

F92 Series Air Volume Controls for Shallow Wells and F93 Series Air Volume Controls for Deep Wells

Product Bulletin

F92B, F93B, F93H

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The F92 Series and F93 Series Air Volume Controls control the amount of air in residential water storage tanks. Water storage tanks in residential water systems rely on a volume of air in the tank to provide system pressure, making it important to control the amount of air in the tank.

Too little air in the tank results in rapid pump cycling - a problem common in shallow well systems (less than 25 ft [7.6m] deep). Too much air in the tank results in air entering the distribution system - a problem common in deep well systems (more than 25 ft [7.6m] deep).

The F92 Series Air Volume Control for Shallow Wells connects to the air charging section of the pump. The F92 Control allows room air to enter into the air charging section of the pump when the water level in the tank rises (loss of air volume).

The F93 Series Air Volume Control for Deep Wells allows air to escape from the tank and into the surrounding room when the water level in the tank drops (increase of air volume).



Figure 1: F92B Shallow Well Air Volume Control (Top) and F93B Deep Well Air Volume Control (Bottom)

Table 1: Features and Benefits

Features	Benefits
Sturdy Noryl (High Performance Thermoplastic) Body	Resists mechanical damage and corrosion.
Brass Internal Operating Parts	Minimize corrosion.
Pressure Tested Plastic Float	Provides long operating life.
Optional Pressure Gauge Tapping	Allows mounting of a pressure gauge.



Application

IMPORTANT: Use this F92 Series Air Volume Control for Shallow Wells or F93 Series Air Volume Control for Deep Wells only as an operating control. Where failure or malfunction of the F92 Control or F93 Control could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices, such as supervisory or alarm systems or safety or limit controls, intended to warn of or protect against failure or malfunction of the F92 Control or F93 Control.

Use Teflon® thread sealing tape on the tank connector threads and the gauge tapping threads.

Models with 1/4 in. gauge tapping can be plugged with a 1/4 in. plug when a gauge is not used. Teflon thread sealing tape must be used on the gauge and plug threads.

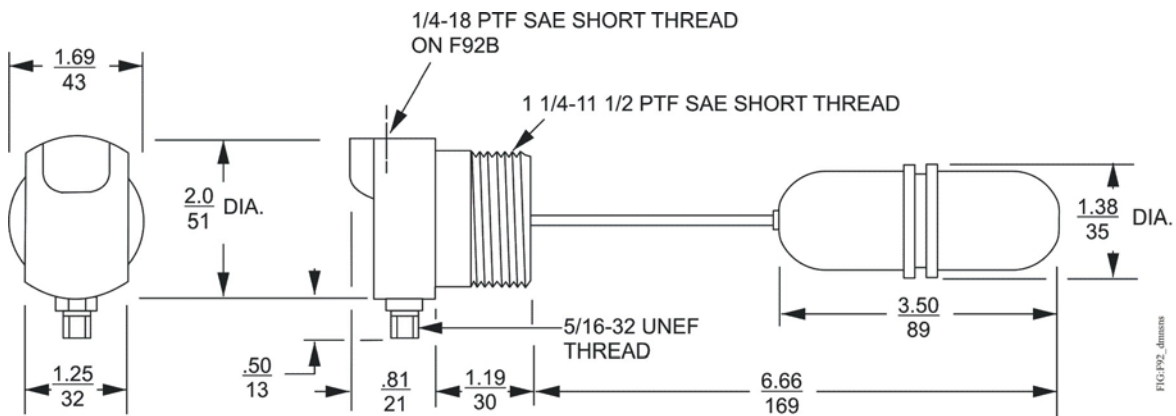


Figure 2: F92 Series Air Volume Control for Shallow Wells Dimensions, in. (mm)

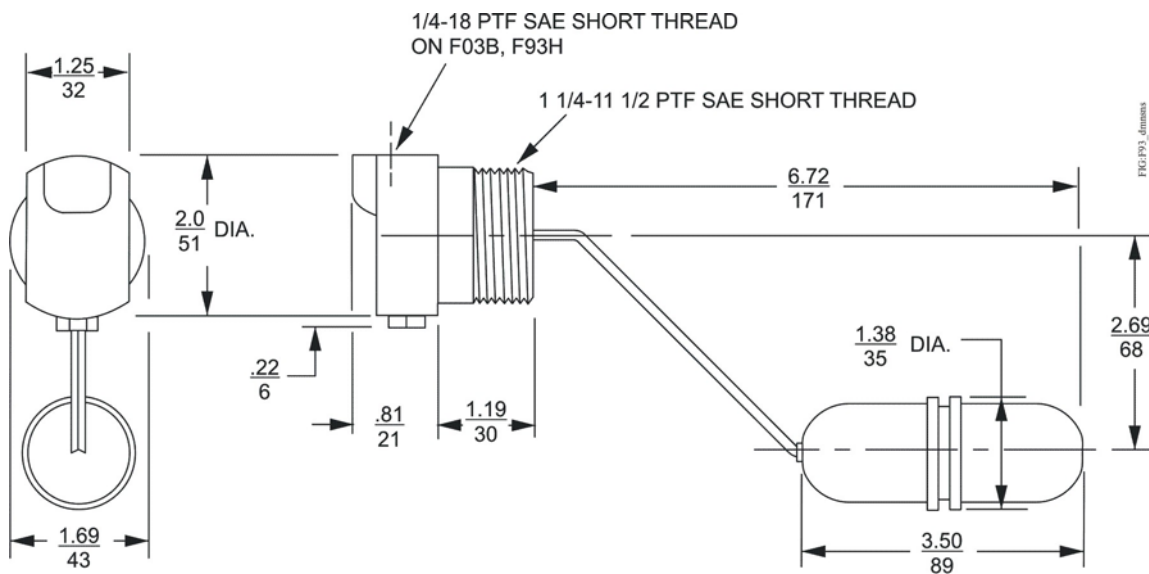


Figure 3: F93 Series Air Volume Control for Deep Wells Dimensions, in. (mm)

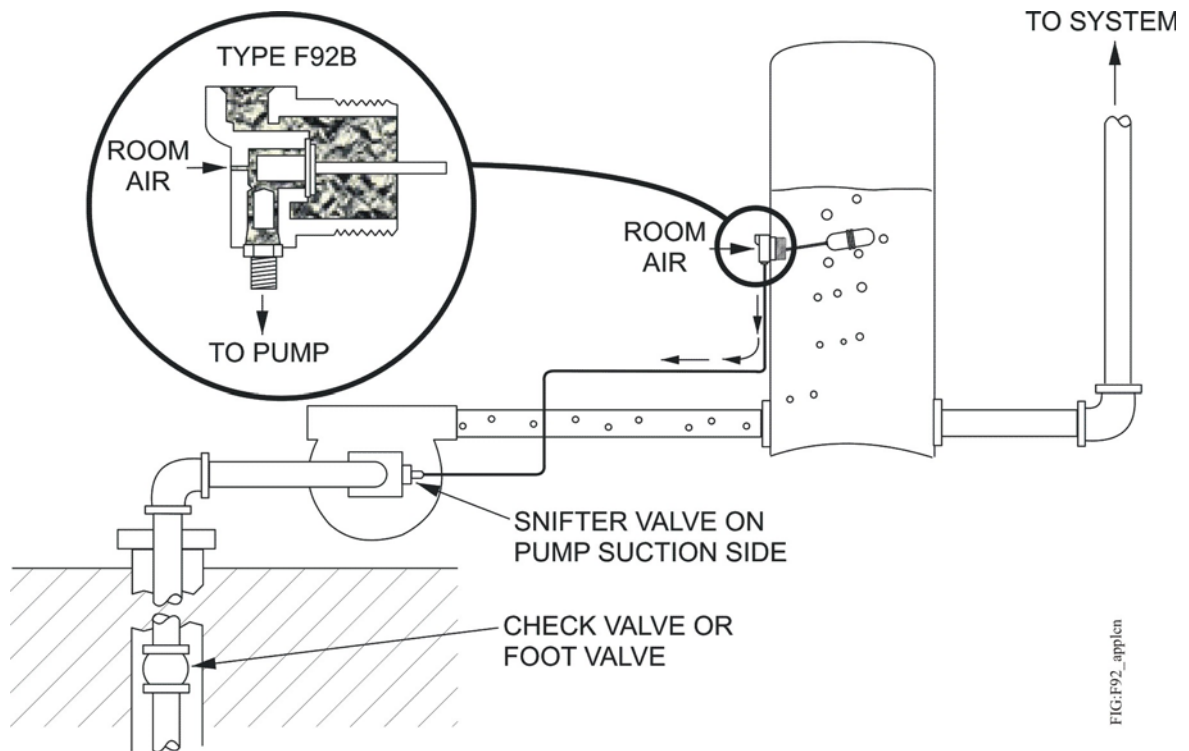


Figure 4: F92 Series Air Volume Control for Shallow Well Application

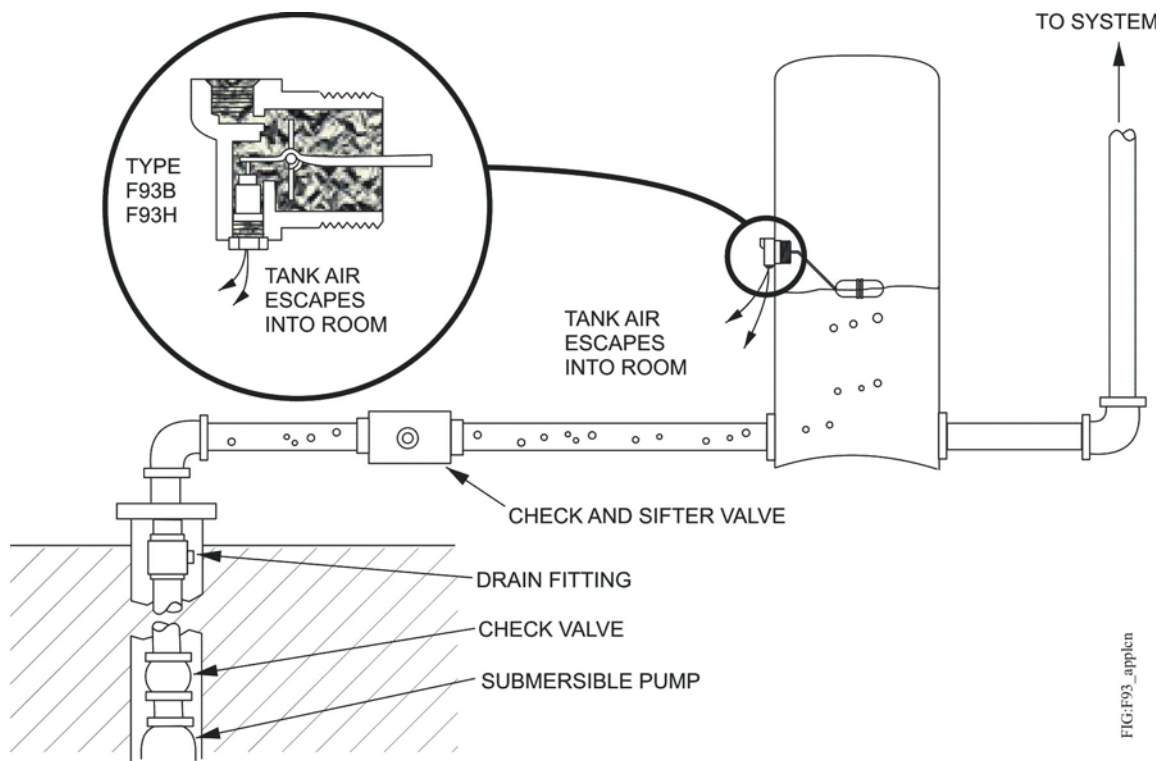


Figure 5: F93 Series Air Volume Control for Deep Well Application

Ordering Information

To order, specify the complete Product Code Number.

Table 2: F92 Series Air Volume Control for Shallow Wells Selection Chart

Product Code Number	Well Type ¹	Tank Air Pressure	1/4 in. Gauge Tap
F92B-1C	Shallow	Increases	Yes
F92B-2C			Yes ²

1. Shallow wells are less than 25 ft (7.6 m) deep.
2. 0.016 in. brass orifice included. Use this model on applications where excessive airflow may reduce water pumping capacity.

Table 3: F93 Series Air Volume Control for Deep Wells Selection Chart

Product Code Number	Well Type ¹	Tank Air Pressure	1/4 in. Gauge Tap
F93B-1C	Deep	Decreases	Yes
F93H-1C			Yes ²

1. Deep wells are more than 25 ft (7.6 m) deep.
2. 25 psig (172 kPa) minimum pressure required to allow air release. Use this model where water may be rapidly drawn from the system.

Repairs and Replacement

Do not make field repairs. Repair parts are not available. If an F92 Series Air Volume Control for Shallow Wells or F93 Series Air Volume Control for Deep Wells malfunctions, replace the control. Contact your nearest Johnson Controls/PENN distributor or sales representative to purchase a replacement.

Technical Specifications

F92 Series Air Volume Control for Shallow Wells

Body Material	30% glass-filled Noryl thermoplastic
Float Material	Plastic with brass rod
Maximum Tank Pressure	80 psig (552 kPa)
Shipping Weight	Individual: 0.25 lb (0.11 kg) Bulk pack (30): 30.9 lb (4.08 kg)
Tank Connector Size	1-1/4 in. Male NPT
Air Flow Restrictor Orifice	Limits air flow to pump on applications where excessive air flow may cause unsatisfactory pump operation
Snifter Line Connection	Flare fitting for 3/16 in. tubing

F93 Series Air Volume Control for Deep Wells

Body Material	30% glass-filled Noryl thermoplastic
Float Material	Plastic with brass rod
Maximum Tank Pressure	100 psig (690 kPa)
Shipping Weight	Individual: 0.25 lb (0.11 kg) Bulk pack (30): 30.9 lb (4.08 kg)
Tank Connector Size	1-1/4 in. Male NPT



Building Efficiency

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