

## Technical data Linear thrust units with multi-turn actuators for modulating duty

| Type     | Stroke <sup>1)</sup> | Thrust <sup>2)</sup> |           | Thrust at modulating torque <sup>3)</sup> | Valve attachment | Stem thread <sup>4)</sup> | Factor <sup>5)</sup> | Suitable multi-turn actuator | Output speed <sup>6)</sup> | Running speed | Thrust at stall torque <sup>7)</sup> | Weight <sup>8)</sup> |
|----------|----------------------|----------------------|-----------|-------------------------------------------|------------------|---------------------------|----------------------|------------------------------|----------------------------|---------------|--------------------------------------|----------------------|
|          | Max. [mm]            | Min. [kN]            | Max. [kN] | Max. [kN]                                 |                  |                           |                      |                              | [rpm]                      | [mm/min]      | Max. [kN]                            | approx. [kg]         |
| LE 12.1  | 50                   | 6                    | 11.5      | 6                                         | F07<br>F10       | 26 x 5 LH                 | 2.6                  | SAR 07.2                     | 4                          | 20            | 23                                   | 8                    |
|          | 100                  |                      |           |                                           |                  |                           |                      |                              | 5.6                        | 28            |                                      | 9                    |
|          | 200                  |                      |           |                                           |                  |                           |                      |                              | 8                          | 40            |                                      | 10                   |
|          | 400                  |                      |           |                                           |                  |                           |                      |                              | 11                         | 55            |                                      | 13                   |
|          | 500                  |                      |           |                                           |                  |                           |                      |                              | 16                         | 80            |                                      | 14                   |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 22                         | 110           |                                      |                      |
| LE 25.1  | 50                   | 12                   | 23        | 12                                        | F07<br>F10       | 26 x 5 LH                 | 2.6                  | SAR 07.6                     | 32                         | 160           | 42                                   | 13                   |
|          | 100                  |                      |           |                                           |                  |                           |                      |                              | 45                         | 225           |                                      | 14                   |
|          | 200                  |                      |           |                                           |                  |                           |                      |                              | 4                          | 20            |                                      | 8                    |
|          | 400                  |                      |           |                                           |                  |                           |                      |                              | 5.6                        | 28            |                                      | 9                    |
|          | 500                  |                      |           |                                           |                  |                           |                      |                              | 8                          | 40            |                                      | 10                   |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 11                         | 55            |                                      | 13                   |
| LE 50.1  | 63                   | 20                   | 37.5      | 20                                        | F10              | 32 x 6 LH                 | 3.2                  | SAR 10.2                     | 16                         | 80            | 60                                   | 15                   |
|          | 125                  |                      |           |                                           |                  |                           |                      |                              | 22                         | 132           |                                      | 18                   |
|          | 250                  |                      |           |                                           |                  |                           |                      |                              | 32                         | 192           |                                      |                      |
|          | 400                  |                      |           |                                           |                  |                           |                      |                              | 45                         | 270           |                                      |                      |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 4                          | 24            |                                      | 10                   |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 5.6                        | 33            |                                      | 12                   |
| LE 70.1  | 80                   | 30                   | 64        | 30                                        | F14              | 40 x 7 LH                 | 3.9                  | SAR 14.2                     | 8                          | 48            | 92                                   | 26                   |
|          | 160                  |                      |           |                                           |                  |                           |                      |                              | 11                         | 66            |                                      | 32                   |
|          | 320                  |                      |           |                                           |                  |                           |                      |                              | 16                         | 96            |                                      | 35                   |
|          | 400                  |                      |           |                                           |                  |                           |                      |                              | 22                         | 154           |                                      |                      |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 32                         | 224           |                                      |                      |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 45                         | 315           |                                      |                      |
| LE 100.1 | 80                   | 64                   | 128       | 52                                        | F14              | 40 x 7 LH                 | 3.9                  | SAR 14.6                     | 4                          | 28            | 180                                  | 23                   |
|          | 160                  |                      |           |                                           |                  |                           |                      |                              | 5.6                        | 39            |                                      | 26                   |
|          | 320                  |                      |           |                                           |                  |                           |                      |                              | 8                          | 56            |                                      | 32                   |
|          | 400                  |                      |           |                                           |                  |                           |                      |                              | 11                         | 77            |                                      | 35                   |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 16                         | 112           |                                      |                      |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 22                         | 154           |                                      |                      |
| LE 200.1 | 100                  | 110                  | 217       | 87                                        | F16              | 48 x 8 LH                 | 4.6                  | SAR 16.2                     | 32                         | 224           | 300                                  | 45                   |
|          | 200                  |                      |           |                                           |                  |                           |                      |                              | 45                         | 315           |                                      | 50                   |
|          | 400                  |                      |           |                                           |                  |                           |                      |                              | 4                          | 32            |                                      | 62                   |
|          | 500                  |                      |           |                                           |                  |                           |                      |                              | 5.6                        | 44            |                                      | 68                   |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 8                          | 64            |                                      |                      |
|          |                      |                      |           |                                           |                  |                           |                      |                              | 11                         | 88            |                                      |                      |

| Weight base | Type         | LE 12.1 | LE 25.1 | LE 50.1 | LE 70.1 | LE 100.1 | LE 200.1 |
|-------------|--------------|---------|---------|---------|---------|----------|----------|
|             | approx. [kg] | 11      |         |         | 40      |          |          |

## General information

AUMA linear thrust units type LE 12.1 – LE 200.1 are used in combination with multi-turn actuators on valves which require linear travel. The linear thrust units convert the output torque of the multi-turn actuator into axial thrust. For other applications, please consult AUMA. 100 % load may only be applied for a short time during opening and closing.

1) – 8) Refer to notes on page 2.

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| Notes on table on page 1         |                                                                                                                      |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 1) Stroke                        | Higher strokes on request                                                                                            |
| 2) Thrust                        | For min./max. settings of torque switching at actuator, tolerance $\pm 20\%$ .                                       |
| 3) Thrust for modulating torque. | Permissible maximum thrust for modulating torque                                                                     |
| 4) Stem thread                   | LH = Stem extension for clockwise rotation of multi-turn actuator                                                    |
| 5) Factor                        | Conversion factor for torque (T in Nm) into thrust (F in kN) for a mean adhesion factor of 0.15 ( $T = F \times f$ ) |
| 6) Output speed                  | Higher speeds on request                                                                                             |
| 7) Thrust at stall torque        | Thrust for modulating actuator stall torque and 100 % nominal voltage                                                |
| 8) Weight                        | Weight indicated does neither include multi-turn actuator nor base                                                   |

| Features and functions |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| Type of duty           | Intermittent duty S4 – 25 %; based on maximum thrust for modulating torque |
| Self-locking           | Yes                                                                        |
| Input speed            | Refer to page 1                                                            |
| Closing direction      | Standard: LH Stem extension for clockwise rotation of multi-turn actuator  |
|                        | Option: RH Stem retraction for clockwise rotation of multi-turn actuator   |

| Valve attachment   |                                                                                                             |
|--------------------|-------------------------------------------------------------------------------------------------------------|
| Output drive types | Coupling stud with metric thread (for dimensions, refer to Dimensions Linear thrust unit LE 12.1 – LE 200.1 |
|                    | Standard: With flange according to DIN 3358                                                                 |
|                    | Options: Base (without valve mounting flange)<br>Spring-loaded                                              |

| Service conditions                         |                                                                                                                                                                                                                                 |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature                        | Standard: $-25\text{ °C}$ to $+80\text{ °C}$                                                                                                                                                                                    |
|                                            | Options: $0\text{ °C}$ to $+120\text{ °C}$<br>$-40\text{ °C}$ to $+60\text{ °C}$<br>$-60\text{ °C}$ to $+60\text{ °C}$                                                                                                          |
|                                            | Standard: IP67                                                                                                                                                                                                                  |
|                                            | Options: KS Suitable for use in areas with high salinity, almost permanent condensation, and high pollution.<br>KX Suitable for use in areas with extremely high salinity, permanent condensation, and high pollution.          |
| Enclosure protection according to EN 60529 | Standard: IP67                                                                                                                                                                                                                  |
| Corrosion protection                       | Standard: KS Suitable for use in areas with high salinity, almost permanent condensation, and high pollution.<br>Option: KX Suitable for use in areas with extremely high salinity, permanent condensation, and high pollution. |
| Base coating                               | Two-component iron-mica combination                                                                                                                                                                                             |
| Base colour                                | Standard: AUMA silver-grey (similar to RAL 7037)                                                                                                                                                                                |
|                                            | Option: Available colours on request                                                                                                                                                                                            |

| Further information |                                                                                                                             |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EU Directives       | Machinery Directive: (2006/42/EC)                                                                                           |
| Reference documents | Technical data SAR .2<br>Electrical data SAR .2<br>Dimensions LE 12.1 – LE 200.1 with SA 07.2 – SA 16.2/SAR 07.2 – SAR 16.2 |