# LC2000 - Specifications

## Standard Features and Benefits

- For medical and ergonomic automation applications
- Self-supporting column in extruded anodized aluminum
- Low weight and quiet operation
- Smooth-operating telescopic lead screw drive
- High load torque capability
- Short retracted length
- High extension to retraction ratio
- Maintenance free
- Load holding brake
- Integrated end-of-stroke limit switches
- EMC recognized for medical applications

## General Specifications

| Parameter | LC2000 |
| --- | --- |
| Screw type | telescopic lead screw |
| Internally restrained | yes |
| Manual override | no |
| Dynamic braking | no [1] |
| Holding brake | yes |
| End-of-stroke protection | end-of-stroke limit switches |
| Mid-stroke protection | no [1] |
| Motor protection | no [1] |
| Motor connection | cable |
| Motor connector | Molex 8-pin plug |
| Certificates | CE<br>EMC for medical applications [2] |
| Options | encoder position feedback |
| Compatable controls [3]<br>  DCG-180<br>  DCG-280 | <br>operation of single unit<br>synchronous operation of two units |

## Performance Specifications

| Parameter | | LC2000 |
| --- | --- | --- |
| Maximum load | [N] | 2000 |
| Maximum load torque, dynamic / static | [Nm] | 150*/ 500 |
| Speed, at no load / at maximum load | [mm/s] | 19 / 15 |
| Available input voltages | [VDC] | 24 |
| Minimum ordering stroke (S) | [mm] | 200 |
| Maximum ordering stroke (S) | [mm] | 600 |
| Operating temperature limits | [°C] | 0 to +40 |
| Full load duty cycle @ 20°C | [%] | 15 |
| Maximum on time | [s] | 60 |
| Lead cross section | [mm²] | 1.5 |
| Standard cable length | [mm] | 1900 |
| Protection class | | IP44 |

* Higher dynamic loads up to 400 Nm available upon request, contact customer support.

## Performance Diagram

### Speed and Current vs. Load
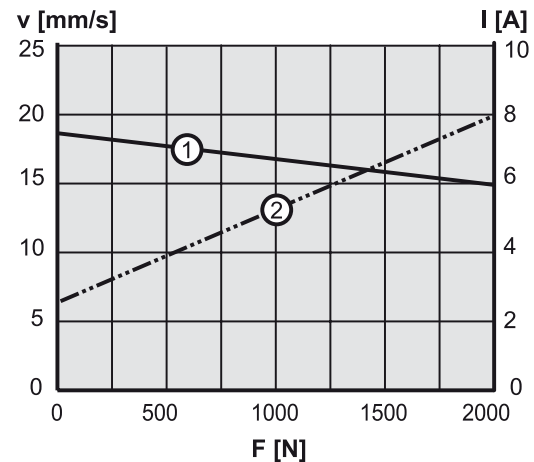


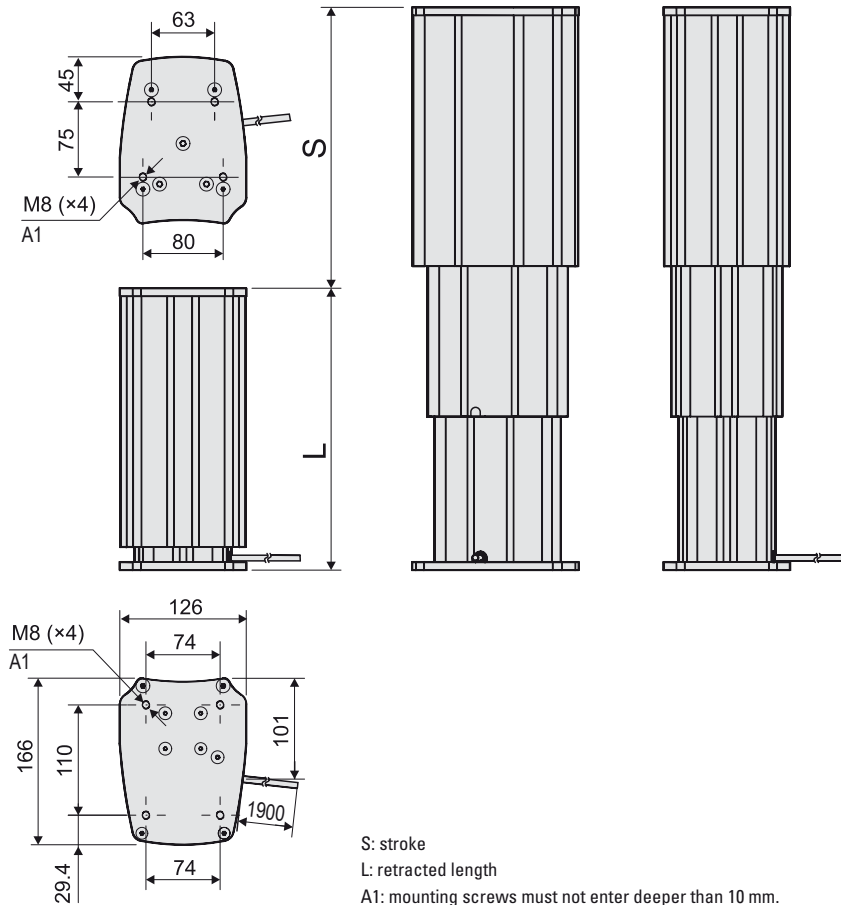V: speed    I: current    F: load

1: speed
2: current

(1) Dynamic braking, mid-stroke protection and motor protection are provided when used with DCG control.
(2) Emission: EN 61000-6-3:2001, EN 60601-1-2:1993, EN 55011 Class B
   Immunity: EN 61000-6-2:2001, EN 61000-4-2, EN 61000-4-3
(3) See page 14 for more information.

# LC2000 - Dimensions and Performance

| Dimensions | Projection |
|---|---|
| METRIC | |



63
45
75
M8 (×4)
A1
80
S
L

126
M8 (×4)
74
A1
166
110
101
29.4
74
1900

S: stroke
L: retracted length
A1: mounting screws must not enter deeper than 10 mm.

## Ordering Stroke, Retracted Length and Weight

The desired stroke (S) will determine the minimum retracted length (L min) and the weight of the unit. Units can be built with a retracted length (L) between the calculated L min value and maximum retracted length.

| Stroke, retracted length and weight relationship | | | |
|---|---|---|---|
| | | Minimum | Maximum |
| Stroke (S) | [mm] | 200 | 600 |
| Retracted length (L) | [mm] | 250 or L min | 441 |
| Min. retracted length (L min) based on stroke (S) | [mm] | L min = (S + 282) / 2 | |
| Weight of unit based on stroke (S) | [kg] | Weight = 3.4 + L [mm] × 0.0203 + S [mm] × 0.001 | |

The table below provides examples of stroke lengths and their corresponding minimum retracted length (L min) values.

| Examples of strokes and the resulting minimum retracted length and weight | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Stroke (S) | [mm] | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| Minimum retracted length (L min) | [mm] | 250 | 266 | 291 | 316 | 341 | 366 | 391 | 416 | 441 |
| Weight | [kg] | 8.7 | 9.1 | 9.7 | 10.2 | 10.8 | 11.3 | 11.9 | 12.4 | 13 |