

Q-VAC

AUTOMATIC PRIMING SYSTEMS

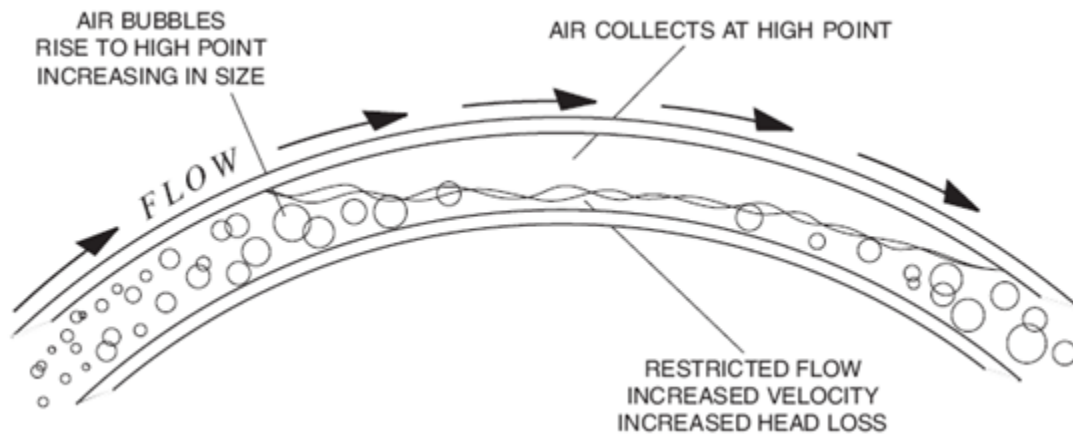


QV Series

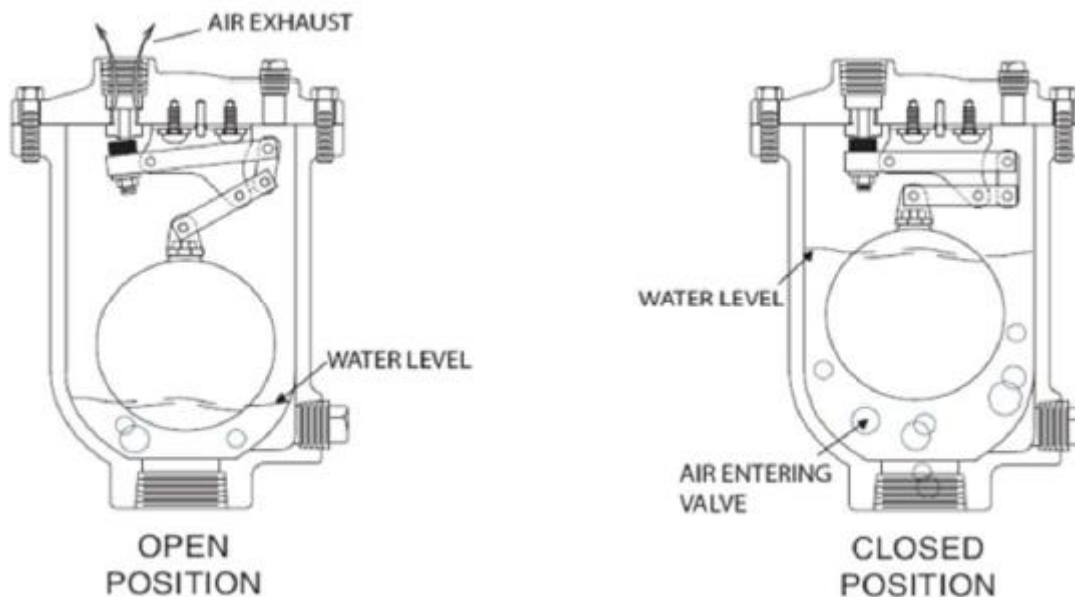
Standard Capacity Priming Valves

Why do you need a priming valve?

Even after a pump is primed, air can have a major impact on centrifugal pump operation. Water contains approximately 2% air by volume. When agitated, some of this entrained air will separate out of the water and accumulate in system high points. Air can also enter the system through common leak paths such as shaft seals, leaky joints, or open ports. If this air is not removed, it creates a restriction that reduces pumping efficiency, increases power consumption, increases fluid velocity, and promotes corrosion. When left unchecked, this can cause a pump to become air-bound so it is unable to start, or even lose its prime during operation.



A float-actuated priming valve, installed in the suction side high points, is used with a vacuum priming system to establish pump prime, while keeping the liquid side of the process separate from the vacuum system. By allowing the continuous removal of air from the suction piping, it also helps ensure that pumps operate at peak design capacity without the possibility of becoming air bound or losing prime. Priming valves are a critical component of any vacuum priming system.



QV SERIES PRIMING VALVES

Q-VAC's QV-series priming valves provide economical and dependable performance for low and medium flow applications. Their long body design and level sensitive float effectively separates the vacuum process from the liquid process while providing continuous air removal from pumps and process piping.

Designed for both clean water and wastewater applications, these valves comply with both AWWA C512 and NSF 61 requirements, and are constructed with heavy-duty cast iron, a durable, non-stick fusion bonded epoxy coating internally and externally, and 316SS trim. This combination creates an economical valve with high strength and exceptional abrasion and chemical resistance, even in aggressive water. For high flow applications, or projects that require 100% stainless steel construction, our HCPV-series priming valves should be used.



STANDARD FEATURES

- Cast iron construction
- Long body design
- 316 stainless steel trim
- Resilient seating for positive shutoff
- Fusion bonded epoxy finish inside & out
- Unconditionally guaranteed stainless steel float
- Performance proven for over 50 years
- Meets AWWA standards

SIZING

It is always best practice to include at least one priming valve for every pump connected to the priming system. However, even a properly sized priming system will not operate as desired if there are flow restrictions caused by improperly selected valves or piping.

The shape and size of an orifice determines the amount of air that can flow through it at any given pressure level. Like all valves, priming valves have flow limitations due to internal orifices and connection sizes that can negatively impact priming if they are restrictive.

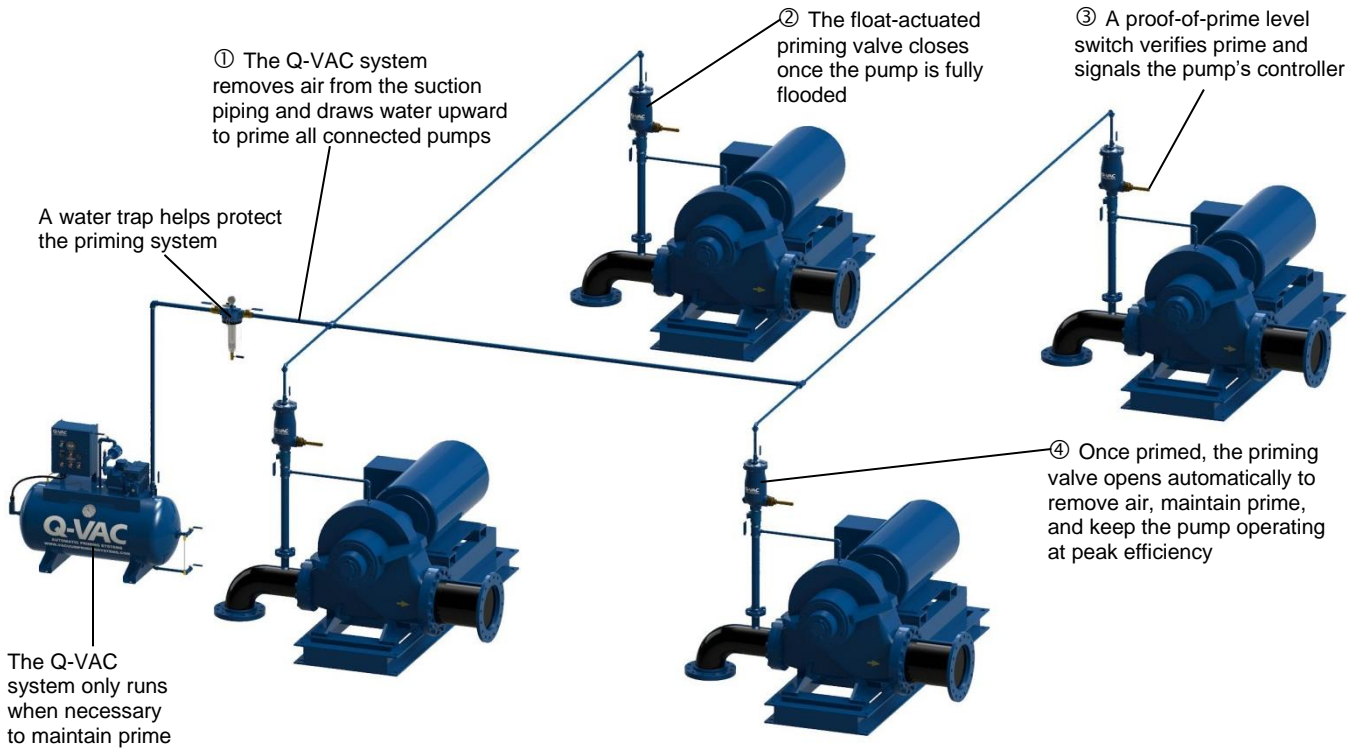
When determining which priming valve should be selected for an application, the size and number of priming valves that are needed will impact the valve selection. Q-VAC's vacuum experts will ensure that each priming system, including the priming valves, are sized properly for peak performance and efficiency.

PRIME VERIFICATION

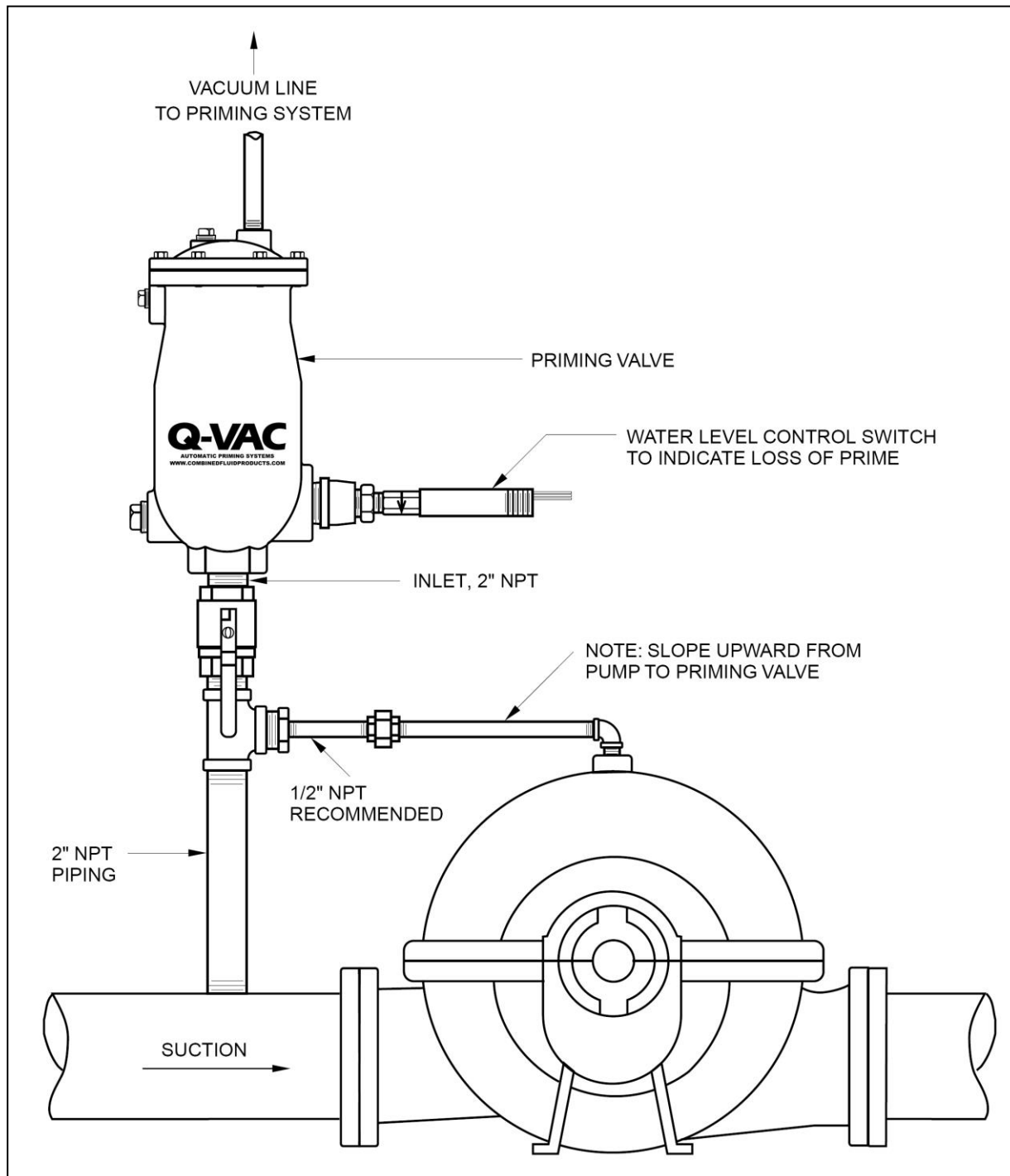
How do you know when a pump is primed and it's safe to start? To answer this question, Q-VAC priming valves are typically provided with a proof-of-prime level switch (sometimes referred to as a "pump protector") to signal when a pump is primed or to provide a warning that prime has been lost. This signal is connected to the plant's SCADA system, pump motor controller, an alarm, or to a prime status panel. In most applications, a float-type level switch provides reliable performance. For applications with aggressive or coating liquids, or for high flow applications, we recommend using our severe duty capacitive type level switch.



TYPICAL INSTALLATION

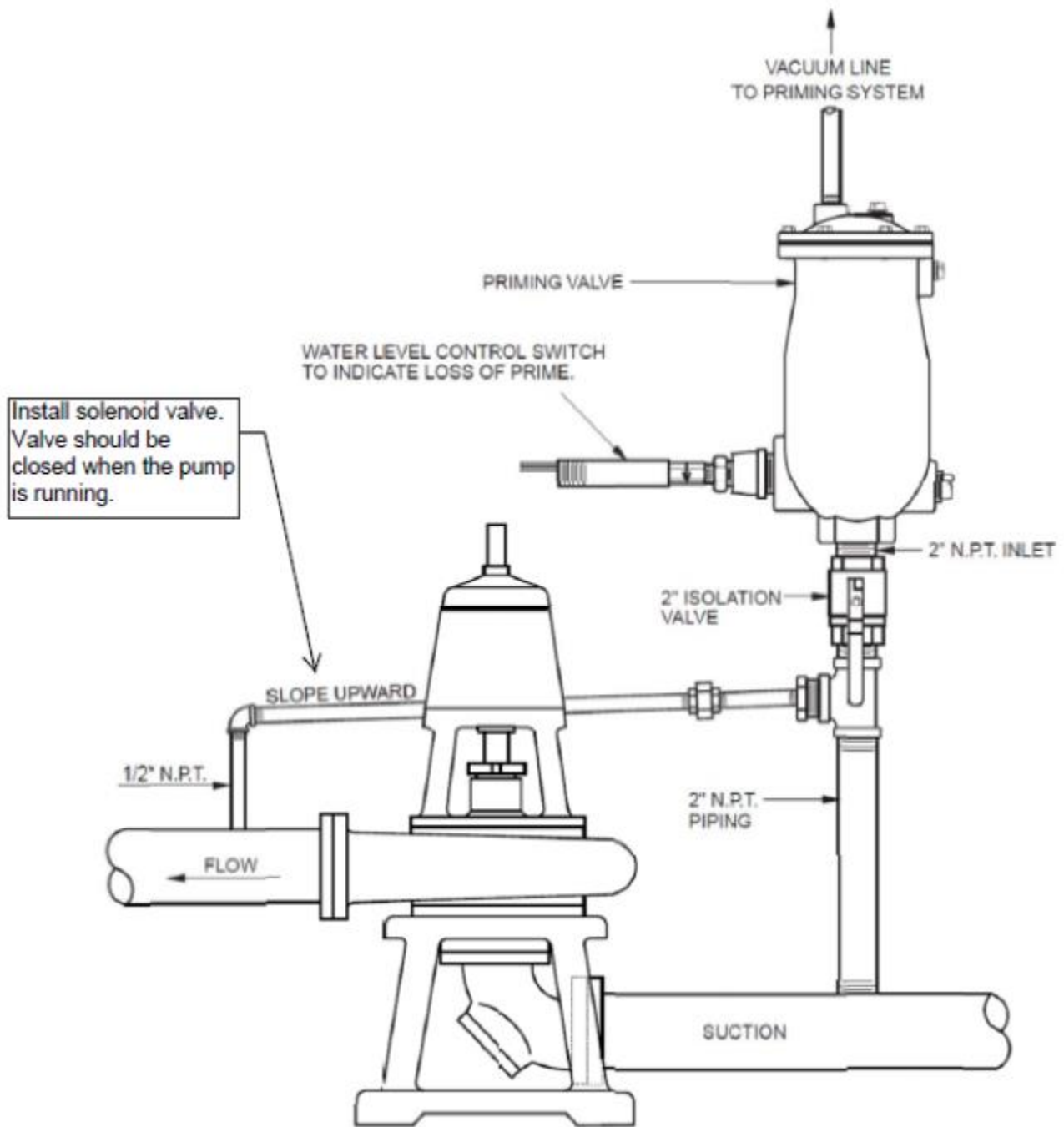


TYPICAL PIPING ARRANGEMENT 1



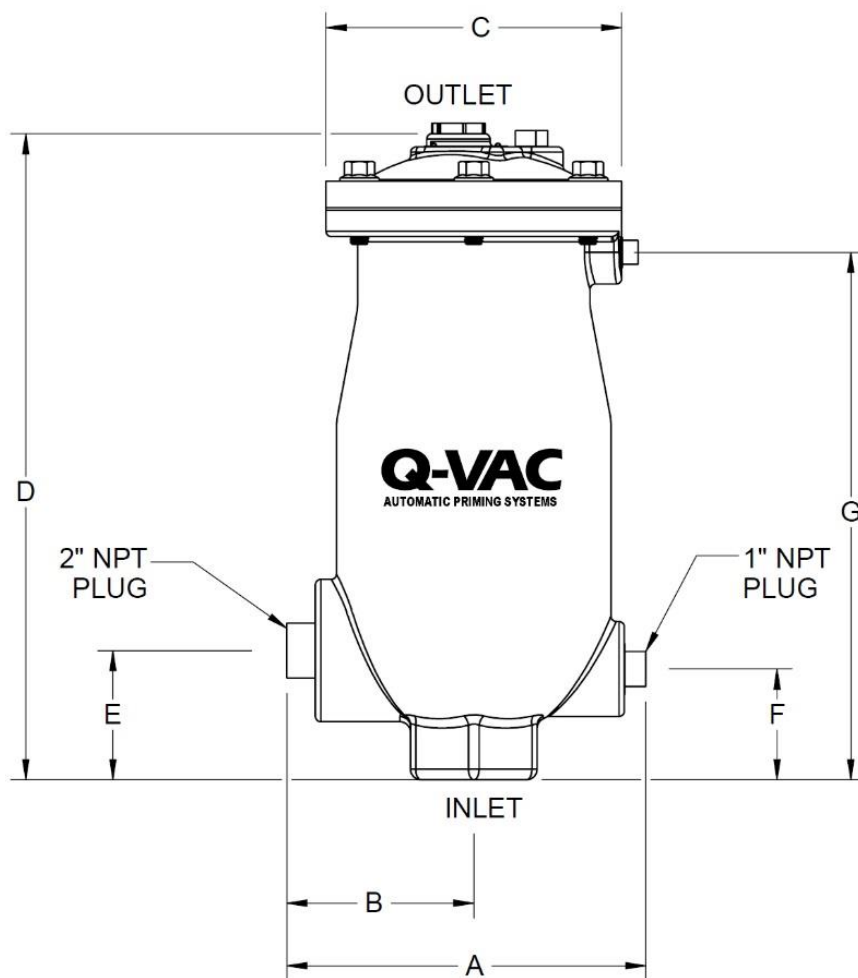
Priming valves should always be installed at a higher elevation than the pumps.

TYPICAL PIPING ARRANGEMENT 2



Priming valves should always be installed at a higher elevation than the pumps.

DIMENSIONAL DATA: Priming Valve Only

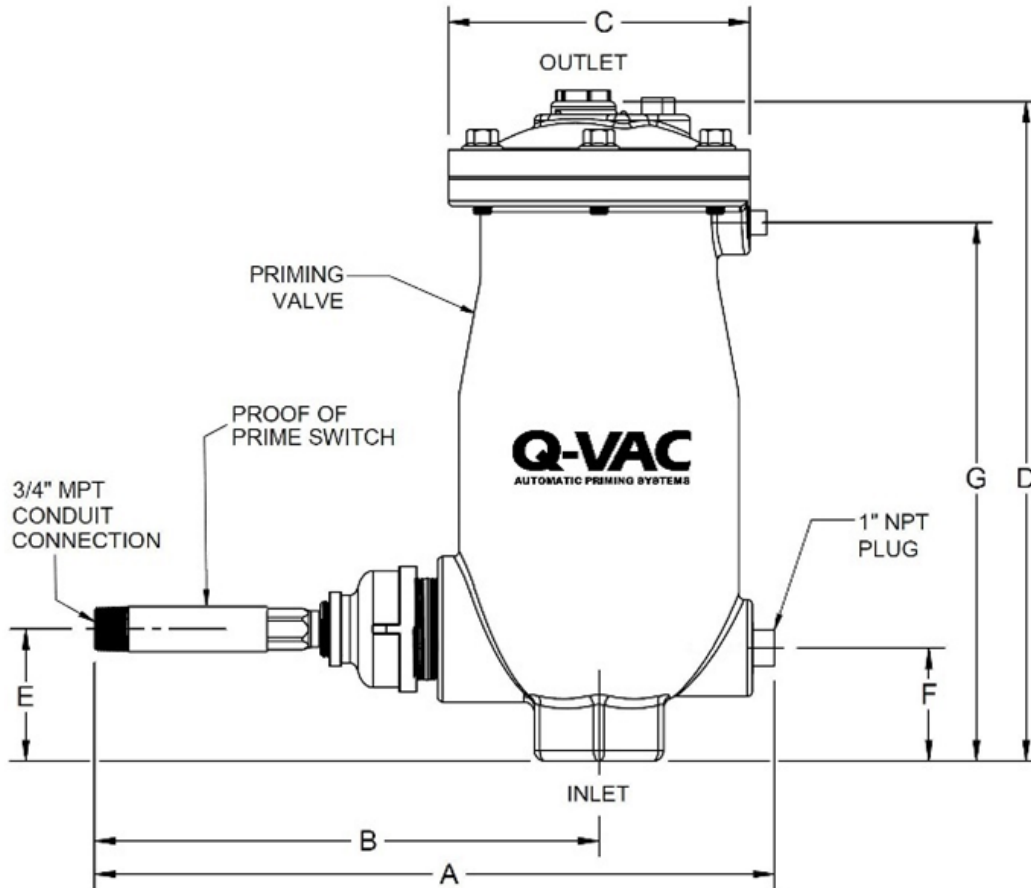


MODEL	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	INLET (FNPT)	OUTLET (FNPT)	PVO	WEIGHT (lbs)
QV-38P	8.5	4.43	7	15.31	3.06	2.63	12.5	2"	1/2"	3/16"	38.5
QV-38P2	8.5	4.43	7	15.31	3.06	2.63	12.5	2"	1/2"	5/16"	38.5
QV-45P	9.79	5.18	9.5	17.56	3.07	2.53	14	2"	1"	23/64"	71
QV-45P3	9.79	5.18	9.5	17.56	3.07	2.53	14	2"	1"	1/2"	71

NOTE

The QV-38P and QV45P are rated for operation up to 150 psi.
 The QV-38P2 and QV-45P3 are rated for operation up to 75 psi.

DIMENSIONAL DATA: Priming Valve with Float Type Level Switch



MODEL	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	INLET (FNPT)	OUTLET (FNPT)	PVO	WEIGHT (lbs)
QV-38P-WLxx	15.78	11.71	7	15.31	3.06	2.63	12.5	2"	1/2"	3/16"	41.3
QV-38P2-WLxx	15.78	11.71	7	15.31	3.06	2.63	12.5	2"	1/2"	5/16"	41.3
QV-45P-WLxx	16.86	12.25	9.5	17.56	3.07	2.53	14	2"	1"	23/64"	73.8
QV-45P3-WLxx	16.86	12.25	9.5	17.56	3.07	2.53	14	2"	1"	1/2"	73.8

NOTE

The QV-38P and QV45P are rated for operation up to 150 psi.
 The QV-38P2 and QV-45P3 are rated for operation up to 75 psi.

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AUTOMATIC PRIMING SYSTEMS



The Comprehensive Source for Priming

Q-VAC offers a full range of standard designs, a wide spectrum of performance levels, multiple vacuum technologies, and a complete assortment of options and priming accessories. As your leading source, Q-VAC Automatic Priming Systems are engineered to provide the highest level of quality, performance, convenience, and value. Our manufacturing capabilities, expertise, attention to detail, and service are unmatched in the industry.



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