

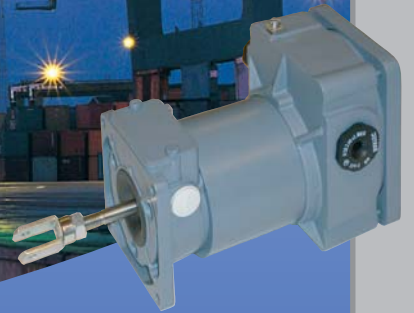


BINDER

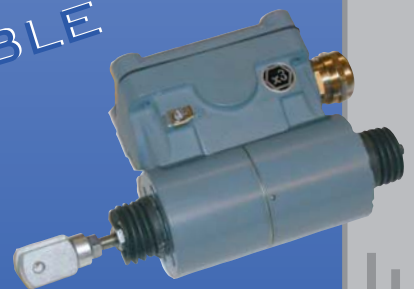
HAHN MAGNET

thoma  
MAGNETTECHNIK

# ATEX



EXPLOSIVE DYNAMIC RELIABLE



● SINGLE DIRECTION LINEAR SOLENOIDS



POWER OF PARTNERSHIP AND MAGNETISM



ATEX LINE

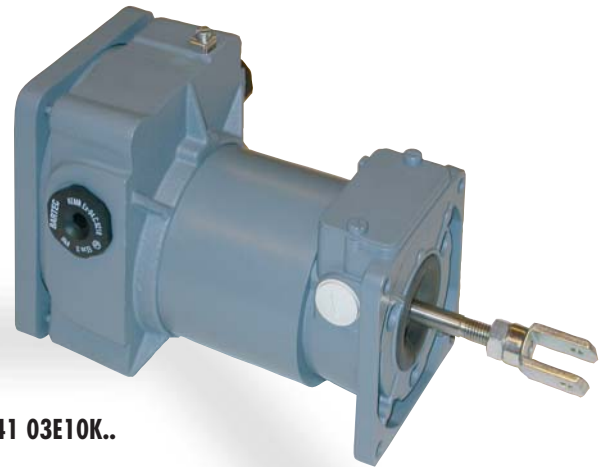


**Type 41 01E06K..**

**Versions**

Types 41 01E 06 to 09K00  
for 100% duty cycle  
type of protection II 2 G EEx e II T4

**PTB 03 ATEX 2175 X**



**Type 41 03E10K..**

**Versions**

Types 41 03E 10 to 20K00  
for 100% duty cycle  
with mounting base  
type of protection II 2 G EEx e II T4

**PTB 04 ATEX 2009 X**

Plant operators must incorporate effective precautions to prevent explosions wherever combustible gases, vapours, mists and dusts mix with the oxygen in the air to form potentially explosive atmospheres.

This is where the DC single direction linear solenoids of the ATEX LINE can be used. These devices are specially designed for such situations and are characterised by their dynamic and reliable operation.

These solenoids comply with type of protection "e" for enhanced safety. Special measures have been taken to prevent the occurrence of sparks, arcs or dangerous temperatures on those parts where such phenomena should not occur during the normal course of operation. The application of an electromagnetic force brings about a linear movement from the initial position to the end position; the return movement is accomplished with external forces. They can be installed in any position, but the force transfer should be in the axial direction only; lateral loads increase the wear on the bearings.

Explosion protection is certified by test certificate PTB 03 ATEX 2175 X for sizes 06 to 09, and by test certificate PTB 04 ATEX 2009 X for sizes 10 to 20 (certificates issued by the Federal Physical-Technical Institute (PTB) in Braunschweig, Germany).

Suitable measures are required to ensure that the breaking overvoltages stated on the test certificates are not exceeded.

These products are manufactured and tested to DIN VDE 0580 (July 2000).

**Type of protection**

for types 41 01E 06 to 09 K: II 2 G EEx e II T4  
for types 41 03E 10 to 20 K: II 2 G EEx e II T4

**Class of protection to IEC 60529:** housing IP 54, connection IP 54

**Rated voltage:** 24 VDC

Other voltages up to max. 230 VDC are possible on request (subject to a surcharge).

**Duty cycle:** 100 %

**Insulation class:** B DIN VDE 0580 (July 2000).

For further information on the use of electromagnetic devices please refer to the publication "The Technical Background".

**CE symbol solenoids/electronics**

electromagnets, electromagnetic actuators

The electromagnetic products from Kendrion Magnettechnik are components for incorporation and operation in electrical equipment and devices. They therefore do not fall within the remit of the Low Voltage Directive 73/23/EEC.

However, the components comply with various standards for incorporation and operation in devices covered by the Low Voltage Directive, in particular DIN VDE 0580 (July 2000). The corresponding data is given on the data sheets for the individual components.

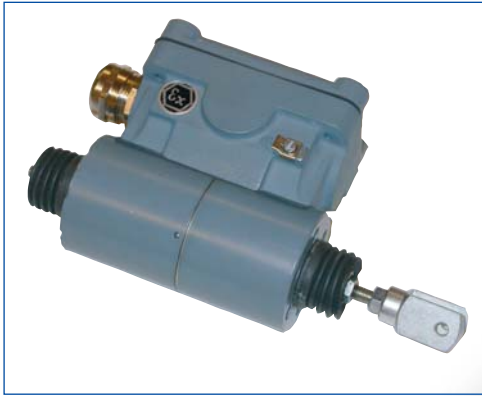
The products are components in the meaning of the Machinery Directive 98/37/EC. According to this directive, such products incorporated in a machine may not be operated until said machine's conformity with the EC directive has been established. A manufacturer's declaration, which is not automatically supplied with the product, can be obtained on request.

The user must ensure conformity with the EMC Directive 89/336/EEC by using corresponding switching devices or controls. When using the recommended electronic switching devices and controls from Kendrion Magnettechnik, conformity with the EMC Directive is stated on the respective data sheets.

**Notes:**

- to DIN VDE 0580 (July 2000) ICS29.020.53.020.01 (valid as manufacturer's Declaration of Conformity)
- directives 98/37/EC and 73/23/EEC
- CCC certificate for China not required

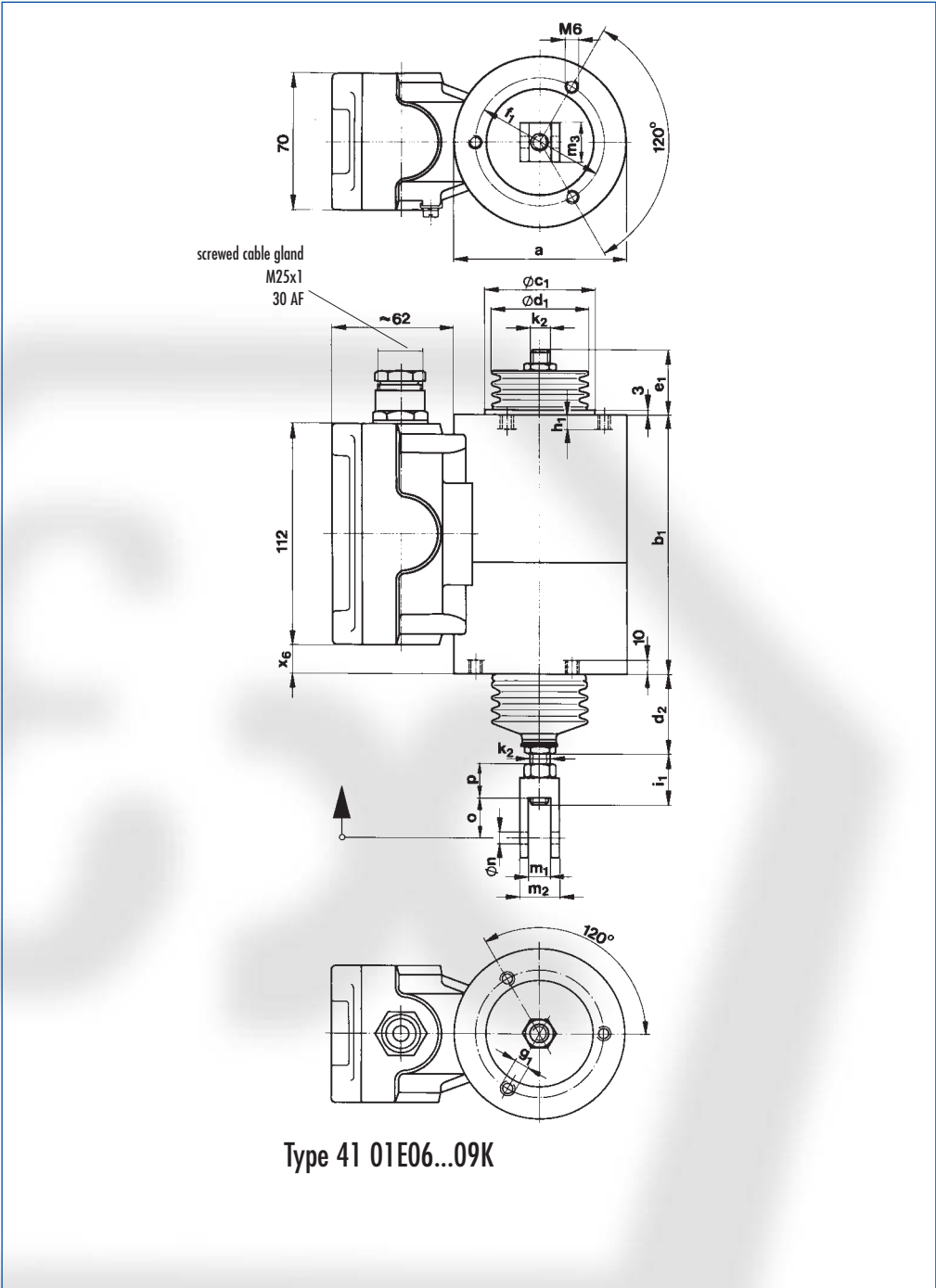
**We reserve the right to make changes to the product design.**



**Type of protection**  
II 2 G EEx e II T4

**Example of order**  
41 01E06K...  
24 VDC  
100% duty cycle  
15 mm stroke

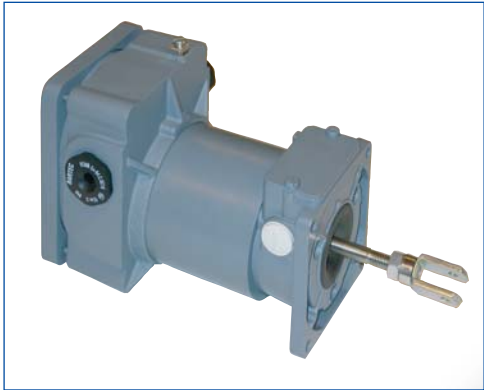
**Technical specification**  
The magnetic forces specified are reached at 90% of the rated voltage and at operating temperature. The values for the switching times are valid for the rated voltage, operating temperature and loaded with 70% of the magnetic force of the device. The force–stroke curve is horizontal for 80% of the stroke and then rises to about twice the value for the final 20%.



Type 41 01E06...09K

Dimensions (mm)																			
Size	a	b <sub>1</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>	e <sub>1</sub>	f <sub>1</sub>	g <sub>1</sub>	h <sub>1</sub>	i <sub>1</sub>	k <sub>2</sub>	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	n	o	p	x <sub>6</sub>	
41 01E06K..	62	119	36	33	31	27.5	45	M 4	5	24	M 8	12	20	20	6	20	16.5	3	
41 01E07K..	72	121	45	40	36	28	56	M 5	6	24	M 8	12	20	20	6	20	16.5	4.5	
41 01E09K..	88	132	55	46	38	32	65	M 5	7	27	M 10	12	20	20	6	20	18	15	

Size	Stroke	100 % duty cycle				Weight	
		Magnetic force	Rated power	Response time	Release time	Plunger	Total
	s	F	P <sub>20</sub>	t <sub>1</sub>	t <sub>2</sub>	m <sub>A</sub>	m
	mm	N	W	ms	ms	kg	kg
<b>06</b>	15	20	22	230	80	0.35	3.5
<b>07</b>	20	30	28	330	100	0.45	4.2
<b>09</b>	20	50	39	420	120	0.75	5.8

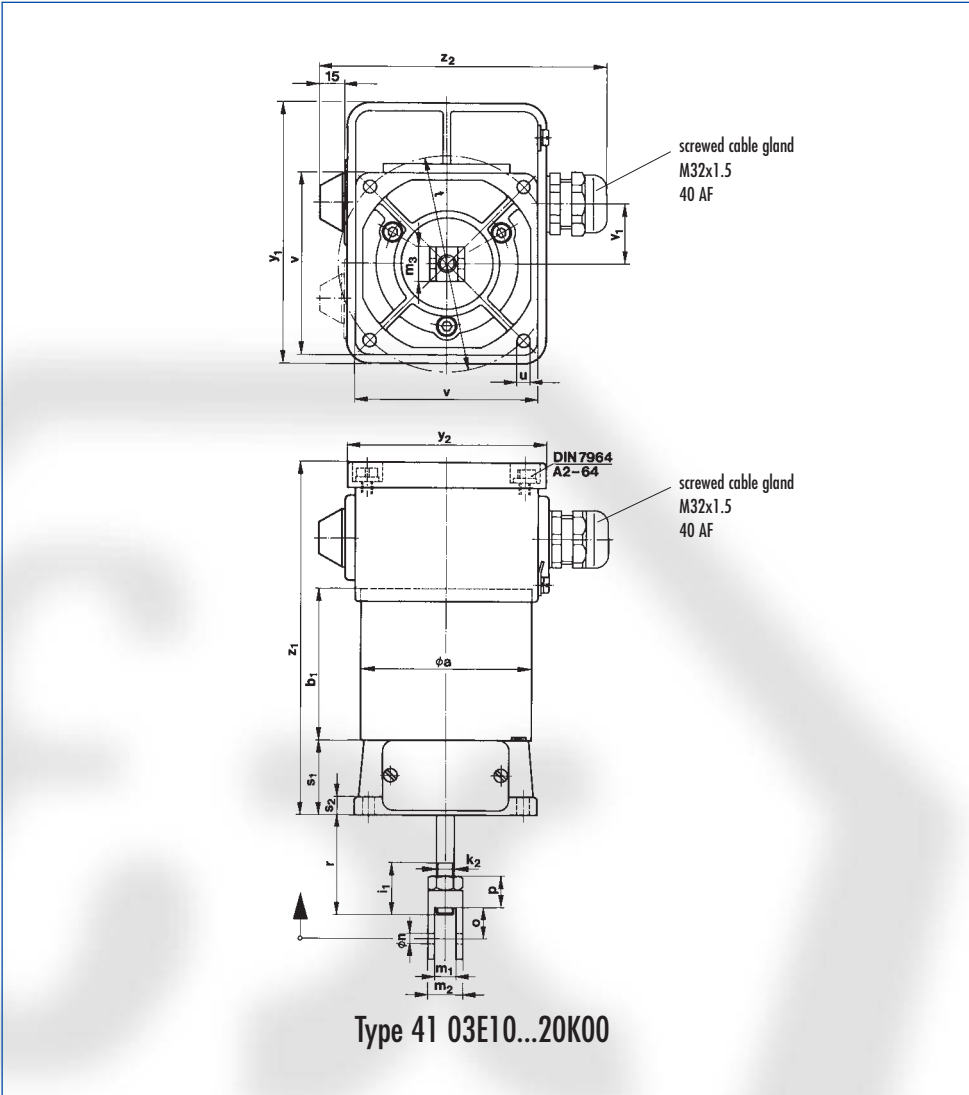


**Type of protection**  
II 2 G EEx e II T4

**Example of order**  
41 03E10K...  
24 VDC  
100% duty cycle  
30 mm stroke

**Technical specification**

The magnetic forces specified are reached at 90% of the rated voltage and at operating temperature. The values for the switching times are valid for the rated voltage, operating temperature and loaded with 70% of the magnetic force of the device. The force–stroke curve is horizontal for 80% of the stroke and then rises to about twice the value for the final 20%.



Size	Stroke	100% duty cycle				Weight	
		Magnetic force	Rated power	Response time	Release time	Plunger	Total
	s	F	P <sub>20</sub>	t <sub>1</sub>	t <sub>2</sub>	m <sub>A</sub>	m
	mm	N	W	ms	ms	kg	kg
<b>10</b>	25	60	50	400	140	0.95	6.3
<b>11</b>	30	75	55	550	160	1.3	8.5
<b>13</b>	30	120	63	660	180	2.3	13.5
<b>14</b>	40	150	83	750	210	3	16.5
<b>16</b>	50	190	110	800	250	5.2	30
<b>18</b>	50	250	125	900	300	5.7	37
<b>20</b>	60	400	160	1000	400	10.5	57

**Release time**

Size	a	b	i <sub>1</sub>	k <sub>2</sub>	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	n	o	p	r	s <sub>1</sub>	s <sub>2</sub>	t	u	v	v <sub>1</sub>	v <sub>2</sub>	y <sub>1</sub>	y <sub>2</sub>	z <sub>1</sub>	z <sub>2</sub>
41 03E10K..	98	87	30	M 10	12	20	20	6	20	18	57	43	11	125	7	105	40	7	149	114	203	168
41 03E11K..	115	91	40	M 12	20	44	22	8	20	24.5	71	49	13	150	9	126	38	13	160	130	215	185
41 03E13K..	135	106	45	M 16	25	53	25	10	23.5	31	71	55	16	175	9	148	38	18	180	152	251	190
41 03E14K..	135	144	45	M 16	25	53	25	10	23.5	31	93	55	16	175	9	148	38	18	180	152	289	190
41 03E16K..	165	152	50	M 20	30	60	34	12	30	41	102	68	17.5	200	11	175	37	22	210	188	330	231
41 03E18K..	180	167	50	M 20	30	60	34	12	30	41	102	68	17.5	225	11	195	38	30	220	190	345	225
41 03E20K..	200	221	60	M 24	30	60	34	14	30	43	128	82	21	260	13	220	50	35	242	192	423	230

The KENDRION ELECTROMAGNETIC COMPONENTS Group (KEC Group) sees itself as a centre of excellence in the field of electromagnetism.

KENDRION MAGNETTECHNIK GmbH develops and manufactures a wide range of electromagnetic products in the most diverse variations and designs for countless technical applications. The company grew out of the traditional operations of Binder, Thoma and Neue Hahn and is now Europe's leading manufacturer of electromagnetic components.

Project work is our focal point. We at KENDRION MAGNETTECHNIK take this to mean the joint development of devices together with our customers, taking into account special operating conditions, special requirements and high economic efficiency. Our objective is to provide the market with the devices it needs. With optimised costs-benefits ratios to secure the competitiveness of our customers.

Our many years of experience in the development and manufacture of electromagnetic devices plus the skills and commitment of our employees enable us to recognise the needs of the market. And we turn those needs into high-quality products in cooperation with our customers.

We at KENDRION MAGNETTECHNIK achieve customer-focused solutions in all corporate divisions. Those solutions bring maximum benefits for customers and hence considerably strengthen their position in their markets.

- **Customer-centred market management,**
  - **innovative product developments,**
  - **lean, flexible logistics,**
  - **high quality standards,**
  - **affordable prices,**
  - **and the power of magnetism**
- guarantee the success of  
KENDRION MAGNETTECHNIK.**



KENDRION MAGNETTECHNIK -  
YOUR ONE-STOP SOLUTION

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