



WE MAGNETISE THE WORLD



Control Power Line

Linear solenoids with fast switching times



INDUSTRIAL MAGNETIC SYSTEMS

BINDER

We develop solutions!

Kendrion develops, manufactures and markets high-quality electromagnetic and mechatronic systems and components for industrial and automotive applications. For over a century we have been engineering precision parts for the world's leading innovators in passenger cars, commercial vehicles and industrial applications.

As a leading technology pioneer, Kendrion invents, designs and manufactures complex components and customised systems as well as local solutions on demand. Committed to the engineering challenges of tomorrow, taking responsibility for how we source, manufacture and conduct business is embedded into our culture of innovation. Rooted in Germany and headquartered in the Netherlands, our expertise extends across Europe to the Americas and Asia. Created with passion and engineered with precision.

In the business unit **Industrial Magnetic Systems (IMS)** the focus lies on electromagnetic actuators and mechatronic assemblies for applications in power engineering, safety engineering, machine building, automation technology and other industries. With the experience of our traditional brands Binder, Neue Hahn Magnet and Thoma Magnettechnik we are successful in our markets as an industry expert with a high technological competence.

We offer you both customer-specific and standardised products. Our assemblies are based on powerful and reliable single-stroke, holding, locking, spreader, control, rotary, vibratory solenoids and solenoid valves. **We always think in terms of solutions.**

Our strength lies in new developments for our customers. Our engineers are specialists for innovative products with optimum technical properties. Furthermore, we develop mechanical assemblies, modern drive electronics and sensor systems to your requirements.

Our products are manufactured in Germany at the parent companies Donaueschingen and Engelswies as well as in the USA, China and Romania. This ensures efficient project management and a needs-oriented delivery for our internationally operating customers.

By means of segmented production areas we can implement both small quantities and large series with an optimum degree of automation.

We guarantee top quality.

All products are tested and developed in compliance with the norm DIN VDE 0580 for electromagnetic devices and components or according to industry-specific standards of our customers. In many cases our products are tested and certified by external associations, among others according to the CSA, VdS and ATEX guidelines. Our quality management system is certified according to DIN EN ISO 9001 and our environmental management system fulfils the norm ISO 14001.

With our subsidiaries in Switzerland, Austria, Italy, USA, China and our worldwide distribution network we are your ideal partner on site.

Kendrion – We magnetise the world

www.kendrion.com

Control Power Line

Short stroke, high magnetic forces, precise switching, dynamics in perfection - these are the advantages of this product line.

Single-stroke solenoids of the Kendrion Control Power Line are solenoids with short stroke travels which excel by their high magnetic forces, precise switching and dynamics. These solenoids are generally used as control elements, stopping modules in transport systems or for the switching of valves

The mode of operation of the control solenoid is based on the force exerted on ferromagnetic bodies in the magnetic field. Electromagnets transform electric energy into mechanical energy. Basically the stroke movement takes place from the stroke starting position to the stroke end position (active direction of movement), while the armature reset is accomplished by external forces, e.g. by spring, weight or magnetic forces (passive direction of movement).

The force transfer is to be performed by a non-magnetizable bolt. The solenoids can be installed in any position, but the force transfer should be in axial direction only. The magnetic forces indicated are reached at 90% of the nominal voltage and in warmed-up condition. The valves for the switching times refer to nominal voltage, warmed-up condition and a load with 70% of the magnetic force of the device.

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

Design subject to change.

Fields of Application

Conveyor technology

Safety engineering

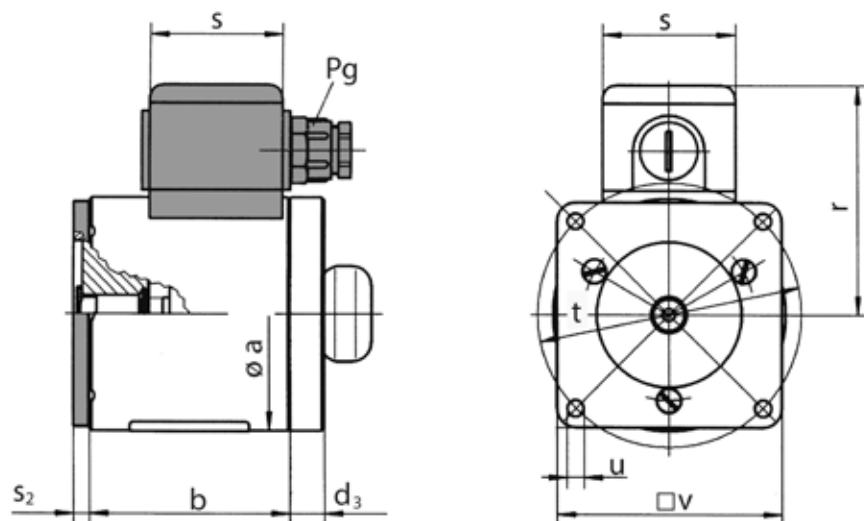
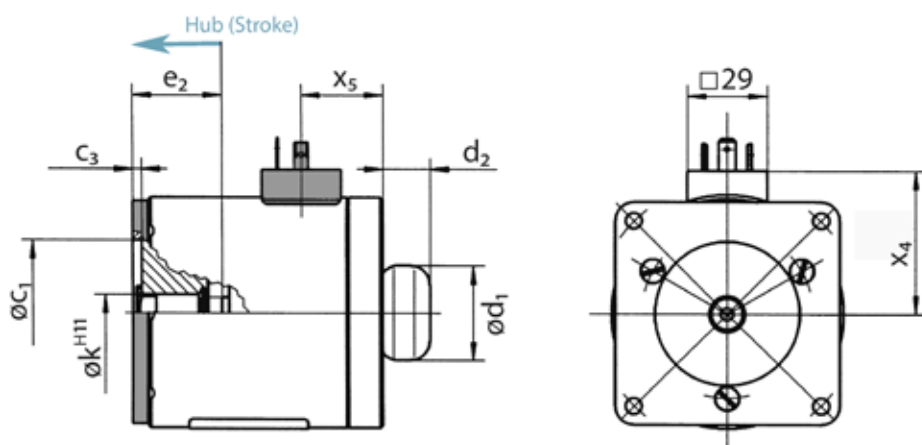
Sorting technology



Technical Data

Size	Length x Diameter [mm]	Stroke [mm]	Duty cycle [%]	Magnetic force [N]	Rated power [W]	Response time [ms]	Release time [ms]
05	58,7 x 50	4	100	30	16	140	55
06	78,2 x 62	4	100	75	19	175	65
07	79,6 / 81,1 x 72	6	100	100	25	250	80
09	95 x 88	8	100	125	28,3	320	100

Dimension Drawing

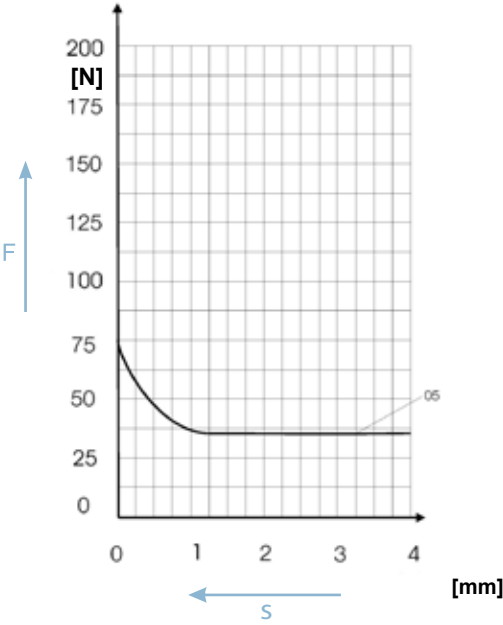
Control solenoid with
adapter housingControl solenoid with
plug

Dimension table

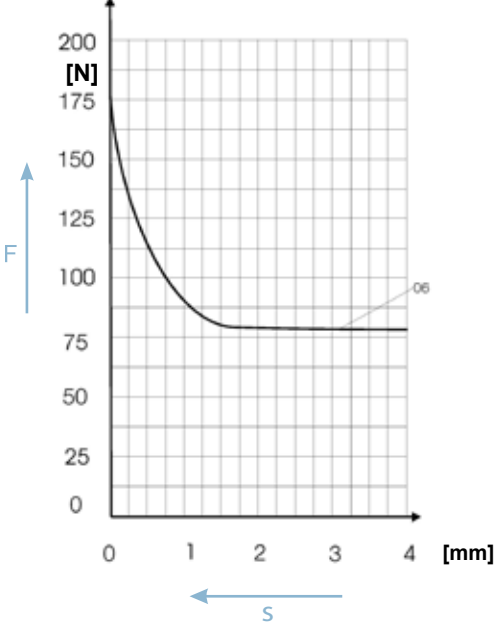
Size	a	b	c ₁	c ₃	d ₁	d ₃	k	r	s	s ₂	t	u	v	x ₄	P _g
05 with adapter housing (41050019)	50	46,7	30	2	33	9	9	55	35	3	60	4,3	50	-	7
05 with plug (41050023)	50	46,7	30	2	33	9	9	-	-	3	60	4,3	50	36,2	-
06 with adapter housing (41060043)	62	63,2	30	2,25	33	10	9	61	35	5	72	4,5	60	-	7
06 with plug (50013732)	62	63,2	30	2,25	33	10	9	-	-	5	72	4,5	60	44	-
07 with adapter housing (41070031)	72	65,1	45	3,5	37	9,5	14	83	50	5	82	6,4	70	-	11
07 with plug (41070030)	72	65,1	45	3,5	37	11	14	-	-	5	82	6,4	70	48,7	-
09 with adapter housing (41090051)	88	76,2	55	3,3	37	13	17,5	91	50	5,8	100	6,6	85	-	11
09 with plug (41090052)	88	76,2	55	3,3	37	13	17,5	-	-	5,8	100	6,6	85	56,5	-

Stroke Force Curves

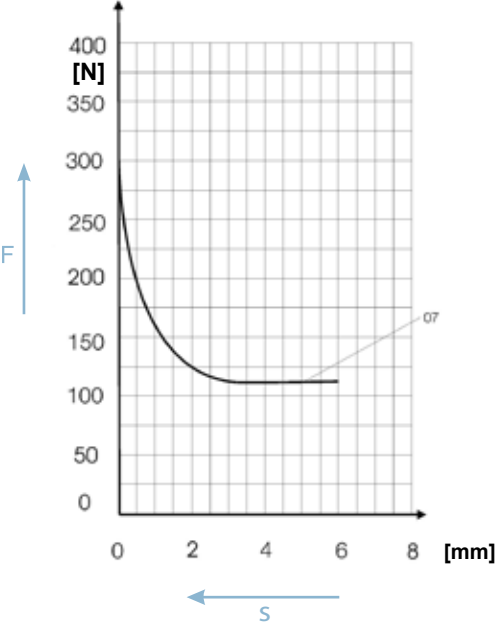
Size 05



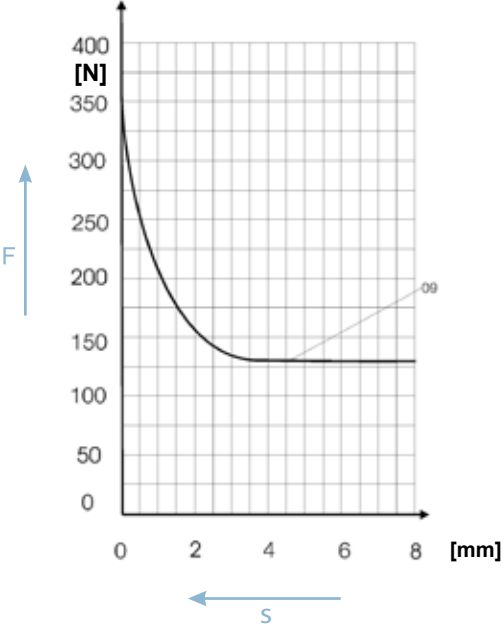
Size 06



Size 07



Size 09



Overview of Catalogue



Classic Line

- single-stroke solenoids
- compact design
- individual fixing
- mono- and bistable version

High Performance Line

- square single-stroke solenoids
- high force with small installation space
- modular system
- short pull-in times

High Power Line

- round single-stroke solenoids
- high forces and stroke travels
- short switching times
- also reversible solenoids

Control Power Line

- control solenoids
- extremely fast
- switching
- short strokes
- precise switching



Hahn CQ^{Line}

- door holding magnet
- design and functionality
- VdS, CE, EN 1155,
- EN 14637 tested
- great variety

Industrial Line

- industrial holding magnets
- high holding force with low power consumption
- compact design
- variable connections

Oscillating Line

- vibratory solenoids
- wide product range for transportation of bulk material
- low wear
- compact design



Elevator Line

- spreader solenoids
- especially designed for elevator brakes
- extremely high forces
- any mounting position

ATEX Line

- explosion-proof solenoids
- prevent the occurrence of sparks and light arcs
- dynamic and reliable switching

Locking Line

- locking solenoids
- high transverse forces
- integrated feedback of locking function
- compact design

System Line

- operated by AC
- extremely short activation times
- very high pull-in forces

- **Rotary solenoids**
- **Assemblies**
- **Customer-specific solutions**

Please contact us for special or customer-specific solutions.

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