

**VARIABLE SPEED
PACKAGED
SYSTEMS.
PLAIN AND SIMPLE.**



MiniBoost™ Extreme Packaged Systems

DESIGNED FOR BOOSTER AND HVAC SYSTEMS



BRMINBTEXT R4



Bell & Gossett

a xylem brand

MINIBOOST™ EXTREME

PACKAGED SYSTEMS

The MiniBoost Extreme Packaged Systems are designed to be simple from beginning to end. They are simple to specify, simple to install and simple to set up. Best of all, with Xylem's single source responsibility and technical expertise, it's simple to work with us. The MiniBoost Extreme Packaged Systems are a pre-engineered, factory assembled and provide hydraulic capabilities from 20 GPM to 200 GPM and boosts up to 100 psig, ideal for booster and closed loop HVAC systems. The MiniBoost Extreme Packaged Systems give you an intelligent pump system that provides maximum value, proven reliability, superior energy efficiency and better system protection. In addition, it provides consistent performance even with your changing system demands. The MiniBoost Extreme Packaged Systems provide boosting and closed loop HVAC solutions for a variety of applications.

Features & Benefits:

- **Higher Pressures:** Each system is fabricated with NPE or e-HM centrifugal pumps – delivering up to 100 psig boost.
- **System Certification:** The entire system, not just the components, are UL listed as a packaged pumping system.
- **Compact Footprint:** Ideal for retrofit installations and new construction.
 - Simplex models available in widths less than 36" – making it an optimal, more efficient replacement for constant speed systems.
- **Expanded Applications:** Built with a differential pressure sensor, these units are designed to work in HVAC closed loop systems.
- **Intelligent Pumping:**
 - These systems are equipped with the AQUAVAR® IPC Variable Speed Controller.
 - Pump(s) will automatically operate at the correct speed based on demand, including alternation and staging.
 - Built with the option to run linear or quadratic pressure control.
- **Communication:**
 - MODBUS® RTU, Metasys N2, FLN, and BACnet standard

For complete system capabilities and detailed specifications go to www.xylem.com/bellgossett

AQUAVAR® IPC Variable Speed Controller Features & Benefits:

- Easier start-up and programming with Start-Up Genie
- Hand On, Off, Auto-On and Reset buttons available for easy pump operation at the keypad
- System redundancy with multi-master control in case of drive failure
- System protection from overvoltage, undervoltage, blocked suction, cavitation, NPSHa, phase loss, short circuit, transducer failure and motor current overload
- Pump run out and dry running protection



MiniBoost Extreme Packaged System Specifications

- Electrical panel is UL listed, NEMA 1 enclosure
- 208/1/60, 230/1/60, 208/3/60, 230/3/60, 460/3/60, 575/3/60 models available
- Simplex and duplex
- Standard efficiency TEFC 1PH motors / Premium efficiency TEFC 3PH motors
- Liquid temperatures up to 105 °F
- Ambient temperatures up to 104 °F
- Flows up to 220 GPM and boosts up to 100 psig
- Programmable system pressure
- Fault detection and alarm notification
- Motor run relay
- Grooved stainless steel manifold connections
- Programmable lead/lag alternation (duplex)
- All MiniBoost Extreme Packaged Systems are ANSI/NSF-61/NSF-61 Annex G and 372

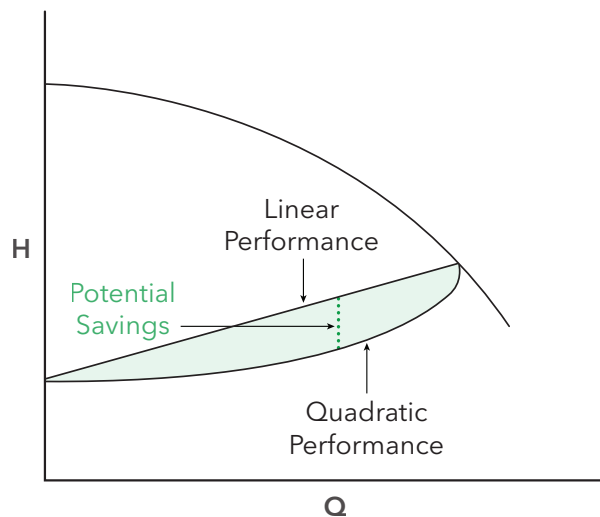
Benefits of Quadratic Pressure Control:

A standard variable speed sensor system is a good solution if the pressure sensor can be mounted remotely, which is not always an option for a retrofit.

Proportional control maintains a linear relationship with pump head and flow. Quadratic performance provides energy savings, since the pump's speed closely matches the needed flow to a simulated system resistance curve. Quadratic pressure control can be sensed or sensorless*, which offers flexibility during installation.

The MiniBoost Extreme has sensors on the inlet and discharge manifolds, so the controller can be set to proportional or quadratic control. Both methods satisfy the ASHRAE Energy Standard (90.1) requirements.

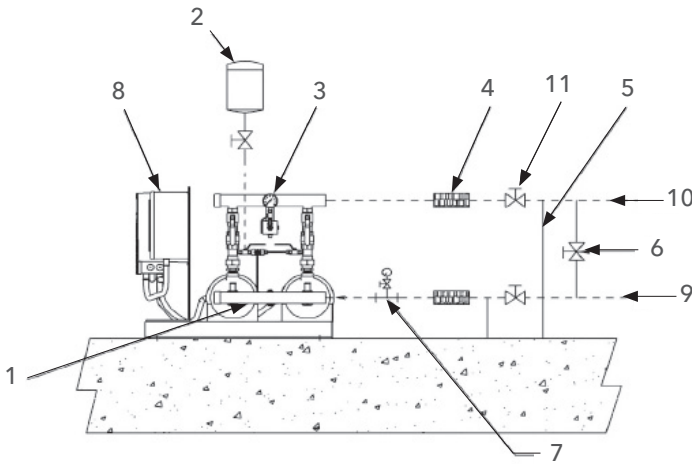
*For closed loop/motor dependent applications



Linear vs. Quadratic Performance

Typical Field Piping for Booster Applications

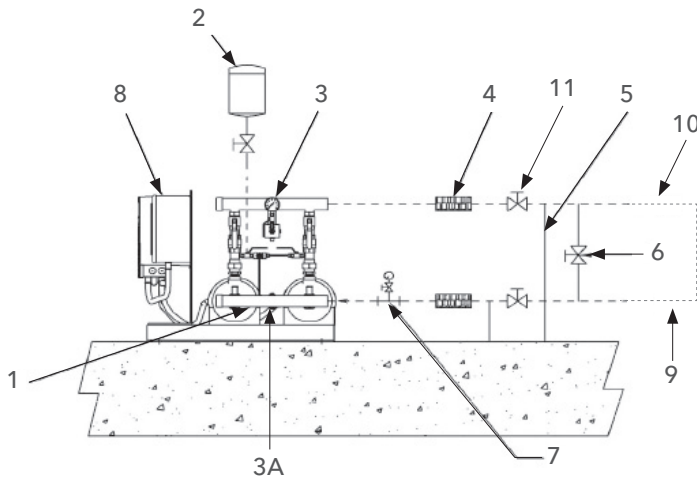
(Variable Speed Duplex shown)



1. ¼ in. tap on the suction manifold for Low Suction PS
2. Optional tank
3. Discharge gauge
4. Vibration eliminator
5. Anchor the pipe securely if eliminators are used
6. If a bypass line is installed, keep valve closed during normal operation. (Do not install a check valve.)
7. Recommended suction gauge
8. AQUAVAR IPC Variable Speed Controller
9. City water
10. To system
11. Isolation valves are locally supplied for a complete recommended installation

Typical Field Piping for Closed Loop HVAC Applications

(Variable Speed Duplex shown)



1. ¼ in. tap on the suction manifold for Low Suction PS
2. Optional tank
3. Discharge gauge and pressure sensor
3A. Suction pressure gauge and sensor
4. Vibration eliminator
5. Anchor the pipe securely if eliminators are used
6. If a bypass line is installed, keep valve closed during normal operation. (Do not install a check valve.)
7. Recommended suction gauge
8. AQUAVAR IPC Variable Speed Controller
9. To system loop inlet
10. To system loop-discharge
11. Isolation valves are locally supplied for a complete recommended installation

Sizing Guide

Simplex MiniBoost Extreme Selection Chart



PSI	FT. HEAD	20 GPM	30 GPM	40 GPM	50 GPM	60 GPM	70 GPM	80 GPM	90 GPM	100 GPM	110 GPM
20	46					1B20	1B20	1B20	1B20	1B30	
25	58			1A15	1A15	1B20	1B20	1B20	1B30	1B30	
30	69	1A15	1A15	1A15	1B20	1B20	1B20	1B30	1B50	1B50	1B50
35	81	1A15	1A15	1A20	1B30	1B30	1B50	1B50	1B50	1B50	1B50
40	92	1A15	1A20	1A20	1B50	1B50	1B50	1B50	1B50	1B50	1B50
45	104	1A20	1A20	1A30	1B50	1B50	1B50	1B50	1B50		
50	116	1A20	1C20	1D30	1D30	1D30					
55	127	1A30	1C20	1D30	1D30	1D30					
60	139	1C20	1C20	1D30	1D40	1D40					
65	150	1C20	1C20	1C30	1D40	1D40					
70	162	1C20	1C20	1C30	1D40	1D55					
75	173	1C20	1C30	1D40	1D40	1D55					
80	185	1C20	1C30	1D40	1D55	1D55					
85	196	1C30	1C30	1D55	1D55	1D55					
90	208	1C30	1C30	1D55	1D55	1D55					
95	219	1C30	1C30	1D55	1D55	1D55					
100	231	1C30	1D55	1D55	1D55						

* Above selections provide non-overloading motors across entire pump curve.

Duplex MiniBoost Extreme Selection Chart



PSI	FT. HEAD	40 GPM	60 GPM	80 GPM	100 GPM	120 GPM	140 GPM	160 GPM	180 GPM	200 GPM	220 GPM
20	46					2B20	2B20	2B20	2B20	2B30	
25	58			2A15	2A15	2B20	2B20	2B20	2B30	2B30	2B50
30	69	2A15	2A15	2A15	2B20	2B20	2B20	2B30	2B50	2B50	2B50
35	81	2A15	2A15	2A20	2B30	2B30	2B50	2B50	2B50	2B50	2B50
40	92	2A15	2A20	2A20	2B50	2B50	2B50	2B50	2B50	2B50	
45	104	2A20	2A20	2A30	2B50	2B50	2B50	2B50	2B50		
50	116	2A20	2C20	2D30	2D30	2D30	2B50				
55	127	2A30	2C20	2D30	2D30	2D30					
60	139	2C20	2C20	2D30	2D40	2D40					
65	150	2C20	2C20	2C30	2D40	2D40					
70	162	2C20	2C20	2C30	2D40	2D55					
75	173	2C20	2C30	2D40	2D40	2D55					
80	185	2C20	2C30	2D40	2D55	2D55					
85	196	2C30	2C30	2D55	2D55	2D55					
90	208	2C30	2C30	2D55	2D55	2D55					
95	219	2C30	2C30	2D55	2D55	2D55					
100	231	2C30	2D55	2D55	2D55						

* Above selections provide non-overloading motors across entire pump curve.

Selections are based on two pumps in parallel. Refer to NPE pump curves or consult factory for duty/standby operation.

Dimensions and Weights

	Model	Phase	Voltage	Length (In.)	Width (In.)	Height (In.)	Weight(Lbs.)	System Connections
Simplex	1A15	All	All	23.13"	22.75"	29.00"	175	1.5" FNPT
	1A20	All	All	23.13"	22.75"	29.00"	175	
	1A30	1	230	24.50"	24.78"	29.00"	218	
		3	230, 460	24.50"	22.75"	29.00"	170	
		3	575	23.50"	22.75"	29.00"	172	
	1B20	All	All	23.25"	22.75"	29.00"	175	
	1B30	1	230	24.50"	24.88"	29.00"	220	
		3	230, 460	24.50"	22.75"	29.00"	170	
		3	575	23.25"	22.75"	29.00"	173	
	1B50	1	230	27.50"	24.88"	29.00"	302	
		3	230, 460	27.25"	22.75"	29.00"	176	
		3	575	25.75"	22.75"	29.00"	176	
	1C20	All	All	32.25"	22.75"	29.00"	182	
	1C30	All	All	32.25"	22.75"	29.00"	182	
1D30	All	All	28.50"	22.75"	29.00"	184		
1D40	All	All	29.75"	22.75"	29.00"	190		
1D55	All	All	33.50"	22.75"	29.00"	213		
Duplex	2A15	All	All	36.50"	35.25"	31.00"	348	2" Clamp
	2A20	All	All	36.50"	35.25"	31.00"	348	
	2A30	1	230	36.50"	37.25"	31.00"	391	
		3	230, 460, 575	36.50"	35.25"	31.00"	324	
	2B20	All	All	37.75"	35.25"	34.50"	363	3" Clamp
	2B30	1	230	37.75"	37.25"	34.50"	413	
	2B30	3	230, 460, 575	37.75"	35.25"	34.50"	350	
	2B50	1	230	41.75"	37.25"	34.75"	560	
		3	230, 460	41.75"	35.25"	34.50"	367	
		3	575	40.50"	35.25"	33.50"	356	
	2C20	All	All	41.25"	35.25"	29.75"	310	2" Clamp
	2C30	All	All	41.25"	35.25"	29.75"	323	
	2D30	All	All	38.75"	35.25"	33.75"	353	3" Clamp
	2D40	All	All	40.00"	35.25"	33.75"	373	
2D55	All	All	42.50"	35.25"	34.25"	412		

Stock Model Number

Product Nomenclature Phase-II (B&G Brand Only, DPT as Standard Offering)				
MBX	# Pumps	Hydraulic	HP	Voltage/Phase
	1 = simplex	A = 1ST	15 = 1.5	A = 208/230/1
	2 = duplex	B = 2ST	20 = 2	B = 208/230/3
		C = 5HM	30 = 3	D = 460/3
		D = 10HM	40 = 4	E = 575/3
			50 = 5	



Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com

Xylem Product Cybersecurity

Xylem values your system security and the availability of your critical services. For more information on Xylem cybersecurity practices or to contact the cybersecurity team please visit xylem.com/security.



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