

## BRAKE MOTORS: PERFORMANCE DATA

	MOTOR TYPE	RATED VALUES					STARTING VALUES							BRAKE Max Torque Nm					Sound Pressure Level dBA *
		OUTPUT		SPEED	CURRENT	MOMENT	CURRENT		TORQUE		Mk/Mn	% $\eta$			Cos $\psi$	J			
		HP	kW	rpm	A	Nm	IA	IN	MA	MN		3/4	4/4		4/4	kgm2	kg		
							⌋	⌋	⌋	⌋									
2 pole 3000 rpm																			
230/400 V	QB 63M2A	1/4	0,18	2800	0,51	0,62	4,20	-	2,3	-	2,4	63	64	0,80	4,5	0,00017	6,0	52	
	QB 63M2B	1/3	0,25	2800	0,66	0,86	4,20	-	2,2	-	2,3	66	67	0,82	4,5	0,00022	7,0	52	
	QB 71M2A	1/2	0,37	2800	0,93	1,27	4,30	-	2,0	-	2,4	67	68	0,84	8	0,00028	8,5	54	
	QB 71M2B	3/4	0,55	2820	1,32	1,87	5,00	-	2,2	-	2,5	69	71	0,85	8	0,00036	9,5	54	
	QB 80M2A	1,0	0,75	2840	1,7	2,53	5,20	-	2,2	-	2,6	72	74	0,86	12	0,00088	12,5	58	
	QB 80M2B	1,5	1,1	2850	2,4	3,69	6,00	-	2,6	-	2,9	75	77,3	0,86	12	0,00109	13,5	58	
	QB 90S2A	2	1,5	2860	3,2	5,01	6,50	-	2,4	-	2,9	78	79	0,86	16	0,00130	18	62	
	QB 90L2A	3	2,2	2860	4,5	7,35	7,00	-	2,7	-	3,3	80	81	0,87	16	0,00164	20	62	
	QB 100L2A	4	3	2890	6,0	9,91	7,60	-	3,0	-	3,6	82	83,0	0,88	35	0,00243	27	65	
400/690 V	QB 112M2A	5,5	4	2890	7,5	13,21	2,00	6,3	0,75	2,8	3,2	84	85,3	0,90	60	0,00399	35	67	
4 pole 1500 rpm																			
230/400 V	QB 63M4A	1/6	0,12	1365	0,50	0,84	2,8	-	2,0	-	2,3	53	56	0,62	4,5	0,00020	6,0	41	
	QB 63M4B	1/4	0,18	1380	0,70	1,25	3,2	-	2,2	-	2,4	57	60	0,62	4,5	0,00025	6,5	41	
	QB 71M4A	1/3	0,25	1390	0,80	1,72	3,5	-	2,2	-	2,4	63	65	0,69	8	0,00072	8,5	45	
	QB 71M4B	1/2	0,37	1390	1,12	2,55	4,0	-	2,3	-	2,6	68	69	0,69	8	0,00096	9,5	45	
	QB 80M4A	3/4	0,55	1400	1,50	3,76	4,0	-	2,1	-	2,3	71	72	0,74	12	0,00168	12,5	49	
	QB 80M4B	1,0	0,75	1400	1,96	5,12	4,2	-	2,1	-	2,2	73	74	0,75	12	0,00206	13,5	49	
	QB 90S4A	1,5	1,1	1410	2,70	7,45	5,4	-	2,5	-	3,0	77	77,5	0,76	16	0,00245	18	54	
	QB 90L4A	2,0	1,5	1420	3,50	10,09	5,5	-	2,5	-	3,1	80	80	0,77	16	0,00324	20	54	
	QB 100L4A	3,0	2,2	1430	4,8	14,69	5,8	-	2,8	-	3,1	82	82	0,80	35	0,00400	27	56	
	QB 100L4B	4,0	3,0	1425	6,5	20,10	5,9	-	2,9	-	3,2	82	83	0,80	35	0,00474	30	56	
400/690 V	QB 112M4B	5,5	4,0	1445	8,5	26,44	1,9	5,7	0,69	2,6	3,0	84	85	0,80	60	0,00938	39	58	
6 pole 1000 rpm																			
230/400 V	QB 71M6A	1/4	0,18	900	0,78	1,91	3,0	-	2,0	-	2,4	55	58	0,57	8	0,00068	8,5	42	
	QB 71M6B	1/3	0,25	910	0,90	2,63	3,1	-	2,0	-	2,4	61	63	0,64	8	0,00090	9,5	42	
	QB	1/2	0,37	920	1,25	3,84	3,3	-	2,1	-	2,4	65	67	0,64	12	0,00160	12,5	49	

	80M6A																		
	QB 80M6B	3/4	0,55	920	1,80	5,71	3,2	-	2,1	-	2,5	68	70	0,63	12	0,00196	13,5	49	
	QB 90S6A	1,0	0,75	925	2,1	7,74	3,8	-	2,0	-	2,2	70	71	0,73	16	0,00257	18	51	
	QB 90L6B	1,5	1,10	930	3,0	11,29	4,2	-	2,2	-	2,4	72	73	0,72	16	0,00330	20	51	
	QB 100L6A	2,0	1,50	935	4,1	15,32	4,0	-	2,0	-	2,2	73	74	0,71	35	0,00465	28	53	
	QB 112M6A	3,0	2,20	950	5,4	22,11	4,7	-	2,0	-	2,5	80	80	0,74	60	0,00921	38	58	
8 pole 750 rpm																			
230/400 V	QB 80M8A	1/4	0,18	650	0,90	2,64	2,2	-	1,5	-	1,7	52	54	0,53	12	0,00168	12,5	44	
	QB 80M8B	1/3	0,25	675	1,15	3,54	2,2	-	1,5	-	1,7	55	57	0,55	12	0,00205	14	44	
	QB 90S8A	1/2	0,37	695	1,50	5,08	2,9	-	1,9	-	2,3	60	62	0,57	16	0,00242	18	49	
	QB 90L8A	3/4	0,55	690	2,00	7,61	3,0	-	1,9	-	2,2	64	65	0,61	16	0,00322	20	49	
	QB 100L8A	1,0	0,75	695	2,6	10,30	3,6	-	1,8	-	2,3	70	70,5	0,59	35	0,00398	27	49	
	QB 100L8B	1,5	1,10	690	3,4	15,22	3,6	-	1,8	-	2,2	73	73	0,64	35	0,00471	29	49	
	QB 112M8A	2	1,5	700	4,50	20,46	3,7	-	1,9	-	2,3	74	74	0,65	60	0,00933	39	54	

\* The 2 and 4 pole in the 1,1 kW to 55 kW output range correspond with the EU "EFF2" efficiency classification.

\* The Sound Pressure Level measurements are taken 1 meter away from the motor.

\* Tolerance + 3 dBA

# BRAKE MOTOR - QB TYPE

## TECHNICAL DOCUMENTATION

Mechanical and electrical properties are the same as QS type motors.

Non-drive endshields are made of cast-iron.

Drive endshields are made of aluminium.

### Brake Specifications

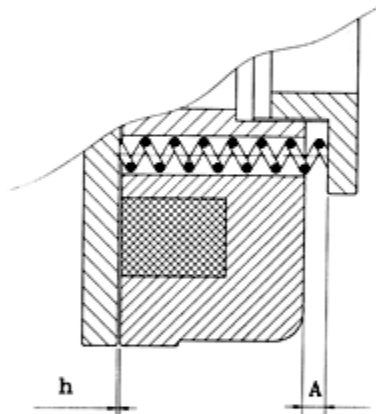
DC electromagnetic brakes with a safety-design are used in brake motors. Different brake voltages are available upon request.

### Working Principle

When the supply fails, the springs make the armature plate press the brake disk and then motor automatically starts braking. When the brake being supplied, electromagnet pulls the armature plate then both the brake-disk and motor shaft are set free.

### Brake Disk

Asbestos-free brake material is used with long-life friction rings.



### Air-Gap

Ideal air-gap values "h" are given in the table on the right-hand side. The maximum acceptable air-gap value can be 0,7 mm. If this value exceeded, the brake's performance will vary.

### Switching Times

The switching times are given in the table. These values are subject to change according to load characteristics.

### Rectifier Bridge

Half wave rectifier is used as standard in motors. By using fast type rectifier, it is possible to get fast switch on times which is shown on the table.

The 24V DC brake motors are supplied without rectifier.

### Special Constructions

The following special construction class features are possible upon request;

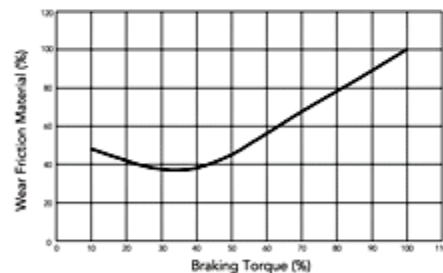
- Special shaft end
- Special flanges
- Different type bearings
- Fixed bearing
- Different voltages and 60 Hz frequency
- Condensation drainage
- Hand release
- Special paint or other colors
- AC or DC type electromagnetic brake



### Braking Torque

Braking torque can be adjusted by ring. In the table shown below, you will find the distance "A" in order to obtain the braking torque requested. The variation in the wear of friction material which is subject to change in braking torque is given below.

Type	Distance between Adjusting-ring and Electromagnet: "A" (in mm)									
	9	8	7	6	5	4	3	2	1	"A"
QB 63	-	-	-	0,3	0,1	1,7	2,4	3,1	3,8	4,5
QB 71	-	-	-	-	0,8	2,2	3,7	5,1	6,6	8
QB 80	-	-	-	-	0,1	3,2	5,4	7,6	9,8	12
QB 90	-	-	-	-	-	1,6	5,2	8,8	12,4	16
QB 100	3,5	7,0	14,5	14,0	17,5	21,0	24,5	28,0	31,5	35
QB 112	-	4,0	11,0	18,0	25,0	32,0	39,0	46,0	53,0	60
Braking Torque Value (Nm)										Max. Torque (Nm)



Type	QB63	QB71	QB80	QB90	QB100	QB112
Ideal Air-Gap (mm)	0,2	0,2	0,2	0,2	0,3	0,3

Type	Normal Switch-off time ms	Normal Switch-on time ms	Fast Switch-on time ms
QB63	10	45	20
QB71	15	50	30
QB80	15	55	30
QB90	15	65	40
QB100	20	75	45
QB112	25	180	85