

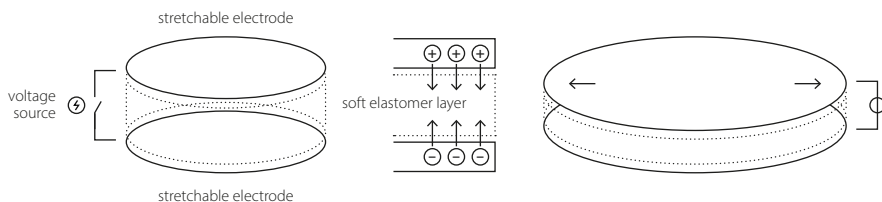
ELECTRO ACTIVE POLYMER (EAP)

Advanced manufacturing of a novel actuation technology. Transducer with versatile high performance.

Datwyler and CTsystems have partnered up to distribute and industrialize the latter's new polymer transducer technology resulting in stacked polymer actuators which replace and outperform conventional actuation technologies, for use in various applications. Some of the improvements of the new technology include: low energy consumption, no complex mechanical parts, a robust and resilient design, and noise-free operation with sensing and haptic/tactile feedback functionalities.

How does it work?

- Electro-mechanical transducer made of soft and elastic polymer
- Electrical power turns into mechanical motion by elastic deformation
- Our unique thin layer silicone stacks allow tactile and sensitive actuation
- Reliable electrostatic working principle for multipurpose and efficient operation



Product and manufacturing set-up

The monoblock polymer transducers can be used as actuators, sensors and generators. Through a highly flexible and fully automated manufacturing technology line, we can offer both standard and customised stacks specifically tailored to your application.

Applications

- Automation: valves, robotic grippers, linear drives
- Nutrition: pumps, valves
- Medical: dosing systems
- Automotive: locks, valves, shutters
- Power distribution: relays
- Domestic: shutters, pumps, switches
- Human Machine Interface: haptic feedback

BENEFITS

- ✓ Zero-energy position holding
- ✓ Proportional positioning
- ✓ Simultaneous actuation and sensing
- ✓ Macro scale stroke
- ✓ Noise-free actuation
- ✓ Low-cost device
- ✓ Compact and lightweight
- ✓ Maintenance free for clean environment

Technology status

- Lab-scale production is established. Samples are available.
- Industrial pilot production is presently under construction, with a manufacturing capacity of up to one million units per annum from Q4/2020 onwards
- Customer projects: concrete customer development projects in various applications are running
- Development kits are available as of April 2021

