

WATERAX



BB-4[®]-23V Vehicle mount vertical drive

DATA SHEET

HIGH PRESSURE 4-STAGE FIRE PUMP

The **WATERAX BB-4 -23** pump pairs a reliable high performance 4-stage pump end with a powerful **Briggs & Stratton 4-stroke 23 HP** engine to achieve pressures of up to **440 PSI (30.3 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[®]** pump lets you replace a damaged pump end in the field with minimal equipment downtime. The 4-stage pump end on the **BB-4[®]** is identical to the pump end on the **MARK-3[®]** unit, which greatly reduces your spare parts inventory and improves your ability to respond to unforeseen equipment damage. You can also quickly install a mid-range **B2X[™]** pump end as needed for supply or structure firefighting.

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

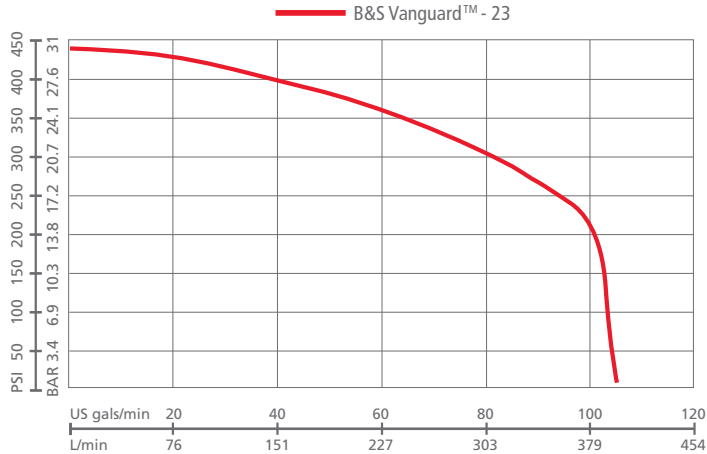
Features and Benefits

- 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



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SPECIFICATIONS



Flow rate at specified pressure

Maximum Pressure: 440 PSI (30.3 bar)
 Free flow: 106 US gals/min (401 L/min)
 Maximum Head: 1016' (310 m)

Flow Rate			Pressure	
US GPM	(LPM)		PSI	(BAR)
105	(397)	@	150	(10.3)
95	(360)	@	250	(17.2)
65	(246)	@	350	(24.1)

Engine: Briggs & Stratton® Vanguard™ - 23 hp



Pump Specifications:

Type:	Detachable 4 stage Centrifugal
Ratings:	ISO 9 and NFPA 1906 Medium Pressure Rating of 50 GPM
Description:	High Pressure, Medium Flow, Foam Compatible
Maximum Allowable Pressure:	600 PSI (41.4 bar)
Intake:	2" Male NPSH Thread
Discharge:	1-1/2" Male NPSH Thread
Priming Port:	1-1/2" Male NPSH Thread
Body & Diffusers:	Anodized corrosive resistant aluminum
Impellers:	3.67" Diameter; Anodized corrosive resistant aluminum
Pump Shaft:	Stainless Steel
Bearings:	Maintenance Free; sealed ball bearing
Pump Seal:	Heat resistant, Maintenance Free
Clamp:	Hand tight quick release clamp (no tools needed)
Drive Unit:	Timing Belt and Pulley; Speed Inserter
Speed Inserter Position:	Horizontal
Drive Ratio:	1.88: 1
Color:	Red
Special Feature:	The entire pump separates completely from the engine/speed inserter.

Engine Specifications:

Model & Type:	Briggs and Stratton Vanguard 4-cycle, horizontal shaft, twin cylinder, OHV
Maximum Power:	23 HP (17.2 kW) @ 3600 RPM
Maximum Torque:	32.75 lb-ft (44.4 Nm) @ 2600 RPM
Bore & Stroke:	2.97 x 2.76 inches (72 x 70 mm)
Displacement:	38.26 cubic inches (627 cc)
Starting System:	12 VDC electric start with recoil start
Ignition:	Magnatron
Charging:	16 AMP regulating alternator
Wiring:	Pre-wired for FastWire panel connections (panels purchased separately).
Governor:	Mechanical
Cooling:	Air Cooled
Lubrication:	Oil, Full pressure
Oil Capacity:	1.8 quarts (1.7 liters)
Fuel Pump:	18 inch lift.
Emissions:	Meets current CARB, EPA, and CE requirements.
Fuel Type:	Gasoline [unleaded, 86 minimum octane, 10% maximum ethanol]
Fuel Consumption:	2.1 US gals/hr (7.9 liters/hr)
Muffler:	Forestry approved spark arrestor

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



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SPECIFICATIONS

Primer Specifications:

Hand Primer Option:

	Guzzler, Diaphragm Type; Reliable, Lightweight and Rugged
Intake and Discharge Port Size:	½" Female NPT
Construction:	Aluminum Handle, composite body, buna-n reinforced diaphragm and flapper valves
Lift:	12 feet (3.7 m) [up to approximately 16 feet (4.8 m) with suction hose footvalve]
Head Capacity:	30 ft (9.1 m)
Maximum Pressure:	15 PSI (1.03 bar)
Maximum Service Temp:	150° F (66° C)
Volume per Stroke:	0.44 quart (0.42 liter)
Dimensions (L x W x H):	12-3/4" x 4-1/2" x 4-5/16" (324 x 114 x 110 mm)
Weight:	1.70 lbs (0.77 kg)

Shipped loose with connection hardware and 6 feet of hose

Exhaust Primer Option:

	Venturi Type (when selected mounted to exhaust primer muffler)
Venturi Construction:	Brass
Exhaust Valve Construction:	Aluminum with stainless shaft and disc
Operation:	Remote mount push/pull cable.
Vacuum:	Minimum of 17 in-Hg

Electric Primer Option:

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

Frame Specifications:

Vehicle Mount:	Black flat base with tubular horizontal legs. (Provided with industrial grade stud isolators - shipped loose)
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Controls Specifications:

Engine supplied controls:	Choke & Throttle levers.
Remote exhaust:	Pull cable
FastWire quick connect:	Loomed engine wire harness (pre-wired to engine) with 8 pin Molex MX150L Industrial Sealed Male Connector. All Vehicle Mounted BB-4 pumps are equipped with FastWire quick connect engine wire harness for plug & play ease in connecting pump engine, power, and control components such as the WATERAX Control Panels MCP, PMSCP, WCP* Series.
WATERAX Control Panels:	MCP, PMSCP, WCP* Series * Water and/or foam level monitors, electric primer, work light options available.

Note: Refer to the WATERAX Control Panel data sheet and specifications to select a remote mount panel and/or call your WATERAX dealer to customize your own control panel with water and/or foam level monitors, and toggle switches for optional electric primer and work light.



PRODUCT SELECTION

PRODUCT SELECTION MATRIX

		BB-4-23V	BB-4-23VX
STANDARD INCLUSIONS	Primer	Guzzler Hand Primer	-
		Remote Exhaust Primer w/Control Cable PART-763	-
		Exhaust Primer	-
		Electric Package - Electric Primer, LED work light, & Battery	-
	Muffler	B&S horizontal low tone	-
		Dual B&S low tone	S
		Exhaust primer muffler	-
	Fuel Tank	Integral / 7 US qts (6.6 L)	-
		Integral / 4 US qts (3.8 L) w/ 3-way valve	-
	Controls	Engine Mount Control Panel	-
	Discharge Gauge	0-600 psi, 2-1/2" dial	-
	Check Valve Manifold	1-1/2" NPSH	-
	FastWire CTRL Cable	B&S 3' CTRL Cable with 8 pin connector (FWC-B-3)	0
Weight		153 lbs (69 kg)	153 lbs (69 kg)

OPTIONS & ACCESSORIES

Sold Separately

Controls



VCBLKIT
Vernier Throttle Cable









PMSCP
Panel Mount Standard Control Panel
w/ FastWire CTRL connector.






MCP
Mini Control Panel
w/ FastWire CTRL connector.



WCP
WATERAX Control Panel
w/ FastWire PWR & CTRL connectors.

Primer	Electric Kit	FastWire Cables
 <p>GZPRIMERKIT Guzzler Hand Primer with hose & valve</p>	 <p>BATKIT-66 Deep Cycle Battery Kit w/ FWP-9 cable</p>	 <p>FWC-B-3 3' B&S CTRL Cable w/ lugs & 8 pin conn.</p>
 <p>EPRIMERKIT Electric Primer w/ plate, 5' harness & switch</p>	 <p>WLIGHTKIT LED Work Light w/ 5' harness & toggle switch</p>	 <p>FWX-3 3' CTRL Cable Extension w/ two 8 pin connectors</p>
		<p>FWP-20 20' PWR Cable with lugs & Anderson conn.</p> <p>FWP-9 9' PWR Cable w/ lugs & Anderson conn.</p> <p>FWP-3 3' PWR Cable w/ lugs & Anderson conn.</p>

Fuel Tank	Pump Intake & Discharge Adapters
 <p>FA-452 Remote Fuel Tank 6.6 US Gallons w/ quick conn.</p>	 <p>ADP-A-FM20S Adapter 2" NPSH Female to NPSH Male ADP-A-FM20SP Adapter 2" NPSH Female to NPT Male ADP-A-FM20SV Adapter 2" NPSH Female to Victaulic</p>
<p>FA-452-3 Remote Fuel Tank 3.2 US Gallons w/ quick conn.</p>	<p>ADP-A-FM15SN Adapter 1-1/2" NPSH Female to NH Male ADP-A-FM15S Adapter 1-1/2" NPSH Female to NPSH Male ADP-A-FM15SP Adapter 1-1/2" NPSH Female to NPT Male ADP-A-FM15SV Adapter 1-1/2" NPSH Female to Victaulic</p>
<p>12-401B-NS-TRPD Fuel Line EPA - quick conn. to hose 1/4"</p>	 <p>B-6365 Check valve manifold 1-1/2 NPSH</p>
<p>12-401B-NS-TRPD Fuel Line - quick conn. to SAE 45 Flare</p>	

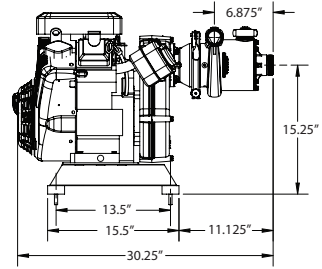
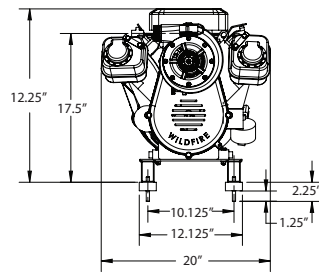
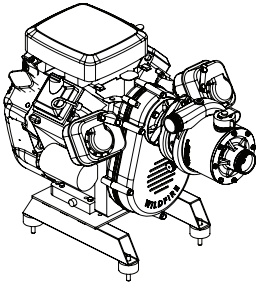


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TECHNICAL DRAWINGS

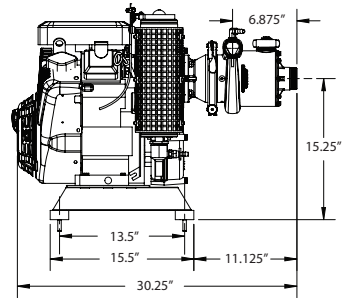
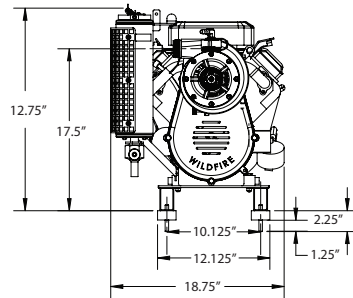
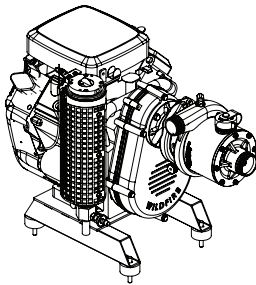
BB-4-23V

Length 30.25" (76.8 cm) Width 20" (50.8 cm) Height 20.25" (51.43 cm) Weight 154 lbs (70 kg)



BB-4-23VX

Length 30.25" (76.8 cm) Width 18.75" (47.62 cm) Height 20.75" (52.70 cm) Weight 162 lbs (73 kg)



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All information contained in this document including drawings is proprietary to *WATERAX* and may not be copied, reproduced or used in whole or in part without our prior written permission. The information in this document is subject to change without notice. Model displayed with multiple options. Weight and dimensions are approximated and may vary depending on options.

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To help you stay **#ReadyForWildfires**, we've made a few changes, placing 100% of our focus on manufacturing our core products, portable fire pumps.

To do so, we've established a network of trusted supply and distribution partners that can help us provide *WATERAX* pumps quickly in addition to water-handling equipment and accessories.

For immediate assistance when it comes to pumps and water-handling accessories, please contact your local dealer.

For genuine spare parts, visit our online store.

BB-4® is a trademark of Waterax.



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