Pulsair PTM Series Mixer
Hand Held Portable

These are Pulsair's most powerful hand held mixers and are designed for batch mixing of liquids and slurries in large containers or transportation vehicles such as railcars and tanker trucks. Operators can direct powerful blasts of air down through stubborn, heavy sediments to break up semi solids and maintain suspension, or blend semi viscous components in minutes.

Weighing only ten pounds, they are easily handled by one person. Built in controls allow the operator to regulate pulse sequences at a pre-set line pressure between 40 and 120 psi.

Choice of 5 sizes. Includes variable pulse rate controller, filter, regulator, 25' of quick disconnect air hose and 10" diameter accumulator plate.

Pulsair TM Series Mixer
Tank Mounted

These heavy duty mixers are basically the same as the portables. It is recommended that they be securely tank mounted, but can be operated by hand if required. They are designed for permanent installation in large single or multiple tank layouts with capacities to 50,000 gallons. The five sizes have line input diameters from 1/2" up to 1 1/2" and are ideal for tall tanks less than 10' in diameter.

Each unit is pre-plumbed to a filter and regulator, requiring only an air (or inert gas) supply line to the controller and an injection line to the accumulator plate inside the tank, allowing an operator to adjust the injection pressure across the full range of available line pressure. Mixing can begin as soon as the pneumatic line is connected and the controller is turned on.

Applications: Exceptionally safe, effective and economical for recirculating sediments in rail tank cans and other large tanks for easy pump out.

The Pulsair 5-55
Drum-Stick Mixer

This mixer is a miniaturized version of the larger Pulsair mixers. The self contained steel case includes all the necessary controller components to quickly change power settings as the job dictates. Protected controls are inset into the top for immediate operator access. It weighs just under two pounds and is specifically designed to mix the contents of a 55 gallon drum without removing the lid. Timed and sequenced pulses are released at the bottom of the tank, bringing up heavier particles and quickly blending product within minutes.

It operates on 50-100 psi. of compressed air and includes a 40" probe, 2" bung adapter, filter, regulator with gauge and 10 ft. of self coiling hose with quick disconnect fittings.

The Pulsair 10-55
Tote-Stick Mixer

A lightweight hand held or tank mounted mixer designed for either round or square IBCs from 250 to 550 gallons or open top containers to 1,000 gallons. It can be equipped with a single accumulator plate or an optional 5 plate assembly (see illustration) that can be positioned to accomplish a complete mixing of the hard to get at corners. It can also be used as a high viscosity drum mixer.

With no moving parts inside the tank, it will not harm plastic liners or "bag-in-a-box" containers.

The unit is shipped as a kit with pneumatic controller, air filter, regulator, hose and a 2" bung adapter. It requires only a 50-100 psi. air source to begin operation.
The Pulsair Programmable Controller

A revolutionary step toward fully automated mixing!

Pulsair’s multiple tank remote controller brings new precision to process control management. It is by far the most advanced method yet designed to control the mixing schedules for any number of tanks from one remote central location.

The fully enclosed unit contains CE rated components and a PLC system that stores the mixing parameters and timing functions for each tank in the system. Linked to this is a digital touch screen readout, or Graphic Operator Terminal providing visual information of the current status of each tank. Operators can control the complete mixing cycles for each tank visually on a 24 hour basis.

All mixing functions are determined at the controller which sends an electrical signal to an Electro-Pneumatic Interface which opens the injection valve, sending air pulses to accumulator plates at the bottom of each tank.

A low voltage line from the Pulsair PPC to the EPI located at each tank is all that is necessary to control the operation of the permanently installed Pulsair mixing systems. Injection line entry can either be through the top or through the side of the tank. Individual injection valves, filter and pressure regulator are located near the tank. The regulator adjusts the injection pressure while the filter removes contaminants, particles and moisture from the compressed air.

Occasional adjustment of the injection pressure and periodic filter element changes are all that is necessary to maintain the system. With no moving parts in the tank and simple routine maintenance, your Pulsair system will provide years of continuous, reliable service.

FT-1 Series Controllers

For 1 or 2 Tank Installations

This is the initial Pulsair controller design that is still in wide use today. Years of continuous operation have proven the FT-1 to be very reliable for a wide range of applications. It is a versatile, self-contained unit that can be pre-set or adjusted to operate under pneumatic mixing requirements.

The basic simplicity of the FT-1 has compiled an unprecedented record of longevity and continuous productivity. One installation has established a record of 14 years in service and several have passed the 10 year mark without requiring any serious maintenance or downtime.

Valve components, the only major moving parts in the Pulsair system, are predicted to exceed 100,000,000 cycles which relates to 10 years of continuous operation. Since all moving parts are located outside the tank and can be easily replaced in a matter of minutes, there is little concern for any serious downtime.

Every FT-1 is set at the factory to handle a specific product application for maximum mixing efficiency and can be configured for remote control capability.

The FT-1 Series controller provides an ideal test platform when anticipating future expansion needs. When upgrading to a PPC system, the FT-1 can simply be replaced with an EPI. All other equipment stays in place.

The Pulsair Advantage:

1. Multiple Tank Mixing
   - Control mixing for all your tanks from one remote location.
2. Minimum maintenance
   - Limited to annual or semi-annual filter changes. No downtime.
3. Cost effectiveness
   - Reduce mixing time by 1/3, with less energy and labor costs.
4. Economy of operation
   - Use 80% less air vs. sparge.
5. Simplified operation
   - No baffles or tank supports, no moving equipment inside tank, no air entrainment, no torque, less tank stress, no motors, no gears, no seals, no propellers.

Glossary of terms

Pulse Rate
- Number of pulses per minute.
Dwell
- Time between pulses.
Injection Time
- Length of time that air is being released. It must be long enough to produce a bubble and then close.
Injection Pressure (Line pressure)
- Adjusted at controller for material viscosity and tank size.
THE PULSAIR BUBBLE

The Pulsair bubble is relatively round, flat and very large. It is formed by a powerful pulse of air (or gas) from under a round, flat plate, usually fastened 1/4" above the bottom of the tank. As air is released, it forces heavier bottom particles away from the center of the plate. The air quickly reforms into a round bubble above the plate, while the bottom particles rush back and are caught up in the suction created by the fast rising bubble. As the bubble reaches the surface, it pushes product ahead of it, creating a vertical motion which forces contents to the sides and eventually back down the perimeter toward the bottom of the tank. With the vertical circular mixing motion established, the contents of the tank are quickly blended into a uniform mix and can be held in suspension with sequentially timed pulses that require very little expense of energy.

NO MOTORS, NO GEARS, NO SEALS, NO LEAKS, NO DOWNTIME!
Pulsair's Worldwide Family of Successful Installations

With the worldwide emphasis on energy conservation, Pulsair is well positioned to provide substantial energy savings to the varied requirements of industrial liquid and semi-liquid mixing. Utilizing compressed air or inert gas as the primary power source, savings of up to 80% are being recorded in a wide range of industry applications.

Product Reliability
With no moving parts inside the tank, Pulsair mixers are virtually maintenance free and can be expected to complete 100,000,000 blending cycles without a breakdown. Some Pulsair systems have been in operation for 10 years without any substantial repairs. With new remote programmable capability, Pulsair can be visually monitored on a computer screen to operate night and day without on site personnel in attendance.

Engineering Assistance
All Pulsair systems operate in exactly the same way, that is, by releasing pulses of air or gas to mix the tank contents. However, no two installations are exactly the same and must be engineered specifically for material viscosity and tank size. Pulsair has more than 20 sizes and variations of mixers and specifically engineers each system to provide maximum mixing efficiency at the lowest possible cost. Each system is provided with an installation, operating and maintenance manual detailing equipment terminology, recommended mixing parameters for input capacity, compressed air and plumbing requirements, optimum pressure and timing sequences, in addition to color photographs of working parts.

Customer Service
Pulsair's representatives are located in strategic countries worldwide and are available for technical support. Each system is thoroughly tested at the factory and guaranteed to operate flawlessly before being shipped. Pulsair engineers are available to answer questions and can usually solve any problem with a phone call.

Pulsair Serves These Industries Worldwide
PETROLEUM • WINE • FOODS • CHEMICALS • PAINTS • PAPER • WASTEWATER • WATER TREATMENT

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