

Pneumatic Artificial Muscles (PAMs) are a lightweight, high performance, and cost effective solution for actuation purposes. Typical application areas include flight controls, robotics, industrial automation, rehabilitation, and animatronics. Techno-Sciences, Inc. (TSi) PAM actuators are produced and tested in-house from our expert engineering staff (*Patents pending*). Applications engineering available.

Benefits and features of TSi PAM actuators are:

- Large force and stroke capability
- No pre-tension needed, just install and operate
- Light weight renders large power-to-weight ratios
- Low cost compared to alternative technologies
- Highly durable and robust passive components
- Compliant with controllable stiffness
- Blocked force scales linearly with pressure
- Smooth biomimetic motion with no stiction
- Low and high frequency operation
- High fatigue life
- Customizable designs available upon request



Model: PAM08F0-121-K-1

Total Length (in): 7.2
 Active Length (in): 5.2
 Resting Diameter (in): 0.625

Braid Material: Kevlar®
 Bladder Material: Latex

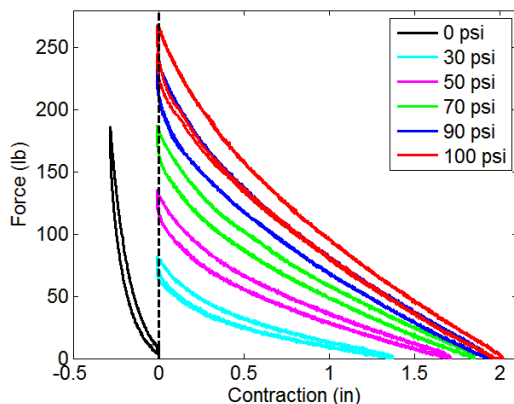
Total Mass (g): 40

Performance at 100 psi

Blocked Force (lb): 200
 Force at ½ Stroke (lb): 100
 Maximum Stroke (in): 1.5
 Free Contraction Ratio: 0.72
 Free Diameter (in): 1.1
 Maximum Stretch: 5%

Failure Limits

Tensile Force* (lb): 3000
 Tensile Stretch* (in): 0.5
 Burst Force† (lb): 2000
 Burst Pressure† (psi): 1000
 *unpressurized condition
 †held at resting length



Notes:

For installation, the standard TSi PAM is tapped 7/16-20 (open end) and 1/4-28 (closed end). *Custom attachment fittings are available.*

Solenoid valves are the most common means of controlling the inflation and deflation cycles.

These PAMs have been tested for over 50 million cycles without failure under 4% to 6.5% strokes at 70 psi and 90°F (higher pressures, strokes, and temperatures may reduce life).

Please contact us today for details.