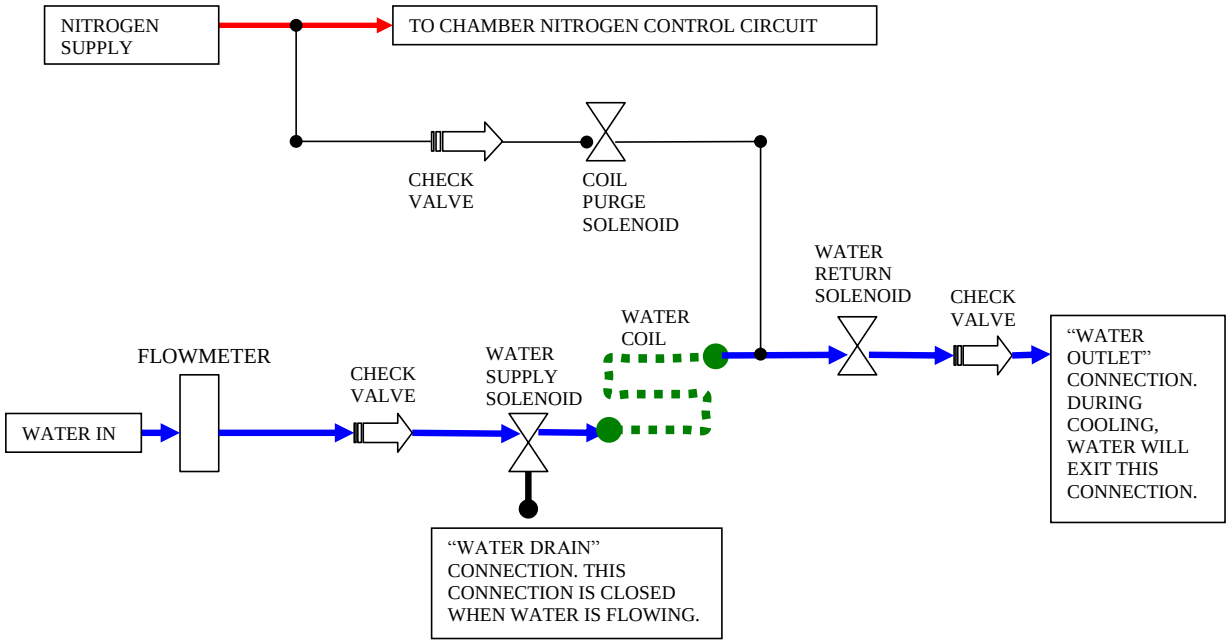
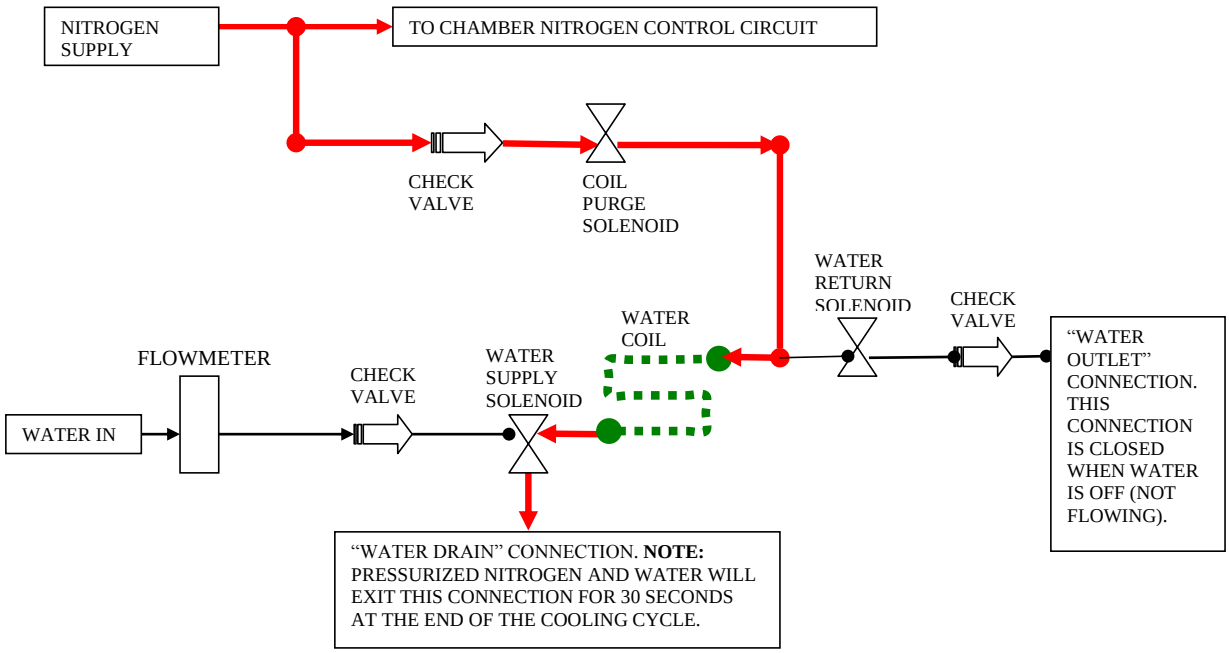
Despatch LCC/LCD Water Cooling Block Diagram

LCC/LCD/LLC/LLD WATER FLOW DIAGRAM

WATER FLOW DURING COOLING CYCLE



NITROGEN/WATER PURGE FLOW AT END OF COOLING CYCLE



LCC/LCD1-16 & LCC/LCD1-51 Water Cooling

4.2.2. Oven Utility Connections

Utility connections vary slightly on different LCC/LCD models. Table 3 lists the connection purposes and parameters. Refer to Figure 6 for visual reference.

Table 3. Oven Utility Connections.

Connection (Figure 6)	LCC/LCD Air Atmosphere with optional Water-Cooled Models	LCC/LCD Nitrogen Atmosphere Models with standard water-cooling
NITROGEN INLET	• Clean Dry Air Inlet (70-80 psi (4.83-5.52 bar)) • Purge water from coil prior to heating oven • ¼" NPT female brass connections provided	• Nitrogen Inlet (58-86 psi (4-6 bar)) • Purge nitrogen, clean dry air and water from coil prior to heating the oven • 1/4" NPT female brass connections provided.
WATER OUTLET	• During cooling cycle, water flows through the water coil and out this connection • 3/8" NPT female brass connections provided • Piping must be rated for up to 250 °F (121°C)	
WATER DRAIN	• At the end of a cooling cycle, Nitrogen or Clean Dry Air is purged through the water coil. Water and pressurized nitrogen/air exit this connection for 30 seconds. Must be connected to gravity style drain (no backpressure). • 3/8" NPT female brass connections are provided. • Piping must be rated for up to 250 °F (121 °C)	
WATER INLET	• Water Inlet for cooling • 3/8" NPT female brass connections provided • Requires 2 GPM flow at 61 °F (16°C) to meet published cooling rates. • Maximum Pressure 100 PSI (6.89 Bar) • Maintain a 20 PSI (1.4 bar) pressure differential at 2 GPM (7.6 lpm) water flow	

4.2.2.1. Nitrogen With Water-Cooled Models

1. Connect nitrogen supply line to **NITROGEN INLET** at the connections panel (Figure 6).

	Nitrogen pressure supplied should be greater the 58 psi (4 bar) but not more than 86 psi (6 bar).

LCC/LCD1-16 & LCC/LCD1-51 Water Cooling

2. Install water connection for cooling coils to **WATER INLET** (Figure 6). Verify the valve on the flowmeter is turned OFF, that is, fully clockwise.

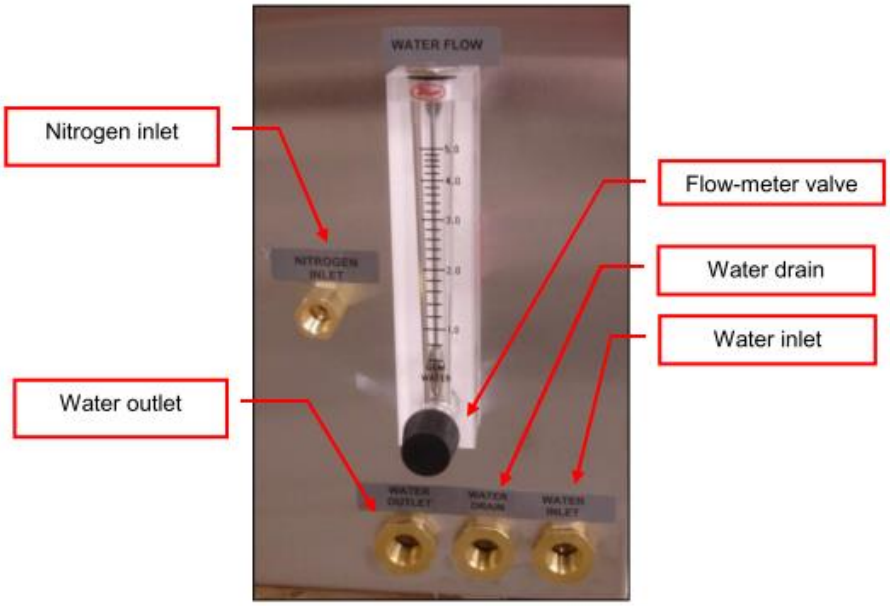


Figure 6. LCC/LCD Connections Panel.

	Water pressure supplied to the oven must not exceed 100 psi (6.89 bar). Despatch recommends installing a regulator to prevent surging.

3. Check for leaks by slowly opening the valve on the flowmeter and allowing any air to bleed out.

	Caution! ***Failure to allow air to bleed from the flowmeter may damage the flowmeter. Bleed air from the flowmeter after every instance of shutting off the water supply.***

4. Adjust the flowmeter to the recommended 2 gpm (11.4 lpm).
5. Complete the drain connection on oven side by connecting **WATER OUTLET** to the closed loop system (Figure 6).

LCC/LCD2-14 Water Cooling

Connection	LCC/LCD Air Atmosphere models with optional water-cooling	LCC/LCD Nitrogen Atmosphere models with standard water-cooling
WATER DRAIN	• At the end of a cooling cycle, Nitrogen or Clean Dry Air is purged through the water coil. Water and pressurized nitrogen/air exit this connection for 30 seconds. Must be connected to gravity style drain (no backpressure). • 3/8" NPT female brass connections provided • Piping must be rated for up to125°C (257°F)	
WATER INLET	• Water Inlet for cooling • 3/8" NPT female brass connections provided • Requires 3 GPM (11 LPM) flow at 13°C (55°F) to meet published cooling rates • Maximum Pressure 100 PSI (6.89 Bar)	

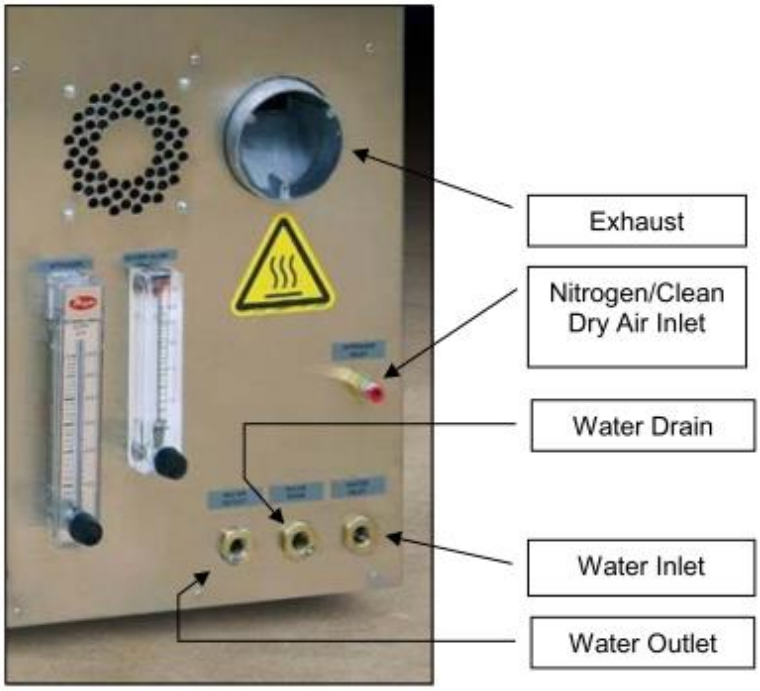


Figure 7. LCC/LCD2-14 Utility Connections.