Product Data Sheet

Rheodyne® TitanEZ™

Long-Life Ceramic Fluidic Valves

Designed for low-pressure flow control in biotech and in vitro diagnostics, the new Rheodyne TitanEZ ceramic shear valves (injection, selection, switching) provide long life, zero maintenance, and easy integration into the instrument.

- Ultrahard ceramic-on-ceramic sealing surfaces resist aggressive chemicals
- Low internal volume increases result accuracy
- Multiple position/port configurations accommodate various applications
- Stand-alone or manifold-mounted design increases design flexibility
- Stand-alone version is customizable for use with virtually any size threaded fittings system

Prototypes Available Now!

Long Life

The TitanEZ is designed for use in low-pressure applications that demand long lifetimes, making it an ideal solution for IVD and biotech applications.

Advanced Materials Mean No Maintenance

Ceramic-on-ceramic wear surfaces provide longer life than polymer sealing surfaces. The ceramic wear surfaces are combined with a long-life actuator comprised of highly inert and wear-resistant advanced-composite polymers. These advanced materials allow the valve to be actuated over the full operating temperature range without maintenance* during its lifetime.

Low Pressure, Smooth Performance

Pressure rated to 102 psi (7 bar), the TitanEZ provides smooth, pulse-free port switching in instruments where erratic valve pulsation can cause dispense inaccuracies or poor result resolution. Low internal volume minimizes flow path variation and results in precise and accurate fluid delivery. A single value-priced TitanEZ can replace multiple solenoid valves and outperforms competing shear valves, especially with harsh or aggressive system fluids.

*Within established ranges.

Manifold Advantages

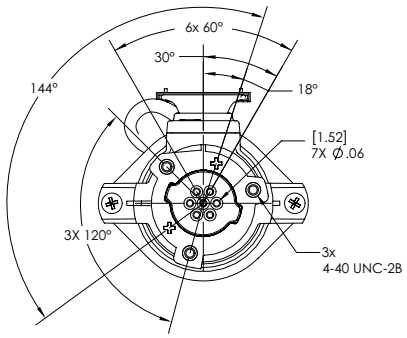
In addition to a stand-alone configuration, the TitanEZ integrates into a manifold customized to the instrument, simplifying the fluidic path by reducing the number of fittings, connectors, and potential leak points. A manifold can also be designed to incorporate other fluidic components.

Integrated Driver Board Option

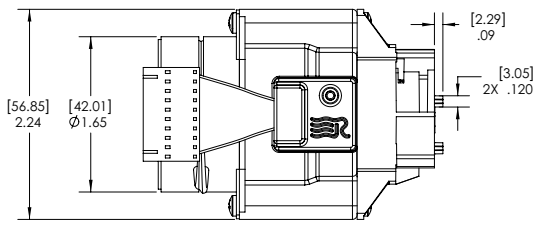
An optional driver board adds the functionality of motor drive and valve control, and shortens equipment manufacturers' time to market by eliminating the need for separate development of the control interfaces. OEM customers only need to provide the digital control signals and 24V DC power in order to achieve random access actuation and position feedback. All valves may be controlled by BCD, I^2C, UART, Pulse, or Dual Pulse standards; two-position valves may also be controlled with level logic. In the case where multiple devices need to be controlled, I^2C communication allows up to 128 devices to be connected to a single instrument.

TitanEZ™

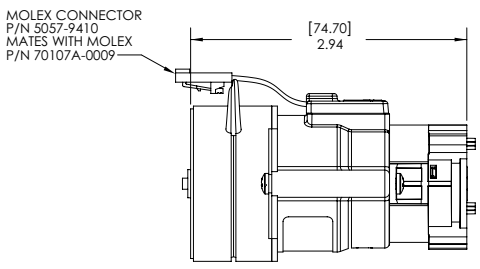
6-Position, 7-Port TitanEZ shown.
Dimensions given in inches and [millimeters]



Front View

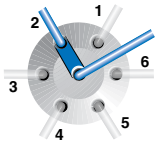
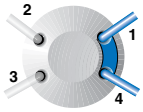
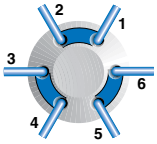
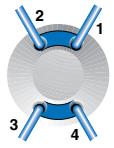


Top View



Side View

Available Configurations

Valve Configuration	Description
	10 Position, 11 Port Selector
	6 Position, 7 Port Selector
	4 Position, 5 Port Selector
	4 Position, 4 Port Diverter
	2 Position, 6 Port Diverter
	2 Position, 4 Port Diverter

**Prior to release of the final configuration, this product is available as a prototype only. No specifications or warranties take effect prior to the release date.*

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