TOHATSU
Portable Fire Pumps
http://tienphongvietnam.com.vn

Reliable and Efficient Fire Protection

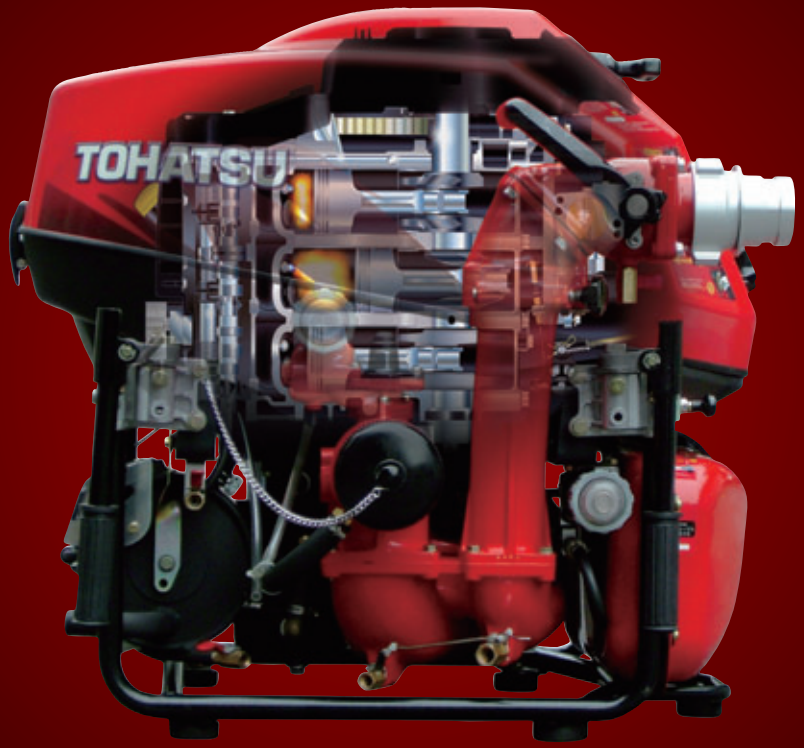
Delivering Reliability

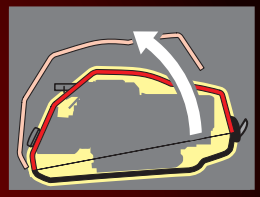
Reliable and Efficient Fire Protection

Tohatsu has been involving in manufacturing and distributing various types of machinery products with application of engines more than 70 years. Portable fire pump is one of our most successful parts among all the products range. Unique combination of originally developed petrol engines, and pump body has brought excellent efficiency to emergency fire services, which have made us the leading manufacturer of portable fire pumps throughout the world.

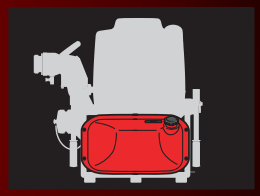
Tohatsu offers comprehensive range of portable fire pumps to meet the demands of global fire services. Lightweight, compactness, and outstanding discharge volume are most essential factors for portable fire pumps. Excellent workmanship, combining of consistent R&D and advanced technology guarantee long durability, and reliable performance.

Our clients include military services, forest departments, various types of factories in many countries, as well as municipal fire departments.





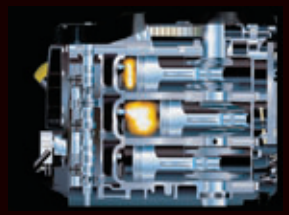
Hermetically sealed engine covering
The top cowl is closed hermetically on the bottom cowl to contain engine noise efficiently and to achieve high waterproof property. The top cowl can be opened simply by releasing the front latch for easier services.



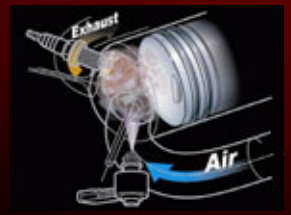
Low fuel tank location
The fuel tank located in the lower section of the pump for easier refueling. No fuel cock. Lower gravity center of the pump makes the pump more stable and less vibratory.

Large sized aluminum oil-less vacuum pump
Volume increased by 200%
Mass decreased by 50%
The vacuum pump is given the volume twice as much as that of our conventional models for providing higher priming efficiency and shorter priming time.The mass of the aluminum made pump is as much as half of our conventional models.

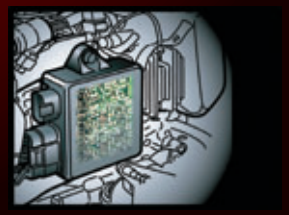
Tohatsu's rotary vane vacuum pump can assure you quick priming of water in case of emergency.



Four stroke, three cylinder engine
The first compact and advanced three cylinder four stroke engine with for driving the small fire pump.



Electronically controlled fuel injection
The fuel injection operates precisely to the commands from ECU (Engine Control Unit), achieving complete fuel combustion for lower emission and lower-fuel consumption.



ECU (Engine Control Unit)
The battery-less electronic engine control unit (ECU) runs the engine at the optimum fuel injection and ignition timing to the current weather conditions and operating conditions of the engine detected by various sensors.

Portable Fire Pumps

VF SERIES

Completely NEW Tohatsu portable fire pump with 4stroke engine

Leads new generation of compact fire pumps

VF53AS is a portable fire pump driven by a four-stroke gasoline engine that is equipped with a battery-less electronic fuel injection control.
This is the first design in the world of compact fire pumps.
The product is characterized by its low emission, low operation cost and very low noise that constitute the standard performance of modern compact fire pumps.

Low emission
An essential requirement of today when the environmental issues are our concerns.

Carbon monoxide
CO emission is lowered by 43%.

Carbon hydride and nitroxide
HC and NOx emissions are lowered by 90%.

Low noise and low vibration
The engine operation does not disturb communication even in fire fighting activities or drilling.

Noise: Reduced by 9dB

Low fuel consumption
Consumes fuel effectively and allow longer operation.

Fuel consumption: Reduced by 48%

Excellent engine starting reliability
Assured engine starting under harsh environment.

Note: Numerical data are comparison with our two stroke models operating at 0.4MPa.

VF53AS

700lit/min at 1.0MPa (10Bar)
950lit/min at 0.8MPa (8Bar)
1,200lit/min at 0.6MPa (6Bar)

Accessories
Automatic battery charger, and tool set

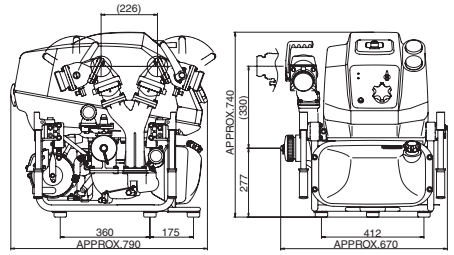
Optional items

1.Operation light
The use of the operation light allows confirmation of the current operation condition of the pump at a distance from the machine.

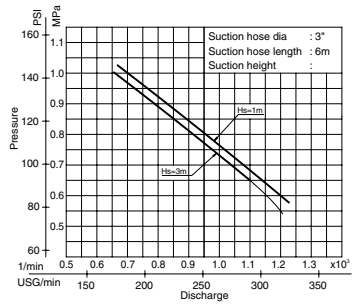
2.Search light
The halogen light (12V, 55W) provides high-intensity illumination to support night activities effectually.

3.Remote fuel tank
Remote fuel tank can be added through the fuel hose connector that is standard on the pump. The 20 liter tank is made of stainless steel. The use of the remote fuel tank can extend the operating period of the pump that is also made longer with the use of the fuel-efficient four-stroke engine.

External dimensions VF53AS



Pumping performance curve VF53AS



Reliable and Efficient Fire Protection

More attractive features and functions are added to maximize efficiency of fire services.

Light weight and compact
Engine and pump castings are made of anti-corrosive aluminum-alloy to reduce weight and prolong working life. Compact unit in its class fits existing locker space, also can be carried by 2 firemen.

High pump performance
Both engine and pump are designed and developed exclusively for fire pumps by Tohatsu, ensuring higher pump performance for its class.

Reliable engine with oil injection/auto mixing oil delivery system
The engine is originally designed by Tohatsu for this model. Equipped with oil pump, gasoline and engine oil are mixed automatically at a precise ratio to engine speed without mixing fuel and oil by operator.

Priming
Quick priming is provided by operating Rotary Vane Vacuum Pump.
* Prime 1meter in 4seconds (6m suction hose)
* Prime 3meter in 5.5seconds (6m suction hose)
* Prime 6meter in 8.0seconds (6m suction hose).

In addition, VC85BS is equipped Automatic Suction System with on/off switch.

Centralized control
All gauges, throttle dial, control switches, and other warning lamps are grouped on the control panel for easy operation.

Cooling water recirculation system
Engine cooling water is returned to the pump eliminating discharge outside of the pump, and contamination of surrounding area.

Unique auto choke carburetor
This device helps engine start easier in all seasonal temperature conditions.

Engine overheat protection sensor
Overheat protection is provided on this model to safeguard the engine from cooling water loss, and to protect engine when water is not discharging. This device stops the engine automatically when engine temperature reaches 80 degree. Reset switch is equipped to VC82ASE provided to release the sensor after it stops the engine.
VC85BS is automatically reset after engine stop.

Large capacity fuel tank
Integrated fuel tank with large capacity of 18liters ensures the fuel supply will last for 1 hour at maximum throttle opening and load.

90 degree rotating twin discharge ports
VC82ASE are equipped twin Flat Valve
VC85BS are equipped twin Ball Valve

Electric starter with back up recoil starter
An electric starter and back-up recoil starter are installed to guarantee starting engine under any conditions.

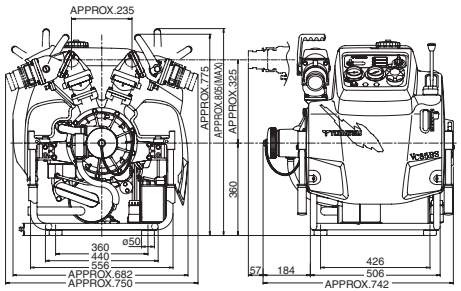
VC82ASE
2,050lit/min at 0.6MPa (6Bar)
1,800lit/min at 0.8MPa (8Bar)
1,500lit/min at 1.0MPa (10Bar)

VC85BS
2,050lit/min at 0.6MPa (6Bar)
1,800lit/min at 0.8MPa (8Bar)
1,500lit/min at 1.0MPa (10Bar)

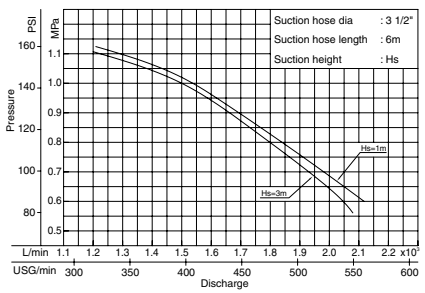
Accessories
1. Battery charger
2. Floodlight projector
3. Plastic toolbox

Adapters:
Some different type of adapters for suction port and discharge ports are available.

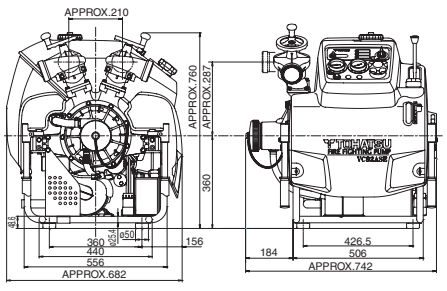
External dimensions VC85BS



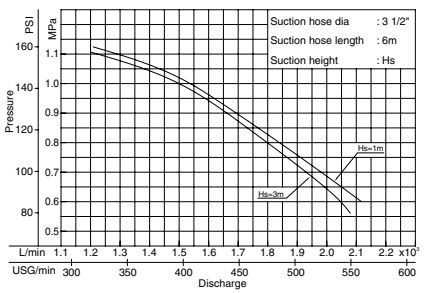
Pumping performance curve VC85BS



External dimensions VC82ASE



Pumping performance curve VC82ASE



Portable Fire Pumps VC SERIES

Light weight and compact
Engine and pump castings are made of anti-corrosive aluminum-alloy to reduce weight and prolong working life. Compact unit in its class fits existing locker space, also can be carried by 2 firemen.

High pump performance
Both engine and pump are designed and developed exclusively for fire pumps by Tohatsu, ensuring higher pump performance for its class.

Reliable engine with oil injection/auto mixing oil delivery system
The engine was originally designed by Tohatsu for VC series models. Equipped with oil pump, gasoline and engine oil are mixed automatically at a precise ratio to engine speed without mixing fuel and oil by operator.

Priming
Quick priming is provided by operating Rotary Vane Vacuum Pump. Prime 3meters in 6seconds.

Centralized control
All gauges, throttle dial, control switches, and other warning lamps are grouped on the control panel for easy operation.

Cooling water recirculation system
Engine cooling water is returned to the pump eliminating discharge outside of the pump, and contamination of surrounding area.

Unique auto choke carburetor
This device helps engine start easier in all seasonal temperature conditions.

Engine overheat protection sensor
Overheat protection is provided on this model to safeguard the engine from cooling water loss, and to protect engine when water is not discharging. This device stops the engine automatically when engine temperature reaches 80degree C. Reset switch is provided to release the sensor after it stops the engine.

Stainless steel fuel tank
Integrated fuel tank with large capacity of 18liters ensures the fuel supply will last for 1.5 hours at least at maximum throttle opening and load.

180degree rotating discharge port

Electric starter with back up recoil starter
An electric starter and back-up recoil starter are installed to guarantee starting engine under any conditions.

VC72AS

1,700lit/min at 0.4MPa (4Bar)
1,550lit/min at 0.6MPa (6Bar)
1,300lit/min at 0.8MPa (8Bar)
950lit/min at 1.0MPa (10Bar)

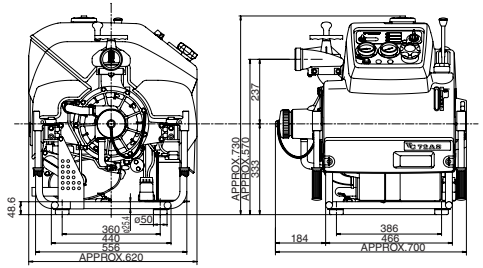
VC52AS

1,450lit/min at 0.4MPa (4Bar)
1,250lit/min at 0.6MPa (6Bar)
1,000lit/min at 0.8MPa (8Bar)
600lit/min at 1.0MPa (10Bar)

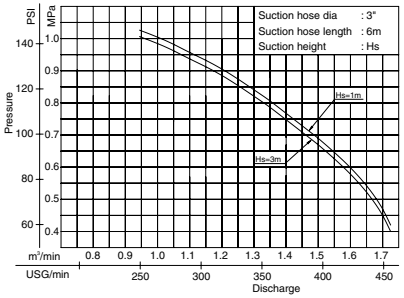
Accessories
1. Battery charger
2. Floodlight projector
3. Plastic toolbox

Adapters:
Some different type of adapters for suction port and discharge ports are available.

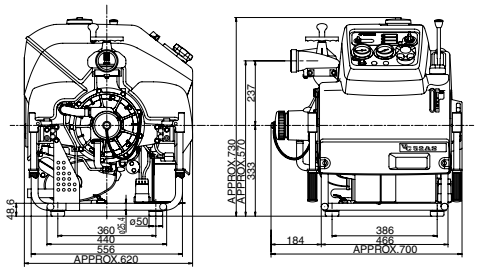
External dimensions VC72AS



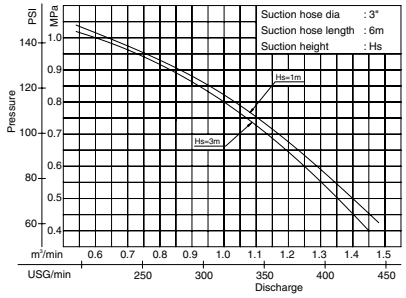
Pumping performance curve VC72AS



External dimensions VC52AS



Pumping performance curve VC52AS



Portable Fire Pumps

V SERIES

More attractive features and functions are added to maximize efficiency of fire services.

Light weight and compact
Engine and pump castings are made of anti-corrosive aluminum-alloy to reduce weight and prolong working life. The pump can be carried on a fireman's back for limited distances when properly mounted on a backpack. When mounted on a truck, the compact design allows for more locker space for other fire equipments. It is suitable for forest fire fighting.

High pump performance
Both engine and pump are designed exclusively for fire pumps by TOHATSU ensuring high pump performance for its class.

Unique auto choke carburetor
Equipped with TOHATSU's unique auto choke carburetor on this model, the engine can start easier in all seasonal temperature conditions. A valve type one touch-draining device is equipped for quick drainage of fuel in carburetor.

Oilless type vacuum pump
Tohatsu's rotary vane vacuum pump can assure you quick priming of water in case of emergency.
* 5.0 sec. at suction height 1m
* 6.0 sec. at suction height 3m
* 10.0 sec. at suction height 6m

Centralized control
Pressure and vacuum gauges, throttle dial and switches are grouped on the control panel.

Stainless steel fuel tank
Stainless steel fuel tank can keep fuel prevent contamination from corrosion.

90 degree rotating discharging port
The discharge port can be rotated freely through 90degree allowing the direction of the delivery hose to be easily changed without moving the pump unit.

Starting system
In addition to the electric starter, a recoil starter is installed to guarantee starting under any condition (V20ES). The pulling load of the recoil starter is reduced by engine exhaust by pass.

V20E/ES

660lit/min at 0.4MPa (4Bar)
540lit/min at 0.6MPa (6Bar)
290lit/min at 0.8MPa (8Bar)

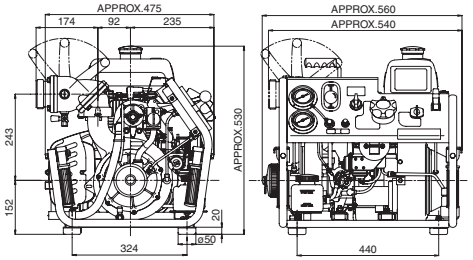
Accessories

1. Battery Charger (V20ES)
2. Floodlight projector
3. Plastic toolbox

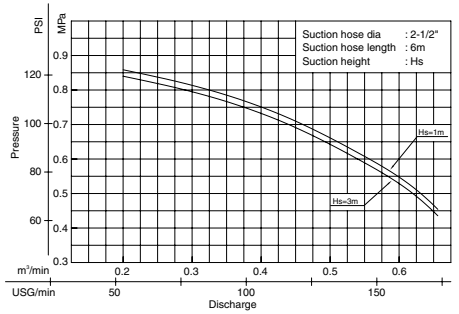
Adapters

Some different type of adapters for suction and discharge ports are available

Outline Drawing V20E/ES



Pumping performance curve V20E/ES



Specifications >>>

		VF53AS		VC85BS	VC82ASE	VC72AS	VC52AS	V20E	V20ES
Engine	Type	4-Cycle		2-Cycle					
	Number Of Cylinder	Three Cylinder		Two Cylinder				Single Cylinder	
	Cooling System	Suction Water Cooled		Suction Water Cooled				Air Cooled	
	Bore x Stroke	61 x 60 (mm) 526cc		78 x 78 (mm) 746cc		76 x 68 (mm) 617cc		66 x 58 (mm) 198cc	
	Output Kw(PS)	22 Kw (30PS)		40.5Kw (55PS)		30Kw (40.8PS)		8.6Kw (11.7PS)	
	Fuel Type	Unleaded Gasoline (Min. 87 Octane)		Unleaded Gasoline (Min. 87 Octane)				Unleaded Gasoline (Min. 87 Octane)	
	Fuel Tank Capacity (Lit)	10 Lit		18 Lit				3.5 Lit	
	Fuel Consumption	9.5 Lit/Hr		20 Lit/Hr		16 Lit/Hr		4.9 Lit/Hr	
	Fuel System	EFI (Electric Fuel Injection)		Single Carburetor with Auto Choke				Single Carburator with Auto Choke	
	Lubrication System	Wet Sump		Separate with Oil Pump				Separate with Oil Pimp	
	Lubrication Oil	SAE 10W-30 (API: SF,SG,SH,SJ)		2-Cycle EngineOil				2-Cycle Engine Oil	
	Volume (Lit)	2 Lit		1.6 Lit				0.5 Lit	
	Engine Starting	Electric/Manual		Electric/Manual				Manual	Electric/Manual
	Ignition	Digital CDI		CDI				CDI	
	DC Output (Max.)	12V - 180W		12V - 35W				12V - 35W	
Suction	Suction System	Exhaust priming	4-Blade Rotary Vane Vaccum Pump	4-Blade Rotaly Vane Vaccum Pump				4-Blade Rotary Vane Vaccum Pump	
	Maximum Suction Height	7m	9m	9m				9m	
	Automatic Suction	No	Yes	Yes	No			No	
Pump	Type	Single Suction, Single Stage, High Pressure Pump		Single Suction, Single Stage, High Pressure Pump				Single Suction, Single Stage, High Pressure Pump	
	Standard Suction Dia.	3"		3-1/2"		3"		2-1/2"	
	Standard Suction Thread	JIS Fire Thread (B-9912)		JIS Fire Thread (B-9912)		JIS Fire Thread (B-9912)		JIS Fire Thread (B-9912)	
	Factory Option	BSP or NST (3",4")		BSP or NST (3",4")				BSP or NST 2-1/2"	
	Standard Discharge Dia.	2-1/2"		2-1/2"				2-1/2"	
	Standard Discharge Thread	JIS Fire Thread (B-9912)		JIS Fire Thread (B-9912)				JIS Fire Thread (B-9912)	
	Factory Option	BSP or NST		BSP or NST				BSP or NST	
	Discharge Number	Twin Outlet		Twin Outlet		Single Outlet		Single Outlet	
	Standard Discharge Vave	Flat Valve	Ball Valve	Ball Valve	Flat Valve	Flat Valve	Flat Valve	Ball Valve	
	Other Valve	N/A	Flat Valve	N/A	Ball Valve	Ball Valve	N/A	N/A	
Performance Head = 3m Hose = 6m	@0.4MPa lit/min					1700	1450	660	
	@0.6MPa lit/min	1200		2050		1550	1250	540	
	@0.8MPa lit/min	950		1800		1300	1000	290	
	@1.0MPa lit/min	700		1500		950	600		
Weight	kg	99	101	95	94	85		40	46

Management of portable fire pumps
- Preparing for fires or natural disasters, the portable fire pump requires periodic inspections and services.
- The rough standard period of normal operation of the portable fire pump is ten (10) years.
- Periodical inspections by an authorized service person should be made every six months.
- It is recommended that the service is performed by a person authorized for service of the portable fire pump. (The repair parts of the portable fire pump are available for ten years after discontinuation of production of the product.)

Caution:
- Please read the owners manual and warranty certificate of the product thoroughly before using it. Also, confirm the contents of the cautionary labels put on the product.
- For safer use of the product, please perform periodical inspections and services.
- The product shown in this brochure includes some optional components.
- The color of the product shown in this brochure may be different from the real one due to photographing conditions and properties of the printing inks.
- The specifications and designs of this product are subject to change without prior notice for the purpose of improvement of the product.

TOHATSU CORPORATION Principal products: Outboard motors, pleasure boats, portable fire pumps, small fire trucks, pumps for construction and drainage and refrigeration unit for transportation

TOHATSU manufactures a full line of portable fire pumps with a variety
of performances to meet the demands of the global fire services.
With the years of engineering and experiences,
we provide you most reliable portable fire pumps really required.
Both engine and pump have been originally designed by TOHATSU,
ensuring quick and efficient performance for fire fighting in case of emergency.

ISO9001:2000.ISO14000 Certified
Head office, Komagane plant

TOHATSU
Portable Fire Pumps

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