

# BB-4<sup>®</sup>

## SERIES



## BB-4-23H

### VEHICLE MOUNT HORIZONTAL DRIVE

#### 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<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. You can also quickly install a mid-range B2X™ pump end as needed for supply or structure firefighting.

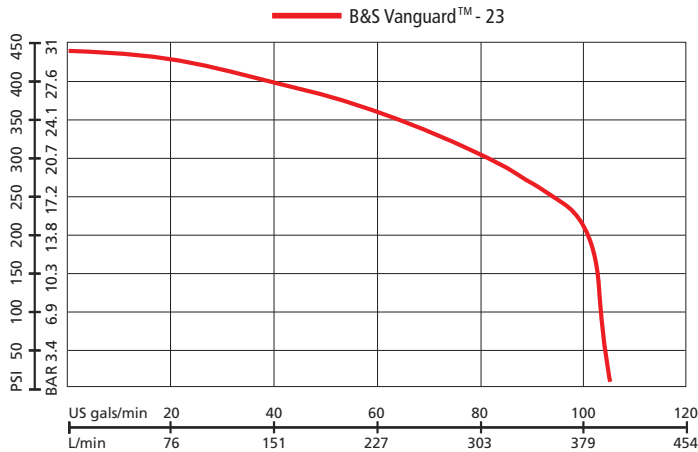
#### Applications

- 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

### 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.

## 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-4-23H	BB-4-23HX
<b>STANDARD INCLUSIONS</b>	Primer	Guzzler Hand Primer	-
		Remote Exhaust Primer w/Control Cable PART-763	-
		Exhaust Primer	S
		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		156 lbs (71 kg)	164 lbs (74 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
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**GZPRIMERKIT**  
Guzzler Hand Primer  
with hose & valve



**BATKIT-66**  
Deep Cycle Battery Kit  
w/ FWP-9 cable



**FWC-B-3**  
3' B&S CTRL Cable  
w/ lugs & 8 pin conn.



**FWP-20**  
20' PWR Cable with lugs  
& Anderson conn.



**EPRIMERKIT**  
Electric Primer w/ plate,  
5' harness & switch



**WLIGHTKIT**  
LED Work Light w/ 5'  
harness & toggle switch

**FWX-3**  
3' CTRL Cable Extension  
w/ two 8 pin connectors

**FWP-9**  
9' PWR Cable w/ lugs  
& Anderson conn.

**FWP-3**  
3' PWR Cable w/ lugs  
& Anderson conn.

Fuel Tank	Pump Intake & Discharge Adapters
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**FA-452**  
Remote Fuel Tank  
6.6 US Gallons w/ quick conn.

**FA-452-3**  
Remote Fuel Tank  
3.2 US Gallons w/ quick conn.

**12-401B-NS-TRPD**  
Fuel Line EPA -  
quick conn. to hose 1/4"

**12-401B-NS-TRPD**  
Fuel Line -  
quick conn. to SAE 45 Flare



- 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
- 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

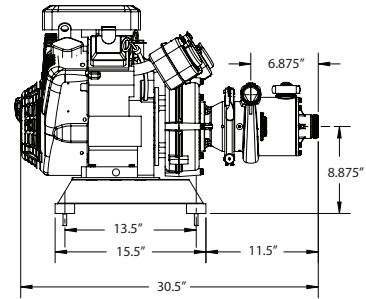
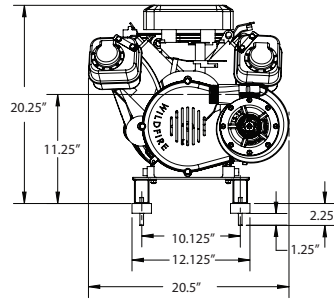
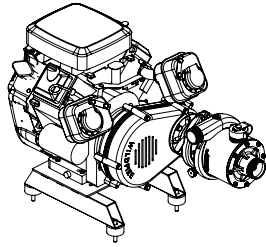


**B-6365** Check valve manifold 1-1/2" NPSH

## TECHNICAL DRAWINGS

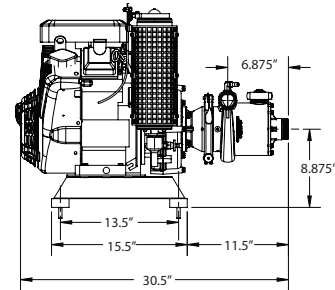
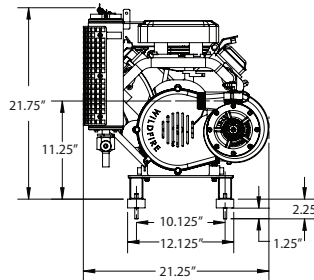
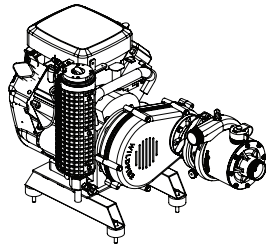
### BB-4-23H

Length 30.5" (77.5 cm) Width 20.5" (52.07 cm) Height 20.25" (51.43 cm) Weight 156 lbs (71 kg)



### BB-4-23HX

Length 30.5" (77.5 cm) Width 21.25" (53.97 cm) Height 21.75" (55.24 cm) Weight 164 lbs (74 kg)





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