


# Installation, Operation and Maintenance Instructions for 970 Hydromatic Self-Cleaning Strainer



## CONCEPT


As traditional strainers do their job of removing debris from raw water, the filter basket becomes obstructed, eventually requiring system shutdown for service. Hydromatic

eliminates the need for system shutdown by conducting self-cleaning cycles at an interval set by the operator.



*970 Hydromatic  
Self-Cleaning Strainer*

This package includes:

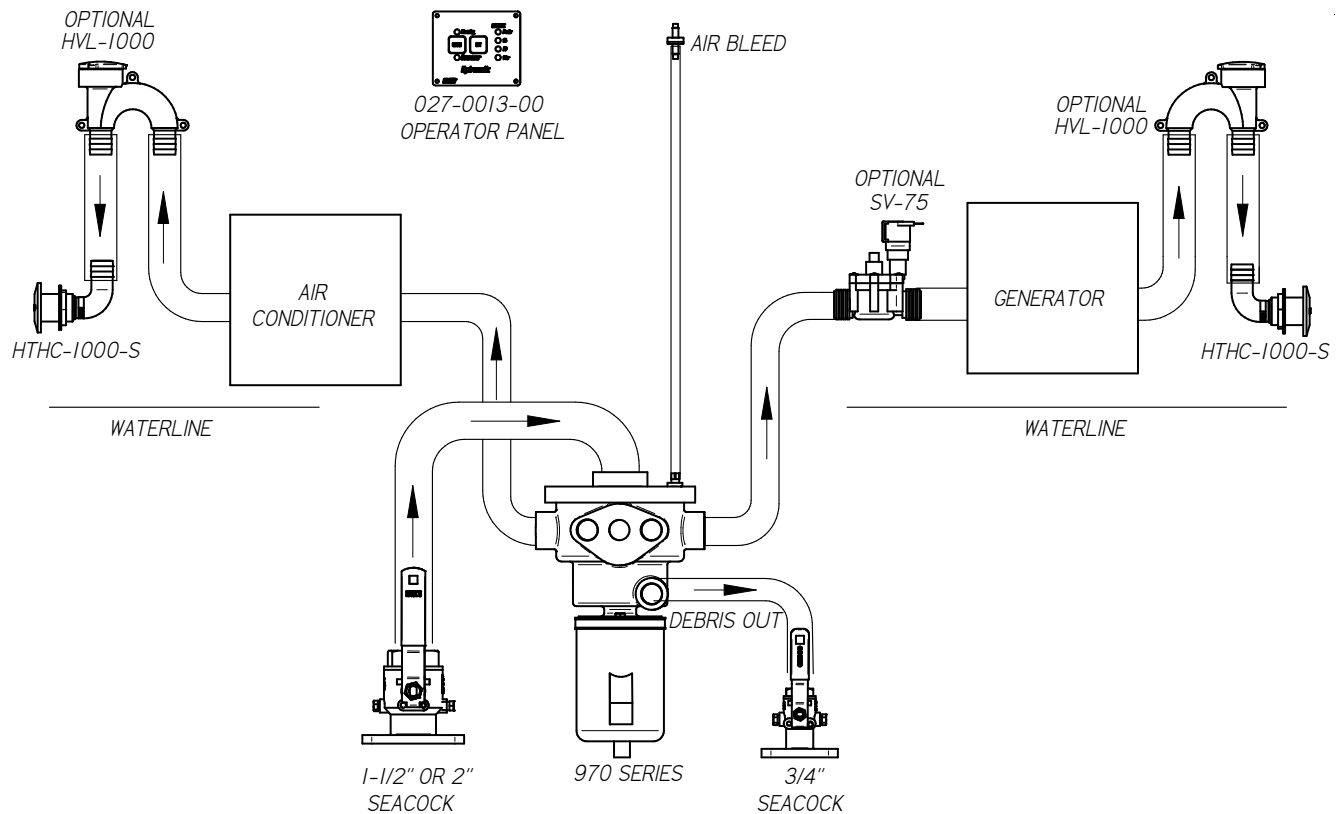


*Operator Panel  
for 970 Hydromatic*

### Product Specifications

- **Power** = 12VDC or 24VDC
- **Current** = 30amps @ 12VDC, 15 amps @ 24VDC
- **Weight** (dry) = 33 lbs
- **Dimensions** = 13.5" X 8.0" X 8.0"
- **IP Rating** = IP67 (estimated)

## GENERAL INSTALLATION



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## STRAINER INSTALLATION

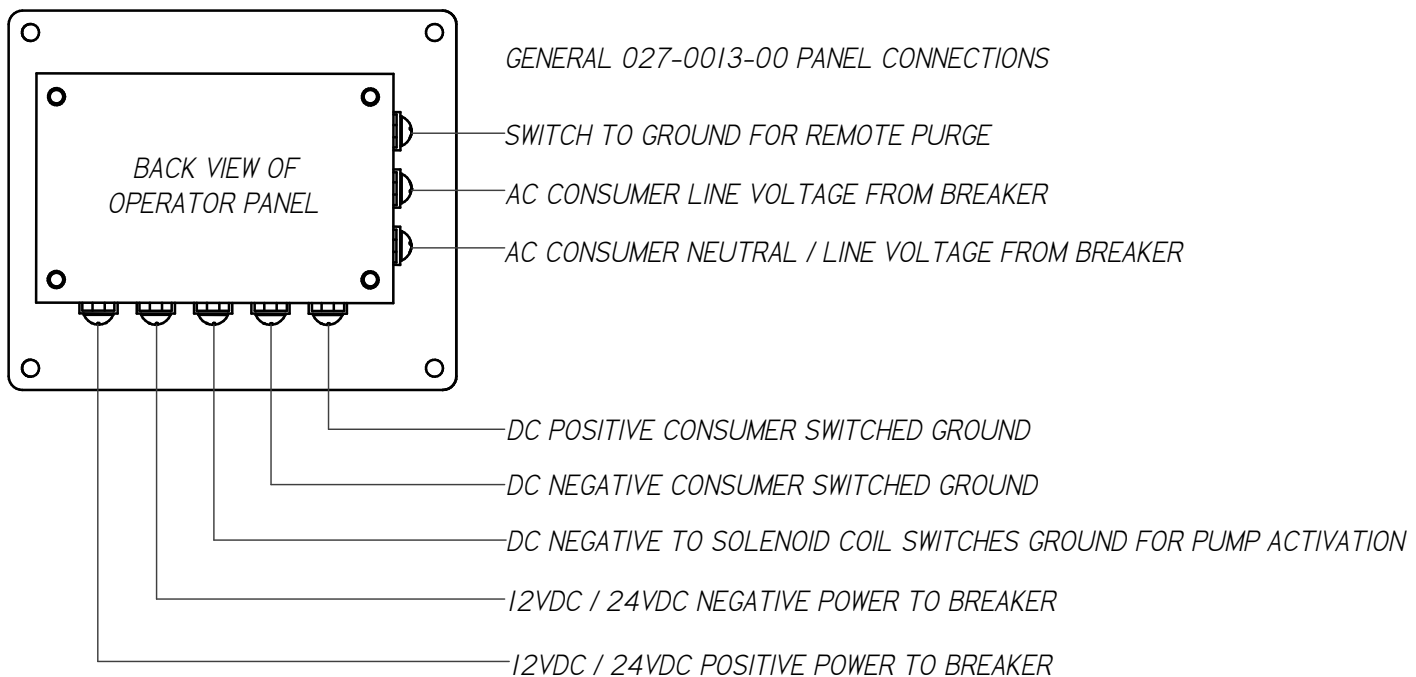
**Strainer Installation:** Refer to the General Installation drawing. 970 series is not self-priming; install the filter below the waterline in any (horizontal or vertical) orientation. The motor is enclosed by a rubber boot and is submersible to 36 inches. The installation should allow at least 12" above the strainer cover for filter basket removal.

**IMPORTANT:** Air can accumulate in the filter chamber from normal operation causing loss of prime. The air bleed system eliminates this condition. For the initial installation loosen the V-Clamp and rotate the cover so the air bleed is at the highest point in your filter installation; secure the hose as high above waterline as possible.

**Installation with Generators:** Refer to the General Installation drawing. To prevent flooding when the generator is off but the vessel is moving, install a normally closed solenoid valve (SV75 for 3/4" or SV100 for 1") between Hydromatic and the generator. Connect the solenoid valve to a normally open switched source that closes and remains closed while the generator is operating.

## OPERATOR PANEL INSTALLATION

- Cut a 3.6" x 2.5" hole for Operator Panel installation.
- See drawings on following pages for specific hook-ups.



## ELECTRIC HOOK-UP

**Electric Hook-up:** Hydromatic’s cleaning cycle duration is 30-seconds. Each time a cleaning cycle occurs, debris that has accumulated in the filter basket is macerated and discharged overboard below the water. A cleaning cycle

can be initiated in several ways, depending on how you configure the system. Determine what consumers will be connected, then make electric connections according to *Figure-1, 2, 3, or 4*, below.

### To command a cleaning cycle based on real time:

*Figure-1:* Use this hook-up to command a cleaning cycle based on real time.

A cleaning cycle occurs at the interval selected on the operator panel, regardless of what consumer is connected or its operational status.

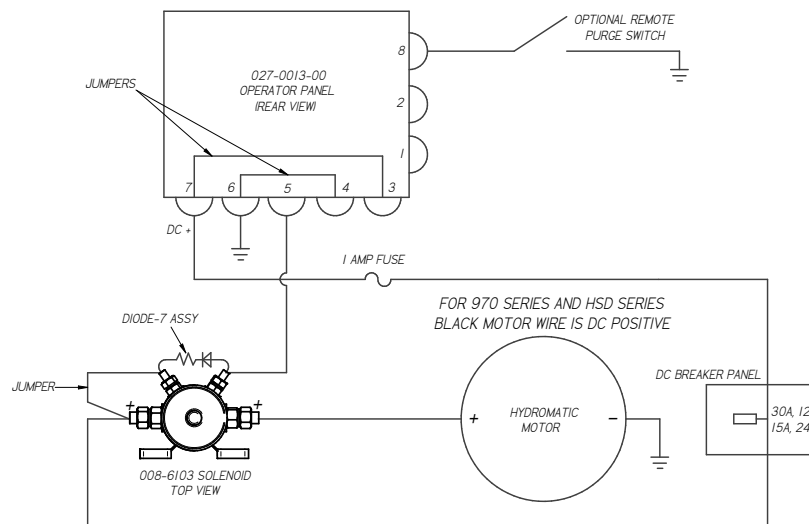


Figure 1

### To use with an AC consumer, such as an air conditioner:

*Figure-2:* Use this hook-up with an AC consumer, such as an air conditioner.

A cleaning cycle occurs when the run time of the AC consumer connected to Terminals 1 and 2 reaches the selected interval.

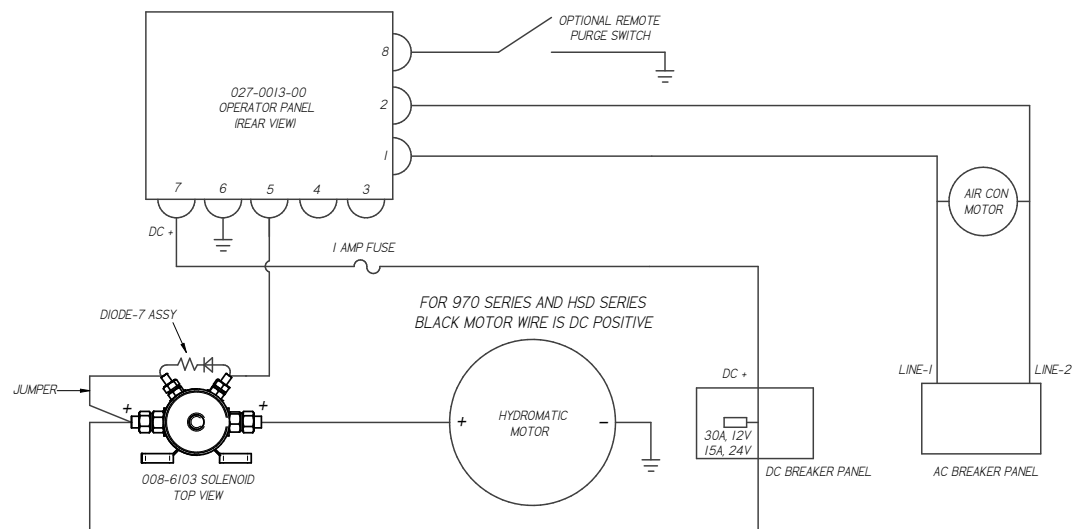


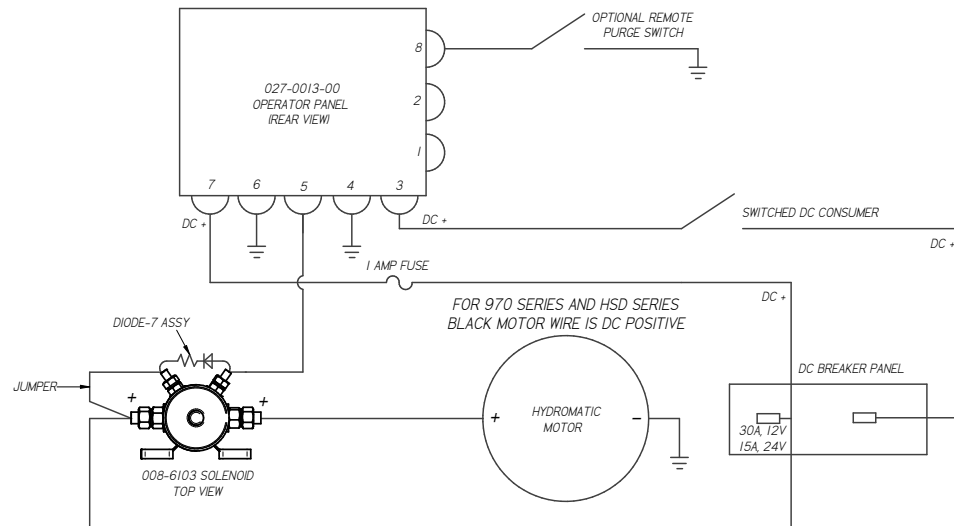
Figure 2

**ELECTRIC HOOKUP (cont.)**

**To use with a DC consumer, such as a generator:**

*Figure-3:* Use this hook-up with a switched DC consumer, such as a generator.

A cleaning cycle occurs when the run time of the DC consumer connected to Terminal 3 reaches the selected interval.

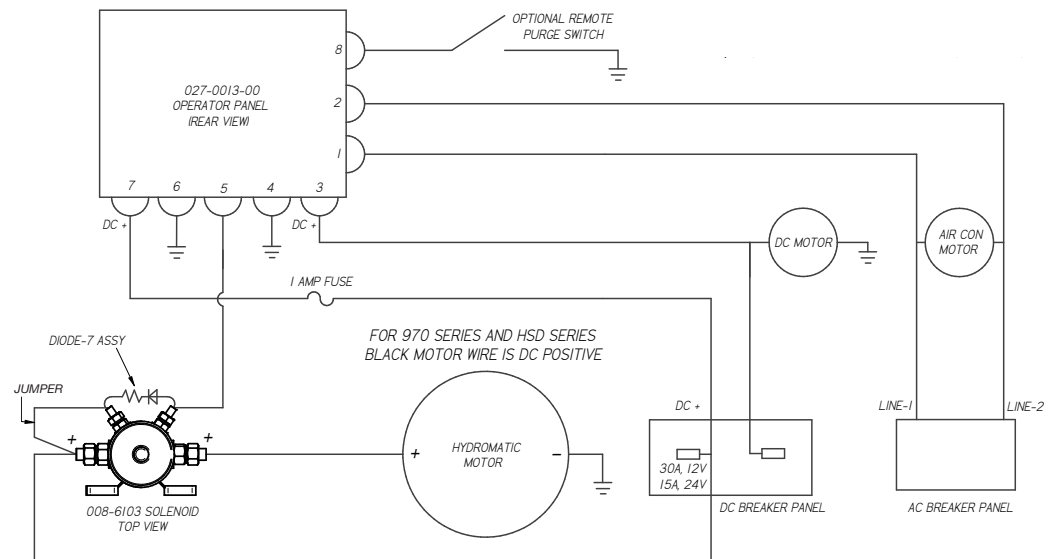


*Figure 3*

**To use with an AC consumer and a DC consumer.**

*Figure-4:* Use this hook-up with an AC consumer and a switched DC consumer.

A cleaning cycle occurs when the combined run time of the DC consumer connected to Terminal 3 and the AC consumer connected to Terminals 1 and 2 reaches the selected interval.



*Figure 4*

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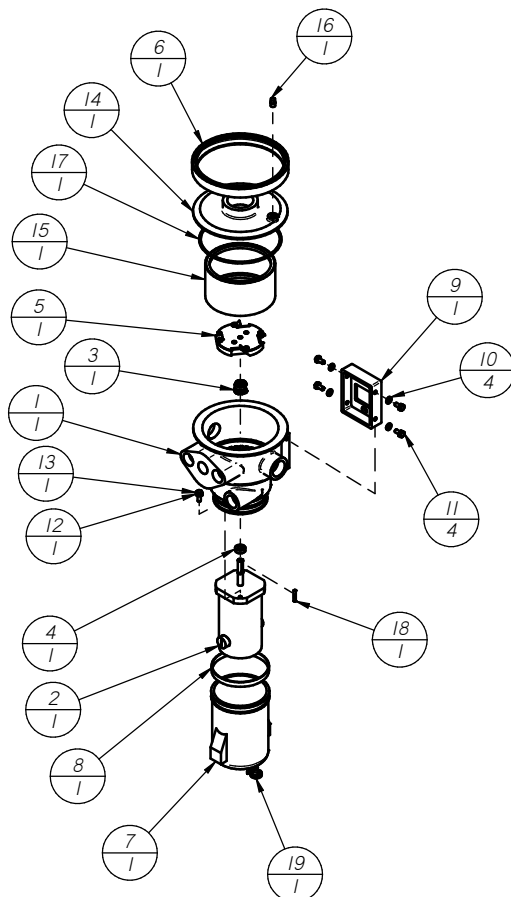
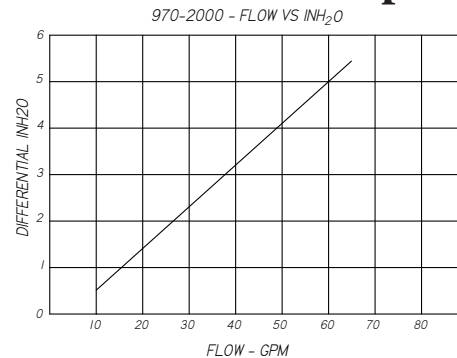
## OPERATION

**Operation:** When power is applied, the operator panel will conduct a self-test, after which all LEDs will be off. Depending on your electrical hookup a 30-second cleaning cycle will occur at the selected interval. To select the cleaning interval touch “SET” until the LEDs next to the desired interval (5, 15, 30 or 60-minutes) is illuminated. The ‘Consumer’ LED will illuminate when the connected consumer is operating. The ‘Cleaning’ LED will illuminate during a cleaning cycle.

**Manual Purge:** A one-time 30-second cleaning cycle is initiated by pressing a momentary ‘purge’ switch (not included) connected to Terminal-8 on the operator panel. Operation returns to the previous interval setting after completing a manual purge.

**Automatic Operation** (coming soon): Individual GROCO SSA Flow Monitors, Hydromatic Operator Panel and GROCO G-Gate will connect to the vessel’s NMEA2000 backbone. The usual method of control will be on the vessel’s touchscreen MFD; the operator panel provides redundancy and enables control and interval settings as it does now. Cleaning interval is set on the MFD, or is automatically triggered when GROCO SSA flow monitor (not included) detects that flow has dropped below the calibrated ‘normal’ flow set by the operator.

### Pressure Drop



Item	Part Number	Name	Qty
1	053-0001-00	BODY CASTING	1
2	N	(VOLTAGE) MOTOR	1
3	009-0375-01	MECHANICAL SEAL	1
4	037-075-8	OIL SEAL	1
5	053-0005-01	MACERATOR ASSY	1
6	CLAMP-5	V-CLAMP	1
7	CP-5004	BOOT	1
8	CLAMP-6	CLAMP	1
9	053-0002-00	BRACKET	1
10	14SS	WASHER	4
11	1420X12HS	SCREW	4
12	PFW-2	WASHER	1
13	1428X58HS	SCREW	1
14	053-0003-00	COVER CASTING	1
15	PS-4929	BASKET	1
16	1827SP	DRAIN PUG	1
17	2-256	O-RING	1
18	18 SQUARE KEY	KEY	1
19	CLAMP-14	WIRE CLAMP	1

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