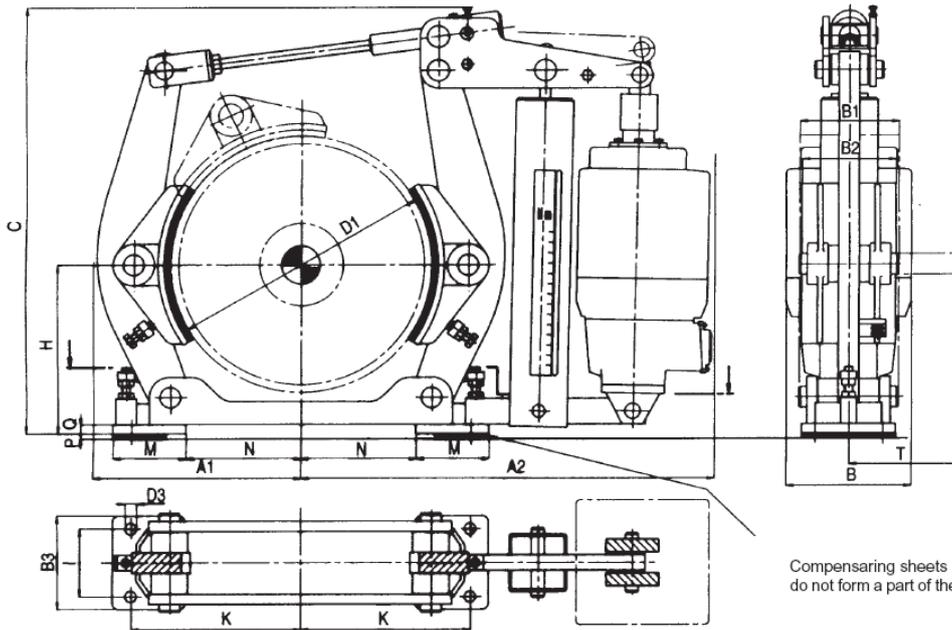


Appr.: Goedk.:  
 Prep.: HH  
 Voorb.:

## Drum Brakes EB according to DIN 15435



Compensating sheets do not form a part of the delivery

right hand design

### Technical Datas:<sup>3)</sup>

All data subject to change without notice

D1	Thruster-size	M <sub>Br</sub> [Nm] <sup>1)4)5)</sup>		A1 <sub>max</sub>	A2 <sub>max</sub>	B <sub>max</sub>	C <sub>max</sub>	B1	B2	B3	D3	H	I	K	M	N	P	Q	T	Weight ca. kg <sup>2)</sup>																		
		μ = 0,3	μ = 0,4																																			
200	23/5	75- 230	100- 300	180	500	162	470	75	70	80	14	155	55	145	90	85	5	10	105	24																		
	30/5	75- 320	100- 420																		470																	
	50/6	120- 600	160- 800																																			
250	23/5	75- 230	100- 300	207	535	162	485	95	90	100	18	185	65	180	100	105	5	13	126	31																		
	30/5	75- 325	100- 425																		560																	
	50/6	120- 600	160- 800																			195																
	80/6	150- 710	200- 940																		610		195	605	118	110	110	18	225	80	220	110	135	5	13	151	48	
315	23/5	90- 285	120- 375	260	610	162	610	118	110	110	18	225	80	220	110	135	5	13	151	50																		
	30/5	90- 400	120- 525																		610																	
	50/6	150- 710	200- 940																			610																
	80/6	150-1200	200- 1600																		610		205	605	110	110	110	18	225	80	220	110	135	5	13	151	50	
	400	23/5	115- 285																		150- 375	322	675	162	670	150	140	140	22	270	100	270	120	180	10	18	190	65
		30/5	115- 400																		150- 525																	
50/6		225- 710	300- 940	675																																		
80/6		225-1220	300- 1610		675	205	660	140	140	140	22	270	100	270	120	180	10	18	190	65																		
121/6		375-1950	500- 2580	730	240	780	150	140	140	22	270	100	270	120	180	10	18	190	84																			
201/6		570-3000	750- 4000	730	250	780	150	140	140	22	270	100	270	120	180	10	18	190	84																			
500	50/6	300- 940	400- 1250	395	800	195	830	190	180	180	22	330	130	325	140	220	10	18	235	120																		
	80/6	300-1580	400- 2080																		790																	
	121/6	375-2420	500- 3200																			790																
	201/6	570-3800	750- 5000																		790		250	190	180	180	22	330	130	325	140	220	10	18	235	120		
630	121/6	450-2420	600- 3200	470	870	250	1010	236	225	220	27	410	170	400	160	285	10	22	285	195																		
	201/6	560-3800	750- 5000																		750- 7600																	
	301/6	560-5750	750- 7600																																			
710	121/6	560-2730	750- 3600	530	955	265	1100	265	255	240	27	460	190	450	180	320	10	22	320	234																		
	201/6	750-4250	1000- 5600																		1000- 8800																	
	301/6	750-6500	1000- 8800																			1000-10000																
	301/12	750-7600	1000-10000																																			

<sup>1)</sup> Value lower than the minimum stated on request  
<sup>2)</sup> Without thruster  
<sup>3)</sup> Dimensions in mm  
<sup>4)</sup> The various operating conditions like circumferential (sliding) speed, contact pressure, thermal load, material of the brake drum and environmental influences can change the friction value. It should be taken into consideration when calculating a brake.  
<sup>5)</sup> Recommendation: necessary braking torque between 30% and 80% of the maximum value

Repl.:  
 Verv.:

## Operating notes

The **automatic wear adjustment** is mounted in a dust-protected enclosure and ensures

- a constant braking torque,
- a constant reserve stroke of the releasing device, and
- together with the shoe clamp springs and the synchronous releasing mechanism (or spring-loaded stops), essentially maintenance-free operation of the brake without adjustment work over the full wear rate of the brake linings



Automatic wear adjustment AWA

The drum brakes of standard series RT and EB are designed for upright installation and side mounted thrusters. The basic version uses electro-hydraulic releasing devices according to DIN 15430 (Elhy/Eldro), but any other common releasing devices can also be used. From this the resulting application of the **RT and EB series** are illustrated in **overview sheets T1 to T7**. Specific dimension and data sheets are available by SHB on request.

To ensure the proper and safe function the drum brakes according to DIN 15435 must be **calculated and designed** according to DIN 15434, part 1 and **used and monitored in operation** according to DIN 15434, part 2.

The selection of the suitable brake can be provided by SHB by means of a computer program on request. The required input data should be provided by the customer on the questionnaire (available for download in pdf format). In case of using **holding brakes** it is enough to calculate the required braking torque only. In case of using **stop brakes** thermal calculation, calculation of the braking time and the stopping distance are necessary in addition, as may have to be calculated the brake lining wear. Besides, the permissible sliding (circumferential) speed at the brake linings as specified in the supplier's data sheet must not be exceeded. Particularly when using **stop brakes and emergency stop brakes** the **overspeed** of the brake drum must be taken into consideration which results from the load effect during the brake engage time (dead time of the releasing device + applying time of the brake). The increased sliding speed as a result of overspeed during lowering after **emergency stop** must be verified during TÜF testing under test load particularly if the brake is mounted to a hoisting gear of a crane with electric motor control and low inertia of the drive.

The **braking torque values** in our documents represent empirical friction values between  $\mu = 0.3$  and  $0.4$  which are valid only for the following **operating conditions**:

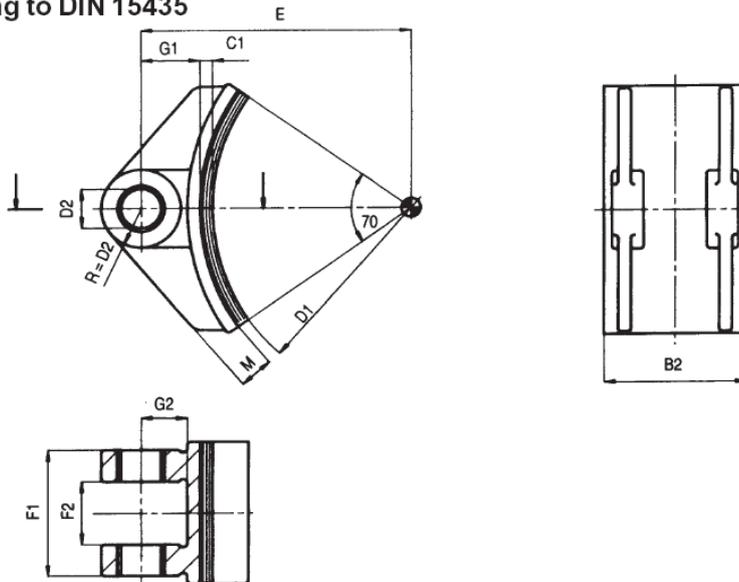
- sufficient calculation of the brake by the user;
- mounted brake drum according to DIN 15431 and DIN 15437; clean, grease-free brake drum surface;
- brake drum material GG 26, GGG 40, GS 52 or St 52, depending on proposed operation;
- seated brake linings with full contact pattern (at least 70 % surface);
- rubbing speed of max. 30 m/s at full contact pressure;
- max. 5 s braking time;
- brake drum steady-state temperature max. 180 °C

The above maximum stress data must not occur simultaneously !

**Other operating conditions can change the friction value of the brake linings and as a result of this also the braking torque!**

## Brake shoes and Brake linings

according to DIN 15435



Dimensions in mm

All data subject to change without notice

Brake drum Ø D 1	B 2	C 1	D 2 D 10	E	F 1 - 0,2	F 2 + 0,2	G 1	G 2	M max.	weight app. [kg]	
										without Brake lining	with
200	70	8	20	140	65	35	32	24	17	0,5	0,7
250	90	8	25	170	80	40	37	29	22	0,7	1,0
315	110	10	30	212	100	50	44,5	34,5	25	1,5	2,1
400	140	10	35	260	125	62	50	40	30	2,2	3,1
500	180	12	40	320	160	80	58	46	33	4,0	6,0
630	225	12	45	390	200	100	63	51	38	6,0	8,9
710	255	15	50	440	224	112	70	56	40	8,5	12,8

### Brake shoes without lining:

Form A1C: Brake shoe made from cast aluminium with steel bushes, for bonding the brake linings (standard version)

- Brake shoes with other brake lining qualities are available on request

Form A2C: Brake shoe made from cast aluminium with steel bushes and rivet holes for riveting the brake lining

- Brake lining data sheet available on request

### Brake shoes with lining:

Version 1: Brake shoe form A1C with bonded brake lining

### Order example:

10 pieces brake shoes 400 DIN 15435 with brake lining type COSID 466

Version 2: Brake shoe form A2C with riveted brake lining

Version 3: Brake shoe form A2C with bonded and riveted brake lining