

DEPENDAPOWER Submersible Pump

Description

Based on the vast experience of Williams Fire & Hazard Control with suppressing industrial fires and mitigating other hazards, DEPENDAPOWER Submersible Pump continues the proven technique of applying overwhelming fire suppression power to control a dangerous situation in the shortest time possible.

The highly efficient hydraulic submersible pump is driven by a market leading diesel engine to pump water at a rate of 8,000 gpm (30,000 Lpm) from a water source as far as 200 ft (61 m) away with a vertical lift of 35 ft (10.6 m). This water flow can then be delivered to an on-board or separate boost pump where pressure is increased before sending to end-of-line devices.

The pump is available as either a standalone pumping system to feed a standalone boost pump, or as a pump combination with a DEPENDAPOWER boost pump. In either configuration, the water can be fed into large volume firefighting monitors such as the Williams Fire & Hazard Control AMBASSADOR monitor, or sent over a long distance hose relay, substantially increasing the logistical efficiency at incident sites.

The submersible unit is compact and easy to deploy. The self-contained pumping system can be built on a base skid, a hook-load skid, or a trailer for easy transportation. A large integrated fuel tank can hold enough fuel to run the pump for up to 8 hours (depending on configuration and use).

Every unit has a high strength integrated lifting rack which allows crane lifting with a standard 4-point lift that does not require a spreader-bar. Fabricated with structural steel and stainless steel fasteners, the DEPENDAPOWER Submersible Pump is designed to pump fresh water, sea water, or brackish water. They are tough pumping systems delivering years of worry-free operations with low maintenance requirements.

Firefighting experience and commitment to reliability are incorporated into the design of the control system. DEPENDAPOWER Submersible Pump and submersible/boost combination units provide a user-friendly, waterproof LCD control screen as a primary interface, advanced sensors, redundant control mechanisms, and emergency shut-down switches for safe and easy operation that does not require extensive training.

The standalone submersible pump is ideal if you already have a DEPENDAPOWER draft/boost pump. Weighing only 320 lbs (145 kg), the floating unit is equipped with ergonomically designed carry poles which allow two or four operators to carry the pump unit into hard to reach locations. The combo pump provides unparalleled pumping and boosting capabilities in one transportable package. An optional wireless controlled crane is also available to aid deployment of the floating unit.



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To meet your unique requirements for specific applications, Williams Fire & Hazard Control provides various options and customizations, such as noise reducing enclosures, solar charging, intake and discharging manifolds, transport modes, and lighting.

Features

- World class components
- Enhanced safety
- Ease of use
- Modular compact design
- Versatile applications
- Multi-use response equipment
- Wide range of options and flexibility of customization

World Class Components – Superior performance, quality, and reliability help ensure worry-free operation to maximize return on investment.

Enhanced Safety – Advanced filtration of the hydraulic system limits contaminants reaching the reservoir and damaging other equipment in the system. Biodegradable hydraulic fluid is used to minimize environmental impact.

Ease of Use – Digital controls are designed to provide a simple and intuitive interface utilizing sophisticated sensors and controls. Quick disconnect couplings of hydraulic lines and hose lines on the floating submersible unit. Powered hydraulic hose reels for easy layout and rewind. Minimum training and low maintenance required. Redundant system controls help ensure a primary control system failure will not render the unit inoperable and allow easy training of operating personnel (continued on page 3).

Technical Specifications

Model	DP-SP 8000 DEPENDAPOWER Hydraulic Submersible Pump	DP-SB 8000 DEPENDAPOWER Submersible-Boost Combo Pump
Modular Base Skid¹		
Base Material	Carbon Steel	Carbon Steel
Fastener Material	Stainless Steel and/or Zinc Plated	Stainless Steel and/or Zinc Plated
Dimensions (H x W x L)	Floating Unit: 44 in. x 27 in. x 33 in. (1,118 mm x 686 mm x 839 mm) Skid with 2 floating units: 96 in. x 98.4 in. x 234 in. (2,438 mm x 2,500 mm x 5,944 mm)	Floating Unit: 44 in. x 27 in. x 33 in. (1,118 mm x 686 mm x 839 mm) Skid with 2 floating units: 100 in. x 98.4 in. x 269 in. (2,540 mm x 2,500 mm x 6,833 mm)
Approximate Weight	Floating Unit: 320 lbs (145 kg) Skid with 2 floating units: 20,500 lbs (9,300 kg)	Floating Unit: 320 lbs (145 kg) Skid with 2 floating units: 32,000 lbs (15,500 kg)
Pumps	Two - End-suction submersible	Two - End-suction submersible One - Horizontal Split-Case
Drivers	CATERPILLAR* C9 D-rated duty, 375 HP with monitoring system	CATERPILLAR C9 D-rated duty, 375 HP with monitoring system CATERPILLAR C18 E-rated duty, 800 HP with monitoring system
Fuel Type	Diesel	Diesel
Fuel Capacity (approx.)	300 gal (1,135 L)	540 gal (2,040 L)
Submersible Pump Discharge	Two 6 in. (150 mm) Storz connections on each	Two 6 in. (150 mm) Storz connections on each
Suction Inlets (Boost Only)	6 in. (150 mm) and 12 in. (300 mm) Storz connections; additional options available for configuring specific requirements	
Discharge Outlets (Boost Only)	6 in. (150 mm) and 12 in. (300 mm) Storz connections with valves; additional options available for configuring specific requirements	
Available Transportation Modes²	Hook-loader skid, gooseneck with 2 5/16 in. ball hitch (59 mm) or 2 in. King Pin (51 mm); or bumper pull trailer with 2 5/16 in. ball hitch (59 mm) or lunette eye	
Performance		
Maximum Run Time w/ Full Tank of Fuel (approx.)	8 hours	8 hours
Nominal Flow Rate³	8,000 gpm (30,000 Lpm)	8,000 gpm (30,000 Lpm)
Nominal Pump Discharging Pressure	23 psi (1.6 bar), Submersible	170 psi (11.7 bar) ⁴ , Boost
Maximum Vertical Lift	100 ft (30.5 m) at 3,000 gpm ⁴ (11,000 Lpm)	100 ft (30.5 m) at 3,000 gpm ⁵ (11,000 Lpm)
Control Systems	Weatherproof (IP65) color screens with graphic displays for monitoring and control operations of the hydraulic system, diesel drivers, and pump discharge pressure; complete manual backup controls	
Environmental and Safety		
Maximum Ambient Temperature	120 °F (49 °C)	120 °F (49 °C)
Emission	EPA & CARB Tier III / Tier II (varies with model/options)	
Protection System	Automatic alarm logging. Automatic warm up. Emergency kill switch. Auxiliary circuit breaker bank.	

Note: Specifications are for reference only and subject to change without prior notice. Specifications vary depending on configurations and options.

4,000 and 12,000 gpm models equipped with 1 and 3 floating units respectively, and CE compliant DP-SP 8000 and DP-SB 8000 skids are also available. Send inquiries to Williams for details.

¹Other transportation modes include various trailers and skids.

²Some configurations may be weight limited.

³With both submersible units running.

⁴Higher if the inlet pressure fed by the submersible pumps is positive and can be regulated by adjusting engine speed.

⁵See charts on page 4 for more information.

Features (Continued from Page 1)

Modular Compact Design – Powerful pumping system in a portable configuration with enhanced mobility, and fast deployment in an emergency response.

Versatile Applications – Each pump can be operated independently or in tandem; fit for pumping large volumes of water while fighting industrial and municipal fires, dewatering flooded areas, hazardous vapor mitigation, and many other applications.

Multi-Use Response Equipment – Optional auxiliary hydraulic outlet connections for powering oil skimmer equipment. This expands emergency response usage of the onboard hydraulic system beyond firefighting, flood control, vapor suppression, or general water movement.

Wide Range of Options and Flexibility of Customization – User focused design includes ideas from industrial firefighters for solving specific and challenging application requirements. Compatible with various transportation modes.

Application

Large volumes of water are usually the most critical resource in firefighting and many other hazard mitigation operations. However, water is not always readily accessible. This inaccessibility is especially true when the fire pump is greatly elevated above the water level, or when large tidal swings occur. The DEPENDAPOWERSubmersible Pump provides the ability to move water from sources where a conventional fire pump is limited by drafting capacity.

The DEPENDAPOWERSubmersible Pump is driven by a powerful diesel engine in a self-contained transportable package to meet the ever increasing challenges of today's industrial firefighting and hazard control operations. The floating submersible hydraulic pump can lift 8,000 gpm (30,000 Lpm) of water up to 35 ft (10.6 m) from a body of water with a positive discharge pressure to feed boost pumps or transport the water over a long distance through a hose relay.

With a maximum vertical lift of over 100 ft (30.5 m) at distances up to 200 ft (60 m) away, the DEPENDAPOWERSubmersible Pump helps resolve problems of water accessibility.

In addition, the DEPENDAPOWERSubmersible Pump, in standalone submersible, or submersible/boost combination, is perfect for dewatering operations in flood zones. The 8,000 gpm (30,000 Lpm) combination pump can easily be reconfigured to move water side by side. The hydraulic submersible pump can pump up to 8,000 gpm (30,000 Lpm) while the on-board priming system of the boost pump allows for simultaneous open-water pumping of up to 6,000 gpm (22,700 Lpm). At full flow, the single unit delivers up to 14,000 gpm (53,000 Lpm) of flow, setting a new industry standard for moving large volumes of water.

The image below shows a standalone 8,000 gpm (30,000 Lpm) submersible package shown with optional bumper pull trailer and PALFINGER* wireless remote control deployment crane.

Note: The converted metric values in this document are provided for dimensional reference only and do not reflect an actual measurement.

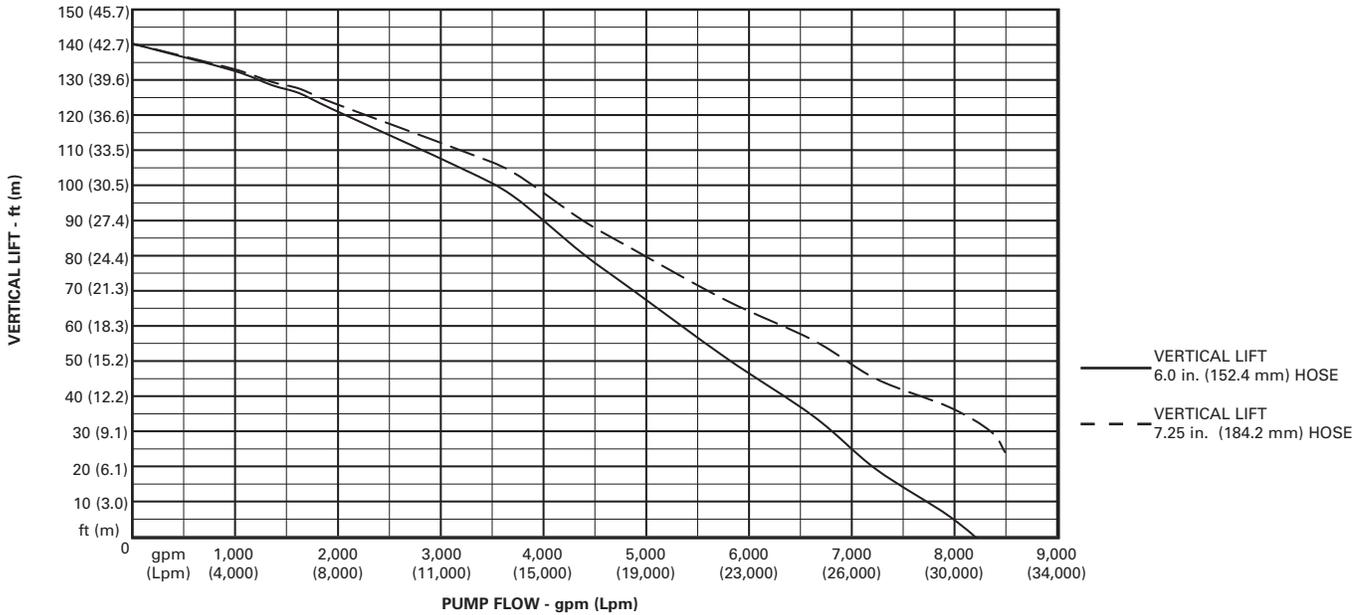
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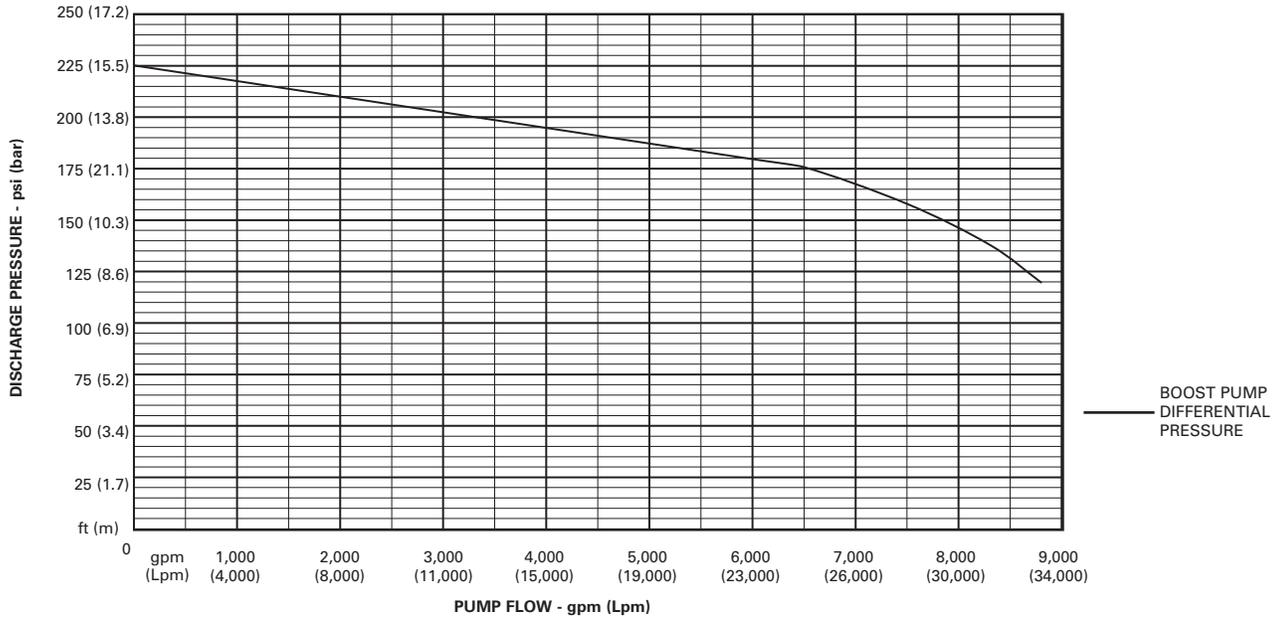
DEPENDAPOWER 8,000 gpm (30,000 Lpm) Submersible Pump Flow vs. Vertical Lift (nominal, twin submersible units)



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- Notes:**
1. Pump flow is for operating at full capacity with unobstructed strainers.
 2. Water flow is variable (can be less than above) by controlling the hydraulic power unit.
 3. Performance may vary based on final equipment construction and option selection.
 4. Lift distance may be improved by using less hose length from the pump to the shore or additional lays.

DEPENDAPOWER 8,000 gpm (30,000 Lpm) Boost Pump Differential Pressure (nominal)



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- Notes:**
1. Pressure listed is approximate differential pressure produced by boost pump.
 2. Discharge pressure at pump discharge flange may be higher if pump inlet pressure is present.
 3. Pump discharge pressure can always be regulated by adjusting engine speed of boost pump.
 4. Performance may vary based on final equipment construction and equipment selection.