Table 3-53 1FT6084, water cooled

1FT6084				
Technical data	***Code***	***Units***	***-8WF7***	
Engineering data				
Rated speed	n_N	rpm	3000	
Number of poles	2p		8	
Rated torque (100 K)	$M_{N(100\ K)}$	Nm	35	
Rated current (100K)	I_N	A	27	
Stall torque (60K)	$M_{0(60\ K)}$	Nm	29	
Stall torque (100K)	$M_{0(100\ K)}$	Nm	35	
Stall current (60K)	$I_{0(60\ K)}$	A	19.9	
Stall current (100K)	$I_{0(100\ K)}$	A	24.5	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	61.1	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	48	
Optimum operating point				
Optimum speed	n_{opt}	rpm	3000	
Optimum power	P_{opt}	kW	11.0	
Limiting data				
Max. permissible speed (mech.)	n_{max}	rpm	7900	
Maximum torque	M_{max}	Nm	65	
Maximum current	I_{max}	A	59	
Physical constants				
Torque constant	k_T	Nm/A	1.43	
Voltage constant	k_E	V/1000 rpm	91	
Winding resistance at 20 °C	R_{ph}	Ohm	0.37	
Rotating field inductance	L_D	mH	4.3	
Electrical time constant	T_{el}	ms	11.6	
Shaft torsional stiffness	c_t	Nm/rad	76000	
Mechanical time constant	T_{mech}	ms	2.6	
Thermal time constant	T_{th}	min	1.5	
Weight with brake	m	kg	24.5	
Weight without brake	m	kg	21	

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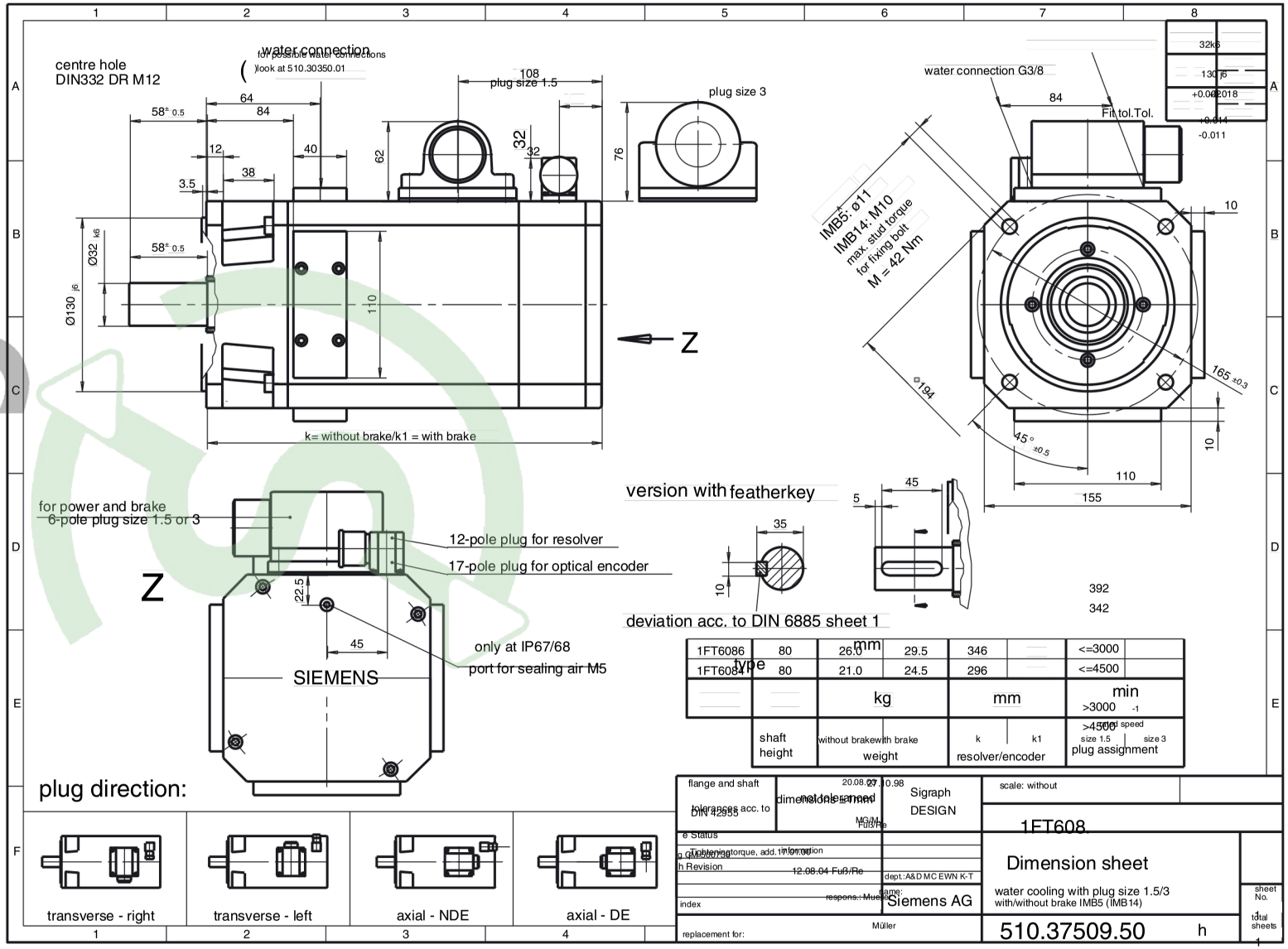

type		mm					
1FT6086	80	26.0	29.5	346		<=3000	
1FT6084	80	21.0	24.5	296		<=4500	
		kg		mm		min	
						>3000 -1	
						>4500	
	shaft height	without brake	with brake weight	k	k1 resolver/encoder	size 1.5	size 3 plug assignment

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