

# E024 (LA SERIES) SUB MINIATURE SERVOVALVE

Low weight, small size, high performance for motorsport and other high performance applications



Motorsport presents a number of unique challenges to motion control suppliers, particularly Formula 1's requirements of low weight, small size and performance.

The E024 Series Miniature Servovalve was developed from the proven E030 series aerospace servovalve widely used for flight control in civil and military aircraft.

Compared to the E030, it is significantly reduced in size and weight, but retains a flow capability of up to 7.5 l/min (2 USg/min) to meet the requirements of the vast majority of motorsport applications. This valve retains the robust two-stage nozzle flapper construction for the 30/50 Series Valve, to meet the extreme performance and environmental demands of the motorsport industry.

## PERFORMANCE IMPROVEMENT - E024 LA SERIES:

The Moog E024 Series valve has now been upgraded to include 'flow matched' nozzles, giving a reduced null shift with variations in temperature and pressure. The end-cap retaining screws have been upgraded to survive 200°C (392°F) local temperatures. These changes are incorporated in the E024-LA series of valves which supersede the E024L Series from September 2009.



## THREE BASIC VERSIONS OF THE E024 VALVE ARE AVAILABLE:

- 1 An axis cut version for use in position, pressure and force control applications.
- 2 A special gear box indexing version for open-loop control of ratchet mechanisms.
- 3 A dual gain Servovalve designed to significantly improve resolution and response in critical systems such as selector drum positioning, clutch control and throttle control.

## ADVANTAGES OF THE E024 VALVE

- Ultra light-weight 92gm (3.24 oz)
- Compact package
- High power density
- Low input signal (10mA)
- Compatible with F1 ecu
- Fast response to command inputs
- Excellent energy efficiency
- High peak flow capability
- Precise, repeatable characteristic control

## INDUSTRY APPLICATIONS

- Formula 1 (Throttle actuation, Differential control, Gearbox actuation, Power assisted steering, clutch control, Front wing actuation)
- Medical
- Subsea equipment
- Special effects in film and theatre

