

## EL-O-Matic F-Series with CSR-coating

### Caustic Soda Resistant

#### Key features

- Superior corrosion resistant properties due to special coating and special selected base materials.
- The coating is cured by a temperature of 240°C resulting in a very strong bonding to the aluminium surface.
- Exceeds the requirements of a 1000 hr salt spray test.
- Default available with hard anodized high grade aluminum pinion (no galvanic corrosion).
- Optional available with AISI 316 pinion and A2-70 Stainless steel end cap screws.
- Suitable for corrosive areas where standard uncoated actuators fail, for instance protected areas on off-shore platforms.

#### Description

EL-O-Matic F-Series with CSR-coating offers a superior corrosion resistance in environments where standard aluminium actuators might fail prematurely due to heavy corrosion. As such CSR coated actuators are used in protected areas on off-shore platforms and on bleaching equipment in paper mills.

#### CSR coating

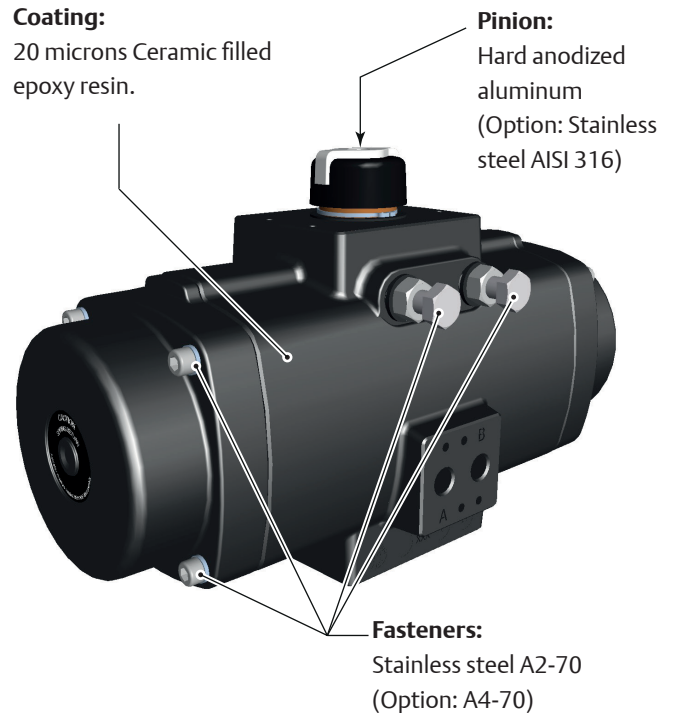
The CSR coating itself is resistant to at least 1000 hours of salt spray test exposure. Together with the excellent mechanical properties, the CSR coating is "the" solution for very harsh and corrosive environments.

CSR actuator housing and caps are coated with a ceramic filled fluoropolymer based epoxy resin, impregnated by a temperature of 240°C into the aluminum surface.

#### Pinion and fasteners.

By default the actuator is equipped with the standard hard anodized high grade aluminium pinion. Because the pinion material is the same as the housing material (aluminum), it prevents galvanic corrosion around the pinion bores of the housing.

For other aggressive or corrosive environments a Stainless Steel pinion (AISI 316) in combination with Stainless Steel A4-70 grade fasteners is available.



#### Technical data:

|                       |   |
|-----------------------|---|
| Coating:              | Ceramic filled fluoropolymer based epoxy resin.               |
| Layer thickness:      | 20 microns  |
| Corrosion resistance: | 1000hr, ASTM B117   |
| Max. temperature:     | -20° to + 80°C (-4°F to +176°F)                               |
| Materials Housing:    | Aluminum alloy  |
| Pinion:               | Aluminum hard anodized<br>(Option : Stainless Steel AISI 316) |
| Fasteners:            | Stainless steel A2-70 (Option: A4-70)                         |
| Type Sticker:         | Polyester   |
| Application:          | Optional on EL-O-Matic F-Series actuators.                    |
| Drive Square:         | See page 2  |

**Dimension for actuators with Stainless Steel pinions.**

Actuators with the stainless steel pinions, as optional available with CSR Coating, are not suitable for the use of drive inserts. The pinions of these actuators are fitted with 2 drive squares (rotated at 45°) in the pinion bottom. These drive squares are according ISO5211.

All the other actuator dimensions are the same. Please refer to:

- EFM.04.01.EN for Metric ISO units
- EFD.04.01.EN for Metric DIN units (with center plate)
- EFL.04.01.EN for Imperial ISO units

For the drive square dimensions of the stainless steel pinions, see below drawing and table.

| Dim.<br>in mm            | Drive square dimensions Stainless Steel pinions |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                          | 25  | 40    | 65    | 100   | 150   | 200   | 350   | 600   | 950   | 1600  | 2500  | 4000  |
| <b>S1 Max.</b>           | 11.08   | 14.08 | 14.08 | 19.13 | 22.11 | 22.11 | 27.11 | 27.11 | 36.16 | 46.16 | 46.16 | 55.19 |
| <b>S1 Min.</b>           | 11.00   | 14.00 | 14.00 | 19.00 | 22.00 | 22.00 | 27.00 | 27.00 | 36.00 | 46.00 | 46.00 | 55.00 |
| <b>S2<sup>+0.5</sup></b> | 14.4  | 18.5  | 18.5  | 22.5  | 22.5  | 28.5  | 36.5  | 36.5  | 48.2  | 60.2  | 60.2  | 72.2  |
| <b>S3</b>                | 17  | 17    | 17    | 20    | 28    | 28    | 30    | 31    | 40.5  | 53.5  | 53.5  | 61.5  |
| <b>S4</b>                | 27  | 27    | 27    | 27    | 40    | 40    | 38    | 38    | 50.5  | 65.5  | 65.5  | 76.5  |
| <b>S5</b>                | 15  | 19    | 19    | 23    | 23    | 29    | 37    | 37    | 48.8  | 60.8  | 60.8  | 72.8  |

| Dim.<br>in inch           | Drive square dimensions Stainless Steel pinions |       |       |       |       |       |       |       |       |       |       |       |
|---------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                           | 25  | 40    | 65    | 100   | 150   | 200   | 350   | 600   | 950   | 1600  | 2500  | 4000  |
| <b>S1 Max.</b>            | 0.436   | 0.554 | 0.554 | 0.753 | 0.870 | 0.870 | 1.067 | 1.067 | 1.424 | 1.817 | 1.817 | 2.173 |
| <b>S1 Min.</b>            | 0.433   | 0.551 | 0.551 | 0.748 | 0.866 | 0.866 | 1.063 | 1.063 | 1.417 | 1.811 | 1.811 | 2.165 |
| <b>S2<sup>+0.02</sup></b> | 0.57  | 0.73  | 0.73  | 0.89  | 0.89  | 1.12  | 1.44  | 1.44  | 1.90  | 2.37  | 2.37  | 2.84  |
| <b>S3</b>                 | 0.67  | 0.67  | 0.67  | 0.79  | 1.1   | 1.1   | 1.18  | 1.22  | 1.59  | 2.11  | 2.11  | 2.42  |
| <b>S4</b>                 | 1.06  | 1.06  | 1.06  | 1.06  | 1.57  | 1.57  | 1.50  | 1.50  | 1.99  | 2.58  | 2.58  | 3.01  |
| <b>S5</b>                 | 0.59  | 0.75  | 0.75  | 0.91  | 0.91  | 1.14  | 1.46  | 1.46  | 1.92  | 2.39  | 2.39  | 2.87  |

