Ultra-Logic

919TS Manual

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FEATURES:

The 919TS has many features. Each of these features is described below.

Changeover Pressure Set Points:
The changeover pressure set points are available on the main screen. These set points determine at what pressure the unit changes from the side in use to the side in standby.

Manual Switchover:
The manual switchover is a button provided to allow the system to be manually changed from the side in use to the side in standby.

Local Alarm Notification:
When the in use side pressure drops below the changeover set point the unit will give a visual and audible alarm. The audible alarm can be temporarily silenced (30 min.) using the alarm silence button or permanently turned off from the parameters screen. Neither of these actions affects the dry contacts located on the top of the box.

Dry Contacts:
Dry contacts are provided on top of the 919TS to allow remote devices, such as alarms and auto dialers, to connect easily to the unit. The dry contacts have a rating of 120VAC at 5 amps. These contacts close when an automatic changeover occurs.

Leak Check System:
The leak check system monitors the reserve side for leaks. If a leak is detected the system will display an alarm notification. After the leak has been corrected, the leak detected button should be pressed. Doing so will reset the leak alarm. If the leak continues and 50% of the reserve side is lost, the leak check system will alarm again.
If a leak alarm occurs and the cylinder is replace with a new one, the leak detected button should not be pressed until the new cylinder is connected.

This feature can be turned on or off from the parameters screen.

Delivery Pressure High/Low Alarm:

When activated, this alarm will sound when the delivery line pressure goes above or below the desired offset of the set pressure. Not only will there be an audible alarm, there will be a visual high/low alarm on the main screen. For more information please see page 8.

Gas Check (for liquid cylinders):

The gas check feature is a system that ensures the most efficient withdrawal of material from dewars. When activated the Gas Check feature will monitor a depleted dewar for 1 hour to ensure that all possible product has been used. During this hour a possible overdraw statement will appear at the bottom of the screen. This statement is a warning that the process maybe using more gas than the liquid source can produce. If this statement appears quite frequently it is recommend to contact your gas supplier.

In the event the depleted dewar regains pressure within the 1 hour monitoring period, the system will return to the previously active side. If, after an hour it has not regained pressure the depleted side will alarm. If both dewars have gone below the changeover set points, the system will continue to flow gas unit the pressure in the dewars is 25 psig higher then the delivery set point. After which the system will stop flowing gas. As an example, if the delivery set point is 50 psig, when the dewars get below 150 psig (the changeover set point) an alarm will sound but gas will continue to flow until the dewar pressure is 75 psig.

Remote Access:

The 919TS has the ability to be remotely accessed and controlled from any internet connection that uses Internet Explorer. Please see the Remote Connection (page 9) for more information.

Logging:

Data is saved in a csv file format for easy viewing. The following information is recorded in 1 minute intervals.
- Left/Right Inlet Pressures
- Delivery Set Pressure
- Delivery Line Pressure
- Changeover Pressure Set Points
- Side In Use

Other features that are recorded are:
- When a changeover takes place

- Whenever the system asks for a username and password

Installation:

The 919TS is provided with four mounting tabs, one in each corner, so that the unit can easily be mounted to a wall or other suitable structure. After the unit is securely mounted, the flexible pigtails (if provided) may be attached to the inlet connections at the bottom of the unit and the process piping may be connected to the outlet located on the top. It is recommended that a valve be installed on the outlet of the changeover. Once all connections have been tightened, connect the other end of the flexible pigtails to the gas source. After the pigtails are connected, open the source valves slowly to pressurize the system. Check your connections for leaks with a suitable leak check solution.

Powering On / Initial Setup:

The unit may now be plugged into a 120VAC outlet. The unit will start to power up. After a few moments you will see the inlet pressures, left and right changeover set points, delivery line pressure and set point, and other various graphical buttons. Figure 1 is a typical home screen.

1. Left Inlet Pressure
2. Right Inlet Pressure
3. Left/Right Changeover Set Points
4. Delivery Set Pressure
5. Delivery Line Pressure
6. Manual Switch Buttons
7. System Information Screen
8. Alarm Silence Button
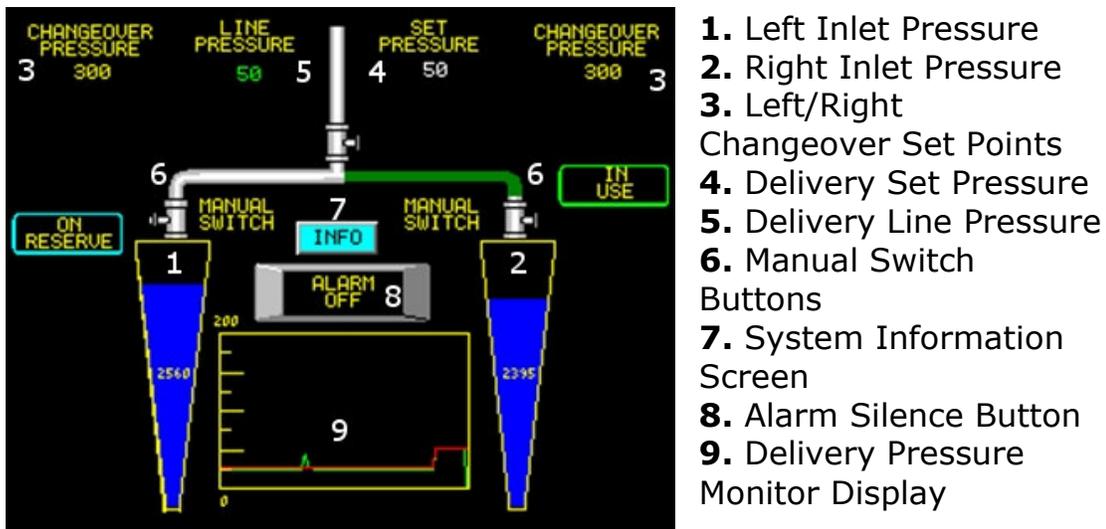**9.** Delivery Pressure Monitor Display

Fig. 1

Once the home screen is on and the inlet pressures are being displayed you can adjust the default 300 psig changeover set points if desired. To do so touch either the left or right changeover set point button (fig. 1 button 3) to bring up the changeover set point keypad (fig. 2).
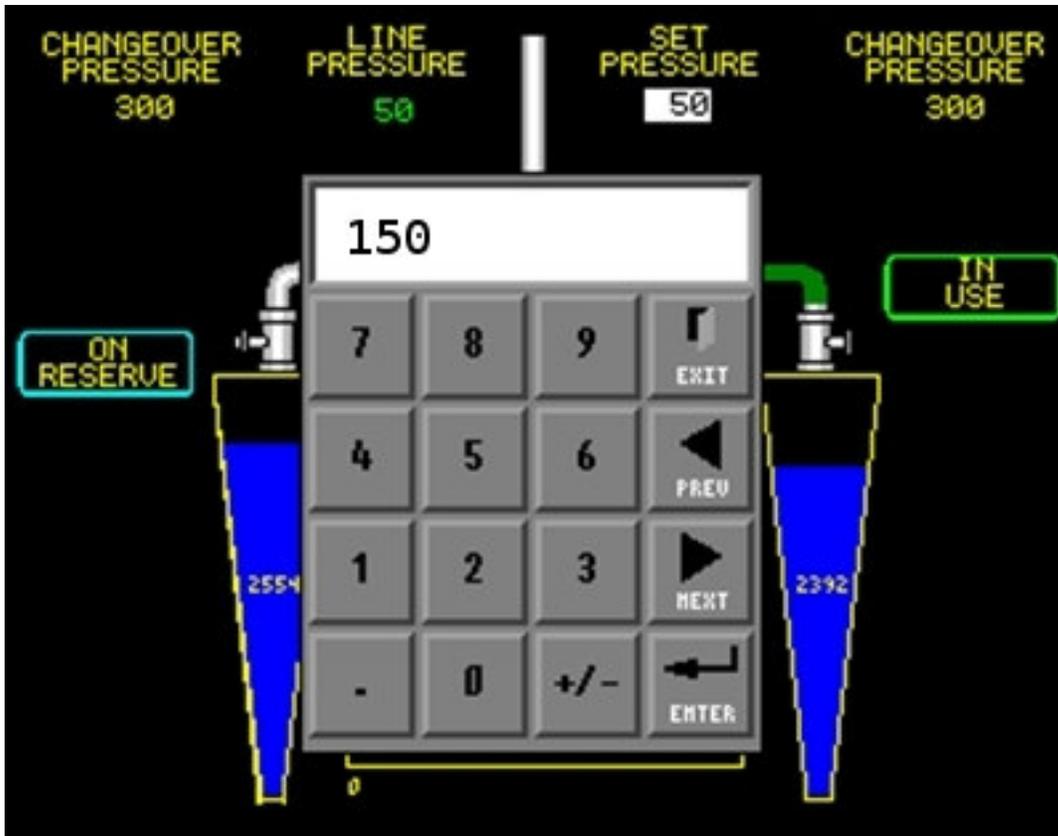
Fig. 2

Enter the desired changeover pressure and press the enter button. A secure access control screen will appear, like the one in figure 2.1

Fig 2.1

Press the logon button, the next screen will ask for your username (username: d1, password: password. Numbers can be accessed by pressing the symbol button. For more information on usernames and passwords please see page 10) after entering the correct username touch the enter button, a new screen will appear asking for your password. Enter your password then touch the enter button. The changeover set point is now set.

It is recommended to use the following chart when setting the changeover set points.

Inlet Pressure Setup	Left Set Point (psig)	Right Set Point (psig)
Cylinders (3000 psig) on both inlets	300	300
Dewars (500 psig or less) on both inlets	150	150
Cylinder on right side Dewar on left side	150	300
Dewar on right side Cylinder on left side	300	150

Setting your delivery pressure:

The delivery pressure for your system may now be set. It is recommended that a valve be installed immediately after the outlet of the unit. This valve should be closed before setting your delivery pressure.

To set the delivery pressure, press the set pressure button (fig.1 button 4) to bring up the keypad (fig.2). Enter the desired pressure, and then press enter. A secure access control screen will appear, like the one in figure 2.1. Press the logon button, the next screen will ask for your username. After entering the correct username press the enter button, a new screen will appear asking for your password. Enter your password then press the enter button. The delivery pressure is now set.

After a moment bleed off a small amount of gas from the delivery line to achieve an accurate line pressure reading. It may be necessary to adjust the set pressure slightly to achieve a specific line pressure. This adjustment is a normal compensation to adjust the bias at various pressures.

Due to the bias adjustment it is possible the set pressure and line pressure may not match. The line pressure always shows the actual pressure going to your system.

To avoid over shooting the desired delivery pressure, it is recommended to increase the pressure by increments of 25 psig.
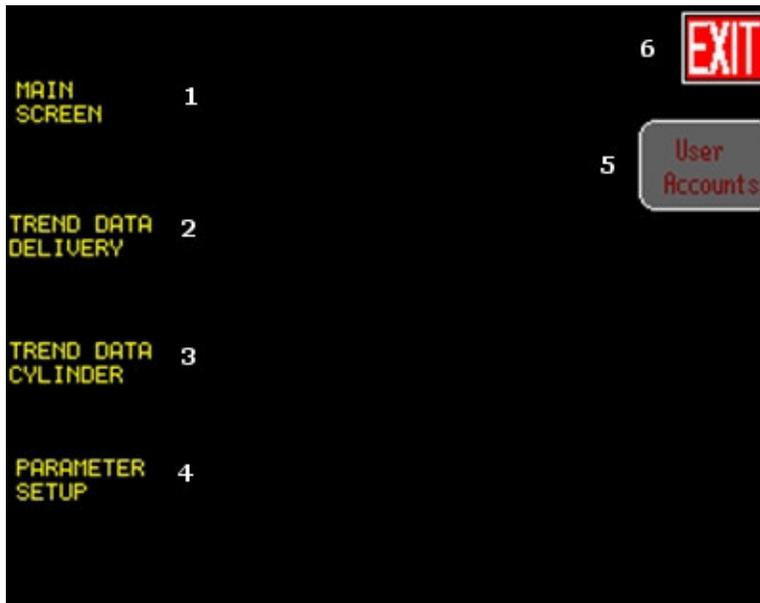
Example: If the desired delivery pressure is 100 psig, first set the line pressure to 25, then 50, then 75 and finally 100.

> **CAUTION:** Setting the delivery line pressure directly (without incrementing) may cause the delivery line pressure to over shoot (up to 25 psig more) then the desired pressure.

Once the delivery pressure is set, your process may now start. The initial setup for your 919TS is now complete.

OPTIONS & SETTINGS:

The 919TS automatic changeover has some additional parameters that may be turned on or off from within the parameters screen. To access the parameters screen press the MENU button located near the lower left of the display. The main screen will change to display what you see in figure 3.

1. Return to main screen

2. View delivery trend graph data

3. View cylinder trend graph data

4. Go to parameters screen

5. Go to user account screen

6. Exit to main screen

Press the button labeled PARAMETER SETUP (4). A secure access control screen will appear, like the one in figure 2.1. Press the logon button, the next screen will ask for your username (see Username and Password section). After entering the correct username press the enter button, a new screen will appear asking for your password. Enter your password then press the enter button. You will now be at the parameter setup screen (figure 3.1).
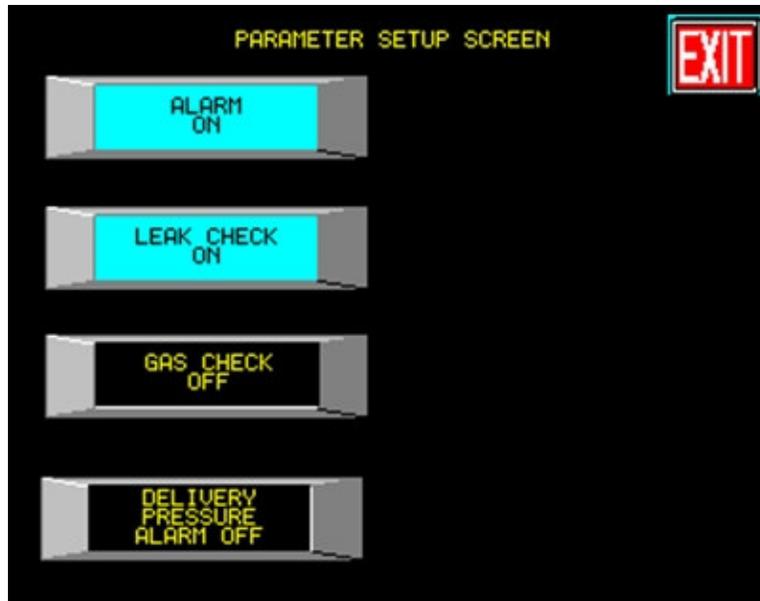
Fig. 3.1

Turn the local alarm on/off:

To turn the local alarm on or off press the ALARM ON/OFF button to read the desired action. Press the exit button to return to the home screen.

Turn the leak check notifications on/off:

To turn the leak check feature on or off press the LEAK CHECK ON/OFF button to read the desired action. Press the exit button to return to the home screen.

Delivery Pressure High/Low Alarm:

The delivery pressure alarm has two settings available. Either ALARM ONLY or ALARM AND SHUTDOWN (fig. 4). To turn these features on press the DELIVERY PRESSURE ALARM BUTTON to read the desired action.

Fig. 4

The high and low set point may now be set. As an example if the unit is delivering 50 psi to your process and you would like to know if the line pressure goes below 45 psig, touch the DELIVERY PRESSURE LOW ALARM OFFSET number. A key pad will be displayed, enter 5 and touch the enter button. Now when the line pressure drops more than 5 psig below the delivery set pressure an alarm will occur. Repeat this process to set the DELIVERY PRESSURE HIGH ALARM OFFSET.
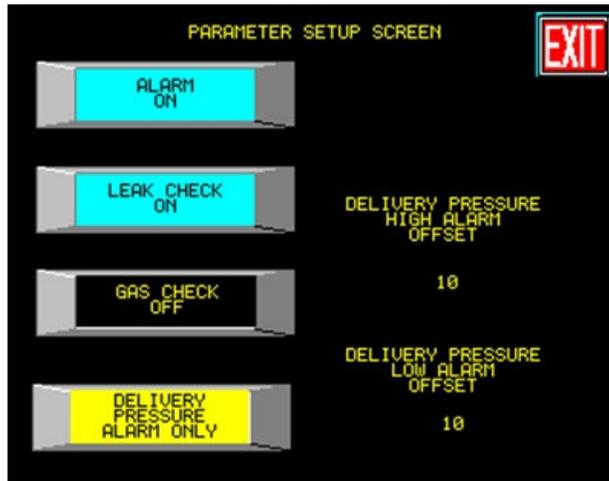

Fig. 5

Liquid cylinder gas check:

To turn the gas check feature on or off press the GAS CHECK button to read the desired action. Press the exit button to return to the home screen.

Remote Access:

The remote access capabilities enable the user to view the main screen, access data logs, and view live system data. To access the remote webpage type HTTP://ipaddress:347 (see page 11 for IP address and internet connection setup) into the address bar of Internet Explorer. Once connected, a popup will prompt for a username and password. This information can be found in the Username and Passwords section.

Once access is granted, there will be three links available.

- View Data
- View Logs
- Remote View

View Data:

The view data page displays inlet pressures, changeover pressures, side in operation, side in stand by, delivery set pressure, delivery line pressure, and if the delivery high/low alarm is on or off. This data is displayed in real time.

View Logs:

The view logs page will give access to all the data recorded in the log files. These files are formatted in csv format and can be viewed as a spreadsheet with excel. Any file can be saved locally to a computer by right clicking on the file and selecting "save as". Files will be stored in the unit for 30 days, after that the oldest file will be over-written with the newest.

Remote View:

Remote view will show exactly what is on the display screen. Any actions that can normally be done on the screen can also be done here with use of the mouse.

Usernames and Passwords:

The following list will show what usernames have access to what areas of the 919TS. The x means access is granted to that function. The default password for all usernames is password. It is recommended to change this password on all usernames as soon as the system setup and running.
(After 30 seconds of inactivity the username will need to be reentered)

Username	Manual Changeover	Delivery Set Pressure	Parameters Screen	User Accounts Screen
A1	x			
A2	x			
A3	x			
B1	x	x		
B2	x	x		
B3	x	x		
C1	x	x	x	
C2	x	x	x	
C3	x	x	x	
D1	x	x	x	x

Changing Passwords:

To change a users' password press the menu button. Then touch the User Accounts button on the touch screen. Touch the NEXT or PREVIOUS button until you get to the username that you would like to change the password for. Touch the SET PASS button. Enter the new password then touch the enter key. Re-enter the password and touch the enter key again. The new password is now set. Only the D1 user has this access.

Remote Access Logon:

Once connected remotely, the username is admin and the password is logon. This information should only be given to personnel who would need to view the 919TS remotely.

IP Address & Internet Connection Setup:

For remote connection to be usable an Ethernet cable connected to a router must provided. The router must have direct access to the internet.

IP Address: _____
Network Mask: 255.255.255.0
Gateway: 192.168.5.1
Port: 347

Port Forwarding:

Under the port forwarding section of your router, add port 347 to the list. The protocol is both (TCP and UDP).

Note:

Remote access can also be done locally with the use of a crossover cable plugged directly into a computer. See your IT professional for proper setup.