

# TECHNICAL CHARACTERISTICS

## Motors wound for 330 Vac phase to phase

		800STK1M		800STK2M		800STK3M		800STK4M		800STK6M	
NATURAL CONVECTION	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	$10^{-3} \text{kg.m}^2$	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	nxmm <sup>2</sup>	4x1.5	4x10	4x2.5	4x16	4x2.5	4x25	4x4	4x25	4x6
	Power cable diameter	mm	Ø10.2	Ø18.8	Ø11.4	Ø24	Ø11.4	4xØ13.5	Ø13.1	4xØ13.5	Ø15.9

		800STK1M		800STK2M		800STK3M		800STK4M		800STK6M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 60°C	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	nxmm <sup>2</sup>	4x2.5	4x16	4x4	4x16	4x4	4x35	4x10	4x50	4x16
	Power cable diameter	mm	Ø11.4	Ø24	Ø13.1	4xØ11	Ø13.1	4xØ15.1	Ø18.8	4xØ17.1	Ø24

		800STK1M		800STK2M		800STK3M		800STK4M		800STK6M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 140°C	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	nxmm <sup>2</sup>	4x4	4x16	4x10	4x35	4x10	4x70	4x16	4x95	4x16
	Power cable diameter	mm	Ø13.1	4xØ11	Ø18.8	4xØ15.1	Ø18.8	4xØ20.1	Ø24	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) From 72 Amps continuous, motors are supplied through 4 single wire shielded cables.

Other speed characteristics are available, please contact us.