



# TOHATSU CORPORATION

## PORTABLE FIRE PUMP

**MODEL VC82ASE**



PERRY JOHNSON  
REGISTRARS, INC.



JAB  
QS Accreditation  
R024



UKAS  
ENVIRONMENTAL  
MANAGEMENT  
105-C

**ISO9001:2000, ISO14001  
Certified, Tokyo plant**



### SPECIFICATIONS

<b>ENGINE</b>	TYPE	2-stroke, 2-cylinder water cooled gasoline engine	<b>PUMP</b>	TYPE	Single-suction, single-stage Centrifugal high pressure turbine pump
	MODEL	VC82ASE		DISCHARGE PORT COUPLING (A)	JIS-B-9912 dimensions of screwed type coupling for fire hose 2-1/2" (Standard : Flat Valve , or option : Ball Valve)
	BORE & STROKE & NO. OF CYLINDER	78 mm x 78 mm x 2 (3.07 in. x 3.07 in. x2)		Twin outlet : Standard	
	TOTAL PISTON DISPLACEMENT	746 cc (45.52 cu.in.)		SUCTION PORT COUPLING (B)	JIS-B-9912 dimensions of screwed type coupling for fire hose 3-1/2"
	MAXIMUM OUTPUT	70PS/51.5kW		PRIMING	Rotary – vane vacuum pump (Oilless type)
	FUEL TANK CAPACITY	18 liters (4.76 US gals)		PUMP PERFORMANCE (Suction height : 3 m)	
	FUEL CONSUMPTION	20 liters (5.29 US gals) / h.		at 0.6 MPa	Over 2,050 lit./min. (542 GPM)
	STARTING SYSTEM	Starter motor and automatic recoil system		at 0.8 MPa	Over 1,800 lit./min. (476 GPM)
	CHOKE SYSTEM	Auto choke system		at 1.0 MPa	Over 1,500 lit./min. (396 GPM)
	SPARK PLUG	NGK BP7HS		OVERALL LENGTH	Approx. 742 mm (29.2 inch)
	LUBRICATION	Auto-mixing (Engine oil tank 1.6 liters(0.42 US gals))		OVERALL WIDTH	Approx. 682 mm (26.8 inch)
	IGNITION	Flywheel magneto (C.D.I. system)		OVERALL HEIGHT	Approx. 760 mm (29.9 inch)
LIGHTING	Pilot lamp	MASS	94 kg (207 lbs)		
BATTERY	12V	MAX.SUCTION HEIGHT	9 m.		
			<b>GENERAL</b>		

# Features of VC82ASE

More attractive features and functions are added on model VC82ASE to maximize the fire fighting activities and safety.

## 1. Light weight and compact

This model has a dry weight of only 94 kg (207 lbs) and they are of compact design. With this weight and size the fire pump can be easily carried by two firemen and positioned close to the fire even in narrow and rugged places. There are essential features of a portable fire pump to facilitate rapid fire fighting.

The engine is designed and produced exclusively for the fire pump, its high performance, light weight and compact size enhances the engines reliability and durability.

Most of the engine and pump component parts are of anticorrosive aluminum-alloy to reduce weight and prolonged the working life.

## 2. High power, high reliable engine with oil injection/ auto-mixing oil delivery system

A special engine was designed exclusively for use on VC82ASE. This model is possible to match engine performance precisely to the needs of pump, while simplifying its overall construction. Gasoline and oil are mixed automatically at a precise ratio to engine speed. This system eliminates to need to premix fuel. The monitor lamp lights up and buzzer sounds when 3/4th of the oil in the tank has been used.

## 3. Low engine noise

Large muffler and intake silencer are fitted to reduce engine noise.

## 4. High pump performance

The VC82ASE boasts the highest performance in the discharge capacity in its class of portable fire pump.

2,050 l/min. (542 US gals/min.) at 0.6 MPa

1,800 l/min. (476 US gals/min.) at 0.8 MPa

1,500 l/min. (396 US gals/min.) at 1.0 MPa

(Suction height: 3 m)

## 5. Oilless vacuum pump

This is the model to use the Oilless Vacuum Pump as a standard equipment. This not only saves oil, but also protects from environment pollution because oil for sealing is not used. The time of priming water is as follows:

4.0 sec. at Hs = 1 m (using 6 m suction hose)

5.5 sec. at Hs = 3 m (using 6 m suction hose)

8.0 sec. at Hs = 6 m (using 8 m suction hose)

The rotary vane type vacuum pump is able to lift water up to 9 meters (29.5 feet).

## 6. Fully covered protection

This cover protects the engine from water falling on the pump unit and it is easily detachable when required for servicing. Streamlined cover is attractive design and safe.

## 7. Cooling water re-circulating system

Cooling water is returned to the pump eliminating discharge outside of the pump. This pump can be operated in dry or clean area without contamination and saves water.

## 8. Twin outlet water delivery

Two outlet hoses can be connected eliminating the need for a twin outlet adapter. These are adjustable within a 90 degree range.

## 9. Unique auto choke carburetor

Because of TOHATSU's unique auto choke carburetor on this model, the engine will start easier in all seasonal temperature conditions. There is no choke knob because no choke adjustment required.

## 10. Maintenance-free battery

This is a sealed type and maintenance-free battery. Once the battery is filled with a specified electrolyte, it is not required to add the electrolyte in the battery like a general battery.

## 11. Fuel drain feature

This model is equipped with a float chamber drain valve to provide easy removal of unused fuel in the carburetor. Fuel should be drained from the float chamber after each use to ensure consistent fast starting in future emergencies.

## 12. Engine overheat protection sensor

Overheat protection is provided on this model to safeguard the engine from cooling water loss, and to protect the pump without supplying water. This device will stop the engine automatically when the operating temperature reaches 80°C. A reset switch is provided to release the sensor after it stops the engine. This gives control to the operator in emergency situations.

## 13. Centralized control

All gauges, throttle dial control knob and switch are located on the control panel for easy operation. The control panel also includes an OK Monitor to provide an easy visual check of the pump operation.

## 14. Stainless steel fuel tank

A stainless steel fuel tank protects fuel against corrosion, ensuring long engine life.

## 15. Reliable electric starter and back-up recoil starter

An electric starter and back-up automatic recoil starter are installed to guarantee starting the engine under any condition.

- Accessories :**
1. Battery charger
  2. Floodlight projector
  3. Tool box

## OK Monitor

The OK Monitor checks the following 3 points:

### Engine Oil Level Indication Lamp



This warning lamp lights up when the oil level in the engine oil chamber reaches a dangerous low level. The lamp lights up when 3/4th of the oil has been used, and the oil must be filled immediately.

### Fuel Level Alarm Lamp



The warning lamp lights up when the level of fuel in the tank is low (2/3rd empty). Fuel should be added as necessary. The tank should be kept fully topped up with fresh fuel.

### Engine Overheat Protection Sensor Device



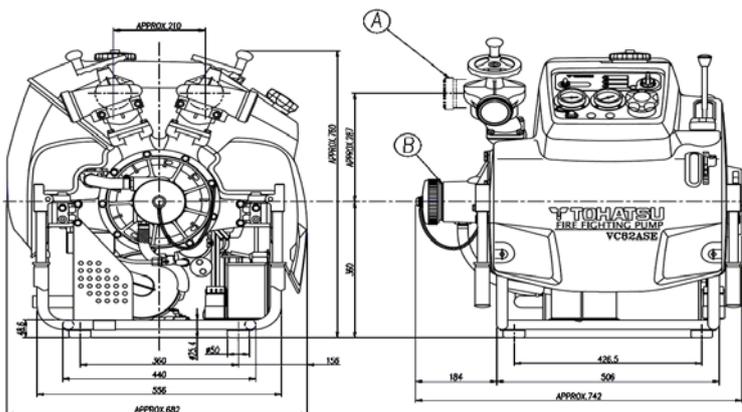
This device stops the engine automatically when the engine has excessively heated caused by lack of cooling water. The engine will stop and the lamp will light when the overheat sensor works.

### Hours Meter



Hours Meter starts counting when main switch is turned "ON" position. It is useful for periodical inspection.

## EXTERNAL VIEW



## PERFORMANCE CURVES

