



## Elevator Line

Single-Acting Spreader Solenoids  
Double-Acting Spreader Solenoids



WE MAGNETISE THE WORLD



Kendrion N.V. is one of the leading manufacturers of solenoids and electromagnetic components worldwide.

Consisting of the four business units Industrial Magnetic Systems, Commercial Vehicle Systems, Industrial Drive Systems and Passenger Car Systems, Kendrion guarantees solution-oriented customer care. The company excels in innovative capability and maximum productivity.



Over the years Kendrion has integrated the brands Binder, Magnet AG, Neue Hahn Magnet, Thoma Magnettechnik, Linnig Antriebstechnik, Tri Tech LLC, Magneta and FAS Controls.

Our business unit Industrial Magnetic Systems develops, manufactures and distributes linear-, holding-, locking-, spreading-, control-, rotary- and vibrator solenoids as well as solenoid valves for industrial applications worldwide.

The strengths of Kendrion lie both in the area of standard applications and in the area of customer-specific solutions and applications.

With our technological know-how we ensure that your application will run smoothly.

All products are tested and developed according to DIN VDE 0580/ 07.2000. Kendrion Magnettechnik GmbH is a company certified according to ISO 9001:2008.



The main locations are in Donaueschingen (D) and Engelswies (D). Further locations are in Hausen am Albis (CH), Linz (A), Bradford (UK), Suzhou (CN), Mishawaka (USA) and Turin (I).

With our global distribution network we are available for our customers at any time and will be pleased to advise you.

Our products are used in almost all industrial areas. To name a few:

- Machine building
- Safety engineering
- Transportation industry
- Medical engineering
- Power engineering
- Environmental technology
- Elevator industry
- Automation

Your industry is not listed? We are sure to have an optimum solution.

Wherever innovations and new approaches are required our staff will be happy to assist you.

Contact us. We're looking forward to assisting you!

**Sales Hotline +49 (0) 771 8009 3770**

Please find detailed performance data in our product catalogues, with the help of our experts or by our product finder on:

[www.kendrion.com](http://www.kendrion.com)





## Product Line

### Description

## Elevator Line

Single-acting and double-acting spreader solenoids of the Kendrion Elevator Line with short strokes and high magnetic forces are particularly suitable for use in elevators and escalators as well as in industrial brakes for the release of block resp. drum brakes.

With these solenoids the stroke movement takes place from the stroke starting position to the stroke end position by electromagnetic force, while the armature reset is accomplished by external forces.

The products can be installed in any position and are maintenance-free if the force transfer is in axial direction.

By means of a sealing ring and a sealing plate the interior of the solenoid is largely protected against the penetration of dust and humidity.

The magnetic forces indicated are reached at 90% of the nominal voltage and in warmed up condition. The values for the switching cycles are valid for nominal voltage, warmed-up condition and load of 70% of the magnetic force of the device.

The products are manufactured and tested acc. DIN VDE 0580 / 07.2000.

Nominal voltage: 205 V DC

Note: Due to the change from mains voltage 220 V AC to 230 V AC and from selenium to silicon Graetz bridge rectifiers solenoids with a coil voltage designed for 180 V DC are thermally overloaded.

Switching frequency: 180/h

Duty cycle: 40% and 100%

If operated with overexcitation a respective overexcitation rectifier has to be selected (overexcitation factor 2:1 or 3.4:1). The AC mains voltage as well as the overexcitation and holding voltages are to be indicated with placement of the order. The standard duty cycle in these cases is 80%.

Protection class: acc. EN 60529 / 09.2000: IP 54

Thermal class: B, F

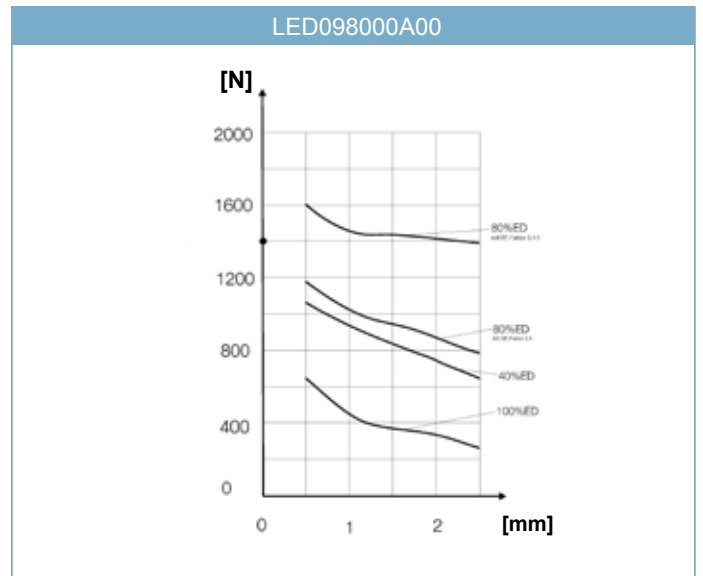
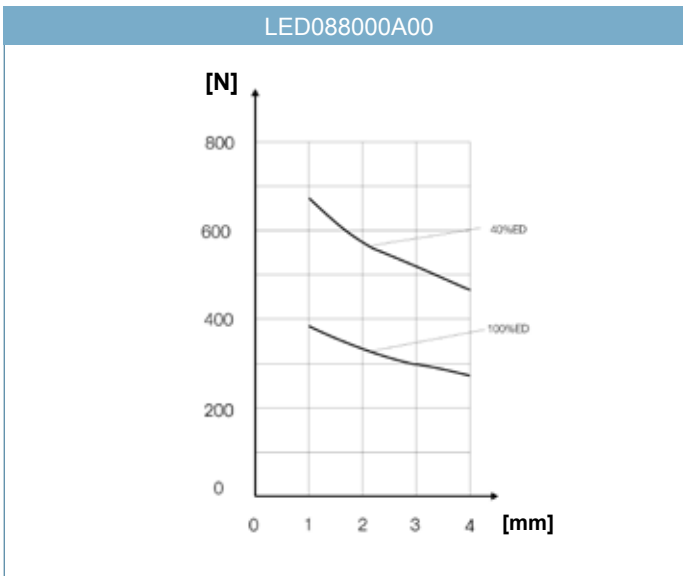
Design subject to change



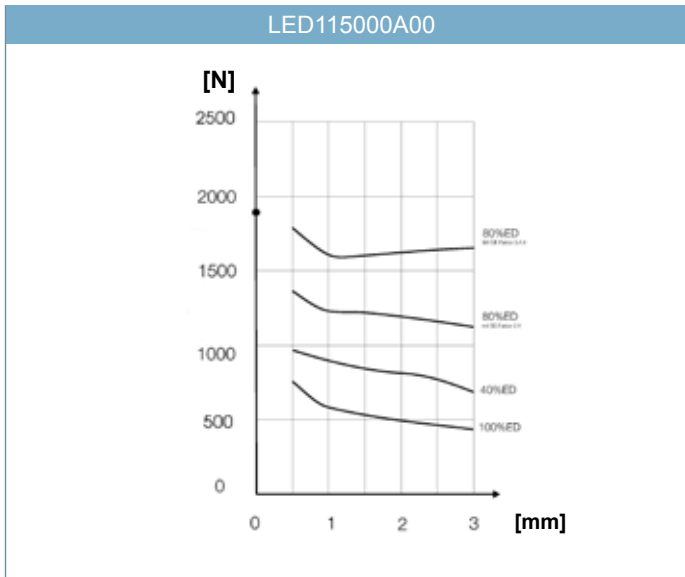
## Double-Acting Spreader Solenoid

Devices of the series LED088000A00 to LED165000A00 consist of two direct-acting solenoid systems accommodated in one housing. The devices are suitable for operation with normal excitation or overexcitation. Depending on the usage they are attached directly to the housing or loosely in the forks on both sides. The devices of this series are prepared for emergency hand release. A large selection of overexcitation rectifiers customized to the respective solenoid and usage is available. The main fields of application of the series 41 334 are elevators, escalators and passenger conveyors.

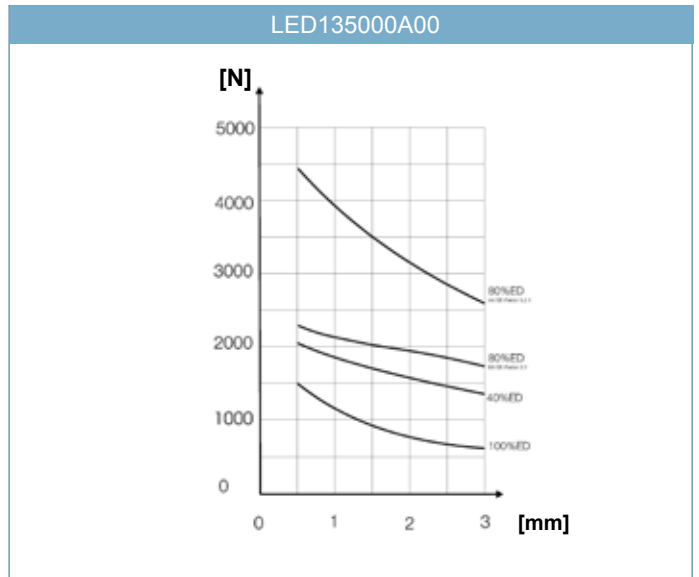
Type	Diameter x Length [mm]	Stroke [mm]	Duty cycle [%]	Magnetic force [N]	Input power [W]	Response time [ms]	Release time [ms]
LED088000A00	88 x 120	2	100	240 bis 500	28	depending on installation	depending on installation
LED088000A00	88 x 120	2	40	450 bis 650	68	depending on installation	depending on installation
LED098000A00	98 x 136	2,5	100	250 bis 620	32		
LED098000A00	98 x 136	2,5	40	650 bis 1080	90		
LED115000A00	115 x 140	3	100	450 bis 750	42		
LED115000A00	115 x 140	3	40	650 bis 980	98		
LED135000A00	135 x 165	3	100	600 bis 1500	55		
LED135000A00	135 x 165	3	40	1300 bis 2100	135		
LED140000A00	135 x 225	4	100	800 bis 1600	70		
LED140000A00	135 x 225	4	40	1600 bis 2200	175		
LED165000A00	165 x 250	4	100	1200 bis 2100	85		
LED165000A00	165 x 250	4	40	2100 bis 2600	225		



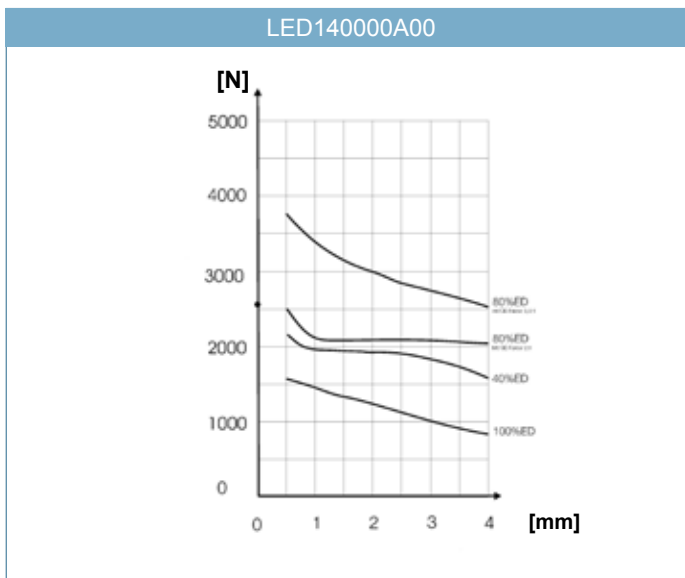
• maximum holding force possible



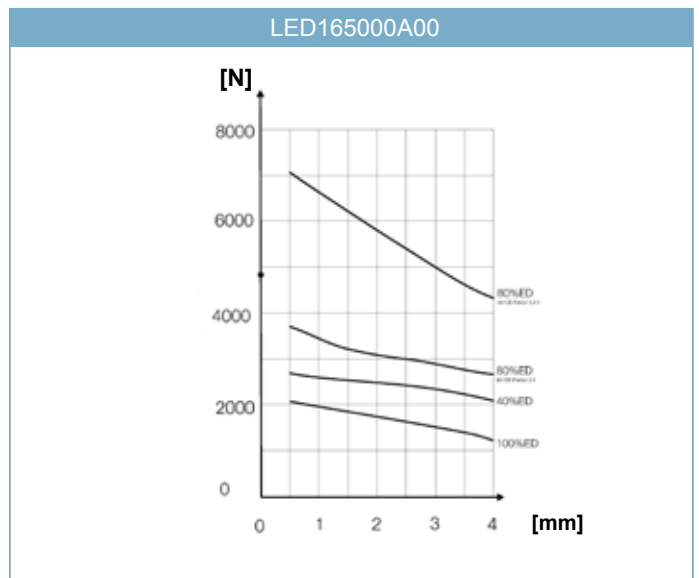
• maximum holding force possible



• maximum holding force possible



• maximum holding force possible



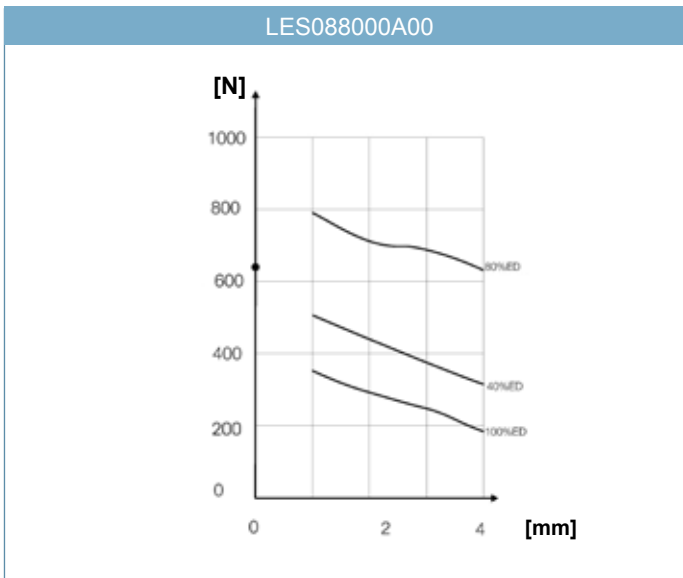
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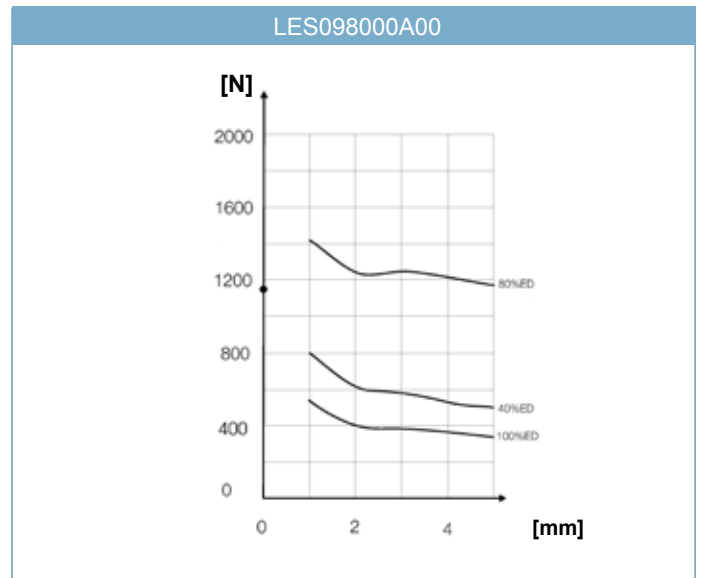
## Single-Acting Spreader Solenoid

Devices of the series LES088000A00 to LES165000A00 are single-acting spreader solenoids for direct current with short strokes and high magnetic forces. The devices are suitable for operation with normal excitation or overexcitation. Depending on the usage they are attached directly to the housing or loosely in the forks on both sides. The main fields of application of these devices are elevators, the release of block brakes but also escalators.

Type	Diameter x Length [mm]	Stroke [mm]	Duty cycle [%]	Magnetic force [N]	Input power [W]	Response time [ms]	Release time [ms]
LES088000A00	88 x 89	4	100	220 bis 720	31	310	30
LES088000A00	88 x 89	4	40	330 bis 760	77	230	30
LES098000A00	98 x 100	5	100	280 bis 1085	47	360	35
LES098000A00	98 x 100	5	40	500 bis 1440	111	270	30
LES115000A00	115 x 106	6	100	350 bis 1440	53	500	40
LES115000A00	115 x 106	6	40	640 bis 1840	134	310	35
LES135000A00	135 x 125	6	100	600 bis 2080	64	730	50
LES135000A00	135 x 125	6	40	1070 bis 2810	151	460	45
LES140000A00	135 x 160	8	100	800 bis 2340	82	810	60
LES140000A00	135 x 160	8	40	1120 bis 2770	165	550	50
LES165000A00	165 x 176	8	100	1340 bis 3730	110	990	75
LES165000A00	165 x 176	8	40	1940 bis 4500	235	750	70

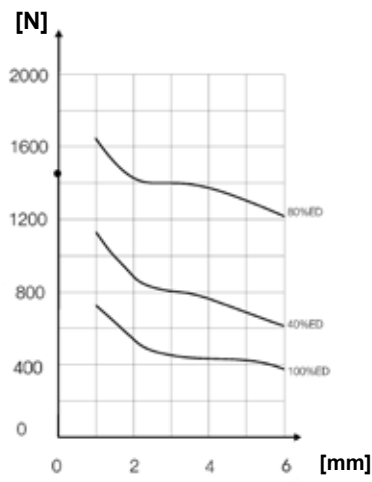


• maximum holding force possible



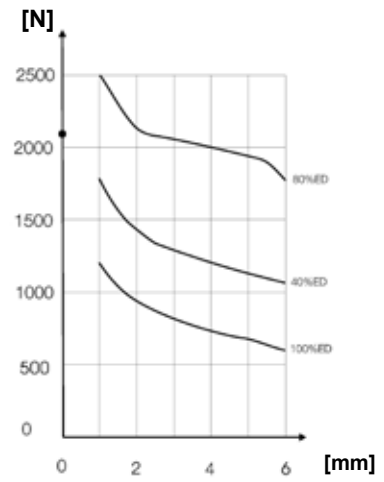
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LES115000A00



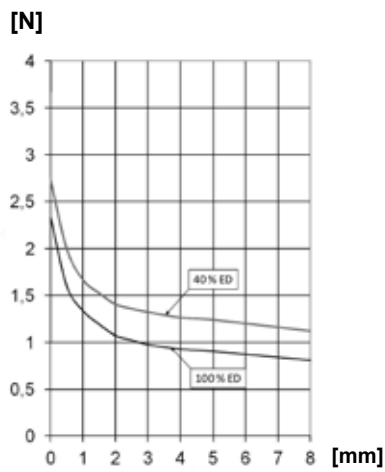
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LES135000A00



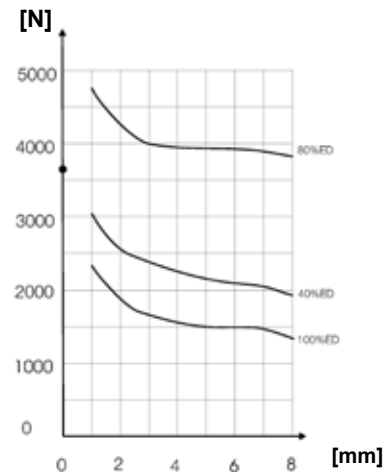
• maximum holding force possible

LES140000A00



• maximum holding force possible

LES165000A00



• maximum holding force possible



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