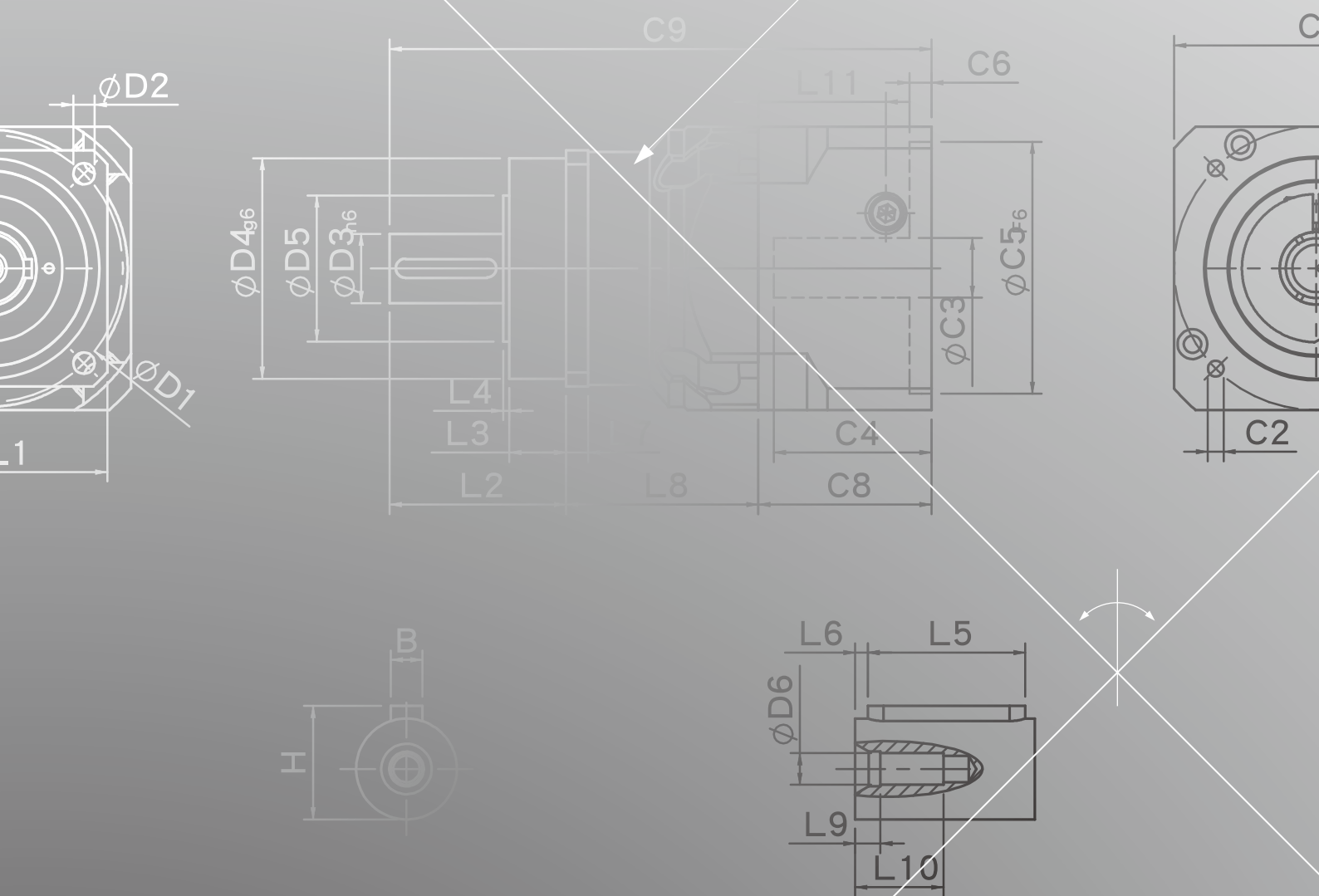
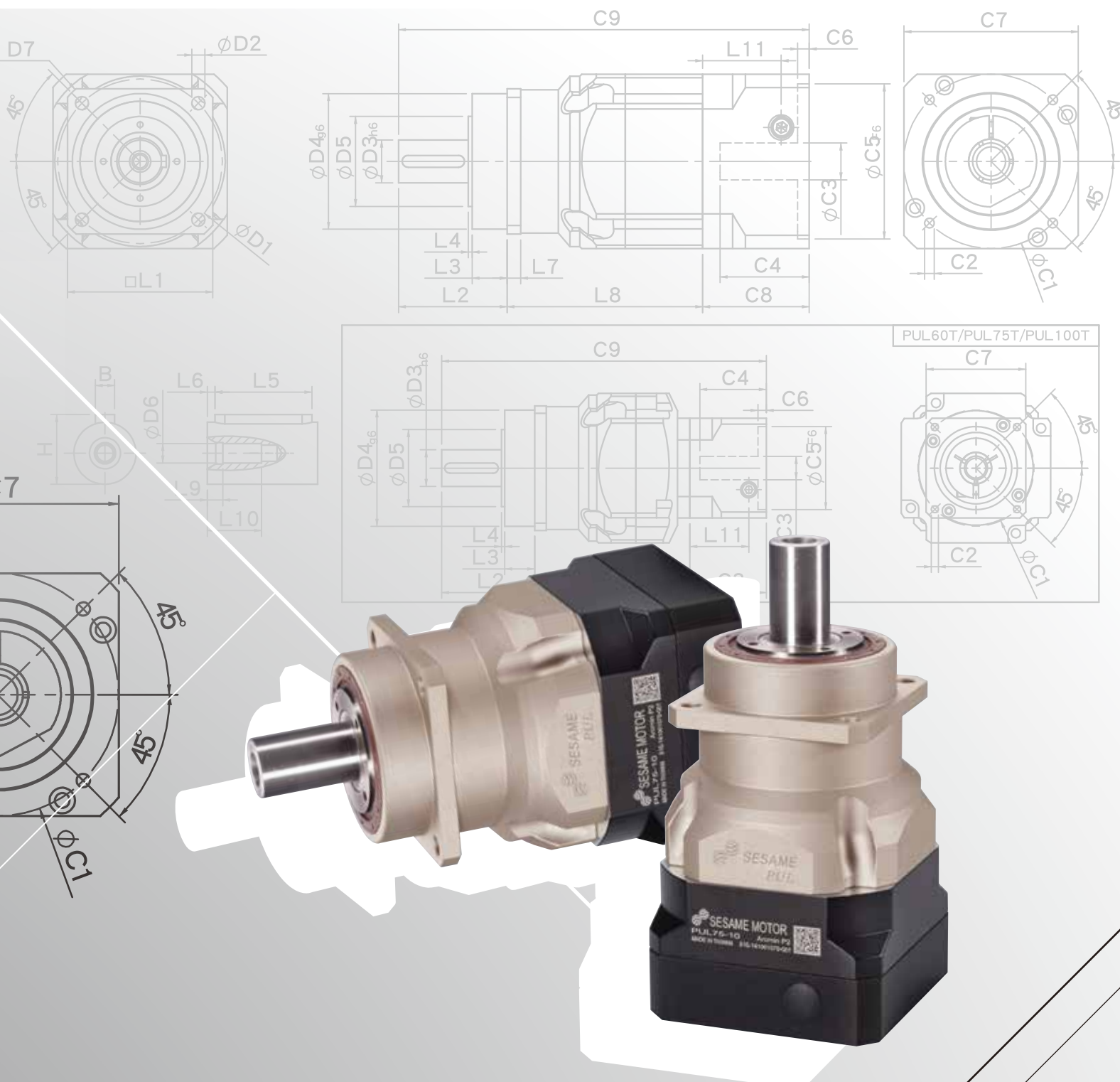
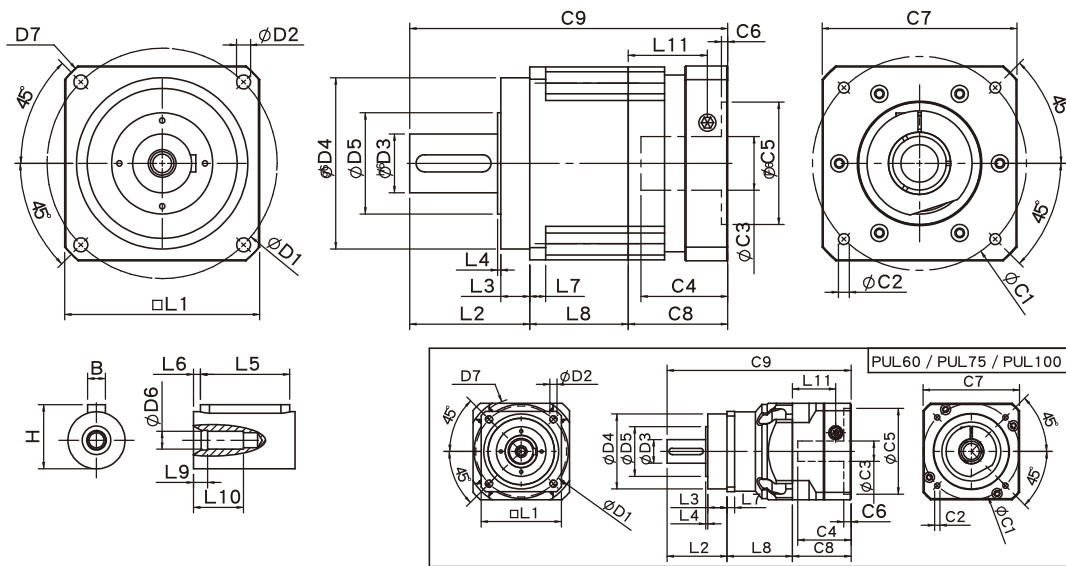


# ***PUL SERIES***





## PUL Single Stage Dimensions



## Specifications

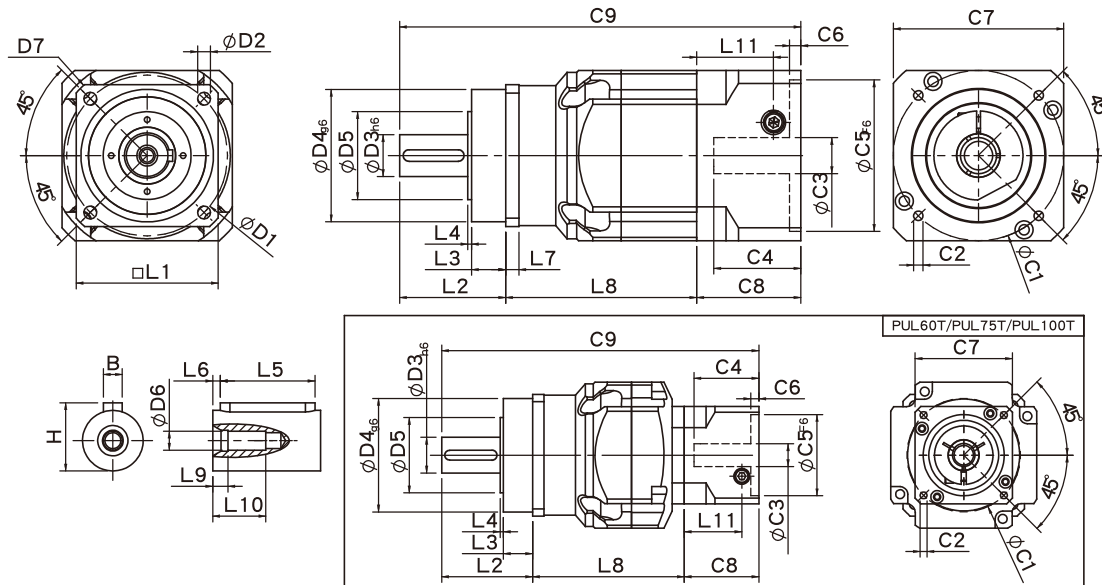
Unit:mm

Dimensions	PUL60	PUL75	PUL100	PUL140	PUL180	PUL220
D1	68	85	120	165	215	250
D2	5.5	6.8	9	11	13	17
D3 <sub>h6</sub>	16	22	32	40	55	75
D4 <sub>g6</sub>	60	70	90	130	160	180
D5	34.6	46.4	59.6	79.2	94.5	114.4
D6	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	80	100	138	186	239	292
L1	62	76	105	142	180	220
L2	48.5	56	88	112	112	138
L3	18.5	18	28	27	27	30
L4	1.5	2	2	3	3	3
L5	25	32	40	60	70	90
L6	2	2	5	5	6	7
L7	6	7	10	12	15	20
L8	44	61	46	64.5	92	111
L9	4	4.5	6	6	8	15
L10	16.5	20.5	30	38	48	42
L11	35.5	40.5	41.8	70	74	96
C1 <sup>2</sup>	70	90	115	165	200	235
C2 <sup>2</sup>	M5x0.8P	M6x1P	M8x1.25P	M10x1.5P	M12x1.75P	M12x1.75P
C3 <sup>2</sup>	≤14	≤19/≤24	≤24/≤32	≤35/≤38	≤50	≤55
C4 <sup>2</sup>	37	47	51	66.7	81	112
C5 <sup>2</sup> <sub>F6</sub>	50	70	95	130	114.3	200
C6 <sup>2</sup>	4	6	6	5.5	6	6
C7 <sup>2</sup>	60	90	115	140	182	220
C8 <sup>2</sup>	46	55	58	87.2	93	120
C9 <sup>2</sup>	138.5	172	192	263.7	297	369
B	5	6	10	12	16	20
H	18	24.5	35	43	59	79.5

★ C1~C9 are motor specific dimensions(metric std shown ). Size may vary according to the motor flange chosen.

★ Specification subject to change without notice.

## PUL Double Stage Dimensions-1



## Specifications

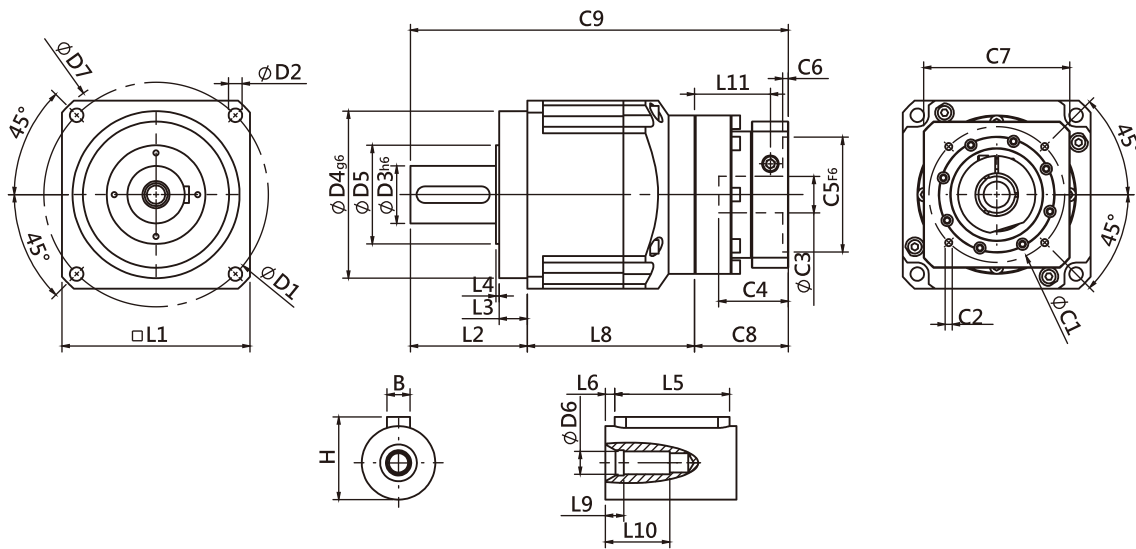
Unit:mm

Dimensions	PUL60/PUL60T		PUL75/PUL75T		PUL100T
D1	68		85		120
D2	5.5		6.8		9
D3 <sub>h6</sub>	16		22		32
D4 <sub>g6</sub>	60		70		90
D5	34.6		46.4		59.6
D6	M5x0.8P		M8x1.25P		M12x1.75P
D7	80		100		138
L1	62		76		105
L2	48.5		56		88
L3	18.5		18		28
L4	1.5		2		2
L5	25		32		40
L6	2		2		5
L7	6		7		10
L8	77	72.5	101	93.5	88.5
L9	4		4.5		6
L10	16.5		20.5		30
L11	35.5	29	40.5	35.5	40.5
C1 <sup>2</sup>	70	46	90	70	90
C2 <sup>2</sup>	M5x0.8P	M4x0.7P	M6x1P	M5x0.8P	M6x1P
C3 <sup>2</sup>	≤14	≤8	≤19/≤24	≤14	≤19/≤24
C4 <sup>2</sup>	37	27	47	37	47
C5 <sup>2</sup> <sub>F6</sub>	50	30	70	50	70
C6 <sup>2</sup>	4	4	6	4	6
C7 <sup>2</sup>	60	42.6	90	60	90
C8 <sup>2</sup>	46	38.5	55	46	55
C9 <sup>2</sup>	171.5	159.5	212	195.5	231.5
B	5		6		10
H	18		24.5		35

★ C1~C9 are motor specific dimensions(metric std shown ), Size may vary according to the motor flange chosen.

★ Specification subject to change without notice.

## PUL Double Stage Dimensions-2



## Specifications

Unit:mm

Dimensions	PUL140T	PUL180T	PUL220T
D1	165	215	250
D2	11	13	17
D3 <sub>h6</sub>	40	55	75
D4 <sub>g6</sub>	130	160	180
D5	79.2	94.5	114.4
D6	M16x2.0P	M20x2.5P	M20x2.5P
D7	186	239	292
L1	142	180	220
L2	112	112	138
L3	27	27	30
L4	3	3	3
L5	60	70	90
L6	5	6	7
L7	12	15	20
L8	120	160.2	202
L9	6	8	15
L10	38	48	42
L11	41.8	72.6	74
C1 <sup>2</sup>	130	130	200
C2 <sup>2</sup>	M8x1.25P	M8x1.25P	M12x1.75P
C3 <sup>2</sup>	≤ 24/ ≤ 32	≤ 35/ ≤ 38	≤ 50
C4 <sup>2</sup>	51	66.7	81
C5 <sup>2</sup> <sub>F6</sub>	110	110	114.3
C6 <sup>2</sup>	6	5.5	6
C7 <sup>2</sup>	115	140	180
C8 <sup>2</sup>	58	89.8	93
C9 <sup>2</sup>	290	362	433
B	12	16	20
H	43	59	79.5

★ C1~C9 are motor specific dimensions(metric std shown ), Size may vary according to the motor flange chosen.

★ Specification subject to change without notice.

## PUL Specifications Table

Specifications		Stage	Ratio	PUL-60	PUL-75	PUL-100	PUL-140	PUL-180	PUL-220
Nominal Output Torque T <sub>2N</sub>	N • m	1	3	53	145	290	520	580	1100
			4	55	150	300	550	1100	1700
			5	54	140	290	530	1200	2000
			6	46	135	280	490	1100	1850
			7	44	125	270	450	1100	1750
			8	41	110	240	390	1000	1550
			9	37	95	220	360	900	1500
			10	37	95	220	360	900	1450
		Stage	Ratio	PUL-60 (T)	PUL-75(T)	PUL-100T	PUL-140T	PUL-180T	PUL-220T
		2	15	53	145	290	520	580	2000
			20	55	150	300	550	1100	2000
			25	54	140	290	530	1200	2000
			30	54	140	290	530	1200	2000
			35	54	140	290	530	1200	2000
			40	54	140	290	530	1200	2000
			45	54	140	290	530	1200	2000
			50	54	140	290	530	1200	2000
			60	46	135	280	490	1200	1850
			70	44	125	270	450	1100	1750
			80	41	110	240	390	1000	1550
			90	37	95	220	360	900	1500
			100	37	95	220	360	900	1450
Emergency Stop Torque T <sub>2NOT</sub>	N • m			3.0 times of Nominal Output Torque (*Max. Output Torque T <sub>2B</sub> =60% of Emergency Stop Torque)					
Nominal Input Speed n <sub>1N</sub>	rpm	1,2	3-100	5000	4000	4000	3000	3000	2000
Max. Input Speed n <sub>1max</sub>	rpm	1,2	3-100	10000	8000	8000	6000	6000	4000
Micro Backlash P0	arcmin	1 2	3-10 12-100	≤ 2 ≤ 4	≤ 2 ≤ 4	≤ 1 ≤ 3	≤ 1 ≤ 3	≤ 1 ≤ 3	≤ 1 ≤ 3
Precision Backlash P1	arcmin	1 2	3-10 12-100	≤ 4 ≤ 6	≤ 4 ≤ 6	≤ 3 ≤ 5	≤ 3 ≤ 5	≤ 3 ≤ 5	≤ 3 ≤ 5
Standard Backlash P2	arcmin	1 2	3-10 12-100	≤ 6 ≤ 8	≤ 6 ≤ 8	≤ 5 ≤ 7	≤ 5 ≤ 7	≤ 5 ≤ 7	≤ 5 ≤ 7
Torsional Rigidity	N • m /arcmin	1,2	3-100	7	14	25	50	150	220
Max. Radial Load F <sub>2rB</sub> <sup>1</sup>	N	1,2	3-100	4130	5220	10650	17600	22000	27800
Max. Axial Load F <sub>2aB</sub> <sup>1</sup>	N	1,2	3-100	2500	3300	5700	11300	14000	16200
Operating Temp.	°C		3-100	-10 °C ~ +90 °C					
Service Life	hr		3-100	30,000 (15,000/ Continuous operation)					
Efficiency	%	1 2	3-10 12-100	≥ 97% ≥ 94%					
Weight	kg	1 2	3-10 12-100	1.8 2.4/2.0	4.0 5.7/4.5	6.7 8.2	15.0 18.0	30.8 37	55 68.5
Mounting Position	-	1,2	3-100	Any direction					
Noise Level <sup>2</sup>	dBA/1m	1,2	3-100	58	60	63	65	67	70
Protection Class	-	1,2	3-100	IP65					
Lubrication	-	1,2	3-100	Synthetic Lubricant					
Inertia(J1)									
Stage	Ratio	unit		PUL-60	PUL-75	PUL-100	PUL-140	PUL-180	PUL-220
1	3	Kg • cm <sup>2</sup>		0.23	0.97	2.35	10.00	30.50	79.50
	4			0.18	0.67	1.66	7.17	25.86	58.21
	5			0.17	0.65	1.50	6.52	23.63	54.36
	6/7/8			0.14	0.60	1.45	6.17	22.92	54.12
	9/10			0.14	0.58	1.41	6.10	22.73	53.98
Stage	Ratio			PUL-60(T)	PUL-75(T)	PUL-100T	PUL-140T	PUL-180T	PUL-220T
2	15/20/25			0.17(0.02)	0.65(0.17)	0.65	1.50	6.52	23.63
	30/35/40			0.14(0.02)	0.60(0.14)	0.60	1.45	6.17	22.92
	45/50/60/70/80/90/100			0.14(0.02)	0.58(0.14)	0.58	1.41	6.10	22.73
* 1. Applied to the output shaft center @100rpm. * 2.Measured at 3000rpm with no load ※ The above figures/specifications are subject to change without prior notice.									

\* 1. Applied to the output shaft center @100rpm.

\* 2. Measured at 3000rpm with no load

※ The above figures/specifications are subject to change without prior notice.

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.