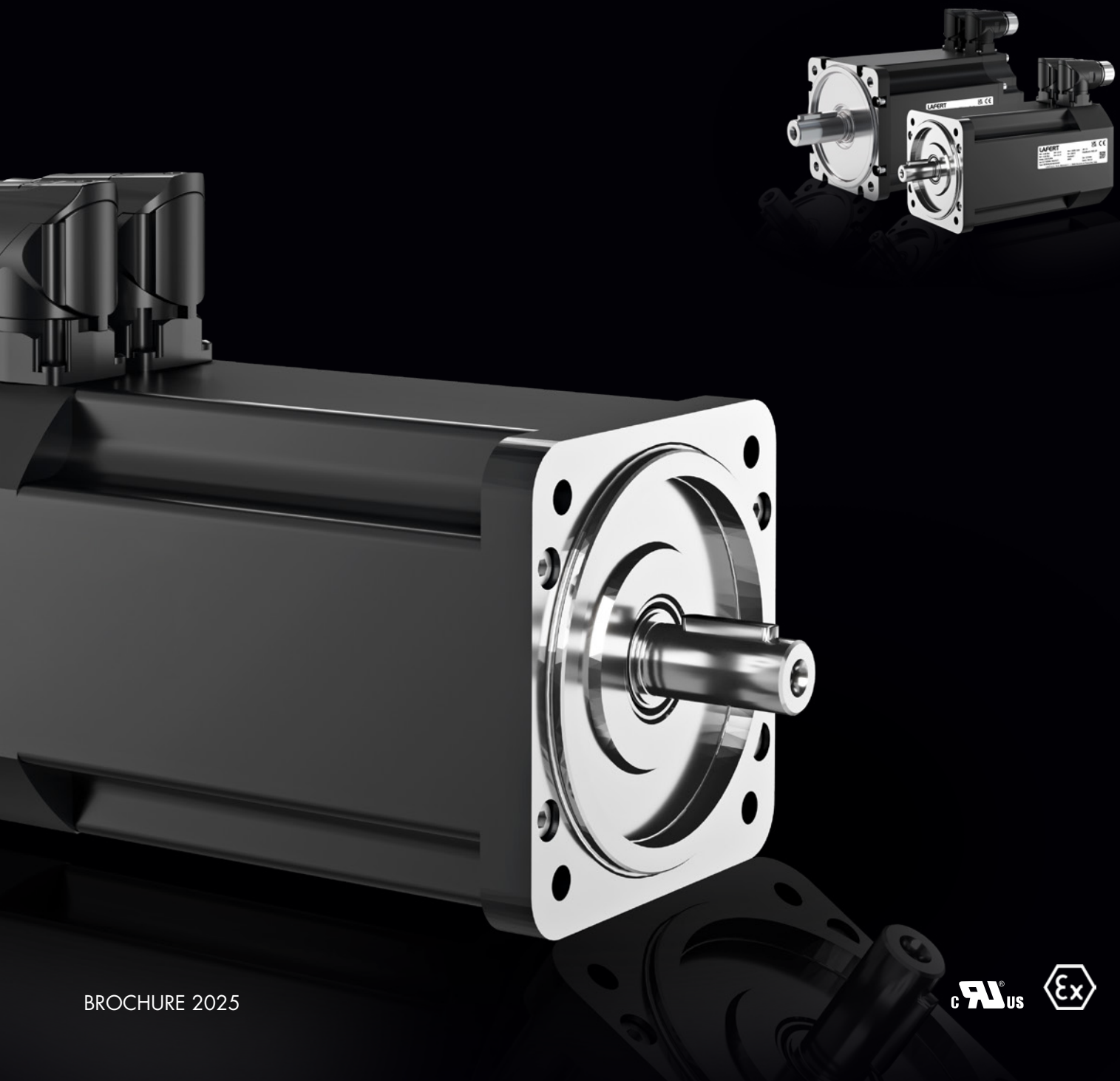
LAFERTGROUP
Member of Sumitomo Drive Technologies

SERVO MOTORS

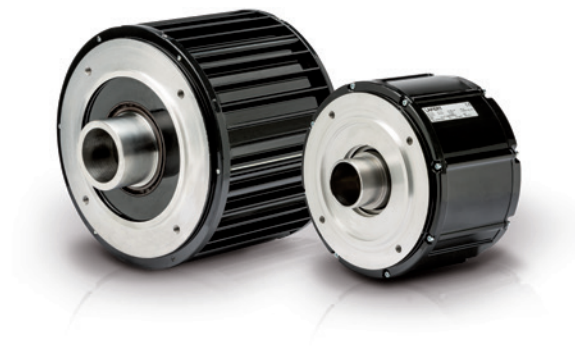
BRUSHLESS SERVO MOTORS
TORQUE MOTORS



BROCHURE 2025

THE RANGE

Lafert offers a wide range of permanent magnet synchronous servo motors and torque motors. The Lafert range of servo motors grants precise engineering and superior performance.
Thanks to its whole integrated manufacturing process, Lafert can supply standard and tailor-made products for **Industrial Automation** giving **excellent flexibility** and **cost efficiency**.



TORQUE MOTORS

STANDARD FEATURES

- Torque range 10 to 510 Nm and rated speed up to 1000 rpm
- High torque at low speed; low noise level
- High overload capability
- Energy Efficient through the whole speed range
- Different coupling shaft available: standard key, blind hole, hollow shaft
- Water cooling options available for medium and large size motors
- Optimal for machines' strong integration

OPTIONAL FEATURES

- cURus certification
- Customised flange and special shaft
- Other (type of encoder and connector, thermal sensor, ...)

TARGET APPLICATIONS

- Material Handling
- Machine tools
- Textile
- Mould injection/plastic

Type	Square flange [mm]	Torque [Nm]	Rated speed [rpm]	Centring diameter ø - CD [mm]	Bolt circle diameter ø - BC [mm]	Shaft diameter ø - SD [mm]	Shaft internal diameter ø [mm]	Shaft length SL [mm]
B10P	225	10 to 20	500 – 1000	130j6	165	32	30	80
B16P	275	50 to 200	300 – 500 - 1000	180j6	215	55	55	110
B18P	386	115 to 510	300	250j6	300	75	80	140

ELECTRICAL DATA TORQUE MOTORS

Type	Stall torque (Δt=105°C) Mo Nm	Rated torque (Δt=105°C) Mn Nm	Stall current Io Arms	Rated current In Arms	Rated speed n rpm	Moment of Inertia J 10^{-4} kgm²	Length with resolver L mm
B10.10P	10	9.6	1.03	0.99	500	40	160
B10.20P	20	19.0	2.06	1.96	500	80	160
B16.50P	50	48	3.0	2.9	300	409	230
B16.C0P	100	95	6.0	5.7	300	784	280
B16.C5P	150	142	8.9	8.5	300	1159	330
B16.B0P	200	188	11.9	11.2	300	1534	380
B18.CBP	115	100	7.1	6.1	300	1600	259
B18.BCP	225	196	13.8	12.0	300	3000	309
B18.325P	325	263	20.0	16.2	300	4400	359
B18.420P	420	290	25.8	17.8	300	5800	409
B18.510P	510	315	31.3	19.3	300	7200	459

MORE FEATURES

- Drive End cooling (liquid coolant)
- Low voltage special winding
- Water cooling (jacket) for medium and large size motors
- Fly - connectors for cabling
- 230V application
- One cable solution
- Safety application
- **ATEX Certification** - II 3G Ex ec IIC T155°C (T3) Gc and II 3D Ex tc IIIC T135°C Dc *(a dedicated brochure is available)*

BRUSHLESS SERVO MOTORS

STANDARD FEATURES

- Torque range 0.18 to 390 Nm; rated speed up to 6000 rpm
- Superior performance, high torque accuracy
- High dynamics and acceleration
- High overload capability
- Compact design with high power density
- Wide range of transducers: resolver, incremental and absolute encoders
- Forced ventilation (fan cooling) option available
- IP65 protection; TENV construction
- All motors available with brake as an option
- Deep background to meet any special mechanical and electrical design
- Excellent flexibility to meet specific market demands

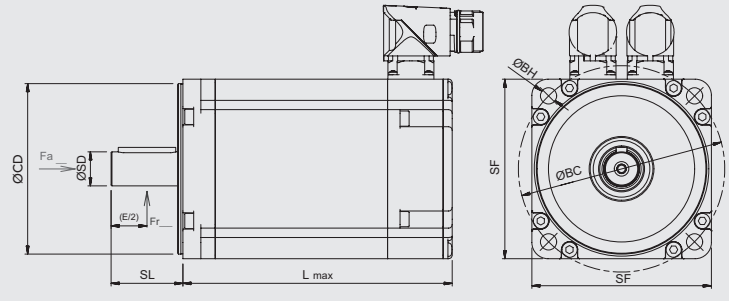
OPTIONAL FEATURES

- cURus certification
- ATEX certification
- Special rotor balancing grade and inertia
- Customised flange and special shaft
- Other (type of encoder and connector, brake, thermal sensor,...)

TARGET APPLICATIONS

- Material Handling
- Machine tools
- Packaging
- Textile
- Mould injection/plastic
- Robotic

Type	Square flange SF [mm]	Torque [Nm]	Rated speed [rpm]	Centring diameter ø - CD [mm]	Bolt circle diameter ø - BC [mm]	Shaft diameter ø - SD [mm]	Shaft length SL [mm]
B20Q	40	0.18 to 0.32	6000	30h7	46	8h6	20/25
B28Q	58	0.25 to 1.25	3000 – 6000	40j6	63	9j6	20
B30J	60	0.7 to 1.4	6000	50h7	70	14h6	25/30
B36Q	70	0.6 to 1.8	3000 – 6000	60j6	75	11j6	23
	70	2.4 to 3	3000 – 6000	60j6	75	14j6	30
B40J	80	0.7 to 2.7	3000 – 6000	70h7	90	16h6	35/40
B56Q	91.3	1.35 to 4.5	3000 – 6000	80j6	100	14j6	30
B63Q	100	4 to 10	3000 – 4500 – 6000	95j6	115	19k6	40
B64J	116	6 to 8	3000 – 4500	110j6	130	19j6	40
	116	10 to 14	3000 – 4500	110j6	130	24j6	50
B71Q	142	4.5 to 26	2000 – 3000 – 4500	130j6	165	24k6	50
	142	29 to 38	2000 – 3000 – 4500	130j6	165	28k6	58
B100Q	190	35 to 105	1500 – 3000	180j6	215	42k6	82
B100J	190	20 to 42	2000 – 3000	180j6	215	32k6	58
	190	56 to 80	2000 – 3000	180j6	215	38k6	80
B132I	240	42 to 73	1500 – 2000 – 3000	230j6	265	38k6	80
	240	81 to 120	1500 – 2000 – 3000	230j6	265	42k6	110
B160Q	270	140 to 240	1500 – 2000 – 3000	250h7	300	55m6	110
	270	300	1500 – 2000 – 2500	250h7	300	60m6	140



MOTOR TYPE CODES USED

x — PRODUCT TYPE

B	Complete Brushless Servo Motors
F	Brushless Servo Motors components

aa — STANDARD MOTOR SIZE

B20Q	☐ Flange 40
B28Q	☐ Flange 58
B30J	☐ Flange 60
B36Q	☐ Flange 70
B40J	☐ Flange 80
B56Q	☐ Flange 91.3
B63Q	☐ Flange 100
B64J	☐ Flange 116
B71Q	☐ Flange 142
B100J-Q	☐ Flange 190
B132I	☐ Flange 240
B160Q	☐ Flange 270

aa — TORQUE MOTOR SIZE

B10	☐ Flange typical 225
B16	☐ Flange typical 275
B18	☐ Flange typical 386

bb — STALL TORQUE CODE

Integer: digit + digit	
02	2 Nm
12	12 Nm
25	25 Nm
...	etc...

Fractional: letter + digit (x)	
Dx	0.x Nm
Ex	1.x Nm
Fx	2.x Nm
Gx	3.x Nm
Hx	4.x Nm
Ix	5.x Nm
Lx	6.x Nm
Mx	7.x Nm
Nx	8.x Nm
Ox	9.x Nm

Over hundred: letter + digit or letter	
C0	100 Nm
CA	105 Nm
C1	110 Nm
CB	115 Nm
...	etc..
B0	200 Nm
BA	205 Nm
B1	210 Nm
BB	215 Nm
...	etc..

Over Threehundred: digit + digir + digit	
300	300 Nm
375	375 Nm
460	460 Nm
...	etc..

c — SINUSOIDAL STANDARD MOTOR TYPE

Size	Series	Description
20	Q	8 poles
28	Q	8 poles
30	J	10 poles
36	Q	8 poles
40	J	10 poles
56	Q	8 poles
63	Q	8 poles
64	J	10 poles
71	Q	8 poles
100	Q	8 poles
100	J	10 poles
132	I	6 poles
160	Q	8 poles

c — SINUSOIDAL TORQUE MOTOR TYPE

Size	Series	Description
10	P	12 poles
16	P	24 poles
18	P	30 poles

d — SPEED

1	1000 rpm
2	2000 rpm
3	3000 rpm
4	4000 rpm
6	6000 rpm

A	1500 rpm
B	2500 rpm
C	3500 rpm
D	4500 rpm

P	200 rpm
Q	300 rpm
R	400 rpm
O	500 rpm

e — VOLTAGE

H	380/400V
M	220/230V (on request)

f — CONNECTION TYPE

4	Straight connectors on endshield
7	Turnable 90° angled connectors
8	Y-TEC connectors

Terminal box construction to be evaluated on special request only
Single connector design available on request depending on transducer requirements

MOTOR TYPE CODES USED

DIGIT	DESCRIPTION

g — BRAKE AND SHAFT EXTENSION

A	Without brake, keyed shaft	D	Without brake, smooth shaft
B	With brake, keyed shaft	E	With brake, smooth shaft
C	With reinforced brake, keyed shaft	F	With reinforced brake, smooth shaft

hh — FEEDBACK*

** Availability of each feedback system and/or ppr to be evaluated on the motor size*

00 Without feedback

RESOLVER

05	Resolver 2 poles
A5	Resolver 4 poles

SIN / COS HIPERFACE ENCODER

RS	Single-turn 1024 sin/cos Stegmann SRS50
RM	Multi-turn 1024 sin/cos, 4096 rev. Stegmann SRM50
EK	Single-turn 16 sin/cos Stegmann SEK37
EL	Multi-turn 16 sin/cos, 4096 rev. Stegmann SEL37
KS	Single-turn 128 sin/cos Stegmann SKS36
KM	Multi-turn 128 sin/cos, 4096 rev. Stegmann SKM36
LE	Single-turn 18 bits DSL, Stegmann EKS36
LF	Multi-turn 18 bits DSL, Stegmann EKM36

EnDat or other Hiperface encoders available on request

INCREMENTAL ENCODER With Hall sensors and 0 reference mark

E9	1000 ppr
09	1024 ppr
L9	2000 ppr
F9	2048 ppr

i — CONNECTION DIRECTION

0	Standard	2	Position 2

l — COOLING SYSTEM

0	Natural convection	V	Forced Ventilation 230Vac from B-Flange to A-Flange
		X	Forced Ventilation 24Vdc from B-Flange to A-Flange

mm — CUSTOMER OPTION

Eg.:

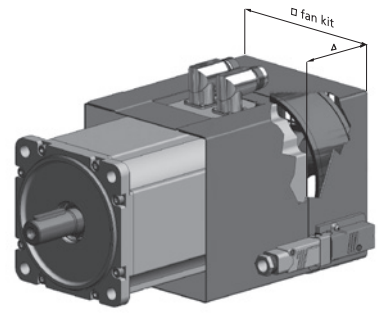
x	aa	bb	c	d	e	f	g	hh	i	l	mm	*
B	63	08	Q	3	H	4	A	05	0	0	00	-EX

*-EX only for ATEX motor

FORCED VENTILATION

Forced ventilation available for B63Q, B71Q, B100Q, B100J, B132I and B160Q series.
For precise increase and torque performances, please refer to the Technical Catalogue.

Type	Voltage Volt	Power Consumption	Fan kit square (mm)	Δ L (mm)
B63Q	24 Vdc 230 Vac, 50/60 Hz	11 W 12 W	124 x 124	87
B71Q	24 Vdc 230 Vac, 50/60 Hz	12 W 47 W	167 x 167	98
B100Q	24 Vdc 230 Vac, 50/60 Hz	12 W 47 W	214 x 214	101
B100J	24 Vdc 230 Vac, 50/60 Hz	12 W 47 W	214 x 214	110
B132I	24 Vdc 230 Vac, 50/60 Hz	12 W 47 W	246 x 246	116
B160Q	24 Vdc 230 Vac, 50/60 Hz	105 W 136/185 W	295 x 295	175



ELECTRICAL DATA BRUSHLESS SERVO MOTORS

SELF COOLED

Type	Stall torque (Δt=105°C) Mo Nm	Rated torque (Δt=105°C) Mn Nm	Stall current Io Arms	Rated current In Arms	Rated speed n rpm	Moment of Inertia J 10^{-4} kgm²	Length with resolver Without brake L mm	Length with resolver With Brake L mm	Max length with encoder Without brake L mm	Max length with encoder With Brake L mm
B20.D2Q	0.18	0.15	0.62	0.52	6000	0.02	84	107	92.5	115.5
B20.D3Q	0.32	0.28	0.68	0.6	6000	0.03	99	122	107.5	130.5
B28.D2Q	0.25	0.24	0.34	0.33	6000	0.07	86.5	116.5	106.5	136.5
B28.D5Q	0.5	0.47	0.69	0.65	6000	0.13	98.5	128.5	118.5	148.5
B28.D7Q	0.75	0.70	1.03	0.96	6000	0.19	110.5	140.5	130.5	160.5
B28.01Q	1.0	0.93	1.37	1.28	6000	0.25	122.5	152.5	142.5	172.5
B28.E2Q	1.25	1.16	1.72	1.59	6000	0.31	134.5	164.5	154.5	184.5
B30.D7J	0.7	0.6	0.86	0.74	6000	0.22	84.5	113.5	107.5	136.5
B30.E4J	1.4	1.1	1.72	1.35	6000	0.41	105	134	128	157
B36.D6Q	0.6	0.5	0.8	0.7	6000	0.25	112	147	123	158
B36.E2Q	1.2	1.0	1.6	1.4	6000	0.44	127	162	138	173
B36.E8Q	1.8	1.5	2.5	2.1	6000	0.63	142	177	153	188
B36.F4Q	2.4	2.0	3.3	2.7	6000	1.05	167	198	180	211
B36.03Q	3.0	2.4	4.1	3.3	6000	1.22	182	213	195	226
B40.D7J	0.7	0.4	0.86	0.49	6000	0.83	86	116	109	139
B40.E4J	1.4	0.9	1.72	1.11	6000	1.13	97.5	127.5	120.5	150.5
B40.F4J	2.7	1.9	3.31	2.33	6000	1.73	120	150	143	173
B56.E3Q	1.35	1.3	0.8	0.8	3000	0.47	122	157	137	172
B56.F6Q	2.6	2.5	1.6	1.5	3000	0.88	145	180	159	194
B56.G5Q	3.5	3.1	2.1	1.9	3000	1.09	160	195	174	209
B56.H5Q	4.5	3.9	2.8	2.4	3000	1.40	180	215	194	229
B63.04Q	4	3.50	2.5	2.1	3000	1.87	150	182	161	193
B63.06Q	6	5.25	3.7	3.2	3000	2.67	170	203	181	214
B63.08Q	8	7.50	4.9	4.6	3000	3.47	194	226	205	237
B63.10Q	10	8.75	6.1	5.4	3000	4.27	214	246	225	257
B64.06J	6	5.4	3.7	3.3	3000	8.83	168	204.5	168	204.5
B64.08J	8	6.9	4.9	4.2	3000	10.6	183	219.5	183	219.5
B64.10J	10	8.2	6.1	5.0	3000	13.1	198	234.5	198	234.5
B64.12J	12	9.5	7.4	5.8	3000	15.6	213	249.5	213	249.5
B64.14J	14	11.2	8.6	6.9	3000	18.9	233	269.5	233	269.5
B71.04Q	4.5	4.2	1.8	1.7	2000	3.6	148	183	159	194
B71.08Q	9	8.1	3.7	3.3	2000	6.0	173	208	184	219
B71.12Q	12.5	11.8	5.1	4.8	2000	8.2	198	228	209	239
B71.16Q	16	15.1	6.6	6.2	2000	10.7	223	253	234	264
B71.20Q	20	18.5	8.2	7.6	2000	13.1	248	273	259	284
B71.26Q	26	22.4	10.6	9.2	2000	18.4	298	318	309	329
B71.29Q	29	23.9	11.9	9.8	2000	20.6	338	380	349	391
B71.32Q	32	25.5	13.1	10.4	2000	23.0	360	402	371	413
B71.35Q	35	26.7	14.3	10.9	2000	25.5	383	425	394	436
B71.38Q	38	28.0	15.6	11.5	2000	28.0	405	447	416	458
B10.35Q	35	28.8	10.7	8.8	1500	45	269	329	269	329
B10.54Q	54	42.0	16.6	12.9	1500	63	314	374	314	374
B10.62Q	62	46.5	19.0	14.3	1500	72	336	396	336	396
B10.72Q	72	51.8	22.1	15.9	1500	80	359	416	359	416
B10.90Q	90	63.7	27.6	19.6	1500	98	404	464	404	464
B10.CAQ	105	74.6	32.2	22.9	1500	116	449	509	449	509
B10.20J	20	18.3	8.2	7.5	2000	33	195	225	223	253
B10.28J	28	24.7	11.4	10.1	2000	46	218	248	246	276
B10.36J	36	30.1	14.7	12.3	2000	60	240	270	268	298
B10.42J	42	36.1	17.2	14.8	2000	74	263	293	291	321
B10.56J	56	44.5	22.9	18.2	2000	102	308	338	336	366
B10.68J	68	50.9	27.8	20.8	2000	130	369	399	369	399
B10.80J	80	57.8	32.7	23.6	2000	158	414	444	414	444
B13.42I	42	35.5	12.9	10.9	1500	65	293	343	321	371
B13.58I	58	47.0	17.8	14.4	1500	90	333	383	361	411
B13.73I	73	58.5	22.4	17.9	1500	114	373	423	401	451
B13.81I	81	65.0	24.8	19.9	1500	126	393	443	421	471
B13.98I	98	77.5	30.1	23.8	1500	150	433	483	461	511
B13.C2I	120	94.5	36.8	29.0	1500	192	493	543	521	571
B16.C4Q	140	110	43	34	1500	290	422	502	450	530
B16.C8Q	180	140	55	43	1500	373	482	562	510	590
B16.B4Q	240	183	74	56	1500	497	572	652	600	680
B16.300Q	300	229	92	70	1500	622	662	742	690	770

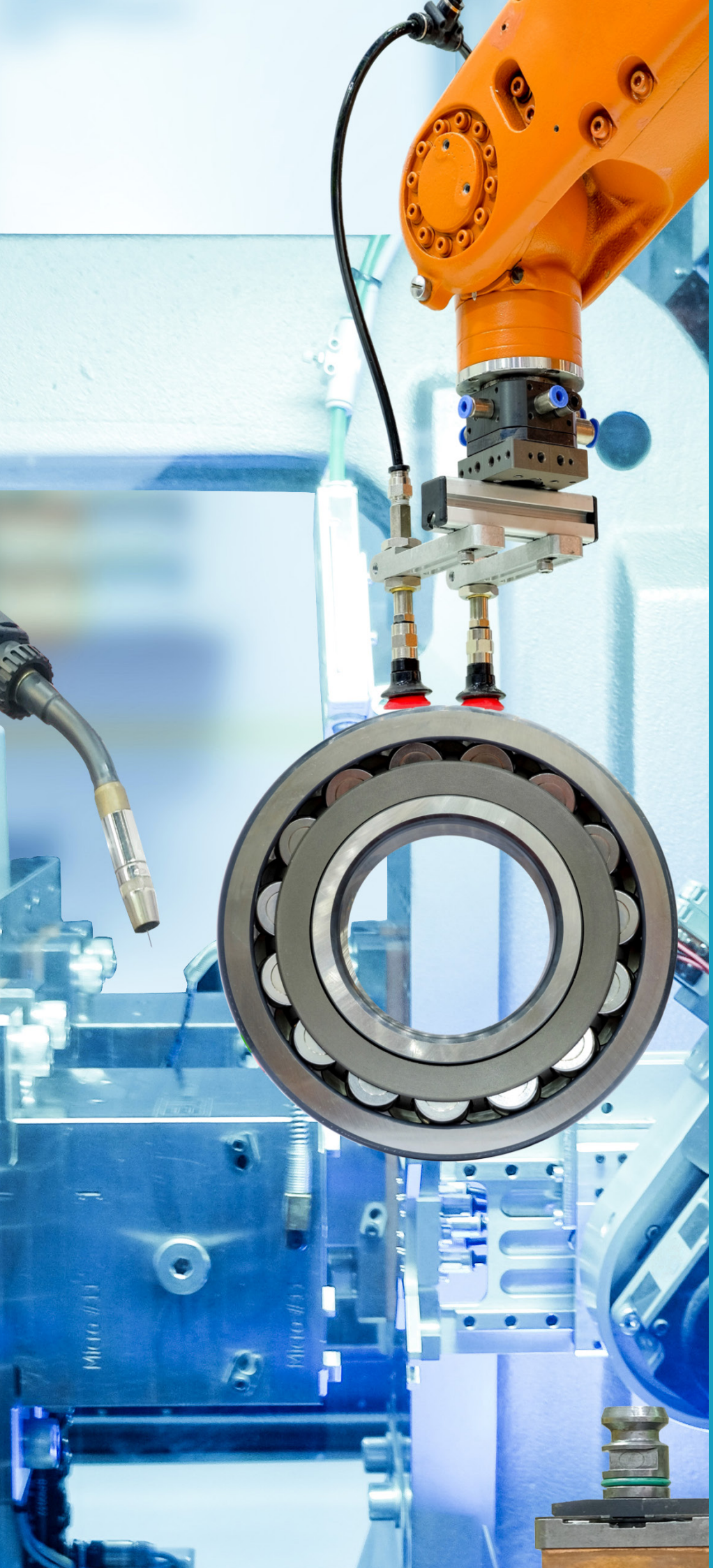
ELECTRICAL DATA BRUSHLESS SERVO MOTORS

AIR COOLED

Type	Stall torque (Δt=105°C) Mo Nm	Rated torque (Δt=105°C) Mn Nm	Stall current Io Arms	Rated current In Arms	Rated speed n rpm	Moment of Inertia J 10^{-4} kgm²	Length with resolver Without brake L mm	Length with resolver With Brake L mm	Max length with encoder Without brake L mm	Max length with encoder With Brake L mm
B63.04Q	4.8	4.4	2.9	2.7	3000	1.87	237	296	248	280
B63.06Q	7.4	6.8	4.5	4.2	3000	2.67	257	290	268	301
B63.08Q	10.1	9.4	6.2	5.8	3000	3.47	281	313	292	324
B63.10Q	13	11.8	8.0	7.2	3000	4.27	301	333	312	344
B71.04Q	6	5.6	2.5	2.3	2000	3.6	246	281	257	292
B71.08Q	12	11.0	4.9	4.5	2000	6.0	271	306	282	317
B71.12Q	17	15.8	7.0	6.5	2000	8.2	296	326	307	337
B71.16Q	22	20.5	9.0	8.4	2000	10.7	321	351	332	362
B71.20Q	27.5	25.5	11.3	10.4	2000	13.1	346	371	357	382
B71.26Q	35.5	33.5	14.5	13.7	2000	18.4	396	416	407	427
B71.29Q	40	39.2	16.4	16.1	2000	20.6	436	478	447	489
B71.32Q	44	42.6	18.0	17.4	2000	23.0	458	500	469	511
B71.35Q	48	46.1	19.7	18.9	2000	25.5	481	523	492	534
B71.38Q	52	49.7	21.3	20.4	2000	28.0	503	545	514	556
B10.35Q	53	50	16.3	15.4	1500	45	370	430	370	430
B10.54Q	81	77	24.9	23.6	1500	63	415	475	415	475
B10.62Q	93	88	28.6	27.0	1500	72	437	497	437	497
B10.72Q	110	100	33.8	30.7	1500	80	460	517	460	517
B10.90Q	135	125	41.5	38.4	1500	98	505	565	505	565
B10.CAQ	160	150	49.1	46.1	1500	116	550	610	550	610
B10.20J	26	24.2	10.6	9.9	2000	33	305	335	333	363
B10.28J	36.4	33.1	14.9	13.5	2000	46	328	358	356	386
B10.36J	47.2	42.1	19.3	17.2	2000	60	350	380	378	408
B10.42J	55.4	50,0	22.7	20.4	2000	74	373	403	401	431
B10.56J	74.5	61.7	30.4	25.2	2000	102	434	464	446	476
B10.68J	91.1	70.8	37.2	28.9	2000	130	479	509	479	509
B10.80J	108	80.3	44.1	32.8	2000	158	524	554	524	554
B13.42I	61	56.0	18.7	17.2	1500	65	409	459	437	487
B13.58I	84	77.5	25.8	23.8	1500	90	449	499	477	527
B13.73I	105	98.0	32.2	30.1	1500	114	489	539	517	567
B13.81I	116	109.0	35.6	33.4	1500	126	509	559	537	587
B13.98I	136	125.0	41.7	38.3	1500	150	549	599	577	627
B13.C2I	162	142.0	49.7	43.6	1500	192	609	659	637	687
B16.C4Q	180	160	55	49	1500	290	597	677	625	705
B16.C8Q	234	208	72	64	1500	373	657	737	685	765
B16.B4Q	312	280	96	86	1500	497	747	827	775	855
B16.300Q	390	350	120	107	1500	622	837	917	865	945

BRAKE DATA

	Symbol	B20Q	B28Q	B30J	B30J	B40J	B56Q	B63Q	B64J	B71Q 4.5 to 26 Nm	B71Q 29 to 38 Nm	B100Q	B100J	B132I	B160Q	Unit
Holding torque 100°C	Mrb	0.35	2.1	2.1	3.2	3.2	3.5	8	17	15	33	120	60	120	280	Nm
Voltage	Urb	24	24	24	24	24	24	24	24	24	24	24	24	24	24	Vdc±10%
Resistance	Rbr	72	70.6	70.6	53.2	53.2	53.2	29	30.8	24	24	12.3	28.3	12.3	13.7	Ohm
Electrical power	Pbr	8	8.2	8.2	10.8	10.8	10.8	19.9	18.7	24	24	50	20.4	50	41.8	W
Current	Ibr	0.33	0.34	0.34	0.45	0.45	0.45	0.83	0.78	1.0	1.0	2.08	0.85	2.08	1.75	Adc
Additional* rotor inertia	Jbr	0.013	0.12	0.12	0.38	0.38	0.38	0.69	3.6	1.66	9.5	52.87	32	52.87	200	kgcm²
Opening (release) time	to max	10	30	30	60	60	60	55	75	50	110	190	155	190	350	ms
Closing (fall in) time	tc max	6	15	15	10	10	10	38	25	30	70	90	65	90	300	ms



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