



# OTTER HP PUMPING SYSTEM

## COMPOSITE ULTRA-LIGHTWEIGHT FLOATING SUBMERSIBLE PUMP SYSTEM

The Otter™ HP is a hydraulically powered ultra-lightweight, high-volume, composite floating submersible pumping system used for remote water supply sourcing and emergency dewatering operations.

The power unit can be mounted on a vehicle or trailer with a minimum 5700 lb (2585 kg) payload and a 7.5 ft (2.29 m) or longer bed. With its standard 100 ft (30 m) hydraulic umbilical, the Otter HP has considerable versatility to access open water sources that a typical fire pumper or draft pump cannot reach.

The Otter HP system's SP4 floating submersible pump uses the latest advancements in structural composite technology to achieve an ultra-lightweight design that is physically manageable by one or two emergency responders. The Otter HP is well suited in supplying pressurized water to downstream apparatus, dewatering flooded infrastructure and pumping brine solutions and contaminated fluids such as chemical and oil spills.



### 10 FEATURES AND BENEFITS OF THE OTTER PUMP

1. Portable "floating hydrant" providing reliable high-volume positive pressure water supply
2. Superior corrosion-proof casing and impeller composite construction for saltwater applications
3. No priming or drafting required
4. Increases access to more open water sources
5. Physically manageable by one or two emergency personnel
6. Deployment flexibility over a wide variety of terrain
7. Improved water shuttle operations by eliminating stationary draft engine, decreasing tanker/tender fill times
8. Easily refueled while operating
9. Power unit skid air-liftable and can be located remotely away from water source
10. Uses non-toxic biodegradable hydraulic fluid



**OTTER**

BRING YOUR OWN HYDRANT®

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# OTTER HP PUMP SPECIFICATIONS



## POWER UNIT

- Tier 4/EuroV: 225 HP (168 kW) Deutz
- Tier 3: 235 HP (175 kW) FPT
- Diesel Cap.: 50 Gal (189 L) stainless steel tank
- 4-Hour run-time at 100% load

## HYDRAULIC POWER SYSTEM

- Closed loop system with variable displacement 100cc (or greater) hydraulic pump
- Eco-friendly biodegradable hydraulic fluid
- 19.4 gallon (73.4 L) stainless steel hydraulic tank

## ENCLOSURE SKID

- Dimensions (Dims may change based on engine)
  - Length: 85" (2164 mm)
  - Width: 62" (1575 mm)
  - Height: 65" (1646 mm)
- Structural steel skid and lifting frame with sealed fluid containment tub
- Aluminum panels
- Transverse forklift pockets
- Total system weight: ~5700 lbs (2585 kg)
- Interior and Exterior LED lighting

## TRANSPORTATION MODES

- 4x4 Pickup
- Tow-behind trailer
- Airlift capable

## HOSE REEL

- Standard 100 ft (30 m) hydraulic umbilical
- Quick connect hydraulic fittings for submersible pump

## CONTROL SYSTEM

- Rugged Plus+1 Control screen
  - IP67 Sealed physical buttons
  - Monitor and control engine and hydraulic power systems
- Emergency Stop
- IP65 Enclosure Rating
- "Smart Charger" Technology

## PUMP TYPE

The Otter HP comes standard with SP4 submersible pump, a carbon fiber-reinforced polymer composite centrifugal pump. The SP4 casing and impeller are corrosion-proof in saltwater and provide an ultra- lightweight design.

- Floating source pump with 90 or 125 cc Hydra-Leduc motor
- Draft (water level) Requirement (36" / 914 mm)
- Discharge: 8" 3-lug Storz or 12" 4-lug Storz
- Pump Materials and Design
  - *Impeller*: Carbon fiber reinforced polymer with integrated stainless steel (304 or 316) shaft sleeve.)
  - *Casing, Motorplate, Suctionplate*: Carbon fiber reinforced polymer
  - *Source pump skid base and integral strainer*: powder coated aluminum
  - *Pontoon*: Molded fiberglass or polyethylene or formed aluminum. Back-filled with expanded polyurethane foam

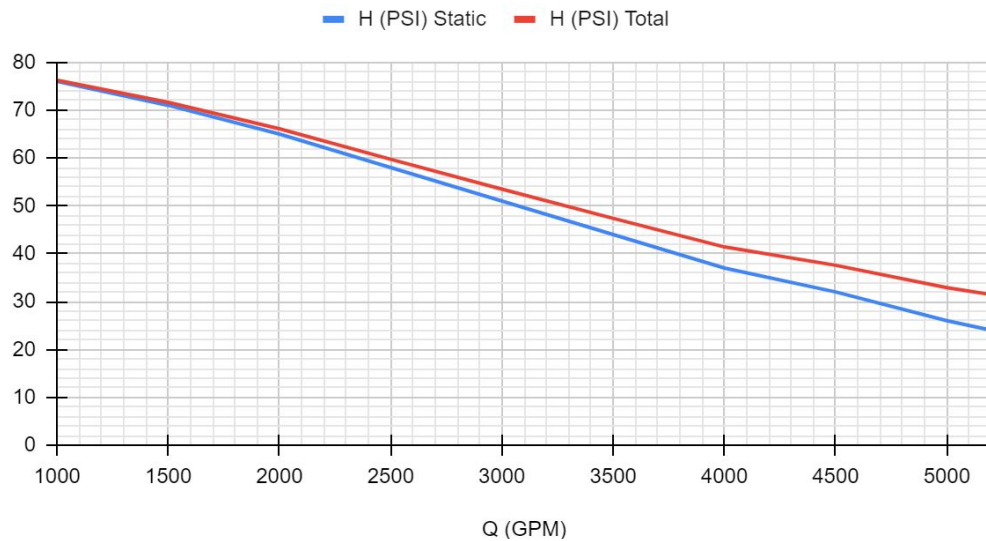




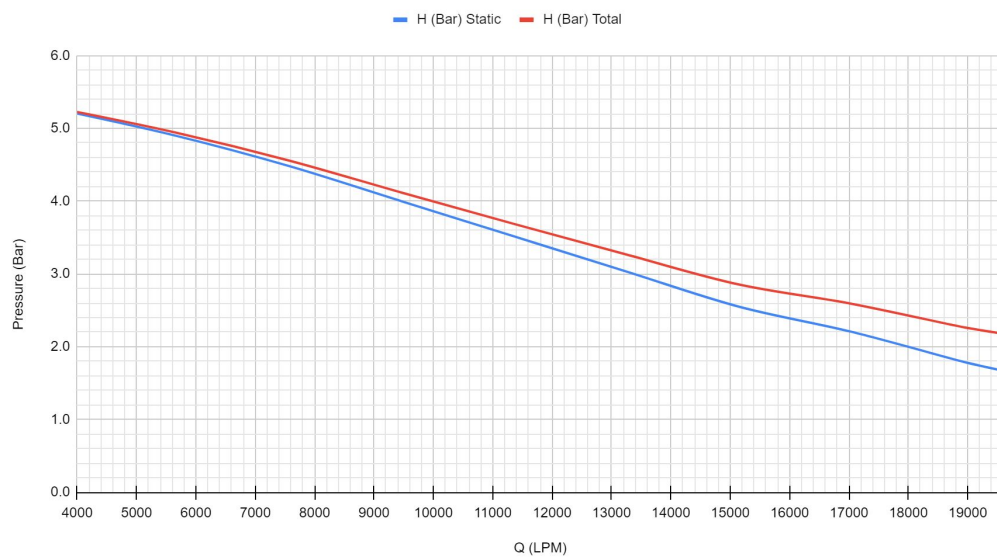


# OTTER HP PUMP SPECIFICATIONS

## SP4V9 Performance



## SP4V9 Performance (Metric)



## Pump Nominal Performance Table (at max hydraulic system pressure of 5700 PSI)

Flow (GPM)	Flow (LPM)	TDH (ft)	TDH (m)	TDH (PSI)	TDH (bar)
1000	3785	176	54	76	5.3
2000	7571	152	46	66	4.6
3000	11356	120	37	52	3.6
4000	15142	92	28	40	2.8
5000	18927	72	22	31	2.1

\* High-head, low-flow submersible available (1050 GPM @ 145 PSI / 3975 LPM @ 10 Bar)



## OTTER HP PUMP SPECIFICATIONS

Hydraulic Hose Reel

Submersible Pump

DEF Tank

Right Side (panels removed)

Oil Filter

Fuel Filter

Fire Extinguisher

Hydraulic Cooler

Left Side (panels removed)



Trickle charging port and  
"jumpstart terminals"



DEF fill port

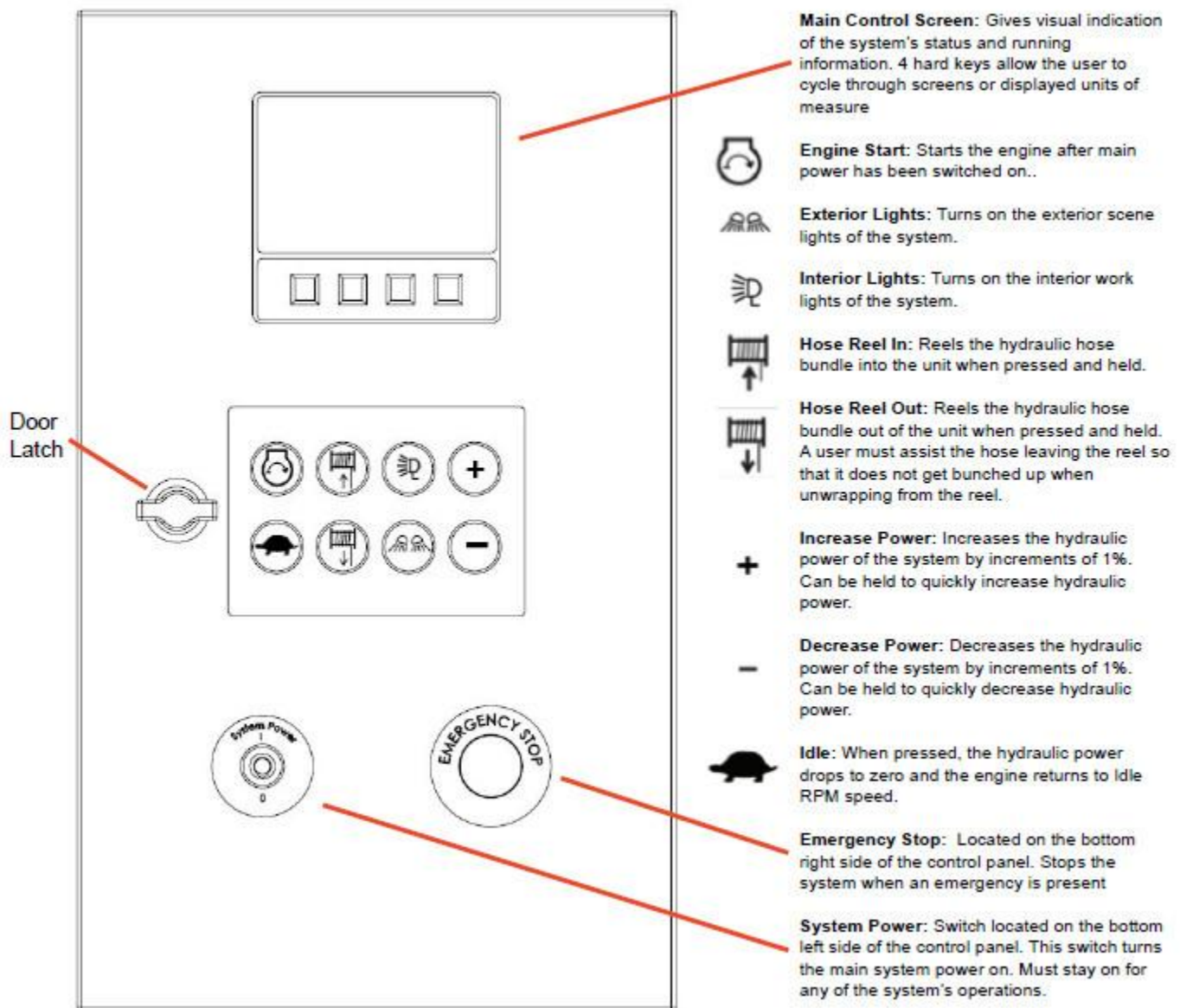


# OTTER HP CONTROL SYSTEM

## SIMPLE TO DEPLOY & SIMPLE TO OPERATE

The Otter HP uses a modern rugged control system with simple up/down operation. The operator only needs to set the desired power level the control system handles the rest.

- IP65 Sealed Control Enclosure
- Day/Night High Visibility
- Single Button Operation





# OTTER HP CONTROL SYSTEM

## MAIN SCREEN DISPLAY

Main Screen		
<b>Power:</b>	<b>0</b>	
		RPM: 0
		Eng. Temp(F): -40
		Oil P (PSI): 0
		Eng. Load(%): 0
		Battery (V): 0.0
		Fuel Level(%): 100
		Hyd. Level(%): 100
		DEF Level (%): 0
		DEF Temp (F): -40
Main	Data	Units

**Power:** Indicates the current power level of the combined hydraulic and engine subsystem. 0-100

**RPM:** Keeps the user updated on the live RPM of the system.

**Temp:** Gives the user a live readout of the temperature of the engine.

**Oil:** Keeps the user updated on the psi of the Engine Oil

**Fuel level:** Keeps a live update on the fuel level of the system. This will blink red when the level falls below 25 percent

**Hyd. Level:** Keeps a live update on the Hydraulic fluid level of the system. This will blink red when the level falls below 70 percent as a warning to fill the tank when possible.

Data Screen		
Eng. Load(%): 0		<u>Hyd. Pressures</u>
Battery (V): 0.0		Power(PSI): 0
Eng. Hours: 0		Charge(PSI): 0
Fuel Rt(G/H): 0.0		
Oil P (PSI): 0		
Target RPM: 0		
RPM: 0		
Power: 0		
Hyd. Power: 0		
		DEF Level (%): 0
		DEF Temp (F): -40
Main	Data	Units

**Eng. Load:** Current engine load of the system.

**DEF Level:** Current level of Def Fluid (For Tier 4 Units Only)

**DEF Temp:** Current value of Def Temperature (For Tier 4 Units Only)

**Battery (V):** Battery voltage of the system.

**Engine Hours:** Accumulated hours of the system.

**Fuel Rate :** Fuel rate that the system is consuming.

**Oil Pressure :** Oil pressure of the system.

**Hyd. Pressures:**

- **Power:** Indicates the hydraulic pressure of the power loop of the system
- **Charge:** Indicates the hydraulic pressure of the charge loop of the system