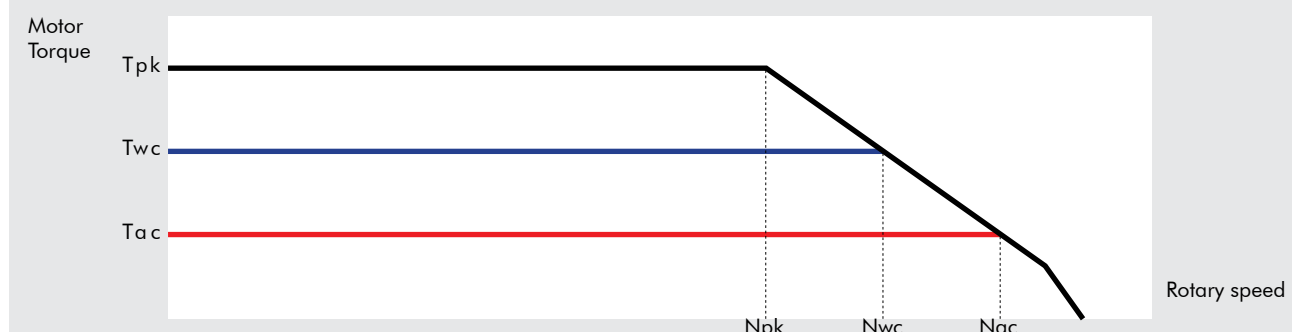
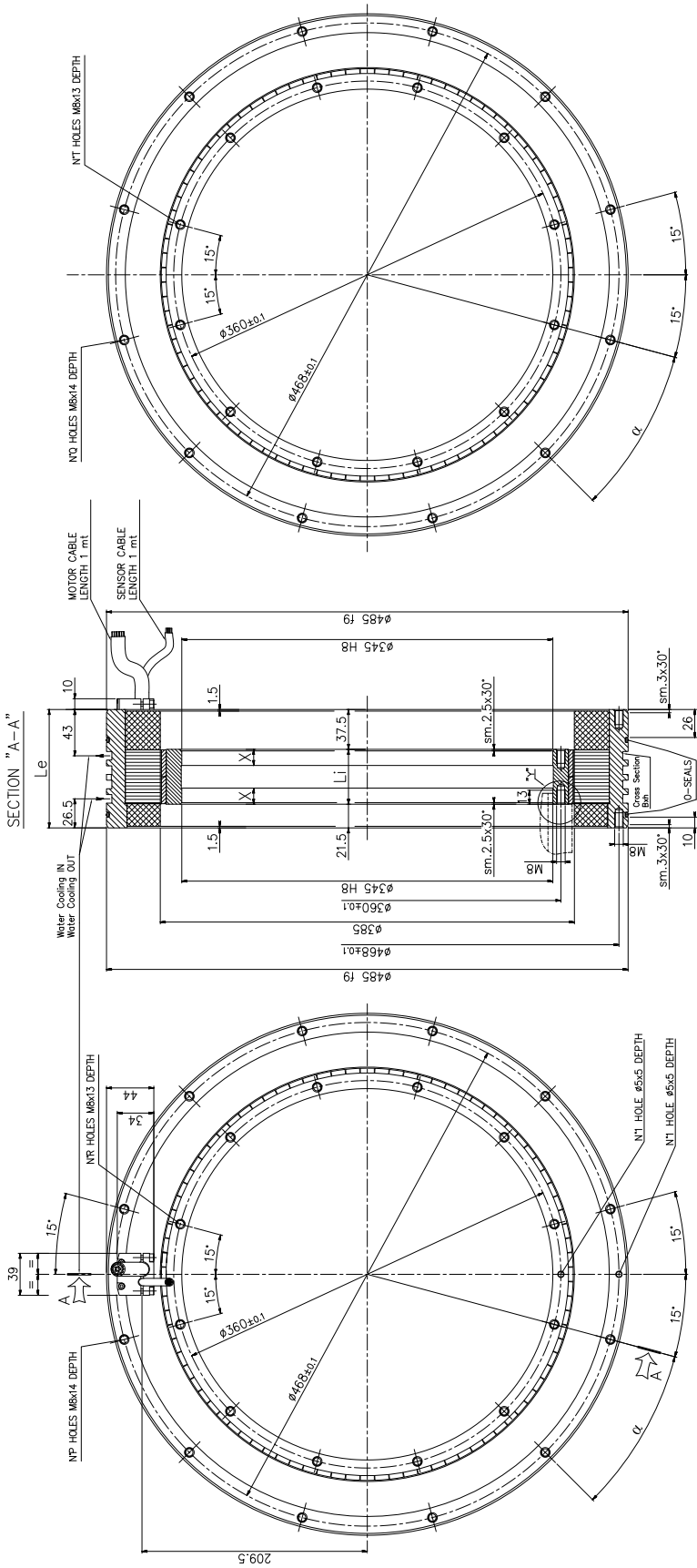


Motor Specifications TECHNAI MK-CI 450 WA/WB

Motor Specifications	Symbol	Unit	MK-CI 450-030		MK-CI 450-050		MK-CI 450-070		MK-CI 450-100		MK-CI 450-150	
			WA	WB	WA	WB	WA	WB	WA	WB	WA	WB
Number of pole	P		88	88	88	88	88	88	88	88	88	88
Peak Torque	T _{pk}	Nm	731	732	1219	1221	1707	1712	2439	2445	3647	3647
Continuos Torque (Water Cooling Dt100)	T _{wc}	Nm	397	402	670	679	938	950	1355	1355	2119	2109
Continuos Torque (Air Cooling Dt100)	T _{ac}	Nm	180	181	290	293	403	404	570	570	831	827
Stall Torque (Water Cooling)	T _{swc}	Nm	312	317	528	536	739	749	1070	1070	1682	1673
Stall Torque (Air Cooling)	T _{sac}	Nm	138	139	222	224	308	309	437	437	636	633
Ripple Torque (Cogging Torque)	T _r	Nm	4,1	4,1	7	7	10	10	14	14	21	21
Power Loss at T _{wc}	P _{wc}	KW	2,6	2,6	3,6	3,6	4,6	4,6	6,2	6,2	9,1	9,1
Power Loss at T _{ac}	P _{ac}	KW	0,53	0,53	0,7	0,7	0,85	0,85	1,1	1,1	1,4	1,4
Termal Resistance Water Cooling	R _{thWc}	K/W	0,040	0,040	0,028	0,028	0,022	0,022	0,016	0,016	0,011	0,011
Termal Resistance Air Cooling	R _{thAc}	K/W	0,196	0,196	0,154	0,154	0,127	0,127	0,101	0,101	0,075	0,075
Torque Constant	K _t	Nm/A	15,6	8,0	26,1	13,4	36,5	18,8	52,1	26,8	38,0	20,1
Back EMF Constant	K _e	V/1000 Rpm	963	495	1606	826	2248	1156	3212	1652	2340	1239
Maximum Speed at I _{pk} at 600 Vdc	N _{pk}	RPM	145	325	70	200	55	120	20	85	55	125
Maximum Speed at I _{wc} at 600 Vdc	N _{wc}	RPM	300	625	180	380	120	260	80	170	110	230
Maximum Speed at I _{ac} at 600 Vdc	N _{ac}	RPM	400	800	240	470	170	340	110	230	160	310
Winding Resistance (Phase to Phase)	R ₂₀	Ω	1,77	0,45	2,4	0,61	3	0,8	4	1	1,25	0,36
Winding Inductance (Phase to Phase)	L	mH	15,6	2,26	13,8	3,7	18,91	5,0	26,7	7,0	9,4	2,7
Peak Current	I _{pk}	Arms	68	131	68	131	68	131	68	131	138	260
Continuos Current (Water Cooling Dt100)	I _{wc}	Arms	26,5	52,5	27	53	26,8	53	27,3	53	57	110,5
Continuos Current (Air Cooling Dt100)	I _{ac}	Arms	11,9	23,4	11,5	22,6	11,4	22,3	11,3	22	22,8	43
Stall Current at 0 Speed (Water Cooling)	I _{swc}	Arms	20,3	40	20,5	40,5	20,5	40,5	20,8	40,5	44,8	84,2
Stall Current at 0 Speed (Air Cooling)	I _{sac}	Arms	9	17,8	8,8	17,3	8,7	17,1	8,6	16,8	17,3	32,5
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	485	485	485	485	485	485	485	485	485	485





TYPE MK-CI-450	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	a	30°	30°	30°	15°	15°

