

# TECHNICAL CHARACTERISTICS

## Motors wound for 330 Vac phase to phase

NATURAL CONVECTION

		800STK1M		800STK2M		800STK3M		800STK4M		800STK6M
Rated speed	Rpm	30	250	30	250	30	250	30	250	30
Continuous torque	(1)(4) N.m	610		1,127		1,620		2,010		2,708
Current at continuous torque	(1) A	14.9	43.9	19.7	68.1	21	102	27.5	110	34.5
Peak torque	(2)(3) N.m	1,828		3,656		5,484		7,312		10,968
Current at peak torque	(2) A	50.8	158	74.9	258.6	86.2	406.4	118.5	474.2	167.4
Rater power	(1) kW	1.92	15.01	3.50	22.60	4.90	28.90	6.30	33.10	8.53
Inertia	10 <sup>-3</sup> kg.m <sup>2</sup>	1,270		2,540		3,810		5,080		7,620
Weight	kg	55		82		109		138		193
Thermal time constant	(1) s	444		685		925		1,166		1,656
Thermal resistance	(1) °C / W	0.035		0.033		0.032		0.030		0.028
Phase resistance at 20°C	(2) Ω	2.695	0.278	1.577	0.132	1.440	0.065	0.899	0.056	0.585
Phase inductance at I continuous	mH	15.4	1.6	14.2	1.2	16.1	0.73	11.3	0.70	8.6
Electrical time constant	(2) ms	5.7		9.0		11.2		12.6		14.7
Power cable square section	(7) nxmm <sup>2</sup>	4x1.5	4x10	4x2.5	4x10	4x2.5	4x25	4x4	4x25	4x6
Power cable diameter	(7) mm	Ø10.2	Ø18.8	Ø11.4	4xØ9.5	Ø11.4	4xØ13.5	Ø13.1	4xØ13.5	Ø15.9

WINDING AT 60°C

		800STK1M		800STK2M		800STK3M		800STK4M		800STK6M
Continuous torque	(4) N.m	803		1,580		2,370		3,160		4,720
Current at continuous torque	A	18.2	53.6	26.3	90.9	29.4	142.8	41.5	166	58.5
Fluid input temperature	(5)(6) °C	20		20		20		20		20
Fluid temperature rise	°C	10		10		10		10		10
Housing temperature	°C	30		28		27		27		26
Fluid flow	l / mn	6		7		9		10		13
Losse	W	3,190		4,080		4,900		5,800		7,400
Pressure	Bar	0.1		0.4		0.9		1.3		3.1
Power cable square section	(7) nxmm <sup>2</sup>	4x2.5	4x10	4x4	4x16	4x4	4x35	4x10	4x50	4x10
Power cable diameter	(7) mm	Ø11.4	4xØ9.5	Ø13.1	4xØ11	Ø13.1	4xØ15.1	Ø18.8	4xØ17.1	4xØ9.5

WINDING AT 140°C

		800STK1M		800STK2M		800STK3M		800STK4M		800STK6M
Continuous torque	(4) N.m	1,039		2,057		3,100		4,100		6,100
Current at continuous torque	A	27.5	81.1	40	138.2	45	218.6	63.3	253	88
Fluid input temperature	(5)(6) °C	20		20		20		20		20
Fluid temperature rise	°C	9		9		9		13		13
Housing temperature	°C	31		28		28		30		29
Fluid flow	l / mn	16		19		23		19		23
Losse	W	7,900		9,710		11,550		13,600		17,200
Pressure	Bar	0.9		2.1		4.2		4		8.5
Power cable square section	(7) nxmm <sup>2</sup>	4x4	4x16	4x10	4x35	4x10	4x70	4x10	4x95	4x16
Power cable diameter	(7) mm	Ø13.1	4xØ11	Ø18.8	4xØ15.1	Ø18.8	4xØ20.1	4xØ9.5	4xØ22.6	4xØ11

(1) Thermal conditions:

Ambient temperature 20°C

Winding temperature rise 120°C

Stator housing in contact with the ambient air or integral on all its peripheral area with a metallic armature in contact with the ambient air.

Stator housing secured on a metallic frame having an area equal to twice the cross section of the housing.

(2) Cold motor at 20°C.

(3) See torque vs speed characteristics on :

<http://www.alxion.com/CFN>

(4) Torque at stall or low speed.

(5) Fluid input temperature should not be lower for avoiding condensation inside the motor.

(6) For cooling fluid, use softened glycol-added water or fluids approved for closed cooling circuits.

(7) For curensts lower than 53 Amps, one shielded cable

For curensts over 53 Amps, four single shielded wires output (highlighted in the table)

Other speed characteristics are available, please contact us.