ADE-WERK
GmbH
Englerstraße 9
D-77652 Offenburg
Tel. +49(0)781/209-0 · Fax 209-99
E-Mail: info@ade.de · Internet:www.ade.de

# Product Standards for ADE - Linear Electric Actuators

## Here: ➔ Standard series [type series: **MST** / **MSK** / **MSP** Size **12** to **50**]

**Basic specifications all types**

- Stainless steel piston rod (Size 12, 20, 30)
- Hard chrome plated piston rod (Size 40, 50)
- Stainless steel pivot trunnion and threaded bushing to piston rod
- Piston rod has internal anti-rotation guide
- Galvanised rod end (ball chrome plated) or galvanised clevis fitted to piston
- Stroke reserve for over-running of 2x15 mm is taken into account
- ***Intended for use on a hard stop applications only in conjuction with integrated overload protection (see ADE "E" type force control)***
- Construction is generally carried out in accordance with customer specifications ( see technical questionnaire for Linear Electric Actuator, in various languages)

**General:**
- Robust construction suitable for industrial applications
- Assumption of a nominal lifespan of at least 5 years

**Paint treatment:**
- Primary coat single layer
  1 component etching primer [20 µm]
- Top coat, single layer, RAL 9007 (grey aluminium)
  2-Component acryllic paint; [60 µm]

**Lubrication:**
- Initial filling with high performance grease (see relevant maintenance and service pages)
- Lubricants used are classified as nonhazardous (REACH Standard), according to regulation 67/548/EWG, respectively 1999/45/EG, safety data sheets can be provided on request.

**Operation / Application:**
- Motor selection S1 ≙ 100 % Duty rating
- Ambient air temperature - 25°C until + 80°C
- Minimum enclosure rating IP 54

If used at ambient temperatures over 40°C a reduced motor output must be taken into account (see data sheet).

**Design:**
**Type: „MST"**
**( trapezoidal screw drive )**
- Rolled precision trapezoidal screw spindle
- Associated spindle nut made of high-grade PAN-bronze, with good emergency running properties and a long lifespan [around 150-180 kilometres stroke travel length]
- Self-locking design (appropriate verification will be carried out during construction)
- Accuracy / repeatability (0,1 mm to 0,3 mm on 300 mm stroke)
- Expected theoretical efficiency ($\eta$ ) relevant to screw geometry

**Design:**
**Type :„MSK"**
**( ball screw spindle )**
- Rolled precision ball screw spindle
- Associated ground ball screw nut with integrated and inner ball guides.
  *Exceptions: a) MSK-12 ( KG 12,7 x 12,7 b ) MSK-20 (KG 19,3 x 12,7)*
- Spindle drive not self-locking, therefore motor brake always required
- Accuracy / repeatability (0,05 mm on 300 mm stroke)
- Expected theoretical efficiency ($\eta$ = 0,85)

**Design:**
**Type :"MSP"**
**( planetary roller screw drive )**
- Ground precision threaded spindle
- Planetary roller screw drive positively driven
- Spindle drive not self-locking, therefore motor brake always required
- Accuracy / repeatability (0,023 mm to 300 mm stroke)
- Expected theoretical efficiency ($\eta$ = 0,75 – 0,80)

**Tests / Protocols:** A test certificate is prepared for every linear actuator and can be provided on request.

**Additional equipment:** There is a comprehensive choice of **standardised** additional equipment.

**Replacement parts:** A list of wear parts and replacement parts including reference to replacement frequency (1/2/3).

**Standard documentation:** Standard documentation in German and / or English and / or French, with a maximum of two sets per machine.
Operating manual in other languages on request (extra charge).

**The standard values outlined here can be optimised by adding non-standard or additional equipment.**