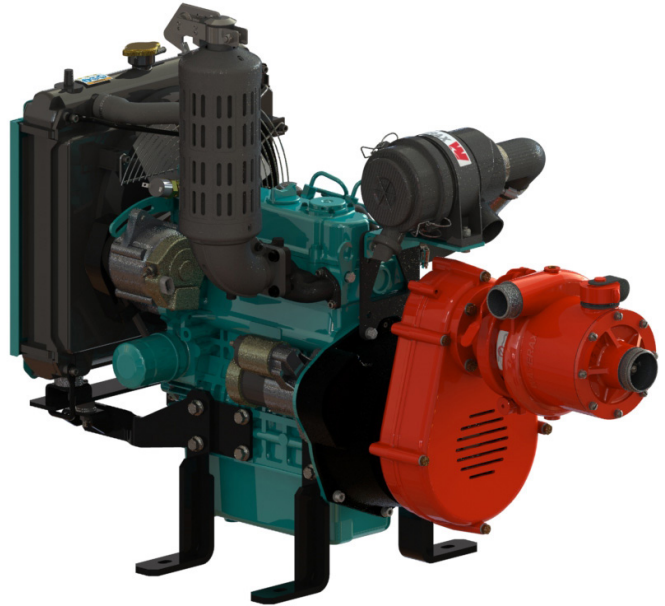


# BB-4<sup>®</sup> DIESEL



## **BB-4-D902** **VEHICLE MOUNT**

### **HIGH PRESSURE 4-STAGE FIRE PUMP**

The **WATERAX BB-4-D902** pump pairs a reliable high performance 4-stage pump end with a powerful Kubota D902-E4B 3-Cylinder Fuel Injected Liquid Cooled 25 HP Diesel Engine to achieve pressures of up to 395 PSI (27.2 bar) and flow rates reaching 106 GPM (401 L/Min). Strong enough to operate as a source pump for tandem and parallel pumping, it is also optimal for direct attack firefighting, remote watering, sprinkler systems, and is a popular choice for slip-on units.

The **WATERAX** quick release clamp provided on the **BB-4<sup>®</sup>** pump lets you replace a damaged pump end in the field with minimal equipment downtime. The 4-stage pump end on the **BB-4<sup>®</sup>** is identical to the pump end on the **MARK-3<sup>®</sup>** unit, which greatly reduces your spare parts inventory and improves your ability to respond to unforeseen equipment damage.

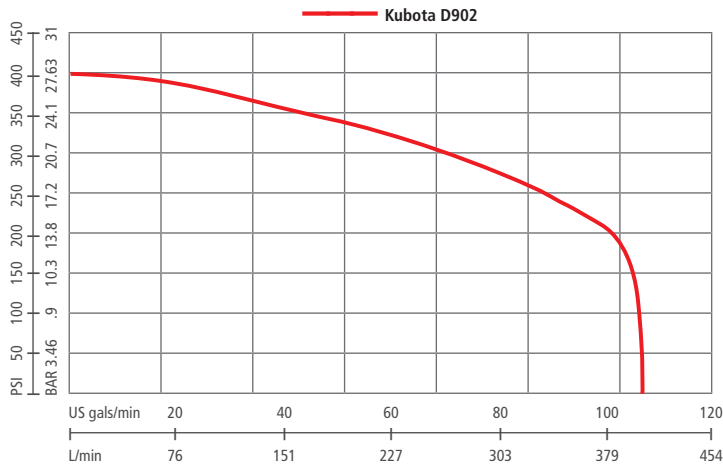
#### **Applications**

- Slip-on units
- Attack line firefighting
- Long hose lay for remote watering during firefighting operations
- High elevation firefighting in mountainous areas
- Accuracy in flow trajectory when structure firefighting
- Tandem pumping over long distances
- Parallel pumping for higher volumes

#### **Features and Benefits**

- Quick release clamp and swappable pump ends for minimal equipment downtime and inventory
- Sealed bearing to eliminate pump end greasing in the field
- Belt drive system for reliable, low maintenance performance
- Aluminium alloy pump components and anodized parts for lighter weight and greater resistance to corrosion
- Comprehensive user and service manuals
- EPA Certified

## SPECIFICATIONS



### Flow rate at specified pressure

Maximum Pressure: 395 PSI (27.2 bar)

Free flow: 106 GPM (401 lpm)

Maximum Head: 911' (278 m)

Flow Rate			Pressure	
US GPM	(LPM)		PSI	(BAR)
103	(390)	@	150	(10.3)
95	(360)	@	250	(17.2)
55	(208)	@	350	(24.1)

Engine: Kubota D902-E4B - 25 hp



### Pump Specifications:

<b>Type</b>	Detachable 4 stage Centrifugal
<b>Ratings</b>	NFPA 1906 Medium Pressure Rating of 50 GPM
<b>Description</b>	High Pressure, Medium Flow, Foam Compatible
<b>Maximum Allowable Pressure</b>	600 PSI (41.4 bar)
<b>Maximum Discharge Pressure</b>	395 PSI (27.2 bar)
<b>Intake</b>	2" Male NPSH Thread
<b>Discharge</b>	1-1/2" Male NPSH thread
<b>Priming Port</b>	1-1/2" Male NPSH Thread
<b>Body &amp; Diffusers</b>	Anodized corrosive resistant aluminum
<b>Impellers</b>	3.67" Diameter; Anodized corrosive resistant aluminum
<b>Pump Shaft</b>	Stainless Steel
<b>Bearings</b>	Maintenance Free; sealed ball bearing
<b>Pump Seal</b>	Blister-resistant carbon seal face, silicon carbide seat, and fully integrated drive bushing.
<b>Clamp</b>	Hand tight quick release clamp (no tools needed)
<b>Drive Unit</b>	Timing Belt and Pulley; Speed Increaser
<b>Speed Increaser</b>	
<b>Position</b>	Horizontal or Vertical
<b>Drive Ratio</b>	1.88: 1
<b>Color</b>	Red
<b>Special Feature</b>	The entire pump separates completely from the engine/speed increaser.

### Engine Specifications:

<b>Model &amp; Type</b>	Kubota D902-E4B 3-Cylinder Fuel Injected Liquid Cooled Diesel Engine
<b>Net Power</b>	24.8 HP (18.5 kW) @ 3600 RPM
<b>Net Torque</b>	40.6 lb-ft (55 Nm) @ 2600 RPM
<b>Max. Bare Idle Speed</b>	900 to 1000 RPM
<b>Bore &amp; Stroke</b>	2.83 x 2.9 inches (72 x 73.6 mm)
<b>Displacement</b>	54.80 cubic inches (898 cc)
<b>Electric Starting System</b>	12 VDC, 1.0 kW Starter (with glow plug)
<b>Charging:</b>	12 Volt, 40 Amp
<b>Battery Capacity (5Hr Capacity)</b>	12 Volt, 52 Amp-Hour or equivalent
<b>Intake System</b>	Naturally Aspirated
<b>Cooling</b>	Liquid Cooled
<b>Compression Ratio</b>	24:1
<b>Oil Capacity</b>	3.9 quarts (3.7 liters)
<b>Oil Type</b>	
<b>(API Classification)</b>	API CJ-4
<b>Emissions:</b>	Meets current CARB, EPA, and CE requirements.
<b>Fuel Type</b>	Ultra Low Sulfur (15 ppm or less)
<b>Muffler</b>	Rain Cap Standard, Forestry Approved Spark Arrestor Optional.

All features are not available on every model. Please refer to the product selection matrix to select the proper model.

## SPECIFICATIONS

### Primer Specifications

#### Hand Primer Option

<b>Intake and Discharge Port Size</b>	1/2" Female NPT
<b>Construction</b>	Aluminum Handle, composite body, buna-n reinforced diaphragm and flapper valves
<b>Lift</b>	12 feet (3.7 m) [up to approximately 16 feet (4.8 m) with suction hose footvalve]
<b>Head Capacity</b>	30 ft (9.1 m)
<b>Maximum Pressure</b>	15 PSI (1.03 bar)
<b>Maximum Service Temp</b>	150° F (66° C)
<b>Volume per Stroke</b>	0.44 quart (0.42 liter)
<b>Dimensions (L x W x H)</b>	12-3/4" x 4-1/2" x 4-5/16" (324 x 114 x 110 mm)
<b>Weight</b>	1.70 lbs (0.77 kg)
	Shipped loose with connection hardware and 6 feet of hose

#### Electric Primer Option

	12 VDC Piston Type Vacuum Pump
<b>Intake and Discharge Port Size</b>	3/8" Female NPT
<b>Construction</b>	Corrosion Resistant Aluminum with Bronze Sleeve and Composite Piston
<b>Max. Current Draw</b>	105 amps
<b>Lift</b>	25 feet (7.6 m)
<b>Vacuum</b>	22 in-Hg
<b>Dimensions</b>	9" x 4-1/8" x 7-1/2" (229 x 105 x 191 mm)
<b>Weight</b>	8.1 lbs (3.7 kg)
<b>Vehicle Units</b>	Shipped loose with mounting plate, hardware, and 6 feet of hose

### Frame Specifications

<b>Vehicle Mount</b>	4 Leg Mounts.
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### Controls Specifications

<b>PMSCP-Diesel</b>	Push Button On/Off Switch (lit when on), Low Pressure Protection Switch (lit when on), Push Button Engine Start, Glow Plug Timer, Low Oil Pressure, Warning Light, High Water Temperature Warning Light, Vernier Throttle, Pump Discharge Pressure Gage and mounting for optional electric primer momentary control toggle switch (comes in electric primer kit).
<b>G1 PANEL</b>	Rotary OFF/RUN/Start Switch; LED Indicators for glow plug preheat, alternator charge failure, low oil pressure, and high engine temperature. Tachometer, Hourmeter, and low oil pressure and high engine temperature shut down.
<b>DUAL CONTROL PANELS</b>	Two individual panels each having a rotary OFF/RUN/Start Switch; LED Indicators for glow plug preheat, alternator charge failure, low oil pressure, and high engine temperature. Tachometer, Hourmeter, and low oil pressure and high engine temperature shut down.

**NOTE:** All panels come with FastWire Connections for ease in installation and maintenance.  
A 3 foot extension is also available.

All features are not available on every model. Please refer to the product selection matrix to select the proper model.

## PRODUCT SELECTION

### PRODUCT SELECTION MATRIX

			BB-4-D902V	BB-4-D902H
STANDARD INCLUSIONS	Primer	Guzzler Hand Primer	0	0
		Electric Primer	0	0
	Muffler	Rain Cap	S	S
		Forestry Approved Spark Arrestor	0	0
	Drive Orientation	Vertical	S	-
		Horizontal	-	S
	Controls	PMSCP-DIESEL	0	0
		G1 PANEL	0	0
		Dual Control Panels	0	0
	Fastwire	FWX-D902-3 3' Extension Harness	0	0
Dimensions			39.8" x 20.6" x 33"	39.8" x 21.9" x 33"
Weight			280 lbs (127 kg)	280 lbs (127 kg)

Standard **S** Option **0** Not applicable **-**

### OPTIONS AND ACCESSORIES

**Sold Separately**

#### CONTROLS



#### PMSCP-DIESEL

(Part Number 250278)

Panel Mount Standard Control Panel  
w/ FastWire CTRL connector.



#### G1 PANEL

(Part Number 250287)

Engine OFF/RUN/START,  
Glow Plug LED Indicator,  
Battery Low Voltage  
Warning LED Indicator,  
Low Oil Pressure LED  
Indicator and Shutdown,  
High Water Temperature  
LED Indicator and  
Shutdown, Hourmeter,  
and Analog Tachometer.

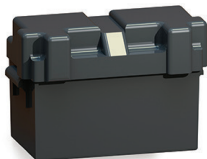


#### DUAL CONTROLS

(Part Number 600609)

#### ELECTRIC KIT

#### FASTWIRE CABLES



#### BATKIT-66

(Part Number 250239)  
Deep Cycle Battery Kit  
w/ FWP-9 cable



#### WLIGHTKIT

(Part Number 250244)  
LED Work Light w/ 5'  
harness & toggle switch



#### FWX-D902-3

(Part Number 600584)  
3' CTRL Cable extension  
w/ two 14pin connectors



#### FWP-20

(Part Number 600071)  
20' PWR Cable with lugs  
& Anderson conn.

#### FWP-9

(Part Number 600144)  
9' PWR Cable w/ lugs  
& Anderson conn.


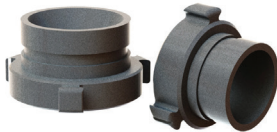


#### FWP-3

(Part Number 600129)  
3' PWR Cable w/ lugs  
& Anderson conn.

## PRODUCT SELECTION

### OPTIONS AND ACCESSORIES

**Sold Separately**

PRIMER		PUMP INTAKE & DISCHARGE ADAPTER	
	<b>GZPRIMERKIT</b> (Part Number 250237) Guzzler Hand Primer with hose & valve		<b>300770</b> ADAPTER 2" NPSH FEMALE TO VICTAULIC <b>300771</b> ADAPTER 1-1/2" NPSH FEMALE TO VICTAULIC
	<b>EPRIMERKIT</b> (Part Number 250238) Electric Primer w/ plate, 5' harness & switch		<b>600428</b> CHECK VALVE MANIFOLD 1-1/2 NPSH

### ENGINE ACCESSORIES



**SPARK ARRESTOR**  
(Part Number 701421)  
(Need to order 701422  
with arrestor)



**AUXILIARY FUEL PUMP KIT**  
(Part Number 701419)  
\*Required for installations where  
the fuel tank sits more than  
8 inches below the bottom  
of the engine.

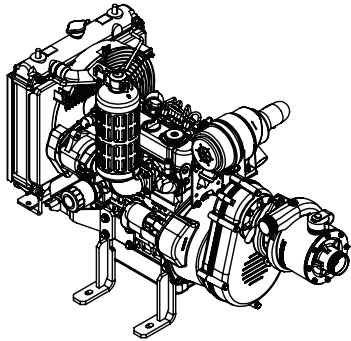


**FUEL LINE CHECK**  
(Part Number 701466)  
\*Reduces engine start up  
time by keeping fuel in the  
fuel line to the engine.



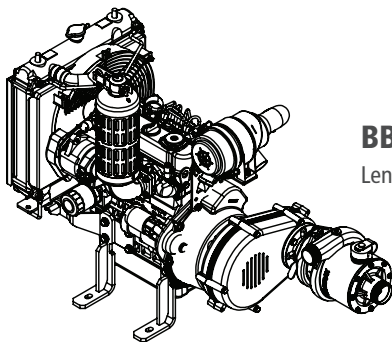
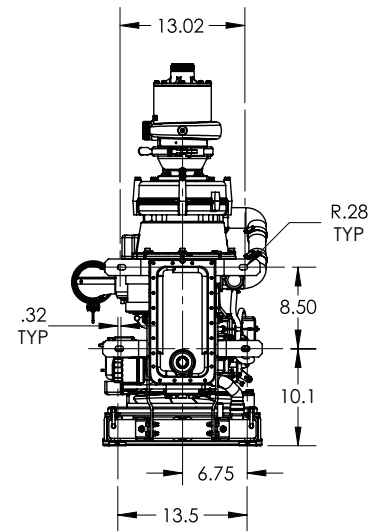
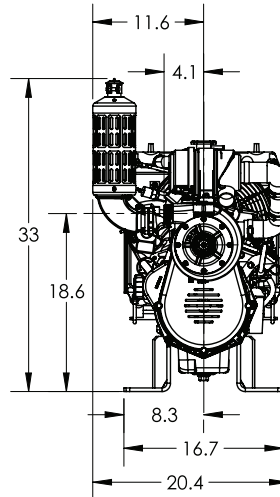
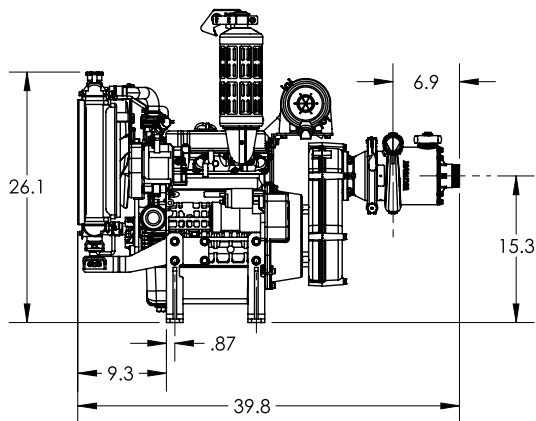
**ISOLATORS**  
(Part Number 701420)  
(Need to order 4)

## TECHNICAL DRAWINGS



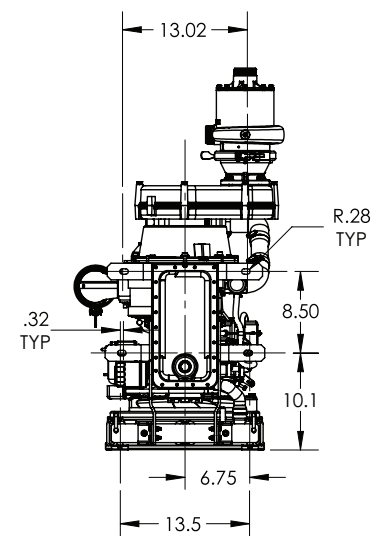
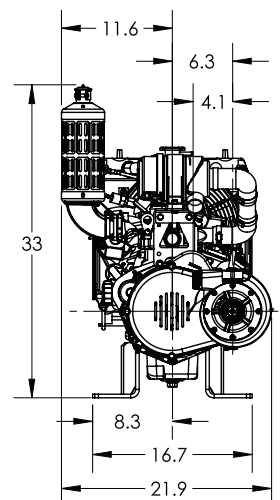
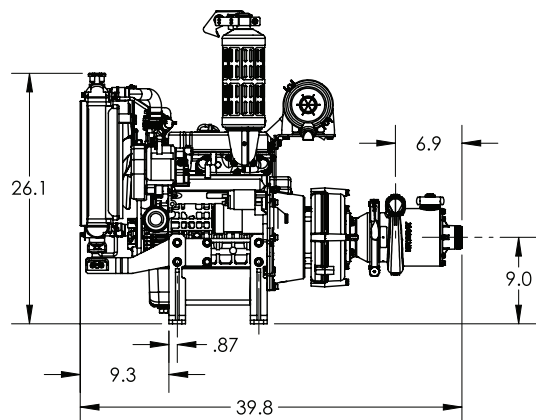
### BB-4-D902V

Length 39.8" (101 cm) Width 20.6" (52.32 cm) Height 33" (83.8 cm) Weight 280 lbs (127 kg)



### BB-4-D902H

Length 39.8" (101 cm) Width 21.9" (52.32 cm) Height 33" (83.8 cm) Weight 280 lbs (127 kg)





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