



** Available up to 100 GPM systems*

Aquavar e-AB3

INTEGRATED VARIABLE SPEED CONSTANT PRESSURE SYSTEMS

½ HP thru 2 HP – Pressure Booster Packages

FEATURES

The e-AB3 smart pump range packaged pumping system is a constant pressure booster system that is specifically designed for customers of municipal water districts with low water pressure, or those seeking a boost from a local storage tank. Featuring the e-HM pump and the Xylem Smart Motor, an ultra-premium IE5 permanent, magnet motor, the e-AB3 provides pumping efficiency well above a standard IE3 NEMA premium efficient asynchronous induction motor.



As water flows to your house, it loses some of its pressure to friction inside the pipe. The higher the flow, the more the friction reduces your water pressure. This flow increase can be caused by more homes and businesses on your water main, the size of your home piping system or increased water use in your house. As water use increases, the e-AB3 changes pump speed to keep line pressure constant. Large supply tanks are eliminated and up to 50% of the energy required by a full speed pump is saved. The e-AB3 is available with a range of flow rates to handle residential homes, irrigation systems, and office buildings.

It's a HIGH PERFORMANCE solution for both residential and commercial customers who need to increase their water pressure when water demand is high.

Pump Protection: safety and monitoring

The Smart Motor comes with a wide range of monitoring, control and safety features right out of the box with no need to configure.

In addition to these regulation functions, the Smart Motor also:

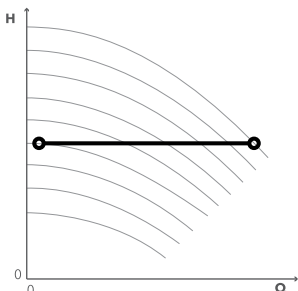
- Stops the pump at zero demand
- Stops the pump in case of water failure
- Has failure and over-temperature sensors for both the inverter and motor, which protects the pump and motor from under or over-voltage

Controls, safety features and monitoring tools

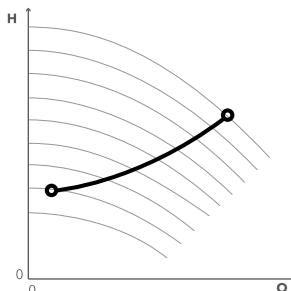
Available control modes include:

- Control for constant pressure
- Control to match a system curve
- Control according to an external signal

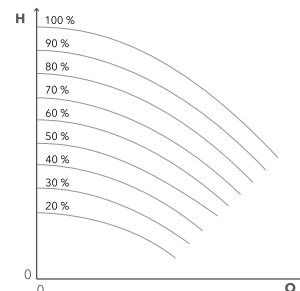
The Smart Motor offers a complete set of supervision and metering tools such as automatic test starts, auto smart cyclic change of lead and lag pump units, a memory for any inverter fault signals, and an operating-hours run counter. There's no need to configure the product; all the listed features are already included in the standard package.



Control for constant pressure



Control to match a system curve in multistage pumps such as the e-SVE or e-HME



Control according to an external signal

e-AB3 FEATURES AND BENEFITS:

- **Wide range:**
 - An ideal solution for most buildings; from family houses up to 10 floor apartment buildings, commercial building services and OEM applications
- **Ultra-premium efficiency:**
 - State-of-the-art hydraulics with best-in-class efficiency mean the lowest possible operating costs
 - Features the Xylem Smart Motor an ultra-premium IE5 permanent, magnet motor:
 - Provides efficiency well above a standard IE3 NEMA premium efficient asynchronous induction motor
 - Provides users an average of 15% in energy savings when compare to similar pumps in the market
 - Programmed to motor electrical characteristics; just select “set pressure”
 - Exceeds hydraulic performance of fixed speed versions in a more compact design
- **Quiet operation:**
 - Almost silent, even when it’s working at its peak.
 - High efficiency hydraulics, motor and thick metal pump body keep the noise level to a minimum.
- **Expanded applications:**
 - Available in six models for a wide range of applications, including chillers, heating, air conditioning and vehicle washing.
 - The broad hydraulic coverage meets flow and head needs in a wide range of applications - flows up to 75 GPM/heads up to 290'.
- **Easy to Install:**
 - Includes a complete kit for installation—pump, Smart Motor, gauge, tank and tee.
- **Variable speed pumping control:**
 - Can operate single or multipump systems with auto lead/lag and alternate for up to three pumps with no need for an external control panel or PLC.
- **Certifications include:** UL778, NSF 61, NSF 372

INDUSTRIES/APPLIATIONS:

- **Applications:**
 - Pressure boosting and water supply systems
 - Industrial washing and cleaning
 - Water treatment
 - Reverse Osmosis Systems
 - Food and Beverage
 - Car Wash
 - OEM
- **Markets:**
 - Residential, Commercial Building Services, OEM

e-AB3 HYDRAULIC SELECTION

FEET	PSI BOOST	GPM				
		5-10	20	30	40	50
46	20	1	4	4	7	7
58	25	1	4	4	7	7
69	30	1	4	4	7	7
81	35	1	4	5	7	
92	40	2	5	5		
104	45	2	5	5		
116	50	2	5	5		
127	55	2	5	6		
139	60	3	6	6		
150	65	3	6	6		
162	70	3	6			
173	75	3	6			
185	80	3				

e-AB3 CONFIGURATIONS

Selection	Part Number	Description
1	1AB31HME04	230V ½ HP 1" discharge, 1" suction V6P N3R
2	1AB31HME06	230V ¾ HP 1" discharge, 1" suction V6P N3R
3	2AB33HME08	230V 2 HP 1" discharge, 1" suction V6P N3R
4	1AB35HME03	230V 1 HP 1" discharge, 1.25" suction V15P N3R
5	2AB35HME05	230V 2 HP 1" discharge, 1.25" suction V15P N3R
6	2AB35HME06	230V 2 HP 1" discharge, 1.25" suction V15P N3R
7	2AB310HME02	230V 2 HP 1.25" discharge, 1.5" suction V15P N3R

Recommend bladder tank, sized to 20% of pump flow (gpm). Pressure Transducer supplied with all configurations.
NOTE: PSI is boosting pressure, NOT total system pressure.

INPUT AND OUTPUT POWER (VOLTAGE AND PHASE)

- All 1AB3 and 2AB3 require single-phase input power
 - All will work on 1Ø, 208-230V input power

1AB31HME04

- 230V SINGLE PHASE INPUT
- ½ HP variable speed controller; NEMA Type 3R
- Pump (e-HM 4 stg) and Tank (V6P) included
- Transducer

1AB31HME06

- 230V SINGLE PHASE INPUT
- ¾ HP variable speed controller; NEMA Type 3R
- Pump (e-HM 6 stg) and Tank (V6P) included
- Transducer

2AB33HME08

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 8 stg) and Tank (V6P) included
- Transducer

1AB35HME03

- 230V SINGLE PHASE INPUT
- 1 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 3 stg) and Tank (V15P) included
- Transducer

2AB35HME05

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 5 stg) and Tank (V15P) included
- Transducer

2AB35HME06

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 6 stg) and Tank (V15P) included
- Transducer

2AB310HME02

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 2 stg) and Tank (V15P) included
- Transducer

SUGGESTED e-AB3 INSTALLATION FOR MUNICIPAL WATER SYSTEM

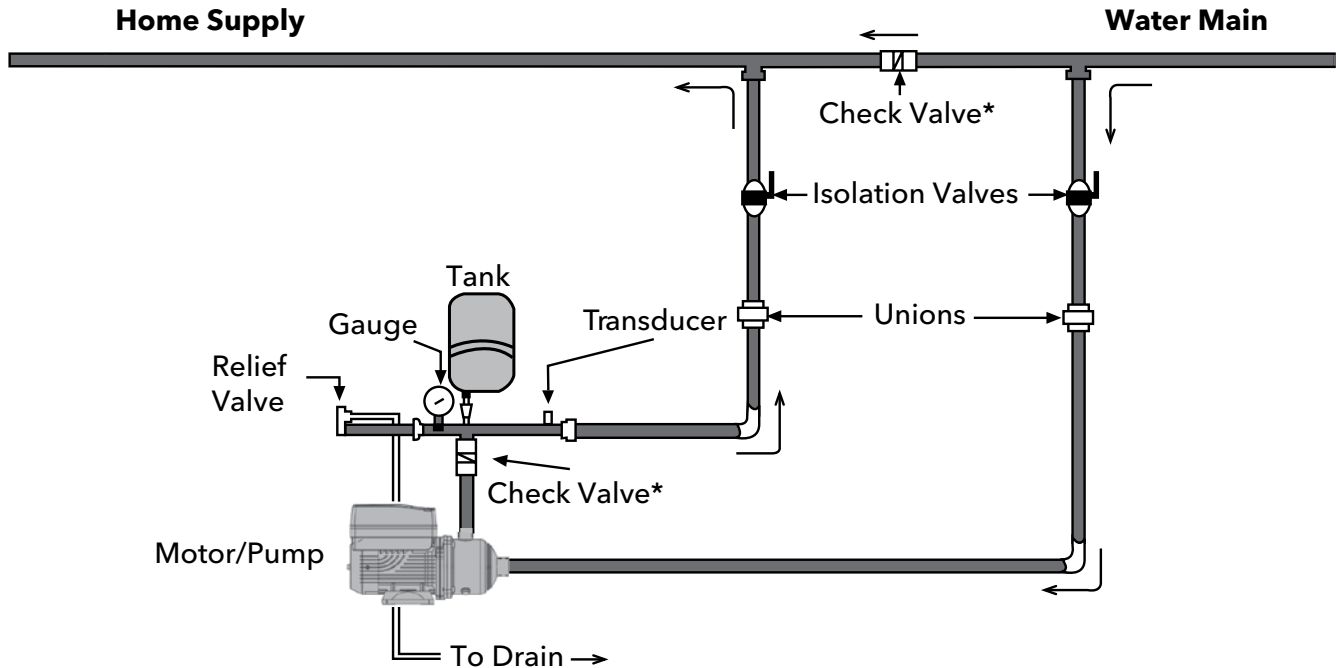


Figure 1

*Spring check valve - provided by installer

SUGGESTED e-AB3 INSTALLATION FOR WELL PUMP SYSTEM

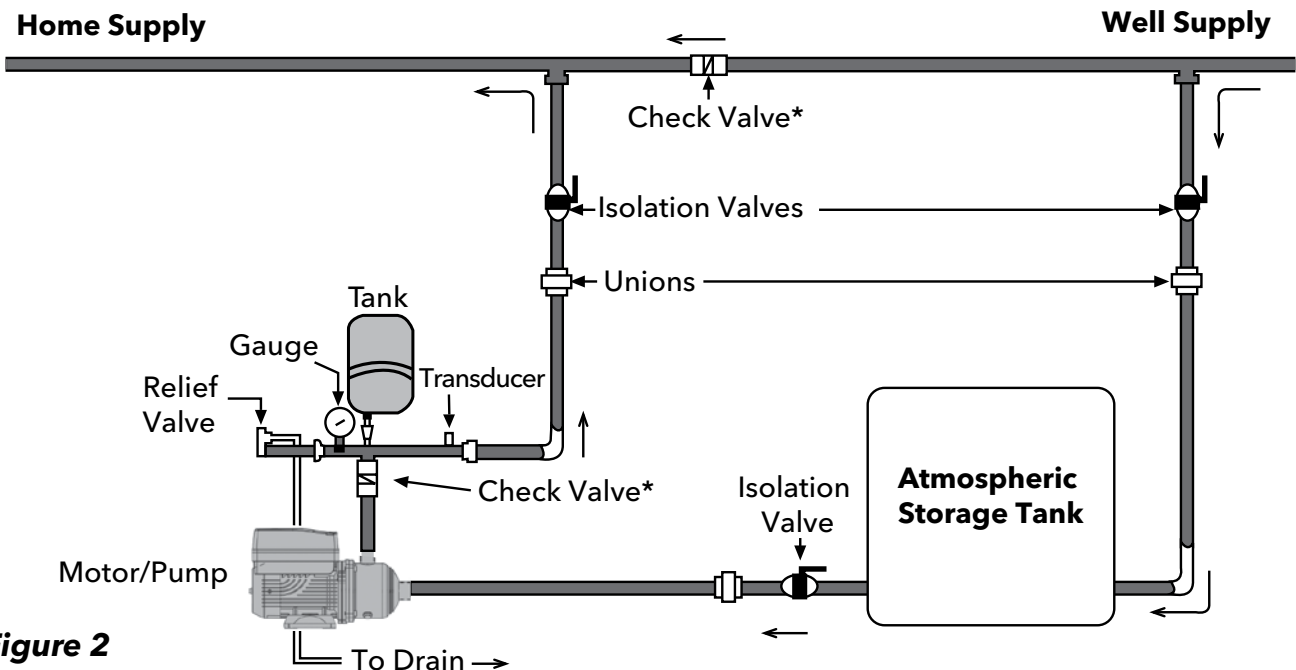
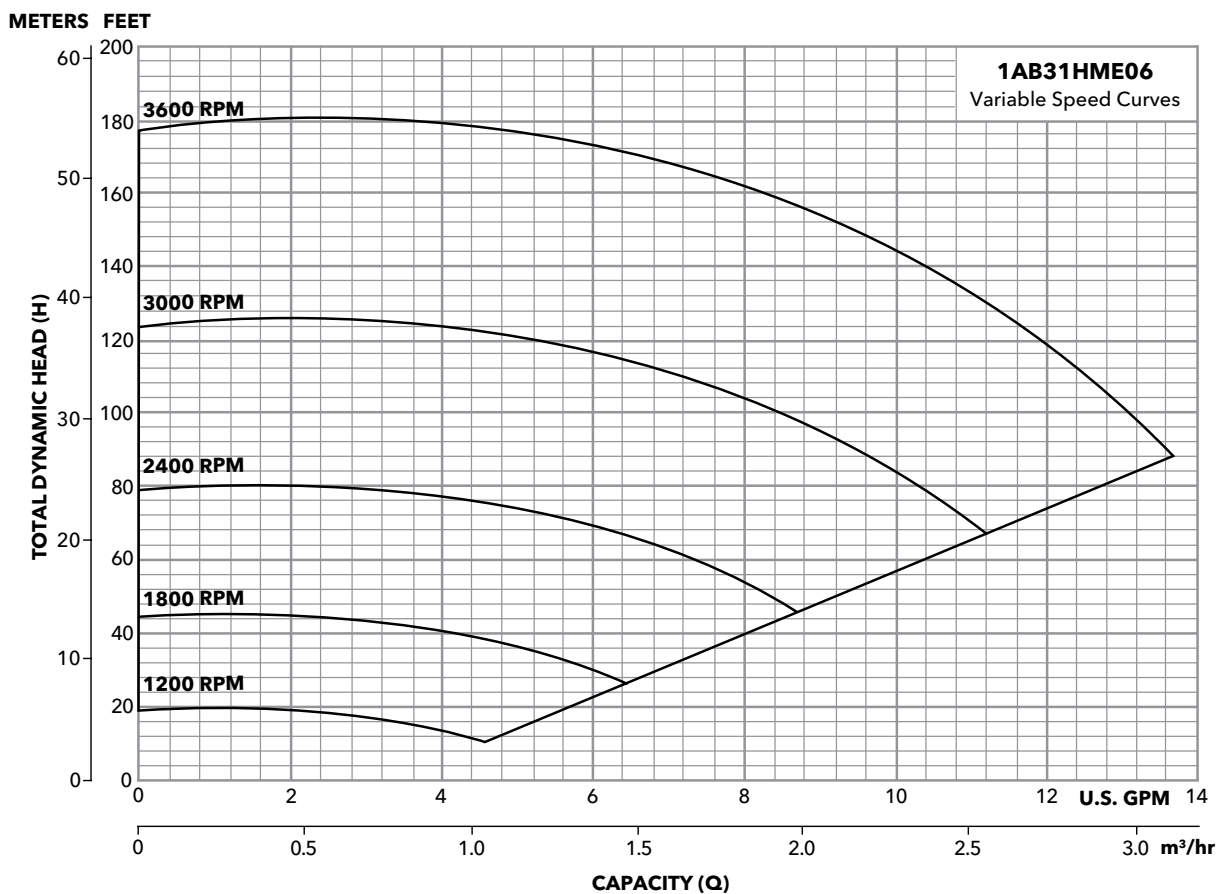
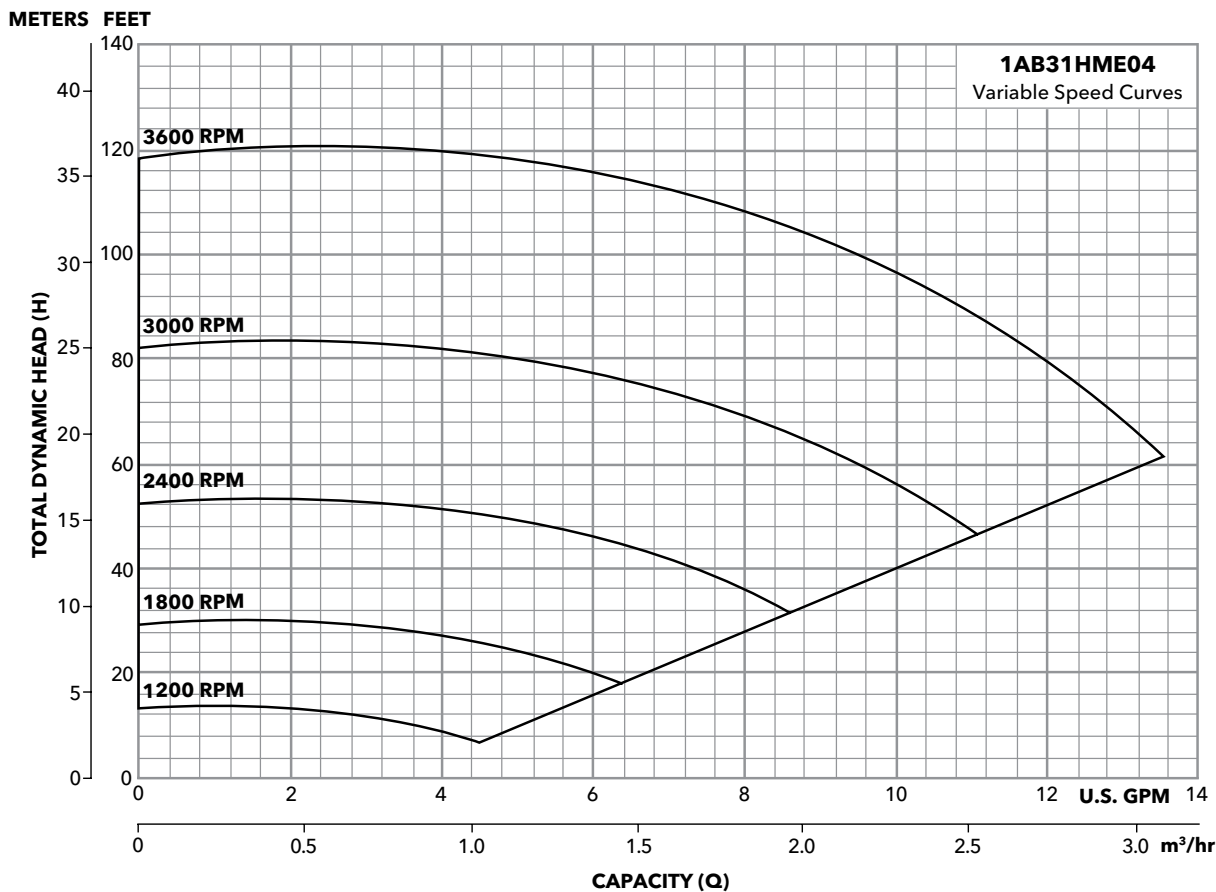
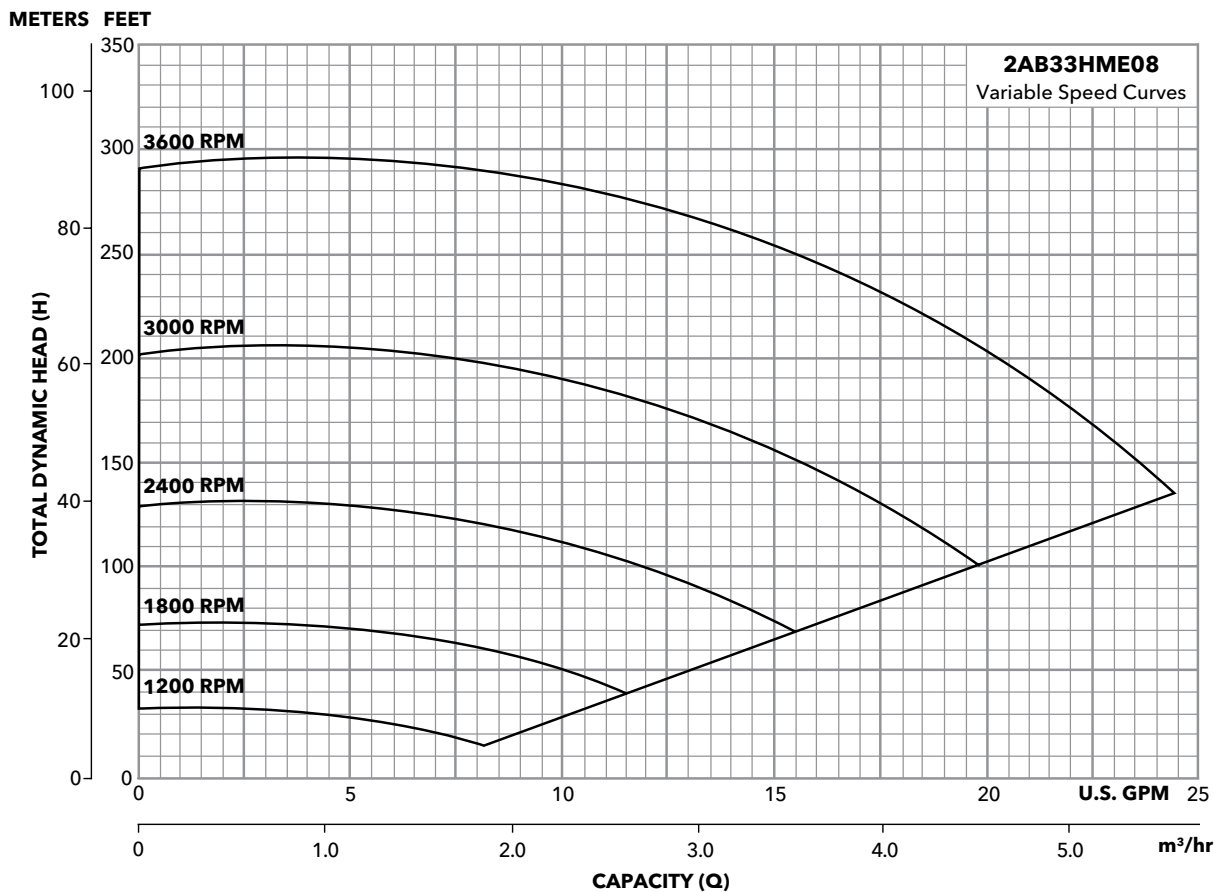
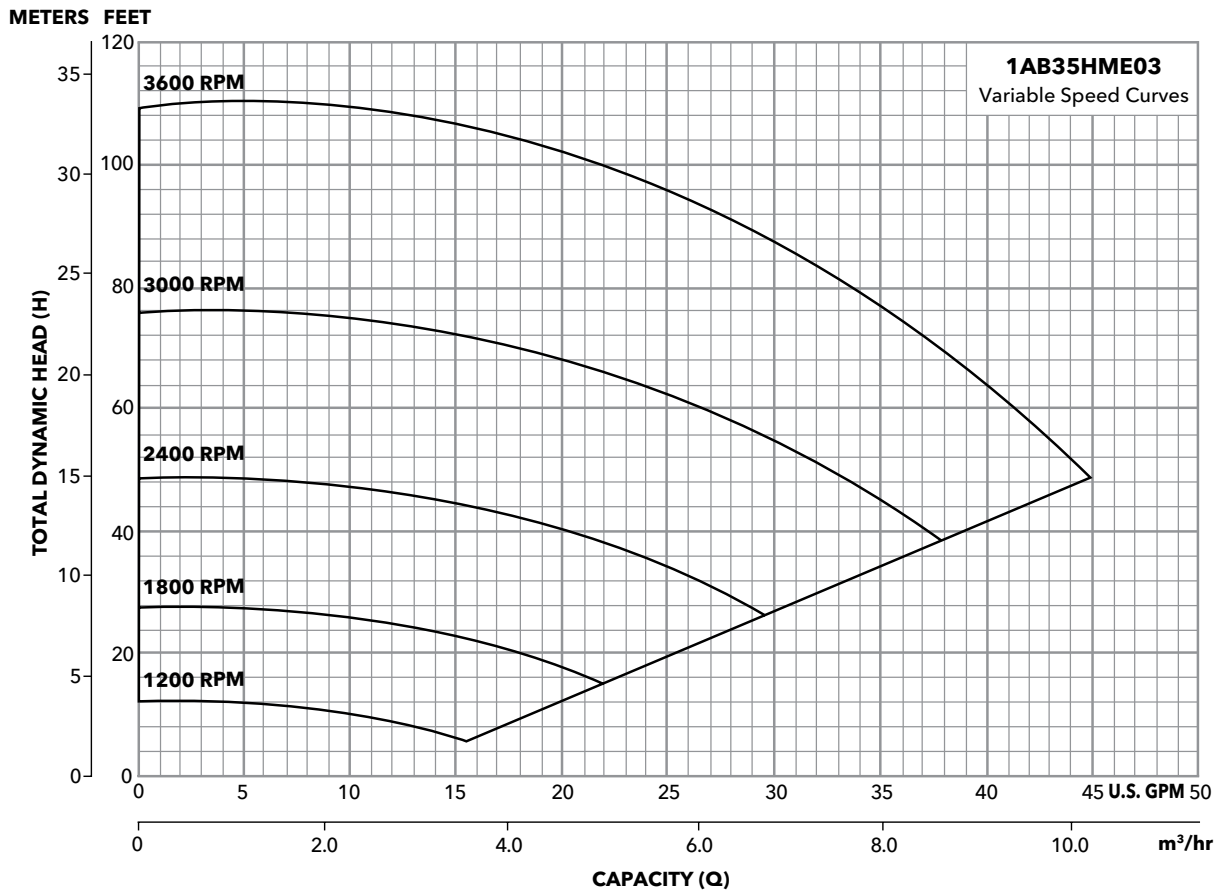
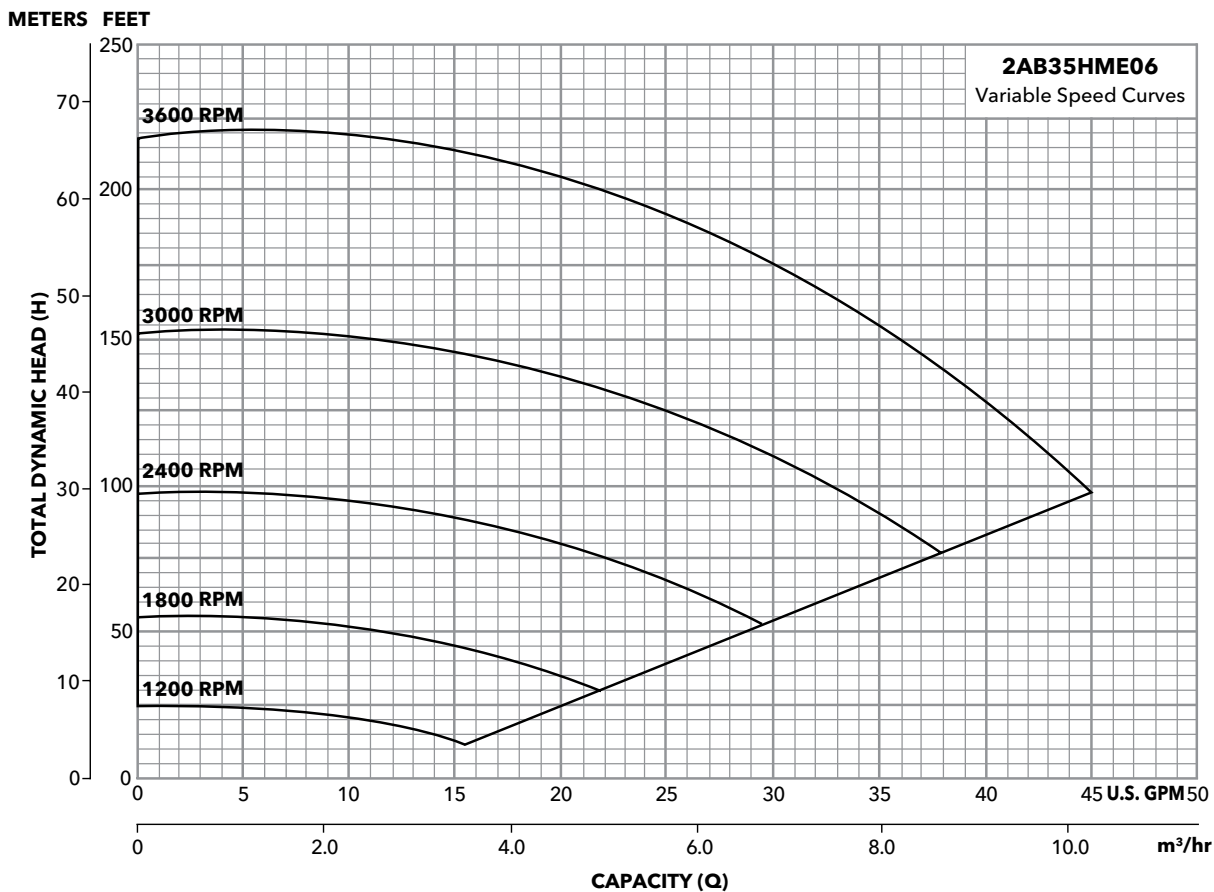
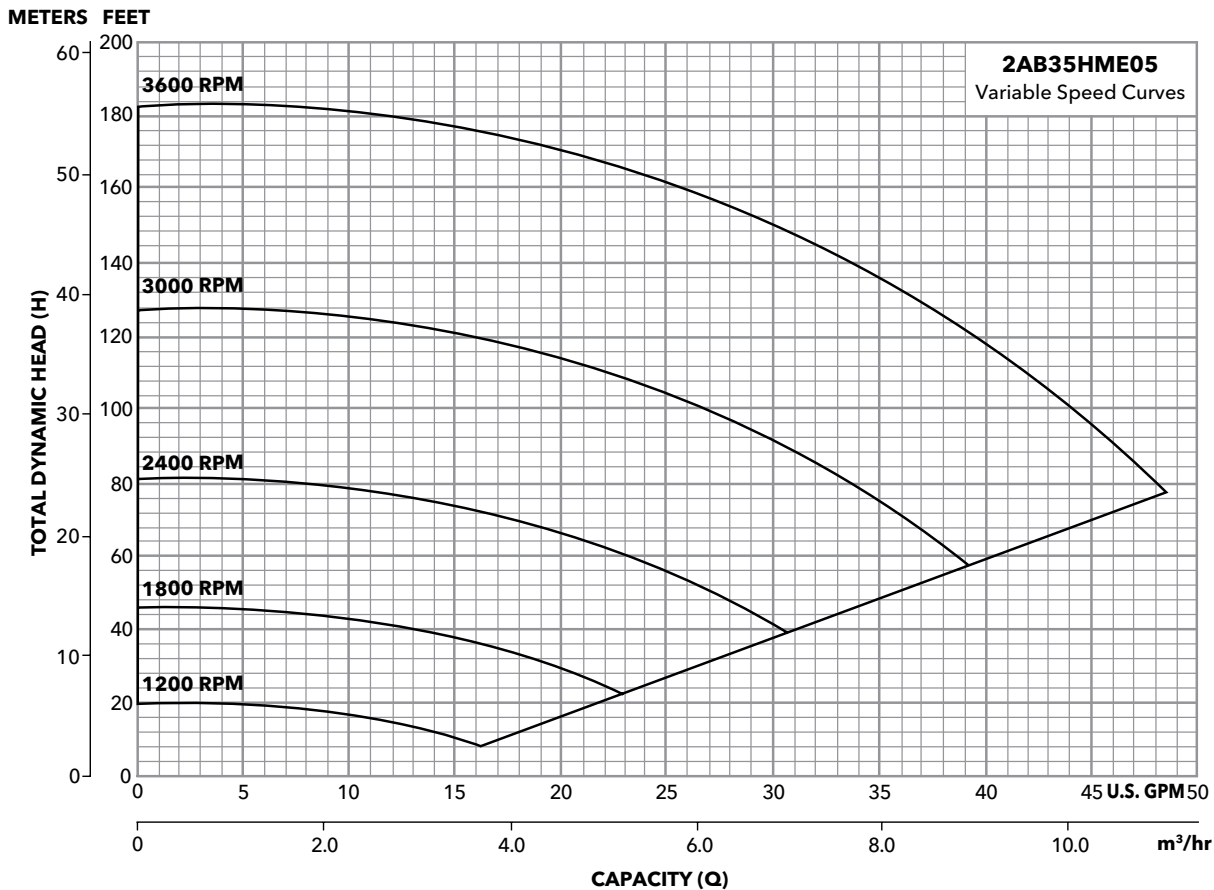


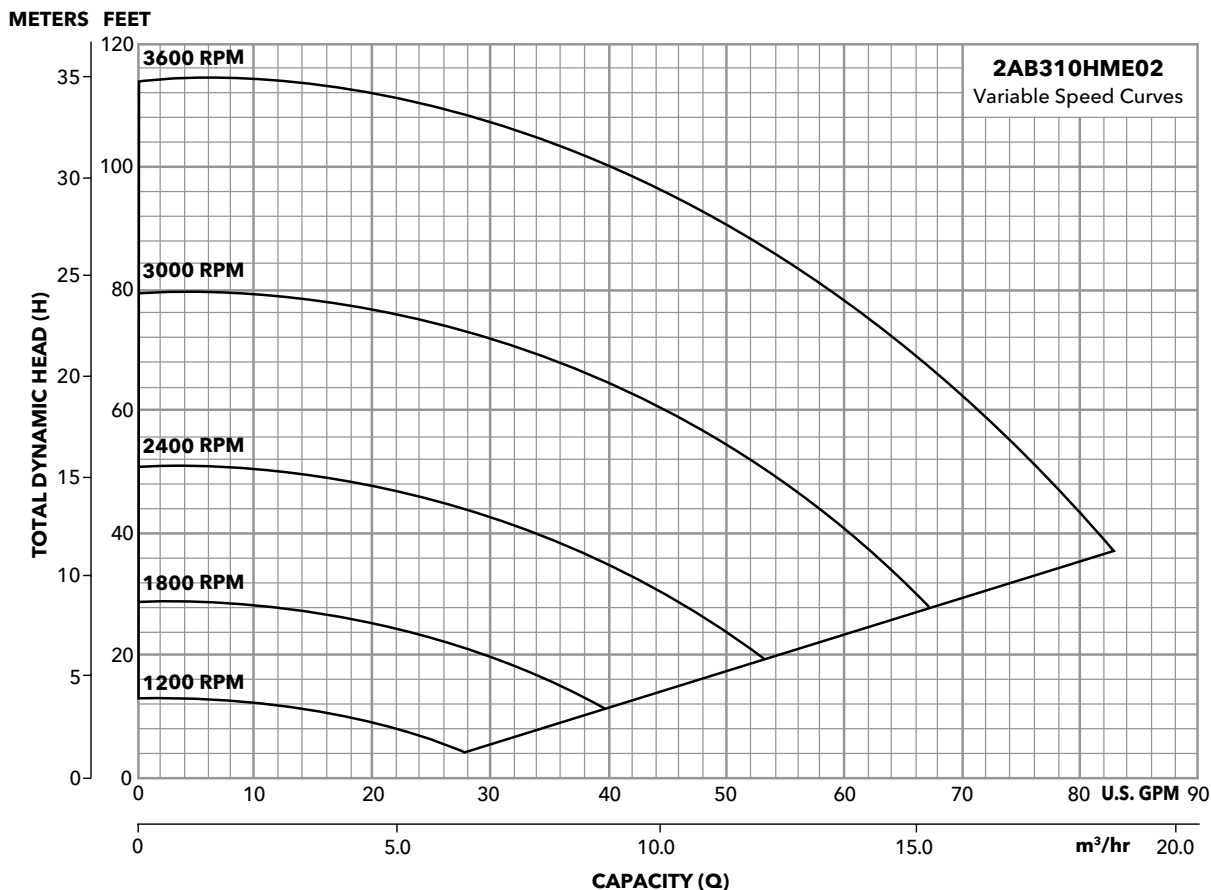
Figure 2

*Spring check valve - provided by installer









e-AB3 INTEGRATED SYSTEM FEATURES

Input Power*: 208-230V ±15%, single phase (controller only)

Input Controls: + and – buttons to set pressure and Menu button for menu access.

Signal Lights: Power on, communication, status, speed LED display for menu, faults/errors.

Electrical Efficiency: Over 95% at full load

Protection Against: Short circuit phase loss, under voltage, overload, motor temperature, suction loss, sensor fault, bound pump, over voltage, static discharge.

Ambient Temperature: 5° F to 122° F

Maximum Humidity: 95% at 122° F, non-condensing

Air Pollution: Avoid mounting in areas with excessive dust, acids, corrosives and salts.

Approvals:  (Listing on motor and controller)

System Approvals:   DRINKING WATER

Controller Enclosure: Outdoor, Type 3R, IP 55 (Rain-tight)

Cooling: Totally Enclosed Fan cooled

Transducer: 4-20mA, 300 psi range, 15 foot 2-wire shielded cable.

Input Wire: 18 with ferrules or 14 AWG

*Low input voltage may affect motor operation.

PRESSURE RANGE

Nominal Range – Field adjustable from 20 - 85 psi, total system pressure.

⚠ WARNING DO NOT SET REQUIRED SYSTEM PRESSURE ABOVE 85 PSI. SEVERE DAMAGE TO PLUMBING COULD RESULT. PLUMB RELIEF VALVE OUTSIDE OR TO A DRAIN.

DIMENSIONS (For Reference Only - Do not use for construction purposes)

e-HM PUMPS

Capacities – to 12 GPM (1HM)
to 45 GPM (5HM)

Rotation – Right hand clockwise,
viewed from motor end

Materials – 316L stainless steel for all liquid
handling components

Motor – 1 HP, TEFC, Single Phase, 208-230
– 1.5 HP, TEFC, Single Phase, 208-230
– 2 HP, TEFC, Single Phase, 208-230

Pipe Connections – 1 x 1 NPT (1HM)
– 1 x 1 1/4 NPT (5HM)

Maximum Temperature of Water – 120° F

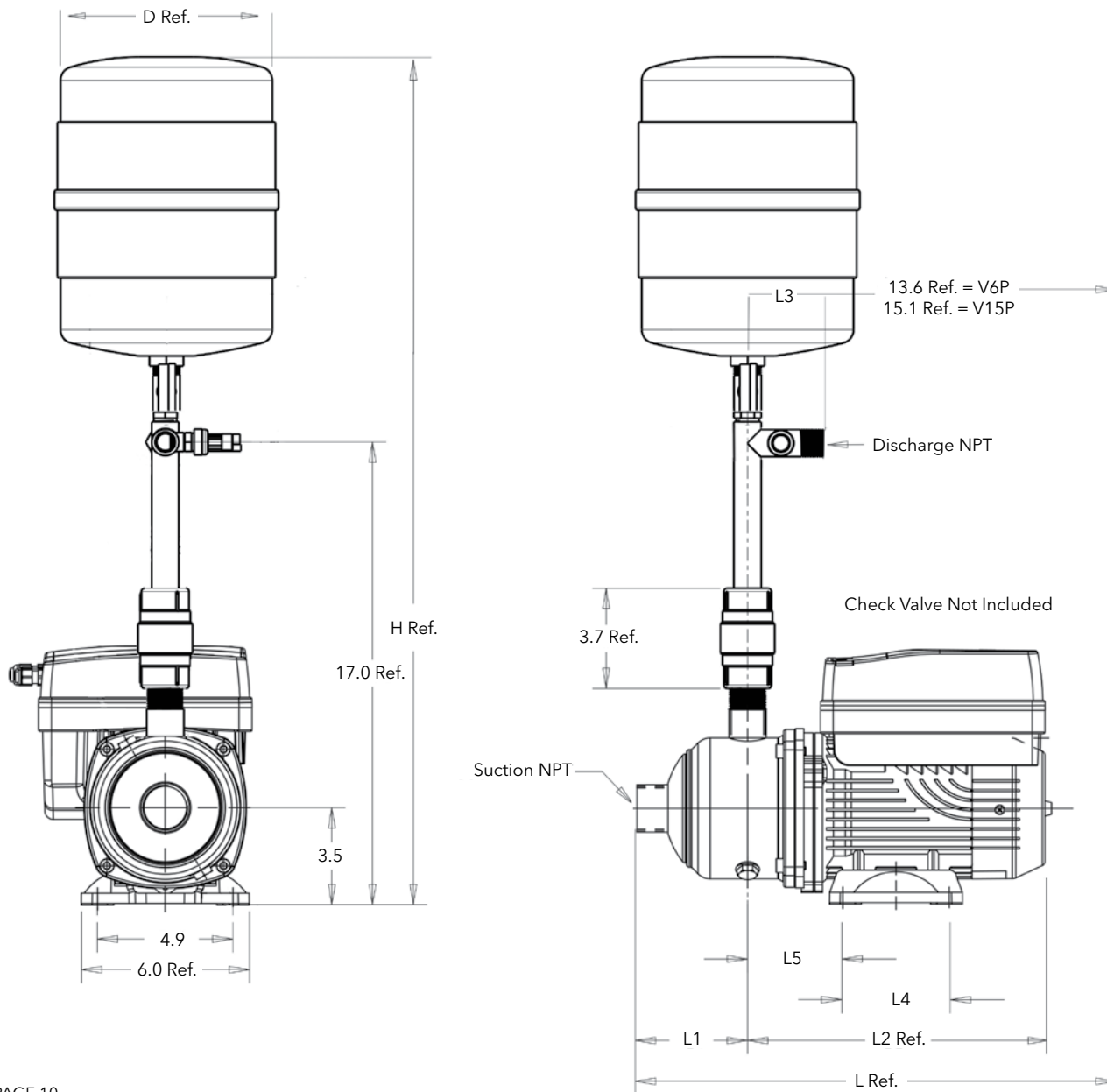
NOTE: Tank Liquid Temperature Limit is 120° F
Pump Liquid Temperature Limit is 194° F

Maximum System Working Pressure – 145 psi

NOTE: Tank Max Working Pressure – 125 psi.

Seal – Carbon / Silicon Carbide / EPR

Overload protection, starters, heaters not required. Dimensions are in inches.



DIMENSIONS (For Reference Only - Do not use for construction purposes)

e-HM PUMPS

Capacities – to 23 GPM (3HM)
to 45 GPM (5HM)
to 75 GPM (10HM)

Rotation – Right hand clockwise,
viewed from motor end

Materials – 316L stainless steel for all liquid
handling components

Motor – 2 HP, TEFC, Single Phase, 208-230
(5HM/10HM)

Pipe Connections – 1 x 1 NPT (3HM)
– 1 x 1¼ NPT (5HM)
– 1¼ x 1½ NPT (10HM)

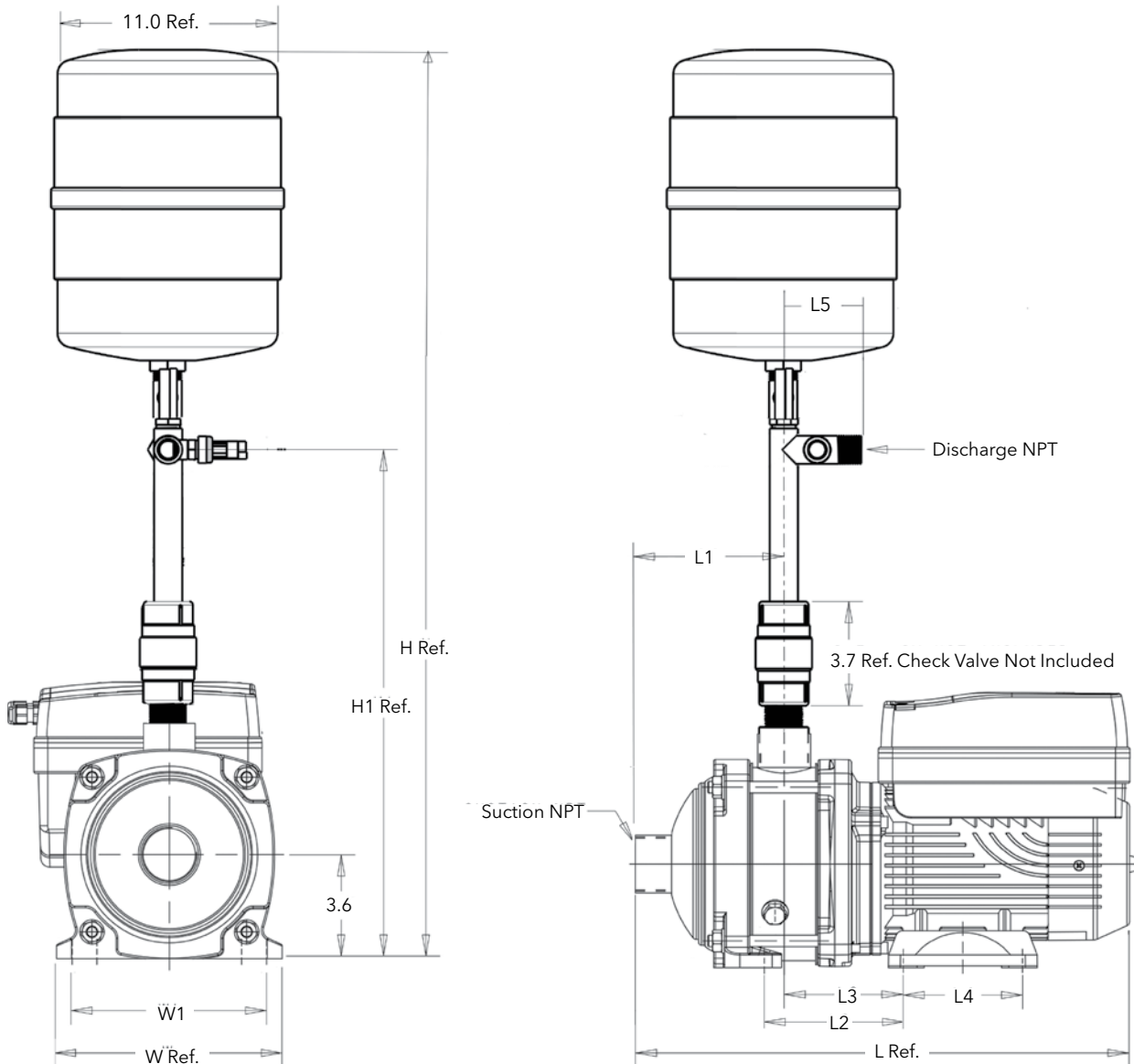
Maximum Temperature of Water – 120° F

NOTE: Tank Liquid Temperature Limit is 120° F
Pump Liquid Temperature Limit is 194° F

Maximum System Working Pressure – 85 psi

Seal – Carbon / Silicon Carbide / EPR

Overload protection, starters, heaters not required. Dimensions are in inches.



ELEVATION DIMENSIONS - REFERENCES PAGES 10 - 11

	Tank and Tee assembly incl.											Suction	Discharge	Page
		L	L1(A)	L2	L3	L4	L5	D	H	W	W1	NPT	NPT	
1HME04N03MM1BQEBP	Yes	17.8	4.2	11.3	2.8			8.25"	21.1			1"	1"	14
1HME06N05MM1BQEBP	Yes	19.4	5.8	11.3	2.8			8.25"	21.1			1"	1"	14
5HME03N07MM1BQEBP	Yes	19.2	4.1	11.3	2.8			11"	22.5			1.25"	1"	14
5HME05N15MM1BQEBP	Yes	21.2	6.1	11.3	2.8			11"	22.5			1.25"	1"	14
		L	L1	L2	L3	L4	L5	H	H1	W	W1	Suction NPT	Discharge NPT	Page
3HME08N15MM1BQEBP	Yes	20.3	6.7	6.6	3.9	3.9	2.8	23.3"	17.8	6.5	5.5	1"	1"	15
5HME06N15MM1BQEBP	Yes	21.3	6.2	6.0	3.9	3.9	2.8	23.3	17.8	6.5	5.5	1.25"	1"	15
10HME02N15MM1BQEBP	Yes	20.0	4.9	4.6	3.9	3.9	2.9	30.6	25.1	7.7	6.6	1.5"	1.25"	15

SUBMERSIBLE PUMPS: Use Aquavar SOLO or S-Drive controllers for submersible applications, they have filters built-in and are programmed for submersibles; alternatively Aquavar IPC with use with DV/DT filter can be used for submersible applications.

PACKAGED HARDWARE WITHOUT PUMP AND MOTOR (See Hydrovar Price Book)

Part Number 15K40

KIT INCLUDES:

- 1) Tank - V6P (2 gallons)
- 2) 1" Bronze Discharge Tee - AV20-6
- 3) Pipe Plug - ½", 6K68
- 4) Pressure Gauge

Part Number 15K108

KIT INCLUDES:

- 1) Tank - V15P
- 2) 1¼" Bronze Discharge Tee - AV20-12
- 3) Pipe Plug - ½", 6K68
- 4) Pressure Gauge



Xylem Inc.
 Phone: (866) 325-4210
 Fax: (888) 322-5877
www.xylem.com/goulds

Goulds is a registered trademark of Goulds Pumps, Inc. and is used under license.
 © 2021 Xylem Inc. BAQeAB3 March 2021