KENDRION
POWER TRANSMISSION

BINDER CLUTCHES & BRAKES

SPRING-APPLIED SINGLE-DISC BRAKE

76 26E..B00 / 76 26G..B00
76 26N..B00 / 76 26P..B00

EEX LINE

POWER OF PARTNERSHIP AND MAGNETISM

Kendrion PowerTransmission

BINDER CLUTCHES & BRAKES

Our company's strength is measured by the delivery of products, performances, as well as a high degree of esteem towards our customers. KENDRION POWER TRANSMISSION is striving to develop a long-term relationship with its customers and to cultivate this relationship under the motto "Power of Partnership". Ambitious aims can only be realised through a close and productive co-operation with our customers. The development of high-quality standard products as well as optimised tailor made solutions is the foundation of all our actions. Power of Partnership stands for a co-operation with the Kendrion employees without bureau-cracy, ensuring a long and successful partnership with our customers.

Top Market Knowledge...

the realisation of market orientated products are the results of our competence in electromagnetism which has been achieved with decades of experience and knowledge. The development of most innovative concepts and the use of the most modern technologies in our research department together with the use of the latest production and logistic processes are our strengths. Our customers profit from the individual solutions for high volume as well as the availability of individual products on the basis of a standard platform. Our know-how is growing steadily hand in hand with the constant optimisation of every business process.

Optimal tailor made solutions...

are not empty promises. The profound understanding of the Power of Magnetism at KENDRION POWER TRANSMISSION is the source of the research/development of market orientated products. Continuous expansion of the technological possibilities enables us to be in the position to offer optimal solutions of brakes and clutches for numerous applications. We lay great emphasis on being able to offer solutions for different applications such as:

... SECURING
... STOPPING
... POSITIONING
... ACCELERATING.

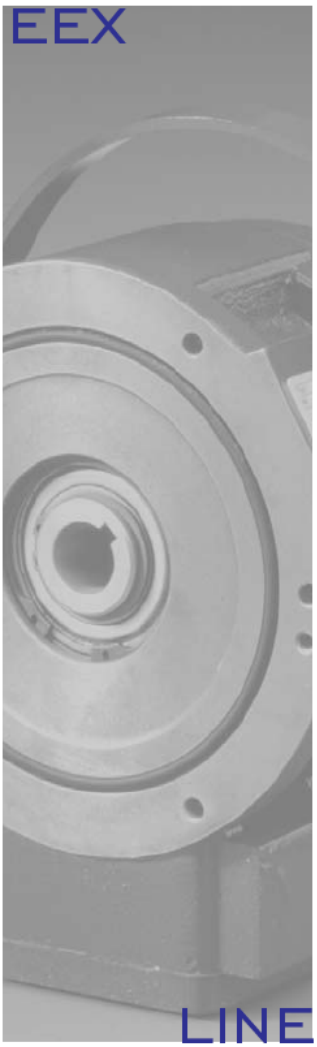
Important synergies as a basis for success...

KENDRION POWER TRANSMISSION is a European company with a local presence in all economic regions of the world. Integrated in and yielding performance to the Kendrion Holding N.V., which is noted on the Amsterdam stock exchange, as a successful company with an annual turnover of 1,8 billion EUR; and approx. 5500 employees all over the world. This is an excellent basis to realise, secure and enable our long-term goals and company objectives. A network of connected companies within Kendrion is another valuable factor for the success of KENDRION POWER TRANSMISSION. We live the "Power of Partnership" in a firm exchange of expertise and business rela-tionship within these companies.

Kendrion Power Transmission protects people and the environmen

Contents

Product line information



The EEX LINE is comprised of spring-applied single-disc brakes with explosion protection for use in potentially explosion hazards locations. The flame proofed spring-applied brake is suitable for use in underground mines where there is a danger of firedamp. Explosion proofed spring-applied brakes are characterised by the fact that all components which may ignite explosive mixtures are placed in an enclosure designed to withstand the specified test pressure and to prevent any mixtures outside the enclosure from being affected by the explosion. The brakes are equipped with four thermoswitches and one microswitch. The microswitch prevents any unintentional motor start-up when the brake is not released. The thermoswitches, which are connected in series with the microswitch, interrupt the control circuit as soon as the brake exceeds the permitted maximum temperature limits. The brakes are corosion protected. Electromagnetic spring-applied brakes generate the required brake torque when voltage is removed. The hand release feature fitted to the brake allows the braking effect to be neutralised manually.

Applications

- DC motors
- Three-phase motors
- Gear motors
- Lifting and materials handling technology

Versions

76 26E..B00	torque range 10-270Nm DC explosion proofing type II as per ATEX 100a
76 26G..B00	torque range 10-270Nm AC (with rectifier) explosion proofing type II as per ATEX 100a
76 26N..B00	torque range 10-270Nm DC flame proofing type I as per ATEX 100a
76 26P..B00	torque range 10-270Nm AC (with rectifier) flame proofing type I as per ATEX 100a

Approvals:

explosion proofing type II
II 2G EEx de II C T5
II 2D IP67 T100˚C
DMT 02 ATEX E 122

flame proofing type I
I M2 EEx de I
II 2D IP67 T100˚C
DMT 02 ATEX E 122

Upon request, spring-applied single-disc brakes can be designed for lower rated torques and supplied without microswitch and hand release feature.

- Petrochemical industry
- Process technology for explosion protected and flammable areas

Information on technical data included in the data sheets

The information provided in the operating instructions must be strictly adheared to when designing a machine (e.g. motor) and when using the brakes. The brakes are manufactured and tested in compliance with DIN VDE 0580 requirements. The insulation materials used conform with thermal class F norms. Operation of the brake as a pure holding brake without friction work is only permitted after prior consultation with the manufacturer. The specified times apply to the following conditions: seperate switching of the brake, operating temperature, rated voltage, and rated air gap. All values are mean values that are subject to variation. In the case of AC brake switching, the coupling time t_1 is substantially longer. W_{max} (maximum switching energy) is the switching energy that must not be exceeded during braking operations at max. 1500 rpm. Braking operations at >1500 rpm lead to a substantial reduction in the maximum admissible switching energy per switching operation Such operation is only permitted after prior consultation with the manufacturer. The maximum switching power P_{max} is the switching energy W that can be converted by the brake per hour. In the case of applications where the number of switching operations per hour is greater than 1 (Z>1), the diagram (W_{max} as a function of the number of switching operations per hour Z) shown in the operating instructions applies. The P_{max} and W_{max} values are approximate values; they apply to applications where the brake is fitted to a motor. The specified rated torques M_2 characterise the torque level of the brakes. Depending on the application of the brake, the switching torque M_1 and the transmissible torque M_4 may differ from the specified M_2 values. The switching torque M_1 depends on the speed (rpm). If the friction surfaces are contaminated with oil, grease or dirt the transferable torque M_4 and the switching torque M_1 may drop.

All technical data is subject to the running-in process of the brake being completed. Vertical operation of the brake is only permitted after prior consultation with the manufacturer.

SPRING-APPLIED SINGLE-DISC BRAKE

Explosion proofing type II for DC or single-phase AC

Versions	76 26E..B00 - DC Gleichstrom
	76 26G..B00 - single-phase AC
Standard rated voltages	76 26E..B00 205V DC 76 26G..B00 230V AC, 50Hz
Protection	IP 67
Thermal class	T 5 (as per EN 50014)
Rated torques	10 - 270 Nm
Accessories (options)	mounting screws

Specification subject to change without notice.
The "General technical information" and the "Operating instructions" 76 26E..B00 / 76 26G..B00 must be strictly observed.

Photo: 76 26G11B00

Technical data

Size	Rated torque	Max. speed	Max. switching power	Max. switching energy (Z = 1)	Rated power		Response times		Moment of inertia hub and friction disc	Weight
							on	off		
	M_2	n_{max}	P_{max}	W_{max}	P_N	P_S	t_1	t_2	J	m
	[Nm]	[rpm]	[kJ/h]	[kJ]	[W]	[VA]	[ms]	[ms]	[kgcm²]	[kg]
10	10	6000	270	41	56	62	80	80	2.5	14.5
11	20	6000	270	41	56	62	70	110	2.5	14.5
13	50	3000	400	55	82	88	110	170	21.5	29
16	100	3000	400	55	82	88	90	230	21.5	29
19	150	3000	570	80	91	95	180	240	125	57
24	270	3000	570	80	91	95	140	350	125	57

Ordering data (Ordering data (to be fully specified)

SPRING-APPLIED SINGLE-DISC BRAKE
Please specify requested version

1 Size (10, 11, 13, 16, 19, 24)

Size: _____

2 Coil voltage (standard 205V DC, 230V AC)

Voltage: _____ V ☐ DC ☐ AC

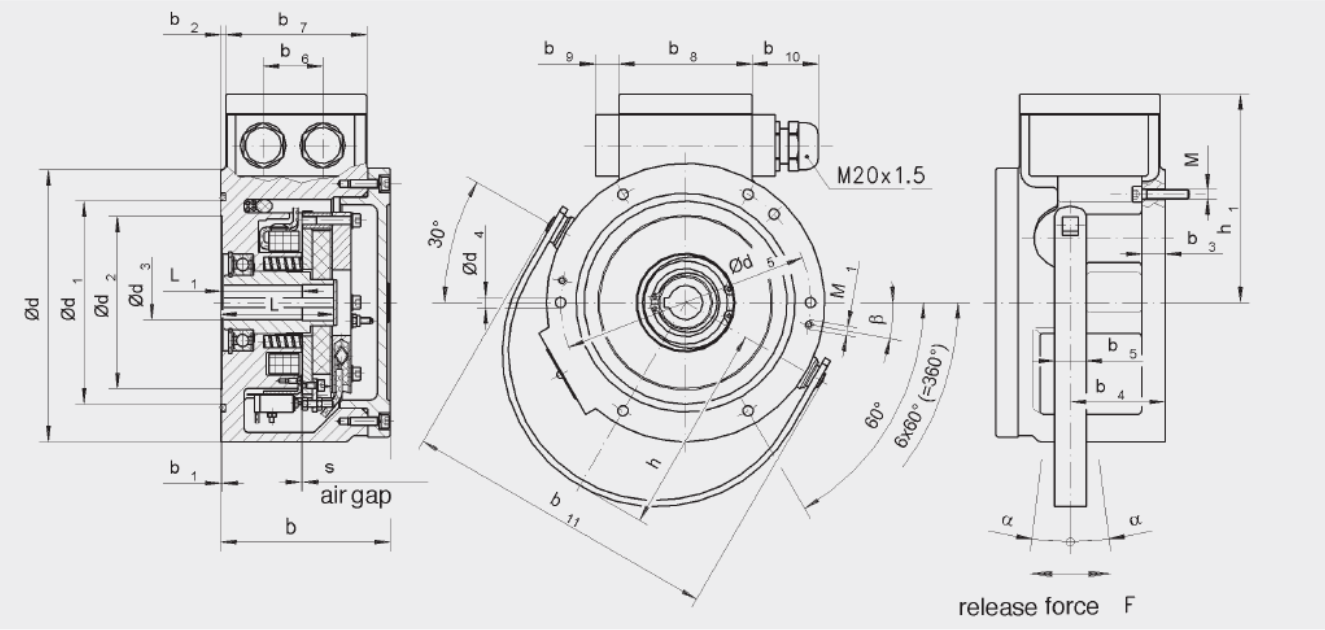
3 Nominal voltage (standard 50 Hz)

Frequency: _____ Hz (only with 76 26G..B00)

4 Pilot bore (standard), groove JS9 as per DIN 6885, sheet 1

Size 10: Ø 15, Ø 16, Ø 19, Ø 20, Ø 22 mm
Size 11: Ø 15, Ø 16, Ø 19, Ø 20, Ø 22 mm
Size 13: Ø 22, Ø 25, Ø 28, Ø 32, Ø 35, Ø 38, Ø 40 mm
Size 16: Ø 22, Ø 25, Ø 28, Ø 32, Ø 35, Ø 38, Ø 40 mm
Size 19: Ø 40, Ø 42, Ø 50, Ø 60 mm
Size 24: Ø 40, Ø 42, Ø 50, Ø 60 mm

Bore diameter: _____ mm



Size	d	d_1	d_2	d_3(G7)	d_4	d_5	b	b_1	b_2	b_3	b_4	b_5	b_6	b_7	b_8	b_9	b_{10}	b_{11}
10	178	130	110[3]	12[1] / 22[2]	6.6	160	108	1	2.5	15	60.7	20	38	90	85	15	ca.43	202
11	178	130	110[3]	12[1] / 22[2]	6.6	160	108	1	2.5	15	60.7	20	38	90	85	15	ca.43	202
13	245	180	160[3]	20[1] / 45[2]	8.4	225	132	1	14	20	77.2	20	38	90	85	15	ca.43	262
16	245	180	160[3]	24[1] / 45[2]	8.4	225	132	1	14	20	77.2	20	38	90	85	15	ca.43	262
19	330	260	240[3]	30[1] / 70[2]	10.5	305	143	1	16	20	79.8	25	38	90	85	15	ca.43	344
24	330	260	240[3]	34[1] / 70[2]	10.5	305	143	1	16	20	79.8	25	38	90	85	15	ca.43	344

Size	h	h_1	L	L_1	s	s_{max}	M	M_1	F [N]	α	β
10	134	133	70	52	$0.25^{+0.12}$	0.7	6xM6	2xM6	ca.18	ca. 19°	10°
11	134	133	70	52	$0.25^{+0.12}$	0.7	6xM6	2xM6	ca.35	ca. 19°	10°
13	164	161	90	83	$0.25^{+0.15}$	0.9	6xM8	3xM8	ca.45	ca. 19°	68°
16	164	161	90	83	$0.25^{+0.15}$	0.9	6xM8	3xM8	ca.90	ca. 19°	68°
19	215	205	100	92	$0.25^{+0.2}$	1.1	6xM10	3xM10	ca.85	ca. 19°	70°
24	215	205	100	92	$0.25^{+0.2}$	1.1	6xM10	3xM10	ca.170	ca. 19°	70°

[1]) Min. bore with keyway JS9 as per DIN 6885, sheet 1.
[2]) Max. bore with keyway JS9 as per DIN 6885, sheet 1.
[3]) Undercut, no centering diameter
Supporting keyway over entire length. Shaft ISO fitting h6. ([1],[2])

Accessories

Size	Mounting screws			
	Screw	Nominal torque	Material number	Screws per brake
10	ISO 4762 - M6 x 30 - 8.8	9.7 Nm	304 046	6
11	ISO 4762 - M6 x 30 - 8.8	9.7 Nm	304 046	6
13	ISO 4762 - M8 x 35 - 8.8	24 Nm	304 071	6
16	ISO 4762 - M8 x 35 - 8.8	24 Nm	304 071	6
19	ISO 4762 - M10 x 40 - 8.8	45 Nm	304 107	6
24	ISO 4762 - M10 x 40 - 8.8	45 Nm	304 107	6

SPRING-APPLIED SINGLE-DISC BRAKE

Flame proofing type I for DC or single-phase AC

Versions	76 26N..B00 - DC
	76 26P..B00 - single-phase AC
Standard rated voltages	76 26N..B00 205V DC 76 26 P..B00 230V AC, 50Hz
Protection	IP 67
Thermal class	T 5 (as per EN 50014)
Rated torques	10 - 270 Nm
Accessories (options)	mounting screws

Specification subject to change without notice.
The "General technical information" and the "Operating instructions" 76 N..B00 / 76 P..B00 must be strictly observed.

Photo: 76 26P11B00

Technical data

Size	Rated torque	Max. speed	Max. switching power	Max. switching energy (Z = 1)	Rated power		Response times		Moment of inertia hub and friction disc	weight
							on	off		
	M_2	n_{max}	P_{max}	W_{max}	P_N	P_S	t_1	t_2	J	m
	[Nm]	[rpm]	[kJ/h]	[kJ]	[W]	[VA]	[ms]	[ms]	[kgcm²]	[kg]
10	10	6000	270	41	56	62	80	80	2.5	14.5
11	20	6000	270	41	56	62	70	110	2.5	14.5
13	50	3000	400	55	82	88	110	170	21.5	29
16	100	3000	400	55	82	88	90	230	21.5	29
19	150	3000	570	80	91	95	180	240	125	57
24	270	3000	570	80	91	95	140	350	125	57

Ordering data (to be fully specified)

SPRING-APPLIED SINGLE-DISC BRAKE

Please specify requested version

1 Size (10, 11, 13, 16, 19, 24)

Size: _____

2 Coil voltage (standard 205V DC, 230V AC)

Voltage: _____ V ☐ DC ☐ AC

3 Nominal voltage (standard 50 Hz)

Frequency: _____ Hz (only with 76 26P..B00)

4 Bore diameter (standard), groove JS9 as per DIN 6885, sheet 1

Size 10: Ø 15, Ø 16, Ø 19, Ø 20, Ø 22 mm
Size 11: Ø 15, Ø 16, Ø 19, Ø 20, Ø 22 mm
Size 13: Ø 22, Ø 25, Ø 28, Ø 32, Ø 35, Ø 38, Ø 40 mm
Size 16: Ø 22, Ø 25, Ø 28, Ø 32, Ø 35, Ø 38, Ø 40 mm
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Size 24: Ø 40, Ø 42, Ø 50, Ø 60 mm

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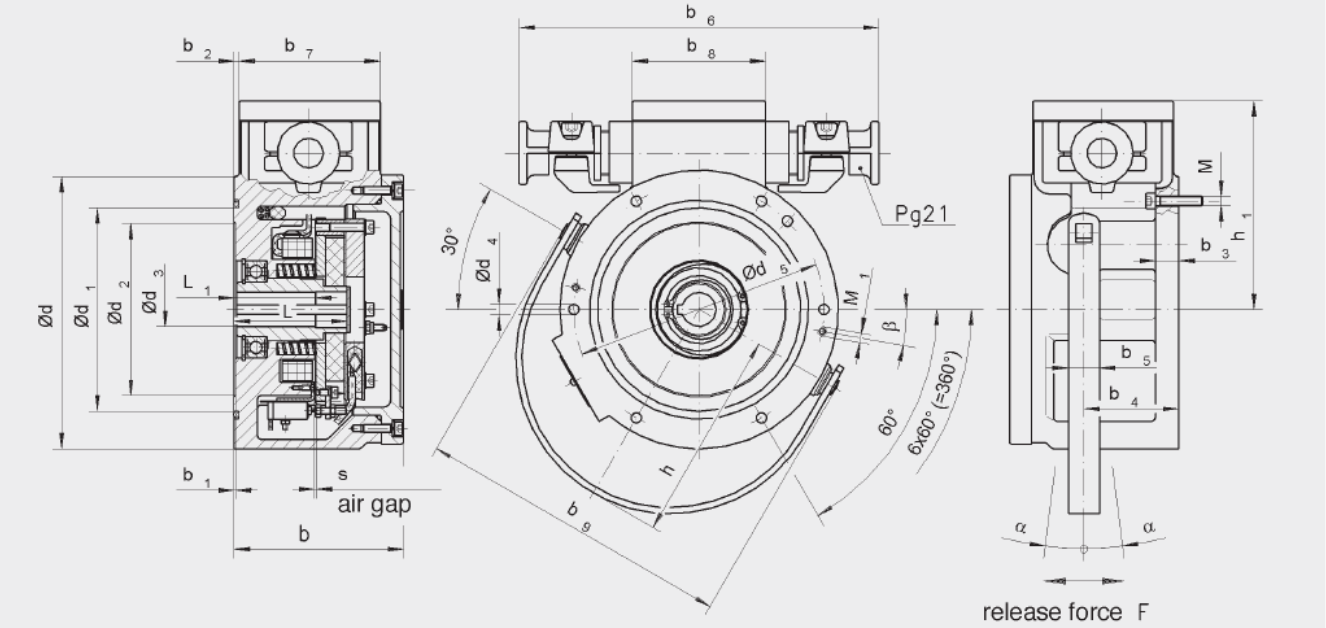

Size	d	d_1	d_2	d_3(G7)	d_4	d_5	b	b_1	b_2	b_3	b_4	b_5	b_6	b_7	b_8	b_9
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13	164	161	90	83	$0.25^{+0.15}$	0.9	6xM8	3xM8	ca.45	ca. 19°	68°
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19	ISO 4762 - M10 x 40 - 8.8	45 Nm	304 107	6
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