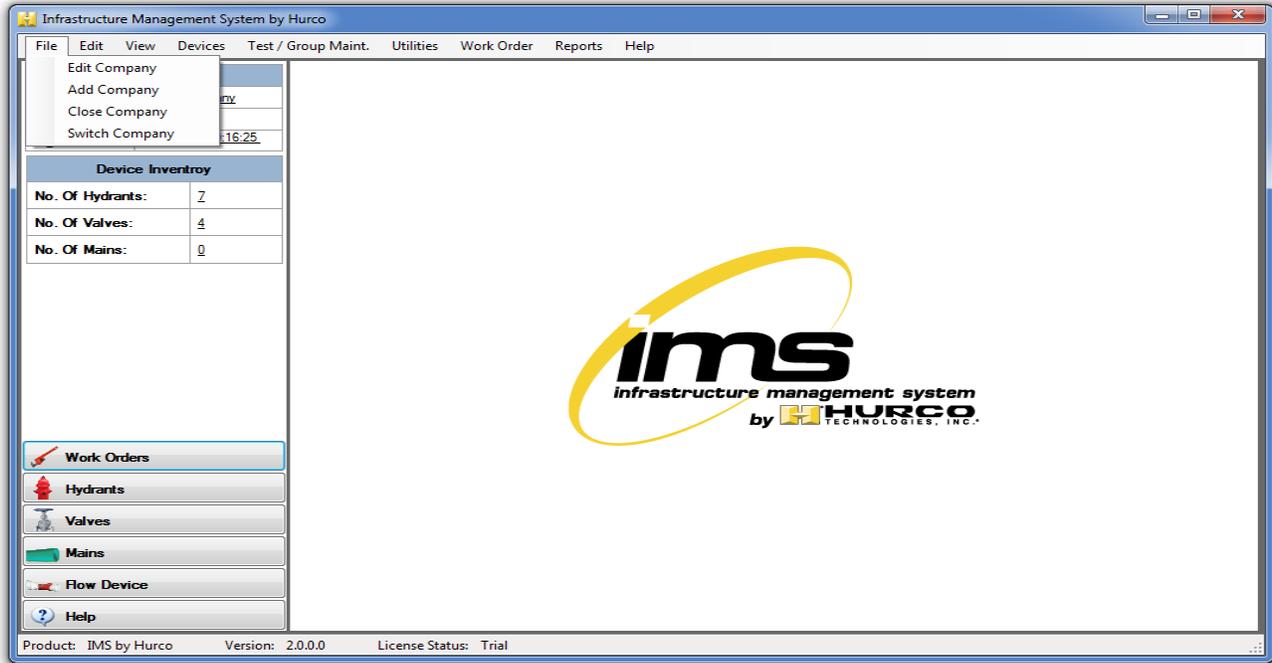


- a) **Create a work order** – This will create a new work repair/maintenance work order. Once this is created, it will appear as an active work order.
- b) **Delete this deficiency** – This will remove the deficiency from the unhandled deficiencies and will require no additional procedures.
- c) **Do nothing** – This will close the menu option and will not affect the selected deficiency.

# Chapter 3

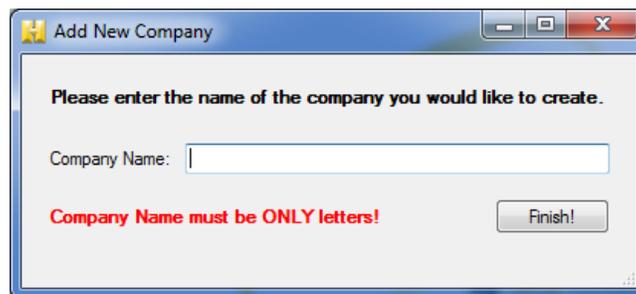
## Creating/Editing/Switching Companies

In this chapter you'll learn the creating and editing companies. These options are located under the File option on the Menu Bar.



### *Creating a New Company*

To create a new company, enter the name of the company you want to create. This will create you new company. Once a new company is created, user will need to close program. Upon login, select newly created company from Connect To list.



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**Note:** Company names can only be letters. If the company name includes number, you will need to spell out the number words or exclude the characters that are not letters.

---

## ***Edit a Current Company***

To edit company information Select Edit Company to enter or update company details. This will need to be done when a new company is created or the company information changes.



The screenshot shows a window titled "Company Maint." with a "Save Data" button at the top left. The form contains the following fields and values:

Name:	Hurco Technologies Inc.
Addr1:	409 Enterprise Street
Addr2:	
City:	Harrisburg
State:	SD
Zip:	57032
Phone:	(605) 743-2466
Fax:	(605) 743-2465
Email:	info@samplecompany.com

On the right side of the form, there is a logo for "ims infrastructure management system by HURCO TECHNOLOGIES, INC." Below the logo are two buttons: "Upload Logo" and "Remove Image".

- Company name- Use this field to enter a unique name for the company you are creating.
- Enter Addr1/Addr2.
- Enter City.
- Enter State. Use two letter state code.
- Enter Zip Code.
- Enter Phone number. Use the following format (xxx) xxx-xxxx.
- Enter Fax Number. Use the following format (xxx) xxx-xxxx.
- Enter company email address.
- Chose the Upload Logo button and go to the location of you logo file. Select the file and chose Open.
- Select Remove Image if the logo isn't needed.

## ***Close a company***

Select Close Company when you want to close the current company to access a new company or to stop using the program.

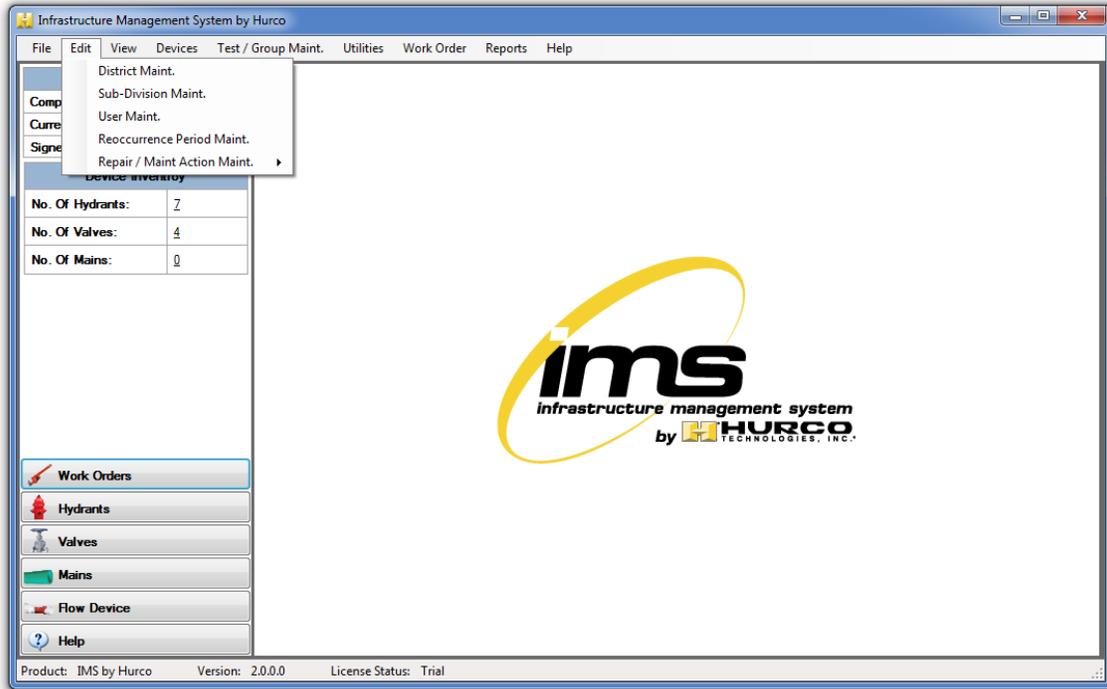
## ***Switch companies***

Select switch company to move from one company to another. The login screen will appear. Enter login user name and password then select the new company that is desired.

# Chapter 4

## Editing Actions

In this chapter, you will learn how to edit actions that are need in work orders. These options are located under the Edit option on the Menu Bar.



### *District Maintenance*

Select District Maint to edit districts for devices. This is the screen that is used to set the districts for where the devices are located. By default, standard districts are included.

- DistName – Enter the name of the district.
- DistNotes – Enter any notes that are needed.

To create a new district, either click Add new or start entering the district name and description in the first blank row. Select Save Data to save the new district.

To delete a district, select the district to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

DistName	DistNotes
Commercial	Commercial
Industrial	Industrial
Multi-Family	Multi-Family Residential
Open/Vacant	Open/Vacant
Park/Recreation	Park/Recreation
Rural	Rural
Residential	Residential
*	

## ***Sub-Division Maintenance***

Select Sub-Division Maint to edit sub-divisions for devices. This is the screen that is used to set the sub-divisions for where the devices are located.

- SubDivName – Enter the name of the district.
- SubDivNotes – Enter any notes that are needed.

To create a new sub-division, either click Add new or start entering the sub-division name and description in the first blank row. Select Save Data to save the new sub-division.

To delete a sub-division, select the sub-division to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

SubDivName	SubDivNotes
Harrisburg	Harrisburg
*	

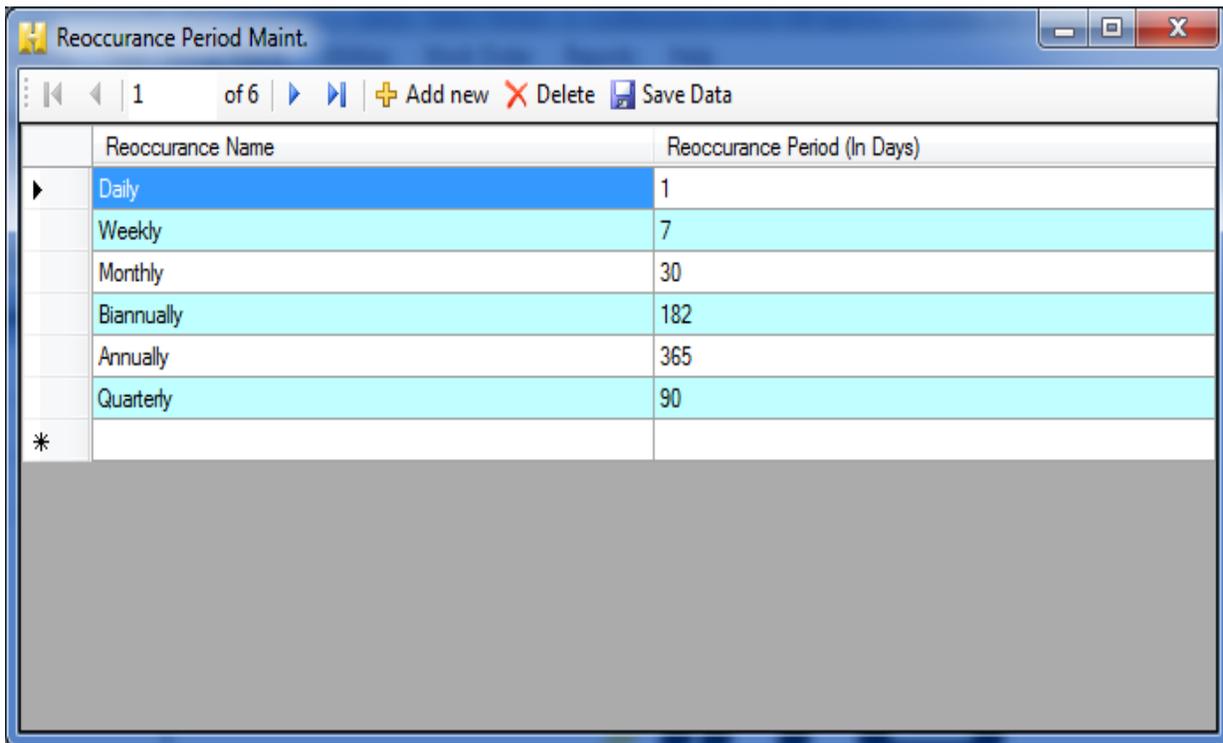
## Reoccurrence Period Maintenance

Select Reoccurrence Period Maint to edit the reoccurrence period for work orders. This is the screen that is used to set the number of days for each reoccurrence. For example, daily is 1 day and weekly is 7 days. These are used in calculating new work order dates for reoccurring work orders. By default, standard period are included.

- Reoccurrence Name – Enter the name for the reoccurrence period.
- Reoccurrence Period (In Days) – Enter the number of days for the reoccurrence period. This needs to be a number.

To create a new period, either click Add new or start entering the reoccurrence name and description in the first blank row. Select Save Data to save the new reoccurrence period.

To delete a period, select the period to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.



	Reoccurrence Name	Reoccurrence Period (In Days)
▶	Daily	1
	Weekly	7
	Monthly	30
	Biannually	182
	Annually	365
	Quarterly	90
*		

## Repair/Maint Action Maintenance

Select Repair/Maint Action Maint to edit actions that are available for work orders. Choose either Hydrant Actions, Valve Actions or Main Actions. These are the screens used to set up the actions that are available to be selected on any work order screen.

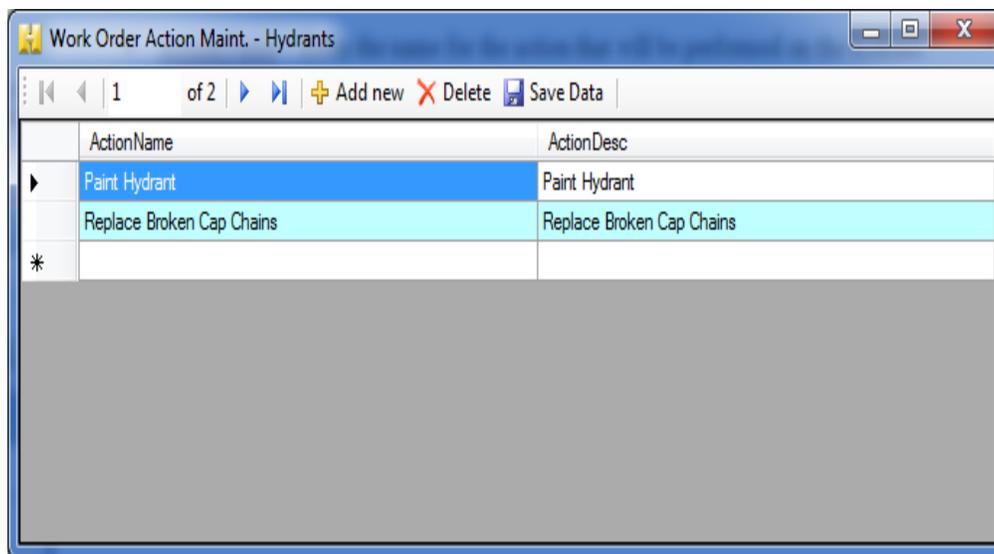
## Hydrant Actions

- ActionName – Enter the name for the action that will be performed on the hydrant.
- ActionDesc– Enter the description of the action that will be performed on the hydrant.

To create a new hydrant action, either click Add new or start entering the action name and description in the first blank row. Select Save Changes to save the new action.

To edit a hydrant action, enter the changes that are needed and select Save Data.

To remove an action, select the action to delete. Select Remove Selection. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.



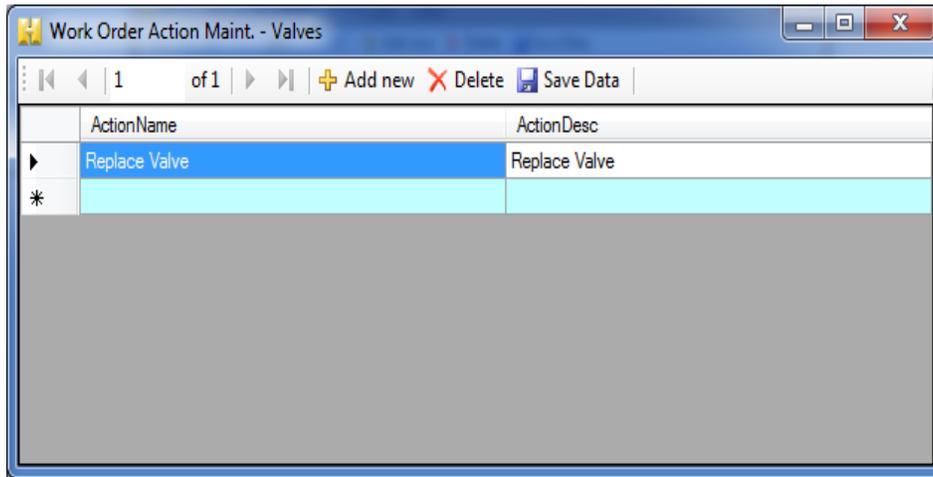
## Valve Actions

- ActionName – Enter the name for the action that will be performed on the valve.
- ActionDesc– Enter the description of the action that will be performed on the valve.

To create a new valve action, either click Add new or start entering the action name and description in the first blank row. Select Save Changes to save the new action.

To edit a valve action, enter the changes that are needed and select Save Data.

To remove an action, select the action to delete. Select Remove Selection. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.



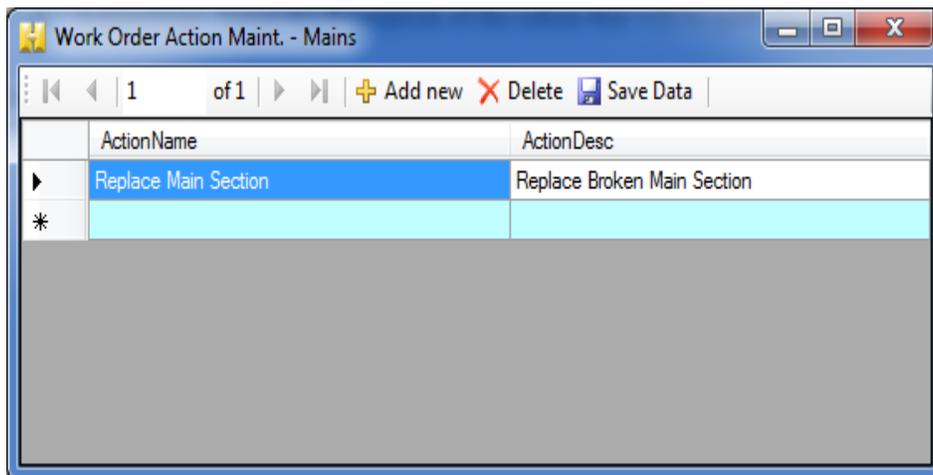
## Main Actions

- ActionName – Enter the name for the action that will be performed on the main.
- ActionDesc– Enter the description of the action that will be performed on the main.

To create a new main action, either click Add new or start entering the action name and description in the first blank row. Select Save Changes to save the new action.

To edit a main action, enter the changes that are needed and select Save Data.

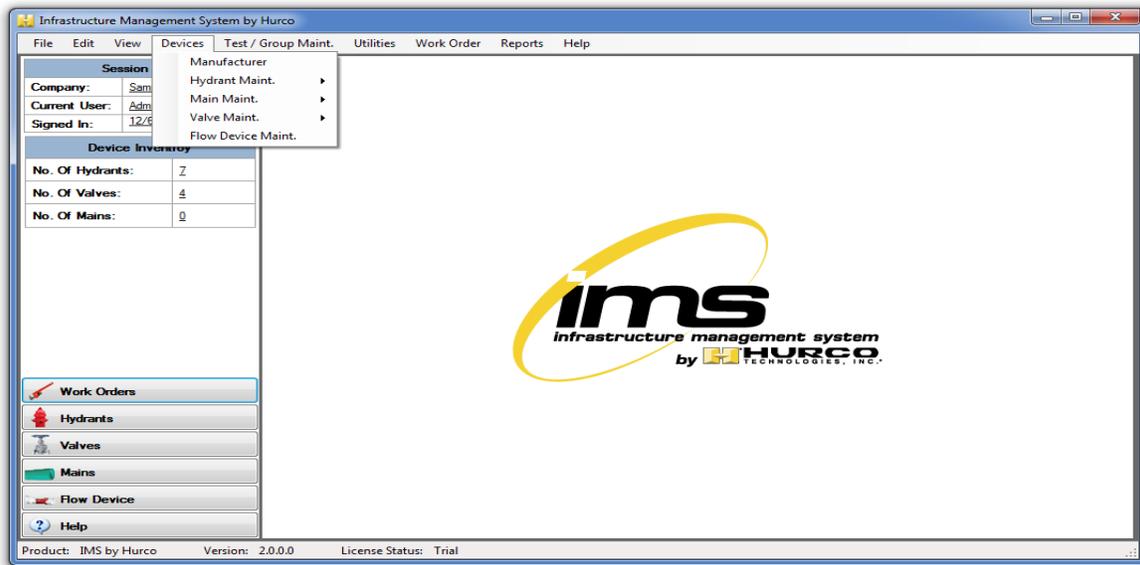
To remove an action, select the action to delete. Select Remove Selection. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.



# Chapter 5

## Creating/Editing/Deleting Devices

In this chapter, you'll learn about creating, editing, and deleting hydrants, valves & mains. You will also be able to add manufacturers, models, and related details. These options are located under the Devices option on the Menu Bar.



## Manufacturer Maintenance

This screen keeps track of the manufacturer of your products. Fill this out to keep track of all the manufacturers. These will be needed when entering your devices into the system. It is a quick way to access the manufacturer address & phone numbers if there are issues with your products.

Name	Address 1	Address 2	City	State	Zip	Phone	Mobile Phone	Fax	Contact Name	Email	Web
Clow	902 South 2...		Oskaloosa	IA	52577	(800) 829-2...		(641) 673-8...			<a href="http://www.clowval...">www.clowval...</a>
James Jones	1470 South ...		Ontario	California	91761	(800) 523-8...		(800) 246-5...			<a href="http://www.jamesjo...">www.jamesjo...</a>
Mueller	1200 Abern...		Atlanta	GA	30328	(770) 206-4...					<a href="http://www.mueller...">www.mueller...</a>
Kennedy Va...	1021 East ...		Elmira	NY	14901	(607) 734-2...					<a href="http://www.kenned...">www.kenned...</a>
TCIW											<a href="http://www.firehydr...">www.firehydr...</a>
Waterous	125 Hardma...		South St. Paul	MN	55075	(651) 450-5...		(651) 450-5...			<a href="http://www.waterou...">www.waterou...</a>
American A...	2155 Meridi...		Minden	NV	89423	(775) 552-1...		(775) 783-1...			<a href="http://www.america...">www.america...</a>
Other											

## **Add a new manufacturer**

To add a new manufacturer, either click Add new or start entering the following information in the first blank row.

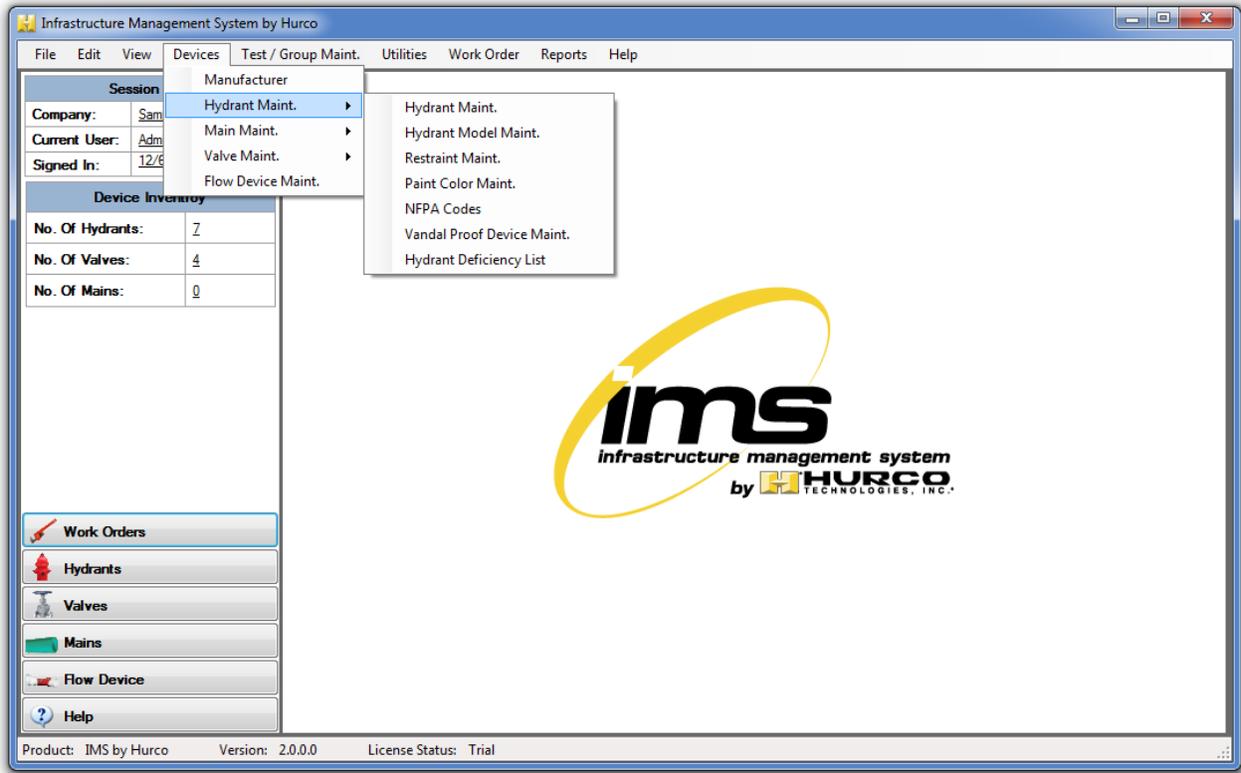
1. Manufacturer's name.
2. Manufacturer's address.
  - a. Address
  - b. City
  - c. State
  - d. Zip Code
3. Manufacturer's contact numbers
  - a. Direct phone number
  - b. Mobile phone number
  - c. Fax number
4. Contact name
5. Email address – double clicking on the email address after entering and saving it will give access to email the manufacturer.
6. Manufacturer's web site address – double clicking on the web address after entering and saving it will take you to the manufacturer's website.
7. Select Save Data to save the information that was entered.

## **Delete a manufacturer**

To remove a manufacturer, select the manufacturer to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

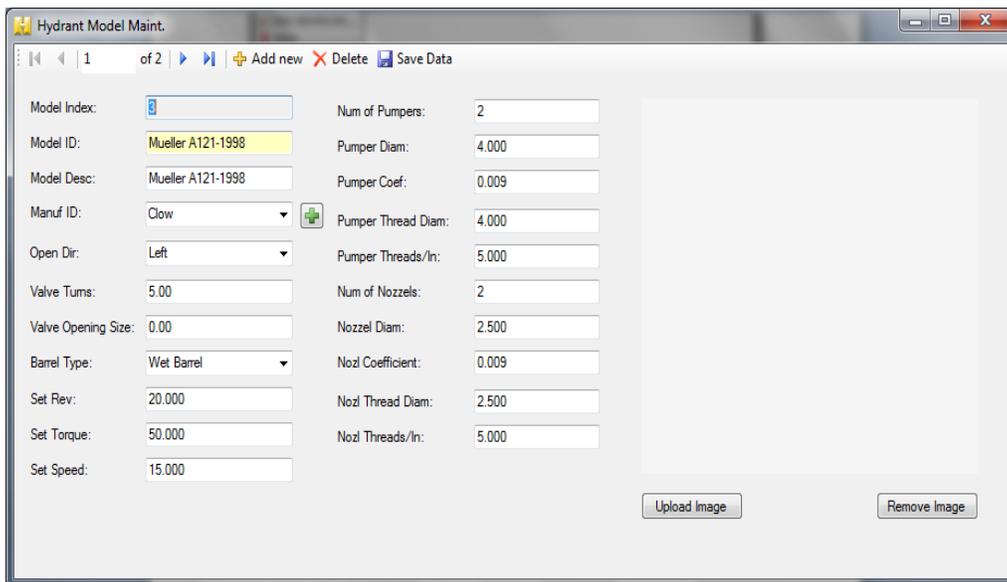
## ***Hydrant Maintenance***

This section is where the aspects of the hydrants can be edited. You can add new hydrants, delete hydrants, and maintain hydrant maintenance options.



## Hydrant Model Maintenance

This screen keeps track of the brands and types of hydrants that are used. These will be needed when entering a new hydrant into the system. This information can be obtained from the manufacturer of the hydrant. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Manuf ID box, it will take you to the Manufacturer Maintenance screen to enter a new manufacturer.)



## Create a new model

1. To create a new model, select Add New.
2. Enter all pertinent information for the model.
3. Upload an image of the model number. (optional)
4. Select Save Data to save new model or Cancel to not save new model.

## Delete current model

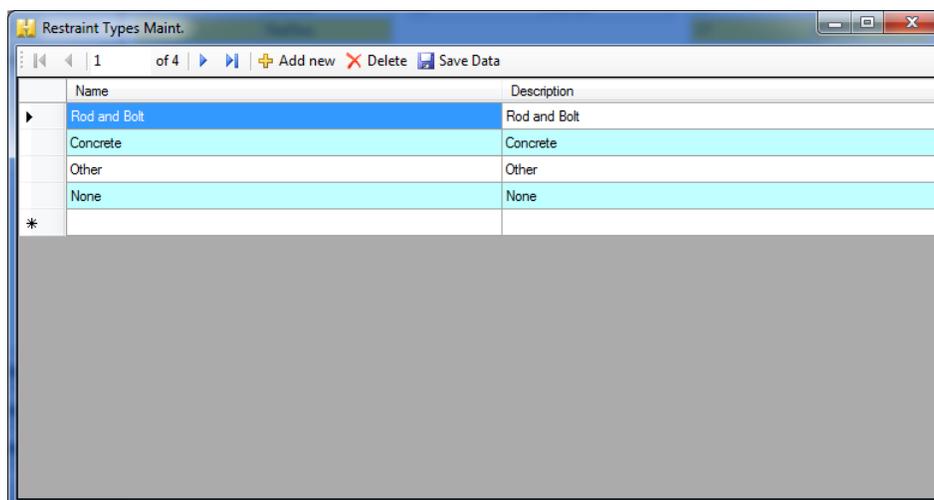
1. To delete a model, select the model that needs to be deleted.
2. Click Delete.
3. Confirmation box will appear asking if you are sure you want to delete model.
4. Select yes to confirm deletion or no to cancel deletion.

## Edit current model

1. To edit a model, select the model that needs to be edited.
2. Change the information that requires change.
3. Select Save Data to save updated information.

## *Restraint Types Maintenance*

This screen keeps track of the types of hydrants restraints that are used. These will be needed when entering a new hydrant into the system.



The screenshot shows a window titled "Restraint Types Maint." with a toolbar containing "Add new", "Delete", and "Save Data". Below the toolbar is a table with the following data:

Name	Description
Rod and Bolt	Rod and Bolt
Concrete	Concrete
Other	Other
None	None

A "\*" symbol is visible in the bottom left corner of the table area.

- Name – Enter the name for the restraint.
- Description– Enter the description of the restraint.

To create a new restraint type, either click Add new or start entering the restraint type name and description in the first blank row. Select Save Data to save the new restraint type.

To edit a restraint type, enter the desired changes. Select Save Data to save the restraint type changes.

To remove a restraint, select the restraint to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Hydrant Paint Color Maintenance***

This list the paint colors used to identify hydrants. These will be needed when entering a new hydrant into the system.

Color Name	Color Description
Yellow	Industrial
Blue	Residential
Red	Rural
*	

- Color Name – Enter the name for the color.
- Color Description– Enter the description of the color.

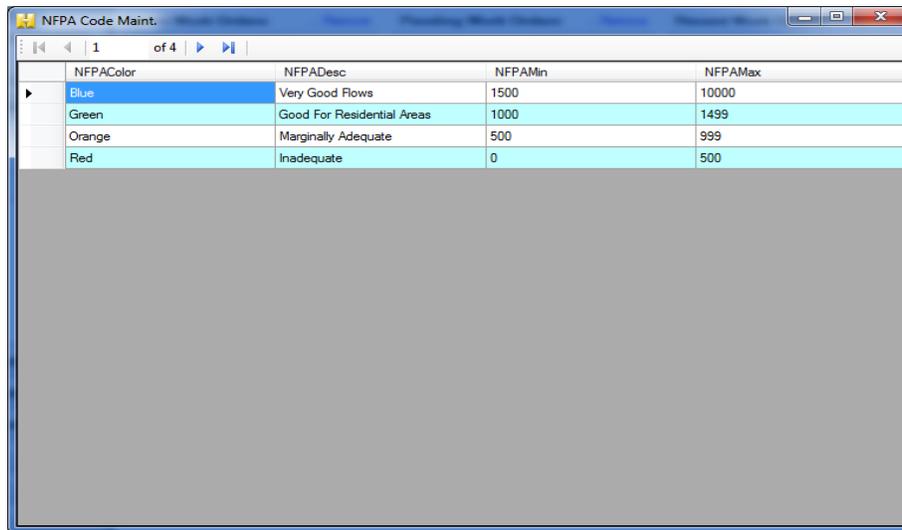
To create a new paint color, either click Add new or start entering the color name and description in the first blank row. Select Save Data to save the new paint color.

To edit a paint color, enter the desired changes. Select Save Data to save the new paint color.

To remove a paint color, select the paint color to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***NFPA Code Maintenance***

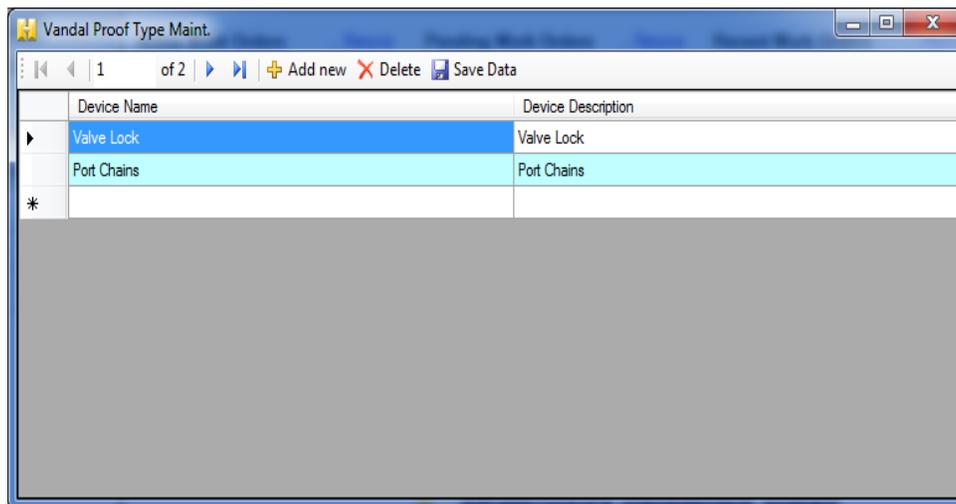
This lists the requirements and codes for NFPA standards. This screen is informational only and cannot be changed. This information will be used in the work order reports and hydrant details.



NFPAColor	NFPADesc	NFPAMin	NFPAMax
Blue	Very Good Flows	1500	10000
Green	Good For Residential Areas	1000	1499
Orange	Marginally Adequate	500	999
Red	Inadequate	0	500

## ***Vandal Proof Type Maintenance***

This screen keeps track of the types of vandal proofs that are used. These will be needed when entering a new hydrant into the system.



Device Name	Device Description
Valve Lock	Valve Lock
Port Chains	Port Chains
*	

- Device Name – Enter the name for the vandal proof device.
- Device Description– Enter the description of the vandal proof device.

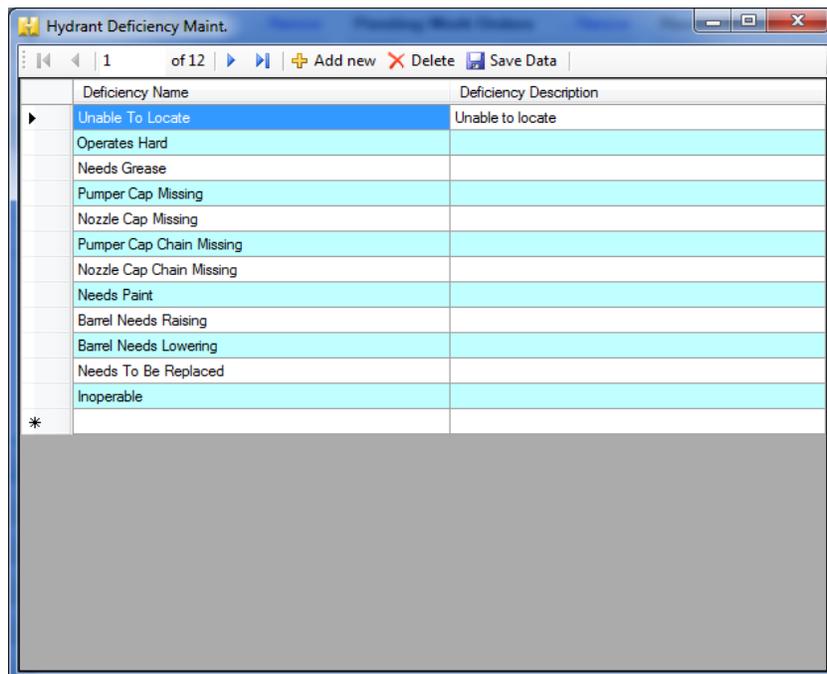
To create a new vandal proof type, either click Add new or start entering the device name and device description in the first blank row. Select Save Data to save the new vandal proof device

To edit a vandal proof type, enter the desired changes. Select Save Data to save the vandal proof type.

To remove a vandal proof type, select the vandal proof type to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Hydrant Deficiency Maintenance***

This screen keeps track of the types of maintenance that may be required on a hydrant. These will be needed when entering a new maintenance work order.



Deficiency Name	Deficiency Description
Unable To Locate	Unable to locate
Operates Hard	
Needs Grease	
Pumper Cap Missing	
Nozzle Cap Missing	
Pumper Cap Chain Missing	
Nozzle Cap Chain Missing	
Needs Paint	
Barrel Needs Raising	
Barrel Needs Lowering	
Needs To Be Replaced	
Inoperable	
*	

- Deficiency Name – Enter the name for the deficiency.
- Deficiency Description– Enter the description of the deficiency.

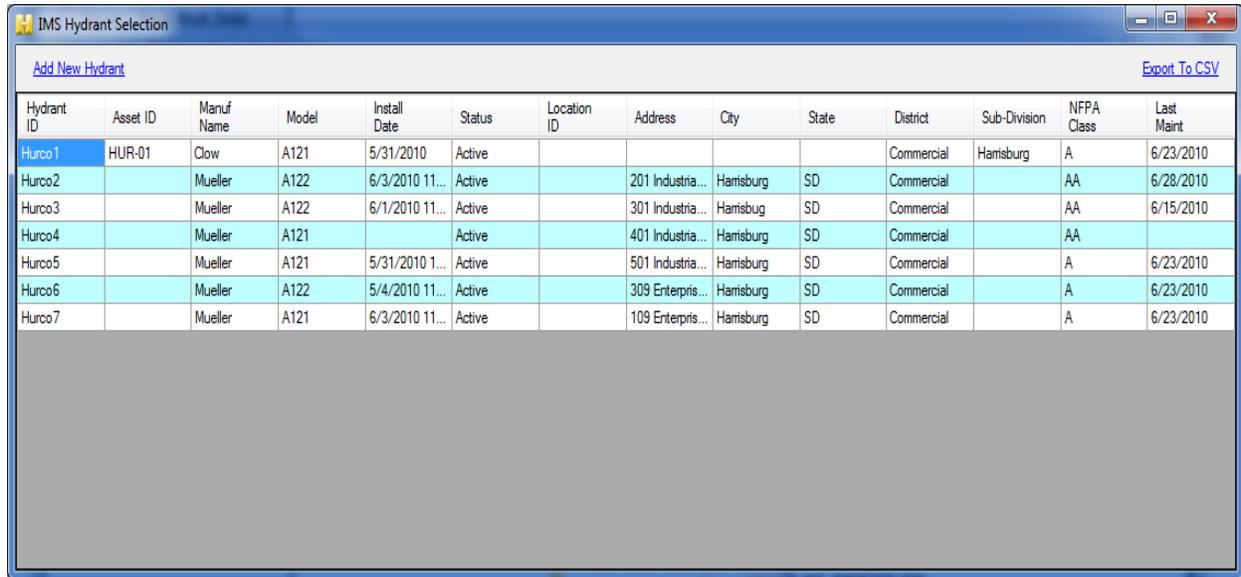
To create a new deficiency, either click Add new or start entering the deficiency name and deficiency description in the first blank row. Select Save Data to save the deficiency.

To edit a deficiency, enter the desired changes. Select Save Data to save deficiency.

To remove a deficiency, select the deficiency to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

# Hydrant Maintenance

This screen keeps track of the hydrants. These will be needed when entering your work orders into the system. New Hydrants can be added here and the list of hydrants can be exported.



The screenshot shows a window titled "IMS Hydrant Selection". At the top left is a link "Add New Hydrant" and at the top right is a link "Export To CSV". Below these is a table with the following columns: Hydrant ID, Asset ID, Manuf Name, Model, Install Date, Status, Location ID, Address, City, State, District, Sub-Division, NFPA Class, and Last Maint. The table contains seven rows of data:

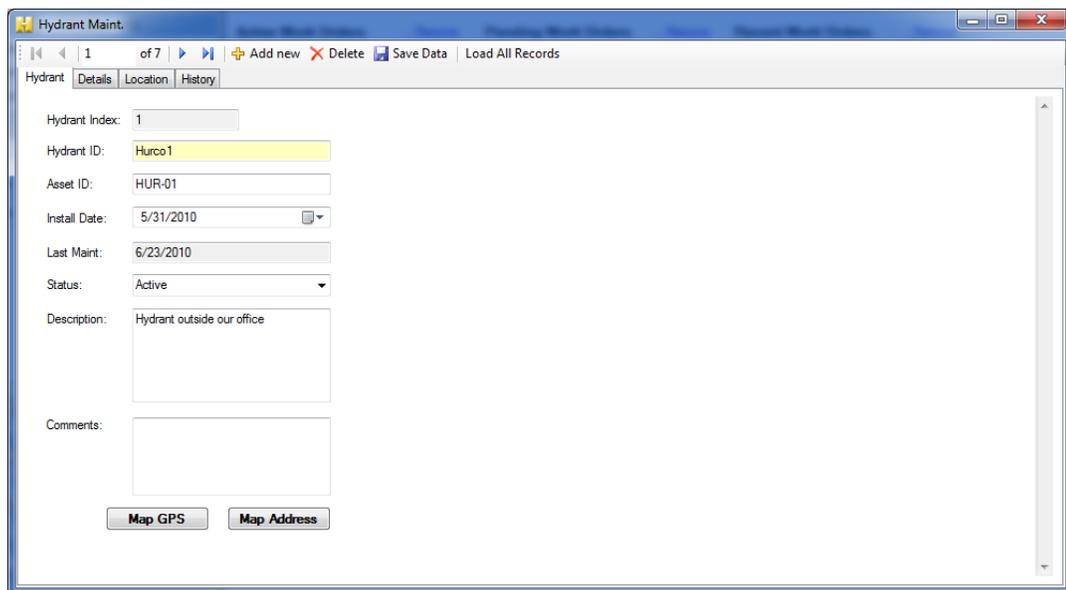
Hydrant ID	Asset ID	Manuf Name	Model	Install Date	Status	Location ID	Address	City	State	District	Sub-Division	NFPA Class	Last Maint
Hurco1	HUR-01	Clow	A121	5/31/2010	Active					Commercial	Harrisburg	A	6/23/2010
Hurco2		Mueller	A122	6/3/2010 11...	Active		201 Industria...	Harrisburg	SD	Commercial		AA	6/28/2010
Hurco3		Mueller	A122	6/1/2010 11...	Active		301 Industria...	Harrisburg	SD	Commercial		AA	6/15/2010
Hurco4		Mueller	A121		Active		401 Industria...	Harrisburg	SD	Commercial		AA	
Hurco5		Mueller	A121	5/31/2010 11...	Active		501 Industria...	Harrisburg	SD	Commercial		A	6/23/2010
Hurco6		Mueller	A122	5/4/2010 11...	Active		309 Enterpris...	Harrisburg	SD	Commercial		A	6/23/2010
Hurco7		Mueller	A121	6/3/2010 11...	Active		109 Enterpris...	Harrisburg	SD	Commercial		A	6/23/2010

To add a new hydrant, select Add New Hydrant. See Add New Hydrant Section to continue.

To export a list of hydrants, select Export to CSV. Next, select the location in which the file will be saved. Click Save. Remember the location that the file was saved.

## Add a new hydrant

To add a new hydrant, select Add New.



The screenshot shows a window titled "Hydrant Maint." with a toolbar containing "Add new", "Delete", "Save Data", and "Load All Records". Below the toolbar are tabs for "Hydrant", "Details", "Location", and "History". The "Details" tab is active, showing the following fields:

- Hydrant Index: 1
- Hydrant ID: Hurco1
- Asset ID: HUR-01
- Install Date: 5/31/2010
- Last Maint: 6/23/2010
- Status: Active
- Description: Hydrant outside our office
- Comments: (empty text area)

At the bottom of the form are two buttons: "Map GPS" and "Map Address".

1. On the Hydrant Tab, enter the following information.
  - a. Hydrant ID. This name will identify the hydrants in the work orders.
  - b. Asset ID. This is optional. It can be used as an alternative way to identify a hydrant.
  - c. Install Date. This is the date that the hydrant was installed in its location.
  - d. Last Maintenance. This field will auto-populate from maintenance work orders.
  - e. Description. A description of the hydrant.
  - f. Comments. Any comments for the hydrant can be entered here.
  - g. Map GPS button. This can be used once the longitude and latitude have been entered on the Location tab.
  - h. Map Address. This can be used once the address has been entered on the Location tab.
  
2. On the Details Tab, enter the following information. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

The screenshot shows a software window titled "Hydrant Maint." with a navigation bar containing "Hydrant", "Details", "Location", and "History". The "Details" tab is active. The interface is divided into several sections:

- Left Column (General Fields):**
  - Manuf ID: Clow
  - Model ID: A121
  - Hydrant Paint Color: Yellow
  - Vandal Proof Type: Valve Lock
  - Restraint ID: Rod and Bolt
  - Main Size: 8.00
  - Bury Depth: 5.00
  - Control Valve ID: V-101
  - Control Val Direction: East
  - Control Val Dist: 0.00
- Right Column (NFFPA Information):**
  - NFFPA Color: Green
  - NFFPA Desc: Good For Residential Areas
  - Rating Min: 1000
  - Rating Max: 1499
  - Last Reading: 1097.0000
- Image Section:** A photograph of a red fire hydrant with a chain. Below the image are "Upload Image" and "Remove Image" buttons.

- a. Manuf ID. Manufacturer of the hydrant.
- b. Model ID. The model of the hydrant.
- c. Hydrant Paint Color.
- d. Vandal Proof Type. What type of equipment is installed for vandal proofing.

- e. Restraint ID.
  - f. Main Size.
  - g. Bury Depth. How deep does the hydrant go?
  - h. Control Valve ID. Select the type of control valve that is on the hydrant.
  - i. Control Valv Direction. Select the direction that the control valve is located on.
  - j. Control Val Dist. Enter the distance in feet of the control valve.
  - k. NFPA Information. This information is auto populated after a flow test has been completed on the hydrant. It gives the NFPA color, NFPA description, rating minimum, rating maximum, and the last GPM reading on the hydrant.
  - l. Upload Image/Remove Image. A picture of the hydrant can be uploaded or removed.
3. On the Location Tab, enter the following information. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

The screenshot shows a software window titled "Hydrant Maint." with a navigation bar at the top containing "Hydrant", "Details", "Location", and "History" tabs. The "Location" tab is active. Below the tabs is a toolbar with "Add new", "Delete", and "Save Data" buttons. The main area contains a form with the following fields:

Latitude:	<input type="text" value="43.441765"/>	XStreet:	<input type="text"/>
Longitude:	<input type="text" value="-96.705803"/>	State X:	<input type="text"/>
Elevation:	<input type="text" value="1476.031982"/>	State Y:	<input type="text"/>
VDOP:	<input type="text" value="1.5"/>	General Loc:	<input type="text" value=""/>
HDOP:	<input type="text" value="1.6"/>	Loc Notes:	<input type="text" value="N side (mid block)"/>
Street Number:	<input type="text" value="201"/>	District ID:	<input type="text" value="Commercial"/>
Street Name:	<input type="text" value="Industrial Dr."/>	Sub Div ID:	<input type="text" value=""/>
Loc City:	<input type="text" value="Hansburg"/>	Location ID:	<input type="text"/>
Loc State:	<input type="text" value="SD"/>		
Loc Zip:	<input type="text" value="57032"/>		

- a. Latitude
- b. Longitude

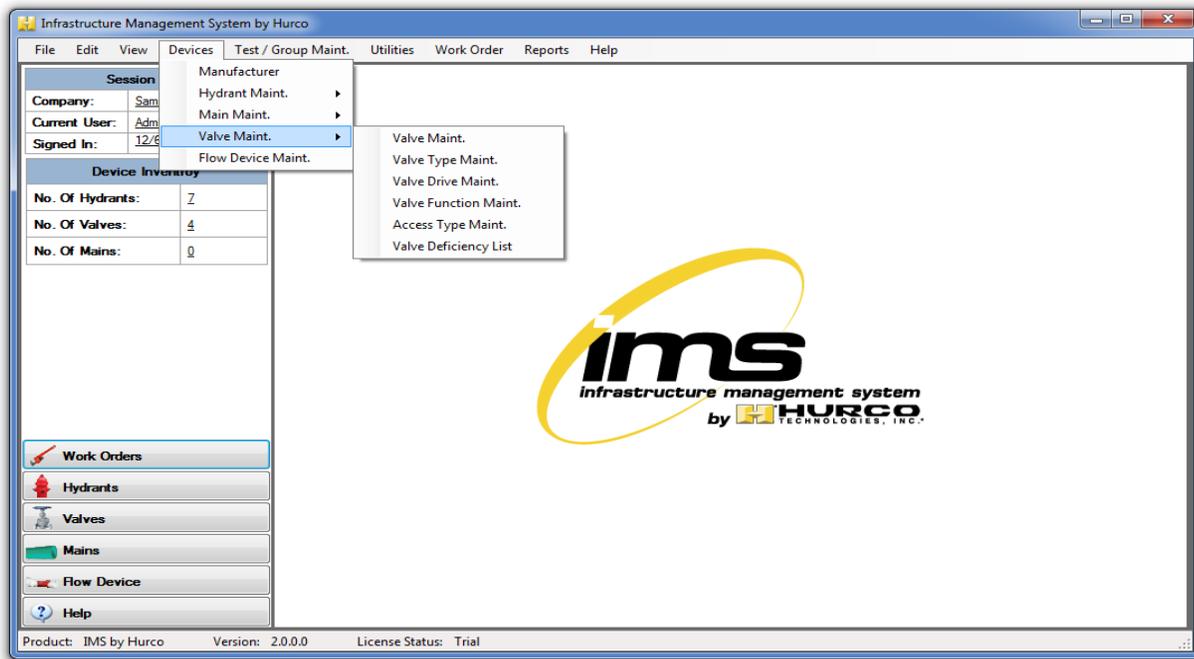
- c. Elevation
  - d. VDOP-This information will come from a GPS unit. The lower the number the more accurate the GPS reading.
  - e. HDOP-This information will come from a GPS unit. The lower the number the more accurate the GPS reading.
  - f. Street Number & Name- Address of the hydrant
  - g. Loc City- City in which the hydrant is located.
  - h. Loc State- State in which the hydrant is located.
  - i. Loc Zip- Zip code for the hydrant location.
  - j. XStreet- The cross street for the hydrant location
  - k. State X.
  - l. State Y.
  - m. District ID-Select the type of district that the hydrant is located in.
  - n. SubDiv ID- Chose the subdivision for the hydrant.
  - o. Location ID- This is optional. Use if there are alternate location references for the hydrant.
4. History Tab. This will list any work orders that have been opened that include the hydrant. Click on any work order and it will display the related report for that work order.

The screenshot shows a software application window titled "Hydrant Maint." with a menu bar containing "Hydrant", "Details", "Location", and "History". Below the menu bar is a toolbar with buttons for "Add new", "Delete", "Save Data", and "Load All Records". The main area displays a table with the following data:

WOID	WOType	Completed	OperID
13	FireFlow	6/8/2010 2:10 PM	MIKE

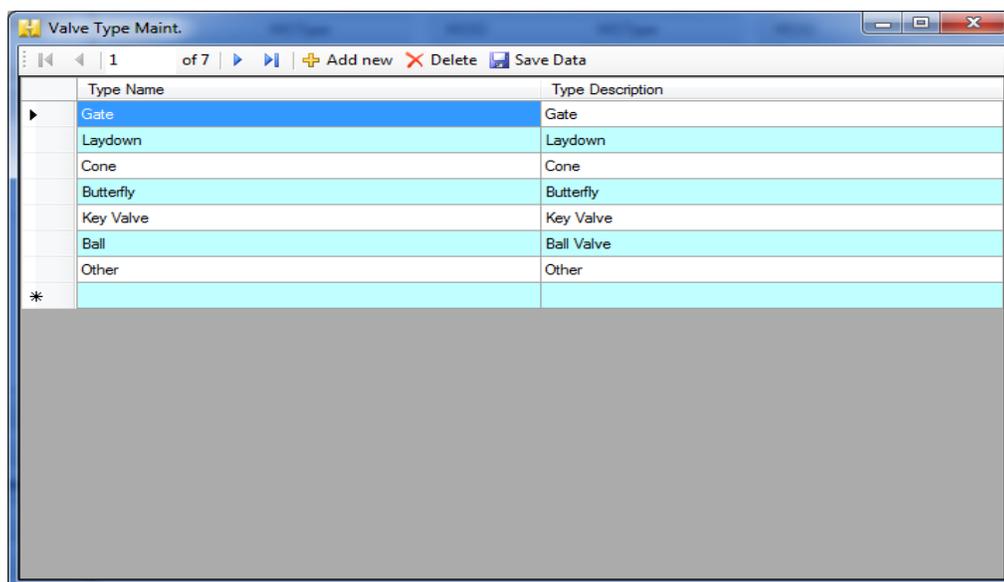
# Valve Maintenance

This section is where the aspects of the valve can be edited. You can add new valves, delete valves, and maintain valves maintenance options.



# Valve Type Maintenance

This screen keeps track of the types of valves that are used. These will be needed when entering a new valve into the system.



- Type Name – Enter the type of valve used.
- Type Description– Enter the description for the type of valve used.

To create a new valve type, either click Add new or start entering the type name and type description in the first blank row. Select Save Data to save the valve type.

To edit a valve type, enter the desired changes. Select Save Data to save valve type.

To remove a valve type, select the valve type to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Valve Drive Type Maintenance***

This screen keeps track of the types of valve drives that are used. These will be needed when entering a new valve into the system.

Drive Name	Drive Description
Standard	Standard Drive
Gear	Gear Reduction
Direct	Direct Drive
*	

- Drive Name – Enter the type of valve drive used.
- Drive Description– Enter the description for the type of valve drive used.

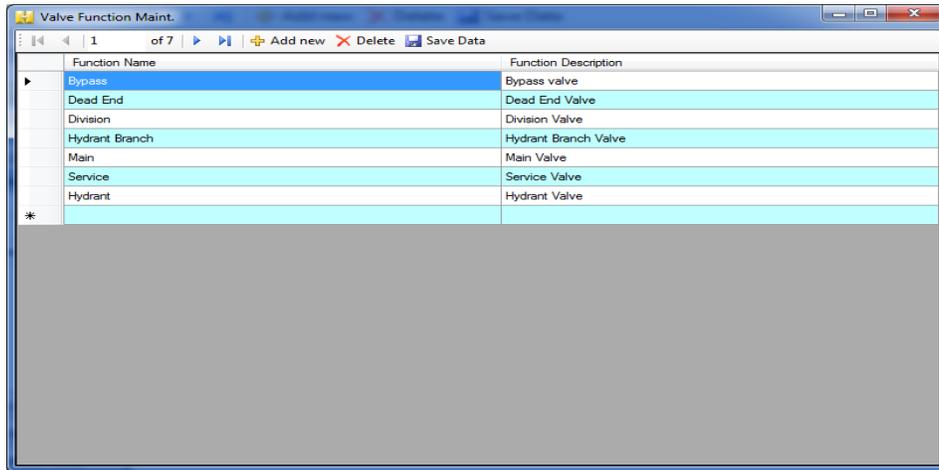
To create a new valve drive type, either click Add new or start entering the type name and type description in the first blank row. Select Save Data to save the valve drive type.

To edit a valve drive type, enter the desired changes. Select Save Data to save valve drive type.

To remove a valve drive type, select the valve drive type to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Valve Function Maintenance***

This screen keeps track of the different functions of valves that are used. These will be needed when entering a new valve into the system.



Function Name	Function Description
Bypass	Bypass valve
Dead End	Dead End Valve
Division	Division Valve
Hydrant Branch	Hydrant Branch Valve
Main	Main Valve
Service	Service Valve
Hydrant	Hydrant Valve
*	

- Function Name – Enter the valve function used.
- Function Description– Enter the description for the valve function used.

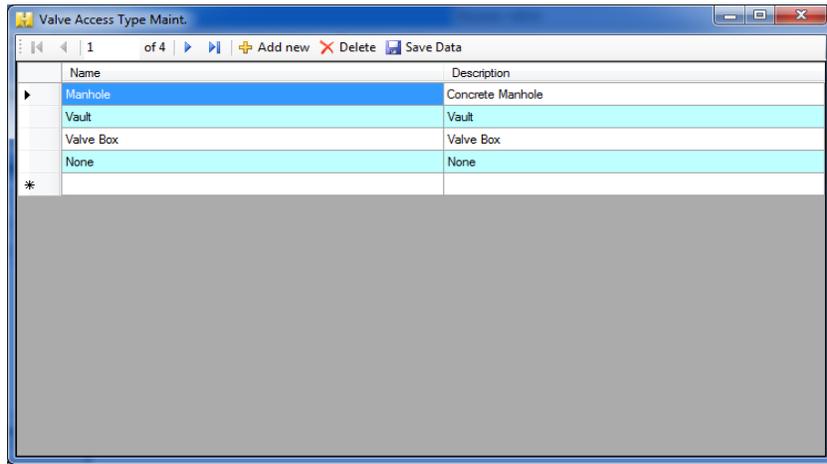
To create a new valve function, either click Add new or start entering the function name and function description in the first blank row. Select Save Data to save the valve function.

To edit a valve drive type, enter the desired changes. Select Save Data to save valve drive type.

To remove a valve function, select the valve function to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Valve Access Type Maintenance***

This screen keeps track of the types of valve accesses that are used. These will be needed when entering a new valve into the system.



- Name – Enter the type of valve access used.
- Description– Enter the description for the type of valve access used.

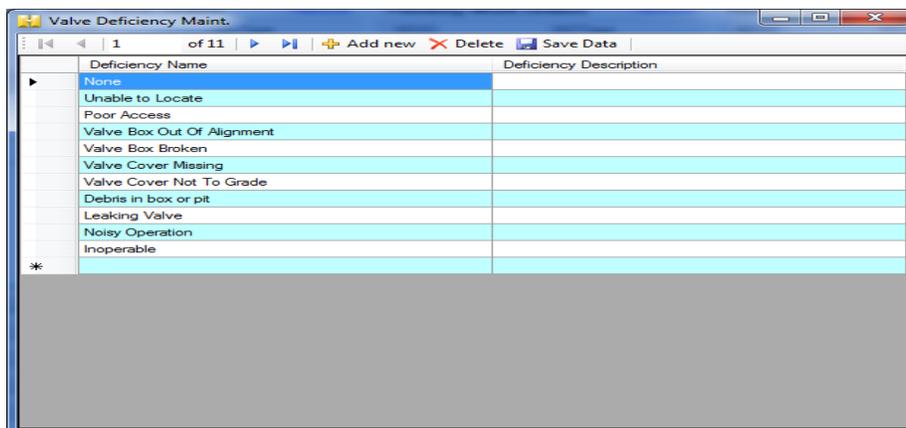
To create a new valve access type, either click Add new or start entering the type name and type description in the first blank row. Select Save Data to save the valve access type.

To edit a valve access type, enter the desired changes. Select Save Data to save valve access type.

To remove a valve access type, select the valve access type to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Valve Deficiency Maintenance***

This screen keeps track of the types of deficiencies that might need to be fixed on a valve.



- Deficiency Name – Enter the deficiency name.
- Deficiency Description– Enter the description for the deficiency.

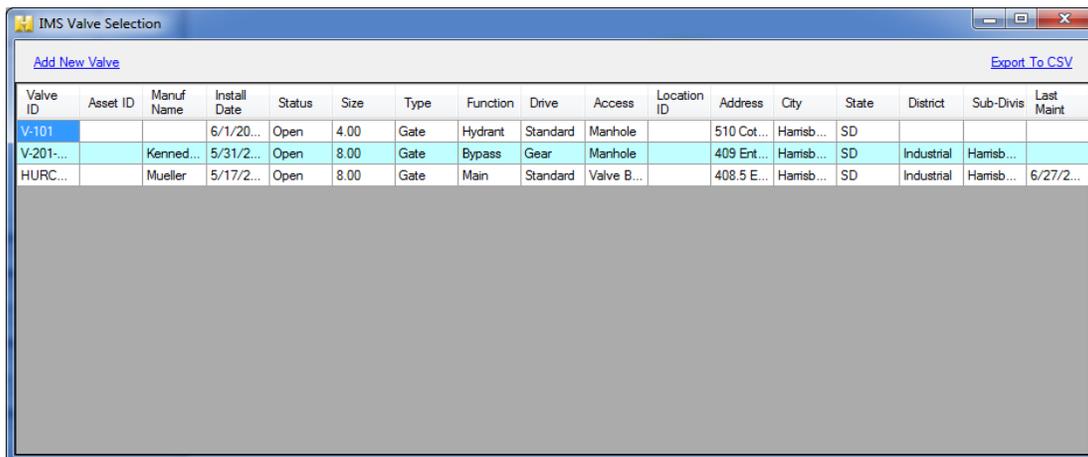
To create a new deficiency, either click Add new or start entering the type name and type description in the first blank row. Select Save Data to save the deficiency.

To edit a deficiency, enter the desired changes. Select Save Data to save deficiency.

To remove a deficiency, select the deficiency to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## Valve Maintenance

This screen keeps track of the valves. These will be needed when entering your work orders into the system. New valves can be added here and the list of valves can be exported.



The screenshot shows a window titled "IMS Valve Selection" with a table of valves. The table has columns for Valve ID, Asset ID, Manuf Name, Install Date, Status, Size, Type, Function, Drive, Access, Location ID, Address, City, State, District, Sub-Divis, and Last Maint. The first row is highlighted in blue.

Valve ID	Asset ID	Manuf Name	Install Date	Status	Size	Type	Function	Drive	Access	Location ID	Address	City	State	District	Sub-Divis	Last Maint
V-101			6/1/20...	Open	4.00	Gate	Hydrant	Standard	Manhole		510 Cot...	Harrisb...	SD			
V-201-...		Kenned...	5/31/2...	Open	8.00	Gate	Bypass	Gear	Manhole		409 Ent...	Harrisb...	SD	Industrial	Harrisb...	
HURC...		Mueller	5/17/2...	Open	8.00	Gate	Main	Standard	Valve B...		408.5 E...	Harrisb...	SD	Industrial	Harrisb...	6/27/2...

To add a new valve, select Add New Valve. See Add New Valve Section to continue.

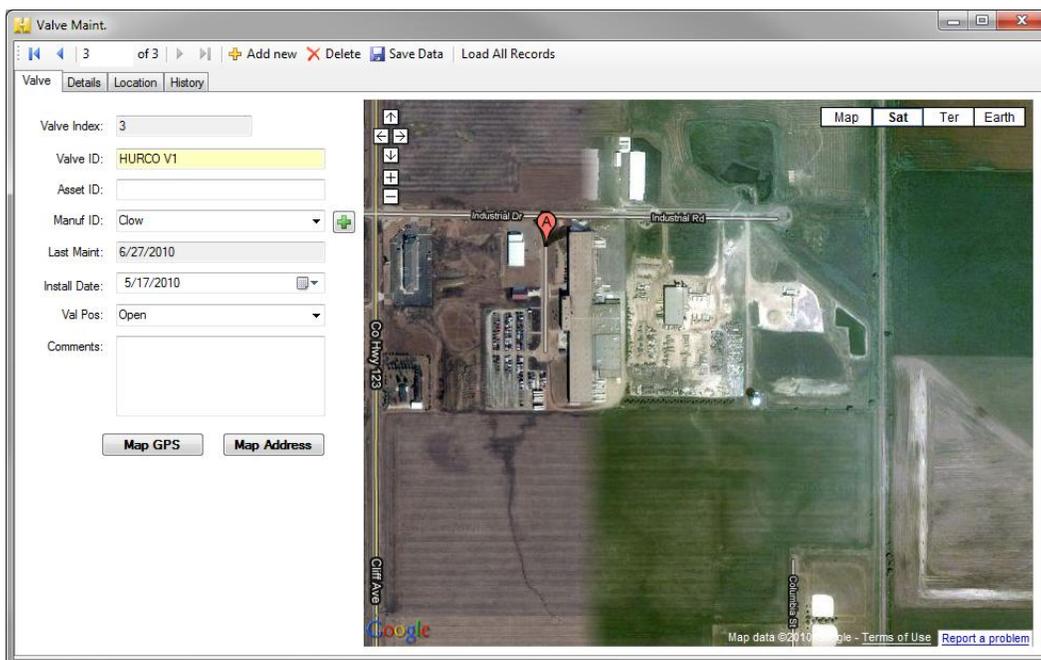
To export a list of valves, select Export to CSV. Next, select the location in which the file will be saved. Click Save. Remember the location that the file was saved.

### Add a new valve

To add a new valve, select Add New.

1. On the Valve Tab, enter the following information. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)
  - a. Valve ID- This name will identify the valves in the work orders.
  - b. Asset ID- This is optional. It can be used as an alternative way to identify a valve.
  - c. Manuf ID- Select the manufacturer from the drop down list. If the manufacture is not listed, a new manufacturer will need to be entered in the Manufacturer Maintenance screen.

- d. Last Maintenance- This field will auto-populate from maintenance work orders.
- e. Install Date- This is the date that the valve was installed in its location.
- f. Val Pos- This acknowledges whether the valve is open or closed.
- g. Comments. Any comments for the valve can be entered here.
- h. Map GPS button. This can be used once the longitude and latitude have been entered on the Location tab.
- i. Map Address. This can be used once the address has been entered on the Location tab.



2. On the Details Tab, enter the following information. Some of this information can be obtained from the manufacturer of the valve. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)
  - a. Valve size
  - b. Valve Box Size
  - c. Valve type
  - d. Valve function
  - e. Valve Drive
  - f. Valve Open Dir- This is the direction the valve opens. It will be either left of right.

- g. Access Type- This is how the valve is accessed.
- h. Box Depth
- i. Set Torque
- j. Set Rev
- k. Set Speed

The screenshot shows a software window titled "Valve Maint." with a menu bar containing "Add new", "Delete", "Save Data", and "Load All Records". Below the menu bar are tabs for "Valve", "Details", "Location", and "History". The "Details" tab is active, displaying a form with the following fields:

- Valve Size: 8.00
- Access Type: Valve Box (dropdown menu with a green "+" icon)
- Val Box Size: (empty text box)
- Box Depth: 5.00
- Val Type: Gate (dropdown menu with a green "+" icon)
- Set Torque: 150.00
- Val Func: Main (dropdown menu with a green "+" icon)
- Set Rev: 24.00
- Val Drive: Standard (dropdown menu with a green "+" icon)
- Set Speed: 45.00
- Val Open Dir: Left (dropdown menu)
- Val Turns: 24.00

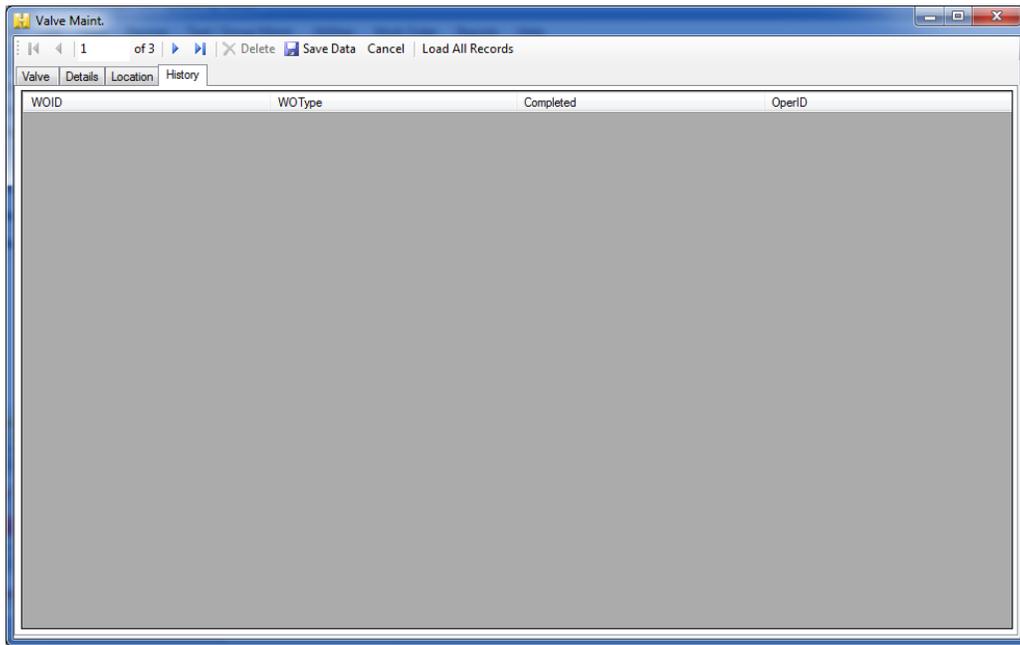
3. On the Location Tab, enter the following information. You can click on the green "+" sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)
  - a. Latitude
  - b. Longitude
  - c. Elevation
  - d. VDOP-This information will come from a GPS unit. The lower the number the more accurate the GPS reading
  - e. HDOP-This information will come from a GPS unit. The lower the number the more accurate the GPS reading
  - f. Street Number & Name- Address of the valve

- g. Loc City- City in which the valve is located
- h. Loc State- State in which the valve is located
- i. Loc Zip- Zip code for the valve location
- j. XStreet- The cross street for the valve location
- k. State X
- l. State Y
- m. Loc notes
- n. District ID
- o. Sub Div ID
- p. Location ID

The screenshot shows a software window titled "Valve Maint." with a navigation bar at the top containing "Valve", "Details", "Location", and "History" tabs. The "Location" tab is active. Below the tabs is a data entry form with the following fields:

Latitude:	43.445423	XStreet:	
Longitude:	-96.716911	State X:	
Elevation:	1438.65	State Y:	
VDOP:	1.1	General Loc:	
HDOP:	0.8	Loc Notes:	SE Corner
Street Number:		District ID:	
Street Name:	United Ave.	Sub Div ID:	
Loc City:	Harrisburg	Location ID:	
Loc State:	SD		
Loc Zip:	57032-____		

4. History Tab. This will list any work orders that have been opened that include the valve. Click on any work order and it will display the related report for that work order.



## ***Flow Device Maintenance***

This section is where the aspects of the flow devices can be edited. You can add new flow devices, delete flow devices, and maintain flow devices maintenance options. This information must be accurate as it is used in calculations on work order results. You can obtain this information from the manufacturer if not known.

	Device Name	Device Description	Diameter	Coefficient
▶	2.5" Hose Monster	2.5" Hose Monster	2.5000000000	0.9060000000
	4" Hose Monster	4" Hose Monster	4.0000000000	0.7120000000
	4.5" Hose Monster	4.5" Hose Monster	4.5000000000	0.5480000000
	1.125 Nozzle Insert	1.125 Nozzle Insert	1.1300000000	0.9900000000
	1.75 Nozzle Insert	1.175 Nozzle Insert	1.1750000000	0.9750000000
	1.125" Pitotless Nozzle	1.125" Pitotless Nozzle	37.4300000000	0.9250000000
	1.75" Pitotless Nozzle	1.75" Pitotless Nozzle	1.7500000000	1.1660000000
	2" Pitotless Nozzle	2" Pitotless Nozzle	2.0000000000	1.3810000000
*			0.0000	0.0000

- Device Name – Enter the name of the flow device.
- Device Description– Enter the description for the flow device.
- Diameter – Enter the diameter of the flow device.

- Coefficient – This number is used in formulas.

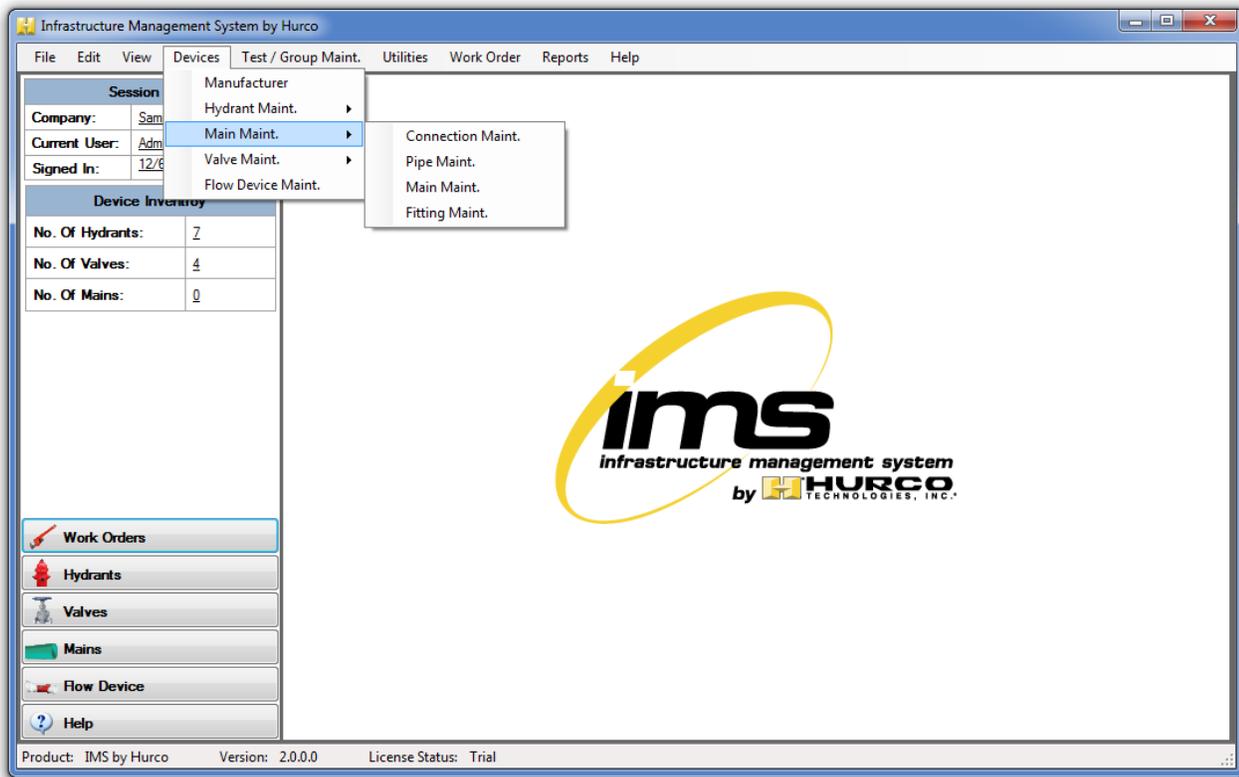
To create a new flow device, either click Add new or start entering the device name in the first blank row. Select Save Data to save the flow device.

To edit a flow device, enter the desired changes. Select Save Data to save flow device.

To remove a flow device, select the flow device to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

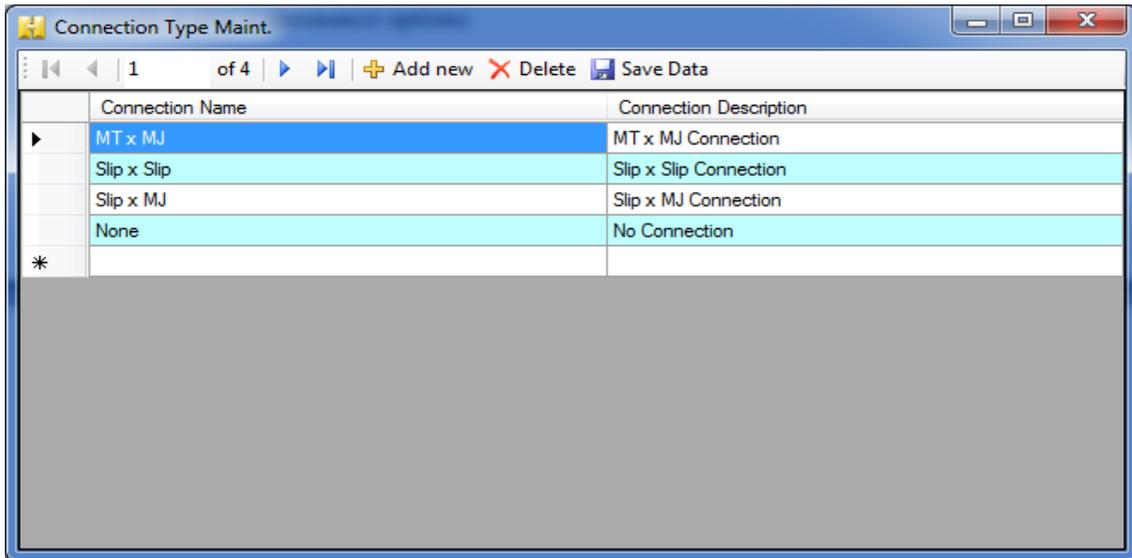
## ***Main Maintenance***

This section is where the aspects of the mains can be edited. You can add new mains, delete mains, and maintain mains maintenance options.



## ***Connection Type Maintenance***

This screen keeps track of the types of connections that are used. These will be needed when entering a new main into the system.



- Connection Name – Enter the name of the connection device.
- Connection Description– Enter the description for the connection device.

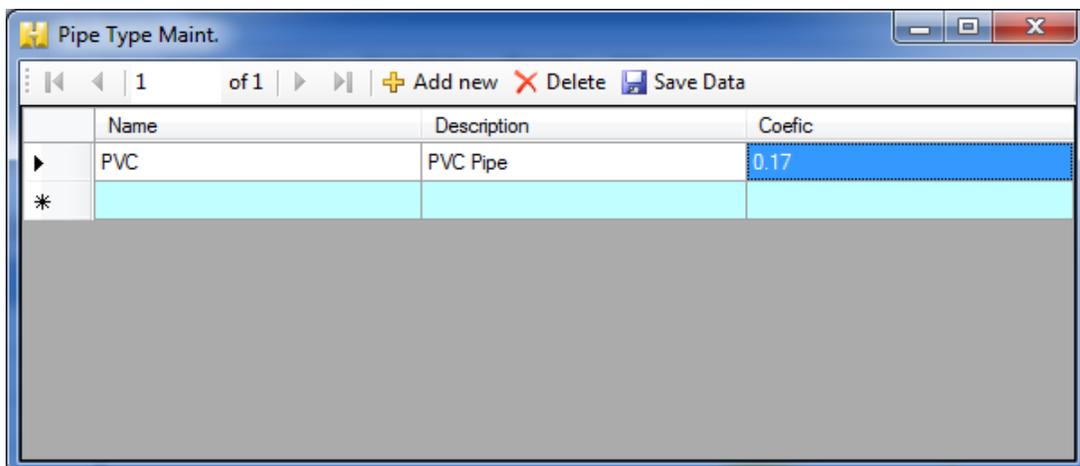
To create a new connection device, either click Add new or start entering the device name in the first blank row. Select Save Data to save the connection device.

To edit a connection device, enter the desired changes. Select Save Data to save connection device.

To remove a connection device, select the connection device to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Pipe Type Maintenance***

This screen keeps track of the types of pipes that are used. These will be needed when entering a new main into the system.



- Name – Enter the name of the type of pipe.
- Description– Enter the description for the type of pipe
- Coefic– Enter the coefficient for the selected type of pipe

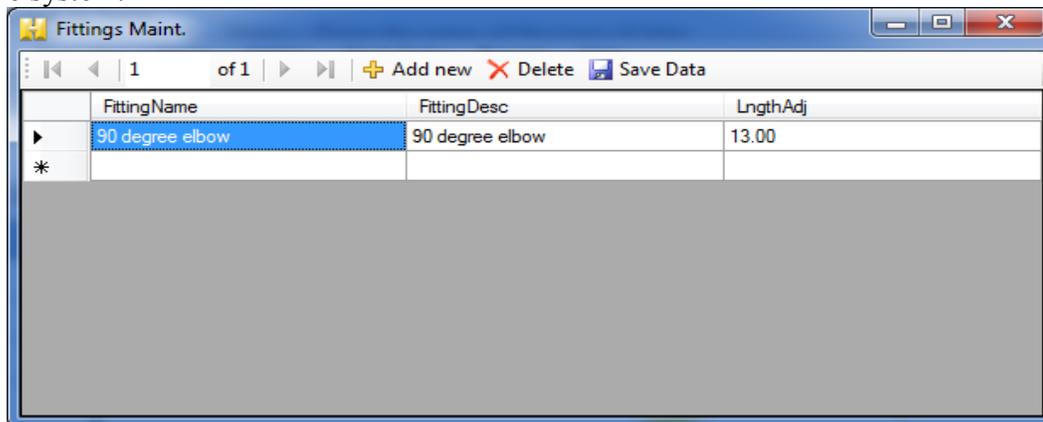
To create a new type of pipe, either click Add new or start entering the type of pipe in the first blank row. Select Save Data to save the pipe type.

To edit a pipe type, enter the desired changes. Select Save Data to save the pipe type.

To remove a pipe type, select the pipe type to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

## ***Fittings Maintenance***

This screen keeps track of the types of fittings that are used. These will be needed when entering a new main into the system.



	FittingName	FittingDesc	LngthAdj
▶	90 degree elbow	90 degree elbow	13.00
*			

- Fitting Name – Enter the name of the fitting.
- Fitting Desc– Enter the description for the fitting.
- LngthAdj– Enter the length adjustment for the selected fitting.

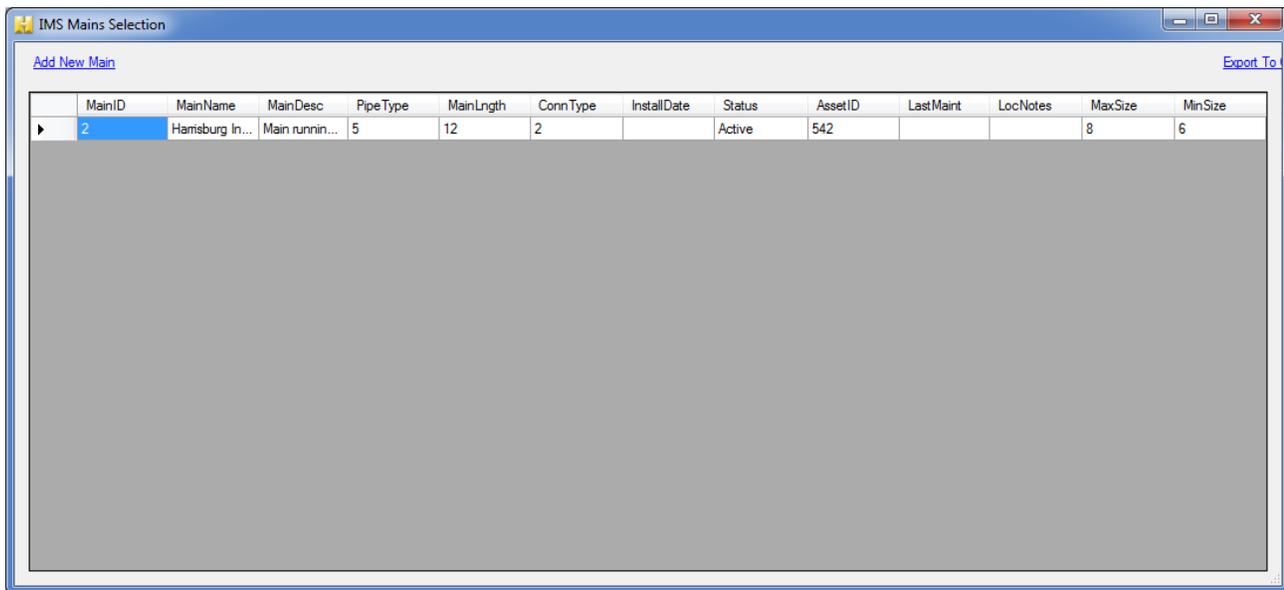
To create a new type of fitting, either click Add new or start entering the type of fitting in the first blank row. Select Save Data to save the pipe type.

To edit a fitting, enter the desired changes. Select Save Data to save the fitting.

To remove a fitting, select the fitting to delete. Select Delete. A confirmation screen will appear to confirm the deletion. Select Yes to delete and No to not delete.

# Main Maintenance

This screen keeps track of the mains. These will be needed when entering your work orders into the system. New mains can be added here and the list of mains can be exported.



The screenshot shows a window titled "IMS Mains Selection" with a table of mains data. The table has columns for MainID, MainName, MainDesc, PipeType, MainLength, ConnType, InstallDate, Status, AssetID, LastMaint, LocNotes, MaxSize, and MinSize. The first row is highlighted in blue and contains the following data: MainID: 2, MainName: Harrisburg In..., MainDesc: Main runnin..., PipeType: 5, MainLength: 12, ConnType: 2, InstallDate: (empty), Status: Active, AssetID: 542, LastMaint: (empty), LocNotes: (empty), MaxSize: 8, MinSize: 6. There are links for "Add New Main" and "Export To" in the top right corner.

MainID	MainName	MainDesc	PipeType	MainLength	ConnType	InstallDate	Status	AssetID	LastMaint	LocNotes	MaxSize	MinSize
2	Harrisburg In...	Main runnin...	5	12	2		Active	542			8	6

To add a new main, select Add New Main. See Add New Main Section to continue.

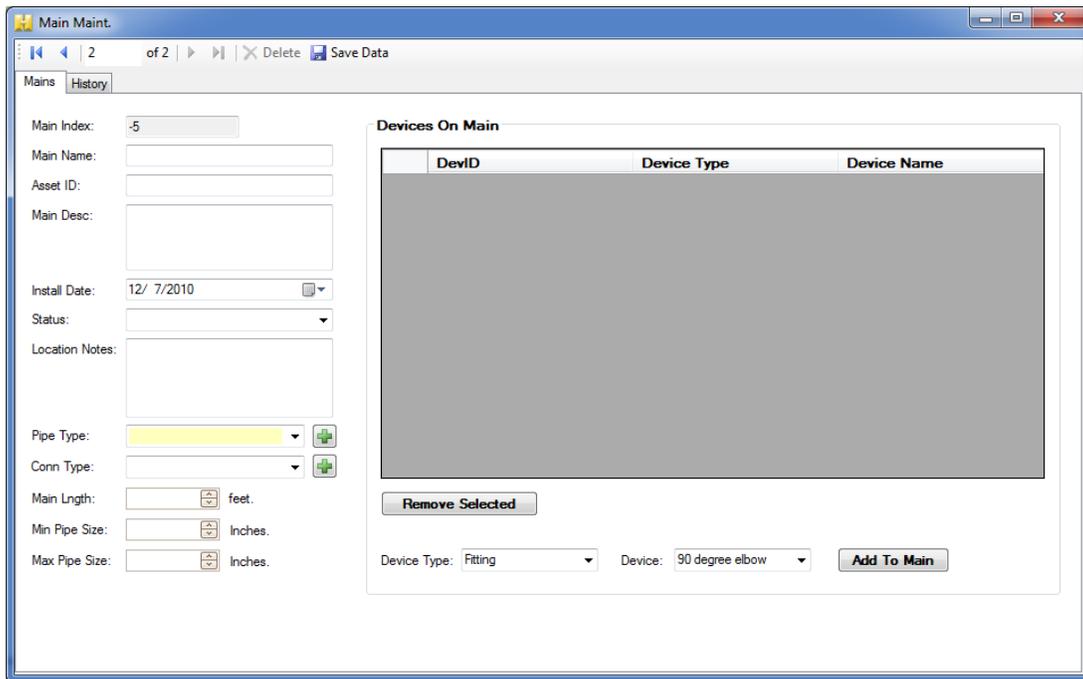
To export a list of main, select Export to CSV. Next, select the location in which the file will be saved. Click Save. Remember the location that the file was saved.

## Add a new main

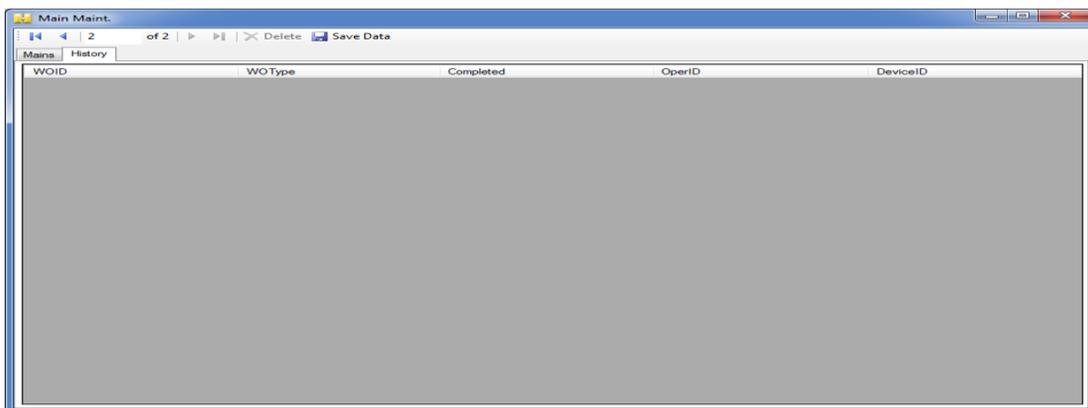
To add a new main, select Add New.

1. On the Mains Tab, enter the following information. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)
  - a. Main Name- This name will identify the main on the work orders.
  - b. Asset ID- This is optional. It can be used as an alternative way to identify a main.
  - c. Main Desc- Enter a description of the main.
  - d. Install Date- This is the date that the main was installed in its location.
  - e. Location Notes- Enter notes to help with the location of the main.
  - f. Pipe Type- Select the type of pipe that the main is.

- g. Conn Type- Select the type of connection for the main.
- h. Main Lngth- Enter the length of the main.
- i. Min Pipe Size- Enter the minimum diameter of the main.
- j. Max Pipe Size- Enter the maximum diameter of the main.
- k. Devices on Main- Select options from the drop down menus. Then select Add to Main. If you added a device that needs to be removed. Highlight the device and select Remove Selected.
  - i. Device Type- Select whether the device is a fitting, hydrant or valve.
  - ii. Device- Select the appropriate device from the listing.



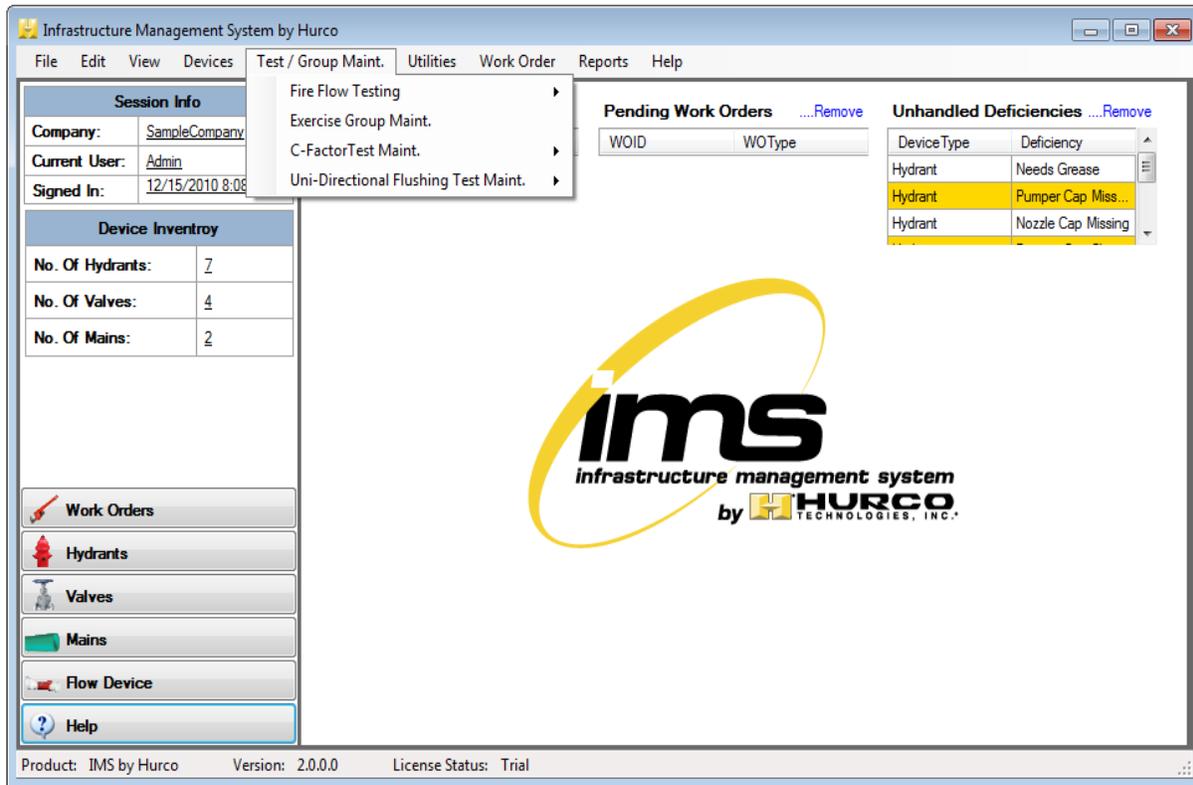
2. History Tab. This will list any work orders that have been opened that include the main. Click on any work order and it will display the related report for that work order.



# Chapter 6

## Creating Tests & Test Groups

In this chapter, you'll learn to create Tests and Test Groups for Fire Flow & Valve Exercises. These options are located under the Test/Group Maint. option on the Menu Bar.



### *Fire Flow Testing*

This section gives details for editing the tests and the test groups for a Fire Flow Test. These will be needed when entering your work orders into the system.

### *Fire Flow Test Maintenance*

This screen keeps track of the tests that are available to be added to a work order. New Tests can be added here and the list of tests can be exported. Test must be entered before a work order can entered into the system.

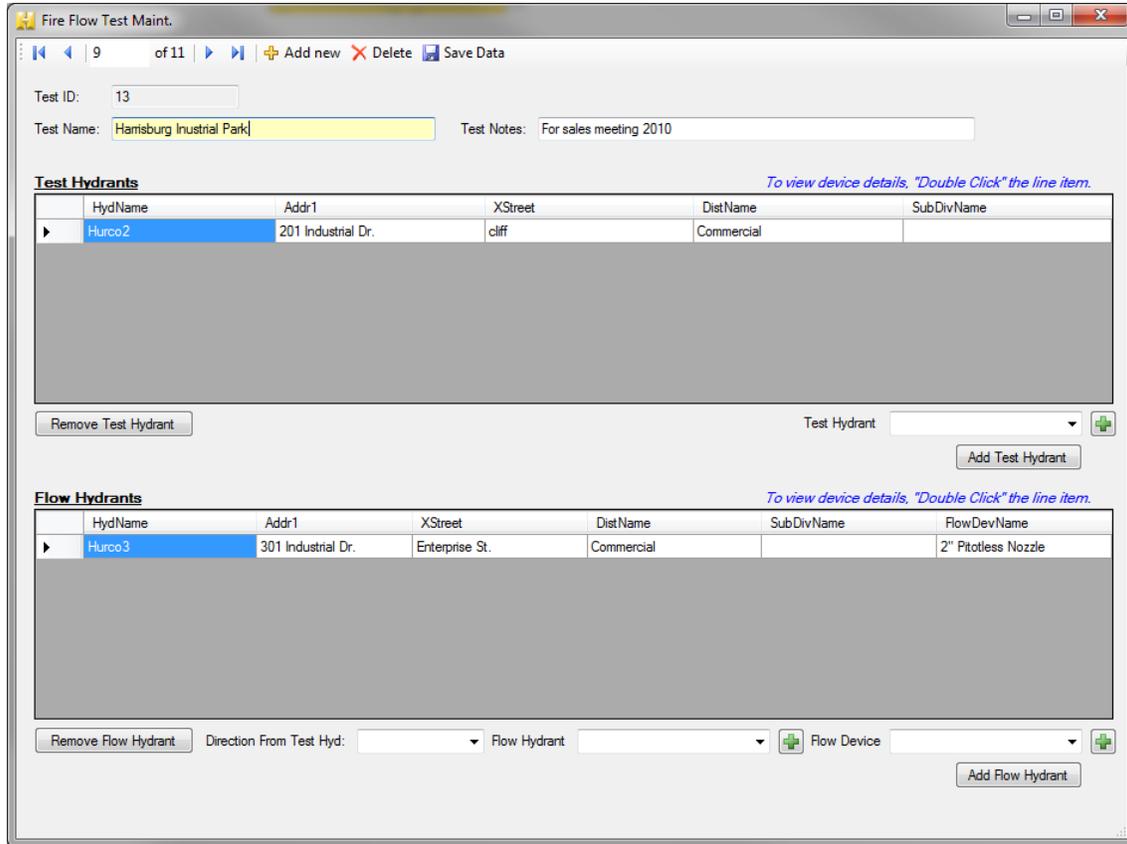
TestName	TestNotes
Flow Test Hurco3	HURCO H 3
Flow Test Hurco4	Flow Test HURCO H 4
Flow Test Hurco2	Flow Test HURCO H 2

### Add a new Fire Flow test

To add a new test, select Add New Test. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

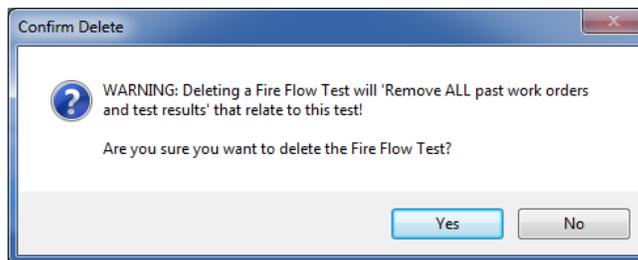
1. Enter the name for the test.
2. Enter any notes that will be needed for the test.
3. Then select Save Data. You will then be able to add the required test and flow hydrants.
4. Next, the test hydrant(s) will need to be added.
  - a. Select the test hydrant from the drop down menu.
  - b. Once you have the test hydrant that is needed, click the Add Test Hydrant button. This will add the test hydrant to the Test Hydrants list. To see details of the flow hydrant added, double click on the line item. This will take you to the hydrant details.
5. Then flow hydrant(s) will need to be added.
  - a. Select the proper direction from the Direction From Test Hyd drop down box.
  - b. Select the hydrant that will be used as the Flow Hydrant from the drop down box. To see details of the test hydrant added, double click on the line item. This will take you to the hydrant details.
  - c. Select the flow device from the drop down box.
  - d. Once you have selected all of the above information, click the Add Flow Hydrant button. This will add the flow hydrant to the Flow Hydrants list. To see details of the flow hydrant added, double click on the line item. This will take you to the hydrant details

- When all of the test hydrants and flow hydrants have been added, select Save Data. This will save the test into the Test lists so that it can be added to a work order.



## Delete a Fire Flow test

To delete a test, use the arrows to select the test that needs to be deleted. Once it is on the selected test, click on Delete. You will receive the following warning:



If you wish to continue deleting the test, select Yes. If you do not want to delete the test, select No.

---

**Note: If you delete a test, all work orders and test results that are associated with that test will be deleted.**

---

## Fire Flow Test Group Maintenance

This screen keeps track of the test groups available to be added to work orders. Test Groups can be added or deleted here. Test groups must be entered before a work order can be entered into the system.

Fire Flow Test Group Maint.

1 of 4 | Add new | Delete | Save Data

Group ID: 2

Group Name: Test | Group Description: Industrial part from Hyd1, Hyd5, 6, and 7

To view test details, "Double Click" the line item.

Test Name	Test Description
Test 1 And 5	flow 2-4
Test 6-7	Flow 1-2

Remove Selected Tests

Add Fire Flow Test to Group

Fire Flow Test: [dropdown] +

Add Test

### Add a new Fire Flow test group

To add a new test group, select Add New. You can click on the green "+" sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

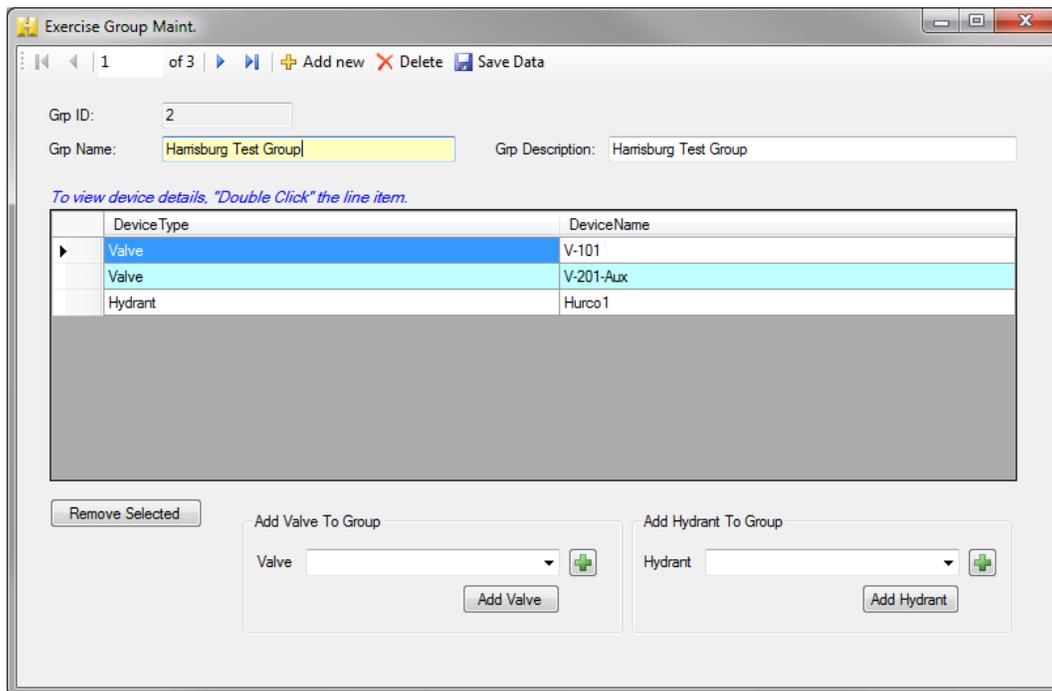
1. Enter the name for the group.
2. Enter a group description.
3. Select Save Data to save the test group. Then the test can be added to the group.
4. Select the Fire Flow Test from the drop down menu that needs to be added.
5. Click the Add Test button. This will add the test to the test group. To see details of the test added, double click on the line item. This will take you to the test details.
6. If a test is added and needs to be removed from the group, click the Remove Selected Test button. A confirmation will appear asking if you are sure you want to remove the selected test. Click yes to continue with the removal or no to cancel the removal.
7. When all of the tests have been added, select Save Data. This will save the group.

## Delete a Fire Flow test group

To delete a test group, select the test group that needs to be deleted. Use the arrows to move between groups. Once you have the group that needs to be deleted, click delete. A confirmation will appear asking if you are sure you want to delete the group. Click yes to continue with the removal or no to cancel the removal.

## Exercise Group Maintenance

This screen keeps track of the exercise test groups that are available to be added to work orders. Test Groups can be added or deleted here. Test groups must be entered before a work order can entered into the system.



The screenshot shows the 'Exercise Group Maint.' window. At the top, there are navigation arrows, a page indicator '1 of 3', and buttons for 'Add new', 'Delete', and 'Save Data'. Below this, there are input fields for 'Grp ID:' (value: 2), 'Grp Name:' (value: Harrisburg Test Group), and 'Grp Description:' (value: Harrisburg Test Group). A blue instruction reads: 'To view device details, "Double Click" the line item.' Below this is a table with two columns: 'DeviceType' and 'DeviceName'. The table contains three rows: 'Valve' (V-101), 'Valve' (V-201-Aux), and 'Hydrant' (Hurco1). The first 'Valve' row is highlighted in blue. Below the table, there is a 'Remove Selected' button and two sections for adding devices: 'Add Valve To Group' and 'Add Hydrant To Group'. Each section has a dropdown menu (currently showing 'Valve' and 'Hydrant' respectively) with a green '+' icon and an 'Add' button.

DeviceType	DeviceName
Valve	V-101
Valve	V-201-Aux
Hydrant	Hurco1

## Add a new Exercise Group

To add a new exercise group, select Add New. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

1. Enter the name for the group.
2. Enter a group description.
3. Select Save Data to save the exercise group.
4. Select the Valve that needs to be added to the group. Click Add Valve. To see details of the valve added, double click on the line item. This will take you to the valve details.

5. Select the hydrant that needs to be added to the group. Click Add Hydrant. To see details of the hydrant added, double click on the line item. This will take you to the hydrant details.
6. If a valve or hydrant is added and needs to be removed from the group, click the Remove Selected button. A confirmation will appear asking if you are sure you want to remove the selected test. Click yes to continue with the removal or no to cancel the removal.
7. When all of the valves and hydrants have been added, select Save Data. This will save the group.

### **Delete an Exercise group**

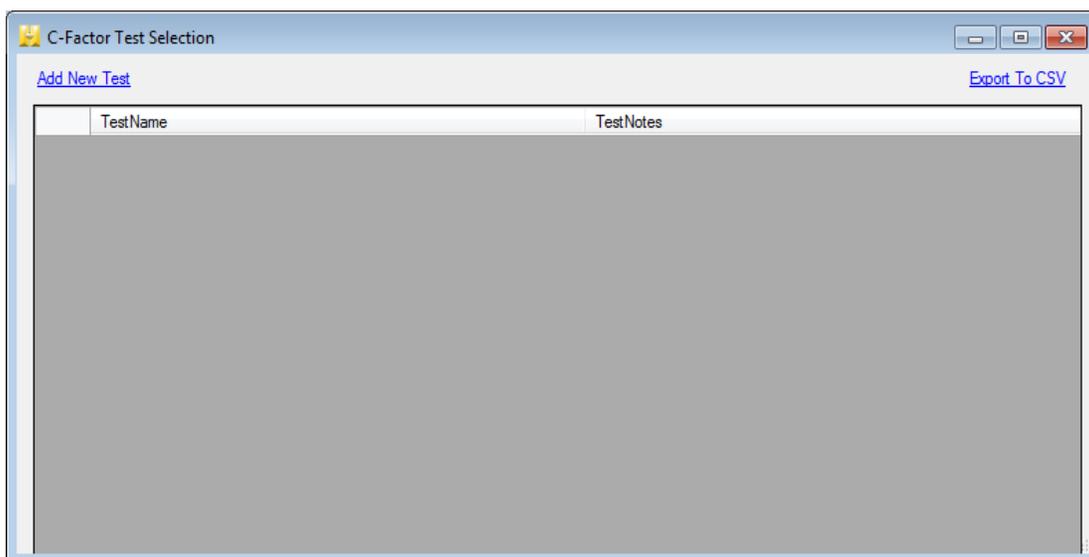
To delete an exercise group, select the group that needs to be deleted. Use the arrows to move between groups. Once you have the group that needs to be deleted, click Delete. A confirmation will appear asking if you are sure you want to remove the delete the group. Click yes to continue with the removal or no to cancel the removal.

## ***C-Factor Testing***

This section gives details for editing the tests and the test groups for C-Factor Testing. These will be needed when entering your work orders into the system.

## ***C-Factor Test Maintenance***

This screen keeps track of the tests that are available to be added to a work order. New Tests can be added here and the list of tests can be exported. Test must be entered before a work order can entered into the system.



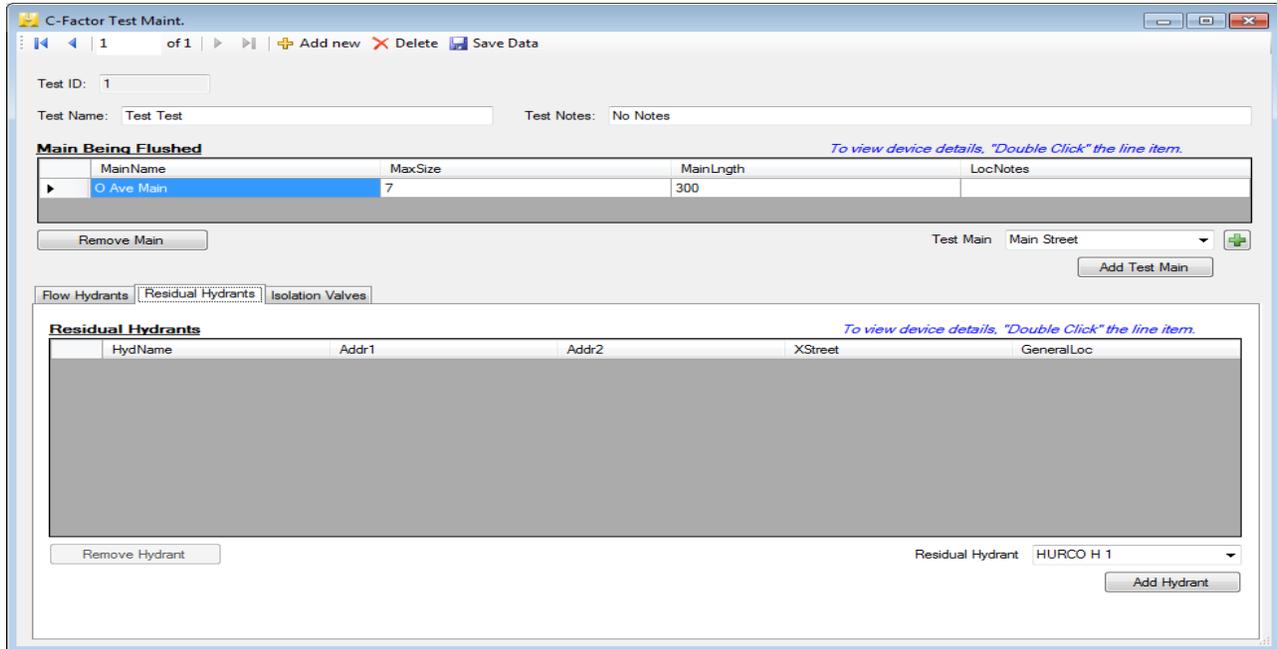
## Add a new C-Factor test

To add a new test, select Add New Test. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

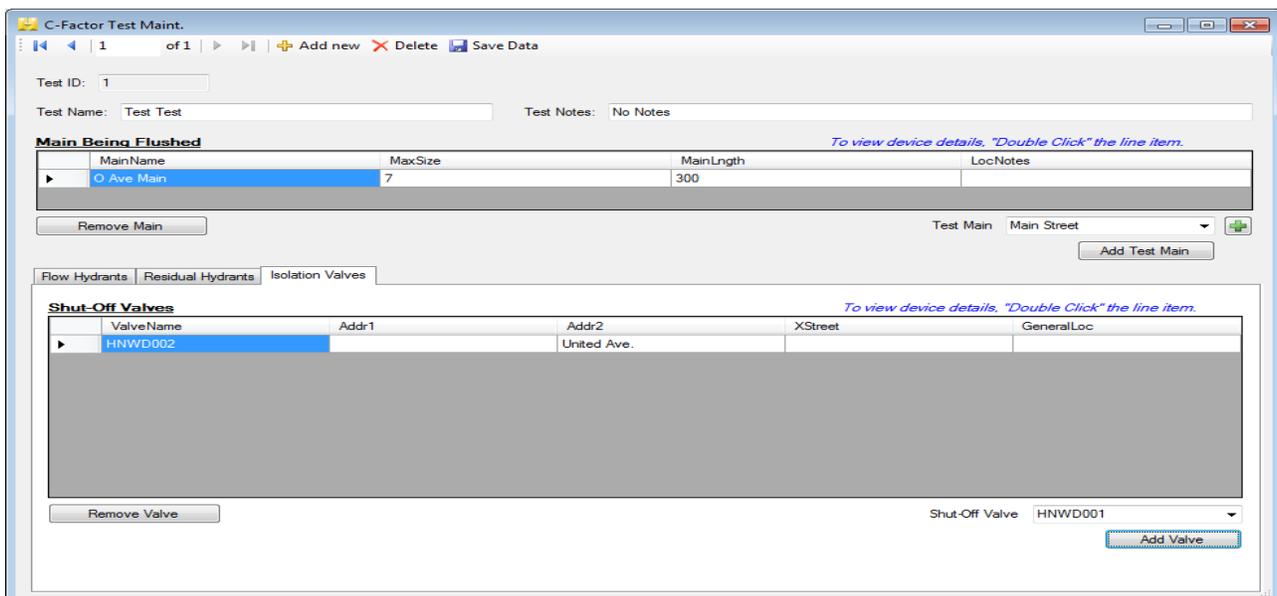
- 1) Enter the name for the test.
- 2) Enter any notes that will be needed for the test.
- 3) Then select Save Data. You will then be able to add the required test main and hydrants.
- 4) Next, the main(s) will need to be added.
  - a) Select the test main from the drop down menu.
  - b) Once you have the test main that is needed, click the Add Test Main button. This will add the test main to the Main Being Flushed list. To see details of the flow main added, double click on the line item. This will take you to the main details.
- 5) Then flow hydrant(s) will need to be added.
  - a) Select the Flow Hydrant from the drop down box.
  - b) Select the flow device from the drop down box.
  - c) Once those two items have been selected, click the Add Flow Hydrant.
  - d) If additional flow hydrants are needed, select them from the drop down menu.

The screenshot shows the 'C-Factor Test Maint' application window. At the top, there is a toolbar with buttons for 'Delete', 'Save Data', and 'Cancel'. Below the toolbar, there are input fields for 'Test ID' (containing '-2'), 'Test Name', and 'Test Notes'. The main area is divided into two sections: 'Main Being Flushed' and 'Flow Hydrants'. The 'Main Being Flushed' section has a table with columns 'MainName', 'MaxSize', 'MainLength', and 'LocNotes'. Below the table is a 'Remove Main' button and a 'Test Main' dropdown menu currently set to 'Main Street', with an 'Add Test Main' button to its right. The 'Flow Hydrants' section has tabs for 'Flow Hydrants', 'Residual Hydrants', and 'Isolation Valves'. It contains a table with columns 'HydName', 'FlowDevName', 'Addr1', 'Addr2', 'XStreet', and 'GeneralLoc'. Below the table are 'Remove Hydrant', 'Flow Hydrant' (dropdown set to 'HURCO H 1'), 'Flow Device' (dropdown set to '2.5" Hose Monster'), and 'Add Flow Hydrant' buttons. A note at the top right of each table reads 'To view device details, "Double Click" the line item.'

- 6) Then residual hydrant(s) will need to be added. There must be two residual hydrants added for a C-Factor test.
  - a) Select the residual hydrant from the drop down list. Only the hydrants that were added to the main on the Main Maintenance will appear in this drop down.
  - b) Click the Add Hydrant to add the hydrant to the Residual Hydrants list.



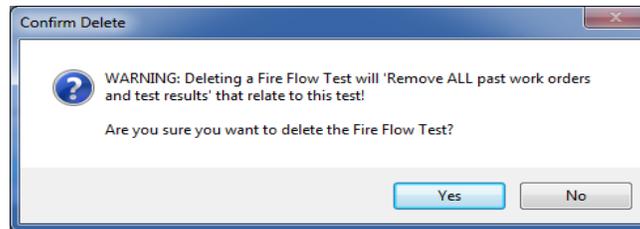
- 7) Then the isolation valve(s) will need to be added.
  - a. Select the isolation valve from the drop down list.
  - b. Click the Add Valve to add the valve to the Shut-Off Valves list.



- 8) When all of hydrants and valves have been added, select Save Data. This will save the test into the Test lists so that it can be added to a work order.

## Delete a C-Factor test

To delete a test, use the arrows to select the test that needs to be deleted. Once it is on the selected test, click on Delete. You will receive the following warning:



If you wish to continue deleting the test, select Yes. If you do not want to delete the test, select No.

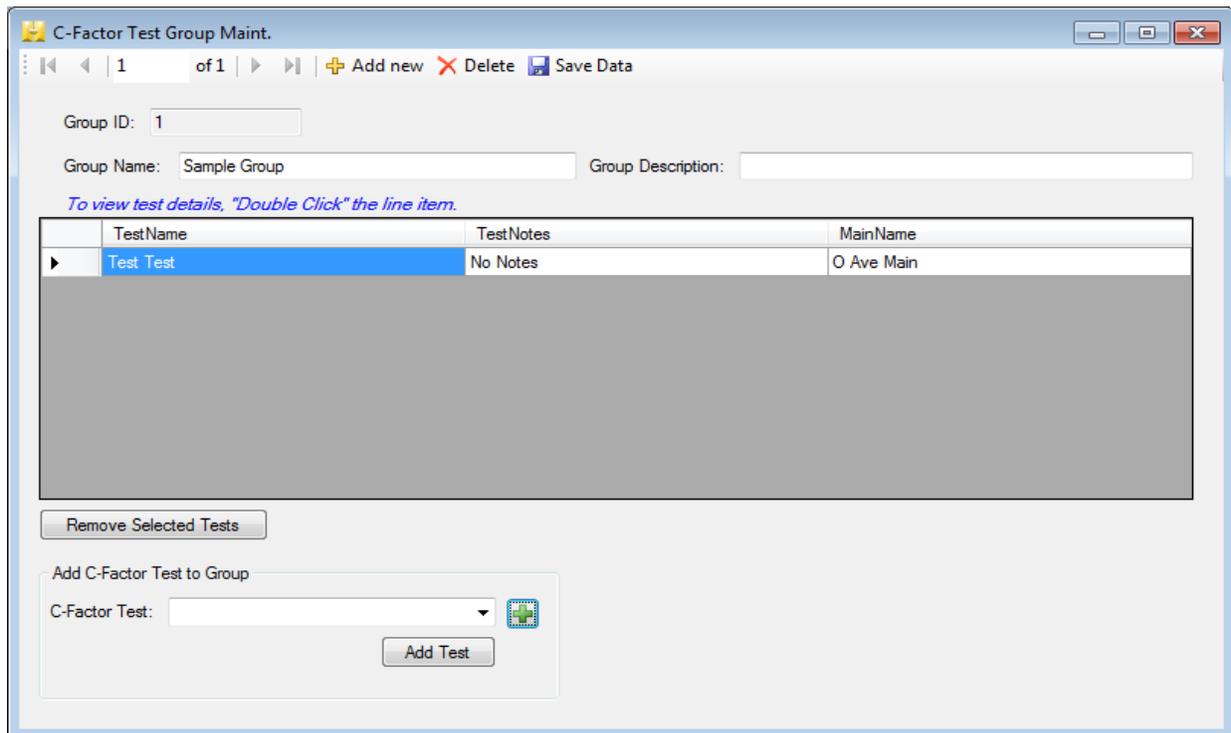
---

**Note: If you delete a test, all work orders and test results that are associated with that test will be deleted.**

---

## C-Factor Test Group Maintenance

This screen keeps track of the test groups available to be added to work orders. Test Groups can be added or deleted here. Test groups must be entered before a work order can entered into the system.



## **Add a new C-Factor test group**

To add a new test group, select Add New. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

1. Enter the name for the group.
2. Enter a group description.
3. Select Save Data to save the test group. Then the tests can be added to the group.
4. Select the C-Factor test from the drop down menu that needs to be added.
5. Click the Add Test button. This will add the test to the test group. To see details of the test added, double click on the line item. This will take you to the test details.
6. If a test is added and needs to be removed from the group, click the Remove Selected Test button. A confirmation will appear asking if you are sure you want to remove the selected test. Click yes to continue with the removal or no to cancel the removal.
7. When all of the tests have been added, select Save Data. This will save the group.

## **Delete a C-Factor test group**

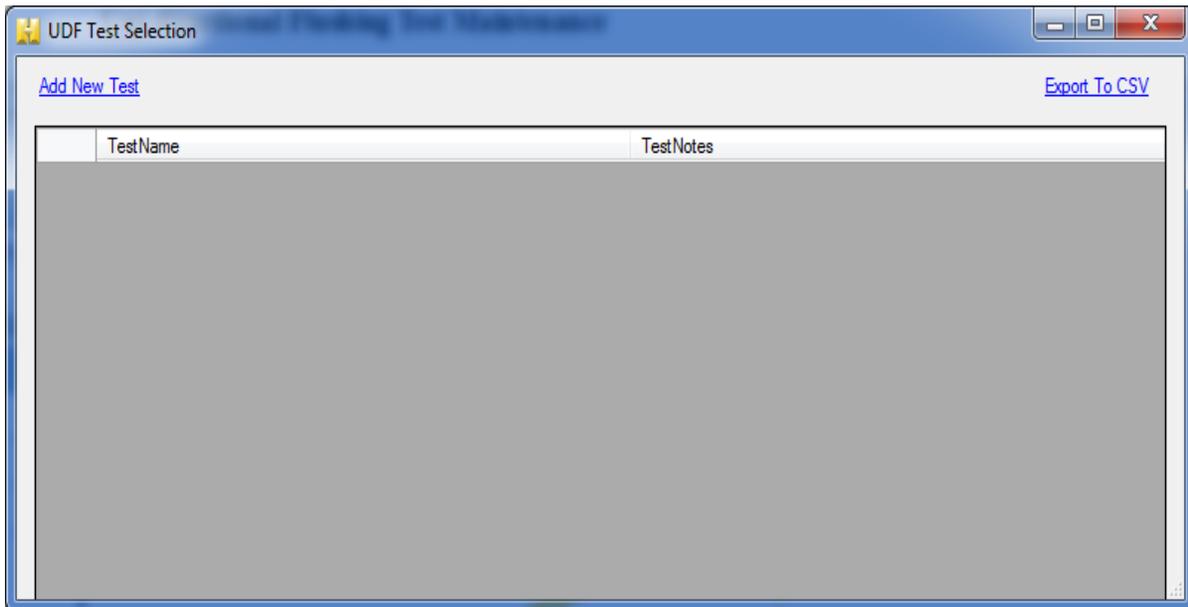
To delete a test group, select the test group that needs to be deleted. Use the arrows to move between groups. Once you have the group that needs to be deleted, click delete. A confirmation will appear asking if you are sure you want to delete the group. Click yes to continue with the removal or no to cancel the removal.

## ***Uni-directional Flushing***

This section gives details for editing the tests and the test groups for Uni-directional Flushing. These will be needed when entering your work orders into the system.

## ***Uni-directional Flush Test Maintenance***

This screen keeps track of the tests that are available to be added to a work order. New Tests can be added here and the list of tests can be exported. Test must be entered before a work order can entered into the system.

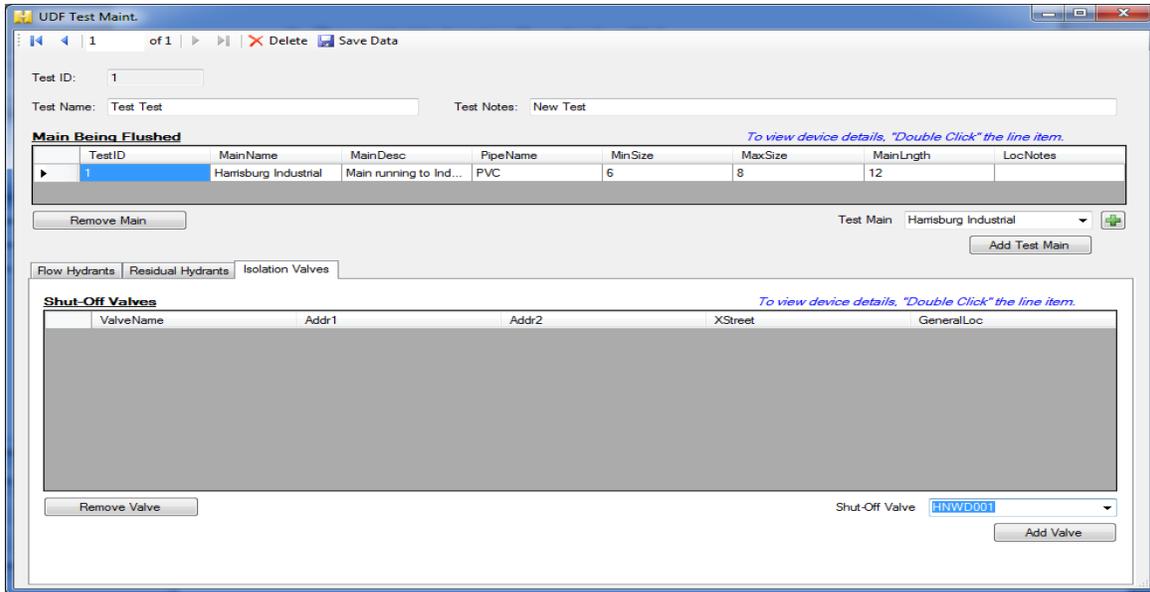


### **Add a new Uni-directional Flush test**

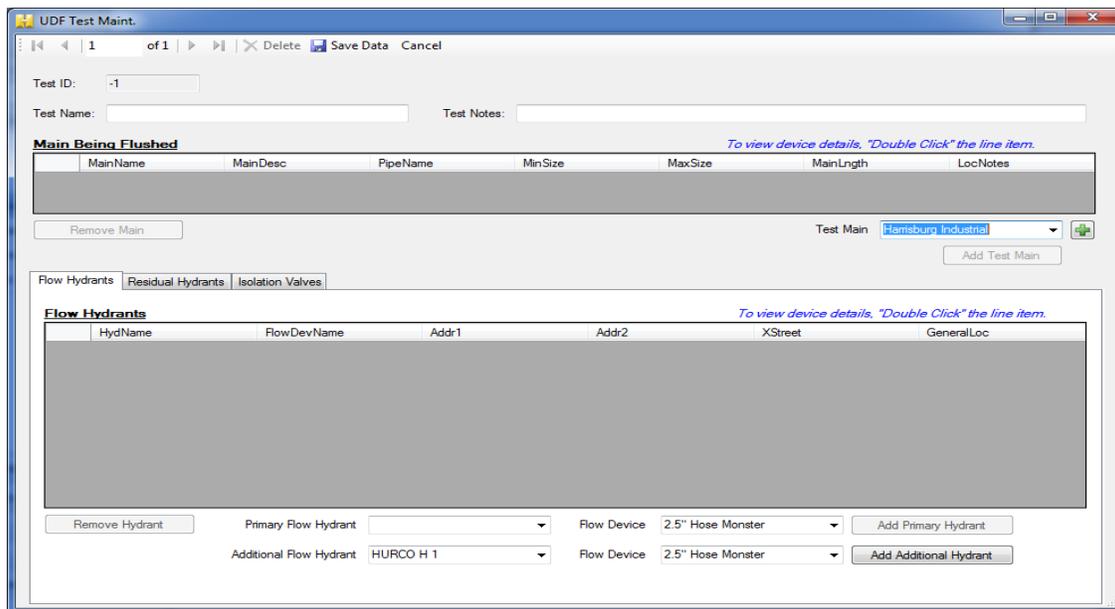
To add a new test, select Add New Test. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

- 1) Enter the name for the test.
- 2) Enter any notes that will be needed for the test.
- 3) Then select Save Data. You will then be able to add the required test main and flow hydrants.
- 4) Next, the main(s) will need to be added.
  - a) Select the test main from the drop down menu.
  - b) Once you have the test main that is needed, click the Add Test Main button. This will add the test main to the Main Being Flushed list. To see details of the flow main added, double click on the line item. This will take you to the main details.
- 5) Then flow hydrant(s) will need to be added.
  - a) Select the Primary Flow Hydrant from the drop down box. Only the hydrants that were added to the main on the Main Maintenance will appear in this drop down.
  - b) Select the flow device from the drop down box.
  - c) Once those two items have been selected, click the Add Primary Hydrant.

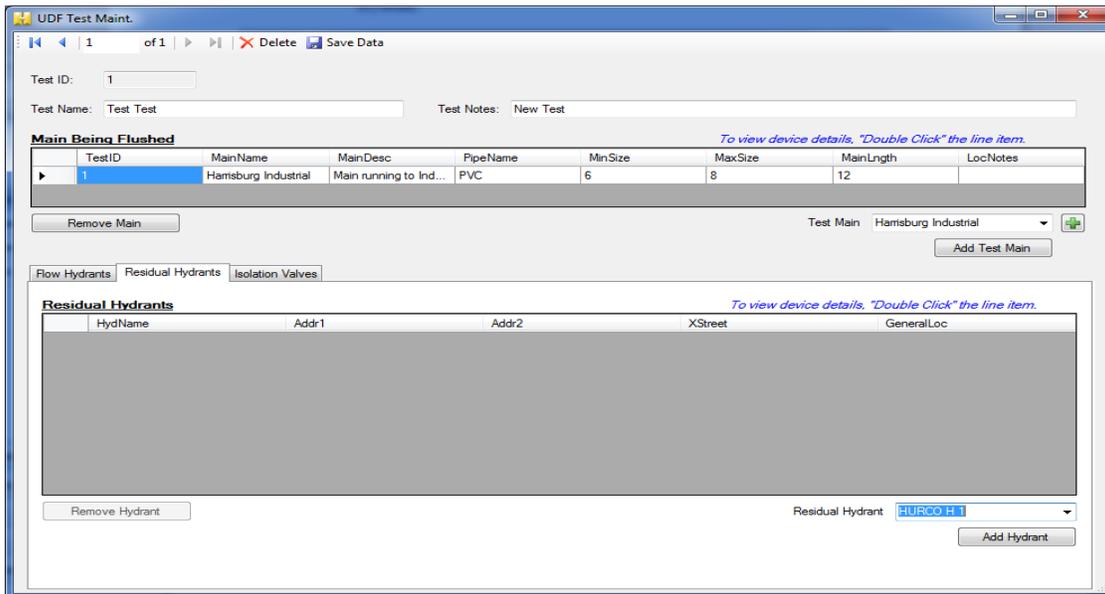
- d) If additional flow hydrants are needed, select them from the drop down menu. Once the flow hydrant and flow device is selected, click the Add Additional Hydrant.



- 6) When all of hydrants and valves have been added, select Save Data. This will save the test into the Test lists so that it can be added to a work order.



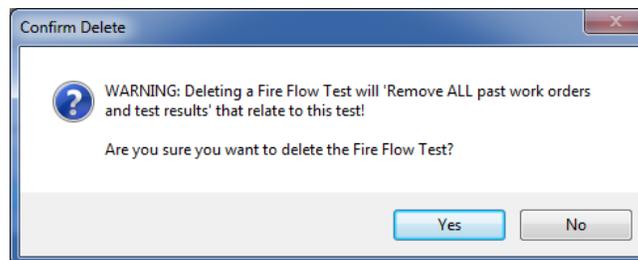
- 7) Then residual hydrant(s) will need to be added.
- Select the residual hydrant from the drop down list. Only the hydrants that were added to the main on the Main Maintenance will appear in this drop down.
  - Click the Add Hydrant to add the hydrant to the Residual Hydrants list.



- 8) Then the isolation valve(s) will need to be added.
  - c. Select the isolation valve from the drop down list.
  - d. Click the Add Valve to add the valve to the Shut-Off Valves list.
- 9) When all of hydrants and valves have been added, select Save Data. This will save the test into the Test lists so that it can be added to a work order.

### Delete a Uni-directional Flush test

To delete a test, use the arrows to select the test that needs to be deleted. Once it is on the selected test, click on Delete. You will receive the following warning:



If you wish to continue deleting the test, select Yes. If you do not want to delete the test, select No.

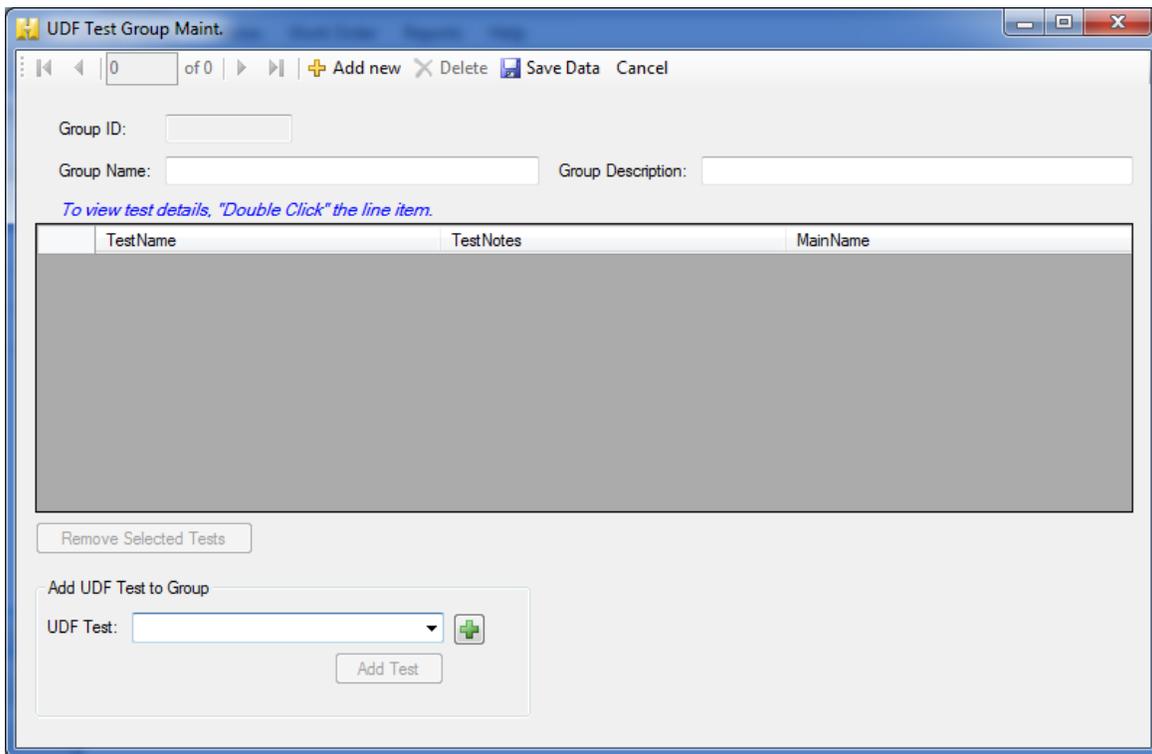
---

**Note: If you delete a test, all work orders and test results that are associated with that test will be deleted.**

---

# Uni-directional Flush Test Group Maintenance

This screen keeps track of the test groups available to be added to work orders. Test Groups can be added or deleted here. Test groups must be entered before a work order can entered into the system.



## Add a new Uni-directional Flush test group

To add a new test group, select Add New. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

8. Enter the name for the group.
9. Enter a group description.
10. Select Save Data to save the test group. Then the test can be added to the group.
11. Select the Uni-directional Flush test from the drop down menu that needs to be added.
12. Click the Add Test button. This will add the test to the test group. To see details of the test added, double click on the line item. This will take you to the test details.
13. If a test is added and needs to be removed from the group, click the Remove Selected Test button. A confirmation will appear asking if you are sure you want to remove the selected test. Click yes to continue with the removal or no to cancel the removal.
14. When all of the tests have been added, select Save Data. This will save the group.

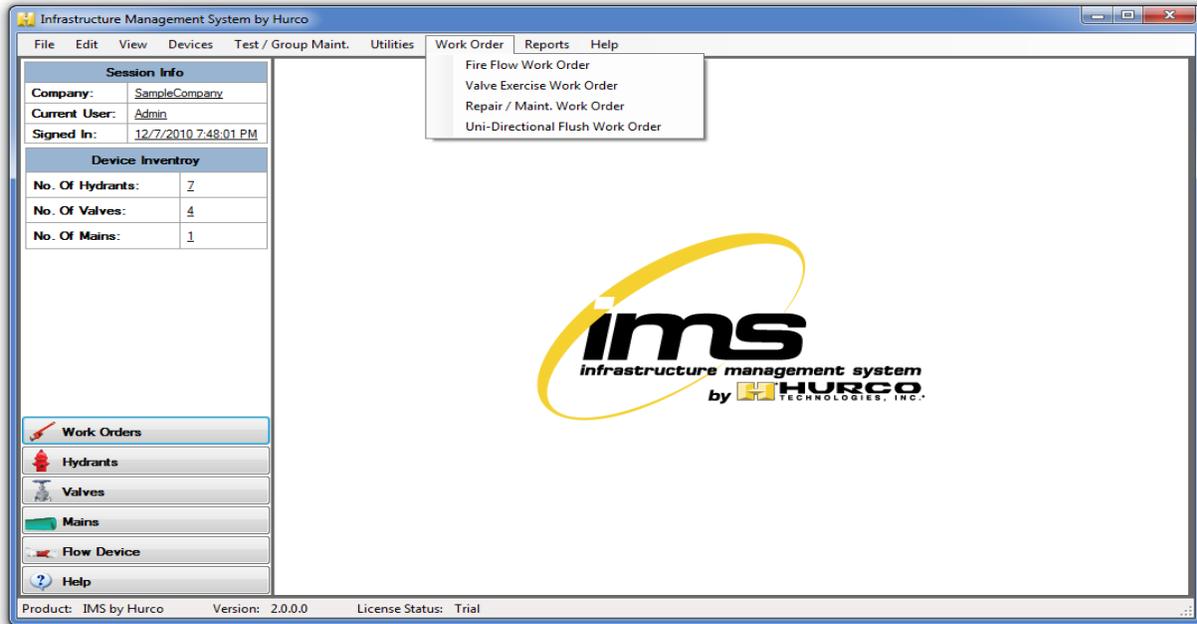
## **Delete a Uni-directional Flush test group**

To delete a test group, select the test group that needs to be deleted. Use the arrows to move between groups. Once you have the group that needs to be deleted, click delete. A confirmation will appear asking if you are sure you want to delete the group. Click yes to continue with the removal or no to cancel the removal.

# Chapter 7

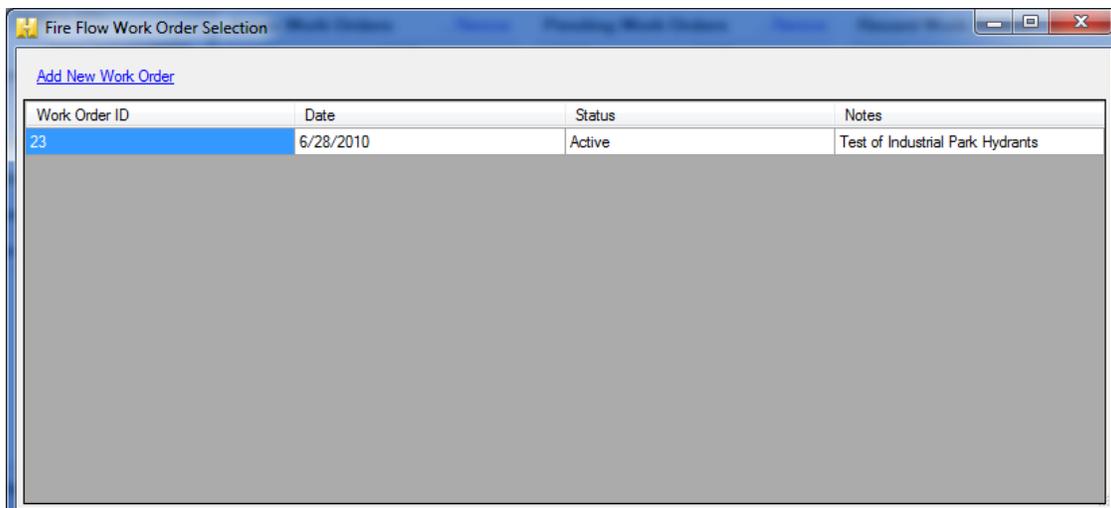
## Creating/Submitting Fire Flow Work Order

In this chapter, you'll learn to create and submit Fire Flow work orders. These options are located under the Work Order option on the Menu Bar.



### *Fire Flow Work Order*

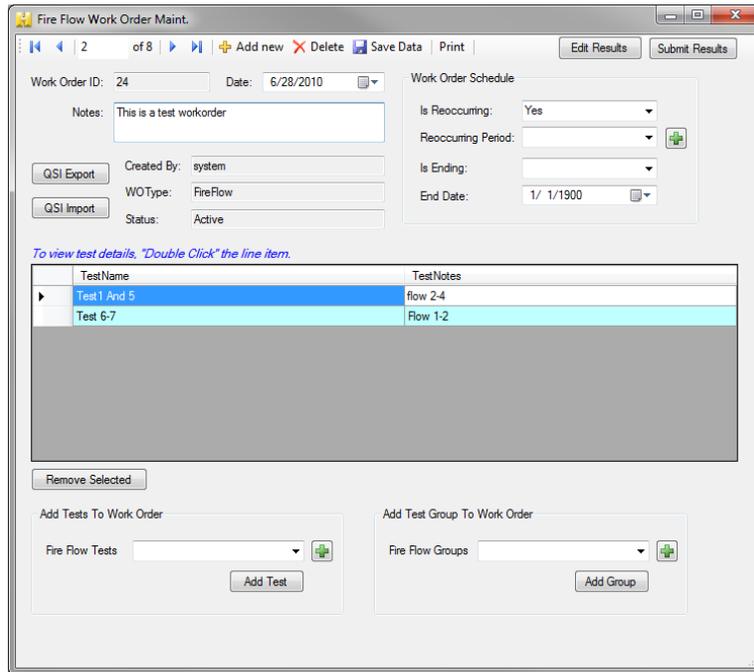
This screen keeps track of the active work orders. New work orders can be added here. Test or test groups must be created before a work order can be created.



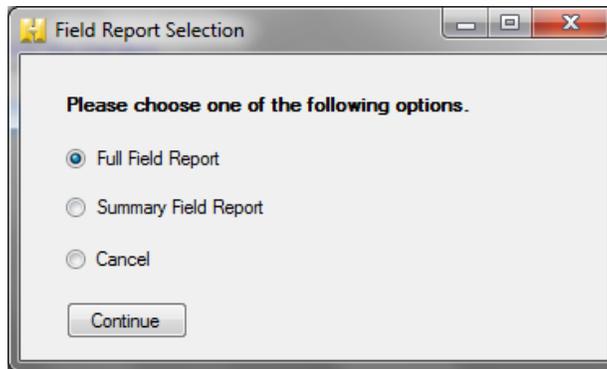
## **Add a new Fire Flow Work Order**

To add a new Fire Flow Work Order, select Add New Work Order. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

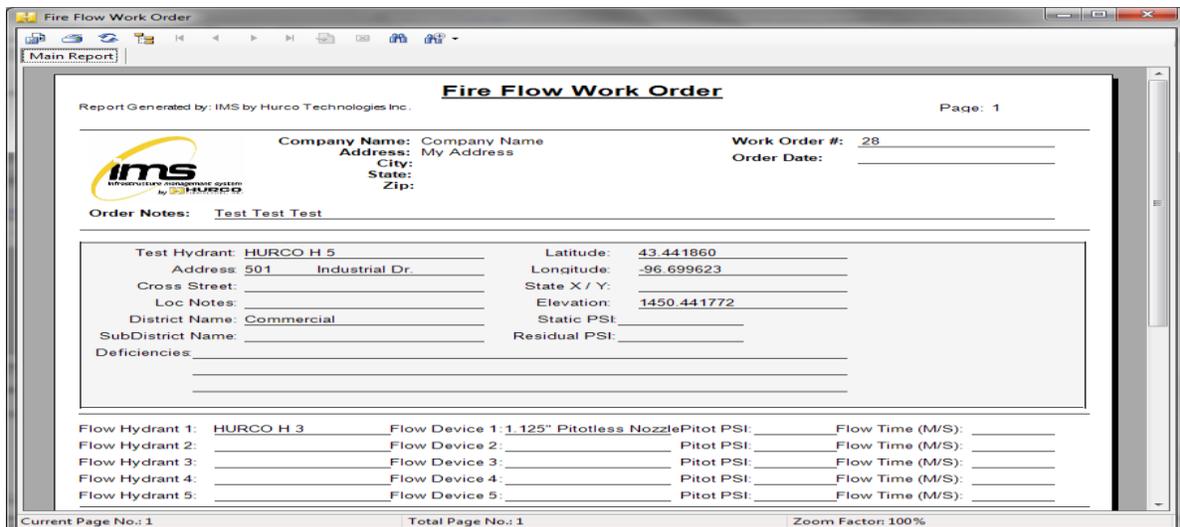
- 1.** A work order number will be generated automatically.
- 2.** Select the date.
- 3.** Enter any notes that are needed.
- 4.** Created by will be generated by the user that is logged in.
- 5.** WO Type will be generated automatically depending on which work order screen you are in.
- 6.** Status will change depending on what is being done with the work order.
- 7.** Work Order Schedule
  - a.** Select whether it is a reoccurring work order.
  - b.** If it is a reoccurring work order, select the reoccurrence period.
  - c.** Select whether or not the reoccurring event has an ending period.
  - d.** If it does have an ending, chose the date for the reoccurrence to end.
- 8.** Select the test or test group to add to the work order. If a test or group is added and needs to be removed, select Remove Selected. A confirmation will appear asking if you are sure you want to remove the delete the group. Click yes to continue with the removal or no to cancel the removal. To see details of the line item added, double click on the line item.
- 9.** Once all information has been entered into the work order, select Save Data.



10. To print the work order, click Print and the select from the following menu.



a. Full Field Report- This report will be the full report that goes to the field with the tester.



b. Summary Field Report – This report will give a summary of the walking order.

The screenshot shows a software window titled "Fire Flow Work Order" displaying a "Fire Flow Walking Order Summary" report. The report is generated by "IMS by Hurco Technologies Inc." and is on "Page: 1". It includes the IMS logo and the following information:

- Company Name: Company Name
- Address: My Address
- City: \_\_\_\_\_
- State: \_\_\_\_\_
- Zip: \_\_\_\_\_
- Work Order #: 28
- Order Date: \_\_\_\_\_
- Order Notes: Test Test Test

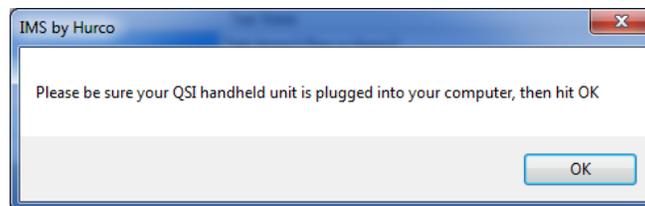
Below the notes, there is a table of hydrants:

	Test Hydrant	HURCO H 5	Address	501 Industrial Dr.
Flow Hydrants	<input type="checkbox"/>	HURCO H 3	301 Industrial Dr.	1.125" Pitotless Nozzle

At the bottom of the window, it shows "Current Page No.: 1", "Total Page No.: 1", and "Zoom Factor: 100%".

## ***To Export Fire Flow Work Order to QSI Handheld***

Once the work order has been saved, it can be exported to the QSI handheld. Click the Export to QSI. The following warning will appear. If the QSI Handheld is plugged in, click Ok. If the QSI handheld is not plugged in, plug it in and click Ok. Select the location to save the Hydrant Directory file. Message will appear to alert if the export was successful.



It will then be ready to take to the field and the tests on the work orders to be performed.

## ***To Import Fire Flow Work Order From QSI Handheld***

After the tests have been run and the results are ready to be added to the work order, go to the work order list and select the work order that has been completed. Click the QSI Import button. The same warning will appear as when the work order was exported. If the QSI Handheld is plugged in, click Ok. If the QSI handheld is not plugged in, plug it in and click Ok. Select the location where the Flow Results file is saved. Click Ok to import. Message will appear to alert if the import was successful.

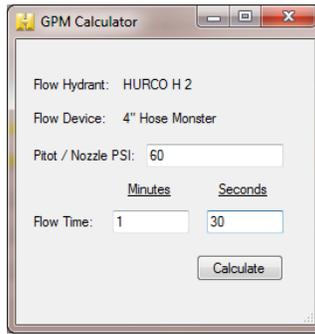
## To Edit Results from the Fire Flow Work Order

After the tests have been run and the results are ready to be added to the work order, go to the work order list and select the work order that has been completed. Click the Edit Results button. There will be one screen for each test hydrant that was part of the test. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

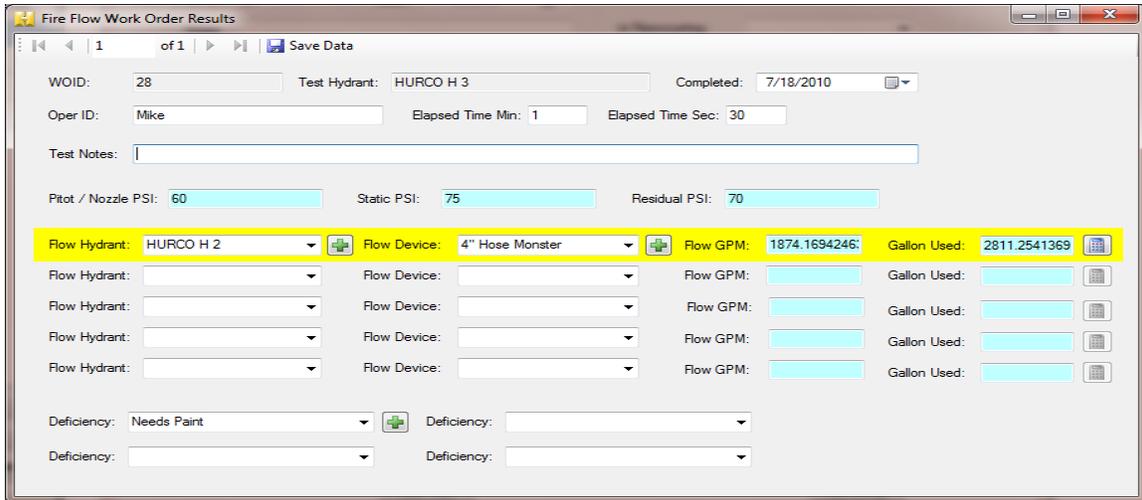
Flow Hydrant	Flow Device	Flow GPM	Gallon Used
HURCO H 2	4" Hose Monster	1874.1694246	2811.2541369

Deficiency: Needs Paint

1. Completed- Enter the date that the test was completed.
2. Oper ID- Enter the person's name that performed the test.
3. Elapsed time- Enter the amount of time that the test was run.
4. Test Notes- Enter any test notes that need to be recorded.
5. Pitot PSI- Enter the pitot PSI.
6. Static PSI- Enter the static PSI.
7. Residual PSI- Enter the residual PSI.
8. Devices Used
  - a. Flow Hyd ID- Enter the flow hydrant that was used.
  - b. Flow Dev ID- Enter the flow device that was used.
  - c. Flow GPM & Gallons Used- Enter these two values that were obtained during the test.
    - If you didn't calculate the gallons used during the test, click on the calculator icon. Enter the Pitot pressure and the flow time in minutes and seconds.



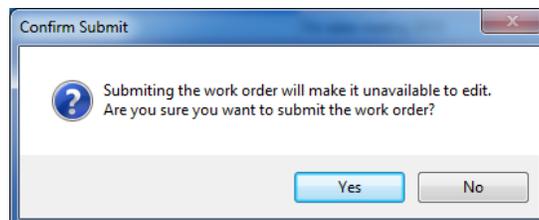
- Click the calculate button and this will fill in the values.



9. Deficiency- Use the drop down menu to select any deficiencies that were detected during the test.
10. When all results have been entered, select Save Data. This will save the test results.

## ***To Submit Results from the Fire Flow Work Order***

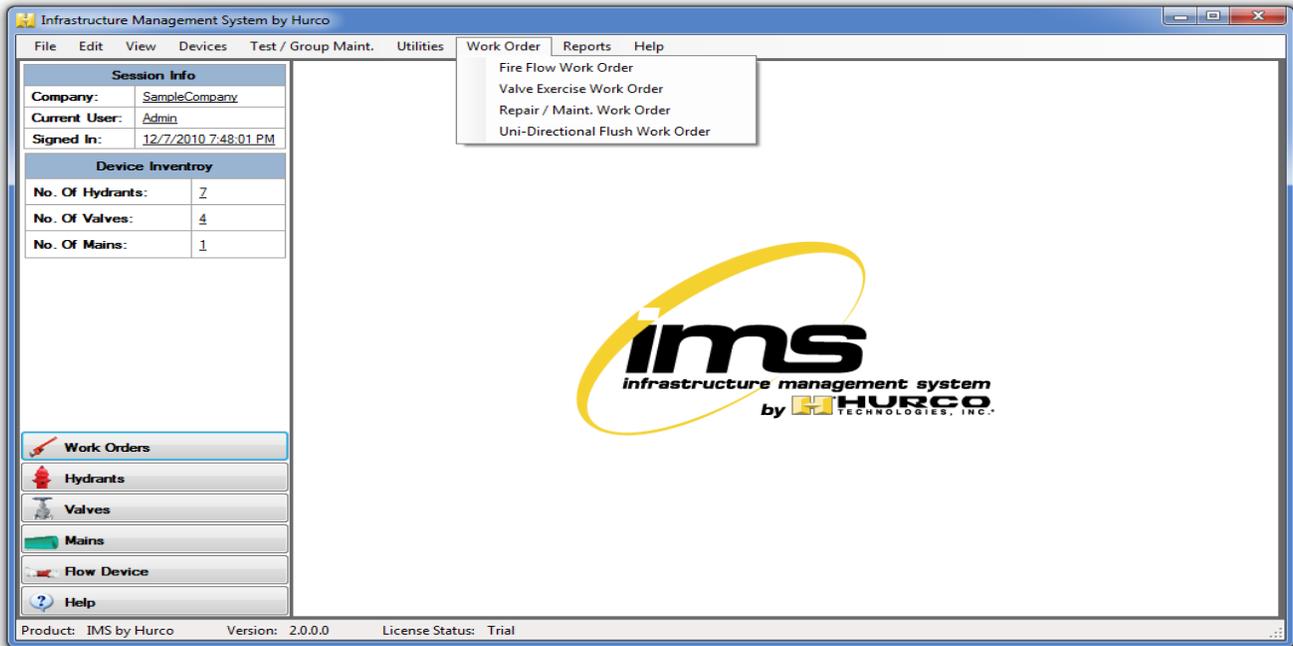
After the results have been entered or uploaded, the results will need to be submitted. The results must be submitted in order to view them in the Reports section. Click the Submit Results button. A warning will appear alerting to the fact that once the results are submitted the work order cannot be edited anymore. If you agree, select Yes. If you want to be able to edit the work order still, select No.



# Chapter 8

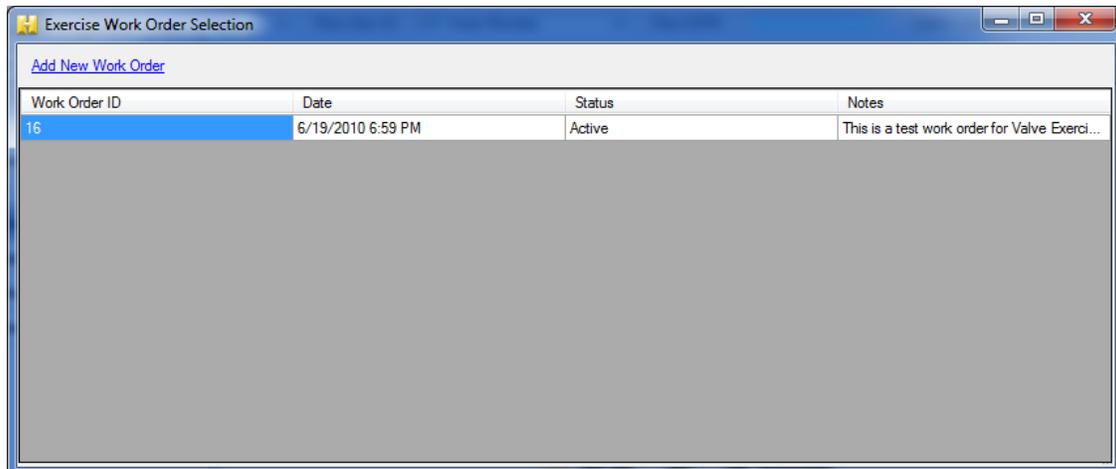
## Creating/Submitting Valve Exercise Work Order

In this chapter, you'll learn to create and submit Valve Exercise work orders. These options are located under the Work Order option on the Menu Bar.



### *Valve Exercise Work Order*

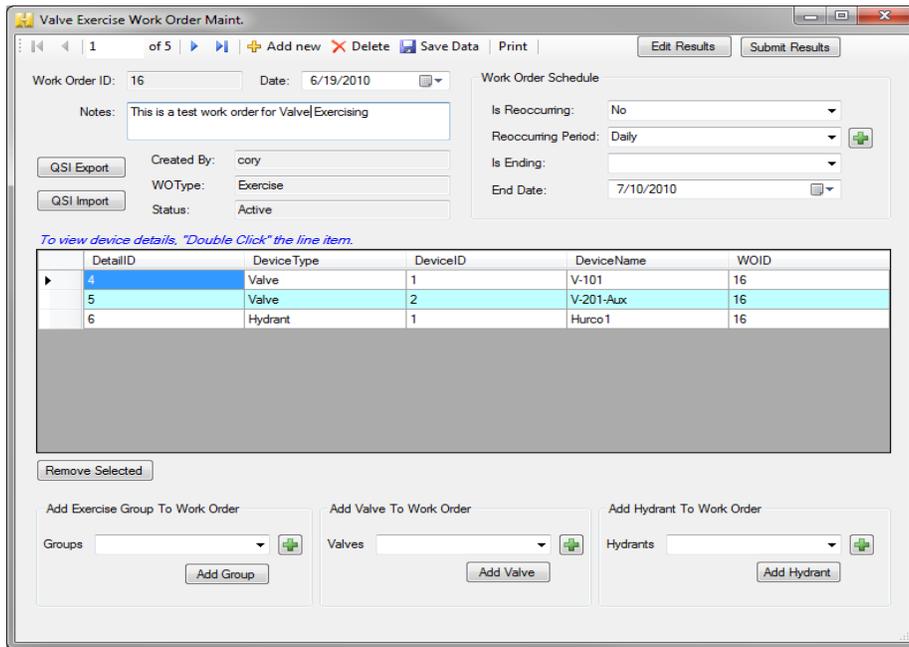
This screen keeps track of the active valve exercise work orders. New valve exercise work orders can be added here. Exercise groups must be created before a work order can be created.



## **Add a new Valve Exercise Work Order**

To add a new Valve Exercise Work Order, select Add New Work Order. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

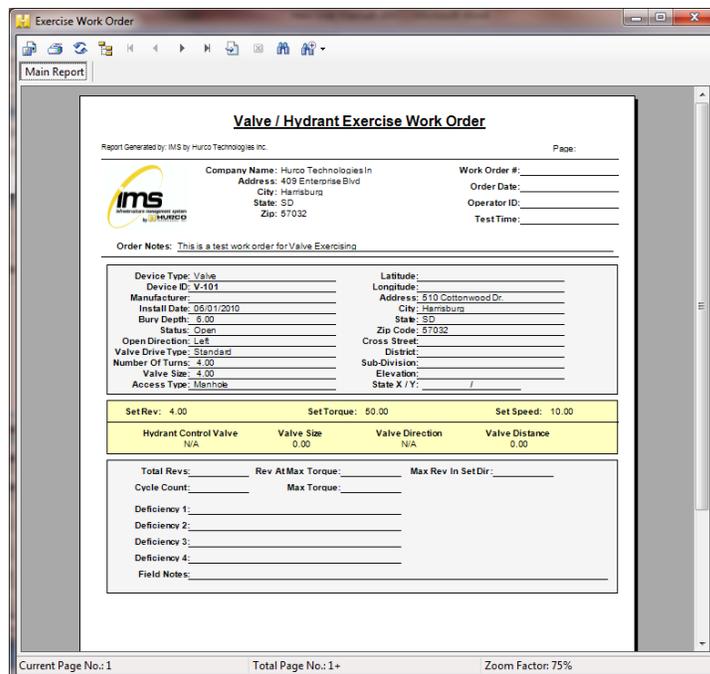
1. A work order number will be generated automatically.
2. Select the date.
3. Enter any notes that are needed.
4. Created by will be generated by the user that is logged in.
5. Status will change depending on what is being done with the work order.
6. WO Type will be generated automatically depending on which work order screen you are in.
7. Work Order Schedule
  - a. Select whether it is a reoccurring work order.
  - b. If it is a reoccurring work order, select the reoccurrence period.
  - c. Select whether or not the reoccurring event has an ending period.
  - d. If it does have an ending, chose the date for the reoccurrence to end.
8. Select the Exercise Group(s) to add to the work order from the drop down box.
9. Select the valve(s) to add to the work order from the drop down box.
10. Select the hydrant(s) to add to the work order from the drop down box.
11. If an exercise group, valve or hydrant is added and needs to be removed, select Remove Selected. A confirmation will appear asking if you are sure you want to remove the delete the group. Click yes to continue with the removal or no to cancel the removal. To see details of the line item added, double click on the line item.
12. Once all information has been entered into the work order, select Save Data.



13. To print the work order, click Print and the select from the following menu.



- a. Full Field Report- This report will be the full report that goes to the field with the tester.



- b. Summary Field Report – This report will give a summary of the walking order.

The screenshot shows a software window titled "Exercise Work Order". Inside, there is a report titled "Valve / Hydrant Exercise Walking Order Summary". The report is generated by "IMS by Hurco Technologies Inc." and is on "Page: 1".

Fields in the report include:

- Company Name: Company Name
- Address: My Address
- City:
- State:
- Zip:
- Work Order #: 29
- Order Date:
- Operator ID:
- Test Time:

Order Notes: Test 1234

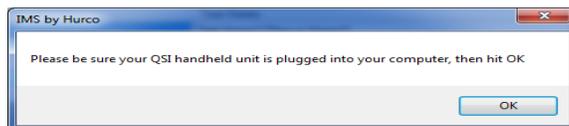
Device list:

<input type="checkbox"/>	Device Type: Valve Device ID: HNWD002	Address: United Ave.
<input type="checkbox"/>	Device Type: Hydrant Device ID: HURCO H 4	Address: 401 Industrial Dr.
<input type="checkbox"/>	Device Type: Hydrant Device ID: HURCO H 3	Address: 301 Industrial Dr.

At the bottom of the window, it shows "Current Page No.: 1", "Total Page No.: 1", and "Zoom Factor: 100%".

## ***To Export Valve Exercise Work Order to QSI Handheld***

Once the work order has been saved, it can be exported to the QSI handheld. Click the Export to QSI. The following warning will appear. If the QSI Handheld is plugged in, click Ok. If the QSI handheld is not plugged in, plug it in and click Ok. Select the location to save the Valve Directory file. Message will appear to alert if the export was successful.



It will then be ready to be taken to the field and the tests on the work orders to be performed.

## ***To Import Valve Exercise Work Order to QSI Handheld***

After the tests have been run and the results are ready to be added to the work order, go to the work order list and select the work order that has been completed. Click the QSI Import button. The same warning will appear as when the work order was exported. If the QSI Handheld is plugged in, click Ok. If the QSI handheld is not plugged in, plug it in and click Ok. Select the location where the Exercise Results file is saved. Click Ok to import. Message will appear to alert if the import was successful.

## ***To Edit Results from the Valve Exercise Work Order***

After the tests have been run and the results are ready to be added to the work order, go to the work order list and select the work order that has been completed. Click the Edit Results button. There will be one screen for each valve that was part of the test. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

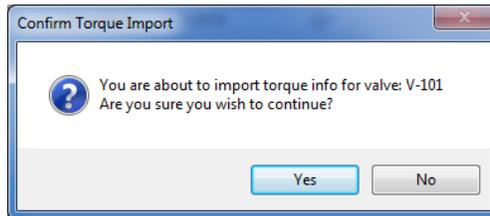
1. Oper ID- Enter the person’s name that performed the exercise.
2. Completed- Enter the date that the exercise was completed.
3. Total Revs- Enter the total revolutions during the exercise.
4. Cycle Count- Enter the number of cycles during the exercise.
5. Max Torque- Enter the maximum torque applied during the exercise.
6. Rev At Max Torque- Enter the revolutions at maximum torque.
7. Max Rev In Set Dir- Enter the maximum revolutions in one set direction.
8. Deficiency- Use the drop down menu to select any deficiencies that were detected during the exercise.
9. Field Notes- Enter any notes taken during in the field during the exercise.
10. When all results have been entered, select Save Data. This will save the exercise results.

The screenshot shows a software window titled "Valve Exercise Result Maint." with a toolbar at the top containing navigation icons and buttons for "Save Data" and "Import Torque Log". The "Result Index" is set to 8. The form contains the following fields:

- Work Order ID: 18
- Device Type: Valve
- Device ID: V-101
- Operator ID: (empty)
- Completed: 7/10/2010
- Total Revs: (empty)
- Cycle Count: (empty)
- Max Torque: (empty)
- Rev At Max Torque: (empty)
- Max Rev In Set Dir: (empty)
- Deficiency1-4: (empty dropdown menus)
- Field Notes: (empty text area)

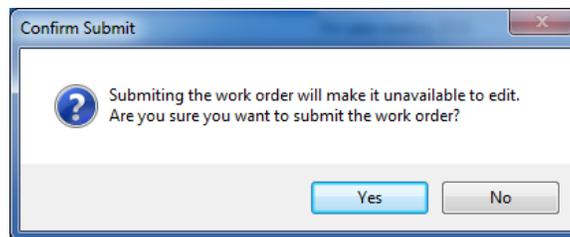
## ***To Import Torque Log***

After the exercise has been run, a torque log obtained during the valve exercise may need to upload. While in the Edit Results Screen for the Valve Exercise, click on Import Torque Log. A warning will appear to alert the user that torque information is about to be imported. If user wishes to continue, select Yes. If user doesn’t want to import the file, select NO. Message will appear to alert if the import was successful.



## ***To Submit Results from the Valve Exercise Work Order***

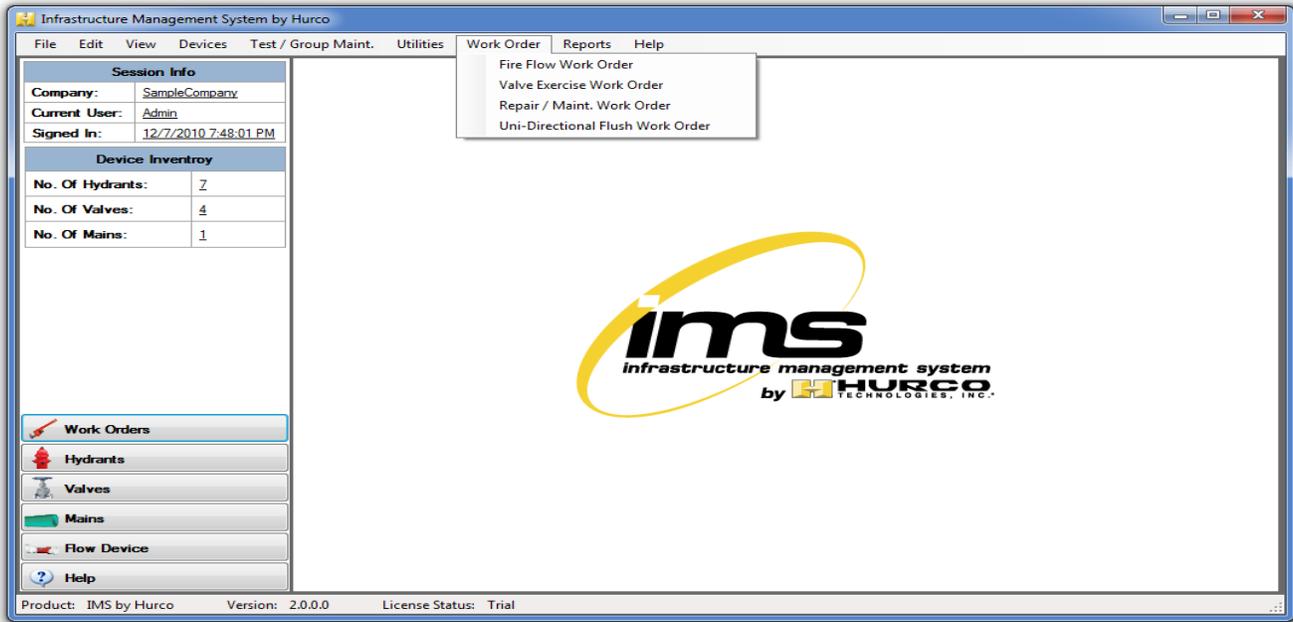
After the results have been entered or uploaded, the results will need to be submitted. The results must be submitted in order to view them in the Reports section. Click the Submit Results button. A warning will appear alerting to the fact that once the results are submitted the work order cannot be edited anymore. If you agree, select Yes. If you want to be able to edit the work order still, select No. The related Valve Exercise Work Order Report will appear.



# Chapter 9

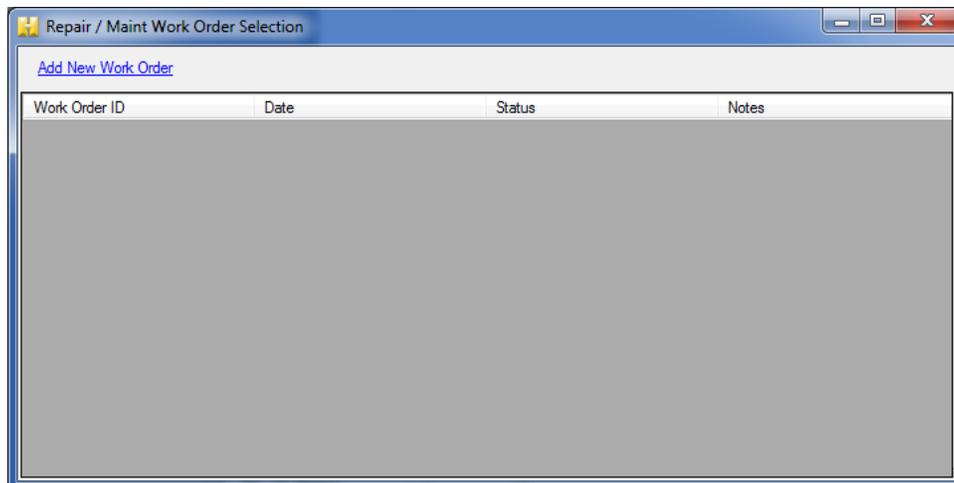
## Creating/Submitting Repair/Maintenance Work Order

In this chapter, you'll learn to create and submit Repair/Maintenance work orders. These options are located under the Work Order option on the Menu Bar.



### *Repair/Maintenance Work Order*

This screen keeps track of the active repair/maintenance work orders. New repair/maintenance work orders can be added here. Repair/Maintenance action items must be created before a work order can be created.



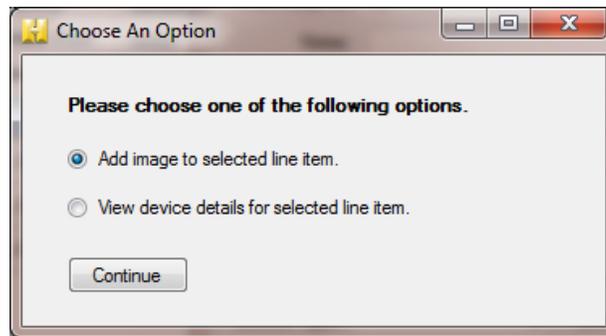
## Add a new Repair/Maintenance Work Order

To add a new Repair/Maint Work Order, select Add New Work Order. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

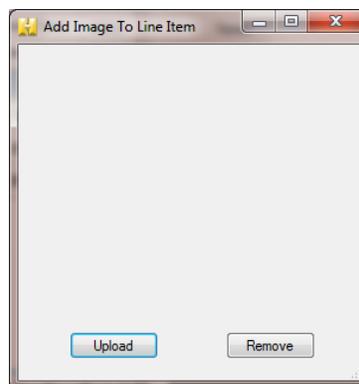
DeviceType	DeviceName	ActionName	Notes
Valve	V-101	Replace Valve	
Hydrant	Hurco3	Replace Broken Cap Chains	

1. A work order ID will be generated automatically
2. Select the date.
3. Enter any notes that are needed.
4. Created by will be generated by the user that is logged in.
5. WO Type will be generated automatically depending on which work order screen you are in.
6. Status will change depending on what is being done with the work order.
7. Work Order Schedule
  - a. Select whether it is a recurring work order.
  - b. If it is a recurring work order, select the recurrence period.
  - c. Select whether or not the recurring event has an ending period.

- d. If it does have an ending, chose the date for the reoccurrence to end.
8. Select Save Data to create work order.
9. Now that the work order has been created, chose the Device type that needs work.
10. Select the Device ID.
11. Select the action that needs to be performed on the device. If there are no actions to select, then actions need to be set up in the Repair/Maint Action Maint screen.
12. If an exercise group, valve or hydrant is added and needs to be removed, select Remove Selected. A confirmation will appear asking if you are sure you want to remove the delete the group. Click yes to continue with the removal or no to cancel the removal.
13. Double click on a line item to upload/remove image or to view the details of the selected line item.



14. To add or remove image, select Add Image to selected line item. Click upload to add picture or Remove to delete image.



15. To view device details, select View device details for selected line item. This will take you to the device details.
16. Once all information has been entered into the work order, select Save Data.
17. To print the work order, click Print. The following report will appear.

Repair / Maint Work Order Report

Main Report

### Repair / Maint Work Order

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

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**ims**  
infrastructure management system  
by **HURCO**

**Company Name:** Hurco Technologies Inc.  
**Address:** 409 Enterprise Street  
**City:** Harrisburg  
**State:** SD  
**Zip:** 57032

**Work Order:** 65  
**Work Order Date:**

**Work Order Notes:** sdfd

---

Hurco3

**Device Type:** Hydrant  
**Manufacture:** Mueller  
**Install Date:** 6/1/2010 11:21:45AM  
**Status:** Active

**Address:** 301 Industrial Dr.  
**Location:** N side (mid block)  
**City:** Harrisbug  
**State:** SD  
**Zip:** 57032

Action	Notes
Replace Broken Cap Chains	

**Field Notes:** \_\_\_\_\_

---

V-101

**Device Type:** Valve  
**Manufacture:** Clow  
**Install Date:** 6/1/2010 6:57:07PM  
**Status:** Open

**Address:** 510 Cottonwood Dr.  
**Location:**  
**City:** Harrisburg  
**State:** SD  
**Zip:** 57032

Action	Notes
Replace Valve	

**Field Notes:** \_\_\_\_\_

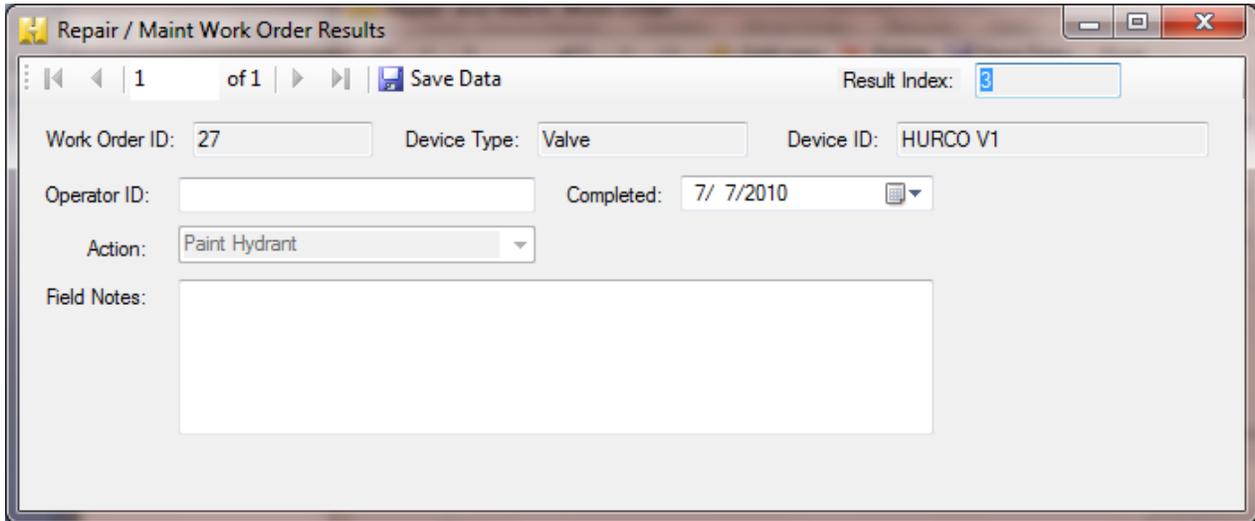
Current Page No.: 1      Total Page No.: 1      Zoom Factor: 100%

## ***To Edit Results from the Repair/Maintenance Work Order***

After the repair/maintenance item has been completed, the results must be entered into the work order so that it can be closed. Click the Edit Results button. There will be one screen for each item on the work order.

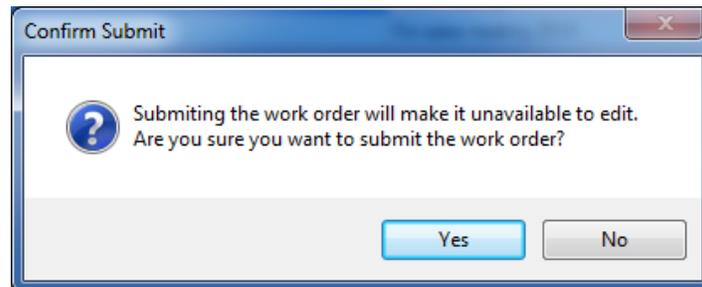
1. Work Order ID, Device Type and Device ID- These items are populated from the line items on the work order.
2. Oper ID- Enter the person's name that performed the repair/maintenance.

3. Completed- Enter the date that the repair or maintenance was completed.
4. Action- This is auto populated with one of the line items on the work order.
5. Field Notes- Enter any notes taken during in the field during the repair/maintenance.
6. When all results have been entered, select Save Data. This will save the repair/maintenance results.



## ***To Submit Results from the Repair/Maintenance Work Order***

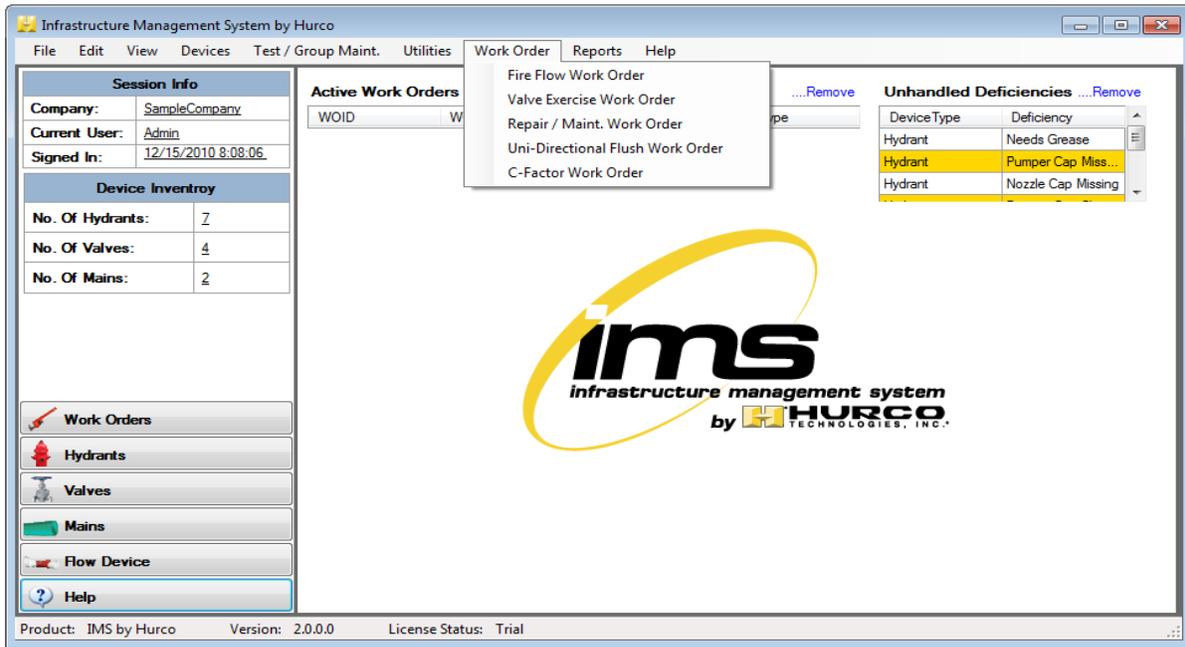
After the results have been entered or uploaded, the results will need to be submitted. The results must be submitted in order to view them in the Reports section. Click the Submit Results button. A warning will appear alerting to the fact that once the results are submitted the work order cannot be edited anymore. If you agree, select Yes. If you want to be able to edit the work order still, select No.



# Chapter 10

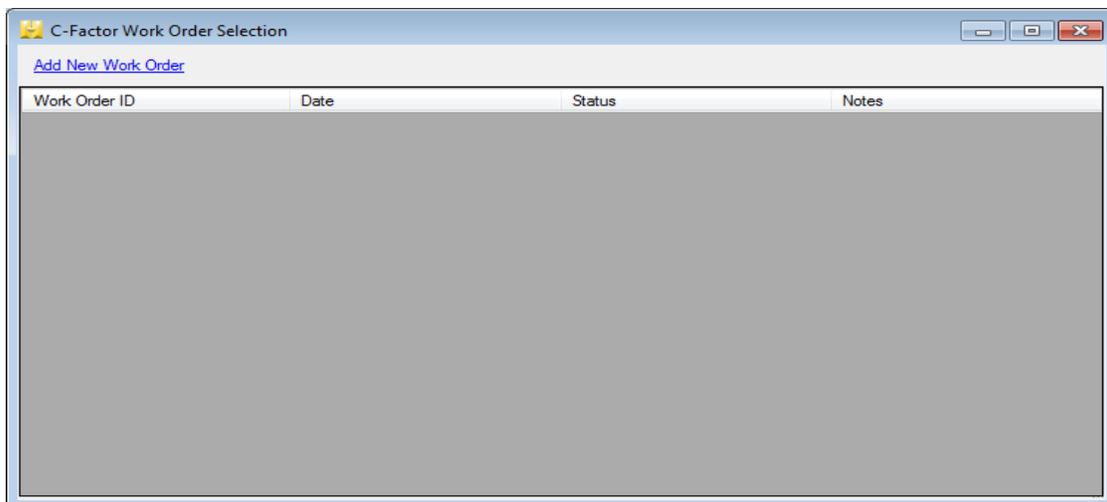
## Creating/Submitting C-Factor Work Order

In this chapter, you'll learn to create and submit C-Factor work orders. These options are located under the Work Order option on the Menu Bar.



### *C-Factor Work Order*

This screen keeps track of the active C-Factor work orders. New C-factor work orders can be added here.



## Add a new C-Factor Work Order

To add a new C-Factor Work Order, select Add New Work Order. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

1. A work order number will be generated automatically
2. Select the date.
3. Enter any notes that are needed.
4. Created by will be generated by the user that is logged in.
5. WO Type will be generated automatically depending on which work order screen you are in.
6. Status will change depending on what is being done with the work order.
7. Work Order Schedule
  - a. Select whether it is a reoccurring work order.
  - b. If it is a reoccurring work order, select the reoccurrence period.
  - c. Select whether or not the reoccurring event has an ending period.
  - d. If it does have an ending, chose the date for the reoccurrence to end.
8. Once all information has been entered into the work order, select Save Data.
9. Select the C-Factor test(s) to add to the work order from the drop down box. Click the Add Test button.
10. Select the C-Factor test group(s) to add to the work order from the drop down box. Click the Add Group button.
11. If a test or test group, is added and needs to be removed, select the appropriate item and click Remove Selected. A confirmation will appear asking if you are sure you want to remove the delete the test/group. Click yes to continue with the removal or no to cancel the removal. To see details of the line item added, double click on the line item.
12. Once all test/group(s) have been added, select Save Data.

C-Factor Work Order Maint.

1 of 1 | Add new | Delete | Save Data | Print | Edit Results | Submit Results

WOID: 30 | Date: 12/15/2010

Notes:

Created By: Admin

Work OrderType: CF

Work Order Status: Active

Work Order Schedule

Is Reoccurring: No

Reoccurring Period: Daily

Is Ending:

End Date: 12/15/2010

To view test details, "Double Click" the line item.

TestName	TestNotes	MainName
Test Test	No Notes	O Ave Main

Remove Selected

Add Tests To Work Order

C-Factor Tests

Add Test

Add Test Group To Work Order

C-Factor Test Groups

Add Group

14. To print the work order, click Print.

C-Factor Work Order

Main Report

### C-Factor Work Order

Report Generated by: IMS by Hurco Technologies Inc. Page: 1



**Company Name:** Company Name  
**Address:** My Address  
**City:**  
**State:**  
**Zip:**

**Work Order #:** 30  
**Order Date:**

Order Notes:

<b>Main ID:</b> O Ave Main	<b>Length:</b> 300.00	<b>Diameter:</b> 7.00
<b>TestTime Min:</b> _____	<b>TestTime Sec:</b> _____	

<b>Residual Hydrant 1:</b> HURCO H 1	<b>Static PSI:</b> _____	<b>Flowing PSI:</b> _____
<b>Residual Hydrant 2:</b> HURCO H 4	<b>Static PSI:</b> _____	<b>Flowing PSI:</b> _____

<b>Flow Hydrant:</b> HURCO H 6	<b>Flow Device:</b> 2.5" Hose Monster	<b>Flow PSI:</b> _____
<b>Flow Hydrant:</b> _____	<b>Flow Device:</b> _____	<b>Flow PSI:</b> _____
<b>Flow Hydrant:</b> _____	<b>Flow Device:</b> _____	<b>Flow PSI:</b> _____
<b>Flow Hydrant:</b> _____	<b>Flow Device:</b> _____	<b>Flow PSI:</b> _____

**Isolation Valves To Operate**

ValveName	Addr1	Addr2	X Street	GeneralLo
HNWD002		United Ave.		

Current Page No.: 1 | Total Page No.: 1 | Zoom Factor: 75%

## To Edit Results from the C-Factor Work Order

After the tests have been run and the results are ready to be added to the work order, go to the work order list and select the work order that has been completed. Click the Edit Results button. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

The screenshot shows the 'C-Factor Work Order Results' software interface. The window title is 'C-Factor Work Order Results'. The interface includes a navigation bar with '1 of 1' and a 'Save Data' button. The main form contains the following fields:

- Work Order ID: 30
- Main Name: O Ave Main
- Main Diameter: 7 (with a red double asterisk and 'Diam in Inches')
- Operator ID: (empty)
- Completed: 12/15/2010
- Main Length: 300 (with a red double asterisk and 'Length in Feet')
- Field Notes: (empty text area)
- Test Time Min: 0
- Test Time Sec: 0
- Pitot / Nozzle PSI: 0.000000000
- Residual Hydrant 1: HURCO H 1
- Static PSI: 0
- Residual PSI: 0.000000000
- Residual Hydrant 2: HURCO H 4
- Static PSI: 0
- Residual PSI: 0.000000000
- Flow Hydrant: HURCO H 6 (highlighted in yellow)
- Flow Device: 2.5" Hose Monster (highlighted in yellow)
- Flow GPM: 0.000000000
- Gallons Used: 0.000000000
- Four additional rows of hydrant data with empty fields for Hydrant, Device, GPM, and Gallons Used.

1. Oper ID- Enter the person's name that performed the flush.
2. Completed- Enter the date that the flush was completed.
3. Main Diam- This field is auto-populated.
4. Main Lngth- This field is auto-populated.
5. Field Notes- Enter any notes taken during in the field during the flush.
6. Test Time Min/Test Time Sec- Enter the amount of time the test was run.
7. Pitot/Nozzle PSI- Enter the pitot or nozzle PSI.
8. Residual Hydrant 1- Enter the residual hydrant that was used.
  - a. Static PSI- Enter the static PSI for this hydrant.
  - b. Residual PSI- Enter the residual PSI for this hydrant.
9. Residual Hydrant 2- Enter the residual hydrant that was used.

a. Static PSI- Enter the static PSI for this hydrant.

10. Residual PSI- Enter the residual PSI for this hydrant.

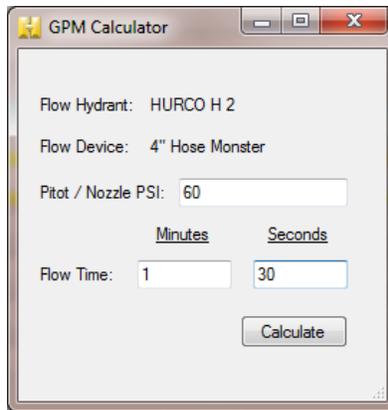
11. Devices Used

a. Flow Hydrant- Enter the flow hydrant that was used.

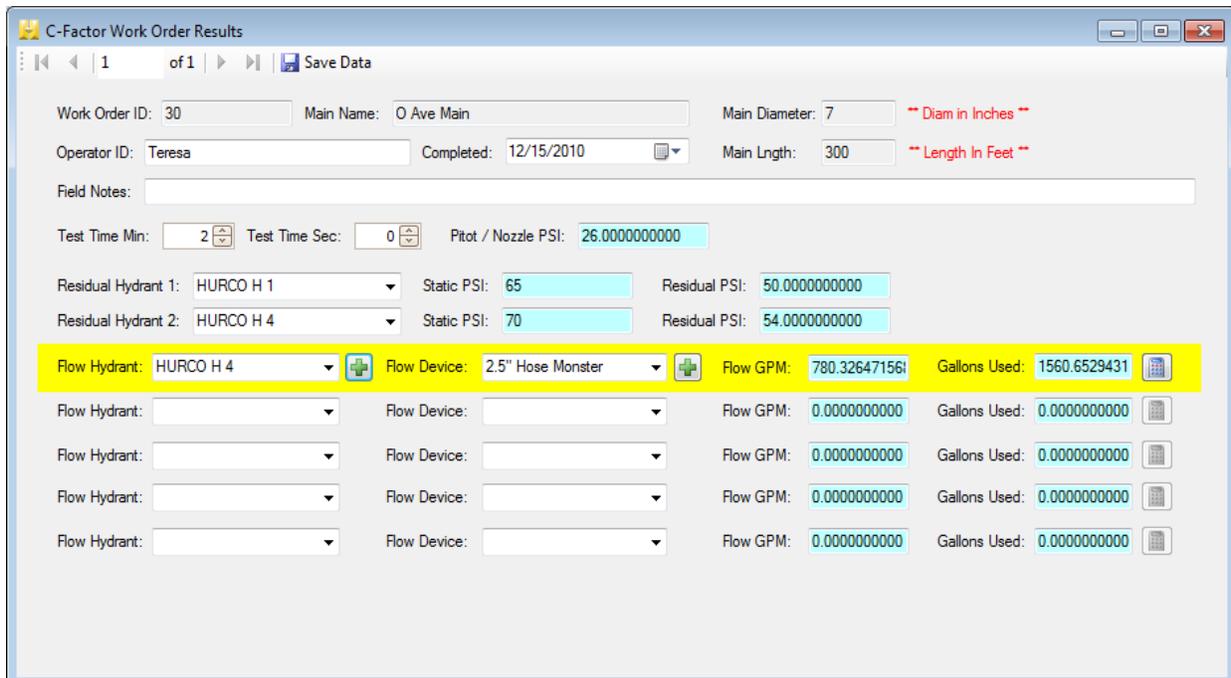
b. Flow Device- Enter the flow device that was used.

c. Flow GPM & Gallons Used- Enter these two values that were obtained during the test.

- If you didn't calculate the gallons used during the test, click on the calculator icon. Enter the Pitot pressure and the flow time in minutes and seconds.



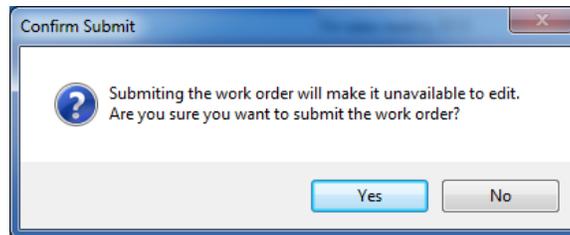
- Click the calculate button and this will fill in the values.



Flow Hydrant	Flow Device	Flow GPM	Gallons Used
HURCO H 4	2.5" Hose Monster	780.326471561	1560.6529431
		0.0000000000	0.0000000000
		0.0000000000	0.0000000000
		0.0000000000	0.0000000000
		0.0000000000	0.0000000000

## ***To Submit Results from the C-Factor Work Order***

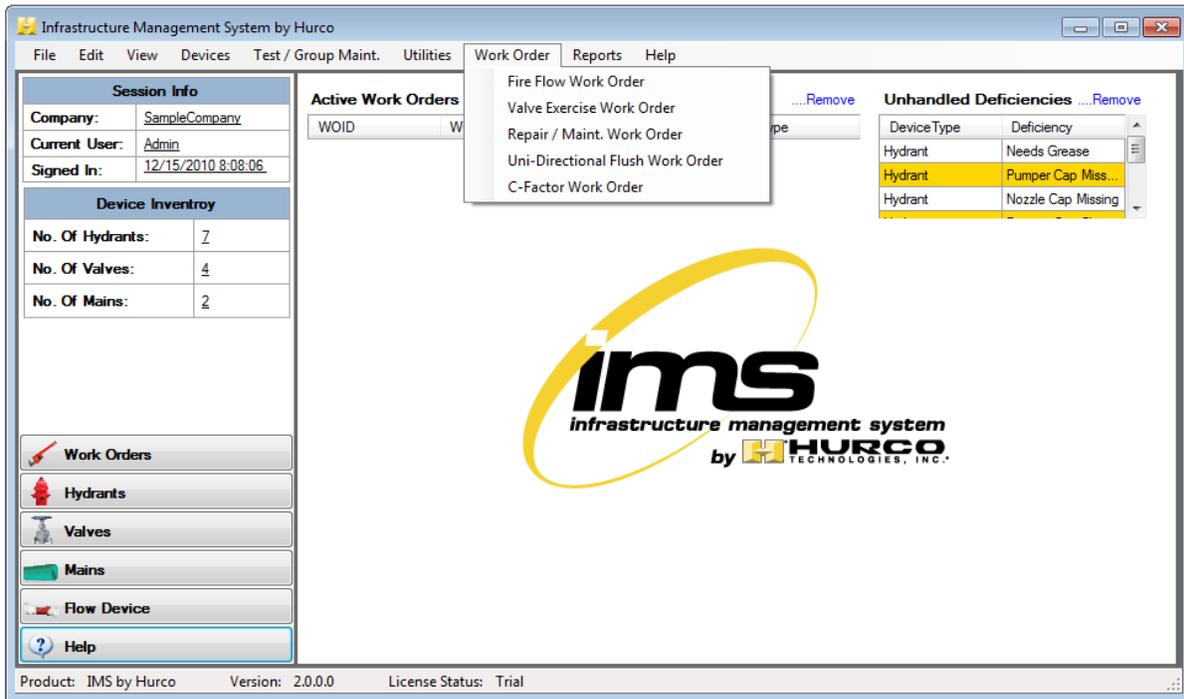
After the results have been entered or uploaded, the results will need to be submitted. The results must be submitted in order to view them in the Reports section. Click the Submit Results button. A warning will appear alerting to the fact that once the results are submitted the work order cannot be edited anymore. If you agree, select Yes. If you want to be able to edit the work order still, select No. The related C-Factor Work Order Report will appear.



# Chapter 11

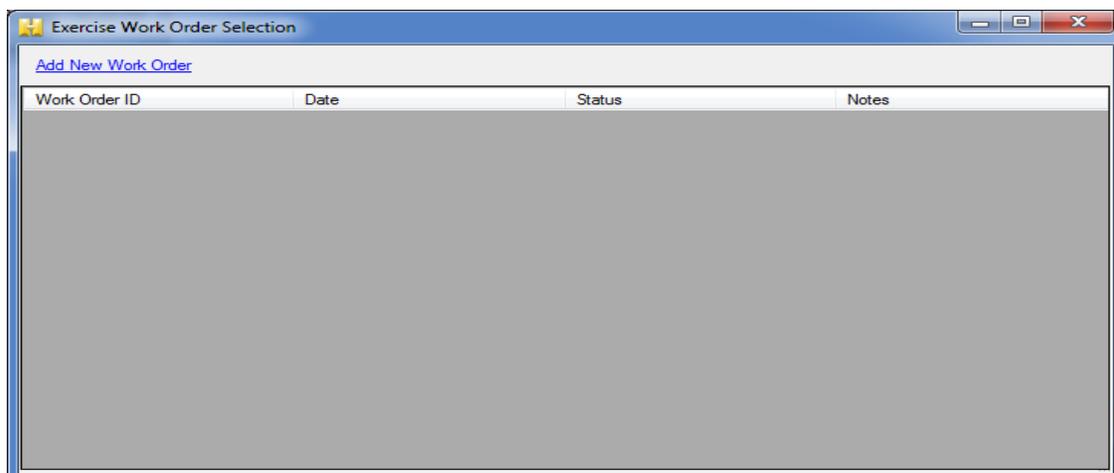
## Creating/Submitting Uni-direction Flush Work Order

In this chapter, you'll learn to create and submit Valve Exercise work orders. These options are located under the Work Order option on the Menu Bar.



### *Uni-directional Flush Work Order*

This screen keeps track of the active Uni-directional Flush work orders. New uni-directional flush work orders can be added here.



## **Add a new Uni-directional Flush Work Order**

To add a new Uni-directional Flush Work Order, select Add New Work Order. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

- 1.** A work order number will be generated automatically
- 2.** Select the date.
- 3.** Enter any notes that are needed.
- 4.** Created by will be generated by the user that is logged in.
- 5.** WO Type will be generated automatically depending on which work order screen you are in.
- 6.** Status will change depending on what is being done with the work order.
- 7.** Work Order Schedule
  - a.** Select whether it is a reoccurring work order.
  - b.** If it is a reoccurring work order, select the reoccurrence period.
  - c.** Select whether or not the reoccurring event has an ending period.
  - d.** If it does have an ending, chose the date for the reoccurrence to end.
- 8.** Once all information has been entered into the work order, select Save Data.
- 9.** Select the Uni-directional test(s) to add to the work order from the drop down box. Click the Add Test button.
- 10.** Select the Uni-directional test group(s) to add to the work order from the drop down box. Click the Add Group button.
- 11.** If an test or test group, is added and needs to be removed, select the appropriate item and click Remove Selected. A confirmation will appear asking if you are sure you want to remove the delete the test/group. Click yes to continue with the removal or no to cancel the removal. To see details of the line item added, double click on the line item.
- 12.** Once all test/group(s) have been added, select Save Data.

Uni-Directional Flush Work Order Maint.

1 of 1 | Add new | Delete | Save Data | Print | Edit Results | Submit Results

WOID: 28 | Date: 12/ 8/2010

Notes:

Created By: Admin

Work Order Type: UDF

Work Order Status: Active

Work Order Schedule

Is Reoccurring: No

Reoccurring Period: Daily

Is Ending:

End Date: 12/14/2010

To view test details, "Double Click" the line item.

TestName	TestNotes	MainName
Main Street Test	None	Main Street

Remove Selected

Add Tests To Work Order

UDF Tests

Add Test

Add Test Group To Work Order

UDF Test Groups

Add Group

13. To print the work order, click Print.

Fire Flow Work Order

Uni-Directional Work Order

Report Generated by: IMS by Hurco Technologies Inc. | Page: 1

Company Name: Company Name | Work Order #: 28  
 Address: My Address | Order Date:  
 City:  
 State:  
 Zip:

ims  
 infrastructure management system  
 by HURCO

Order Notes:

Main ID: Main Street | Main Length: 400.00 | Main Diam: 8.00

Target Velocity: 2.50 | Flush Time Min: | Flush Time Sec: |

Min GPM needed to reach desired velocity: 392.16

Flow Hydrant: HURCO H 1	Flow Device: 2.5" Hose Monster	Flow PSI: _____
Flow Hydrant: _____	Flow Device: _____	Flow PSI: _____
Flow Hydrant: _____	Flow Device: _____	Flow PSI: _____
Flow Hydrant: _____	Flow Device: _____	Flow PSI: _____
Flow Hydrant: _____	Flow Device: _____	Flow PSI: _____

**Water Clarity**

	Initial	During	Final	Comments:
Clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Particles:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Yellowish:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Brown:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Isolation Valves To Operate**

Valve ID	Valve Position	Comments
HNWD002	<input type="checkbox"/> Opened <input type="checkbox"/> Closed	_____

Current Page No.: 1 | Total Page No.: 1 | Zoom Factor: 100%

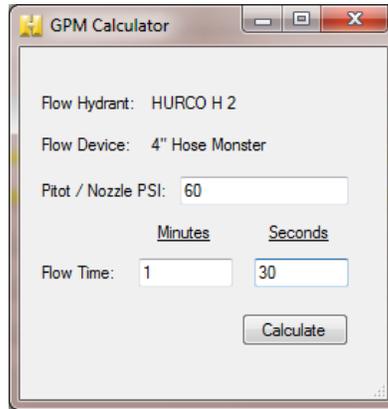
## To Edit Results from the Uni-directional Flush Work Order

After the tests have been run and the results are ready to be added to the work order, go to the work order list and select the work order that has been completed. Click the Edit Results button. You can click on the green “+” sign and it will take you to the respective menu option to enter a new device. (Example: If you click the one next to the Model ID box, it will take you to the Model ID screen to enter a new hydrant model.)

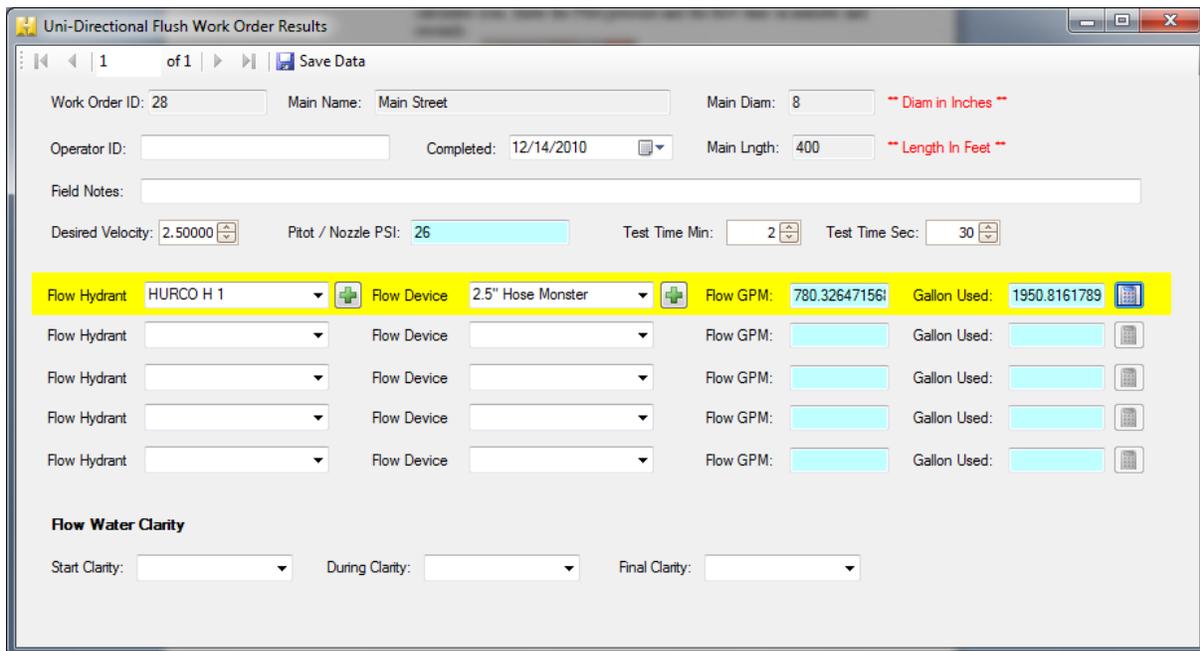
The screenshot shows a software window titled "Uni-Directional Flush Work Order Results". At the top, there are navigation buttons and a "Save Data" button. The main form contains several input fields: "Work Order ID: 28", "Main Name: Main Street", "Main Diam: 8" (with a red asterisk and "Diam in Inches" below it), "Operator ID:" (empty), "Completed: 12/14/2010" (with a calendar icon), "Main Lngth: 400" (with a red asterisk and "Length In Feet" below it), and a "Field Notes:" text area. Below these are "Desired Velocity: 2.50000" (with a spinner), "Pitot / Nozzle PSI:" (with a text input), "Test Time Min:" (with a spinner), and "Test Time Sec:" (with a spinner). A yellow highlighted section contains a table of flow data with columns for "Flow Hydrant", "Flow Device", "Flow GPM", and "Gallon Used". The first row is populated with "HURCO H 1", "2.5\" Hose Monster", and empty "Flow GPM" and "Gallon Used" fields. Below this is a section titled "Flow Water Clarity" with "Start Clarity:", "During Clarity:", and "Final Clarity:" dropdown menus.

1. Oper ID- Enter the person's name that performed the flush.
2. Completed- Enter the date that the flush was completed.
3. Main Diam- This field is auto-populated.
4. Main Lngth- This field is auto-populated.
5. Field Notes- Enter any notes taken during in the field during the flush.
6. Desired Velocity- Enter the desired velocity.
7. Pitot/Nozzle PSI- Enter the pitot or nozzle PSI.
8. Test Time Min/Test Time Sec- Enter the amount of time the test was run.
9. Devices Used
  - a. Flow Hydrant- Enter the flow hydrant that was used.
  - b. Flow Device- Enter the flow device that was used.

- c. Flow GPM & Gallons Used- Enter these two values that were obtained during the test.
  - If you didn't calculate the gallons used during the test, click on the calculator icon. Enter the Pitot pressure and the flow time in minutes and seconds.



- Click the calculate button and this will fill in the values.



10. Start Clarity- Use the drop down menu to select the quality of the water at the beginning of the test.
11. During Clarity- Use the drop down menu to select the quality of the water during the test.
12. Final Clarity- Use the drop down menu to select the quality of the water at the end of the test.
13. When all results have been entered, select Save Data. This will save the exercise results.

Uni-Directional Flush Work Order Results

Work Order ID: 28 Main Name: Main Street Main Diam: 8 \*\* Diam in Inches \*\*

Operator ID: Completed: 12/14/2010 Main Length: 400 \*\* Length In Feet \*\*

Field Notes:

Desired Velocity: 2.50000 Pitot / Nozzle PSI: 26 Test Time Min: 2 Test Time Sec: 30

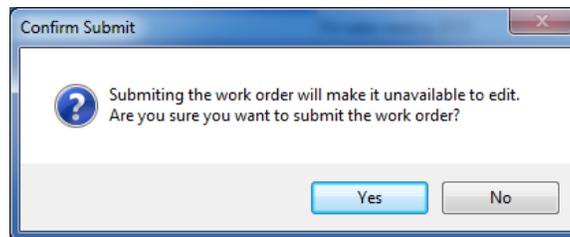
Flow Hydrant	Flow Device	Flow GPM	Gallon Used
HURCO H 1	2.5" Hose Monster	780.32647156i	1950.8161789

**Flow Water Clarity**

Start Clarity: During Clarity: Final Clarity:

## ***To Submit Results from the Uni-directional Flush Work Order***

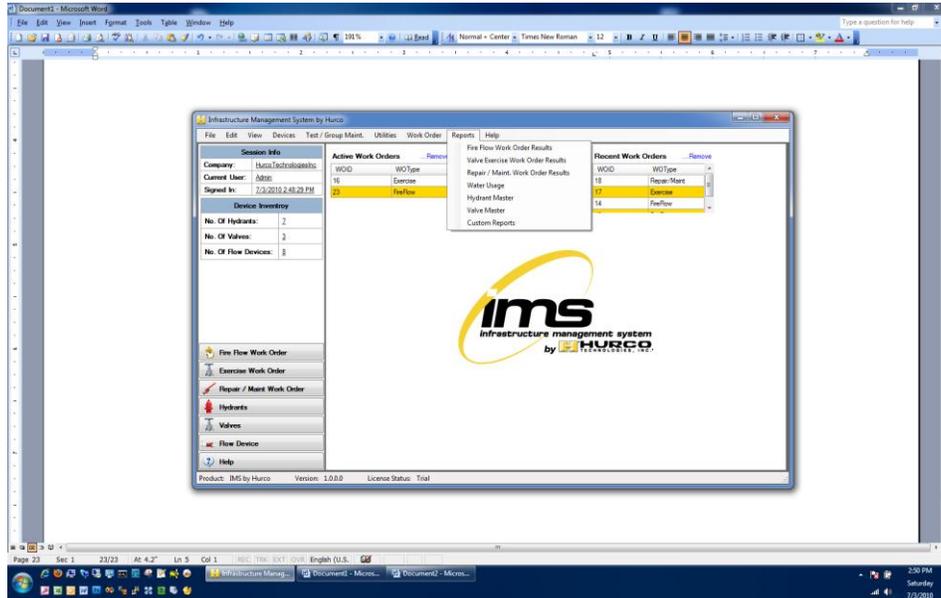
After the results have been entered or uploaded, the results will need to be submitted. The results must be submitted in order to view them in the Reports section. Click the Submit Results button. A warning will appear alerting to the fact that once the results are submitted the work order cannot be edited anymore. If you agree, select Yes. If you want to be able to edit the work order still, select No. The related Uni-directional Flush Work Order Report will appear.



# Chapter 12

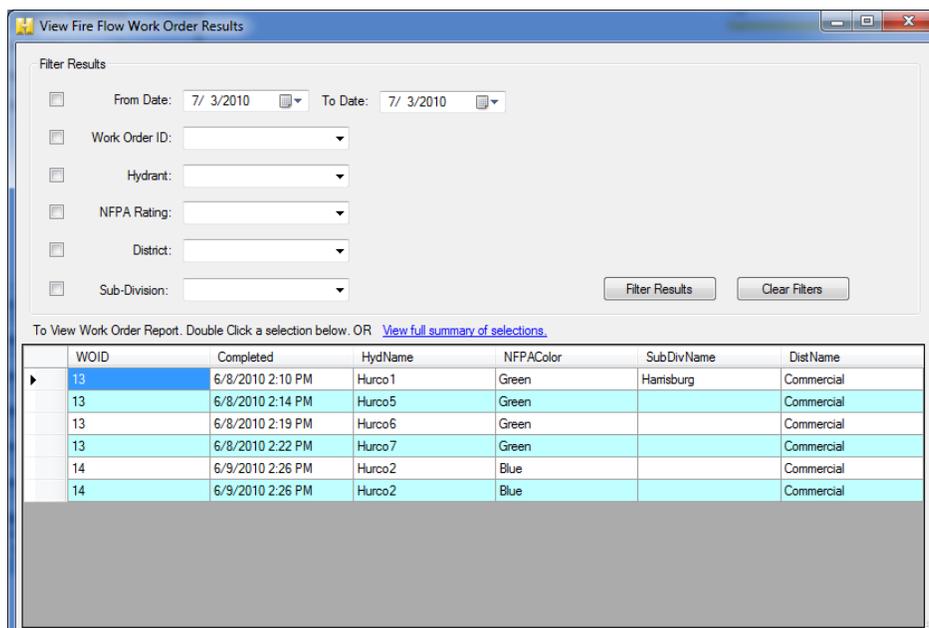
## REPORTS

In this chapter, you'll learn to about reports. These options are located under the Reports option on the Menu Bar.



### *Fire Flow Work Order Results*

This screen allows you to view & print Fire Flow Work Order Reports. Users have the ability to filter for reports by certain criteria.



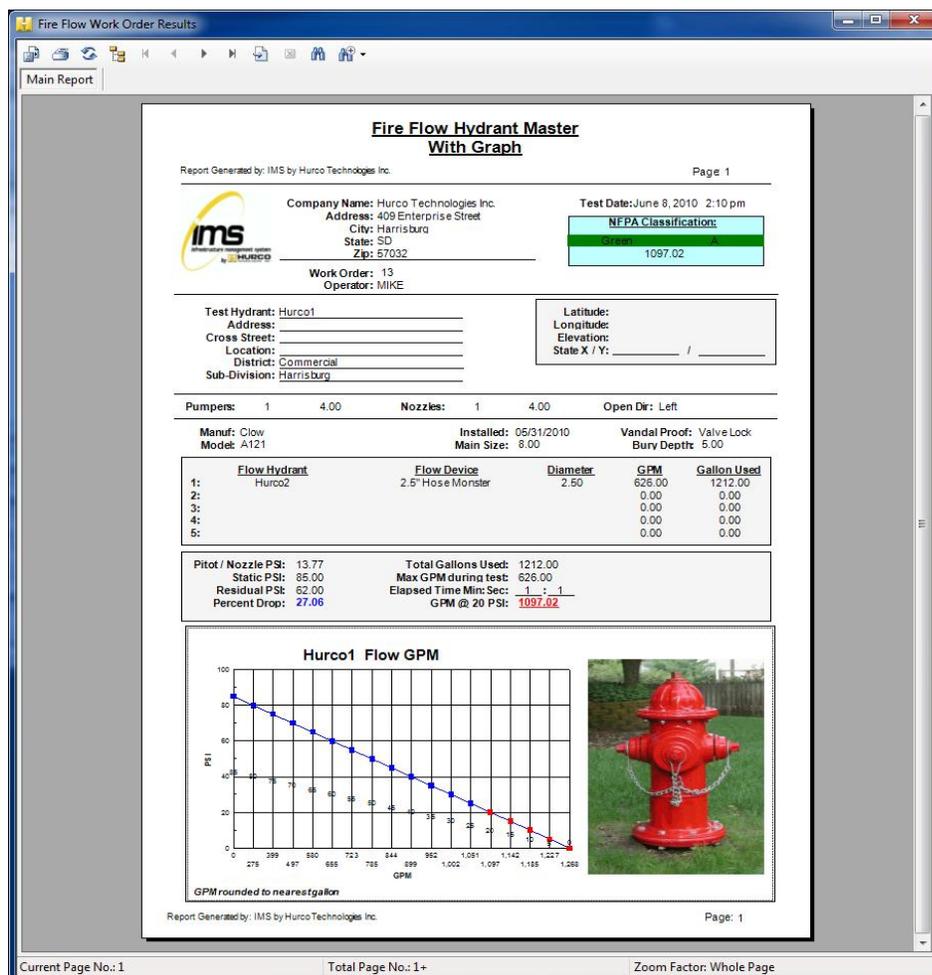
## Filtering & Viewing Fire Flow Work Order Reports

User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see work order results for a specific work order.
- Hydrant- Use this option to see work order results for a specific hydrant.
- NFPA Rating- Use this option to see work orders results by NFPA ratings.
- District- Use this option to see all work order results for a specific divisions
- Sub-division-Use this option to see all work order results for a specific divisions.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, double click on a work order. A confirmation will appear stating the work order ID that is being loaded. The report will show up in a new screen.



To view a summary of the filtered results, click on View full summary of selections. The report will appear in a new screen.

**Fire Flow Test Summary Report**

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

**ims**  
Innovative equipment systems  
by HURCO

Company Name: Hurco Technologies Inc.  
Address: 409 Enterprise Street  
City: Harrisburg  
State: SD  
Zip: 57032

Work Order: 13 Order Created: 06/06/2010  
Test Hydrant: **Hurco1** Completed 6/8/2010 2:10:00PM Operator: MIKE  
Address: \_\_\_\_\_  
Cross Street: \_\_\_\_\_

Static PSI	Residue PSI	Flow GPM	Predicted @ 20 PSI	Gallons Used	NFPA Class	NFPA Color
85.00	62.00	626.00	1,097.02	1,212.00	A	Green

Work Order: 13 Order Created: 06/06/2010  
Test Hydrant: **Hurco5** Completed 6/8/2010 2:14:00PM Operator: MIKE  
Address: 501 Industrial Dr.  
Cross Street: \_\_\_\_\_

Static PSI	Residue PSI	Flow GPM	Predicted @ 20 PSI	Gallons Used	NFPA Class	NFPA Color
85.00	62.00	626.00	1,097.02	1,212.00	A	Green

Work Order: 13 Order Created: 06/06/2010  
Test Hydrant: **Hurco6** Completed 6/8/2010 2:19:00PM Operator: MIKE  
Address: 309 Enterprise St.  
Cross Street: \_\_\_\_\_

Static PSI	Residue PSI	Flow GPM	Predicted @ 20 PSI	Gallons Used	NFPA Class	NFPA Color
85.00	62.00	626.00	1,097.02	1,212.00	A	Green

Work Order: 13 Order Created: 06/06/2010  
Test Hydrant: **Hurco7** Completed 6/8/2010 2:22:00PM Operator: MIKE  
Address: 109 Enterprise St.  
Cross Street: \_\_\_\_\_

Static PSI	Residue PSI	Flow GPM	Predicted @ 20 PSI	Gallons Used	NFPA Class	NFPA Color
85.00	62.00	626.00	1,097.02	1,212.00	A	Green

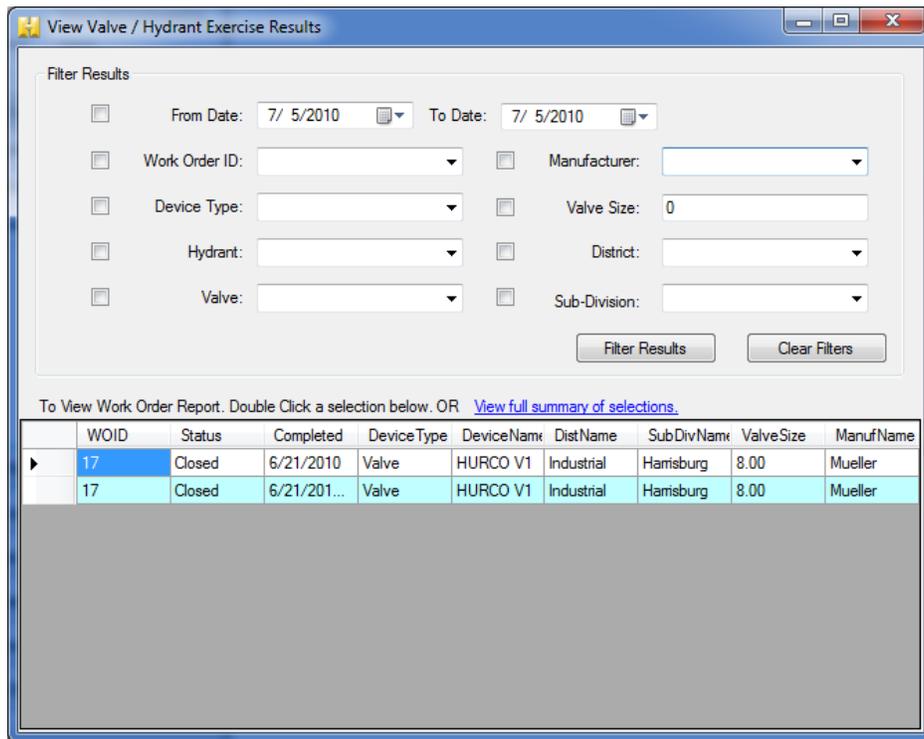
Hydrants Tested: 4 Total Gallons Used 4,848.00

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

Current Page No.: 1 Total Page No.: 1 Zoom Factor: Whole Page

## Valve Exercise Work Order Results

This screen allows you to view & print Valve Exercise Work Order Reports. Users have the ability to filter for reports by certain criteria.



## Filtering & Viewing Valve Exercise Work Order Reports

User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see work order results for a specific work order.
- Device Type- Use this option to see work order results for a specific device type.
- Hydrant- Use this option to see work orders results for a specific hydrant.
- Valve- Use this option to see work orders results for a specific valve.
- Manufacturer- Use this option to see work orders for a specific manufacturer.
- Valve Size- Use this option to see work orders for specific valve sizes.
- District- Use this option to see all work order results for a specific divisions
- Sub-division-Use this option to see all work order results for a specific divisions.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, double click on a work order. A confirmation will appear stating the work order ID that is being loaded. The report will show up in a new screen.

Valve Exercise Result Report

Main Report

### Valve / Hydrant Exercise Results Master Report

Report Generated by: IMS by Hurco Technologies Inc. Page: 1



Company Name: Hurco Technologies Inc.  
Address: 408 Enterprise Street  
City: Harrisburg  
State: SD  
Zip: 57032

Work Order #: 17  
Completed On: 8/21/10 12:18 pm  
Operator ID: MIKE

Work Order Notes: Valve Exercise for Mike At Hurco

Device Type: Valve	Device ID: HURCO V1
Set Rev: 24.00	Set Torque: 150.00
Set Speed: 45.00	

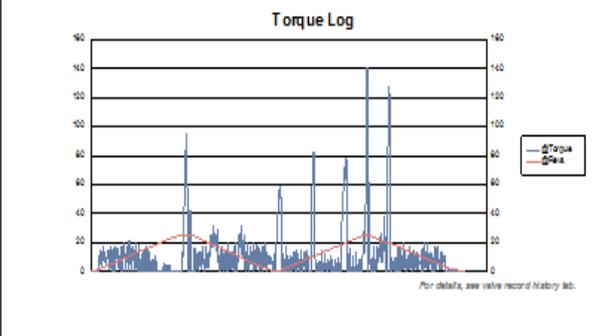
Address: 408 S Enterprise St.  
Cross Street: Cliff Ave.  
Location: N side (mid block)  
District: Industrial  
Sub-Division: Harrisburg

Latitude: 43.441250  
Longitude: -96.704269  
Elevation: 1450.48  
State X / Y: /

Manufacturer: Mueller	Valve Size: 8.00
Install Date: 05/17/2010	Open Direction: Left
Status: Active	Bury Depth: 5.00

Total Revs: 201.00	Rev @ Max Torque: 19.65
Cycle Count: 3.00	Max Rev In Set Dir: 25.00
Max Torque: 133.00	

#### Torque Log



For details, see valve record history tab.

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

Current Page No.: 1
Total Page No.: 2
Zoom Factor: Whole Page

To view a summary of the filtered results, click on View full summary of selections. The report will appear in a new screen.

Exercise Work Order Summary Report

Main Report

### Valve / Hydrant Exercise Summary Report

Report Generated by: IMS by Hurco Technologies Inc. Page: 1


 Company Name: Hurco Technologies Inc.  
 Address: 408 Enterprise Street  
 City: Harrisburg  
 State: SD  
 Zip: 57032

---

Work Order: 17      Order Created: 06/21/2010      Operator: MIKE  
 Test Device ID: HURCO V1      Device Type: Valve      Completed: 6/21/10 12:18 pm

Address: 408 S Enterprise St.	District: Industrie		
Cross Street: Cliff Ave.	Sub-Division: Harrisburg		
Install Date: 05/17/2010	Manufacturer: Mueller		
Valve Size: 3.00	Total Revs: 201.00	Cycle Count: 3.00	Max Torque: 132.00
Rev @ Max Torque: 19.65	Max Rev In 360 Dir: 25.00		

---

Work Order: 17      Order Created: 06/21/2010      Operator: MIKE  
 Test Device ID: HURCO V1      Device Type: Valve      Completed: 6/21/10 12:00 am

Address: 408 S Enterprise St.	District: Industrie		
Cross Street: Cliff Ave.	Sub-Division: Harrisburg		
Install Date: 05/17/2010	Manufacturer: Mueller		
Valve Size: 3.00	Total Revs: 201.00	Cycle Count: 3.00	Max Torque: 122.00
Rev @ Max Torque: 20.00	Max Rev In 360 Dir: 24.00		

Devices Exercised: 2      Total # of Work Orders: 1

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

Current Page No.: 1      Total Page No.: 1      Zoom Factor: Whole Page

## Repair/Maintenance Work Order Results

This screen allows you to view & print Repair/Maint Work Order Reports. Users have the ability to filter for reports by certain criteria.

View full summary of selections.' followed by a table with columns: WOID, Status, Completed, Device Type, Device Name, Dist Name, Sub Div Name, Manuf Name, Action Name. The first row is highlighted with a blue background and contains: 27, Closed, 6/30/2010, Hydrant, HURCO H 2, Commercial, Mueller, Paint Hydr..."/>

View Repair / Maint. Work Order Results

Filter Results

From Date: 12/16/2010 To Date: 12/16/2010

Work Order ID:   Manufacturer:

Device Type:   Action:

Hydrant:   District:

Valve:   Sub-Division:

Main:

Filter Results Clear Filters

To View Work Order Report. Double Click a selection below. OR [View full summary of selections.](#)

	WOID	Status	Completed	Device Type	Device Name	Dist Name	Sub Div Name	Manuf Name	Action Name
▶	27	Closed	6/30/2010	Hydrant	HURCO H 2	Commercial		Mueller	Paint Hydr...

## Filtering & Viewing Repair/Maint Work Order Reports

User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see work order results for a specific work order.
- Device Type- Use this option to see work order results for a specific device type.
- Hydrant- Use this option to see work order results for a specific hydrant.
- Valve- Use this option to see work order results for a specific valve.
- Main- Use this option to see work order results for a specific main.
- Manufacturer- Use this option to see work order results for a specific manufacturer.
- Action- Use this option to see work order results for specific repair/maintenance action.
- District- Use this option to see all work order results for a specific divisions
- Sub-division-Use this option to see all work order results for a specific divisions.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, double click on a work order. A confirmation will appear stating the work order ID that is being loaded. The report will show up in a new screen.

**Repair / Maint Work Order Results**

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

**ims**  
Infrastructure management system  
by HURCO

Company Name: Hurco Technologies Inc.  
Address: 409 Enterprise Street  
City: Harrisburg  
State: SD  
Zip: 57032

Work Order: 28  
Work Order Date: 07/05/2010

Work Order Notes: New work order

---

**Hurco 1**

Device Type: Hydrant  
Manufacture: Clow  
Install Date: 5/31/2010 12:00:00AM  
Status: Active

Address:  
Location:  
City:  
State:  
Zip:

Action	Completed	Operator
Paint Hydrant	07/07/2010	Teresa

Field Notes: Hydrant repainted yellow per the work order.

---

**HURCO V1**

Device Type: Valve  
Manufacture: Mueller  
Install Date: 5/17/2010 6:57:07PM  
Status: Open

Address: 408.5 Enterprise St  
Location: N side (mid block)  
City: Harrisburg  
State: SD  
Zip: 57032

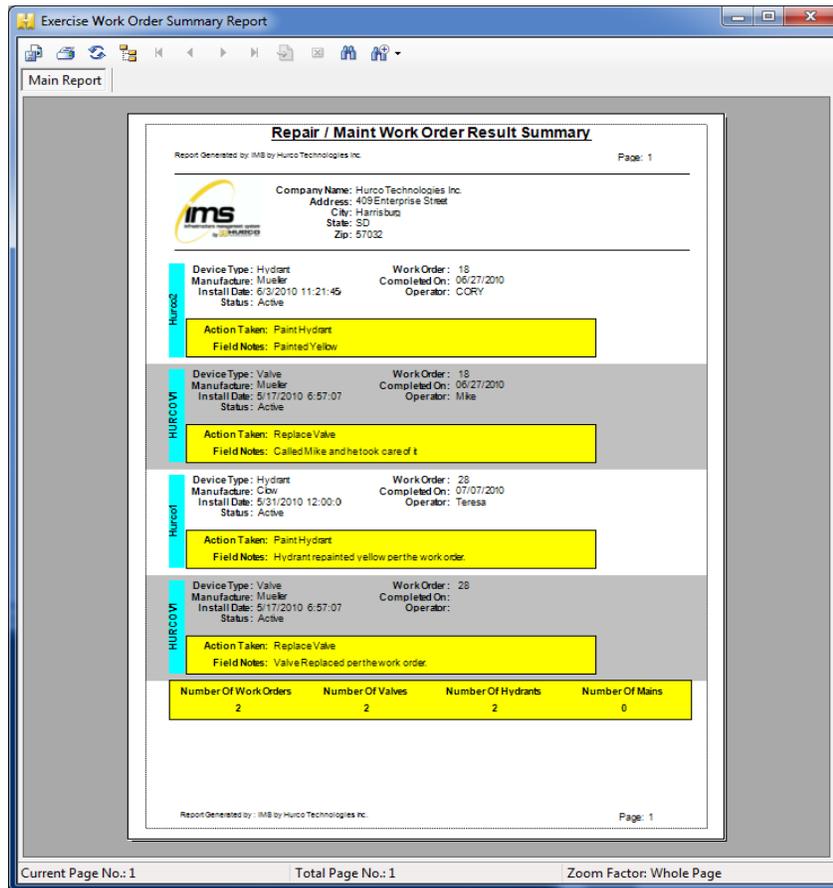
Action	Completed	Operator
Replace Valve		

Field Notes: Valve Replaced per the work order.

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

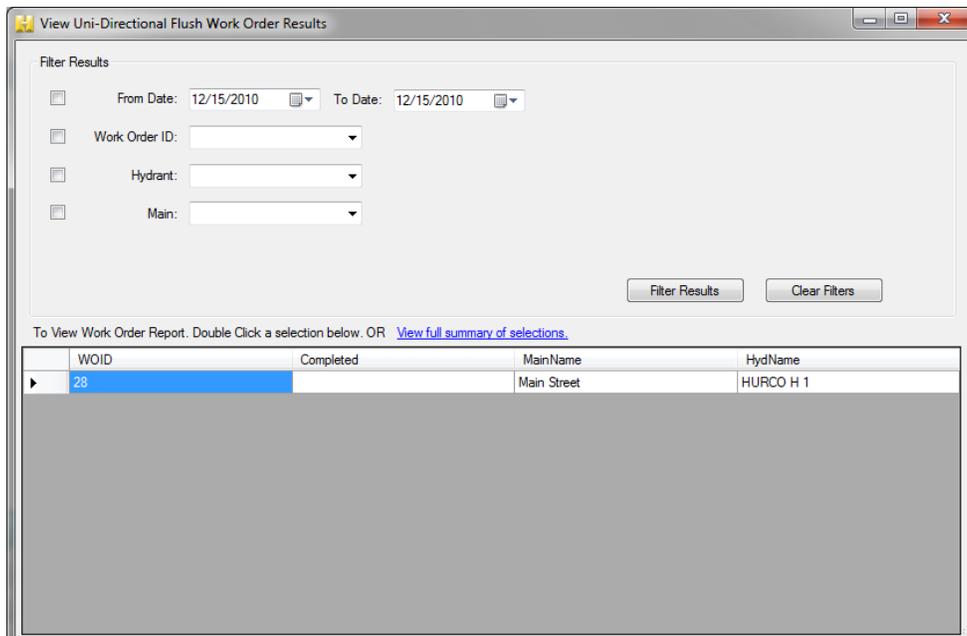
Current Page No.: 1 Total Page No.: 1 Zoom Factor: Whole Page

To view a summary of the filtered results, click on View full summary of selections. The report will appear in a new screen.



## Uni-directional Flush Work Order Results

This screen allows you to view & print Uni-directional Flush Work Order Reports. Users have the ability to filter for reports by certain criteria.



## Filtering & Viewing Uni-directional Flush Work Order Reports

User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see work order results for a specific work order.
- Hydrant- Use this option to see work order results for a specific hydrant.
- Main- Use this option to see work orders results for a specific main.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, double click on a work order. A confirmation will appear stating the work order ID that is being loaded. The report will show up in a new screen.

The screenshot shows a web browser window titled "Uni-Directional Flush Work Order Results". The main content area displays a "Master Report" for a specific work order. The report includes a company logo (ims by HURCO), company details, work order information, a warning message, and a table of flow data. At the bottom, there is a summary table for water quality and detention statistics.

**Uni-Directional Flush Results Master Report**

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

**ims** Infrastructure management system by HURCO

Company Name: Company Name  
Address: My Address  
City:  
State:  
Zip:

Work Order #: 29  
Completed On: 12/15/2010  
Operator ID: Teresa

Work Order Notes:

**WARNING! - Did not reach AWWA recommended number of detentions.**

Main ID: Main Street	Min Size: 6.00 In.
Length: 400.00 Ft.	Max Size: 8.00 In.
Install Date:	
Location Notes:	

Flow Time: 2: 0	Target Velocity: 2.50	Actual Velocity: 5.16
-----------------	-----------------------	-----------------------

Flow Hydrant:	Flow Device:	Flow PSI:	GPM:	Gallons Used:
HURCO H 1	2.5" Hose Monster	28.00	809.78	1,619.57

	Initial	During	Final
Water Quality:	Yellowish	Particles	Clear

# Of Detentions:	1.55	Total Gallons Used:	1619.57
------------------	------	---------------------	---------

Current Page No.:1 Total Page No.:1 Zoom Factor:100%

To view a summary of the filtered results, click on View full summary of selections. The report will appear in a new screen.

Uni-Directional Flow Work Order Result Summary

Main Report

### Uni-Directional Flush Work Order Summary

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

---



**Company Name:** Company Name  
**Address:** My Address  
**City:**  
**State:**  
**Zip:**

---

**Work Order #:** 28 **Order Date:** 12/08/2010

**Test Main:** Main Street **Completed** **Operator:**

<b>Target Velocity:</b> 2.50	<b>Actual Velocity:</b> 4.97	<b>Main Length:</b> 400.00
<b>Start Clarity:</b> Brown	<b>During Clarity:</b> Particles	<b>Final Clarity:</b> Clear
<b>Total GPM:</b> 780.33	<b>Total Gallons:</b> 1,950.82	

---

**Work Order #:** 29 **Order Date:** 12/15/2010

**Test Main:** Main Street **Completed** 12/15/2010 **Operator:** Teresa

<b>Target Velocity:</b> 2.50	<b>Actual Velocity:</b> 5.16	<b>Main Length:</b> 400.00
<b>Start Clarity:</b> Yellowish	<b>During Clarity:</b> Particles	<b>Final Clarity:</b> Clear
<b>Total GPM:</b> 809.78	<b>Total Gallons:</b> 1,619.57	

<b>Mains Flushed:</b> 2	<b>Total Gallons:</b> 3,570.38
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Current Page No.: 1 Total Page No.: 1 Zoom Factor: 100%

## C-Factor Work Order Results

This screen allows you to view & print C-Factor Work Order Reports. Users have the ability to filter for reports by certain criteria.

View full summary of selections.'. At the bottom is a table with four columns: 'WOID', 'Completed', 'MainName', and 'HydName'. The first row is highlighted in blue and contains the values: '30', '12/15/2010 11:15 PM', 'O Ave Main', and 'HURCO H 4'."/>

WOID	Completed	MainName	HydName
30	12/15/2010 11:15 PM	O Ave Main	HURCO H 4

### Filtering & Viewing C-Factor Work Order Reports

User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see work order results for a specific work order.
- Hydrant- Use this option to see work order results for a specific hydrant.
- Main- Use this option to see work orders results for a specific main.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, double click on a work order. A confirmation will appear stating the work order ID that is being loaded. The report will show up in a new screen.

C-Factor Work Order Results

Main Report

### C-Factor Results Master Report

Report Generated by: IMS by Hurco Technologies Inc. Page: 1



**ims**  
a division of HURCO TECHNOLOGIES INC.

Company Name: Company Name  
Address: My Address  
City:  
State:  
Zip:

Work Order #: 30  
Completed On: 12/15/2010  
Operator ID: Teresa

Work Order Notes:

Main ID: O Ave Main Min Size: 7.00 In.  
 Length: 300.00 Ft. Max Size: 7.00 In.  
 Install Date: 12/14/2010  
 Pipe Type: Iron  
 Location Notes:

Residual Hydrant	Static PSI	Residual PSI	% Of Drop
HURCO H 1	65.00	50.00	23.08
HURCO H 4	70.00	54.00	22.86

Flow Time: 2: 0 Target C-Factor: 130.00  
 Fitting Length Adj: 5.00 Actual C-Factor: 232.00  
 Head Loss: 2.00 Adjusted Pipe Diameter: 5.62

Flow Hydrant:	Flow Device:	Flow PSI:	GPM:	Gallons Used:
HURCO H 4	2.5" Hose Monster	26.00	780.33	1560.65

**Total Gallons Used: 1560.65**

Current Page No.: 1 Total Page No.: 1 Zoom Factor: 75%

To view a summary of the filtered results, click on View full summary of selections. The report will appear in a new screen.

C-Factor Work Order Result Summary

Main Report

### C-Factor Work Order Summary

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

---



**Company Name:** Company Name  
**Address:** My Address  
**City:**  
**State:**  
**Zip:**

---

**Work Order #:** 30      **Order Date:** 12/15/2010

[Test Main:](#) O Ave Main

Target C-Factor: <u>130.00</u>	Actual C-Factor: <u>232.00</u>
Main Diameter: <u>7.00</u>	Actual Inside Diameter: <u>5.62</u>
Total GPM: 780.33	Total Gallons: 1,560.65

<b>Mains Tested: 1</b>	<b>Total Gallons: 1,560.65</b>
------------------------	--------------------------------

Current Page No.: 1      Total Page No.: 1      Zoom Factor: 75%

## *Water Usage Results*

There are three water usage reports that can be viewed. Choose Fire Flow, Uni-directional Flush or C-Factor. Users have the ability to filter for reports by certain criteria.

## Filtering & Viewing Fire Flow Water Usage Reports

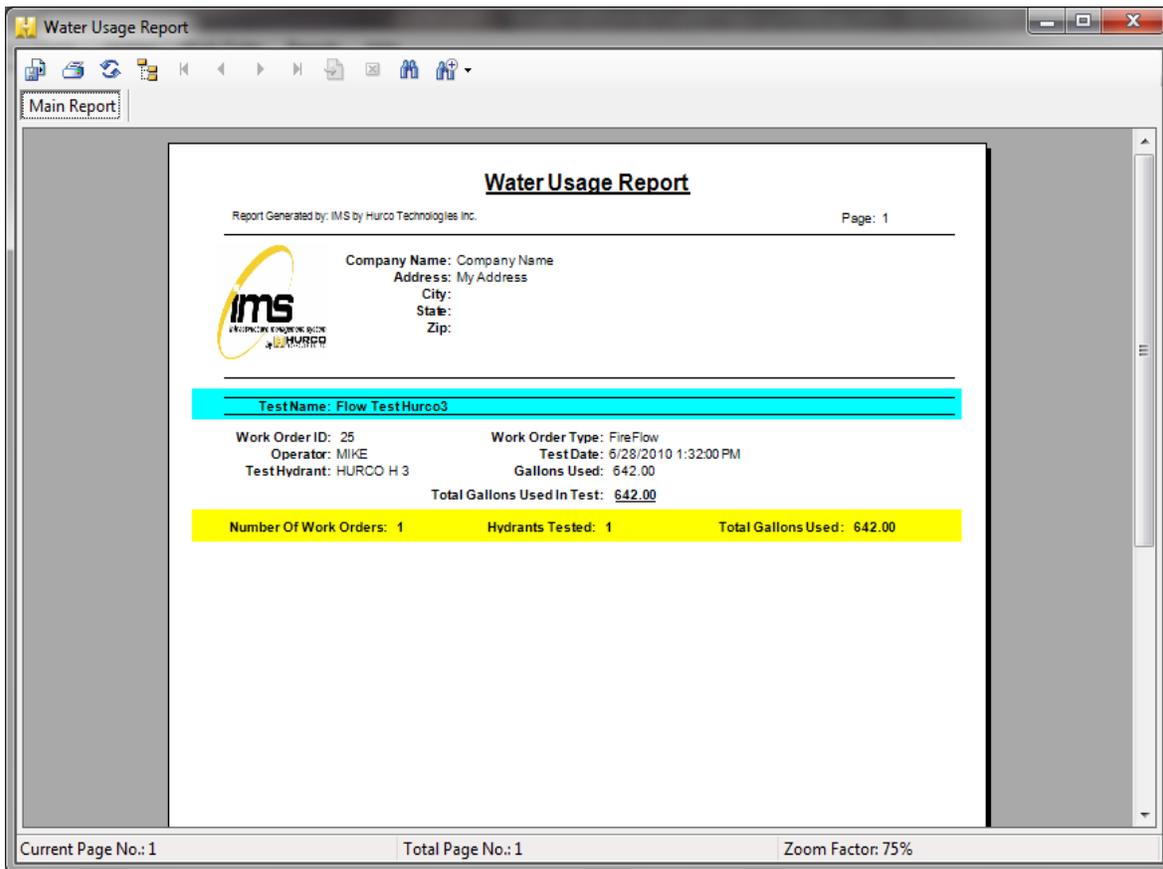
WOID	WOType	Status	Completed	OperID	HydName	Gallons	DistName	SubDivName	NFPAColor
25	FireFlow	Closed	6/28/2010...	MIKE	HURCO H 4	761.00000...	Commercial		Blue
25	FireFlow	Closed	6/28/2010...	MIKE	HURCO H 3	642.00000...	Commercial		Green
25	FireFlow	Closed	6/28/2010...	MIKE	HURCO H 2	504.00000...	Commercial		Blue

User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see water usage results for a specific work order.
- Hydrant- Use this option to see water usages results for a specific hydrant.
- Valve- Use this option to see water usages results for a specific valve.
- NFPA Rating- Use this option to see water usages results by NFPA ratings.
- District- Use this option to see all water usage results for a specific divisions
- Sub-division-Use this option to see all water usage results for a specific divisions.

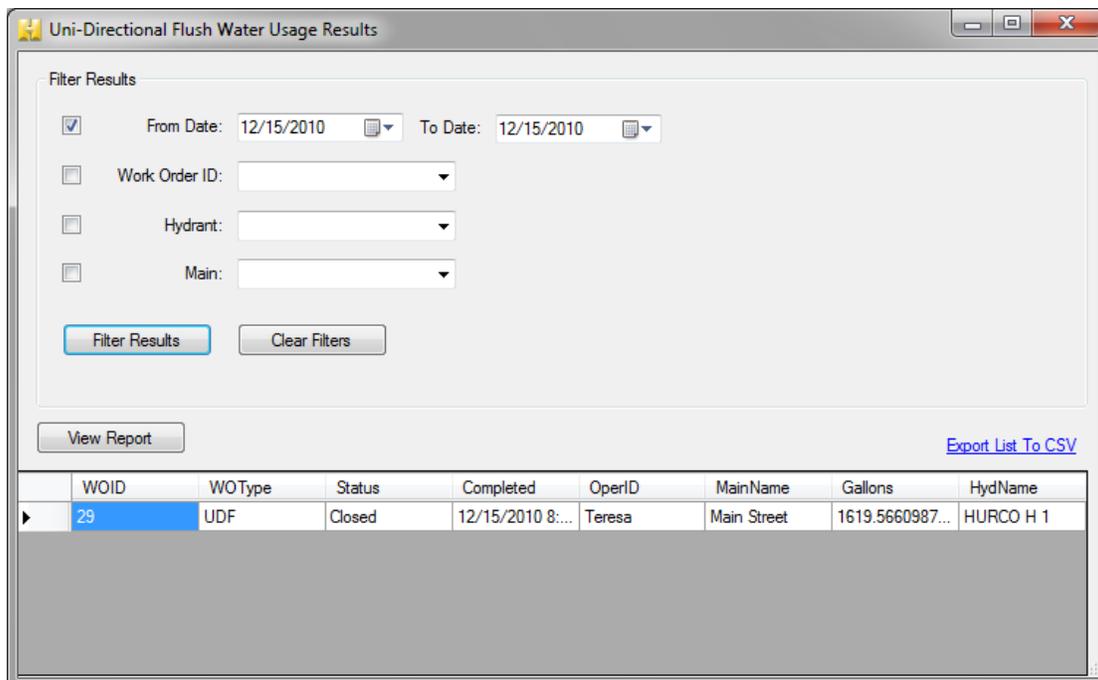
User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, click View Report. A confirmation will appear stating the selection is being loaded. The report will show up in a new screen.



The water usage list can also be exported to a CSV file. Click Export List to CSV. Select the destination for the file to be saved. Click Ok to save file. A confirmation will appear stating that file was successfully exported.

## Filtering & Viewing Uni-directional Flush Water Usage Reports



User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see water usage results for a specific work order.
- Hydrant- Use this option to see water usages results for a specific hydrant.
- Main- Use this option to see water usages results for a specific main.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, click View Report. A confirmation will appear stating the selection is being loaded. The report will show up in a new screen.

The screenshot shows a web browser window titled "UDF Water Usage Report". The browser's address bar shows "Main Report". The report content includes the following information:

**UDF Water Usage Report**  
Report Generated by: IMS by Hurco Technologies Inc. Page: 1

**ims** logo: WATER METER DATA by HURCO

Company Name: Company Name  
Address: My Address  
City:  
State:  
Zip:

---

Work Order ID: 29      Test Date: 12/15/2010  
Operator: Teresa      Gallons Used: 1,619.57  
Test Main: Main Street

<b>Number Of Work Orders: 1</b>	<b>Mains Tested: 1</b>	<b>Total Gallons Used: 1,619.57</b>
---------------------------------	------------------------	-------------------------------------

Current Page No.: 1      Total Page No.: 1      Zoom Factor: 75%

The water usage list can also be exported to a CSV file. Click Export List to CSV. Select the destination for the file to be saved. Click Ok to save file. A confirmation will appear stating that file was successfully exported.

## Filtering & Viewing C-Factor Water Usage Reports

View full summary of selections.' Below this is a table with columns: WOID, Completed, MainName, and HydName. The first row is selected and highlighted in blue, showing WOID: 30, Completed: 12/15/2010 11:15 PM, MainName: O Ave Main, and HydName: HURCO H 4."/>

WOID	Completed	MainName	HydName
30	12/15/2010 11:15 PM	O Ave Main	HURCO H 4

User can filter by the following results:

- For a certain date period. Enter from date and to date.
- Work order ID-Use this option to see water usage results for a specific work order.
- Hydrant- Use this option to see water usages results for a specific hydrant.
- Main- Use this option to see water usages results for a specific main.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, click View Report. A confirmation will appear stating the selection is being loaded. The report will show up in a new screen.

C-Factor Work Order Results

Main Report

### C-Factor Results Master Report

Report Generated by: IMS by Hurco Technologies Inc. Page: 1



**ims**  
INTEGRATED MANAGEMENT SOLUTIONS  
by HURCO

Company Name: Company Name  
Address: My Address  
City:  
State:  
Zip:

Work Order #: 30  
Completed On: 12/15/2010  
Operator ID: Teresa

Work Order Notes:

Main ID: O Ave Main  
Length: 300.00 Ft.  
Install Date: 12/14/2010  
Pipe Type: Iron  
Location Notes:

Residual Hydrant	Static PSI	Residual PSI	% Of Drop
HURCO H 1	65.00	50.00	23.08
HURCO H 4	70.00	54.00	22.86

Flow Time: 2: 0      Target C-Factor: 130.00  
Fitting Length Adj: 5.00      Actual C-Factor: 232.00  
Head Loss: 2.00      Adjusted Pipe Diameter: 5.62

Flow Hydrant:	Flow Device:	Flow PSI:	GPM:	Gallons Used:
HURCO H 4	2.5" Hose Monster	26.00	780.33	1560.65

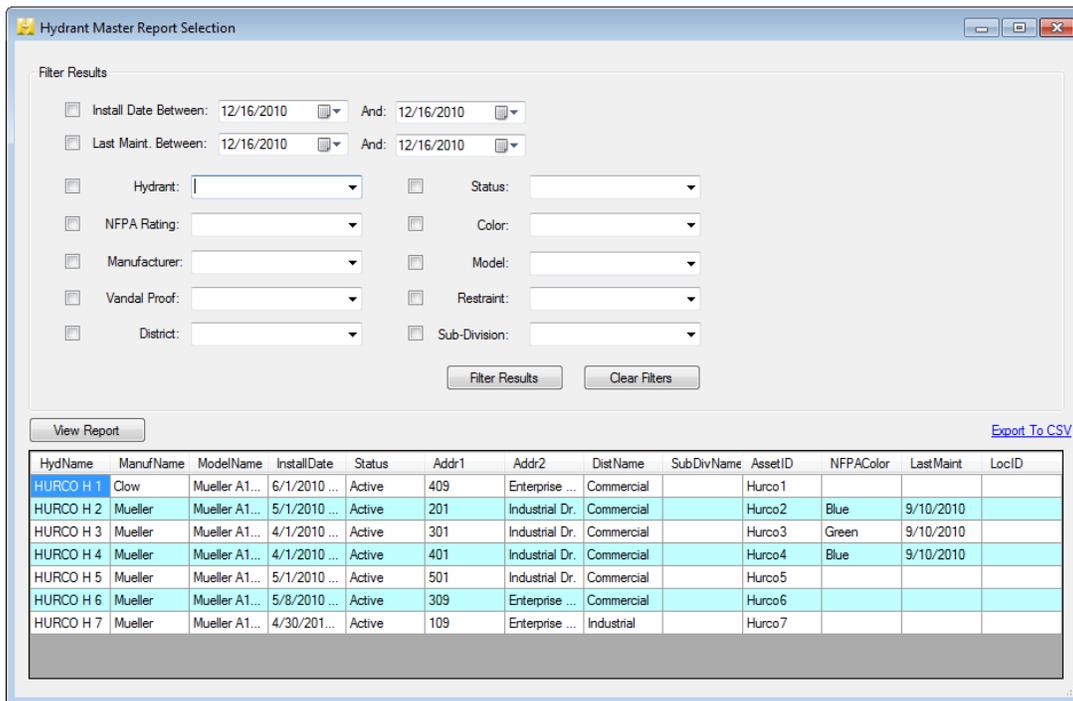
**Total Gallons Used: 1560.65**

Current Page No.: 1      Total Page No.: 1      Zoom Factor: 75%

The water usage list can also be exported to a CSV file. Click Export List to CSV. Select the destination for the file to be saved. Click Ok to save file. A confirmation will appear stating that file was successfully exported.

## ***Hydrant Master***

This screen allows you to view & print Hydrant Master Report. Users have the ability to filter for reports by certain criteria.



## Filtering & Viewing Hydrant Master Reports

User can filter by the following results:

- Install Date. Use this option to see hydrant details by date range of installation.
- Last Maint Date. Use this option to see hydrant details by date range of last maintenance.
- Hydrant- Use this option to see hydrant details results for a specific hydrant.
- NFPA Rating- Use this option to see hydrant details by NFPA ratings.
- Manufacturer- Use this option to see hydrant details by manufacturer.
- Vandal Proof- Use this option to see hydrant details by vandal proof types.
- District- Use this option to see hydrant details for a specific divisions.
- Status- Use this option to see hydrant details for a specific status.
- Color- Use this option to see hydrant details for a specific hydrant paint color.
- Model- Use this option to see hydrant details for a specific hydrant model.
- Restraint- Use this option to see hydrant details for a specific hydrant restraint type.
- Sub-division-Use this option to see hydrant details for a specific sub-divisions.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, click View Report. A confirmation will appear stating the selection is being loaded. The report will show up in a new screen.

**Hydrant Master Report**

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

**ims**  
Infrastructure management system  
by HURCO

Company Name: Hurco Technologies Inc.  
Address: 409 Enterprise Street  
City: Harrisburg  
State: SD  
Zip: 57032

HydName	ManufName	ModelName	InstallDate	Status
Hurco2	Mueller	A122	06/03/2010	Active
Asset ID: _____ Restraint: Rod and Bolt Vandal Proof: Valve Lock Location ID: _____ Address: 201 Industrial Dr. City: Harrisburg State: SD Cross Street: cliff District: Commercial Sub-Division: _____ Location Notes: N side (mid block)				
		Last Maint: 06/28/2010 NFPA Color: Blue NFPA Class: AA Predicted Flow @ 20 PSI 2,477.00		
Hurco3	Mueller	A122	06/01/2010	Active
Asset ID: _____ Restraint: Rod and Bolt Vandal Proof: Valve Lock Location ID: _____ Address: 301 Industrial Dr. City: Harrisburg State: SD Cross Street: Enterprise St. District: Commercial Sub-Division: _____ Location Notes: N side (mid block)				
		Last Maint: 06/15/2010 NFPA Color: Blue NFPA Class: AA Predicted Flow @ 20 PSI 2,313.00		
Hurco4	Mueller	A121		Active
Asset ID: _____ Restraint: Rod and Bolt Vandal Proof: Valve Lock Location ID: _____ Address: 401 Industrial Dr. City: Harrisburg State: SD Cross Street: _____ District: Commercial Sub-Division: _____ Location Notes: N side (mid block)				
		Last Maint: _____ NFPA Color: Blue NFPA Class: AA Predicted Flow @ 20 PSI		

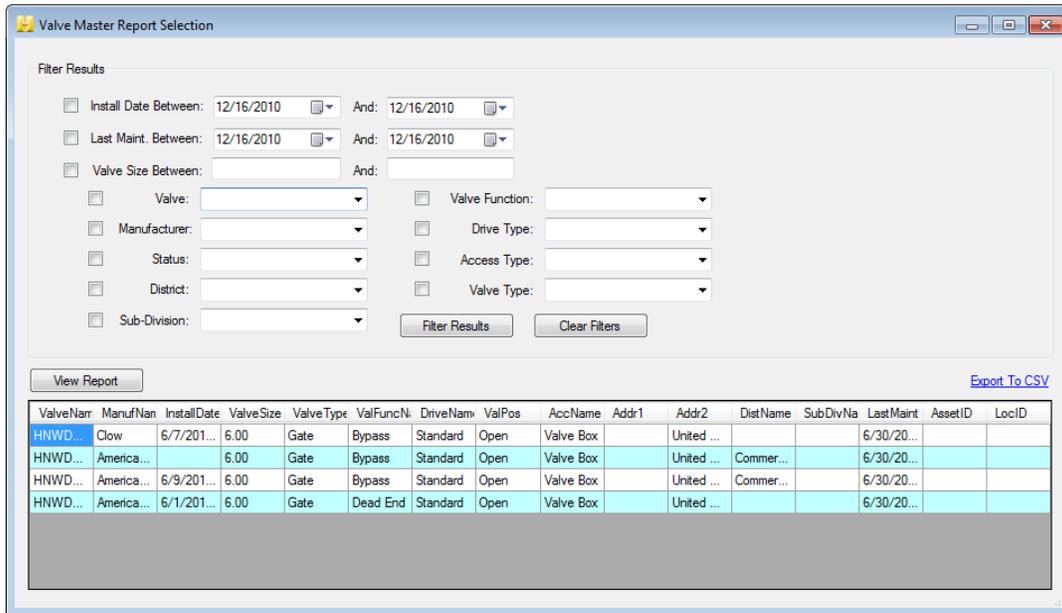
Report Generated by: IMS by Hurco Technologies Inc. Page: 1

Current Page No.: 1 Total Page No.: 1 Zoom Factor: Whole Page

The hydrant master list can also be exported to a CSV file. Click Export List to CSV. Select the destination for the file to be saved. Click Ok to save file. A confirmation will appear stating that file was successfully exported.

# Valve Master

This screen allows you to view & print Valve Master Report. Users have the ability to filter for reports by certain criteria.



## Filtering & Viewing Valve Master Reports

User can filter by the following results:

- Install Date. Use this option to see valve details by date range of installation.
- Last Maint Date. Use this option to see valve details by date range of last maintenance.
- Valve- Use this option to see valve details results for a specific valve.
- Manufacturer- Use this option to see valve details by manufacturer.
- Status- Use this option to see valve details for a specific status.
- District- Use this option to see valve details for a specific divisions.
- Sub-division-Use this option to see valve details for a specific sub-divisions.
- Valve function- Use this option to see valve details for a specific valve function.
- Drive Type- Use this option to see valve details for a specific drive type.
- Access Type- Use this option to see valve details for a specific access type.
- Valve Type- Use this option to see valve details for a specific valve type.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, click View Report. A confirmation will appear stating the selection is being loaded. The report will show up in a new screen.

**Valve Master Report**

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

**Company Name:** Hurco Technologies Inc.  
**Address:** 409 Enterprise Street  
**City:** Harrisburg  
**State:** SD  
**Zip:** 57032

---

<b>V-101</b>	<b>Manufacture:</b> _____	<b>Address:</b> 510 Cottonwood Dr. _____
	<b>Install Date:</b> 06/01/2010	<b>Cross Street:</b> _____
	<b>Valve Type:</b> Gate	<b>Location Notes:</b> _____
	<b>Function:</b> Hydrant	<b>City:</b> Harrisburg
	<b>Drive Type:</b> Standard	<b>State:</b> SD
	<b>Access Type:</b> Manhole	<b>District:</b> _____
	<b>Valve Size:</b> 4	<b>Sub-Division:</b> _____
	<b>Status:</b> Open	<b>Location ID:</b> _____
	<b>Asset ID:</b> _____	<b>Box Size:</b> 4.00
	<b>Last Maint:</b> _____	<b>Box Depth:</b> 6.00
<b>Open Direction:</b> Left		

---

<b>V-201-Aux</b>	<b>Manufacture:</b> Kennedy Valve	<b>Address:</b> 409 Enterprise St. _____
	<b>Install Date:</b> 05/31/2010	<b>Cross Street:</b> Cliff Ave. _____
	<b>Valve Type:</b> Gate	<b>Location Notes:</b> North Side Of Street
	<b>Function:</b> Bypass	<b>City:</b> Harrisburg
	<b>Drive Type:</b> Gear	<b>State:</b> SD
	<b>Access Type:</b> Manhole	<b>District:</b> Industrial
	<b>Valve Size:</b> 8	<b>Sub-Division:</b> Harrisburg
	<b>Status:</b> Open	<b>Location ID:</b> _____
	<b>Asset ID:</b> _____	<b>Box Size:</b> 10.00
	<b>Last Maint:</b> _____	<b>Box Depth:</b> 6.00
<b>Open Direction:</b> Left		

Number Of Valves	Oldest Valve Install Date	Newest Valve Install Date
2	05/31/2010	06/01/2010

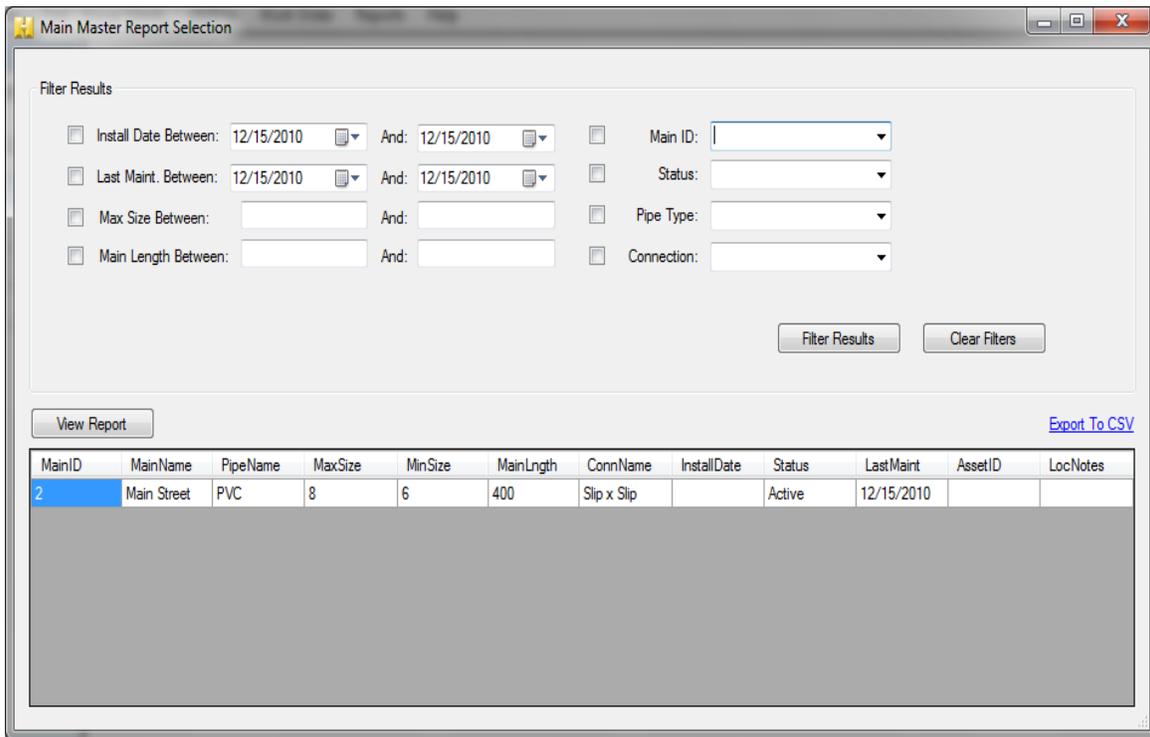
Report Generated by: IMS by Hurco Technologies Inc. Page: 1

Current Page No.: 1 Total Page No.: 1 Zoom Factor: Whole Page

The valve master list can also be exported to a CSV file. Click Export List to CSV. Select the destination for the file to be saved. Click Ok to save file. A confirmation will appear stating that file was successfully exported.

# Main Master

This screen allows you to view & print Main Master Report. Users have the ability to filter for reports by certain criteria.



## Filtering & Viewing Main Master Reports

User can filter by the following results:

- Install Date- Use this option to see main details by date range of installation.
- Last Maint Date- Use this option to see main details by date range of last maintenance.
- Max Size Between- Use this option to see main detail results for a max size range.
- Main Length Between- Use this option to see mains by a range in length.
- Main ID- Use this option to see main details for a specific main ID.
- Status- Use this option to see main details for a specific status.
- Pipe Type-Use this option to see main details for a specific type of pipe.
- Connection- Use this option to see main details for a specific main connection.

User can chose one or more options to filter by. Once the filter options have been selected, click the Filter Results button. The results for the filter will appear on the bottom of the screen.

To view a report, click View Report. A confirmation will appear stating the selection is being loaded. The report will show up in a new screen.

**Main Master Report**

Report Generated by: IMS by Hurco Technologies Inc. Page: 1

**ims**  
Hydrant Management System  
by HURCO

Company Name: Company Name  
 Address: My Address  
 City:  
 State:  
 Zip:

**0 Ave Main**

Asset ID: \_\_\_\_\_ Location Notes: \_\_\_\_\_  
 Install Date: 12/14/2010 \_\_\_\_\_  
 Main Length: 300.00 \_\_\_\_\_  
 Pipe Type: Iron \_\_\_\_\_  
 Min Size: 7.00 \_\_\_\_\_  
 Max Size: 5.00 \_\_\_\_\_  
 Connection Type: MT x MJ \_\_\_\_\_  
 Status: Active \_\_\_\_\_  
 Last Maint: \_\_\_\_\_

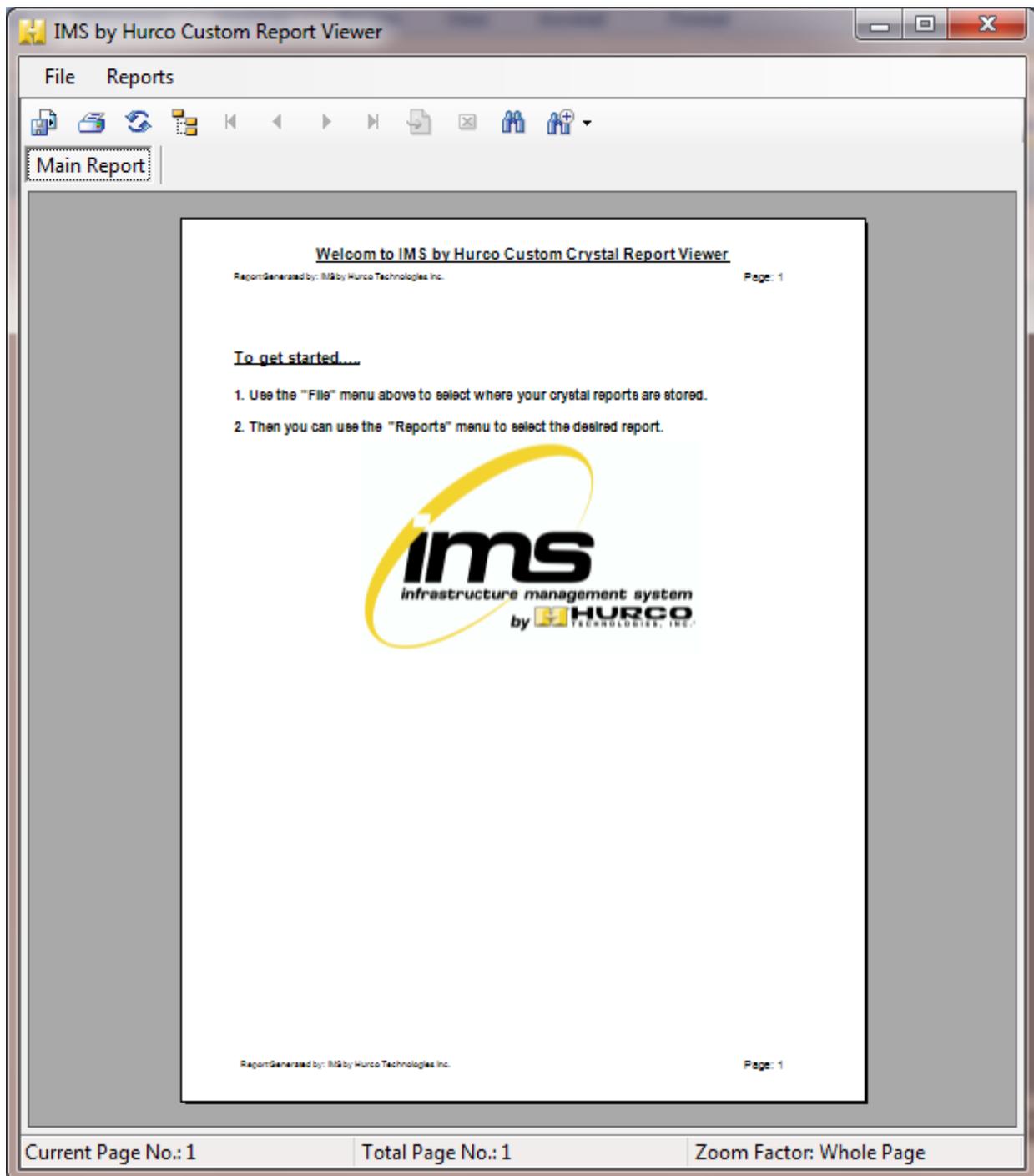
Number Of Mains	Oldest Main Install Date	Newest Main Install Date
1	12/14/2010	12/14/2010

Current Page No.: 1 Total Page No.: 1 Zoom Factor: 75%

The valve master list can also be exported to a CSV file. Click Export List to CSV. Select the destination for the file to be saved. Click Ok to save file. A confirmation will appear stating that file was successfully exported.

## Custom Report Viewer

This screen allows you to view & print Custom Reports. These are custom reports that have been created by the user in Crystal Report Writer. No custom reports are included with the program.

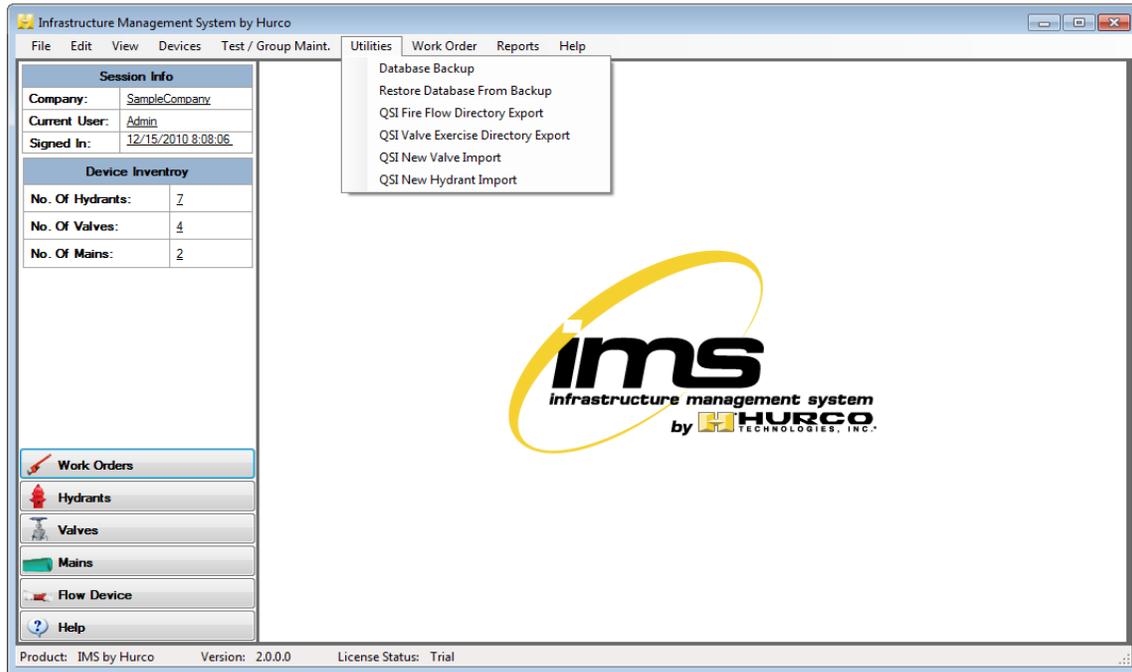


To view reports in this selection, you must first set the report directory. This is where the custom reports that are created will be saved. Once you set the directory, all custom reports will need to be saved in that directory in order to be access by IMS by Hurco. For more information on the database structure and writing reports, contact Hurco Technologies.

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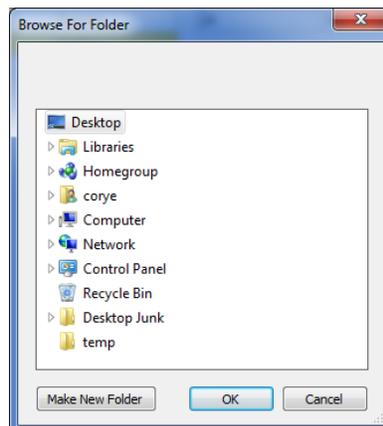
## Utilities

In this chapter, you'll learn the utilities that are available for the program. These options are located under the Utilities option on the Menu Bar.



## Database Backup

This option allows the user to save a backup of the database. To back up the database, chose Backup Database. A screen will appear asking for the location to save the backup file. Select a location or make a new folder to save it in. Once you have the location, select Ok.



## ***Restore Database from Backup***

This option allows the user to restore a backup of the database. To restore the database, chose Restore Database from Backup. A screen will appear asking for the location of the backup file. Select the backup file and select Ok.

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**Warning:** Restoring a backup will overwrite all current data in your company. Please make sure that you are selecting the correct backup file for your company.

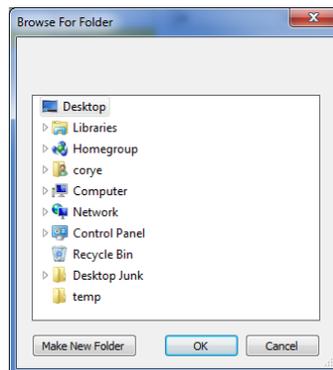
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## ***QSI Fire Flow Directory Export***

This option allows the user export the Fire Flow Directory. You will get the following warning. If the QSI Device is pulled in, select Ok. If the QSI is not plugged in, plug it in and then select Ok.

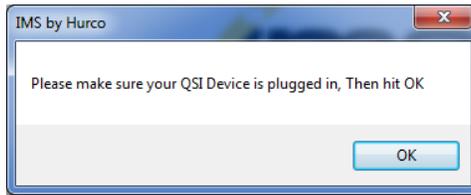


A screen will appear asking for the location to save the directory file. Select a location or make a new folder to save it in. Once you have the location, select Ok.



## ***QSI Valve Exercise Directory Export***

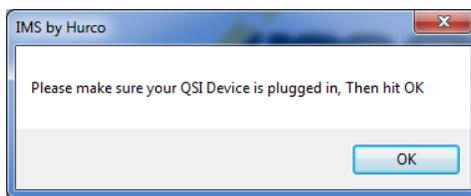
This option allows the user export the Valve Exercise Directory. You will get the following warning. If the QSI Device is pulled in, select Ok. If the QSI is not plugged in, plug it in and then select Ok.



A screen will appear asking for the location to save the directory file. Select a location or make a new folder to save it in. Once you have the location, select Ok.

## ***QSI New Valve Import***

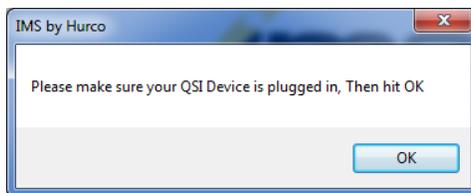
This option allows the user to import the Valve Directory. You will get the following warning. If the QSI Device is pulled in, select Ok. If the QSI is not plugged in, plug it in and then select Ok.



A screen will appear asking for the location to retrieve the file from. Select the file and click "Open". A confirmation will appear to confirm the import.

## ***QSI New Hydrant Import***

This option allows the user to import the Hydrant Directory. You will get the following warning. If the QSI Device is pulled in, select Ok. If the QSI is not plugged in, plug it in and then select Ok.



A screen will appear asking for the location to retrieve the file from. Select the file and click "Open". A confirmation will appear to confirm the import.

# Chapter 14

## Help

### *About IMS by Hurco*

This screen gives you details of the program. If you need to find the version of this program that is installed, it will be located on this screen.



### *Support*

This screen gives you support details. This is pertinent information that is need if the user contacts product support for help.



If additional modules are purchase, you will need to reactivate the software. Once you have you new activation code, click Enter New License Key. This will bring up the screen for you to enter the new activation ID. You will need to restart the program in order for the new changes to take effect.



This Screen gives details about the computer that the program is running on.



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Rev: 1-12-2012-01  
Part No. IMS-RM