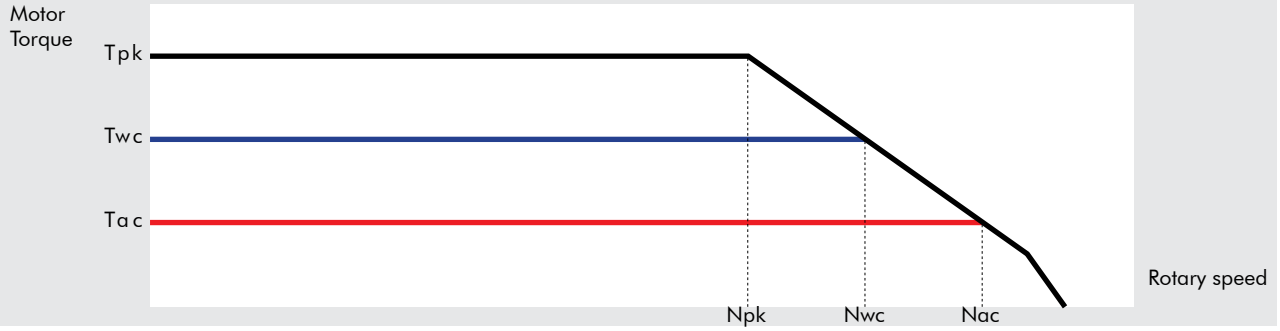
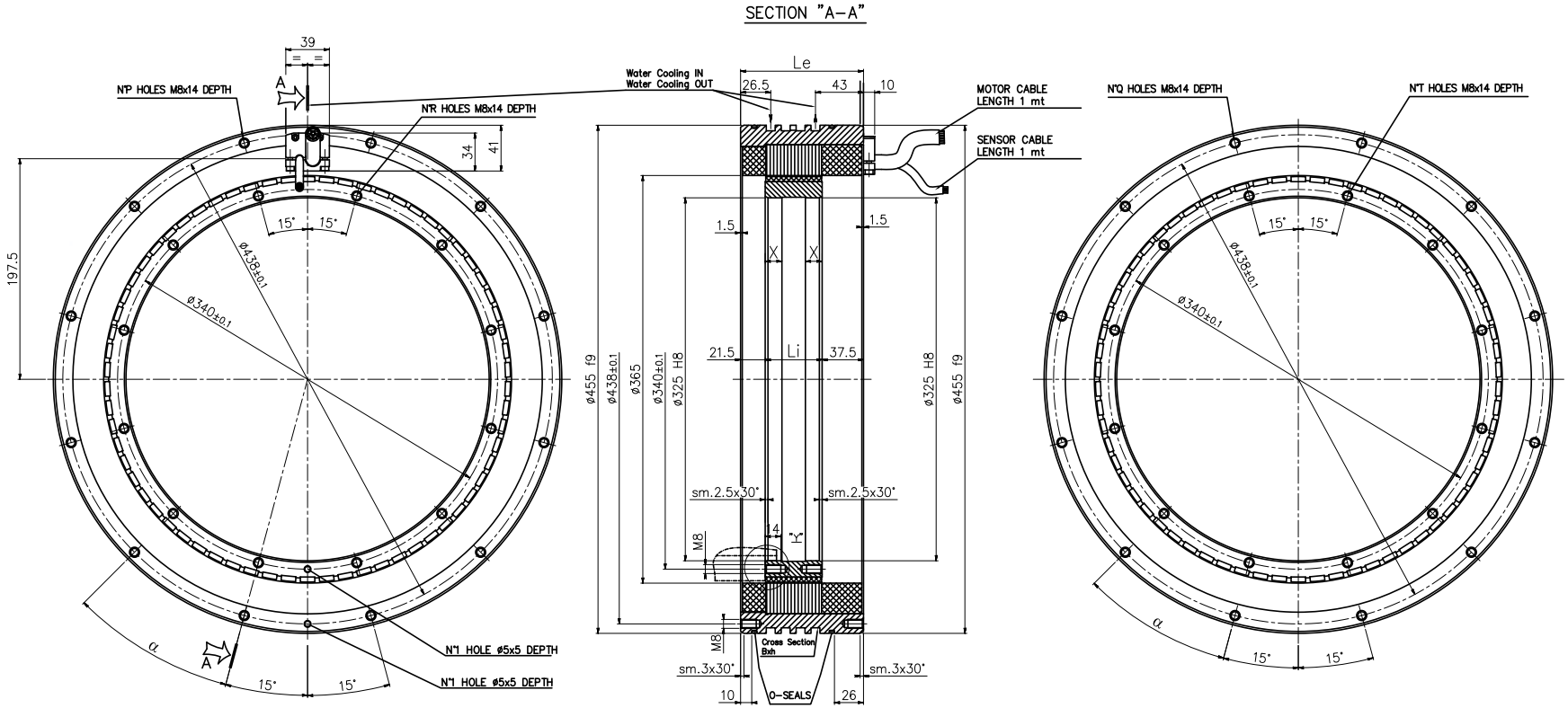
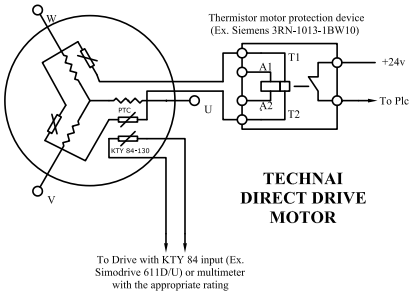
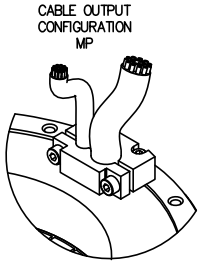
Motor Specifications TECHNAI MK-CI 420 WA/WB

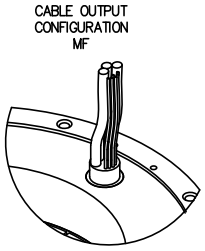
Motor Specifications	**Symbol**	**Unit**	**MK-CI 420-030**		**MK-CI 420-050**		**MK-CI 420-070**		**MK-CI 420-100**		**MK-CI 420-150**	
			WA	**WB**	**WA**	**WB**	**WA**	**WB**	**WA**	**WB**	**WA**	**WB**
Number of pole	P		66	66	66	66	66	66	66	66	66	66
Peak Torque	Tpk	Nm	430	430	725	725	980	980	1410	1410	2110	2110
Continuos Torque (Water Cooling Dt100)	Twc	Nm	283	281	482	478	691	689	995	991	1458	1455
Continuos Torque (Air Cooling Dt100)	Tac	Nm	128,5	125	209	205	290	288	412	408	585	583
Stall Torque (Water Cooling)	Tswc	Nm	216	214	368	365	527	526	760	757	1113	1111
Stall Torque (Air Cooling)	Tsac	Nm	85	95,6	160	157	223	220	315	311	447	445
Ripple Torque (Cogging Torque)	Tr	Nm	3	3	5	5	7	7	8,7	8,7	13	13
Power Loss at Twc	Pwc	KW	2,7	2,7	3,7	3,7	4,7	4,7	6	6	8,5	8,5
Power Loss at Tac	Pac	KW	0,5	0,5	0,65	0,65	0,75	0,75	0,95	0,95	1,25	1,25
Termal Resistance Water Cooling	RthWc	K/W	0,036	0,036	0,026	0,026	0,021	0,021	0,017	0,017	0,012	0,012
Termal Resistance Air Cooling	RthAc	K/W	0,170	0,170	0,150	0,150	0,130	0,130	0,108	0,108	0,080	0,080
Torque Constant	Kt	Nm/A	24,0	11,9	29,5	14,6	28,0	13,6	40,0	19,4	40,0	19,9
Back EMF Constant	Ke	V/1000 Rpm	1450	721	1772	882	1692	822	2417	1175	2417	1202
Maximum Speed at Ipk at 600 Vdc	Npk	RPM	70	150	60	120	77	150	44	95	44	95
Maximum Speed at Iwc at 600 Vdc	Nwc	RPM	145	320	125	250	138	290	90	200	90	200
Maximum Speed at Iac at 600 Vdc	Nac	RPM	220	450	185	390	200	400	138	280	138	280
Winding Resistance (Phase to Phase)	R20	Ω	8,3	2,12	5,8	1,5	3,2	0,8	4,2	1,05	2,7	0,67
Winding Inductance (Phase to Phase)	L	mH	37,9	9,6	32,2	8,16	20,4	4,9	28,7	7	18,8	4,77
Peak Current	Ipk	Arms	26		35,5		50,5	103	50,5	104	75,7	152
Continuos Current (Water Cooling Dt100)	Iwc	Arms	12,6	241	17,6	35,4	26,5	54,5	26,5	54,7	39	78
Continuos Current (Air Cooling Dt100)	Iac	Arms	5,6	10,8	7,5	14,8	10,7	22	10,5	22	14,9	30
Stall Current at 0 Speed (Water Cooling)	Iswc	Arms	9,6	19,2	13,4	27	20,2	41,6	20,2	41,7	29,7	59,6
Stall Current at 0 Speed (Air Cooling)	Isac	Arms	4,3	8,2	5,7	11,4	8,1	16,7	8	16,7	11,4	23
Maximum Winding Temperature		°C	130	130	130	130	130	130	130	130	130	130
Height of Rotor		mm	30	30	50	50	70	70	100	100	150	150
Height of Stator		mm	90	90	110	110	130	130	160	160	210	210
Outer Diameter of Stator		mm	455	455	455	455	455	455	455	455	455	455

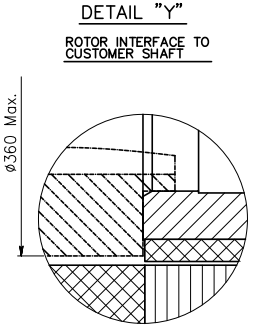












TYPE MK-CI-420		030	050	070	100	150
STATOR LENGTH	Le	90	110	130	160	210
ROTOR LENGTH	Li	31	51	71	101	151
CENTERING LENGTH	X	10	15	15	15	15
COOLING GROOVE WIDTH	B	8	8	9	8	9
COOLING GROOVE DEPTH	h	5	5	5	5	5
COOLING GROOVES	No	2	4	4	8	8
STATOR HOLES	P	12	12	12	22	22
	Q	12	12	12	24	24
ROTOR HOLES	R	12	12	12	23	23
	T	12	12	12	24	24
HOLES PITCH ANGLE	α	30°	30°	30°	15°	15°