



WE MAGNETISE THE WORLD

INDUSTRIAL DRIVE SYSTEMS



Vario Line

Spring Pressure Single-Disc Brake



Spring pressure
single-disc
brakes for DC

The VARIO LINE includes spring pressure single-disc brakes for direct current which can be matched to the individual application due to a wide range of variants.

Electromagnetically operated spring pressure brakes generate the braking torque when the current is switched off. The braking effect can be neutralized by means of the electromagnetic force or an additionally mounted hand release.

Fitting dimensions and the grading of the type series of the VARIO LINE are matched to IEC-motors.



Versions

76 431..H00

- Torque range 1 – 600 Nm
- DC
- Adjustable torque

Applications

- Machining equipment
- DC motors
- Material handling vehicles
- Gear motors
- Equipment manufacturing
- Handling technology
- Lifting and conveying technology
- IEC three-phase motors
- Medical engineering
- Paper-making and printing machines
- Wheelchairs
- Textile machines



Certification



Norms

DIN VDE 0580

Version	76 431..H00
Standard rated voltages	24, 102, 178, 205 VDC Other standard rated voltages on request.
Protection class	IP 55 ▪ if installed under motor fan cowl IP 65 ▪ with accessories and if installed under motor fan cowl
Thermal class	F
Rated torques	1 – 600 Nm
Accessories (options)	Friction plate/flange, hand release, mounting screws, protective cover, sealing plug, sealing ring

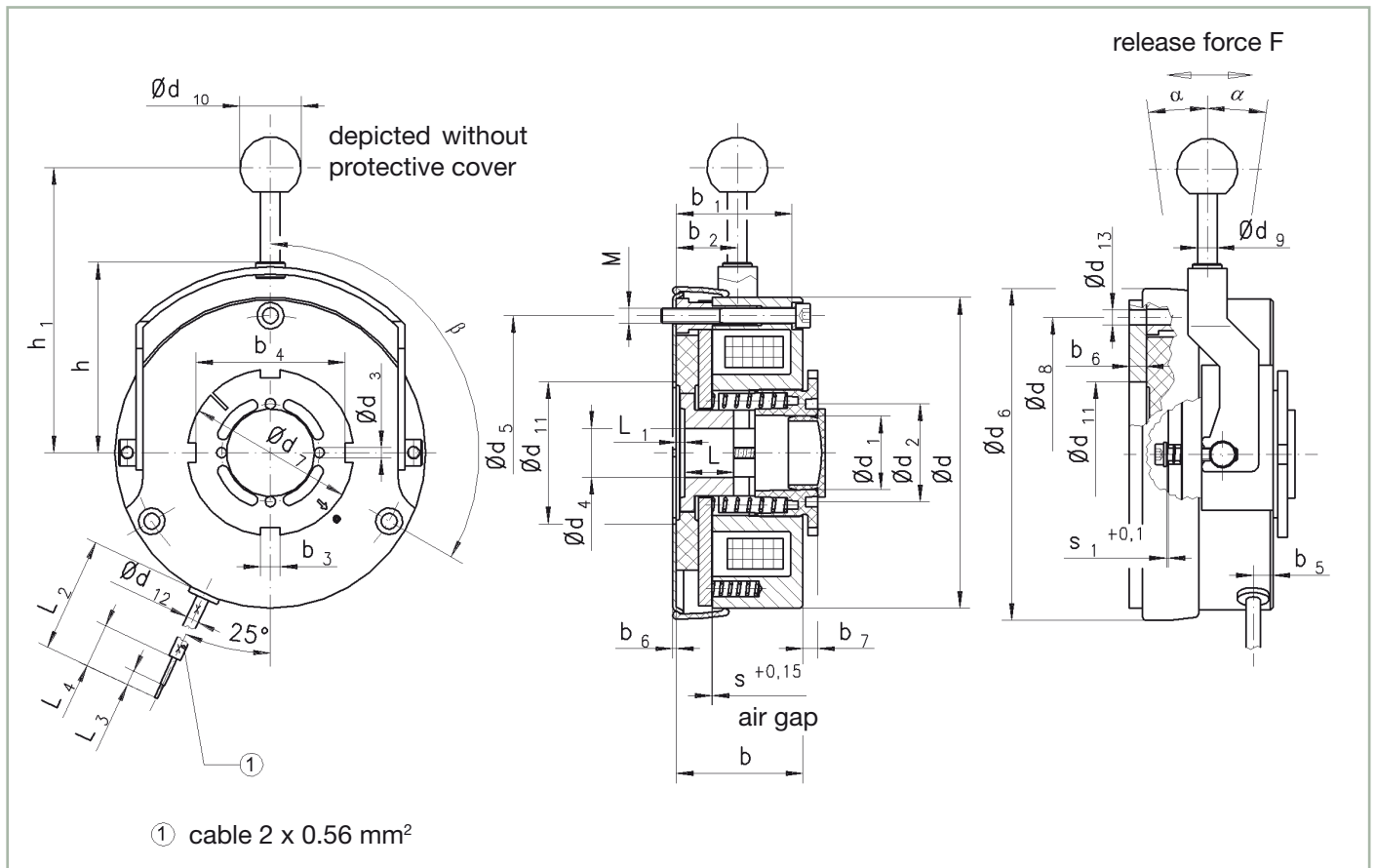
Design subject to change without notice.

Please observe the “General Technical Information on Data Sheets” and the operating instructions 76 431..H00.

Technical Data

Size	Rated torque range (standard) M_2 [Nm]	Max. reachable rated torque with fully screwed in adjustment ring $M_{2,max}$ [Nm]	Max. speed n_{max} [min ⁻¹]	Max. switching power P_{max} [kJ/h]	Max. switching energy (Z = 1) W_{max} [kJ]	Rated power P_N [W]	Response times		Moment of inertia driver and friction disc J [kgcm ²]	Weight m [kg]
							On t_1 [ms]	Off t_2 [ms]		
08	1 – 5	6	10000	200	25	23.5	18	30	0.32	0.61
10	4 – 10	12	3500	320	30	26	20	95	1.2	1.3
11	8 – 20	23	3500	430	41	30	30	80	2	2.8
13	16 – 32	40	3500	650	50	40	45	90	6	3.7
14	30 – 60	65	3500	800	55	53	85	85	8	5.7
16	40 – 80	100	3500	1000	58	55	90	190	16	8.4
19	80 – 150	170	3000	1200	65	80	130	270	38	13.1
24	150 – 240	300	3000	1400	80	110	225	235	108	22
29	280 – 400	600	3000	1600	275	130	115	560	230	36

The maximum switching energy (W_{max}) specified in the table refer to the maximum rated torque (standard).



Size	d	d ₁	d ₂	d ₃	d ₄ (H7)	d ₅	d ₆ (ca.)	d ₇	d ₈	d ₉	d ₁₀	d ₁₁	d ₁₂	d ₁₃	b	b ₁	b ₂	b ₃ ⁴⁾	b ₄ ⁴⁾
08	82	17	26	5	9 ¹⁾ /15 ²⁾	72	85.5	42	64	4	16	3.8	-	-	7	13.7	12	7	36
10	100	24	35	5	11 ¹⁾ /20 ²⁾	90	111	60	-	6	25	44	5.2	-	42	38.5	18	8	53
11	127	30	40	4.2	13 ¹⁾ /23 ²⁾	112	136	68	-	8	25	58	5.2	-	52	47.5	25	8	61
13	147	35	50	5.2	18 ¹⁾ /30 ²⁾	132	159	82	-	8	32	70	5.2	-	55.5	52	22	10	74
14	164	35	50	5.2	18 ¹⁾ /30 ²⁾	145	179	82	-	10	40	61	5.2	-	61.5	55.5	28.5	10	74
16	188	45.5	60	5	25 ¹⁾ /40 ²⁾	170	203	102	-	10	40	61	5.2	-	70	65	25	10	94
19	215	51	75	6	30 ¹⁾ /45 ²⁾	196	230	116	100	10	40	77	5.2	9 6x60°	83	70.5	29	10	108
24	252	69.5	124	10.1	35 ¹⁾ /60 ²⁾	230	268	156	120	14	40	90	5.2	11 6x60°	97	89	36	-	-
29	302	89	124	10	40 ¹⁾ /70 ²⁾	278	321	156	278	14	40	120	5.2	11 6x60°	107	100	57.5	-	-

Size	b ₅	b ₆	b ₇	b ₈	h	h ₁	L	L ₁	L ₂	L ₃	L ₄	s	s _{max} ³⁾	s ₁	M	F ⁵⁾ [N]	α	β
08	14	1	3-6	91.5	51	90	18	1.8	400	6	30	0.2	0.5	-	3xM4	30	ca. 2°	-
10	7	1.5	3.5-6.5	-	62	115	20	2.5	400	6	30	0.2	0.8	1	3xM5	25	10°	3x120°
11	8	1.5	4.0-8.0	-	78	125	20	3.5	400	6	30	0.2	0.95	1	3xM6	30	10°	3x120°
13	8	1.5	5.0-10.0	-	86	140	25	3	400	6	30	0.25	0.8	1.25	3xM6	60	10°	3x120°
14	8	1.5	5.0-10.0	-	96.5	152.5	30	3	400	6	30	0.3	0.9	1.5	3xM8	110	10°	3x120°
16	8	1.5	5.5-11.5	-	110	175	30	3	600	6	30	0.35	1.2	1.5	3xM8	130	10°	3x120°
19	13	11	6.0-14.5	-	134	210	35	4	600	6	30	0.35	1.5	1.7	6xM8	200	10°	6x60°
24	17	11	7.0-15	-	148	230	40	5	750	6	30	0.4	1.5	2	6xM10	270	10°	6x60°
29	13.5	12.5	7.0-13.5	-	175	445	50	4.5	700	6	30	0.45	1.5	2.5	6xM10	200	10°	6x60°

- 1) Min. bore with feather key groove JS9 acc. DIN 6885, sheet 1.
- 2) Max. bore with feather key groove JS9 acc. DIN 6885, sheet 1.
Feather key supporting on total length. Shaft ISO fitting k6 ^(1), 2)
- 3) Max. air gap relating to max. rated torque (standard) up to replacement of friction disc.
- 4) Not with sizes 24 and 29.
- 5) Release force F (approx.) relating to max. rated torque (standard).
Hand lifting only possible against the mounting surface.



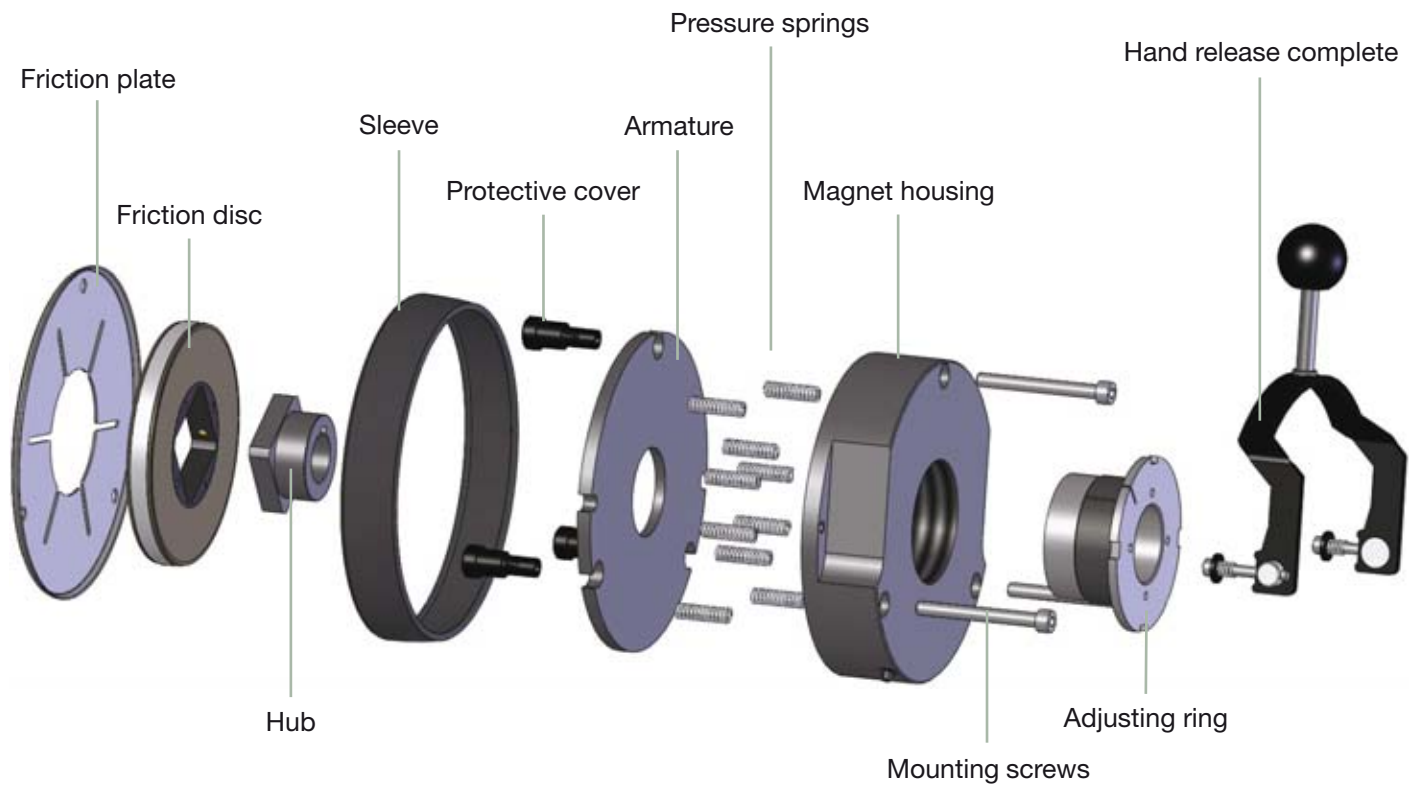
Accessories

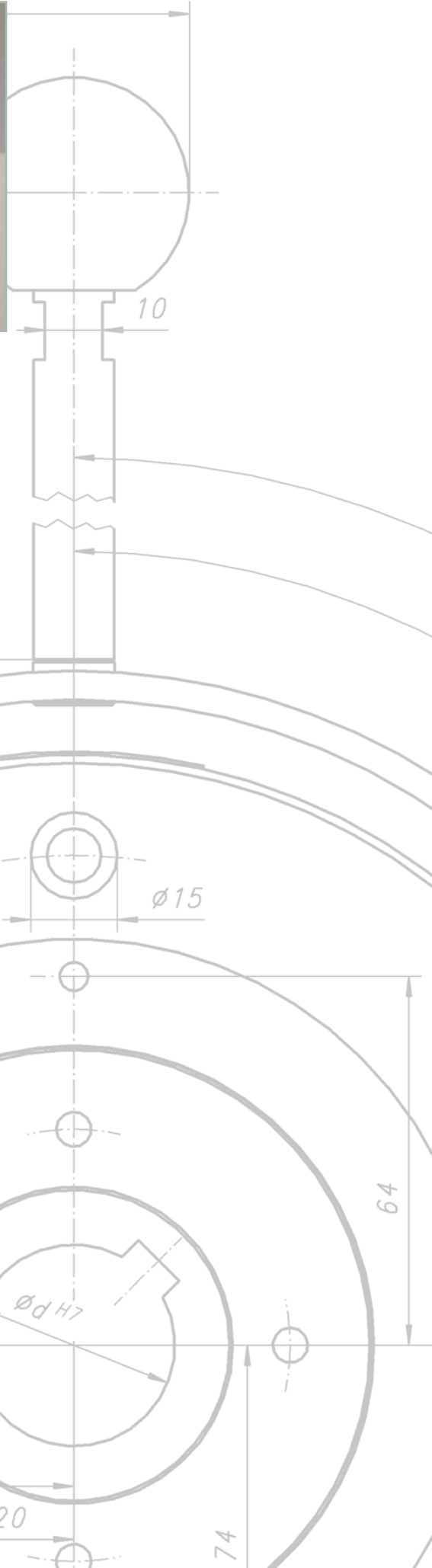
Size	Friction plate/ flange ⁶⁾	Hand release	Mounting screws				Protective cover ⁶⁾	Sealing plug	Sealing ring	
			Screw	Tightening torque	Order no.	Screws per brake			Order no.	Rings per brake
08	76 43108A0004	76 43108A01940	DIN 7984-M4 x 25-8.8	3 Nm	304 510	3	76 43108A00005 (without hand release) 76 43108A01005 (with hand release)	412 817	326 000	3
10	76 43110H00004	76 43110H00940	ISO 4762 - M5 x 45	6 Nm	304 065	3	76 43110H00005	412 859	326 005	3
11	76 43111H00004	76 43111H00940	ISO 4762 - M6 x 55	10 Nm	304 051	3	76 43111H00005	412 842	326 006	3
13	76 43113H00004	76 43113H00940	ISO 4762 - M6 x 60	10 Nm	304 052	3	76 43113H00005	412 843	326 006	3
14	76 43114H00004	76 43114H00940	ISO 4762 - M8 x 70	25 Nm	304 078	3	71 10116A3013	412 843	326 007	3
16	76 43116H00004	76 43116H00940	ISO 4762 - M8 x 75	25 Nm	304 079	3	76 43116H00005	412 860	326 007	3
19	76 43119H00024	76 43119H00940	ISO 4762 - M8 x 80 ⁷⁾	25 Nm	304 080	6	76 43119H00005	412 841	326 007	6
24	76 43124H00024	76 43124H00940	ISO 4762 - M10 x 100 ⁷⁾	40 Nm	304 117	6	76 43124H00005	412 885	326 008	6
29	76 43129H00024	76 43129H00940	ISO 4762 - M10 x 110 ⁷⁾	40 Nm	304 118	6	76 43129H00005	-	326 008	6

⁶⁾ Sizes 10 to 16: friction plate, sizes 19 to 29: flange.

⁷⁾ Screw length without use of flange.

⁸⁾ Friction plate resp. flange are required.





INDIVIDUAL CUSTOMER SOLUTIONS

Customer-Specific Applications

- Based on existing standard platforms
- From minor to major adaptations
- According to specific customer requirements

Customized Solutions and Applications

- Comprehensive design of new devices according to individual customer requirements

Complete Solutions

- Based on the individual solutions mentioned above
- Our brakes and clutches in combination with our electronic accessories



GIVE US A CALL!

OUR CUSTOMER SUPPORT WILL BE HAPPY TO ASSIST YOU.

Extended Accessories



Series line	LEAN COLLECTION	UNIVERSAL COLLECTION
Features	<ul style="list-style-type: none"> extremely small size cost-effective manifold mounting and connecting options 	<ul style="list-style-type: none"> all types of rectifiers and switches can be combined in one housing manifold mounting and connecting options
Types	32 0710.B.. 32 0730.B.. 32 0731.B..	32 07.2.B.. 32 17.2.B.. 32 4730.B.. 32 57303B.. 32 67.04B.. 32 77303B..
Nominal input voltage VAC	max. 500 V	max. 500 (575) V
Max. output current ADC	half wave: 1.0 full wave: 2.0	half wave: 0.7 to 2.0 full wave: 0.7 to 2.0 overexcitation: 1.4/0.7 to 3.0/1.5
Overexcitation	no	depending on model 2:1
High-speed switching-off	depending on type external	external or internal with voltage or current detection
Standards	CE EN60529 HD625.1 S1 NSRL IP 00	CE EN60529 HD625.1 S1 NSRL, EMVRL IP 00
Options and accessories	<ul style="list-style-type: none"> mounting rail clip adhesive pad leads for motor connection M4 	<ul style="list-style-type: none"> mounting rail clip adhesive pad, mounting clip leads for motor connection M4



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