

# The Rolaram® range

## Standard features

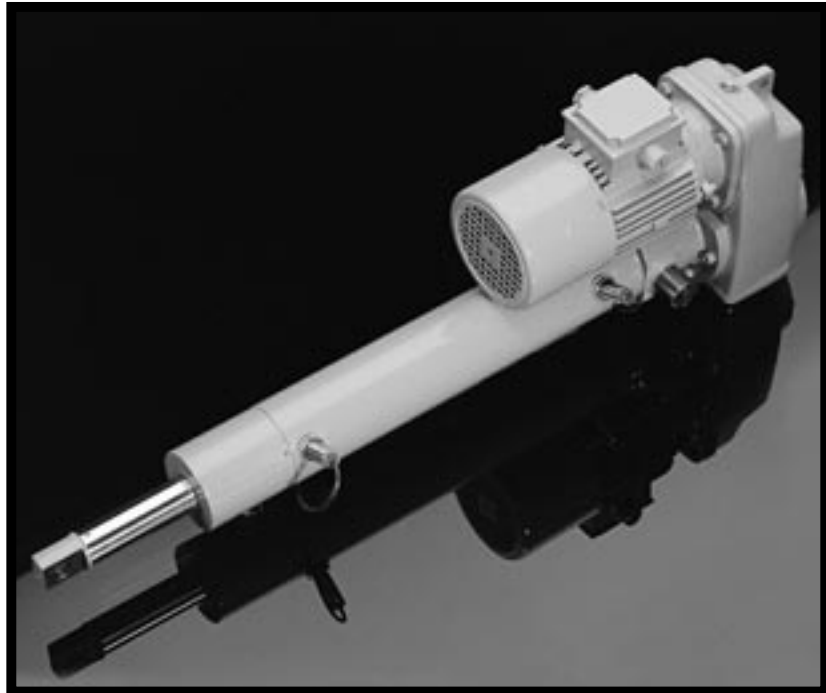
- Right angle or parallel drive configurations
- Choice of end fittings - clevis, threaded end, top plate
- Trunnion mounting (with or without feet)
- Proximity switches, encoder
- Ball screw version for R075, R100 and R125 models
- Anti-rotation ram

## Operating life and duty

The actuator models listed in the technical charts are capable of very high operating lives (in excess of 10,000 hours for some high speed models). The ball screw version may have a lower life expectancy than the equivalent roller screw version. Due to the almost limitless number of possible configurations, please consult our product engineers for an estimate of life for individual applications. Continuous duty applications, such as reciprocating systems, can also be accommodated.

## Efficiency

The inherent high efficiency of the screw and helical spur and spiral bevel gear system combine to give a typical overall mechanical efficiency of 80%. This minimizes power consumption and actuator size.



## Synchronization

Synchronization of two or more Rolaram® actuators can be achieved in one of two ways, depending on the requirements of the application:

- Using encoders, synchronous motors or servo systems (each unit motorized).
- By linking the units mechanically with drive shafting driven by one common motor.

## Positional accuracy

The accuracy of the roller screw and low backlash gearing provide repeatable positioning to within 5 microns (0.0002 inches) when the actuator is combined with a suitable drive and control system. Ball screw models have a positional accuracy of 50 microns (0.002 inches).

## Guiding the Load

Side loads on the actuator ram should be avoided by ensuring that the load is guided. The load guide mechanism should resist the torque developed at the ram by the screw mechanism, thus precluding the use of spherical end fittings. The anti-rotation option, which utilizes rolling element followers, eliminates the need for torsional restraint and allows flexibility in the choice of end fittings.

## Mounting position

The Rolaram® actuator can be mounted for operation in any orientation.

## Safety features

- In the event of power failure, the fail-safe brake on the motor will maintain the position of the actuator
- Totally enclosed and sealed unit
- Built in proximity switches/limit switches
- Anti-rotation version

## Operating environment

All units are designed for industrial operating conditions. The actuator is sealed at the ram and, along with the standard brake motor, is protected to IP55 (Nema ratings available) enclosure. Normal operating temperatures are from 10°C (14°F) to +50°C (122°F). However, these products have been proven at operating temperatures of -30°C (-22°F) (arctic) and the very high temperature of +70°C (158°F) (steelworks). Please contact our product engineers to discuss hostile or hazardous operating environments.

## Lubrication and maintenance

Rolaram® actuators require minimal maintenance during the normal operating life. Depending upon the application, periodic lubrication should be carried out on the Spiracon® roller nut, thrust housing and helical spur/spiral bevel gearbox as recommended in our detailed maintenance instructions.

## Specials

The Rolaram® concept has been successfully applied in many special applications requiring:

- Very high linear speed of over 50 meters/minute (17 ft/minute) and an acceleration of over 3 meters/s<sup>2</sup> (10 ft/s<sup>2</sup>)
- Very high dynamic load of over 1000kN (112 tons)
- In-line drive configuration
- Special drive inverter, servo, DC, stepper
- Protection from extreme temperatures or hazardous environments
- Built in load cell
- Special mounting or restricted space
- Very low noise (under 60dB)

