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## Purpose

This information applies to the HyPrecision S-series and D-series pump operator interface. Refer to the applicable manual for operation instructions.

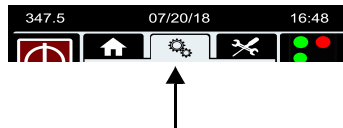
HyPrecision 50S/60S/75S Operator Manual 808690, page 47

HyPrecision 100D/150D Instruction Manual 808310, page 19

This manual addendum describes updates that have been made to the operator interface software.

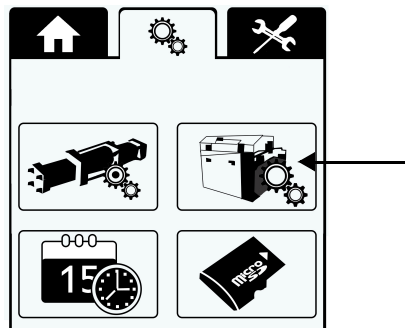
## System adjustments

1. Touch the settings tab.



The settings screen opens.

2. Touch the pump symbol on the screen.

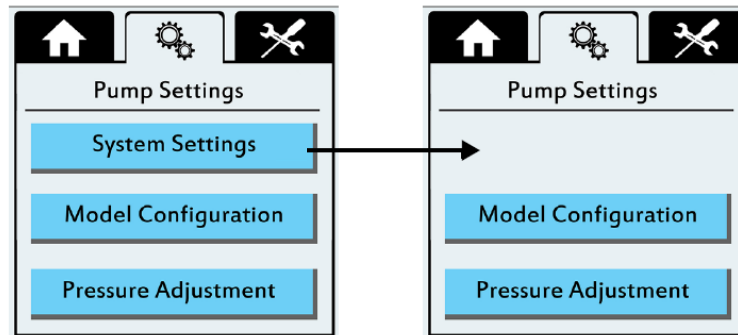


The Pump Settings screen opens.

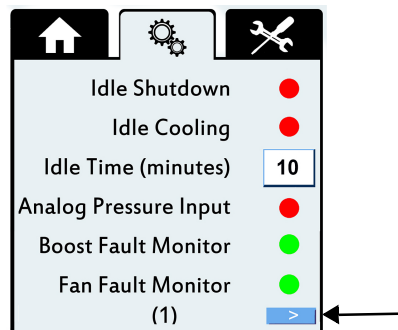
### 3. Touch **System Settings**.



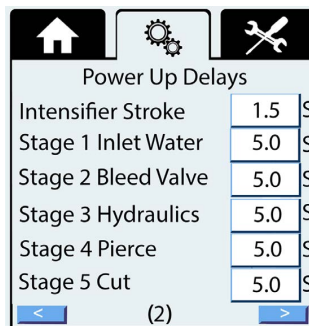
To prevent causing damage to the pump, system settings can not be changed while the pump is in running mode, cooling mode, or remote mode.



The first System Settings screen opens.



### 4. Touch the arrow on the bottom of the screen to move to the Power Up Delays screen.



### 5. Touch a number field to open a numeric keypad. Use the numeric keypad to change the value.

## Pump start sequence



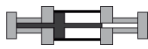
The default setting for all timers except the intensifier stroke timer is 5 seconds. The timers are user-programmable. Refer to **A battery error warning means that the controller battery is not operating correctly. Contact a Hypertherm Technical Service Associate for information and support.** (page 5).

The updated and improved starting sequence is fully automated.

Touch the pump start symbol. The controller puts the pump in start mode.

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## Stage 1: Increase the supply water pressure



These symbols are on the main screen before the inlet water pressure switch closes. The prefilter gauge symbol flashes and the intensifier image is still.

1. The primary motor starts and the hydraulic pump operates at the differential pressure setting.
  - The factory default is 20.7 bar (300 psi).
  - The intensifier does not stroke during this stage.
2. When the inlet water pressure is 2.8 bar (40 psi), the switch closes to start the Stage 1 Inlet Water timer.



The default setpoint for the Stage 1 Inlet Water timer is 5 seconds.

Inlet water causes the water pressure in the system to increase.

If the timer does not start after 20 seconds:

- The start sequence stops.
- An Inlet Water Pressure Low alarm shows on the screen.
- The system stays in cooling mode.

Find the cause of the low inlet-water pressure and start the pump again.

3. The Stage 1 Inlet Water timer expires.

## Stage 2: Purge the system



These symbols are on the main screen while the bleed-down valve is open. The wastewater outlet symbol flashes and the intensifier image moves to show that the intensifier is stroking.

1. The pump runs at the differential pressure setting.
2. The intensifier starts stroking.
3. The Stage 2 Bleed Valve timer starts.



The default setpoint for the Stage 2 Bleed Valve timer is 5 seconds.

4. The intensifier pushes water through the system and pushes any air in the system out through the bleed-down valve.
5. The Stage 2 Bleed Valve timer expires.

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## Stage 3: Charge the system



These symbols are on the main screen while the system is charging. The minimum-pressure gauge symbol flashes and the intensifier image moves to show that the intensifier is stroking.

1. When the timer expires, the bleed-down valve closes and the hydraulic pump operates at the differential pressure setting.
2. The Intensifier Stroke timer and the Stage 3 Hydraulics timer starts.



The default setpoint for the Intensifier Stroke timer is 1.5 seconds. The default setpoint for the Stage 3 Hydraulics timer is 5 seconds.

3. When the time between intensifier strokes is longer than the Intensifier Stroke timer setpoint, the pressure in the system is sufficient. The intensifier stops stroking.
4. The Stage 3 Hydraulics timer expires.

If the time between intensifier strokes is shorter than the Intensifier Stroke timer setpoint when the Stage 3 Hydraulics timer expires, pressure in the system is too low. Refer to **Troubleshooting** (page 5).

## Stage 4: Ramp to pierce pressure



These symbols are on the main screen while the pressure in the system increases. The low-pressure gauge symbol flashes and the intensifier image moves to show that the intensifier is stroking.

### Pumps with manual pressure control

1. If pierce pressure is selected, the intensifier strokes until the system is at the pressure set with the pierce-pressure control knob.
2. The pierce timer starts if the time between intensifier strokes is less than the intensifier stroke timer setting and pressure in the system is too low. Refer to **Troubleshooting** (page 5).
3. The remote pump-running signal turns on at the end of the start sequence.
4. The intensifier stops stroking until the cutting head is opened.

### Pumps with electronic proportional pressure control

1. If pierce pressure is selected, the intensifier strokes until the system is at the pierce pressure setpoint. The setpoint is user-programmable.
2. The pierce timer starts if the time between intensifier strokes is less than the intensifier stroke timer setting and pressure in the system is too low. Refer to **Troubleshooting** (page 5).
3. The remote pump-running signal turns on at the end of the start sequence.
4. The intensifier stops stroking.

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## Stage 5: Ramp to cut pressure



These symbols are on the main screen while the pressure in the system increases. The high-pressure gauge symbol flashes and the intensifier image moves to show that the intensifier is stroking.

### Pumps with manual pressure control

1. If cut pressure is selected, the intensifier strokes until the system is at the pressure set with the cut-pressure control knob.
2. The cut timer starts if the time between intensifier strokes is less than the intensifier stroke timer setting and pressure in the system is too low. Refer to **Troubleshooting** (page 5).
3. The remote pump-running signal turns on at the end of the start sequence.
4. The intensifier stops stroking until the cutting head is opened.

### Pumps with electronic proportional pressure control

1. If cut pressure is selected, the intensifier strokes until the system is at the cut pressure setpoint. The setpoint is user-programmable.
2. The cut timer starts if the time between intensifier strokes is less than the intensifier stroke timer setting and pressure in the system is too low. Refer to **Troubleshooting**.
3. The remote pump-running signal turns on at the end of the start sequence.
4. The intensifier stops stroking.

## Troubleshooting

### Low water pressure

When pressure in the system is too low:

- A Power Up Warning alarm shows on the screen.
- The yellow stack light flashes.

If this occurs, find and correct the source of the low pressure. Causes can include a leak in the high-pressure system or at the cutting head, the cutting head is open, or the timer setpoint is too short.

### Battery error warning

A battery error warning means that the controller battery is not operating correctly. Contact a Hypertherm Technical Service Associate for information and support.

