						DC brushless (PBL)				DC permanent magnet (PM)						AC induction (SD)						AC/DC series wound (SD)						DC shunt wound (SD)						Standard options													
						Power[a] (Watts)	Speed (rpm)	Torque[a] (Nm)		Power[a] (Watts)	Speed (rpm)			Torque[a] (Nm)		Power[a] (Watts)	Speed (rpm)			Torque[a] (Nm)		Power[a] (Watts)	Speed (rpm)			Torque[a] (Nm)		Power[a] (Watts)	Speed (rpm)			Torque[a] (Nm)				shaft dia. (mm)			shaft output			flange PCD (mm)			International standard flanges		
	Type code	Mechanical rating (Nm)	Radial load (N)	Axial load (N)	Shaft Orientation	Max	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	fixing base (B)	shaft length (mm)	single	double	hollow (H)	flat	keyway	custom	standard	optional (F)	3-point (3P)	IEC	NEMA	metric
motor only	-	-	-	-	In-line	440	4000	0.06	1.4	7.5	984	1500	5000	0.05	1.1	3.7	250	900	2800	0.025	1.3	10	190	2000	6500	0.04	0.36	10	150	2000	5000	0.05	0.36	-	-	❍	❍	-	-	-	-	●	-	-	❍	❍	❍
worm																																															
	S	4.5	69	35	90°	84	640	0.2	3.5	7.5	90	21	970	0.2	4.0	3.7	120	13	680	0.06	4.5	38	50	43	960	0.2	2.0	38	50	43	960	0.2	2.0	-	29	8	8	-	●	❍	❍	41.3	-	42	-	-	-
	M	11.8	132[b]	88[c]	90°	220	480	0.7	11.8	23	280	21	970	0.5	11.7	10	190	12	680	0.36	11.4	38	150	42	970	0.2	6.4	38	150	42	970	0.2	2.0	❍	52	12	12	8	❍	●	❍	47.6	80	50.8	-	-	-
	L	22	177[b]	132[c]	90°	346	432	0.7	19.2	45	450	25	780	0.9	18.7	100	250	15	546	1.9	17	50	150	33	780	0.9	11.3	60	150	33	780	1	11.3	❍	51	15	15	15	❍	●	❍	57.1	100	72	-	-	-
	LS	22	314	196	90°	346	432	0.7	19.2	45	450	25	780	0.9	18.7	100	250	15	546	1.9	17	50	150	33	780	0.9	11.3	60	150	33	780	1	11.3	-	51	25	25	15	❍	●	❍	-	-	-	-	-	-
	G	50	491	294	90°	440	240	6.6	50	80	450	20	240	4.6	45.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	25	25	15	❍	●	❍	-	-	-	-	-	-
double worm																																														
	SS	5.9	54	35	90°/in-line	-	-	-	-	7.5	60	0.5	150	0.8	5.9	3.7	120	0.32	40	0.34	5.9	15	50	1	80	1.8	5.9	38	50	1	80	2.8	5.9	-	29	8	8	-	●	❍	❍	41.3	-	42	-	-	-
	MM	11.8	88[b]	88[c]	90°/in-line	-	-	-	-	23	60	0.3	59	5	11.8	8	190	0.5	30	1.1	11.8	10	125	1	80	3.4	11.8	10	150	1	80	3.4	11.8	❍	52	12	12	8	❍	●	❍	47.6	80	50.8	-	-	-
in-line double worm																																														
	SIW	11.3	78	49	in-line	136	102	2.5	11.3	7.5	90	1	235	0.6	11.3	8	60	1	164	0.4	11.3	10	38	1.5	176	0.5	11.3	10	38	1.5	176	0.5	11.3	●	29	9	-	-	●	❍	❍	41.3	-	-	-	-	-
	MIW	28	265	132	in-line	184	77	3.2	28	23	120	1	235	1.7	28	8	120	1	164	0.5	28	10	75	1.5	176	0.5	28	10	95	1.5	176	0.5	28	●	52	12	-	-	❍	●	❍	47.6	-	-	-	-	-
	LIW	45	353	196	in-line	new for 2009				33	200	1	108	4.7	45	35	190	1.1	75	4.3	45	30	95	1.6	81	2	45	50	125	1.6	81	4	45	●	51	15	-	-	❍	●	❍	57.1	-	-	-	-	-
in-line spur																																														
	SIS	7.9	88	44	in-line	-	-	-	-	7.5	90	5	182	0.9	7.9	8	60	3	127	1.24	7.9	10	38	6.6	136	1	7.9	10	38	6.6	136	1	7.9	●	25.5	10	-	-	●	❍	❍	41.3	77.2	-	-	-	-
	MIS	45	216	137	in-line	-	-	-	-	33	200	15	623	1	37	35	120	14	436	1	45	30	95	20	467	0.8	23	50	125	20	467	1.3	30	●	51	14	-	-	❍	●	❍	48	-	-	-	-	-
	LIS	74	265	177	in-line	-	-	-	-	23	280	4	667	1	86	10	190	2.6	467	1	100	30	95	6	500	1	74	50	125	6	500	1	74	●	51	15	-	-	❍	●	❍	70	-	-	-	-	-
worm spur																																														
	SWS	11	177	112	90°	52	67	3.6	11	7.5	60	1	101	1.5	11	25	25	1	71	1.9	11	15	38	1.8	76	1.9	11	15	38	1.8	76	1.9	11	●	32	10	10	-	●	❍	❍	-	-	-	-	-	-
	MWS	45	353	177	90°	134	98	3.3	45	7.5	90	1	149	1	45	60	60	0.65	106	1.1	45	25	50	1.4	150	1.8	45	25	50	1.4	150	1.8	45	●	51	14	14	-	❍	●	❍	48	-	-	-	-	-
	LWS	100	446	226	90°	184	80	3.4	100	23	450	0.4	80	4	100	190	190	0.22	90	1	100	38	125	0.9	80	3.5	100	38	150	0.9	80	3.5	100	●	51	15[e]	15[e]	-	❍	●	❍	70	-	-	-	-	-
	GWS	250	667	353	90°	184	44	19.4	250	60	450	0.5	71	16	250	250	250	0.4	50	2	250	-	-	-	-	-	-	-	-	-	-	-	-	●	76	25	25	15	❍	●	❍	75	-	-	-	-	-
planetary																																														
	PG36	3[d]	39[d]	15[d]	in-line	-	-	-	-	3.8	11	3	674	0.05	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	10	-	-	●	❍	❍	28	-	-	-	-	-
	HP42				in-line	new for 2009				new for 2009						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-			-	-				
	PG45	15[d]	130[d]	40[d]	in-line	-	-	-	-	11	14	5	863	0.1	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	10	-	-	❍	●	❍	35	-	-	-	-	-
	PG56	30[d]	260[d]	80[d]	in-line	-	-	-	-	3.7	59	3	694	0.1	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	12	-	-	❍	●	❍	45	-	-	-	-	-
	HP60	40[d]	725[d]	225[d]	in-line	220	1000	0.4	30	23	450	1	1000	0.52	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	15	-	-	❍	●	❍	45	-	-	❍	❍	❍
	HP86				in-line	new for 2009				new for 2009						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-			-	-				

	DC brushless	DC permanent Magnet	AC induction	AC/DC series wound	DC shunt wound
motor construction	Wound stator, permanent magnet rotor	Permanent magnet stator, wound rotor with commutator	Wound stator, aluminium cage rotor	Low resistance wound stator, wound rotor with commutator	High resistance wound stator, wound rotor with commutator
insulation class	F	F	F	F	F
supply voltage	DC up to 48V with controller	DC from 12V to mains voltage	AC 1 or 3 phase mains voltage	AC or DC up to mains voltage	DC up to mains voltage
ingress protection	IP54	IP22 / IP54	IP20 / IP50 / IP54	IP20 / IP23 / IP50 / IP54	IP20 / IP23 / IP50 / IP54

Optional extras
Tachogenerator; encoder; terminal box; brake; speed reducer; controller

Customisation options
Shaft; spindle; paint finish; fixing arrangements; non-standard ratios; Ingress Protection (IP) rating; gear material; lubricant; insulation class

Design options
Bespoke motor-gearbox design and manufacture service | call for details

a: for S1 duty cycle (continuous operation); figures for intermittent operation may be higher, call for details | b: approx. 70% higher when supplied with base | c: approx. 20% higher when supplied with base | d: for 4-stage assembly | e: 17mm diametre shaft available with ratios 115:1 and 56:1 KEY: ● as standard ❍ optional