



MACK
MOTOR
MKM



0.16 - 11
Nm

50 - 3500
W

SERIES	SIZE	MKM 42		MKM 60		MKM 70			MKM 85			MKM 120		
		M	L	M	L	S	M	L	S	M	L	S	M	L
Power	(W)	50	100	200	400	280	470	630	570	1050	1600	1300 ²	2400 ²	3500 ²
Mo stall Torque ($\Delta t=100^{\circ}\text{C}$)	(Nm)	0.16	0.32	0.65	1.3	0.9	1.5	2.0	1.8	3.3	5	4	7.5	11
Mo¹ stall Torque ($\Delta t=70^{\circ}\text{C}$)	(Nm)	0.15	0.3	0.6	1.2	0.8	1.35	1.8	1.65	3	4.5	3.6	6.8	10

WINDING CODE		-	-	-	-	*	*	*	Q28	Q38	Q48	V28	V38	V48	
400 VAC	Io¹ Stall Current	(Arms)	-	-	-	-	*	*	*	1.1	2	2.8	2.3	4.3	6.5
Drive's Voltage	K_T Torque Constant	(Nm/Arms)	-	-	-	-	*	*	*	1.5	1.5	1.6	1.55	1.6	1.55
	N_n Rated Speed	(Rpm)	-						3000						

WINDING CODE		F36	F46	J36	J46	K26	K36	K46	Q26	Q36	Q46	V28	V38	V48		
230 VAC	Io¹ Stall Current	(Arms)	0.5	0.9	1.45	2.4	1.1	1.5	2	2	3.3	4.7	2.3	4.3	6.5	
Drive's Voltage	K_T Torque Constant	(Nm/Arms)	0.33	0.33	0.41	0.5	0.7	0.9	0.9	0.8	0.9	0.95	1.55	1.6	1.55	
	N_n Rated Speed	(Rpm)	-						3000				1500			

W weight	kg	0.35	0.5	1.0	1.4	1.35	1.9	2.4	2.2	3.2	4.2	4.9	7.3	9.7
W1 weight with brake	kg	0.44	0.59	1.4	1.8	1.55	2.1	2.6	2.5	3.5	4.5	5.8	8.2	10.6
W2 weight with Hith Inertia Rotor	kg	-	-	-	-	1.7	2.3	2.8	3.0	4.0	5.0	6.9	9.3	11.7
J Rotor Inertia (std)	(Kg ^{m2})-10 ⁻⁴	0.03	0.04	0.14	0.24	0.35	0.7	1.0	1.3	2.2	3.1	9	14	19
J_H Higher Rotor Inertia (opt)	(Kg ^{m2})-10 ⁻⁴	N.A.	N.A.	N.A.	N.A.	1.9	2.2	2.5	6.3	7.2	8.2	30	35	40
J_B Rotor Inertia with brake	(Kg ^{m2})-10 ⁻⁴	0.05	0.06	0.15	0.25	0.4	0.75	1.05	1.5	2.4	3.3	9.5	14.5	19.5
BRAKE stall torque (24 VDC +6% -10%)		0.4 Nm (0.5 A _{DC})		2 Nm (0.5 A _{DC})		2 Nm (0.45 A _{DC})			4.5 Nm (0.5 A _{DC})			9 Nm (0.8 A _{DC})		

Mo¹ : 5-100rpm - mounted on AL flange (300x300x6.5 mm, 65°C max) - no brake (with brake Mo¹ -5%) * See 230VAC version ² Power refers to 400VAC / 3000Rpm

STANDARD FEATURES

- ◆ 8 Poles sinusoidal B.E.M.F.
- ◆ Medium - high rotor inertia
- ◆ Permanent rare earth magnets
- ◆ Very low torque fluctuation at minimum speed
- ◆ Feedback: Mack® Serial Encoder 13 bit DSL
- ◆ Ambient temp. ¹: operating 0 / + 40°C storage - 20 / + 60°C
- ◆ Ambient Humidity ¹: operating & storage 85% RH max
- ◆ Altitude (a.m.s.l.): operating & storage 1000m
- ◆ Vibration: 5G max
- ◆ Insulation class: F
- ◆ Protection rating: IP54
- ◆ Ball-bearing life: >20'000h



NOTE: ¹ Free from condensation

OPTIONS

- ◆ Holding brakes
- ◆ Protection rating: IP65
- ◆ Special flanges and shafts
- ◆ JH Higher rotor inertia (additional)
- ◆ Thermal Switch
- ◆ **MKEC1** Commutation Enc. feedback
- ◆ **ES3** Mack® Serial Enc. 17 bit DSL
- ◆ **AS3** Mack® Absolute Multiturn Enc. 17 bit DSL
- ◆ **H01** Absolute Enc. feedback (Endat 2.1)

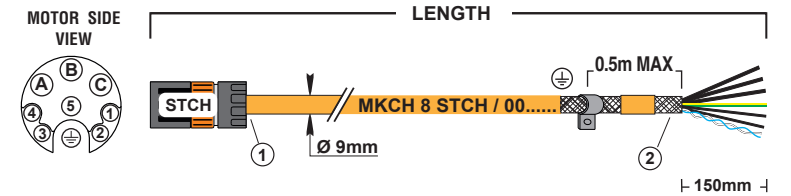
CABLE SPEC.

- ◆ Mobile usage for chain tracks
- ◆ External sheating: PUR polyurethane
- ◆ Flame / oil resistance
- ◆ Trailing speed: 300m / min. max
- ◆ Acceleration: 20m / sec²
- ◆ Cycles: 5 million
- ◆ Minimum bending radius: 7 x Ø
- ◆ Operating temperature: - 25°C / + 80°C
- ◆ Length > 10m use a 3 Ph choke (LXT20).
- ◆ DIN VDE

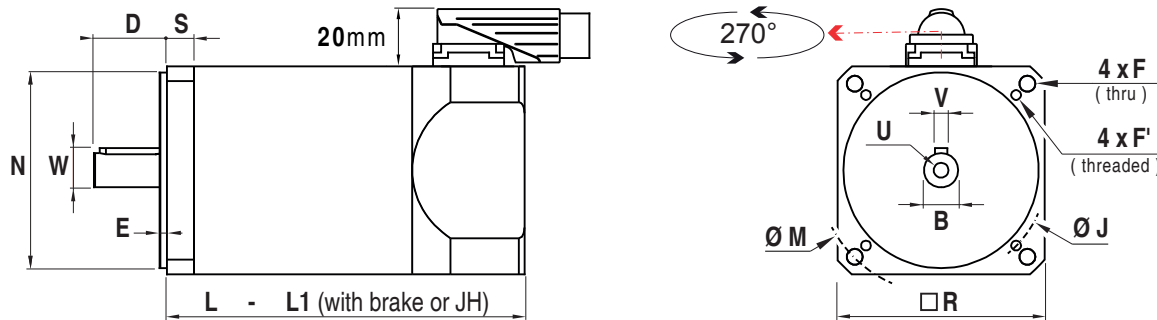


TYPE	Mo	L	L1	B _{h7}	D	V _{h9}	W	U	N _{h6}	M	F	J	F'	E	S	R
	Nm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
MKM 42 M	0.16	93	121	8	25	3 x 12	9.2	M3 x 10	30	45/48	3.2	-	-	2.5	7.5	42 □
MKM 42 L	0.32	107	135													
MKM 60 M	0.65	91	124	14	30	5 x 25	16	M4 x 10	50	70	5.2	-	-	2.5	7	60 □
MKM 60 L	1.3	105	138													
MKM 70 S	0.9	100	125	11	23	4 x 18	12.5	M4 x 10	60	90	5.5	75	Ø4.2 x 10	2.5	10	75 □
MKM 70 M	1.5	125	150													
MKM 70 L	2.0	150	175													
MKM 85 S	1.8	115	145	14	30	5 x 25	16	M4 x 10	80	100	6.5	-	-	3	11	85 □
MKM 85 M	3.3	145	175													
MKM 85 L	5	175	205													
MKM 120 S	4	135	170	19	40	6 x 32	21.5	M6 x 16	110	145	9	-	-	3.5	12.5	120 □
MKM 120 M	7.5	170	205													
MKM 120 L	11	205	240													

HYBRID: Power + MKES Serial Encoder



NOTE: ① All shields (int. and ext.) wired to housing ② Int. and ext. shields wrapped together



STCH	FUNCTION	WIRE COLOR	MARK
A / C / B	U / V / W MOTOR	BLACK	U-1/V-2/W-3
1 / 2	(+) / (-) BRAKE	WHITE / BLACK	-
4 / 3	SE+ / SE-	BLU / WHITE	-
⊕	PE	GREEN YELLOW	-
5	N.C.	-	-
HOUSING	ALL SHIELDS	-	-

MACK® MOTOR ORDERING CODE										MACK® CABLE ORDERING CODE					
MKM85 M Q36 - 000 D 00 X P 0 MKES1 ST R 1 X X - Sxxx										MKCH 8STCH / 00 - 030 Sxxx					
SERIES: MKM 42 - 60 - 70 85 - 120	MOUNTING FLANGE: 000 = standard 001-499 = IEC metric 501-999 = Reserved	SHAFT KEY: X = with key (std) W = w/out key (opt)	TH.PROT.: P = PTC (std) N = w/out	CONNECTOR ORIENTATION: R = Rear (std) F = Front (opt) T = Top (opt)	SPEC	CABLE LINE: Preassembled Hybrid cables	ASSEMBLY MOTOR SIDE: 8STCH = 8 Arms cable + M15 Springtec connector	LENGTH: 030 = 3m 050 = 5m 070 = 7m 100 = 10m							
SIZE: S, M, L	MOUNTING HOLES: D = B5 thru holes (std) C = B14 threaded holes (opt)	SHAFT DIAMETER: 00 = standard 01-49 = IEC metric 51-99 = Reserved	GEARBOX: R = With, X = W/out	INERTIA: X = (std), H = High (opt)	IP RATING: 1 = IP54 (std), 2 = IP65 (opt)	ASSEMBLY DRIVE SIDE: 00 = Flying leads (no connector)									
WINDING CODE: See table on reverse			FEEDBACK + CONNECTOR TYPE: MKES1 ST = Mack® Serial Enc. 13bit DSL + STCH (std) ES3 ST = Mack® Serial Enc. 17bit DSL + STCH (opt) AS3 ST = Mack® Absolute Multiturn Enc. 17bit DSL + STCH (opt)												
FLANGES & SHAFT OPTIONAL	B_{h7}	D	V_{h9}	W	U	N_{h6}	M	F	J	F'	E	S	R		
090D14X (MKM70 all)	14	30	5x25	16	M4x10	60	90	5.2	75	4.2x10	2.5	10	75		
100D19X (MKM85 all)	19	40	6x32	21.5	M6x16	80	100	6.5	-	-	3	11	85		
115D19X (MKM85 all)	19	40	6x32	21.5	M6x16	95	115	9	-	-	3	11	100		

For cables see CBL5 datasheet