

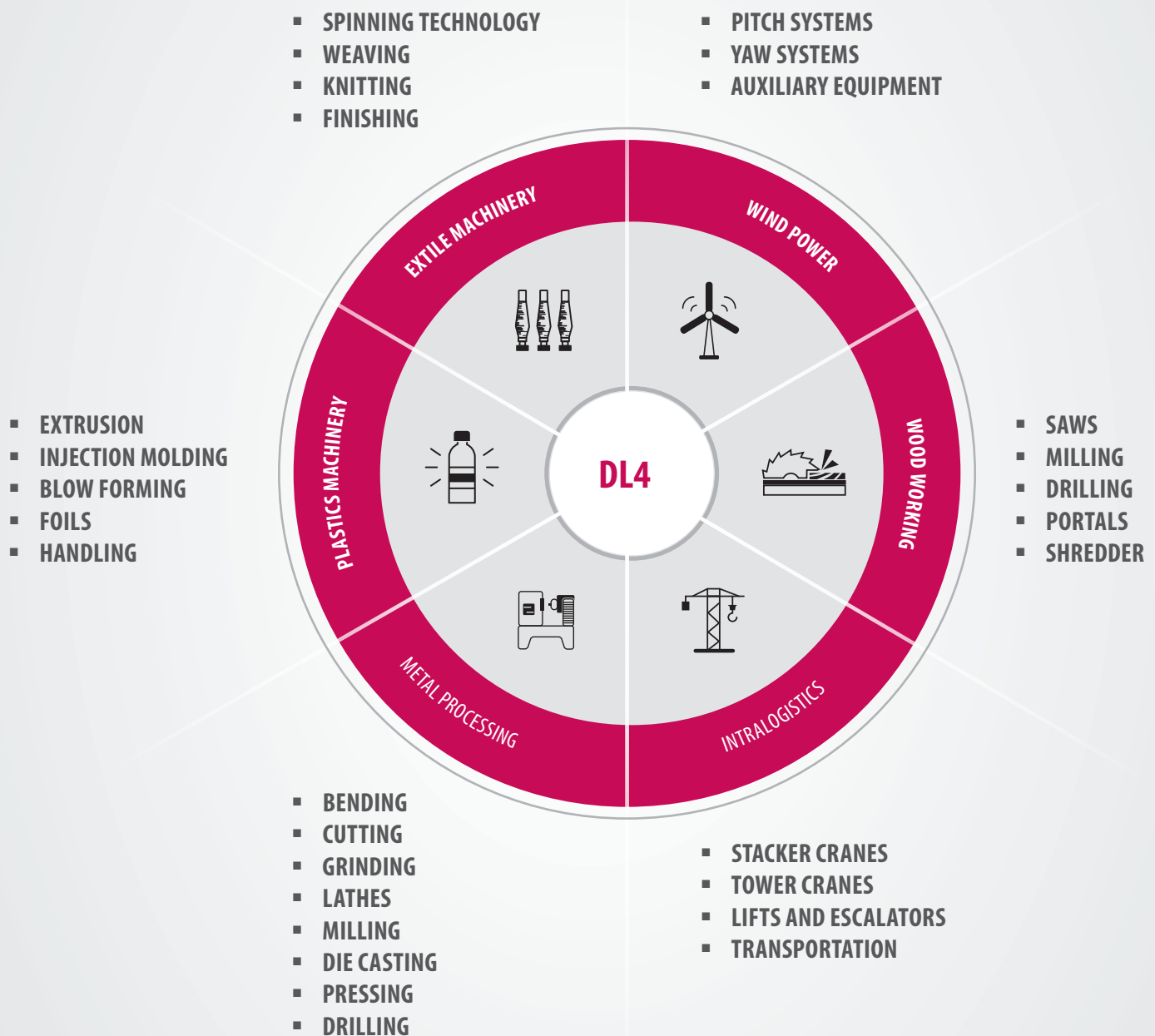


Crouzet

HIGH TORQUE SERIES DL4

SERVO SYSTEMS - WITH AIR AND LIQUID COOLING

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HIGH TORQUE SERIES DL4

DL4 servo motors stands for maximum dynamics and maximum flexibility in the connection to the machine design. The use of rare earth permanent magnet ensures a high energy density - the design of the magnetic circuit for sinusoidal voltages combines low ripple torque with high overload without danger of demagnetization.



SERVO SYSTEMS

In combination with the servo inverters KEB COMBIVERT F6, as well as assembled encoder / motor cables, create powerful Drive systems that perfectly matched optimal properties of speed and torque characteristics, as well as provide high efficiency and easy startup.



MOTOR FEATURES

Design	IM B5	
Protection	IP 54	
Shaft	without keyway	
Encoder systems	without encoder (SCL-operation)	
	Resolver	
	Hiperface SRS50 - 16 bit	
	Hiperface SRM50 - 16 bit /Multiturn - 12 bit	
Nominal voltage	400V	
Temperature sensor	PT 1000	
Thermal design	ISO Kl. F	
Winding	ISO Kl. F	
No. of poles	8	
Connection Motor	Speedtec plug M23	for SE/.../CS
	Terminal box	from SE/.../CF
Version forced ventilation	1 ph. 230V AC connection on clipboard in the terminal box	

OPTIONS

Foot/ Flange mounted version IM B3 / IM B35
IP 65 – exclude ventilation (with shaft seal ring D-side)
with keyway, special shaft
Brake 24V DC, additional inertia

ACCESSORIES

Encoder cable Resolver 00S6L50-10xx (xx = 1 ... 50 m)
Encoder cable Hiperface 00S6L55-10xx (xx = 1 ... 50 m)
Connection: Speedtec plug M23
Motor cable 2.5mm ² 00S4619-00xx(xx = 1 ... 50 m)
Connection: Speedtec plug M23 für SE/ ... /CS

VERSION DL4-LC

Increased power density due to liquid cooling - available for size SG - SE/SF on request

TECHNICAL DATA DL 4

SIZE	LENGTH	COOLING	MOTOR							
			T _{d0} [Nm]	T _N [Nm]	P _N [kW]	T _{max} [Nm]	I _{d0} [A]	I _N [A]	I _{max} [A]	
SE	L2	CS	12	10.2 / 10 / 9.8	1.6 / 2.1 / 3.1	23.8 / 23.5 / 23.3	3.7 / 4.9 / 7.2	3.4 / 4.4 / 6.2	8.6 / 11 / 16	1500
		CF	15,4	14.6 / 14 / 12.6	2.3 / 2.9 / 4	28.5 / 28.2 / 28	5 / 6.5 / 9.4	4.9 / 6.1 / 8	10.3 / 13.2 / 19.2	
	L4	CS	22	20.5 / 20 / 16.5	3.2 / 4.2 / 5.2	44.3 / 45.9 / 45.9	6.6 / 9 / 13.4	6.4 / 8.5 / 10.3	14.9 / 21.1 / 30.9	
		CF	31	29 / 28 / 24	4.6 / 5.9 / 7.5	53.2 / 55 / 55	9.3 / 12.7 / 18.6	9 / 11.9 / 15	17.9 / 25.3 / 37.1	
	L6	CS	30	27.5 / 25.6 / 20	4.3 / 5.4 / 6.3	68.2 / 69.6 / 68.8	9.2 / 12.4 / 18.2	8.8 / 11 / 12.5	23.6 / 32.4 / 46.4	
		CF	42	39 / 37.5 / 33	6.1 / 7.9 / 10.4	81.9 / 83.5 / 82.6	12.9 / 17.4 / 25.3	12.5 / 16.1 / 20.6	28.3 / 38.8 / 55.7	
	L8	CS	39	33.5 / 30.4 / 22.2	5.3 / 6.4 / 7	91.7	12 / 15.9 / 23.5	10.8 / 12.9 / 13.9	32 / 42.2 / 61.8	
		CF	54	49 / 47 / 39	7.7 / 9.8 / 12.3	100.1	16.8 / 22.1 / 32.5	15.8 / 20 / 24.3	38.4 / 50.6 / 74.2	
SF	L2	CS	33	31.5 / 30.5 / 29.5	3.3 / 6.4 / 9.3	82.3 / 82 / 82.2	6.7 / 14.8 / 20.2	6.7 / 14.3 / 18.8	18.4 / 40.4 / 55.1	1000
		CF	45	42.7 / 42 / 43	4.5 / 8.8 / 13.5	93.5 / 93.1 / 93.4	9.3 / 20.5 / 27.9	9.1 / 19.7 / 27.4	21.9 / 48.1 / 65.6	
	L4	CS	60	56 / 51 / 44	5.9 / 10.7 / 13.8	154.3 / 154 / 154.6	13.6 / 25.6 / 40.9	13.1 / 22.4 / 30.9	37.9 / 71 / 114	
		CF	89	87 / 85 / 80	9.1 / 17.8 / 25.1	203.4 / 203.6 / 204.5	20.2 / 37.9 / 60.7	20.4 / 37.3 / 56.1	52.4 / 98.3 / 157	
	L6	CS	82	72 / 62 / 53	7.5 / 13 / 16.7	223.6 / 223.1 / 223.3	17 / 37.3 / 46.6	15.3 / 29 / 31	49.9 / 110 / 137	
		CF	130	124 / 118 / 111	13 / 24.7 / 34.9	280.1 / 280 / 280.4	26.9 / 59.1 / 73.9	26.4 / 55.2 / 64.9	65.6 / 144 / 180	
	L8	CS	102	90 / 76.3 / 65	9.4 / 16 / 20.4	271.5 / 270.7 / 271.1	21.7 / 43.5 / 58	19.7 / 33.5 / 38	62.4 / 125 / 166	
		CF	163	154 / 144 / 137	16.1 / 30.2 / 43	373.5 / 373.5 / 373.8	34.7 / 69.5 / 92.7	33.8 / 63.2 / 80.1	90.2 / 180 / 241	
SG	L2	CS ^(*)	100(153)	93 / 76 / 60	9.7 / 15.9 / 18.8	147.4	21.6 / 40.5 / 54	21.6 / 33.1 / 34.8	38.3 / 71.9 / 95.8	1000
		CF	145	143 / 125 / 117	15 / 26.2 / 34.3	267.1	31.3 / 58.7 / 78.3	33.2 / 54.4 / 67.9	69.5 / 130.3 / 173.7	
	L4	CS ^(*)	182(270)	150 / 113 / 45	15.7 / 23.7 / 14.1	258.8	36.8 / 73.7 / 98.2	32.7 / 49.2 / 26.1	63.1 / 126.2 / 168.3	
		CF	310	290 / 260 / 230	30.4 / 54.5 / 67.4	543.9 / 558.6 / 526.3	62.8 / 127.3 / 161.9	63.1 / 110.2 / 133.5	132.6 / 265.2 / 342.2	
	L6	CS ^(*)	270(400)	205 / 115 / 0	21.5 / 24.1 / 0	386 / 386 / 378.4	58.3 / 97.2 / 143	47.6 / 44.5 / 0	100.4 / 167.3 / 251	
		CF	440	395 / 350 / 300	41.4 / 73.3 / 88	736.8 / 736.8 / 657.9	95 / 158.3 / 237.5	91.7 / 135.5 / 174.2	191.6 / 319.4 / 427.8	
	L8	CS ^(*)	340(493)	270 / 130 / 0	28.3 / 27.2 / 0	464.9 / 464.9 / 455.8	68.8 / 137.7 / 183.5	58.8 / 56.6 / 0	113.4 / 226.7 / 302.3	
		CF	580	530 / 470 / 320	55.5 / 98.4 / 93.8	964.9 / 833.3 / 771.9	117.4 / 239.3 / 313.1	115.4 / 204.7 / 185.8	235.3 / 406.4 / 501.9	

(*) Data for S3- operation 40%- 1min.

PART NUMBER SERVO MOTORS

00SM000-CMAT - EXECUTION-CODE DL4

Voltage		Size		Lengths		Cooling		Speed				Shaft			Brake			Encoder					Options brakes 24V DC			
V	4	S	F	L	4	C	F	S	P	2	0		F	K		B	R	E	N	C	O	1	O	P	O	O
V4 400V		SE		L2		CS surface		SP10 1000 rpm				FK keyway			BR brake			ENC00 no					OP00 no			
		SF		L4		CF forced		SP15 1500 rpm				FKN no keyway			BRN no brake			ENC01 Resolver					OP01 IP65			
		SG		L6				SP20 2000 rpm										ENC04 SRSS0					OP02 IM B35			
				L8				SP30 3000 rpm										ENC05 SRMS0					OP06 IM B35 SW			
																		OP03 IP 65/IM B35					OP07 IP 65/IM B35 SW			
																		OP09 IP 65/IM B35					OP10 IP 65/IM B35			
																		OP11 IP 65/IM B35					OP11 IP 65/IM B35			

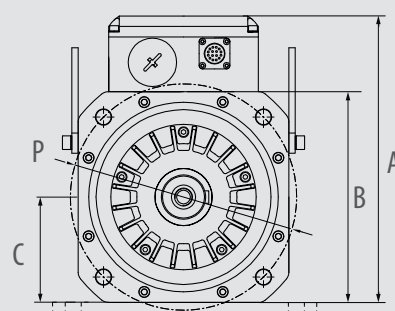
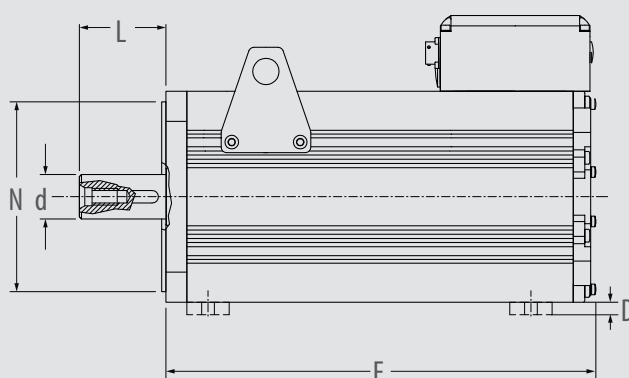
SW: special shaft; ZM: Additional Inertia

				BRAKE			DIMENSIONS																					
n _N [min ⁻¹]	J _L [kgcm ²]	J _Z [kgcm ²]	m [kg]	T _{NBr} [Nm]	J _{br} [kgcm ²]	m _{Br} [kg]	A [mm]	B [mm]	C [mm]	D [mm]	E _{without brake} [mm]	E _{with brake} [mm]	Ø d [mm]	L [mm]	Ø N [mm]	Ø P [mm]												
/ 2000 / 3000	8.52	14**	11.9	32	5.9	2.7(CS) 3.2(CF)	194	142/158*	80	9	245	295	24 _{j6} SW: 28 _{j6}	50 SW: 60	130 _{j6}	165												
			14				224				340	390																
	16.6		194				300				350																	
	15.1		224				395				445																	
	21.3		194				355				405																	
	24.3		224				450				500																	
	28.27		26				194				410	460	28 _{j6}	60														
			29.5				224				505	555																
	/ 2000 / 3000		49				50**				30	130	60	11(CS) 13(CF)			272	200/224*	112	12/20*	259	379	42 _{k6} SW: 38 _{k6}	82 SW: 80	180 _{j6}	215		
											37						296				353	473						
89		43	272	333	453																							
		49	296	428	548																							
128		54	272	408	528																							
		64	296	502	622																							
167		68	272	483	703																							
		78	296	577	697																							
/ 2000 / 2800		224		75	225	84		33(CS) 37(CF)	361	264/292*	132/146*				18/14*	340	475				48 _{k6}	110					250 _{j6}	300
				89					389							470	605											
	109	361		447			582																					
	126	389		577			712																					
	401	143		450	149	39(CS) 43(CF)	361	554	689																			
		164					389	684	819																			
	177	361					661	796																				
	753	203					389	791	926																			

** Option ZM: Additional Inertia

* Motor frame version .././CF

ZM	OP12 SW/ZM
IP65 ZM	OP13 IP65 SW/ZM
IP335 ZM	OP14 IM B35 SW/ZM
IP335 ZM	OP15 IP 65/IM B35 SW/ZM

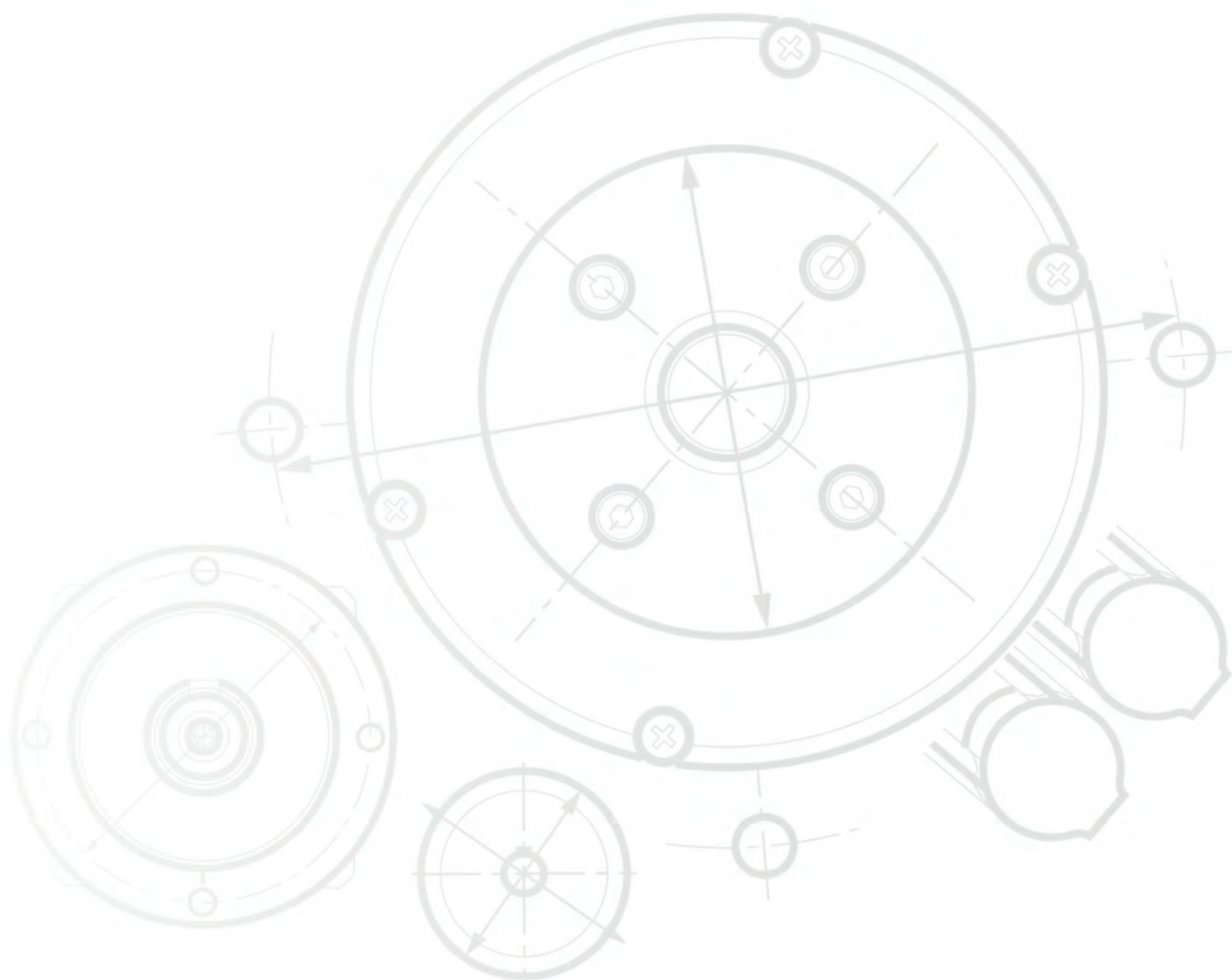




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