

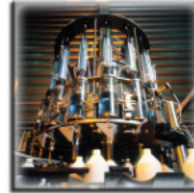
# PROPORTIONAIR

THE FUTURE OF CONTROL



ENERGY SAVINGS DEVICE FOR  
AIR OPERATED DOUBLE  
DIAPHRAGM PUMPS

**SAVE  
UP TO 50%**



- ⌚ SAVES UP TO 50% OF ENERGY REQUIRED FOR AODD PUMPS
- ⌚ REDUCES WEAR ON PUMPS
- ⌚ MAINTENANCE COST REDUCED



- ⌚ NO PUMP MODIFICATION (ON APPROVED PUMPS)
- ⌚ NOISE REDUCTION HELPS MEET OSHA REQUIREMENTS

U.S. Patent #7,517,199  
Additional Patents Pending

# FUNCTIONAL DESCRIPTION

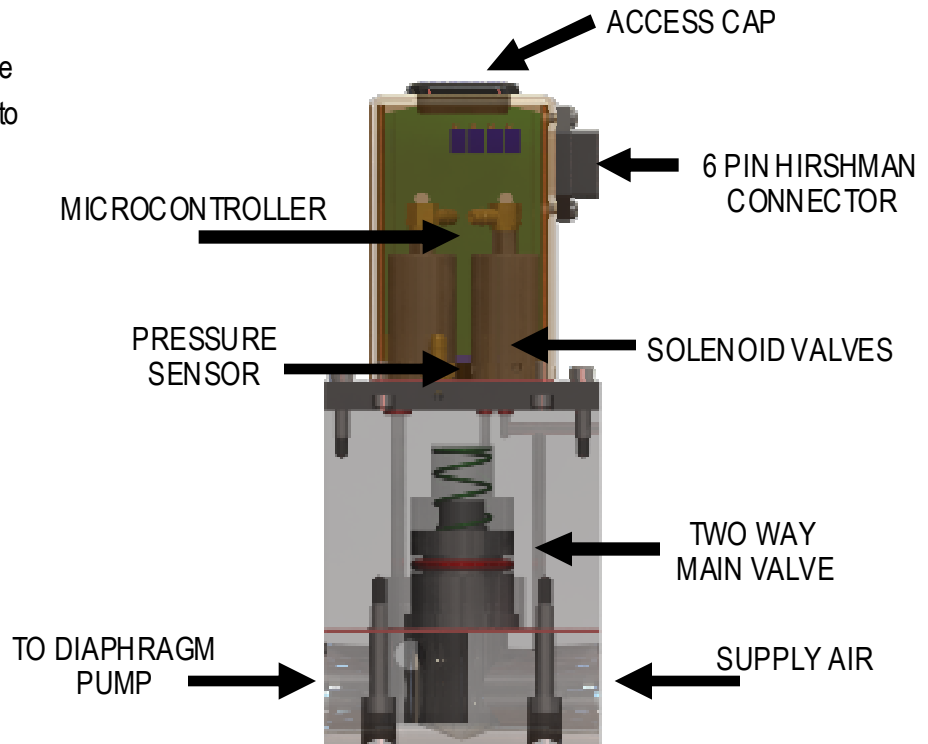
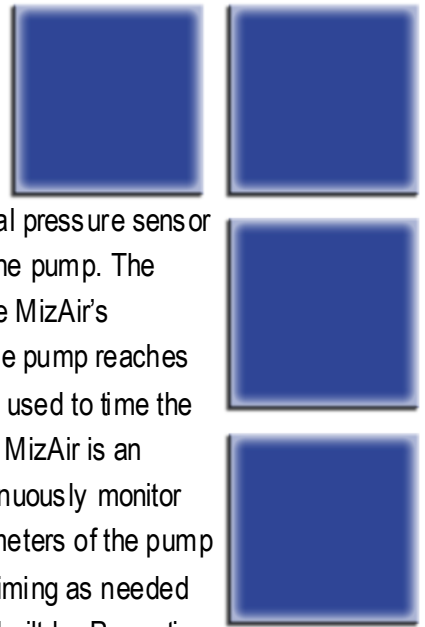
## FUNCTIONAL DESCRIPTION

The Proportion-Air, Inc. MizAir is a revolutionary new device that is specifically designed to reduce air consumption of Air Operated Double Diaphragm Pumps (AODD). It's patented control effect allows for the reduction of air consumption of up to 50% with minimal loss of fluid flow. The only requirements from the user of the MizAir is a 24VDC power source and to insure the MizAir is close coupled to the pump.

The MizAir utilizes a microcontroller controlled air dispensing system. The MizAir consists of a high-flow normally-open two-way valve and an electronic control unit. The high-flow normally open valve delivers precisely timed pulses of air to the pump at the beginning of each pump stroke. The MizAir valve then closes. The air that has already entered the pump and has started the pump stroke is left to continue expanding and finish the stroke. This results in the pump ending it's stroke with less air entering the pump for a given amount of fluid being pumped. Since less air enters, there is less air to exhaust as well. This helps the pump start it's next cycle because there is less resistance to the return stroke. Less air to exhaust also produces lower exhaust noise levels.

The MizAir utilizes an internal pressure sensor to monitor the air being supplied to the pump. The characteristics of this signal allow the MizAir's microcontroller to determine when the pump reaches the end of stroke. This information is used to time the pulses of air entering the pump. The MizAir is an intelligent device and is able to continuously monitor the speed and other operating parameters of the pump and make adjustments to the valve timing as needed

The MizAir is designed and built by Proportion -Air, Inc. to meet the demanding requirements of diaphragm pump control. The MizAir has a fast response time (<30ms), low power consumption (<275mA @ 24Vdc) and high cycle life (more than 25 million cycles). The result is a lightweight compact anodized aluminum two-way valve which is mounted directly to our control circuit in a NEMA4/IP65 rated assembly which is ideally suited to the kinds of environments in which diaphragm pumps are often installed.



# MIZAIR GENERAL SPECIFICATIONS

## ELECTRICAL

Power Requirement	24 VDC +/- 0.5 VDC
Supply Current	275 mA

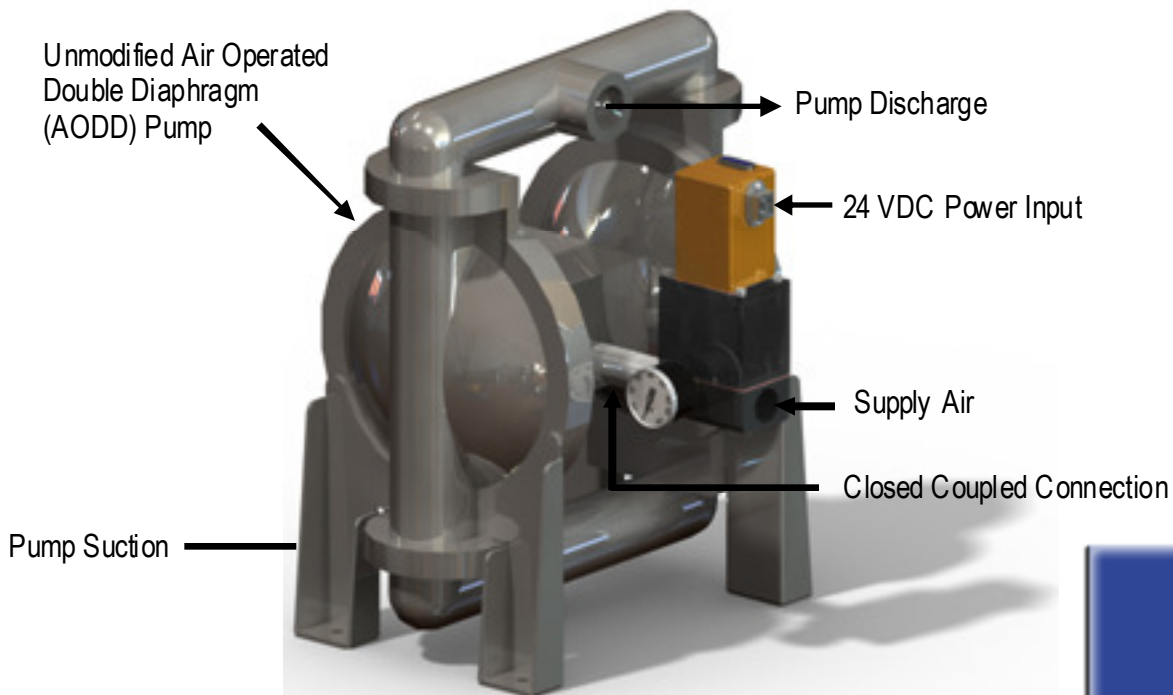
## MECHANICAL

Maximum Supply Pressure	130 PSIG (10.34 BAR)
Cv	6
Response Time	<30 ms
Shock Rating	25 G's of Force
End Connections (Port Size)	3/4" NPT Threaded

## PHYSICAL

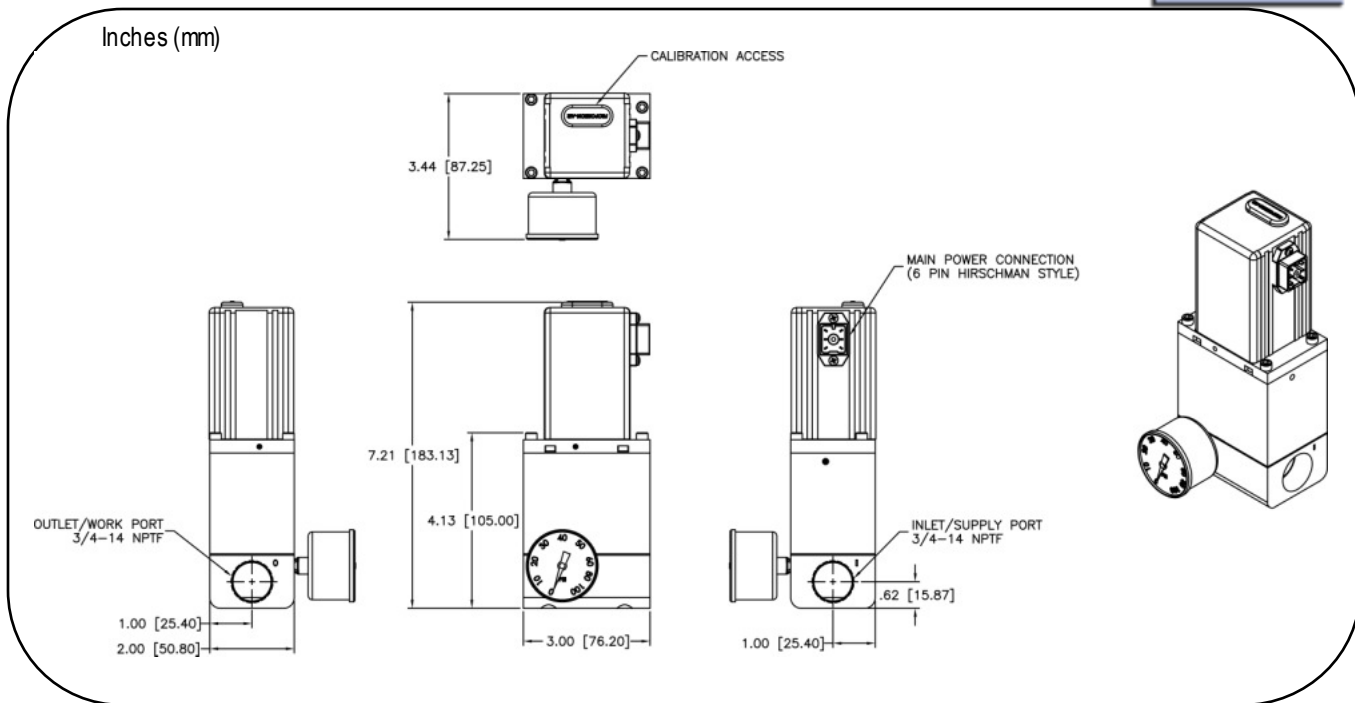
Media Working Temperature	32-122°F (0-50°C)
Ambient Temperature	32-158°F (0-70°C)
Weight	2.7 lbs (1.13 Kg)
Actuator Housing Rating	IP65 / NEMA4X

# TYPICAL INSTALLATION



# DIMENSIONS

DIMENSIONS ARE FOR REFERENCE USE ONLY



## ORDERING INFORMATION & ACCESSORIES

**MIZAIR**

Electronic Pump Controller

**FIELD WIREABLE MATING CONNECTORS**

H615 (Mating 6 pin connector)

**PRE-ASSEMBLED POWER CORD**

QBT-C-X

X = Length in feet  
(Other lengths are available from 1 to 25 feet, in 1 foot increment)

Proportion-Air products are warranted to the original purchaser only against defects in material or workmanship for one (1) year from the date of manufacture. The extent of Proportion-Air's liability under this warranty is limited to repair or replacement of the defective unit at Proportion-Air's option. Proportion-Air shall have no liability under this warranty where improper installation or filtration occurred.

All specifications are subject to change without notice. **THIS WARRANTY IS GIVEN IN LIEU OF, AND BUYER HEREBY EXPRESSLY WAIVES, WARRANTIES OR LIABILITIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY OBLIGATION OF PROPORTION-AIR WITH REGARD TO CONSEQUENTIAL DAMAGES, WARRANTIES OF MERCHANTABILITY, DESCRIPTION, AND FITNESS FOR A PARTICULAR PURPOSE.**

WARNING: Installation and use of this product should be under the supervision and control of properly qualified personnel in order to avoid the risk of injury or death.

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