MEDIA Mation
Show Control & Multi Media Systems
AUDIO VIDEO LIGHTING AUTOMATION ROBOTICS ANIMATION

MediaMation, Inc. MX4D Seats Facility Installation Specifications

The MediaMation Inc. MX4D EFX chair requires certain facility infrastructure to be installed in order to operate. This document should assist in the determination of the proper size and type of equipment that is required for each installations. Each chair requires air, water and power to operate. Chairs are delivered in benches of 4 seats with a single air, water, and power connection for each bench. Using the per chair calculations, and the number of benches, you can figure out your overall needs.

Air

Each **bench** requires 7 CFM. @100PSI for the 4D EFX and 3DOF analog valves. We recommend a holding tank for the compressor of at least 8 gallons per bench. The size of the air line should be .25”(8mm) or larger to the air intake at each bench. It is recommended to use an air dryer to prolong valve life. For most theaters, a 1” air outlet on the compressor is typical. Rotary or screwdrive compressor are quiter and last significantly longer than piston type and should always be used.

Water

We recommend using distilled or highly filtered and disinfected water. This will help prevent clogging of the nozzles. Otherwise, a clean filtered water source can be used, but the nozzles life span will be reduced. The water supply should be delivered at 30-45psi @ 30gph through a hose with a diameter of .25”(8mm) or larger to the water intake at each bench . In suitable areas you can use your municipal water supply with a filter and pressure regulator.

Power

Our 3DOF motion benches require 100-230VAC at 1.5 amps at each base. This runs both the analog and the digital effects valves

For our non-analog benches, each bench requires 3 amps (70 watts) of 24 volts DC for valve's, and 1 amp @ 5 volts DC for the vibrators per bench. MediaMation Inc. typically supplies this power from out control rack. Optionally, we can build in a DC power supply in the bench. In that case, you will need 1 amp of 100-230VAC power at each bench.

Multiple Seats Installations

When doing multiple seats or benches, things that need to be accounted for are:

- Size of the compressor
- Water delivery
- Size of lines
- Power.

To calculate the size of the compressor and holding tank

It's just a matter of multiplying the number of **chairs** by .5 plus the number of 3DOF motion benches by 2 to get the proper CFM for the compressor. The size of the holding tank can be calculated by multiplying the number of **chairs** X2 for the number of gallons for the holding tank for the compressor.

For example for doing a 80 seat theater:

(.5 X 80) + (20 X 2) = 80 CFM
2 X 80 = 160 gallons

You would need a compressor to supply approximately 80 CFM with 160 gallon holding tank with a 1" outlet. For larger theaters, it is typical to have more than one compressor as the size requirements can get quite large. We also recommend a 50% overage on your compressor size for safety and to keep the unit from working too hard. Installing the largest tank you can is always better.

Hose size - air

2 to 14 **chairs** .375" (10mm)
15 to 100 **chairs** 1" (25mm)
When doing multiple chair/benches installations the air and water lines must be looped with

chairs/benches in the center of the loop with reduction tee's to chairs/benches. (see illustration 1)

This is done to supply even pressure to all chairs/benches.

Hose water supply

2 to 20 **chairs** .375" (10mm)

21 to 100 **chairs** 1" (25mm)

Water pressure 30-45psi @ 30gph and to the looped in the same manner as the airlines. (see illustration 1)

Power

For non-analog base installations, simply take the number of **benches** x 1 for the 5VDC amperage for the vibrators, and the number of **benches** x 3 for the 24VDC amperage for the valves.

For motion base seats, calculate 1.5 Amps of 100-230 VAC power at each **bench**. You will need an AC receptacle at each **bench** installed by the local electrician.