

HITEX BRAKES



HSB DC BRAKES

HITEX
POWER TRANSMISSION COMPONENTS



DC BRAKES



Specifications

- Torque range
4 – 400 Nm
- Available in 24, 96 and
190 VDC
- Modular system
- Manual Release
- Non-asbestos
friction linings
- Backlash-free
- Maintenance free

Technical data

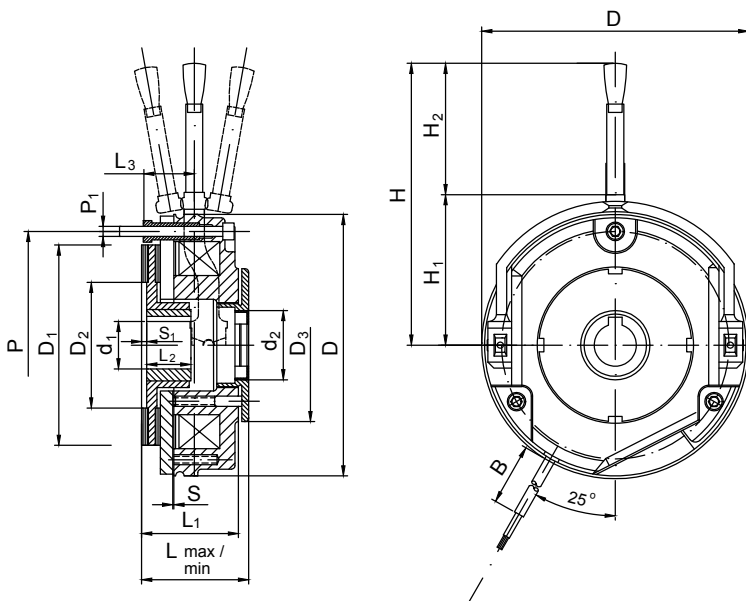
Size	Input power $P_{20^\circ\text{C}}$ (W)	Rated torque T_{BN} (Nm)	Reduction of rated torque at specified speed to % of max. speed			Max. speed n_{Bmax} (1/min)	Operating times (ms)				Mass moment of inertia J (kg cm)	Weight m (kg)
			1500 (1/min)	3000 (1/min)	Max.		Connection on DC side		Disconnection			
							t_{11}	t_{12}	t_1	t_2		
6	20	4	87%	80%	65%	12.400	7	10	17	35	0,15	1,3
8	25	8	85%	78%	66%	10.100	10	25	35	65	0,61	2,2
10	30	16	83%	76%	66%	8.300	10	30	40	90	2	3,8
12	40	32	81%	74%	66%	6.700	10	40	50	120	4,5	5,8
14	50	60	80%	73%	67%	6.000	15	50	65	150	6,3	8,3
16	76	100	79%	72%	66%	5.300	20	70	90	180	15	11,7
18	85	150	77%	70%	66%	4.400	30	80	110	300	29	18,2
20	100	260	75%	68%	66%	3.700	50	150	200	400	73	27,6
25	110	400	73%	66%	66%	3.000	70	200	270	500	200	42,6

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Size	Rated torque T_{BN} (Nm)	Finish bore d_1 (H7)			Dimensions (mm)									
		Min.	Max.	Std.	d_2	D	D_1	D_2	D_3	Lmin	L_{max}	L_1	L_2	L_3
6	4	10	16	10/11/12/14/15	22	87	60	20/31*	52	39,5	41,5	36,3	18	15,8
8	8	10	24	11/12/14/15/19/20	26	105	76,5	30/41*	60	47	48,5	42,8	20	16,3
10	16	10	24	11/12/14/15/19/20	33	130	95	40	68	52,5	56	48,4	20	27,4
12	32	14	28	20/24/25	40	150	115	45	82	59	64,5	54,9	25	29,4
14	60	14	34	20/24/25/28/30/32	48	165	124	55	92	71,5	77	66,3	30	33,8
16	100	15	38	25/28/30/32/34/35	56	190	149	65	102	77,5	82,5	72,5	30	37
18	150	20	45	30/35/38/40/42	60	217	174	75	116	89	98	83,1	35	41,6
20	260	25	50	35/40/42/45/50	73,1	254	206	90	135	104,6	114	97,6	40	48,1
25	400	30	70	45/48/50/52/55/60	95,1	302	254	120	165	115,7	124	106,7	50	57,7

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Size	Dimensions (mm)						B	P	P_1
	S	S_1	H	H_1	H_2				
6	0,2	1,00	87	59	28	410	72	3 x M4	
8	0,2	1,50	115	67	48				
10	0,2	2,00	113	80	33				
12	0,3	2,00	142	90	52				
14	0,3	2,00	165	103	62	610	145	3 x M8	
16	0,3	2,25	212,5	118	94,5				
18	0,4	2,75	243,5	124	119,5				
20	0,4	3,50	285	146	139				
25	0,5	4,50	409	170	239				



Brake selection

Proper dimensioning of the HSB 458 brake should be done to ensure that the permissible load never is exceeded in any operating condition.

The largest possible required braking torque (T_N) should be used as a basis. Verify the required braking torque of the application by the following formula:

$$T_N \text{ (Nm)} = 9550 \cdot \frac{P \text{ (kW)}}{n \text{ (rpm)}}$$

The rated torque of the brake (T_{BN}) should be equal or higher to the application required braking torque (T_N) taking a safety factor (S_B) in consideration.

$$T_{BN} \geq T_N \cdot S_B$$

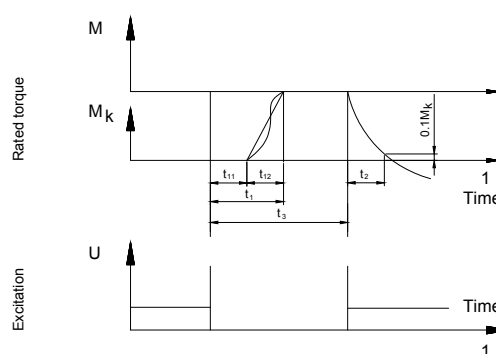
In event of extreme or critical working conditions please contact the technical department of the manufacturer.

Servicefactors

Guidelines for servicefactor S_B	
Operating factor	S_B
Low masses, equal loading & non - intermittent operation	2,0
Low masses, light shock load & intermittent operation	2,5
Medium masses, light shock load & intermittent operation	3,0
Large masses, light shock load & intermittent operation	3,0
Compressor drive	5 - 6
Non overhauling Loads	2 - 3
Overhauling Loads	3 - 4

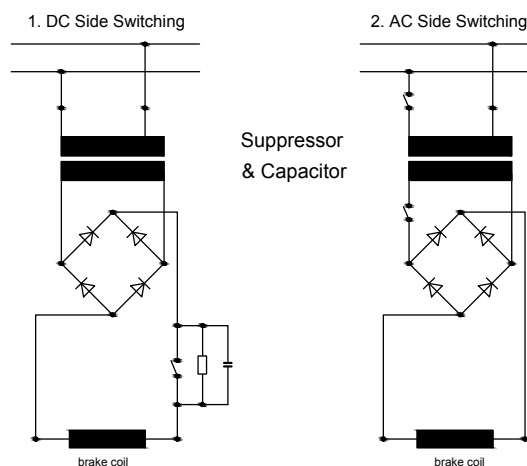
Operating Times

The operating times are guide values applicable for DC switching with nominal air gap, coil at nominal temperature and standard rated torque. Torque time ratings are dependent on excitation voltage. The engagement time (t_1) is prolonged by approximately factor 10 for AC switching. The disengagement time (t_2) is the same for AC and DC switching.



t11 = Delay time when connecting
t12 = Rise time of braking torque

t1 = Engagement time
t2 = Disengagement time
t3 = Slipping time

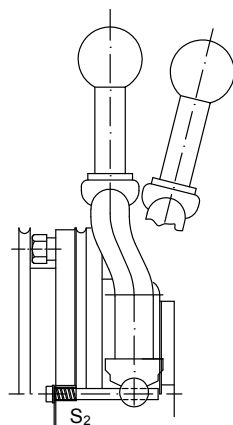


Accessories

Hand release

The hand release is used to release the brake by hand in case of continuous power failure. The hand release automatically springs back to its original position and brake will immediately revert to its safe action. The release requires an air gap S_2 in order to function correctly, which is pre-set by the factory prior to delivery.

Size	S_2 (mm)
6	1,0
8	1,0
10	1,0
12	1,0
14	1,0
16	1,5
18	1,5
20	1,5
25	2,0



Microswitch

The HSB 458 brake can be supplied with a microswitch for monitoring the air gap and wear. With the air gap monitoring, the motor does not start before the brake has been released. With this Set-up all possible faults are monitored. When checking the wear, no current will be applied to the brake and motor if the air gap is too large. The users must provide the corresponding electrical connection. Circuit diagram can be made available on request.

PRODUCT GROUPS



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Brakes



Collars

Skilled to get your ideas fulfilled

HITEX is a range of power transmission components dedicated to add value to all OEM industrial creations.

HITEX is produced using the latest technology & rich experience of its factories to provide innovative and cost-effective engineered solutions.

Honored to have the opportunity to serve OEM customers worldwide, HITEX provides prompt and reliable deliveries to meet all aftersales requirements.

Our best technology is human

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The **Powerful** Solution

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