TECHNICAL CHARACTERISTICS

Motors wound for 330 Vac phase to phase

NATURAL CONVECTION

			500STK1M		500STK2M		500STK3M		500STK4M		500STK6M	500STK9M
Rated speed		Rpm	50	600	50	600	50	600	50	600	50	50
Continuous torque	(1)(4)	N.m	210		365		520		640		878	1,185
Current at continuous torque	(1)	A	7.7	37.3	10.1	62.6	13.9	91.5	16.5	112.8	19	23.5
Peak torque	(2)(3)	N.m	768		1,536		2,304		3,072		4,608	6,912
Current at peak torque	(2)	A	32.4	166.3	46.7	295.6	70	443	85.8	532	120.9	166.3
Rater power	(1)	kW	1.05	12.6	1.8	19.5	2.6	25.2	3.3	28.4	4.6	6.22
Inertia		10^{-3}kg.m²	216		433		649		865		1,296	1,944
Weight		kg	27.4		43		58		73		103	148
Thermal time constant	(1)	s	1,036		1,593		2,153		2,710		3,830	4,670
Thermal resistance	(1)	℃ / W	0.084		0.078		0.072		0.068		0.059	0.050
Phase resistance at 20℃	(2)	Ω	5.40	0.206	3.36	0.084	1.83	0.046	1.44	0.038	0.955	0.686
Phase inductance at I continuous		mH	26.2	1	25.3	0.63	17	0.42	15.1	0.4	11.5	9.2
Electrical time constant	(2)	ms	4.9		7.5		9.3		10.5		12	13.4
Power cable square section	(7)	nxmm²	4x1.5	4x6	4x1.5	4x10	4x1.5	4x16	4x1.5	4x25	4x2.5	4x4
Power cable diameter	(7)	mm	Ø10.2	Ø15.9	Ø10.2	4xØ9,5	Ø10.2	4xØ11	Ø10.2	4xØ13.5	Ø11.4	Ø13.1

COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 60℃

			500STK1M		500STK2M		500STK3M		500STK4M		500STK6M	500STK9M
Continuous torque	(4)	N.m	285		588		831		1,122		1,731	2,530
Current at continuous torque		A	10.1	49.2	15.9	98.6	21.7	142.5	27.8	190.5	36.5	52
Fluid input temperature	(5)(6)	℃	20		20		20		20		20	20
Fluid temperature rise		℃	10		10		10		10		10	10
Housing temperature		℃	< 30		< 30		< 30		< 30		< 30	< 30
Fluid flow		l / mn	3		5		6		7		9	13
Losse		W	1,750		2,520		3,160		3,920		4,813	6,870
Pressure		Bar	0.04		0.23		0.65		0.9		1.84	5.4
Power cable square section	(7)	nxmm²	4x1.5	4x10	4x1.5	4x25	4x2.5	4x35	4x4	4x50	4x6	4x10
Power cable diameter	(7)	mm	Ø10.2	Ø18.8	Ø10.2	4xØ13.5	Ø11.4	4xØ15.1	Ø13.1	4xØ17.1	Ø15.9	Ø18.8

COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 140℃

			500STK1M		500STK2M		500STK3M		500STK4M		500STK6M	500STK9M
Continuous torque	(4)	N.m	412		819		1,180		1,550		2,394	3,590
Current at continuous torque		A	16.5	80.3	24.4	151	34	223	42	288	61	82
Fluid input temperature	(5)(6)	℃	20		20		20		20		20	20
Fluid temperature rise		℃	8		8		8		9		12	17
Housing temperature		℃	41		31		31		28		30	32
Fluid flow		l / mn	11		15		17		19		19	19
Losse		W	5,508		7,128		8,410		9,690		13,040	17,590
Pressure		Bar	0.29		1.3		2.6		4.4		6.8	10.4
Power cable square section	(7)	nxmm²	4x1.5	4x16	4x4	4x35	4x6	4x70	4x10	4x95	4x10	4x16
Power cable diameter	(7)	mm	Ø10.2	4xØ11	Ø13.1	4xØ15.1	Ø15.9	4xØ20.1	Ø18.8	4xØ22.6	4xØ9,5	4xØ11

(1) Thermal conditions:
Ambient temperature 20℃
Winding temperature rise 120℃
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℃.

(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 gycol-added water or fluids approved for closed cooling circuits.

(7) For curents lower than 53 Amps, one shielded cable
For curents over 53 Amps, four single shielded wires output (highlighted in the table)

Other speed characteristics are available, please contact us.