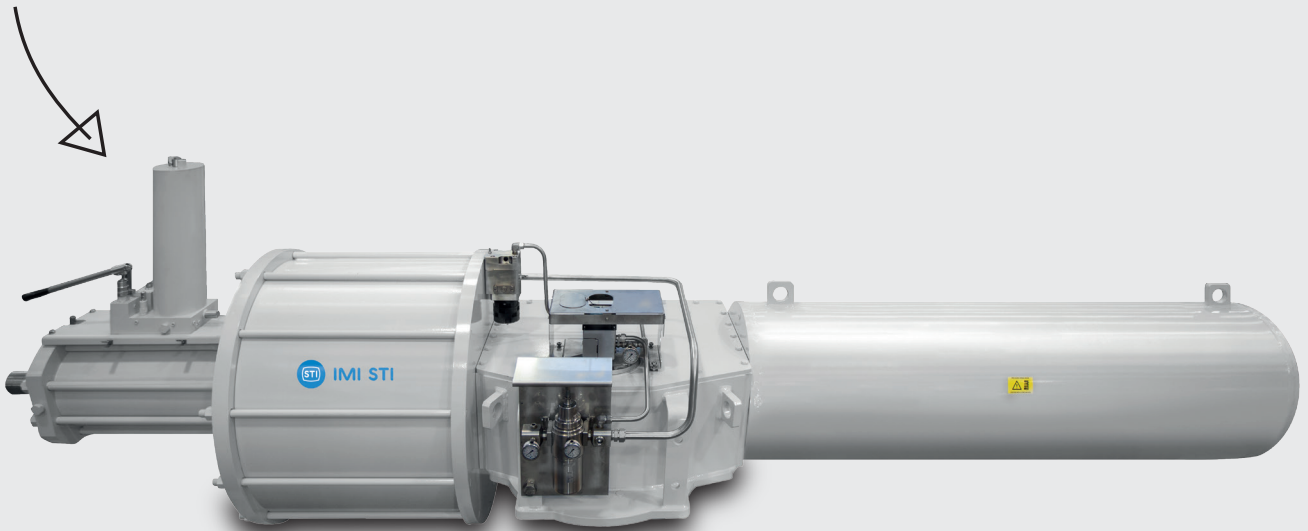


# Zero Backlash (ZB)

Quarter  
Turn Actuator



Engineering  
GREAT Solutions

**Scotch Yoke Mechanism for RT Series**

## New scotch yoke mechanism for modulating valve

Quarter turn valves have been used for a very long time almost exclusively for on-off application. Nowadays the request for regulation purposes is increasing.

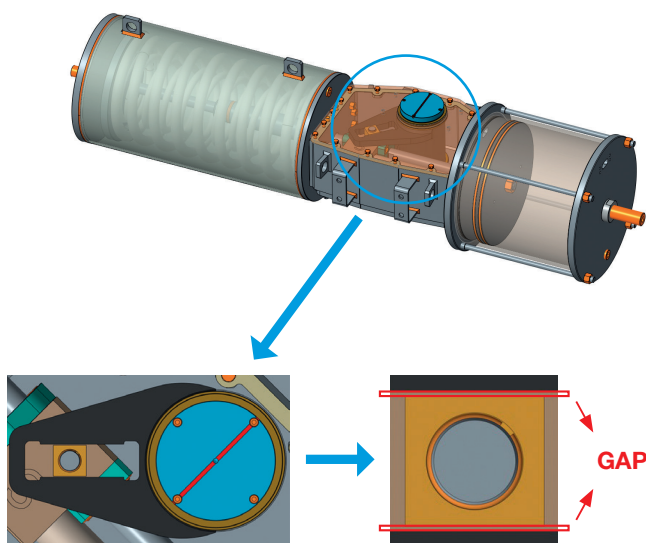
The majority of pneumatic/hydraulic actuators uses scotch yoke technology to transform the linear piston movement into a rotary one. Gaps between the sliding block and the scotch yoke slot inevitably have a negative influence on both precision and functional

dynamic (i.e. hysteresis, dead band, small step response, etc.). Going on towards the operative life of the actuator, this inaccuracy becomes inevitable and increases consistently.

**Zero Backlash** mechanism solves the native and the wearing-related gap between the sliding block and the scotch yoke slot, maintaining friction values at comparable levels to the state-of-the-art technology.

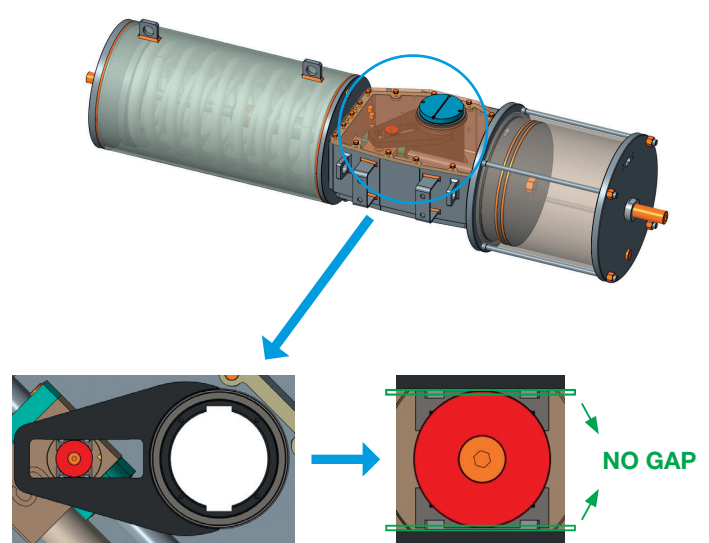
### Standard scotch yoke mechanism

#### PROBLEM



### Zero Backlash system

#### SOLUTION



## Why buy quarter turn actuator with ZB system?

- > Available on the **whole range** of scotch yoke mechanism
- > **Avoid** the increase of dynamic and static friction
- > **Avoid** any possible unwanted mobility between different parts
- > Allows **automatic** and continuous adaptations during actuator's operation
- > Position reliability of the ZB system is **400% times better** than standard mechanism
- > It is **upgradable** on IMI STI quarter turn portfolio
- > **Patented** technology

*Patented mechanism*

*Please contact us for more information at [imisti.sales@imi-critical.com](mailto:imisti.sales@imi-critical.com)*