

12160-10 / 12162-07

Water-Flo Power Cut-Off/with Timer

(120 Volts)

General Operating Instructions

~ Improved with surge and brown-out protection! ~

The Water-Flo Power Cut-Off is designed to give years of trouble free, safe and reliable operation when adapted to your water cooling system, and to the ACE U.V. Power Supply. A maximum control power rated at 120V, 60 Hz., 15 amperes is sufficient for operation of U.V. power supplies, A.C. motors, pumps, etc. When using the 12160-06 Sensing Head in conjunction with the Water-Flo Power Pack, (12160-10 or 12162-07), and ACE U.V. Power Supplies, (7830, 120V type), in conjunction, they will automatically “cutoff” after 5 seconds after water loss. This helps prevent false shut downs due to air pockets in water lines or surges. Momentary electrical main power loss will also cut-off output. The manual push button must be used to reset and restart the Power Cut-Off after water or power is restored. The Power Cut-Off delivers power to the output sockets until there is an interruption in water flow or power.

The Water-Flo Sensing Head has 3/8” hose fittings at the exit for connection to water lines, (drain or recycling tank). Note! Be sure to identify the IN and OUT ports of the sensing head. A water filter is supplied with the head to trap magnetic particles, found in most water supply lines, before they can cause a malfunction in the sensing head. This filter is connected before the IN port of the sensing head.

The internal mechanism of the Water-Flo Power Pack is controlled by a microprocessor control circuit and a heavy duty contactor which provides for more reliable operation. A totally isolated low voltage (5V) sensing input circuit, for the flow switch, provides added safety for the user.

The improved version provides automatic reset for power outages of less than 90 seconds in duration. This allows output power to restart for brownouts of the main power that would normally stop a run..

Features that provide simple operation and indication are: Main power switch with red pilot light, three controlled output sockets for multiple control functions with yellow output indicator light, input pin type mounted sockets for the sensing head hookup, an easy access fuse and a six-foot, heavy-duty, neoprene power cord with 120V plug.

Since three controlled outlets are available, an electric water shut-off valve, (12165, 120V), can be utilized for the ultimate protection from flooding due water line breakage. When connected to a water source, and plugged into the Power Pack, the electric valve would shut off the main water supply should a water line break occur

12162-07



Equipment And Apparatus Needed

- Water-Flo Power Pack (12160-10 or 12162-07)
- Sensing Head, w/Filter (12160-06)
- “Electro-Flo” Shut-Off Valve, 120v (12165-14, 20, 26)
- Main power source of 120 volts, 60 Hz.
- Water main source with manual shut-off



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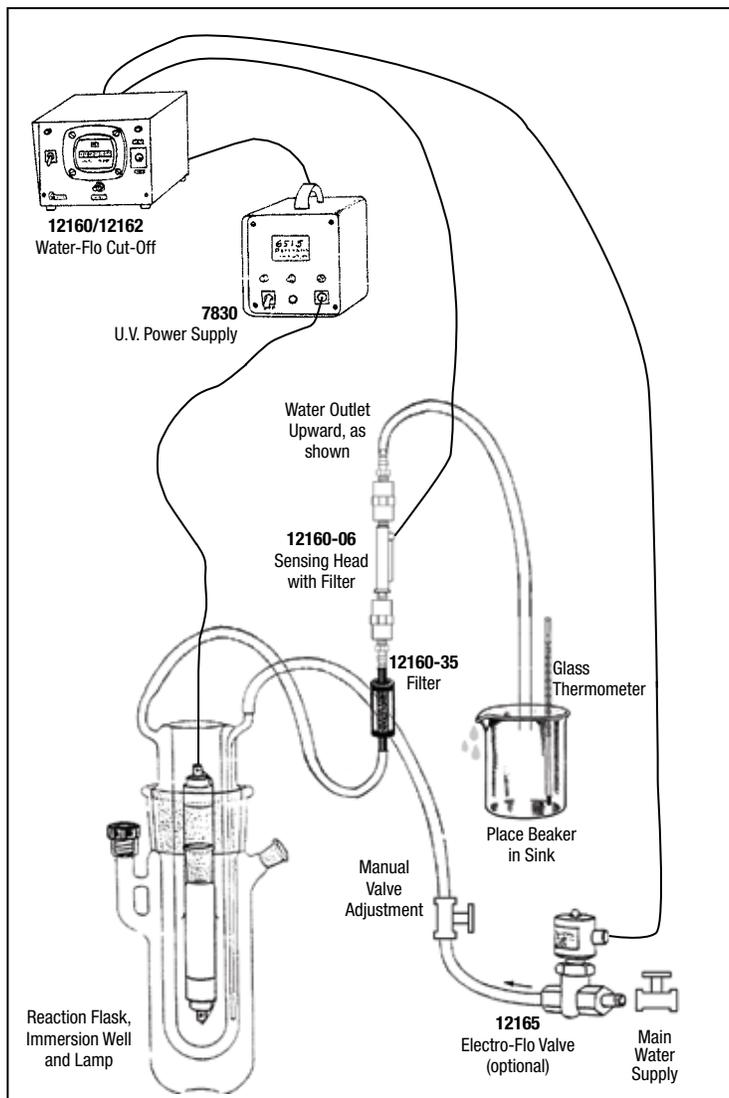
(For 120 Volt Systems)

Operational Steps

- 1) Install Electro-Flo Valve at main water supply source (optional).
- 2) Set up ACE U.V. Apparatus or item to be controlled.
- 3) Mount Sensing Head at drain (sink) with filter
- 4) Connect water hose from Control Valve to Immersion Well or other apparatus to be cooled.
- 5) Connect hose from Immersion Well to IN connection on Water Filter that has been connected to Sensing Head.
- 6) Insert lamp into Immersion Well.
- 7) Plug lamp cord into U.V. Power Supply output socket.
- 8) Plug U.V. Power Supply power cord into rear socket of Water-Flo Power Pack.
- 9) Flip main switch on U.V. Power Supply ON.
- 10) Plug Water-Flo Power Pack power cord into main power source. (120V)
- 11) Plug Electro-Flo valve cord into rear socket of Water-Flo Power Pack (optional).
- 12) Plug pin connectors from Sensing Head into rear mounted pin sockets on Water-Flo Power Pack.
- 13) Flip main switch on Water-Flo Power Pack ON.
- 14) Turn manual water source valve ON.
- 15) Push and hold the START-RESET button on front of Water-Flo Cutoff. If using a 12165 Electro-Flo valve, water should begin to flow. Lamp should light. Release the start button and the lamp and water flow should continue.

*Note: Adjust water flow rate to approximately one liter per minute and then adapt according to the exit water temperature. The water temperature should stabilize between 20 -30°C, (ideal for lamp life), determined by original temperature of your supply water, the size of your lamp, and the flow rate. Adjust according to your reactant temperature needs. For cryogenic temperatures use an insulated well assembly (7858 or 7876).

- 16) Check for "failsafe" (recommended after a run):
 - Test water flow sensing head by turning water control valve OFF. UV Lamp should shut off.
- 17) If main power is lost, the cut-off will automatically reset and the run will continue only if power is restored within 90 seconds. If the power loss extends beyond 90 seconds, it will remain cut off. If using Electro-Flo Valve, water shuts off with power loss.



Typical Installation*



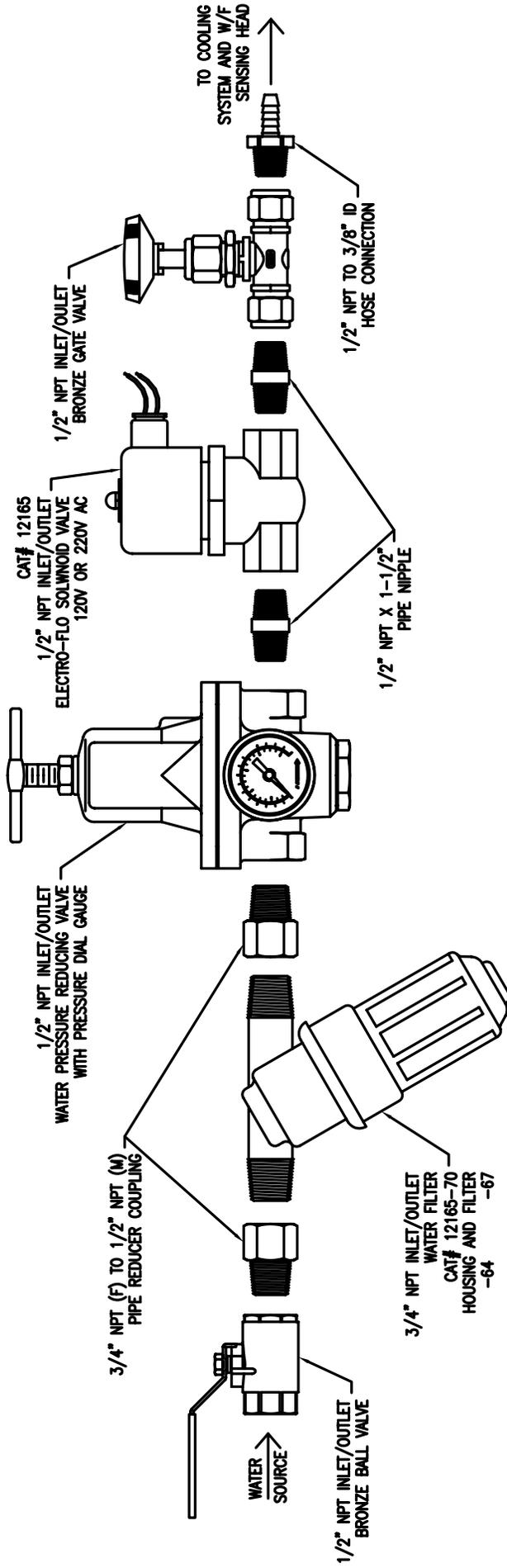
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Typical Hookup of ACE 12165 Electro-Flo Valve and Water Filter for ACE 12160, 12162 or 12164 Water-Flo Power Cutoff System



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