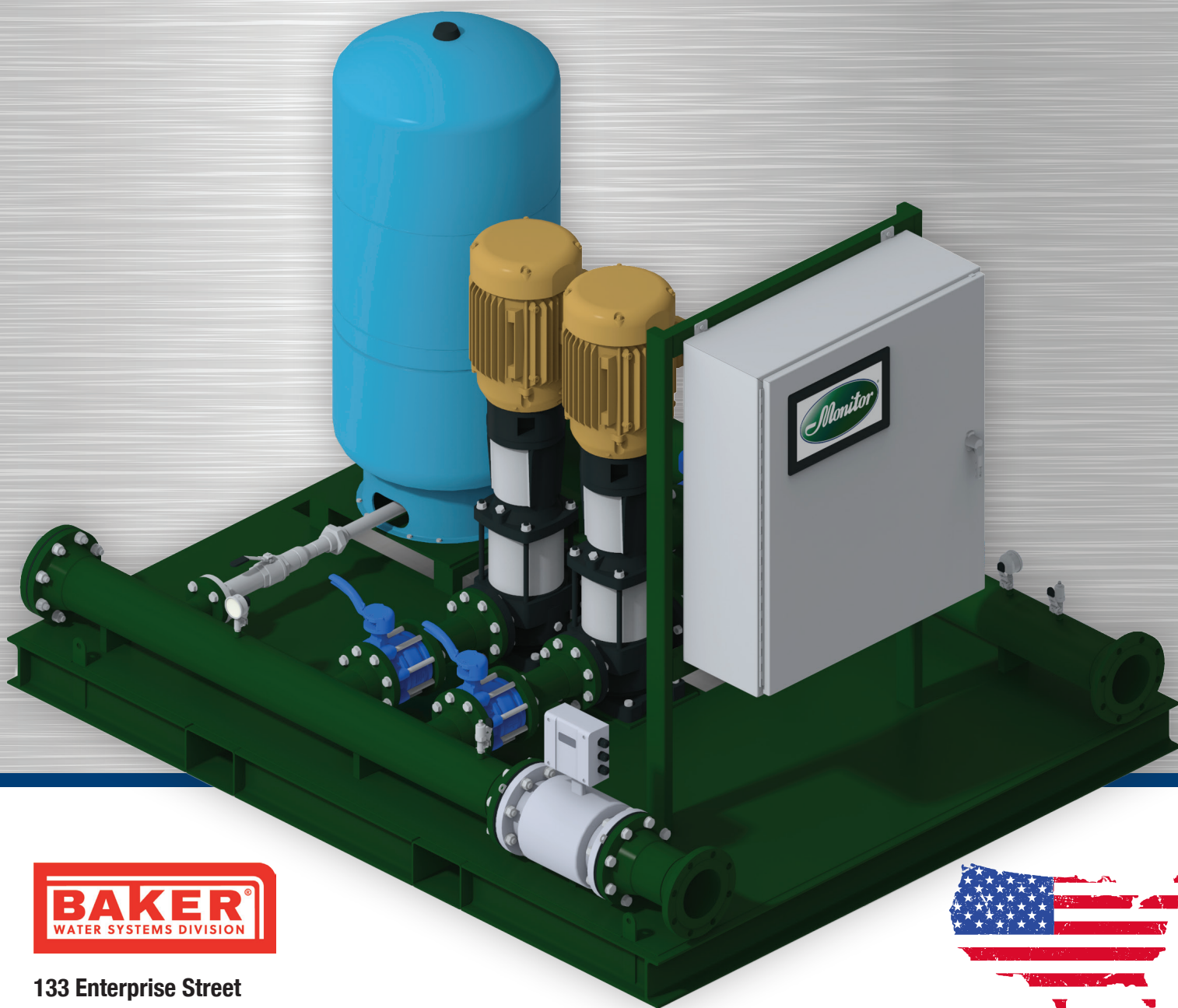




Since 1873

## SKID MOUNT PACKAGED BOOSTER



133 Enterprise Street  
Evansville, WI 53536  
(800) 356-5130



U.S.A. Assembled



**Monitor® is proud to unveil its new Skid Mount Packaged Booster.** This fully engineered solution is built to meet the complex needs of any water boosting project. Expect this offering to exhibit the same quality and reliability associated with the rest of Monitor's industry leading water product portfolio. The package comes fully assembled, tested, and ready to operate. Simply set the skid in place, install piping to the inlet/outlet flanges, and power up the control panel.



ANSI/HI 9.6.6-2016



## FEATURES/BENEFITS

### Sole Sourced

- Complete pumping system is engineered, designed, manufactured, tested, and delivered ready for simple install and operation

### Durable

- Industrial Skid constructed from heavy duty structural steel
- Skid and Piping is Fusion Bonded Epoxy Powder Coated
  - NSF 61 Certified Resicoat® R4-ES
  - Holiday Spark test per ASTM D5162
- Welders certified to ASME Section IX:2019 – Boiler and Pressure Vessel Code

### Fully Customizable

- Each Skid Mount system is made-to-order, allowing all aspects of the package to be tailored to the project requirements

### Compact

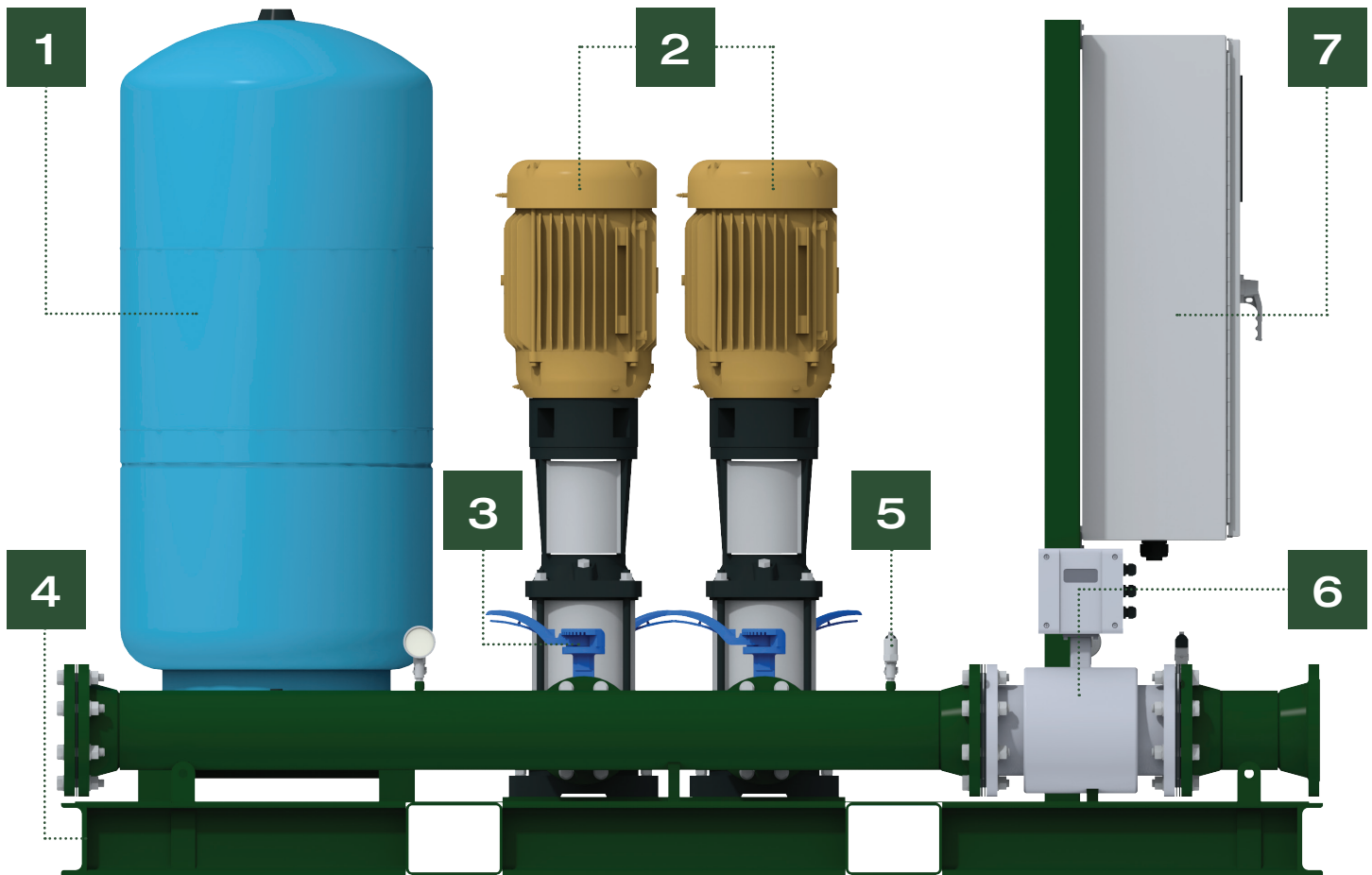
- Small footprint that can fit within tight spaces
- Designed for easy unload and installation

### Monitor Custom Pump Controls

- VFD Controlled – Virtually eliminates water hammer, inrush current, and the need for pump control valves
- Custom PLC control strategy developed for each project
- Emergency Pump shutdown and Low suction pressure protection
- SCADA compatible

### Certifications/Standards

- ANSI/HI 9.6.6-2016 – Ensures efficient and reliable pump performance
- ISO 9001:2015 Certified Manufacturing Facility
- AIS Compliant (Available by request)
- NSF 61 Certification (Safe Drinking Water)
- UL QCZJ Listing (Packaged Pumping Systems)



### 1. Hydropneumatic Pressure Tank

- Improves flow stability and reduces pump cycling

### 2. Pump and Motor

- Pump and Motor selection based upon project design requirements
- Pump available in Horizontal Centrifugal and Vertical Multistage configurations

### 3. Valves

- Suction and Discharge Butterfly Valve: allow isolation of system for maintenance
- Check Valves: Installed on pump discharge to prevent backflow through system

### 4. Industrial Pump Skid

- Fabricated from heavy duty structural steel

### 5. Pressure Transducers

- Suction and Discharge Pressure Transducers provide input to Control Panel

### 6. Flow Meter

- Electromagnetic design with display and input to Control Panel

### 7. Control Panel — UL508A Panel, Typical components include:

- Touchscreen HMI, Allen Bradley PLC
- Indicator Lights and Hand/Off/Auto selector switches
- Variable Frequency Drives





# APPLICATIONS



- Potable Water Line Pressurizing
- Potable Water Tank Filling
- Golf Course Irrigation
- Turf or Agricultural Irrigation
- High Rise Buildings
- Fire Protection
- Snowmaking
- Non-Potable Water Transfer (Grey Water)

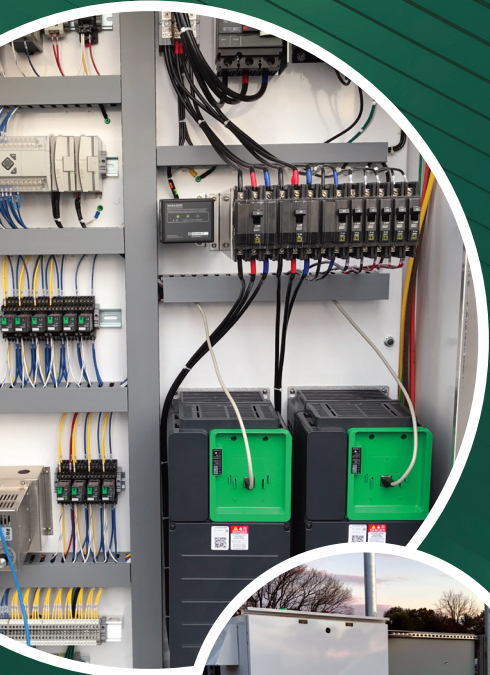
# HORSEPOWER REQUIRED TABLE

Flowrate (GPM)																																		
FT	5	10	15	20	25	30	40	50	60	70	80	90	100	120	140	160	180	200	240	280	320	360	400	450	550	650	750	850	1000	1100	1200	1300	1400	PSI
600	3.0	5.0	5.0	7.5	7.5	10	10	15	15	20	20	20	25	30	40	40	40	50	50	60	75	75	100	100	125	150	175	200	225	250	275	300	300	260
575	1.5	3.0	5.0	5.0	7.5	10	10	15	15	20	20	20	25	25	30	40	40	50	50	60	75	75	100	100	125	150	175	200	225	225	250	275	300	249
550	1.5	3.0	5.0	5.0	7.5	10	10	10	15	15	20	20	25	25	30	40	40	40	50	60	75	75	100	100	125	150	175	175	200	225	250	275	300	239
525	1.5	3.0	5.0	5.0	7.5	10	10	10	15	15	20	20	20	25	30	40	40	40	50	60	80	75	75	100	125	125	150	175	200	225	225	250	275	228
500	1.5	3.0	5.0	5.0	7.5	7.5	10	10	15	15	15	20	20	25	30	30	40	40	50	50	60	75	75	100	100	125	150	175	200	200	225	250	275	217
475	1.0	3.0	3.0	5.0	7.5	7.5	10	10	15	15	15	20	20	25	25	30	40	40	50	50	60	75	75	100	100	125	150	150	175	200	225	225	250	206
450	1.0	2.0	3.0	5.0	7.5	7.5	7.5	10	10	15	15	20	20	20	25	25	30	40	40	50	50	60	75	75	100	125	125	150	175	175	200	225	225	195
425	1.0	2.0	3.0	5.0	5.0	7.5	7.5	10	10	15	15	15	20	20	25	25	30	30	40	50	50	60	60	75	100	100	125	150	175	175	200	200	225	184
400	1.0	2.0	3.0	5.0	5.0	7.5	7.5	7.5	10	10	15	15	20	20	20	25	25	30	40	40	50	50	60	75	75	100	125	125	150	175	175	200	200	174
375	1.0	1.5	3.0	3.0	5.0	7.5	7.5	7.5	10	10	15	15	15	20	20	25	25	30	40	40	50	50	60	60	75	100	125	125	150	150	175	200	200	163
350	1.0	1.5	3.0	3.0	5.0	5.0	7.5	7.5	10	10	15	15	15	20	20	20	25	25	30	40	40	50	50	60	75	100	100	125	125	150	175	175	200	152
325	1.0	1.5	2.0	3.0	5.0	5.0	7.5	7.5	10	10	10	15	15	15	20	20	20	25	25	30	40	40	50	50	60	75	75	100	125	125	150	150	175	141
300	1.0	1.5	2.0	3.0	5.0	5.0	5.0	7.5	7.5	10	10	15	15	15	20	20	20	25	30	40	40	40	50	50	60	75	100	100	125	125	150	150	175	130
275	1.0	1.0	2.0	3.0	3.0	5.0	5.0	5.0	7.5	10	10	10	15	15	15	20	20	20	25	30	40	40	40	50	60	75	75	100	100	125	125	150	150	120
250	3/4	1.0	2.0	3.0	3.0	5.0	5.0	5.0	7.5	7.5	10	10	10	15	15	15	20	20	25	30	30	40	40	40	50	60	75	100	100	100	125	125	150	109
225	3/4	1.0	1.5	2.0	3.0	3.0	5.0	5.0	7.5	7.5	7.5	10	10	10	15	15	15	20	25	25	30	30	40	40	50	60	75	75	100	100	100	125	125	98
200	3/4	1.0	1.5	2.0	2.0	3.0	5.0	5.0	7.5	7.5	7.5	7.5	10	10	15	15	15	15	20	25	25	30	30	40	40	50	60	75	75	100	100	100	125	87
175	1/2	3/4	1.0	1.5	2.0	2.0	3.0	5.0	5.0	7.5	7.5	7.5	7.5	10	10	15	15	15	20	20	25	25	30	40	40	50	50	60	75	75	75	100	76	
150	1/2	3/4	1.0	1.0	1.5	2.0	2.0	3.0	5.0	5.0	5.0	5.0	7.5	7.5	7.5	10	10	10	15	15	20	20	25	25	30	40	40	50	50	60	60	75	75	65
125	1/2	3/4	3/4	1.0	1.5	1.5	2.0	3.0	3.0	5.0	5.0	5.0	5.0	7.5	7.5	7.5	10	10	10	15	15	15	20	20	25	30	40	40	50	50	50	60	60	55
100	1/2	1/2	3/4	1.0	1.0	1.5	1.5	2.0	3.0	3.0	5.0	5.0	5.0	5.0	7.5	7.5	7.5	7.5	10	10	15	15	15	20	20	25	30	30	40	40	40	50	50	44
75	1/2	1/2	1/2	3/4	1.0	1.0	1.5	1.5	2.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	7.5	7.5	7.5	7.5	10	10	15	15	20	20	25	25	30	30	40	40	33	
50	1/2	1/2	1/2	3/4	3/4	1.0	1.0	1.5	1.5	2.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	7.5	7.5	7.5	10	10	15	15	15	20	20	20	20	25	25	22
25	1/2	1/2	1/2	1/2	3/4	3/4	1.0	1.0	1.5	1.5	2.0	2.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	7.5	7.5	7.5	10	10	10	15	15	15	15	15	11
FT	5	10	15	20	25	30	40	50	60	70	80	90	100	120	140	160	180	200	240	280	320	360	400	450	550	650	750	850	1000	1100	1200	1300	1400	PSI

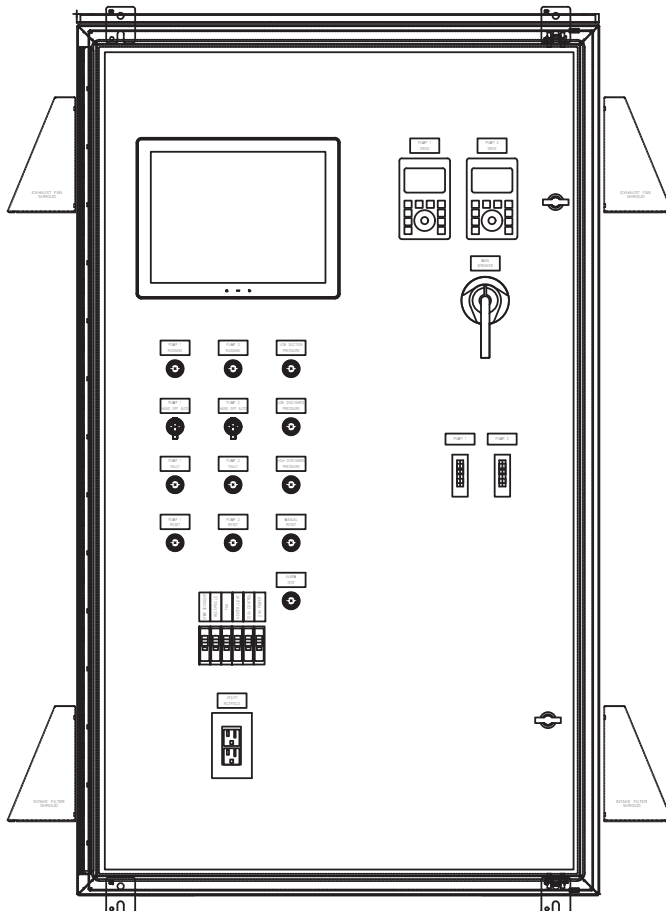


## Monitor VFD Control Panels

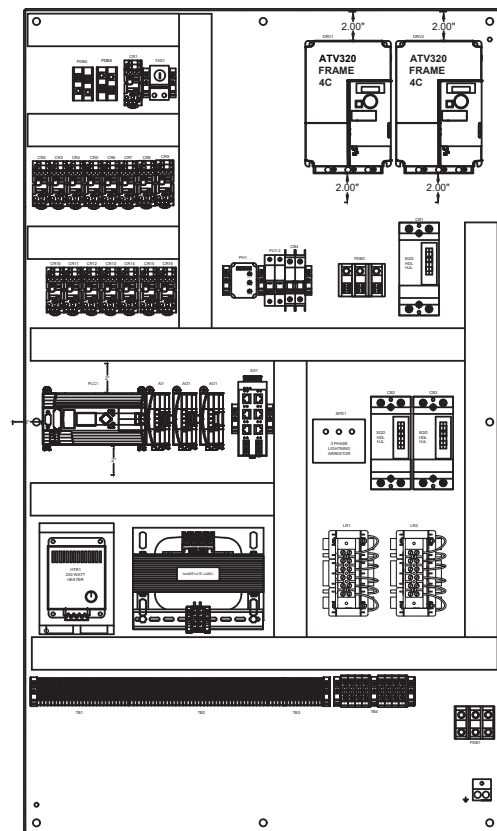
Monitor offers fully functional, factory tested, UL approved, Variable Frequency Drive (VFD) and Constant Speed, control panels. Our control panels are custom designed and built to suit each project. The difference is in the control software. Our VFD control panels utilizing Programmable Logic Controllers are distinctly different than most control panels in that we use custom designed Ladder Logic Control Software for better overall station performance, less wear on the pumps and motors, and virtual elimination (with exception of a power failure) of water hammer. Each control panel can be customized to display information and readouts important to the customer. If you can describe it, we can program it into our control panels.



## EXAMPLE DUPLEX CONTROL PANEL



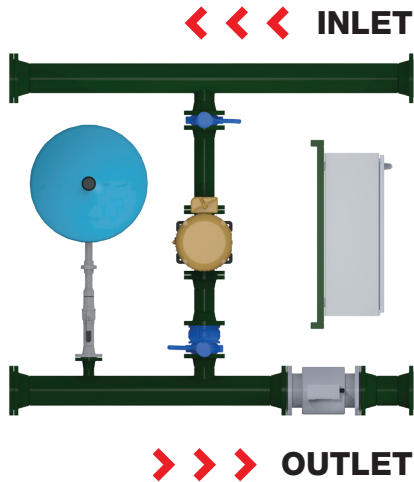
**INNER DOOR**



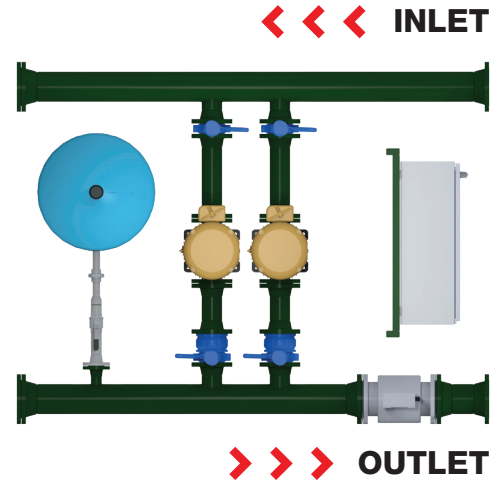
**BACK PLATE**

# PUMPING CONFIGURATIONS

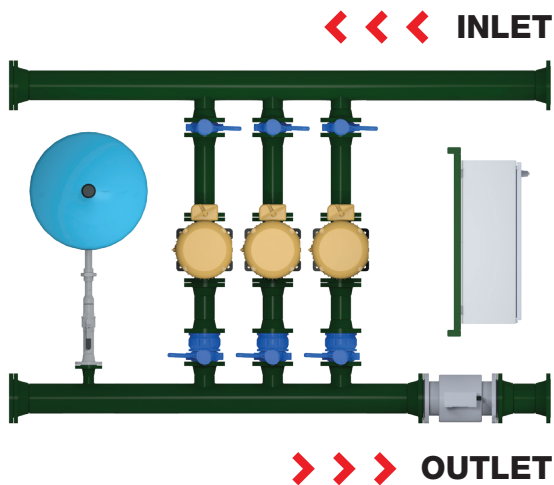
## Simplex



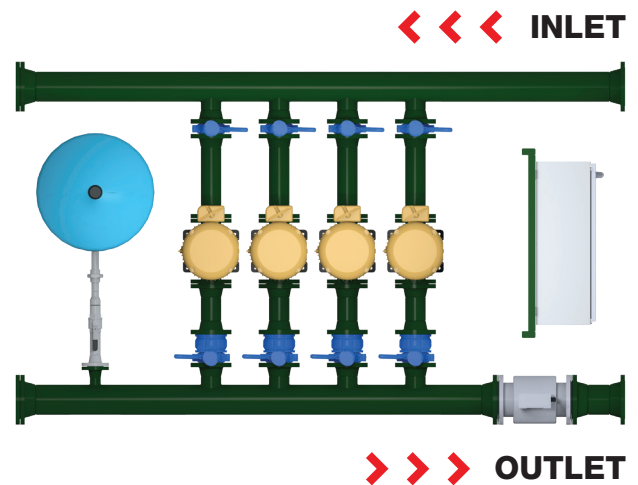
## Duplex



## Triplex



## Quadplex



- Lead/Lag control programming alternates pump operation, ensuring even pump run times
- Different sized pumps can exist on the same skid, allowing for Jockey, Duty, and High Flow configurations
- Additional designs and layouts can be accommodated

# Skid Mount Booster Station Quote Form



## PROJECT DETAILS

Date \_\_\_\_\_

Project Name \_\_\_\_\_

Location City \_\_\_\_\_ State \_\_\_\_\_

Project Status ☐ Feasibility Study ☐ Budget Design ☐ Quote Estimated Booster Budget \$ \_\_\_\_\_

Est Schedule Bid Date \_\_\_\_\_ Estimated Install Date \_\_\_\_\_

Customer Info Name \_\_\_\_\_ Email \_\_\_\_\_

Company \_\_\_\_\_ Phone \_\_\_\_\_

Engineering Info Name \_\_\_\_\_ Email \_\_\_\_\_

Company \_\_\_\_\_ Phone \_\_\_\_\_

## PROJECT TYPE

☐ Potable Water ☐ Irrigation ☐ Non Potable ☐ Snowmaking

## BOOSTER STATION MAIN FUNCTIONS

☐ Pressurizing a Line ☐ Filling Tanks ☐ Other Specify \_\_\_\_\_

## NUMBER OF BOOSTING STATIONS REQUIRED

☐ Simplex (1) ☐ Duplex (2) ☐ Triplex (3) ☐ Quadplex (4)

☐ Other Specify \_\_\_\_\_

## MAXIMUM ALLOWABLE SKID DIMENSIONS

Length (ft)  Width (ft)  Height (ft)

## DESIGN FLOW CRITERIA

GPM (per pump)  TDH (feet)  Desired Discharge Pressure

Static Inlet Suction Pressure (PSI)  Dynamic Inlet Suction Pressure (PSI)

Suction Pipe Diameter (in)  Discharge Pipe Diameter (in)

## JOCKEY FLOW CRITERIA — IF APPLICABLE ☐ Applicable ☐ Not Applicable

GPM (per pump)  TDH (feet)  Desired Discharge Pressure

Static Inlet Suction Pressure (PSI)  Dynamic Inlet Suction Pressure (PSI)

Suction Pipe Diameter (in)  Discharge Pipe Diameter (in)

## FIRE FLOW CRITERIA — IF APPLICABLE ☐ Applicable ☐ Not Applicable

GPM (per pump)  TDH (feet)  Desired Discharge Pressure

Static Inlet Suction Pressure (PSI)  Dynamic Inlet Suction Pressure (PSI)

Suction Pipe Diameter (in)  Discharge Pipe Diameter (in)

## ELECTRICAL/CONTROL INFO

Power Source ☐ Single Phase ☐ Three Phase

Voltage ☐ 200V ☐ 230V ☐ 460V Other \_\_\_\_\_

Control Design ☐ Simple PID ☐ Fully Programmable PLC with Touchscreen HMI ☐ Line/Load Reactors?





*Monitor*

## GENERAL INFO

133 Enterprise Street  
Evansville, WI 53536  
800-356-5130  
Fax: 608-882-3777

monitorsales@baker-mfg.com  
www.bakermonitor.com  
www.bakermfg.com

# WHY MONITOR?

- Simple, Safe, Cost Effective, Easy to Maintain ... and more
- Monitor provides conceptual design assistance and budget pricing proposals
- On-site start-up and training services
- Custom designed control software for effective utilization of power, elimination of water hammer and better overall station performance



## BRIEF HISTORY OF BAKER MANUFACTURING

Baker Manufacturing Company was founded in 1873. The founders of Baker Manufacturing Company, Almeron Eager and Alan S. Baker, were civil war history enthusiasts. When they needed a name for their newly formed water systems division of Baker Manufacturing Company, they decided to call it Monitor after the first ironclad warship, the USS Monitor. The indecisive battle amongst the USS Monitor and the CSS Virginia (formerly known as the USS Merrimack) began a new era in naval warfare. The battle of the two ferocious ironclad warships was the beginning of the end for wood and sail naval ships. Today, the Monitor Division of Baker Manufacturing Company, stands strong, just like the battleship did in 1862.



FOUNDED 1873

MBB 11/21