



**GPS**  
Smart Pumps Powered By IIoT



## LH100S10 INSTANT-PRIME® PUMP



### PUMP SPECIFICATIONS

Pump End: GPS MCL-P4410S  
Pump Size: 4x4 inches (100x100 mm)  
Max Flow: 1470 US GPM (334 m³/h)  
Max Head: 150 feet (46 m)  
Solids Size: 3 inches (76 mm)  
Mechanical Seal: Single mechanical seal 2.5"  
Lip Seals: CR type, single lip, Buna-N (Bearing & SAE Cover) and Viton(Stuffing box)  
Non-Drive End Bearing: Single row ball bearing 6313  
Drive End Bearing: Single row ball bearing 6315  
Air/Water Chamber: Steel material and designed to separate air and water before entering into vacuum pump suction hose.  
Discharge Non Return Valve: Swing type, cast iron with Buna-N disc (Viton optional)  
Gasket: Aramid Fiber w/ EPDM  
O Ring: Buna-N

### VACUUM ASSISTED PRIMING SYSTEM

**INSTANT-PRIME® SYSTEM:** Patent Pending self priming pumps are equipped with the most powerful priming system and P-S-P mechanism. Instant-Prime® pump sets a new benchmark of vacuum assisted priming pumps in the industry.

**VACUUM PUMP DATA\*:** Air Capacity: 112CFM  
Vacuum: -26inHg(9m)

\* at engine speed 2200 rpm

### PUMP FEATURES

#### 1 ECO Friendly Vacuum Priming System

GPS pump's EVP self priming system has extraordinary features like large air process capability, high vacuum, low operation temperature, maintenance free, oil and mechanical seal free etc.

#### 2 P-S-P Auto Switch System (Prime-Sleep-Prime)

EVP system will be switched to sleep status automatically once priming was finished. When it is used for general purpose application, EVP system only operates for a few seconds for priming, which makes it almost unnecessary for daily maintenance or changing spare parts within its life cycle.

#### 3 Dry Running Protection System

Instant-Prime® pumps offer three types of dry running seal options: oil reservoir lubricated mechanical seal, air cushion protected mechanical seal and grease lubricated lip seals configurations. Either of them can secure the pump run dry for a long time.

#### 4 Cooling System\*\*

A pressurized cooling flush water is introduced from centrifugal pump into vacuum pump's water jacket and then flows back to centrifugal pump. This cooling system cools the vacuum pump quickly and brings most of the heat out of the vacuum pump's cavity, and makes its rotor has an extraordinary long life.

#### 5 Easy Maintenance Structure

It is very convenient to remove the vacuum pump's cover from its non-drive end, and slides can be easily pulled out for inspection or replacement. It is also easy to access to the centrifugal pump's impeller, wear ring or mechanical seal for inspection or maintenance without removing diesel engine or pump's frame since the centrifugal pump's suction cover can be fully opened.

#### 6 All-In-One Pump Applications

EVP Priming system's powerful function makes Instant-Prime® pumps can be used in almost all aspects of fluid industry, including well point dewatering. Buy one pump and get all your jobs covered.

\*\* cooling system is only needed for well point dewatering application.

### ENGINE SPECIFICATIONS

Engine Model: HATZ 3H50TIC

Rated Power At Speed: 58.5HP @ 2800RPM

Engine Type: In-line 3 cylinders, common rail EFI  
turbocharged intercooled diesel engine,  
water cooled

Displacement: 91 Cu.In. (1.5 Liters)

EPA Tier: Tier 4 Final

Fuel Tank: 70 U.S. Gallons (268 Liters)

Full Load Operating Time: 21.5 Hours

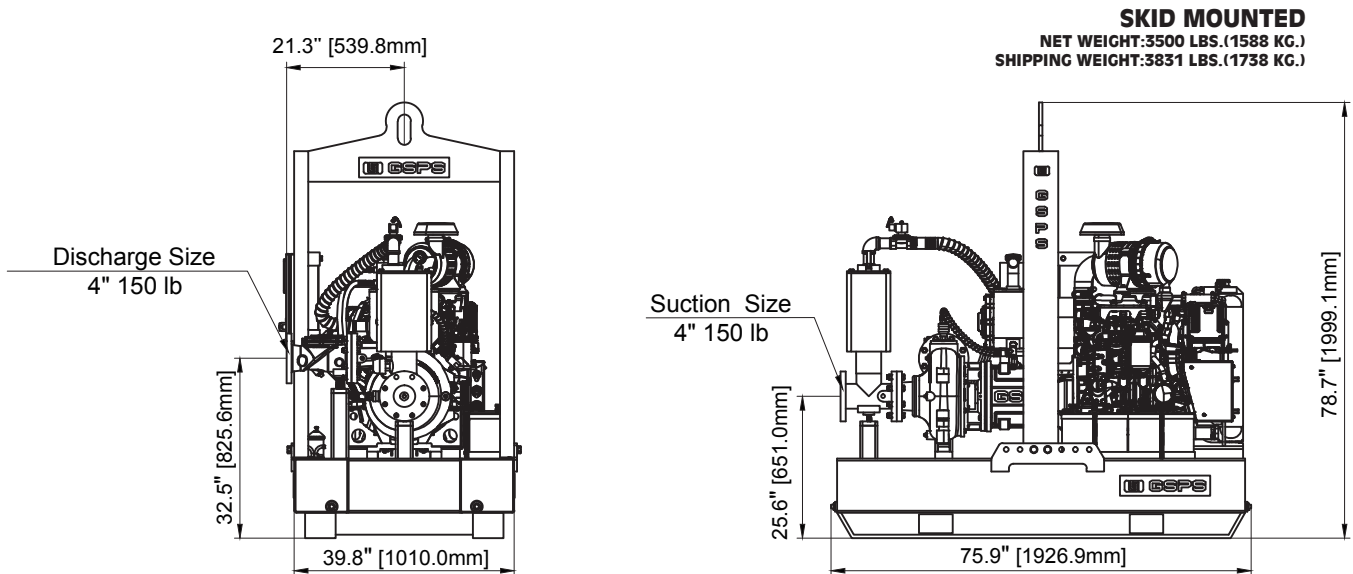
Starter: 12 Volts Electric

Control Panel: Murphy, Controls Inc, Deepsea, Kensho, Lofa

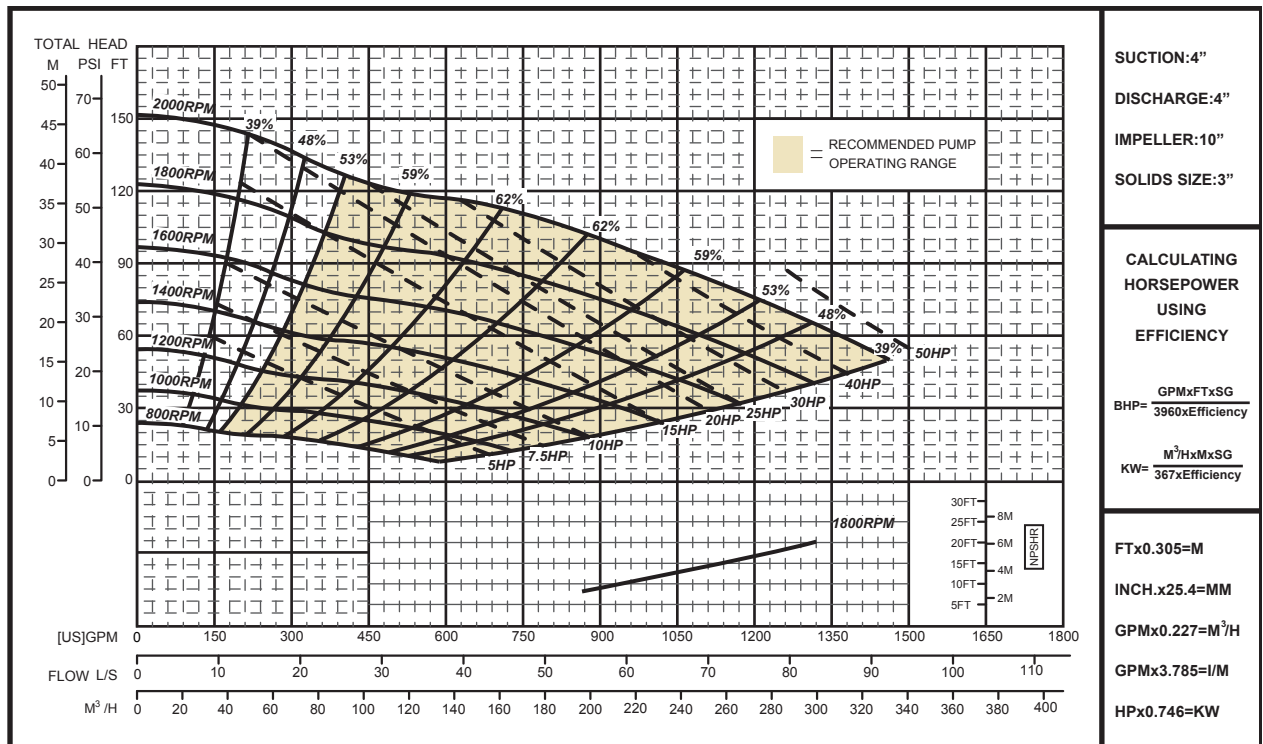
### PUMP MATERIAL OF CONSTRUCTION

Main Parts	Standard (code:38)	Optional 1 (code:58)	Optional 2 (code:88)	Optional 3 (code:98)
Impeller	CA6NMSS	CA6NMSS	26% High Chrome	CD4MCu
Shaft	17-4PH	17-4PH	17-4PH	17-4PH
Wear Ring	Gray Iron	Gray Iron	Carbon Steel	316SS
Suction Cover	Gray Iron	Ductile Iron	26% High Chrome	CD4MCu
Volute	Gray Iron	Ductile Iron	26% High Chrome	CD4MCu
Stuffing Box	Gray Iron	Ductile Iron	26% High Chrome	CD4MCu
Adaptor	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron

## LH100S10 INSTANT-PRIME® PUMP DIMENSIONS



## LH100S10 INSTANT-PRIME® PUMP PERFORMANCE CURVE



## PUMP DESIGNATION SYSTEM

### Pump Type

LH: Low Head Pump  
MH: Medium Head Pump  
HH: High Head Pump

### Pump Inlet & Outlet

LH: Pump Outlet Size (mm)  
MH: Pump Outlet Size (mm)  
HH: Pump Inlet Size (mm)

### Impeller Type

S: Solids Handling  
C: Clear Water

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Pump Type Pump Inlet & Outlet Impeller Type Impeller Size Engine Power Pump Material Seal Type Seal Material Priming System Cooling Package Type

**Impeller Size: Inch**  
**Engine Power: hp**

**Pump Material**  
38: Standard  
58: Optional 1  
88: Optional 2  
98: Optional 3

**Seal Type**  
MO: Mech. Seal Oil Lub (Standard)  
MA: Mech. Seal Air Cushion  
LG: Lip Seal Grease Lub

**Seal Material**  
1: SiC/SiC (Standard)  
2: TC/SiC  
3: TC/TC  
4: NBR  
5: Viton

### Priming System

V1: Venturi  
V2: Diaphragm Pump (NA)  
V3: EVP (Standard)

### Cooling

WC: With Cooling System  
NC: No Cooling System

### Package Type

SO: Skid Open  
TO: Trailer Open  
SE: Skid Enclosed  
TE: Trailer Enclosed  
SP: Skid Push Bar  
GN: Goose Neck