

## **VS2-9EV Portable Pump Specification**

### **Pump Performance and Rating:**

Typical pump performance from 4 foot draft under standard NFPA conditions shall be 64 GPM @ 100 PSI, 80 GPM @ 75 PSI, 97 GPM @ 40 PSI, and 102 GPM @ 20 PSI – NO EXCEPTIONS.

The pump shall provide a maximum pressure of 150 PSI and a maximum flow of 105 GPM. It shall be capable of operating to a maximum pressure of 190 PSI and be capable of passing a hydrostatic test of 150 PSI – NO EXCEPTIONS.

### **Pump Suction/Discharge Ports:**

The pump intake shall be a 2" male NPT pipe thread and be an integral part of the pump intake flange.

The pump shall have a manifold discharge consisting of two 1 inch male NPT ports each located on opposite sides of the manifold and a 1.5 inch male NPT port located above and parallel to the pump intake port.

The pump intake and discharge shall be in locations where applicable hose thread adapters can be installed without interference.

### **Pump:**

The pump shall be a direct mount 2-stage self-priming centrifugal pump with the pump body, diffusers, discharge manifold, and intake flange made of a high quality corrosive resistant aluminum. The impeller and wear rings shall be made of a reinforced non-corrosive glass fiber nylon composite material to prevent galvanic corrosion from taking place between pump components – NO EXCEPTIONS. The impellers shall be 6.28 inches in diameter with anti-rotation flats as an integral part of the impeller hub.

The pump shaft shall be a hexagonal engine drive shaft extension through which the mechanical rotary seal mounts preventing the pump media from coming in contact with and/or corroding the engine drive shaft.

In addition, the pump seal shall be a maintenance free mechanical rotary seal, shall be externally pressurized, and shall incorporate a blister-resistant carbon seal face with a ceramic seat. – NO EXCEPTIONS.

A 2" BSP priming port shall be located on the top side of the pump discharge manifold and be sealed through the means of a hard anodized aluminum removable cap.

The pump body, discharge manifold, and pump intake flange shall be finished with an extremely durable red powder coat.

### **Engine:**

The engine shall be a manual (recoil) start 4-stroke Honda horizontal drive GX270 series OHV air cooled gasoline engine. The engine net horsepower shall be 8.5 HP at 3,600 RPM with a net torque of 14.1 lb-ft at 2,500 rpm. The engine shall have a 3.03 bore, 2.28 inches of stroke, and a displacement of 16.48 cubic inches. The engine shall meet current EPA and CARB emission standards.

The engine shall have the option of utilizing the engines 12VDC electric start system. The option shall have a 1 amp regulating alternator and be pre-wired with a 3 feet engine harness to allow it to connect to a mating control harness via an 8-pin industrial sealed quick-connect connector – NO EXCEPTIONS.

### **Muffler:**

The muffler shall be a canister type with an approved forestry spark arrestor.

### **Fuel Tank:**

The unit shall have a fuel tank with a manual shut off valve that is an integral part of the pump/engine unit and meet current EPA evaporative emission standards. The integral fuel tank shall have a 5.6 quart fuel capacity.

### Priming:

The pump shall be a self-priming pump capable of being filled with water through means of a 2" male BSP port located on top of the pump discharge manifold. The unit shall be capable of pulling a prime from a minimum of 11.5 feet of lift.

The pump shall provide the option of a guzzler hand primer kit to aid the unit in installations where the pump may not be able to be kept full of water or where the priming port may be difficult to reach (fill). The guzzler hand primer shall have a composite body with aluminum handle and reinforced buna-n diaphragm and flapper valves. It shall have a lift of 12 feet with the capability of approximately 16 feet when a foot valve is used on the pump suction hose. The hand primer shall be capable of handling a maximum pressure of 15 PSI and weigh 1.7 pounds. It shall ship loose with the unit with all the essential hardware items and hose needed to connect it to the pump up to 6 feet away.

The guzzler priming system offered must be connected to the pump through a ¼ turn ball type shut-off valve to prevent the priming system from being pressurized when the pump is attached to a pressurized water source.

### Controls:

The pump shall have the capability of being supplied with the Honda GX270 standard engine controls or any of two remote control panel options using a quick-connect 8-pin industrial sealed connector. The panel 8-pin industrial sealed connector must mate directly to the 8-pin industrial sealed connector supplied on the engine harness – NO EXCEPTIONS. The two remote panel options shall be a MCP (Mini-control panel) or the PMSCP (panel mount standard control panel).

1. The standard engine controls shall consist of an engine choke lever, engine throttle lever, fuel valve lever, and On/Off Switch.
2. The MCP panel shall be a channel shaped remote panel containing the following features and controls: chrome On/Off toggle, push button start, chrome toggle low water pressure override switch, red LED low oil pressure warning light, liquid filled dual unit 0-600 PSI/0-4000 kilopascals pump discharge pressure gage, vernier throttle with red emergency throttle idle push button, and push/pull engine choke cable. The panel shall be wired and the wiring shall terminate with an 8-pin female industrial sealed connector. All panel wiring shall be color coded or labeled to directly correspond to the mating engine or extension harness. All electrical components shall be weather resistant.
3. The PMSCP panel shall be a flush mount flat panel with the following features and controls: chrome On/Off toggle, push button start, red LED low oil pressure warning light, liquid filled dual unit 0-600 PSI/0-4000 kilopascals pump discharge pressure gage, vernier throttle with red emergency throttle idle push button, push/pull engine choke cable, and a cut out for either the mounting of an exhaust remote control priming cable or an electric primer chrome momentary toggle switch. The panel shall be wired and the wiring shall terminate with an 8-pin female industrial sealed connector. All panel wiring shall be color coded or labeled to directly correspond to the mating engine or extension harness. All electrical components shall be weather resistant.

### Pumping Unit Remote Panel Wiring:

The wiring of the engine and control panel shall incorporate a pre-mounted engine wiring harness and a panel to pump 3 feet extension harness option. The extension harness shall be capable of interconnecting for accommodating installation lengths longer than 3 feet. In addition, the system shall provide a quick an easy method for quickly connecting all components of the unit. No additional wiring or technical labor shall be required. All wiring shall meet NFPA 1901 specifications and terminate with industrial grade sealed connectors.