



## EEX Line (+60°C)

Spring-applied single-disc brake

76 26E..B20  
76 26N..B20



## Kendrion – The brake experts

As a solution provider, Kendrion develops, produces and markets innovative and high-quality electromagnetic and mechatronic systems and components for industrial and automotive applications. Kendrion is very serious about its commitment to addressing the technical challenges of the future. Which is why the responsible use of resources along the entire value chain, and trustworthy business practices, are deeply ingrained in our corporate culture.

### The right brakes for every situation

The Industrial Drive Systems business unit develops and produces electromagnetic brakes and clutches for industrial drive engineering. They are used for the accelerating, braking, positioning, holding and securing of movable drive components and loads. The areas of application for our brakes and clutches are primarily in robotics and automation technology, machine tool and production machinery, as well as in medical technology and material handling.

'Servo Line', our newly designed spring-applied brake for servo motors, completes our product portfolio, enabling us to provide the ideal solution for any application.

### Worldwide availability

The headquarters of Industrial Drive Systems is located in Villingen within Germany's Black Forest. However, the business unit can also rely on additional production sites and subsidiaries in Aerzen (Germany), China, the UK and Italy, as well as numerous sales partners all over the world.

### Tradition and progress

It was the long-established BINDER brand that laid the foundations for the successful development of Industrial Drive Systems. Wilhelm Binder founded his company in 1911, and during the early 1920s he began developing and manufacturing electromagnetic components. In 1997, the business was taken over by Dutch group Schuttersveld N.V., today Kendrion N.V.

The former magneta GmbH & Co. KG has been part of the Kendrion Group since 2010. Now known as Kendrion (Aerzen) GmbH, this innovative company continues to develop and produce permanent magnet brakes for small motors, electromagnetic clutches and brakes at its site in Aerzen, along with magnetic particle clutches and brakes.

### Kendrion – We magnetise the world!

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



## About the EEX Line (+60°C)

The EEX Line is comprised of spring-applied single-disc brakes with explosion protection for use in potentially explosion hazardous 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 thermostats and one microswitch. The microswitch

prevents any unintentional motor start-up when the brake is not released. The thermostats, 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 corrosion 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. This version is designed for use at ambient temperatures of up to 60°C .

### Versions ( $T_{amb} = -20^{\circ}\text{C} \dots +60^{\circ}\text{C}$ )

#### 76 26E..B20

torque range 10 to 270 Nm

DC

explosion proofing type II as per ATEX (EU) + IEC Ex

#### 76 26N..B20

torque range 10 to 270 Nm

DC

flame proofing type I as per ATEX (EU) + IEC Ex

### Approvals

explosion proofing type II

II 2G Ex de IIC T4 Gb

II 2D Ex tb IIIC T115°C Db, IP67

DMT 02 ATEX E 122 X; IEC Ex BVS 11.0025X



flame proofing type I

I M2 Ex de I Mb

II 2D Ex tb IIIC T115°C Db, IP67

DMT 02 ATEX E 122 X; IEC Ex BVS 11.0025X

Upon request, spring-applied single-disc brakes can be designed for lower rated torques and supplied without microswitch and hand release feature.  
Further approvals:  $T_{amb} \leq 60^{\circ}\text{C}$  or NEC500 on request

### Applications

DC motors

Three-phase motors

Gear motors

Lifting and materials handling technology

Petrochemical industry

Process technology for explosion protected and flammable areas...

### Data sheets – General information

The Operating Instructions must be strictly observed during the set-up of the machine (e.g. motor) and during the start-up, operation and maintenance of the brakes. The state-of-the-art brakes have been designed, built and tested in accordance with the requirements of DIN VDE 0580 concerning electromagnetic devices and components. Additional information on technical specifications given in the data sheets is included in the operating instructions.



# Spring-applied single-disc brake

## Dust and explosion proofing type II for DC

Version	76 26E..B20 – DC
Standard rated voltage	76 26E..B20 – 205V DC
Protection	IP 67
Thermal class	T 4 (acc. to EN 60079-0)
Ambient temperature range	-20°C to +60°C
Rated torque	10 to 270 Nm
Accessories (options)	mounting screws
Note	Specification subject to change without notice. The „General technical information“ and the „Operating instructions“ 76 26E..B20



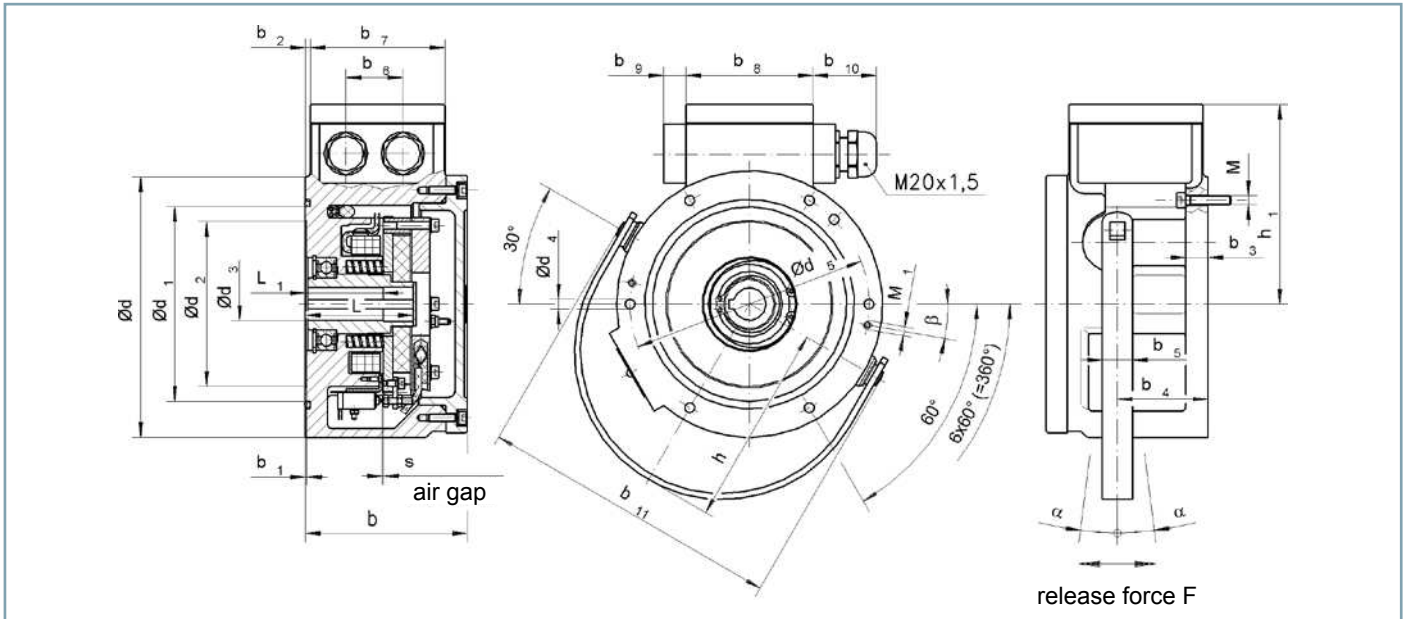
### Technical specifications

Size	Nominal torque $M_2$ [Nm]	Max. speed $n_{max}$ [min <sup>-1</sup> ]	Max. switching power $P_{max}$ [kJ/h]	Max. switching energy (Z = 1) $W_{max}$ [kJ]	Rated power		Response times		Moment of inertia armature and flange hub $J$ [kgcm <sup>2</sup> ]	Weight $m$ [kg]
					$P_N$ [W]	$P_S$ [VA]	Coupling time (acc. to VDE 0580) $t_1$ [ms]	Disconnection time $t_2$ [ms]		
10	10	6000	220	41	56	62	80	80	2.5	14.5
11	20	6000	220	41	56	62	70	110	2.5	14.5
13	50	3600	330	55	82	88	110	170	21.5	29
16	100	3600	330	55	82	88	90	230	21.5	29
19	150	3600	480	80	91	95	180	240	125	57
24	270	3600	480	80	91	95	140	350	125	57

### Design types

Bore diameter (standard) [mm], flute DIN 6885 BL.1 JS9							
10	Ø 15	Ø 16	Ø 19	Ø 20	Ø 22		
11	Ø 15	Ø 16	Ø 19	Ø 20	Ø 22		
13	Ø 22	Ø 25	Ø 28	Ø 32	Ø 35	Ø 38	Ø 40
16	Ø 22	Ø 25	Ø 28	Ø 32	Ø 35	Ø 38	Ø 40
19	Ø 40	Ø 42	Ø 50	Ø 60			
24	Ø 40	Ø 42	Ø 50	Ø 60			

## Dimensions [mm]



Size	d	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> (G7)	d <sub>4</sub>	d <sub>5</sub>	b	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	b <sub>4</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	b <sub>8</sub>	b <sub>9</sub>	b <sub>10</sub>	b <sub>11</sub>
10	178	130	110 <sup>3)</sup>	12 <sup>1)</sup> / 22 <sup>2)</sup>	6.6	160	108	1	2.5	15	60.7	20	38	90	85	15	ca. 43	202
11	178	130	110 <sup>3)</sup>	12 <sup>1)</sup> / 22 <sup>2)</sup>	6.6	160	108	1	2.5	15	60.7	20	38	90	85	15	ca. 43	202
13	245	180	160 <sup>3)</sup>	20 <sup>1)</sup> / 45 <sup>2)</sup>	8.4	225	132	1	14	20	77.2	20	38	90	85	15	ca. 43	262
16	245	180	160 <sup>3)</sup>	24 <sup>1)</sup> / 45 <sup>2)</sup>	8.4	225	132	1	14	20	77.2	20	38	90	85	15	ca. 43	262
19	330	260	240 <sup>3)</sup>	30 <sup>1)</sup> / 70 <sup>2)</sup>	10.5	305	143	1	16	20	79.8	25	38	90	85	15	ca. 43	344
24	330	260	240 <sup>3)</sup>	34 <sup>1)</sup> / 70 <sup>2)</sup>	10.5	305	143	1	16	20	79.8	25	38	90	85	15	ca. 43	344

Size	h	h <sub>1</sub>	L	L <sub>1</sub>	s	s <sub>max</sub>	M	M <sub>1</sub>	F [N]	α	β
10	134	133	70	52	0.25 <sup>+0.12</sup>	0.7	6xM6	2xM6	ca. 18	ca. 19°	10°
11	134	133	70	52	0.25 <sup>+0.12</sup>	0.7	6xM6	2xM6	ca. 35	ca. 19°	10°
13	164	161	90	83	0.25 <sup>+0.15</sup>	0.9	6xM8	3xM8	ca. 45	ca. 19°	68°
16	164	161	90	83	0.25 <sup>+0.15</sup>	0.9	6xM8	3xM8	ca. 90	ca. 19°	68°
19	215	205	100	92	0.25 <sup>+0.2</sup>	1.1	6xM10	3xM10	ca. 85	ca. 19°	70°
24	215	205	100	92	0.25 <sup>+0.2</sup>	1.1	6xM10	3xM10	ca. 170	ca. 19°	70°

<sup>1)</sup> Min. bore with fitting key JS9 as per DIN 6885, sheet 1  
<sup>2)</sup> Max. bore with fitting key JS9 as per DIN 6885, sheet 1

<sup>3)</sup> Undercut, no centering diameter  
 Supporting keyway over entire length. Shaft ISO fitting h6 (<sup>1)</sup>, <sup>2)</sup>)

## 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

## Dust and firedamp protection type I for DC or single-phase AC

Version	76 26N..B20 – DC
Standard rated voltage	76 26N..B20 – 205V DC
Protection	IP 67
Thermal class	T 4 (acc. to EN 60079-0)
Ambient temperature range	-20°C to +60°C
Rated torque	10 to 270 Nm
Accessories (options)	mounting screws
Note	Specification subject to change without notice. The „General technical information“ and the „Operating instructions“ 76 ..N..B20



### Technical specifications

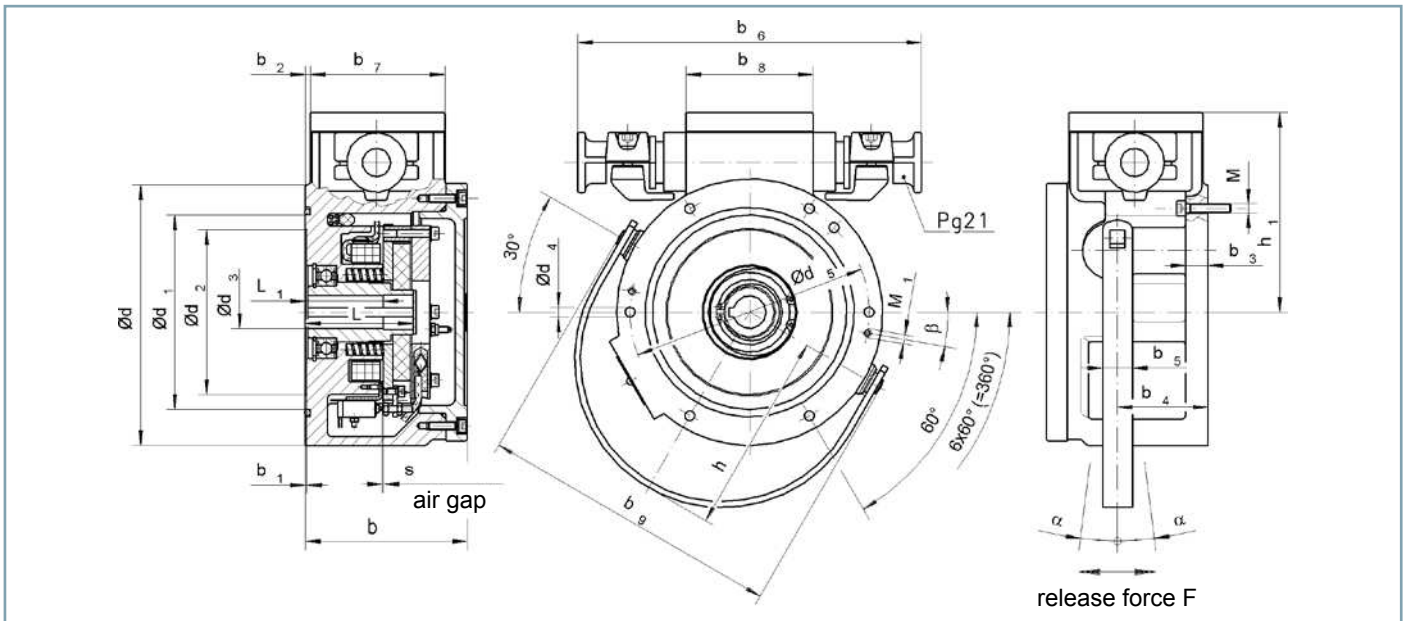
Size	Nominal torque $M_2$ [Nm]	Max. speed $n_{max}$ [min <sup>-1</sup> ]	Max. switching power $P_{max}$ [kJ/h]	Max. switching energy (Z = 1) $W_{max}$ [kJ]	Rated power		Response times		Moment of inertia armature and flange hub $J$ [kgcm <sup>2</sup> ]	Weight $m$ [kg]
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## Dimensions [mm]



Size	d	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> (G7)	d <sub>4</sub>	d <sub>5</sub>	b	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	b <sub>4</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	b <sub>8</sub>	b <sub>9</sub>
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