



ALYAN PUMP COMPANY

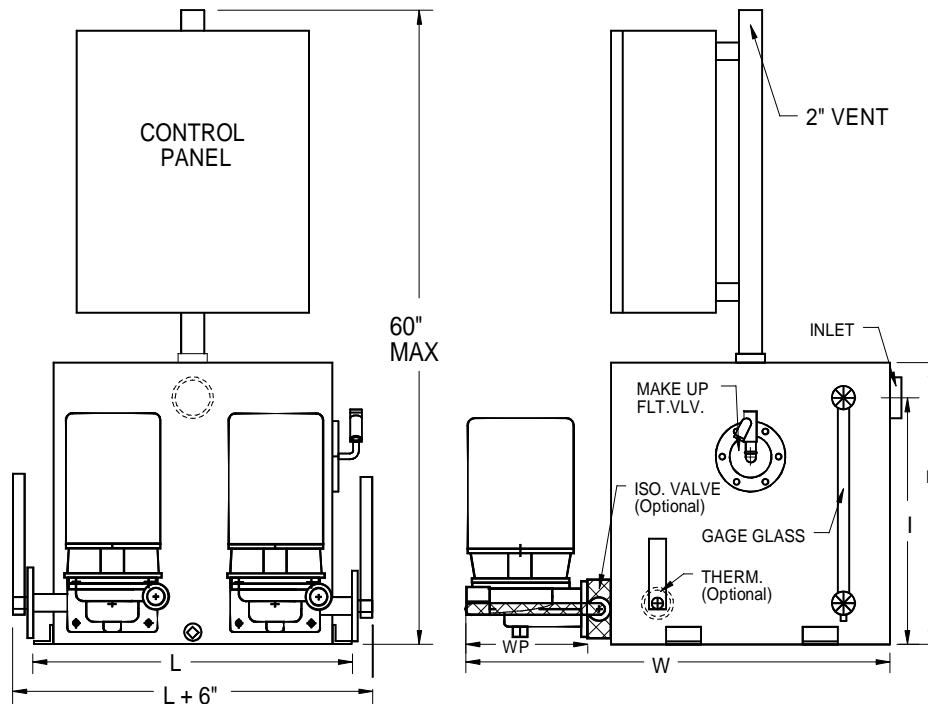
GUARD BOILER FEED - GBF

GBF-31-A

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Revised 8-8-08

APPLICATIONS—Boiler feedwater makeup for low pressure boilers



- ✓ Simplex or Duplex Boiler Feed for Low Pressure (15PSI) Boilers
- ✓ Heavy Duty ¼" Welded Copper Bearing Steel Receiver
- ✓ Pump capacity from 10 to 150 BHP
- ✓ Space saving rectangular tank
- ✓ Complete with Float Operated Makeup Valve
- ✓ Custom Options include Panel, Thermometer, Isolation Valves or Float Operated Solenoid Makeup

The GBF is a compact, versatile, self-contained boiler feed unit which is the ideal choice for commercial low pressure boilers. Since most products offered for this applications use 10 ga (.1345") or 7 ga (.1793"), the ¼" (.250) steel offers real value and longer receiver life.

We offer two pump choices, our CV with up to 15 GPM (75 BHP) and the 903 which provides up to 31 GPM for a 150 BHP Boiler.

Alyan Pump

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GUARD BOILER FEED - GBF

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BOILER FEED APPLICATION

A boiler feed stores feedwater and pumps it into the boiler on demand. The boiler level control is normally used to control the pump. The boiler feed also needs to have a makeup system to maintain proper water level and compensate for any evaporation or leakage. The other essential component is a gage glass to permit the monitoring of receiver level. Other standard features are a vent, drain and inlet connection. The boiler feed function alone if gravity returns are high enough or can have a condensate unit collect the returned water and transfer it to the GBF.

The receiver should be sized for a total operating boiler capacity. We recommend the 60 gallon unit for capacities to 50 BHP, the 115 for up to 100 BHP, and the 165 for up to 150 BHP. The pump is sized for the boiler it is connected to. The CV is suitable for up to a 75 BHP boiler, while the 903 handles up to a 150 BHP load. The discharge pressure is 20 PSI for each pump which handles a low pressure boiler.

The basic GBF in its simplest configuration uses the level controller to directly start and stop a single phase pump. A duplex GBF can also be in this way to control 2 boilers. Either of these is the simplest configuration because no panel is required.

A panel will be needed if you want two pumps to control one boiler, with one being a backup. The panel would need a selector switch to determine which pump connects to the level control. Please note that you would also need to install check and isolation valves to isolate the off-line pump. A panel would also be necessary if three phase power was used. The pumps are low HP and can use either single phase or three phase power, however a 3 phase motor is typically much more reliable.

GBF Selection Table		Simplex		2 Pumps 1 Boiler		2 Pumps 2 Boilers	
BOILER SIZE	PUMP - HP	GPM	Tank	GPM	Tank	GPM	Tank
10 – 50 BHP	CV – 1/3 HP	9	60	9	60	9	115
60 – 75 BHP	CV – 1/3 HP	15	115	15	115	15	165
80 - 100 BHP	903 -1/2	21	115	21	115	---	---
110 – 150 BHP	903 -1/2	31	165	31	165	---	---

Suggested Specifications:

The contractor shall furnish and install an Alyan type GBF boiler feed pump. The receiver shall be made of 1/4" copper bearing steel for increased life and shall have a capacity of (60, 115,165) gallons. An integral float operated makeup valve shall be included.

The pumps shall be vertically flange mounted of CIBF construction and suitable for low pressure boiler feed application. Seals shall be suitable for up to 250 F operation.

All single phase motors must have internal thermal protection.

The complete system shall be warranted for 12 months after documented startup or 18 months after shipment.

Provide an optional D-1361 panel for 3 phase installations or where 2 pumps feed a single boiler. The panel shall be UL-508 labeled and provide combination protection to each pump.

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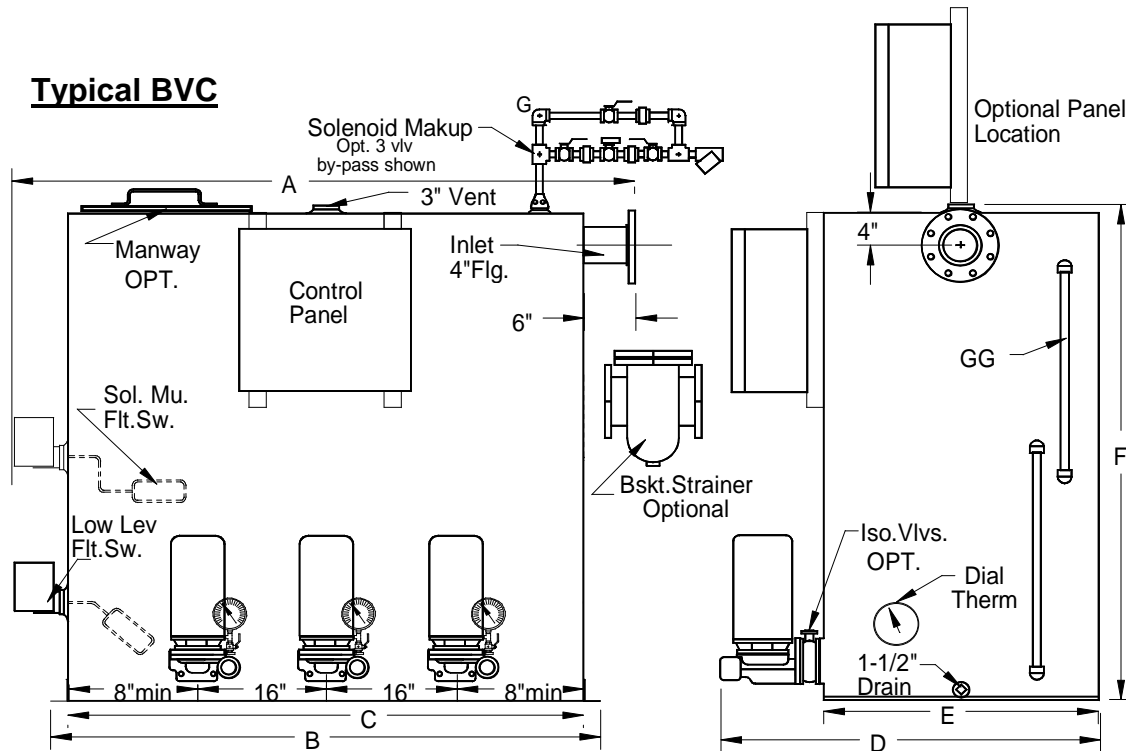
RECTANGULAR BOILER FEEDS - BVC

BVC-47B

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Revised 9-12-08

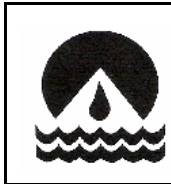
APPLICATIONS—Custom Boiler feedwater system with tanks 300 to 2000 gallon . Particularly useful in installations where floor space or transit space is limited.



- ✓ Duplex or Multiplex Boiler Feed using Vertically Flanged Pumps
- ✓ Heavy Duty 1/4" Welded Copper Bearing Steel Receiver (3/8" opt)
- ✓ Pump capacity from 150 to 1000 BHP
- ✓ Space saving rectangular tank – Larger tanks may be built in 2 or 3 sections and welded or bolted together at jobsite.
- ✓ With pumps off overall width is under 29" to aid in transit .
- ✓ Custom Options include Panel, Manway, Isolation Valves or Inlet Strainer

The BVC is a custom, versatile, self-contained boiler feed unit which is the ideal choice for commercial boilers. The heavy duty .25 thickness provides long life. The rectangular receiver is easily customized to add pumps, inlets or accessories.

We offer multiple pump choices to match boiler capacity and operating pressure requirements, including multistage pumps.



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RECTANGULAR BOILER FEEDS - BVC

BVC-47B

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Revised 9-12-08

BOILER FEED APPLICATION

A boiler feed stores feedwater and pumps it into the boiler on demand. The boiler level control is normally used to control the pump. The boiler feed also needs to have a makeup system to maintain proper water level and compensate for any evaporation or leakage. The other essential component is a gage glass to permit the monitoring of receiver level. Other standard features are a vent, drain and inlet connection. The boiler feed typically is fed by condensate receivers as well as some direct gravity return lines.

The receiver should be sized for a total operating boiler capacity, with the receiver size (in gallons) at least as large as the total operating boiler HP. For example, if you had two 250BHP boilers and three pumps (2 duty and 1 standby) the receiver should be at least 500 gallons. A larger receiver is often appropriate as it may avoid transient problems such as startup where there is uneven condensate flow as the loop heats up. The pump flow capacity is sized for the boiler it is connected to, and the discharge pressure is determined by the boiler operating pressure. Most commercial boilers operate at no more than 15 PSI and would use 20 PSI pumps. Industrial boilers may operate at much higher pressures.

Our recommended panel has a main disconnect, combination starters with motor protectors for each pump, and a fused control transformer. In addition to HOAs and Run Lights, systems with backup pumps will have a pump selector switch. We also recommend a low water cutoff with light.

Standard BVC Sizes ---- Note ---- Custom Receivers are available

Receiver Size	W x L x H (in)		Receiver Size	W x L x H (in)
300 gal	29 x 48 x 52		800 gal	29 x 98 x 66
400 gal	29 x 64 x 52		1000 gal	29 x 128 x 66
500 gal	29 x 64 x 66		1500 gal	42 x 128 x 66
650 gal	29 x 66 x 80		2000 gal	56 x 128 x 66

Suggested Specifications:

The contractor shall furnish and install an Alyan type BVC boiler feed pump. The receiver shall be made of ¼" copper bearing steel (3/8" optional) for increased life and shall have a capacity of (_____) gallons. A float operated solenoid makeup shall be included. All receivers larger than 450 Gallons shall have a manway for maintenance.

The pumps shall be vertically flange mounted of CIBF construction and suitable for low pressure boiler feed application. Seals shall be suitable for up to 250 F operation. Provide isolation by butterfly isolation valves to facilitate pump maintenance.

The complete system shall be warranted for 12 months after documented startup or 18 months after shipment.

Provide an optional Alyan Type 1361 panel to control the pumps and provide Low Water Cutoff protection and alarm. The panel shall be UL-508 labeled and provide combination protection to each pump. The panel must have a main disconnect.